8. Estructura E-10

2.3.13. Reacciones

13. REACCIONES

Resumen de reacciones verticales en el modelo viga.

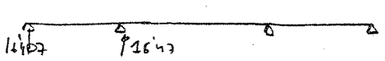
Peso propio e hiperestático de pretensado.

	Sobre estructura Pecilla		Sobre estructura final T∞ (ideal)	
	Nudo 1	Nudo 17	Nudo 1	Nudo 17
1. PPropias:	0	651'2	1'0	650'3
1.2 Post. 1.2:	0	0	-8'14	6'93
2.1- Post 2.1:	0	0	8'42	-8'14
3- PP ant-volt.	73'9	71'3	83'2	67'1
3.1. pret teller:	0	0	15'28	-15'28
4- pp ant:	0	72'64	-17'94	90'67
4.1 post teller	0	0	21'82	-21'82
5. BC	0'88	-0'88	1'55	-1'55
PP pantalla	18'64	40'58	16'5	47'88
pp losa 1	1'09	64'92	6'99	100'2
pp losa 2	60'21	110'84	59	71
Diafrag.	6'34	-0'34	0'32	-0'32
Post. 7.1.	8'3	-8'3	12'8	-12'8
8.1	7'5	-7'5	10'8	-10'8
7.1	-4'0	+4'0	-7'9	+7'9
11	32'2	-32'2	idem	
12	25	-25	idem	
13	-25	25	idem.	

Resumen de reacciones a t∞:

Por fases		Ideal	
Nudo 1	Nudo 17	Nudo 1	Nudo 17
199'06	966'26	235'9	979'07

$E = 0'85 E_\infty + 0'15 \cdot E_0 + \text{Pérdidas}$

Con Pérdidas ⇒  de hiperestático a t∞.

$R_0 \Rightarrow$ 199'06 t 966'26 t.

$R_\infty \Rightarrow$ $0'85 \cdot (235'9) + 0'15 \cdot (199) - 16'47 = 213'86$ t / $0'85(979)+0'15(966)+16'5$ = 951 t.

Reacciones	Nudo 1	Nudo 17
R_0 (t)	199'06	966'26
R_∞ (t)	213'83	951'0

A las sobrecargas (envolventes de tramo B), en el empotramiento se han introducido como una envolvente de 12 t, en lugar del tramo B de la IPT, luego estamos del lado de la seguridad.

Para ajustar las reacciones se deberán multiplicar por la proporción de reacción máxima del tramo B / reacción máxima del tramo 12 t

Nudo 1 ⇒ Factor ⇒ $\frac{239'03}{252'54} = 0'94$ para R_{max}.

$\frac{-40'74}{-63'67} = 0'63$ para R_{min}

Nudo 17 ⇒ Factor ⇒ $\frac{87}{793} = 0'90$ para R_{max}

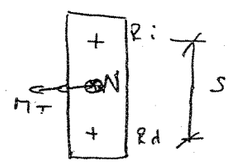
$\frac{-8'48}{-76'57} = 0'11$ para R_{min}

Aquí del lado de la seguridad sólo tomamos para R_{max}, sin tenerlo en cuenta para R_{min}.

En las hipótesis de sobrecargas con pares de envolventes:

Dado que el modelo de pares de envolventes nos da reacciones concomitantes se procede a descargar cada caso ⇒.

En cada pila:



$$\begin{Vmatrix} M_T = N \cdot e \ (-t) \\ N\,(t). \end{Vmatrix}$$ Esfuerzos en cabeza de pila ⇒.

$$R_{i_{inc}} = \frac{N}{2} + \frac{M_T}{S} = N\left(\frac{1}{2} + \frac{e}{S}\right)$$ con e ⇒ excentricidad en [m].

$$R_{d\,inc} = \frac{N}{2} - \frac{M_T}{S} = N\left(\frac{1}{2} - \frac{e}{S}\right)$$

Se analizará el caso de máxima reacción por metro.

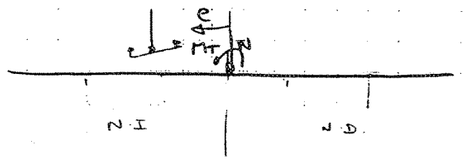
→ Máxima R_i: $\underline{\underline{R_{i\,max} = N\left(\frac{1}{2} + \frac{e}{S}\right)}}$ ⇒ Con e se despeja

$$N = \frac{R_{i,max}}{\left(\frac{1}{2} + \frac{e}{S}\right)}$$

R_d, conc con $R_{i\,max}$ ⇒ $\underline{\underline{R_{d\,inc}}} = N\left(\frac{1}{2} - \frac{e}{S}\right) = \underline{\underline{\frac{R_{i,max}\left(\frac{1}{2} - \frac{e}{S}\right)}{\left(\frac{1}{2} + \frac{e}{S}\right)}}}$

Y el caso mínimo respecto del metro derecho.

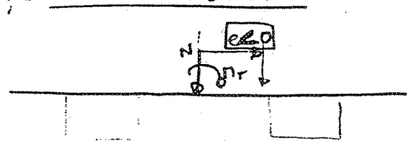
Sobrecarga en metro izquierdo.



$M_T > 0$

$$\left.\begin{aligned} R_i &= N\left(\tfrac{1}{2} + \tfrac{e}{S}\right) \\ R_d &= N\left(\tfrac{1}{2} - \tfrac{e}{S}\right) \end{aligned}\right| \Rightarrow \begin{Vmatrix} N = R_{i\,max} \Big/ \left(\tfrac{1}{2} + \tfrac{e}{S}\right) \\ M_{T_{inc}} = N \cdot e \end{Vmatrix} ; \quad \boxed{R_{d_{inc}} = N\left(\tfrac{1}{2} - \tfrac{e}{S}\right) = \frac{R_{i\,max}\left(\tfrac{1}{2} - \tfrac{e}{S}\right)}{\left(\tfrac{1}{2} + \tfrac{e}{S}\right)}}$$

Sobrecarga en metro derecho.



$M_T < 0$

$$\left.\begin{aligned} R_i &= N\left(\tfrac{1}{2} + \tfrac{e}{S}\right) \\ R_d &= N\left(\tfrac{1}{2} - \tfrac{e}{S}\right) \end{aligned}\right\| \Rightarrow \begin{Vmatrix} N = R_{d,max} \Big/ \left(\tfrac{1}{2} - \tfrac{e}{S}\right) \\ M_{T_{inc}} = N \cdot e \end{Vmatrix} ; \quad R_{i\,inc} = N\,\frac{\left(\tfrac{1}{2} + \tfrac{e}{S}\right)}{\left(\tfrac{1}{2} - \tfrac{e}{S}\right)}$$

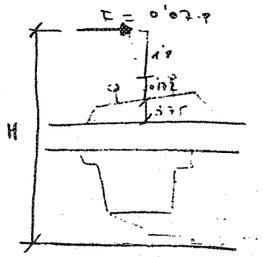
Cada pila tendrá las hipótesis de:

- N_{max} ⇒ $+N_{max}$ izq y N_{max} derecha
- $M_{T\,max}$ ⇒ N_{max} izq. o N_{max} derecha ⇒ el que más M_T de

		← e > 0	e < 0 →		SIN FC.
		e_{via}	$e_{tripulado}$	$e_{pantalla}$	$e_{fza\ antirfga}$	$e_{T+T.}$
	NI				P-32, 33 P-33, P-34	
	SR	2'354 m	0	+ 0'1918 m	-0'39 / -0'54	2'542 m
	R Int	"	-0'3 m	"	"	2'7418
Mmax +	R Ext	"	+0'3 m	"	"	7'942
	ND.					
	SR	-2'35 m	0	+0'1918 m	"	-2'1587
	R INT	"	+0'3	+ "	"	-2'4587
Mmax -	R EXT	"	-0'3	+ "	"	-2'7582

$T_{fza\ antirfga}$

$e = 0'07 \cdot H$



$M_T = H \cdot 0'07 \cdot H \Rightarrow$ H en zapata calculada $= \sqrt{1'8 + 0'177 + 0'75 + 7'85} : 5'532$ m

H en zapata estribo $\Rightarrow 1'8 + 0'177 + 0'75 + 5'0 = 7'727$ m

M_T en zapata calculada $\rightarrow e = 5'877 \cdot 0'07 = -0'39$ m $< 0 \rightarrow$

M_T en zapata estribo $\Rightarrow e = 7'727 \cdot 0'07 = -0'54$ m

La fza antirfga se le añadirá a la caso con $M_T < 0 \Rightarrow$ Hip M_{max}.

IDEAM

Frenado - Interacción vía estructura

Pila fija P-34

- Hipótesis prisma Frenado en 2 vías: $F_L = 308\ t \cdot 2 = 616$ tn a Cald.
- Interacción térmica vía estructura: $47'3\ t/vía \times 2 = 94'6$ tn Cald

Si el frenado es concomitante con la interacción térmica se reduce por 0'75.

- Fza antirfga (según IPF-75)

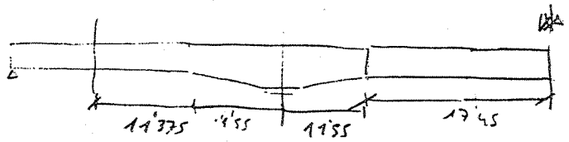
$F_T = 48'03\ t \times 2$ (P-34 y P-33)

- Viento transversal

+ Viento con sc (se debe reducir a 50%)

$q = \begin{cases} 176\ t/ml & \text{en zona de } 7'85\ m \text{ de ancho} \\ 2'31\ t/ml & \text{" " " } 5\ m \text{ " "} \end{cases}$

En pila P-33 y P-34 ⇒



$(11'375 + 17'45) \cdot 1'06 + \frac{(1'176 + 2'31)}{2} \cdot 23'1 = 101'79\ t$ (reducir en 50%)

+ Viento sin sc

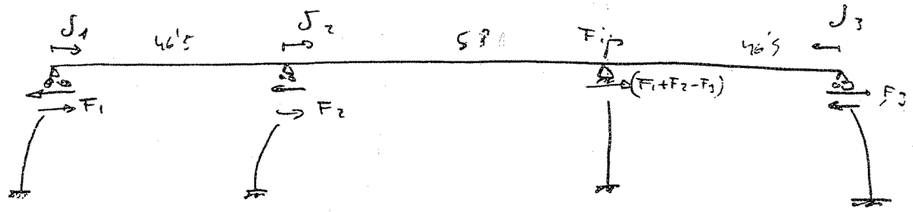
$q = \begin{cases} 1'105\ t/ml & \text{en zona de } 7'85\ m \text{ de ancho} \\ 1'555\ t/ml & \text{en zona de } 5\ m \text{ de ancho} \end{cases}$

$F_T = 1'105 (11'375 + 17'45) + \frac{(1'5554\ 1'105)}{2} \cdot 23'1 = 67'57\ t$

Sobre pila ⇒ $q_{fricc} = 0'213\ t/m^2$ en P-33 y P-34

Con ancho de $5'1\ m \Rightarrow q = 0'213 \cdot 5'1 = 1'086\ t/ml$

Teflones



Con $F_i = 3 \cdot \frac{E_m \cdot I_{pila}}{H_i^3} \cdot \delta_i$

$E_m = \frac{E_0}{(1+\psi \cdot \varphi)} = \frac{E_0}{(1+0'7 \cdot 2'0)} = \underline{0'42\ E_0}$

$\delta_i = L_i \cdot \varepsilon$

	L_i	H_i	I_i
Pila 1 ⇒	$L_1 = 45'8 + 5'8 = 10'3$ m	11'53 m	10'16 m⁴
Pila 2 ⇒	$L_2 =$ 5'7 m	17'963 m	3 7'32 m⁴
Pila 3 ⇒	$L_3 =$ 2'2'8 m	11'25 m	10'16 m⁴

Con $E_m = 0'42 \cdot E_0$ y $E_0 = 150000 \cdot \sqrt[3]{30+8} = \underline{2957679'1\ t/m^2}$

	$\frac{3 E_m I}{L^3}$	$F_i = K_i \cdot \delta_i$	F_i (t	$\mu \cdot N_{cp}$
P-32	568751	$589845 \cdot \varepsilon$	4128'91	$0'05 \cdot 57'82 = 26'89$
P-33	129.168'5	$749.774'5 \cdot \varepsilon$	5 744'2	$0'05 \cdot 2877'17 = 143'8$
P-35	611745	$2801792'1 \cdot \varepsilon$	1761'2	26'29

Con $\varepsilon = 0'7\ mm/m = \underline{7 \cdot 10^{-4}}$

Como en todos los casos $F_i > \mu \cdot N_{cp}$ sólo puede tener el 5% del axil de carga permanente.

Luego

$F_1 = \mu \cdot N_{cp1} = 0'05 \cdot (147'5 + 118'32 + 142'5 + 134'35 + 289'2) = 29'25\ t$ (incr. 30% = 147)

$F_3 = \mu \cdot N_{cp3} = F_1 = 29'25\ t$

$F_2 = \mu \cdot N_{cp2} = 0'05 (2 \cdot 9389_{pp} + 590'7_{c} + 409'32 + 2 \cdot 94'66_{incr. 30\% = 141}) = \underline{153'34\ t}$

Sobre la pila fija se tomará del lado de la seguridad

$F = 1'1 (F_1 + F_3) - 0'9\ F_2 = \underline{174'52\ t}$

Pila	F_L Teflones (t/pila)
P-32	29'25 t
P-33	153'34 t
P-34	174'52 t
P-35	29'25 t

Pila fija

Como a la pila fija 174'52 t de Teflones ⇒ $\mu \cdot \Sigma N_{cp} > IVE$ al ser IVE = 94'66 t se tomará para el cálculo la acción del rozamiento sobre teflones al ser más desfavorable que la interacción sin calcular.

Luego $F_L = \underline{174'52\ t}$ en Pila P-34.

				REACCIONES EN APOYOS (Tn.)					
CARGAS		1	101	12005	12006	28005	28006	39	139
		p-32IZQ	p-32DER	p-33IZQ	p-33DER	p-34IZQ	p-34DER	p-35IZQ	p-35DER
Pp+Hiperest to		199.06	199.06	966.26	966.26	966.26	966.26	199.06	199.06
Pp+Hiperest tinf		213.00	213.00	951.00	951.00	951.00	951.00	213.00	213.00
Cargas muertas.		118.32	134.05	409.32	590.40	409.32	590.40	118.32	134.05
Incr. balasto +/-30%		23.90	23.90	94.66	94.66	94.66	94.66	23.90	23.90
Gradiente		7.95	7.95	-7.95	-7.95	-7.95	-7.95	7.95	7.95
Env Tren B Nervio Izq	max	197.52	67.18	1163.26	14.87	1163.26	14.87	197.52	67.18
	min	-35.83	-33.52	-46.48	-415.50	-46.48	-415.50	-35.83	-33.52
Env Tren B Nervio der	max	65.11	187.11	15.18	1053.58	15.18	1053.58	65.11	187.11
	min	-33.20	-35.22	-314.02	-45.28	-314.02	-45.28	-33.20	-35.22
Tren B S.R. N.I.	max	184.66	63.51	1022.08	10.32	1022.08	10.32	184.66	63.51
	min	-35.23	-33.29	-45.14	-281.73	-45.14	-281.73	-35.23	-33.29
Tren B R.I. N.I.	max	175.15	67.18	935.38	14.87	935.38	14.87	175.15	67.18
	min	-34.32	-32.59	-43.69	-213.94	-43.69	-213.94	-34.32	-32.59
Tren B R.E. N.I.	max	197.52	53.65	1163.26	4.90	1163.26	4.90	197.52	53.65
	min	-35.83	-33.52	-46.48	-415.50	-46.48	-415.50	-35.83	-33.52
Tren B S.R. N.D.	max	63.83	177.20	12.01	966.62	12.01	966.62	63.83	177.20
	min	-32.37	-34.18	-248.22	-43.68	-248.22	-43.68	-32.37	-34.18
Tren B R.I. N.D.	max	65.11	165.85	15.18	878.36	15.18	878.36	65.11	165.85
	min	-31.08	-32.69	-191.10	-41.56	-191.10	-41.56	-31.08	-32.69
Tren B R.E. N.D.	max	60.69	187.11	8.18	1053.58	8.18	1053.58	60.69	187.11
	min	-33.20	-35.22	-314.02	-45.28	-314.02	-45.28	-33.20	-35.22
Env S.C. Paseos N Izq	max	16.43	0.67	133.36	0.00	133.36	0.00	16.43	0.67
	min	-1.89	-5.27	-2.75	-91.38	-2.75	-91.38	-1.89	-5.27
Env S.C. Paseos N Der	max	0.67	16.43	0.00	133.36	0.00	133.36	0.67	16.43
	min	-5.27	-1.89	-91.38	-2.75	-91.38	-2.75	-5.27	-1.89
Reacc. TOTAL servicio to	max	**617.24**	**624.62**	**2715.36**	**2786.45**	**2715.36**	**2786.45**	**617.24**	**624.62**
	min	**220.87**	**236.89**	**868.59**	**949.39**	**868.59**	**949.39**	**220.87**	**236.89**
Reacc. TOTAL servicio to	max	**631.18**	**638.56**	**2700.10**	**2771.19**	**2700.10**	**2771.19**	**631.18**	**638.56**
	min	**234.81**	**250.83**	**853.33**	**934.13**	**853.33**	**934.13**	**234.81**	**250.83**

nota: Las reacciones de las sobrecargas van ya sin ϕ

Separacion de apoyos (m)		Excent.	Pila 32				Pila 33				Pila 34				Pila 35			
			6.30				2.50				2.50				6.30			
			N(t)	Mt(mt)	Rizq(t)	Rder(t)	N(t)	Mt(mt)	Rizq(t)	Rder(t)	N(t)	Mt(mt)	Rizq(t)	Rder(t)	N(t)	Mt(mt)	Rizq(t)	Rder(t)
Tren B S.R. N.I.	max	2.542	204.39	519.55	184.66	19.73	673.84	1712.90	1022.08	-348.24	673.84	1712.90	1022.08	-348.24	204.39	519.55	184.66	19.73
	min	2.542	-38.99	-99.12	-35.23	-3.76	-29.76	-75.65	-45.14	15.38	-29.76	-75.65	-45.14	15.38	-38.99	-99.12	-35.23	-3.76
Tren B R.I. N.I.	max	2.2418	204.65	458.79	175.15	29.50	669.69	1501.32	935.38	-265.68	669.69	1501.32	935.38	-265.68	204.65	458.79	175.15	29.50
	min	2.2418	-40.10	-89.90	-34.32	-5.78	-31.28	-70.12	-43.69	12.41	-31.28	-70.12	-43.69	12.41	-40.10	-89.90	-34.32	-5.78
Tren B R.E. N.I.	max	2.842	207.68	590.21	197.52	10.15	710.69	2019.78	1163.26	-452.57	710.69	2019.78	1163.26	-452.57	207.68	590.21	197.52	10.15
	min	2.842	-37.67	-107.06	-35.83	-1.84	-28.40	-80.70	-46.48	18.08	-28.40	-80.70	-46.48	18.08	-37.67	-107.06	-35.83	-1.84
Tren B S.R. N.D.	max	-2.1582	210.31	-453.89	33.11	177.20	709.04	-1530.25	-257.58	966.62	709.04	-1530.25	-257.58	966.62	210.31	-453.89	33.11	177.20
	min	-2.1582	-40.57	87.55	-6.39	-34.18	-32.04	69.15	11.64	-43.68	-32.04	69.15	11.64	-43.68	-40.57	87.55	-6.39	-34.18
Tren B R.I. N.D.	max	-1.8582	208.63	-387.68	42.78	165.85	706.49	-1312.80	-171.87	878.36	706.49	-1312.80	-171.87	878.36	208.63	-387.68	42.78	165.85
	min	-1.8582	-41.12	76.41	-8.43	-32.69	-33.43	62.12	8.13	-41.56	-33.43	62.12	8.13	-41.56	-41.12	76.41	-8.43	-32.69
Tren B R.E. N.D.	max	-2.4582	210.19	-516.68	23.08	187.11	710.30	-1746.07	-343.28	1053.58	710.30	-1746.07	-343.28	1053.58	210.19	-516.68	23.08	187.11
	min	-2.4582	-39.56	97.26	-4.34	-35.22	-30.53	75.04	14.75	-45.28	-30.53	75.04	14.75	-45.28	-39.56	97.26	-4.34	-35.22
Env S.C. Paseos I	max	5.9	11.44	67.48	16.43	-4.99	46.63	275.11	133.36	-86.73	46.63	275.11	133.36	-86.73	11.44	67.48	16.43	-4.99
	min	5.9	-1.32	-7.76	-1.89	0.57	-0.96	-5.67	-2.75	1.79	-0.96	-5.67	-2.75	1.79	-1.32	-7.76	-1.89	0.57
Env S.C. Paseos I	max	-5.9	11.44	-67.48	-4.99	16.43	46.63	-275.11	-86.73	133.36	46.63	-275.11	-86.73	133.36	11.44	-67.48	-4.99	16.43
	min	-5.9	-1.32	7.76	0.57	-1.89	-0.96	5.67	1.79	-2.75	-0.96	5.67	1.79	-2.75	-1.32	7.76	0.57	0.00

	N(t)	Mt(mt)		N(t)	Mt(mt)		N(t)	Mt(mt)		N(t)	Mt(mt)
pp+hip+per	426.00	0	pp	1932.52	0	pp	1932.52	0	pp	426.00	0
cm	252.37	-49.5495	cm	999.72	-226.35	cm	999.72	-226.35	cm	252.37	-49.5495
+/- incr balasto	47.80	0 +/-	incr balasto	189.32	0 +/-	incr balasto	189.32	0 +/-	incr balasto	47.80	0 +/-
gradiente	15.90	0	gradiente	-15.90	0	gradiente	-15.90	0	gradiente	15.90	0

TRENES	N(t)	Mt(mt)		N(t)	Mt(mt)		N(t)	Mt(mt)		N(t)	Mt(mt)
NI+RE, ND+RI Hip1:Nmax	416.31	202.53	Hip1:Nmax	1417.18	706.99	Hip1:Nmax	1417.18	706.99	Hip1:Nmax	416.31	202.53
NI+RE, ND+RE Hip2:Mtmax	168.11	687.47	Hip2:Mtmax	680.16	2094.83	Hip2:Mtmax	680.16	2094.83	Hip2:Mtmax	168.11	687.47
NI-RE, ND+RE Hip3:Mtmin	172.52	-691.03 *	Hip3:Mtmin	681.91	-2195.00 *	Hip3:Mtmin	681.91	-2195.00 *	Hip3:Mtmin	172.52	-716.90
NI-RI, ND-RI Hip4:Nmin	-81.22	-13.49	Hip4:Nmin	-64.71	-8.01	Hip4:Nmin	-64.71	-8.01	Hip4:Nmin	-81.22	-13.49

SC PASEOS	N(t)	Mt(mt)	N(t)	Mt(mt)	N(t)	Mt(mt)	N(t)	Mt(mt)
Hip1:Nmax	22.87	0.00	93.26	0.00	93.26	0.00	22.87	0.00
Hip2:Mtmax	10.12	75.24	45.67	280.79	45.67	280.79	10.12	75.24
Hip3:Mtmin	10.12	-75.24	45.67	-280.79	45.67	-280.79	10.12	-75.24
Hip4:Nmin	-2.63	0.00	-1.92	0.00	-1.92	0.00	-2.63	0.00

Reacciones

Viaducto del Jarama. Tramo hiperestático.

Apoyo	Aparato de Apoyo	Rmax (Tn)	Rmin (Tn)	Corrimiento long.(mm.)	Corrimiento long.(mm.)	Fza. Transversal(Tn)	Fza. longitudinal(Tn)
P-32 izq	TU-1	631.18	220.87	73	-21	66	0
P-33 izq	TU-1	2715.36	853.33	41	-12	151	0
P-34 izq	TF	2715.36	853.33	0	0	151	396
P-35 izq	TU-1	631.18	220.87	34	-10	66	0
P-32 der	TO	638.56	236.89	73	-21	0	0
P-33 der	TO	2786.45	934.13	41	-12	0	0
P-34 der	TU-2	2786.45	934.13	0	0	0	396
P-35 der	TO	638.56	236.89	34	-10	0	0

Nota: Los valores de Reacciones y Movimientos son en valores caracteristicos , sin mayorar.
Y los movimientos positivos según el avance del P.K

TU-1 Apoyo unidireccional longitudinal
TU-2 Apoyo unidireccional transversal
TO Apoyo multidireccional
TF Apoyo fijo

2.3.14. Control de deformaciones

14. CONTROL DE DEFORMACIONES

Resumen de flechas producidas por un Tren B IFF-75. (sin ϕ)

	Nervio izquierdo. (cm)		Nervio derecho (cm)	
	C.V. Lat.	C.V. central	C.V.L.	C.V.C
Tren B SR.NI	2'28	2'57	1'84	2'14
Tren B R.I.NI	2'49	2'52	1'79	2'12
Tren B R.E.NI	2'34	2'64	1'84	2'14
Tren B SR.NO.	1'78	2'10	2'18	2'50
Tren B R.I.NO	1'73	2'02	2'09	2'38
Tren B R.E.NO	1'81	2'14	2'27	2'58

Valor límite de $\delta/L \Rightarrow$

Vano central $L = 58\,m \Rightarrow \delta/L \Rightarrow \frac{1'1}{2400}$ valor límite para nivel de comodidad muy bueno y $V = 310\ Km/h$

Con $\frac{2'64 \cdot 10^{-2}}{58} = \frac{1}{2196} = 4'551 \cdot 10^{-4}\ m/m$

Con el límite de $\frac{1'1}{2400} = 4'583 \cdot 10^{-4}$

Como $4'551 \cdot 10^{-4} < \frac{1}{2400/11} : \frac{1}{2181} \Rightarrow$ cumple en flechas en vano central.

Vano lateral de $L = 46'5\,m$

Con $\frac{2'34 \cdot 10^{-2}}{46'5} = 5'037 \cdot 10^{-4} = \frac{1}{1987}$

Como el valor límite es de $\delta/L = \frac{1}{2400/11} = \frac{1}{1909}$

Como $\frac{1}{1987} < \frac{1}{1909} \Rightarrow$ cumple con flechas en vano lateral

IDEAM

Como puede comprobarse se cumplen en ambos casos que la flecha producida por un tren en curva de muy es menor que la que limita la norma IAPF y el Eurocódigo 1, incluso habiendo considerado el tren como una sobrecarga de 12 t/m en lugar del tren B real de la IPF-75.

Luego estamos cumpliendo muy del lado de la seguridad.

Envolvente de tren de cargas plano genérico: UY-

Coef. esc.

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	-0.0097	-0.0016
3	11.4330	-0.0176	-0.0011
4	17.1500	-0.0221	-0.0004
5	22.8670	-0.0228	0.0002
6	28.5830	-0.0192	0.0008
7	34.3000	-0.0138	0.0012
8	36.3000	-0.0114	0.0012
9	38.6500	-0.0084	0.0012
10	41.0000	-0.0056	0.0012
11	43.3500	-0.0027	0.0011
12	45.8500	0.0000	0.0000
13	48.3500	-0.0024	-0.0010
14	50.7000	-0.0051	-0.0011
15	53.0500	-0.0076	-0.0011
16	55.4000	-0.0105	-0.0012
17	57.4000	-0.0130	-0.0012
18	63.2170	-0.0194	-0.0010
19	69.0330	-0.0241	-0.0006
20	74.8500	-0.0258	0.0000
21	80.6670	-0.0241	0.0006
22	86.4830	-0.0194	0.0010
23	92.3000	-0.0130	0.0012
24	94.3000	-0.0105	0.0012
25	96.6500	-0.0076	0.0011
26	99.0000	-0.0051	0.0011
27	101.3500	-0.0024	0.0010
28	103.8500	0.0000	0.0000
29	106.3500	-0.0027	-0.0011
30	108.7000	-0.0056	-0.0012
31	111.0500	-0.0084	-0.0012
32	113.4000	-0.0114	-0.0012
33	115.4000	-0.0138	-0.0012
34	121.1170	-0.0192	-0.0008
35	126.8330	-0.0229	-0.0002
36	132.5500	-0.0221	0.0004
37	138.2670	-0.0176	0.0011
38	143.9830	-0.0097	0.0016
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	-0.0070	-0.0011
103	11.4330	-0.0133	-0.0009
104	17.1500	-0.0170	-0.0005
105	22.8670	-0.0184	0.0000
106	28.5830	-0.0166	0.0005
107	34.3000	-0.0125	0.0010
108	36.3000	-0.0107	0.0010
109	38.6500	-0.0079	0.0011
110	41.0000	-0.0055	0.0011
111	43.3500	-0.0027	0.0010
112	45.8500	0.0000	0.0000
113	48.3500	-0.0024	-0.0009
114	50.7000	-0.0049	-0.0010
115	53.0500	-0.0072	-0.0010
116	55.4000	-0.0099	-0.0010
117	57.4000	-0.0116	-0.0010
118	63.2170	-0.0168	-0.0008
119	69.0330	-0.0204	-0.0004
120	74.8500	-0.0214	0.0000
121	80.6670	-0.0204	0.0004
122	86.4830	-0.0168	0.0008
123	92.3000	-0.0116	0.0010
124	94.3000	-0.0099	0.0010
125	96.6500	-0.0072	0.0010
126	99.0000	-0.0049	0.0010
127	101.3500	-0.0024	0.0009
128	103.8500	0.0000	0.0000
129	106.3500	-0.0027	-0.0010
130	108.7000	-0.0055	-0.0011
131	111.0500	-0.0079	-0.0011
132	113.4000	-0.0107	-0.0010
133	115.4000	-0.0125	-0.0010
134	121.1170	-0.0166	-0.0005
135	126.8330	-0.0184	0.0000
136	132.5500	-0.0170	0.0005
137	138.2670	-0.0133	0.0009
138	143.9830	-0.0070	0.0011
139	149.7000	0.0000	0.0000

Envolvente de tren de cargas plano genérico. UY-

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	-0.0095	-0.0015
3	11.4330	-0.0171	-0.0011
4	17.1500	-0.0215	-0.0004
5	22.8670	-0.0218	0.0002
6	28.5830	-0.0189	0.0008
7	34.3000	-0.0134	0.0011
8	36.3000	-0.0113	0.0012
9	38.6500	-0.0082	0.0012
10	41.0000	-0.0055	0.0011
11	43.3500	-0.0027	0.0011
12	45.8500	0.0000	0.0000
13	48.3500	-0.0024	-0.0010
14	50.7000	-0.0049	-0.0011
15	53.0500	-0.0075	-0.0011
16	55.4000	-0.0104	-0.0011
17	57.4000	-0.0125	-0.0011
18	63.2170	-0.0188	-0.0010
19	69.0330	-0.0235	-0.0006
20	74.8500	-0.0252	0.0000
21	80.6670	-0.0235	0.0006
22	86.4830	-0.0188	0.0010
23	92.3000	-0.0125	0.0011
24	94.3000	-0.0104	0.0011
25	96.6500	-0.0075	0.0011
26	99.0000	-0.0049	0.0011
27	101.3500	-0.0024	0.0010
28	103.8500	0.0000	0.0000
29	106.3500	-0.0027	-0.0011
30	108.7000	-0.0055	-0.0011
31	111.0500	-0.0082	-0.0012
32	113.4000	-0.0113	-0.0012
33	115.4000	-0.0134	-0.0011
34	121.1170	-0.0189	-0.0008
35	126.8330	-0.0218	-0.0002
36	132.5500	-0.0215	0.0004
37	138.2670	-0.0171	0.0011
38	143.9830	-0.0095	0.0015
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	-0.0070	-0.0011
103	11.4330	-0.0132	-0.0009
104	17.1500	-0.0170	-0.0005
105	22.8670	-0.0179	0.0001
106	28.5830	-0.0165	0.0005
107	34.3000	-0.0124	0.0009
108	36.3000	-0.0105	0.0010
109	38.6500	-0.0079	0.0011
110	41.0000	-0.0055	0.0011
111	43.3500	-0.0026	0.0010
112	45.8500	0.0000	0.0000
113	48.3500	-0.0024	-0.0009
114	50.7000	-0.0048	-0.0010
115	53.0500	-0.0071	-0.0010
116	55.4000	-0.0098	-0.0010
117	57.4000	-0.0113	-0.0010
118	63.2170	-0.0167	-0.0007
119	69.0330	-0.0200	-0.0004
120	74.8500	-0.0212	0.0000
121	80.6670	-0.0200	0.0004
122	86.4830	-0.0167	0.0007
123	92.3000	-0.0113	0.0010
124	94.3000	-0.0098	0.0010
125	96.6500	-0.0071	0.0010
126	99.0000	-0.0048	0.0010
127	101.3500	-0.0024	0.0009
128	103.8500	0.0000	0.0000
129	106.3500	-0.0026	-0.0010
130	108.7000	-0.0054	-0.0011
131	111.0500	-0.0079	-0.0011
132	113.4000	-0.0105	-0.0010
133	115.4000	-0.0124	-0.0009
134	121.1170	-0.0165	-0.0005
135	126.8330	-0.0179	-0.0001
136	132.5500	-0.0170	0.0005
137	138.2670	-0.0132	0.0009
138	143.9830	-0.0070	0.0011
139	149.7000	0.0000	0.0000

Envolvente de tren de cargas plano genérico. UY-

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	-0.0101	-0.0016
3	11.4330	-0.0182	-0.0011
4	17.1500	-0.0228	-0.0004
5	22.8670	-0.0234	0.0002
6	28.5830	-0.0200	0.0008
7	34.3000	-0.0142	0.0012
8	36.3000	-0.0116	0.0013
9	38.6500	-0.0084	0.0012
10	41.0000	-0.0058	0.0012
11	43.3500	-0.0027	0.0011
12	45.8500	0.0000	0.0000
13	48.3500	-0.0024	-0.0010
14	50.7000	-0.0053	-0.0011
15	53.0500	-0.0077	-0.0012
16	55.4000	-0.0107	-0.0012
17	57.4000	-0.0130	-0.0012
18	63.2170	-0.0199	-0.0011
19	69.0330	-0.0246	-0.0006
20	74.8500	-0.0264	0.0000
21	80.6670	-0.0246	0.0006
22	86.4830	-0.0199	0.0011
23	92.3000	-0.0130	0.0012
24	94.3000	-0.0107	0.0012
25	96.6500	-0.0077	0.0012
26	99.0000	-0.0053	0.0011
27	101.3500	-0.0024	0.0010
28	103.8500	0.0000	0.0000
29	106.3500	-0.0027	-0.0011
30	108.7000	-0.0058	-0.0012
31	111.0500	-0.0084	-0.0012
32	113.4000	-0.0116	-0.0013
33	115.4000	-0.0142	-0.0012
34	121.1170	-0.0200	-0.0008
35	126.8330	-0.0234	-0.0002
36	132.5500	-0.0228	0.0004
37	138.2670	-0.0182	0.0011
38	143.9830	-0.0101	0.0016
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	-0.0071	-0.0011
103	11.4330	-0.0132	-0.0009
104	17.1500	-0.0171	-0.0005
105	22.8670	-0.0184	0.0000
106	28.5830	-0.0166	0.0005
107	34.3000	-0.0125	0.0010
108	36.3000	-0.0107	0.0010
109	38.6500	-0.0079	0.0011
110	41.0000	-0.0055	0.0011
111	43.3500	-0.0027	0.0011
112	45.8500	0.0000	0.0000
113	48.3500	-0.0024	-0.0010
114	50.7000	-0.0049	-0.0010
115	53.0500	-0.0072	-0.0010
116	55.4000	-0.0099	-0.0010
117	57.4000	-0.0117	-0.0010
118	63.2170	-0.0168	-0.0008
119	69.0330	-0.0204	-0.0004
120	74.8500	-0.0214	0.0000
121	80.6670	-0.0204	0.0004
122	86.4830	-0.0168	0.0008
123	92.3000	-0.0117	0.0010
124	94.3000	-0.0099	0.0010
125	96.6500	-0.0072	0.0010
126	99.0000	-0.0049	0.0010
127	101.3500	-0.0024	0.0010
128	103.8500	0.0000	0.0000
129	106.3500	-0.0027	-0.0011
130	108.7000	-0.0055	-0.0011
131	111.0500	-0.0079	-0.0011
132	113.4000	-0.0107	-0.0010
133	115.4000	-0.0125	-0.0010
134	121.1170	-0.0166	-0.0005
135	126.8330	-0.0184	0.0000
136	132.5500	-0.0171	0.0005
137	138.2670	-0.0132	0.0009
138	143.9830	-0.0071	0.0011
139	149.7000	0.0000	0.0000

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Envolvente de tren de cargas plano genérico. UY-

Coor. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	-0.0069	-0.0011
3	11.4330	-0.0128	-0.0009
4	17.1500	-0.0167	-0.0005
5	22.8670	-0.0178	0.0000
6	28.5830	-0.0164	0.0005
7	34.3000	-0.0123	0.0009
8	36.3000	-0.0102	0.0010
9	38.6500	-0.0079	0.0011
10	41.0000	-0.0053	0.0011
11	43.3500	-0.0026	0.0010
12	45.8500	0.0000	0.0000
13	48.3500	-0.0024	-0.0009
14	50.7000	-0.0048	-0.0010
15	53.0500	-0.0071	-0.0010
16	55.4000	-0.0096	-0.0010
17	57.4000	-0.0113	-0.0010
18	63.2170	-0.0163	-0.0007
19	69.0330	-0.0198	-0.0004
20	74.8500	-0.0210	0.0000
21	80.6670	-0.0198	0.0004
22	86.4830	-0.0163	0.0007
23	92.3000	-0.0113	0.0010
24	94.3000	-0.0096	0.0010
25	96.6500	-0.0071	0.0010
26	99.0000	-0.0048	0.0010
27	101.3500	-0.0024	0.0009
28	103.8500	0.0000	0.0000
29	106.3500	-0.0026	-0.0010
30	108.7000	-0.0053	-0.0011
31	111.0500	-0.0079	-0.0011
32	113.4000	-0.0102	-0.0010
33	115.4000	-0.0123	-0.0009
34	121.1170	-0.0164	-0.0005
35	126.8330	-0.0178	0.0000
36	132.5500	-0.0167	0.0005
37	138.2670	-0.0128	0.0009
38	143.9830	-0.0069	0.0011
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	-0.0094	-0.0015
103	11.4330	-0.0171	-0.0011
104	17.1500	-0.0215	-0.0004
105	22.8670	-0.0218	0.0002
106	28.5830	-0.0189	0.0008
107	34.3000	-0.0134	0.0011
108	36.3000	-0.0113	0.0012
109	38.6500	-0.0082	0.0012
110	41.0000	-0.0055	0.0011
111	43.3500	-0.0027	0.0011
112	45.8500	0.0000	0.0000
113	48.3500	-0.0024	-0.0009
114	50.7000	-0.0049	-0.0011
115	53.0500	-0.0074	-0.0011
116	55.4000	-0.0103	-0.0011
117	57.4000	-0.0125	-0.0011
118	63.2170	-0.0187	-0.0010
119	69.0330	-0.0235	-0.0006
120	74.8500	-0.0250	0.0000
121	80.6670	-0.0235	0.0006
122	86.4830	-0.0187	0.0010
123	92.3000	-0.0125	0.0011
124	94.3000	-0.0103	0.0011
125	96.6500	-0.0074	0.0011
126	99.0000	-0.0049	0.0011
127	101.3500	-0.0024	0.0009
128	103.8500	0.0000	0.0000
129	106.3500	-0.0027	-0.0011
130	108.7000	-0.0055	-0.0011
131	111.0500	-0.0082	-0.0012
132	113.4000	-0.0113	-0.0012
133	115.4000	-0.0134	-0.0011
134	121.1170	-0.0189	-0.0008
135	126.8330	-0.0218	-0.0002
136	132.5500	-0.0215	0.0004
137	138.2670	-0.0171	0.0011
138	143.9830	-0.0094	0.0015
139	149.7000	0.0000	0.0000

[redacted]

Envolvente de tren de cargas plano genérico. UY-

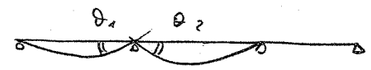
Coor. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	-0.0067	-0.0011
3	11.4330	-0.0125	-0.0009
4	17.1500	-0.0162	-0.0004
5	22.8670	-0.0173	0.0000
6	28.5830	-0.0159	0.0005
7	34.3000	-0.0118	0.0009
8	36.3000	-0.0098	0.0010
9	38.6500	-0.0075	0.0010
10	41.0000	-0.0050	0.0010
11	43.3500	-0.0025	0.0010
12	45.8500	0.0000	0.0000
13	48.3500	-0.0022	-0.0009
14	50.7000	-0.0047	-0.0010
15	53.0500	-0.0068	-0.0010
16	55.4000	-0.0090	-0.0009
17	57.4000	-0.0109	-0.0009
18	63.2170	-0.0156	-0.0007
19	69.0330	-0.0192	-0.0004
20	74.8500	-0.0202	0.0000
21	80.6670	-0.0192	0.0004
22	86.4830	-0.0156	0.0007
23	92.3000	-0.0109	0.0009
24	94.3000	-0.0090	0.0009
25	96.6500	-0.0068	0.0010
26	99.0000	-0.0047	0.0010
27	101.3500	-0.0022	0.0009
28	103.8500	0.0000	0.0000
29	106.3500	-0.0025	-0.0010
30	108.7000	-0.0050	-0.0010
31	111.0500	-0.0075	-0.0010
32	113.4000	-0.0098	-0.0010
33	115.4000	-0.0118	-0.0009
34	121.1170	-0.0159	-0.0005
35	126.8330	-0.0173	0.0000
36	132.5500	-0.0162	0.0004
37	138.2670	-0.0125	0.0009
38	143.9830	-0.0067	0.0011
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	-0.0089	-0.0014
103	11.4330	-0.0164	-0.0010
104	17.1500	-0.0203	-0.0004
105	22.8670	-0.0208	0.0002
106	28.5830	-0.0181	0.0007
107	34.3000	-0.0128	0.0011
108	36.3000	-0.0109	0.0011
109	38.6500	-0.0080	0.0011
110	41.0000	-0.0052	0.0011
111	43.3500	-0.0025	0.0010
112	45.8500	0.0000	0.0000
113	48.3500	-0.0023	-0.0009
114	50.7000	-0.0048	-0.0010
115	53.0500	-0.0072	-0.0011
116	55.4000	-0.0099	-0.0011
117	57.4000	-0.0118	-0.0011
118	63.2170	-0.0180	-0.0009
119	69.0330	-0.0222	-0.0005
120	74.8500	-0.0238	0.0000
121	80.6670	-0.0222	0.0005
122	86.4830	-0.0180	0.0009
123	92.3000	-0.0118	0.0011
124	94.3000	-0.0099	0.0011
125	96.6500	-0.0072	0.0011
126	99.0000	-0.0048	0.0010
127	101.3500	-0.0023	0.0009
128	103.8500	0.0000	0.0000
129	106.3500	-0.0025	-0.0010
130	108.7000	-0.0052	-0.0011
131	111.0500	-0.0080	-0.0011
132	113.4000	-0.0109	-0.0011
133	115.4000	-0.0128	-0.0011
134	121.1170	-0.0181	-0.0007
135	126.8330	-0.0208	-0.0002
136	132.5500	-0.0203	0.0004
137	138.2670	-0.0164	0.0010
138	143.9830	-0.0089	0.0014
139	149.7000	0.0000	0.0000

Envolvente de tren de cargas plano genérico. UY.

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	-0.0070	-0.0011
3	11.4330	-0.0131	-0.0009
4	17.1500	-0.0170	-0.0005
5	22.8670	-0.0181	0.0000
6	28.5830	-0.0166	0.0005
7	34.3000	-0.0125	0.0010
8	36.3000	-0.0106	0.0010
9	38.6500	-0.0079	0.0011
10	41.0000	-0.0055	0.0011
11	43.3500	-0.0027	0.0010
12	45.8500	0.0000	0.0000
13	48.3500	-0.0024	-0.0009
14	50.7000	-0.0049	-0.0010
15	53.0500	-0.0072	-0.0010
16	55.4000	-0.0099	-0.0010
17	57.4000	-0.0116	-0.0010
18	63.2170	-0.0168	-0.0007
19	69.0330	-0.0204	-0.0004
20	74.8500	-0.0214	0.0000
21	80.6670	-0.0204	0.0004
22	86.4830	-0.0168	0.0008
23	92.3000	-0.0116	0.0010
24	94.3000	-0.0099	0.0010
25	96.6500	-0.0072	0.0010
26	99.0000	-0.0049	0.0010
27	101.3500	-0.0024	0.0009
28	103.8500	0.0000	0.0000
29	106.3500	-0.0027	-0.0010
30	108.7000	-0.0055	-0.0011
31	111.0500	-0.0079	-0.0011
32	113.4000	-0.0106	-0.0010
33	115.4000	-0.0125	-0.0010
34	121.1170	-0.0166	-0.0005
35	126.8330	-0.0181	0.0000
36	132.5500	-0.0170	0.0005
37	138.2670	-0.0131	0.0009
38	143.9830	-0.0070	0.0011
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	-0.0098	-0.0016
103	11.4330	-0.0176	-0.0011
104	17.1500	-0.0221	-0.0004
105	22.8670	-0.0228	0.0002
106	28.5830	-0.0193	0.0008
107	34.3000	-0.0138	0.0012
108	36.3000	-0.0114	0.0012
109	38.6500	-0.0084	0.0012
110	41.0000	-0.0056	0.0012
1	43.3500	-0.0027	0.0011
2	45.8500	0.0000	0.0000
113	48.3500	-0.0024	-0.0010
114	50.7000	-0.0051	-0.0011
115	53.0500	-0.0077	-0.0011
116	55.4000	-0.0105	-0.0012
117	57.4000	-0.0130	-0.0012
118	63.2170	-0.0194	-0.0010
119	69.0330	-0.0241	-0.0006
120	74.8500	-0.0258	0.0000
121	80.6670	-0.0241	0.0006
122	86.4830	-0.0194	0.0010
123	92.3000	-0.0130	0.0012
124	94.3000	-0.0105	0.0012
125	96.6500	-0.0077	0.0011
126	99.0000	-0.0051	0.0011
127	101.3500	-0.0024	0.0010
128	103.8500	0.0000	0.0000
129	106.3500	-0.0027	-0.0011
130	108.7000	-0.0056	-0.0012
131	111.0500	-0.0084	-0.0012
132	113.4000	-0.0114	-0.0012
133	115.4000	-0.0138	-0.0012
134	121.1170	-0.0193	-0.0008
135	126.8330	-0.0228	-0.0002
136	132.5500	-0.0221	0.0004
137	138.2670	-0.0176	0.0011
138	143.9830	-0.0098	0.0016
139	149.7000	0.0000	0.0000

- Control de giro (flecha)



$\theta_1 + \theta_2 = 5 \cdot 10^{-3}$ rad

Considerando el giro de 1 tren de cargas multiplicado por ϕ y de las acciones térmicas.

Tren B IPF-75.

$\theta_1 + \theta_2 = 12 \cdot 10^{-4} + 10 \cdot 10^{-4} = 27 \cdot 10^{-4}$ rad

Con $\phi = 1'12$

$\theta_1 + \theta_2 = 1'12 \cdot 27 \cdot 10^{-4}$ rad $= 0'00246$ rad

Gradiente $= 1 \cdot 10^{-4}$

$\theta_1 + \theta_2$ total $= 0'0025$ rad $< 5 \cdot 10^{-3}$ rad $\Rightarrow$ cumple con la limitación de giro.

En apoyo extremo $\theta_1 = -0'0019$, si suponemos que en el otro extremo tiene también un valor

$\theta_1 + \theta_2 = 1'12(2 \cdot 0'0019) = 0'004256$ rad + térmico $= 0'0002 = 0'0044$ rad

Como $0'0044$ rad $< 0'005$ rad $\Rightarrow$ cumple con los giros.

- Comprobación con velocidades $v \geq 220$ km/h para carga de tráfico real. (1 tren sin coeficiente de impacto tipo AVE)

Con trenes tipo AVE, de carga por metro lineal (+ peso propio del tablero de la seguridad) $q \approx 7'14$ t/ml.

Se ha calculado con $q = 12$ t/ml $\Rightarrow$ se usará la fracción $\frac{7'14}{12} = 0'78$.

Luego con $\theta_1+\theta_2 = 22\cdot10^{-4}$ rad en el apoyo extrd ⇒

$22\cdot10^{-4} \cdot 0'178 = \underline{3'923\cdot10^{-4}\ rad}$

Como $\theta_{adm} = \frac{4\cdot10^{-3}}{h(m)}$ con $h = 5'75$m ⇒

$\theta_{adm} = \frac{4\cdot10^{-3}}{5'75\ m} = 6'95\cdot10^{-4}$ rad $> 3'923\cdot10^{-4}$ rad ⇒

cumple

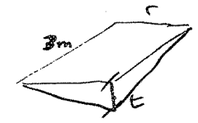
En apoyo interd ⇒ $\theta_1+\theta_2 = 2\cdot0'0019 = \underline{0'0038 rad}$.

$0'0038 \cdot 0'178 = \underline{0'000676 rad}$.

$\theta_{adm} = \frac{4\cdot10^{-3}}{(2'5+0'75)} = 11'1\cdot10^{-4}$ rad $> 6'76\cdot10^{-4}$ rad ⇒

cumple.

· Alabeo permitido en el tablero:



$V > 220$ km/h ⇒ $t \leq 1'5 \cdot \beta(-m)/3m$

con $\beta = 1'78 \cdot r^2/(r+c)^2$

Donde r = separación entre ejes de rodadura ⇒ Se usará

1'5 = separación de vías ⇒ $\beta = 1'78 \cdot \frac{1'5^2}{(1'5+0'5)^2} = \underline{1'00125}$

Luego $t \leq 1'5 \cdot 1'00125\ mm/3m = \underline{0'001502\ m/3m}$

Con $\Delta\theta$ entre 2 ejes 320 μrad entre ejes 6 y 7 separados 5'716m

$\frac{320}{5'716}\cdot10^{-6}\ \frac{rad}{m} = 5'598\cdot10^{-5}\ rad/m$

En 3 metros $5'598\cdot10^{-5}\cdot3$ rad $= 1'679\cdot10^{-4}$ rad en 3m por el incuento del giro

En una separación de carriles de r = 1'5m ⇒ $1'679\cdot10^{-4}\cdot1'5\ m = \underline{2'519\cdot10^{-4}m}$

Luego 0'252 mm en 3m $<$ 1'502 mm en 3m ⇒ Luego cumple.

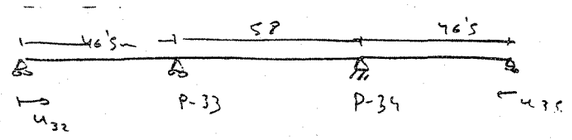
2.3.15 Juntas y aparatos de apoyo

2.3.15.1 Juntas

IDEAM

Junta en pila P-32 y P-35.

Con movimientos de pila P-32 pésimos



u_{32} hacia Pila 34 = 0'073 m

u_{32} hacia estribo contrario = -0'021

δ_{TOTAL} = 0'094 m.

Vano ldcha ⇒ $u = \frac{34'5}{2} \cdot 0'7 \cdot 10^{-3} = 0'012$ m

u contrario = $\frac{34'5}{2} \cdot 0'7 \cdot 10^{-3} = 0'0034$ m

δ_{TOTAL} = 0'0155 m.

Junta con carrera mínima de 0'0155 + 0'094 = 0'109 m.

Apertura máxima = 0'073 + 0'012 = 0'085
Cierre máximo = 0'021 + 0'0034 = 0'0244
Carrera total = 0'109 m

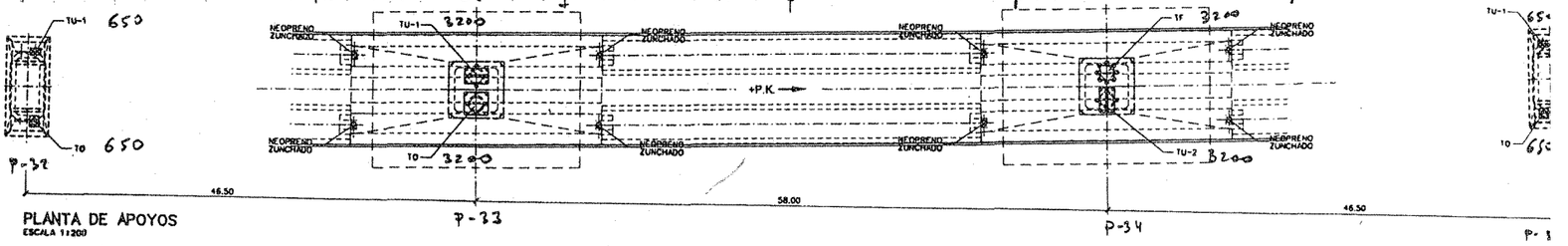
2.3.15.2. Aparatos de apoyo

Apoyo	Aparato de Apoyo	Rmax (Tn)	Rmin (Tn)	Corrimiento long.(mm.)	Corrimiento long.(mm.)	Fza. Transversal(Tn)	Fza. longitudinal(Tn)
P-32 izq	TU-1-650	631.18	220.87	73	-21	66	0
P-33 izq	TU-1-3200	2715.36	853.33	41	-12	151	0
P-34 izq	TF-3200	2715.36	853.33	0	0	151	396
P-35 izq	TU-1-650	631.18	220.87	34	-10	66	0
P-32 der	TO-650	638.56	236.89	73	-21	0	0
P-33 der	TO-3200	2786.45	934.13	41	-12	0	0
P-34 der	TU-2-3200	2786.45	934.13	0	0	0	396
P-35 der	TO-650	638.56	236.89	34	-10	0	0

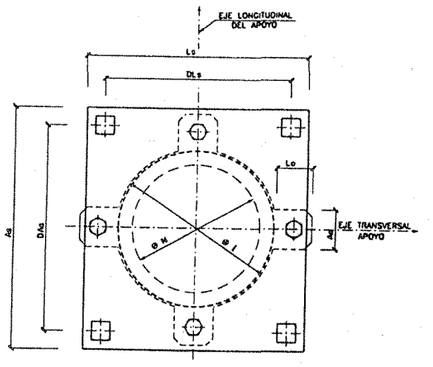
Nota: Los valores de Reacciones y Movimientos son en valores caracteristicos , sin mayorar.
Y los movimientos positivos según el avance del P.K

TU-1 Apoyo unidireccional longitudinal
TU-2 Apoyo unidireccional transversal
TO Apoyo multidireccional
TF Apoyo fijo

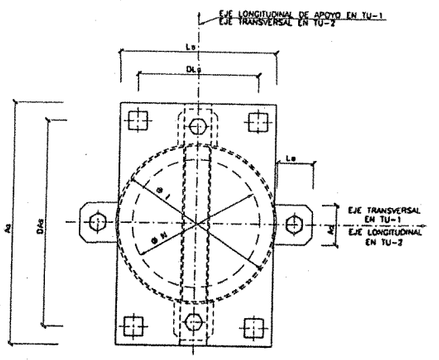
Según esto el esquema de aparato de apoyo será el siguiente:



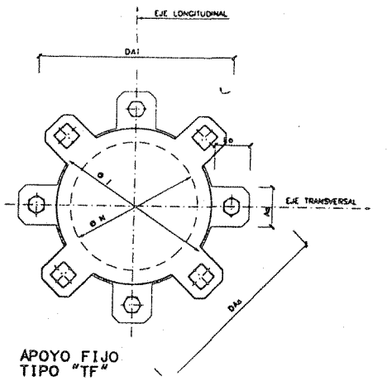
PLANTA DE APOYOS
ESCALA 1:200



APOYO MULTIDIRECCIONAL
TIPO "TO"



APOYO UNIDIRECCIONAL
TIPO "TU-1" (LONGITUDINAL)
TIPO "TU-2" (TRANSVERSAL)

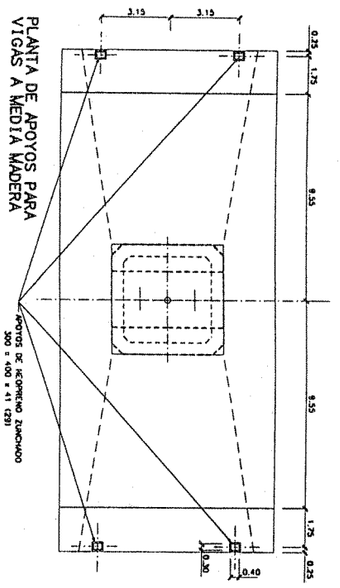


APOYO FIJO
TIPO "TF"

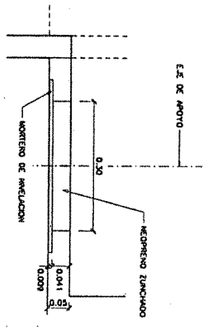
IDEAM

En las pilas P-32 y P-35 se colocan apoyo de 650 t.
y en pila P-33 y P-34 de 3200 t.

Mientras que en los apoyo a media madera los ejes entre a los capiteles "in situ" se realizan con apoyo de 300 x 400 x 41 (29) Neopreno - Zunchado.



PLANTA DE APOYOS PARA VIGAS A MEDIA MADERA



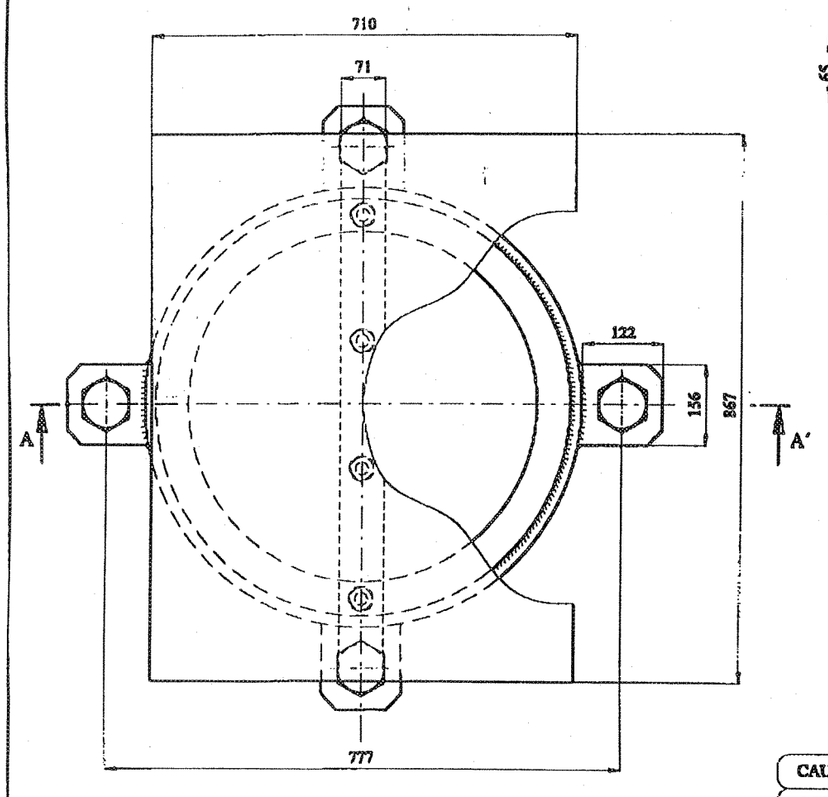
APOYO DE NEOPRENO ZUNCHADO

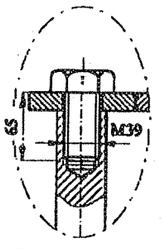
A continuación se detallan los planos de despiece de apoyo a colocar en obra.

TU-650-1-28168

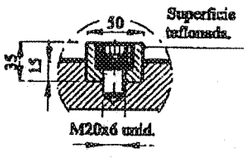
UNIDADES : 1

PESO DEL HIERRO 346 KG

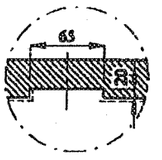




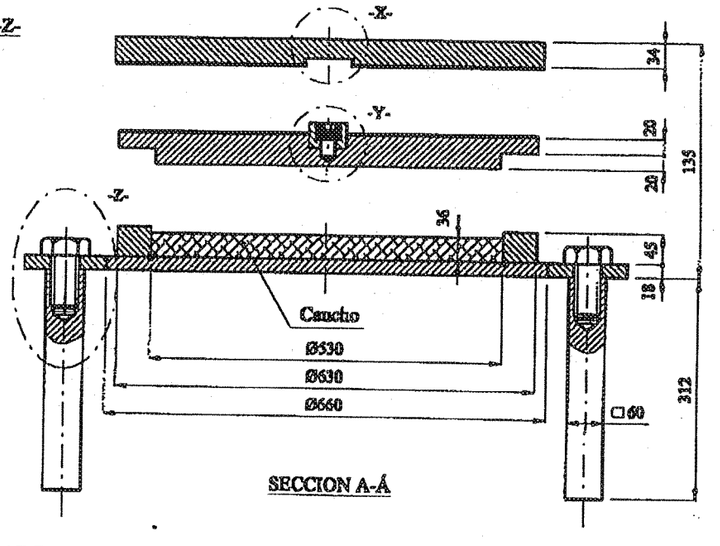
DETALLE -Z-



DETALLE -Y-



DETALLE -X-



SECCION A-Á

CALIDAD DE LOS MATERIALES

CAUCHO	NEOPRENO C610C S/IESA.
ACERO	FE-510 GALV. CALIENTE S/EN 10025.
ACERO INOX	AISI 304.
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

ACCIONES CARACTERISTICAS.

CARGA VERTICAL MAX.	650 Ton
CARGA VERTICAL MIN.	130 Ton
CARGA HORIZONTAL TRANSVERSAL.	66 Ton
DESPLAZAMIENTO LONGITUDINAL (A)	+73/-21 mm

Nº REV.	FECHA	DENOMINACION
1	27/09/2000	Quitamos anclajes superiores.

TRELLEBORG
Infraestructuras y Elastómeros S.A.

DIBUJADO	REVISADO	APROBADO
ILH	ILH	NI
ESCALA	FECHA	
S/E	13/09/2000	

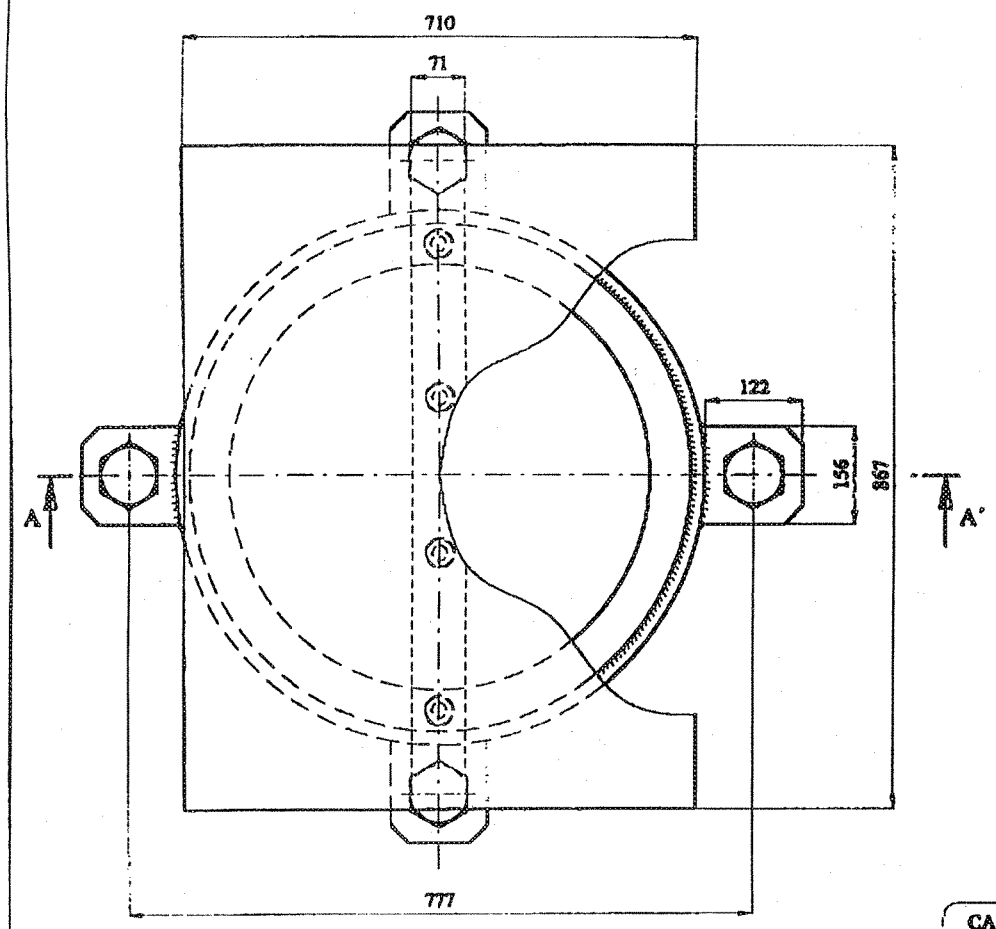
APOYO TOP UNIDIRECC. "UD-650". REF. P32-TU1.
PROYECTO: VIADUCTO RIO JARAMA.
CLIENTE: UTE MEJORADA.

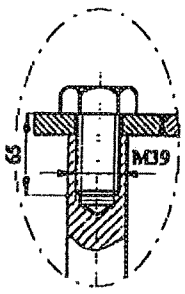
REF. PLANO
TU-650-1-28168

OF 28534.01

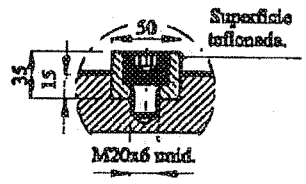
UNIDADES : 1

PESO DEL HIERRO 346 KG

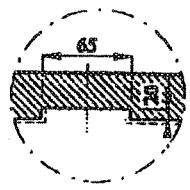




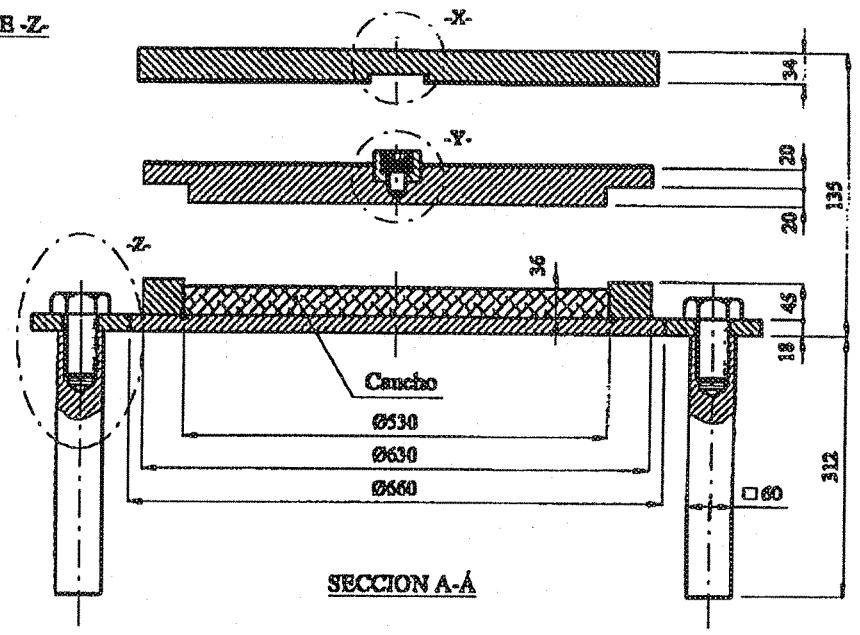
DETALLE -Z-



DETALLE -Y-



DETALLE -X-



SECCION A-Á

CALIDAD DE LOS MATERIALES	
CAUCHO	NEOPRENO C610C S/IESA.
ACERO	FE-510 GALV. CALIENTE S/EN 10025.
ACERO INOX	AISI 304.
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

ACCIONES CARACTERISTICAS.	
CARGA VERTICAL MAX.	650 Ton
CARGA VERTICAL MIN.	130 Ton
CARGA HORIZONTAL TRANSVERSAL.	66 Ton
DESPLAZAMIENTO LONGITUDINAL (A)	+34/-10 mm

Nº REV.	FECHA	DENOMINACION
1	27/09/2000	Quitamos anclajes superiores.

TRELLEBORG
Infraestructuras y Elastómeros S.A.

DIBUJADO	REVISADO	APROBADO
ILH	ILH	NJ
ESCALA	FECHA	
S/E	13/09/2000	

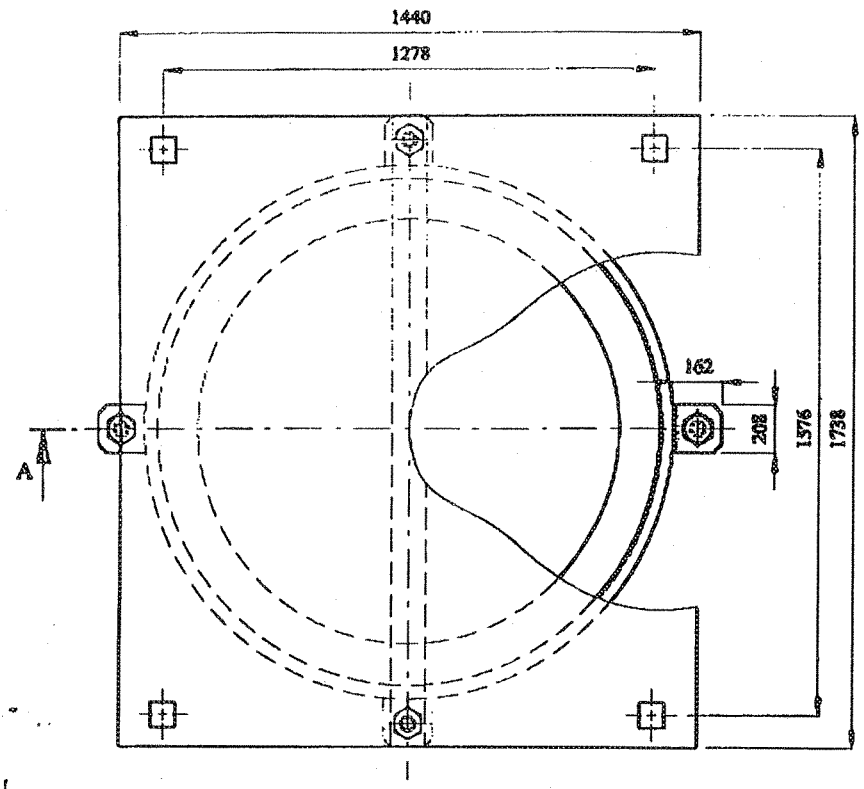
APOYO TOP UNIDIRECC. "UD-650". REF. P35-TU1.
PROYECTO: VIADUCTO RIO JARAMA.
CLIENTE: UTE MEJORADA.

REF. PLANO TU-650-2-28168

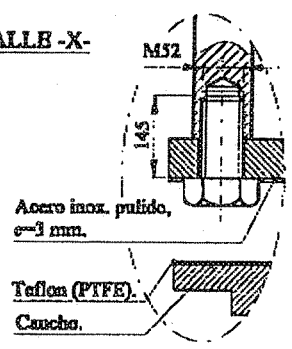
OF 28534.07

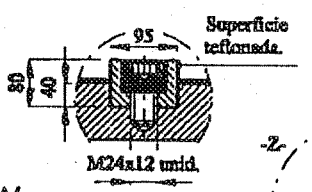
UNIDADES :

PESO DEL HIERRO 2696 KG



DETALLE -X-





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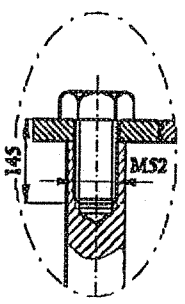
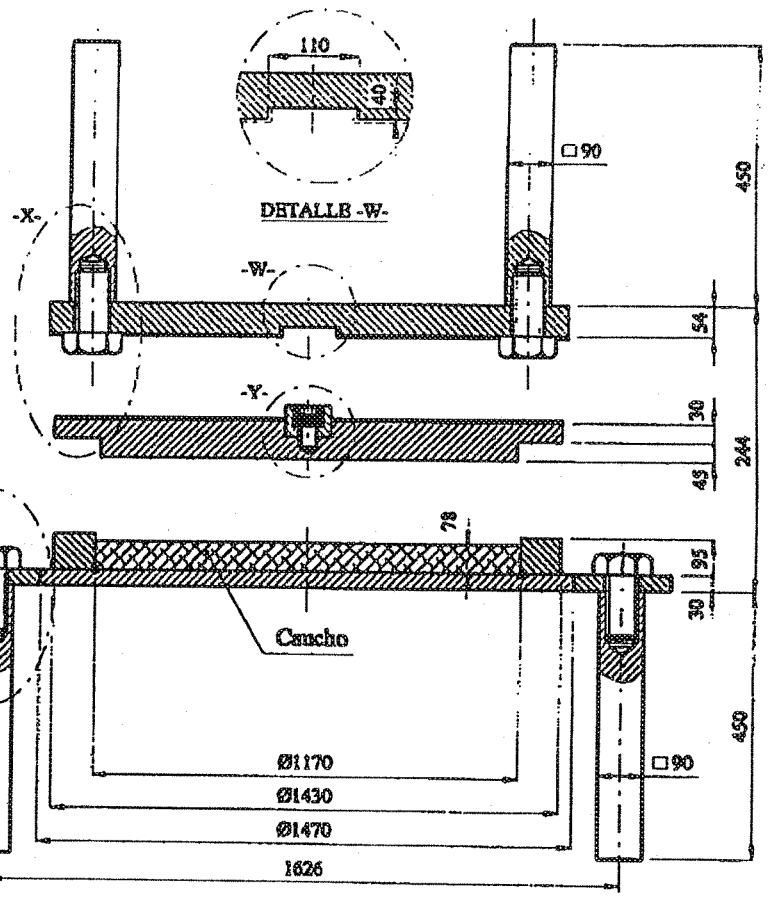


DETALLE -Z-



SECCION A-Á

CALIDAD DE LOS MATERIALES	
CAUCHO	NEOPRENO C610C S/IESA.
ACERO	FE-510 GALV. CALIENTE S/EN 10025.
ACERO INOX	AISI 304.
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

ACCIONES CARACTERISTICAS.	
CARGA VERTICAL MAX.	3200 Ton
CARGA VERTICAL MIN.	640 Ton
CARGA HORIZONTAL TRANSVERSAL.	151 Ton
DESPLAZAMIENTO LONGITUDINAL (A)	+41/-1 mm

TRELLEBORG
Infraestructuras y Elastómeros S.A.

DIBUJADO	REVISADO	APROBADO
ILH	ILH	NJ
ESCALA	FECHA	
S/E	13/09/2000	

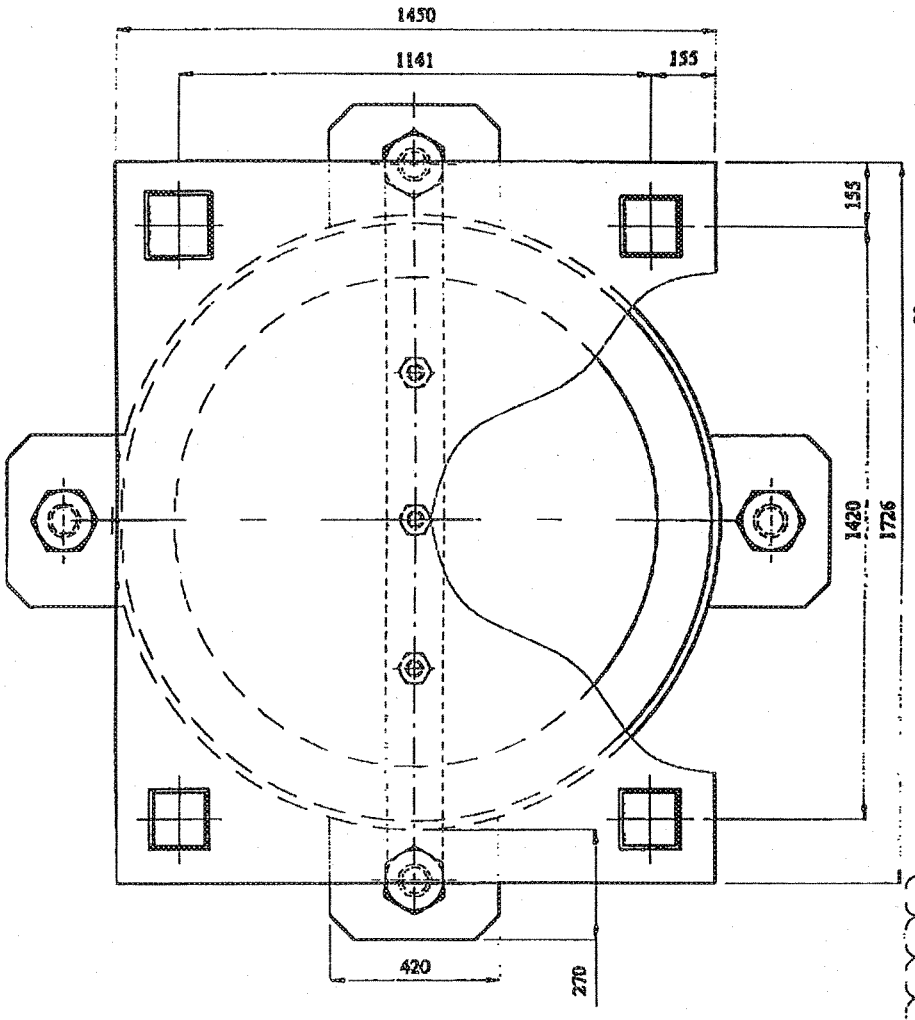
APOYO TOP UNIDIRECC. "UD-3200". REF. P33-TU1.
PROYECTO: VIADUCTO RIO JARAMA.
CLIENTE: UTE MEJORADA.

REF. PLANO TU-3200-1-28168

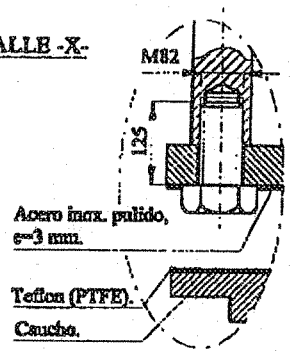
OF 28534.03

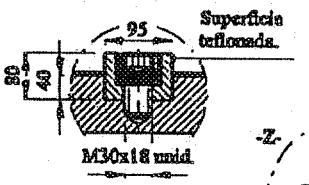
UNIDADES :

PESO DEL HIERRO 2887 KG

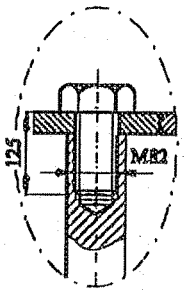


DETALLE -X-

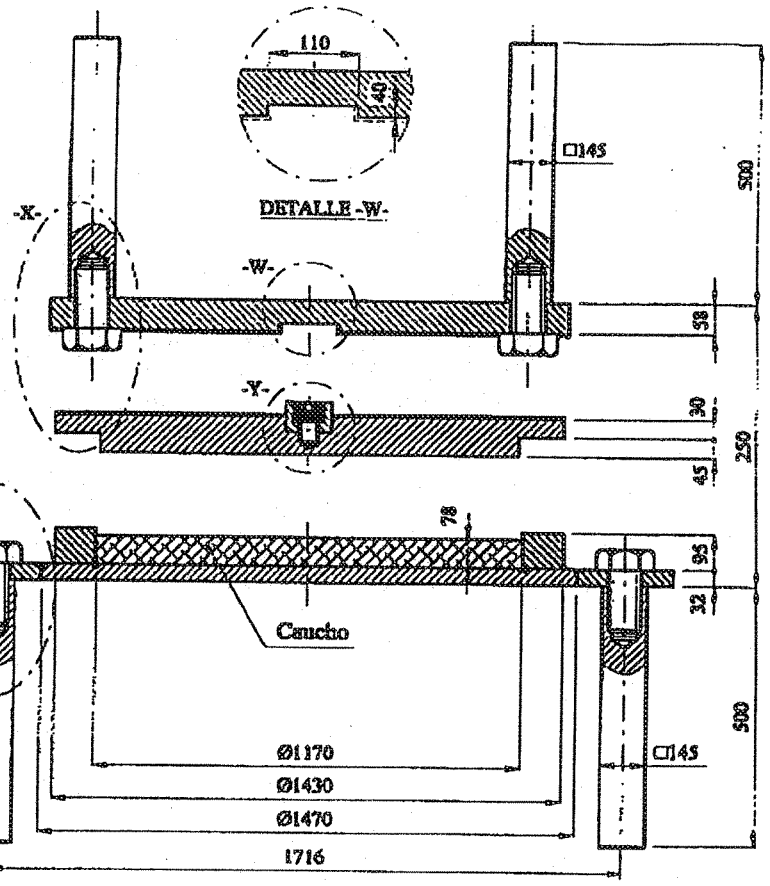




DETALLE -Y-



DETALLE -Z-



SECCION A-A

CALIDAD DE LOS MATERIALES

CAUCHO	NEOPRENO C610C S/IESA.
ACERO	FE-510 GALV. CALIENTE S/EN 10025.
ACERO INOX	AISI 304.
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

ACCIONES CARACTERISTICAS.

CARGA VERTICAL MAX.	3200 Ton
CARGA VERTICAL MIN.	640 Ton
CARGA HORIZONTAL TRANSVERSAL.	396 Ton
DESPLAZAMIENTO LONGITUDINAL (A)	±0 mm

TRELLEBORG
Infraestructuras y Elastómeros S.A.

DIBUJADO	REVISADO	APROBADO
ILH	ILH	NJ
ESCALA	FECHA	
S/E	13/09/2000	

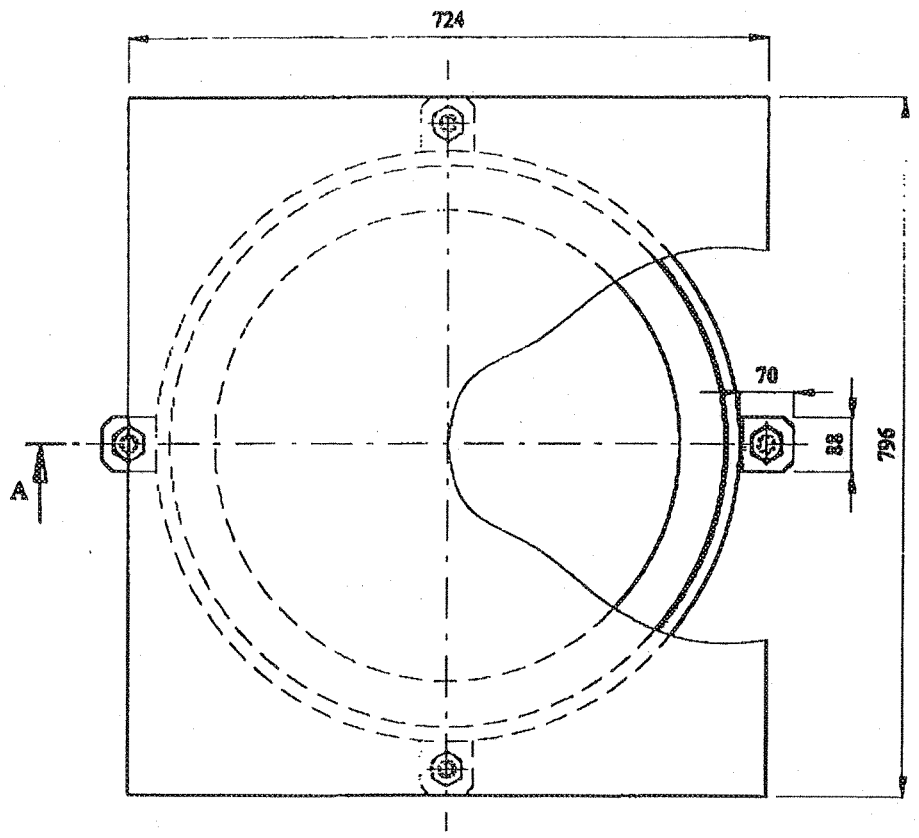
APOYO TOP UNIDIRECC. "UD-3200". REF. P34-TU2.
PROYECTO: VIADUCTO RIO JARAMA.
CLIENTE: UTE MEJORADA.

REF. PLANO
TU-3200-2-28168

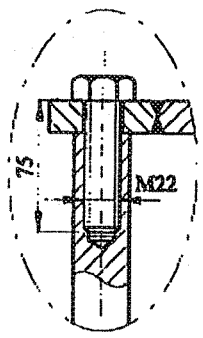
OF 28534.06

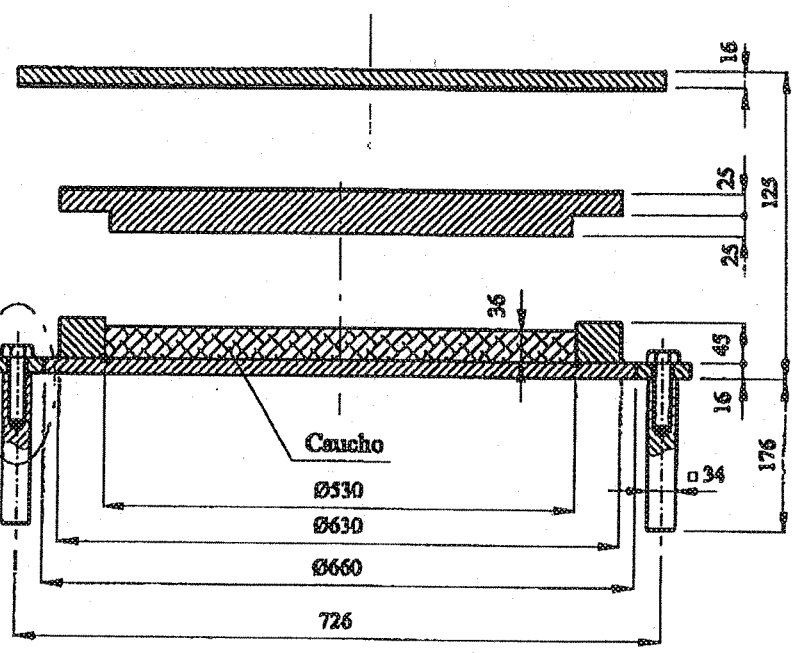
UNIDADES: 1

PESO DEL HIERRO : 260 KG



DETALLE -X-





SECCION A-A'

CALIDAD DE LOS MATERIALES

CAUCHO	NEOPRENO C610C S/IESA.
ACERO	FE-510 GALV. CALIENTE S/EN 10025.
ACERO INOX	AISI 304.
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

ACCIONES CARACTERISTICAS.

CARGA VERTICAL MAX.	650Ton
CARGA VERTICAL MIN.	130Ton
DESPLAZAMIENTO TRANSVERSAL (L)	± 25 mm
DESPLAZAMIENTO LONGITUDINAL (A)	+73/-21 mm

Nº REV.	FECHA	DENOMINACION
1	27/09/2000	Quitamos anclajes superiores.

TRELLEBORG
Infraestructuras y Elastómeros S.A.

DIBUJADO	REVISADO	APROBADO
ILH	ILH	NJ
ESCALA	FECHA	
S/E	13/09/2000	

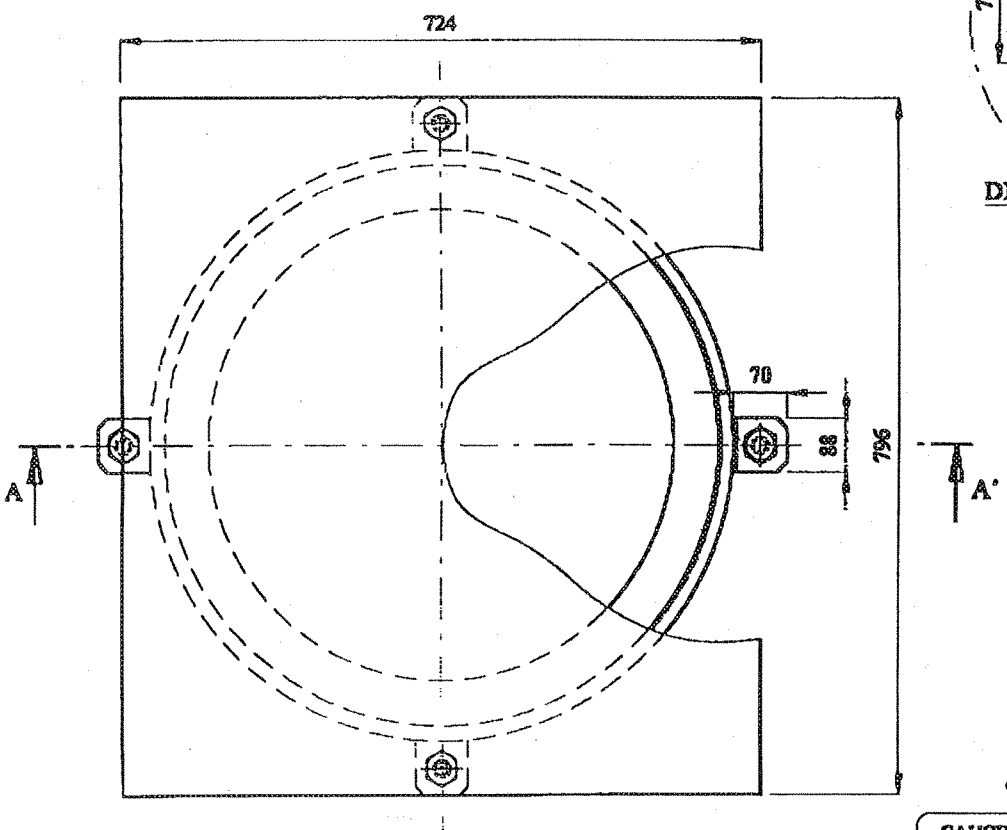
APOYO TOP MULTI-DIREC. "MD-650" REF. P32-T0.
PROYECTO: VIADUCTO RIO JARAMA.
CLIENTE: UTE MEJORADA.

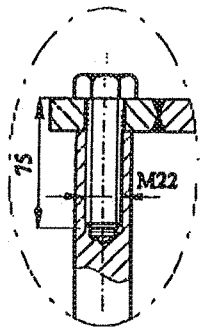
REF. PLANO
TM-650-1-28168

OF 28534.02

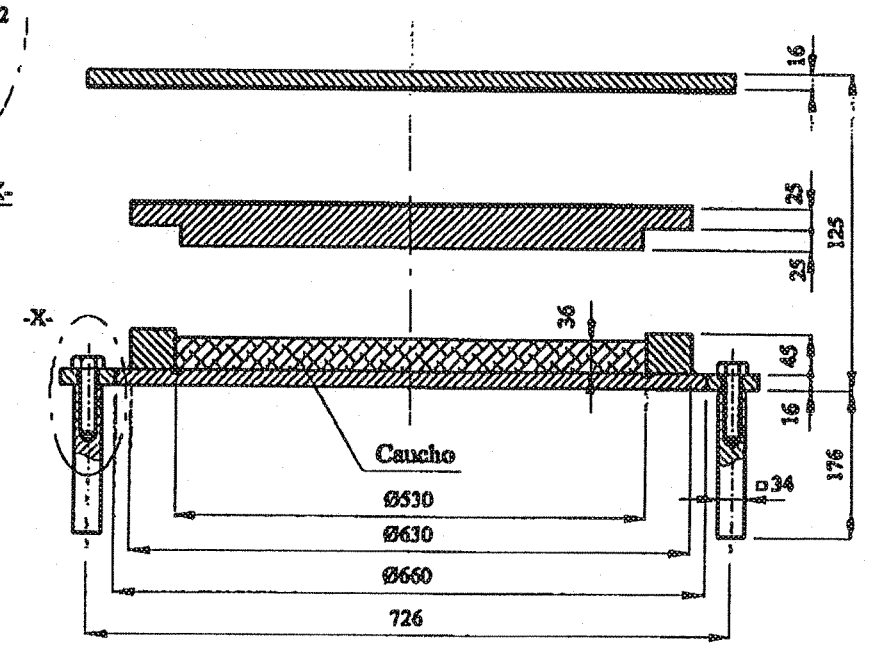
UNIDADES: 1

PESO DEL HIERRO : 260 KG





DETALLE -X-



SECCION A-A'

CALIDAD DE LOS MATERIALES

CAUCHO	NEOPRENO C610C S/IESA.
ACERO	FE-510 GALV. CALIENTE S/EN 10025.
ACERO INOX	AISI 304.
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

ACCIONES CARACTERISTICAS.

CARGA VERTICAL MAX.	650Ton
CARGA VERTICAL MIN.	130Ton
DESPLAZAMIENTO TRANSVERSAL (L)	± 25 mm
DESPLAZAMIENTO LONGITUDINAL (A)	+34/-10 mm

Nº REV.	FECHA	DENOMINACION
1	27/09/2000	Quitamos anclajes superiores.

TRELLEBORG Infraestructuras y Elastómeros S.A.

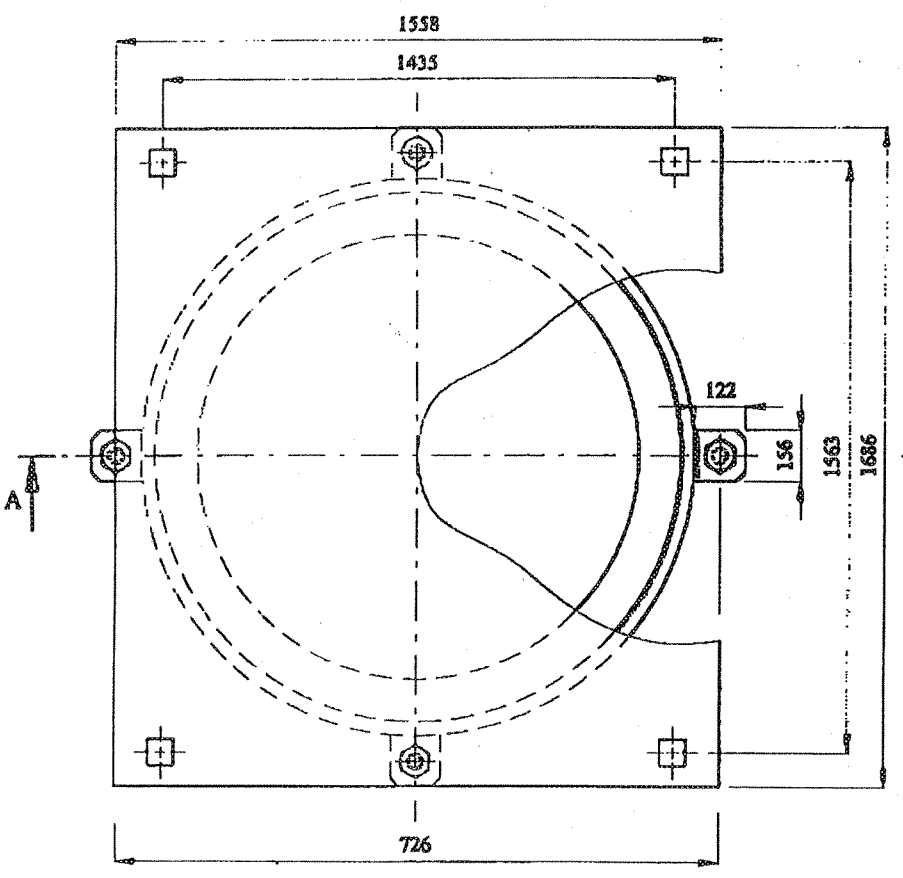
DIBUJADO	REVISADO	APROBADO
ILH	ILH	NJ
ESCALA S/E	FECHA 13/09/2000	

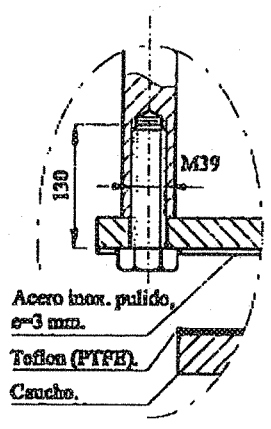
APOYO TOP MULTI-DIREC. "MD-650" REF. P35-T0.
PROYECTO: VIADUCTO RIO JARAMA.
CLIENTE: UTE MEJORADA.

REF. PLANO TM-650-2-28168

OF 28534.08

TM-3200-1-28168





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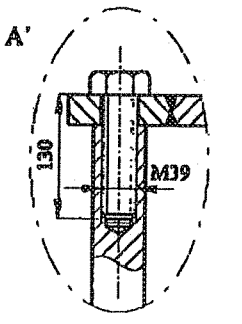
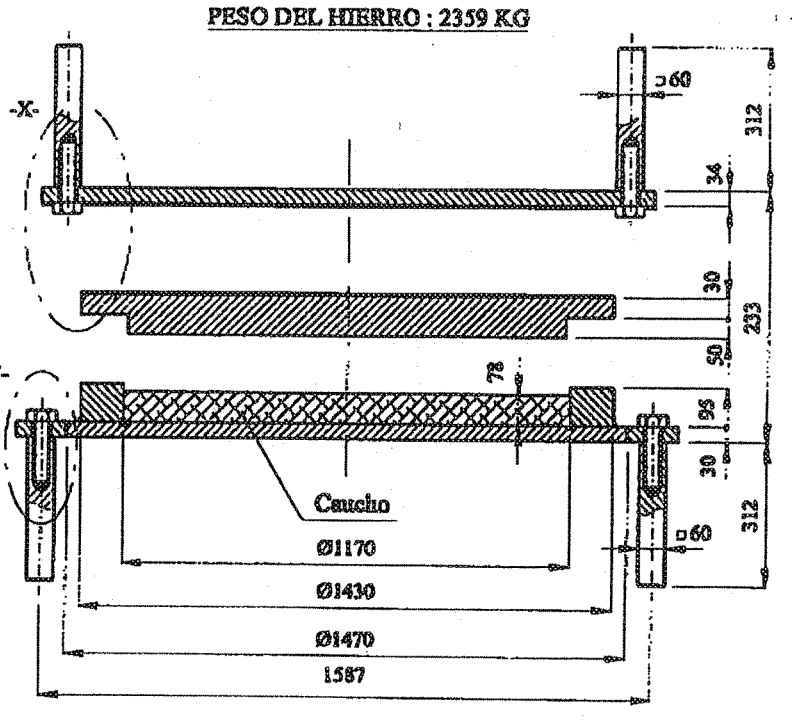


DETALLE -Y-

UNIDADES:

PESO DEL HIERRO : 2359 KG



SECCION A-A'

CALIDAD DE LOS MATERIALES

CAUCHO	NEOPRENO C610C S/IESA.
ACERO	FE-510 GALV. CALIENTE S/EN 10025.
ACERO INOX	AISI 304.
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

ACCIONES CARACTERISTICAS.

CARGA VERTICAL MAX.	3200 Ton
CARGA VERTICAL MIN.	640 Ton
DESPLAZAMIENTO TRANSVERSAL (L)	± 25 mm
DESPLAZAMIENTO LONGITUDINAL (A)	+41/-1 mm

TRELLEBORG Infraestructuras y Elastómeros S.A.

DIBUJADO	REVISADO	APROBADO
ILH	ILH	NJ
ESCALA S/E	FECHA 13/09/2000	

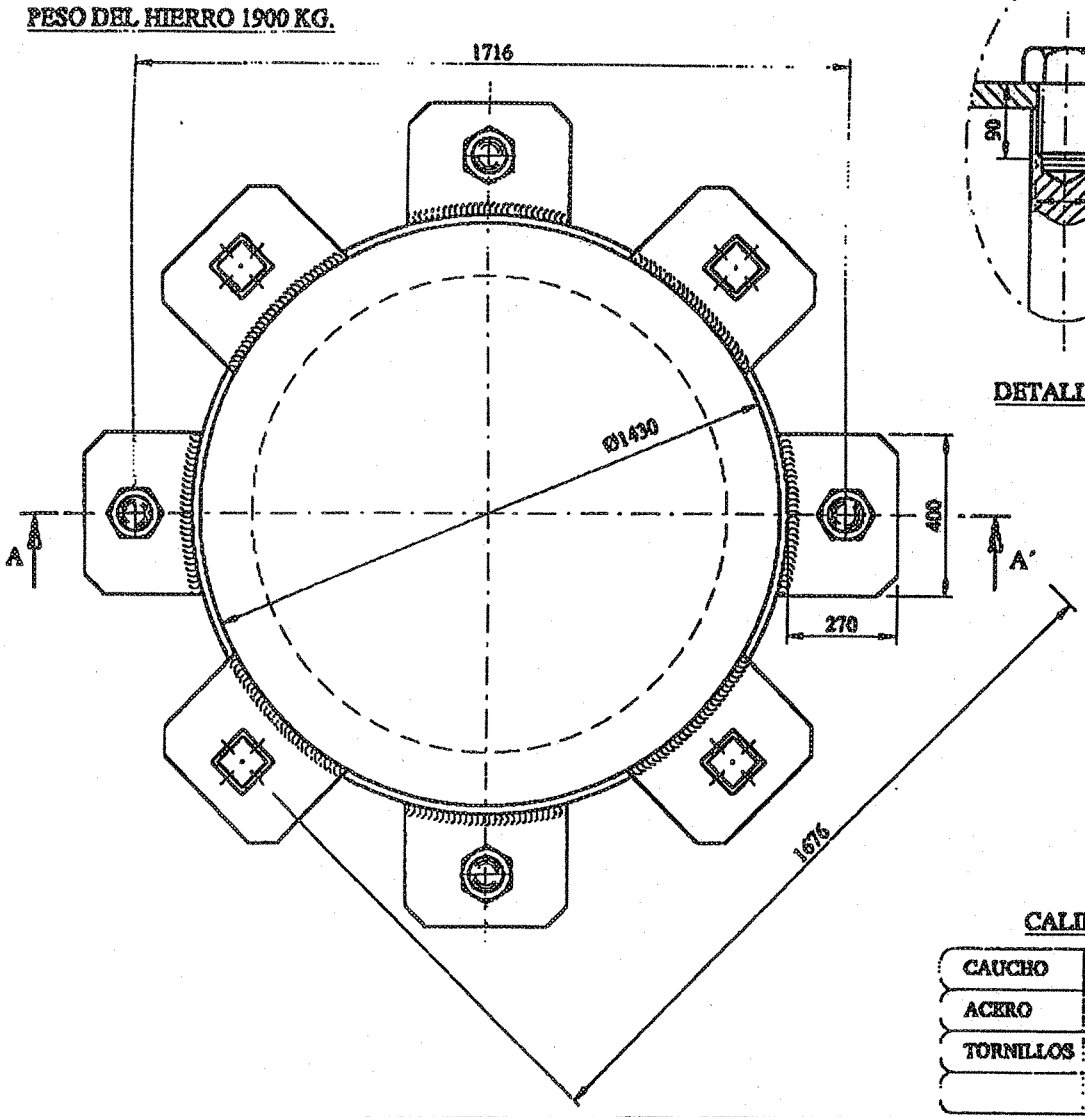
APOYO TOP MULTI-DIREC. "MD-3200" REF. P33-T0.
PROYECTO: VIADUCTO RIO JARAMA.
CLIENTE: UTE MEJORADA.

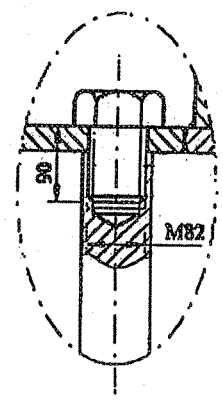
REF. PLANO TM-3200-1-28168

OF 28534.04

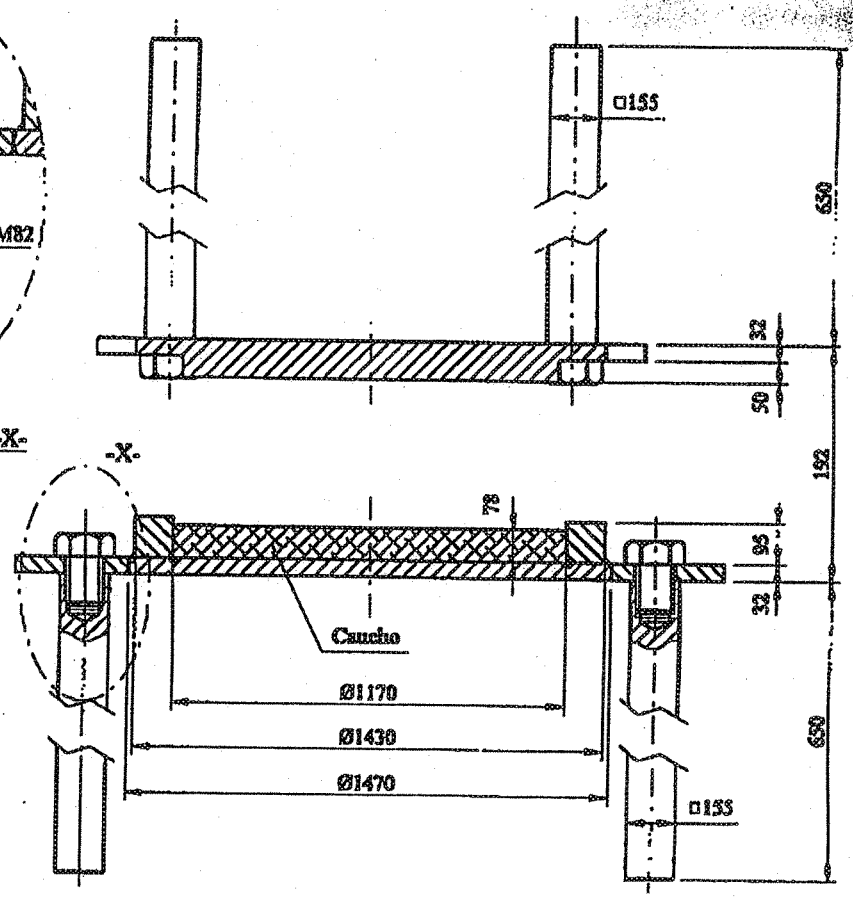
UNIDADES:

PESO DEL HIERRO 1900 KG.





DETALLE -X-



SECCION A-A'

CALIDAD DE LOS MATERIALES

CAUCHO	NEOPRENO C610C S/IESA.
ACERO	AE275B GALV. CALIENTE S/HN 10025
TORNILLOS	CALIDAD 8.8 ZINCADOS S/EA-95.

CARACTERISTICAS/ACCIONES.

CARGA VERTICAL MAX.	3200 Ton
CARGA VERTICAL MIN.	640 Ton
CARGA HORIZONTAL LONGITUDINAL	396 Ton
CARGA HORIZONTAL TRANSVERSAL	151Ton

TRELLEBORG
Infraestructuras y Elastómeros S.A.

DIBUJADO ILH	REVISADO ILH	APROBADO NJ	APOYO TOP FIJO "F-3200" REF. P34-TF. PROYECTO: VIADUCTO DEL JARAMA. CLIENTE: UTE MEJORADA..
ESCALA S/E	FECHA 13/09/2000		

REF. PLANO TF-3200-1A-28168

OF 28534.05

APOYO TOP UNIDIRECCIONAL 650

			SERVICIO	MAYOR (1,5)	
EMPRESA:	UTE MEJORADA	CARGA VERT. MÁX. (Vs/Vu):	650	975	Ton
OBRA:	VIADUCTO RIO JARAMA	CARGA VERT. MÍN. (Vmín):	160,00		Ton
REF:	P32 - TU1	CARGA HORIZ. TRAN. (Hs/Hu):	66,00	99	Ton
PLANO:	P32 - TU1	DESPLAZAMIENTO (-/+):	60		mm
		GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^R (Dn):	530 mm
2-ESPESOR NEOPRENO^R (En):	36 mm
3-Nº ANCLAJES INFERIOR (n):	4 UDS
3-Nº ANCLAJES SUPERIOR (ns):	4 UDS
4-DIAMETRO TORNILLOS (MT):	39 mm
5-LONGITUD SOLDADURA CAZUELA (S):	3.642 mm
6-GARGANTA MIN.SOLDADURA (g):	10 mm
7-ESPESOR CHAPA SUPERIOR (Es):	34 mm
8-ESPESOR CHAPA INFERIOR (Ei):	18 mm
9-ANCHO CHAPA SUPERIOR (As):	867 mm
10-LARGO CHAPA SUPERIOR (Ls):	710 mm
11-DIÁMETRO CHAPA INFERIOR (Di):	660 mm
12-AREA DE PISTÓN (Ap):	2.205 cm^2
13-DIST SUP. CENTRO AGUJ-BORDE FRONT (esf):	65 mm
14-DIST SUP. CENTRO AGUJ-BORDE LATER (esl):	62 mm
15-DIST INF. CENTRO AGUJ-BORDE FRONT (eif):	64 mm
16-DIST INF. CENTRO AGUJ-BORDE LATER (eil):	78 mm
17-ANCHO OREJETA ANCLAJE (Ao):	156 mm
18-LARGO OREJETA ANCLAJE (Lo):	122 mm
19-ESP. ANILLO DE CONFINAMIENTO (Ec):	50 mm
20-LONGITUD ROSCADA (Lr):	31 mm
21-LADO DE VAINAS DE ANCLAJE (Da):	60 mm
22-LONGITUD DE VAINAS DE ANCLAJE (La):	312 mm
23-DIAMETRO DISCO P.T.F.E. (P):	630 mm
24-LONGITUD DE GUIA (Lg):	630 mm
25-ESPESOR DE GUIA (Ag):	50 mm
26-ALTURA TOTAL GUIA (Hg):	35 mm
27-EMPOTRAMIENTO EN DISCO (He):	15 mm
28-Nº TORNILLOS GUIA (Ng):	6 mm
29-METRICA TORNILLOS GUIA (MTg):	20 mm
30-HOLGURA COMPRESIÓN (h1):	11 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025

Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2

Infraestructuras y Elastómeros, S.A.
c/ San Vicente, 25 - E 01440 Izarra (Alava) - Spain - Tel: 34 945 437 090 - Fax: 34 945 437 050
Internet: www.trelleborg.com - R. Mercantil de Alava. Tomo 771. Folio 208. Hoja VI-5303 Insc. 1ª - C.I.F. A-01241744

TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

2.- TORNILLOS: Calidad 8.8			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
TORNILLOS SUJECCIÓN GUÍA (Calidad 8.8)			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
3.- CAUCHO: Neopreno^R -/+ 65 ºSh A			
Compresión admisible en servicio:	300 Kg/cm^2		
Módulo de cizalla (G):	10 Kg/cm^2		
4.- HORMIGÓN Y MORTERO:			
Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2		
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2		
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2		
5.- P.T.F.E - TEFLON^R:			
Espesor medio de lámina:	2,0 mm		
Resistencia a tracción:	200-300 Kg/cm^2		
Tensión de cálculo a compresión (Tc):	400 Kg/cm^2		

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Máx(Ls,As)/50

34 mm > 17 mm OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50

18 mm > 13 mm OK

1.3- Esfuerzo cortante en disco (Tp): Tp=Hu/Ap < (fy/SQR3/&o) con &o=1,1
s/ENV 1993-1-1 5.4.6

44,90 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eif/3do ; 1)
do = MT + 2

24.750 Kg < 36.966 Kg OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): Fapl=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eil/3do ; 1)
do = MT + 2

24.750 Kg < 45.407 Kg OK

1.6- Aplastamiento chapa superior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esf/3do ; 1)
do = MT + 2

24.750 Kg < 71.475 Kg OK

1.7- Aplastamiento chapa superior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esl/3do ; 1)
Hroz=1,2*Vu * m (Ver punto 6.2)
do = MT + 2

Infraestructuras y Elastómeros, S.A.
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	6.351 Kg	<	67.626 Kg	OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2

	1127,05 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2

	983,73 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.10- Desgarro chapa superior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; Ls)
Lv= Distancia entre anclajes DLs
L1=MIN(esf;5*MT)
L2=(esl-0,5*do)*fu/fy con do=MT+2

	103,42 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.11- Desgarro chapa superior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; As)
Lv= Distancia entre anclajes DAs
L1=MIN(esl;5*MT)
L2=(esf-0,5*do)*fu/fy con do=MT+2
Hroz=1,2*Vu * m (Ver punto 6.2)

	21,55 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

	1082,68 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

	881,41 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.14- Cortadura chapa superior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

	573,18 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.15- Cortadura chapa superior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

	466,63 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.16- Tracción en sección neta orejetas (Fn): s/ENV 1993-1-1 5.4.3.

Fn=Hu/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1,25

	24.750 Kg	<	90.622 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz): s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

	2343,47 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.18- Tensión cortante en guía (Tguia): s/ENV 1993-1-1 5.4.6

Tguia=Hu/(Lg*Ag) < (fy/SQR3/&o) con &o=1,1

	314,29 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.19- Compresión sobre guía (Tcguia): s/ENV 1993-1-1 5.4.4

Tcguia=Hu/(Lg*(Hg-He) < (fy/&o) con &o=1,1

	785,71 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.20- Compresión de guía sobre empotramiento (Tcemp):

Tcemp=Hu/(Lg*He) < (fy/&o) con &o=1,1

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ISO 9001
G.Fila – 8000003 – IE150

TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

s/ENV 1993-1-1 5.4.4

	1047,62 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.21- Flexión de guía por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu*(Hg-He)/2
wr =1/6*Lg*Ag^2

	377,14 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.22- Flexión + cortadura en guía (Tflex+Tguia): s/ENV 1993-1-1 5.4.7

Si Tguia<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tguia>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tguia/(fy/SQR3)-1)^2 = 0,48

	377,14 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.23- Flexión + cortadura en guía (Tflex+Tcorej): s/ Von Mises

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

	662,24 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.24- Tensión cortante en tornillos guía (Tt): s/ENV 1993-1-1 6.5.5.

Tt=Hroz/Ng/Ae < 0,6*fub/&b con &b=1,25
Hroz=1,2*Hu * m (Ver punto 6.2)
Ae=Area resistente

	39,59 Kg/cm^2	<	3.840 Kg/cm^2	OK

1.25- Tracción por vuelco en tornillos guía (Trt): s/ENV 1993-1-1 5.4.3.

Trt=Hu*Hg*4/(Ng*3,14*Ag*de^2) < 0,9*fub/&b con &b=1,25
de= diámetro resistente = 0,86*MTg s/NBE EA-95 2.5.3

	4973,42 Kg/cm^2	<	5.760 Kg/cm^2	OK

1.26- Cortante + Tracción en tornillos guía: s/ENV 1993-1-1 6.5.5.

Tt/(0,6*fub/&b) + Trt/ (1,4*(0,9*fub*&b))< 1

	0,63	<	1	OK

1.27- Tensión cortante en orejetas (Tcorej): s/ENV 1993-1-1 5.4.6

Tcorej=Hu/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1

	881,41 Kg/cm^2	<	1.863 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Tcorej=(Hu-Hroz)/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1
con Hroz = mu * Vmin

	240 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.28- Flexión en orejetas por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu/n*(Dai-Di)/2
wr =1/6*Ei*Ao^2

	1.983 Kg/cm^2	<	3.227 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Mom = (Hu-Hroz)/n*(Dai-Di)/2 con Hroz= mu*Vmin

	541 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.29- Flexión + cortadura en orejetas (Tflex+Tcorej): s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,01958

	1983,17 Kg/cm^2	<	3.227 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

	541 Kg/cm^2	<	3.227 Kg/cm^2	OK

mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,58589

1.30- Flexión + cortadura en orejetas (Tflex+Tcorej):

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

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G.Fila – 8000003 – IE150

s/ Von Mises (Sin rozamiento)

2502,72 Kg/cm^2	<	3.227 Kg/cm^2	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct):

Tct=Hu/n/Ae < 0,6*fub/&b con &b=1,25

Ae=Area resistente con de= diámetro resistente = 0,86*MT

s/ENV 1993-1-1 6.5.5.

2591,11 Kg/cm^2	<	3.840 Kg/cm^2	OK

2.2- Longitud roscada mínima (Lr):

Lr > MAX (MT/2,20mm)

31 mm	>	20 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P):

P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

294,78 Kg/cm^2	<	300 Kg/cm^2	OK

3.2- Altura de neopreno (En):

En>máx(Dn/2*a/0,15 ; 12 mm)

36 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t):

t=h1-Dn/2*a > 5 mm

11 mm	>	5 mm	OK

4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft):

Ft=Vs/(3,14*(P/2)^2) < fct

209 Kg/cm^2	<	300 Kg/cm^2	OK

4.2- Compresión mortero de asiento (Fm):

Fm=Vs/(3,14*(Di/2)^2) < fm

190 Kg/cm^2	<	400 Kg/cm^2	OK

4.3- Compresión hormigón de pila (Fp):
(No se tiene en cuenta el cono de reparto del asiento de mortero)

Fp=Vs/(3,14*(Di/2)^2) < fcp

190 Kg/cm^2	<	300 Kg/cm^2	OK

4.4- Compresión por anclajes (Fa):

Fa=Hu/(n*La*Da) < fcp

132 Kg/cm^2	<	300 Kg/cm^2	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1):
s/ENV 1993-1-1 6.6.5.3.

Ts1=Hu/S/g < fu/SQR3/&w/BETA con &w=1,25

BETA= 0,9

272 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.2- Tensión producida por compresión neopreno (Ts2):
s/ENV 1993-1-1 6.6.5.3.

Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,25

727 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.3- Tensión total (Tst):
s/ENV 1993-1-1 6.6.5.3.

Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

999 Kg/cm^2	<	2.617 Kg/cm^2	OK

6.- P.T.F.E - TEFLON^R

6.1- Compresión máxima (Ts):

Ts=Vs/(3,14*(P/2)^2-Lg*Ag) < Tc

344 Kg/cm^2	<	400 Kg/cm^2	

6.2- Coeficiente de rozamiento P.T.F.E.-Inox.(m):

m=7,33*10^{-2} -15*10^{-5} *Ts

m=	0,02

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ENGINEERED SYSTEMS

NJ-8/09/00

6.3- Fuerza de rozamiento máxima (Hroz):

Hroz=1,2*m*Vs

Fr=	25,41 Ton

7.- VAINAS ANCLAJE:

7.1- Flexión en transmisión de carga horizontal:
s/ENV 1993-1-1 5.4.5

Twv < fy/&o con &o=1,1

Sh=Plastificac. hormigón: fcd/1,5*0,85	170 Kg/cm2	
Coef. Rozamiento acero-hormigón:	0,45	s/MV103-9.4.2.
y= Long. de plastif. en parte inferior de vaina (cm):	0,93	
x= Long. de plastif. en parte superior de vaina (cm):	7,54	
Mmax= ((Hu-Hroz)/n)^2/2/Sh/Da =	22.335 Kg*cm	
Módulo resistente vaina : w=	36 cm3	
Twv = Mmax / w =	620 Kg/cm2	

620 Kg/cm^2	<	3.227 Kg/cm^2	OK

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ENGINEERED SYSTEMS

APOYO TOP MULTIDIRECCIONAL 650

			SERVICIO	MAYOR (1,5)	
EMPRESA:	UTE MEJORADA	CARGA VERT. MÁX. (Vs/Vu):	650	975	Ton
OBRA:	VIADUCTO RIO JARAMA	CARGA VERT. MÍN. (Vmín):	176		Ton
REF:	P32 - TO	DESPLAZ. LONG. As(-/+):	50		Ton
PLANO:	P32 - TO	DESPLAZ. TRANSV. Ls(-/+):	25		mm
		GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^R (Dn):	530 mm
2-ESPESOR NEOPRENO^R (En):	36 mm
3-Nº ANCLAJES INFERIOR (n):	4 UDS
3-Nº ANCLAJES SUPERIOR (ns):	4 UDS
4-DIAMETRO TORNILLOS (MT):	22 mm
5-LONGITUD SOLDADURA CAZUELA (S):	3.642 mm
6-GARGANTA MIN.SOLDADURA (g):	10 mm
7-ESPESOR CHAPA SUPERIOR (Es):	16 mm
8-ESPESOR CHAPA INFERIOR (Ei):	16 mm
9-ANCHO CHAPA SUPERIOR (As):	796 mm
10-LARGO CHAPA SUPERIOR (Ls):	724 mm
11-DIÁMETRO CHAPA INFERIOR (Di):	660 mm
12-AREA DE PISTÓN (Ap):	2.205 cm^2
13-DIST SUP. CENTRO AGUJ-BORDE FRONT (esf):	72 mm
14-DIST SUP. CENTRO AGUJ-BORDE LATER (esl):	36 mm
15-DIST INF. CENTRO AGUJ-BORDE FRONT (eif):	37 mm
16-DIST INF. CENTRO AGUJ-BORDE LATER (eil):	44 mm
17-ANCHO OREJETA ANCLAJE (Ao):	88 mm
18-LARGO OREJETA ANCLAJE (Lo):	70 mm
19-ESP. ANILLO DE CONFINAMIENTO (Ec):	50 mm
20-LONGITUD ROSCADA (Lr):	59 mm
21-LADO DE VAINAS DE ANCLAJE (Da):	34 mm
22-LONGITUD DE VAINAS DE ANCLAJE (La):	176 mm
23-DIAMETRO DISCO P.T.F.E. (P):	630 mm
24-HOLGURA COMPRESIÓN (hi):	16 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025			
Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2	
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2	
2.- TORNILLOS: Calidad 8.8			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
3.- CAUCHO: Neopreno^K -/+ 65 ºSh A			
Compresión admisible en servicio:	300 Kg/cm^2		
Módulo de cizalla (G):	10 Kg/cm^2		
4.- HORMIGÓN Y MORTERO:			
Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2		
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2		
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2		

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ISO 9001

1-Fila - 20/09/03 - IE150

TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

5.- P.T.F.E - TEFLON^R:

Espesor medio de lámina:	2,0 mm
Resistencia a tracción:	200-300 Kg/cm^2
Tensión de cálculo a compresión (Tc):	400 Kg/cm^2

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Máx(Ls,As)/50

16 mm > 16 mm OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50

16 mm > 13 mm OK

1.3- Esfuerzo cortante en disco (Tp): Tp=Hroz/Ap < (fy/SQR3/&o) con &o=1,1
Hroz=1,2*Vu * m (Ver punto 6.2)
s/ENV 1993-1-1 5.4.6

15,43 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): Fapf=Hroz/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eif/3do ; 1)
do = MT + 2

8.507 Kg < 18.451 Kg OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eil/3do ; 1)
do = MT + 2

8.507 Kg < 21.941 Kg OK

1.6- Aplastamiento chapa superior anclajes frontal (Fapf): Fapf=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esf/3do ; 1)
do = MT + 2

8.507 Kg < 35.904 Kg OK

1.7- Aplastamiento chapa superior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esl/3do ; 1)
Hroz=1,2*Vu * m (Ver punto 6.2)
do = MT + 2

8.507 Kg < 17.952 Kg OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): Tdf=Hroz/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2

759,55 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): Tdl=Hroz/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2

665,31 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.10- Desgarro chapa superior por anclajes frontal (Tdf): Tdf=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(Lv+L1+L2 ; Ls)
Lv= Distancia entre anclajes DLs
L1=MIN(esf;5*MT)
L2=(esl-0,5*do)*fu/fy con do=MT+2

77,45 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.11- Desgarro chapa superior por anclajes lateral (Tdl): Tdl=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1

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ISO 900

1-Fila - 20/09/03 - IE150

s/ENV 1993-1-1 6.5.2.2.

Lvef=MIN(Lv+L1+L2 ; As)
Lv= Distancia entre anclajes DAs
L1=MIN(esl;5*MT)
L2=(esf-0,5*do)*fu/fy con do=MT+2
Hroz=1,2*Vu * m (Ver punto 6.2)

66,79 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

718,49 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

604,19 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.14- Cortadura chapa superior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

718,49 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.15- Cortadura chapa superior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

604,19 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.16- Tracción en sección neta orejetas (Fn):
s/ENV 1993-1-1 5.4.3.

Fn=Hroz/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1

8.507 Kg	<	45.440 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz):
s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

2343,47 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.18- Tensión cortante en orejetas (Tcorej):
s/ENV 1993-1-1 5.4.6

Tcorej=Hroz/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1

604,19 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.19- Flexión en orejetas por carga horizontal (Tflex):
s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hroz/n*(Dai-Di)/2
wr =1/6*Ei*Ao^2

1.359 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.20- Flexión + cortadura en orejetas (Tflex+Tcorej):
s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,16845

1359,42 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.21- Flexión + cortadura en orejetas (Tflex+Tcorej):
s/ Von Mises

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

1715,56 Kg/cm^2	<	3.227 Kg/cm^2	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct):
s/ENV 1993-1-1 6.5.5.

Tct=Hroz/n/Ae < 0,6*fub/&b con &b=1,25
Ae=Area resistente con de= diámetro resistente = 0,86*MT

2239,03 Kg/cm^2	<	3.840 Kg/cm^2	OK

2.2- Longitud roscada mínima (Lr):

Lr > MAX (MT/2,20mm)

59 mm	>	20 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P):

P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

294,78 Kg/cm^2	<	300 Kg/cm^2	OK

3.2- Altura de neopreno (En):

En>máx(Dn/2*a/0,15 ; 12 mm)

36 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t):

t=h1-Dn/2*a > 5 mm

16 mm	>	5 mm	OK

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ENGINEERED SYSTEMS

NJ-8/09/00

4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft):

Ft=Vs/(3,14*(P/2)^2) < fct

209 Kg/cm^2	<	300 Kg/cm^2	OK

4.2- Compresión mortero de asiento (Fm):

Fm=Vs/(3,14*(Di/2)^2) < fm

190 Kg/cm^2	<	400 Kg/cm^2	OK

4.3- Compresión hormigón de pila (Fp):
(No se tiene en cuenta el cono de reparto del asiento de mortero)

Fp=Vs/(3,14*(Di/2)^2) < fcp

190 Kg/cm^2	<	300 Kg/cm^2	OK

4.4- Compresión por anclajes (Fa):

Fa=Hroz/(n*La*Da) < fcp

142 Kg/cm^2	<	300 Kg/cm^2	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1):
s/ENV 1993-1-1 6.6.5.3.

Ts1=Hroz/S/g < fu/SQR3/&w/BETA con &w=1,25
BETA= 0,9

93 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.2- Tensión producida por compresión neopreno (Ts2):
s/ENV 1993-1-1 6.6.5.3.

Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,

727 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.3- Tensión total (Tst):
s/ENV 1993-1-1 6.6.5.3.

Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

821 Kg/cm^2	<	2.617 Kg/cm^2	OK

6.- P.T.F.E - TEFLON^R

6.1- Compresión máxima (Ts):

Ts=Vs/(3,14*(P/2)^2) < Tc

295 Kg/cm^2	<	400 Kg/cm^2	

6.2- Coeficiente de rozamiento P.T.F.E.-Inox.(m):

m=7,33*10^{-2} -15*10^{-5} *Ts

m=	0,03

6.3- Fuerza de rozamiento máxima (Hroz):

Hroz=1,2*m*Vs

Fr=	34,03 Ton

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ISO 9001

G:\Fka - 8000003 - IE150

APOYO TOP UNIDIRECCIONAL 3200

EMPRESA:	UTE MEJORADA
OBRA:	VIADUCTO RIO JARAMA
REF:	P33 - TU1
PLANO:	P33 - TU1

	SERVICIO	MAYOR (1,5)	
CARGA VERT. MÁX. (Vs/Vu):	3.200	4.800	Ton
CARGA VERT. MÍN. (Vmín):	789,99		Ton
CARGA HORIZ. TRAN. (Hs/Hu):	151,00	227	Ton
DESPLAZAMIENTO (-/+):	50		mm
GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^R (Dn):	1.170 mm
2-ESPESOR NEOPRENO^R (En):	78 mm
3-Nº ANCLAJES INFERIOR (n):	4 UDS
3-Nº ANCLAJES SUPERIOR (ns):	4 UDS
4-DIAMETRO TORNILLOS (MT):	52 mm
5-LONGITUD SOLDADURA CAZUELA (S):	8.164 mm
6-GARGANTA MIN.SOLDADURA (g):	10 mm
7-ESPESOR CHAPA SUPERIOR (Es):	54 mm
8-ESPESOR CHAPA INFERIOR (Ei):	30 mm
9-ANCHO CHAPA SUPERIOR (As):	1.738 mm
10-LARGO CHAPA SUPERIOR (Ls):	1.440 mm
11-DIÁMETRO CHAPA INFERIOR (Di):	1.470 mm
12-AREA DE PISTÓN (Ap):	10.746 cm^2
13-DIST SUP. CENTRO AGUJ-BORDE FRONT (esf):	430 mm
14-DIST SUP. CENTRO AGUJ-BORDE LATER (esl):	81 mm
15-DIST INF. CENTRO AGUJ-BORDE FRONT (eif):	84 mm
16-DIST INF. CENTRO AGUJ-BORDE LATER (eil):	104 mm
17-ANCHO OREJETA ANCLAJE (Ao):	208 mm
18-LARGO OREJETA ANCLAJE (Lo):	162 mm
19-ESP. ANILLO DE CONFINAMIENTO (Ec):	130 mm
20-LONGITUD ROSCADA (Lr):	91 mm
21-LADO DE VAINAS DE ANCLAJE (Da):	90 mm
22-LONGITUD DE VAINAS DE ANCLAJE (La):	450 mm
23-DIAMETRO DISCO P.T.F.E. (P):	1.430 mm
24-LONGITUD DE GUIA (Lg):	1.430 mm
25-ESPESOR DE GUIA (Ag):	95 mm
26-ALTURA TOTAL GUIA (Hg):	80 mm
27-EMPOTRAMIENTO EN DISCO (He):	40 mm
28-Nº TORNILLOS GUIA (Ng):	12 mm
29-METRICA TORNILLOS GUIA (MTg):	24 mm
30-HOLGURA COMPRESIÓN (h1):	28 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025

Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2

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ISO 9001
1.Fila - 8000003 - IE150

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ENGINEERED SYSTEMS

NJ-8/09/00

2.- TORNILLOS: Calidad 8.8			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
TORNILLOS SUJECCIÓN GUÍA (Calidad 8.8)			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
3.- CAUCHO: Neopreno^R -/+ 65 ºSh A			
Compresión admisible en servicio:	300 Kg/cm^2		
Módulo de cizalla (G):	10 Kg/cm^2		
4.- HORMIGÓN Y MORTERO:			
Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2		
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2		
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2		
5.- P.T.F.E - TEFLON^R:			
Espesor medio de lámina:	2,0 mm		
Resistencia a tracción:	200-300 Kg/cm^2		
Tensión de cálculo a compresión (Tc):	400 Kg/cm^2		

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Máx(Ls,As)/50

54 mm	>	35 mm	OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50

30 mm	>	29 mm	OK

1.3- Esfuerzo cortante en disco (Tp): Tp=Hu/Ap < (fy/SQR3/&o) con &o=1,1
s/ENV 1993-1-1 5.4.6

21,08 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eif/3do ; 1)
do = MT + 2

56.625 Kg	<	82.507 Kg	OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): Fapl=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eil/3do ; 1)
do = MT + 2

56.625 Kg	<	102.151 Kg	OK

1.6- Aplastamiento chapa superior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esf/3do ; 1)
do = MT + 2

56.625 Kg	<	286.416 Kg	OK

1.7- Aplastamiento chapa superior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esl/3do ; 1)
Hroz=1,2*Vu * m (Ver punto 6.2)
do = MT + 2

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Q.Fila - 8000003 - IE150

	31.921 Kg	<	143.208 Kg	OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2

1165,12 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2

1015,40 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.10- Desgarro chapa superior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; Ls)
Lv= Distancia entre anclajes DLs
L1=MIN(esf;5*MT)
L2=(esl-0,5*do)*fu/fy con do=MT+2

114,28 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.11- Desgarro chapa superior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; As)
Lv= Distancia entre anclajes DAs
L1=MIN(esl;5*MT)
L2=(esf-0,5*do)*fu/fy con do=MT+2
Hroz=1,2*Vu * m (Ver punto 6.2)

34,01 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

1123,51 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

907,45 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.14- Cortadura chapa superior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

624,17 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.15- Cortadura chapa superior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

504,14 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.16- Tracción en sección neta orejetas (Fn): s/ENV 1993-1-1 5.4.3.

Fn=Hu/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1,25

56.625 Kg	<	201.382 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz): s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

2010,08 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.18- Tensión cortante en guía (Tguia): s/ENV 1993-1-1 5.4.6

Tguia=Hu/(Lg*Ag) < (fy/SQR3/&o) con &o=1,1

166,73 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.19- Compresión sobre guía (Tcguia): s/ENV 1993-1-1 5.4.4

Tcguia=Hu/(Lg*(Hg-He) < (fy/&o) con &o=1,1

395,98 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.20- Compresión de guía sobre empotramiento (Tcemp): Tcemp=Hu/(Lg*He) < (fy/&o) con &o=1,1

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TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

s/ENV 1993-1-1 5.4.4	395,98 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.21- Flexión de guía por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu*(Hg-He)/2
wr =1/6*Lg*Ag^2

210,60 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.22- Flexión + cortadura en guía (Tflex+Tguia): s/ENV 1993-1-1 5.4.7

Si Tguia<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tguia>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tguia/(fy/SQR3)-1)^2 = 0,70

210,60 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.23- Flexión + cortadura en guía (Tflex+Tcorej): s/ Von Mises

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

357,42 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.24- Tensión cortante en tornillos guía (Tt): s/ENV 1993-1-1 6.5.5.

Tt=Hroz/Ng/Ae < 0,6*fub/&b con &b=1,25
Hroz=1,2*Hu * m (Ver punto 6.2)
Ae=Area resistente

70,53 Kg/cm^2	<	3.840 Kg/cm^2	OK

1.25- Tracción por vuelco en tornillos guía (Trt): s/ENV 1993-1-1 5.4.3.

Trt=Hu*Hg*4/(Ng*3,14*Ag*de^2) < 0,9*fub/&b con &b=1,25
de= diámetro resistente = 0,86*MTg s/NBE EA-95 2.5.3

4752,96 Kg/cm^2	<	5.760 Kg/cm^2	OK

1.26- Cortante + Tracción en tornillos guía: s/ENV 1993-1-1 6.5.5.

Tt/(0,6*fub/&b) + Trt/ (1,4*(0,9*fub*&b))< 1

0,61	<	1	OK

1.27- Tensión cortante en orejetas (Tcorej): s/ENV 1993-1-1 5.4.6

Tcorej=Hu/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1

907,45 Kg/cm^2	<	1.863 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Tcorej=(Hu-Hroz)/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1
con Hroz = mu * Vmin

-517 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.28- Flexión en orejetas por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu/n*(Dai-Di)/2
wr =1/6*Ei*Ao^2

2.042 Kg/cm^2	<	3.227 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Mom = (Hu-Hroz)/n*(Dai-Di)/2 con Hroz= mu*Vmin

-1.163 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.29- Flexión + cortadura en orejetas (Tflex+Tcorej): s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,01311

2041,77 Kg/cm^2	<	3.227 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

-1.163 Kg/cm^2	<	3.227 Kg/cm^2	OK

mu = (2*Tcorej/(fy/SQR3)-1)^2 = 2,26293

1.30- Flexión + cortadura en orejetas (Tflex+Tcorej):

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

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I. Fija - 8000003 - IE150

s/ Von Mises (Sin rozamiento)

2576,67 Kg/cm^2	<	3.227 Kg/cm^2	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct): Tct=Hu/n/Ae < 0,6*fub/&b con &b=1,25

Ae=Area resistente con de= diámetro resistente = 0,86*MT

s/ENV 1993-1-1 6.5.5.

3334,59 Kg/cm^2	<	3.840 Kg/cm^2	OK

2.2- Longitud roscada mínima (Lr): Lr > MAX (MT/2,20mm)

91 mm	>	26 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P): P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

297,79 Kg/cm^2	<	300 Kg/cm^2	OK

3.2- Altura de neopreno (En): En>máx(Dn/2*a/0,15 ; 12 mm)

78 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t): t=h1-Dn/2*a > 5 mm

28 mm	>	5 mm	OK

4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft): Ft=Vs/(3,14*(P/2)^2) < fct

199 Kg/cm^2	<	300 Kg/cm^2	OK

4.2- Compresión mortero de asiento (Fm): Fm=Vs/(3,14*(Di/2)^2) < fm

189 Kg/cm^2	<	400 Kg/cm^2	OK

4.3- Compresión hormigón de pila (Fp): Fp=Vs/(3,14*(Di/2)^2) < fcp

(No se tiene en cuenta el cono de reparto del asiento de mortero)

189 Kg/cm^2	<	300 Kg/cm^2	OK

4.4- Compresión por anclajes (Fa): Fa=Hu/(n*La*Da) < fcp

140 Kg/cm^2	<	300 Kg/cm^2	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1): Ts1=Hu/S/g < fu/SQR3/&w/BETA con &w=1,25

s/ENV 1993-1-1 6.6.5.3. BETA= 0,9

277 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.2- Tensión producida por compresión neopreno (Ts2): Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,25

s/ENV 1993-1-1 6.6.5.3.

1.568 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.3- Tensión total (Tst): Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

s/ENV 1993-1-1 6.6.5.3.

1.845 Kg/cm^2	<	2.617 Kg/cm^2	OK

6.- P.T.F.E - TEFLON^R

6.1- Compresión máxima (Ts): Ts=Vs/(3,14*(P/2)^2-Lg*Ag) < Tc

341 Kg/cm^2	<	400 Kg/cm^2

6.2- Coeficiente de rozamiento P.T.F.E.-Inox.(m): m=7,33*10^{-2} -15*10^{-5} *Ts

m=	0,02

6.3- Fuerza de rozamiento máxima (Hroz): Hroz=1,2*m*Vs

Fr=	127,68 Ton

7.- VAINAS ANCLAJE:

7.1- Flexión en transmisión de carga horizontal: Twv < fy/&o con &o=1,1

s/ENV 1993-1-1 5.4.5

Sh=Plastificac. hormigón: fcd/1,5*0,85	170	Kg/cm2
Coef. Rozamiento acero-hormigón:	0,45	s/MV103-9.4.2.
y= Long. de plastif. en parte inferior de vaina (cm):	3,55	
x= Long. de plastif. en parte superior de vaina (cm):	-17,52	
Mmax= ((Hu-Hroz)/n)^2/2/Sh/Da =	339.866	Kg*cm
Módulo resistente vaina : w=	122	cm3
Twv = Mmax / w =	2.797	Kg/cm2

2.797 Kg/cm^2	<	3.227 Kg/cm^2	OK

TRELLEBORG
ENGINEERED SYSTEMS

APOYO TOP MULTIDIRECCIONAL 3200

EMPRESA:	UTE MEJORADA
OBRA:	VIADUCTO RIO JARAMA
REF:	P33 - TO
PLANO:	P33 - TO

	SERVICIO	MAYOR (1,5)	
CARGA VERT. MÁX. (Vs/Vu):	3.200	4.800	Ton
CARGA VERT. MÍN. (Vmín):	870		Ton
DESPLAZ. LONG. As(-/+):	50		Ton
DESPLAZ. TRANSV. Ls(-/+):	25		mm
GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^{R} (**Dn**):	1.170 mm
2-ESPESOR NEOPRENO^{R} (**En**):	78 mm
3-Nº ANCLAJES INFERIOR (**n**):	4 UDS
3-Nº ANCLAJES SUPERIOR (**ns**):	4 UDS
4-DIAMETRO TORNILLOS (**MT**):	39 mm
5-LONGITUD SOLDADURA CAZUELA (**S**):	8.164 mm
6-GARGANTA MIN.SOLDADURA (**g**):	10 mm
7-ESPESOR CHAPA SUPERIOR (**Es**):	34 mm
8-ESPESOR CHAPA INFERIOR (**Ei**):	30 mm
9-ANCHO CHAPA SUPERIOR (**As**):	1.686 mm
10-LARGO CHAPA SUPERIOR (**Ls**):	1.558 mm
11-DIÁMETRO CHAPA INFERIOR (**Di**):	1.470 mm
12-AREA DE PISTÓN (**Ap**):	10.746 cm^2
13-DIST SUP. CENTRO AGUJ-BORDE FRONT (**esf**):	489 mm
14-DIST SUP. CENTRO AGUJ-BORDE LATER (**esl**):	62 mm
15-DIST INF. CENTRO AGUJ-BORDE FRONT (**eif**):	64 mm
16-DIST INF. CENTRO AGUJ-BORDE LATER (**eil**):	78 mm
17-ANCHO OREJETA ANCLAJE (**Ao**):	156 mm
18-LARGO OREJETA ANCLAJE (**Lo**):	122 mm
19-ESP. ANILLO DE CONFINAMIENTO (**Ec**):	130 mm
20-LONGITUD ROSCADA (**Lr**):	96 mm
21-LADO DE VAINAS DE ANCLAJE (**Da**):	60 mm
22-LONGITUD DE VAINAS DE ANCLAJE (**La**):	312 mm
23-DIAMETRO DISCO P.T.F.E. (**P**):	1.430 mm
24-HOLGURA COMPRESIÓN (**h1**):	33 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025

Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2

2.- TORNILLOS: Calidad 8.8

Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3

3.- CAUCHO: Neopreno^{R} -/+ 65 ºSh A

Compresión admisible en servicio:	300 Kg/cm^2
Módulo de cizalla (G):	10 Kg/cm^2

4.- HORMIGÓN Y MORTERO:

Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2

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ISO 9001

3 Fita - 8000003 - IE150

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ENGINEERED SYSTEMS

NJ-8/09/00

5.- P.T.F.E - TEFLON^{R}:

Espesor medio de lámina:	2,0 mm
Resistencia a tracción:	200-300 Kg/cm^2
Tensión de cálculo a compresión (Tc):	400 Kg/cm^2

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Máx(Ls,As)/50
34 mm > 34 mm OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50
30 mm > 29 mm OK

1.3- Esfuerzo cortante en disco (Tp): Tp=Hroz/Ap < (fy/SQR3/&o) con &o=1,1
Hroz=1,2*Vu * m (Ver punto 6.2)
s/ENV 1993-1-1 5.4.6
15,35 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): Fapf=Hroz/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eif/3do ; 1)
do = MT + 2
41.230 Kg < 61.610 Kg OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eil/3do ; 1)
do = MT + 2
41.230 Kg < 75.679 Kg OK

1.6- Aplastamiento chapa superior anclajes frontal (Fapf): Fapf=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esf/3do ; 1)
do = MT + 2
41.230 Kg < 135.252 Kg OK

1.7- Aplastamiento chapa superior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esl/3do ; 1)
Hroz=1,2*Vu * m (Ver punto 6.2)
do = MT + 2
41.230 Kg < 67.626 Kg OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): Tdf=Hroz/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2
1126,49 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): Tdl=Hroz/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2
983,24 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.10- Desgarro chapa superior por anclajes frontal (Tdf): Tdf=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(Lv+L1+L2 ; Ls)
Lv= Distancia entre anclajes DLs
L1=MIN(esf;5*MT)
L2=(esl-0,5*do)*fu/fy con do=MT+2
145,42 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.11- Desgarro chapa superior por anclajes lateral (Tdl): Tdl=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1

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ISO 9001

3 Fita - 8000003 - IE150

s/ENV 1993-1-1 6.5.2.2.

Lvef=MIN(Lv+L1+L2 ; As)
Lv= Distancia entre anclajes DAs
L1=MIN(esl;5*MT)
L2=(esf-0,5*do)*fu/fy con do=MT+2
Hroz=1,2*Vu * m (Ver punto 6.2)

71,92 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

1082,14 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

880,97 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.14- Cortadura chapa superior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

954,83 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.15- Cortadura chapa superior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

777,33 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.16- Tracción en sección neta orejetas (Fn):
s/ENV 1993-1-1 5.4.3.

Fn=Hroz/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1

41.230 Kg	<	151.036 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz):
s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

2010,08 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.18- Tensión cortante en orejetas (Tcorej):
s/ENV 1993-1-1 5.4.6

Tcorej=Hroz/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1

880,97 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.19- Flexión en orejetas por carga horizontal (Tflex):
s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hroz/n*(Dai-Di)/2
wr =1/6*Ei*Ao^2

1.982 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.20- Flexión + cortadura en orejetas (Tflex+Tcorej):
s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,01970

1982,19 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.21- Flexión + cortadura en orejetas (Tflex+Tcorej):
s/ Von Mises

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

2501,49 Kg/cm^2	<	3.227 Kg/cm^2	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct):
s/ENV 1993-1-1 6.5.5.

Tct=Hroz/n/Ae < 0,6*fub/&b con &b=1,25
Ae=Area resistente con de= diámetro resistente = 0,86*MT

3453,11 Kg/cm^2	<	3.840 Kg/cm^2	OK

2.2- Longitud roscada mínima (Lr):

Lr > MAX (MT/2,20mm)

96 mm	>	20 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P):

P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

297,79 Kg/cm^2	<	300 Kg/cm^2	OK

3.2- Altura de neopreno (En):

En>máx(Dn/2*a/0,15 ; 12 mm)

78 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t):

t=h1-Dn/2*a > 5 mm

33 mm	>	5 mm	OK

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NJ-8/09/00

4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft):

Ft=Vs/(3,14*(P/2)^2) < fct

199 Kg/cm^2	<	300 Kg/cm^2	OK

4.2- Compresión mortero de asiento (Fm):

Fm=Vs/(3,14*(Di/2)^2) < fm

189 Kg/cm^2	<	400 Kg/cm^2	OK

4.3- Compresión hormigón de pila (Fp):
(No se tiene en cuenta el cono de reparto del asiento de mortero)

Fp=Vs/(3,14*(Di/2)^2) < fcp

189 Kg/cm^2	<	300 Kg/cm^2	OK

4.4- Compresión por anclajes (Fa):

Fa=Hroz/(n*La*Da) < fcp

220 Kg/cm^2	<	300 Kg/cm^2	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1):
s/ENV 1993-1-1 6.6.5.3.

Ts1=Hroz/S/g < fu/SQR3/&w/BETA con &w=1,25
BETA= 0,9

202 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.2- Tensión producida por compresión neopreno (Ts2):
s/ENV 1993-1-1 6.6.5.3.

Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,

1.568 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.3- Tensión total (Tst):
s/ENV 1993-1-1 6.6.5.3.

Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

1.770 Kg/cm^2	<	2.617 Kg/cm^2	OK

6.- P.T.F.E - TEFLON^R

6.1- Compresión máxima (Ts):

Ts=Vs/(3,14*(P/2)^2) < Tc

298 Kg/cm^2	<	400 Kg/cm^2	

6.2- Coeficiente de rozamiento P.T.F.E.-Inox.(m):

m=7,33*10^{-2} -15*10^{-5} *Ts

m=	0,03

6.3- Fuerza de rozamiento máxima (Hroz):

Hroz=1,2*m*Vs

Fr=	164,92 Ton

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APOYO TOP FIJO 3200

EMPRESA:	UTE MEJORADA
OBRA:	VIADUCTO RIO JARAMA
REF:	P34 - TF
PLANO:	P34 - TF

	SERVICIO	MAYOR (1,5)	
CARGA VERT. MAX. (Vs/Vu):	3.200	4.800	Ton
CARGA VERT. MÍN. (Vmín):	789		Ton
CARGA HORIZ. LONG. (Hls/Hlu):	396	594	Ton
CARGA HORIZ. TRAN. (Hts/Htu):	151	227	Ton
CARGA HORIZ. TOTAL. (Hs/Hu):	424	636	Ton
GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^R (Dn):	1.170 mm
2-ESPESOR NEOPRENO^R (En):	78 mm
3-Nº ANCLAJES INFERIOR (n):	4 UDS
3-Nº ANCLAJES SUPERIOR (ns):	4 UDS
4-DIAMETRO TORNILLOS (MT):	82 mm
5-LONGITUD SOLDADURA CAZUELA (S):	8.164 mm
6-GARGANTA MIN.SOLDADURA (g):	10 mm
7-ESPESOR CHAPA SUPERIOR (Es):	32 mm
8-ESPESOR CHAPA INFERIOR (Ei):	32 mm
9-DIAMETRO CHAPA SUPERIOR (Ds):	1.430 mm
10-DIÁMETRO CHAPA INFERIOR (Di):	1.470 mm
11-AREA DE PISTÓN (Ap):	10.746 cm^2
12-DIST SUP. CENTRO AGUJ-BORDE FRONT (esf):	147 mm
13-DIST SUP. CENTRO AGUJ-BORDE LATER (esl):	200 mm
14-DIST INF. CENTRO AGUJ-BORDE FRONT (eif):	147 mm
15-DIST INF. CENTRO AGUJ-BORDE LATER (eil):	200 mm
16-ANCHO OREJETA ANCLAJE (Ao):	400 mm
17-LARGO OREJETA ANCLAJE (Lo):	270 mm
18-ESP. ANILLO DE CONFINAMIENTO (Ec):	130 mm
19-LONGITUD ROSCADA (Lr):	58 mm
20-LADO DE VAINAS DE ANCLAJE (Da):	155 mm
21-LONGITUD DE VAINAS DE ANCLAJE (La):	650 mm
22-HOLGURA COMPRESIÓN (h1):	33 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025

Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2	
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2	

2.- TORNILLOS: Calidad 8.8

Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3

3.- CAUCHO: Neopreno^R -/+ 65 °Sh A

Compresión admisible en servicio:	300 Kg/cm^2
Módulo de cizalla (G):	10 Kg/cm^2

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ENGINEERED SYSTEMS

NJ-8/09/00

4.- HORMIGÓN Y MORTERO:

Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Ds/50
32 mm > 29 mm OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50
32 mm > 29 mm OK

1.3- Esfuerzo cortante en disco (Tp): s/ENV 1993-1-1 5.4.6
Tp=Hu/Ap < (fy/SQR3/&o) con &o=1,1
59,16 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): s/ENV 1993-1-1 6.5.5.
Fapf=Hlu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
alfa = MIN(eif/3do ; 1)
do = MT + 2
148.500 Kg < 156.128 Kg OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): s/ENV 1993-1-1 6.5.5.
Fapl=Htu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
alfa = MIN(eil/3do ; 1)
do = MT + 2
56.625 Kg < 212.419 Kg OK

1.6- Aplastamiento orejeta sup.anclajes frontal (Fapf): s/ENV 1993-1-1 6.5.5.
Fapf=Hlu/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
alfa = MIN(esf/3do ; 1)
do = MT + 2
148.500 Kg < 156.128 Kg OK

1.7- Aplastamiento orejeta sup. anclajes lateral (Fapl): s/ENV 1993-1-1 6.5.5.
Fapl=Htu/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
alfa = MIN(esl/3do ; 1)
do = MT + 2
56.625 Kg < 212.419 Kg OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.
Tdf=Hlu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2
1718,75 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.
Tdl=Htu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2
504,36 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.10- Desgarro orejeta superior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.
Tdf=Hlu/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Lo)
L1=esf

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L2=(esl-0,5*do)*fu/fy con do=MT+2

1718,75 Kg/cm²	<	1.863 Kg/cm²	OK

1.11- Desgarro orejeta superior por anclajes lateral (Tdl):
s/ENV 1993-1-1 6.5.2.2.

Tdl=Htu/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Ao)
L1=esl
L2=(esf-0,5*do)*fu/fy con do=MT+2

504,36 Kg/cm²	<	1.863 Kg/cm²	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hlu/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

1578,44 Kg/cm²	<	1.863 Kg/cm²	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Htu/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

442,38 Kg/cm²	<	1.863 Kg/cm²	OK

1.14- Cortadura orejeta superior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hlu/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

1578,44 Kg/cm²	<	1.863 Kg/cm²	OK

1.15- Cortadura orejeta superior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Htu/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

442,38 Kg/cm²	<	1.863 Kg/cm²	OK

1.16- Tracción en sección neta orejetas (Fn):
s/ENV 1993-1-1 5.4.3.

Fn=Hu/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1,25
con Hu=MAX(Hlu;Htu)

148.500 Kg	<	413.091 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz):
s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

2010,08 Kg/cm²	<	3.227 Kg/cm²	OK

1.18- Tensión cortante en orejetas (Tcorej):
s/ENV 1993-1-1 5.4.6

Tcorej=Hu/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1
con Hu=MAX(Hlu;Htu)

1160,16 Kg/cm²	<	1.863 Kg/cm²	OK

Considerando rozamiento chapa hormigón (mu=0,45)
S/MV-103 9.4.2.

Tcorej=(Hu-Hroz)/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1
con Hroz = mu * Vmin

467 Kg/cm²	<	1.863 Kg/cm²	OK

1.19- Flexión en orejetas por carga horizontal (Tflex):
s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu/n*(Dai-Di)/2 con Hu=MAX(Hlu;Htu)
wr =1/6*Ei*Ao²

2.140 Kg/cm²	<	3.227 Kg/cm²	OK

Considerando rozamiento chapa hormigón (mu=0,45)
S/MV-103 9.4.2.

Mom = (Hu-Hroz)/n*(Dai-Di)/2 con Hroz= mu*Vmin

861 Kg/cm²	<	3.227 Kg/cm²	OK

1.20- Flexión + cortadura en orejetas (Tflex+Tcorej):
s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,01745

2140,49 Kg/cm²	<	3.171 Kg/cm²	OK

Considerando rozamiento chapa hormigón (mu=0,45)
S/MV-103 9.4.2.

861 Kg/cm²	<	3.227 Kg/cm²	OK

mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,29658

1.21- Flexión + cortadura en orejetas (Tflex+Tcorej):

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

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TRELLEBORG
ENGINEERED SYSTEMS
NJ-8/09/00

s/ Von Mises (Sin rozamiento)

2935,91 Kg/cm²	<	3.227 Kg/cm²	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct):
s/ENV 1993-1-1 6.5.5.

Tct=Hu/n/Ae < 0,6*fub/&b con &b=1,25
Ae=Area resistente con de= diámetro resistente = 0,86*MT

3763,72 Kg/cm²	<	3.840 Kg/cm²	OK

2.2- Longitud roscada mínima (Lr):

Lr > MAX (MT/2,20mm)

58 mm	>	41 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P):

P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

297,79 Kg/cm²	<	300 Kg/cm²	OK

3.2- Altura de neopreno (En):

En>máx(Dn/2*a/0,15 ; 12 mm)

78 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t):

t=h1-Dn/2*a > 5 mm

33 mm	>	5 mm	OK

4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft):

Ft=Vs/(3,14*(Ds/2)^2) < fct

199 Kg/cm²	<	300 Kg/cm²	OK

4.2- Compresión mortero de asiento (Fm):

Fm=Vs/(3,14*(Di/2)^2) < fm

189 Kg/cm²	<	400 Kg/cm²	OK

4.3- Compresión hormigón de pila (Fp):
(No se tiene en cuenta el cono de reparto del asiento de mortero)

Fp=Vs/(3,14*(Di/2)^2) < fcp

189 Kg/cm²	<	300 Kg/cm²	OK

4.4- Compresión por anclajes (Fa):

Fa=Hu/(n*La*Da) < fcp con Hu=MAX(Hlu;Htu)

147 Kg/cm²	<	300 Kg/cm²	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1):
s/ENV 1993-1-1 6.6.5.3.

Ts1=Hu/S/g < fu/SQR3/&w/BETA con &w=1,25
BETA= 0,9

779 Kg/cm²	<	2.617 Kg/cm²	OK

5.2- Tensión producida por compresión neopreno (Ts2):
s/ENV 1993-1-1 6.6.5.3.

Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,25

1.568 Kg/cm²	<	2.617 Kg/cm²	OK

5.3- Tensión total (Tst):
s/ENV 1993-1-1 6.6.5.3.

Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

2.347 Kg/cm²	<	2.617 Kg/cm²	OK

6.- VAINAS ANCLAJE:

6.1- Flexión en transmisión de carga horizontal:
s/ENV 1993-1-1 5.4.5

Twv < fy/&o con &o=1,1
Sh=Plastificac. hormigón: fcd/1,5*0,8 170 Kg/cm2
Coef. Rozamiento acero-hormigón: 0,45 s/MV103-9.4.2.
y= Long. de plastif. en parte inferior de vaina (cm): 15,51
x= Long. de plastif. en parte superior de vaina (cm): 42,14

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TRELLEBORG
ENGINEERED SYSTEMS

Mmax= ((Hu-Hroz)/n)^2/2/Sh/Da =		934.238 Kg*cm
Módulo resistente vaina : w=		621 cm3
Twv = Mmax / w =		1.505 Kg/cm2
1.505 Kg/cm^2	<	3.227 Kg/cm^2 OK

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APOYO TOP UNIDIRECCIONAL 3200

			SERVICIO	MAYOR (1,5)	
EMPRESA:	UTE MEJORADA	CARGA VERT. MÁX. (Vs/Vu):	3.200	4.800	Ton
OBRA:	VIADUCTO RIO JARAMA	CARGA VERT. MÍN. (Vmín):	870,00		Ton
REF:	P34 - TU2	CARGA HORIZ. TRAN. (Hs/Hu):	396,00	594	Ton
PLANO:	P34 - TU2	DESPLAZAMIENTO (-/+):	25		mm
		GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^R (Dn):	1.170 mm
2-ESPESOR NEOPRENO^R (En):	78 mm
3-Nº ANCLAJES INFERIOR (n):	4 UDS
3-Nº ANCLAJES SUPERIOR (ns):	4 UDS
4-DIAMETRO TORNILLOS (MT):	82 mm
5-LONGITUD SOLDADURA CAZUELA (S):	8.164 mm
6-GARGANTA MIN.SOLDADURA (g):	10 mm
7-ESPESOR CHAPA SUPERIOR (Es):	58 mm
8-ESPESOR CHAPA INFERIOR (Ei):	32 mm
9-ANCHO CHAPA SUPERIOR (As):	1.726 mm
10-LARGO CHAPA SUPERIOR (Ls):	1.450 mm
11-DIÁMETRO CHAPA INFERIOR (Di):	1.470 mm
12-AREA DE PISTÓN (Ap):	10.746 cm^2
13-DIST SUP. CENTRO AGUJ-BORDE FRONT (esf):	126 mm
14-DIST SUP. CENTRO AGUJ-BORDE LATER (esl):	573 mm
15-DIST INF. CENTRO AGUJ-BORDE FRONT (eif):	147 mm
16-DIST INF. CENTRO AGUJ-BORDE LATER (eil):	210 mm
17-ANCHO OREJETA ANCLAJE (Ao):	420 mm
18-LARGO OREJETA ANCLAJE (Lo):	270 mm
19-ESP. ANILLO DE CONFINAMIENTO (Ec):	130 mm
20-LONGITUD ROSCADA (Lr):	67 mm
21-LADO DE VAINAS DE ANCLAJE (Da):	145 mm
22-LONGITUD DE VAINAS DE ANCLAJE (La):	500 mm
23-DIAMETRO DISCO P.T.F.E. (P):	1.430 mm
24-LONGITUD DE GUIA (Lg):	1.430 mm
25-ESPESOR DE GUIA (Ag):	95 mm
26-ALTURA TOTAL GUIA (Hg):	80 mm
27-EMPOTRAMIENTO EN DISCO (He):	40 mm
28-Nº TORNILLOS GUIA (Ng):	18 mm
29-METRICA TORNILLOS GUIA (MTg):	30 mm
30-HOLGURA COMPRESIÓN (h1):	28 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025		
Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2

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TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

2.- TORNILLOS: Calidad 8.8			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
TORNILLOS SUJECCIÓN GUÍA (Calidad 8.8)			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3

3.- CAUCHO: Neopreno^R -/+ 65 ºSh A	
Compresión admisible en servicio:	300 Kg/cm^2
Módulo de cizalla (G):	10 Kg/cm^2

4.- HORMIGÓN Y MORTERO:	
Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2

5.- P.T.F.E - TEFLON^R:	
Espesor medio de lámina:	2,0 mm
Resistencia a tracción:	200-300 Kg/cm^2
Tensión de cálculo a compresión (Tc):	400 Kg/cm^2

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Máx(Ls,As)/50

58 mm	>	35 mm	OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50

32 mm	>	29 mm	OK

1.3- Esfuerzo cortante en disco (Tp): Tp=Hu/Ap < (fy/SQR3/&o) con &o=1,1
s/ENV 1993-1-1 5.4.6

55,28 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eif/3do ; 1)
do = MT + 2

148.500 Kg	<	156.128 Kg	OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): Fapl=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eil/3do ; 1)
do = MT + 2

148.500 Kg	<	223.040 Kg	OK

1.6- Aplastamiento chapa superior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esf/3do ; 1)
do = MT + 2

148.500 Kg	<	242.556 Kg	OK

1.7- Aplastamiento chapa superior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esl/3do ; 1)
Hroz=1,2*Vu * m (Ver punto 6.2)
do = MT + 2

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	31.921 Kg	<	485.112 Kg	OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2

1718,75 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2

1286,04 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.10- Desgarro chapa superior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; Ls)
Lv= Distancia entre anclajes DLs
L1=MIN(esf;5*MT)
L2=(esl-0,5*do)*fu/fy con do=MT+2

176,58 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.11- Desgarro chapa superior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; As)
Lv= Distancia entre anclajes DAs
L1=MIN(esl;5*MT)
L2=(esf-0,5*do)*fu/fy con do=MT+2
Hroz=1,2*Vu * m (Ver punto 6.2)

49,55 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

1578,44 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

1104,91 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.14- Cortadura chapa superior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

870,87 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.15- Cortadura chapa superior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

609,61 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.16- Tracción en sección neta orejetas (Fn): s/ENV 1993-1-1 5.4.3.

Fn=Hu/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1,25

148.500 Kg	<	433.745 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz): s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

2010,08 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.18- Tensión cortante en guía (Tguia): s/ENV 1993-1-1 5.4.6

Tguia=Hu/(Lg*Ag) < (fy/SQR3/&o) con &o=1,1

437,25 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.19- Compresión sobre guía (Tcguia): s/ENV 1993-1-1 5.4.4

Tcguia=Hu/(Lg*(Hg-He) < (fy/&o) con &o=1,1

1038,46 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.20- Compresión de guía sobre empotramiento (Tcemp): Tcemp=Hu/(Lg*He) < (fy/&o) con &o=1,1

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TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

s/ENV 1993-1-1 5.4.4	1038,46 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.21- Flexión de guía por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu*(Hg-He)/2
wr =1/6*Lg*Ag^2

552,31 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.22- Flexión + cortadura en guía (Tflex+Tguia): s/ENV 1993-1-1 5.4.7

Si Tguia<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tguia>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tguia/(fy/SQR3)-1)^2 = 0,33

552,31 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.23- Flexión + cortadura en guía (Tflex+Tcorej): s/ Von Mises

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

937,34 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.24- Tensión cortante en tornillos guía (Tt): s/ENV 1993-1-1 6.5.5.

Tt=Hroz/Ng/Ae < 0,6*fub/&b con &b=1,25
Hroz=1,2*Hu * m (Ver punto 6.2)
Ae=Area resistente

30,09 Kg/cm^2	<	3.840 Kg/cm^2	OK

1.25- Tracción por vuelco en tornillos guía (Trt): s/ENV 1993-1-1 5.4.3.

Trt=Hu*Hg*4/(Ng*3,14*Ag*de^2) < 0,9*fub/&b con &b=1,25
de= diámetro resistente = 0,86*MTg s/NBE EA-95 2.5.3

5318,28 Kg/cm^2	<	5.760 Kg/cm^2	OK

1.26- Cortante + Tracción en tornillos guía: s/ENV 1993-1-1 6.5.5.

Tt/(0,6*fub/&b) + Trt/ (1,4*(0,9*fub*&b))< 1

0,67	<	1	OK

1.27- Tensión cortante en orejetas (Tcorej): s/ENV 1993-1-1 5.4.6

Tcorej=Hu/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1

1104,91 Kg/cm^2	<	1.863 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Tcorej=(Hu-Hroz)/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1
con Hroz = mu * Vmin

377 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.28- Flexión en orejetas por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu/n*(Dai-Di)/2
wr =1/6*Ei*Ao^2

1.941 Kg/cm^2	<	3.227 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Mom = (Hu-Hroz)/n*(Dai-Di)/2 con Hroz= mu*Vmin

662 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.29- Flexión + cortadura en orejetas (Tflex+Tcorej): s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,00611

1941,49 Kg/cm^2	<	3.208 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

662 Kg/cm^2	<	3.227 Kg/cm^2	OK

mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,39998

1.30- Flexión + cortadura en orejetas (Tflex+Tcorej):

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

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G.Fila - 800/0003 - IE150

s/ Von Mises (Sin rozamiento)

2726,14 Kg/cm^2	<	3.227 Kg/cm^2	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct):

Tct=Hu/n/Ae < 0,6*fub/&b con &b=1,25

Ae=Area resistente con de= diámetro resistente = 0,86*MT

s/ENV 1993-1-1 6.5.5.

3516,73 Kg/cm^2	<	3.840 Kg/cm^2	OK

2.2- Longitud roscada mínima (Lr):

Lr > MAX (MT/2,20mm)

67 mm	>	41 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P):

P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

297,79 Kg/cm^2	<	300 Kg/cm^2	OK

3.2- Altura de neopreno (En):

En>máx(Dn/2*a/0,15 ; 12 mm)

78 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t):

t=h1-Dn/2*a > 5 mm

28 mm	>	5 mm	OK

4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft):

Ft=Vs/(3,14*(P/2)^2) < fct

199 Kg/cm^2	<	300 Kg/cm^2	OK

4.2- Compresión mortero de asiento (Fm):

Fm=Vs/(3,14*(Di/2)^2) < fm

189 Kg/cm^2	<	400 Kg/cm^2	OK

4.3- Compresión hormigón de pila (Fp):
(No se tiene en cuenta el cono de reparto del asiento de mortero)

Fp=Vs/(3,14*(Di/2)^2) < fcp

189 Kg/cm^2	<	300 Kg/cm^2	OK

4.4- Compresión por anclajes (Fa):

Fa=Hu/(n*La*Da) < fcp

205 Kg/cm^2	<	300 Kg/cm^2	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1):
s/ENV 1993-1-1 6.6.5.3.

Ts1=Hu/S/g < fu/SQR3/&w/BETA con &w=1,25

BETA= 0,9

728 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.2- Tensión producida por compresión neopreno (Ts2):
s/ENV 1993-1-1 6.6.5.3.

Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,25

1.568 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.3- Tensión total (Tst):
s/ENV 1993-1-1 6.6.5.3.

Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

2.295 Kg/cm^2	<	2.617 Kg/cm^2	OK

6.- P.T.F.E - TEFLON^R

6.1- Compresión máxima (Ts):

Ts=Vs/(3,14*(P/2)^2-Lg*Ag) < Tc

341 Kg/cm^2	<	400 Kg/cm^2

6.2- Coeficiente de rozamiento P.T.F.E.-Inox.(m):

m=7,33*10^{-2}-15*10^{-5}*Ts

m=	0,02

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ENGINEERED SYSTEMS

NJ-8/09/00

6.3- Fuerza de rozamiento máxima (Hroz):

Hroz=1,2*m*Vs

Fr=	127,68	Ton

7.- VAINAS ANCLAJE:

7.1- Flexión en transmisión de carga horizontal:
s/ENV 1993-1-1 5.4.5

Twv < fy/&o con &o=1,1

Sh=Plastificac. hormigón: fcd/1,5*0,85	170	Kg/cm2
Coef. Rozamiento acero-hormigón:	0,45	s/MV103-9.4.2.
y= Long. de plastif. en parte inferior de vaina (cm):	12,26	
x= Long. de plastif. en parte superior de vaina (cm):	32,80	
Mmax= ((Hu-Hroz)/n)^2/2/Sh/Da =	519.856	Kg*cm
Módulo resistente vaina : w=	508	cm3
Twv = Mmax / w =	1.023	Kg/cm2

1.023 Kg/cm^2	<	3.227 Kg/cm^2	OK

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TRELLEBORG
ENGINEERED SYSTEMS

APOYO TOP UNIDIRECCIONAL 650

			SERVICIO	MAYOR (1,5)	
EMPRESA:	UTE MEJORADA	CARGA VERT. MÁX. (Vs/Vu):	650	975	Ton
OBRA:	VIADUCTO RIO JARAMA	CARGA VERT. MÍN. (Vmín):	160,00		Ton
REF:	P35 - TU1	CARGA HORIZ. TRAN. (Hs/Hu):	66,00	99	Ton
PLANO:	P35 - TU1	DESPLAZAMIENTO (-/+):	60		mm
		GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^{R} (Dn):	530 mm
2-ESPESOR NEOPRENO^{R} (En):	36 mm
3-Nº ANCLAJES INFERIOR (n):	4 UDS
3-Nº ANCLAJES SUPERIOR (ns):	4 UDS
4-DIAMETRO TORNILLOS (MT):	39 mm
5-LONGITUD SOLDADURA CAZUELA (S):	3.642 mm
6-GARGANTA MIN.SOLDADURA (g):	10 mm
7-ESPESOR CHAPA SUPERIOR (Es):	34 mm
8-ESPESOR CHAPA INFERIOR (Ei):	18 mm
9-ANCHO CHAPA SUPERIOR (As):	867 mm
10-LARGO CHAPA SUPERIOR (Ls):	710 mm
11-DIÁMETRO CHAPA INFERIOR (Di):	660 mm
12-AREA DE PISTÓN (Ap):	2.205 cm^2
13-DIST SUP. CENTRO AGUJ-BORDE FRONT (esf):	65 mm
14-DIST SUP. CENTRO AGUJ-BORDE LATER (esl):	62 mm
15-DIST INF. CENTRO AGUJ-BORDE FRONT (eif):	64 mm
16-DIST INF. CENTRO AGUJ-BORDE LATER (eil):	78 mm
17-ANCHO OREJETA ANCLAJE (Ao):	156 mm
18-LARGO OREJETA ANCLAJE (Lo):	122 mm
19-ESP. ANILLO DE CONFINAMIENTO (Ec):	50 mm
20-LONGITUD ROSCADA (Lr):	31 mm
21-LADO DE VAINAS DE ANCLAJE (Da):	60 mm
22-LONGITUD DE VAINAS DE ANCLAJE (La):	312 mm
23-DIAMETRO DISCO P.T.F.E. (P):	630 mm
24-LONGITUD DE GUIA (Lg):	630 mm
25-ESPESOR DE GUIA (Ag):	50 mm
26-ALTURA TOTAL GUIA (Hg):	35 mm
27-EMPOTRAMIENTO EN DISCO (He):	15 mm
28-Nº TORNILLOS GUIA (Ng):	6 mm
29-METRICA TORNILLOS GUIA (MTg):	20 mm
30-HOLGURA COMPRESIÓN (h1):	11 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025		
Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2

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TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

2.- TORNILLOS: Calidad 8.8			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
TORNILLOS SUJECCIÓN GUÍA (Calidad 8.8)			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3

3.- CAUCHO: Neopreno^{R} -/+ 65 ºSh A	
Compresión admisible en servicio:	300 Kg/cm^2
Módulo de cizalla (G):	10 Kg/cm^2

4.- HORMIGÓN Y MORTERO:	
Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2

5.- P.T.F.E - TEFLON^{R}:	
Espesor medio de lámina:	2,0 mm
Resistencia a tracción:	200-300 Kg/cm^2
Tensión de cálculo a compresión (Tc):	400 Kg/cm^2

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Máx(Ls,As)/50
34 mm > 17 mm OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50
18 mm > 13 mm OK

1.3- Esfuerzo cortante en disco (Tp): Tp=Hu/Ap < (fy/SQR3/&o) con &o=1,1
s/ENV 1993-1-1 5.4.6
44,90 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5.
alfa = MIN(eif/3do ; 1)
do = MT + 2
24.750 Kg < 36.966 Kg OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): Fapl=Hu/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5.
alfa = MIN(eil/3do ; 1)
do = MT + 2
24.750 Kg < 45.407 Kg OK

1.6- Aplastamiento chapa superior anclajes frontal (Fapf): Fapf=Hu/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5.
alfa = MIN(esf/3do ; 1)
do = MT + 2
24.750 Kg < 71.475 Kg OK

1.7- Aplastamiento chapa superior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5.
alfa = MIN(esl/3do ; 1)
Hroz=1,2*Vu * m (Ver punto 6.2)
do = MT + 2

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ISO 9001

	6.351 Kg	<	67.626 Kg	OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2

1127,05 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hu/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2

983,73 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.10- Desgarro chapa superior por anclajes frontal (Tdf): s/ENV 1993-1-1 6.5.2.2.

Tdf=Hu/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; Ls)
Lv= Distancia entre anclajes DLs
L1=MIN(esf;5*MT)
L2=(esl-0,5*do)*fu/fy con do=MT+2

103,42 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.11- Desgarro chapa superior por anclajes lateral (Tdl): s/ENV 1993-1-1 6.5.2.2.

Tdl=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1
Lvef=MIN(Lv+L1+L2 ; As)
Lv= Distancia entre anclajes DAs
L1=MIN(esl;5*MT)
L2=(esf-0,5*do)*fu/fy con do=MT+2
Hroz=1,2*Vu * m (Ver punto 6.2)

21,55 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

1082,68 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

881,41 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.14- Cortadura chapa superior en borde frontal (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

573,18 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.15- Cortadura chapa superior en borde lateral (Tb): s/ENV 1993-1-1 5.4.6

Tb=Hu/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

466,63 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.16- Tracción en sección neta orejetas (Fn): s/ENV 1993-1-1 5.4.3.

Fn=Hu/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1,25

24.750 Kg	<	90.622 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz): s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

2343,47 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.18- Tensión cortante en guía (Tguia): s/ENV 1993-1-1 5.4.6

Tguia=Hu/(Lg*Ag) < (fy/SQR3/&o) con &o=1,1

314,29 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.19- Compresión sobre guía (Tcguia): s/ENV 1993-1-1 5.4.4

Tcguia=Hu/(Lg*(Hg-He) < (fy/&o) con &o=1,1

785,71 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.20- Compresión de guía sobre empotramiento (Tcemp): Tcemp=Hu/(Lg*He) < (fy/&o) con &o=1,1

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ISO 9001
G.Fika - 80/00/03 - IE150

TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

1047,62 Kg/cm^2	<	3.227 Kg/cm^2	OK

s/ENV 1993-1-1 5.4.4

1.21- Flexión de guía por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu*(Hg-He)/2
wr =1/6*Lg*Ag^2

377,14 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.22- Flexión + cortadura en guía (Tflex+Tguia): s/ENV 1993-1-1 5.4.7

Si Tguia<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tguia>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tguia/(fy/SQR3)-1)^2 = 0,48

377,14 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.23- Flexión + cortadura en guía (Tflex+Tcorej): s/ Von Mises

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

662,24 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.24- Tensión cortante en tornillos guía (Tt): s/ENV 1993-1-1 6.5.5.

Tt=Hroz/Ng/Ae < 0,6*fub/&b con &b=1,25
Hroz=1,2*Hu * m (Ver punto 6.2)
Ae=Area resistente

39,59 Kg/cm^2	<	3.840 Kg/cm^2	OK

1.25- Tracción por vuelco en tornillos guía (Trt): s/ENV 1993-1-1 5.4.3.

Trt=Hu*Hg*4/(Ng*3,14*Ag*de^2) < 0,9*fub/&b con &b=1,25
de= diámetro resistente = 0,86*MTg s/NBE EA-95 2.5.3

4973,42 Kg/cm^2	<	5.760 Kg/cm^2	OK

1.26- Cortante + Tracción en tornillos guía: s/ENV 1993-1-1 6.5.5.

Tt/(0,6*fub/&b) + Trt/ (1,4*(0,9*fub*&b))< 1

0,63	<	1	OK

1.27- Tensión cortante en orejetas (Tcorej): s/ENV 1993-1-1 5.4.6

Tcorej=Hu/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1

881,41 Kg/cm^2	<	1.863 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Tcorej=(Hu-Hroz)/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1
con Hroz = mu * Vmin

240 Kg/cm^2	<	1.863 Kg/cm^2	OK

1.28- Flexión en orejetas por carga horizontal (Tflex): s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hu/n*(Dai-Di)/2
wr =1/6*Ei*Ao^2

1.983 Kg/cm^2	<	3.227 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

Mom = (Hu-Hroz)/n*(Dai-Di)/2 con Hroz= mu*Vmin

541 Kg/cm^2	<	3.227 Kg/cm^2	OK

1.29- Flexión + cortadura en orejetas (Tflex+Tcorej): s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,01958

1983,17 Kg/cm^2	<	3.227 Kg/cm^2	OK

Considerando rozamiento chapa hormigón (mu=0,45) S/MV-103 9.4.2.

541 Kg/cm^2	<	3.227 Kg/cm^2	OK

mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,58589

1.30- Flexión + cortadura en orejetas (Tflex+Tcorej):

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

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G.Fika - 80/00/03 - IE150

s/ Von Mises (Sin rozamiento)

2502,72 Kg/cm^2	<	3.227 Kg/cm^2	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct):

Tct=Hu/n/Ae < 0,6*fub/&b con &b=1,25

Ae=Area resistente con de= diámetro resistente = 0,86*MT

s/ENV 1993-1-1 6.5.5.

2591,11 Kg/cm^2	<	3.840 Kg/cm^2	OK

2.2- Longitud roscada mínima (Lr):

Lr > MAX (MT/2,20mm)

31 mm	>	20 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P):

P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

294,78 Kg/cm^2	<	300 Kg/cm^2	OK

3.2- Altura de neopreno (En):

En>máx(Dn/2*a/0,15 ; 12 mm)

36 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t):

t=h1-Dn/2*a > 5 mm

11 mm	>	5 mm	OK

4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft):

Ft=Vs/(3,14*(P/2)^2) < fct

209 Kg/cm^2	<	300 Kg/cm^2	OK

4.2- Compresión mortero de asiento (Fm):

Fm=Vs/(3,14*(Di/2)^2) < fm

190 Kg/cm^2	<	400 Kg/cm^2	OK

4.3- Compresión hormigón de pila (Fp):
(No se tiene en cuenta el cono de reparto del asiento de mortero)

Fp=Vs/(3,14*(Di/2)^2) < fcp

190 Kg/cm^2	<	300 Kg/cm^2	OK

4.4- Compresión por anclajes (Fa):

Fa=Hu/(n*La*Da) < fcp

132 Kg/cm^2	<	300 Kg/cm^2	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1):
s/ENV 1993-1-1 6.6.5.3.

Ts1=Hu/S/g < fu/SQR3/&w/BETA con &w=1,25

BETA= 0,9

272 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.2- Tensión producida por compresión neopreno (Ts2):
s/ENV 1993-1-1 6.6.5.3.

Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,25

727 Kg/cm^2	<	2.617 Kg/cm^2	OK

5.3- Tensión total (Tst):
s/ENV 1993-1-1 6.6.5.3.

Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

999 Kg/cm^2	<	2.617 Kg/cm^2	OK

6.- P.T.F.E - TEFLON^R

6.1- Compresión máxima (Ts):

Ts=Vs/(3,14*(P/2)^2-Lg*Ag) < Tc

344 Kg/cm^2	<	400 Kg/cm^2

6.2- Coeficiente de rozamiento P.T.F.E.-Inox.(m):

m=7,33*10^{-2} -15*10^{-5} *Ts

m=	0,02

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ISO 9001

0. Fila - 8000003 - IE150

TRELLEBORG
ENGINEERED SYSTEMS

NJ-8/09/00

6.3- Fuerza de rozamiento máxima (Hroz):

Hroz=1,2*m*Vs

Fr=	25,41 Ton

7.- VAINAS ANCLAJE:

7.1- Flexión en transmisión de carga horizontal:
s/ENV 1993-1-1 5.4.5

Twv < fy/&o con &o=1,1

Sh=Plastificac. hormigón: fcd/1,5*0,85	170 Kg/cm2	
Coef. Rozamiento acero-hormigón:	0,45	s/MV103-9.4.2.
y= Long. de plastif. en parte inferior de vaina (cm):	0,93	
x= Long. de plastif. en parte superior de vaina (cm):	7,54	
Mmax= ((Hu-Hroz)/n)^2/2/Sh/Da =	22.335 Kg*cm	
Módulo resistente vaina : w=	36 cm3	
Twv = Mmax / w =	620 Kg/cm2	

620 Kg/cm^2	<	3.227 Kg/cm^2	OK

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ISO 9001

3. Fila - 8000003 - IE150

TRELLEBORG
ENGINEERED SYSTEMS

APOYO TOP MULTIDIRECCIONAL 650

EMPRESA:	UTE MEJORADA
OBRA:	VIADUCTO RIO JARAMA
REF:	P35 - TO
PLANO:	P35 - TO

	SERVICIO	MAYOR (1,5)	
CARGA VERT. MÁX. (Vs/Vu):	650	975	Ton
CARGA VERT. MÍN. (Vmín):	176		Ton
DESPLAZ. LONG. As(-/+):	50		Ton
DESPLAZ. TRANSV. Ls(-/+):	25		mm
GIRO ADMISIBLE (a):	0,01		Rad

CARACTERISTICAS APOYO

1-DIAMETRO NEOPRENO^R (Dn):	530 mm
2-ESPESOR NEOPRENO^R (En):	36 mm
3-Nº ANCLAJES INFERIOR (n):	4 UDS
3-Nº ANCLAJES SUPERIOR (ns):	4 UDS
4-DIAMETRO TORNILLOS (MT):	22 mm
5-LONGITUD SOLDADURA CAZUELA (S):	3.642 mm
6-GARGANTA MIN.SOLDADURA (g):	10 mm
7-ESPESOR CHAPA SUPERIOR (Es):	16 mm
8-ESPESOR CHAPA INFERIOR (Ei):	16 mm
9-ANCHO CHAPA SUPERIOR (As):	796 mm
10-LARGO CHAPA SUPERIOR (Ls):	724 mm
11-DIÁMETRO CHAPA INFERIOR (Di):	660 mm
12-AREA DE PISTÓN (Ap):	2.205 cm^2
13-DIST SUP. CENTRO AGUJ-BORDE FRONT (esf):	72 mm
14-DIST SUP. CENTRO AGUJ-BORDE LATER (esl):	36 mm
15-DIST INF. CENTRO AGUJ-BORDE FRONT (eif):	37 mm
16-DIST INF. CENTRO AGUJ-BORDE LATER (eil):	44 mm
17-ANCHO OREJETA ANCLAJE (Ao):	88 mm
18-LARGO OREJETA ANCLAJE (Lo):	70 mm
19-ESP. ANILLO DE CONFINAMIENTO (Ec):	50 mm
20-LONGITUD ROSCADA (Lr):	59 mm
21-LADO DE VAINAS DE ANCLAJE (Da):	34 mm
22-LONGITUD DE VAINAS DE ANCLAJE (La):	176 mm
23-DIAMETRO DISCO P.T.F.E. (P):	630 mm
24-HOLGURA COMPRESIÓN (h1):	16 mm

MATERIALES

1.- ACERO: Fe 510 - EN 10025			
Límite elástico (fy):	3.550 Kg/cm^2	s/ENV 1993-1-1 3.2	
Tensión de rotura: (fu):	5.100 Kg/cm^2	s/ENV 1993-1-1 3.2	
2.- TORNILLOS: Calidad 8.8			
Límite elástico (fyb):	6.400 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
Tensión de rotura: (fub):	8.000 Kg/cm^2	Kg/cm^2	s/ENV 1993-1-1 3.3
3.- CAUCHO: Neopreno^K -/+ 65 ºSh A			
Compresión admisible en servicio:	300 Kg/cm^2		
Módulo de cizalla (G):	10 Kg/cm^2		
4.- HORMIGÓN Y MORTERO:			
Compresión admisible hormigón de tablero (fct):	300 Kg/cm^2		
Compresión admisible mortero de asiento (fm):	400 Kg/cm^2		
Compresión admisible hormigón de pila (fcp):	300 Kg/cm^2		

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NJ-8/09/00

5.- P.T.F.E - TEFLON^R:	
Espesor medio de lámina:	2,0 mm
Resistencia a tracción:	200-300 Kg/cm^2
Tensión de cálculo a compresión (Tc):	400 Kg/cm^2

LIMITACIONES

1.- ACERO

1.1- Espesor chapa superior (Es): Es > Máx(Ls,As)/50
16 mm > 16 mm OK

1.2- Espesor chapa inferior (Ei): Ei > Di/50
16 mm > 13 mm OK

1.3- Esfuerzo cortante en disco (Tp): Tp=Hroz/Ap < (fy/SQR3/&o) con &o=1,1
Hroz=1,2*Vu * m (Ver punto 6.2)
s/ENV 1993-1-1 5.4.6
15,43 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.4- Aplastamiento orejeta inferior anclajes frontal (Fapf): Fapf=Hroz/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eif/3do ; 1)
do = MT + 2
8.507 Kg < 18.451 Kg OK

1.5- Aplastamiento orejeta inferior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Ei/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(eil/3do ; 1)
do = MT + 2
8.507 Kg < 21.941 Kg OK

1.6- Aplastamiento chapa superior anclajes frontal (Fapf): Fapf=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esf/3do ; 1)
do = MT + 2
8.507 Kg < 35.904 Kg OK

1.7- Aplastamiento chapa superior anclajes lateral (Fapl): Fapl=Hroz/n<2,5*alfa*fu*MT*Es/&b con &b=1,25
s/ENV 1993-1-1 6.5.5. alfa = MIN(esl/3do ; 1)
Hroz=1,2*Vu * m (Ver punto 6.2)
do = MT + 2
8.507 Kg < 17.952 Kg OK

1.8- Desgarro orejeta inferior por anclajes frontal (Tdf): Tdf=Hroz/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(L1+L2 ; Lo)
L1=eif
L2=(eil-0,5*do)*fu/fy con do=MT+2
759,55 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.9- Desgarro orejeta inferior por anclajes lateral (Tdl): Tdl=Hroz/n/Lvef/Ei < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(L1+L2 ; Ao)
L1=eil
L2=(eif-0,5*do)*fu/fy con do=MT+2
665,31 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.10- Desgarro chapa superior por anclajes frontal (Tdf): Tdf=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1
s/ENV 1993-1-1 6.5.2.2. Lvef=MIN(Lv+L1+L2 ; Ls)
Lv= Distancia entre anclajes DLs
L1=MIN(esf;5*MT)
L2=(esl-0,5*do)*fu/fy con do=MT+2
77,45 Kg/cm^2 < 1.863 Kg/cm^2 OK

1.11- Desgarro chapa superior por anclajes lateral (Tdl): Tdl=Hroz/n/Lvef/Es < fy/SQR3/&o con &o=1,1

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s/ENV 1993-1-1 6.5.2.2.

Lvef=MIN(Lv+L1+L2 ; As)
Lv= Distancia entre anclajes DAs
L1=MIN(esl;5*MT)
L2=(esf-0,5*do)*fu/fy con do=MT+2
Hroz=1,2*Vu * m (Ver punto 6.2)

66,79 Kg/cm²	<	1.863 Kg/cm²	OK

1.12- Cortadura orejeta inferior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Ei/eif < (fy/SQR3/&o) con &o=1,1

718,49 Kg/cm²	<	1.863 Kg/cm²	OK

1.13- Cortadura orejeta inferior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Ei/eil < (fy/SQR3/&o) con &o=1,1

604,19 Kg/cm²	<	1.863 Kg/cm²	OK

1.14- Cortadura chapa superior en borde frontal (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Es/eif < (fy/SQR3/&o) con &o=1,1

718,49 Kg/cm²	<	1.863 Kg/cm²	OK

1.15- Cortadura chapa superior en borde lateral (Tb):
s/ENV 1993-1-1 5.4.6

Tb=Hroz/2/n/Es/eil < (fy/SQR3/&o) con &o=1,1

604,19 Kg/cm²	<	1.863 Kg/cm²	OK

1.16- Tracción en sección neta orejetas (Fn):
s/ENV 1993-1-1 5.4.3.

Fn=Hroz/n < MIN(Ao*Ei*fy/&o ; 0,9*(Ao-do)*Ei*fu/&2) con &o=1,1 y &2=1

8.507 Kg	<	45.440 Kg	OK

1.17- Tracción en cazuela por carga vert.(Tcaz):
s/ENV 1993-1-1 5.4.3.

Tcaz=Vu/Ap*Dn/2/Ec < fy/&o

2343,47 Kg/cm²	<	3.227 Kg/cm²	OK

1.18- Tensión cortante en orejetas (Tcorej):
s/ENV 1993-1-1 5.4.6

Tcorej=Hroz/n/(Ao*Ei) < (fy/SQR3/&o) con &o=1,1

604,19 Kg/cm²	<	1.863 Kg/cm²	OK

1.19- Flexión en orejetas por carga horizontal (Tflex):
s/ENV 1993-1-1 5.4.5

Tflex=Mom/wr < (fy/&o) con &o=1,1
Mom = Hroz/n*(Dai-Di)/2
wr =1/6*Ei*Ao²

1.359 Kg/cm²	<	3.227 Kg/cm²	OK

1.20- Flexión + cortadura en orejetas (Tflex+Tcorej):
s/ENV 1993-1-1 5.4.7

Si Tcorej<0,5*fy/SQR3/&o Tflex < (fy/&o) con &o=1,1
Si Tcorej>0,5*fy/SQR3/&o Tflex < (1-mu)*(fy/&o) con &o=1,1
mu = (2*Tcorej/(fy/SQR3)-1)^2 = 0,16845

1359,42 Kg/cm²	<	3.227 Kg/cm²	OK

1.21- Flexión + cortadura en orejetas (Tflex+Tcorej):
s/ Von Mises

Tco = SQR(Tflex^2 + 3* Tcorej^2) < (fy/&o) con &o=1,1

1715,56 Kg/cm²	<	3.227 Kg/cm²	OK

2.- TORNILLOS

2.1- Tensión cortante en tornillos (Tct):
s/ENV 1993-1-1 6.5.5.

Tct=Hroz/n/Ae < 0,6*fub/&b con &b=1,25
Ae=Area resistente con de= diámetro resistente = 0,86*MT

2239,03 Kg/cm²	<	3.840 Kg/cm²	OK

2.2- Longitud roscada mínima (Lr):

Lr > MAX (MT/2,20mm)

59 mm	>	20 mm	OK

3.- CAUCHO

3.1- Compresión con Vs (P):

P=Vs/3,14/(Dn/2)^2 < 300 Kg/cm2

294,78 Kg/cm²	<	300 Kg/cm²	OK

3.2- Altura de neopreno (En):

En>máx(Dn/2*a/0,15 ; 12 mm)

36 mm	>	12 mm	OK

3.3- Holgura remanente tras giro máximo (t):

t=h1-Dn/2*a > 5 mm

16 mm	>	5 mm	OK

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4.- HORMIGÓN Y MORTERO:

4.1- Compresión hormigón de tablero (Ft):

Ft=Vs/(3,14*(P/2)^2) < fct

209 Kg/cm²	<	300 Kg/cm²	OK

4.2- Compresión mortero de asiento (Fm):

Fm=Vs/(3,14*(Di/2)^2) < fm

190 Kg/cm²	<	400 Kg/cm²	OK

4.3- Compresión hormigón de pila (Fp):
(No se tiene en cuenta el cono de reparto del asiento de mortero)

Fp=Vs/(3,14*(Di/2)^2) < fcp

190 Kg/cm²	<	300 Kg/cm²	OK

4.4- Compresión por anclajes (Fa):

Fa=Hroz/(n*La*Da) < fcp

142 Kg/cm²	<	300 Kg/cm²	OK

5.- SOLDADURA:

5.1- Tensión producida por carga horizontal (Ts1):
s/ENV 1993-1-1 6.6.5.3.

Ts1=Hroz/S/g < fu/SQR3/&w/BETA con &w=1,25
BETA= 0,9

93 Kg/cm²	<	2.617 Kg/cm²	OK

5.2- Tensión producida por compresión neopreno (Ts2):
s/ENV 1993-1-1 6.6.5.3.

Ts2=Vu/(3,14*(Dn/2)^2)*3,14*Dn*En/(S*g) < fu/SQR3/&w/BETA con &w=1,

727 Kg/cm²	<	2.617 Kg/cm²	OK

5.3- Tensión total (Tst):
s/ENV 1993-1-1 6.6.5.3.

Tst=Ts1 + Ts2 < fu/SQR3/&w/BETA con &w=1,25

821 Kg/cm²	<	2.617 Kg/cm²	OK

6.- P.T.F.E - TEFLON®

6.1- Compresión máxima (Ts):

Ts=Vs/(3,14*(P/2)^2) < Tc

295 Kg/cm²	<	400 Kg/cm²

6.2- Coeficiente de rozamiento P.T.F.E.-Inox.(m):

m=7,33*10^-2 -15*10^-5 *Ts

m=	0,03

6.3- Fuerza de rozamiento máxima (Hroz):

Hroz=1,2*m*Vs

Fr=	34,03 Ton

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2.3.16. Análisis local de esfuerzos. Cálculo transversal de losa

IDEAM

16. ANÁLISIS LOCAL DE ESFUERZOS. CÁLCULO TRANSVERSAL DE LOSA

Para el cálculo de la losa habrá que tener en cuenta los 3 estados límites siguientes:

- Rotura
- Fisuración
- Fatiga

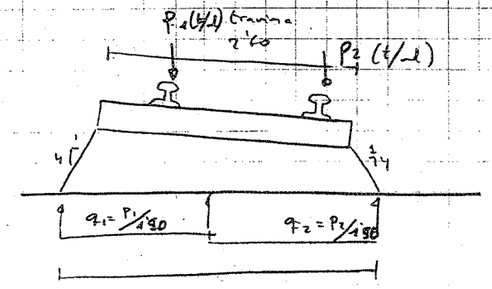
Para el cálculo de esfuerzos, se obtendrán los esfuerzos globales producidos por el empedrillado y los efectos locales en un modelo de tablero transversal por metro de ancho de losa. -

Acciones a considerar en el cálculo de losa:

- Peso propio: - locales, - Globales
- Cargas muertas: - locales, - Globales
- Tren sobrecarga: - locales, - Globales
- Sc. peatones: - locales, - Globales.

Se comprobará asimismo el descarrilo excentrado de 1 tren

Cálculo local de tramo en losa

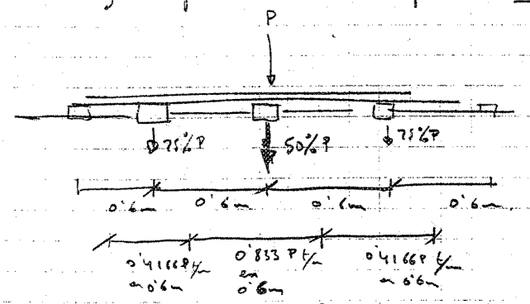


Ancho de reparto: $2'6 + \frac{0'70}{4} \cdot 2 = 3'00$

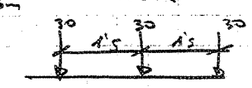
Separación = 1'50

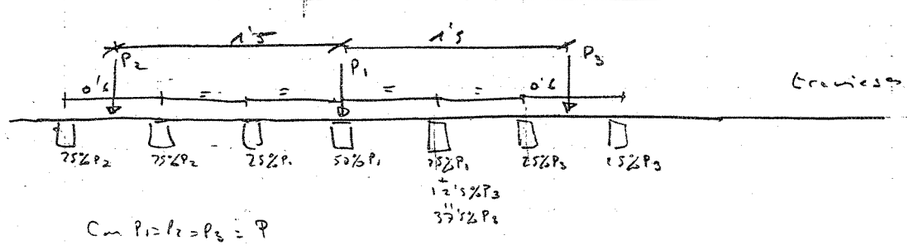
Se reparten con una altura media de 0'65 m de impendiente de 4:1.

Una carga puntual se reparte en 3 traviesas.



El tren tipo A



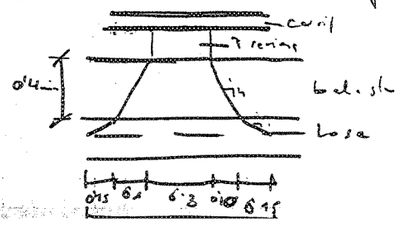


Traviesas a 0'60 m entre ejes

Con $P_1 = P_2 = P_3 = P$

Si $P_1 = P_2 = P_3$ como máximo una traviesa se llevará 50% de P.

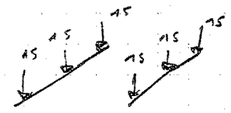
Y con un ancho de reparto en longitudinal de ⇒ 0'80 m.



Luego para una carga puntual el cálculo local en 0'80 m de longitud según el punto es

$$\frac{q\,(t/ml)\ 0'5 \cdot P}{0'8\ m} = 0'625 \cdot P(t) \text{ en t/ml}$$

Si P = 30 t/eje



La carga equivalente para el cálculo local será de

$0'625 \cdot P = 0'625 \cdot 30 = \underline{18'75\ t/ml}$ del tren A frente a 12 t/ml del tren B. (en 2 carriles)

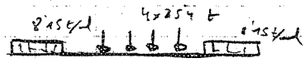
Resumen IPF-75: Con $I = 1'12$ coeficiente de impacto.

- Cálculo local

Tren B $q: 12\ t/ml \times 1'12 = 13'44$ (64% del tren A)

Tren A $q: 18'75\ t/ml \times 1'12 = 21\ t/ml$

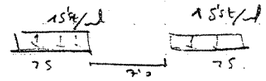
- Tren de EC.



Load Model 71 ⇒ con carga puntual de 25'48 t. repartida 1'6m

$$\Rightarrow 25'0 \cdot \frac{0'5}{0'8} = \underline{15'62\ t/ml} \times 1'32 = 20'6\ t/ml$$

SW2 ⇒ $q = 15'5\ t/ml$



Cálculo de coeficientes de impacto para la UIC

- Voladizo = 3 veces la distancia 7'3 m.

$L_\phi = 3 \cdot 2'3\,m = 6'9\,m$

$$\phi_2 = \frac{1'44}{\sqrt{6'9} - 0'2} + 0'82 = \underline{\underline{1'41}}$$

- Forjado: 3 veces distancia entre ejes:

$\Rightarrow 3 \cdot 3'1 = 9'3\,m \Rightarrow \phi_2 = \dfrac{1'44}{\sqrt{9'3} - 0'2} + 0'82 = \underline{\underline{1'32}}$

$\Rightarrow 3 \cdot 3'2 = 9'6\,m \Rightarrow \phi_2 = \dfrac{1'44}{\sqrt{9'6} - 0'2} + 0'82 = \underline{\underline{1'31}}$

Dado que no hay esfuerzos en el voladizo locales de tren no se tiene en cuenta, sólo se usará $\underline{\phi = 1'32}$ para el Load Model 71 de la UIC.

Comparación del Load Model 71 de UIC y el Tren A de IPF

Tren A $\Rightarrow$ 30 t $\Rightarrow$ Supone $18'75$ t/ml $\times \overset{I}{1'12} = \underline{\underline{21}}$ t/ml con impacto

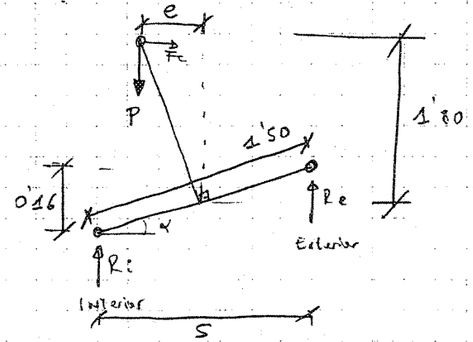
Load Model 75 t $\Rightarrow$ Supone $\dfrac{25 \cdot 0'5}{0'8} \times 1'32 = \underline{\underline{20'625}}$ t/ml con impacto

Luego es más desfavorable el tren A de la IPF a efectos locales.

IDEAM

- Efecto del Peralte de la vía

El peralte provoca un desequilibrio en las reacciones de los carriles.



$\operatorname{sen}\alpha = \dfrac{0'16}{1'50} = 0'1066 \Rightarrow \underline{\alpha = 6'173°}$

$S = 1'5 \cdot \cos\alpha = \underline{1'4914\,m}$

$e = 1'80 \cdot \operatorname{sen}\alpha = \underline{0'4918\,m}$

$R_i = P\left(\frac{S}{2} + e\right)/S = \underline{0'629\,P}$

$R_e = P\left(\frac{S}{2} - e\right)/S = \underline{0'371\,P}$

Sin fuerza centrífuga

H) Efecto de la fuerza centrífuga.

- Efecto de la fuerza centrífuga. Según la IPF-75:

$$F_c = \frac{Q \cdot V^2}{127 \cdot R}$$

Con $V = 200$ Km/h y $R = \underline{4500\,m}$

Con V en Km/h y R en m., Q y Fc en t/ml

$$F_c = \frac{Q \cdot (200)^2}{127 \quad 4500} = \underline{\underline{0'07 \cdot Q}}$$

$M = F_c \; 1'8 = 0'126 \cdot Q \Rightarrow \Delta R = \dfrac{M}{S} = \underline{\underline{0'0845 \cdot Q}}$

Como la Fc en IPF ya lleva coeficiente de impacto se reducirá para luego multiplicar el efecto global.

Luego

$R_i = (0'629 - \frac{0'0845}{1'12})P = \underline{0'5535\,P}$

$R_e = (0'371 + \frac{0'0845}{1'12})P = \underline{0'4465\,P}$

Con Fc.

Se deben considerar 2 hipótesis:

1) Sólo peralte, sin fuerza centrífuga ⇒ Tren Parado

Ri:	0'629 P
Re:	0'371 P

2) Peralte + Fc de tren a 200 km/h

Ri =	0'545 P
Re =	0'455 P.

- Fuerza centrífuga según la UIC

Efecto del peralte, es el mismo que el antes calculado.

Efecto de fza centrífuga:

Para tren a 350 km/h

$$Fc = Q \cdot \frac{v^2}{127 \cdot R} = Q \cdot \frac{350^2}{127 \cdot 4500} = \underline{0'2143 \cdot Q}$$

$$Mc\ Fc \cdot 1'8 = 0'3858 \cdot Q \Rightarrow \Delta R = \frac{M}{5} = \underline{0'2587\ Q}$$

Luego $Ri = (0'629 - 0'2587)Q = \underline{0'371\ Q}$

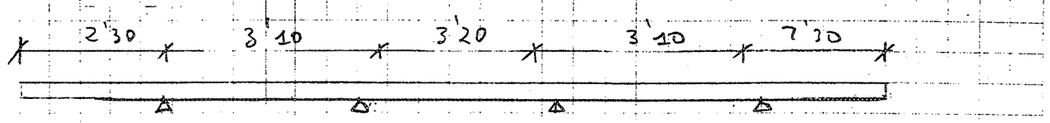
$Re = (0'371 + 0'2587)Q = \underline{0'629\ Q}$

El resultado es el mismo pero cambiando las reacciones de lugar.

2 hipótesis: 1) Tren parado: Ri = 0'629 Q, Re = 0'371 Q

2) Tren + Fc (350 km/h): Ri = 0'371 Q, Re = 0'629 Q

- Modelo de cálculo transversal

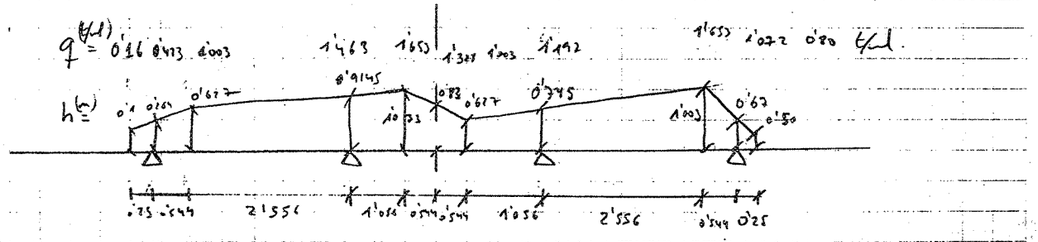


Apoyos en el apoyo de almas

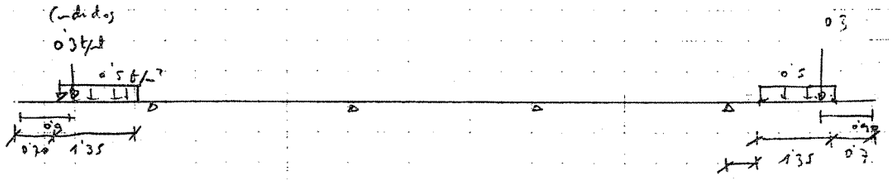
- Acciones en el cálculo transversal

1) Peso losa = 0'3 · 2'5 t/m³ = 0'75 t/m y ml.

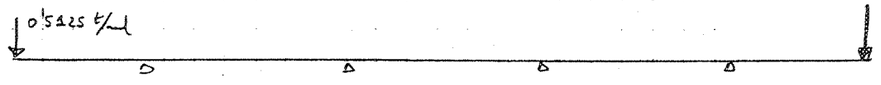
2) Balasto + pendientado



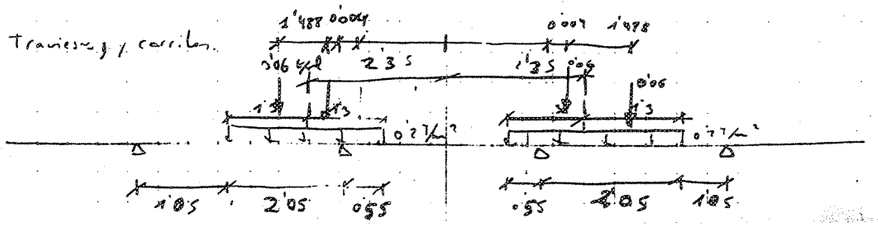
3) Conductos + cableado + pasarelas



4) Imposta y barandillas



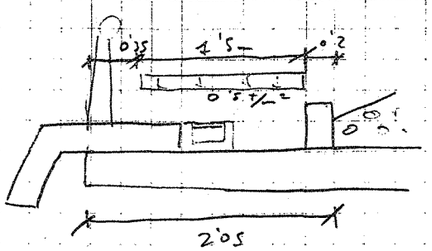
5) Traviesas y carriles



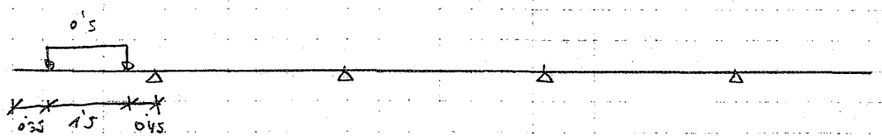
IDEAM

6) Sobre carga en P-suelo

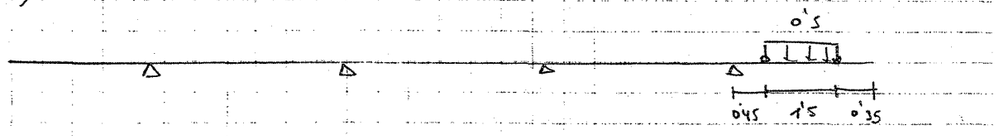
Se considera una sobrecarga de 0'5 t/m² en un ancho de 1'5 m.



6.1) SC. Pasco izquierdo



6.2) SC. Pasco derecho.

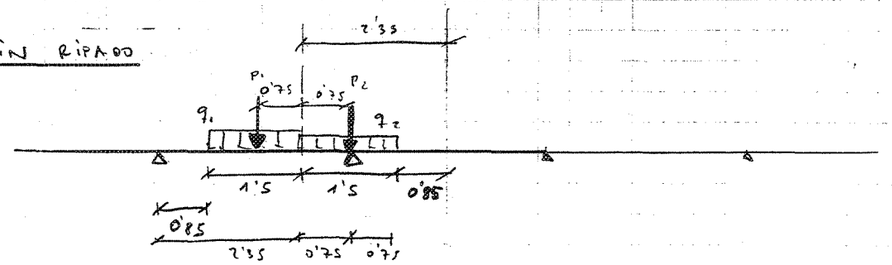


IDEAM

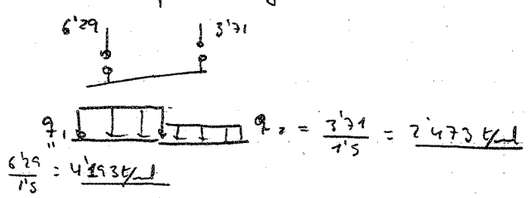
CARGAS UNITARIAS DE 10 T/m (en total, 2 patines, 1 vía)

Nervio izquierdo (Sólo Peralte)

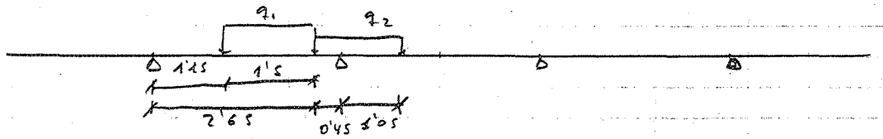
· SIN RIPADO



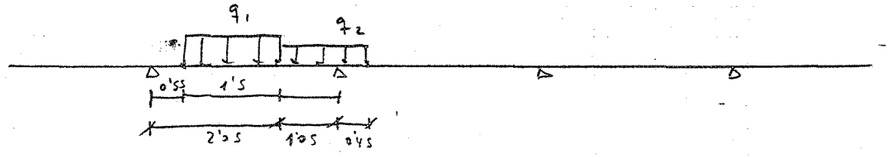
Para vía con peralte y carga unitaria de 10 T/m ⇒



· RIPADO INTERIOR +0'30

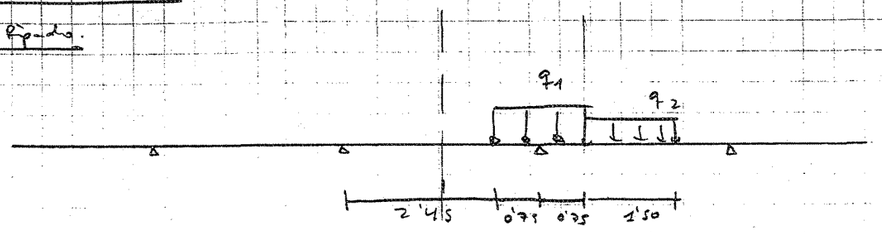


· RIPADO EXTERIOR

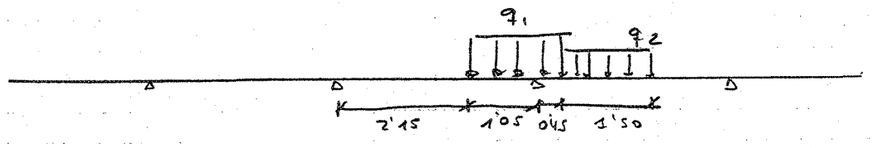


Natrio derecho (sólo peralte)

- Sin ripado.



- Ripado interior.



- Ripado exterior.

- Caso con sólo peralte $q_1 = \frac{6'29}{1'5} = \underline{4'193\ t/ml}$ y $q_2 = \frac{3'71}{1'5} = \underline{2'473\ t/ml}$.

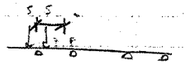
- Caso con Fc. IAF ⇒ $q_1 = \frac{5'535}{1'5} = \underline{3'69\ t/ml}$ y $q_2 = \frac{4'465}{1'5} = \underline{2'976\ t/ml}$

Para carga vertical de 10 t/ml, vía

· Descarrilamiento de vehículos ferroviarios.

Se trata de una carga accidental sólo concomitante con las cargas permanentes, y que se verificará con un coeficiente de mayoración de $\gamma_f = 1'00$ y minoración de resistencia $\gamma_c = 1'70$ en hormigón y $\gamma_s = 1'0$ en acero.

- 2 cargas verticales de 5 T/ml separadas 1'4 m entre sí ~~adosadas~~ a 2'20 m (mínimo) en cada lado del eje de la vía.



Nomb. arch.: TRANS.DIM	Fecha 26-09-2000 17:31	ROBOT V6 v. 4.4

ROBOT

PORtico PLAno

NUMeración DIScontínua

NUDos 6 ELEmentos 5

UNIdades
 Longitud=m FUErzas=T

NUDos

N°	X	Y
1	0	0
2	2.3	0
3	5.4	0
4	8.6	0
5	11.7	0
6	14	0

ELEmentos

N°	OR	FI
1	1	2
2	2	3
3	3	4
4	4	5
5	5	6

CARActerísticas
 "H-300"
  1A5 BB=1 HH=0.3

APOyos
' Etiqueta - móvil
' Ninguna etiqueta - fijo

 2 RZ
 3A5 UX RZ

CARGamento

CASo # 1 PP LOSA
  ELEmentos
   1A5 PY=-0.75

CASo # 2 BALASTO+PENDIENTEADO
  ELEmentos
   1 X=2.05 PY=-0.16 HAsta X=2.3 PY=-0.423
   2 X=0 PY=-0.423 HAsta X=0.544 PY=-1.003
   2 X=0.544 PY=-1.003 HAsta X=3.1 PY=-1.463
   3 X=0 PY=-1.463 HAsta X=1.056 PY=-1.653
   3 X=1.056 PY=-1.653 HAsta X=2.144 PY=-1.003
   3 X=2.144 PY=-1.003 HAsta X=3.2 PY=-1.192
   4 X=0 PY=-1.192 HAsta X=2.556 PY=-1.653
   4 X=2.556 PY=-1.653 HAsta X=3.1 PY=-1.072
   5 X=0 PY=-1.072 HAsta X=0.25 PY=-0.8

CASo # 3 COND+CABLE+PASEOS
  ELEmentos
   1 X=0.7 PY=-0.5 HAsta X=2.05 PY=-0.5
   5 X=0.2500001 PY=-0.5 HAsta X=1.6 PY=-0.5
   1 X=0.9 FY=-0.3

   5 X=1.4 FY=-0.3

CASo # 4 IMPOSTAS Y BARANDILLAS
   1 6 FY=-0.5125

CASo # 5 TRAVIESAS Y CARRILES
  ELEmentos
   2 X=1.604 FY=-0.06
   4 X=1.496 FY=-0.06
   2 X=3.096 FY=-0.06
   4 X=0.004 FY=-0.06
   2 X=1.05 PY=-0.2 HAsta X=3.1 PY=-0.2
   4 X=0 PY=-0.2 HAsta X=2.05 PY=-0.2
   3 X=0 PY=-0.2 HAsta X=0.55 PY=-0.2
   3 X=2.65 PY=-0.2 HAsta X=3.2 PY=-0.2

CASo # 6 INCREMENTO 30 BALASTO
  ELEmentos
   2A4 PY=-0.32
   1 X=2.05 PY=-0.32 HAsta X=2.3 PY=-0.32
   5 X=0 PY=-0.32 HAsta X=0.25 PY=-0.32

CASo # 7 SC PASEO NI
  ELEmentos
   1 X=0.35 PY=-0.5 HAsta X=1.85 PY=-0.5

CASo # 8 SC PASEO ND
  ELEmentos
   5 X=0.45 PY=-0.5 HAsta X=1.95 PY=-0.5

CASo # 9 TREN NI SR solo peralte
  ELEmentos
   2 X=0.85 PY=-4.193 HAsta X=2.35 PY=-4.193
   2 X=2.35 PY=-2.473 HAsta X=3.1 PY=-2.473
   3 X=0 PY=-2.473 HAsta X=0.75 PY=-2.473

CASo # 10 TREN NI RINT solo peralte
  ELEmentos
   2 X=1.15 PY=-4.193 HAsta X=2.65 PY=-4.193
   2 X=2.65 PY=-2.473 HAsta X=3.1 PY=-2.473
   3 X=0 PY=-2.473 HAsta X=1.05 PY=-2.473

CASo # 11 TREN NI REXT solo peralte
  ELEmentos
   2 X=0.55 PY=-4.193 HAsta X=2.05 PY=-4.193
   2 X=2.05 PY=-2.473 HAsta X=3.1 PY=-2.473
   3 X=0 PY=-2.473 HAsta X=0.45 PY=-2.473

CASo # 12 TREN ND SR solo peralte
  ELEmentos
   3 X=2.45 PY=-4.193 HAsta X=3.2 PY=-4.193
   4 X=0 PY=-4.193 HAsta X=0.75 PY=-4.193
   4 X=0.75 PY=-2.473 HAsta X=2.25 PY=-2.473

CASo # 13 TREN ND RINT solo peralte
  ELEmentos
   3 X=2.15 PY=-4.193 HAsta X=3.2 PY=-4.193
   4 X=0 PY=-4.193 HAsta X=0.45 PY=-4.193
   4 X=0.45 PY=-2.473 HAsta X=1.95 PY=-2.473

CASo # 14 TREN ND REXT solo peralte
  ELEmentos
   3 X=2.75 PY=-4.193 HAsta X=3.2 PY=-4.193
   4 X=0 PY=-4.193 HAsta X=1.05 PY=-4.193
   4 X=1.05 PY=-2.473 HAsta X=2.55 PY=-2.473

CASo # 15 TREN NI SR Fcipf
  ELEmentos
   2 X=0.85 PY=-3.690 HAsta X=2.35 PY=-3.690

```
   2 X=2.35 PY=-2.976 HAsta X=3.1 PY=-2.976
   3 X=0 PY=-2.976 HAsta X=0.75 PY=-2.976

CASo # 16 TREN NI RINT Fcipf
  ELEmentos
   2 X=1.15 PY=-3.690 HAsta X=2.65 PY=-3.690
   2 X=2.65 PY=-2.976 HAsta X=3.1 PY=-2.976
   3 X=0 PY=-2.976 HAsta X=1.05 PY=-2.976

CASo # 17 TREN NI REXT  Fcipf
  ELEmentos
   2 X=0.55 PY=-3.690 HAsta X=2.05 PY=-3.690
   2 X=2.05 PY=-2.976 HAsta X=3.1 PY=-2.976
   3 X=0 PY=-2.976 HAsta X=0.45 PY=-2.976

CASo # 18 TREN ND SR  Fcipf
  ELEmentos
   3 X=2.45 PY=-3.690 HAsta X=3.2 PY=-3.690
   4 X=0 PY=-3.690 HAsta X=0.75 PY=-3.690
   4 X=0.75 PY=-2.976 HAsta X=2.25 PY=-2.976

CASo # 19 TREN ND RINT  Fcipf
  ELEmentos
   3 X=2.15 PY=-3.690 HAsta X=3.2 PY=-3.690
   4 X=0 PY=-3.690 HAsta X=0.45 PY=-3.690
   4 X=0.45 PY=-2.976 HAsta X=1.95 PY=-2.976

CASo # 20 TREN ND REXT  Fcipf
  ELEmentos
   3 X=2.75 PY=-3.690 HAsta X=3.2 PY=-3.690
   4 X=0 PY=-3.690 HAsta X=1.05 PY=-3.690
   4 X=1.05 PY=-2.976 HAsta X=2.55 PY=-2.976

FIN
```


Especificación de esfuerzos

Resultados individuales

Convención de señales - fuerzas internas

Caso 1A20
1A20
Elemento todo
1A5
Nudo todo
1A6

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
Nombre del caso			PP LOSA		
1	1	1	0.0	0.0000	0.00000
1	1	2/5	0.0	-0.4313	0.12398
1	1	3/5	0.0	-0.8625	0.49594
1	1	4/5	0.0	-1.2938	1.11586
1	1	2	0.0	-1.7250	1.98375
1	2	2	0.0	1.6885	1.98375
1	2	2/5	0.0	1.1072	0.90040
1	2	3/5	0.0	0.5260	0.26753
1	2	4/5	0.0	-0.0553	0.08512
1	2	3	0.0	-0.6365	0.35318
1	3	3	0.0	1.2000	0.35318
1	3	2/5	0.0	0.6000	-0.36682
1	3	3/5	0.0	0.0000	-0.60682
1	3	4/5	0.0	-0.6000	-0.36682
1	3	4	0.0	-1.2000	0.35318
1	4	4	0.0	0.6365	0.35318
1	4	2/5	0.0	0.0553	0.08512
1	4	3/5	0.0	-0.5260	0.26753
1	4	4/5	0.0	-1.1072	0.90040
1	4	5	0.0	-1.6885	1.98375
1	5	5	0.0	1.7250	1.98375
1	5	2/5	0.0	1.2938	1.11586
1	5	3/5	0.0	0.8625	0.49594
1	5	4/5	0.0	0.4312	0.12398
1	5	6	0.0	0.0000	0.00000
Nombre del caso			BALASTO+PENDIENTEADO		
2	1	1	0.0	0.0	0.00000
2	1	2/5	0.0	0.0	0.00000
2	1	3/5	0.0	0.0	0.00000
2	1	4/5	0.0	0.0	0.00000
2	1	2	0.0	-0.0729	0.00774
2	2	2	0.0	1.1712	0.00774
2	2	2/5	0.0	0.5468	-0.69198
2	2	3/5	0.0	-0.3168	-0.78807
2	2	4/5	0.0	-1.2885	-0.17300
2	2	3	0.0	-2.3683	1.23701
2	3	3	0.0	2.2538	1.23701
2	3	2/5	0.0	1.0258	-0.08250
2	3	3/5	0.0	-0.2023	-0.39442
2	3	4/5	0.0	-1.0990	0.14357
2	3	4	0.0	-1.9953	1.37364
2	4	4	0.0	2.5598	1.37364
2	4	2/5	0.0	1.5818	-0.23824
2	4	3/5	0.0	0.4955	-1.05022
2	4	4/5	0.0	-0.6991	-0.97835
2	4	5	0.0	-1.8173	0.02783
2	5	5	0.0	0.2340	0.02783
2	5	2/5	0.0	0.0000	0.00000
2	5	3/5	0.0	0.0000	0.00000
2	5	4/5	0.0	0.0000	0.00000
2	5	6	0.0	0.0000	0.00000

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
Nombre del caso			COND+CABLE+PASEOS		
3	1	1	0.0	0.0000	0.00000
3	1	2/5	0.0	0.0000	0.00000
3	1	3/5	0.0	-0.5250	0.12563
3	1	4/5	0.0	-0.8125	0.51016
3	1	2	0.0	-0.9750	1.04438
3	2	2	0.0	0.4030	1.04438
3	2	2/5	0.0	0.4030	0.73205
3	2	3/5	0.0	0.4030	0.41973
3	2	4/5	0.0	0.4030	0.10741
3	2	3	0.0	0.4030	-0.20491
3	3	3	0.0	0.0000	-0.20491
3	3	2/5	0.0	0.0000	-0.20491
3	3	3/5	0.0	0.0000	-0.20491
3	3	4/5	0.0	0.0000	-0.20491
3	3	4	0.0	0.0000	-0.20491
3	4	4	0.0	-0.4030	-0.20491
3	4	2/5	0.0	-0.4030	0.10741
3	4	3/5	0.0	-0.4030	0.41973
3	4	4/5	0.0	-0.4030	0.73205
3	4	5	0.0	-0.4030	1.04438
3	5	5	0.0	0.9750	1.04438
3	5	2/5	0.0	0.8125	0.51016
3	5	3/5	0.0	0.5250	0.12562
3	5	4/5	0.0	0.0000	0.00000
3	5	6	0.0	0.0000	0.00000
Nombre del caso			IMPOSTAS Y BARANDILLAS		
4	1	1	0.0	-0.5125	0.00000
4	1	2/5	0.0	-0.5125	0.29469
4	1	3/5	0.0	-0.5125	0.58937
4	1	4/5	0.0	-0.5125	0.88406
4	1	2	0.0	-0.5125	1.17875
4	2	2	0.0	0.4548	1.17875
4	2	2/5	0.0	0.4548	0.82624
4	2	3/5	0.0	0.4548	0.47374
4	2	4/5	0.0	0.4548	0.12123
4	2	3	0.0	0.4548	-0.23127
4	3	3	0.0	0.0000	-0.23127
4	3	2/5	0.0	0.0000	-0.23127
4	3	3/5	0.0	0.0000	-0.23127
4	3	4/5	0.0	0.0000	-0.23127
4	3	4	0.0	0.0000	-0.23127
4	4	4	0.0	-0.4548	-0.23127
4	4	2/5	0.0	-0.4548	0.12123
4	4	3/5	0.0	-0.4548	0.47374
4	4	4/5	0.0	-0.4548	0.82624
4	4	5	0.0	-0.4548	1.17875
4	5	5	0.0	0.5125	1.17875
4	5	2/5	0.0	0.5125	0.88406
4	5	3/5	0.0	0.5125	0.58937
4	5	4/5	0.0	0.5125	0.29469
4	5	6	0.0	0.5125	0.00000
Nombre del caso			TRAVIESAS Y CARRILES		
5	1	1	0.0	0.0000	0.00000
5	1	2/5	0.0	0.0000	0.00000
5	1	3/5	0.0	0.0000	0.00000
5	1	4/5	0.0	0.0000	0.00000
5	1	2	0.0	0.0000	0.00000
5	2	2	0.0	0.1310	0.00000
5	2	2/5	0.0	0.1310	-0.10154
5	2	3/5	0.0	0.0310	-0.17809
5	2	4/5	0.0	-0.1840	-0.09881

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
5	2	3	0.0	-0.3990	0.10408
5	3	3	0.0	0.1100	0.10408
5	3	2/5	0.0	0.0000	0.07383
5	3	3/5	0.0	0.0000	0.07383
5	3	4/5	0.0	0.0000	0.07383
5	3	4	0.0	-0.1100	0.10408
5	4	4	0.0	0.3990	0.10408
5	4	2/5	0.0	0.1840	-0.09881
5	4	3/5	0.0	-0.0310	-0.17809
5	4	4/5	0.0	-0.1310	-0.10154
5	4	5	0.0	-0.1310	0.00000
5	5	5	0.0	0.0000	0.00000
5	5	2/5	0.0	0.0000	0.00000
5	5	3/5	0.0	0.0000	0.00000
5	5	4/5	0.0	0.0000	0.00000
5	5	6	0.0	0.0000	0.00000
Nombre del caso			INCREMENTO 30 BALASTO		
6	1	1	0.0	0.0	0.00000
6	1	2/5	0.0	0.0	0.00000
6	1	3/5	0.0	0.0	0.00000
6	1	4/5	0.0	0.0	0.00000
6	1	2	0.0	-0.0800	0.01000
6	2	2	0.0	0.3977	0.01000
6	2	2/5	0.0	0.1497	-0.20210
6	2	3/5	0.0	-0.0983	-0.22200
6	2	4/5	0.0	-0.3463	-0.04971
6	2	3	0.0	-0.5943	0.31479
6	3	3	0.0	0.5120	0.31479
6	3	2/5	0.0	0.2560	0.00759
6	3	3/5	0.0	0.0000	-0.09481
6	3	4/5	0.0	-0.2560	0.00759
6	3	4	0.0	-0.5120	0.31479
6	4	4	0.0	0.5943	0.31479
6	4	2/5	0.0	0.3463	-0.04971
6	4	3/5	0.0	0.0983	-0.22200
6	4	4/5	0.0	-0.1497	-0.20210
6	4	5	0.0	-0.3977	0.01000
6	5	5	0.0	0.0800	0.01000
6	5	2/5	0.0	0.0000	0.00000
6	5	3/5	0.0	0.0000	0.00000
6	5	4/5	0.0	0.0000	0.00000
6	5	6	0.0	0.0000	0.00000
Nombre del caso			SC PASEO NI		
7	1	1	0.0	0.0	0.00000
7	1	2/5	0.0	-0.1125	0.01266
7	1	3/5	0.0	-0.4000	0.16000
7	1	4/5	0.0	-0.6875	0.47266
7	1	2	0.0	-0.7500	0.90000
7	2	2	0.0	0.3667	0.90000
7	2	2/5	0.0	0.3667	0.61583
7	2	3/5	0.0	0.3667	0.33165
7	2	4/5	0.0	0.3667	0.04748
7	2	3	0.0	0.3667	-0.23670
7	3	3	0.0	-0.0928	-0.23670
7	3	2/5	0.0	-0.0928	-0.16249
7	3	3/5	0.0	-0.0928	-0.08829
7	3	4/5	0.0	-0.0928	-0.01409
7	3	4	0.0	-0.0928	0.06011
7	4	4	0.0	0.0194	0.06011
7	4	2/5	0.0	0.0194	0.04508
7	4	3/5	0.0	0.0194	0.03006
7	4	4/5	0.0	0.0194	0.01503
7	4	5	0.0	0.0194	0.00000

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
7	5	5	0.0	0.0000	0.00000
7	5	2/5	0.0	0.0000	0.00000
7	5	3/5	0.0	0.0000	0.00000
7	5	4/5	0.0	0.0000	0.00000
7	5	6	0.0	0.0000	0.00000
Nombre del caso			SC PASEO ND		
8	1	1	0.0	0.0	0.00000
8	1	2/5	0.0	0.0	0.00000
8	1	3/5	0.0	0.0	0.00000
8	1	4/5	0.0	0.0	0.00000
8	1	2	0.0	0.0	0.00000
8	2	2	0.0	-0.0194	0.00000
8	2	2/5	0.0	-0.0194	0.01503
8	2	3/5	0.0	-0.0194	0.03006
8	2	4/5	0.0	-0.0194	0.04508
8	2	3	0.0	-0.0194	0.06011
8	3	3	0.0	0.0928	0.06011
8	3	2/5	0.0	0.0928	-0.01409
8	3	3/5	0.0	0.0928	-0.08829
8	3	4/5	0.0	0.0928	-0.16249
8	3	4	0.0	0.0928	-0.23670
8	4	4	0.0	-0.3667	-0.23670
8	4	2/5	0.0	-0.3667	0.04748
8	4	3/5	0.0	-0.3667	0.33165
8	4	4/5	0.0	-0.3667	0.61583
8	4	5	0.0	-0.3667	0.90000
8	5	5	0.0	0.7500	0.90000
8	5	2/5	0.0	0.6875	0.47266
8	5	3/5	0.0	0.4000	0.16000
8	5	4/5	0.0	0.1125	0.01266
8	5	6	0.0	0.0000	0.00000
Nombre del caso			TREN NI SR SOLO PERALTE		
9	1	1	0.0	0.0	0.0
9	1	2/5	0.0	0.0	0.0
9	1	3/5	0.0	0.0	0.0
9	1	4/5	0.0	0.0	0.0
9	1	2	0.0	0.0	0.0
9	2	2	0.0	2.5202	0.00000
9	2	2/5	0.0	2.5202	-1.95319
9	2	3/5	0.0	-0.4149	-2.87910
9	2	4/5	0.0	-3.6644	-1.29838
9	2	3	0.0	-5.6240	2.31701
9	3	3	0.0	2.4917	2.31701
9	3	2/5	0.0	0.6369	1.11194
9	3	3/5	0.0	0.6369	0.60241
9	3	4/5	0.0	0.6369	0.09288
9	3	4	0.0	0.6369	-0.41666
9	4	4	0.0	-0.1344	-0.41666
9	4	2/5	0.0	-0.1344	-0.31249
9	4	3/5	0.0	-0.1344	-0.20833
9	4	4/5	0.0	-0.1344	-0.10416
9	4	5	0.0	-0.1344	0.00000
9	5	5	0.0	0.0000	0.00000
9	5	2/5	0.0	0.0000	0.00000
9	5	3/5	0.0	0.0000	0.00000
9	5	4/5	0.0	0.0000	0.00000
9	5	6	0.0	0.0000	0.00000
Nombre del caso			TREN NI RINT SOLO PERALTE		
10	1	1	0.0	0.0000	0.00000
10	1	2/5	0.0	0.0000	0.00000
10	1	3/5	0.0	0.0000	0.00000
10	1	4/5	0.0	0.0000	0.00000

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
10	1	2	0.0	0.0000	0.00000
10	2	2	0.0	1.7671	0.00000
10	2	2/5	0.0	1.7671	-1.36949
10	2	3/5	0.0	0.0899	-2.40354
10	2	4/5	0.0	-3.1597	-1.21399
10	2	3	0.0	-5.6353	2.31983
10	3	3	0.0	2.9773	2.31983
10	3	2/5	0.0	0.9989	0.72933
10	3	3/5	0.0	0.3807	0.34750
10	3	4/5	0.0	0.3807	0.04296
10	3	4	0.0	0.3807	-0.26158
10	4	4	0.0	-0.0844	-0.26158
10	4	2/5	0.0	-0.0844	-0.19619
10	4	3/5	0.0	-0.0844	-0.13079
10	4	4/5	0.0	-0.0844	-0.06540
10	4	5	0.0	-0.0844	0.00000
10	5	5	0.0	0.0	0.00000
10	5	2/5	0.0	0.0	0.00000
10	5	3/5	0.0	0.0	0.00000
10	5	4/5	0.0	0.0	0.00000
10	5	6	0.0	0.0	0.00000
Nombre del caso			TREN NI REXT SOLO PERALTE		
11	1	1	0.0	0.0	0.0
11	1	2/5	0.0	0.0	0.0
11	1	3/5	0.0	0.0	0.0
11	1	4/5	0.0	0.0	0.0
11	1	2	0.0	0.0	0.0
11	2	2	0.0	3.3687	0.00000
11	2	2/5	0.0	2.4252	-2.50458
11	2	3/5	0.0	-0.8243	-3.12493
11	2	4/5	0.0	-3.6009	-1.29190
11	2	3	0.0	-5.5175	2.24147
11	3	3	0.0	1.8933	2.24147
11	3	2/5	0.0	0.7804	1.36674
11	3	3/5	0.0	0.7804	0.74239
11	3	4/5	0.0	0.7804	0.11805
11	3	4	0.0	0.7804	-0.50630
11	4	4	0.0	-0.1633	-0.50630
11	4	2/5	0.0	-0.1633	-0.37973
11	4	3/5	0.0	-0.1633	-0.25315
11	4	4/5	0.0	-0.1633	-0.12658
11	4	5	0.0	-0.1633	0.00000
11	5	5	0.0	0.0000	0.00000
11	5	2/5	0.0	0.0000	0.00000
11	5	3/5	0.0	0.0000	0.00000
11	5	4/5	0.0	0.0000	0.00000
11	5	6	0.0	0.0000	0.00000
Nombre del caso			TREN ND SR SOLO PERALTE		
12	1	1	0.0	0.0000	0.00000
12	1	2/5	0.0	0.0000	0.00000
12	1	3/5	0.0	0.0000	0.00000
12	1	4/5	0.0	0.0000	0.00000
12	1	2	0.0	0.0000	0.00000
12	2	2	0.0	0.0660	0.00000
12	2	2/5	0.0	0.0660	-0.05118
12	2	3/5	0.0	0.0660	-0.10236
12	2	4/5	0.0	0.0660	-0.15354
12	2	3	0.0	0.0660	-0.20472
12	3	3	0.0	-0.3058	-0.20472
12	3	2/5	0.0	-0.3058	0.03988
12	3	3/5	0.0	-0.3058	0.28449
12	3	4/5	0.0	-0.3058	0.52910
12	3	4	0.0	-3.4505	1.95299

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
12	4	4	0.0	5.3089	1.95299
12	4	2/5	0.0	2.1023	-0.90274
12	4	3/5	0.0	0.1858	-1.78938
12	4	4/5	0.0	-1.5453	-1.19763
12	4	5	0.0	-1.5453	0.00000
12	5	5	0.0	0.0	0.00000
12	5	2/5	0.0	0.0	0.00000
12	5	3/5	0.0	0.0	0.00000
12	5	4/5	0.0	0.0	0.00000
12	5	6	0.0	0.0	0.00000
Nombre del caso			TREN ND RINT SOLO PERALTE		
13	1	1	0.0	0.0000	0.00000
13	1	2/5	0.0	0.0000	0.00000
13	1	3/5	0.0	0.0000	0.00000
13	1	4/5	0.0	0.0000	0.00000
13	1	2	0.0	0.0000	0.00000
13	2	2	0.0	-0.0180	0.00000
13	2	2/5	0.0	-0.0180	0.01396
13	2	3/5	0.0	-0.0180	0.02792
13	2	4/5	0.0	-0.0180	0.04189
13	2	3	0.0	-0.0180	0.05585
13	3	3	0.0	0.1251	0.05585
13	3	2/5	0.0	0.1251	-0.04420
13	3	3/5	0.0	0.1251	-0.14424
13	3	4/5	0.0	-0.9232	-0.11326
13	3	4	0.0	-4.2776	1.96705
13	4	4	0.0	4.6580	1.96705
13	4	2/5	0.0	1.9674	-0.47452
13	4	3/5	0.0	0.0508	-1.25660
13	4	4/5	0.0	-0.9384	-0.72722
13	4	5	0.0	-0.9384	0.00000
13	5	5	0.0	0.0000	0.00000
13	5	2/5	0.0	0.0000	0.00000
13	5	3/5	0.0	0.0000	0.00000
13	5	4/5	0.0	0.0000	0.00000
13	5	6	0.0	0.0000	0.00000
Nombre del caso			TREN ND REXT SOLO PERALTE		
14	1	1	0.0	0.0000	0.00000
14	1	2/5	0.0	0.0000	0.00000
14	1	3/5	0.0	0.0000	0.00000
14	1	4/5	0.0	0.0000	0.00000
14	1	2	0.0	0.0000	0.00000
14	2	2	0.0	0.1278	0.00000
14	2	2/5	0.0	0.1278	-0.09903
14	2	3/5	0.0	0.1278	-0.19806
14	2	4/5	0.0	0.1278	-0.29709
14	2	3	0.0	0.1278	-0.39612
14	3	3	0.0	-0.6099	-0.39612
14	3	2/5	0.0	-0.6099	0.09179
14	3	3/5	0.0	-0.6099	0.57971
14	3	4/5	0.0	-0.6099	1.06762
14	3	4	0.0	-2.4967	1.98008
14	4	4	0.0	5.8514	1.98008
14	4	2/5	0.0	2.6018	-1.29552
14	4	3/5	0.0	0.2122	-2.26770
14	4	4/5	0.0	-1.7044	-1.68950
14	4	5	0.0	-2.2608	0.00000
14	5	5	0.0	0.0	0.00000
14	5	2/5	0.0	0.0	0.00000
14	5	3/5	0.0	0.0	0.00000
14	5	4/5	0.0	0.0	0.00000
14	5	6	0.0	0.0	0.00000

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
Nombre del caso			TREN NI SR FCIPF		
15	1	1	0.0	0.0	0.0
15	1	2/5	0.0	0.0	0.0
15	1	3/5	0.0	0.0	0.0
15	1	4/5	0.0	0.0	0.0
15	1	2	0.0	0.0	0.0
15	2	2	0.0	2.2351	0.00000
15	2	2/5	0.0	2.2351	-1.73224
15	2	3/5	0.0	-0.3479	-2.56042
15	2	4/5	0.0	-3.2076	-1.18268
15	2	3	0.0	-5.5319	2.21056
15	3	3	0.0	2.7721	2.21056
15	3	2/5	0.0	0.5401	0.94150
15	3	3/5	0.0	0.5401	0.50944
15	3	4/5	0.0	0.5401	0.07738
15	3	4	0.0	0.5401	-0.35468
15	4	4	0.0	-0.1144	-0.35468
15	4	2/5	0.0	-0.1144	-0.26601
15	4	3/5	0.0	-0.1144	-0.17734
15	4	4/5	0.0	-0.1144	-0.08867
15	4	5	0.0	-0.1144	0.00000
15	5	5	0.0	0.0000	0.00000
15	5	2/5	0.0	0.0000	0.00000
15	5	3/5	0.0	0.0000	0.00000
15	5	4/5	0.0	0.0000	0.00000
15	5	6	0.0	0.0000	0.00000
Nombre del caso			TREN NI RINT FCIPF		
16	1	1	0.0	0.0	0.00000
16	1	2/5	0.0	0.0	0.00000
16	1	3/5	0.0	0.0	0.00000
16	1	4/5	0.0	0.0	0.00000
16	1	2	0.0	0.0	0.00000
16	2	2	0.0	1.5247	0.00000
16	2	2/5	0.0	1.5247	-1.18166
16	2	3/5	0.0	0.0487	-2.06813
16	2	4/5	0.0	-2.8110	-0.99774
16	2	3	0.0	-5.3495	2.21666
16	3	3	0.0	3.3576	2.21666
16	3	2/5	0.0	0.9768	0.48292
16	3	3/5	0.0	0.2328	0.20370
16	3	4/5	0.0	0.2328	0.01747
16	3	4	0.0	0.2328	-0.16875
16	4	4	0.0	-0.0544	-0.16875
16	4	2/5	0.0	-0.0544	-0.12656
16	4	3/5	0.0	-0.0544	-0.08438
16	4	4/5	0.0	-0.0544	-0.04219
16	4	5	0.0	-0.0544	0.00000
16	5	5	0.0	0.0	0.00000
16	5	2/5	0.0	0.0	0.00000
16	5	3/5	0.0	0.0	0.00000
16	5	4/5	0.0	0.0	0.00000
16	5	6	0.0	0.0	0.00000
Nombre del caso			TREN NI REXT FCIPF		
17	1	1	0.0	0.0000	0.0
17	1	2/5	0.0	0.0000	0.00000
17	1	3/5	0.0	0.0000	0.00000
17	1	4/5	0.0	0.0000	0.00000
17	1	2	0.0	0.0000	0.00000
17	2	2	0.0	3.0447	0.00000
17	2	2/5	0.0	2.2144	-2.26622
17	2	3/5	0.0	-0.6453	-2.87424
17	2	4/5	0.0	-3.3087	-1.29296
17	2	3	0.0	-5.6151	2.16503

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
17	3	3	0.0	2.0698	2.16503
17	3	2/5	0.0	0.7306	1.27926
17	3	3/5	0.0	0.7306	0.69482
17	3	4/5	0.0	0.7306	0.11037
17	3	4	0.0	0.7306	-0.47408
17	4	4	0.0	-0.1529	-0.47408
17	4	2/5	0.0	-0.1529	-0.35556
17	4	3/5	0.0	-0.1529	-0.23704
17	4	4/5	0.0	-0.1529	-0.11852
17	4	5	0.0	-0.1529	0.00000
17	5	5	0.0	0.0000	0.00000
17	5	2/5	0.0	0.0000	0.00000
17	5	3/5	0.0	0.0000	0.00000
17	5	4/5	0.0	0.0000	0.00000
17	5	6	0.0	0.0000	0.00000
Nombre del caso			TREN ND SR	FCIPF	
18	1	1	0.0	0.0	0.00000
18	1	2/5	0.0	0.0	0.00000
18	1	3/5	0.0	0.0	0.00000
18	1	4/5	0.0	0.0	0.00000
18	1	2	0.0	0.0	0.00000
18	2	2	0.0	0.0860	0.00000
18	2	2/5	0.0	0.0860	-0.06668
18	2	3/5	0.0	0.0860	-0.13335
18	2	4/5	0.0	0.0860	-0.20003
18	2	3	0.0	0.0860	-0.26670
18	3	3	0.0	-0.4026	-0.26670
18	3	2/5	0.0	-0.4026	0.05538
18	3	3/5	0.0	-0.4026	0.37747
18	3	4/5	0.0	-0.4026	0.69955
18	3	4	0.0	-3.1701	2.05945
18	4	4	0.0	5.4011	2.05945
18	4	2/5	0.0	2.5592	-1.01845
18	4	3/5	0.0	0.2528	-2.10806
18	4	4/5	0.0	-1.8304	-1.41859
18	4	5	0.0	-1.8304	0.00000
18	5	5	0.0	0.0	0.00000
18	5	2/5	0.0	0.0	0.00000
18	5	3/5	0.0	0.0	0.00000
18	5	4/5	0.0	0.0	0.00000
18	5	6	0.0	0.0	0.00000
Nombre del caso			TREN ND RINT	FCIPF	
19	1	1	0.0	0.0	0.0
19	1	2/5	0.0	0.0	0.0
19	1	3/5	0.0	0.0	0.0
19	1	4/5	0.0	0.0	0.0
19	1	2	0.0	0.0	0.0
19	2	2	0.0	0.0119	0.00000
19	2	2/5	0.0	0.0119	-0.00925
19	2	3/5	0.0	0.0119	-0.01849
19	2	4/5	0.0	0.0119	-0.02774
19	2	3	0.0	0.0119	-0.03698
19	3	3	0.0	-0.0228	-0.03698
19	3	2/5	0.0	-0.0228	-0.01871
19	3	3/5	0.0	-0.0228	-0.00044
19	3	4/5	0.0	-0.9453	0.13315
19	3	4	0.0	-3.8973	2.07022
19	4	4	0.0	4.9438	2.07022
19	4	2/5	0.0	2.3161	-0.69077
19	4	3/5	0.0	0.0097	-1.59202
19	4	4/5	0.0	-1.1807	-0.91505
19	4	5	0.0	-1.1807	0.00000
19	5	5	0.0	0.0	0.00000

Especificación de esfuerzos

Caso	Elem.	Nudo	FX (T)	FY (T)	MZ (Tm)
19	5	2/5	0.0	0.0	0.00000
19	5	3/5	0.0	0.0	0.00000
19	5	4/5	0.0	0.0	0.00000
19	5	6	0.0	0.0	0.00000
Nombre del caso			TREN ND REXT	FCIPF	
20	1	1	0.0	0.0	0.00000
20	1	2/5	0.0	0.0	0.00000
20	1	3/5	0.0	0.0	0.00000
20	1	4/5	0.0	0.0	0.00000
20	1	2	0.0	0.0	0.00000
20	2	2	0.0	0.1382	0.00000
20	2	2/5	0.0	0.1382	-0.10709
20	2	3/5	0.0	0.1382	-0.21417
20	2	4/5	0.0	0.1382	-0.32126
20	2	3	0.0	0.1382	-0.42834
20	3	3	0.0	-0.6598	-0.42834
20	3	2/5	0.0	-0.6598	0.09947
20	3	3/5	0.0	-0.6598	0.62728
20	3	4/5	0.0	-0.6598	1.15510
20	3	4	0.0	-2.3203	2.05652
20	4	4	0.0	5.7537	2.05652
20	4	2/5	0.0	2.8940	-1.29446
20	4	3/5	0.0	0.3912	-2.51839
20	4	4/5	0.0	-1.9152	-1.92787
20	4	5	0.0	-2.5848	0.00000
20	5	5	0.0	0.0000	0.00000
20	5	2/5	0.0	0.0000	0.00000
20	5	3/5	0.0	0.0000	0.00000
20	5	4/5	0.0	0.0000	0.00000
20	5	6	0.0	0.0000	0.00000

Especificación de reacciones

Resultados individuales

Caso 1A20
1A20
Nudo 2A5
1A6

Caso	Nudo	FX (T)	FY (T)	MZ (Tm)
Nombre del c.		PP LOSA		
1	2	0.0	3.4135	0.00000
1	3	0.0	1.8365	0.00000
1	4	0.0	1.8365	0.0
1	5	0.0	3.4135	0.00000
Suma de val.		0.0	10.5000	0.00000
Nombre del c.		BALASTO+PENDIENTEADO		
2	2	0.0	1.2440	0.00000
2	3	0.0	4.6220	0.00000
2	4	0.0	4.5551	0.00000
2	5	0.0	2.0513	0.00000
Suma de val.		0.0	12.4725	0.00000
Nombre del c.		COND+CABLE+PASEOS		
3	2	0.0	1.3780	0.00000
3	3	0.0	-0.4030	0.00000
3	4	0.0	-0.4030	0.00000
3	5	0.0	1.3780	0.00000
Suma de val.		0.0	1.9500	0.00000
Nombre del c.		IMPOSTAS Y BARANDILLAS		
4	2	0.0	0.9673	0.00000
4	3	0.0	-0.4548	0.00000
4	4	0.0	-0.4548	0.00000
4	5	0.0	0.9673	0.00000
Suma de val.		0.0	1.0250	0.00000
Nombre del c.		TRAVIESAS Y CARRILES		
5	2	0.0	0.1310	0.00000
5	3	0.0	0.5090	0.00000
5	4	0.0	0.5090	0.00000
5	5	0.0	0.1310	0.0
Suma de val.		0.0	1.2800	0.00000
Nombre del c.		INCREMENTO 30 BALASTO		
6	2	0.0	0.4777	0.0
6	3	0.0	1.1063	0.00000
6	4	0.0	1.1063	0.00000
6	5	0.0	0.4777	0.00000
Suma de val.		0.0	3.1680	0.00000
Nombre del c.		SC PASEO NI		
7	2	0.0	1.1167	0.00000
7	3	0.0	-0.4594	0.00000
7	4	0.0	0.1121	0.0
7	5	0.0	-0.0194	0.00000
Suma de val.		0.0	0.7500	0.00000
Nombre del c.		SC PASEO ND		

Especificación de reacciones

Caso	Nudo	FX (T)	FY (T)	MZ (Tm)
8	2	0.0	-0.0194	0.00000
8	3	0.0	0.1121	0.00000
8	4	0.0	-0.4594	0.00000
8	5	0.0	1.1167	0.00000
Suma de val.		0.0	0.7500	0.00000
Nombre del c.		TREN NI SR SOLO PERALTE		
9	2	0.0	2.5202	0.00000
9	3	0.0	8.1157	0.00000
9	4	0.0	-0.7713	0.00000
9	5	0.0	0.1344	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN NI RINT SOLO PERALTE		
10	2	0.0	1.7671	0.00000
10	3	0.0	8.6126	0.00000
10	4	0.0	-0.4651	0.00000
10	5	0.0	0.0844	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN NI REXT SOLO PERALTE		
11	2	0.0	3.3687	0.00000
11	3	0.0	7.4108	0.00000
11	4	0.0	-0.9438	0.00000
11	5	0.0	0.1633	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN ND SR SOLO PERALTE		
12	2	0.0	0.0660	0.00000
12	3	0.0	-0.3718	0.00000
12	4	0.0	8.7594	0.00000
12	5	0.0	1.5453	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN ND RINT SOLO PERALTE		
13	2	0.0	-0.0180	0.00000
13	3	0.0	0.1431	0.0
13	4	0.0	8.9356	0.00000
13	5	0.0	0.9384	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN ND REXT SOLO PERALTE		
14	2	0.0	0.1278	0.00000
14	3	0.0	-0.7377	0.0
14	4	0.0	8.3481	0.00000
14	5	0.0	2.2608	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN NI SR FCIPF		
15	2	0.0	2.2351	0.00000
15	3	0.0	8.3039	0.00000
15	4	0.0	-0.6545	0.00000
15	5	0.0	0.1144	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN NI RINT FCIPF		
16	2	0.0	1.5247	0.00000

ROBOTV6 v. 4.4 — IDEAM S.A.-Miguel Ortega 3727 — Página: 20
(c) RoboBAT — c:\proyec~1\utemej~1_calcu~1\trans.dim — Fecha:27-09-2000
Proyecto: — modificación de carga: 27-09-2000 — Hora: 10:55:51

Especificación de reacciones

Caso	Nudo	FX (T)	FY (T)	MZ (Tm)
16	3	0.0	8.7071	0.00000
16	4	0.0	-0.2872	0.00000
16	5	0.0	0.0544	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN NI REXT	FCIPF	
17	2	0.0	3.0447	0.00000
17	3	0.0	7.6849	0.00000
17	4	0.0	-0.8835	0.00000
17	5	0.0	0.1529	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN ND SR	FCIPF	
18	2	0.0	0.0860	0.0
18	3	0.0	-0.4886	0.00000
18	4	0.0	8.5712	0.00000
18	5	0.0	1.8304	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN ND RINT	FCIPF	
19	2	0.0	0.0119	0.00000
19	3	0.0	-0.0348	0.00000
19	4	0.0	8.8411	0.00000
19	5	0.0	1.1807	0.00000
Suma de val.		0.0	9.9990	0.00000
Nombre del c.		TREN ND REXT	FCIPF	
20	2	0.0	0.1382	0.00000
20	3	0.0	-0.7979	0.00000
20	4	0.0	8.0740	0.00000
20	5	0.0	2.5848	0.00000
Suma de val.		0.0	9.9990	0.00000

REACCIONES DEL REPARTO TRANSVERSAL.

Peso losa	3.414	1.837	1.837	3.414	
Balasto+pendienteado	1.244	4.622	4.555	2.051	
Incremento 30% de balasto(+/-)	0.478	1.106	1.106	0.478	
Traviesas y carriles	0.131	0.509	0.509	0.131	
Conductos	1.378	-0.403	-0.403	1.378	
Imposta+barandillas	0.967	-0.455	-0.455	0.967	
Tren sin ripar.Nervio Izq	2.520	8.116	-0.771	0.134	sin ϕ
Tren ripado int.Nervio Izq	1.767	8.613	-0.465	0.084	sin ϕ
Tren ripado ext.Nervio Izq	3.369	7.411	-0.944	0.163	sin ϕ
Tren sin ripar.Nervio D	0.066	-0.372	8.759	1.545	sin ϕ
Tren ripado int.Nervio D	-0.018	0.143	8.936	0.938	sin ϕ
Tren ripado ext.Nervio D	0.128	-0.738	8.348	2.261	sin ϕ
S.C. Paseos Nervio Izq	1.117	-0.459	0.112	-0.019	
S.C. Paseos Nervio Der	-0.019	0.112	-0.459	1.117	

Factor ϕ de IPF
1.12
1.12
1.12
1.12
1.12
1.12

nota:trenes unitarios(10t)

Separación entre apoyo 1 y 2	3.100
Separación entre apoyo 3 y 4	3.100

	Nervio Izquierdo		Nervio Derecho	
CARGAS	Q1(T/m/ml)	MT1(mT/ml)	Q2(T/m/ml)	MT2(mT/ml)
Peso losa	**5.250**	**-2.444**	**5.250**	**2.444**
Balasto+pendienteado	5.866	5.236	6.606	-3.881
Traviesas y carriles	0.640	0.586	0.640	-0.586
Conductos	0.975	-2.761	0.975	2.761
Imposta+barandillas	0.513	-2.204	0.513	2.204
TOTAL CARGAS MUERTAS	**7.994**	**0.857**	**8.734**	**0.498**
Incremento 30% de balasto(+/-)	1.584	0.973	1.584	-0.973
Tren A sin ripar.Nervio Izq	**14.295**	**11.657**	**-0.856**	**1.887**
Tren A ripado int.Nervio Izq	**13.950**	**14.261**	**-0.512**	**1.145**
Tren A ripado ext.Nervio Izq	**14.488**	**8.421**	**-1.049**	**2.306**
Tren A sin ripar.Nervio D	**-0.411**	**-0.912**	**13.850**	**-15.028**
Tren A ripado int.Nervio D	**0.168**	**0.336**	**13.271**	**-16.660**
Tren A ripado ext.Nervio D	**-0.820**	**-1.803**	**14.258**	**-12.681**
S.C. Paseos Nervio Izq	**0.657**	**-2.443**	**0.093**	**-0.204**
S.C. Paseos Nervio Der	**0.093**	**0.204**	**0.657**	**2.443**

Nota: Trenes con factor ϕ

	3xQ1(T/m)	3xMT1(mT/m)	3xQ2(T/m)	3xMT2(mT/m)
Tren A sin ripar.Nervio Izq	35.737	29.141	-2.140	4.717
Tren A ripado +3 Nervio Izq	34.876	35.651	-1.279	2.862
Tren A ripado -3 Nervio Izq	36.219	21.051	-2.622	5.766
Tren A sin ripar.Nervio Der	-1.027	-2.280	34.624	-37.571
Tren A ripado +3 Nervio Der	0.420	0.839	33.177	-41.649
Tren A ripado -3 Nervio Der	-2.049	-4.508	35.646	-31.703

Nota: Trenes con factor ϕ y sin FC

REACCIONES DEL REPARTO TRANSVERSAL.

Peso losa	3.414	1.837	1.837	3.414
Balasto+pendienteado	1.244	4.622	4.555	2.051
Incremento 30% de balasto(+/-)	0.478	1.106	1.106	0.478
Traviesas y carriles	0.131	0.509	0.509	0.131
Conductos	1.378	-0.403	-0.403	1.378
Imposta+barandillas	0.967	-0.455	-0.455	0.967
Tren A sin ripar Nervio Izq	2.520	8.116	-0.771	0.134
Tren A ripado Int Nervio Izq	1.767	8.613	-0.465	0.084
Tren A ripado Ext Nervio Izq	3.369	7.411	-0.944	0.163
Tren A sin ripar Nervio D	0.066	-0.372	8.759	1.545
Tren A ripado Int Nervio D	-0.018	0.143	8.936	0.938
Tren A ripado Ext Nervio D	0.128	-0.738	8.348	2.261
S/C Paseos Nervio Izq	1.117	-0.459	0.112	-0.019
S/C Paseos Nervio Der	-0.019	0.112	-0.459	1.117

nota:trenes unitarios(10t)

Separación entre apoyo 1 y 2	3.100
Separación entre apoyo 3 y 4	3.100

	Nervio Izquierdo		Nervio Derecho	
CARGAS	Q1 (Tn/ml)	M1 (mTm/ml)	Q2 (Tn/ml)	M2 (mTm/ml)
Peso losa	**5.250**	**-2.444**	**5.250**	**2.444**
Balasto+pendienteado	5.866	5.236	6.606	-3.881
Traviesas y carriles	0.640	0.586	0.640	-0.586
Conductos	0.975	-2.761	0.975	2.761
Imposta+barandillas	0.513	-2.204	0.513	2.204
TOTAL CARGAS MUERTAS	**7.994**	**0.857**	**8.734**	**0.498**
Incremento 30% de balasto(+/-)	1.584	0.973	1.584	-0.973
Tren B sin ripar Nervio Izq	**12.763**	**10.408**	**-0.764**	**1.685**
Tren B ripado Int Nervio Izq	**12.456**	**12.733**	**-0.457**	**1.022**
Tren B ripado Ext Nervio Izq	**12.935**	**7.518**	**-0.937**	**2.059**
Tren B sin ripar Nervio D	**-0.367**	**-0.814**	**12.366**	**-13.418**
Tren B ripado Int Nervio D	**0.150**	**0.300**	**11.849**	**-14.875**
Tren B ripado Ext Nervio D	**-0.732**	**-1.610**	**12.731**	**-11.322**
S/C Paseos Nervio Izq	**0.657**	**-2.443**	**0.093**	**-0.204**
S/C Paseos Nervio Der	**0.093**	**0.204**	**0.657**	**2.443**

Nota: Trenes sin factor ϕ

	Sx0 (Tn)	Sy M z (mTm)	Sx2 (Tn)	Sy M z (mTm)
Tren A sin ripar Nervio Izq	31.908	26.019	-1.911	4.212
Tren A ripado 3 Nervio Izq	31.139	31.832	-1.142	2.555
Tren A ripado 3 Nervio Izq	32.339	18.796	-2.342	5.148
Tren A sin ripar Nervio Der	-0.917	-2.036	30.914	-33.546
Tren A ripado 3 Nervio Der	0.375	0.749	29.622	-37.187
Tren A ripado 3 Nervio Der	-1.830	-4.025	31.827	-28.306

Nota: Trenes sin factor ϕ y sin Fc

LOCALES DE LOSA

Nudo	PP LOSA		BALASTO+PEND		COND+CAB+PAS		IMP Y BARAND		TRAV Y CARRIL		INCR 30% BAL		SC PASEO NI		SC PASEO ND		TREN NI SIN		TREN NI RINT		TREN NI REXT		TREN ND SIN		TREN ND RINT		TREN ND REXT	
	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.431	-0.124	0.000	0.000	0.000	0.000	-0.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.863	-0.490	0.000	0.000	0.525	-0.128	0.513	-0.589	0.000	0.000	0.000	0.000	0.000	0.000	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1.294	-1.116	0.000	0.000	0.813	-0.510	0.513	-0.884	0.000	0.000	0.000	0.000	0.000	0.000	0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2i	1.725	-1.984	0.073	-0.008	0.975	-1.044	0.513	-1.179	0.000	0.000	0.080	-0.010	0.750	-0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2d	-1.689	-1.884	-1.171	-0.008	-0.403	-1.044	-0.455	-1.179	-0.131	0.000	-0.398	-0.010	-0.397	-0.800	0.019	0.000	-2.520	0.000	-2.520	0.000	-2.520	0.000	-2.520	0.000	-2.520	0.000	-2.520	0.000
	-1.107	-0.900	-0.547	0.692	-0.403	-0.732	-0.455	-0.828	-0.131	0.102	-0.150	0.202	-0.397	-0.616	0.019	-0.015	-2.520	1.953	-2.520	1.953	-2.520	1.953	-2.520	1.953	-2.520	1.953	-2.520	1.953
cv	-0.526	-0.268	0.317	0.788	-0.403	-0.420	-0.455	-0.474	-0.031	0.178	0.098	0.222	-0.397	-0.332	0.019	-0.030	0.415	2.679	0.415	2.679	0.415	2.679	0.415	2.679	0.415	2.679	0.415	2.679
3i	0.053	-0.085	1.289	0.173	-0.403	-0.107	0.205	-0.455	0.231	0.184	0.099	0.346	0.050	-0.397	0.019	-0.045	3.664	1.298	3.664	1.298	3.664	1.298	3.664	1.298	3.664	1.298	3.664	1.298
3d	0.637	-0.393	2.388	-1.237	-0.403	0.205	0.000	0.231	0.399	-0.104	0.594	-0.315	0.093	-0.397	0.237	0.019	-0.060	5.624	-2.492	-2.317	-2.492	-2.317	-2.492	-2.317	-2.492	-2.317	-2.492	-2.317
	-1.200	-0.353	-2.254	-1.237	0.000	0.205	0.000	0.231	-0.110	-0.104	-0.512	-0.315	0.093	-0.397	0.237	-0.093	-0.060	-2.492	-0.637	-1.112	-0.637	-1.112	-0.637	-1.112	-0.637	-1.112	-0.637	-1.112
	-0.600	0.367	-1.029	0.083	0.000	0.205	0.000	0.231	0.000	-0.074	-0.256	-0.008	0.093	0.162	-0.093	0.014	-0.093	-0.637	-0.837	-0.602	-0.837	-0.602	-0.837	-0.602	-0.837	-0.602	-0.837	-0.602
cv	0.000	0.607	0.202	0.394	0.000	0.205	0.000	0.231	0.000	-0.074	0.000	0.095	0.093	0.088	-0.093	0.088	-0.837	0.417	-0.837	-0.093	-0.837	-0.093	-0.837	-0.093	-0.837	-0.093	-0.837	-0.093
	0.800	0.397	-0.353	-0.144	0.000	0.205	0.000	0.231	0.000	-0.074	0.256	-0.008	0.093	0.162	-0.093	0.162	-0.837	0.417	-0.837	0.134	-0.837	0.134	-0.837	0.134	-0.837	0.134	-0.837	0.134
4i	1.200	-0.353	1.995	-1.374	0.000	0.205	0.000	0.231	0.110	-0.104	0.512	-0.315	0.093	-0.060	-0.093	0.237	-0.637	0.417	-0.637	0.134	-0.637	0.134	-0.637	0.134	-0.637	0.134	-0.637	0.134
4d	-0.637	-0.353	-2.560	-1.374	0.403	0.205	0.455	0.231	-0.399	-0.104	-0.594	-0.315	-0.019	-0.060	0.387	0.237	0.134	0.312	0.134	0.208	0.134	0.208	0.134	0.208	0.134	0.208	0.134	0.208
	-0.055	-0.085	-1.582	0.238	0.403	-0.107	0.455	-0.121	-0.184	0.099	-0.346	0.050	-0.019	-0.045	0.387	-0.047	0.134	0.312	0.134	0.208	0.134	0.208	0.134	0.208	0.134	0.208	0.134	0.208
cv	0.528	-0.268	-0.496	1.056	0.403	-0.420	0.455	-0.474	0.031	0.178	-0.098	0.222	-0.019	-0.030	0.387	-0.332	0.134	0.134	0.134	0.104	0.134	0.104	0.134	0.104	0.134	0.104	0.134	0.104
5i	1.107	-0.900	0.699	0.978	0.403	-0.732	0.455	-0.828	0.131	0.102	-0.150	0.202	-0.019	-0.015	0.387	-0.816	0.134	0.000	0.134	0.000	0.134	0.000	0.134	0.000	0.134	0.000	0.134	0.000
5d	1.689	-1.984	1.817	-0.028	0.403	-1.044	0.455	-1.179	0.131	0.000	0.398	-0.010	-0.019	0.000	0.387	-0.900	0.134	0.000	0.134	0.000	0.134	0.000	0.134	0.000	0.134	0.000	0.134	0.000
	-1.725	-1.984	-0.234	-0.028	-0.875	-1.044	-0.513	-1.179	0.000	0.000	-0.080	-0.010	0.000	0.000	-0.750	-0.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	-1.294	-1.116	0.000	0.000	-0.813	-0.510	-0.513	-0.884	0.000	0.000	0.001	0.000	0.000	0.000	-0.988	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
cv	-0.863	-0.496	0.000	0.000	-0.525	-0.128	-0.513	-0.589	0.000	0.000	0.000	0.000	0.000	0.000	-0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	-0.431	-0.124	0.000	0.000	0.000	0.000	-0.513	-0.295	0.000	0.000	0.000	0.000	0.000	0.000	-0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Nudo	TREN NI SIN FCDP		TREN NI RINT FCDP		TREN NI REXT FCDP		TREN ND SIN FCDP		TREN ND RINT FCDP		TREN ND REXT FCDP	
	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2i	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2d	-2.235	0.000	-1.525	0.000	-3.045	0.000	-0.086	0.000	-0.012	0.000	-0.138	0.000
	-2.235	1.732	-1.525	1.162	-2.214	2.266	-0.086	0.067	-0.012	0.009	-0.138	0.107
cv	0.348	2.560	-0.049	2.068	0.645	2.674	-0.086	0.133	-0.012	0.018	-0.138	0.214
3i	3.208	1.183	2.611	0.998	3.369	1.293	-0.086	0.200	-0.012	0.028	-0.138	0.321
3d	-2.772	-2.211	-3.358	-2.217	-2.217	-2.070	-2.165	0.403	0.023	0.037	0.660	0.428
	-0.540	-0.842	-0.977	-0.483	-0.731	-1.279	-2.165	-0.086	0.267	0.023	-0.138	0.428
cv	-0.540	-0.509	-0.233	-0.204	-0.731	-0.695	0.403	-0.377	0.023	0.000	0.660	-0.099
	-0.540	-0.077	-0.233	-0.017	-0.731	-0.110	0.403	-0.700	0.945	-0.133	0.660	-0.627
4i	-0.540	0.355	-0.233	0.169	-0.731	0.474	3.170	-2.059	3.897	-2.070	2.320	-1.155
4d	0.114	0.355	0.054	0.169	0.153	0.474	-5.401	2.059	-4.944	-2.070	-5.754	-2.057
	0.114	0.266	0.054	0.127	0.153	0.356	-2.559	1.018	-2.316	0.691	-2.894	1.294
cv	0.114	0.177	0.054	0.084	0.153	0.237	-0.253	2.108	-0.010	1.592	-0.381	2.518
	0.114	0.089	0.054	0.042	0.153	0.119	1.830	1.419	1.181	0.915	1.915	1.928
5i	0.114	0.000	0.054	0.000	0.153	0.000	1.830	0.000	1.181	0.000	2.565	0.000
5d	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
cv	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	CM		INCR 30% BAL		[illegible]		SC PASEO NI		SC PASEO ND		TREN A IPF SIN FUERZA CENTRÍFUGA Y CON I=1.12											
											TREN NI SR		TREN NI RINT		TREN NI REXT		TREN ND SR		TREN ND RINT		TREN ND REXT	
Nudo	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)
1	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.431	-0.124	0.513	-0.295	0.000	0.000	0.513	-0.295	0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1.294	-1.116	1.325	-1.394	0.000	0.000	1.325	-1.394	0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2i	1.725	-1.994	1.560	-2.231	0.080	-0.010	[illegible]	[illegible]	0.750	-0.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2d	-1.666	-1.994	-2.160	-2.231	-0.398	-0.010	[illegible]	[illegible]	-0.367	-0.900	0.000	0.000	-2.375	1.841	-3.259	3.366	-0.089	0.069	0.024	-0.019	-0.172	0.133
3i	-1.107	-0.900	-1.536	-0.765	-0.150	0.202	-1.685	-0.967	-0.367	-0.616	0.019	-0.015	-3.387	2.625	-2.375	1.841	-3.259	3.366	-0.089	0.069	0.024	-0.019	-0.172	0.133
3d	0.055	-0.085	0.615	0.043	0.346	0.050	0.961	0.093	-0.367	-0.047	0.019	-0.045	4.925	1.745	4.247	1.632	-4.840	-1.736	-0.089	0.206	0.024	-0.058	-0.172	0.399
4i	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-0.856	-1.494	-1.343	-0.980	-1.049	-1.837	0.411	-0.054	-0.168	0.059	0.820	-0.123
4d	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-0.856	-0.125	-0.512	-0.058	-1.049	-0.159	0.411	-0.711	1.241	0.152	0.820	-1.435
5i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.181	0.420	0.113	0.264	0.219	0.510	-2.825	1.213	-2.644	0.839	-3.497	1.741
5d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.181	0.140	0.113	0.088	0.219	0.170	2.077	1.610	1.261	0.977	2.291	2.271
6i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.240	0.559	0.114	0.266	0.321	0.747	-5.374	2.139	-4.864	1.451	-6.077	2.710
6d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.240	0.186	0.114	0.089	0.321	0.249	3.844	2.979	2.479	1.922	4.022	4.049
7i	-1.294	-1.116	-1.325	-1.394	0.000	0.000	-1.325	-1.394	0.000	0.000	-0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7d	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.431	-0.124	-0.513	-0.295	0.000	0.000	-0.513	-0.295	0.000	0.000	-0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

[illegible]								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Nudo
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	1
1.056	-0.419	0.944	-0.431	1.443	-0.565	1.274	-0.584	
2.300	-1.211	1.900	-1.371	3.165	-1.635	2.565	-1.875	
3.306	-2.510	2.619	-2.983	4.567	-3.389	3.535	-4.098	
2.115	-2.223	2.365	-2.125	3.125	-2.885	2.525	-3.141	2i
1.209	-1.227	1.312	-1.125	1.958	-1.885	1.525	-2.141	2d
-2.735	3.600	-8.720	-2.527	-3.684	5.661	-12.661	-3.511	3i
8.769	3.358	0.361	-0.173	13.001	5.038	0.419	-0.260	3d
-0.508	1.089	-4.335	-2.244	-0.480	1.510	-6.220	-3.488	4i
3.987	1.008	0.223	-1.897	5.687	1.422	0.042	-2.934	4d
-0.800	3.591	-6.793	-0.020	-0.704	5.376	-9.993	-0.040	5i
7.234	2.233	2.925	-2.212	10.409	3.566	3.946	-3.081	5d
-2.619	-2.510	-3.306	-2.983	-3.535	-3.389	-4.567	-4.098	6i
-0.944	-0.419	-1.056	-0.431	-1.274	-0.565	-1.443	-0.584	6d
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	7

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	CM		INCR 30% BAL		[illegible]		SC PASEO NI		SC PASEO ND		TREN A IPF CON FUERZA CENTRÍFUGA Y CON I=1.12											
											TREN NI SR		TREN NI RINT		TREN NI REXT		TREN ND SR		TREN ND RINT		TREN ND REXT	
Nudo	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)
1	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.431	-0.124	0.513	-0.295	0.000	0.000	0.513	-0.295	0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1.294	-1.116	1.325	-1.394	0.000	0.000	1.325	-1.394	0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2i	1.725	-1.994	1.560	-2.231	0.080	-0.010	[illegible]	[illegible]	0.750	-0.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2d	-1.666	-1.994	-2.160	-2.231	-0.398	-0.010	[illegible]	[illegible]	-0.367	-0.900	0.000	0.000	-2.773	3.117	-8.143	-2.498	-3.741	4.955	-11.799	-3.467	0.000	0.000
3i	-1.107	-0.900	-1.536	-0.765	-0.150	0.202	-1.685	-0.967	-0.367	-0.616	0.019	-0.015	-4.894	3.638	-3.202	2.481	-4.650	4.759	-0.181	0.140	-0.025	0.019	-0.290	0.225
3d	0.055	-0.085	0.615	0.043	0.346	0.050	0.961	0.093	-0.367	-0.047	0.019	-0.045	6.736	2.464	5.903	2.095	6.948	2.715	-0.181	0.420	-0.025	0.058	-0.290	0.675
4i	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-1.134	-1.977	-2.051	-1.014	-1.534	-2.688	0.845	-0.116	0.048	0.039	1.388	-0.209
4d	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-1.134	-0.162	-0.489	-0.037	-1.534	-0.232	0.845	-1.459	1.985	-0.280	1.388	-2.426
5i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.181	0.420	0.113	0.264	0.219	0.510	-2.825	1.213	-2.644	0.839	-3.497	1.741
5d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.181	0.140	0.113	0.088	0.219	0.170	2.077	1.610	1.261	0.977	2.291	2.271
6i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.240	0.559	0.114	0.266	0.321	0.747	-5.374	2.139	-4.864	1.451	-6.077	2.710
6d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.240	0.186	0.114	0.089	0.321	0.249	3.844	2.979	2.479	1.922	4.022	4.049
7i	-1.294	-1.116	-1.325	-1.394	0.000	0.000	-1.325	-1.394	0.000	0.000	-0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7d	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.431	-0.124	-0.513	-0.295	0.000	0.000	-0.513	-0.295	0.000	0.000	-0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

[illegible]								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Nudo
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	1
1.056	-0.419	0.944	-0.431	1.443	-0.565	1.274	-0.584	
2.300	-1.211	1.900	-1.371	3.165	-1.635	2.565	-1.875	
3.306	-2.510	2.619	-2.983	4.567	-3.389	3.535	-4.098	
2.115	-2.223	2.365	-2.125	3.125	-2.885	2.525	-3.141	2i
1.209	-1.227	1.312	-1.125	1.958	-1.885	1.525	-2.141	2d
-2.749	1.632	-6.718	-2.517	-3.704	2.726	-9.656	-3.495	3i
5.985	2.152	0.478	-0.141	8.825	3.227	0.564	-0.213	3d
-0.969	1.055	-3.485	-1.141	-1.172	1.460	-4.946	-1.834	4i
3.289	0.922	0.813	-1.000	4.840	1.294	0.927	-1.590	4d
-0.723	2.325	-4.626	-0.020	-0.889	3.476	-7.042	-0.040	5i
5.822	0.880	2.925	-2.212	8.291	1.527	3.946	-3.081	5d
-2.619	-2.510	-3.306	-2.983	-3.535	-3.389	-4.567	-4.098	6i
-0.944	-0.419	-1.056	-0.431	-1.274	-0.565	-1.443	-0.584	6d
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	7

LOCALES DE LOSA

envol

	CM		INCR 30% BAL		[illegible]		SC PASEO NI		SC PASEO ND		TREN B IPF SIN FUERZA CENTRÍFUGA Y CON I=1.12											
											TREN NI SR		TREN NI RINT		TREN NI REXT		TREN ND SR		TREN ND RINT		TREN ND REXT	
Nudo	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)
1	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.431	-0.124	0.513	-0.295	0.000	0.000	0.513	-0.295	0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1.294	-1.116	1.325	-1.394	0.000	0.000	1.325	-1.394	0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2i	1.725	-1.994	1.560	-2.231	0.080	-0.010	[illegible]	[illegible]	0.750	-0.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2d	-1.666	-1.994	-2.160	-2.231	-0.398	-0.010	[illegible]	[illegible]	-0.367	-0.900	0.000	0.000	-2.749	1.632	-6.718	-2.517	-3.704	2.726	-9.656	-3.495	0.000	0.000
3i	-1.107	-0.900	-1.536	-0.765	-0.150	0.202	-1.685	-0.967	-0.367	-0.616	0.019	-0.015	-3.387	2.625	-2.375	1.841	-3.259	3.366	-0.089	0.069	0.024	-0.019	-0.172	0.133
3d	0.055	-0.085	0.615	0.043	0.346	0.050	0.961	0.093	-0.367	-0.047	0.019	-0.045	4.925	1.745	4.247	1.632	-4.840	-1.736	-0.089	0.206	0.024	-0.058	-0.172	0.399
4i	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-0.856	-1.494	-1.343	-0.980	-1.049	-1.837	0.411	-0.054	-0.168	0.059	0.820	-0.123
4d	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-0.856	-0.125	-0.512	-0.058	-1.049	-0.159	0.411	-0.711	1.241	0.152	0.820	-1.435
5i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.181	0.420	0.113	0.264	0.219	0.510	-2.825	1.213	-2.644	0.839	-3.497	1.741
5d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.181	0.140	0.113	0.088	0.219	0.170	2.077	1.610	1.261	0.977	2.291	2.271
6i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.154	0.356	0.073	0.170	0.205	0.478	-3.440	1.369	-3.113	0.928	-3.890	1.740
6d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.154	0.119	0.073	0.057	0.205	0.159	2.460	1.907	1.587	1.230	2.574	2.591
7i	-1.294	-1.116	-1.325	-1.394	0.000	0.000	-1.325	-1.394	0.000	0.000	-0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7d	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.431	-0.124	-0.513	-0.295	0.000	0.000	-0.513	-0.295	0.000	0.000	-0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

[illegible]								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Nudo
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	1
1.056	-0.419	0.944	-0.431	1.443	-0.565	1.274	-0.584	
2.300	-1.211	1.900	-1.371	3.165	-1.635	2.565	-1.875	
3.306	-2.510	2.619	-2.983	4.567	-3.389	3.535	-4.098	
2.115	-2.223	2.365	-2.125	3.125	-2.885	2.525	-3.141	2i
1.209	-1.227	1.312	-1.125	1.958	-1.885	1.525	-2.141	2d
-2.749	1.632	-6.718	-2.517	-3.704	2.726	-9.656	-3.495	3i
5.985	2.152	0.478	-0.141	8.825	3.227	0.564	-0.213	3d
-0.969	1.055	-3.485	-1.141	-1.172	1.460	-4.946	-1.834	4i
3.289	0.922	0.813	-1.000	4.840	1.294	0.927	-1.590	4d
-0.723	2.325	-4.626	-0.020	-0.889	3.476	-7.042	-0.040	5i
5.822	0.880	2.925	-2.212	8.291	1.527	3.946	-3.081	5d
-2.619	-2.510	-3.306	-2.983	-3.535	-3.389	-4.567	-4.098	6i
-0.944	-0.419	-1.056	-0.431	-1.274	-0.565	-1.443	-0.584	6d
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	7

envol

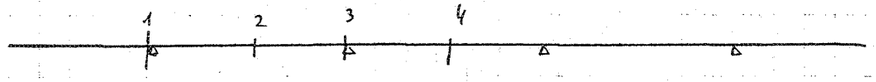
	CM		INCR 30% BAL		[illegible]		SC PASEO NI		SC PASEO ND		TREN B IPF CON FUERZA CENTRÍFUGA Y CON I=1.12											
											TREN NI SR		TREN NI RINT		TREN NI REXT		TREN ND SR		TREN ND RINT		TREN ND REXT	
Nudo	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	[illegible]	[illegible]	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)	Fy(t)	Mz(mt)
1	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.431	-0.124	0.513	-0.295	0.000	0.000	0.513	-0.295	0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1.294	-1.116	1.325	-1.394	0.000	0.000	1.325	-1.394	0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2i	1.725	-1.994	1.560	-2.231	0.080	-0.010	[illegible]	[illegible]	0.750	-0.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2d	-1.666	-1.994	-2.160	-2.231	-0.398	-0.010	[illegible]	[illegible]	-0.367	-0.900	0.000	0.000	-3.004	2.328	-2.049	1.588	-2.978	3.046	-0.116	0.090	-0.016	0.012	-0.166	0.144
3i	-1.107	-0.900	-1.536	-0.765	-0.150	0.202	-1.685	-0.967	-0.367	-0.616	0.019	-0.015	-3.387	2.625	-2.375	1.841	-3.259	3.366	-0.089	0.069	0.024	-0.019	-0.172	0.133
3d	0.055	-0.085	0.615	0.043	0.346	0.050	0.961	0.093	-0.367	-0.047	0.019	-0.045	4.311	1.590	3.778	1.341	4.447	1.736	-0.116	0.269	-0.016	0.037	-0.166	0.432
4i	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-0.726	-1.285	-1.313	-0.649	-0.982	-1.719	0.541	-0.074	0.031	0.025	0.887	-0.134
4d	0.600	0.367	1.099	0.219	0.256	-0.008	1.355	0.226	0.093	0.014	-0.093	0.162	-0.726	-0.104	-0.313	-0.023	-0.982	-0.148	0.541	-0.940	1.270	-0.179	0.887	-1.552
5i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.154	0.356	0.073	0.170	0.205	0.478	-3.440	1.369	-3.113	0.928	-3.890	1.740
5d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.154	0.119	0.073	0.057	0.205	0.159	2.460	1.907	1.587	1.230	2.574	2.591
6i	-0.055	-0.085	-0.908	0.108	-0.346	0.050	-1.254	0.158	-0.019	-0.045	0.387	-0.047	0.240	0.559	0.114	0.266	0.321	0.747	-5.374	2.139	-4.864	1.451	-6.077	2.710
6d	1.107	-0.900	1.688	-0.478	0.150	0.202	1.838	-0.681	-0.019	-0.015	0.387	-0.616	0.240	0.186	0.114	0.089	0.321	0.249	3.844	2.979	2.479	1.922	4.022	4.049
7i	-1.294	-1.116	-1.325	-1.394	0.000	0.000	-1.325	-1.394	0.000	0.000	-0.688	-0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7d	0.863	-0.496	1.038	-0.715	0.000	0.000	1.038	-0.715	0.400	-0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	-0.431	-0.124	-0.513	-0.295	0.000	0.000	-0.513	-0.295	0.000	0.000	-0.113	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.513	0.000	0.000	0.000	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

[illegible]								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Nudo
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	1
1.056	-0.419	0.944	-0.431	1.443	-0.565	1.274	-0.584	
2.300	-1.211	1.900	-1.371	3.165	-1.635	2.565	-1.875	
3.306	-2.510	2.619	-2.983	4.567	-3.389	3.535	-4.098	
2.115	-2.223	2.365	-2.125	3.125	-2.885	2.525	-3.141	2i
1.209	-1.227	1.312	-1.125	1.958	-1.885	1.525	-2.141	2d
-2.773	1.322	-6.349	-2.498	-3.741	2.264	-9.104	-3.467	3i
5.463	2.177	0.484	-0.085	8.071	3.265	0.543	-0.128	3d
-0.902	1.021	-3.287	-1.034	-1.071	1.409	-4.649	-1.674	4i
3.318	0.770	0.880	-1.108	4.884	1.066	1.027	-1.750	4d
-0.737	2.291	-5.219	-0.020	-0.910	3.425	-7.031	-0.040	5i
6.091	1.169	2.925	-2.212	8.695	1.991	3.946	-3.081	5d
-2.619	-2.510	-3.306	-2.983	-3.535	-3.389	-4.567	-4.098	6i
-0.944	-0.419	-1.056	-0.431	-1.274	-0.565	-1.443	-0.584	6d
0.513	0.000	0.513	0.000	0.000	0.000	0.000	0.000	7

Condiciona Tren A frente a Tren B.

IDEAM

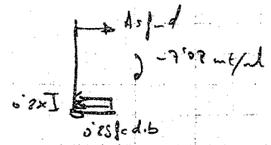
Armadura de losa en zona de vigas artesa



Sección 1. Voladizo. (sólo efectos locales)

$M_d = -7'08$ mt/ml.

Para recubrimiento de H-200 y canto útil medio de 0'24 m.



$0'68 f_{cd} \cdot x \cdot b = A_s f_{yd}$

$M_d = 0'68 f_{cd} \cdot x \cdot b (d - 0'4x) =$ Con recubrimiento geom. 3 cm

$A_s = 8'692$ cm²/ml. para un canto de 0'24 m de canto útil y un recubrimiento mecánico de 4'5 cm.

- Armadura superior necesaria = 8'69 cm²/ml

Sección 2 ⇒ Sólo locales: $M_d = +10'504$ mt/ml

$M_d = -0'594$ mt/ml

Para $M_d = 10'504$ mt/ml ⇒ A_s nec = 13'33 cm²/ml. A inferior

" $M_d = -0'594$ mt/ml ⇒ A_s nec = 0'69 cm²/ml A superior

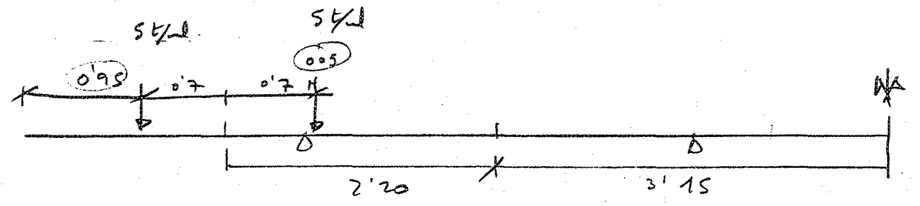
Sección 3 (interior): $M_d = -9'692$ mt/ml (y siempre negativo) Sólo locales

A_s nec = 12'71 cm²/ml armadura superior

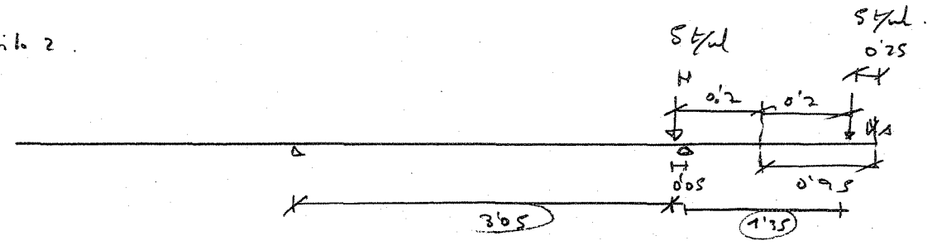
IDEAM

Comprobación de descarrilo según EC 1. Parte 3.

Descarrilo 1.



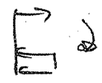
Descarrilo 2.



Resumen de resultados.

En voladizo: $M = -6'75$ $M_d = -1'98 - 7'26 - 6'75 = -10'99$ t/ml (PP, Cm, Dsc)

En cv: $M = +2'54$. $M_d = 0'607 + 0'857 + 2'54 = +4$ mt/ml (PP, Cm)

Para el voladizo ⇒  ⇒

Con $\gamma_c = 1'3$ $\gamma_s = 1$

Calculado con canto útil el total de la sección, ya que es eficaz todo el voladizo al llevar prelosa colaborante. $\gamma_f = 1$.

$h = 0'3$ $d = 0'26$ m ⇒ $A_s = 8'86$ cm²/ml

Con Ø16 a 0'20 dispuesta = 10'05 cm²/ml ⇒ cumple.

La flexión positiva en el M_d cumple.

No condiciona.

cortante en vaciado ⇒

$V_{descarnido} = \underset{desc}{7'648}\ t/m + \underset{PP}{1'725} + \underset{cm}{1'62} = 11'01\ t/m$

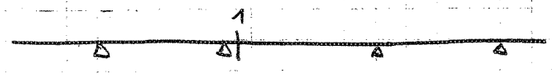
$V_{u2} = 12 \cdot 2 \cdot \left(3000 \cdot \frac{10'053 \cdot 10^{-4}}{10 \cdot 0'2}\right)^{1/3} \cdot 1 \cdot 0'2 = 11'85\ t/m$

Con $d = 0'2$ m ⇒ $V_d < V_{u2}$ ⇒ No necesita A_s de cte cople.

IDEAM

- Calculo de losa en zona entre cajones.

Apoyo interior.



Calculo local.

	Mk (m t/m)
PP	−0'353
cm + i.c. 30%	−1'220
Tren A NI	−4'872 R. int.
Tren A ND	−0'117 R int
Tren B NI	−3'118 R ext
Tren B ND	−0'168 R ext
Sc Pas. NI	+0'737
Sc P. ND	−0'060

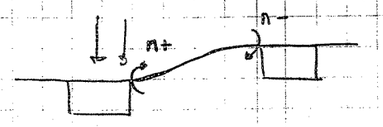
- Local con tren A ⇒ $Mk = -0'353 - 1'22 \overbrace{-4'872 - 0'117}^{\text{Tren A}} - \frac{0'06}{2} = -6'592$ m t/m
- Local con tren B ⇒ $Mk = -0'353 - 1'22 \underbrace{-3'118 - 0'168}_{\text{Tren B}} - \frac{0'06}{2} = -4'879$ m t/m

Calculo global

	Barra 1 Mk (m t/m)	Barra 4 Mk (m t/m)
PP	−1	−0'77
Cm	1'45 / −1'3	−0'26 / 0'37
i.c. 30%	± 0'4	± 0'4
Tren A NI M−	−3'23 / −0'54	−3'12 / 0
Tren A ND M−	−1'52 / −7'55	−3'08 / −0'02
Tren B NI M−	−8'92 / −0'41	−0'03 / −7'31
Tren B ND M−	−0'77 / −6'64	−6'79 / −0'07
Sc NI	−2'39 / −0'05	−0'22 / −0'59
Sc ND	−0'05 / −2'39	−0'59 / −0'22

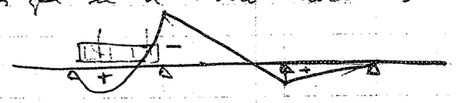
Concomitancias de locales y globales. Flexión

Caso de tramo en extremo izquierdo.



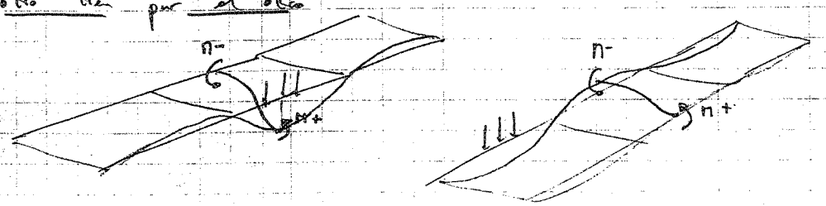
Produce un momento positivo ∫to al cajón cargado.

Mientras que en el cálculo local ⇒ Produce momento negativo.



En el otro cajón global M- y local M+ luego no son concomitantes y se contrarrestan.

Debido a que el efecto global de un tramo por un extremo (envolvente) y otro tramo por el otro



Los globales se suman, mientras que los locales serán sólo de un tramo, y además el signo es contrario.

Globales para tramo A.

Hipótesis: primer tramo 4 con nudo izquierdo.

$$M_K = \overset{PP}{-0'77} \overset{cm}{-0'26} - 0'4 \overset{30\%b}{-3'17} \overset{tr\,AN\,I}{-2'08} \overset{tr\,AN\,D}{+\left(\frac{-0'22-0'59}{2}\right)} = -8'035\ t/d.$$

Para tramo B: barra 1 con nudo izquierdo.

$$M_K = \overset{PP}{-1'0} \overset{cm}{+1'45} - 0'4 \overset{30\%b}{-8'92} \overset{tr\,BN\,I}{-0'77} \overset{tr\,BN\,D}{+\left(\frac{-7'39-0'05}{2}\right)} = -10'96\ t/d$$

Global + local ⇒.

Con Tram A ⇒ $M_K = \overset{global}{-8'035} + \left(\overset{PP}{-0'353} \overset{tr\,AN\,I}{-1'22} \overset{tr}{-0'117} - \frac{0'06}{2}\right) = -9'755\ t/d$ (local concomitante con el global. Local del tramo B N.D. sólo)

Con tram B ⇒ $M_K = \overset{global}{-10'96} + \left(-0'353 - 1'22 - \overset{N.D}{0'1268} - \frac{0'06}{2}\right) = -12'731\ t/d$

Con tram B

M_d ⇒ local: $1'35(-0'353 - 1'22) + 1'5\left(-0'1268\right) + 1'5\left(\frac{-0'06}{2}\right) = -2'4205\ t/d$

global = $1'35(-1 + 1'45 - 0'4) + 1'5(-8'92 - 0'77) + 1'5\left(\frac{-7'39-0'05}{2}\right) = -16'297\ t/d$

Luego $M_d = \boxed{-18'717\ t/d}$ para la sección 1 y 3.

Flexión positiva en nudo 1 y 3.

M+ global concomitante con un M- local del tramo NI.

Globales de tramos positivos.

		Barra 1	Barra 4
Tramo A NI	M+	3'77 / 3'45	4'38 / 0'127
Tramo A ND	M+	3'63 / 4'58	0'36 / 4'46
Tramo B NI	M+	2'43 / 11'67	11'04 / 0'08
Tramo B ND	M+	10'19 / 3'03	0'13 / 11'21
SC P NI		0'05 / 1'38	0'02 / 0'01
SC P ND		1'38 / 0'05	0'01 / 0'02

Considerando el tramo B condicionante.

Global en barra 1 Nudo 3

$$M_{K+} = \underset{PP}{-1} \underset{cm=3\%6}{-1'3} + 0'4 + \underbrace{11'67 + 3'03}_{\text{Tramo NI + TB ND}} + \underbrace{\frac{(1'38 + 0'05)}{2}}_{\text{SC Pmax}} = 13'51 \text{ m-t/ml}$$

$$M_{K\ \text{local + concomitte}} = \underset{PP}{-0'353} \underset{cm=3\%6}{-0'59} + \underbrace{(-4'01)}_{\substack{\text{local} \\ \text{concomitte}}} + \underbrace{\frac{(0'237 - 0'06)}{2}}_{\text{Tramo ND}} = -4'96 \text{ m-t/ml}$$

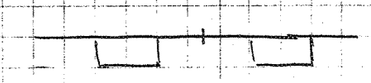
$$M_K = +8'650 \text{ m-t/ml}$$

$$M_{d\ g+p} = 0'9(-1-1'3) + 1'35 \cdot 0'4 + 1'5\left(11'67 + 3'03 + \frac{(1'38 + 0'05)}{2}\right) = 21'59 \text{ m-t/ml}$$

$$M_{d\ \text{local}} = 0'9(-0'353 - 0'9) + 1'5(+0'3) + 1'5(-4'01) + 1'5\left(\frac{0'237 - 0'06}{2}\right) = -5'92 \text{ m-t/ml}$$

$$M_{d\ \text{total}} = +15'66 \text{ m-t/ml} \quad \text{en p.70}$$

Cálculo en el centro del vano entre ejes



Del lado de la seguridad se tomará sin tener en cuenta concomitancias la envolvente de las envolventes de tramos por ambos lados, en locales y globales.

	M_K (m-t/ml) M+	M-
PP	-0'21	-1
cm	0'07	0'02
inst	0'4	-0'4
Tramo NI	1'31	0
Tramo ND	1'53	0
Tramo B NI	2'44	0
Tramo B ND	3'44	0
SC P NI	0	-0'5
SC P ND	0	-0'5

M_K local (envolvente) = 1'938 (-1'313) con tramo A y 1'829 (-0'311) con tramo B

M_d local (envolv.) = 2'698 (-2'196) con tramo A y 2'574 (-0'697) con tramo B.

Global $M_K^+ = -0'21 + 0'07 + 0'4 + 1'31 + 1'53 = 3'1$ m-t/ml con tramo A

$M_K^+ = -0'11 + 0'07 + 0'4 + 2'44 + 3'44 = 6'64$ m-t/ml con tramo B

Condicionante tramo B.

Global + local: $M_K = 6'64 + 1'829 = 8'469$ m-t/ml

$M_d = 1'35(-0'21 + 0'07 + 0'4) + 1'5(2'44 + 3'44) + 2'574 = +12'445$ m-t/ml.

Flexión negativa $M_d = 1'35(-2 + 0'02 - 0'4) + 1'5(-0'5) + (-2'196) = -4'809$ m-t/ml

Armadura en apoyo izquierdo

$Md^+ = +1'566$ m·t/l ⇒ Asnecesaria: 20'1 cm²/l inferior

$Md^- = -18'717$ m·t/l ⇒ As necesaria = 25'25 cm²/l superior

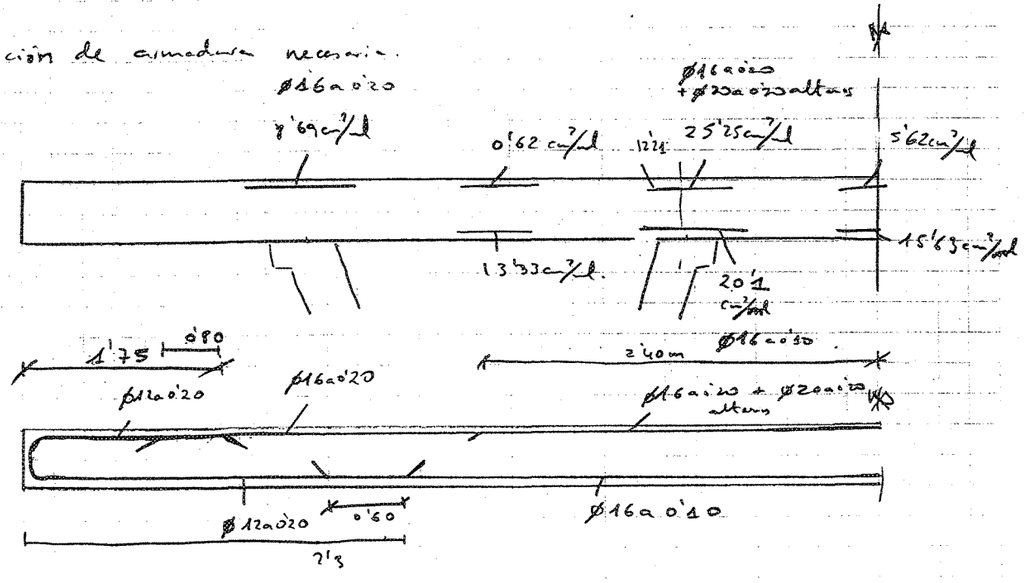
Armadura en vano

$Md^+ = 12'415$ m·t/l ⇒ Asnec: 15'63 cm²/l inferior

$Md^- = -4'809$ m·t/l ⇒ Asnec: 5'62 cm²/l superior

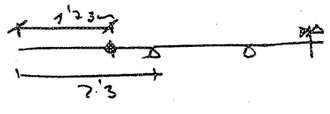
Calculado con canto útil de 0'24 m - recubrimiento de 4'0 cm (mecánico)

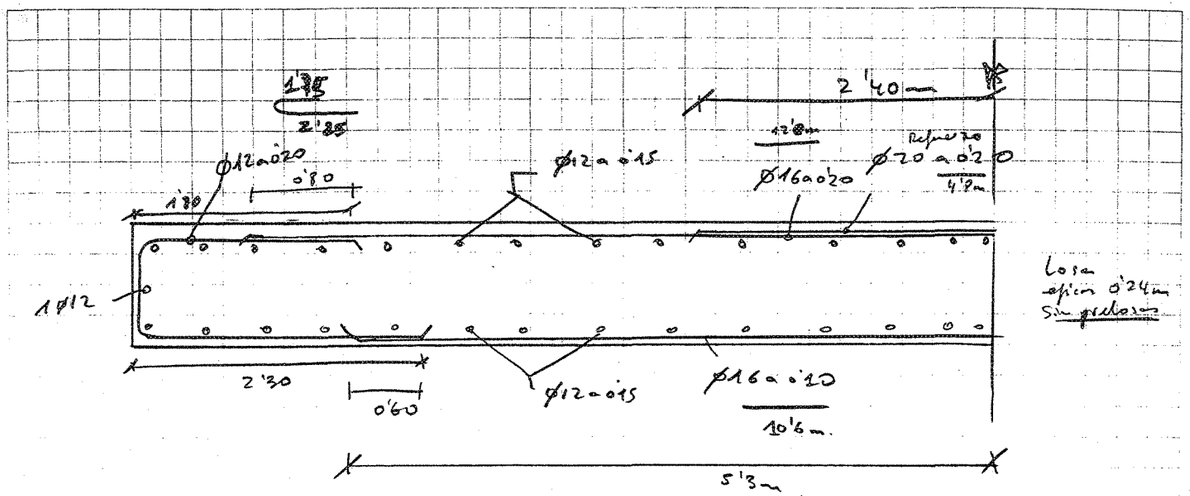
Disposición de armadura necesaria:

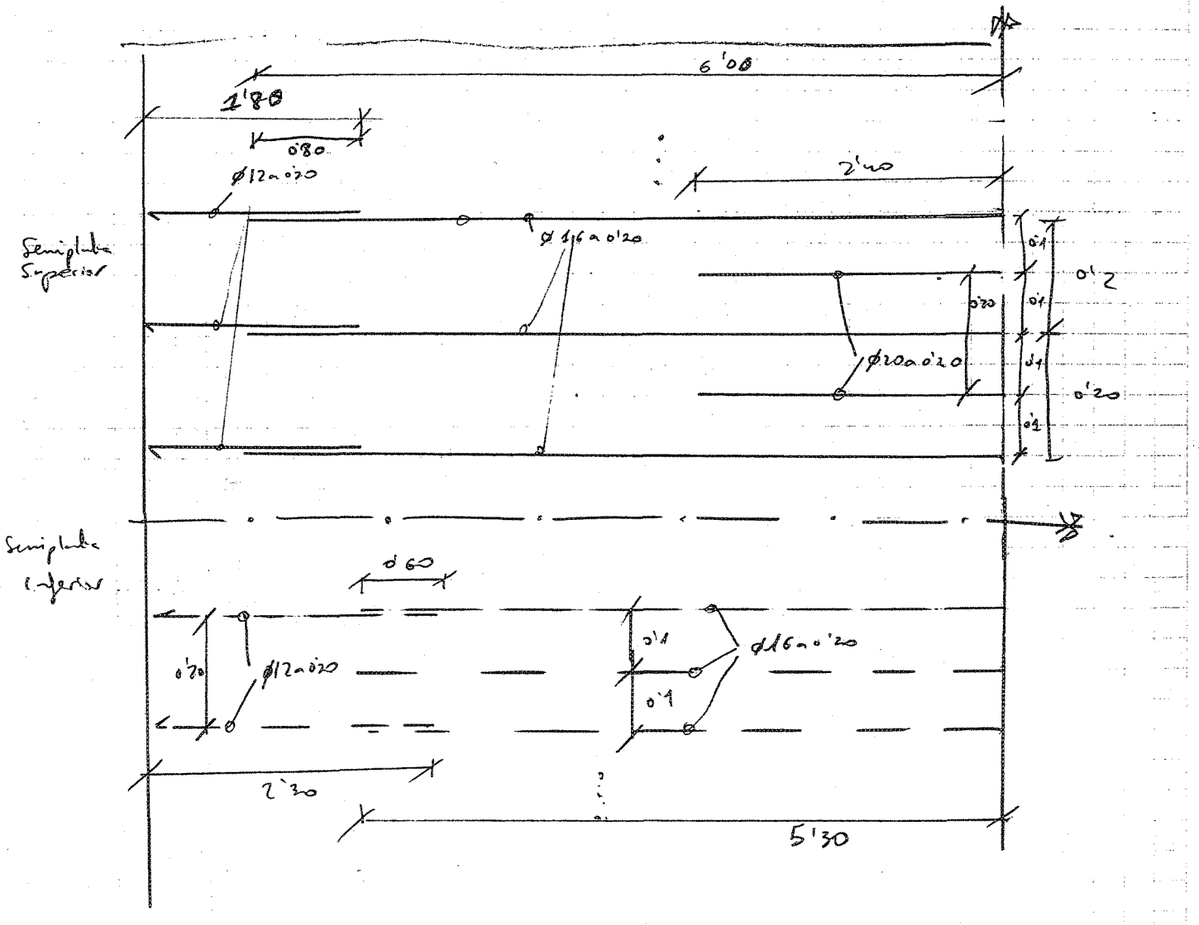


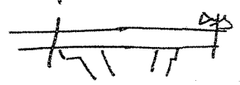
Corte de ϕ16 a 0'20 - ϕ12 a 0'20 en voladizo

Sección en borde Md = -4'08 ⇒ As = 4'77 cm²/l situada a 1'73 m







Con las armaduras dispuestas se cumple con holgura las armaduras de rasante necesarias dimensionadas en el apartado nº 12 de análisis transversal de esfuerzos, salvo en el nudo del apoyo 1, en la sección  de borde de voladizo, que se disponen Ø16 a 0'20 arriba y Ø12 a 0'20 abajo = 15'70 cm²/ml frente a los 17'6 cm²/ml necesarios.

Dado que en esa zona hay presión en calzada esa armadura crecerá en 1 Ø8 a 0'20 = 2'51 cm²/ml.

Luego 15'7 + 2'51 = 18'77 cm²/ml > 17'6 cm²/ml luego cumple con holgura.

Incluso no sería necesario esta comprobación hasta un canto útil del borde del apoyo, aunque del lado de la seguridad cumple en el extremo del tablero.

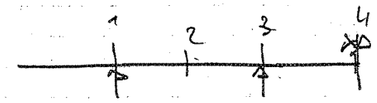
Comprobación de fisuración

La EHE marca que se comprueba fisuración bajo hipótesis de acciones frecuentes para secciones de hormigón pretensado y para armado bajo cargas permanentes.

Es más restrictivo el caso de frecuente en HP.

Se cogerán este criterio.

Se contemplarán los esfuerzos negativos de losa en apoyos de viga



Sección 1

$M_{1k} = \underset{PP}{-1'984} - \underset{\text{Cmt}\ 30\%b}{2'261} - \underset{\text{Sc pneo}}{0'9 \cdot 0'8^{\Psi_1}} = -4'965$ mt/ml.

Sección 3: Con Ψ_1 para tren de cargas = 0'8 (1 vía cargada del lado de sep)

$M_{3k\ \text{glob}} = \underset{PP}{-1'0} + \underset{\text{cm}}{1'75} - \underset{\text{sobrecb}}{0'4} + 0'8\left(\underset{\text{TRANS}}{-8'72} - \underset{ND}{0'72}\right) + 0'8\left(\frac{-2'39 - 0'05}{2}\right)_{\text{sep}} = -8'878$ mt/ml

$M_{k\ \text{local}} = \underset{PP}{-0'353} - \underset{\text{cm}}{1'22} + 0'8\left(\underset{\text{tren}}{-0'168}\right) + 0'8\left(\frac{-0'06}{2}\right)_{\text{sep}} = -1'731$ mt/ml

$M_{k\ \text{total}} = -10'409$ mt/ml

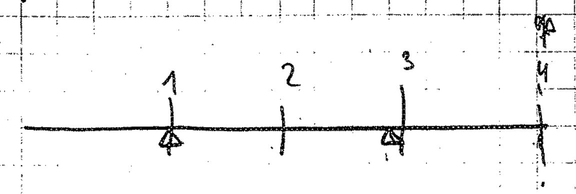
Además del lado de la seguridad se controlará la fisuración de positivos en vanos 2 y 4.

$M_{k2} = 7'0$ mt/ml

$M_{k4} = 8'47$ mt/ml

IDEAM

Comprobación de fisuración



Sección	Md (m·t/ml)	As tracc.	As comp.
1 l.cd	-4'965	Ø16 a 0'20	Ø12 a 0'20
2 l.cd	7'005	Ø16 a 0'10	Ø16 a 0'20
3	-10'41	Ø16 a 0'20 + Ø20 a 0'20	Ø16 a 0'10
4	8'47	Ø16 a 0'10	Ø16 a 0'20 + Ø20 a 0'20

Con ambiente tipo IIb.

La armadura Ø16 a 0'20 + Ø20 a 0'20 se considera del lado de la seguridad como Ø16 a 0'10 para el cálculo.

Como puede comprobarse todas las secciones cumplen con holgura.

29/09/00

ESTADO LÍMITE DE SERVICIO: FISURACIÓN

IIb	0.30	L	300	1.5	5100	1.15	100	24	3.5	16	5	12	5	0.125	0.5	0	4.965	15.77	0.00	2.94	1617.21	2728.15	0.00107	0.287	Cumple
IIb	0.30	L	300	1.5	5100	1.15	100	24	3.5	16	10	16	5	0.125	0.5	0	7.005	11.39	0.00	3.10	878.82	1988.39	0.00085	0.165	Cumple
IIb	0.30	L	300	1.5	5100	1.15	100	24	3.5	16	10	16	10	0.125	0.5	0	10.409	11.39	0.00	3.14	895.30	2968.01	0.00135	0.261	Cumple
IIb	0.30	L	300	1.5	5100	1.15	100	24	3.5	16	10	16	10	0.125	0.5	0	8.47	11.39	0.00	3.14	895.30	2415.13	0.00107	0.207	Cumple

COMPROBACION DE LA LOSA A FATIGA

Segun la VIC (774-1R)

$$\Delta\sigma_{adm} = \frac{\Delta f_{ck}\, K_A\, K_N}{\gamma_M\ \gamma_F} \cdot \frac{1}{K_T\, L_T\, \beta_T} > \Delta\sigma_{max}$$

Donde:

K_A : 1 Para buena redes

K_N = 1 Para $2\cdot10^6$ ciclos

γ_M = 1'26 Para armaduras pasivas

γ_F = 1'12 Coeficiente de seguridad parcial de carga - fatiga

L_T → Para una luz de 58 m → L_T = 0'63.

K_T = 0'9 para tráfico de viajeros predominante.

β_T = 0'92 Coeficiente de reparto 0'9 para un tren entre 2 ejes.

Δf_{ck} con ϕ16 = 200 N/mm² = 1962 Kp/cm²

con ϕ20 = 190 N/mm² = 1834 Kp/cm²

Para ϕ20 → $\Delta\sigma_{adm} = \frac{1834\cdot 1\cdot 1}{1'26\cdot 1'12} \cdot \frac{1}{0'9\cdot 0'63\cdot 0'92} = \underline{2491\ Kp/cm^2}$

El valor $\Delta\sigma_{max}$ se calcula con el Load Model 71 de la VIC.

los efectos del Load Model son menores que los del tren B

Del lado de la seguridad se comprueba para los efectos pésimos del tren B (que es peor que el tren A en flexión + torsión) en IPF. En la sección del apoyo interno

$M_{cp,k}$ = −4'573 mt/ml

$M_{sc,k} = (\underset{global}{-8'52} - 0'77) - 0'168 = \underline{-9'458}$ mt/ml local + global

Como se puede apreciar el incremento de tensión para una sección con 5ø16 + 5ø20 arriba y 10ø16 abajo es de

$$\Delta\sigma_s = \frac{(2700 + 2322)}{2} - \left(\frac{385 + 321}{2}\right) = \underline{2158\ Kp/cm^2} < 2491\ kp/cm^2$$

Como $\Delta\sigma_s < \Delta\sigma_{adm}$ ⇒ cumple fatiga

Proyecto:
URTE MEJORADA

Seccion:LOSA

MATERIALES

	Fck (Kg/cm2)	Gamma	E (Kg/cm2)	Cfi1	Cfi2
Hormigon :	300.0	1.50	329090	2.25	1.35
A.Pasivas:	5100.0	1.15	2100000		
Acciones :		1.00			

DIMENSIONES SECCION (Tipo 1)

B1 : 100.0cm. H1 : 24.0cm.

ARMADURAS PASIVAS

Nivel	Numero	⌀(mm.)	Ycg(cm.)
1	5	16.00	4.0
2	5	20.00	4.0
3	10	16.00	20.0

SECCIONES INTERMEDIAS

HO: HORMIGONES
RD: ARM.PASIVAS
HR: HORMIGONES + ARM.PASIVAS

* CONSTANTES ESTATICAS *

S.COMPLETA

Tipo	Acciones	Area(cm2)	Xcg(cm)	Inercia(cm4)
F:pura +	(0)	133.9	5.62	5164.1
	(1)	83.5	7.81	4139.0
	(2)	94.0	7.22	4399.3
F.pura -	(0)	143.9	17.73	6259.2
	(1)	88.6	15.14	4801.4
	(2)	100.2	15.85	5178.7
C.Simple	(0)	422.0	11.89	20995.2
	(1)	161.6	11.72	8489.3
	(2)	205.9	11.78	10619.3
T.Simple	(0)	45.9	11.01	2902.6
	(1)	45.9	11.01	2902.6
	(2)	45.9	11.01	2902.6

*** Nota: Homogeneizadas a E=2100000 Kp/cm2 ***

** CALCULO ELASTICO **

Título Sección: LOSA

Analisis CON FISURACION

Secuencia Incrementos de Carga:

Incremento de Carga 1 :
Flector : -1.52m.T PP
Tipo de Solicitacion: CP
Seccion Afectada: TOTAL

TENSIONES (Kg/cm2):

ESTADO INICIAL (To)						ESTADO FINAL (Tinf)					
Nsp	Yn(cm)	Tsup.	Tinf.	Tao	Tcomp	Nsp	Yn(cm)	Tsup.	Tinf.	Tao	Tcomp
1	17.7	0.0	-23.9	0.0	0.0	1	15.1	0.0	-13.6	0.0	0.0
2	17.7	353.5	314.6	0.0	353.5	2	15.1	378.7	328.0	0.0	378.7
3	17.7	358.4	309.7	0.0	358.4	3	15.1	385.1	321.6	0.0	385.1
4	17.7	-35.8	-74.7	0.0	74.7	4	15.1	-128.8	-179.5	0.0	179.5

Incrementos de Carga:
1

Incremento de Carga 2 :
Flector : -9.86m.T SC
Tipo de Solicitacion: SC
Seccion Afectada: TOTAL

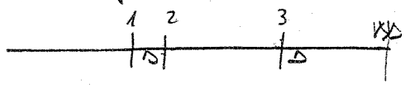
TENSIONES (Kg/cm2):

ESTADO INICIAL (To)						ESTADO FINAL (Tinf)					
Nsp	Yn(cm)	Tsup.	Tinf.	Tao	Tcomp	Nsp	Yn(cm)	Tsup.	Tinf.	Tao	Tcomp
1	17.7	0.0	-178.7	0.0	0.0	1	17.6	0.0	-168.8	0.0	0.0
2	17.7	2642.0	2351.0	0.0	2642.0	2	17.3	2662.8	2360.2	0.0	2662.8
3	17.7	2678.3	2314.7	0.0	2678.3	3	17.3	2700.7	2322.4	0.0	2700.7
4	17.7	-267.3	-558.2	0.0	558.2	4	17.3	-363.5	-666.2	0.0	666.2

Incrementos de Carga:
1 2

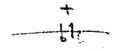
Comprobación de cortante en losa.

- Tramo con efectos locales únicamente.



Secciones 1, 2 y 3. Con tipo A condicionante.

$$V_{d\,max} = \begin{cases} 5'668 & \text{en } 1 \\ -17'796 & \text{en } 2 \\ 22'956 & \text{en } 3 \end{cases}$$



Comprobación en la sección 2

$$V_{rd} = \left[12 \cdot \xi \left(1_1 \cdot f_{ck} \right)^{1/3} - 0'15\,\sigma_{cd} \right] b_o \cdot d$$

$$\text{Con } \xi = 1 + \sqrt{\frac{0'2}{d}}$$

$$\text{Si } d \simeq 0'2 \Rightarrow \quad \xi = 1 + 1 = \underline{2}.$$

$$V_{rd} = 12 \cdot 2 \left(3000 \cdot 5'076\,(10^{-3}) \right)^{1/3} \cdot 1 \cdot 0'2 = \underline{11'85\ t/ml}$$

$$\text{Con } \rho_1 = \frac{10'053 \cdot 10^{-4}\ m^2}{1 \cdot 0'2} = 5'07 \cdot 10^{-3}$$

Con 5 ø16 por ml de losa.

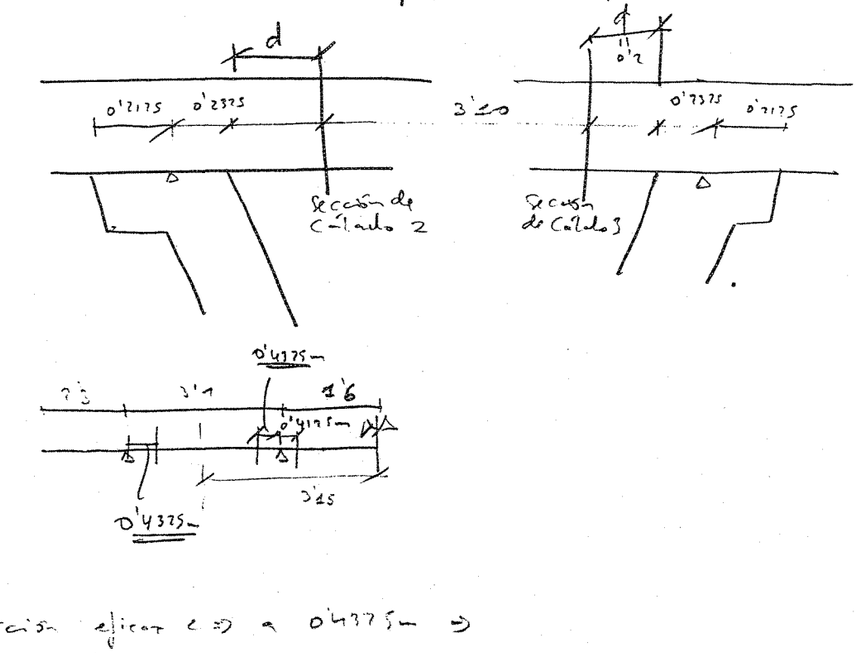
La sección 2 necesitará armadura de cortante.

Sección 3: $V_{rd} = \left[12 \cdot 2 \left(0'01 \cdot 3000 \right)^{1/3} \right] \cdot 1 \cdot 0'2 = \underline{14'91\ t/ml}$

$$\text{Con } \rho_1 = \frac{20'106 \cdot 10^{-4}}{1 \cdot 0'2} = 1'00 \cdot 10^{-2}$$

Necesitará A= de a

Dado que el cortante no se ha calculado a un canto útil del borde del apoyo se comprobará en ese punto.



Sección eficaz ⇒ a 0'4375 m ⇒

Vd ⇒ Sitio de losa. con tipo A.

$$\left.\begin{array}{l} Vd \text{ a } 0'775\text{ m} = -12'861 \\ Vd \text{ en borde} = -17'796 \end{array}\right\} \text{ Luego a } \underline{0'4375\text{ m}} \Rightarrow Vd = \underline{-14'709\ t/ml} \text{ aunado?}$$

En modo 3 interior.

Vd a borde = 22'956 , a 0'775 m Vd = 13'001.

Luego: $Vd = \underline{17'40\ t/ml}$ en un canto del modo 3 (del borde)

Con esto ⇒ En valor absoluto

Nudo 2 ⇒ $V_d = +14'709$ y $V_{az} = 11'85$ ⇒ Necesita As de a

Nudo 3 ⇒ $V_d = 17'40$ y $V_{az} = 14'91$ ⇒ " " " "

Con esto ⇒

$$V_{su} = 0'9 \cdot d \cdot \operatorname{sen}\alpha \left(\operatorname{cotg}\alpha + \operatorname{cotg}\theta\right) \cdot A_\alpha \, f_{yd}$$

Si $\theta = 45°$

$\alpha = 45°$

$$V_{cu} = 0'9 \cdot d \cdot \frac{1}{\sqrt{2}} \; 2 \cdot A_\alpha \; 4\,t/cm^2 =$$

Con $d = 0'2$ m ⇒ $V_{su} = 0'9 \cdot 0'2 \cdot \frac{2}{\sqrt{2}} \cdot 4 \cdot A_\alpha$

$$\Rightarrow A_\alpha = \frac{V_{su}}{0'9 \cdot 0'2 \cdot \frac{2}{\sqrt{2}} \cdot 4} = 0'9820 \cdot (V_d - V_{cu})$$

Para Nudo 2 ⇒ $V_{cu} = \frac{11'85}{1'2} = 9'875$ ⇒ $A_\alpha = \underline{4'75\ cm^2/ml}$ y m

Para Nudo 3 ⇒ $V_{cu} = \frac{14'91}{1'2} + 12'42$ ⇒ $A_\alpha = \underline{4'88\ cm^2/ml}$ y m.

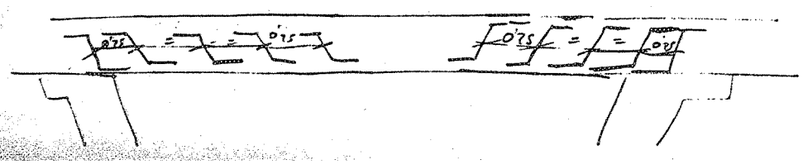
Con cuantía mínima ⇒

$A_\alpha \cdot f_{yd} \geq 0'02\, f_{cd} \cdot b \cdot \operatorname{sen}\alpha$.

$A_\alpha = 0'02 \frac{300}{1'5} \cdot \operatorname{sen} 45° / 4 = \underline{7'07\ cm^2/m.m}$

Luego con cuantía mínima cumple con holgura.

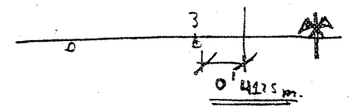
Si se disponen 5 $\begin{matrix} 0'3 \\ 4\,r\,L \\ 0'3 \end{matrix}$ Ø8 a 0'25 x 0'25. ⇒ $\underline{10'05\ cm^2/m}$ m



Vu2 a borde interior ⇒

$$f_1 = \frac{7'576 \cdot 10^{-7}}{1 \cdot 0'2} = \underline{1'788 \cdot 10^{-2}}$$

$$V_{u2} = \left[12 \cdot \left(1'2 \cdot 8 \cdot 10^{-2} \cdot 3000\right)^{1/3}\right] \cdot 1 \cdot 0'2 = \underline{16'77\ t/ml}$$



Vd ⇒

	Nudo 4+	Nudo 3		Local V_K^- a 0'4125 m	
	V_{K+}	V_{K-}		a eje m	
PP ⇒	1'2	-1'2		-0'6	$\rightarrow$ -0'8706
Cm ⇒	+2'364	-2'364		-1'026	$\rightarrow$ -1'674
Incertidumbre	+0'512	-0'512		-0'256	$\rightarrow$ -0'38
Tra A NI	x	-6'252	(cuando vamos izq)	-2'098	$\rightarrow$ -4'11
Tra AND	8'983	-0'263 ←	(no concomitante con NI)		$\simeq$ +5'46
Sc PNI	0'093	0			
Sc PND	0	-0'093			
Tra B NI	0	-4'001			
Tra B ND	5'749	-0'168			

Buscando V_K^- min (máximo en valor absoluto) mirando ambos.

Dado que el global máximo de un tramo en cualquier ⇒

	V_K+	V_K-
Tra A NI	1'93	-1'18

y además no son concomitantes el valor del tipo − del global con el signo − del local x tomar lo siguiente:

Globales concomitantes

	V_{k+}	V_{k-}
Ip	0	0
cm	0'86 (barra 1)	−0'20 (barra 4)
ind 30%	0	0
TrANI	1'93 / ×	No concomitante
TrIND	1'23 / −2'32 (barra 4)	
SCPNI	0'13 (b1)	−1'18 (b 4)
SCPND	1'18 (b1) /	0'13 (b4)

Hyp en total en el nudo 3 interior

$V_{d\,bcd} = 1'35(-1'2 - 2'36 - 0'51) + 1'5(-6'25) + 1'5(-0'093) = -15'209$

$V_{d\,fl.bd} = 1'35(-0'2) + 1'5(-2'32) + 1'5(-1'18) = -5'52$

$V_d = -20'529$ t/m en el apoyo del modelo de cálculo

A un canto útil ⇒

$V_{d\,bcd} = 1'35(-0'89 - 1'67 - 0'38) + 1'5(-4'11) + 1'5(-0'093) = 10'27$

$V_{d\,fl.bd} = 5'52.$

⇒ $V_{d\,total} = 15'79$ t/m ⇒ No necesita As de Q al cortante

$V_d < V_{u2} = 16'77$ t/m.

En el nudo 4 interior

$V_{d\,bcd} = 1'35(0'89 + 1'67 + 0'38) + 1'5(5'46) + 1'5(0'093) = 12'29$ t/m

$V_{d\,fl.bd} = 1'35(+0'8) + 1'5(-1'93) + 1'5(+1'18) = 5'876$ t/m

$V_{d\,total} = 18'116$ t/m ⇒ Sí necesita As de Q.

Se dispondrá una serie de cortes en losa ⇒

$V_{cu} = V_d - V_{cu} = 18'116 - \frac{16'22}{1'2} = 4'599$ t/m

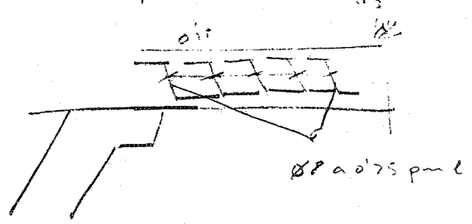
$V_{su} = 0'9 \cdot d \cdot A_\alpha \cdot f_{yd} \cdot \sin\alpha\,(\cot g\,\alpha + \cot g\,\theta)$

$\Rightarrow A_\alpha = \frac{4'59}{0'9 \cdot 0'2 \cdot 4 \cdot \frac{2}{\sqrt{2}}} = 4'50\ cm^2/m$

Con cuantía mínima ⇒ $A_\alpha = \frac{0'02 \cdot f_{cd} \cdot b}{f_{yd}} \cdot \sin\alpha = \frac{0'02}{4} \cdot \frac{3000}{1'5} \cdot 1 \cdot \sin 45^\circ$

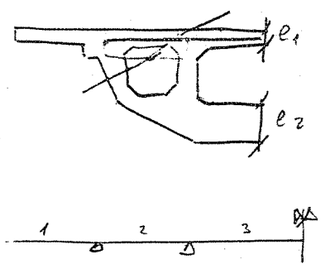
$A_\alpha = 7'07\ cm^2/m.$

Se dispondrán Ø8 a 0'25 = y = 0'25 m transversal.



Capiteles "in situ". Cálculo de losa.

En los capiteles "in situ", los esfuerzos en la losa se calculan como se indica:



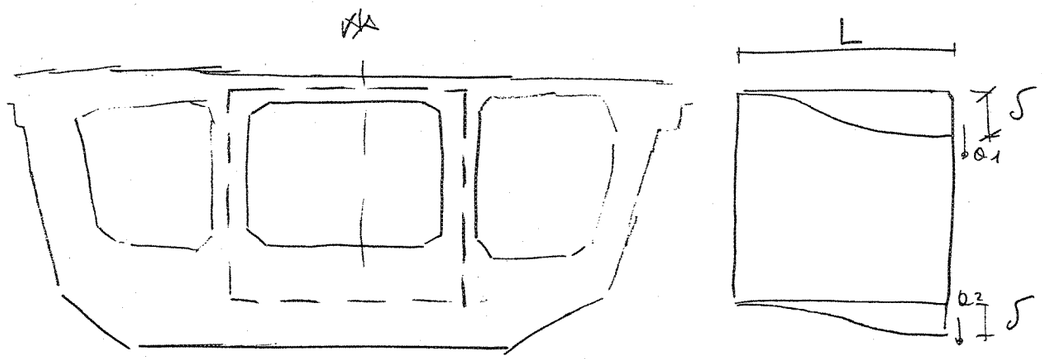
Barra 1 y 2 sólo con esfuerzos locales ⇒ Igual que en el resto del tablero.

Barra 3 con locales + globales

Los locales son iguales que en el resto del tablero.

Los globales se obtendrán según se indica:

Esquema de viga tipo Viesendeel



$\delta_1 = \delta_2 \Rightarrow \frac{L^3}{12 E I_1} Q_1 = \frac{L^3}{12 E I_2} Q_2 \Rightarrow$

$Q_1 = \frac{I_1}{I_2} \cdot Q_2 \Rightarrow$

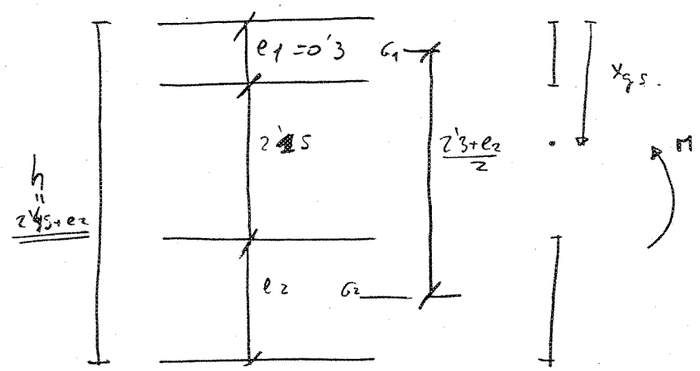
$$\left| \begin{array}{l} Q_1 = \frac{I_1}{I_1 + I_2} \cdot Q \qquad \text{donde} \quad \underline{Q = Q_1 + Q_2} \\ Q_2 = \frac{I_2}{I_1 + I_2} \cdot Q \end{array} \right.$$

Se reparte en función de las rigideces relativas de cada tablero

IDEAM

IDEAM

- Reparto de esfuerzos de flexión.



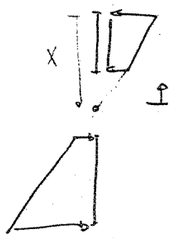
Sección compuesta ⇒ Área = $(0'3+e_2)$ m² / pml.

$$X_{gs} = \frac{0'3\cdot 0'15 + (2'45+\frac{e_2}{2})\cdot e_2}{0'3+e_2}$$

- $$X_{gs} = \frac{0'045 + 2'45\cdot e_2 + e_2^2\cdot 0'5}{(0'3+e_2)}$$

$$I_{g\,total} = \frac{1}{12}\cdot 0'3^3 + \frac{1}{12}\cdot e_2^3 + 0'3\cdot\left(X_g - 0'15\right)^2 + e_2\cdot\left(2'45+\frac{e_2}{2} - X_{gs}\right)$$

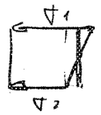
Con esto ⇒



$$\begin{cases} \sigma_{1s} = \dfrac{M}{I_g}\cdot X_{gs} & (+\text{comp}) \\ \sigma_{1i} = \dfrac{M}{I_g}\left(X_{gs} - 0'3\right) \end{cases}$$

$$\begin{cases} \sigma_{2s} = \dfrac{M}{I_g}\left(X_g - 2'45\right) \\ \sigma_{2i} = \dfrac{M}{I}\left(X_g - (2'45+e_2)\right) \end{cases}$$

Conocido $\begin{matrix}\sigma_{1s}\\ \sigma_{1i}\end{matrix}$ ⇒



$$N_1 = \left(\frac{\sigma_{1s}+\sigma_{1i}}{2}\right)\cdot e_1 + \text{comp.}$$

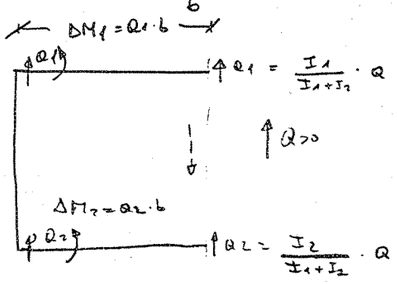
$$\sigma = \frac{M\cdot 6}{e_1^2} \Rightarrow \boxed{M_1 = \frac{e_1^2}{6}\cdot\left(\frac{\sigma_s - \sigma_i}{2}\right)} + \text{?}$$

Para zona 2 ⇒ idem $\begin{cases} N_2 = \left(\dfrac{\sigma_{2s}+\sigma_{2i}}{2}\right)\cdot e_2 \\ M_2 = \dfrac{e_2^2}{6}\left(\dfrac{\sigma_s - \sigma_i}{2}\right) \end{cases}$

Secciones de cálculo.

Barra del nudo	e_2
Sección 1	2'55
2	1'992
3	1'434
4	0'875
6	0'4

Con esto ya para cada sección tendría un incumbo de flexión producido por el cortante



Como se ha podido comprobar en la losa superior N_1 está entre 0'2 y 0'4 para el momento global y M_1 es apenas un 0'2% de el eso mayor por lo que no se tendrá en cuenta ese valor.

Seccion tipo	e1(m)	e2(m)	h(m)	A1(m2)	A2(m2)	Atot(m2)	Xgs(m)	I1(m4)	I2(m4)	Itot	I1/(I1+I2)	I2/(I1+I2)	m3 Ws1	m3 Wi1	m3 Ws2	m3 Wi2	Unitarios T/m2 σs1	Unitarios T/m2 σi1	Unitarios T/m2 σs2	Unitarios T/m2 σi2	Unitarios N1	Unitarios M1	Unitarios N2	Unitarios M2
1	0.3	2.55	5	0.3	2.55	2.85	3.3487	0.0023	1.3818	4.8146	0.0016	0.9984	1.4378	1.5792	5.3574	-2.9156	0.6955	0.6332	0.1867	-0.3430	0.1993	0.0005	-0.1993	0.2870
2	0.3	1.992	4.442	0.3	1.992	2.292	3.0146	0.0023	0.6587	3.4935	0.0034	0.9966	1.1588	1.2869	6.1876	-2.4474	0.8629	0.7770	0.1616	-0.4086	0.2460	0.0006	-0.2460	0.1886
3	0.3	1.434	3.884	0.3	1.434	1.734	2.6450	0.0023	0.2457	2.5062	0.0091	0.9909	0.9475	1.0687	12.8507	-2.0228	1.0554	0.9357	0.0778	-0.4944	0.2987	0.0009	-0.2987	0.0980
4	0.3	0.875	3.325	0.3	0.875	1.175	2.1886	0.0023	0.0558	1.7322	0.0387	0.9613	0.7915	0.9172	-6.6259	-1.5243	1.2634	1.0902	-0.1509	-0.6560	0.3530	0.0013	-0.3530	0.0322
6	0.3	0.4	2.85	0.3	0.4	0.7	1.5786	0.0023	0.0053	1.0790	0.2967	0.7033	0.6835	0.8439	-1.2382	-0.8487	1.4630	1.1849	-0.8076	-1.1783	0.3972	0.0021	-0.3972	0.0049

Programa F A G U S - 2 V.1.29 página 23
I D E A M, S.A
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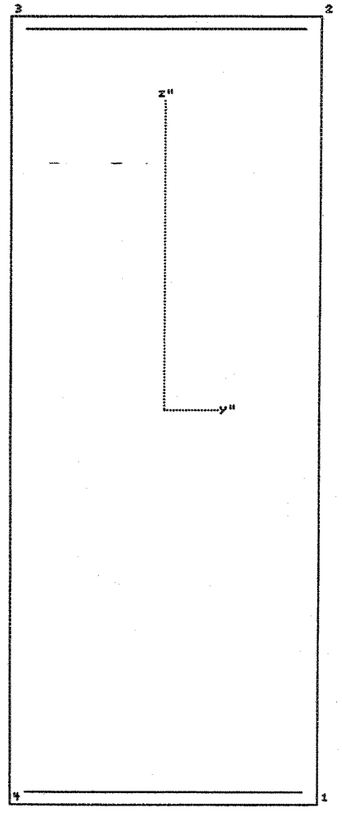
Escala 1 : 20.0



Sección :"TABLAI1" Armadura :"B1"
Tipo : tipo viga/ Rectángulo Unidades :[cm]
Material :"H400"

Ancho = 100.00 cm Canto = 255.00 cm

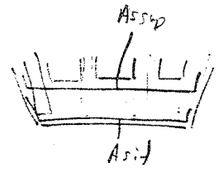
Características mecánicas de la sección:
Area : Ax= 2.550 [m2]
Momentos de inercia : Iy= 1.382 [m4] Iz= 0.212500 [m4]
Inercia a torsión : Ix= 0.640410 [m4]

Posición del centro de gravedad: ys= 0.000 [m] zs= 1.275 [m]

	I:	R=dist.borde [m]	W=I/R [m3]	W/Ax [m]
izq.	Iz	-0.500	-0.425000	0.167
dch.	Iz	0.500	0.425000	-0.167
abajo	Iy	-1.275	-1.084	0.425
arriba	Iy	1.275	1.084	-0.425

Resumen de Momentos últimos con las armaduras dispuestas en tabla inferior de capital:

Sección	M_u^+ (mt/l)	M_u^- (mt/l)	$A_{s,sup.} = A_{s,inf.}$
1	340	-340	Ø20 a 0'10
2	765	-765	"
3	185	-185	"
4	110	-110	"
6	68'5	-68'5	Ø20 a 0'20 + Ø25 a 0'20



Estos valores son tan grandes que en todos los casos estamos por encima de Md

Ya que el valor del Md en la tabla inferior, prácticamente viene solo por el efecto de $Q_z \cdot b = \Delta M_z$.

Sólo por efectos globales. Los locales son de losa sólo

Barra de comprobación.

	Barra 8 → Sec 4		Barra 11	
	M_z	ΔM_z	M_z	ΔM_z
PP	0'05	0	-0'45	0
Cm	0'03/0'01	0'301	-4'45/-5'99	2'679
30%Q	± 0'14	0	∓0'20	0
SC PNI	-0'17/-0'11	-0'827	∓1'61/0'39	-3'485 (Hormig.)
Tren Bici	0'23/0'52	-4'35	-11'17/3'41	-7'863 (..)
"	0'2/0'17	-7'032	0'83/3'27	-4'23 (..)

Barra 8

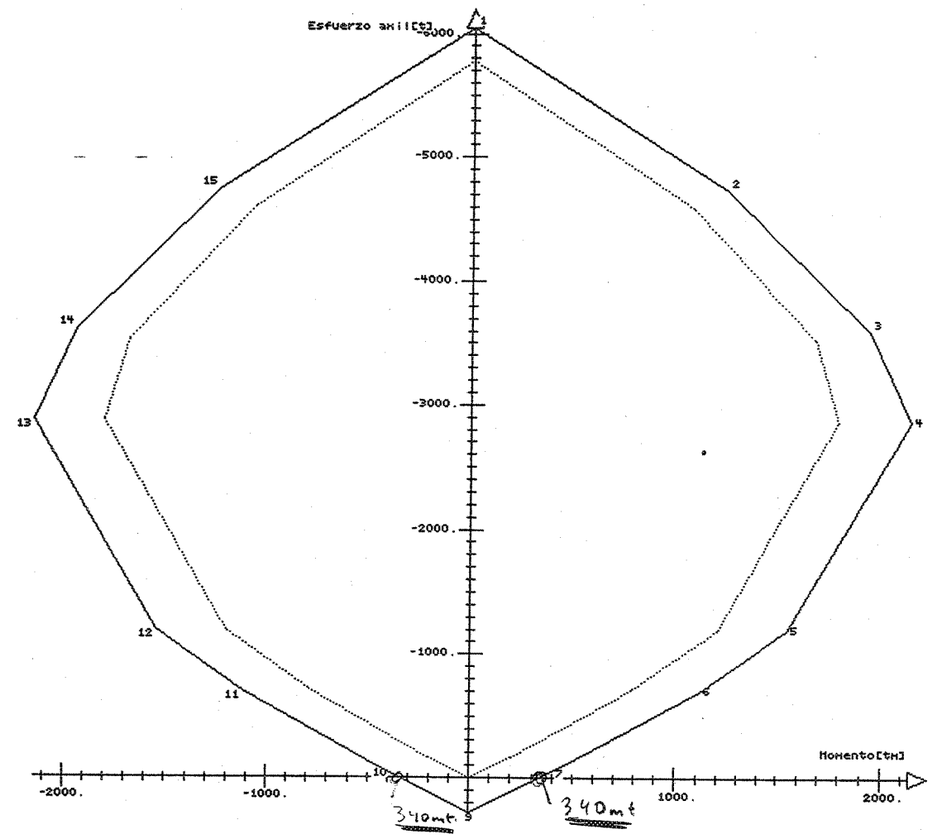
$Md = |-17'73 \cdot \gamma_d| < |110 \cdot \gamma_d|$

Cumple en todos los casos

Barra 11

$Md = |-55 \cdot \gamma_d| < |-340/\cdot \gamma_d|$

Escala 1 : 500.0



My/N D. de interacción paraSec. Viga : "TABLAI1" Armadura :"B1"
Factor de minoración de la resistencia de la sección 1.00
Esfuerzos y rigideces del ELU divididos entre este factor

Pos	Momento My [tm]	Esf.Axil [t]	Eps.sup [o/oo]	Eps.inf [o/oo]	EJy [tm2]
1	9.46E-16	-6042.194	-2.000	-2.000	201249.2
2	1235.305	-4743.617	-3.500	0.056	885889.8
3	1930.836	-3606.855	-3.500	1.128	1.06E+06
4	2135.518	-2871.654	-3.500	2.201	955163.4
5	1542.977	-1193.706	-3.500	10.215	286879.5
6	1117.560	-701.925	-2.187	10.194	230160.0
7	435.273	-77.987	-0.875	10.173	100463.0
8	-1.20E-14	278.641	2.112	10.126	3.82E-12
9	-1.20E-14	278.641	10.126	2.112	3.82E-12
10	-435.273	-77.987	10.173	-0.875	100463.0
11	-1117.560	-701.925	10.194	-2.187	230160.0
12	-1542.977	-1193.706	10.215	-3.500	286879.5
13	-2135.518	-2871.654	2.201	-3.500	955163.4
14	-1930.836	-3606.855	1.128	-3.500	1.06E+06
15	-1235.305	-4743.617	0.056	-3.500	885889.8

Escala estándar:[1-cm]:[t] = 1:500.0, Relac M:N = 0.6000

Armadura: "B1"

N°	Nom.mat	Cod.dim.	Area [cm2]	y1 [cm]	z1 [cm]	y2 [cm]	z2 [cm]
1	AEH500	(2)	31.42	-45.00	4.00	45.00	4.00
2	AEH500	(2)	31.42	-45.00	251.00	45.00	251.00
	Total:		62.83	Cuantía de armadura: 0.246 [o/o]			

Cód. dimensionamiento: (0) = As constante
Cód. dimensionamiento: (1) = Aumentar As en zonas comprimida y traccionada
Cód. dimensionamiento: (2) = Aumentar As solo en zona traccionada

Dimens. a cortante (valores por defecto): (Acero"AEH500"/Hormigón"H400")

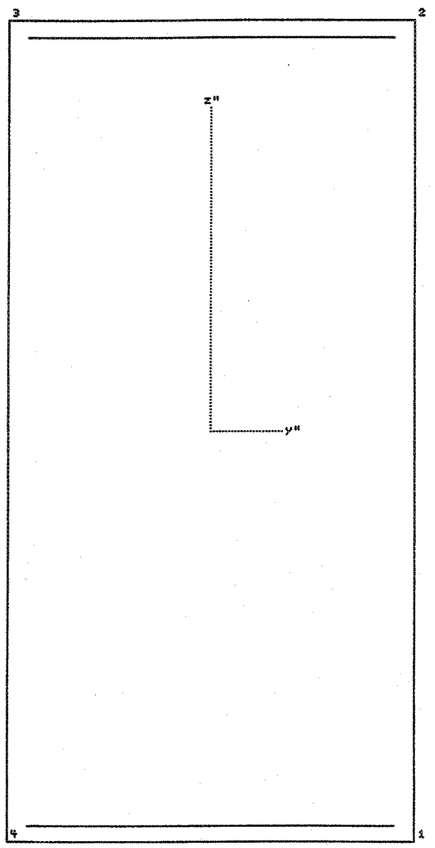
Cortante	Area mín.cercos	Ancho alma ideal	Canto útil	Incl.bielas
Vz	0.00 [cm2/m]	100.00 [cm]	251.00 [cm]	0.00
Vy	0.00 [cm2/m]	255.00 [cm]	96.00 [cm]	0.00

Características del material:

Nom.Mat.	Módulo E [kp/cm2]	0.85*fcd,fyd [kp/cm2]	eps-fc [o/oo]	fct [kp/cm2]	fcv [kp/cm2]	fcw,mín [kp/cm2]
"H400"	380000.0	-226.600	-2.000	0.0	8.170	400.000
"AEH500"	2.10E+06	4434.700				

Leyenda:
fcd,fyd resistencia de cálculo del hormigón,acero
eps-fc deformación al final de la parábola (fig.2.3, cap.2.2)
fct resistencia de cálculo a tracción del hormigón
fcv resistencia virtual de cálculo del hormigón a esfuerzo cortante

Escala 1 : 15.0



Sección :"TABLA2" Armadura :"B1"
Tipo : tipo viga/ Rectángulo Unidades :[cm]
Material :"H400"

Ancho = 100.00 cm Canto = 199.20 cm

Características mecánicas de la sección:
Area : Ax= 1.992 [m2]
Momentos de inercia : Iy= 0.658698 [m4] Iz= 0.166000 [m4]
Inercia a torsión : Ix= 0.455101 [m4]

Posición del centro de gravedad: ys= 0.000 [m] zs= 0.996000 [m]

	I:	R=dist.borde [m]	W=I/R [m3]	W/Ax [m]
izq.	Iz	-0.500	-0.332000	0.167
dch.	Iz	0.500	0.332000	-0.167
abajo	Iy	-0.996	-0.661343	0.332
arriba	Iy	0.996	0.661343	-0.332

Armadura: "B1"

N°	Nom.mat	Cod.dim.	Area [cm2]	y1 [cm]	z1 [cm]	y2 [cm]	z2 [cm]
1	AEH500	(2)	31.42	-45.00	4.00	45.00	4.00
2	AEH500	(2)	31.42	-45.00	195.00	45.00	195.00
	Total:		62.83	Cuantía de armadura: 0.315 [o/o]			

Cód. dimensionamiento: (0) = As constante
Cód. dimensionamiento: (1) = Aumentar As en zonas comprimida y traccionada
Cód. dimensionamiento: (2) = Aumentar As solo en zona traccionada

Dimens. a cortante (valores por defecto): (Acero"AEH500"/Hormigón"H400")

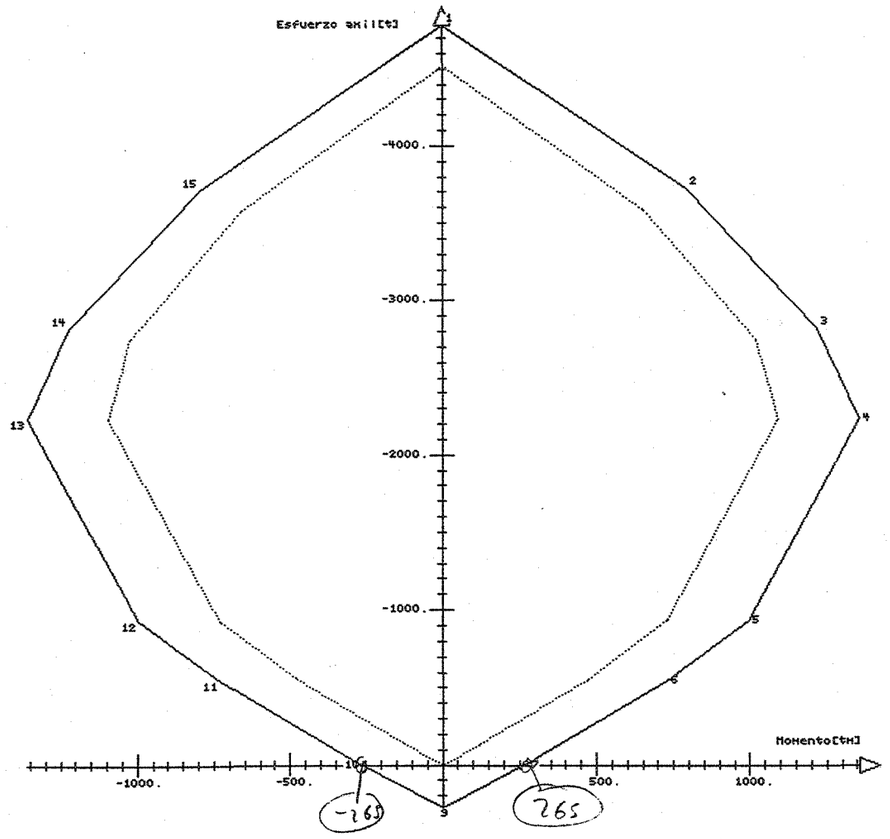
Cortante	Area mín.cercos	Ancho alma ideal	Canto útil	Incl.bielas
Vz	0.00 [cm2/m]	100.00 [cm]	195.20 [cm]	0.00
Vy	0.00 [cm2/m]	199.20 [cm]	96.00 [cm]	0.00

Características del material:

Nom.Mat.	Módulo E [kp/cm2]	0.85*fcd,fyd [kp/cm2]	eps-fc [o/oo]	fct [kp/cm2]	fcv [kp/cm2]	fcw,mín [kp/cm2]
"H400"	380000.0	-226.600	-2.000	0.0	8.170	400.000
"AEH500"	2.10E+06	4434.700				

Leyenda:
fcd,fyd resistencia de cálculo del hormigón,acero
eps-fc deformación al final de la parábola (fig.2.3, cap.2.2)
fct resistencia de cálculo a tracción del hormigón
fcv resistencia virtual de cálculo del hormigón a esfuerzo cortante

Escala 1 : 400.0

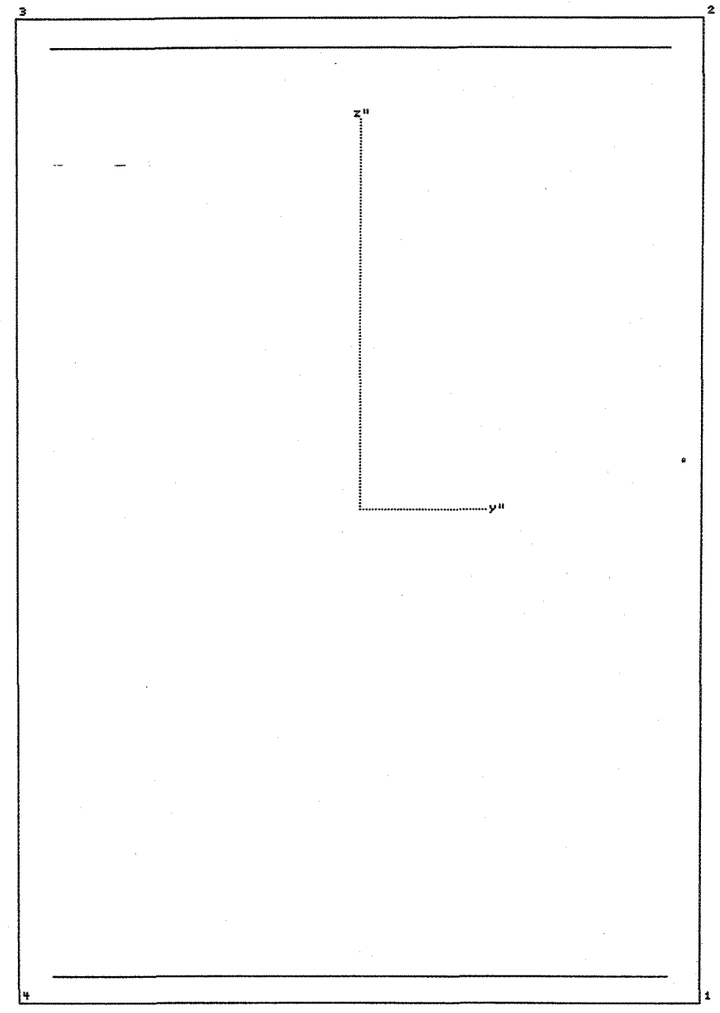


My/N D. de interacción paraSec. Viga : "TABLA2" Armadura :"B1"
Factor de minoración de la resistencia de la sección 1.00
Esfuerzos y rigideces del ELU divididos entre este factor

Pos	Momento My [tm]	Esf.Axil [t]	Eps.sup [o/oo]	Eps.inf [o/oo]	EJy [tm2]
1	-0.263894	-4777.766	-2.000	-2.000	120339.3
2	791.883	-3720.032	-3.500	0.072	441644.3
3	1223.415	-2820.498	-3.500	1.149	524180.9
4	1359.469	-2233.254	-3.500	2.227	472878.9
5	995.298	-928.333	-3.500	10.277	143912.8
6	730.433	-539.655	-2.187	10.250	116989.1
7	298.739	-35.965	-0.875	10.223	53622.0
8	0.278641	278.641	2.112	10.162	68.952
9	0.278641	278.641	10.170	2.112	68.881
10	-299.113	-36.549	10.234	-0.875	53634.0
11	-730.767	-539.897	10.263	-2.187	116922.8
12	-994.751	-927.382	10.291	-3.500	143686.3
13	-1359.506	-2230.966	2.233	-3.500	472407.3
14	-1224.261	-2817.680	1.154	-3.500	524006.1
15	-794.462	-3716.364	0.075	-3.500	442628.9

Escala estándar:[1-cm]:[t] = 1:400.0, Relac M:N = 0.5000

Escala 1 : 9.0



Sección :"TABLA3" Armadura :"B1"
Tipo : tipo viga/ Rectángulo Unidades :[cm]
Material :"H400"

Ancho = 100.00 cm Canto = 143.40 cm

Características mecánicas de la sección:
Area : Ax= 1.434 [m2]
Momentos de inercia : Iy= 0.245734 [m4] Iz= 0.119500 [m4]
Inercia a torsión : Ix= 0.272099 [m4]

Posición del centro de gravedad: ys= 0.000 [m] zs= 0.717000 [m]

	I:	R=dist.borde [m]	W=I/R [m3]	W/Ax [m]
izq.	Iz	-0.500	-0.239000	0.167
dch.	Iz	0.500	0.239000	-0.167
abajo	Iy	-0.717	-0.342726	0.239

arriba Iy 0.717 0.342726 -0.239

Armadura: "B1"

N°	Nom.mat	Cod.dim.	Area [cm2]	y1 [cm]	z1 [cm]	y2 [cm]	z2 [cm]
1	AEH500	(2)	31.42	-45.00	4.00	45.00	4.00
2	AEH500	(2)	31.42	-45.00	139.00	45.00	139.00
	Total:		62.83	Cuantía de armadura: 0.438 [o/o]			

Cód. dimensionamiento: (0) = As constante
Cód. dimensionamiento: (1) = Aumentar As en zonas comprimida y traccionada
Cód. dimensionamiento: (2) = Aumentar As solo en zona traccionada

Dimens. a cortante (valores por defecto): (Acero"AEH500"/Hormigón"H400")

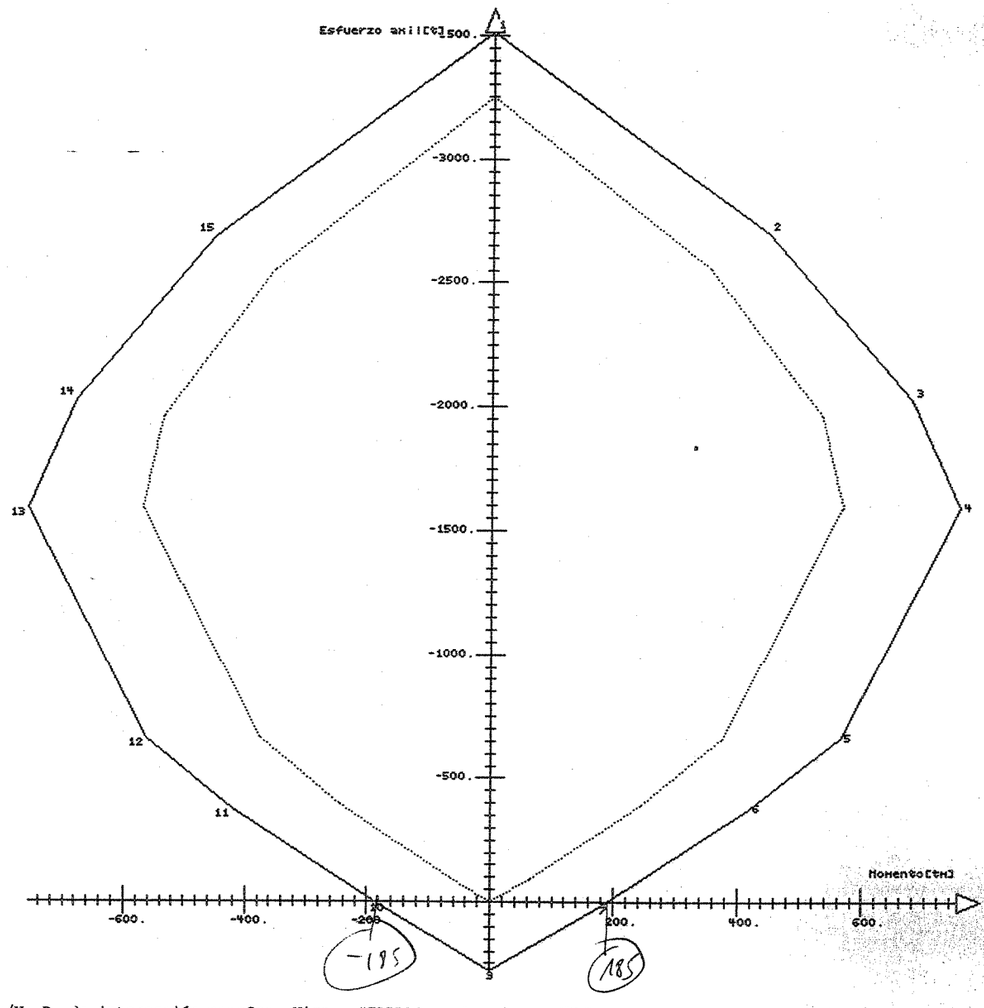
Cortante	Area mín.cercos	Ancho alma ideal	Canto útil	Incl.bielas
Vz	0.00 [cm2/m]	100.00 [cm]	139.40 [cm]	0.00
Vy	0.00 [cm2/m]	143.40 [cm]	96.00 [cm]	0.00

Características del material:

Nom.Mat.	Módulo E [kp/cm2]	0.85*fcd,fyd [kp/cm2]	eps-fc [o/oo]	fct [kp/cm2]	fcv [kp/cm2]	fcw,mín [kp/cm2]
"H400"	380000.0	-226.600	-2.000	0.0	8.170	400.000
"AEH500"	2.10E+06	4434.700				

Leyenda:
fcd,fyd resistencia de cálculo del hormigón,acero
eps-fc deformación al final de la parábola (fig.2.3, cap.2.2)
fct resistencia de cálculo a tracción del hormigón
fcv resistencia virtual de cálculo del hormigón a esfuerzo cortante

Escala 1 : 250.0



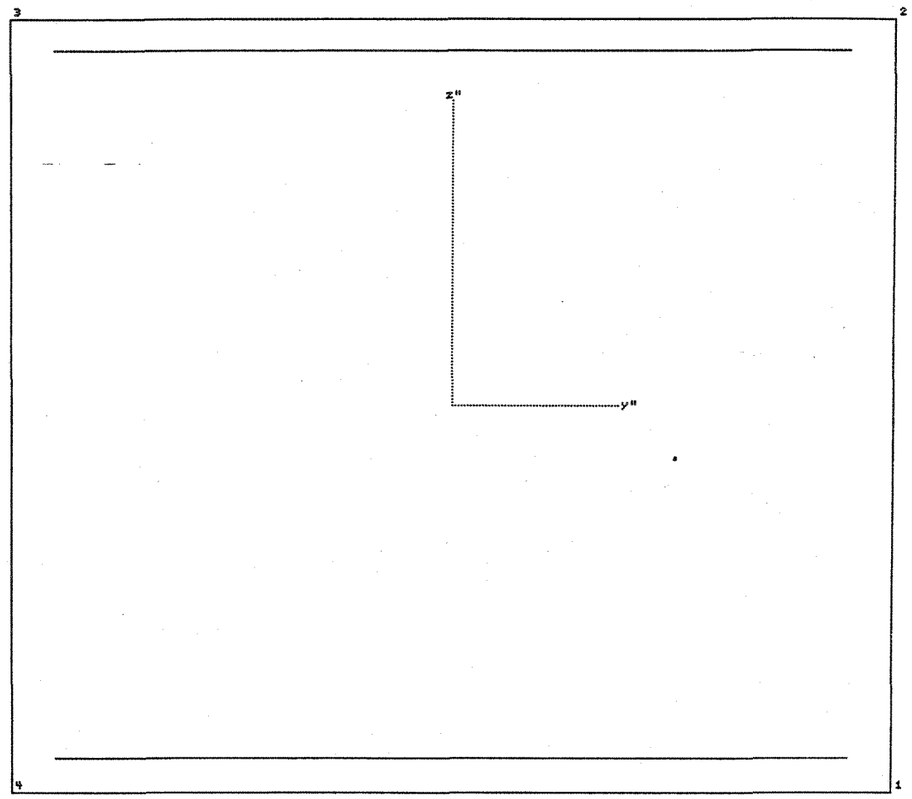
My/N D. de interacción paraSec. Viga : "TABLA3" Armadura :"B1"
Factor de minoración de la resistencia de la sección 1.00
Esfuerzos y rigideces del ELU divididos entre este factor

Pos	Momento My [tm]	Esf.Axil [t]	Eps.sup [o/oo]	Eps.inf [o/oo]	EJy [tm2]
1	-0.527789	-3513.338	-2.000	-2.000	60119.0
2	444.454	-2696.448	-3.500	0.100	177019.8
3	674.342	-2034.142	-3.500	1.187	206333.9
4	754.813	-1594.855	-3.500	2.273	187500.6
5	563.759	-662.959	-3.500	10.387	58213.4
6	419.412	-373.793	-2.187	10.350	47972.1
7	182.326	9.262	-0.875	10.312	23371.3
8	0.557282	278.641	2.112	10.226	98.482
9	0.557282	278.641	10.250	2.112	98.200
10	-183.089	7.535	10.344	-0.875	23401.7
11	-420.251	-374.903	10.386	-2.187	47930.2
12	-562.967	-661.057	10.427	-3.500	57964.7

13	-754.837	-1590.278	2.289	-3.500	186968.5
14	-675.594	-2028.505	1.200	-3.500	206123.8
15	-448.248	-2689.110	0.111	-3.500	178018.4

Escala estándar:[1-cm]:[t] = 1:250.0, Relac M:N = 0.4000

Escala 1 : 7.0



Sección :"TABLA4" Armadura :"B1"
Tipo : tipo viga/ Rectángulo Unidades :[cm]
Material :"H400"

Ancho = 100.00 cm Canto = 87.50 cm

Características mecánicas de la sección:
Area : Ax= 0.875000 [m2]
Momentos de inercia : Iy= 0.055827 [m4] Iz= 0.072917 [m4]
Inercia a torsión : Ix= 0.106165 [m4]

Posición del centro de gravedad: ys= 0.000 [m] zs= 0.437500 [m]

	I:	R=dist.borde [m]	W=I/R [m3]	W/Ax [m]
izq.	Iz	-0.500	-0.145833	0.167
dch.	Iz	0.500	0.145833	-0.167
abajo	Iy	-0.438	-0.127604	0.146
arriba	Iy	0.438	0.127604	-0.146

Armadura: "B1"

N°	Nom.mat	Cod.dim.	Area [cm2]	y1 [cm]	z1 [cm]	y2 [cm]	z2 [cm]
1	AEH500	(2)	31.42	-45.00	4.00	45.00	4.00

2	AEH500	(2)	31.42	-45.00	84.00	45.00	84.00

Total: 62.83 Cuantía de armadura: 0.718 [o/o]

Cód. dimensionamiento: (0) = As constante
Cód. dimensionamiento: (1) = Aumentar As en zonas comprimida y traccionada
Cód. dimensionamiento: (2) = Aumentar As solo en zona traccionada

Dimens. a cortante (valores por defecto): (Acero"AEH500"/Hormigón"H400")

Cortante	Area mín.cercos	Ancho alma ideal	Canto útil	Incl.bielas
Vz	0.00 [cm2/m]	100.00 [cm]	83.50 [cm]	0.00
Vy	0.00 [cm2/m]	87.50 [cm]	96.00 [cm]	0.00

Características del material:

Nom.Mat.	Módulo E [kp/cm2]	0.85*fcd,fyd [kp/cm2]	eps-fc [o/oo]	fct [kp/cm2]	fcv [kp/cm2]	fcw,mín [kp/cm2]
"H400"	380000.0	-226.600	-2.000	0.0	8.170	400.000
"AEH500"	2.10E+06	4434.700				

Leyenda:
fcd,fyd resistencia de cálculo del hormigón,acero
eps-fc deformación al final de la parábola (fig.2.3, cap.2.2)
fct resistencia de cálculo a tracción del hormigón
fcv resistencia virtual de cálculo del hormigón a esfuerzo cortante

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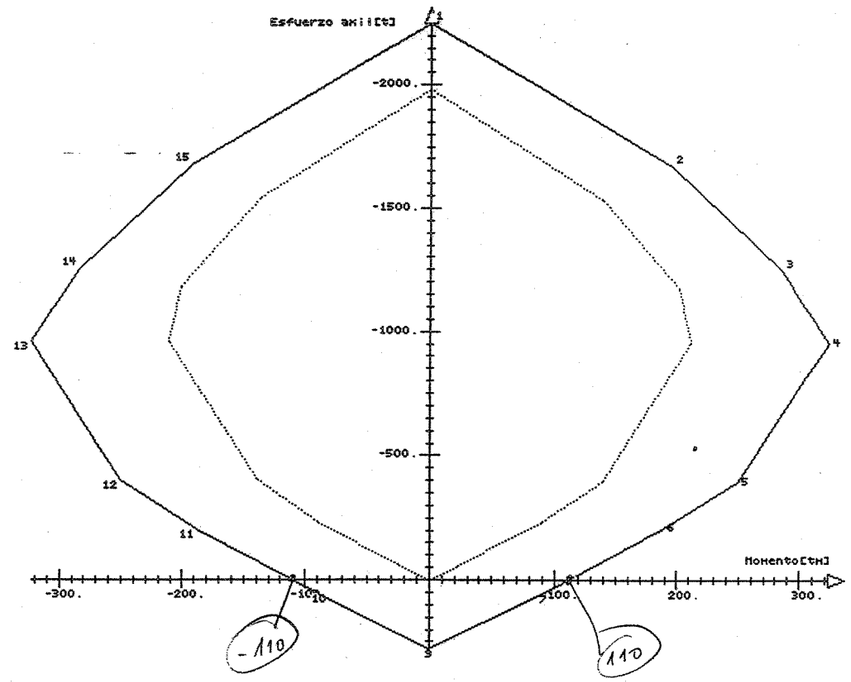
Escala 1 : 250.0

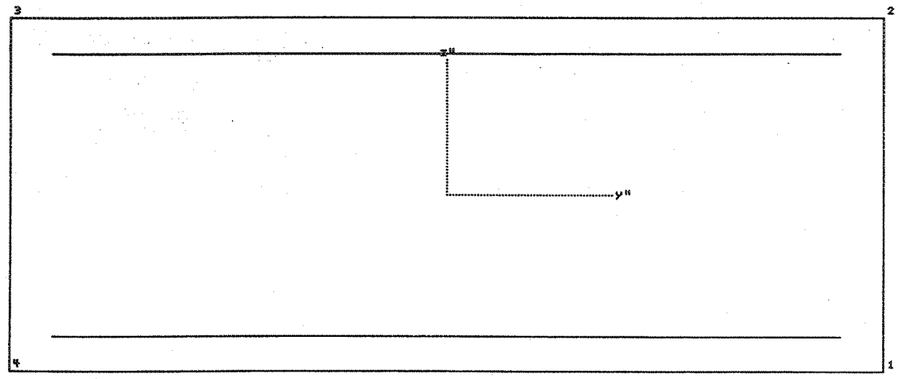


My/N D. de interacción paraSec. Viga : "TABLA4" Armadura :"B1"
Factor de minoración de la resistencia de la sección 1.00
Esfuerzos y rigideces del ELU divididos entre este factor

Pos	Momento My [tm]	Esf.Axil [t]	Eps.sup [o/oo]	Eps.inf [o/oo]	EJy [tm2]
1	0.659736	-2246.644	-2.000	-2.000	21112.4
2	194.188	-1671.029	-3.500	0.168	46327.6
3	284.592	-1246.376	-3.500	1.274	52160.0
4	322.458	-955.311	-3.500	2.381	47980.1
5	249.433	-397.110	-3.500	10.647	15427.9
6	189.717	-207.403	-2.187	10.584	12998.1
7	90.072	54.776	-0.875	10.521	6915.872
8	-0.696603	278.641	2.112	10.378	73.738
9	-0.696603	278.641	10.329	2.112	74.180
10	-89.137	58.527	10.453	-0.875	6885.065
11	-188.495	-204.232	10.508	-2.187	12991.6
12	-250.043	-399.487	10.563	-3.500	15558.3
13	-322.475	-961.032	2.346	-3.500	48269.9
14	-283.555	-1253.423	1.246	-3.500	52281.1
15	-191.113	-1680.201	0.146	-3.500	45867.2

Escala estándar:[1-cm]:[t] = 1:250.0, Relac M:N = 0.2000

Escala 1 : 7.0



Sección :"TABLA6" Armadura :"B1"
Tipo : tipo viga/ Rectángulo Unidades :[cm]
Material :"H400"

Ancho = 100.00 cm Canto = 40.00 cm

Características mecánicas de la sección:
Area : Ax= 0.400000 [m2]
Momentos de inercia : Iy= 0.005333 [m4] Iz= 0.033333 [m4]
Inercia a torsión : Ix= 0.015969 [m4]

Posición del centro de gravedad: ys= 0.000 [m] zs= 0.200000 [m]

	I:	R=dist.borde [m]	W=I/R [m3]	W/Ax [m]
izq.	Iz	-0.500	-0.066667	0.167
dch.	Iz	0.500	0.066667	-0.167
abajo	Iy	-0.200	-0.026667	0.067
arriba	Iy	0.200	0.026667	-0.067

Armadura: "B1"

N°	Nom.mat	Cod.dim.	Area [cm2]	y1 [cm]	z1 [cm]	y2 [cm]	z2 [cm]
1	AEH500	(2)	40.25	-45.00	4.00	45.00	4.00
2	AEH500	(2)	40.25	-45.00	36.00	45.00	36.00
	Total:		80.50	Cuantía de armadura: 2.013 [o/o]			

Cód. dimensionamiento: (0) = As constante
Cód. dimensionamiento: (1) = Aumentar As en zonas comprimida y traccionada
Cód. dimensionamiento: (2) = Aumentar As solo en zona traccionada

Dimens. a cortante (valores por defecto): (Acero"AEH500"/Hormigón"H400")

Cortante	Area mín.cercos	Ancho alma ideal	Canto útil	Incl.bielas
Vz	0.00 [cm2/m]	100.00 [cm]	36.00 [cm]	0.00
Vy	0.00 [cm2/m]	40.00 [cm]	96.00 [cm]	0.00

Características del material:

Nom.Mat.	Módulo E [kp/cm2]	0.85*fcd,fyd [kp/cm2]	eps-fc [o/oo]	fct [kp/cm2]	fcv [kp/cm2]	fcw,mín [kp/cm2]
"H400"	380000.0	-226.600	-2.000	0.0	8.170	400.000
"AEH500"	2.10E+06	4434.700				

Leyenda:
fcd,fyd resistencia de cálculo del hormigón,acero
eps-fc deformación al final de la parábola (fig.2.3, cap.2.2)
fct resistencia de cálculo a tracción del hormigón
fcv resistencia virtual de cálculo del hormigón a esfuerzo cortante

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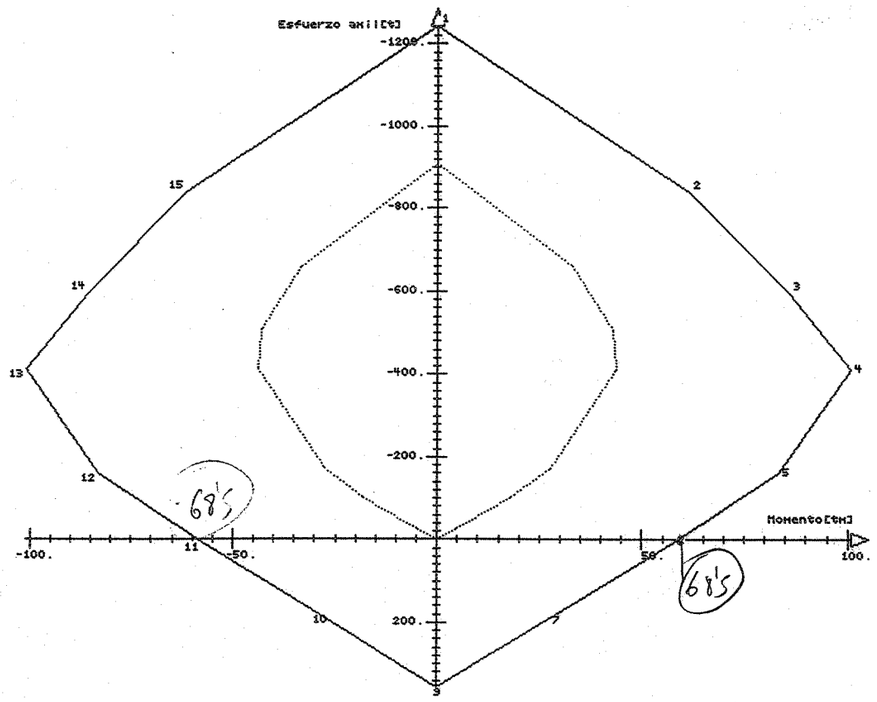
Escala 1 : 150.0

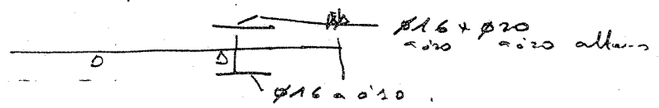


My/N D. de interacción paraSec. Viga : "TABLA6" Armadura :"B1"
Factor de minoración de la resistencia de la sección 1.00
Esfuerzos y rigideces del ELU divididos entre este factor

Pos	Momento My [tm]	Esf.Axil [t]	Eps.sup [o/oo]	Eps.inf [o/oo]	EJy [tm2]
1	-3.53E-16	-1244.517	-2.000	-2.000	4327.895
2	61.746	-838.883	-3.500	0.389	6351.039
3	85.943	-596.579	-3.500	1.562	6791.091
4	101.029	-411.871	-3.500	2.735	6481.091
5	83.205	-161.762	-3.500	11.500	2218.802
6	57.684	6.269	-2.187	11.354	1703.909
7	28.711	182.154	-0.875	11.208	950.444
8	3.49E-16	357.011	2.112	10.876	1.59E-14
9	3.49E-16	357.011	10.876	2.112	1.59E-14
10	-28.711	182.154	11.208	-0.875	950.444
11	-57.684	6.269	11.354	-2.187	1703.909
12	-83.205	-161.762	11.500	-3.500	2218.802
13	-101.029	-411.871	2.735	-3.500	6481.091
14	-85.943	-596.579	1.562	-3.500	6791.091
15	-61.746	-838.883	0.389	-3.500	6351.039

Escala estándar:[1-cm]:[t] = 1:150.0, Relac M:N = 0.1000

Sección de apoyos entrelos jen losa.



$Mu+ = 21 mt/ml$
$Mu- = -26'5 - t/ml$] Esfuerzos últimos con las armaduras dispuestas en el resto de losa

En la sección del resto de losa en el apoyo 3 es

Md global = $-16'3$ mt/ml

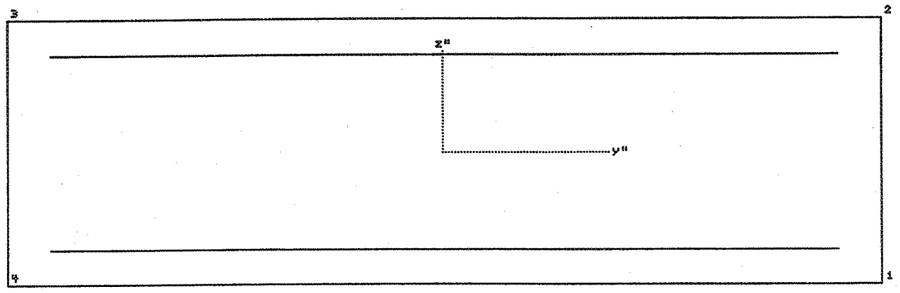
Mientras que según el global viene por $\Sigma M_i = Q_1 b$. y para M_2

El valor de M_2 es despreciable en todos los casos mientras que $\Delta M_2 = Q_1 b$ es un valor pequeño al ser $Q_2 \gg Q_1$ al ser $I_2 \gg I_1$ luego el valor del Md será mucho menor en la losa en el capitel que en el resto del tablero, en cuanto a esfuerzos globales. Del lado de la seguridad se mantiene la misma armadura.

- Valga como ejemplo que el valor de ΔM_1 mismo del tramo B en el nervio izq. = $0'27$ mt/ml.

Con esto queda comprobado que la armadura dispuesta en el resto de losa cumple en cuanto a flexión.

Escala 1 : 7.0



Sección :"LOSACENT" Armadura :"B1"
Tipo : tipo viga/ Rectángulo Unidades :[cm]
Material :"H400"

Ancho = 100.00 cm Canto = 30.00 cm

Características mecánicas de la sección:
Area : Ax= 0.300000 [m2]
Momentos de inercia : Iy= 0.002250 [m4] Iz= 0.025000 [m4]
Inercia a torsión : Ix= 0.007300 [m4]

Posición del centro de gravedad: ys= 0.000 [m] zs= 0.150000 [m]

	I:	R=dist.borde [m]	W=I/R [m3]	W/Ax [m]
izq.	Iz	-0.500	-0.050000	0.167
dch.	Iz	0.500	0.050000	-0.167
abajo	Iy	-0.150	-0.015000	0.050
arriba	Iy	0.150	0.015000	-0.050

Armadura: "B1"

N°	Nom.mat	Cod.dim.	Area [cm2]	y1 [cm]	z1 [cm]	y2 [cm]	z2 [cm]
1	AEH500	(2)	25.76	-45.00	26.00	45.00	26.00
2	AEH500	(2)	20.11	-45.00	4.00	45.00	4.00
	Total:		45.87	Cuantía de armadura: 1.529 [o/o]			

Cód. dimensionamiento: (0) = As constante
Cód. dimensionamiento: (1) = Aumentar As en zonas comprimida y traccionada
Cód. dimensionamiento: (2) = Aumentar As solo en zona traccionada

Dimens. a cortante (valores por defecto): (Acero"AEH500"/Hormigón"H400")

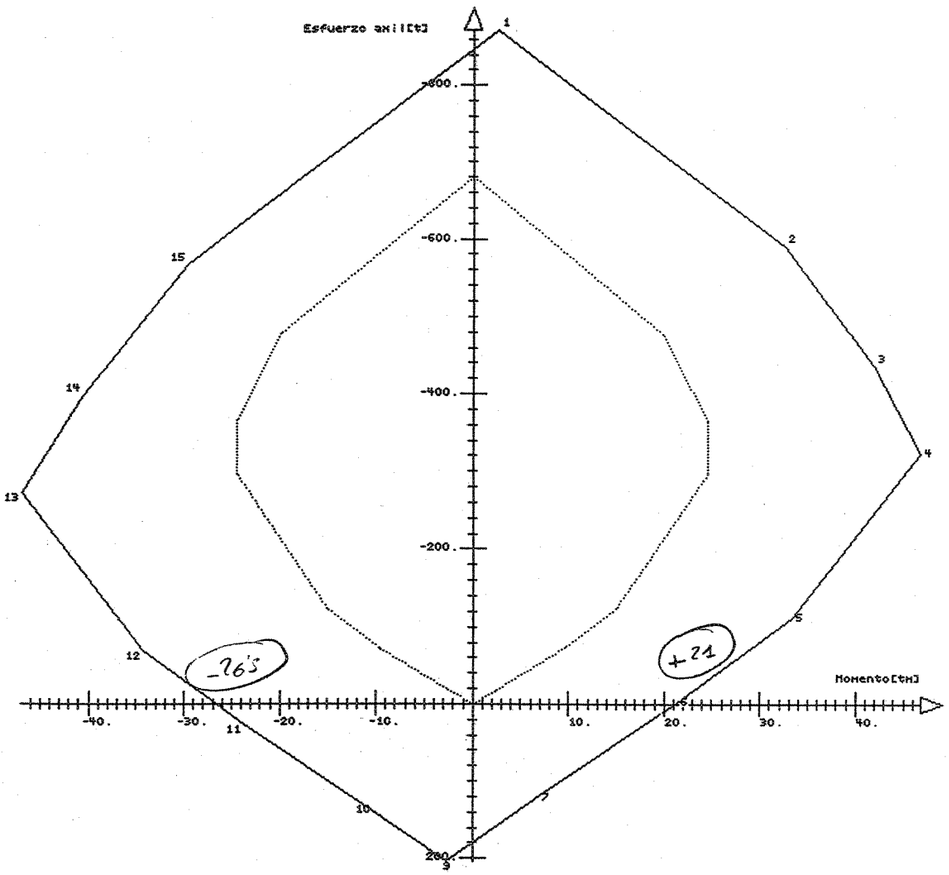
Cortante	Area mín.cercos	Ancho alma ideal	Canto útil	Incl.bielas
Vz	0.00 [cm2/m]	100.00 [cm]	26.00 [cm]	0.00
Vy	0.00 [cm2/m]	30.00 [cm]	96.00 [cm]	0.00

Características del material:

Nom.Mat.	Módulo E [N/mm2]	0.85*fcd,fyd [N/mm2]	eps-fc [o/oo]	fct [N/mm2]	fcv [N/mm2]	fcw,mín [N/mm2]
"H400"	38000.0	-22.660	-2.000	0.0	0.817000	40.000
"AEH500"	210000.0	443.470				

Leyenda:
fcd,fyd resistencia de cálculo del hormigón,acero
eps-fc deformación al final de la parábola (fig.2.3, cap.2.2)
fct resistencia de cálculo a tracción del hormigón
fcv resistencia virtual de cálculo del hormigón a esfuerzo cortante

Escala 1 : 80.0



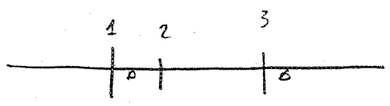
My/N D. de interacción paraSec. Viga : "LOSACENT" Armadura :"B1"
Factor de minoración de la resistencia de la sección 1.00
Esfuerzos y rigideces del ELU divididos entre este factor

Pos	Momento My [tm]	Esf.Axil [t]	Eps.sup [o/oo]	Eps.inf [o/oo]	EJy [tm2]
1	2.612	-872.437	-2.000	-2.000	1165.455
2	32.525	-591.177	-3.500	0.538	2416.177
3	41.988	-436.058	-3.500	1.757	2396.200
4	46.929	-322.536	-3.500	2.975	2174.273
5	33.357	-111.470	-3.500	12.077	642.426
6	21.388	-1.260	-2.187	11.875	456.282
7	7.587	114.622	-0.875	11.673	181.401
8	-2.758	203.402	2.112	11.214	90.909
9	-2.758	203.402	11.214	2.112	90.909
10	-11.388	130.220	11.673	-0.875	272.263
11	-23.738	27.524	11.875	-2.187	506.415
12	-34.256	-69.499	12.077	-3.500	659.749
13	-46.929	-272.388	2.975	-3.500	2174.273
14	-40.609	-398.448	1.757	-3.500	2317.498
15	-29.767	-566.103	0.538	-3.500	2211.288

Escala estándar:[1-cm]:[t] = 1:80.0, Relac M:N = 0.0800

Comprobación de cortante

Con los cortantes locales calculados ya son:



$Vd_1 = 5'06$ t/ml

$Vd_2 = -14'709$ t/ml

$Vd_3 = -17'29$ t/ml

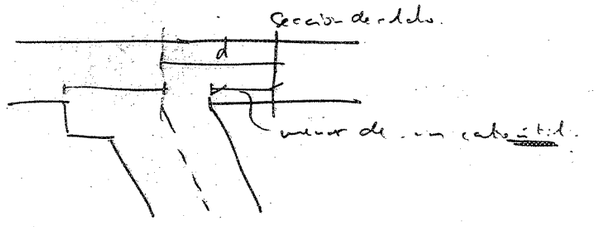
En la sección 2 ⇒ Con canto de 0'30 m ⇒ canto útil 0'26 m

$$Vu_2 = \left[12 \cdot \left(1 + \sqrt{\frac{0'2}{0'265}}\right)\left(\frac{10'053 \cdot 10^{-4}}{0'265} \cdot 4000\right)^{1/3}\right] \cdot 1 \cdot 0'265 = \underline{14'72 \text{ t/ml}}$$

$|Vu_2| > |Vd_2| \Rightarrow$ No hace falta armadura de cortante al ser

$14'72 > 14'709$

Además en este caso el cortante se ha calculado a menos de 1 canto útil del borde del apoyo al ser mayor el apoyo superior del capitel que de la viga

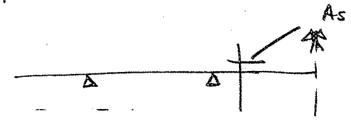


Sección 1: $Vu_2 = \left[12 \cdot \left(1 + \sqrt{\frac{0'2}{0'265}}\right)\left(\frac{20'106 \cdot 10^{-4}}{0'265} \cdot 4000\right)^{1/3}\right] \cdot 0'265 = \underline{18'53 \text{ t/ml}}$

Como $|Vd| = 17'29$ t/ml $< |Vu_2| = 18'53$ t/ml $\Rightarrow$ No necesita armadura de cortante.

Comprobación de cortante en sección interior de apoyo interior.

As = Ø16 a 0'20 + Ø20 a 0'20



$$Vu_2 = \left[12 \cdot \left(1 + \sqrt{\frac{0'2}{0'265}}\right)\left(\frac{25'76 \cdot 10^{-4}}{0'265} \cdot 4000\right)^{1/3}\right] \cdot 1 \cdot 0'265 = \underline{20'13 \text{ t/ml}}$$

Mientras que Vd ⇒

Hoja	Vu_2 (t/ml) en apoyo ⇒	Anch. útil
PP	1'2	0'89
CM	2'364	1'674
Sobrecarga	0'512	0'38
Tra AND	8'983	5'46
SC Pol 1	0'093	0'093

El tra AND no da cortante positivo.

Cálculo concomitante Q_1 en cara superior.

	Q_1 (t/ml)
PP	0
CM	0'01
Sobrec.	0
SC P	0'02
Tra AND	0'3
Tra AND	aprox = 0

Como puede comprobarse el cortante positivo es muy pequeño al ser mayor Q_1 en cara superior

$$Vd = 1'35(0'79 + 1'675 + 0'37) + 1'5(5'48 + 0'093 + 0'07) = \underline{12'39 \text{ t/ml}}$$

Como $Vd < Vu_1 \Rightarrow$ No necesita armadura de cortante.

Comprobación de cortante en table inferior

Con e_2 = 2'55 → Sección 1
1'992 → 2
1'434 → 3
0'875 → 4
0'4 → 6

Sección 1: $V_{u1} = \left(12 \cdot \left(1+\sqrt{\frac{0'2}{2'50}}\right)\left(4000 \cdot \frac{31'415\cdot10^{-4}}{2'50}\right)^{1/3}\right) \cdot 2'50 \cdot 1 = 65'97$ t/m

Sección 2: $V_{u2} = 12\cdot\left(1+\sqrt{\frac{0'2}{1'95}}\right)\left(4000\ \frac{31'415\cdot10^{-4}}{1'95}\right)^{1/3} \cdot 1'95 = 57'49$ t/m

Sec 3: $V_{u2} = 12\left(1+\sqrt{\frac{0'2}{1'40}}\right)\left(4000 \cdot \frac{31'415\cdot10^{-4}}{1'40}\right)^{1/3} \cdot 1'40 = 49'41$ t/m

Sec 4: $V_{u2} = 12\left(1+\sqrt{\frac{0'2}{0'84}}\right)\left(4000 \cdot \frac{31'415\cdot10^{-4}}{0'84}\right)^{1/3} \cdot 0'84 = 36'95$ t/m

Sec 6: $V_{u2} = 12\left(1+\sqrt{\frac{0'2}{0'56}}\right)\left(4000 \cdot \frac{40'251\cdot10^{-4}}{0'36}\right)^{1/3} \cdot 0'36 = 26'76$ t/m

En ningún caso se llega a alcanzar este valor de V_d

$V_d = Q_2 d$

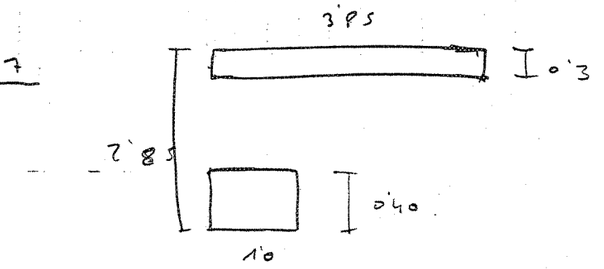
Sólo por efecto globales en table inferior.

	$Q_{2,k}$ (t/l)
PP	0
Cm +30%	1'68
Separ.	2'18
TramBND	14'77 (a zona curvada mínimo apoyo)
TramBNI	2'7 concomitante con 14'77. (")

$V_d = 1'35(1'68) + 1'5(14'77+7'7+2'18) = 31'74$ t/m.

En todos los casos cumple que $V_d < V_{u1}$

Barra 7



Relación de rigideces ⇒ $I_1 = \frac{1}{12}\cdot 3'95\cdot 0'3^3 = 0'0086625$

$I_2 = \frac{1}{12}\cdot 0'4^3 = 5'333\cdot10^{-2}$

$\alpha_1 = \frac{I_1}{I_1+I_2} = 0'6189$

$\alpha_2 = \frac{I_2}{I_1+I_2} = 0'321$

⇒ $Q_1 = 0'6189\cdot Q$ en 3'95 m

$Q_2 = 0'391\cdot Q$ en 1 m

$A_{tot} = 1'155 + 0'4 = 1'555$

$X_{gs} = \frac{1'155\cdot0'15 + 0'4\cdot(2'85-0'2)}{1'555} = 0'793$ m

$I_{TOT} = 0'0086625 + 5'333\cdot10^{-2} + 1'155\cdot(0'793-0'15)^2 + 0'4(2'65-0'793)^2$

$I_{TOT} = 1'8710$ m^4

$W_{s1} = \frac{I_T}{0'793} = 2'3594$ m^3

$W_{i1} = \frac{I_T}{(0'793-0'3)} = 3'795$ m^3

⇒ $N_1 = 0'403\cdot M$ en 3'85 m

$M_1 = 1'707\cdot10^{-3}\cdot M$ en 3'85 m

$W_{s2} = \frac{I_T}{(0'793-2'65)} = -1'129$ m^3

$W_{i2} = \frac{I_T}{(0'793-2'79)} = -0'9095$ m^3

$N_2 = 0'397\cdot M$ en 1 m.

$M_2 = -2'850\cdot10^{-3}\cdot M$ en 1 m

Pieza = barra transversal entera.

$Q_1 = \frac{0'5189}{3'85} = 0'160\cdot Q$ t/l $\quad N_1 = \frac{0'403}{3'85}\cdot 0'0267\cdot M$ t/l

$M_1 = \frac{1'207\ m^3}{3'85}\cdot M = 3'177\ m^3\cdot M$ mt/l

tabla inferior ⇒

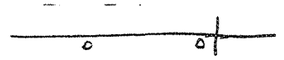
$Q_2 = 0'381 \cdot Q$ t/ml

$N_2 = 0'397 \cdot M$ t/ml

$M_2 = -2'8502 \cdot 10^{-3} \cdot n$ mt/ml

Losa zona entre barra 7.

Cortante (a uncent. útil)



Locales ⇒ $Vd = 1'35(0'89 + 1'674 + 0'38) + 1'5(\overbrace{0'64 \cdot 5'46}^{\text{Tram BND}} + 0'033) = 9'35$ t/ml

Globales	$V_k = Q_{1,k}$
PP	0
cm	-0'317
±30% balasto	0
Tren BNI	10'06
Tren BND	0'735
SCP-rey. ND	0'116
SCP NI	0'32

$Vd_{global} = 1'35(-0'317) + 1'5(10'06 + 0'735) + 1'5(0'116 + 0'32) = 16'42$ t/ml

$Vd_{total} = 25'78$ t/ml Necesita armadura de cortante

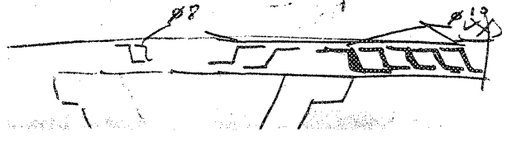
Se dispondrá en esta zona ⇒ Con $V_{cu} = \frac{16'77}{1'2}$ para H-300 y losa de

$V_{su} = 25'78 - \frac{16'77}{1'2} = 12'26$

$A\alpha = \frac{12'26}{0'9 \cdot 0'2 \cdot 4 \frac{2}{\sqrt{2}}} = 12'04$ cm²/m²

Se disponen $5\phi 8$ a 0'25 m transversal y a 0'25 m longitudinal = 12'56

(En lugar de Ø8 en el resto de losa)



IDEAM

Comprobación de barra 7 ⇒

Tabla inferior ⇒

	N_2	ΔN_2
PP	0'64	0
cm	0'03/-0'18	-1'377
±30% balasto	∓0'45	0
TrmBNI	0'48	38'29
TrmBND	0'19	7'50
Sc Perm	0'48	1'408

M_d: $(0'64 + 0'03 - 1'377 \cdot 0'4) \cdot 1'35 + 1'5(0'48 + 38'29 + 0'19 + 7'5 + 0'48 + 1'408)$

$= 64'58$ t/ml.

Como $M_u = 68'5$ t ⇒ cumple con la armadura dispuesta

Comprobación de cortante en tabla inferior (barra 7)

	$Q_{z,ik}$ (t/ml)
PP	0
cm	-0'873
±30% balast.	0
TrmBNI	23'9
TrmBND	1'749
Sc NI	0'8
Sc ND	0'77

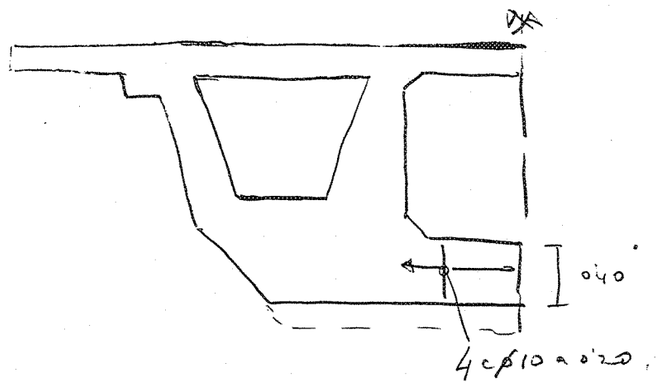
V_d: $1'5(23'9 + 1'749) + 1'5\left(\frac{0'8 + 0'77}{2}\right) + 0'9(-0'873) = 38'49$ t/ml.

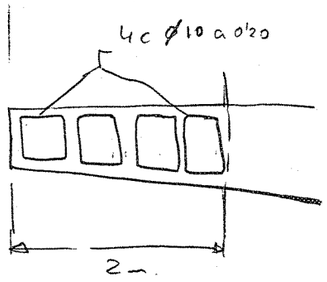
$V_{su} = V_d - V_{cu} = 38'49 - \frac{26'25}{12} = 16'1903 = A_\alpha \cdot f_{yd} \cdot 0'9\,d$

$A_\alpha = 12'49$ cm²/ml y m. Se dispondrán 2 c ø10 a 0'20 en extremos de capiteles

2 c ø10 a 0'20 = 15'7 cm²/ml por metro. Se colocarán 4 c ø10 a 0'20 en 2 m.

Esquema de armado de cortante en bordes de tabla central de capiteles ⇒





Flexión en apoyo interior

Mk locales (mt/ml)

PP	−0'353
cm ±30%b	−1'22
Tra B NI	−3'118 (no concomitante en global máximo)
Tra B ND	−0'168
Sc Pasos NI	0'737 (no concomitante)
Sc Pasos ND	−0'06

Globales mt/ml

	ΔM+
PP	0
cm ±30%b	−0'587
Tra B ND	−16'1 (sup V_T^-)
Tra B N2	−1'3 (sup V_T^-)
Sc Pasos ND	no concomitante
Sc Pasos N2	−0'186

$Md = 1'35(-0'353 - 1'22) + 1'5(-0'168) + 1'5(-0'06) = -2'4655$ mt/ml

$+ 1'35(-0'587) + 1'5(-16'1 - 1'3) + 1'5(-0'186) = -27'17$ mt/ml

$Md = -29'6337$ mt/ml

En la zona extrema con canto eficaz de 0'40 m ⇒

d = 0'36 m ⇒

x = 0'0652

A_S = 20'01 cm²/ml con Ø16 + Ø20 a 20 = 25'76 cm²/ml cuple

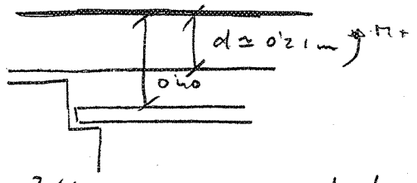
Flexión positiva ⇒

Globales ΔM+ con $M_1 \simeq 0$		Local concomitante
PP	0	−0'353
cm ±30%b	−0'58	−1'22
Sc Pasos NI	0'591	0'737
Sc Pasos ND	0'186	−0'06
Tra B NI	16'09	−3'118
Tra B ND	1'17	−0'168

$Md = 0'9(-0'353 - 1'22 - 0'58) + 1'5(16'09 - 3'11 + 1'1 - 0'168) + 1'5\left(\frac{0'591 + 0'737}{2} + 0'186 - 0'06\right)$

Md = 20'28 mt/ml

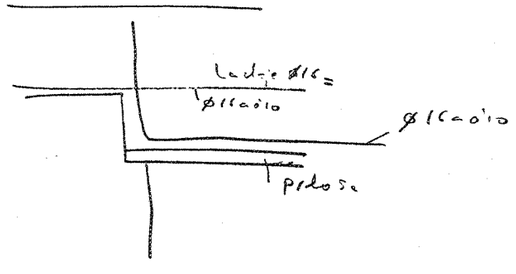
Para canto de 0'21 m



A_S necesaria = 25'96 cm²/ml para canto reducido hay más canto.

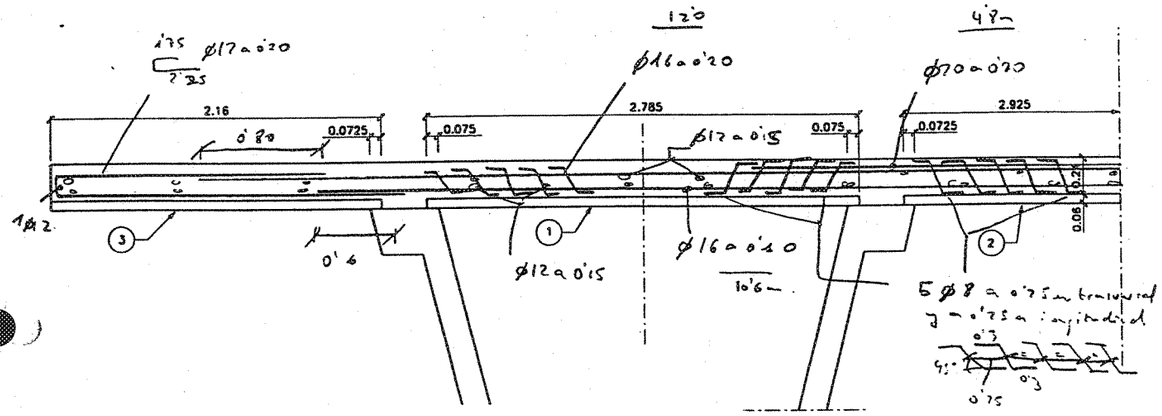
Para un canto útil de 0'36 m ⇒ A_S = 13 cm²/ml < Ø16 a 0'20

luego con la armadura dispuesta se hará un detalle ⇒



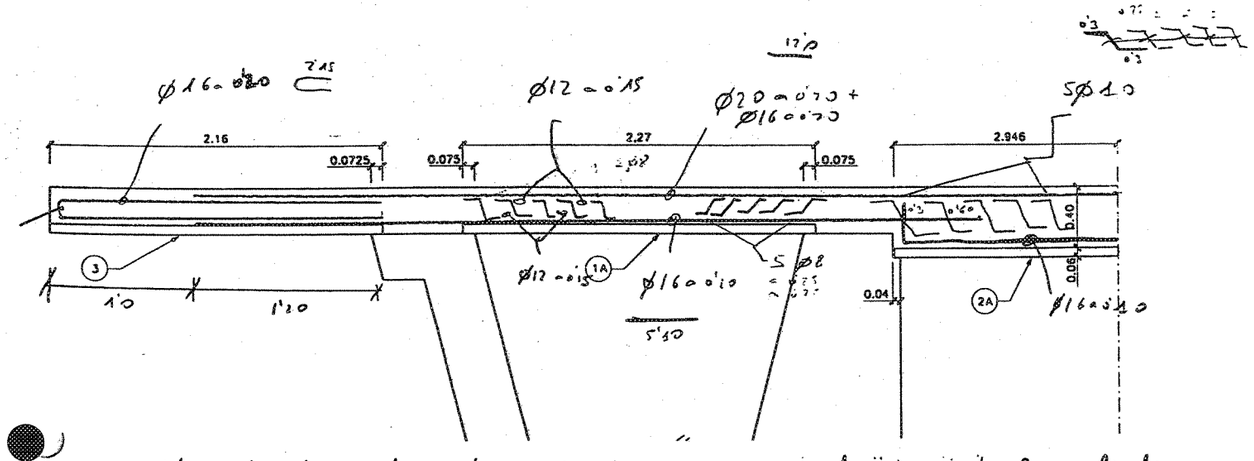
en zona con recrecido de losa

Resumen de armado de losa



Zona entre vigas altura tipo.

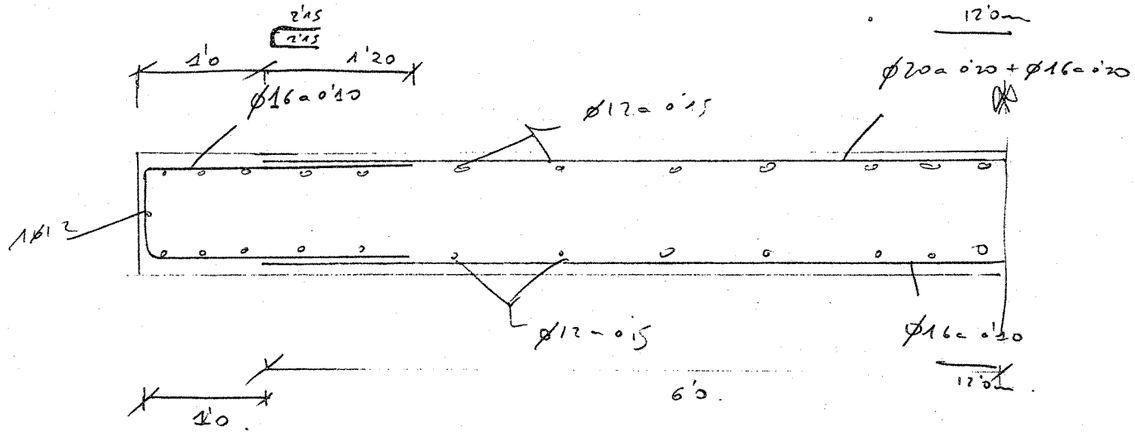
Detalle de zona con recreado en losa entre almas.



Armado tipo de voladizo de losa en capitel "in-situ". 2m finales

Losa en zona de capitel "in situ".

Para cumplir con las armaduras de rasante se coloca en el capitel la armadura de losa siguiente:

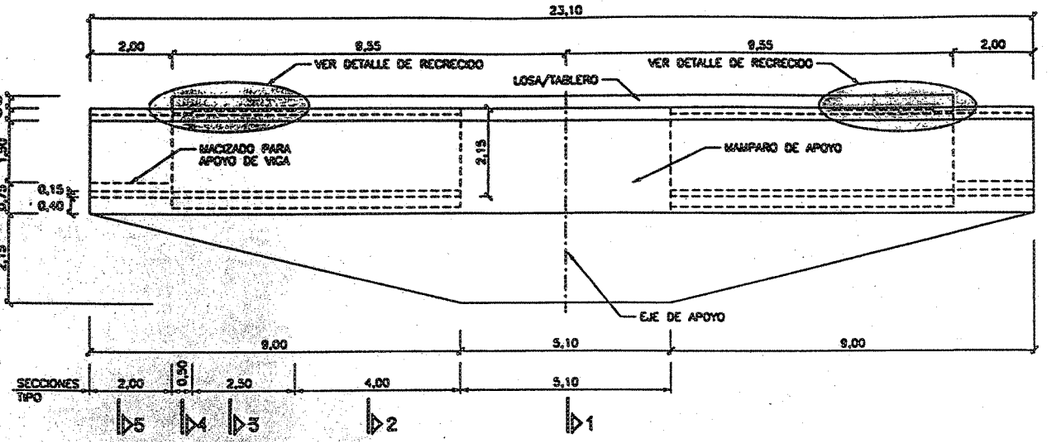


2.3.17. Mamparos y zonas de anclajes

17. MAMPAROS Y ZONAS DE ANCLAJES

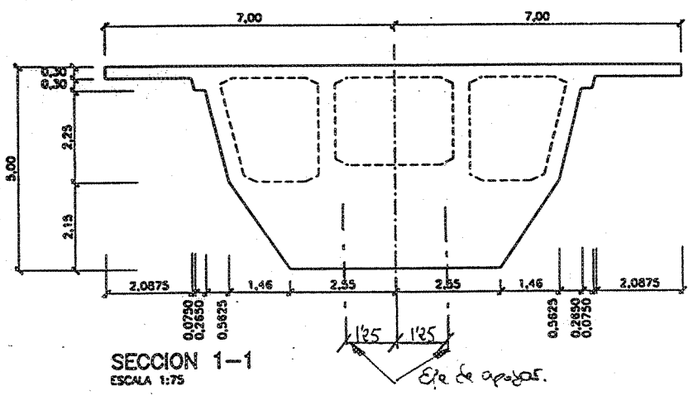
17- MAMPAROS

17.1 Mamparos pilas P33 y P34



ALZADO DE CAPITEL SOBRE PILAS P–33 y P–34
ESCALA 1:75

GEOMETRIA DEL MAMPARO



SECCION 1–1
ESCALA 1:75

Características de los materiales

Hormigón HP-40 · $f_{ck} \geq 40\ N/mm^2$ $\gamma = 1'5$

Armaduras B-500-S $f_{yk} = 500\ N/mm^2$ $\gamma = 1'15$

Proceso de cálculo

A) Tabla de cortantes y torsores.

B) Cálculo como ménsula corta del plano medio de apoyos y cosido a rasante de la carga no suspendida.

C) Armadura de rasante de torsión.

D) Control adicional de la capacidad de suspensión de los cercos.

E) Armado frente a fuerzas horizontales.

F) Armaduras base en apoyos.

IDEAM

A) Tabla de cortantes y flectores (m, tn)

Modelo empotrado

	Izquierda				Derecha			
	Elemento 11		Elemento 12		Elemento 111		Elemento 112	
	V_y	M_x	V_y	M_x	V_y	M_x	V_y	M_x
Peso Propio	514'60	-170'18	-498'61	170'22	514'60	170'18	-498'61	-170'22
CHuerta	240'15	-55'96	-226'41	52'85	274'45	44'56	-258'7	-47'67
ΔCM	±45'94	±11'04	±41'98	±8'61	48'73	11'06	-45'94	-11'04
GRAD	-6'98	0'70	0	-0'70	-6'98	-0'70	0	0'70
SCpaseo								
NI								
V_y+	31'71	7'20	1'73	0'01	0'08	-0'37	10'28	-2'71
M_x+	25'97	19'02	-2'68	12'88	-8'77	16'40	3'76	10'84
V_y-	-0'62	0'37	-30'92	-3'51	-10'96	7'86	-0'14	-0'75
M_x-	5'12	-11'45	-24'52	-16'37	-2'10	-8'90	6'38	-14'31
NI								
V_y+	0'08	0'37	10'28	2'71	31'71	-7'20	1'73	-0'01
M_x+	-2'10	8'90	6'38	14'31	5'12	11'45	-24'52	16'37
V_y-	-5'95	-20'07	-10'96	-7'86	-0'62	-0'37	-30'92	3'51
M_x-	-8'77	-16'40	3'76	-10'84	25'97	-19'02	-4'68	-12'88
Norvio EXT TREN* SR								
V_y+	337'63	-29'10	31'62	-2'81	82'82	84'39	29'85	11'54
M_x+	217'15	81'14	-108'20	108'96	69'83	121'68	23'49	55'75
V_y-	-11'56	5'13	-341'38	42'55	-11'99	-9'18	-94'72	-70'70
M_x-	108'92	-105'11	-201'55	-69'21	1'50	-46'47	-88'96	-114'91
TREN* RIM								
V_y+	317'27	-35'83	30'78	-2'87	92'97	76'15	28'99	7'88
M_x+	200'18	70'52	-101'9	103'51	79'17	110'12	20'89	48'14
V_y-	-11'26	4'92	-321'76	46'39	-10'94	-5'84	-103'81	-65'26
M_x-	105'84	-101'43	-189'1	-60'00	2'86	-39'82	-95'71	-105'52

IDEAM

	Izquierda				Derecha			
	Elemento 11		Elemento 12		Elemento 111		Elemento 112	
	V_y	M_x	V_y	M_x	V_y	M_x	V_y	M_x
TREN* Rext	-	-						
V_y+	367'23	-14'21	32'22	-2'57	59'38	109'31	31'00	30'02
M_x+	264'35	101'84	-90'52	116'67	48'76	141'03	27'46	70'47
V_y-	-11'76	5'38	-369'81	33'11	-12'66	-26'75	-73'05	-90'70
M_x-	91'12	-110'67	-246'57	-86'43	-2'04	-58'48	-69'52	-131'15
Norvio EXT								
TREN* SR								
V_y+	85'43	-80'29	28'92	-8'25	322'75	31'34	30'67	2'78
M_x+	2'25	42'82	-89'73	108'83	107'58	101'50	-192'54	64'07
V_y-	-11'02	8'55	-96'69	65'54	-11'21	-4'95	-326'74	-43'34
M_x-	72'17	-114'56	21'96	-51'53	203'96	-75'11	-103'53	-102'62
TREN* RIM								
V_y+	91'15	-71'82	27'62	-5'89	299'78	35'70	29'31	2'76
M_x+	+3'12	36'79	-93'19	99'17	100'04	96'45	-178'6	55'60
V_y-	-10'38	5'67	-101'33	60'50	-10'72	-4'67	-304'24	-45'23
M_x-	77'65	-103'14	19'48	-44'56	189'02	-65'41	-96'34	-98'05
TREN* REXT								
V_y+	76'35	-89'32	29'95	-12'70	343'66	25'14	31'63	2'73
M_x+	0'49	+28'33	-82'45	118'54	111'52	105'93	-206'7	73'12
V_y-	-11'66	12'58	-88'67	71'38	-11'56	-5'17	-346'96	-39'93
M_x-	64'19	-126'06	23'24	-58'26	221'58	-85'96	-169'26	-110'32

* Sin coef. de impacto (coef. de impacto = 1'12)

Acciones de pretensado

Para un solo nervio: (modelo viga) VALORES HIPERESTÁTICOS

	Elemento 16 NUDO 17	Elemento 17 NUDO 17
Tesado capitel superior a	9'54	0
Pretensado inf de capitel	-7'67	0
Pretensado viga central	-25'44	0
Pretensado viga lateral	-16'75	0
1º Pretensado vano central	-13'56	-0'11
1º Pretensado vanos laterales	-10'26	0
1º Pretensado losa	11'40	0
2º Pretensado vano central	-29'25	0
2º Pretensado vanos laterales	-20'89	0
2º Pretensado losa	+22'71	0

Todos estos esfuerzos son sobre estructura total, a partir de ellos se obtienen los esfuerzos a $t=\infty$:

$E_{t\infty}$ = Esf parcial + Redistribuciones + Pérdidas

$$\text{Redistribuciones} = 0'85 \cdot (E_{estructura\ total} - E_{estructura\ parcial})^{(1-e^{-x})}$$

Pérdidas = -0'15 $E_{estructura\ total}$

$E_{t\infty} = 0'7\ E_{estructura\ total} + 0'15\ E_{estructura\ parcial}$.

Esfuerzos de pretensado a $t=\infty$: (valores hiperestáticos)

	Elemento 16 NUDO 17	Elemento 17 NUDO 17
Tesado capitel superior	$0'7 \cdot 9'54 = 6'68$	0
Tesado inf capitel	$0'7 \cdot (-7'94) = -5'56$	0
Pretensado viga central	$0'7 \cdot (-20'44) = -14'30$	0
Pretensado viga lateral	$0'7 \cdot (-23'46) = -8'176$	0
1º pretensado vano central	$0'85 \cdot (-13'56) = -11'526$	0
1º pretensado vano total	$0'85 \cdot (-10'26) = -8'721$	0
1º pretensado losa	$0'85 \cdot (11'40) = 9'69$	0
2º pretensado vano central	$0'85 \cdot (-29'25) = -24'86$	0
2º pretensado vanos laterales	$0'85 \cdot (-20'89) = -17'75$	0
2º pretensado losa	$0'85 \cdot (22'71) = 19'30$	0
SUMA V_{pret} =	$-55'223$ tn	0 tn

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Resumen total de esfuerzos (tn, m)

	Izquierda				Derecho			
	Elemento 11		Elemento 12		Elemento 11		Elemento 12	
	V_y	M_x	V_y	M_x	V_y	M_x	V_y	M_x
Peso propio	514'60	-170'2	-498'6	170'2	512'6	170'2	-498'6	-170'2
Cmuerta	240'15	-55'96	-226'4	52'85	274'45	44'6	-258'7	-47'7
ΔCM	±45'94	± 11'04	± 41'98	± 8'61	± 8'73	11'06	-45'94	-11'04
GRAD	-6'98	0'70	0	-0'70	-6'98	-0'70	0	0'170

o Cortante máximo SC paso + tren

SC Izq	31'71	7'20	-30'92	-3'51	0'08	-0'37	-0'14	-0'75
SC Der.	0'08	0'37	-10'96	-7'86	31'21	-7'20	-30'92	3'51
TREN Izq *	367'2	-14'21	-309'31	33'11	92'97	76'15	-103'81	-65'26
TREN DER *	91'15	-71'82	-101'33	60'50	343'66	25'14	-346'46	-39'93
SUMA SC**	545'14	-88'78	-569'0	93'50	520'81	105'82	-535'36	-115'05

o Torsor máximo SC paso + tren

SC Izq	5'12	-11'45	-2'68	12'88	-8'77	16'40	6'38	-14'31
SC Der	-8'77	-16'40	6'38	14'31	5'12	11'50	-2'68	-12'88
TREN Izq *	91'12	-116'67	-90'52	116'67	98'76	141'03	-81'36	-114'91
TREN DER *	64'19	-126'68	-82'45	118'54	110'52	105'93	-95'71	-105'54
SUMA SC**	170'30	-293'01	-192'02	290'62	174'74	304'50	-204'45	-274'10

PRETENSADO	-55'20	0	0	0	-55'20	0	0	0

* SIN COEF. DE IMPACTO ** CON COEF. DE IMPACTO

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o Torsor mínimo :

	Izqui				Derecho			
	Elemento 11		Elemento 12		Elemento 11		Elemento 12	
	V_y	M_x	V_y	M_x	V_y	M_x	V_y	M_x
SC Izq	25'97	19'02	-24'52	-16'37	-2'10	-8'90	3'76	10'84
SC Der	-2'10	8'90	3'76	-10'84	25'97	-19'02	-24'52	16'37
TREN Izq *	264'35	101'84	-246'57	-86'13	-2'64	-58'48	27'46	70'47
TREN DER *	0'49	+49'83	23'74	-59'21	221'58	-85'96	-266'7	73'12
SUMA **	321'04	197'23	-270'33	-190'05	269'75	-189'69	-221'5	188'03

* Sin coef. de impacto ** Con coef. de impacto.

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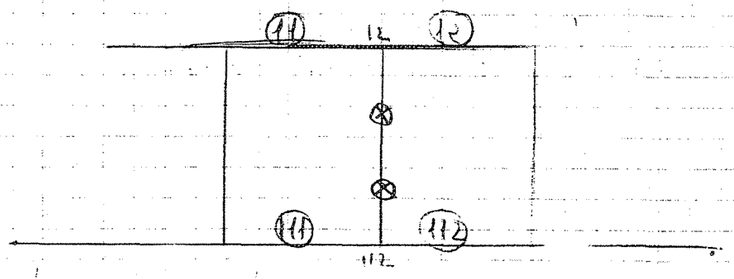
Valores de cálculo:

1'35 ó 0'9 PP + 1'35 ó 0'9 CM + 1'2 ó 0 GRAD + 1'5 ó 0 (SCparcial+ten)
+ 0'9 ó 1'2 PRET.

	IZQUIERDA				DERECHA			
	Elemento 11		Elemento 12		Elemento 111		Elemento 112	
	Vyd	Mxd	Vyd	Mxd	Vyd	Mxd	Vyd	Mxd
• Cortante máximo								
PP	1'35 ó (514'6	-170'2	-498'6	170'2	514'6	170'2	-498'6	-170'2)
CM	1'35 ó (240'15	-55'96	-225'4	52'85	232'45	44'6	-258'2	-72'7)
ΔCM	1'35 ó (45'92	-11'64	-41'55	8'61	48'33	11'06	-45'92	-11'64)
GRAD	0	0	0	0	0	0	0	0
SCtten	1'5 ó (545'4	-88'78	-569'0	93'50	520'81	105'82	-535'36	-115'31)
PRET	0'9 ó (-51'20	0	0	0	-51'20	0	0	0)
TAL	1849	-453'4	-1889	453	1862'5	463'5	-1887'4	-481'6
• Torsor máximo								
PP	—		Igual que cortante máximo					
CM			"					
ΔCM			"					
GRAD			"					
SCtten 1/5	170'3	-293'01	-192'08	+290'62	172'74	304'50	-204'45	-274'10
PRET			Igual que cortante máximo					
TAL	1286'7	-759'7	-1323'4	+748'7	1343'4	761'7	-1391'0	-720'0

IDEAM

	IZQUIERDA				DERECHA			
	Elemento 11		Elemento 12		Elemento 111		Elemento 112	
	Vyd	Mxd	Vyd	Mxd	Vyd	Mxd	Vyd	Mxd
ó TORSOR MÍNIMO								
PP+CM+AC+PRET (suma 1 por 1'35 y suma 2 por 0'9)								
SCtten	321'04	197'23	-270'33	-190'65	269'75	189'7	-221'5	188'03
SUMA 1	1512'8	-24'4	-1440'9	27'7	1486	20'4	-1416'6	-27
SUMA 2	1152'5	82'2	-1096	-76'6	1109	-8'3	-1055'2	76

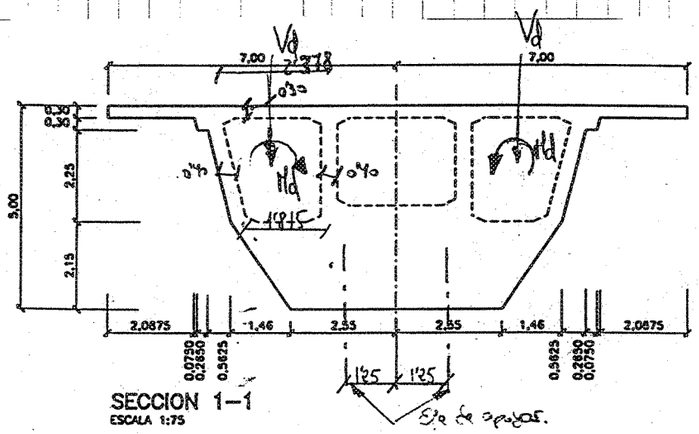


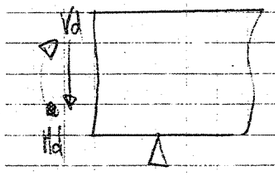
Resumen valores envolventes (m,tn)

	Nudo 12		Nudo 112	
	Elemento 11	Elemento 12	Elemento 111	Elemento 112
Vd	1849'00	-1889'00	1862'50	-1887'40
Mxd	-453'40	453'00	463'50	-481'60
Vd	1286'70	-1323'40	1343'40	-1391'00
Mxd	-759'70	748'70	761'70	-720'00
Vd	1512'80	-1440'90	1486'00	-1416'60
Mxd	-24'40	27'70	20'40	-27'00
Vd	1152'50	-1096'00	1109'00	-1055'20
Mxd	82'20	-76'60	-8'30	76'00

B) Cálculo como ménsula corta del plano medio de apoyos y corido a rasante de la carga no suspendida

ESQUEMA DE FUERZAS





$V_{dmax} = +1889$ tn	$V_d = +1343'4$ tn
$H_{dcorc} = -453$ mtn	$H_d = -761'7$ mtn

$V_d = +1512'8$ tn	$V_d = +1152'5$ tn
$H_d = -224'4$ mtn	$H_d = +82'40$ mtn

Dado que el valor del cortante y torsor en ambos lados del apoyo son similares, para simplificar se adopta unos valores para ambos casos.

El cortante que transmite cada alma será:

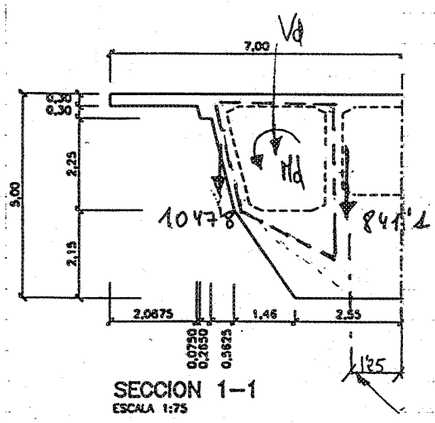
$$\frac{V_d}{2} + \frac{H_{dcorc}}{2 \times A_K} \times h_{alma}$$

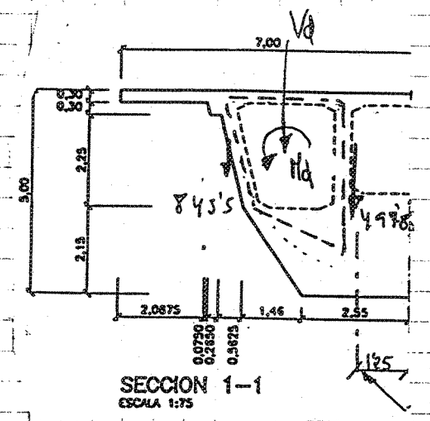
$A_K = 3'13 + \left(\frac{2'378 + 0'4 + 1'815 + 0'4}{2}\right)$

$= 8'271\ m^2$

$h_{alma} = 3'775$

Con todo ello se obtiene:



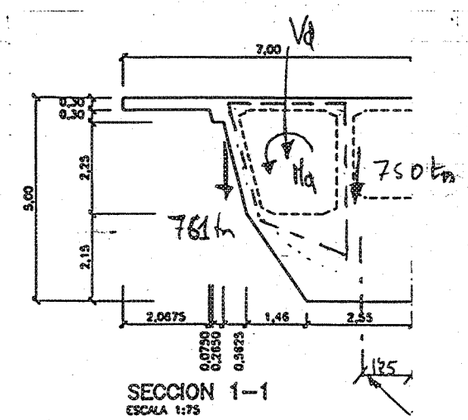


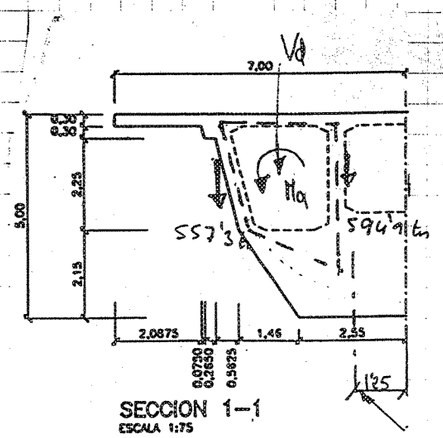
$V_d = +1889$ tn

$H_{dcorc} = 453$ mtn

$V_d = +1343'4$ tn

$H_d = 761'7$ mtn





$V_d = +1512'8$ tn

$H_d = -224'4$ mtn

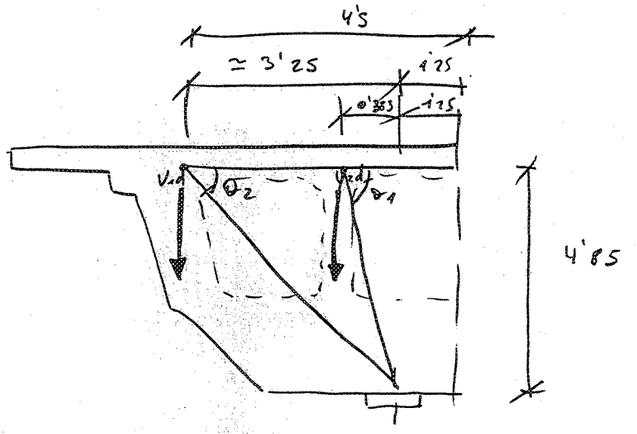
$V_d = 1152'5$

$H_d = -82'40$

Con esto el cortante será resistido por dos mecanismos

1) Se obtiene la carga que es capaz de suspender los cercos dispuestos en el mampuro y se cuelga la parte del cortante igual a esa carga.

Esta carga a la que se transmite al apoyo mediante un esquema de bielas, como una ménsula corta.



- $tg\,\theta_1 = \frac{0'383}{4'85} = \underline{0'0789}$ $\quad \theta_1 = 4'51°$
- $tg\,\theta_2 = \frac{3'25}{4'85} = \underline{0'670}$ $\rightarrow \theta_2 = 33'87°$

Fuerza de tracción ⇒

$T_{1d} = \sum_i F_{vd_i}\, tg\,\theta_i$

Con F_v = capacidad de suspender cercos ⇒

En 2'55m ⇒ Con c ø20 a 0'20 por ambos.

$F_v = 2 \cdot \frac{3'1415}{0'20} \cdot 4\ t/cm^2 \cdot 2'55m = 640'8\ t/alma$ y 2'55m

$T_{1d} = 640'8\,(0'0789 + 0'670) = 479'89\ t$

Armadura principal

$A_s = \frac{T_{1d}}{4'2\ t/cm^2} = \underline{114'26\ cm^2}$ en 2'55m.

Con ø16 a 0'20 + ø20 a 0'20 = 25'76 cm^2/ml
ø16 a 0'10 = 20'16 cm^2/ml

A_s total en 2'55m = 45'76 $cm^2/ml \cdot 2'55 = \underline{116'9\ cm^2}$ capaz con la dispuesta.

Armadura secundaria ⇒

Cargas uniformemente distribuidas ⇒

$T_{2d} = 0'2 \cdot F_{vd} = A_{se} \cdot f_{yd}$ con $f_{yd} \neq 400N/mm^2$

$T_{2d} = 0'2 \cdot (2 \cdot 640'8) = A_{se} \cdot 4\ t/cm^2 \Rightarrow$

$A_{se} = \frac{0'2\,(2 \cdot 640'8)}{4} = \underline{64'08\ cm^2}$ en 2'55m de ancho

2) Parte del cortante no suspendida: Se calcula el cosido de rasante ⇒

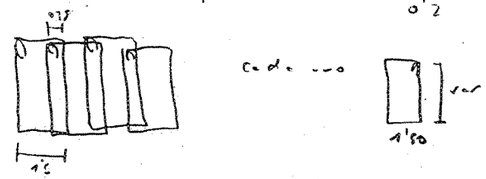
$A_{se}' = \frac{V_{alma} - F_{vd}}{4\ t/cm^2} = \frac{1889\ t/2\,almas - 640'8}{4} = \underline{312'05\ cm^2}$

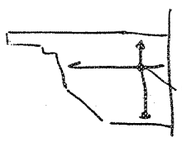
Hay si tenemos $A_{se} = 64'08\ cm^2 + A_{se}' = 317'05$

$A_{se} + A_{se}' = \underline{376'13\ cm^2}$ a distribuir transversalmente de forma uniforme en el mampuro.

Se dispondrán 2c ø20 a 0'20 por lado $4 \cdot \frac{3'1415 \cdot 5m}{0'2} = 314'1\ cm^2$

vista en planta





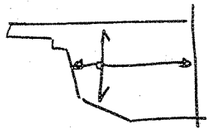
4 cø20 a 0'20 en todo el mampuro 4 cercos/por lado?

c) Armadura de rasante de torsión

Para resistir el rasante de torsión es necesario disponer una parilla de armadura horizontal y vertical. La armadura horizontal ya se tuvo en cuenta en los apartados anteriores, con lo que aquí se calcula la armadura a disponer en vertical.

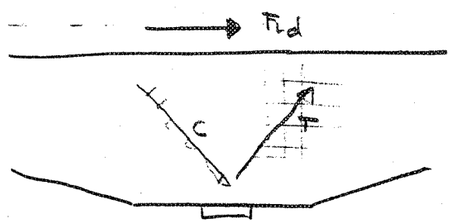
$$A_s = \frac{T_{d\,max}}{2 \cdot A_k \cdot f_{yd}} = \frac{761'7\,mt}{2 \cdot 8'27^2\,m^2 \cdot 4\,t/cm^2} = \underline{\underline{11'51\,cm^2/m}}$$

Cercos verticales ⇒



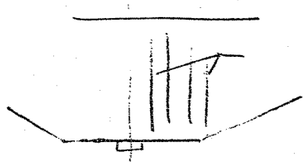
Ver punto d) con fracedo para cercos verticales

D) · Efecto de frenado + intersección vía estructura

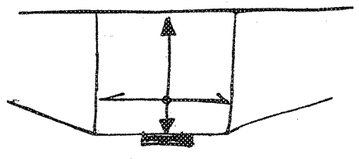


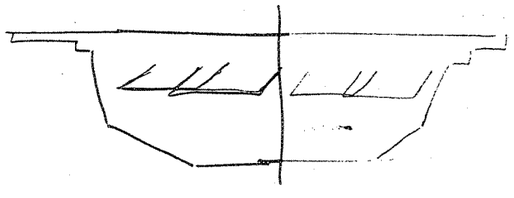
Armadura de cosido = Con $F_{ld\,TOTAL} = (396)\,1'5 = 596\,t/lado$

$$A_s\,\text{holizontal} = \frac{F_{ld}}{f_{yd}} = \frac{596\,t/lado}{4\,t/cm^2} = \underline{\underline{148'5\,cm^2}}\ \text{por lado.}$$



Se dispondrán en horizontal



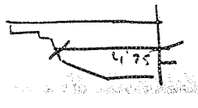


$2c\ \phi\,16\ a\ 0'25 = \frac{5}{0'25} \cdot 4 \cdot 2'01\,cm^2 = \underline{\underline{160'85\,cm^2}} > 148'5 \Rightarrow$ cumple

En vertical ⇒ $148'5\,cm^2$ necesario por fracedo + intersección

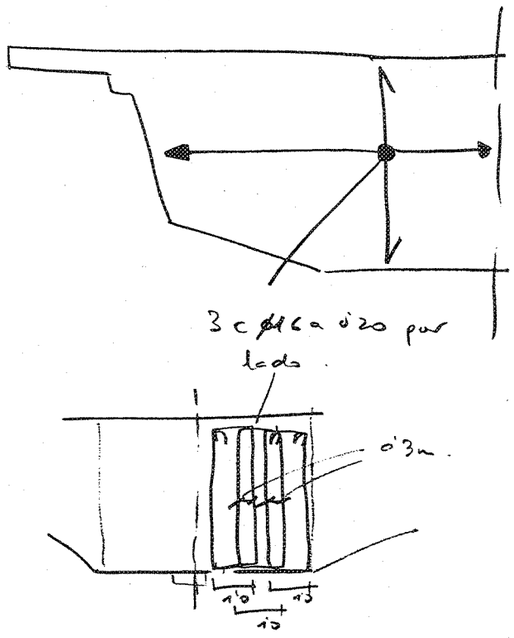
Si de torsión se marcha $11'51\,cm^2/m$ y lado, de fracedo ⇒

$148'5\,cm^2 / 4'25\,m_{aprox} = 34'94\,cm^2/m.$



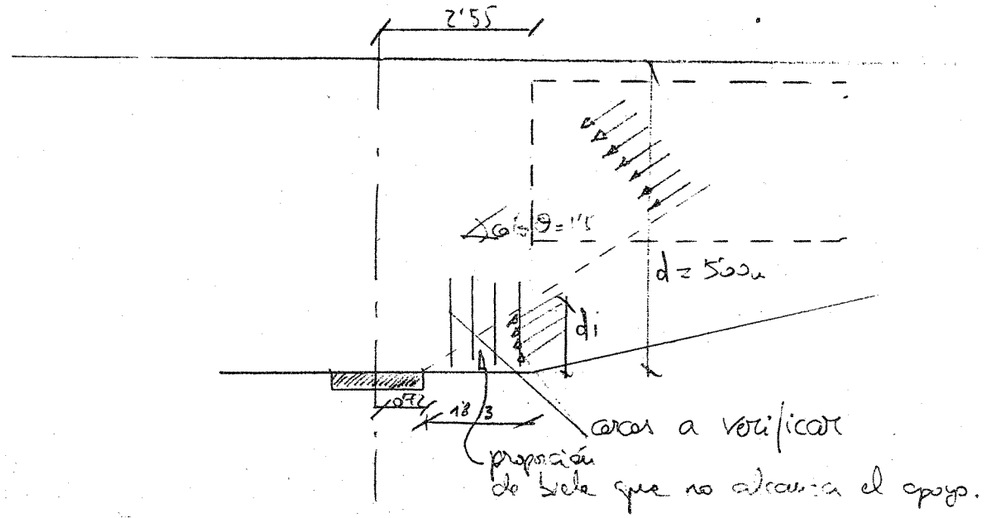
Total = $11'51 + 34'94 = \underline{\underline{46'45\,cm^2/m}}$.

Luego se dispondrán: 3 cercos ϕ16 a 0'20 por lado.



E) Control adicional de la capacidad de suspensión de los cercos

Como control adicional, verificamos que los cercos de cuatro cuantías tienen capacidad suficiente para resistir el cortante correspondiente a la porción de biela de suspensión que no alcanza el apoyo



Proporción de biela a suspender

$$d_1/d = \frac{1'83/\cos\alpha}{5'00} \qquad \frac{d_1}{d} = 0'244$$

$$V_{parcial} = V_{no\ suspendido} \cdot 0'244\ t_n$$

El $V_{parcial}$ a resistir en 1'83 m es:

$V_{no\ suspendido} = V_d - T_{ud} = 1889 - 640'8 = 1248'2$ t/2 ud.s

$V_{parcial,d} = 1248'2 \cdot 0'244 = 304'56$ t/2 ud.s

Con cercos c ϕ20 a 0'10 por ud.s

Con 1 c/20 a 0'20 por alma ⇒

$\frac{4 \cdot 3'1415\ cm^2/ml}{0'1} = 125'66\ cm^2/ml$

En 1'83 m ⇒ $1'83\ m \cdot 125'66\ cm^2/m = 229'96\ cm^2$

Con $f_{yd} = 4\ t/cm^2$ ⇒ $4\ t/cm^2 \cdot 229'96 = \underline{919'8\ t}$ / 2 almas

Como 919'8 t es la capacidad resistente de medio lado y

$V_{pvd,d} = 304'56\ t/2\ almas$ ⇒

Cumple con la comprobación de cortante y es disponible.

F) Armaduras locales en apoyos:

Reacción vertical:	Izq	Derecha
Peso propio	1013'21	1013'21
Cmuerta	409'32 t	596'4 t
Δ balasto	± 94'66	± 94'66
Gradiente	-6'98	-6'98
Tren Izq	1240/-467'9	1612/-917'7
Tren Dcha	1621/-315'30	1229'2/-467'9
Peso Izq	133'64/-2'80	133'64/-2'80
Peso Dcha	0'01/-91'7	133'64/-2'80
Rmax	2907'2	2971'07 toneladas

Entonces se dispone PoT 3200

- Armadura superficial:

$A_{s,sup} = \frac{3000\ t \times 0'04}{2'1} = \underline{57'14\ cm^2}$ → Con la armadura dispuesta de Ø20 a 0'20 + Ø25 a 0'20 = 40'25 cm²/ml en 1'5 m = $\underline{60'37\ cm^2}$ suficiente

- Armadura dispuesta principal en sentido transversal:

$A_{s\,dif} = 0'33 \times P_K \times \left(1 - \frac{a}{d}\right) \times \frac{1}{2'7}$

$P_K = 3000\ t$

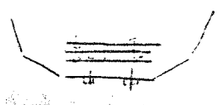
$a = 1'44\ m$

$d = 1'25 \times 2\ m$

$= \underline{155'46\ cm^2}$

3 capas de $\underline{12\text{Ø}25}$ cada una a 0'15

176 cm² dispuestos



- Armadura difusión primaria en sentido longitudinal:

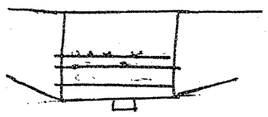
$$A_{s\,dif} = 0{,}33 \cdot P_k \cdot \left(1 - \frac{a}{d}\right) \cdot \frac{1}{2{,}7}$$

$P_k = 3000\ t_n$

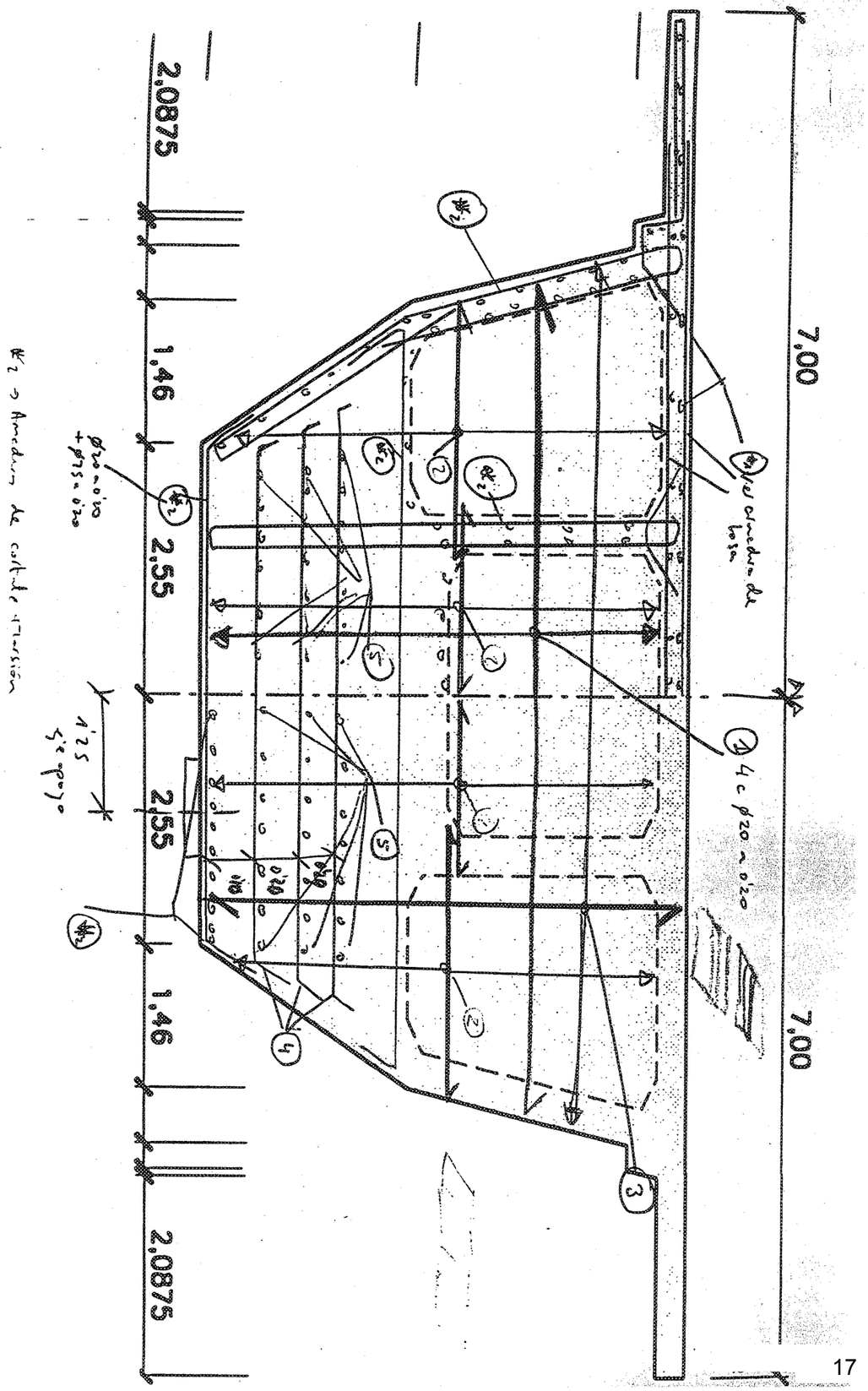
$a = 1{,}44\ m$

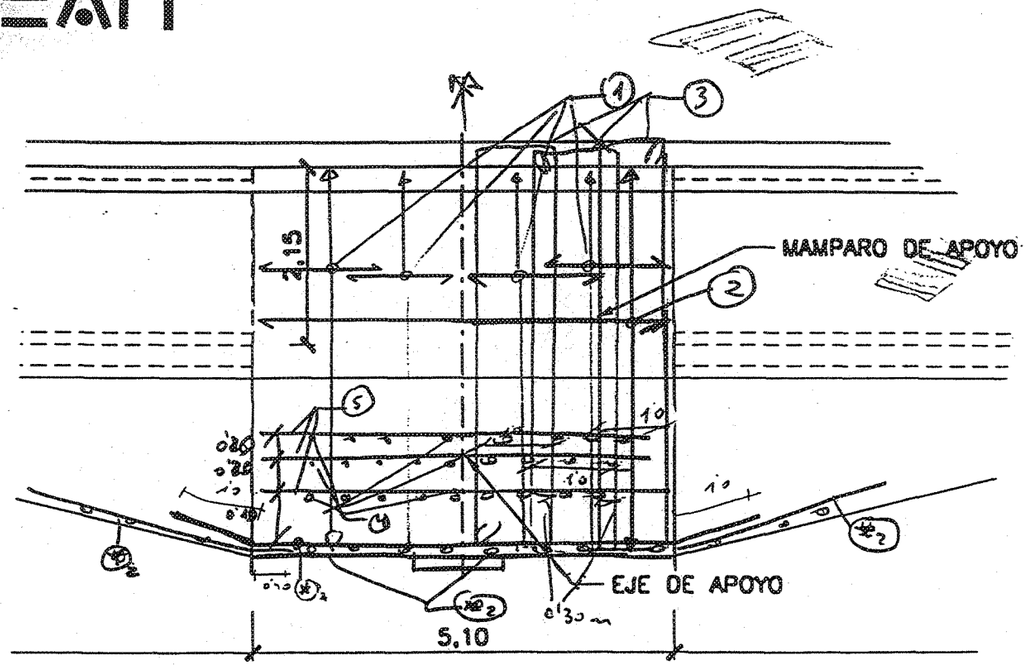
$d = 5{,}10\ m$

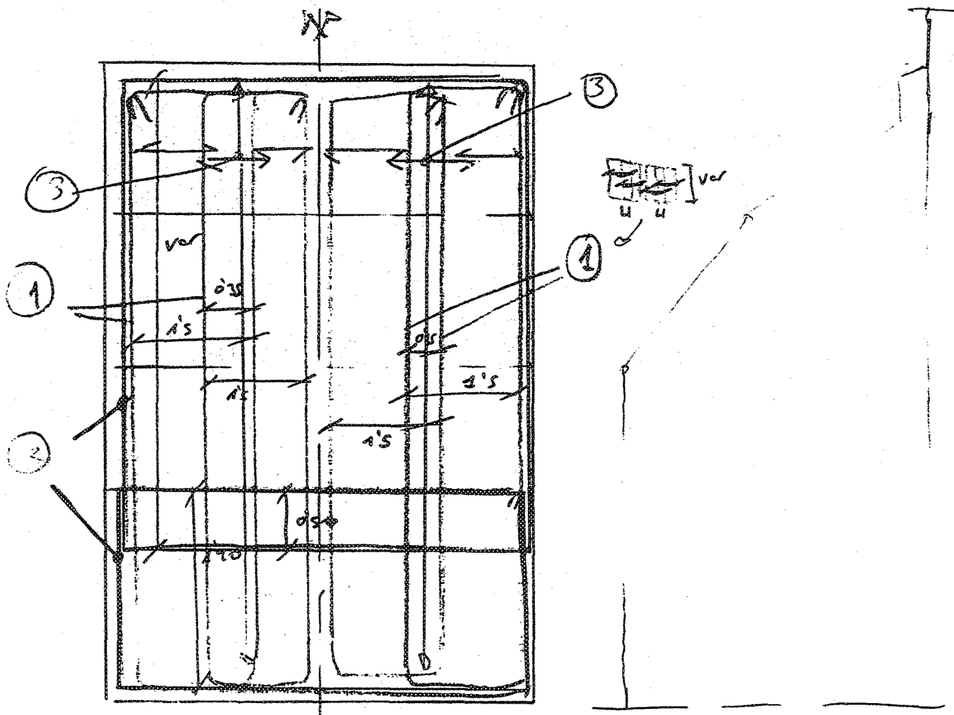
$= 263{,}1\ cm^2 \rightarrow$ 3 capas de 28 ø25 a 0'10

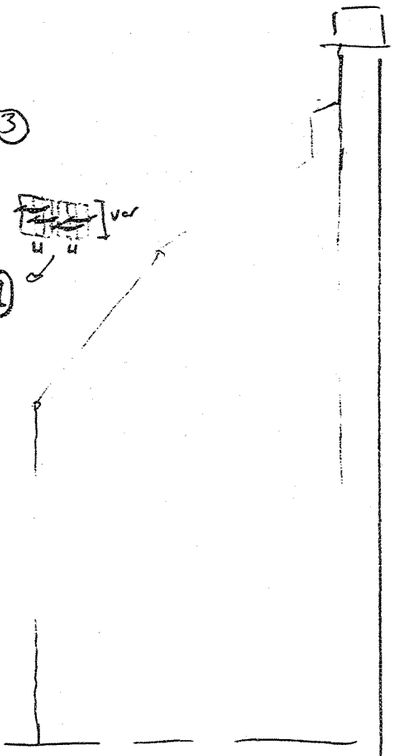


IDEAM









① 4 c ø20 a 0'20

② 4 c ø16 a 0'20

③ 6 c ø 16 a 0'20

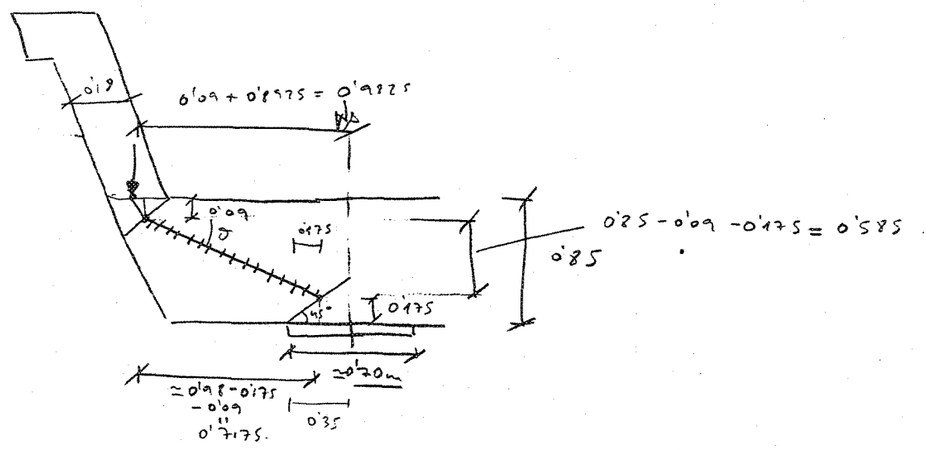
④ 3 capas de 17 ø25 a 0'10 sobre apoyos

⑤ 3 capas de 18 ø25 a 0'20

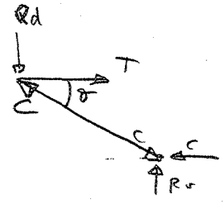
17.2 MAMPAROS DE VIGAS

Mamparos en extremos de pilas P-37 y P-35

Calculo como ménsula corta



biela de compresión.

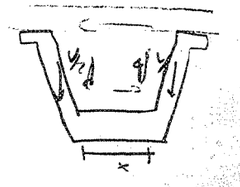


$T = Vd \cdot \cot g\,\theta \Rightarrow Qd \cdot \frac{0'7175}{0'585} = 1'226 \cdot Qd$

Hipótesis de calculo.

	Vd(t)	Td(m·t)	Qd
Vmax	95'1	0	95'1/2 = 47'5 t ← condiciona
Mmax	65'8	10'2	65'8/4 + 10'2/4 = 35'6 t

Luego Qd por alma = $\frac{Vd}{2} + \frac{Td}{2} \cdot \frac{d}{x}$



x = ?

$Qd = \frac{Vd}{2} + \frac{Td}{4}$ ⇒ condiciona Vmax.

Calculamos con Qd = 477'5 t máxima por alma.

Tracción producida por la biela

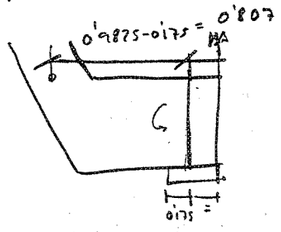
$T_d = R_d \cdot \operatorname{cotg}\theta$ con $\operatorname{cotg}\theta = \frac{0'7175}{0'585} = 1'22$

$T_d = 477'5 \cdot 1'22 = \underline{585'6\ t}$ en 1'20 m

Si se arma con $f_{yd} = 4\ t/cm^2$ ⇒

$A_s = 585'6/4 = \underline{146'4\ cm^2}$ en 1'20 m.

Comprobación como cálculo a flexión:



$M_d = 477'5\ t \cdot 0'807\ m = 385'5\ m\cdot t$.

$\begin{cases} \rightarrow \\ \circlearrowleft \end{cases}$ $M_d = \begin{cases} 0'68 f_{cd} \cdot b \cdot x = A_s \cdot f_{yd} \\ M_d = 0'68 f_{cd} \cdot b \cdot x\,(d - 0'4x) \end{cases}$ $f_{yd} = 4\ t/cm^2$

Con $x = 0'458$ m ⇒ $A_s = \underline{129\ cm^2}$ / 1'2 m para $f_{yd} = 4\ t/cm^2$

Luego sale algo parecido. Se adopta el valor de $146'4\ cm^2$ como resultado del lado de la seguridad, como cálculo con bielas.

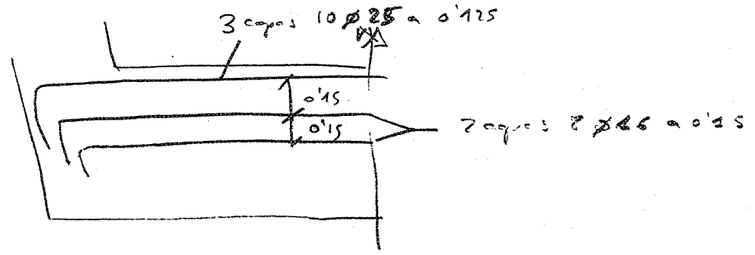
- Cercos horizontales: Armadura mínima (EHE)

$T_{rd} = 0'2\ Q_d = A_{sc} \cdot f_{yd}$ ⇒

$A_{sc} = \frac{0'2 \cdot 477'5\ t}{4\ t/cm^2} = \underline{23'87\ cm^2}$

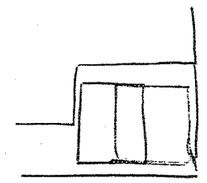
Según esto se colocará 3 capas de 10 ø25 a 0'125 = $\underline{147'2\ cm^2}$ como armadura de tracción.

Como secundaria ⇒ 2 capas de 8 ø16 a 0'15 = $\underline{32'16\ cm^2}$



- Armadura de cortante

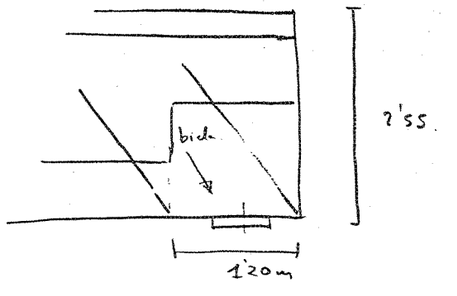
Se dispondrá cuantía mínima.



$A_s = 0'02 \frac{f_{cd}}{f_{yd}} \cdot b\,d = 0'02 \cdot \frac{6000/15}{4} \cdot 1'2 \cdot 0'8 = \underline{19'2\ cm^2/m}$

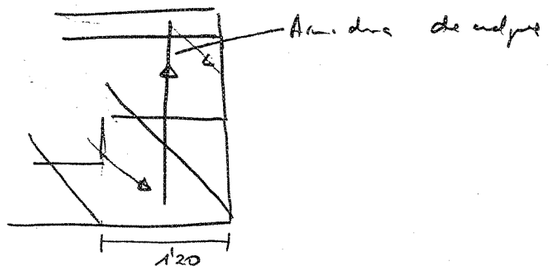
Se disponen 2c ø12 a 0'20 = $22'62\ cm^2/m$

- Comprobación de armadura de anclaje



La parte del cortante que va directamente $V^* = Q_d \cdot \frac{\text{Long. anclaje}}{\text{Cant.}}$

$V^* = Q_d \cdot \frac{1'2}{7'55}$ ⇒ cortante a colgar.



$V^u = 477'5\ t/lado \cdot \frac{1'20}{7'55} = 224'7\ t$

$A_s = 224'7\ t / 4'2\ t/cm^2 = 53'5\ cm^2$ en 1'20m

Con $c\phi16\ a\ 0'20 + c\ \phi20\ a\ 0'20 = 51'5\ cm^2/ml$

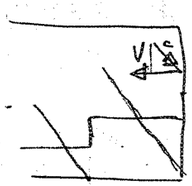
Luego $1'2 \cdot 51'5 = 61'8\ cm^2$ en 1'20m por lado ⇒ cumple con el refuerzo necesario.

Resto de cortante ⇒ $V_d = \phi V_d - V^u = 477'5 - 224'7 = 252'8\ t/lado$

Estribos directamente y hay que unir con ganchos en U.

$A_{s\,nec} = 252'8 / 4\ t/cm^2$ ⇒

Armadura necesaria = $63'2\ cm^2$ por cada.



Se colocarán 16 ⟶ ganchos en U de $\phi16$ ⇒ separados a 0'15m por cada.

$2 \times 16 \times 2'01\ cm^2 = 64'33\ cm^2$ /lado

Parrilla bajo sobre apoyo.

$R_{u,d} = 955'1\ t$ → $R_k = 650\ t.$

Se dimensiona bajo acciones en servicio con $f_y = 2100\ kg/cm^2$

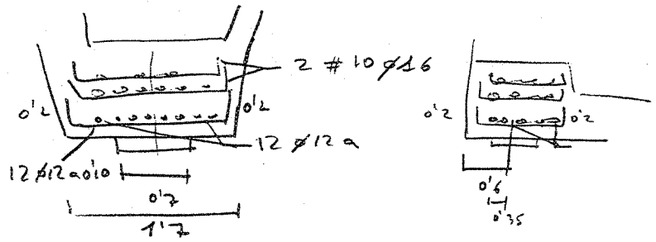
Armadura superficial. 4‰ de reacción con $f_y \times d = 2100 kg/cm^2$

$A_s = \frac{R_k \cdot 0'04}{2'1\ t/cm^2} = \frac{650 \cdot 0'04}{2'1} = 12'3\ cm^2$

Armadura principal

$A_s = 0'25\ R_d \left(1 - \frac{a}{d}\right) / f_{yd}$ ⇒ Con $f_{yd} = 4\ t/cm^2$

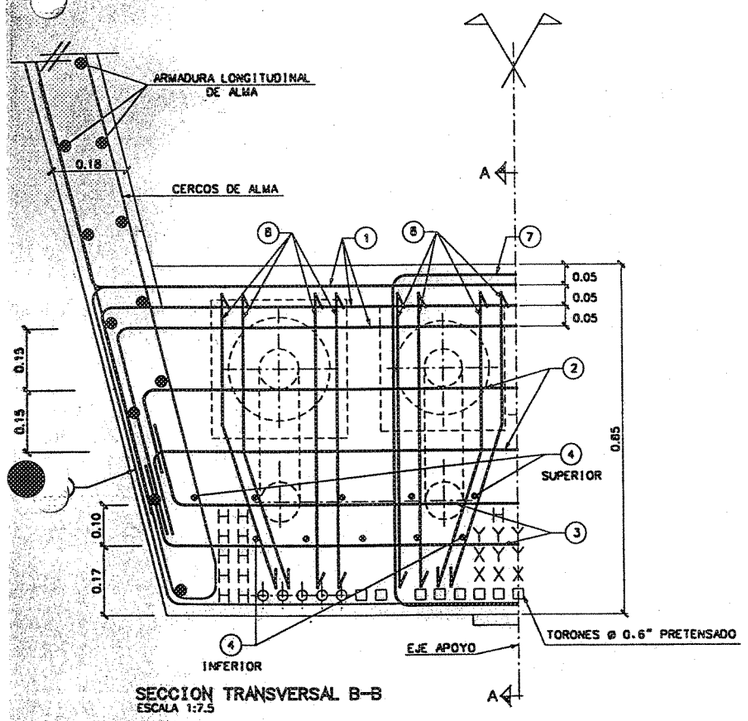
Con



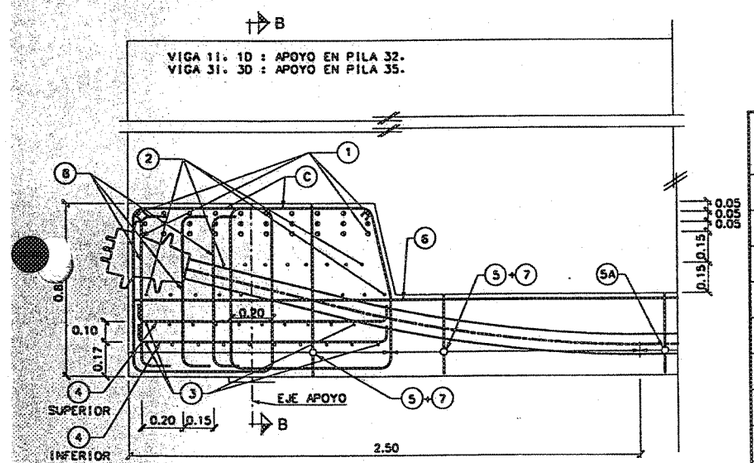
$A_s = 0'25 \cdot 955'1 \left(1 - \frac{0'7}{1'7}\right) / 4 = 35'11\ cm^2$

Se dispondrá una parrilla superficial con # 12 ϕ 12

y principal ⇒ 2 # 10 ϕ16



SECCION TRANSVERSAL B-B
ESCALA 1:7.5



SECCION LONGITUDINAL A-A
ESCALA 1:15

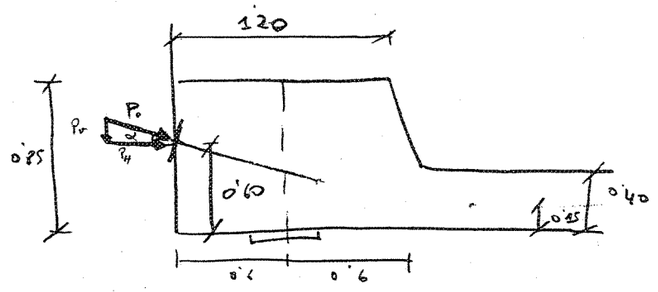
CUADRO DE ARMADURAS DE MAMPAROS

①	3 CAPAS 10 Ø25	0.50 / 0.50 / 0.30 / 0.50 / 0.50 / 0.50
②	2 CAPAS 8 Ø16	0.20 / 0.20 / 0.20 / 0.20
③	2 CAPAS 10 Ø16	0.20 / 1.85 / 0.20
④ SUPERIOR	10 Ø16 a 0.175	0.20 / 1.10 / 0.20
④ INFERIOR	5 Ø16 a 0.10 POR LADO. ENTRE TORONES	0.20 / 1.10 / 0.20
⑤	CERCOS DE TABLA INFERIOR C Ø16 a 0.20+C Ø20 a 0.20 ALTERNOS	
⑤A	CERCOS DE TABLA INFERIOR C Ø16 a 0.10	
⑥	8 Ø12 ARMADURA LONGITUDINAL SUPERIOR. TABLA INFERIOR.	
⑦	C Ø12 a 0.20 en 2.50m	0.575
⑧	3 CAPAS DE 4 Ø16 POR ANCLAJE. 2 A CADA LADO.	PATILLAS DE 0.60 m
Ⓒ	2 C Ø12 a 0.20	

MAMPARO DE EXTREMO DE VIGAS (SOBRE P-32 Y P-35)

DETALLE DE ARMADURA EN EXTREMO DE VIGA. SECCION TRANSVERSAL DE ALMA EN PLANTA
ESCALA 1:7.5

17.3 Calculo de macizos de anclaje extremos de vigas, en mamparos



$\alpha = 14'128°$

$P_0 \Rightarrow$ 2 ud 15 ø 0,6" + 2 ud 19 ø 0,6"

1 ud 15 ø 0,6" $\Rightarrow P_0 = 14 \cdot 10^{-4}\ m^2 \cdot 15\ ud \cdot 142.500\ t/m^2 = 299'25\ t$

Se mayora un 1% del lado de seguridad

$P_{k\ 1\ ud\ 15\ ø\ 0,6"} = 329\ t$

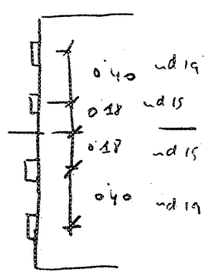
$P_{k\ 1\ ud\ 19\ ø\ 0,6"} = 379'5\ t \cdot 1'1 = 416\ t$

$P_{0,k} = 2\ ud\ 15 + 2\ ud\ 19 = 1490\ t$

$P_H = P_0 \cdot \cos\alpha = 1444\ t$

$P_V = P_0 \cdot \operatorname{sen}\alpha = 363\ t$

Planta.



1) – Armadura superficial

$$A_s = \frac{P_{AK} \cdot 0'04}{2'1}$$ Con el acero trabajando en

servicio a $f_{yk} = 2100\ Kp/cm^2$

Para 1 ud IS ⇒ $A_s = \frac{0'04 \cdot 379}{2'1} = 6'76\ cm^2$

Para 1 ud 19 ⇒ $A_s = \frac{0'04\ \ 416}{2'1} = 7'92\ cm^2$

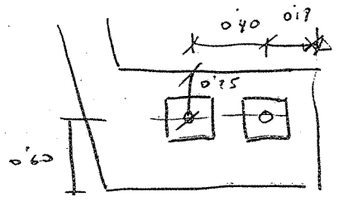
En transversal anclando con $3\phi 25 + 1\phi 16$, en Longitudinal
En altura se colocan $4\phi 16$, 2 a cada lado del muro, superficialmente

2) – Difusión pluvia

$$A_s = 0'25 \cdot N_k \left(1 - \frac{a}{d}\right) \cdot \frac{1}{2'7}$$

Con $f_{yk} = 2700\ Kp/cm^2$

Con placa de anclaje de $0'34 \times 0'34$ aprox para $\phi 19$ y $0'38 \times 0'30$ para IS



En transversal: $d = 0'38$ y $a = 0'25$ para $\phi 25$ y $d = 0'2$ y $a = 0'17$ para $\phi 19$.

Valor mínimo $\frac{a}{d} = 0'83$

$$A_s = 0'25 \cdot N_k \left(1 - 0'83\right) \cdot \frac{1}{2'7}$$

Con N_k a $\phi 19$ ⇒ $A_s = 0'25 \cdot 416 \cdot (1 - 0'83)\frac{1}{2'7} = 6'58\ cm^2$ cubierta con la armadura del muro

En altura: $a = 0'17$ y $d = 0'79$.

$$A_s = 0'25 \cdot 416 \left(1 - \frac{0'17}{0'25}\right) \cdot \frac{1}{2'7} = 12'38\ cm^2$$ por anclaje

Se colocarán 2 capas de $4\phi 16$ cubierta, 2 a cada lado del anclaje

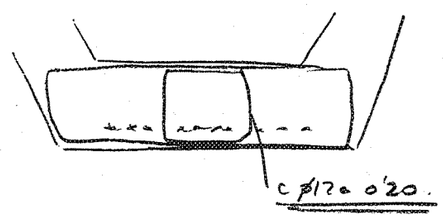
Fuerza cortante de diseño a cortar con ocho verticales ⇒

$P_d = 363\ t$ ⇒

Con $f_{yd} = 3\ t/cm^2$ ⇒ $363/3 = 121\ cm^2$

Si colocamos hoy colocado $c\ \phi 16$ a $0'20$ en tabla inferior de rosete ⇒ En 7'5m ⇒ $100'5\ cm^2$

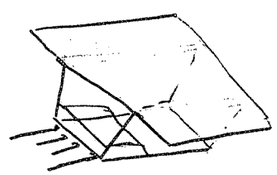
Se colocará un ocho $\phi 12$ a $0'20$ de refuerzo ⇒ en 7'5m = $28'27\ cm^2$

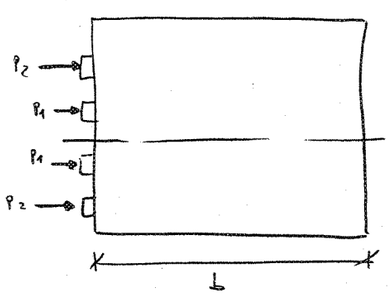


Con esto cumple

3) Cálculo de la tabla inferior. Difusión secundaria

Sección de comprobación a un ancho $b = 1'76\ m$





Con Características de la sección completa (homogenizada H-60)

$A = 3'422\ m^2$

$I_x = 3'7666\ m^4$

$X_{gs} = 0'993$ (losa) $\quad X_{gcajón\,s} = 0'693$

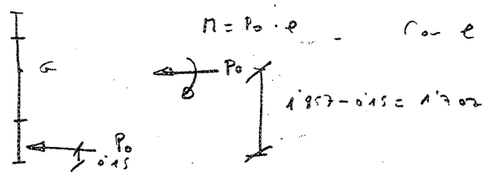
$X_{gi} = 1'857$

$W^{-1}_{sup\,losa} = \frac{X_{gs}}{I} = +0'2636$ + de compresión

$W^{-1}_{sup\,cajón} = \frac{X_{gc}}{I} = \frac{0'693}{3'766} = 0'184$

$W^{-1}_{inf\,cajón} = \frac{X_{gi}}{I} = -\frac{1'857}{3'766} = -0'493$ (tracción)

En la sección a una distancia $b = 1'76\ m \Rightarrow$

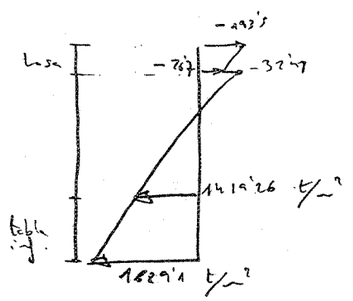


$N = P_0 = 1490\ t$

$M = P_0 \cdot e = -1'707 \cdot 1490 = -2543\ mt$

Tensiones en sección transversal.

$$\sigma = \frac{N}{A} + M\, W_i^{-1}$$



$\sigma_{sup\,losa} = \frac{1}{n} \cdot \left(\frac{1490}{3'422} - 2543 \cdot 0'2636 \right) = -193'5\ t/m^2$

con $n = \frac{E_{60}}{E_{30}} = \sqrt[3]{\frac{60+8}{30+8}} = 1'214$

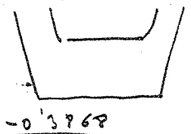
$\sigma_{inf\,losa} = \frac{1}{n} \cdot \left(\frac{1490}{3'422} - 2543 \cdot 0'184 \right) = -76'76\ t/m^2$

$\sigma_{media\ en\ losa} = \frac{(-193'5 - 76'7)}{2} = -110'1\ t/m^2$

$\sigma_{sup\,cajón} = -32'48$

$\sigma_{inf\,cajón} = \frac{1490}{3'422} + 2543 \cdot 0'493 = 1689'1\ t/m^2$

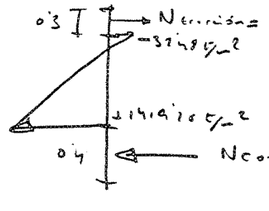
Sección a $0'40\ m$

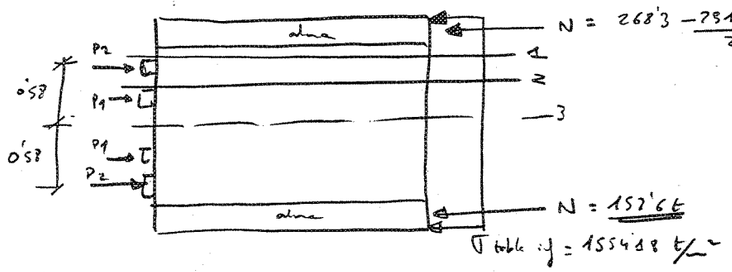


$W^{-1} = \frac{-1'857 + 0'4}{3'766} = -0'3868$

$\sigma_{tabl.\,inf} = \frac{1490}{3'422} + 2543 \cdot 0'3868 = 1419'26$

Lo que equivale a tener $\Rightarrow$





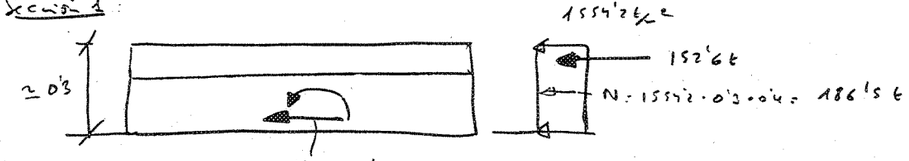
$N = \frac{268'3 - 781'71}{2} = 152'6\,t$ en la sección.

$N = 152'6\,t$

$\sigma_{tabla\ inf} = 1554'8\ t/m^2$

Comprobación de sección

Sección 1:



$V = 339'1\,t$

$M = 152'6 \cdot (0'3 - 0'09) + 186'5 \cdot 0'15 = 60'071\ m\,t$

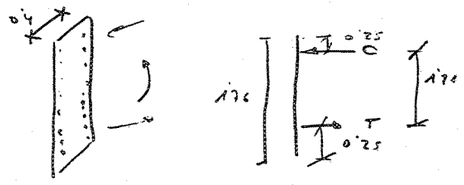
Para sección de 1'76 m

Con la armadura de rasante en extremo de viga de $c\phi16\ a\ 0'10$

$\Rightarrow 2 \cdot \frac{2'01}{0'1} = 40'21\ cm^2/ml$; en 1'76 m $\rightarrow$ $70'77\ cm^2$.

Para $V_k = 339'1\ t$. y $M_k = 60'071\ m\,t$.

Sección de



De forma aproximada

$C = T = \frac{60'071}{1'76} = 47'63$

$T = 47'63\,t$ en una distancia de 0'5 m con $f_y = 3\ t/cm^2$

$\frac{0'5}{0'1} \cdot 2\ m \cdot 2'01\ cm^2/ml = 20'106\ cm^2 \cdot 3\ t/cm^2 = 60'31\ t.$

$\Rightarrow$ Cumple con la armadura dispuesta.

Compresión $\frac{47'63}{0'4} = 117'5\ t/ml \rightarrow \frac{117'5}{0'1} = 775\ t/m^2$ valor bajo

La sección cumple con holgura

Comprobación del rasante en la sección.

Con $V_k = 339'1\ t$.

Según el EC-2 $\Rightarrow$ $V_{rd3} = 2'5\ \tau_{rd} \cdot h_f + \frac{A_{sf}}{s_t} \cdot f_{yd}$.

Con $\tau_{rd} = 48\ t/m^2$ para H-60

$339'1\ t = 2'5 \cdot 48\ t/m^2\ 0'4\ m \cdot 1'76\ m = 257'62\ t$

Con $\phi16\ a\ 0'10 = 40'21\ cm^2/ml \cdot 1'76\ m = 70'77\ cm^2/ml \cdot 3\ t/cm^2$

$= 212'3\ t$

Necesita algo más de armadura $\Rightarrow$ 8 ídem + $c\phi16\ a\ 0'20$ +

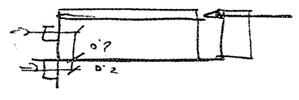
$c\phi20\ a\ 0'20$ en zonas extremas 7'5 m

Así $\Rightarrow$ $90'67\ cm^2/1'76\ m \times 3\ t/cm^2 = 272'0\ t > V_k - V_{cu}$.

cumple.

Sección 2 $V = 339'1 + 1557'2 \cdot 0'4_{aprox} \cdot 0'2 = 463\ t$

$M_k = 152'6\,(0'5 - 0'09) + 310'8\,(0'25) = 140'2$



$V_k = 463 - 416 = 47\ t$

$M_k = 140'2 - 416 \cdot 0'2 = 57\ m\,t$ | Esfuerzos menores que los anteriores $\Rightarrow$ cumple

Comprobación de cercos del alma

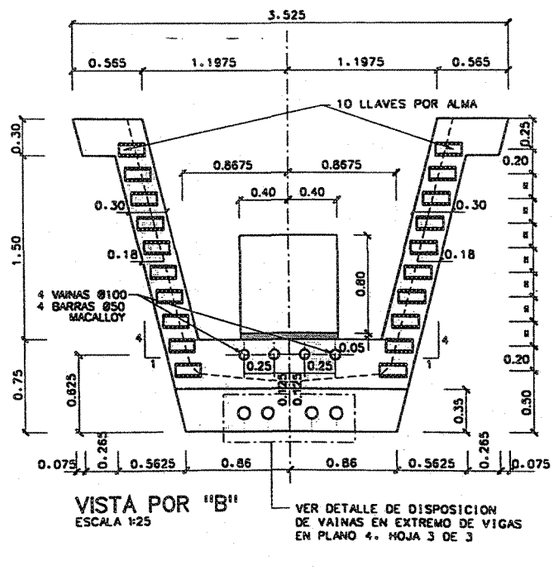
Con C Ø16 - o'20 + c Ø20 - o'20 ⇒ As = 51'52 cm²/m

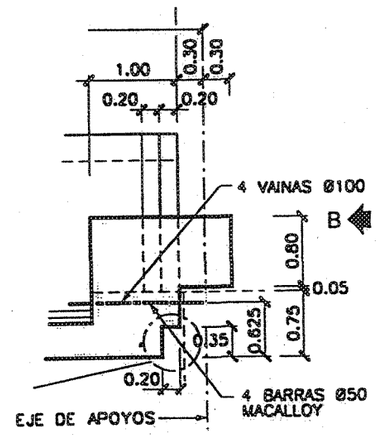
En 1'76m ⇒ 90'67 cm² x 3 t/cm² = 272'03 t/alma.

capaces de ser resistidas con fyd = 3000 kgf/cm².

Luego como N1da = 157'6 t < 272'03 t ⇒ cumple el resto de disposición recomendada.

17.4. Cálculo de extremos de vigas con nariz





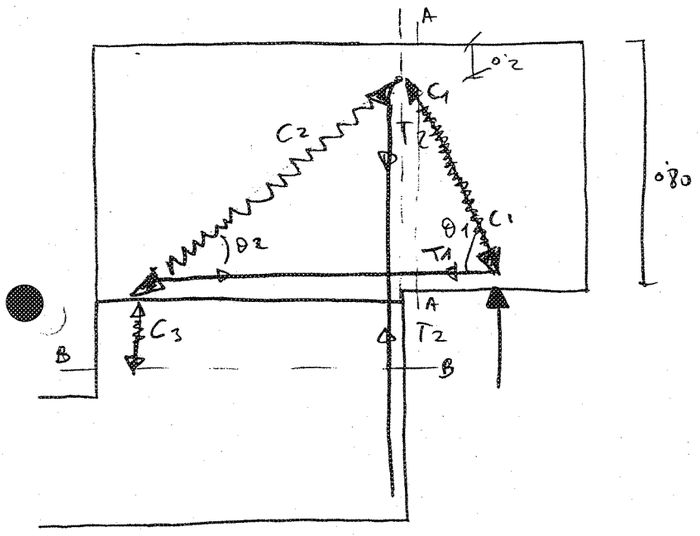
-Reacción unitaria de peso propio de viga + peso propio de prelosas.

• $R_{d,k}$ = 97'5 t.

Del lado de la seguridad se mayora por 1'5

Rd = 97'5 x 1'5 = 138'75 t.

Pieza de cálculo con bielas y tirantes



Como $a < d \Rightarrow$ Ménsula corta

Con $a = 0'30$

$d = 0'90$

$d \geq \frac{a}{0'85} \cdot \operatorname{cotg}\theta$

Con $\operatorname{cotg}\theta = 1'4$ hormigonado monolítico.

$d = 0'90 \geq \frac{0'3}{0'85} \cdot 1'4 = 0'49$ cumple

$\operatorname{Cotg}\theta_1 = \frac{0'6}{0'3} = 2$

$T_{1d} = \frac{R_d}{\operatorname{cotg}\theta_1} = \frac{138'95}{2} = \underline{69'47\ t}$.

$\Rightarrow A_{s1} = \frac{T_{1d}}{f_{yd}} = \frac{69'47\ t}{4\ t/cm^2} = 17'36\ cm^2 \Rightarrow 6\ \phi 20 = \underline{18'85\ cm^2}$

Armadura secundaria $\Rightarrow T_{2d} = 0'2 \cdot R_d = 0'2 \cdot 138'95 = \underline{27'79\ t}$.

$A_{sc} = \frac{27'79}{4} = \underline{6'94\ cm^2} \rightarrow$ Se colocan 2 cercos de $4\phi 12 = 9'04\ cm^2$

Tracción en placa $\Rightarrow$ Resultante

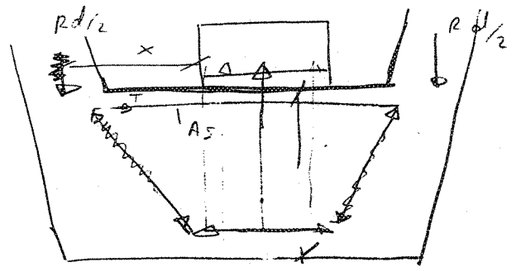
$T_{2d} = R_d = 138'95\ t \Rightarrow A_{s2} = 138'95\ t / 4 = \underline{34'7\ cm^2} \Rightarrow \underline{8\phi 25}$

$39'27\ cm^2$

Comprobación de capacidad de cualquier de cara de almas

con $c\phi 16 a 0'20 + c\phi 20 a 0'20$ en $1\ m = \underline{51'5\ cm^2/alma}$

Capacidad mucho mayor que la necesaria



Armadura necesaria para resistir cortante

$x \geq 0'9575 - 0'4 = 0'5575$

$M_d = \frac{Rd}{2} \cdot 0'[illegible] \cdot 70 \cdot 0'5575 = \underline{39'075\ mt}$.

$T_{sup} = \frac{39'075}{d \cdot 0'75 \cdot 0'8} = 65'04\ t$ Con $f_{yd} = 4\ t/cm^2$

$A_s = 65/4 = 16'26\ cm^2 \Rightarrow$ Con $c\phi 16 a 0'20 + c\phi 20 a 0'20$

$= 25'76\ cm^2$ disponibles $\Rightarrow$ cumple.

Asc como armadura cortante $= \frac{0'2 \cdot 70}{4} = \underline{3'5\ cm^2} \Rightarrow$ 5 cobertura

2 cercos de $\underline{5\ \phi 12} = \underline{11'3\ cm^2}$.

IDEAM

Pantalla sobre apoyo en testa

Armadura superficial.

$A_s = 0'04 \cdot R_k/2'1 = 0'04 \cdot 97'5/2'1 = \underline{1'76\,cm^2} \Rightarrow$

con $6\phi 20 = 18'9\,cm^2$.

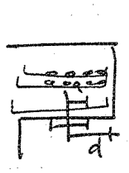
y con $c\phi 12$ a $0'20 \Rightarrow$ Con mitad $2\phi 12$ ya $\Rightarrow > 1'76\,cm^2$ es vale.

Difusión primera.

$A_s = 0'25 \cdot 97'5 \left(1 - \frac{a}{d}\right)/2'1$

Con $a = 0'3$ y $d = 0'6$

$A_s = 0'25 \cdot 97'5 \left(1 - \frac{0'3}{0'6}\right)/2'1 = \underline{4'28\,cm^2}$



Con $2 \times 4\,\phi 12$ de armadura vertical en mitad cada $\Rightarrow$ superficie $= 9'04\,cm^2$

En transversal $\Rightarrow A_s = 0'25 \cdot 97'5 \left(1 - \frac{0'4}{0'8}\right)/2'1 = 4'28\,cm^2$.

Con $2 \times 4\,\phi 10 = \underline{6'28\,cm^2} \Rightarrow$ vale.

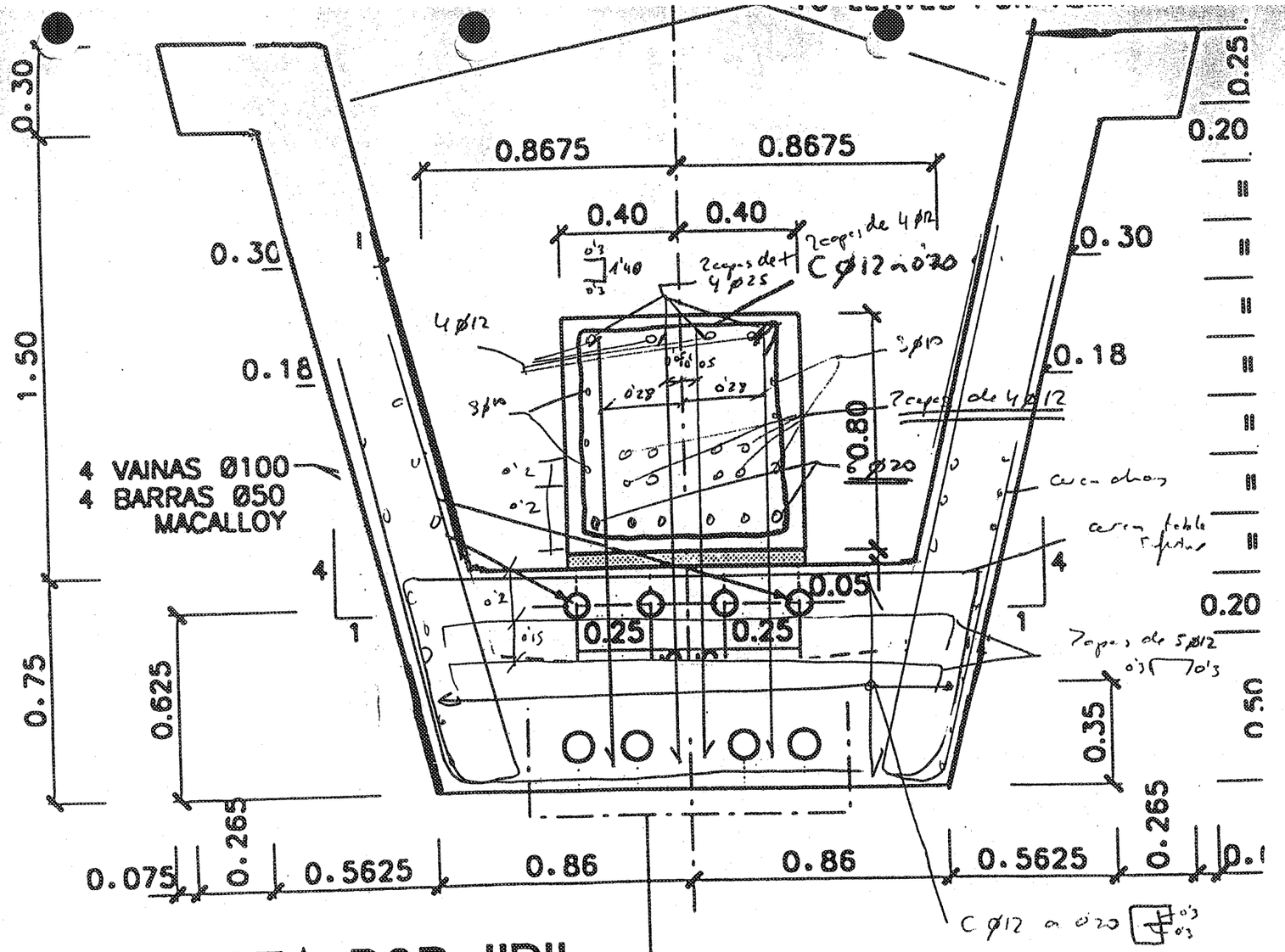
Pantalla transversal de $\phi 50$ Macalloy.

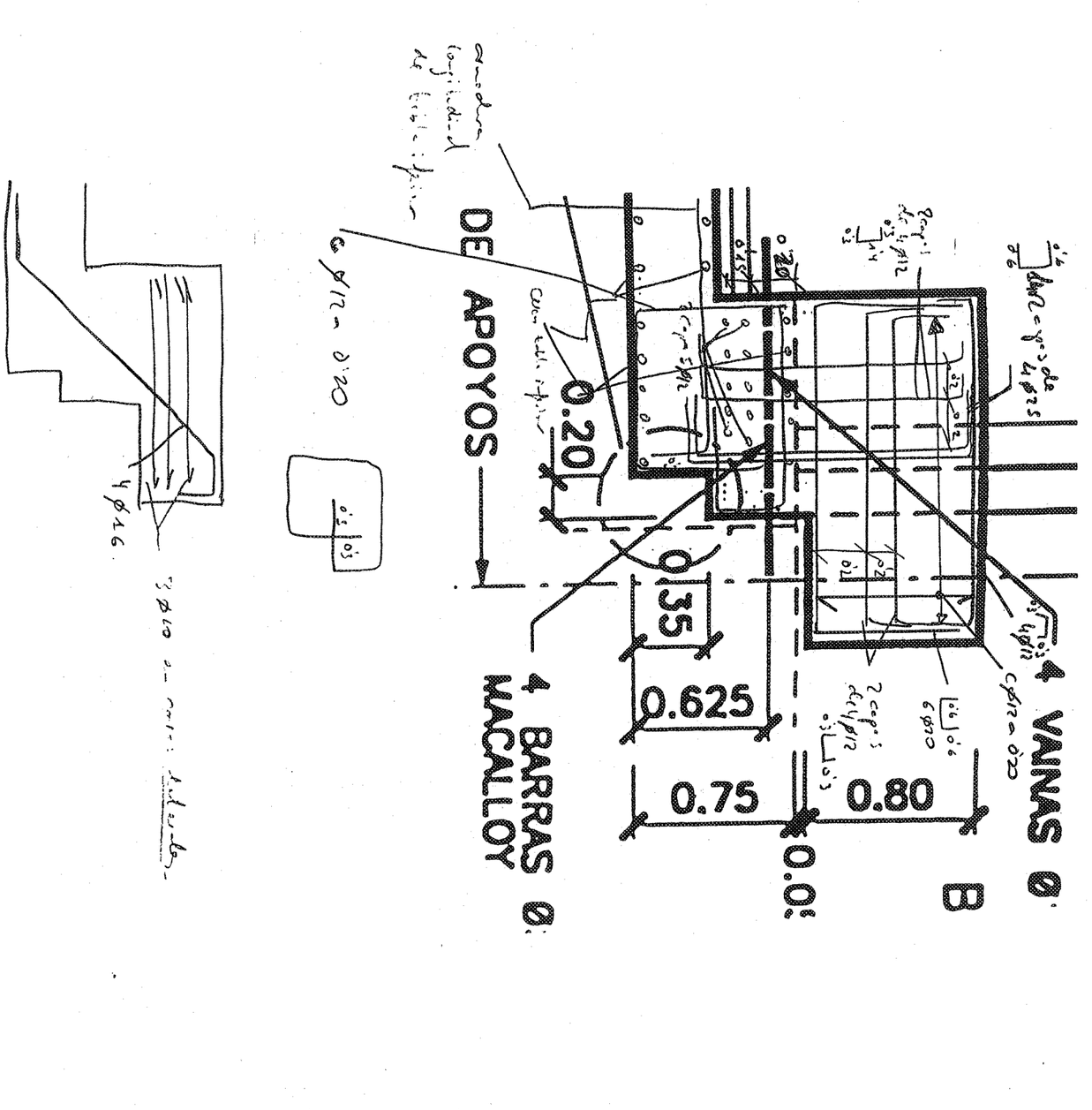
As superficial de $1\,\phi 50 \Rightarrow$ Con 152 t/barra

$A_s = 0'04 \cdot 152/2'1 = 2'89\,cm^2$/anclaje. $\Rightarrow$ Con $2\phi 16$ por anclaje vale

Pilares $\Rightarrow$ En altura $A_s = 0'25 \cdot 152 \left(1 - \frac{0'075}{0'125}\right)/2'1 = 5'62\,cm^2 \Rightarrow$ Se colocan $2 \times 2\phi 16$ por anclaje

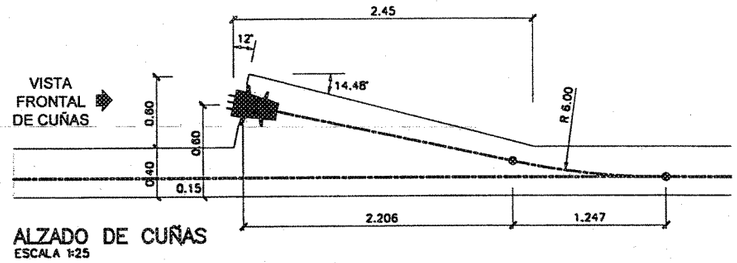
En horiz $A_s = 0'25\ 152 \left(1 - \frac{0'125}{0'140}\right)/2'1 = 5'72\,cm^2$. $\Rightarrow$ Con $c\phi 20$ a $0'20$ + $c\phi 15$ a $0'20$ + 2 perfiles de $5\phi 12$ $\Rightarrow$ suficiente.


0.30
1.50
0.75
0.625
0.265
0.8675
0.8675
0.40
0.40
0.30
0.18
4 VAINAS Ø100
4 BARRAS Ø50
MACALLOY
4
1
0.80
0.05
0.25
0.25
0.20
0.35
0.075
0.5625
0.86
0.86
0.5625
0.265
VISTA POR "B"
ESCALA 1:25
VER DETALLE DE DISPOSICION
DE VAINAS EN EXTREMO DE VIGAS
EN PLANO 4. HOJA 3 DE 3

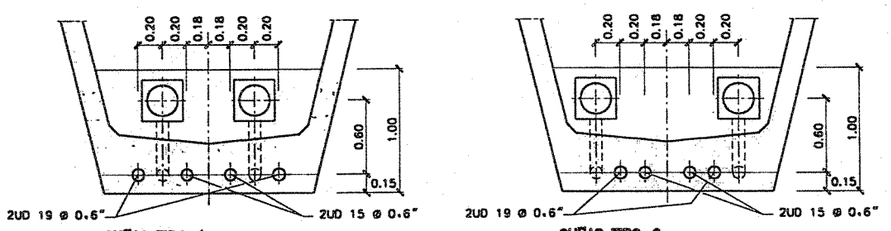

4 VAINAS Ø
4 BARRAS Ø
MACALLOY
DE APOYOS
0.20
0.55
0.625
0.75
0.80
B

17.5. CUÑAS INTERIORES DE VIGAS

- Cuña Tipo 1: de 2 ud ø19 interiores.
- Cuña Tipo 2: de 2 ud ø19 exteriores



ALZADO DE CUÑAS
ESCALA 1:25



CUÑAS TIPO-1:
ANCLAJE DE 2 UD 19 ø 0.6"
(INTERIORES)

CUÑAS TIPO-2:
ANCLAJE DE 2 UD 19 ø 0.6"
(EXTERIORES)

ALZADO FRONTAL DE CUÑAS
ESCALA 1:25

CALCULO DE CUÑAS : 2 ud 19 ø 0,6". Con $P_{0\,max} = 416$ t

- Armadura superficial:

$A_s = \frac{0'04 \cdot R_k}{2'1\ t/cm^2} = \frac{0'04 \cdot 416}{2'1} = 7'92\ cm^2 \Rightarrow$ 2 x 2ø16 por anclaje $= 8'04\ cm^2$

- Armadura de difusión primaria.

$A_{s\,vertical} = 0'75 \cdot P_k \cdot \left(1 - \frac{a}{d}\right) \cdot \frac{1}{2'1} \Rightarrow$

Con $a = 0'17$ y $d = 0'25 \Rightarrow$ $A_s = 0'75 \cdot 416 \left(1 - \frac{0'17}{0'25}\right) \cdot \frac{1}{2'1} = 12'33\ cm^2$

2 capas con 4ø16 por anclaje

A_s horizontal $\Rightarrow$ $a = 0'17$ $d = 0'33$

$A_s = 0'75 \cdot 416 \left(1 - \frac{0'17}{0'33}\right) \cdot \frac{1}{2'1} = 71'28\ cm^2 \Rightarrow$ 7 capas de 4ø20 $= 75'36\ cm^2$

Cosido en zona de anclaje de al menos el 50% de la fuerza $\Rightarrow$

$$A_{s\,vertical} = \frac{0'5 \cdot \overbrace{P}^{P_H} \cdot \cos\alpha - \overbrace{P}^{P_V} \cdot \operatorname{sen}\alpha}{\overline{\sigma}_s \cdot \operatorname{cotg}\theta}$$

Con $\operatorname{cotg}\theta = 1'4$ de hormigonado monolítico

Con $P = 379$ t de 1 ud ø19 con $\alpha = 17°$ y $\overline{\sigma}_s = 2700\ kg/cm^2$

$A_{sv} = \frac{91'88}{2'7 \cdot 1'4} = 24'30\ cm^2$ por anclaje

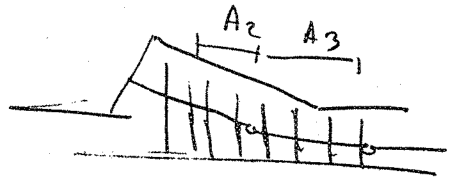
Con la superficial + primaria $\Rightarrow$ 3 capas de 4ø16 $= 24'2\ cm^2$ luego valdría.

Con $\operatorname{cotg}\theta = 1 \Rightarrow$ lo comprueba la $A_{s\,vertical}$ y $A_{s\,horizontal}$

$A_s = \frac{0'5 P \cos\alpha - P \operatorname{sen}\alpha}{\overline{\sigma}_s \operatorname{cotg}\theta} \cdot \frac{91'88}{2'7 \cdot 1} = 34'5\ cm^2$

Con 3 capas 4ø16 verticales + 1 capa de 4ø16 + 2 capas de 4ø20 por anclaje $A_{s\,horizontal} + A_{s\,vertical} = 57'3\ cm^2 > 34\ cm^2 \Rightarrow$ cumple.

Armadura secundaria en la cuña.

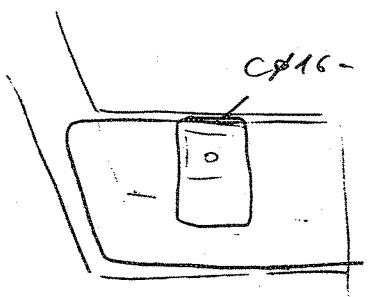


$A_2 \Rightarrow$

Cosido de $A_s = \dfrac{0'5\, P \cdot \cos\alpha}{\sigma_s \cdot \cot\theta} = \dfrac{0'5 \cdot 379 \cdot \cos 12^\circ}{2'7 \cdot 1'4} = \underline{49'03\ cm^2}$ / por andaje

Con los cercos de tabla inferior de Ø16 a 0'10 en una distancia de 2m aprox = 80'42 cm²

De toda manera se colocarán unos cercos cØ16 a 0'15 rodeando cada andaje para coser el empuje vertical de curva



Zona de curva ⇒ = 1'25m ⇒ con Fuerza vertical de 79t/ud 19 Ø 0,6"

$\dfrac{79\ t}{2'7\ t/cm^2} = 29\ cm^2$, en 1'25m $\underline{23'34\ cm^2/ml}$.

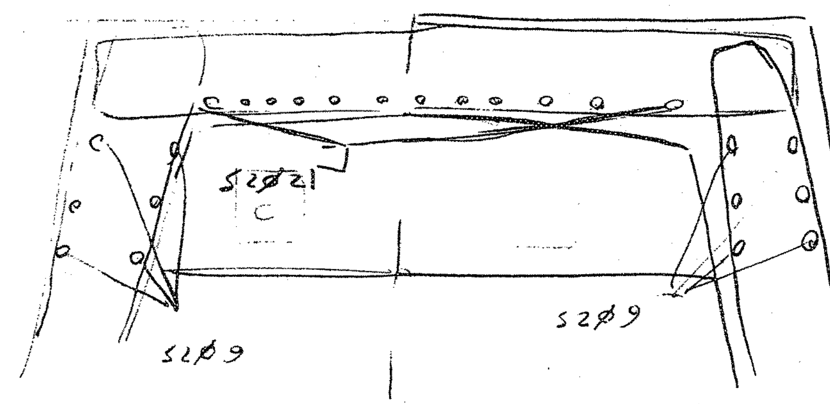
Se colocan cØ16 a 0'15 = 76'8 cm²/ml para cada andaje en toda la zona.

Arrastre ⇒ 40% de la fuerza de 416t/ud 19 Ø 0,6"

luego ⇒ $\dfrac{0'4 \cdot 416\ t}{3\ t/cm^2} = 55'46\ cm^2$/ud 19 Ø 0,6"

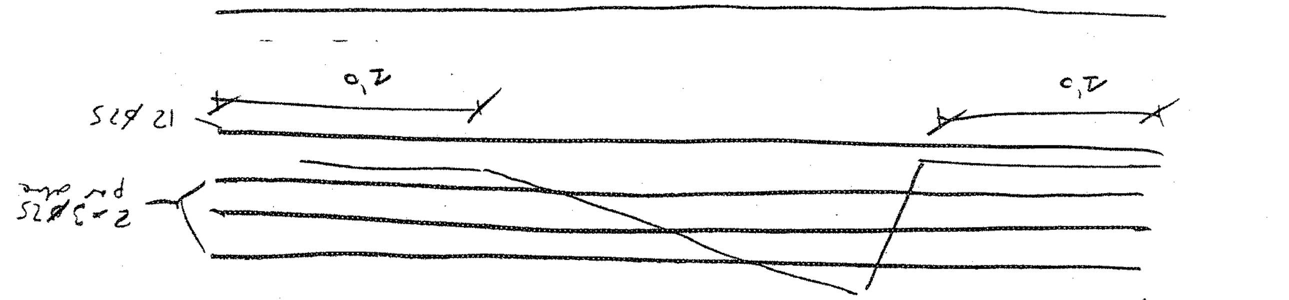
En total 110'5 cm²

Se refuerza la armadura longitudinal con

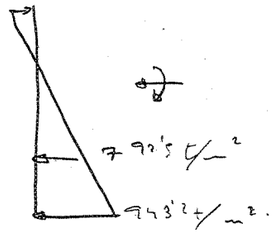


Se coloca como armadura de arrastre

Con 12+12 Ø25 = 117'8 cm². 6 en cada alma entre la tabla inferior y el borde de cuña y el resto 12 Ø25 en tabla inferior cara superior.



Armaduras de arrastre..



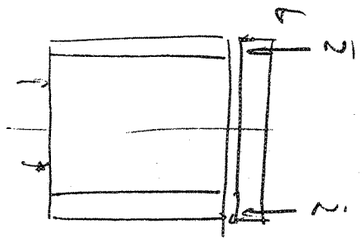
$\sigma_i = \frac{832}{3'422} + 1420 \cdot 0'493 = 943'2\ t/m^2$

$\sigma_{s,losa} = \frac{1}{1'714}\left(\frac{832}{3'422} + 1420 \cdot (-0'2636)\right) = -10\ t/m^2$ Con $n = 1/1'714$

$\sigma_{s\ base\ inf} = \frac{832}{3'422} + \frac{1420}{3'766} \cdot (1'857 - 0'4) = 792'5\ t/m^2$

$\sigma_{medio\ a\ base\ inferior} = \frac{943'2 + 792'5}{2} = 868\ t/m^2$.

Con espesor medio = 0'40 m y ancho = 1'85 m.



$N_H = 2 + 868\ t/m^2 \cdot 0'4 \cdot 1'85 = 2'416 \Rightarrow$ Nº de aros = $94'84\ t/ud$.

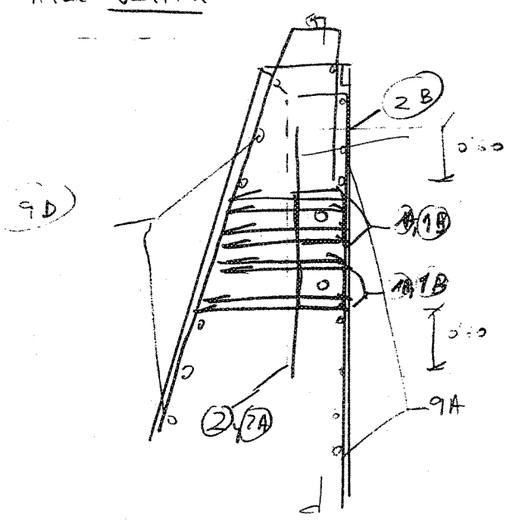
en 1'85 m $\Rightarrow$ $94'84/1'85 = 33'2\ t/ml$ y aro

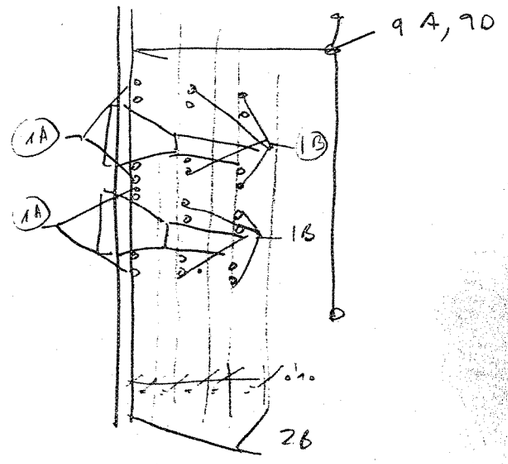
Con $\sigma_s = 2\ t/m^2 \Rightarrow$ $A_{s\ nec} = 33'2/3 = 11'09\ cm^2/ml$ y aro.

Como la cuantía de aros a colocar 0'20 en todas las caras = $20'1\ cm^2/ml$ y aro = triple del necesario en aros

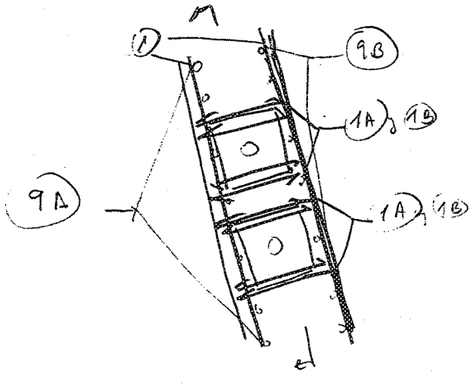
Anclajes de aros

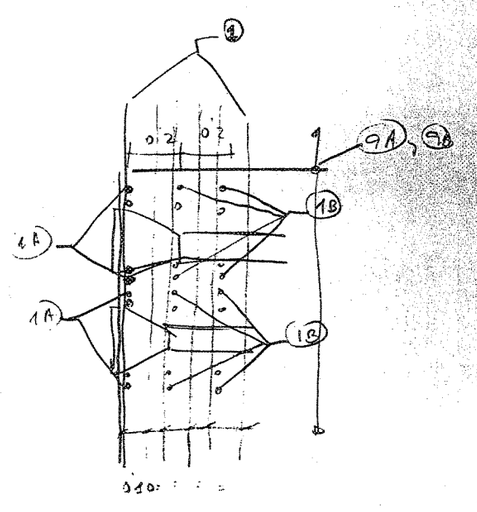
Alma vertical





Alma inclinada





(2) 2 Ø16 por andaje

(2A) 2 capas de 2 Ø16 por andaje

(1A) 4 Ø16 por andaje 2 a cada lado

(1B) 2 capas de 4 Ø 12 por andaje 1 a cada lado

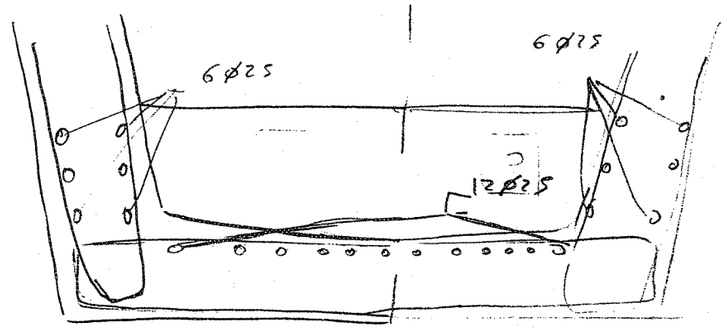
Anclajes 9A, 9D, 2B, 2, 9A y 9B según el Plano 7 hoja 1

Arrastre ⇒ 40% de la fuerza de 416 t/ud 19 ø 0,6"

Luego ⇒ $\frac{0'4 \cdot 416\,t}{3\,t/cm^2} = 55'46\,cm^2$/ud 19 ø 0,6"

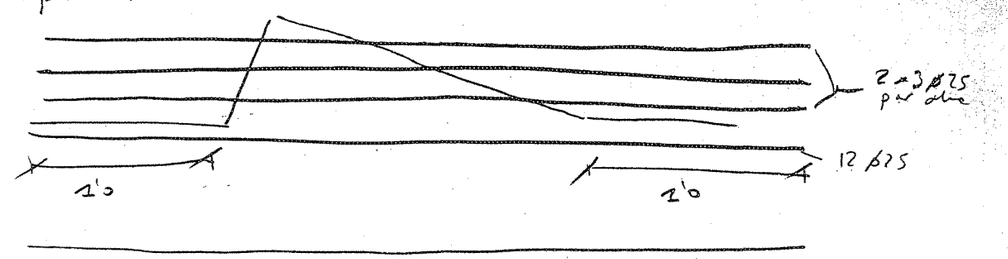
En total 110'9 cm²

Se repite la armadura longitudinal con

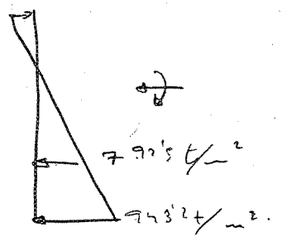


Se coloca como armadura de arrastre

Con 12 + 12 ø25 = 117'8 cm². 6 en cada alma entre la losa inferior y el borde de cima y el resto 12 ø25 en losa inferior cara superior.



Armaduras de arrastre..



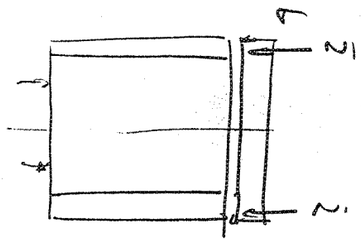
$\sigma_i = \frac{832}{3'422} + \frac{1420}{3'766} \cdot 0'493 = 943'2 \text{ t/m}^2$

$\sigma_{s,losa} = \frac{1}{1'714}\left(\frac{832}{3'422} + 1420 \cdot (-0'2636)\right) = -10 \text{ t/m}^2$ Con $n = 1'714$

$\sigma_{s\ table\ inf} = \frac{832}{3'422} + \frac{1420}{3'766} \cdot (1'857 - 0'4) = 792'5 \text{ t/m}^2$

$\sigma_{media\ table\ inferior} = \frac{943'2 + 792'5}{2} = 868 \text{ t/m}^2$.

Con espesor medio = 0'40 m y ancho = 1'85 m.



$N_1 = 2 + 868 \text{ t/m}^2 \cdot 0'4 \cdot 1'85 \text{ m} = 2'416 \Rightarrow$ N° de alas = 94'84 t/ala

en 1'85 m $\Rightarrow$ $94'84/1'85 = 33'2$ t/m ala y alma

Con $\sigma_s = 3 \text{ t/cm}^2 \Rightarrow$ $A_{s\ nec} = 33'2/3 = 11'09 \text{ cm}^2/\text{m}$ ala.

- Con la malla de alas a cada 0'10 en 1 m de la cara = 20'1 cm²/m ala y alma = cuple disponible en alas

Comprobación de difusión secundaria en cuna de viga.

Sección de viga + losa =

$A = 3'422 \text{ m}^2$

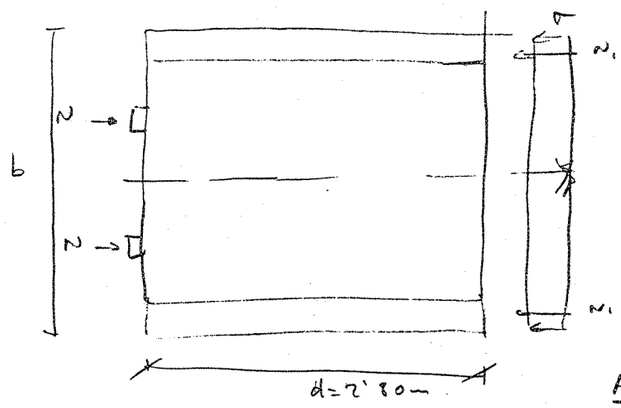
$I = 3'766 \text{ m}^4$

$W_{s\ losa}^{-1} = 0'2636$ $\quad x_{G,s} = 0'993$ m

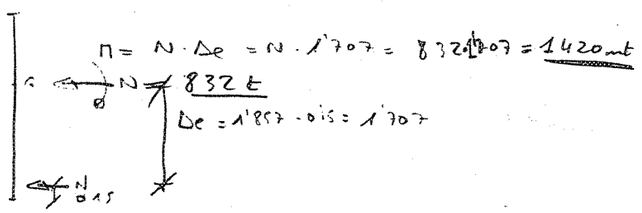
$W_{i\ losa}^{-1} = 0'184$ $\quad x_{G,i} = 1'857$ m

$W_{i\ viga}^{-1} = -0'493$.

Con 2 ud 1"ϕ0,6" $\Rightarrow$ $\quad 2 \cdot 416 \text{ t} = 832 \text{ t}$

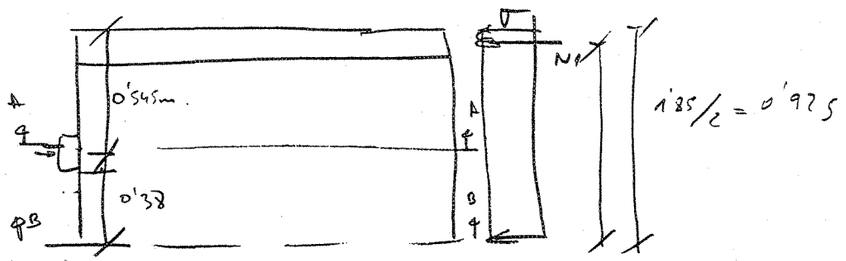


A un canto útil.



$\Pi = N \cdot \Delta e = N \cdot 1'707 = 832 \cdot 1'707 = 1420 \text{ mt}$ Par resistido

Sección de cálculo en difusión rasante.



Sección AA. Caso más desfavorable, con anclajes inferiores.

$V_A = 0'545 \cdot 0'4 \cdot 868 + 94'24 = \underline{284'06\ t}$

$M_A = \frac{0'545^2}{2} \cdot 0'4 \cdot 868 + 94'24 (0'545 - 0'09) = \underline{94'71\ m\cdot t}$.

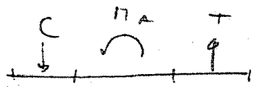
En 2'85 m ⇒ Con $V_A = \frac{284'06\ t}{2'85\ m} = 99'67\ t/m$.

Si $\tau_s = 3\ t/cm^2$ ⇒ $A_s = \frac{99'67}{3} = \underline{33'2\ cm^2/m}$.

Con armadura en doble inferior de $c\phi 16$ a $0'10 = 40'21\ cm^2/m$

cumple.

Con el momento ⇒



$C = T = \frac{M_d}{2m} = \frac{94\ m\cdot t}{2\ m} = \underline{47\ t}$

$T = \frac{47}{0'85} = 55\ t/m \rightarrow \frac{55\ t/m}{3\ t/cm^2} = 18'3\ cm^2/m$ con $c\phi 16 \cdot 0'10$

cumple.

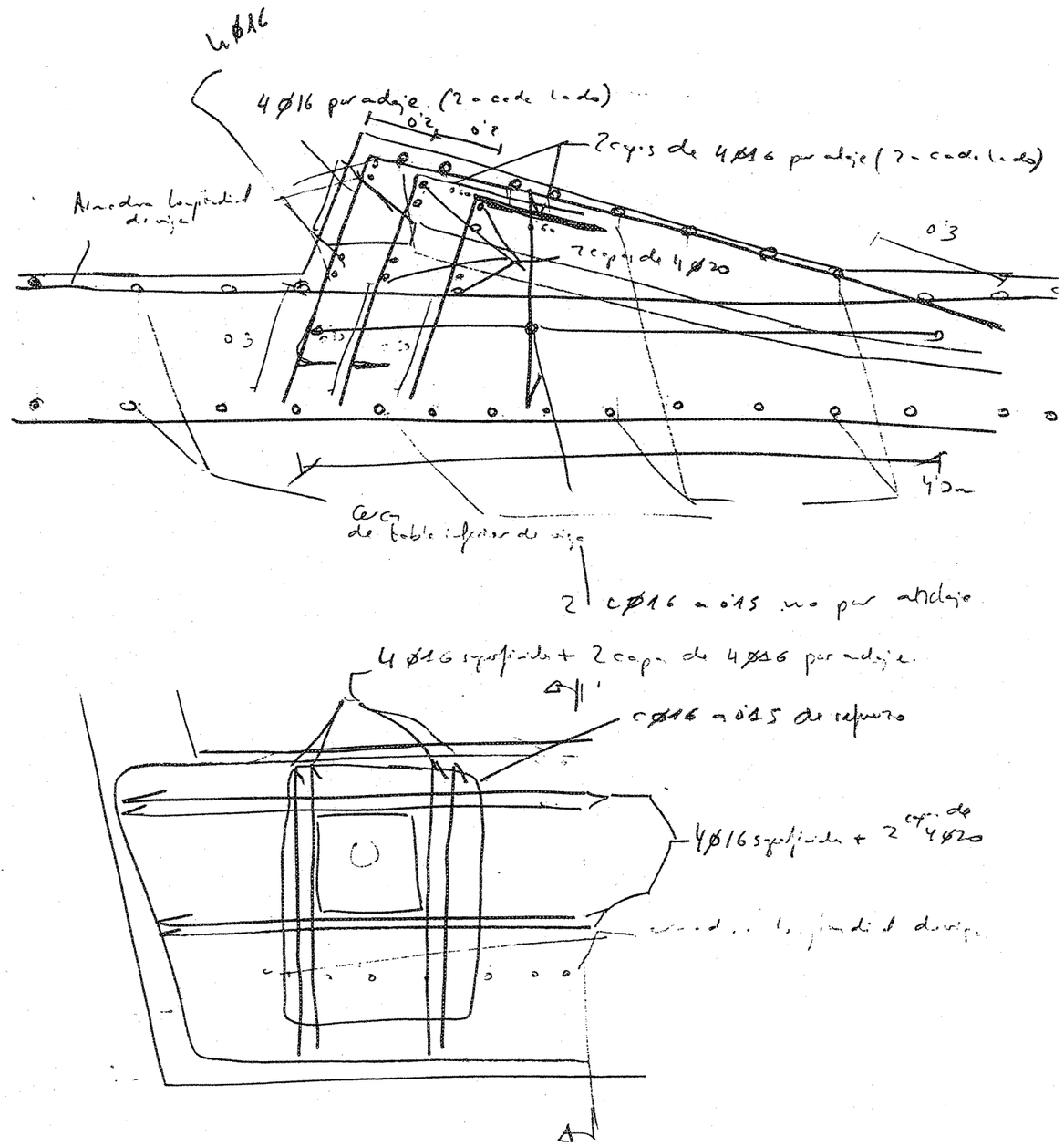
No es necesario reforzar nada en difusión rasante.

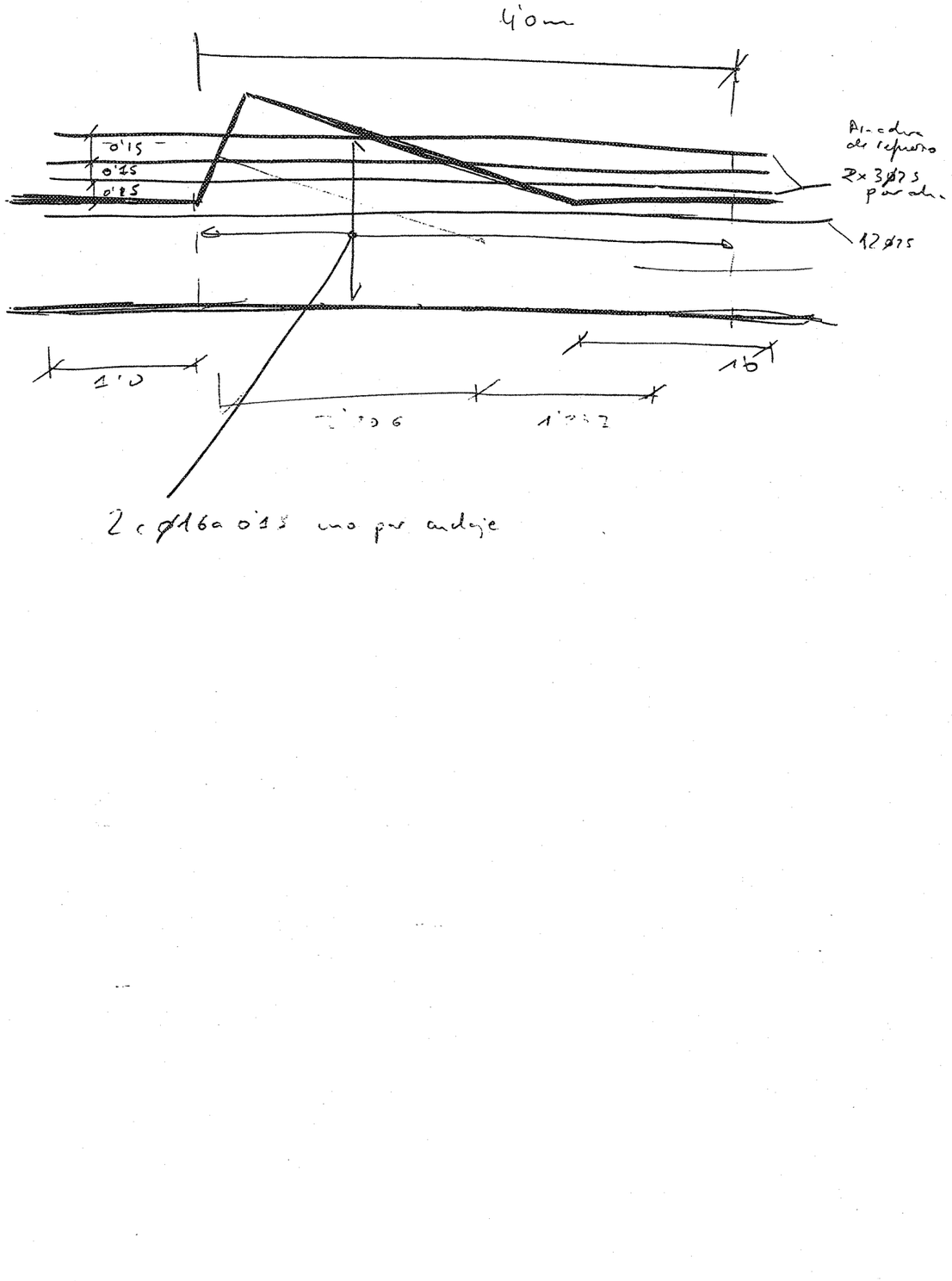
Sección BB ⇒ $V_B = 0$

$M_B = 868 \cdot \frac{0'925^2}{2} \cdot 0'4 + 94'24 \cdot (0'925 - 0'09) - 416 \cdot 0'38$

$= \underline{89'6\ m\cdot t}$

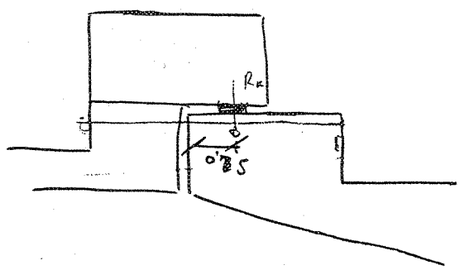
Como se ve la sección BB es mucho más desfavorable que la AA hupo no es necesario reforzar.


Ld ϕ16
4 ϕ16 por andaje (2 a cada lado)
0'2
0'2
2 cpos de 4 ϕ16 por andaje (2 a cada lado)
Arm. de long. del viga
0'3
2 cpos de 4 ϕ20
0'3
0'3
4'0 m
Cota de fondo inferior de viga
2 c ϕ16 a 0'15 mo por andaje


4'0 m
0'15
0'25
0'25
Arm. de refuerzo
2 x 3 ϕ12 s por and.
12 ϕ12 s
1'0
1'0
2 c ϕ16 a 0'15 mo por andaje

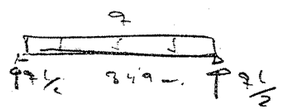
4 ϕ16 superiores + 2 cpos de 4 ϕ16 por andaje
1'
c ϕ16 a 0'15 de refuerzo
4 ϕ16 superiores + 2 cpos de 4 ϕ20
Cota de fondo inferior de viga
A
A'

17.6-Apoyo de nariz en capiteles "in situ"



· Máxima reacción transmitida

PP vigas + PP prelosas de forma indistinta



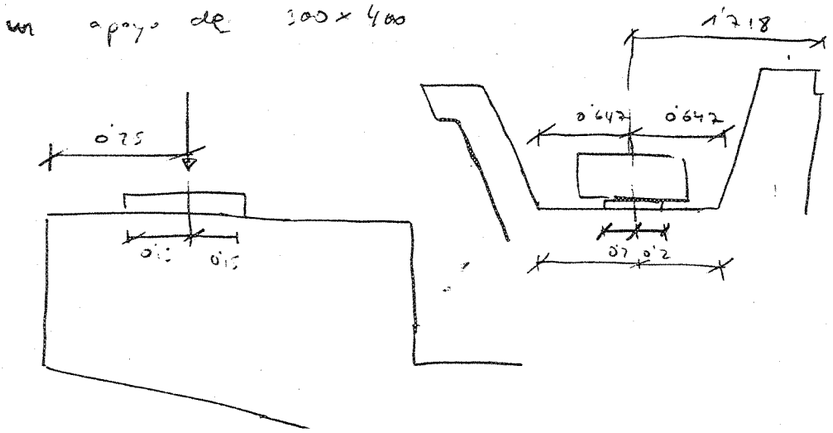
luego :

R: $\frac{qL}{2}$ con q viga = 4'25 t/m y q prelosa = 0'06 · 7 · 2'5 = 1'05 t/m

luego $q = 4'25 + 1'05 = 5'30$ t/m.

$R = \frac{qL}{2} = \frac{34'9 \cdot 5'30}{2} = 92'5$ t.

Con un apoyo de 300 × 400



Parrilla bajo apoyo 3.

· Armadura superficial

$A_s = \frac{0'04 \cdot R_k}{2'1\ t/cm^2} = \frac{0'04 \cdot 92'5}{2'1} = 1'76 cm^2$

Con la disposición de ø12 a 0'15 en longitudinal y en transversal ø10 a 0'20 + ø12 a 0'30 cumple en holgura.

· Armadura de dispersión primaria

$A_s = 0'25 R_k (1 - \frac{a}{d}) / 2'7$ Con $\sigma_s = 2700$ kp/cm² en servicio

Con $a = 0'2$ y $d = 0'65$ en transversal

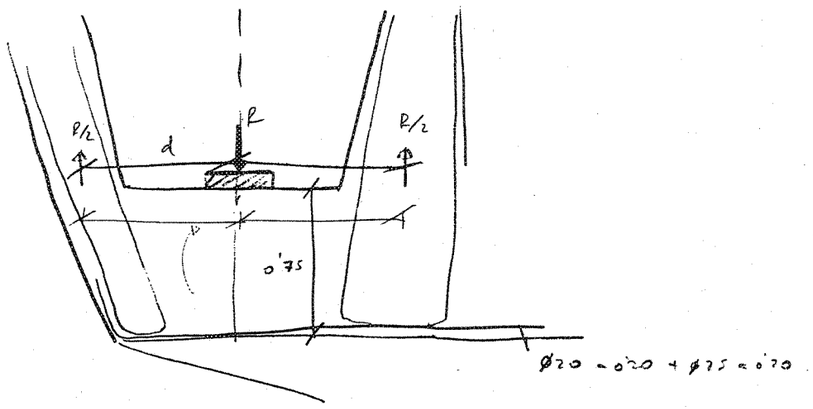
$A_s = 0'25 \cdot 92'5 \left(1 - \frac{0'2}{0'65}\right) / 2'7 = 5'93 cm^2$ → cubre con la armadura (5c) dispuesta en el capitel

En longitudinal $a = 0'15$ y $d = 0'25$

$A_s = 0'25 R_k \left(1 - \frac{0'15}{0'25}\right) = 9'25 cm^2$

Se colocarán 4 ø 20 en longitudinal

Comprobación de cimentación inferior ⇒



Con R = 97'5 t ⇒ Momento de P/2 . d

Con d ≃ 0'85 m ⇒ M = 97'5/2 . 0'75 = 39'31 mt

Para un canto mínimo de 0'75 m ⇒

Con d = 0'75 - 0'075 ⇒ T = 39'31/0'5625 = 69'8 t con σs = 3 t/cm²

69'8 t / 3 t/cm² = 23'3 cm² en 2 m ⇒ 11'64 cm²/ml.

Como se han dispuesto = 40'25 cm²/ml ⇒ cumple con la armadura dispuesta

Además la capacidad de anclaje es superior - P/2 = 46'25 t

Con cØ20 a 0'20 + cØ25 a 0'20 ⇒ 80'50 cm²/ml · 2 m = 161'0 cm² · 3 t/cm²

= 483 t/ alzado >> 46'25 t necesario → luego es suficiente.

Armadura en anclajes de unidades 19 y 15 y barra Ø50 Macalloy.

Fza de 1 ud Ø19 ≃ 379 t

1 ud Ø15 ≃ 300 t.

Fza de 1 Ø50 Macalloy ≃ 152 t/barra

Armadura suplidad.

$$A_s = \frac{0'04\ P_k}{2'1}$$

· Para unidades 19 Ø 0,6"

$A_s = 0'04\ 379/2'1 =$ 7'21 cm²

· Para unidades 15 Ø 0,6"

$A_s = 0'04 \cdot 300/2'1 =$ 5'71 cm².

· Para barra Ø50 ⇒ $A_s = \frac{0'04 \cdot 152}{2'1} =$ 2'89 cm²

Armadura de dispersión primaria

$$A_s = 0'25\ P_k \left(1 - \frac{a}{d}\right)/2'7$$ en altura

Para ud 19 ⇒ con a = 0'17 y d = 0'30

$A_s = 0'25 \cdot 379 \left(1 - \frac{0'17}{0'3}\right)/2'7 =$ 15'2 cm²

Para ud 15 ⇒ con a = 0'15 y d = 0'3

$A_s = 0'25 \cdot 300 \left(1 - \frac{0'15}{0'3}\right)/2'7 =$ 13'88 cm²

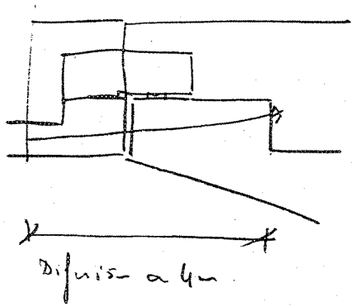
Para Ø50 ⇒ $A_s = 0'25 \cdot 152 \left(1 - \frac{0'075}{0'175}\right)/2'7 =$ 5'62 cm²

En horizontal ud 19 $A_s = 0'25\ 379 \left(1 - \frac{0'17}{0'35}\right)/2'7$ 18'0 cm²

ud 15 $A_s = 0'25 \cdot 300 \left(1 - \frac{0'15}{0'35}\right)/2'7$ 15'2 cm²

Para Ø50 ⇒ $A_s = 0'25 \cdot 152 \left(1 - \frac{0'2}{\ }\right) =$ 7'21 cm²

Comprobación de difusión secundaria



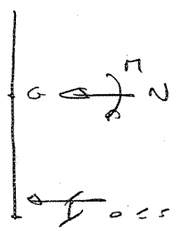
Sección ya difundida ⇒ Arbotante + Losa.

$A = 3'472\ m^2$ $\quad W^{-1}_{s\,losa} = 0'2636\ m^{-3}$ $\quad W^{-1}_{i\,losa} = -0'493\ m^{-3}$

$I = 3'766\ m^4$ $\quad W^{-1}_{i\,losa} = 0'184\ m^{-3}$

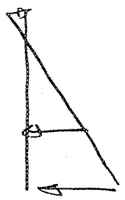
$x_{os} = 0'993\ m.$; $x_{ai} = 1'857\ m.$

Con $2\ ud\ 15\phi\ 0,6'' + 2\ ud\ 19\phi\ 0,6'' \Rightarrow 2\times 329 + 2\cdot 416 = \underline{1490t}$



Con $N = \underline{1490t}$

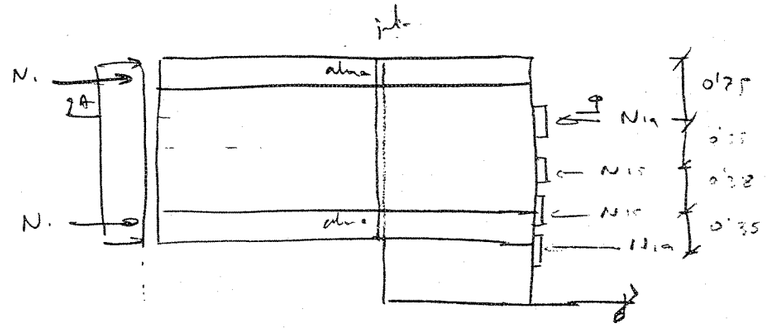
$M = N \cdot De = -1490\cdot(1'857 - 0'15) = \underline{-2543'4\ mt.}$



$\sigma_{i\,cgs} = \frac{1490}{3'472} + \frac{2543'4}{3'766}\cdot 0'493 = \underline{1688\ t/m^2}$

$\sigma_{s\,losa} = \frac{1490}{3'472} + \frac{2543'4}{3'766}\cdot(1'857 - 0'4) = \underline{1419'4\ t/m^2}$

$\sigma_{media} = \underline{1554\ t/m^2}$



Con $2\cdot N_1 + 1'85\ 0'4\cdot 1554\ t/m^2 = 1490 \Rightarrow N_1 = \underline{170t}$ en 4m.

Este resto en alma se resuelve con bulbos por la cara disputa $170t/4m = 42'5\ t/ml$ con $\sigma_s = 3\ t/cm^2 \Rightarrow 14'16\ cm^2/ml$.

Se ha dispuesto $c\phi 20$ a $0'20$ + $c\phi 25$ a $0'20$ en capital y $c\phi 16$ a $0'20$ + $c\phi 20$ a $0'20$ en viga ⇒ cumple.

Sección de cálculo AA

$V_A = 0'75\cdot 0'4\cdot 1554 + 170 = \underline{636'2t}$ (pésimo)

$M_A = \frac{0'75^2}{2}\cdot 0'4\cdot 1554 + 170\cdot(0'75 - 0'39) = \underline{461\ mt}$ pésimo.

Con 4 montantes ⇒ $636'2\ t/4m = 159\ t/ml$

Con $\sigma_s = 3\ t/cm^2 \Rightarrow A_s = 159/3 = 53'01\ cm^2/ml$.

Con $c\phi 20$ a $0'20$ + $c\phi 25$ a $0'20$ en 2m = $80'50\ cm^2/ml$ en 2m

y $c\phi 16$ a $0'20$ + $c\phi 20$ a $0'20$ en 2m en viga = $51'52\ cm^2/ml$ en otro 2m

total = $\underline{264\ cm^2} \times \sigma_s = 3\ t/cm^2 = 792\ t \gg 636 \Rightarrow$ cumple.

Comprobacion del nudo a

C ↶ M T ↷ 0'5 0'5

$C = T = \frac{M}{(1-0'75)} = \frac{461}{3} = 153'6\ t$

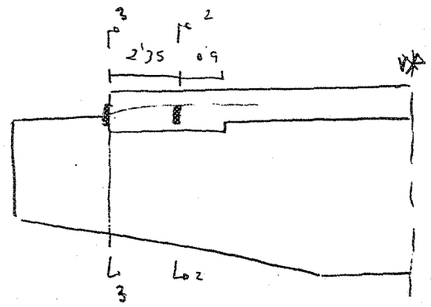
En 1 m ⇒ 153'6 t/ml con $\sigma_s = 3\ t/cm^2$ ⇒ $A_s = 5'12\ cm^2/ml$

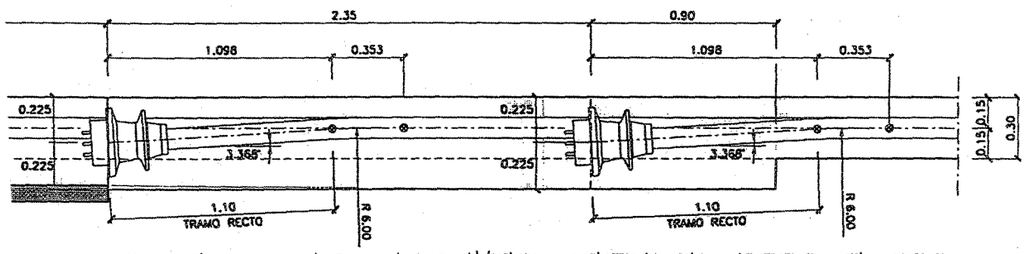
cuple con la armadura dispuesta

No es necesario reforzar por difusión secundaria

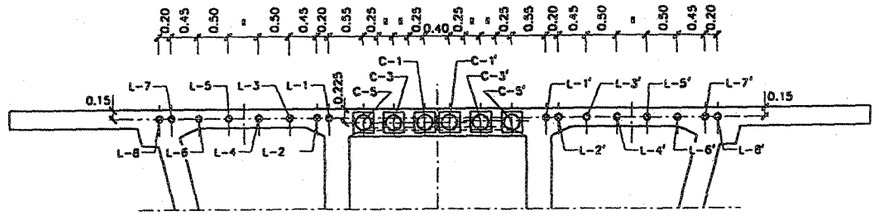
17.7.- Refuerzo en anclajes de losa.

1) Anclajes de losa en capiteles "in situ"

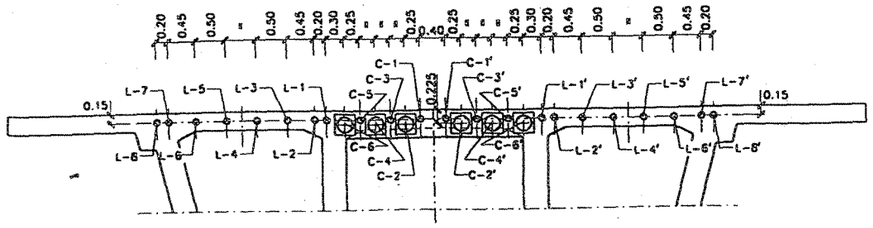




. SECCION DE LOSA POR ALIGERAMIENTO CENTRAL EN CAPITELES "IN SITU".

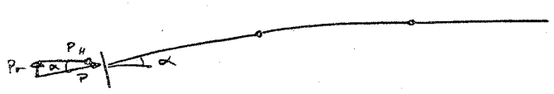


SECCION 3-3
ESCALA 1:50



SECCION 2-2
ESCALA 1:50

$P_{k\,1\,ud\,19\,\varnothing 0{,}6''} = 19 \cdot 1{,}4 \cdot 10^{-4} \cdot 14{,}7500 \cdot 1{,}1 = \underline{\underline{416\ t}}$ / ud 19 ø 0,6"



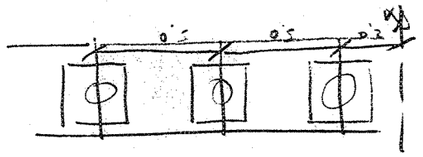
$P_H = P \cdot \cos\alpha = 416 \cdot \cos 2'34 \simeq P_H = \underline{\underline{416\ t}}$

$P_v = P \cdot \operatorname{sen}\alpha \simeq \underline{\underline{17\ t}}$

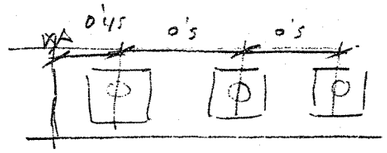
- Armadura superficial por anclaje:

$A_s = \frac{0'04 \cdot P_k}{2'1} = \frac{0'04 \cdot 416}{2'1} = 7'92\ cm^2 \Rightarrow \underline{\underline{4\,\varnothing 16 \text{ por anclaje.}}}$

- Dirección principal



Anclajes sección 33.



Anclajes sección 22.

En anclaje de 0'37 × 0'34 y losa de 0'40 × 0'40

En alto ⇒ $A_s = 0'25 \cdot P_k \cdot \left(1 - \frac{a}{d}\right) / 2'2$

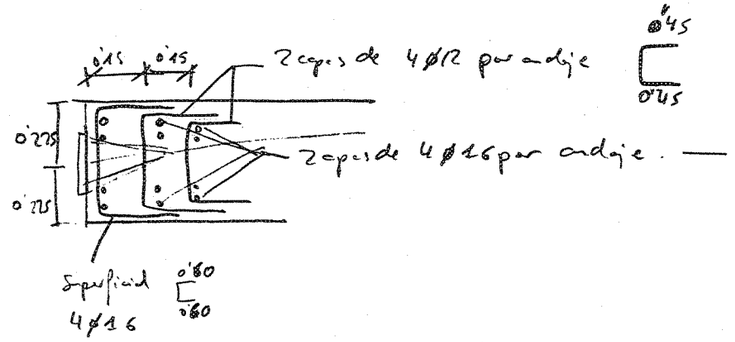
Con $a = 0'37$ $d = 0'40$.

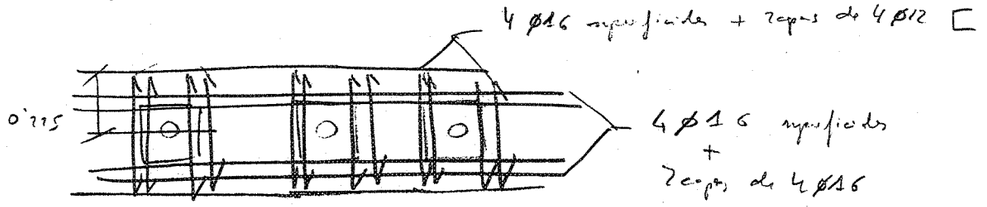
$A_s = 0'25 \cdot 416 \cdot \left(1 - \frac{0'37}{0'40}\right) / 2'2 = 5'77\ cm^2$/anclaje ⇒ $\underline{\underline{2 \text{ capas de } 4\,\varnothing 12 = 9'04\ cm^2}}$

Horizontal. Caso más desfavorable $d = 0'5$ y $a = 0'37$

$A_s = 0'25 \cdot 416 \left(1 - \frac{0'37}{0'50}\right) / 2'2 = \underline{\underline{10'01\ cm^2}}$

En horizontal se colocarán $\underline{\underline{2 \text{ capas}}}$ de $\underline{\underline{4\,\varnothing 16}}$ cada una. = 16'08

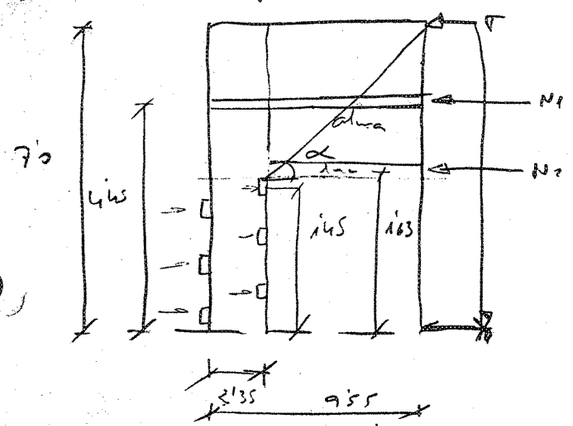




- Comprobación de difusión secundaria.

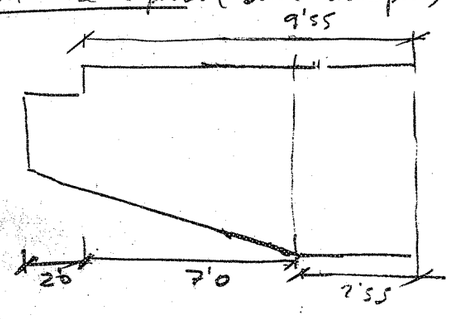
Zona de capitel "in situ"

Se difunde en 9'55m. En toda la longitud hasta el eje de apoyo.



Con 6 anclajes $\varnothing$19 $\varnothing$ 0,6" ⇒ $6 \cdot 416\,t = \underline{2496\,t}$.

Sección de capitel (borde mampara)



Sección con rentado exterior ⇒ (reducida a H-55) Con $n = \underline{1'0948}$

$A = 10'89\ m^2$ ⇒ $A_{red} = 1'0948 \cdot 10'89 = \underline{11'92\ m^2}$

$I = 27'339$ ⇒ $I_{red} = 27'339 \cdot 1'0948 = \underline{29'93\ m^4}$

$x_{gs} = 2'697$

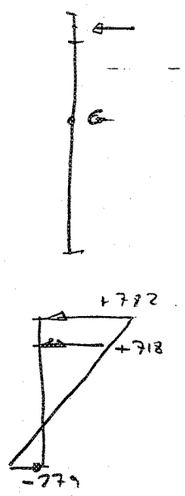
$x_{gi} = 2'303$

$W_s^{-1} = \frac{2'697}{29'93} = \underline{9'011 \cdot 10^{-2}\ m^{-3}}$

$W_i^{-1} = \frac{-2'305}{29'93} = \underline{-0'07694\ m^{-3}}$

$W_{i\,loza}^{-1} = \frac{2'397}{29'93} = \underline{0'08008\ m^{-3}}$

Para esta sección



$M = 2496 \cdot (2'697 - 0'45) = \underline{6357'3\ mt}$

$N = \underline{2496\,t}$

$\sigma_i = \frac{N}{A} + M \cdot W_i^{-1}$

$\sigma_{s,total} = \frac{2496}{11'92} + 6357'3 \cdot 9'011 \cdot 10^{-2} = 782'2\ t/m^2$

$\sigma_{s,loza} = \frac{2496}{11'92} + 6357'3 \cdot 0'08008 = 718'48\ t/m^2$

$\sigma_{i,total} = \frac{2496}{11'92} + 6357'3(-0'0769) = -779'48\ t/m^2$

$\sigma_{medio\ en\ losa} = \frac{782'2 + 718'5}{2} = \underline{750'4\ t/m^2}$.

Para un espesor de $0'3 m \Rightarrow 750'4 \cdot 0'3 \cdot 7 = 1575\,t$

Suponemos que el resto se reparte uniformemente a almas

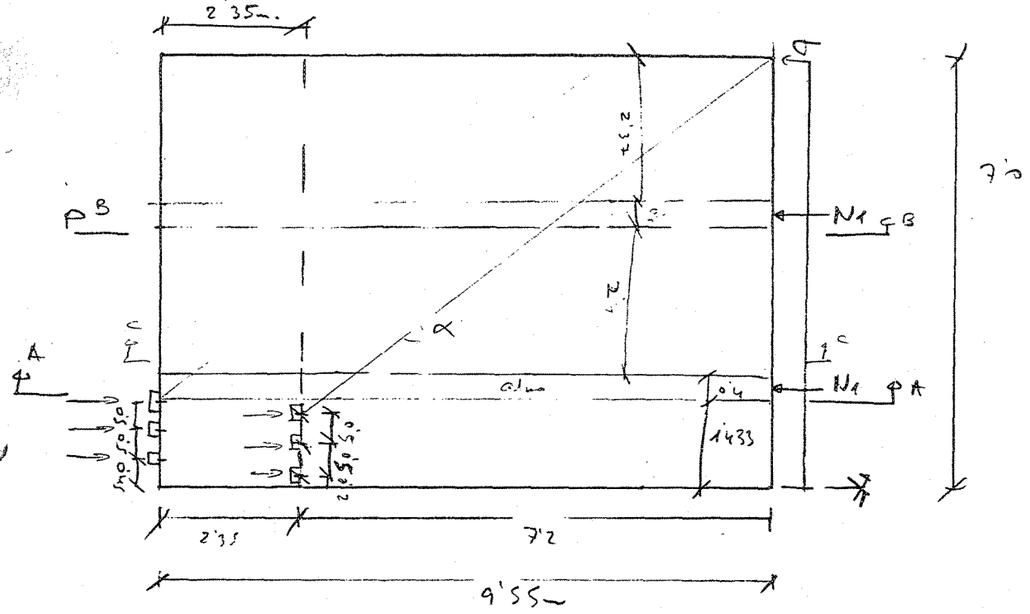
Luego por alma ⇒ $\frac{-1575 + 2496}{2} = \frac{921}{2} = \underline{460'5\,t/alma}$

- Comprobación de rasante por alma.

Armadura de cosido c/20 a 0'10 por alma.

$2 \cdot \frac{3'1416}{0'1} = 62'83\ cm^2/m$ y alma $\times 3\,t/cm^2 = 188\,t/ml$

En $7m$ $7 \cdot 188 = \underline{1319\,t} > 460\,t \Rightarrow$ cumple la armadura dispuesta con holgura.



Donde $\sigma = 750'4\ t/m^2 \cdot 0'3 = 225'12\ t/ml$.

$N_1 = 460'5\ t$ por cada.

Sección de control AA.

$V = 225'12 \cdot 5'567 + 460'5 \cdot 2 = 2174\ t$.

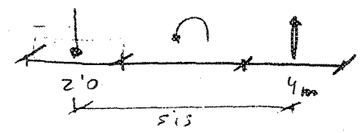
$M = 225'12 \cdot \frac{5'567^2}{2} + 460'5 \cdot (2'4 + 0'6) + 460'5 \cdot 0'2 = 4962\ mt$.

Para un lujo de $9'55 m \Rightarrow V = \frac{2174}{9'55} = 227'6\ t/ml$

Si se refuerza la losa con $\phi 25$ a $0'10$ arriba + $\phi 20$ - $0'10$ abajo $\Rightarrow$ $80'50\ cm^2/ml \cdot \sigma_s = 3\ t/cm^2 = 241'5\ t/ml > 227'6\ t/ml$.

Luego con esto cumple.

Flexión $\Rightarrow$ $M = 4962\ mt$



$C = T = \frac{M}{b} = \frac{4962}{5'15} = 963\ t$.

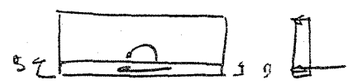
Tracción en 4m apoyo $\Rightarrow$ $80'50\ cm^2/ml \cdot 4m = 322\ m^2$

trabajando a $3\ t/cm^2 \Rightarrow 322 \cdot 3 = 966\ t > 963$

Compresión en una zona de $2'0\ m \Rightarrow \sigma_{c\ máx} = 0'6 \cdot 4000 = 2400\ t/m^2$

$2400 \cdot 0'2 \cdot 2 = 1440 > 963 \Rightarrow$ cumple con la armadura dispuesta.

Comprobación de sección BB.



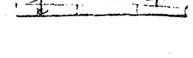
$V = 750'4\ t/m^2 \cdot 0'3 \cdot (7'37 + 0'4) + 460'5 = 1084'0\ t \Rightarrow \frac{1084}{9'55} = 113\ t/ml$

$M = 750'4 \cdot 0'3 \cdot \frac{(7'37 + 0'4)^2}{2} = 863\ mt$.

Con $\phi 20$ a $0'10$ en ambas caras $\Rightarrow$

$62'83\ cm^2/ml \times 9'55 m = 600\ m^2 \times 3\ t/cm^2 = 1800\ t$

Con $\phi 20$ a $0'10$ en ambas caras cumple el cortante < 1084

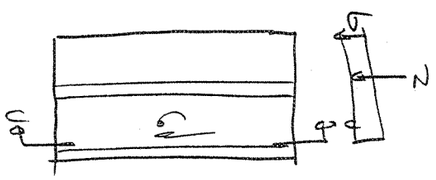
Flexión $\Rightarrow$  $C = T = \frac{M}{b} = \frac{863}{5'15} = 167\ t$.

En 4m de tracción $\Rightarrow$ $62'83\ cm^2/ml \cdot 3\ t/cm^2 \cdot 4m = 753\ t >> 167\ t$

cumple con holgura

Compresión: 2m $\Rightarrow$ $0'6 \cdot 4000 \cdot 0'3 \cdot 2 = 1440\ t > 167\ t \Rightarrow$ cumple

En una sección intermedia antes de 2ª alm.



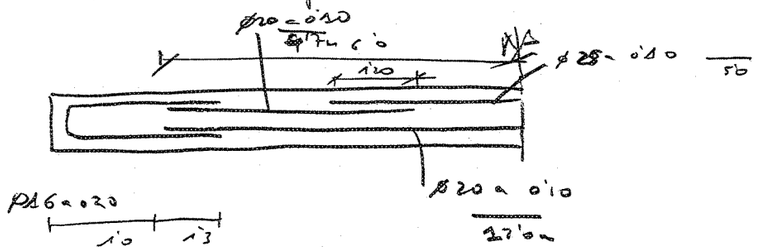
$V = 750'4 \quad 0'3 \cdot 5'17 + 460'5 = 1624'3\ t \Rightarrow 1624'3/9'55 = 170'14\ t/l$

$M = 750'4 \cdot 0'3 \cdot \frac{5'17^2}{2} + 460'5(2'6) = 4705'9\ mt.$

Con 2 cercos $\phi 20$ a 0'10 c.

$V_{resistido} = 62'83\ cm^2/l \quad 9'55\ m \cdot 3\ t/cm^2 = 1800\ t > 1624\ t \Rightarrow$ cumple

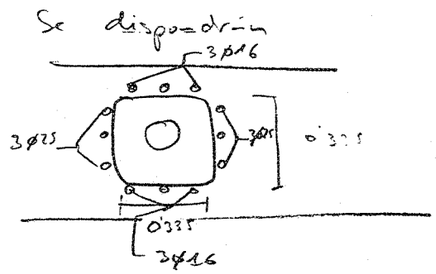
Esquema de armado de losa en zona de capitel "in situ", debido a tracción de positivo de losa



Calculo de armadura de anclaje.

Arrastre de anclajes positivos en el interior de losa.

Se dispondrán



$2 \times (3\phi 16 + 3\phi 25) = 41'51\ cm^2/$ anclaje

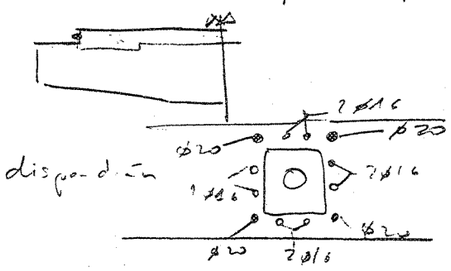
Carga de 1 anclaje $\Rightarrow 147.500\ t/m^2 \cdot 19 \cdot 14 \cdot 10^{-7} = 37'9\ t.$

Considerando los $41'1\ cm^2$/anclaje trabajando a $3\ t/cm^2 = 174'53\ t$

lo que supone un $\frac{174'5}{379} = 33\%$ de la fuerza de tracción. Valor admisible.

Arrastre de anclajes en extremo de capitel.

Dado que allí se producirá arrastre por efecto de flexión al no existir losa en zona adyacente a la losa del tablero se permite un menor porcentaje de arrastre



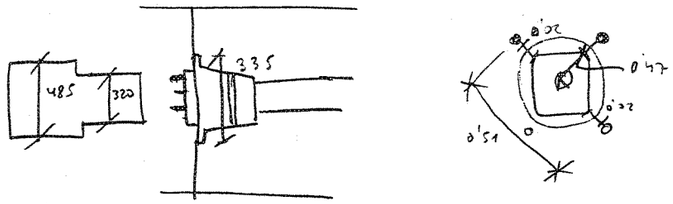
Se disponen $4 \times 2\phi 16 + 4 \times \phi 20 = 27'65\ cm^2$

$27'65\ cm^2 \times 3\ t/cm^2 = 95'95\ t$

Con un % de anclaje de arrastre de $\frac{95'95}{379} = 22'7\%$

Que lo consideramos admisible al ser arrastre por flexión exclusivamente, ya que al tener no hay losa delante.

Además así se pueden doblar las barras del ø16 para realizar las operaciones de tesado, mientras que las ø20 no estorban



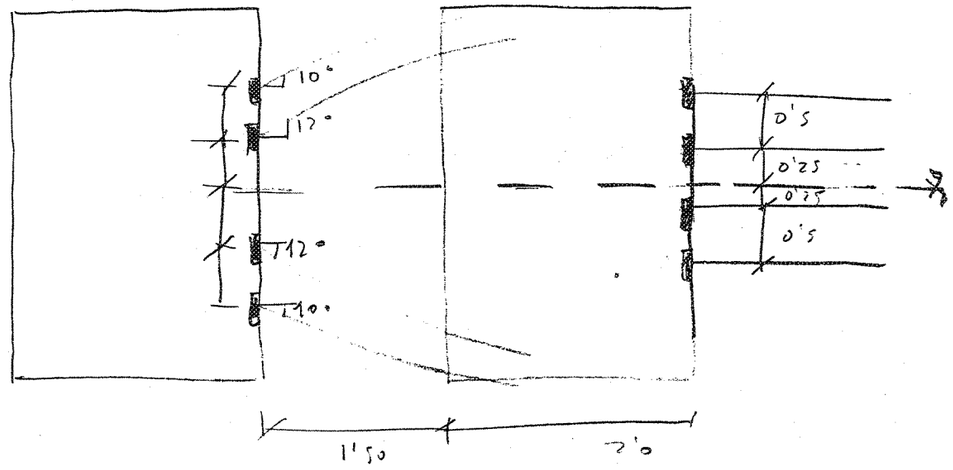
El hueco entre 4ø20 = 0'513 m > 0'485 m luego se puede introducir el gato con sin mover las ø20.

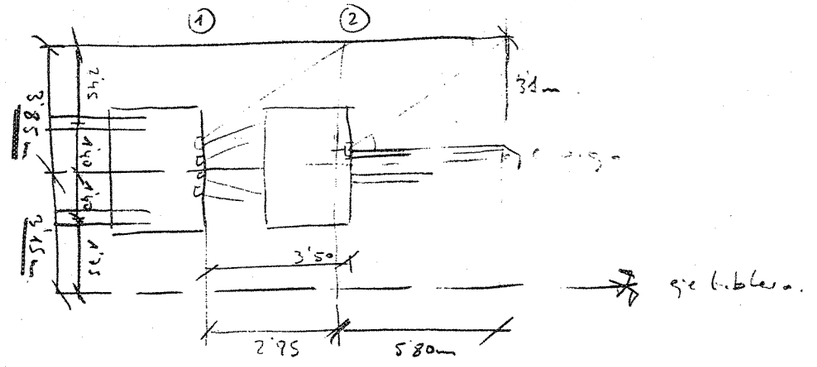
Las ø16 se doblarán para facilitar el tesado y el posicionado de gatos.

- Comprobación de difusión secundaria en anclajes en losa.

Zona anclajes activos.

La superficie y primaria es como en el replat "in situ"

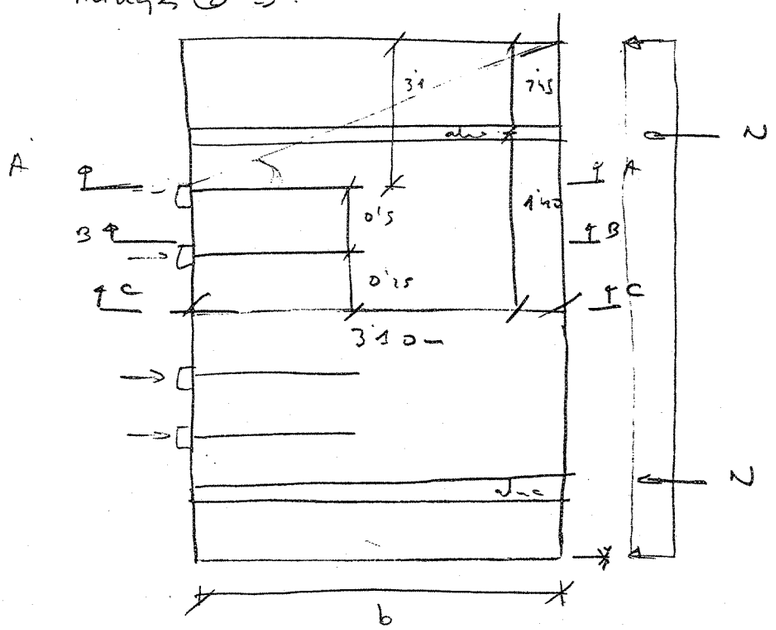




Los anclajes tensores se disponen en una longitud de 5'7m, a borde de losa de replat "in situ".

Los anclajes distancia ①, se disponen en una longitud de 4'0m aprox.

Andejas ② ⇒



T_1 = 416 t ×4 = 1664 t de 4 cadejas 19 ø 0,6"

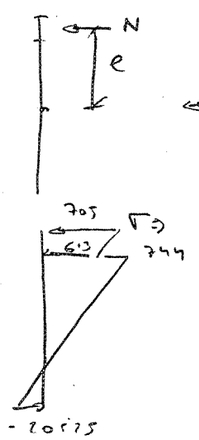
Co-

A = 3'422 m^2 W_s^{-1} = 0'2636 m^{-3}

I = 3'766 m^4 W_i^{-1} = -0'493 m^{-3}

$W_{i\,losa}^{-1}$ = 0'184 m^{-3}

$n_{losa} = \sqrt[3]{\frac{60+8}{30+8}} = 1'214$



$M = N \cdot e = N \cdot (0'793 - 0'15) = 0'643 \cdot 1664 = 1407'7$ t·m

$N = 1664$ t

$\sigma_{sup\,losa} = \frac{1}{1'214}\left(\frac{1664}{3'422} + 1407'7 \cdot 0'2636\right) = 705'1$ t/m^2

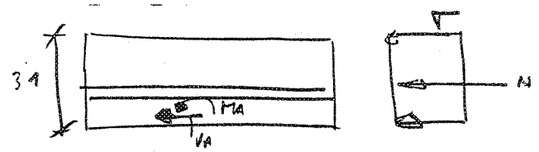
$\sigma_{i\,losa} = \frac{1}{1'214}\left(\frac{1664}{3'422} + 1407'7 \cdot 0'184\right) = 613'1$ t/m^2

$\sigma_{medio} = 659$ t/m^2

$\sigma_{inf} = \frac{1664}{3'422} + 1407'7 \cdot (-0'493) = -205'26$ t/m^2

$T_{media\ en\ losa} = 659$ t/m^2.

Comprobación de sección AA.



$V_A = 659$ t/m^2 · 0'3 · 3'1 m + N

Donde N ⇒ 659 · 0'3 · 7 = 1383'9 t / metro losa

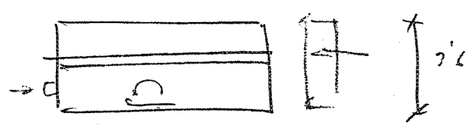
1664 t ⇒ de 4 cadejas de 4 Ud 19 ø 0,6"

1664 − 1383'9 = 280'1 t $280'1/2$ = 140'5 = N.

Luego
$V_A = 617'8 + 140'5 = 753'4$ t.

$M_A = 659 \cdot \frac{3'1^2}{2} + 140 \cdot 0'65 = 1040'9$ m·t.

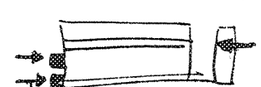
Sección BB.



$V_B = 659 \cdot 0'3 \cdot 3'6 + 140 - 416 = 435'7$ t.

$M_B = 659 \cdot 0'3 \cdot \frac{3'6^2}{2} + 140 \cdot (1'15) - 416 \cdot 0'5 = 1734'0$ m·t

Sección CC



$V_C = 659 \cdot 0'3 \cdot 3'85 + 140 - 7 \cdot 416 = 69$ t

$M_C = 659 \cdot 0'3 \cdot \frac{3'85^2}{2} + 140 \cdot (1'40) - 416 \cdot (0'75 + 0'75) = 1245'2$ t·m

Con un ancho de reparto de 5'80m ⇒

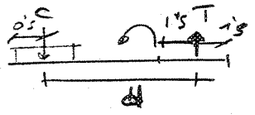
Máximo cortante ⇒ $\frac{751'4}{5'8} = 129'8$ t/m

Con el acero trabajando a $\sigma_s = 3000$ kgr/cm²

$\frac{129'8 \text{ t/m}}{3 \text{ t/cm}^2} = 43'29 \text{ cm}^2/\text{m}$.

Comprobación de flexión ⇒ M = 1245'2 mt

Para 5'8m ⇒



Con un brazo aprox d = 3'8m

$C = T = 1245'2/3'8 = 327'6$ t. ⇒ $T = 327'6 \text{ t}/3\text{m} = 109'2$ t/m

Con $\sigma_s = 3000$ kgr/cm² ⇒ $109'2/3 \text{ t/cm}^2 = 36'4 \text{ cm}^2/\text{m}$ → cumple.

Compresión máxima $0'6 f_{ck} = 0'6 \cdot 3000 = 1800$ t/m²

$1800 \cdot 0'3 \cdot 1\text{m} = 540 \text{ t} > 327'6$ ⇒ cumple con holgura.

Si se disponen $\phi 16$ a $0'10$ en capa inferior y $\phi 16$ a $0'20 + \phi 20$ a $0'20$ en capa superior: $45'86 \text{ cm}^2/\text{m}$ → cumple con el cortante y flexión

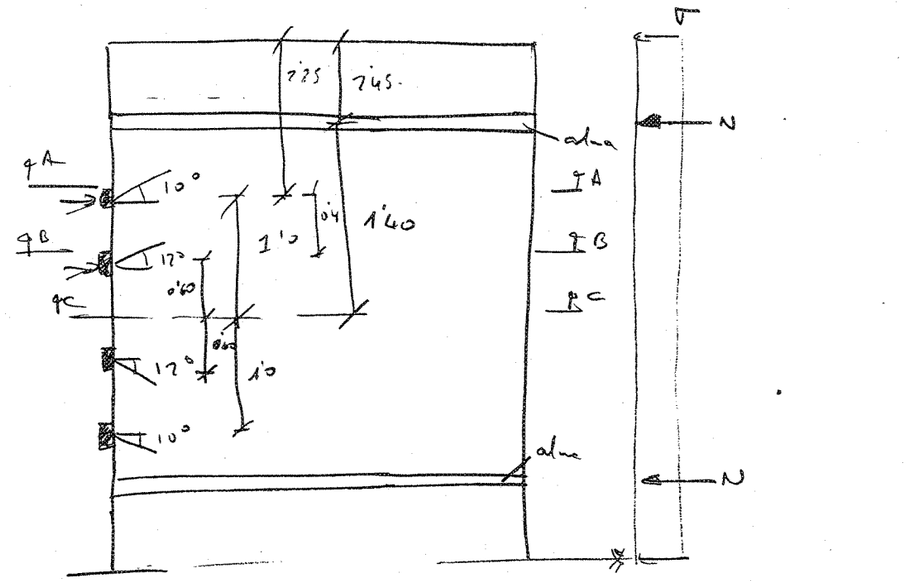
Los aros son capaces de coger el cortante de 140 t/ml ⇒

Con la cuantía dispuesta de $\phi 16$ a $0'10$ ⇒ $2 \cdot 20'106 \text{ cm}^2/\text{m}$ y aros.

Con $\sigma_s = 3$ t/cm² ⇒ 120'63 t/m ⇒ en 5'80m 699 t > 140

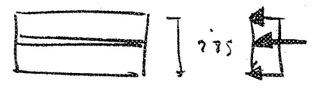
⇒ Muy cumple con holgura

Anclaje 1 : 8 tirafondos en una zona de 4'5 metros.



Con $\sigma = 660$ t/m² y N = 140 t/ml.

· Sección AA ⇒



$V_A = 660 \cdot 7'25 \cdot 0'3 + 140 = 707'3$ t.

$M_A = 660 \cdot \frac{7'25^2}{2} \cdot 0'3 + 140 \cdot 0'4 = 860'1$ mt

· Sección BB ⇒

$V_B = 660 \cdot 3'75 \cdot 0'3 + 140 - 416 = 367'5$ t

$M_B = 660 \frac{3'75^2}{2} 0'3 + 140(0'8) - 411 \cdot 0'4 = 991$ mt.

· Sección CC

$V_C = 660 \cdot 3'85 \cdot 0'3 + 140 - 416 \cdot 2 = 70'3$ t

$M_C = 660 \cdot \frac{3'85^2}{2} \cdot 0'3 + 140(1'4) - 416 \cdot (1 + 0'6) = 997$ mt

En una zona de 4'5m de difusión ⇒.

$V_A = 704'3\,t$ en 5m ⇒ $\frac{704'3}{4'5} = \underline{156\ t/m}$

$V_{cu} = V - V_{cm}$ Si se toma $V_{cm} = 2'5\ \tau_{rd} \cdot b_p \cdot d$ del EC-2

Con $\tau_{rd} = 34\ t/m^2$ para H-300

$V_{cm} = 2'5 \cdot 34\ 0'3 = \underline{25'5\ t/m}$

$V_{su} = 156 - 25'5 = \underline{131\ t/m} \Rightarrow$ Con $\sigma_s = 3000\ kp/cm^2 \Rightarrow$

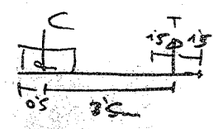
$A_s = \frac{131\,t}{3\,t/cm^2} = \underline{43'6\ cm^2/m}$

Con $\phi 16$ c 0'10 abajo y $\phi 16$ c 0'20 + $\phi 20$ c 0'20 arriba = $\underline{45'16\ cm^2/m}$

cuple

Comprobación de momentos:

Con $M = 997\ m\cdot t$ a 4'5m.



$T = C = \frac{997}{2'5m} = \underline{399\ t}$

$T = \frac{399\ t}{3m} = \underline{133'9\ t/m} \Rightarrow$ Con $\sigma_s = 3000\ kp/cm^2 \Rightarrow$

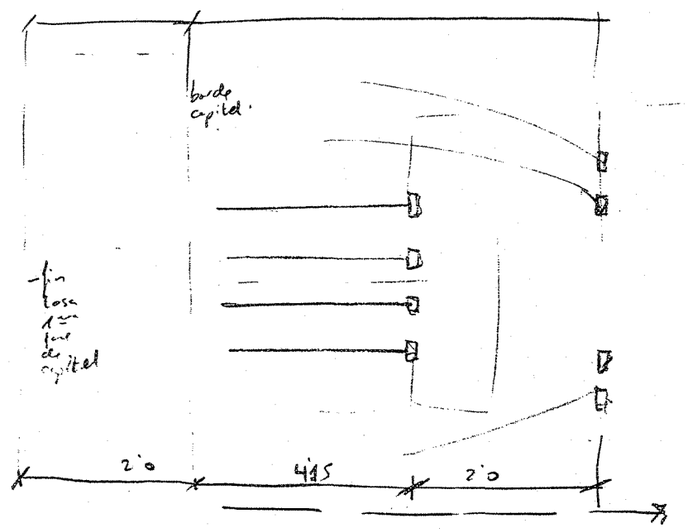
$A_s = \frac{133'9\,t}{3\,t/cm^2} = \underline{44'3\ cm^2/m} \Rightarrow$ Con la disposición cuple.

$C = 399\,t/m \Rightarrow$ Con $\sigma_c = 0'6 \cdot 3000 = 1800\ t/m^2$

$1800\ 0'3 = 540\,t > 399\,t \Rightarrow$ cuple con compresiones

Con $\phi 16$ a 0'10 abajo y $\phi 16$ c 0'20 + $\phi 20$ a 0'20 arriba cuple

- Zona de anclajes pasivos



Debido la proximidad se hace una disposición total en una zona de 9'5m

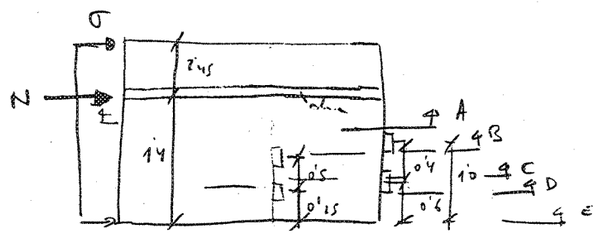
2+4 ud 19 por rodón ⇒ $N_{TOTAL} = 8.416\,t = \underline{3378\,t}$.

Se supone como en el caso de anclajes anteriores a la losa

σ medio en losa de 8 ud 19 ⇒ $660 \times 2 = \underline{1320\ t/m^2}$

N por ud. : 1'40 t.

Sección de anclaje.



Sección AA

$V_A = 1320 \cdot 0'3 \cdot 2'85 + 140 = \underline{1268'6\,t}$ en 8'15 m.

$M_A = 1320\ 0'3 \cdot \frac{2'85^2}{2} + 140 \cdot 0'4 = \underline{1664\,mt}$

Sección BB

$V_B = 1320 \cdot 0'3 \cdot 3'1 + 140 - 416 = \underline{951'6\ t}$

$M_B = 1320 \cdot 0'3 \cdot \frac{3'1^2}{2} + 140 \cdot 0'65 - 416 \cdot 0'25 = \underline{1889'8\,mt}$

Sección CC

$V_C = 1320 \cdot 0'3 \cdot 3'25 + 140 - 7 \cdot 416 = \underline{595t}$

$M_C = 1320 \cdot 0'3 \cdot \frac{3'25^2}{2} + 140 \cdot 0'8 - 416(0'4 + 0'25) = \underline{1974\,mt}$

Sección DD ⇒

$V_D = 1320 \cdot 0'3 \cdot 3'6 + 140 - 3 \cdot 416 = \underline{317'6\ t}$

$M_D = 1320 \cdot 0'3 \cdot \frac{3'6^2}{2} + 140(1'15) - 416(0'75 + 0'5 + 0'35) = \underline{\frac{2061'4\,mt}{4}}$

Sección EE.

$V_D = 1320 \cdot 0'3 \cdot 3'85 + 140 \cdot -4 \cdot 416 = 0'6\,t$

$M_D = 1320 \cdot 0'3 \cdot \frac{3'85^2}{2} + 140 \cdot 1'4 - 416(1 + 0'6 + 0'75 + 0'75) = \underline{2049\,mt}$

Luego con $V = 1768'6\ t$ en 8'15 m ⇒ $\underline{155'65\ t/m}$

$V_{cu} = 75\ \tau_{cd} \cdot b = 7'5 \cdot 34\ t/m^2 \cdot 0'3 = 75'5\ t/m$

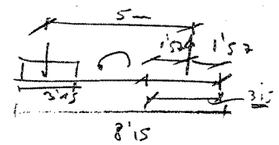
$V_{su} = V - V_{cu} = 155'65 - 75'5 = \underline{130'1\ t/m} = A_s \cdot \sigma_s$

Con $\sigma_s = 3000\ kg/cm^2$ ⇒ $A_s = \frac{130'1\ t/m}{3\ t/cm^2} = \underline{43'36\ cm^2/m}$.

Con $\phi 16$ a 0'20 + $\phi 20$ a 0'20 arriba y $\phi 16$ a 0'10 abajo = 45'86 cm^2/m cumple

Comprobación de momentos.

Para $M = \underline{2061'4\,mt}$



$C = T = \frac{M}{b} = \frac{2061'4}{5} = \underline{412'28\ t}$

$T = 412'28\ t = A_s \cdot \sigma_s$ ⇒ Con $\sigma_s = 3000\ kg/cm^2$ ⇒ $A_s = \frac{412'28\ t / 3'15\ m}{3\ t/cm^2}$

$A_s = 43'62\ cm^2/m$ en 3'15 m ⇒ Sí cumple con la armadura dispuesta.

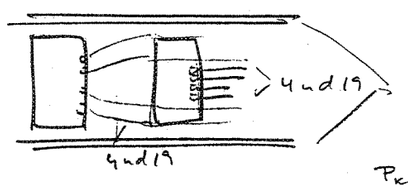
$C = 412'28\ t / 3'15\ m = 130'1\ t/m$ con ⇒

$\sigma_{c,max} = 0'6 \cdot 3000 = 1800\ t/m^2$.

$C_{max} = 1800 \cdot 0'3 = 540\ t/m > 130'1$ ⇒ cumple con holgura.

Luego con la armadura de $\phi 16$ a 0'20 + $\phi 20$ a 0'20 arriba y $\phi 16$ a 0'20 abajo cumple.

En las zonas extremas cercanas a los bordes se colocará un refuerzo capaz de soportar tracciones del 10% de la fuerza de tesado, por cada.



envainas de refuerzo.

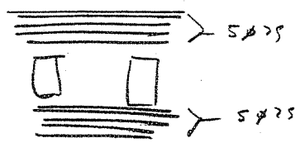
Pci 1 ud 19 = 19 · 14·10⁻⁴ · 14750 = 379 t

4 x 379 = 1516 t

0'10 · 1516 t = 151'6 t Con σs = 3000 kg/cm²

151'6 t / 3 t/cm² = 50 cm² = 10 ø25. 5 en cada cara

Se colocarán 5ø25 arriba y abajo de refuerzo.



17.8-Anclajes de unidades de tabla inferior y almas.

- Armadura superficial:

$$A_s = \frac{0'04 \cdot P_k}{7'1} = \frac{0'04 \cdot 216}{7'1} = 1'27\ cm^2 \Rightarrow 4\text{ø}16 \text{ por anclaje}$$

- Difusión primaria.

En alma ⇒ $A_s = 0'25\ P_k \left(1 - \frac{a}{d}\right) / 7'7$

Con a = 0'34 y d = 0'40.

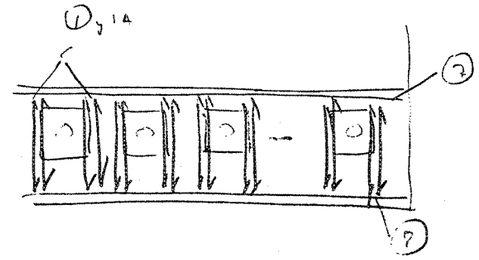
$A_s = 0'25 \cdot 416 \left(1 - \frac{0'34}{0'4}\right) / 7'7 = 5'77\ cm^2$/anclaje ⇒ 2 capas de 4ø12 = 9'05 cm².

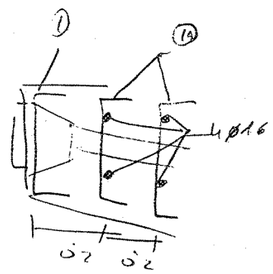
En transversal:

$A_s = 0'25 \cdot 416 \left(1 - 0'34/0'4\right) / 7'7 = 5'77\ cm^2$/anclaje

Con la armadura dispuesta de ø20 c 0'20 + ø12 c 0'20 alternos es suficiente.

Tabla inferior.



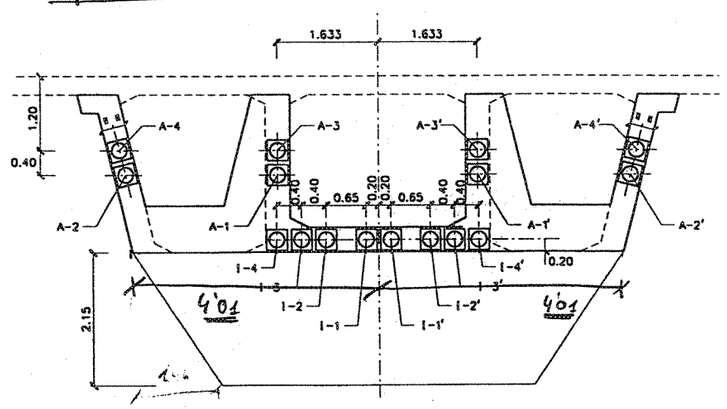


① ⇒ 4ø16 superficie

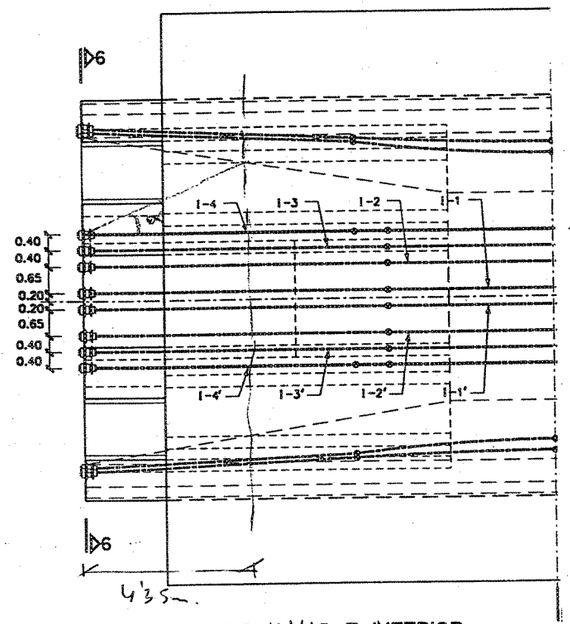
1A ⇒ 4ø12 por anclaje

Anclaje de unidades en tabla inferior de capiteles "in situ".

Difusión vertical.



Tendones I-1 a I-4 y I-1' a I-4'



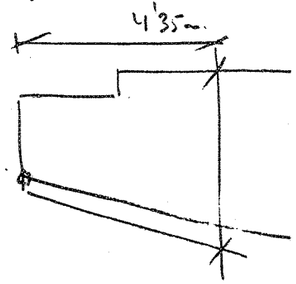
$tg\,\alpha = 0'666$

1'65 1'25 0'85 0'2

POSTESADO DE ALMAS E INFERIOR
DE CAPITELES "IN SITU". PLANTA

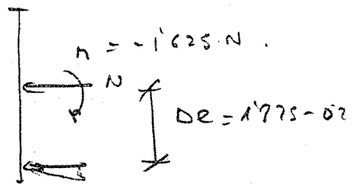
Se comprueba a 2m de la sección de difusión de pretensado de tendones inf.

Se difunde a la sección situada a 4'35m del borde.

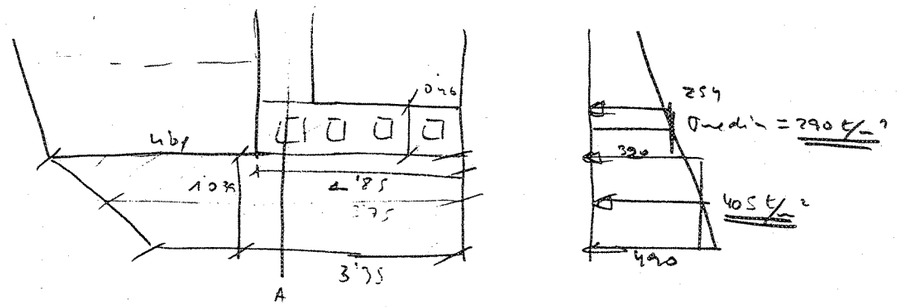


$A = 8'698\ m^2$ $\quad y_{cSup} = 2'059$ $\quad W_S^{-1}(m^{-3}) = 0'1747\ m^{-3}$

$I = 1\,c'51\ m^4$ $\quad y_{cInf} = 1'825$ $\quad W_i^{-1}(m^{-3}) = -0'1705\ m^{-3}$



Con $N = 4 \cdot 416 = 1664\ t$ $\quad M = -270\ mt$



Sección crítica a AA' ⇒ (El resto de almas es menos desfavorable)

$V = (3'75 - 1'65)\,m \cdot 1'03\,m \cdot 405\,t/m^2 = \underline{\underline{883\,t}}$

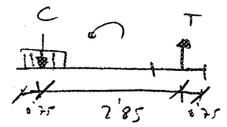
Con 4'35m con $\phi 20 = 0'20 + \phi 25 = 0'20$ en ambos casos.

⇒ $A_{s\,disp} = 3'50\,cm^2/4'35m \times \sigma_s = 3\,t/cm^2 = 1050\,t > 883\,t$

⇒ cumple con la armadura dispuesta.

El resto de almas = γ pequeño y abierto de sobra con
c Ø20 a 0'20 = c Ø25 a 0'20.

$M_A = \frac{(3'75-1'15)^2}{2} \cdot 1'039 \cdot 405 = \underline{927\ mt.}$



$C = T = \frac{M}{b} = \frac{927}{2'85} = 325t$

En 1'5m $T = 325/1'5 = \underline{216t.}$

Con Ø20 + Ø25 a 0'20 cada una → 40'25 cm²/cm x 2 = 80'5 cm²/2 ramas

Con $\bar{\sigma}_s = 3\ t/cm^2$ ⇒

80'5 · 3 = 241 t/m 1'5m ⇒ > 216 ⇒ cumple.

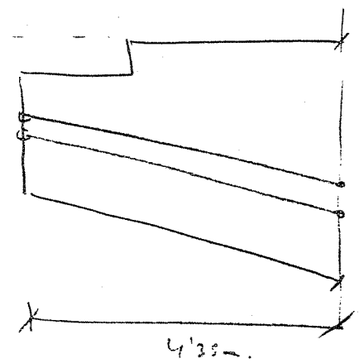
C = 325t en 1'5m

Con $\bar{\sigma}_{max} = 0'6 \cdot 3000 = \underline{1800\ t/m^2}$. en canto de 1'039m

$C = 180 \cdot 1'039 \cdot 1'5m = 2805\ T >> 325$ ⇒ cumple de sobra.

No es necesario reforzar, con la armadura dispuesta es suficiente.

Comprobación de difusión secundaria en anclaje de almas.



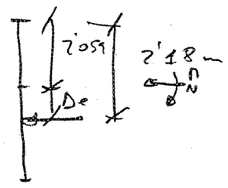
Si difundimos a 4'35m

$A = 8'698\ m^2$ $I = 16'51\ m^4$ $y_{0S} = 2'059\ m$ $y_{0i} = 1'875$

$W_s^{-1}(m^{-3}) = 0'1247\ m^{-3}$

$W_i^{-1}(m^{-3}) = -0'1105\ m^{-3}$

Con $N = 1664\ t.$ $M = 0'1201 \cdot N = \underline{-199\ mt.}$

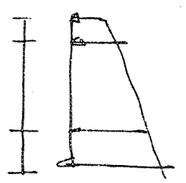


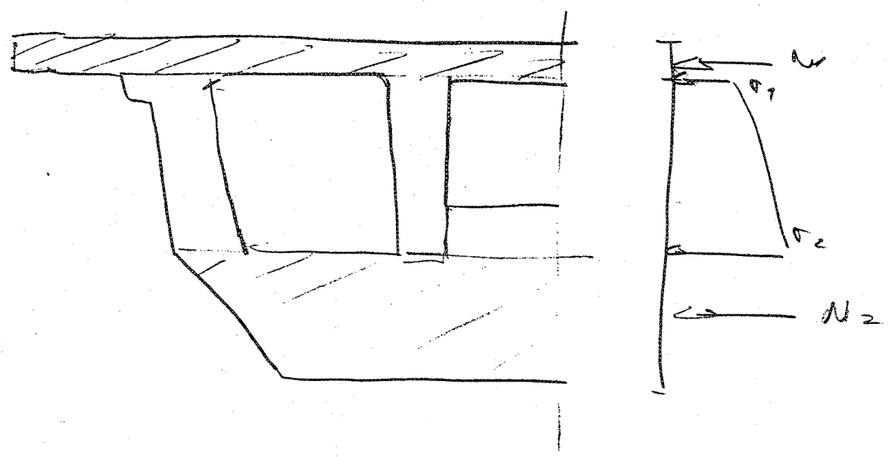
$De = \underline{0'1201m.}$

$\bar{\sigma}_{s\ losa} = \frac{1664}{8'698} - 199 \cdot 0'1247 = \underline{166\ t/m^2}$

$\bar{\sigma}_{i\ losa} = \frac{1664}{8'698} - \frac{199}{16'51}(2'059 - 0'5) = \underline{170'1\ t/m^2}$

$\bar{\sigma}_{i\ cajón} = \frac{1664}{8'698} + 199 \cdot 0'1105 = \underline{213'29\ t/m^2}$

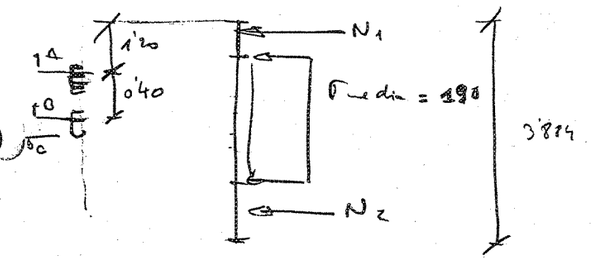




$N_{tierra} = 1'6\,t/m^2 \cdot 0'3 \cdot 7 = 35'28\,t \Rightarrow$ Por l. de $\underline{176'5\,t}$.

$N_{rodillo\ inf} = 200\,t/m^2 \cdot 1'039 \cdot 3'75 = \underline{780\,t} \Rightarrow$ Por l. de $= \underline{390\,t}$

Luego por alma $\Rightarrow$



Por alma $\Rightarrow$ Sección AA $\Rightarrow$ Por alma.

$V_A = 176'5 + 190 \cdot 0'90 \cdot 0'4 = \underline{249'9\,t}$

$M_A = 176'5\,(1'20 - 0'15) + 190 \cdot 0'4 \cdot \frac{0'9^2}{2} = \underline{216'1\,mt}$

Sección BB

$V_B = 176'5 + 190 \cdot 1'3 \cdot 0'4 - 416 = \underline{-140'7\,t}$

$M_B = 176'5\,(1'6 - 0'15) + 190 \cdot \frac{1'3^2}{2} \cdot 0'4 - 416 \cdot 0'4 = \underline{153\,mt}$

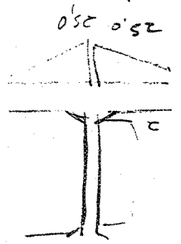
Sección CC $V_C = 390 + 190 \cdot 0'4\,(2'28 - 1'03) \cdot 0'4 = \underline{485\,t}$

$M_C = 390\,(2'28 - \frac{1'33}{2}) + 190 \cdot 0'4\,(1'25)^2 = \underline{747\,mt}$

Con cuantía de alma $c\,\phi 20 \text{ a } 0'20 + c\,\phi 25 \text{ a } 0'20$ por alma en $4'35\,m \Rightarrow \underline{350'18\,cm^2}$

Con $\sigma_s = 3\,t/cm^2 \Rightarrow A_s \cdot \sigma_s = \underline{1050\,t/m^2}$. $\Rightarrow$ cuplen en losa superior e inferior el resto con hidpra.

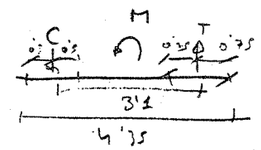
En losa superior con $\phi 20 - 0'10 + \phi 20 \text{ c } 0'10$ en $4'35\,m = \underline{273\,cm^2}$



$3\,t/cm^2 \cdot 273 = 819\,t$ por l. de cuantía.

La cuantía a colocar en alma al ser $\underline{V_c = 485\,t}$.

El momento de $747\,mt \Rightarrow$



$T = C = \frac{747}{3'1} = 240\,t$ $\quad T = 240\,t/1'5\,m = 160\,t/ml$.

Con $c\,\phi 20 - 0'20 + c\,\phi 25 - 0'20 = 80'50\,cm^2/ml \rightarrow \sigma_s = 3\,t/cm^2 = \underline{241\,t/ml}$

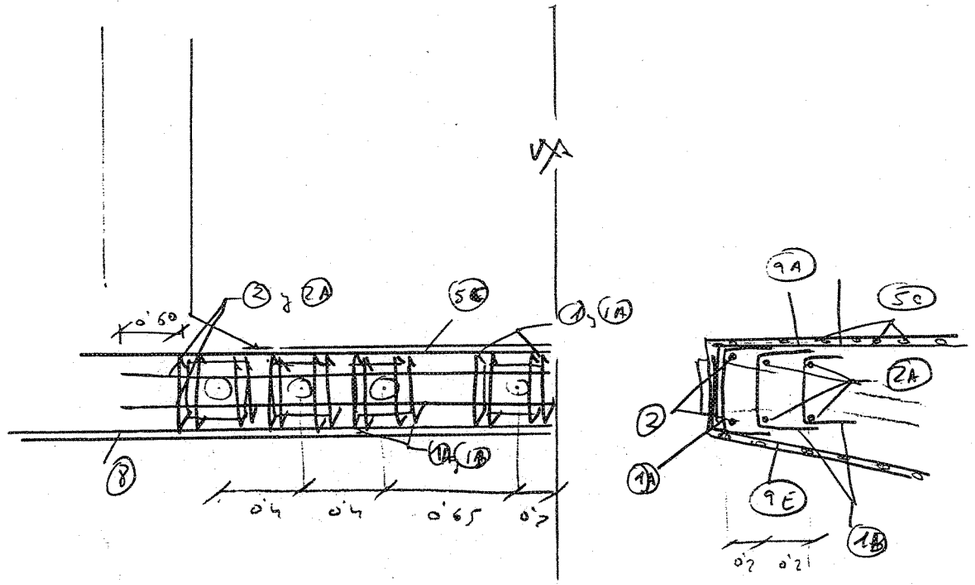
$241 > 160\,t/ml \Rightarrow$ cuple final.

$C = 747\,t$ en $1\,m$ con $\sigma_c = 0'6 \cdot 4000 = 2400\,t/m^2$

$2400 \cdot 0'4 \cdot 1 = 960\,t \gg 740\,t \Rightarrow$ cuple

$\Rightarrow N_0$ en menos sobrará cuantía por flexión rondinal.

Andajes de tabla inferior



(1A) 4 ø16 por andaje 2 a cada lado [0'60 / 0'60]

(1B) 2 capas de 4 ø12 por andaje 2 a cada lado [0'45 / 0'45]

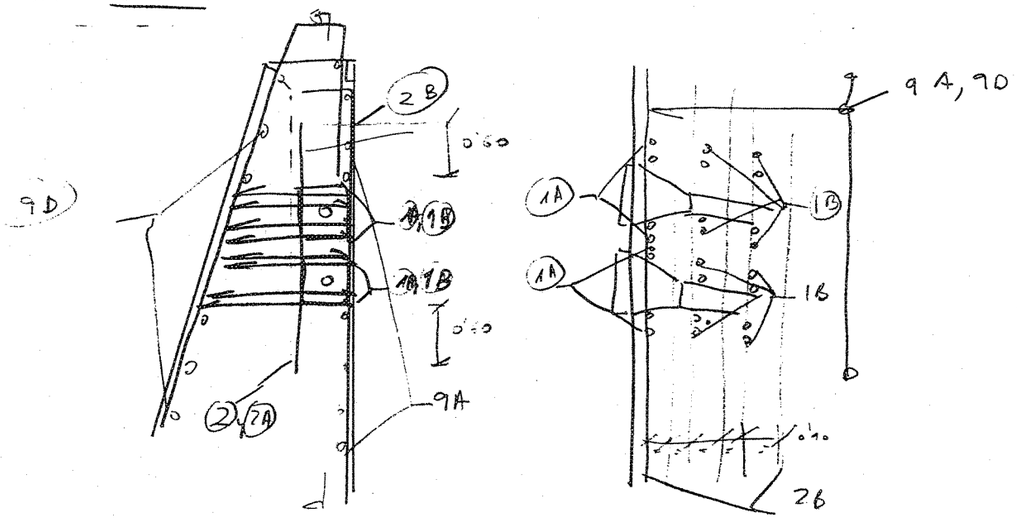
(2) 1 capa de 2 ø16 por andaje.

(2A) 2 capas de 2 ø16 por andaje.

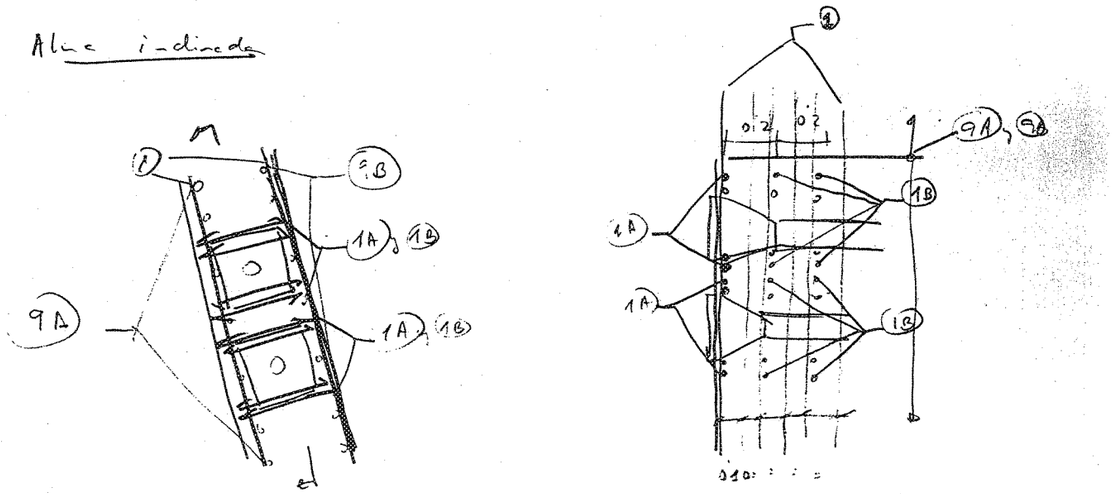
Armaduras 5C y 8, 9A y 9E según el plano 7 Hoja 1.

Andajes de almas

Alma vertical



Alma inclinada



(2) 2 ø16 por andaje

(2A) 2 capas de 2 ø16 por andaje

(1A) 4 ø16 por andaje 2 a cada lado [0'6 / 0'6]

(1B) 2 capas de 4 ø12 por andaje 2 a cada lado [0'45 / 0'45]

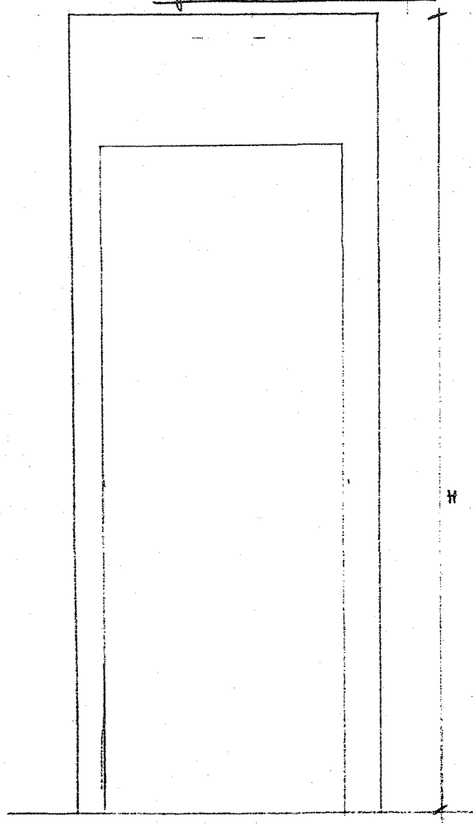
Armaduras 9A, 9D, 2B, 1, 9A y 9B según el Plano 7 hoja 1

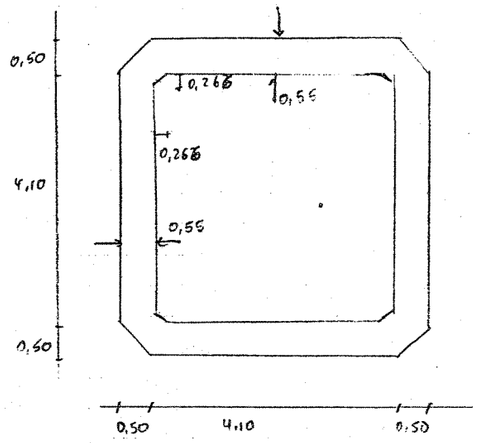
2.3.18. Pilas y cimentaciones

18. PILAS Y CIMENTACIONES

Comprobación de Pilas P-33 y P-34.

Definición geométrica





	H
P33	12,963
P34	12,621

$A = 9,651\ m^2$

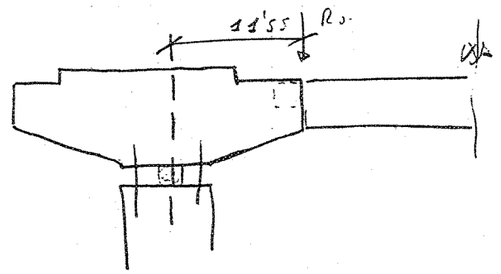
$I_y = I_z = 32,313\ m^4$

$i = 1,811\ m$

Se comprueba un armado de 6Ø25 pml perimetral en cada cara en sección de base y 6Ø20 pml en secciones media y superior

Estados de carga que descargan el peso en cabeza de pilas

Colocación de vigas atlas.



Peso/ml de 1 viga = 4'163 t/ml. Con una central de 34'9 —

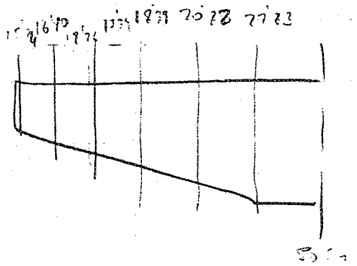
Ro 1 viga = 72'644 t

Ro 2 vigas = 145'2887 t

• Momento de desequilibrio = 145'2887 × 11'55 = 1678'08 mt.

Para comprobar el estado límite de Equilibrio

Peso capitel "in situ"



Pro = $\frac{(16'20 + 15'24)}{2} \cdot 1$ = 16'02

$\frac{(16'20 + 18'36)}{2} \cdot 1$ = 17'53

$\frac{(15'24 + 18'36)}{2} \cdot 1'35$ = 39'633

$\frac{(18'36 + 20'28)}{2} \cdot 2'35$ = 46'142

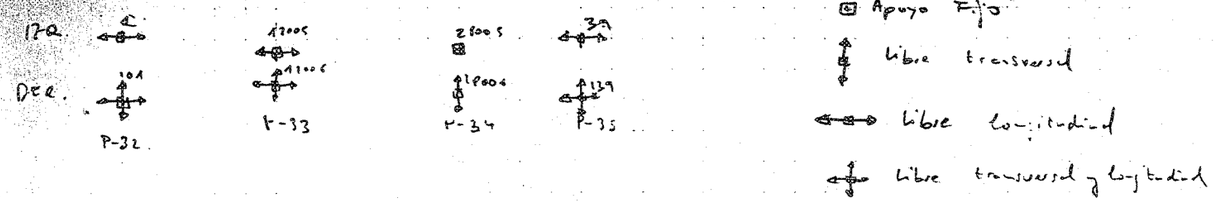
$\frac{(20'28 + 22'23)}{2} \cdot 2'35$ = 50'266

50'54 · 2'55 = 128'877

298'468 t

Total = 2 tableros × 2 nervios × 298'468 = 1193'9 t

REACCIONES.



• Reacciones verticales características en t

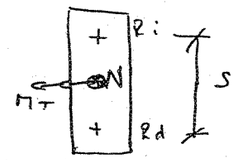
Nº	Nom	Tren pp total	Cm Total	+/- Bdelo Δ33%	Envolvente Trenes. Envolvente tren N.I Rmax	Rmin	Env. UD. Rmax	Rmin	5c PASEOS N.I Rmax	Rmin	N.D Rmax	Rmin
P-32 izq.	1	142'5	118'32	+/-23'9	209'34	-36'0	69'7	-33'5	16'3	-1'9	0'69	-5'2
P-32 der.	101	142'5	134'05	+/-23'9	71'9	-33'79	199'4	-35'4	0'69	-5'2	16'3	-1'9
P-33 izq	1200s	938'9	409'37	+/-94'66	1240'0	-46'97	16'43	-315'3	133'64	-2'8	0'01	-91'2
P-33 der	1200b	938'9	590'4	+/-94'66	16'12	-417'1	1123'01	-45'8	0'01	-91'7	133'64	-2'8
P-34 izq	2800s	938'9	409'37	+/-94'66	1240'0	-46'97	16'43	-315'3	133'64	-2'8	0'01	-91'2
P-34 der.	2800b	938'9	590'4	+/-94'66	16'12	-417'1	1123'01	-45'8	0'01	-91'7	133'64	-2'8
P-35 izq	39	142'5	118'32	+/-23'9	209'34	-36'0	69'7	-33'5	16'3	-1'9	0'69	-5'2
P-35 der	139	142'5	134'05	+/-23'9	71'9	-33'79	199'4	-35'4	0'69	-5'2	16'3	-1'9

Gradiente (t)

Nº	
1	6'98
101	6'98
1200s	-6'98
1200b	-6'98
2800s	-6'98
2800b	-6'98
39	6'98
139	6'98

En las hipótesis de sobrecarga con pesos ⇒
Dado que el modelo de pesos de envolventes nos da reacciones concomitantes se procede a descargar cada uno ⇒.

En cada pila.



$\left\| \begin{matrix} M_T = N \cdot e \ (-t) \\ N\,(t). \end{matrix} \right.$ Esfuerzos en cabeza de pila ⇒

$R_{izq} = \frac{N}{2} + \frac{M_T}{S} = N\left(\frac{1}{2} + \frac{e}{S}\right)$ con e ⇒ excentricidad en t.

$R_{dcha} = \frac{N}{2} - \frac{M_T}{S} = N\left(\frac{1}{2} - \frac{e}{S}\right)$

Se analizará el caso de máxima reacción por un lado.

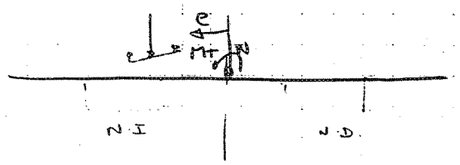
→ Máxima Ri:, $\underline{\underline{R_{i\,max}}} = N\left(\frac{1}{2} + \frac{e}{S}\right)$ ⇒ Con e se despeja

$N = \frac{R_{i,max}}{\left(\frac{1}{2} + \frac{e}{S}\right)}$

Rd, coincidente con Ri ⇒ $\underline{\underline{Rd_{coinc}}} = N\left(\frac{1}{2} - \frac{e}{S}\right) = \frac{R_{i,max}\left(\frac{1}{2} - \frac{e}{S}\right)}{\left(\frac{1}{2} + \frac{e}{S}\right)}$

y el caso simétrico respecto del mismo derecho.

Sobrecarga en nudo izquierdo



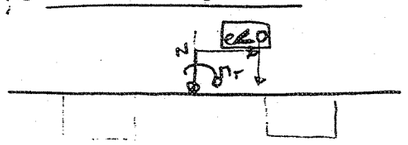
$\circlearrowright M_T > 0$

$R_i = N\left(\frac{1}{2} + \frac{e}{s}\right)$

$R_d = N\left(\frac{1}{2} - \frac{e}{s}\right)$

$\Rightarrow \begin{cases} N = R_{i\,max} \Big/ \left(\frac{1}{2} + \frac{e}{s}\right) \\ M_{T_{max}} = N \cdot e \end{cases}$; $\boxed{R_{d_{max}} = N\left(\frac{1}{2} - \frac{e}{s}\right) = \frac{R_{i\,max}\left(\frac{1}{2} - \frac{e}{s}\right)}{\left(\frac{1}{2} + \frac{e}{s}\right)}}$

Sobrecarga en nudo derecho



$\circlearrowright M_T < 0$

$R_i = N\left(\frac{1}{2} + \frac{e}{s}\right)$

$R_d = N\left(\frac{1}{2} - \frac{e}{s}\right)$

$\Rightarrow \begin{cases} N = R_{d,max} \Big/ \left(\frac{1}{2} - \frac{e}{s}\right) \\ M_{T_{max}} = N \cdot e \end{cases}$; $R_{i\,max} = N \dfrac{\left(\frac{1}{2} + \frac{e}{s}\right)}{\left(\frac{1}{2} - \frac{e}{s}\right)}$

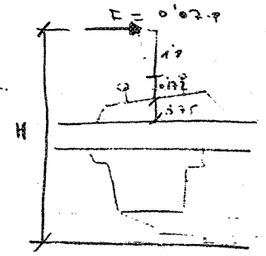
Cada pila tendrá la hipótesis de:

- $N_{max} \Rightarrow +N_{max}$ izq y N_{max} derecha
- $M_{T\,max} \Rightarrow$ N_{max} izq. ó N_{max} derecha → el que más M_T de

← e>0 e<0 →

		e_{via}	$e_{tripido}$	e_{puente}	$e_{frenado/tr}$	$e_{SINTC.}$
	N I				p-32,35 p-33,p-34	
	S R	2'35 m	0	+ 0'1918 m	-0'39 / -0'54	2'542 m
	R Int.	"	-0'3 m	"	"	2'7418
$M_{T\,max}$ +	R Ext.	"	+0'3 m	"	"	2'942
	N D.					
	S R	-2'35 m	0	+0'1918 m	"	-2'1582
	R INT	"	+0'3	+ "	"	-2'4582
$M_{T\,max}$ -	R EXT	"	-0'3	+ "	"	-2'7582

Fte centrífuga



$M_T = H \cdot 0'07 \cdot p \Rightarrow$ H en apoyo izquierda = 1'8 + 0'177 + 0'75 + 7'85 = 5'572 m

H en apoyo extrado $\Rightarrow$ 1'8 + 0'177 + 0'75 + 5'0 = 7'772 m

M_T en apoyo izqd $\Rightarrow e = 5'572 \cdot 0'07 = -0'39$ m < 0 →

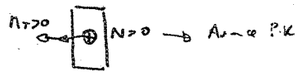
M_T en apoyo extd $\Rightarrow e = 7'772 \cdot 0'07 = -0'54$ m

La fte centrífuga no le modificará a los casos con $M_T < 0 \Rightarrow$ Hip $M_{T\,min}$.

N>0 Compresión.

Resumen de reacciones en pilas.

	P-32 y P-35 N(t)	P-32 y P-35 M_T(mt)	P-33 y P-34 N(t)	P-33 y P-34 M_T(mt)
pp (total)	285	0	1973	0
cm	252'4	-49'55	999'7	-276'35
Sobrecarga 30% total	±47'8	0	±189'32	0
Gradiente	13'96	0	-13'96	0
SC Hip 1 Nmax	441'4	214'3	1510'6	757'65
Hip 2 Mtmax	180'3	773'3	776'7	222'8
Hip 3 Mtmin	185'3	-727'5	728'1	-733'09
Hip 4 Nmin	-81'6	-13'53	-65'47	-9'10
SC Pasos				
H1 Nmax	27'69	0	93'45	0
H2 Mtmax	10'02	74'75	45'75	78'47
H3 Mtmin	10'02	-74'75	45'75	-28'47
H4 Nmin	-2'65	0	-1'96	0



Frenado - Interacción via estructura

Pila fija P-34.

- Hipótesis prisma Frenado en 2 vías: F_L = 308 t · 2 = 616 tn a f.d.
- Interacción térmica via estructura: 47'3 t/vía ×2 = 94'6 tn f.d

Si el frenado es concomitante con la interacción térmica se reduce por 0'75.

- Fza centrífuga. (Supl. 1 PF-75)

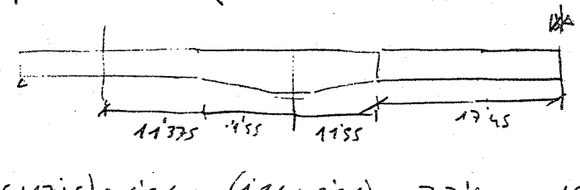
F_T = 48'03 t_{x2} (P-34 y P-33)

- Viento transversal

+ Viento con sc (se debe reducir un 50%)

q = 176 t/ml en zona de 7'85 m de canto.
q = 2'314 t/ml " " " 5 m " "

En pila P-32 y P-34.



$(11'375+17'45)\cdot 1'106 + \left(\frac{1'176+2'314}{2}\right)\cdot 23'1 = 1012'79$ t (reducir un 50%)

+ Viento sin sc

q = 1'105 t/ml en zona de 7'85 m de canto.
q = 1'555 t/ml en zona de 5 m de canto.

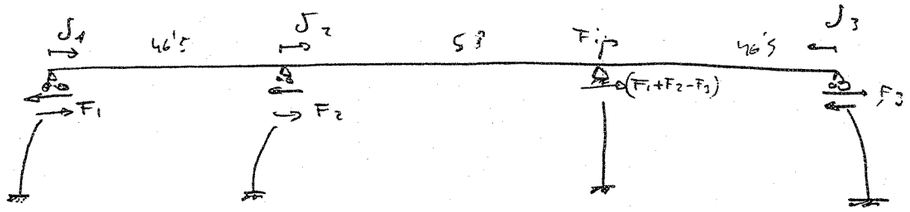
$F_T = 1'105(11'375+17'45) + \left(\frac{1'555+1'105}{2}\right)\cdot 27'1 = 672'57$ t

Sobre pila ⇒ $q_{viento} = 0'213$ t/m² en P-33 y P-34

Con ancho de 5'1 m ⇒ q = 0'213 · 5'1 = 1'086 t/ml

IDEAM

Teflones



) Con $F_i = 3 \cdot \frac{E_m \cdot I_{pila}}{H_i^3} \cdot \delta_i$

$E_m = \frac{E_o}{(1+\psi \cdot \varphi)} = \frac{E_o}{(1+0'7 \cdot 2'3)} \simeq \underline{0'42\ E_o}$

$\delta_i = L_i \cdot \varepsilon$

Pila 1 ⇒ $L_1 = 45'8 + 5'8 = 10'3$ m

Pila 2 ⇒ $L_2 = 5'3$ m

Pila 3 ⇒ $L_3 = 4'6'8$ m

	H_i	I_i
	11'53 m	10'16 m⁴
	17'963 m	3'32 m⁴
	11'25 m	10'16 m⁴

Con $E_m = 0'42 \cdot E_o$ y $E_o = 150000 \cdot \sqrt[3]{30+8} = \underline{2857679'1\ t/m^2}$

	$\frac{3 E_m I}{L^3}$	$F_i = K_i \cdot \delta_i$	F_i (t	$\mu \cdot N_{cp}$
P-32	56875'1	$5'898445 \cdot \varepsilon$	4128'91	$0'05 \cdot 5732'2 = 286'9$
P-33	129.168'5	$749'174'5 \cdot \varepsilon$	5744'2	$0'05 \cdot 7877'7 = 1439$
P-35	11174'5	$2801792'1 \cdot \varepsilon$	1961'2	286'9

Con $\varepsilon = 0'7$ mm/m $= \underline{7 \cdot 10^{-4}}$

Como en todos los casos $F_i > \mu \cdot N_{cp}$ sólo puede tener el 5% del axil de cargas permanentes.

IDEAM

Luego

$F_1 = \mu \cdot N_{cp_2} = 0'05 \cdot (147'5 + 118'32 + 142'5 + 134'35 + 73'92) = 29'25$ t (incr. 30%)

$F_3 = \mu \cdot N_{cp_3} = F_1 = 29'25$ t

$F_2 = \mu \cdot N_{cp_2} = 0'05 \left(2 \cdot \underset{pp}{938'9} + \underset{cm}{590'74} + \underset{(incr. 30\%)}{409'72} + 2 \cdot 94'66 \right) = \underline{153'34\ t}$

Sobre la pila fija se tomará del lado de la seguridad

$F = 1'1 (F_1 + F_3) - 0'9\ F_2 = \underline{174'52\ t}$.

Pila	F_L (t/pila) Teflones
P-32	29'25 t
P-33	153'34 t
P-34	174'52 t
P-35	29'25 t

Pila fija

Como en la pila fija 174'52 t de Teflon ⇒ $\mu \cdot \xi N_p > 1VE$ al ser $1VE = 94'66$ t se tomará para el cálculo la acción del rozamiento sobre teflones al ser más desfavorable que la interacción via calzadera.

Luego $F_L = \underline{174'52\ t}$ en Pila P-34.

CARGAS				REACCIONES EN APOYOS (Tn.)					
		1	101	1200	12006	28005	28006	39	139
		p-32IZQ	p-32DER	p-33IZQ	p-33DER	p-34IZQ	p-34DER	p-35IZQ	p-35DER
Peso propio total		142.50	142.50	938.90	938.90	938.90	938.90	142.50	142.50
Cargas muertas.		118.32	134.05	409.32	590.40	409.32	590.40	118.32	134.05
Incr. balasto +/-30%		23.90	23.90	94.66	94.66	94.66	94.66	23.90	23.90
Gradiente		6.98	6.98	-6.98	-6.98	-6.98	-6.98	6.98	6.98
Env.Tren B Nervio Izq	max	209.34	71.90	1240.00	16.12	1240.00	16.12	209.34	71.90
	min	-36.00	-33.79	-46.79	-417.10	-46.97	-417.10	-36.00	-33.79
Env.Tren B Nervio der	max	69.70	198.40	16.43	1123.04	16.43	1123.04	69.70	198.40
	min	-33.50	-35.40	-315.30	-45.80	-315.30	-45.80	-33.50	-35.40
Tren B S.R. N.I.	max	195.80	68.05	1089.45	11.26	1089.45	11.26	195.80	68.05
	min	-35.41	-33.55	-45.65	-283.04	-45.65	-283.04	-35.41	-33.55
Tren B R.I. N.I.	max	185.76	71.88	997.02	16.12	997.02	16.12	185.76	71.88
	min	-34.49	-32.84	-44.20	-215.08	-44.20	-215.08	-34.49	-32.84
Tren B R.E. N.I.	max	209.34	57.70	1239.96	5.44	1239.96	5.44	209.34	57.70
	min	-36.00	-33.79	-46.97	-417.09	-46.97	-417.09	-36.00	-33.79
Tren B S.R. N.D.	max	68.35	187.91	13.06	1030.34	13.06	1030.34	68.35	187.91
	min	-32.62	-34.35	-249.43	-44.18	-249.43	-44.18	-32.62	-34.35
Tren B R.I. N.D.	max	69.64	175.91	16.43	936.25	16.43	936.25	69.64	175.91
	min	-31.32	-32.86	-192.16	-42.05	-192.16	-42.05	-31.32	-32.86
Tren B R.E. N.D.	max	65.07	198.37	8.87	1123.04	8.87	1123.04	65.07	198.37
	min	-33.46	-35.40	-315.30	-45.78	-315.30	-45.78	-33.46	-35.40
Env S.C. Paseos N Izq	max	16.30	0.69	133.64	0.01	133.64	0.01	16.30	0.69
	min	-1.90	-5.20	-2.80	-91.70	-2.80	-91.70	-1.90	-5.20
Env S.C. Paseos N Der	max	0.69	16.30	0.01	133.64	0.01	133.64	0.69	16.30
	min	-5.20	-1.90	-91.70	-2.80	-91.70	-2.80	-5.20	-1.90
Reacc. TOTAL servicio	max	587.73	594.72	2832.96	2896.77	2832.96	2896.77	587.73	594.72
	min	160.32	176.36	789.99	870.26	789.81	870.26	160.32	176.36

nota: Las reacciones de las sobrecargas van ya sin ϕ

Separacion de apoyos (m)			Pila 32				Pila 33				Pila 34				Pila 35			
			6.30				2.50				2.50				6.30			
		Excent.	N(t)	Mt(mt)	Rizq(t)	Rder(t)	N(t)	Mt(mt)	Rizq(t)	Rder(t)	N(t)	Mt(mt)	Rizq(t)	Rder(t)	N(t)	Mt(mt)	Rizq(t)	Rder(t)
Tren B S.R. N.I.	max	2.542	216.71	550.89	195.80	20.91	718.26	1825.81	1089.45	-371.19	718.26	1825.81	1089.45	-371.19	216.71	550.89	195.80	20.91
	min	2.542	-39.19	-99.63	-35.41	-3.78	-30.10	-76.50	-45.65	15.55	-30.10	-76.50	-45.65	15.55	-39.19	-99.63	-35.41	-3.78
Tren B R.I. N.I.	max	2.2418	217.05	486.58	185.76	31.29	713.83	1600.26	997.02	-283.19	713.83	1600.26	997.02	-283.19	217.05	486.58	185.76	31.29
	min	2.2418	-40.30	-90.34	-34.49	-5.81	-31.65	-70.94	-44.20	12.55	-31.65	-70.94	-44.20	12.55	-40.30	-90.34	-34.49	-5.81
Tren B R.E. N.I.	max	2.842	220.10	625.53	209.34	10.76	757.55	2152.96	1239.96	-482.41	757.55	2152.96	1239.96	-482.41	220.10	625.53	209.34	10.76
	min	2.842	-37.85	-107.57	-36.00	-1.85	-28.70	-81.55	-46.97	18.27	-28.70	-81.55	-46.97	18.27	-37.85	-107.57	-36.00	-1.85
Tren B S.R. N.D.	max	-2.1582	223.02	-481.32	35.11	187.91	755.78	-1631.12	-274.56	1030.34	755.78	-1631.12	-274.56	1030.34	223.02	-481.32	35.11	187.91
	min	-2.1582	-40.77	87.99	-6.42	-34.35	-32.41	69.94	11.77	-44.18	-32.41	69.94	11.77	-44.18	-40.77	87.99	-6.42	-34.35
Tren B R.I. N.D.	max	-1.8582	221.28	-411.19	45.37	175.91	753.05	-1399.31	-183.20	936.25	753.05	-1399.31	-183.20	936.25	221.28	-411.19	45.37	175.91
	min	-1.8582	-41.34	76.81	-8.48	-32.86	-33.82	62.85	8.23	-42.05	-33.82	62.85	8.23	-42.05	-41.34	76.81	-8.48	-32.86
Tren B R.E. N.D.	max	-2.4582	222.84	-547.79	24.47	198.37	757.13	-1861.18	-365.91	1123.04	757.13	-1861.18	-365.91	1123.04	222.84	-547.79	24.47	198.37
	min	-2.4582	-39.77	97.75	-4.37	-35.40	-30.86	75.87	14.92	-45.78	-30.86	75.87	14.92	-45.78	-39.77	97.75	-4.37	-35.40
Env S.C. Paseos N	max	5.9	11.35	66.95	16.30	-4.95	46.73	275.69	133.64	-86.91	46.73	275.69	133.64	-86.91	11.35	66.95	16.30	-4.95
	min	5.9	-1.32	-7.80	-1.90	0.58	-0.98	-5.78	-2.80	1.82	-0.98	-5.78	-2.80	1.82	-1.32	-7.80	-1.90	0.58
Env S.C. Paseos N	max	-5.9	11.35	-66.95	-4.95	16.30	46.73	-275.69	-86.91	133.64	46.73	-275.69	-86.91	133.64	11.35	-66.95	-4.95	16.30
	min	-5.9	-1.32	7.80	0.58	-1.90	-0.98	5.78	1.82	-2.80	-0.98	5.78	1.82	-2.80	-1.32	7.80	0.58	-1.90

		N(t)	Mt(mt)
	pp	285.00	0
	cm	252.37	-49.5495
+/-	incr balasto	47.80	0 +/-
	gradiente	13.96	0

	TRENES	N(t)	Mt(mt)	
NI+RE, ND+RI	Hip1:Nmax	441.38	214.34	
NI+RE, ND+RE	Hip2:Mtmax	180.33	723.28	
NI-RE, ND+RE	Hip3:Mtmin	184.99	-727.50	*
NI-RI, ND-RI	Hip4:Nmin	-81.64	-13.53	

SC PASEOS	N(t)	Mt(mt)
Hip1:Nmax	22.69	0.00
Hip2:Mtmax	10.02	74.75
Hip3:Mtmin	10.02	-74.75
Hip4:Nmin	-2.65	0.00

	N(t)	Mt(mt)
pp	1877.80	0
cm	999.72	-226.35
incr balasto	189.32	0 +/-
gradiente	-13.96	0

	N(t)	Mt(mt)	
Hip1:Nmax	1510.60	753.65	
Hip2:Mtmax	726.69	2228.83	
Hip3:Mtmin	728.44	-2336.09	*
Hip4:Nmin	-65.47	-8.10	

N(t)	Mt(mt)
93.45	0.00
45.75	281.47
45.75	-281.47
-1.96	0.00

	N(t)	Mt(mt)
pp	1877.80	0
cm	999.72	-226.35
incr balasto	189.32	0 +/-
gradiente	-13.96	0

	N(t)	Mt(mt)	
Hip1:Nmax	1510.60	753.65	
Hip2:Mtmax	726.69	2228.83	
Hip3:Mtmin	728.44	-2336.09	*
Hip4:Nmin	-65.47	-8.10	

N(t)	Mt(mt)
93.45	0.00
45.75	281.47
45.75	-281.47
-1.96	0.00

	N(t)	Mt(mt)
pp	285.00	0
cm	252.37	-49.5495 *
incr balasto	47.80	0 +/-
gradiente	13.96	0

	N(t)	Mt(mt)
Hip1:Nmax	441.38	214.34
Hip2:Mtmax	180.33	723.28
Hip3:Mtmin	184.99	-755.25
Hip4:Nmin	-81.64	-13.53

N(t)	Mt(rnt)
22.69	0.00
10.02	74.75
10.02	-74.75
-2.65	0.00

Hacia P-34

Apoyo	Aparato de Apoyo	Rmax (Tn)	Rmin (Tn)	Corrimiento long.(mm.)	Fza. Transversal(Tn)	Fza. longitudinal(Tn)
P-32 izq	PU	587.73	160.32	73	66	0
P-33 izq	PU	2832.96	789.99	41	151	0
P-34 izq	PF	2832.96	789.81	0	151	396
P-35 izq	PU	587.73	160.32	34	66	0
P-32 der	PL	594.72	176.36	73	0	0
P-33 der	PL	2896.77	870.26	41	0	0
P-34 der	PU	2896.77	870.26	0	0	396
P-35 der	PL	594.72	176.36	34	0	0

*Corrimientos esperados. *viento+Fuerza Centrífuga

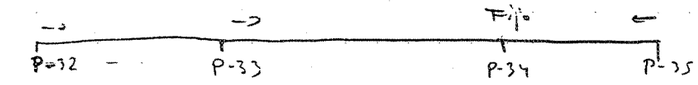
Sentido contrario a P-34

Apoyo	Aparato de Apoyo	Rmax (Tn)	Rmin (Tn)	Corrimiento long.(mm.)	Corrimiento long.(mm.)
P-32 izq	PU	587.73	160.32	73	-21
P-33 izq	PU	2832.96	789.99	41	-12
P-34 izq	PF	2832.96	789.81	0	0
P-35 izq	PU	587.73	160.32	34	-10
P-32 der	PL	594.72	176.36	73	-21
P-33 der	PL	2896.77	870.26	41	-12
P-34 der	PU	2896.77	870.26	0	0
P-35 der	PL	594.72	176.36	34	-10

*Corrimientos esperados. *Corrimientos esperados. *viento+Fuerza Centrífuga

Nota: Los valores de Reacciones y Movimientos son en valores característicos , sin mayorar.
Para el cálculo de las reacciones no se ha considerado (todavía) los efectos de los hiperestáticos del pretensado, que se tendrán en cuenta en su momento.

Movimiento provisible longitudinal



desplazamiento hacia el punto fijo.

$\delta = 0'7 \cdot 10^{-3}$ m/m.

Hacia el centro $\delta = 0'2 \cdot 10^{-3}$ m/m.

	δ hacia P-34.	δ a centro.
P-32	73 mm	-21 mm
P-33	41 mm	-12 mm
P-34 fijo	0	0
P-35	34 mm	-10 mm

Fza longitudinal en pila fija →

Tablero Fijado 516 t + Teflones = 175 t ⇒ 395'5 t/apoyo

Fza transversal viento. (sin sc)

	F_T (t)
P-32	26
P-33	63
P-34	63
P-35	26

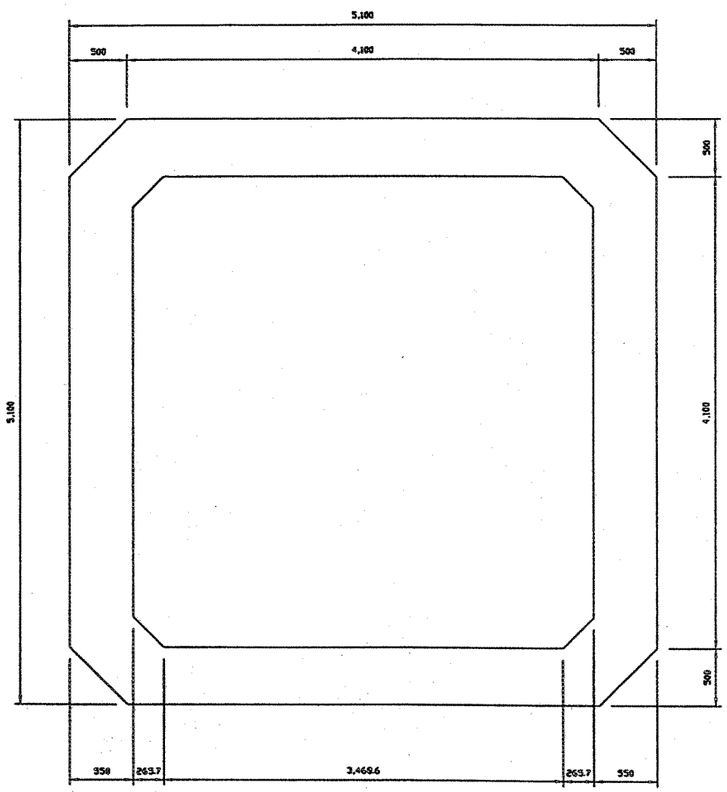
Fza centrífuga

0'83 t/ml

y mín

	F_c (t)
P-32	20 × 2 = 40 t/2 vías
P-33	44 × 2 = 88 "
P-34	44 × 2 = 88 "
P-35	20 × 2 = 40 "

11.2



ENCOFRADO INTERIOR NORMAL (Pila cuadrada)
ENCOFRADO TREPANTE DE PILA
U.T.E. MEJORADA

(P-33 y P-34)

IDEAM

COMPROBACIÓN PILAS TRAMO HIPERESTATICO

P33 - P34

Las reacciones en cabeza de pila a adoptar son:

		N(T)	M_T (mT)	H_L (T)	H_T (T)
Peso propio		1870			
C. cuneta		999,7	-226,4		
Incremento balasto		±189,3			
Gradiente		-13,96			
Tren	N_{max}	1510.6	753,7		
	$H_{T\,max}$	726,7	2228.7		
	$M_{T\,min}$	728.4	-2386,1		
	N_{min}	-65,5	-8,1		
Paseos	N_{max}	93,5	0		
	$M_{T\,max}$	45,75	281,5		
	$H_{T\,min}$	45,75	-281,5		
	N_{min}	-1,96	0		
Frenado (P34)				616,0	
Centrifuga					96,06
Viento					101.8 x 0.50
Teflones				174,5	

	N	M_L
Montaje	1339,2	1678

Se consideran los siguientes coeficientes de seguridad

	γ_f	γ_d
peso propio	1	1.35
c. muerta	1	1.35
reologicas	0	1.20
gradiente	0	1.20
viento	0	1.50
sobrecargas tren	0	1.50
pasos	0	1.50

A efectos de combinaciones, se siguen las indicadas en el EC-1

$$\sum \gamma_{G,i}\, G_{k,i} + \sum \gamma_{Q,j}\, G_{k,j} + \gamma_{Q,1}\, Q_{k,1} + \sum \gamma_{Q,i}\, \psi_{0,i}\, Q_{k,i}$$

Al ser condicionante la hipótesis de tráfico, se aplica $\psi_0 = 0.60$ para el viento. Dado que el viento sólo es concomitante con el tráfico para una presión del 50% de la barrera, el coeficiente de combinación ψ_0 aplicado es 0.30

Con estos criterios se obtienen los esfuerzos que figuran en las páginas siguientes, para los que resulta válido el dimensionamiento propuesto en proyecto

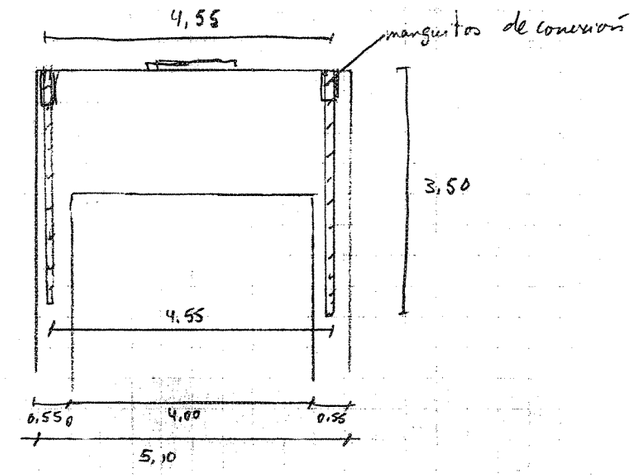
Se controla también la situación de montaje (combinación 2)

DIMENSIONAMIENTO BARRAS DE BLOQUEO EN MONTAJE

La colocación de las vigas de un lado de la pieza canto variable supone un momento de

$M_1 = 1678$ m T

Para recoger ese par se plantea situar barras pasivas empotrando en pila



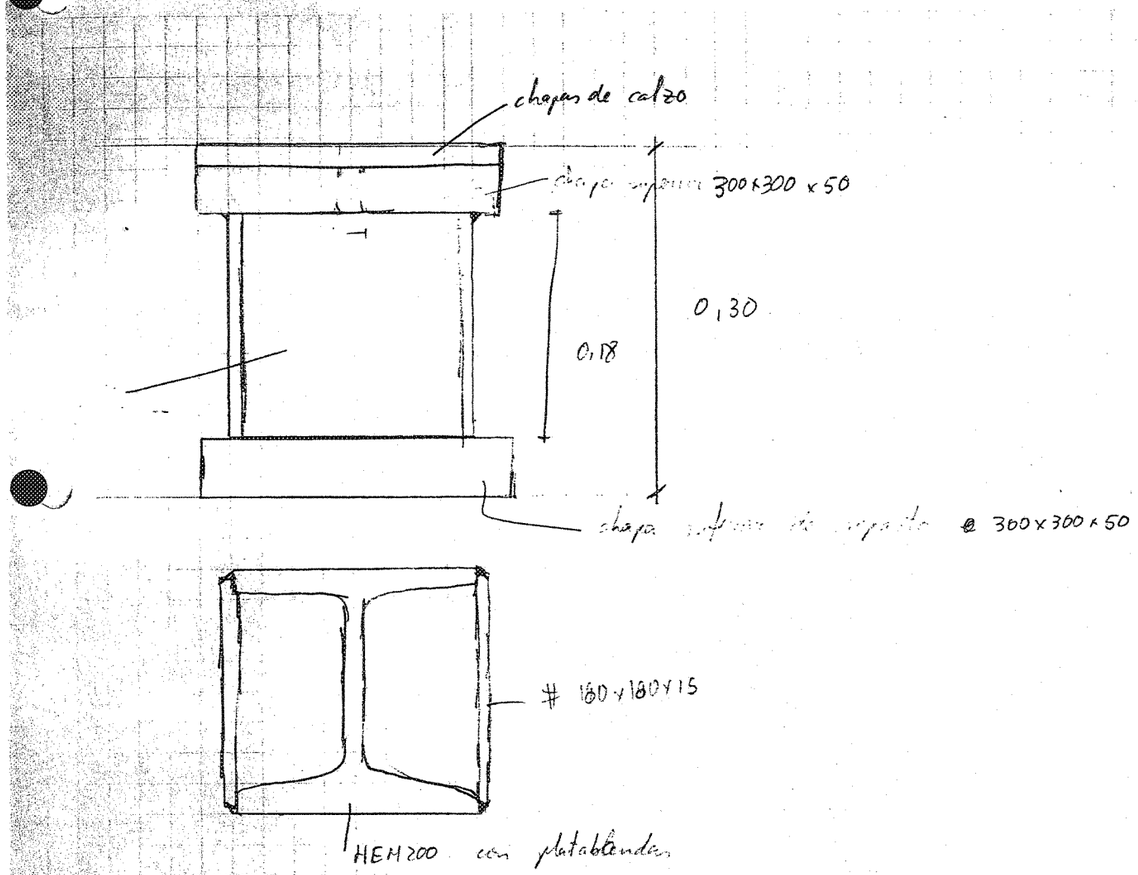
Con un coeficiente $\gamma = 1,50$, se tiene

$$T_d = \frac{1,50 \cdot 1678}{4,55} = 553 \text{ T}$$

Disponiendo barras tipo GEWI $\phi 50$ $A = 19,6 \text{ cm}^2$, cargándolas sólo a $3,5 \text{ T/cm}^2$, harían falta

$$n = \frac{553}{3,5 \cdot 19,6} = 8,1 \text{ barras}$$

Con 9 barras, la disposición resultante sería



TACOS DE APOYO

Se dimensionan para el axil debido al peso de las vigas + mas el incremento por el par de flexión

$N = 149\ T$

$M = 1678\ mT$ $\quad \Delta N = \frac{1678}{4.50} = 373\ T$

$N + \Delta N = 522\ T$

$N_d = 1.5 \cdot 522 = 782\ T$

Suponiendo tacos metálicos de A275 $\sigma_u = 2.6\ T/cm^2$,

se necesitan: $\frac{782}{2.6} = 301\ cm^2$

Se disponen 4 HEM 200 ($A = 4 \cdot 131.3 = 525.2\ cm^2$), con platabanda lateral $190 \times 15 \rightarrow$ Area total $4 \cdot 188 = 752\ cm^2$

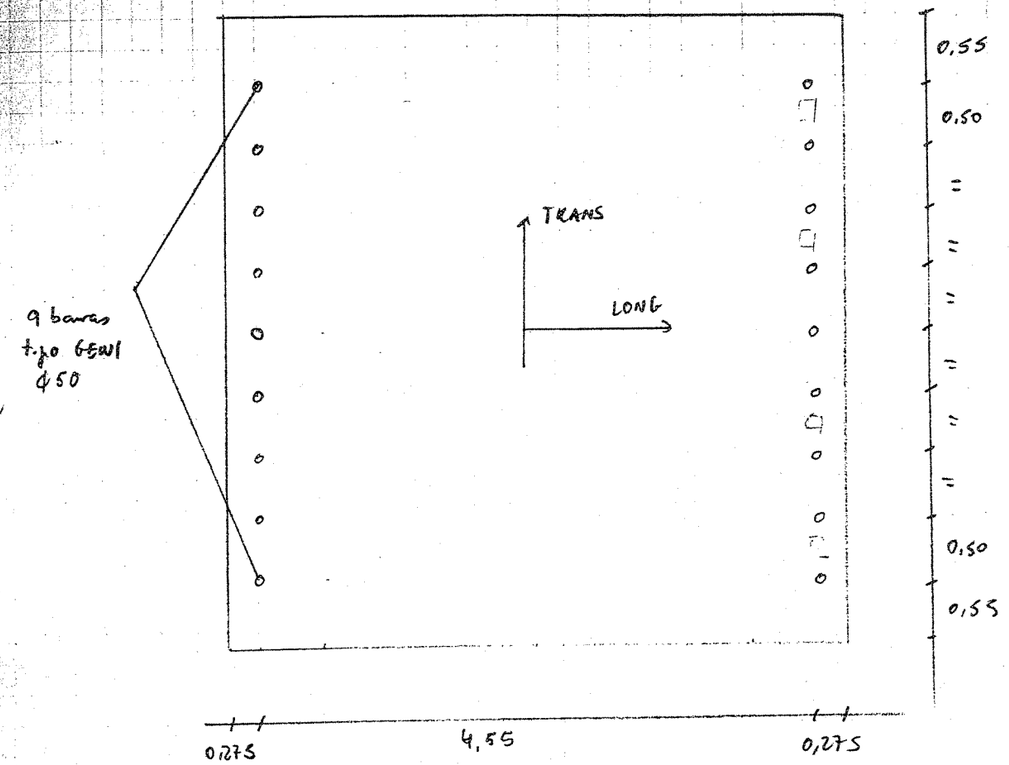
Sobre el perfil se coloca una chapa de 30 mm para repartir, tanto en cara superior como inferior.

Con un reparto a 45° el área de piso sobre el hormigón es de 2.5 Area perfil

$A_p = 2.5 \cdot 752 = 1880\ cm^2$

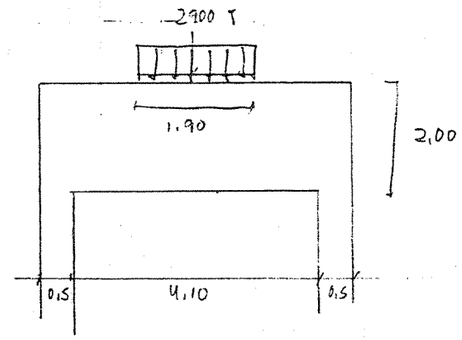
$\sigma = \frac{522000}{1880} = 277\ kg/cm^2$

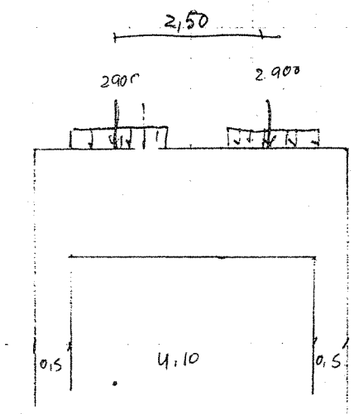
Con chapas de calzo hasta 5 cm el reparto ya es suficiente



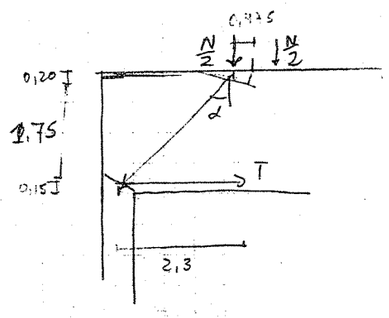
La tracción por barra es de $\frac{553}{9} = 61,4\ T$. Para coser ese rasante a las barras verticales (6ϕ20 mm/ en cada cara) hacen falta $\frac{61,4}{4,0} = 15,4\ cm^2$. Con ϕ12 a 0,15, el armado es suficiente, ya que se tienen 3,5 m para coser ese esfuerzo

ARMADO CABEZA





Con reparto al 50 % entre ambas direcciones



$\frac{N}{2} = 725\ T$

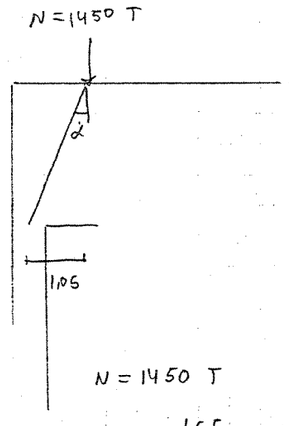
$tg\alpha = \frac{1,65}{2,30} = 0,717$

$T = \frac{N/2}{tg\alpha} = 1010\ T$

$Td = 1,5 \cdot 1010 = 1516\ T$

$A_{nec} = \frac{1516}{4} = 379\ cm^2$

En 2,1 m hay $2 \times 10 \cdot 4,909\ 2,1 = 412\ cm^2$ VALE



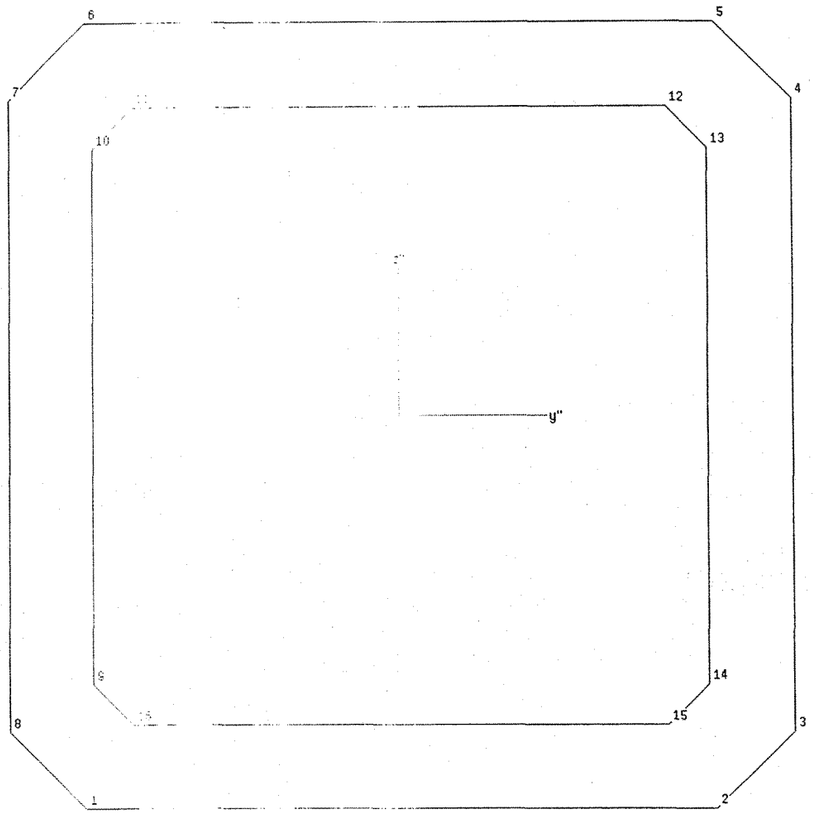
N = 1450 T

$tg\alpha = \frac{1,65}{1,05} = 1,57$

$T = \frac{1450}{1,57} = 922\ T$

No condiciona sobre la otra dirección

Mstb. 1 : 40.0



Sección :"FUSTE" Armadura :""
Tipo : tipo viga/ [illegible]érico Unidades :[cm]

Sección parcial 1: Hormigón =~~B35/25~~ H-300

Pto	Coord-Y	Coord-Z	Pto	Coord-Y	Coord-Z
1	-205.00	-255.00	2	205.00	-255.00
3	255.00	-205.00	4	255.00	205.00
5	205.00	255.00	6	-205.00	255.00
7	-255.00	205.00	8	-255.00	-205.00
Puntos aligeramiento:					
9	-200.00	173.43	10	200.00	173.43
11	-173.43	200.00	12	173.43	200.00
13	200.00	-173.43	14	200.00	-173.43
15	173.43	-200.00	16	-173.43	-200.00

Características mecánicas de la sección:
Area : [illegible] 2.251 [m2]
Momentos de inercia : [illegible] 32.713 [m4] [illegible] 32.713 [m4]
Inercia a torsión : [illegible] 14.825 [m4] (de un círculo del mismo área)

Posición del centro de gravedad: ys= 0.000 [m] zs=-2.29E-17 [m]

	I:	R=dist.borde [m]	W=I/R [m3]	W/Ax [m]
izq.	Iz	-2.550	-12.828	1.329
dch.	Iz	2.550	12.828	-1.329
abajo	Iy	-2.550	-12.828	1.329
arriba	Iy	2.550	12.828	-1.329

Armadura: ninguna
Características del material:

Nom.Mat.	Módulo E [N/mm2]	[illegible]cd,fyd [N/mm2]	eps-fc [o/oo]	fct [N/mm2]	fcv [N/mm2]	fcw,mín [N/mm2]
"B35/25"	35000.0	[illegible].000	-2.000	2.500	0.900000	25.000

Leyenda:
fcd,fyd resistencia de cálculo del hormigón,acero
eps-fc deformación al final de la parábola (fig.2.3, cap.2.2)
fct resistencia de cálculo a tracción del hormigón
fcv resistencia tangencial de cálculo del hormigón a esfuerzo cortante

PILA P34 PUENTE JARAMA

SECCION: B1 COMBINACION DE CARGAS: 1
HIPOTESIS: 1 CP + SC
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
1	Nmax Mlmax Mtmax	6535.80	0.00	824.91	Esbeltez < 35; no hay pandeo.			
2	Nmin Mlmax Mtmax	2496.16	0.00	-238.55				
3	Mlmax Mtmax Nmax	5288.33	0.00	3459.96				
4	Mlmax Mtmax Nmin	3756.02	0.00	3539.20				
5	Mtmax Nmax Mlmax	4938.43	0.00	3539.20				
6	Mtmax Nmin Mlmax	3756.02	0.00	3539.20				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B1 COMBINACION DE CARGAS: 1
HIPOTESIS: 2 CP + Viento Trans.
Cargas: PP CM TEFLON TERM GRAD REOL VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
7	Nmax Mlmax Mtmax	3874.10	0.00	-305.64	Esbeltez < 35; no hay pandeo.			
8	Nmin Mlmax Mtmax	2852.90	0.00	-226.40				
9	Mlmax Mtmax Nmax	3524.20	0.00	-226.40				
10	Mlmax Mtmax Nmin	2852.90	0.00	-226.40				
11	Mtmax Nmax Mlmax	3524.20	0.00	-226.40				
12	Mtmax Nmin Mlmax	2852.90	0.00	-226.40				

PILA P34 PUENTE JARAMA

SECCION: B1 COMBINACION DE CARGAS: 1
HIPOTESIS: 4 1.00(CP + SC + 0.30Viento Trans.)
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
13	Nmax Mlmax Mtmax	6535.80	0.00	824.91	Esbeltez < 35; no hay pandeo.			
14	Nmin Mlmax Mtmax	2496.16	0.00	-238.55				
15	Mlmax Mtmax Nmax	5288.33	0.00	3459.96				
16	Mlmax Mtmax Nmin	3756.02	0.00	3539.20				
17	Mtmax Nmax Mlmax	4938.43	0.00	3539.20				
18	Mtmax Nmin Mlmax	3756.02	0.00	3539.20				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B1 COMBINACION DE CARGAS: 1
HIPOTESIS: 5 1.00(CP + SC + 0.30Viento Long.)
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM VL

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
19	Nmax Mlmax Mtmax	6535.80	0.00	824.91	Esbeltez < 35; no hay pandeo.			
20	Nmin Mlmax Mtmax	2496.16	0.00	-238.55				
21	Mlmax Mtmax Nmax	5288.33	0.00	3459.96				
22	Mlmax Mtmax Nmin	3756.02	0.00	3539.20				
23	Mtmax Nmax Mlmax	4938.43	0.00	3539.20				
24	Mtmax Nmin Mlmax	3756.02	0.00	3539.20				

PILA P34 PUENTE JARAMA

SECCION: B2 COMBINACION DE CARGAS: 1
HIPOTESIS: 1 CP + SC
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
25	Nmax Mlmax Mtmax	6741.35	7154.59	1734.12	Esbeltez < 35; no hay pandeo.			
26	Nmin Mlmax Mtmax	2648.42	1321.31	-238.55				
27	Mlmax Mtmax Nmax	6669.73	7154.59	2156.37				
28	Mlmax Mtmax Nmin	5084.13	7154.59	2235.61				
29	Mtmax Nmax Mlmax	5143.98	4285.75	3993.80				
30	Mtmax Nmin Mlmax	3908.28	4285.75	3993.80				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B2 COMBINACION DE CARGAS: 1
HIPOTESIS: 2 CP + Viento Trans.
Cargas: PP CM TEFLON TERM GRAD REOL VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
31	Nmax Mlmax Mtmax	4079.65	1321.31	690.45	Esbeltez < 35; no hay pandeo.			
32	Nmin Mlmax Mtmax	3005.16	1321.31	769.69				
33	Mlmax Mtmax Nmax	4079.65	1321.31	690.45				
34	Mlmax Mtmax Nmin	3005.16	1321.31	769.69				
35	Mtmax Nmax Mlmax	3729.75	1321.31	769.69				
36	Mtmax Nmin Mlmax	3005.16	1321.31	769.69				

PILA P34 PUENTE JARAMA

SECCION: B2 COMBINACION DE CARGAS: 1
HIPOTESIS: 4 1.00(CP + SC + 0.30Viento Trans.)
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
37	Nmax Mlmax Mtmax	6741.35	7154.59	2032.94	Esbeltez < 35; no hay pandeo.			
38	Nmin Mlmax Mtmax	2648.42	1321.31	60.28				
39	Mlmax Mtmax Nmax	6669.73	7154.59	2455.19				
40	Mlmax Mtmax Nmin	5084.13	7154.59	2534.43				
41	Mtmax Nmax Mlmax	5143.98	4285.75	4292.63				
42	Mtmax Nmin Mlmax	3908.28	4285.75	4292.63				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B2 COMBINACION DE CARGAS: 1
HIPOTESIS: 5 1.00(CP + SC + 0.30Viento Long.)
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM VL

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
43	Nmax Mlmax Mtmax	6741.35	7154.59	1734.12	Esbeltez < 35; no hay pandeo.			
44	Nmin Mlmax Mtmax	2648.42	1321.31	-238.55				
45	Mlmax Mtmax Nmax	6669.73	7154.59	2156.37				
46	Mlmax Mtmax Nmin	5084.13	7154.59	2235.61				
47	Mtmax Nmax Mlmax	5143.98	4285.75	3993.80				
48	Mtmax Nmin Mlmax	3908.28	4285.75	3993.80				

PILA P34 PUENTE JARAMA

SECCION: B3 COMBINACION DE CARGAS: 1
HIPOTESIS: 1 CP + SC
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
49	Nmax Mlmax Mtmax	6946.90	14309.19	2643.33	Esbeltez < 35; no hay pandeo.			
50	Nmin Mlmax Mtmax	2800.68	2642.63	-238.55				
51	Mlmax Mtmax Nmax	6875.28	14309.19	3065.58				
52	Mlmax Mtmax Nmin	5236.39	14309.19	3144.82				
53	Mtmax Nmax Mlmax	5349.53	8571.50	4448.41				
54	Mtmax Nmin Mlmax	4060.54	8571.50	4448.41				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B3 COMBINACION DE CARGAS: 1
HIPOTESIS: 2 CP + Viento Trans.
Cargas: PP CM TEFLON TERM GRAD REOL VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
55	Nmax Mlmax Mtmax	4285.20	2642.63	1751.63	Esbeltez < 35; no hay pandeo.			
56	Nmin Mlmax Mtmax	3157.42	2642.63	1830.87				
57	Mlmax Mtmax Nmax	4285.20	2642.63	1751.63				
58	Mlmax Mtmax Nmin	3157.42	2642.63	1830.87				
59	Mtmax Nmax Mlmax	3935.30	2642.63	1830.87				
60	Mtmax Nmin Mlmax	3157.42	2642.63	1830.87				

PILA P34 PUENTE JARAMA

SECCION: B3 COMBINACION DE CARGAS: 1
HIPOTESIS: 4 1.00(CP + SC + 0.30Viento Trans.)
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
61	Nmax Mlmax Mtmax	6946.90	14309.19	3260.51	Esbeltez < 35; no hay pandeo.			
62	Nmin Mlmax Mtmax	2800.68	2642.63	378.63				
63	Mlmax Mtmax Nmax	6875.28	14309.19	3682.76				
64	Mlmax Mtmax Nmin	5236.39	14309.19	3762.00				
65	Mtmax Nmax Mlmax	5349.53	8571.50	5065.59				
66	Mtmax Nmin Mlmax	4060.54	8571.50	5065.59				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B3 COMBINACION DE CARGAS: 1
HIPOTESIS: 5 1.00(CP + SC + 0.30Viento Long.)
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM VL

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
67	Nmax Mlmax Mtmax	6946.90	14309.19	2643.33	Esbeltez < 35; no hay pandeo.			
68	Nmin Mlmax Mtmax	2800.68	2642.63	-238.55				
69	Mlmax Mtmax Nmax	6875.28	14309.19	3065.58				
70	Mlmax Mtmax Nmin	5236.39	14309.19	3144.82				
71	Mtmax Nmax Mlmax	5349.53	8571.50	4448.41				
72	Mtmax Nmin Mlmax	4060.54	8571.50	4448.41				

PILA P34 PUENTE JARAMA

SECCION: B1 COMBINACION DE CARGAS: 2
HIPOTESIS: 1 CP + SC
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM

Num	Esfuerzos			N	Ml	Mt	eo	ea	etot	Mlpan
73	Nmax	Mlmax	Mtmax	1807.92	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
74	Nmin	Mlmax	Mtmax	1339.20	1678.10	0.00				
75	Mlmax	Mtmax	Nmax	1807.92	2265.44	0.00				
76	Mlmax	Mtmax	Nmin	1807.92	2265.44	0.00				
77	Mtmax	Nmax	Mlmax	1807.92	2265.44	0.00				
78	Mtmax	Nmin	Mlmax	1339.20	1678.10	0.00				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B1 COMBINACION DE CARGAS: 2
HIPOTESIS: 2 CP + Viento Trans.
Cargas: PP CM TEFLON TERM GRAD REOL VT

Num	Esfuerzos			N	Ml	Mt	eo	ea	etot	Mlpan
79	Nmax	Mlmax	Mtmax	1807.92	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
80	Nmin	Mlmax	Mtmax	1339.20	1678.10	0.00				
81	Mlmax	Mtmax	Nmax	1807.92	2265.44	0.00				
82	Mlmax	Mtmax	Nmin	1807.92	2265.44	0.00				
83	Mtmax	Nmax	Mlmax	1807.92	2265.44	0.00				
84	Mtmax	Nmin	Mlmax	1339.20	1678.10	0.00				

PILA P34 PUENTE JARAMA

SECCION: B1 COMBINACION DE CARGAS: 2
HIPOTESIS: 3 CP + Viento Long.
Cargas: PP CM TEFLON TERM GRAD REOL VL

Num	Esfuerzos			N	Ml	Mt	eo	ea	etot	Mlpan
85	Nmax	Mlmax	Mtmax	1807.92	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
86	Nmin	Mlmax	Mtmax	1339.20	1678.10	0.00				
87	Mlmax	Mtmax	Nmax	1807.92	2265.44	0.00				
88	Mlmax	Mtmax	Nmin	1807.92	2265.44	0.00				
89	Mtmax	Nmax	Mlmax	1807.92	2265.44	0.00				
90	Mtmax	Nmin	Mlmax	1339.20	1678.10	0.00				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B2 COMBINACION DE CARGAS: 2
HIPOTESIS: 1 CP + SC
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM

Num	Esfuerzos			N	Ml	Mt	eo	ea	etot	Mlpan
91	Nmax	Mlmax	Mtmax	2013.47	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
92	Nmin	Mlmax	Mtmax	1491.46	1678.10	0.00				
93	Mlmax	Mtmax	Nmax	2013.47	2265.44	0.00				
94	Mlmax	Mtmax	Nmin	2013.47	2265.44	0.00				
95	Mtmax	Nmax	Mlmax	2013.47	2265.44	0.00				
96	Mtmax	Nmin	Mlmax	1491.46	1678.10	0.00				

PILA P34 PUENTE JARAMA

SECCION: B2 COMBINACION DE CARGAS: 2
HIPOTESIS: 2 CP + Viento Trans.
Cargas: PP CM TEFLON TERM GRAD REOL VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
97	Nmax Mlmax Mtmax	2013.47	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
98	Nmin Mlmax Mtmax	1491.46	1678.10	0.00				
99	Mlmax Mtmax Nmax	2013.47	2265.44	0.00				
100	Mlmax Mtmax Nmin	2013.47	2265.44	0.00				
101	Mtmax Nmax Mlmax	2013.47	2265.44	0.00				
102	Mtmax Nmin Mlmax	1491.46	1678.10	0.00				

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PILA P34 PUENTE JARAMA

SECCION: B2 COMBINACION DE CARGAS: 2
HIPOTESIS: 3 CP + Viento Long.
Cargas: PP CM TEFLON TERM GRAD REOL VL

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
103	Nmax Mlmax Mtmax	2013.47	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
104	Nmin Mlmax Mtmax	1491.46	1678.10	0.00				
105	Mlmax Mtmax Nmax	2013.47	2265.44	0.00				
106	Mlmax Mtmax Nmin	2013.47	2265.44	0.00				
107	Mtmax Nmax Mlmax	2013.47	2265.44	0.00				
108	Mtmax Nmin Mlmax	1491.46	1678.10	0.00				

PILA P34 PUENTE JARAMA

SECCION: B3 COMBINACION DE CARGAS: 2
HIPOTESIS: 1 CP + SC
Cargas: PP CM TEFLON TERM GRAD REOL VP SC SCM

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
109	Nmax Mlmax Mtmax	2219.02	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
110	Nmin Mlmax Mtmax	1643.72	1678.10	0.00				
111	Mlmax Mtmax Nmax	2219.02	2265.44	0.00				
112	Mlmax Mtmax Nmin	2219.02	2265.44	0.00				
113	Mtmax Nmax Mlmax	2219.02	2265.44	0.00				
114	Mtmax Nmin Mlmax	1643.72	1678.10	0.00				

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PILA P34 PUENTE JARAMA

SECCION: B3 COMBINACION DE CARGAS: 2
HIPOTESIS: 2 CP + Viento Trans.
Cargas: PP CM TEFLON TERM GRAD REOL VT

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
115	Nmax Mlmax Mtmax	2219.02	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
116	Nmin Mlmax Mtmax	1643.72	1678.10	0.00				
117	Mlmax Mtmax Nmax	2219.02	2265.44	0.00				
118	Mlmax Mtmax Nmin	2219.02	2265.44	0.00				
119	Mtmax Nmax Mlmax	2219.02	2265.44	0.00				
120	Mtmax Nmin Mlmax	1643.72	1678.10	0.00				

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

SECCION: B3 COMBINACION DE CARGAS: 2
HIPOTESIS: 3 CP + Viento Long.
Cargas: PP CM TEFLON TERM GRAD REOL VL

Num	Esfuerzos	N	Ml	Mt	eo	ea	etot	Mlpan
121	Nmax Mlmax Mtmax	2219.02	2265.44	0.00	Esbeltez < 35; no hay pandeo.			
122	Nmin Mlmax Mtmax	1643.72	1678.10	0.00				
123	Mlmax Mtmax Nmax	2219.02	2265.44	0.00				
124	Mlmax Mtmax Nmin	2219.02	2265.44	0.00				
125	Mtmax Nmax Mlmax	2219.02	2265.44	0.00				
126	Mtmax Nmin Mlmax	1643.72	1678.10	0.00				

ESFUERZOS ADICIONALES

N	Ml	Mt	eo_l	ea_l	etot_l	Mlpan

PILA P34 PUENTE JARAMA

Num	Cmb	Seccion	Hip	Esfuerzos	N	Ml	Mt	As	γ
1	1	B1	1	Nmax Mlmax Mtmax	6535.80	0.00	824.91	640.56	2,77
2	1	B1	1	Nmin Mlmax Mtmax	2496.16	0.00	-238.55	640.56	7,35
3	1	B1	1	Mlmax Mtmax Nmax	5288.33	0.00	3459.96	640.56	2,76
4	1	B1	1	Mlmax Mtmax Nmin	3756.02	0.00	3539.20	640.56	3.51
5	1	B1	1	Mtmax Nmax Mlmax	4938.43	0.00	3539.20	640.56	2,89
6	1	B1	1	Mtmax Nmin Mlmax	3756.02	0.00	3539.20	640.56	3,51
7	1	B1	2	Nmax Mlmax Mtmax	3874.10	0.00	-305.64	640.56	4,78
8	1	B1	2	Nmin Mlmax Mtmax	2852.90	0.00	-226.40	640.56	6.48
9	1	B1	2	Mlmax Mtmax Nmax	3524.20	0.00	-226.40	640.56	5,29
10	1	B1	2	Mlmax Mtmax Nmin	2852.90	0.00	-226.40	640.56	6,48
11	1	B1	2	Mtmax Nmax Mlmax	3524.20	0.00	-226.40	640.56	5, 29
12	1	B1	2	Mtmax Nmin Mlmax	2852.90	0.00	-226.40	640.56	6.48
13	1	B1	4	Nmax Mlmax Mtmax	6535.80	0.00	824.91	640.56	2,77
14	1	B1	4	Nmin Mlmax Mtmax	2496.16	0.00	-238.55	640.56	7,35
15	1	B1	4	Mlmax Mtmax Nmax	5288.33	0.00	3459.96	640.56	2,76
16	1	B1	4	Mlmax Mtmax Nmin	3756.02	0.00	3539.20	640.56	3,51
17	1	B1	4	Mtmax Nmax Mlmax	4938.43	0.00	3539.20	640.56	2,89
18	1	B1	4	Mtmax Nmin Mlmax	3756.02	0.00	3539.20	640.56	3,51
19	1	B1	5	Nmax Mlmax Mtmax	6535.80	0.00	824.91	640.56	2,77
20	1	B1	5	Nmin Mlmax Mtmax	2496.16	0.00	-238.55	640.56	7,35
21	1	B1	5	Mlmax Mtmax Nmax	5288.33	0.00	3459.96	640.56	2,76
22	1	B1	5	Mlmax Mtmax Nmin	3756.02	0.00	3539.20	640.56	3,51
23	1	B1	5	Mtmax Nmax Mlmax	4938.43	0.00	3539.20	640.56	2,89
24	1	B1	5	Mtmax Nmin Mlmax	3756.02	0.00	3539.20	640.56	3,51

PILA P34 PUENTE JARAMA

Num	Cmb	Seccion	Hip	Esfuerzos	N	Ml	Mt	As	γ
49	1	B3	1	Nmax Mlmax Mtmax	6946.90	14309.19	2643.33	1001.74	1,32
50	1	B3	1	Nmin Mlmax Mtmax	2800.68	2642.63	-238.55	1001.74	5,07
51	1	B3	1	Mlmax Mtmax Nmax	6875.28	14309.19	3065.58	1001.74	1,32
52	1	B3	1	Mlmax Mtmax Nmin	5236.39	14309.19	3144.82	1001.74	1,36
53	1	B3	1	Mtmax Nmax Mlmax	5349.53	8571.50	4448.41	1001.74	1,86
54	1	B3	1	Mtmax Nmin Mlmax	4060.54	8571.50	4448.41	1001.74	1,96
55	1	B3	2	Nmax Mlmax Mtmax	4285.20	2642.63	1751.63	1001.74	3,59
56	1	B3	2	Nmin Mlmax Mtmax	3157.42	2642.63	1830.87	1001.74	4,35
57	1	B3	2	Mlmax Mtmax Nmax	4285.20	2642.63	1751.63	1001.74	3,59
58	1	B3	2	Mlmax Mtmax Nmin	3157.42	2642.63	1830.87	1001.74	4,35
59	1	B3	2	Mtmax Nmax Mlmax	3935.30	2642.63	1830.87	1001.74	3,79
60	1	B3	2	Mtmax Nmin Mlmax	3157.42	2642.63	1830.87	1001.74	4,35
61	1	B3	4	Nmax Mlmax Mtmax	6946.90	14309.19	3260.51	1001.74	1,31
62	1	B3	4	Nmin Mlmax Mtmax	2800.68	2642.63	378.63	1001.74	5,06
63	1	B3	4	Mlmax Mtmax Nmax	6875.28	14309.19	3682.76	1001.74	1,30
64	1	B3	4	Mlmax Mtmax Nmin	5236.39	14309.19	3762.00	1001.74	1,34
65	1	B3	4	Mtmax Nmax Mlmax	5349.53	8571.50	5065.59	1001.74	1,81
66	1	B3	4	Mtmax Nmin Mlmax	4060.54	8571.50	5065.59	1001.74	1,90
67	1	B3	5	Nmax Mlmax Mtmax	6946.90	14309.19	2643.33	1001.74	1,32
68	1	B3	5	Nmin Mlmax Mtmax	2800.68	2642.63	-238.55	1001.74	5,00
69	1	B3	5	Mlmax Mtmax Nmax	6875.28	14309.19	3065.58	1001.74	1,32
70	1	B3	5	Mlmax Mtmax Nmin	5236.39	14309.19	3144.82	1001.74	1,36
71	1	B3	5	Mtmax Nmax Mlmax	5349.53	8571.50	4448.41	1001.74	1,86
72	1	B3	5	Mtmax Nmin Mlmax	4060.54	8571.50	4448.41	1001.74	1,96

γ ≡ Coeficiente de seguridad sobre rotura

PILA P34 PUENTE JARAMA

Num	Cmb	Seccion	Hip	Esfuerzos	N	Ml	Mt	As
73	2	B1	1	Nmax Mlmax Mtmax	1807.92	2265.44	0.00	640.56
74	2	B1	1	Nmin Mlmax Mtmax	1339.20	1678.10	0.00	640.56
75	2	B1	1	Mlmax Mtmax Nmax	1807.92	2265.44	0.00	640.56
76	2	B1	1	Mlmax Mtmax Nmin	1807.92	2265.44	0.00	640.56
77	2	B1	1	Mtmax Nmax Mlmax	1807.92	2265.44	0.00	640.56
78	2	B1	1	Mtmax Nmin Mlmax	1339.20	1678.10	0.00	640.56
79	2	B1	2	Nmax Mlmax Mtmax	1807.92	2265.44	0.00	640.56
80	2	B1	2	Nmin Mlmax Mtmax	1339.20	1678.10	0.00	640.56
81	2	B1	2	Mlmax Mtmax Nmax	1807.92	2265.44	0.00	640.56
82	2	B1	2	Mlmax Mtmax Nmin	1807.92	2265.44	0.00	640.56
83	2	B1	2	Mtmax Nmax Mlmax	1807.92	2265.44	0.00	640.56
84	2	B1	2	Mtmax Nmin Mlmax	1339.20	1678.10	0.00	640.56
85	2	B1	3	Nmax Mlmax Mtmax	1807.92	2265.44	0.00	640.56
86	2	B1	3	Nmin Mlmax Mtmax	1339.20	1678.10	0.00	640.56
87	2	B1	3	Mlmax Mtmax Nmax	1807.92	2265.44	0.00	640.56
88	2	B1	3	Mlmax Mtmax Nmin	1807.92	2265.44	0.00	640.56
89	2	B1	3	Mtmax Nmax Mlmax	1807.92	2265.44	0.00	640.56
90	2	B1	3	Mtmax Nmin Mlmax	1339.20	1678.10	0.00	640.56

PILA P34 PUENTE JARAMA

Num	Cmb	Seccion	Hip	Esfuerzos	N	Ml	Mt	As
91	2	B2	1	Nmax Mlmax Mtmax	2013.47	2265.44	0.00	640.56
92	2	B2	1	Nmin Mlmax Mtmax	1491.46	1678.10	0.00	640.56
93	2	B2	1	Mlmax Mtmax Nmax	2013.47	2265.44	0.00	640.56
94	2	B2	1	Mlmax Mtmax Nmin	2013.47	2265.44	0.00	640.56
95	2	B2	1	Mtmax Nmax Mlmax	2013.47	2265.44	0.00	640.56
96	2	B2	1	Mtmax Nmin Mlmax	1491.46	1678.10	0.00	640.56
97	2	B2	2	Nmax Mlmax Mtmax	2013.47	2265.44	0.00	640.56
98	2	B2	2	Nmin Mlmax Mtmax	1491.46	1678.10	0.00	640.56
99	2	B2	2	Mlmax Mtmax Nmax	2013.47	2265.44	0.00	640.56
100	2	B2	2	Mlmax Mtmax Nmin	2013.47	2265.44	0.00	640.56
101	2	B2	2	Mtmax Nmax Mlmax	2013.47	2265.44	0.00	640.56
102	2	B2	2	Mtmax Nmin Mlmax	1491.46	1678.10	0.00	640.56
103	2	B2	3	Nmax Mlmax Mtmax	2013.47	2265.44	0.00	640.56
104	2	B2	3	Nmin Mlmax Mtmax	1491.46	1678.10	0.00	640.56
105	2	B2	3	Mlmax Mtmax Nmax	2013.47	2265.44	0.00	640.56
106	2	B2	3	Mlmax Mtmax Nmin	2013.47	2265.44	0.00	640.56
107	2	B2	3	Mtmax Nmax Mlmax	2013.47	2265.44	0.00	640.56
108	2	B2	3	Mtmax Nmin Mlmax	1491.46	1678.10	0.00	640.56

Programa PILAS v1.1 I D E A M, S.A.

PILA P34 PUENTE JARAMA

Num	Cmb	Seccion	Hip	Esfuerzos	N	Ml	Mt	As
109	2	B3	1	Nmax Mlmax Mtmax	2219.02	2265.44	0.00	1001.74
110	2	B3	1	Nmin Mlmax Mtmax	1643.72	1678.10	0.00	1001.74
111	2	B3	1	Mlmax Mtmax Nmax	2219.02	2265.44	0.00	1001.74
112	2	B3	1	Mlmax Mtmax Nmin	2219.02	2265.44	0.00	1001.74
113	2	B3	1	Mtmax Nmax Mlmax	2219.02	2265.44	0.00	1001.74
114	2	B3	1	Mtmax Nmin Mlmax	1643.72	1678.10	0.00	1001.74
115	2	B3	2	Nmax Mlmax Mtmax	2219.02	2265.44	0.00	1001.74
116	2	B3	2	Nmin Mlmax Mtmax	1643.72	1678.10	0.00	1001.74
117	2	B3	2	Mlmax Mtmax Nmax	2219.02	2265.44	0.00	1001.74
118	2	B3	2	Mlmax Mtmax Nmin	2219.02	2265.44	0.00	1001.74
119	2	B3	2	Mtmax Nmax Mlmax	2219.02	2265.44	0.00	1001.74
120	2	B3	2	Mtmax Nmin Mlmax	1643.72	1678.10	0.00	1001.74
121	2	B3	3	Nmax Mlmax Mtmax	2219.02	2265.44	0.00	1001.74
122	2	B3	3	Nmin Mlmax Mtmax	1643.72	1678.10	0.00	1001.74
123	2	B3	3	Mlmax Mtmax Nmax	2219.02	2265.44	0.00	1001.74
124	2	B3	3	Mlmax Mtmax Nmin	2219.02	2265.44	0.00	1001.74
125	2	B3	3	Mtmax Nmax Mlmax	2219.02	2265.44	0.00	1001.74
126	2	B3	3	Mtmax Nmin Mlmax	1643.72	1678.10	0.00	1001.74

Anexos al cálculo del tramo hiperestático Nº 2

Anexo Nº 2.3.7.1.1. Cortantes y torsores. Modelo emparrillado

7.1.1. Cortantes y torsores. Modelo emparrillado.

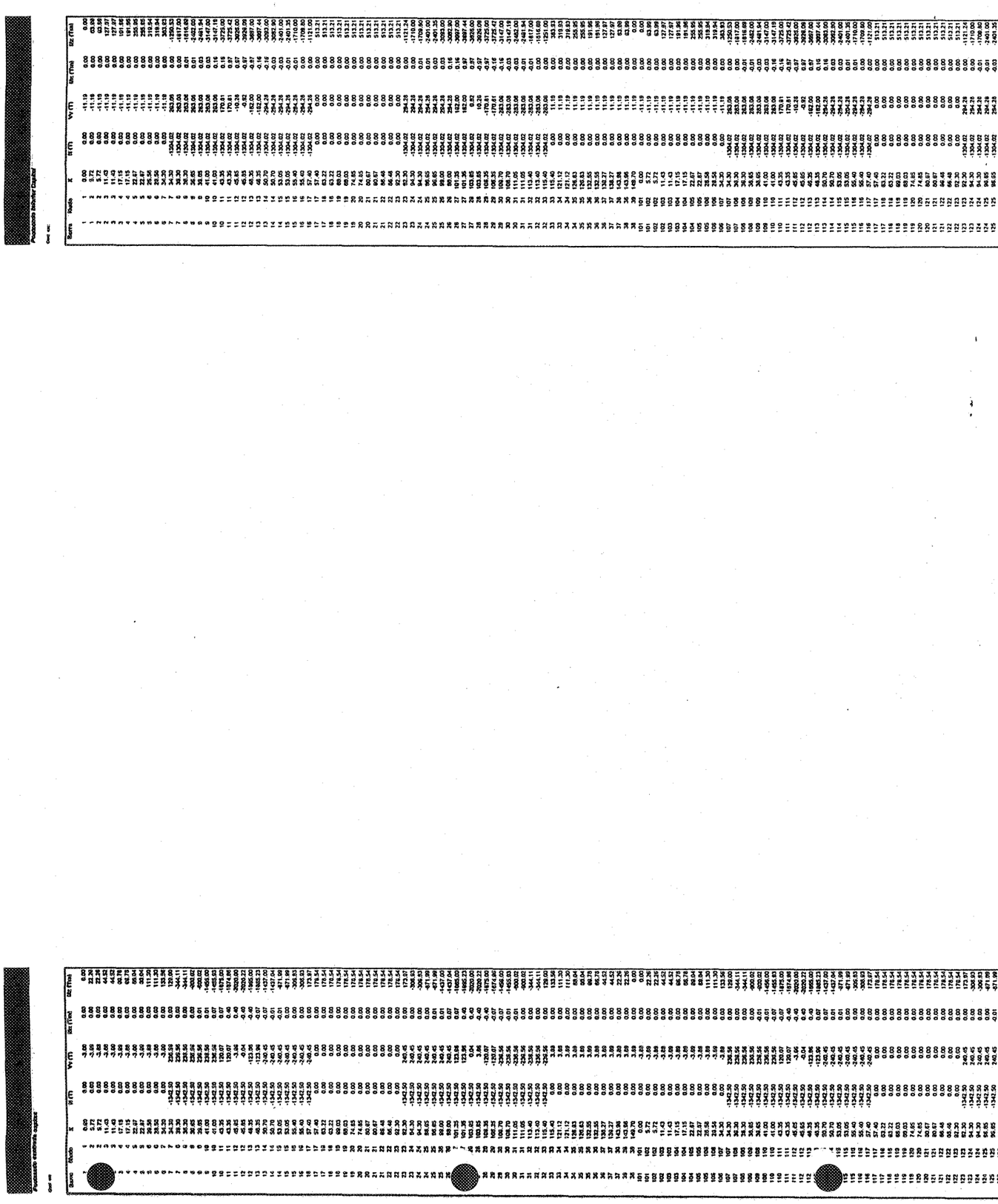
Cont viz

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
	1	0.00	0.00	-145.91	-2.86	0.00
		5.72	0.00	-91.03	11.11	677.26
		5.72	0.00	-91.03	5.53	677.26
		11.43	0.00	-36.15	19.51	1040.79
3	3	11.43	0.00	-36.15	14.35	1041.00
3	4	17.15	0.00	16.73	25.33	1080.59
4	4	17.15	0.00	16.73	23.90	1091.00
4	5	22.87	0.00	73.61	37.87	826.65
5	5	22.87	0.00	73.61	34.50	826.65
5	6	28.58	0.00	126.49	48.47	248.00
6	6	28.58	0.00	126.49	46.51	248.00
6	7	34.30	0.00	163.37	60.48	-642.40
7	7	34.30	0.00	163.37	37.96	-642.40
7	8	36.30	0.00	223.49	16.90	-1049.00
8	8	36.30	0.00	223.49	22.59	-1048.26
8	9	38.65	0.00	268.67	5.56	-1628.00
9	9	38.65	0.00	268.67	22.04	-1627.78
9	10	41.00	0.00	325.01	-22.31	-2326.00
10	10	41.00	0.00	325.01	15.79	-2325.58
10	11	43.35	0.00	380.64	-44.63	-3166.00
11	11	43.35	0.00	380.64	-46.32	-3166.47
11	12	45.85	0.00	516.99	-175.95	-4301.00
12	12	45.85	0.00	-501.15	175.99	-4301.02
12	13	48.35	0.00	-374.80	46.36	-3206.00
13	13	48.35	0.00	-374.80	44.82	-3206.09
13	14	50.70	0.00	-308.16	-15.00	-2402.00
14	14	50.70	0.00	-309.16	23.15	-2402.45
14	15	53.05	0.00	-253.02	-21.20	-1742.00
15	15	53.05	0.00	-253.02	5.79	-1741.89
15	16	55.40	0.00	-207.64	-19.39	-1201.00
16	16	55.40	0.00	-207.64	-8.84	-1200.61
16	17	57.40	0.00	-167.52	-28.02	-825.45
17	17	57.40	0.00	-167.52	-30.62	-825.45
17	18	63.22	0.00	-111.68	-24.40	-13.44
18	18	63.22	0.00	-111.68	-25.58	-13.44
18	19	69.03	0.00	-55.84	-11.36	473.76
19	19	69.03	0.00	-55.84	-13.19	473.76
19	20	74.85	0.00	0.00	1.02	836.16
20	20	74.85	0.00	0.00	-1.02	836.16
20	21	80.67	0.00	55.84	13.19	473.76
21	21	80.67	0.00	55.84	11.36	473.76
21	22	86.48	0.00	111.68	25.58	-13.44
22	22	86.48	0.00	111.68	24.40	-13.44
22	23	92.30	0.00	167.52	36.62	-825.45
23	23	92.30	0.00	167.52	28.02	-825.45
23	24	94.30	0.00	207.64	6.84	-1201.00
24	24	94.30	0.00	207.64	19.39	-1200.61
24	25	96.65	0.00	253.02	-8.78	-1742.00
25	25	96.65	0.00	253.02	21.20	-1741.89
25	26	99.00	0.00	309.16	-23.15	-2402.00
		99.00	0.00	309.16	15.60	-2402.45
		101.35	0.00	374.80	-44.82	-3206.00
		101.35	0.00	374.80	-46.36	-3206.09
		103.65	0.00	501.15	-175.99	-4301.00
26	26	103.65	0.00	-516.99	175.95	-4301.02
26	29	106.35	0.00	-390.64	46.32	-3166.00
29	28	106.35	0.00	-380.64	44.63	-3166.47
28	30	108.70	0.00	-325.01	-15.79	-2326.00
30	29	108.70	0.00	-325.01	22.31	-2325.58
30	31	111.05	0.00	-266.87	-22.04	-1628.00
31	31	111.05	0.00	-268.87	5.58	-1627.78
31	32	113.40	0.00	-223.49	-22.58	-1049.00
32	32	113.40	0.00	-223.49	-16.90	-1048.26
32	33	115.40	0.00	-163.37	-37.96	-642.40
33	33	115.40	0.00	-163.37	-60.48	-642.40
33	34	121.12	0.00	-128.48	-46.51	249.04
34	34	121.12	0.00	-128.48	-48.47	249.04
34	35	126.83	0.00	-73.61	-34.50	826.63
35	35	126.83	0.00	-73.61	-37.87	826.63
35	36	132.55	0.00	-18.73	-23.90	1090.59
35	36	132.55	0.00	-18.73	-28.33	1091.00
36	37	138.27	0.00	35.15	-14.35	1040.79
37	37	138.27	0.00	35.15	-19.51	1041.00
37	38	143.98	0.00	91.03	-5.54	677.29
38	38	143.98	0.00	91.03	-11.11	677.29
38	39	149.70	0.00	145.91	2.86	0.00
101	101	0.00	0.00	-145.91	2.86	0.00
101	102	5.72	0.00	-91.03	-11.11	677.26
102	102	5.72	0.00	-91.00	-5.53	677.26
102	103	11.43	0.00	-36.15	-19.51	1040.79
103	103	11.43	0.00	-35.15	-14.35	1041.00
103	104	17.15	0.00	16.73	-28.33	1080.59
104	104	17.15	0.00	16.73	-23.90	1091.00
104	105	22.87	0.00	73.61	-37.87	826.65
105	105	22.87	0.00	73.61	-34.50	826.65
105	106	28.58	0.00	126.48	-46.47	248.00
106	106	28.58	0.00	128.49	-46.51	248.00
106	107	34.30	0.00	163.37	-60.48	-642.40
107	107	34.30	0.00	163.37	-37.96	-642.40
107	108	36.30	0.00	223.49	-16.90	-1048.00
108	108	36.30	0.00	223.49	-22.59	-1048.26
108	109	38.65	0.00	268.67	5.56	-1628.00
109	109	38.65	0.00	268.67	-22.04	-1627.78
109	110	41.00	0.00	325.01	22.31	-2326.00
110	110	41.00	0.00	325.01	-15.79	-2325.58
110	111	43.35	0.00	380.64	44.63	-3166.00
111	111	43.35	0.00	380.64	46.32	-3166.47
111	112	45.85	0.00	516.99	175.95	-4301.00
112	112	45.85	0.00	-501.15	-175.99	-4301.02
112		48.35	0.00	-374.80	-46.36	-3206.00
		48.35	0.00	-374.80	-44.82	-3206.09
		50.70	0.00	-308.16	15.00	-2402.00
		50.70	0.00	-309.16	-23.15	-2402.45
115	115	53.05	0.00	-253.02	21.20	-1742.00
115	115	53.05	0.00	-253.02	-5.78	-1741.88
116	116	55.40	0.00	-207.64	19.38	-1201.00
116	116	55.40	0.00	-207.64	8.84	-1200.61
116	117	57.40	0.00	-167.52	28.02	-825.45
117	117	57.40	0.00	-167.52	30.62	-825.45
117	118	63.22	0.00	-111.68	24.40	-13.44
118	118	63.22	0.00	-111.68	25.58	-13.44
118	119	69.03	0.00	-55.84	11.36	473.76
119	119	69.03	0.00	-55.84	13.19	473.76
119	120	74.85	0.00	0.00	-1.02	836.16
120	120	74.85	0.00	0.00	1.02	836.16
120	121	80.67	0.00	55.84	-13.18	473.76
121	121	80.67	0.00	55.84	-11.36	473.76
121	122	86.48	0.00	111.68	-25.58	-13.44
122	122	86.48	0.00	111.68	-24.40	-13.44
122	123	92.30	0.00	167.52	-36.62	-825.45
123	123	92.30	0.00	167.52	-28.02	-825.45
123	124	94.30	0.00	207.64	-6.84	-1201.00
124	124	94.30	0.00	207.64	-19.39	-1200.61
124	125	96.65	0.00	253.02	8.78	-1742.00
125	125	96.65	0.00	253.02	-21.20	-1741.88
125	126	99.00	0.00	309.16	23.15	-2402.00
126	126	99.00	0.00	309.16	-15.60	-2402.45
126	127	101.35	0.00	374.80	44.82	-3206.00
127	127	101.35	0.00	374.80	46.36	-3206.09
127	128	103.65	0.00	501.15	175.99	-4301.00
128	128	103.65	0.00	-516.99	-175.95	-4301.02
128	129	106.35	0.00	-390.64	46.32	-3166.00
129	129	106.35	0.00	-380.64	44.63	-3166.47
129	130	106.70	0.00	-325.01	15.79	-2326.00
130	130	106.70	0.00	-325.01	-22.31	-2325.58
130	131	111.05	0.00	-266.87	22.04	-1628.00
131	131	111.05	0.00	-266.87	-5.59	-1627.78
131	132	113.40	0.00	-223.49	22.58	-1048.00
132	132	113.40	0.00	-223.49	16.80	-1048.26
132	133	115.40	0.00	-163.37	37.96	-642.40
133	133	115.40	0.00	-163.37	60.48	-642.40
133	134	121.12	0.00	-128.49	46.51	249.04
134	134	121.12	0.00	-128.49	48.47	249.04
134	135	126.83	0.00	-73.61	34.50	826.63
135	135	126.83	0.00	-73.61	37.87	826.63
135	136	132.55	0.00	-18.73	23.90	1090.59
136	136	132.55	0.00	-18.73	28.33	1091.00
136	137	138.27	0.00	35.15	14.35	1040.78
137	137	138.27	0.00	35.15	19.51	1041.00
		143.98	0.00	91.03	5.54	677.29
		143.98	0.00	91.03	11.11	677.29
		149.70	0.00	145.91	-2.86	0.00

CRUCES SUERTAS TOTALES

Cont viz

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-121.09	7.94	0.00
1	2	5.72	0.00	-75.39	3.04	561.58
2	2	5.72	0.00	-76.77	7.81	561.58
2	3	11.43	0.00	-31.97	2.91	888.62
3	3	11.43	0.00	-30.53	1.58	888.62
3	4	17.15	0.00	15.17	-3.31	913.73
4	4	17.15	0.00	16.29	-8.53	913.73
4	5	22.87	0.00	61.89	-11.42	668.95
5	5	22.87	0.00	62.51	-13.76	669.95
5	6	28.58	0.00	108.51	-16.95	200.25
6	6	28.58	0.00	106.89	-16.97	200.25
6	7	34.30	0.00	154.36	-23.87	-551.56
7	7	34.30	0.00	156.85	-26.59	-551.56
7	8	36.30	0.00	172.84	-30.30	-660.98
8	8	36.30	0.00	172.10	-27.16	-660.88
8	9	38.65	0.00	180.89	-29.17	-1307.00
9	9	38.65	0.00	186.89	-23.80	-1307.37
9	10	41.00	0.00	207.77	-25.61	-1774.00
10	10	41.00	0.00	205.03	-23.37	-1773.57
10	11	43.35	0.00	223.81	-25.39	-2277.00
11	11	43.35	0.00	219.67	-55.74	-2277.45
11	12	45.85	0.00	239.95	-57.84	-2652.00
12	12	45.85	0.00	-226.44	54.83	-2664.43
12	13	48.35	0.00	-206.46	52.66	-2324.00
13	13	48.35	0.00	-210.15	21.56	-2323.50
13	14	50.70	0.00	-191.38	19.56	-1652.00
14	14	50.70	0.00	-193.90	21.03	-1651.89
14	15	53.05	0.00	-175.11	19.02	-1418.00
15	15	53.05	0.00	-176.84	23.87	-1418.11
15	16	55.40	0.00	-158.05	21.85	-1025.00
16	16	55.40	0.00	-158.57	24.45	-1024.52
16	17	57.40	0.00	-142.58	22.73	-723.46
17	17	57.40	0.00	-140.73	18.54	-723.46
17	18	63.22	0.00	-84.23	13.56	-40.10
18	18	63.22	0.00	-84.10	13.23	-40.10
18	19	69.03	0.00	-47.60	0.25	372.03
19	19	69.03	0.00	-46.95	6.31	372.03
19	20	74.85	0.00	-0.45	1.33	509.86
20	20	74.85	0.00	0.45	-1.33	509.86
20	21	80.67	0.00	46.95	-6.31	372.03
21	21	80.67	0.00	47.60	-8.25	372.03
21	22	86.48	0.00	94.10	-13.23	-40.10
22	22	86.48	0.00	94.23	-13.56	-40.10
22	23	92.30	0.00	140.73	-18.54	-723.46
23	23	92.30	0.00	142.56	-22.73	-723.46
23	24	94.30	0.00	156.57	-24.45	-1025.00
24	24	94.30	0.00	158.05	-21.85	-1024.52
24	25	96.65	0.00	176.84	-23.87	-1418.00
25	25	96.65	0.00	175.11	-19.02	-1418.11
25	26	99.00	0.00	193.90	-21.03	-1652.00
26	26	99.00	0.00	191.38	-19.56	-1651.89
26	27	101.35	0.00	210.16	-21.56	-2324.00
27	27	101.35	0.00	208.46	-52.66	-2323.50
27	28	103.65	0.00	226.44	-54.83	-2665.00
28	28	103.65	0.00	-239.86	57.86	-2652.11
28	25	109.35	0.00	-218.87	55.74	-2277.00
29	29	106.35	0.00	-223.91	25.39	-2277.45
29	30	106.70	0.00	-205.03	23.37	-1774.00
30	30	106.70	0.00	-207.77	25.61	-1773.57
30	31	111.05	0.00	-188.89	23.80	-1307.00
31	31	111.05	0.00	-190.89	28.17	-1307.37
31	32	113.40	0.00	-172.10	27.16	-660.86
32	32	113.40	0.00	-172.64	30.30	-660.66
32	33	115.40	0.00	-156.85	26.59	-551.56
33	33	115.40	0.00	-154.36	23.87	-551.56
33	34	121.12	0.00	-108.66	16.97	200.28
34	34	121.12	0.00	-106.51	16.65	200.28
34	35	126.83	0.00	-62.82	13.76	669.93
35	35	126.83	0.00	-62.00	11.43	669.93
35	36	132.55	0.00	-16.29	6.53	913.73
36	36	132.55	0.00	-15.17	3.31	913.73
36	37	138.27	0.00	30.53	-1.59	669.61
37	37	138.27	0.00	31.07	-2.81	669.81
37	38	143.98	0.00	76.77	-7.80	561.61
38	38	143.98	0.00	75.36	-3.04	561.61
38	39	149.70	0.00	121.09	-7.94	0.00
101	101	0.00	0.00	-132.06	7.52	0.00
101	102	5.72	0.00	-82.14	4.67	612.26
102	102	5.72	0.00	-80.75	8.61	612.26
102	103	11.43	0.00	-30.83	5.78	931.19
103	103	11.43	0.00	-31.36	3.68	931.19
103	104	17.15	0.00	18.57	0.84	967.77
104	104	17.15	0.00	17.44	-3.04	967.77
104	105	22.87	0.00	67.37	-5.89	725.36
105	105	22.87	0.00	66.55	-8.72	725.36
105	106	28.58	0.00	116.48	-11.57	202.21
106	106	28.58	0.00	116.33	-12.19	202.21
106	107	34.30	0.00	166.26	-15.03	-605.52
107	107	34.30	0.00	163.97	-24.76	-605.52
107	108	36.30	0.00	181.43	-25.76	-950.92
108	108	36.30	0.00	181.97	-25.51	-950.92
108	109	38.65	0.00	202.50	-26.68	-1403.00
109	109	38.65	0.00	204.40	-29.28	-1402.68
109	110	41.00	0.00	224.92	-21.45	-1907.00
110	110	41.00	0.00	227.67	-6.38	-1907.13
110	111	43.35	0.00	248.20	-7.55	-2466.00
111	111	43.35	0.00	252.14	-47.03	-2466.27
111	112	45.85	0.00	273.97	-46.39	-3124.00
112	112	45.85	0.00	-258.67	-49.43	-3111.39
112	113	48.35	0.00	-236.83	-50.68	-2492.00
113	113	48.35	0.00	-233.13	3.77	-2492.01
113	114	50.70	0.00	-212.60	2.60	-1968.00
114	114	50.70	0.00	-210.08	16.89	-1968.28
114	115	53.05	0.00	-192.56	15.82	-1499.00
115	115	53.05	0.00	-187.63	21.64	-1498.69
115	116	55.40	0.00	-167.31	20.67	-1081.00
116	116	55.40	0.00	-166.79	21.36	-1081.40
116	117	57.40	0.00	-148.32	20.36	-765.29
117	117	57.40	0.00	-151.17	-12.90	-765.29
117	118	63.22	0.00	-100.37	19.00	-33.73
118	118	63.22	0.00	-100.50	9.49	-33.73
118	119	69.03	0.00	-49.70	6.59	403.09
119	119	69.03	0.00	-50.36	4.36	403.09
119	120	74.85	0.00	-0.45	1.48	548.25
120	120	74.85	0.00	-0.45	-1.48	548.25
120	121	80.67	0.00	50.36	-4.36	403.09
121	121	80.67	0.00	49.70	-6.59	403.09
121	122	86.48	0.00	100.50	-9.49	-33.73
122	122	86.48	0.00	100.37	-10.00	-33.73
122	123	92.30	0.00	151.17	-12.90	-765.29
123	123	92.30	0.00	149.32	-20.36	-765.29
123	124	94.30	0.00	166.79	-21.36	-1081.00
124	124	94.30	0.00	167.31	-20.67	-1081.40
124	125	96.65	0.00	187.63	-21.64	-1499.00
125	125	96.65	0.00	188.56	-15.82	-1498.69
125	126	99.00	0.00	210.08	-16.99	-1968.00
126	126	99.00	0.00	212.60	-2.60	-1968.28
126	127	101.35	0.00	233.13	-3.77	-2492.00
127	127	101.35	0.00	236.83	50.68	-2492.01
127	128	103.65	0.00	258.67	49.43	-3111.00
128	128	103.85	0.00	-273.97	-46.39	-3123.91
128	129	106.35	0.00	-252.14	-47.63	-2466.00
129	129	108.35	0.00	-248.20	7.55	-2466.27
129	130	106.70	0.00	-227.67	6.38	-1907.00
130	130	106.70	0.00	-224.92	21.45	-1907.13
130	131	111.05	0.00	-204.40	20.26	-1403.00
131	131	111.05	0.00	-202.50	26.68	-1402.68
131	132	113.40	0.00	-181.97	25.51	-950.92
132	132	113.40	0.00	-181.43	25.76	-950.92
132	133	115.40	0.00	-163.97	24.76	-605.52
133	133	115.40	0.00	-166.26	15.03	-605.52
133	134	121.12	0.00	-116.33	12.18	202.25
134	134	121.12	0.00	-116.48	11.57	202.25
134	135	126.83	0.00	-66.55	8.72	725.34
135	135	126.83	0.00	-67.37	5.89	725.34
135	136	132.55	0.00	-17.44	3.04	967.77
136	136	132.55	0.00	-18.57	-0.84	967.77
136	137	138.27	0.00	31.37	-3.68	931.18
137	137	138.27	0.00	30.83	-5.78	931.18
137	138	143.98	0.00	90.75	-0.61	612.28
138	138	143.98	0.00	82.13	-4.67	612.28
138	139	149.70	0.00	132.06	-7.52	0.00



[redacted]

Hipercalcitrin prot. (to)

Barra	Nodo	X	M (T)	Vy (T)	Mz (Tmet	Mz (Tmet
1	1	0.00	0.00	-66.06	0.00	0.00
1	1	5.72	0.00	-66.06	0.00	491.98
2	2	5.72	0.00	-66.06	0.00	491.98
2	3	11.43	0.00	-66.06	0.00	963.95
3	3	11.43	0.00	-66.06	0.00	963.95
3	4	17.15	0.00	-66.06	0.00	1475.93
4	4	17.15	0.00	-66.06	0.00	1476.00
4	5	22.87	0.00	-66.06	0.00	1967.91
5	5	22.87	0.00	-66.06	0.00	1968.00
5	6	28.58	0.00	-66.06	0.00	2459.88
6	6	28.58	0.00	-66.06	0.00	2460.00
6	7	34.30	0.00	-66.06	0.00	2951.86
7	7	34.30	0.00	-66.06	0.00	2952.00
7	8	36.30	0.00	-66.06	0.00	3123.98
8	8	36.30	0.00	-66.06	0.00	3124.00
8	9	38.65	0.00	-66.06	0.00	3326.22
9	9	38.65	0.00	-66.06	0.00	3326.00
9	10	41.00	0.00	-66.06	0.00	3528.46
10	10	41.00	0.00	-66.06	0.00	3528.00
10	11	43.35	0.00	-66.06	0.00	3730.70
11	11	43.35	0.00	-66.06	0.00	3731.00
11	12	45.85	0.00	-66.06	0.00	3945.85
12	12	45.85	0.00	0.00	0.00	3946.00
12	13	48.35	0.00	0.00	0.00	3945.85
13	13	48.35	0.00	0.00	0.00	3946.00
13	14	50.70	0.00	0.00	0.00	3945.85
14	14	50.70	0.00	0.00	0.00	3946.00
14	15	53.05	0.00	0.00	0.00	3945.85
15	15	53.05	0.00	0.00	0.00	3946.00
15	16	55.40	0.00	0.00	0.00	3945.85
16	16	55.40	0.00	0.00	0.00	3946.00
16	17	57.40	0.00	0.00	0.00	3945.85
17	17	57.40	0.00	0.00	0.00	3946.00
17	18	63.22	0.00	0.00	0.00	3945.85
18	18	63.22	0.00	0.00	0.00	3946.00
18	19	69.03	0.00	0.00	0.00	3945.85
19	19	69.03	0.00	0.00	0.00	3946.00
19	20	74.85	0.00	0.00	0.00	3945.85
20	20	74.85	0.00	0.00	0.00	3946.00
20	21	80.67	0.00	0.00	0.00	3945.85
21	21	80.67	0.00	0.00	0.00	3946.00
21	22	86.48	0.00	0.00	0.00	3945.85
22	22	86.48	0.00	0.00	0.00	3946.00
22	23	92.30	0.00	0.00	0.00	3945.85
23	23	92.30	0.00	0.00	0.00	3946.00
23	24	94.30	0.00	0.00	0.00	3945.85
24	24	94.30	0.00	0.00	0.00	3946.00
24	25	96.65	0.00	0.00	0.00	3945.85
25	25	96.85	0.00	0.00	0.00	3946.00
25	26	99.00	0.00	0.00	0.00	3945.85
26	1	99.00	0.00	0.00	0.00	3946.00
26		101.35	0.00	0.00	0.00	3945.85
26		101.35	0.00	0.00	0.00	3946.00
26	6	103.85	0.00	0.00	0.00	3945.85
26	26	103.85	0.00	66.06	0.00	3946.00
26	28	106.35	0.00	66.06	0.00	3730.70
29	29	106.35	0.00	66.06	0.00	3731.00
29	30	108.70	0.00	66.06	0.00	3528.46
30	30	108.70	0.00	66.06	0.00	3528.00
30	31	111.05	0.00	66.06	0.00	3326.22
31	31	111.05	0.00	66.06	0.00	3326.00
31	32	113.40	0.00	66.06	0.00	3123.98
32	32	113.40	0.00	66.06	0.00	3124.00
32	33	115.40	0.00	66.06	0.00	2951.86
33	33	115.40	0.00	66.06	0.00	2952.00
33	34	121.12	0.00	66.06	0.00	2459.85
34	34	121.12	0.00	66.06	0.00	2460.00
34	35	126.83	0.00	66.06	0.00	1967.93
35	35	126.83	0.00	66.06	0.00	1968.00
35	36	132.55	0.00	66.06	0.00	1475.93
36	36	132.55	0.00	66.06	0.00	1476.00
36	37	136.27	0.00	66.06	0.00	983.92
37	37	136.27	0.00	66.06	0.00	983.92
37	38	143.96	0.00	66.06	0.00	492.01
38	38	143.96	0.00	66.06	0.00	492.01
38	39	149.70	0.00	66.06	0.00	0.00
101	101	0.00	0.00	-66.06	0.00	0.00
101	102	5.72	0.00	-66.06	0.00	491.98
102	102	5.72	0.00	-66.06	0.00	491.98
102	103	11.43	0.00	-66.06	0.00	963.95
103	103	11.43	0.00	-66.06	0.00	963.95
103	104	17.15	0.00	-66.06	0.00	1475.93
104	104	17.15	0.00	-66.06	0.00	1476.00
104	105	22.87	0.00	-66.06	0.00	1967.91
105	105	22.87	0.00	-66.06	0.00	1968.00
105	106	28.58	0.00	-66.06	0.00	2459.88
106	106	28.58	0.00	-66.06	0.00	2460.00
106	107	34.30	0.00	-66.06	0.00	2951.86
107	107	34.30	0.00	-66.06	0.00	2952.00
107	108	36.30	0.00	-66.06	0.00	3123.98
108	108	36.30	0.00	-66.06	0.00	3124.00
108	109	38.65	0.00	-66.06	0.00	3326.22
109	109	38.65	0.00	-66.06	0.00	3326.00
109	110	41.00	0.00	-66.06	0.00	3528.46
110	110	41.00	0.00	-66.06	0.00	3528.00
110	111	43.35	0.00	-66.06	0.00	3730.70
111	111	43.35	0.00	-66.06	0.00	3731.00
111	112	45.85	0.00	-66.06	0.00	3945.85
112	112	45.85	0.00	0.00	0.00	3946.00
112	4	48.35	0.00	0.00	0.00	3945.85
		48.35	0.00	0.00	0.00	3946.00
		50.70	0.00	0.00	0.00	3945.85
	4	50.70	0.00	0.00	0.00	3946.00
115	115	53.05	0.00	0.00	0.00	3945.85
115	116	53.05	0.00	0.00	0.00	3946.00
116	116	55.40	0.00	0.00	0.00	3945.85
116	116	55.40	0.00	0.00	0.00	3946.00
116	117	57.40	0.00	0.00	0.00	3945.85
117	117	57.40	0.00	0.00	0.00	3946.00
117	118	63.22	0.00	0.00	0.00	3945.85
118	118	63.22	0.00	0.00	0.00	3946.00
118	119	69.00	0.00	0.00	0.00	3945.85
119	119	69.03	0.00	0.00	0.00	3946.00
119	120	74.85	0.00	0.00	0.00	3945.85
120	120	74.85	0.00	0.00	0.00	3946.00
120	121	80.67	0.00	0.00	0.00	3945.85
121	121	80.67	0.00	0.00	0.00	3946.00
121	122	86.48	0.00	0.00	0.00	3945.85
122	122	90.48	0.00	0.00	0.00	3946.00
122	123	92.30	0.00	0.00	0.00	3945.85
123	123	92.30	0.00	0.00	0.00	3946.00
123	124	94.30	0.00	0.00	0.00	3945.85
124	124	94.30	0.00	0.00	0.00	3946.00
124	125	96.65	0.00	0.00	0.00	3945.85
125	125	96.65	0.00	0.00	0.00	3946.00
125	126	99.00	0.00	0.00	0.00	3945.85
126	126	99.00	0.00	0.00	0.00	3946.00
126	127	101.35	0.00	0.00	0.00	3945.85
127	127	101.35	0.00	0.00	0.00	3946.00
127	128	103.85	0.00	0.00	0.00	3945.85
128	128	103.85	0.00	66.06	0.00	3946.00
128	129	106.35	0.00	66.06	0.00	3730.70
129	129	106.35	0.00	66.06	0.00	3731.00
129	130	108.70	0.00	66.06	0.00	3528.46
130	130	108.70	0.00	66.06	0.00	3528.00
130	131	111.05	0.00	66.06	0.00	3326.22
131	131	111.05	0.00	66.06	0.00	3326.00
131	132	113.40	0.00	66.06	0.00	3123.98
132	132	113.40	0.00	66.06	0.00	3124.00
132	133	115.40	0.00	66.06	0.00	2951.86
133	133	115.40	0.00	66.06	0.00	2952.00
133	134	121.12	0.00	66.06	0.00	2459.85
134	134	121.12	0.00	66.06	0.00	2460.00
134	135	126.83	0.00	66.06	0.00	1967.93
135	135	126.83	0.00	66.06	0.00	1968.00
135	136	132.55	0.00	66.06	0.00	1475.93
136	136	132.55	0.00	66.06	0.00	1476.00
136	137	136.27	0.00	66.06	0.00	983.92
137	137	136.27	0.00	66.06	0.00	983.92
137	4	143.96	0.00	66.06	0.00	492.01
	4	143.96	0.00	66.06	0.00	492.01
	4	149.70	0.00	66.06	0.00	0.00

[redacted]

Pesdides

Barra	Nodo	X	M (T)	Vy (T)	Mz (Tmet	Mz (Tmet
1	1	0.00	0.00	16.47	0.00	0.00
1	2	5.72	0.00	16.47	0.00	-94.15
2	2	5.72	0.00	16.47	0.00	-94.15
2	3	11.43	0.00	16.47	0.00	-188.31
3	3	11.43	0.00	16.47	0.00	-188.31
3	4	17.15	0.00	16.47	0.00	-282.46
4	4	17.15	0.00	16.47	0.00	-282.46
4	5	22.87	0.00	16.47	0.00	-376.61
5	5	22.87	0.00	16.47	0.00	-376.61
5	6	28.58	0.00	16.47	0.00	-470.77
6	6	28.58	0.00	16.47	0.00	-470.77
6	7	34.30	0.00	16.47	0.00	-564.92
7	7	34.30	0.00	16.47	0.00	-564.92
7	8	36.30	0.00	16.47	0.00	-597.86
8	8	36.30	0.00	16.47	0.00	-597.86
8	9	38.65	0.00	16.47	0.00	-636.57
9	9	38.65	0.00	16.47	0.00	-636.57
9	10	41.00	0.00	16.47	0.00	-675.27
10	10	41.00	0.00	16.47	0.00	-675.27
10	11	43.35	0.00	16.47	0.00	-713.97
11	11	43.35	0.00	16.47	0.00	-713.97
11	12	45.85	0.00	16.47	0.00	-755.15
12	12	45.85	0.00	0.00	0.00	-755.15
12	13	48.35	0.00	0.00	0.00	-755.15
13	13	48.35	0.00	0.00	0.00	-755.15
13	14	50.70	0.00	0.00	0.00	-755.15
14	14	50.70	0.00	0.00	0.00	-755.15
14	15	53.05	0.00	0.00	0.00	-755.15
15	15	53.05	0.00	0.00	0.00	-755.15
15	16	55.40	0.00	0.00	0.00	-755.15
16	16	55.40	0.00	0.00	0.00	-755.15
16	17	57.40	0.00	0.00	0.00	-755.15
17	17	57.40	0.00	0.00	0.00	-755.15
17	18	63.22	0.00	0.00	0.00	-755.15
18	18	63.22	0.00	0.00	0.00	-755.15
18	19	69.03	0.00	0.00	0.00	-755.15
19	19	69.03	0.00	0.00	0.00	-755.15
19	20	74.85	0.00	0.00	0.00	-755.15
20	20	74.85	0.00	0.00	0.00	-755.15
20	21	80.67	0.00	0.00	0.00	-755.15
21	21	80.67	0.00	0.00	0.00	-755.15
21	22	86.48	0.00	0.00	0.00	-755.15
22	22	86.48	0.00	0.00	0.00	-755.15
22	23	92.30	0.00	0.00	0.00	-755.15
23	23	92.30	0.00	0.00	0.00	-755.15
23	24	94.30	0.00	0.00	0.00	-755.15
24	24	94.30	0.00	0.00	0.00	-755.15
24	25	96.85	0.00	0.00	0.00	-755.15
25	25	96.85	0.00	0.00	0.00	-755.15
25	26	99.00	0.00	0.00	0.00	-755.15
26	27	101.35	0.00	0.00	0.00	-755.15
27	27	101.35	0.00	0.00	0.00	-755.15
27	28	103.85	0.00	0.00	0.00	-755.15
28	28	103.85	0.00	-16.47	0.00	-755.15
28	29	106.35	0.00	-16.47	0.00	-713.97
29	29	106.35	0.00	-16.47	0.00	-713.97
29	30	108.70	0.00	-16.47	0.00	-675.27
30	30	108.70	0.00	-16.47	0.00	-675.27
30	31	111.05	0.00	-16.47	0.00	-636.57
31	31	111.05	0.00	-16.47	0.00	-636.57
31	32	113.40	0.00	-16.47	0.00	-597.86
32	32	113.40	0.00	-16.47	0.00	-597.86
32	33	115.40	0.00	-16.47	0.00	-564.92
33	33	115.40	0.00	-16.47	0.00	-564.92
33	34	121.12	0.00	-16.47	0.00	-470.76
34	34	121.12	0.00	-16.47	0.00	-470.76
34	35	126.83	0.00	-16.47	0.00	-376.82
35	35	126.83	0.00	-16.47	0.00	-376.82
35	36	132.55	0.00	-16.47	0.00	-282.46
36	36	132.55	0.00	-16.47	0.00	-282.46
36	37	136.27	0.00	-16.47	0.00	-188.30
37	37	136.27	0.00	-16.47	0.00	-188.30
37	38	143.96	0.00	-16.47	0.00	-94.16
38	38	143.96	0.00	-16.47	0.00	-94.16
38	39	149.70	0.00	-16.47	0.00	0.00
101	101	0.00	0.00	16.47	0.00	0.00
101	102	5.72	0.00	16.47	0.00	-94.15
102	102	5.72	0.00	16.47	0.00	-94.15
102	103	11.43	0.00	16.47	0.00	-188.31
103	103	11.43	0.00	16.47	0.00	-188.31
103	104	17.15	0.00	16.47	0.00	-282.46
104	104	17.15	0.00	16.47	0.00	-282.46
104	105	22.87	0.00	16.47	0.00	-376.61
105	105	22.87	0.00	16.47	0.00	-376.61
105	106	28.58	0.00	16.47	0.00	-470.77
106	106	28.58	0.00	16.47	0.00	-470.77
106	107	34.30	0.00	16.47	0.00	-564.92
107	107	34.30	0.00	16.47	0.00	-564.92
107	108	36.30	0.00	16.47	0.00	-597.86
108	108	36.30	0.00	16.47	0.00	-597.86
108	109	38.65	0.00	16.47	0.00	-636.57
109	109	38.65	0.00	16.47	0.00	-636.57
109	110	41.00	0.00	16.47	0.00	-675.27
110	110	41.00	0.00	16.47	0.00	-675.27
110	111	43.35	0.00	16.47	0.00	-713.97
111	111	43.35	0.00	16.47	0.00	-713.97
111	112	45.85	0.00	16.47	0.00	-755.15
112	112	45.85	0.00	0.00	0.00	-755.15
112	113	48.35	0.00	0.00	0.00	-755.15
113	113	48.35	0.00	0.00	0.00	-755.15
113	114	50.70	0.00	0.00	0.00	-755.15
114	114	50.70	0.00	0.00	0.00	-755.15
114	115	53.05	0.00	0.00	0.00	-755.15
115	115	53.05	0.00	0.00	0.00	-755.15
115	116	55.40	0.00	0.00	0.00	-755.15
116	116	55.40	0.00	0.00	0.00	-755.15
116	117	57.40	0.00	0.00	0.00	-755.15
117	117	57.40	0.00	0.00	0.00	-755.15
117	118	63.22	0.00	0.00	0.00	-755.15
118	118	63.22	0.00	0.00	0.00	-755.15
118	119	69.03	0.00	0.00	0.00	-755.15
119	119	69.03	0.00	0.00	0.00	-755.15
119	120	74.85	0.00	0.00	0.00	-755.15
120	120	74.85	0.00	0.00	0.00	-755.15
120	121	80.67	0.00	0.00	0.00	-755.15
121	121	80.67	0.00	0.00	0.00	-755.15
121	122	86.48	0.00	0.00	0.00	-755.15
122	122	86.48	0.00	0.00	0.00	-755.15
122	123	92.30	0.00	0.00	0.00	-755.15
123	123	92.30	0.00	0.00	0.00	-755.15
123	124	94.30	0.00	0.00	0.00	-755.15
124	124	94.30	0.00	0.00	0.00	-755.15
124	125	96.65	0.00	0.00	0.00	-755.15
125	125	96.85	0.00	0.00	0.00	-755.15
125	126	99.00	0.00	0.00	0.00	-755.15
126	126	99.00	0.00	0.00	0.00	-755.15
126	127	101.35	0.00	0.00	0.00	-755.15
127	127	101.35	0.00	0.00	0.00	-755.15
127	128	103.85	0.00	0.00	0.00	-755.15
128	128	103.85	0.00	-16.47	0.00	-755.15
128	129	106.35	0.00	-16.47	0.00	-713.97
129	129	106.35	0.00	-16.47	0.00	-713.97
129	130	106.70	0.00	-16.47	0.00	-675.27
130	130	108.70	0.00	-16.47	0.00	-675.27
130	131	111.05	0.00	-16.47	0.00	-636.57
131	131	111.05	0.00	-16.47	0.00	-636.57
131	132	113.40	0.00	-16.47	0.00	-597.86
132	132	113.40	0.00	-16.47	0.00	-597.86
132	133	115.40	0.00	-16.47	0.00	-564.92
133	133	115.40	0.00	-16.47	0.00	-564.92
133	134	121.12	0.00	-16.47	0.00	-470.76
134	134	121.12	0.00	-16.47	0.00	-470.76
134	135	126.83	0.00	-16.47	0.00	-376.82
135	135	126.83	0.00	-16.47	0.00	-376.82
135	136	132.55	0.00	-16.47	0.00	-282.46
136	136	132.55	0.00	-16.47	0.00	-282.46
136	137	136.27	0.00	-16.47	0.00	-188.30
137	137	136.27	0.00	-16.47	0.00	-188.30
137	138	143.96	0.00	-16.47	0.00	-94.16
138	138	143.96	0.00	-16.47	0.00	-94.16
138	139	149.70	0.00	-16.47	0.00	0.00

[redacted]

Envolvente de tres de cargas picos gravitico, YY-

Cont ac

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-104.56	-44.27	0.00
1	2	5.72	0.00	-132.20	-97.09	756.25
2	2	5.72	0.00	-133.09	-36.07	756.25
2	3	11.43	0.00	-65.74	-42.17	994.52
3	3	11.43	0.00	-68.30	4.93	994.52
3	4	17.15	0.00	-61.19	-10.71	992.83
4	4	17.15	0.00	-74.65	34.63	992.83
4	5	22.87	0.00	-43.30	7.34	876.31
5	5	22.87	0.00	-54.79	35.75	876.31
5	6	28.58	0.00	-26.08	0.70	714.73
6	6	28.58	0.00	-34.15	16.80	714.73
6	7	34.30	0.00	-17.00	1.02	574.97
7	7	34.30	0.00	-24.74	27.41	574.97
7	8	36.30	0.00	-16.56	11.64	547.22
8	8	36.30	0.00	-22.12	27.00	547.22
8	9	38.85	0.00	-15.82	0.76	519.78
9	8	36.85	0.00	-16.41	21.23	519.78
9	10	41.00	0.00	-13.51	5.34	501.52
10	10	41.00	0.00	-15.49	15.97	501.52
10	11	43.35	0.00	-12.03	3.12	487.48
11	11	43.35	0.00	-13.64	14.23	487.48
11	12	45.85	0.00	-11.55	5.54	514.07
12	12	45.85	0.00	-366.55	33.16	-4005.07
12	13	48.35	0.00	-337.96	21.91	-3136.61
13	13	48.35	0.00	-306.76	-97.93	-3136.61
13	14	50.70	0.00	-282.57	-103.26	-2476.32
14	14	50.70	0.00	-263.75	-180.63	-2476.32
14	15	53.05	0.00	-236.05	-164.15	-1941.15
15	15	53.05	0.00	-225.29	-193.35	-1941.15
15	16	55.40	0.00	-201.04	-184.43	-1510.11
16	16	55.40	0.00	-189.94	-174.76	-1510.11
16	17	57.40	0.00	-180.14	-175.68	-1186.51
17	17	57.40	0.00	-222.04	-9.05	-1186.51
17	18	63.22	0.00	-160.82	-41.17	-357.62
18	18	63.22	0.00	-166.22	-15.18	-357.62
18	19	69.03	0.00	-117.96	-35.51	99.19
19	19	69.03	0.00	-120.39	5.70	99.18
19	20	74.85	0.00	-88.63	-14.73	308.85
20	20	74.85	0.00	-101.05	26.15	308.85
20	21	80.67	0.00	-66.76	-0.53	369.58
21	21	80.67	0.00	-75.26	27.42	369.58
21	22	86.48	0.00	-49.51	-0.35	357.03
22	22	86.48	0.00	-52.80	10.42	357.03
22	23	92.30	0.00	-37.96	-4.55	348.38
23	23	92.30	0.00	-44.88	21.13	348.38
23	24	94.30	0.00	-36.54	5.86	363.32
24	24	94.30	0.00	-42.15	21.44	363.32
24	25	96.85	0.00	-35.68	3.50	384.88
25	25	96.85	0.00	-36.46	16.56	384.88
25	26	98.00	0.00	-33.43	0.84	414.80
26	26	99.00	0.00	-35.64	12.20	414.80
26	27	101.35	0.00	-32.10	-0.59	458.80
27	27	101.35	0.00	-33.85	11.25	-450.80
27	28	103.85	0.00	-31.83	2.56	526.30
28	28	103.85	0.00	-365.89	15.01	-4078.86
28	29	106.35	0.00	-338.29	3.46	-3218.29
29	29	106.35	0.00	-305.64	-119.43	3218.29
29	30	108.70	0.00	-278.37	-125.61	-2568.45
30	30	108.70	0.00	-256.14	-106.54	-2568.45
30	31	111.05	0.00	-232.32	-188.68	-2047.93
31	31	111.05	0.00	-216.46	-216.47	-2047.93
31	32	113.40	0.00	-194.04	-219.17	-1635.26
32	32	113.40	0.00	-192.81	-188.79	-1635.26
32	33	115.40	0.00	-172.63	-188.21	-1340.68
33	33	115.40	0.00	-217.86	6.91	-1340.68
33	34	121.12	0.00	-156.69	-23.60	-548.08
34	34	121.12	0.00	-164.34	3.44	-548.08
34	35	126.63	0.00	-113.32	-13.79	-145.35
35	35	126.63	0.00	-127.12	34.03	-145.35
35	36	132.55	0.00	-63.83	15.03	4.27
36	36	132.55	0.00	-96.09	64.71	4.27
36	37	136.27	0.00	-61.55	34.05	0.36
37	37	136.27	0.00	-71.06	88.34	0.36
37	38	143.96	0.00	-43.87	26.16	-58.72
38	38	143.96	0.00	-47.64	41.40	-58.72
38	39	149.70	0.00	-35.17	-2.07	0.00
101	101	0.00	0.00	-72.64	-53.82	0.00
101	102	5.72	0.00	-72.64	-53.82	415.28
102	102	5.72	0.00	-68.39	-49.74	415.28
102	103	11.43	0.00	-68.39	-49.74	806.23
103	103	11.43	0.00	-45.63	-0.36	758.00
103	104	17.15	0.00	-45.63	-0.36	1018.85
104	104	17.15	0.00	-25.74	17.45	728.79
104	105	22.87	0.00	-25.74	17.45	875.91
105	105	22.87	0.00	-16.35	3.75	507.46
105	106	28.58	0.00	-16.35	3.75	612.36
106	106	28.58	0.00	-15.28	13.00	612.36
106	107	34.30	0.00	-15.28	13.00	689.69
107	107	34.30	0.00	-11.36	1.61	410.50
107	108	36.30	0.00	-11.36	1.61	433.22
108	108	36.30	0.00	-11.05	0.82	412.06
108	109	38.85	0.00	-11.08	0.82	438.05
109	109	38.85	0.00	-10.95	0.45	430.15
109	110	41.00	0.00	-10.95	0.45	455.86
110	110	41.00	0.00	-10.89	-0.40	647.79
110	111	43.35	0.00	-10.89	-0.40	473.34
111	111	43.35	0.00	-12.46	-26.31	118.35
111	112	45.85	0.00	-12.46	-26.31	147.50
112	112	45.85	0.00	-73.06	-92.60	-1349.36
112	113	48.35	0.00	-73.06	-92.80	-1168.66
113	113	48.35	0.00	-66.29	-126.55	-1501.33
113	114	50.70	0.00	-66.29	-126.55	-1270.35
114	114	50.70	0.00	-115.20	-184.66	-1278.06
114	115	53.05	0.00	-115.20	-184.88	-1007.34
115	115	53.05	0.00	-125.48	-231.80	-1014.77
115	116	55.40	0.00	-125.48	-231.80	-719.89
116	116	55.40	0.00	-123.40	-248.24	-771.16
116	117	57.40	0.00	-123.40	-248.24	-524.36
117	117	57.40	0.00	-78.49	-127.63	-756.73
117	118	63.22	0.00	-78.49	-127.83	-300.18
118	118	63.22	0.00	-71.09	-105.98	-300.18
118	119	69.03	0.00	-71.09	-105.98	113.31
119	119	69.03	0.00	-56.47	-54.99	-49.32
119	120	74.85	0.00	-56.47	-54.99	279.16
120	120	74.85	0.00	-44.05	-17.61	-99.69
120	121	80.67	0.00	-44.05	-17.61	166.34
121	121	80.67	0.00	-37.71	-5.75	23.72
121	122	86.48	0.00	-37.71	-5.75	243.07
122	122	86.48	0.00	-34.42	4.21	243.07
122	123	92.30	0.00	-34.42	4.21	443.30
123	123	92.30	0.00	-30.52	-1.17	210.93
123	124	94.30	0.00	-30.52	-1.17	271.96
124	124	94.30	0.00	-30.06	-4.13	220.69
124	125	96.85	0.00	-30.06	-4.13	291.37
125	125	96.85	0.00	-29.78	-3.95	353.84
125	126	99.00	0.00	-29.78	-3.95	353.83
126	126	99.00	0.00	-29.49	-4.10	346.22
126	127	101.35	0.00	-29.49	-4.10	415.52
127	127	101.35	0.00	-30.66	-29.76	50.83
127	128	103.85	0.00	-30.66	-29.76	157.47
128	128	103.85	0.00	-58.71	-110.62	-1252.35
128	129	106.35	0.00	-58.71	-110.62	-1103.08
129	129	106.35	0.00	-88.10	-149.60	-1460.07
129	130	108.70	0.00	-86.18	-149.60	-1257.54
130	130	108.70	0.00	-104.50	-213.46	-1265.65
130	131	111.05	0.00	-104.50	-213.46	-1020.09
131	131	111.05	0.00	-115.84	-267.77	-1027.98
131	132	113.40	0.00	-115.84	-267.77	-755.87
132	132	113.40	0.00	-113.65	-298.11	-776.83
132	133	115.40	0.00	-113.65	-298.11	-549.14
133	133	115.40	0.00	-65.54	-160.45	-438.33
133	134	121.12	0.00	-65.58	-160.45	-463.43
134	134	121.12	0.00	-57.93	-158.29	-463.43
134	135	126.63	0.00	-57.93	-158.29	-132.32
135	135	126.63	0.00	-42.82	-80.74	500.74
135	136	132.55	0.00	-42.82	-80.74	-255.37
136	136	132.55	0.00	-35.01	-18.38	-545.42
136	137	136.27	0.00	-35.01	-18.38	-345.30
137	137	136.27	0.00	-34.66	-3.61	-353.53
137	138	143.96	0.00	-34.66	-3.61	-195.36
138	138	143.96	0.00	-34.18	-2.07	-195.36
138	139	149.70	0.00	-34.18	-2.07	0.00

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Envolvente de tres de cargas picos gravitico, YY-

Cont ac

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-104.56	-44.27	0.00
1	2	5.72	0.00	-132.20	-97.09	756.25
2	2	5.72	0.00	-133.09	-36.07	756.25
2	3	11.43	0.00	-65.74	-42.17	994.52
3	3	11.43	0.00	-68.30	4.93	994.52
3	4	17.15	0.00	-61.19	-10.71	992.83
4	4	17.15	0.00	-74.65	34.63	992.83
4	5	22.87	0.00	-43.30	7.34	876.31
5	5	22.87	0.00	-54.79	35.75	876.31
5	6	28.58	0.00	-26.08	0.70	714.73
6	6	28.58	0.00	-34.15	16.80	714.73
6	7	34.30	0.00	-17.00	1.02	574.97
7	7	34.30	0.00	-24.74	27.41	574.97
7	8	36.30	0.00	-16.56	11.64	547.22
8	8	36.30	0.00	-22.12	27.00	547.22
8	9	38.85	0.00	-15.82	0.76	519.78
9	8	36.85	0.00	-16.41	21.23	519.78
9	10	41.00	0.00	-13.51	5.34	501.52
10	10	41.00	0.00	-15.49	15.97	501.52
10	11	43.35	0.00	-12.03	3.12	487.48
11	11	43.35	0.00	-13.64	14.23	487.48
11	12	45.85	0.00	-11.55	5.54	514.07
12	12	45.85	0.00	-366.55	33.16	-4005.07
12	13	48.35	0.00	-337.96	21.91	-3136.61
13	13	48.35	0.00	-306.76	-97.93	-3136.61
13	14	50.70	0.00	-282.57	-103.26	-2476.32
14	14	50.70	0.00	-263.75	-180.63	-2476.32
14	15	53.05	0.00	-236.05	-164.15	-1941.15
15	15	53.05	0.00	-225.29	-193.35	-1941.15
15	16	55.40	0.00	-201.04	-184.43	-1510.11
16	16	55.40	0.00	-189.94	-174.76	-1510.11
16	17	57.40	0.00	-180.14	-175.68	-1186.51
17	17	57.40	0.00	-222.04	-9.05	-1186.51
17	18	63.22	0.00	-160.82	-41.17	-357.62
18	18	63.22	0.00	-166.22	-15.18	-357.62
18	19	69.03	0.00	-117.96	-35.51	99.19
19	19	69.03	0.00	-120.39	5.70	99.18
19	20	74.85	0.00	-88.63	-14.73	308.85
20	20	74.85	0.00	-101.05	26.15	308.85
20	21	80.67	0.00	-66.76	-0.53	369.58
21	21	80.67	0.00	-75.26	27.42	369.58
21	22	86.48	0.00	-49.51	-0.35	357.03
22	22	86.48	0.00	-52.80	10.42	357.03
22	23	92.30	0.00	-37.96	-4.55	348.38
23	23	92.30	0.00	-44.88	21.13	348.38
23	24	94.30	0.00	-36.54	5.86	363.32
24	24	94.30	0.00	-42.15	21.44	363.32
24	25	96.85	0.00	-35.68	3.50	384.88
25	25	96.85	0.00	-36.46	16.56	384.88
25	26	98.00	0.00	-33.43	0.84	414.80
26	26	99.00	0.00	-35.64	12.20	414.80
26	27	101.35	0.00	-32.10	-0.59	458.80
27	27	101.35	0.00	-33.85	11.25	-450.80
27	28	103.85	0.00	-31.83	2.56	526.30
28	28	103.85	0.00	-365.89	15.01	-4078.86
28	29	106.35	0.00	-338.29	3.46	-3218.29
29	29	106.35	0.00	-305.64	-119.43	3218.29
29	30	108.70	0.00	-278.37	-125.61	-2568.45
30	30	108.70	0.00	-256.14	-106.54	-2568.45
30	31	111.05	0.00	-232.32	-188.68	-2047.93
31	31	111.05	0.00	-216.46	-216.47	-2047.93
31	32	113.40	0.00	-194.04	-219.17	-1635.26
32	32	113.40	0.00	-192.81	-188.79	-1635.26
32	33	115.40	0.00	-172.63	-188.21	-1340.68
33	33	115.40	0.00	-217.86	6.91	-1340.68
33	34	121.12	0.00	-156.69	-23.60	-548.08
34	34	121.12	0.00	-164.34	3.44	-548.08
34	35	126.63	0.00	-113.32	-13.79	-145.35
35	35	126.63	0.00	-127.12	34.03	-145.35
35	36	132.55	0.00	-63.83	15.03	4.27
36	36	132.55	0.00	-96.09	64.71	4.27
36	37	136.27	0.00	-61.55	34.05	0.36
37	37	136.27	0.00	-71.06	88.34	0.36
37	38	143.96	0.00	-43.87	26.16	-58.72
38	38	143.96	0.00	-47.64	41.40	-58.72
38	39	149.70	0.00	-35.17	-2.07	0.00
101	101	0.00	0.00	-72.64	-53.82	0.00
101	102	5.72	0.00	-72.64	-53.82	415.28
102	102	5.72	0.00	-68.39	-49.74	415.28
102	103	11.43	0.00	-68.39	-49.74	806.23
103	103	11.43	0.00	-45.63	-0.36	758.00
103	104	17.15	0.00	-45.63	-0.36	1018.85
104	104	17.15	0.00	-25.74	17.45	728.79
104	105	22.87	0.00	-25.74	17.45	875.91
105	105	22.87	0.00	-16.35	3.75	507.46
105	106	28.58	0.00	-16.35	3.75	612.36
106	106	28.58	0.00	-15.28	13.00	612.36
106	107	34.30	0.00	-15.28	13.00	689.69
107	107	34.30	0.00	-11.36	1.61	410.50
107	108	36.30	0.00	-11.36	1.61	433.22
108	108	36.30	0.00	-11.05	0.82	412.06
108	109	38.85	0.00	-11.08	0.82	438.05
109	109	38.85	0.00	-10.95	0.45	430.15
109	110	41.00	0.00	-10.95	0.45	455.86
110	110	41.00	0.00	-10.89	-0.40	647.79
110	111	43.35	0.00	-10.89	-0.40	473.34
111	111	43.35	0.00	-12.46	-26.31	118.35
111	112	45.85	0.00	-12.46	-26.31	147.50
112	112	45.85	0.00	-73.06	-92.60	-1349.36
112	113	48.35	0.00	-73.06	-92.80	-1168.66
113	113	48.35	0.00	-66.29	-126.55	-1501.33
113	114	50.70	0.00	-66.29	-126.55	-1270.35
114	114	50.70	0.00	-115.20	-184.66	-1278.06
114	115	53.05	0.00	-115.20	-184.88	-1007.34
115	115	53.05	0.00	-125.48	-231.80	-1014.77
115	116	55.40	0.00	-125.48	-231.80	-719.89
116	116	55.40	0.00	-123.40	-248.24	-771.16
116	117	57.40	0.00	-123.40	-248.24	-524.36
117	117	57.40	0.00	-78.49	-127.63	-756.73
117	118	63.22	0.00	-78.49	-127.83	-300.18
118	118	63.22	0.00	-71.09	-105.98	-300.18
118	119	69.03	0.00	-71.09	-105.98	113.31
119	119	69.03	0.00	-56.47	-54.99	-49.32
119	120	74.85	0.00	-56.47	-54.99	279.16
120	120	74.85	0.00	-44.05	-17.61	-99.69
120	121	80.67	0.00	-44.05	-17.61	166.34
121	121	80.67	0.00	-37.71	-5.75	23.72
121	122	86.48	0.00	-37.71	-5.75	243.07
122	122	86.48	0.00	-34.42	4.21	243.07
122	123	92.30	0.00	-34.42	4.21	443.30
123	123	92.30	0.00	-30.52	-1.17	210.93
123	124	94.30	0.00	-30.52	-1.17	271.96
124	124	94.30	0.00	-30.06	-4.13	220.69
124	125	96.85	0.00	-30.06	-4.13	291.37
125	125	96.85	0.00	-29.78	-3.95	353.84
125	126	99.00	0.00	-29.78	-3.95	353.83
126	126	99.00	0.00	-29.49	-4.10	346.22
126	127	101.35	0.00	-29.49	-4.10	415.52
127	127	101.35	0.00	-30.66	-29.76	50.83
127	128	103.85	0.00	-30.66	-29.76	157.47
128	128	103.85	0.00	-58.71	-110.62	-1252.35
128	129	106.35	0.00	-58.71	-110.62	-1103.08
129	129	106.35	0.00	-88.10	-149.60	-1460.07
129	130	108.70	0.00	-86.18	-149.60	-1257.54
130	130	108.70	0.00	-104.50	-213.46	-1265.65
130	131	111.05	0.00	-104.50	-213.46	-1020.09
131	131	111.05	0.00	-115.84	-267.77	-1027.98
131	132	113.40	0.00	-115.84	-267.77	-755.87
132	132	113.40	0.00	-113.65	-298.11	-776.83
132	133	115.40	0.00	-113.65	-298.11	-549.14
133	133	115.40	0.00	-65.54	-160.45	-438.33
133	134	121.12	0.00	-65.58	-160.45	-463.43
134	134	121.12	0.00	-57.93	-158.29	-463.43
134	135	126.63	0.00	-57.93	-158.29	-132.32
135	135	126.63	0.00	-42.82	-80.74	500.74
135	136	132.55	0.00	-42.82	-80.74	-255.37
136	136	132.55	0.00	-35.01	-18.38	-545.42
136	137	136.27	0.00	-35.01	-18.38	-345.30
137	137	136.27	0.00	-34.66	-3.61	-353.53
137	138	143.96	0.00	-34.66	-3.61	-195.36
138	138	143.96	0.00	-34.18	-2.07	-195.36
138	139	149.70	0.00	-34.18	-2.07	0.00

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Envelvente de tron do cargas plono gonérico. 82X-

Cont ast

Barra	Nudo	X	M (T)	Vy (T)	Mz (Tnd	Mz (Tnd
1	1	0.00	0.00	-132.29	-47.09	0.00
1	2	5.72	0.00	-119.82	-90.56	666.61
2	2	5.72	0.00	-79.75	-71.94	645.76
2	3	11.43	0.00	-49.34	-114.12	1384.25
3	3	11.43	0.00	-19.47	-45.88	815.60
3	4	17.15	0.00	29.07	-60.64	1231.21
4	4	17.15	0.00	23.52	-20.07	1010.95
4	5	22.87	0.00	66.81	-38.07	1208.11
5	5	22.87	0.00	-13.16	-9.52	406.18
5	6	28.58	0.00	37.87	-27.05	725.44
6	6	28.58	0.00	38.00	-12.49	588.97
6	7	34.30	0.00	100.19	-43.00	-470.22
7	7	34.30	0.00	43.44	-14.55	-1203.80
7	8	36.30	0.00	89.42	-14.98	-1233.61
8	8	36.30	0.00	43.82	-24.69	-1264.69
8	9	36.65	0.00	88.04	-25.39	-1343.87
9	9	36.65	0.00	47.48	-37.42	-1387.20
9	10	41.00	0.00	73.31	-40.56	-1473.36
10	10	41.00	0.00	52.21	-55.37	-1498.76
10	11	43.35	0.00	78.48	-61.55	-1617.14
11	11	43.35	0.00	99.50	-100.40	-1621.46
11	12	45.85	0.00	91.10	-111.85	-1795.07
12	12	45.85	0.00	-246.53	-86.97	-1987.64
12	13	48.35	0.00	-244.41	-65.57	-1350.25
13	13	48.35	0.00	-231.81	-164.24	-1813.50
13	14	50.70	0.00	-229.27	-177.04	-1237.22
14	14	50.70	0.00	-190.97	-206.52	-1261.47
14	15	53.05	0.00	-165.94	-224.23	-764.15
15	15	53.05	0.00	-155.62	-238.10	-905.54
15	16	55.40	0.00	-149.35	-246.04	-377.09
16	16	55.40	0.00	-135.50	-200.78	-425.78
16	17	57.40	0.00	-129.16	-216.05	-82.63
17	17	57.40	0.00	-112.21	-47.18	-1191.92
17	18	63.22	0.00	-97.36	-62.15	-309.76
18	18	63.22	0.00	-105.91	-41.05	-357.45
18	19	69.03	0.00	-90.03	-69.41	556.51
19	19	69.03	0.00	-41.73	-25.93	-76.59
19	20	74.85	0.00	-7.44	-52.61	493.75
20	20	74.85	0.00	-19.86	-11.73	123.95
20	21	80.67	0.00	21.89	-32.15	545.37
21	21	80.67	0.00	-37.36	-6.48	-69.74
21	22	86.48	0.00	12.91	-25.81	356.85
22	22	86.48	0.00	10.65	-10.55	309.17
22	23	92.30	0.00	71.86	-42.68	341.79
23	23	92.30	0.00	6.10	-19.24	-757.50
23	24	94.30	0.00	25.90	-20.16	-721.01
24	24	94.30	0.00	9.54	-30.17	-769.70
24	25	96.65	0.00	33.80	-31.25	-750.73
25	25	96.65	0.00	13.65	-43.53	-792.12
25	26	99.00	0.00	39.35	-46.85	-798.85
26	26	99.00	0.00	18.67	-61.58	-824.20
26	27	101.35	0.00	45.85	-67.81	-964.32
27	27	101.35	0.00	50.83	-105.92	-1316.57
27	28	103.85	0.00	90.15	-117.47	-1481.13
28	28	103.85	0.00	-263.24	-102.48	-1709.72
28	29	106.35	0.00	-261.15	-111.17	-1086.32
29	29	106.35	0.00	-214.13	-184.10	-1103.66
29	30	108.70	0.00	-210.67	-196.95	-568.14
30	30	108.70	0.00	-171.32	-232.44	-583.57
30	31	111.05	0.00	-166.42	-248.33	-140.95
31	31	111.05	0.00	-134.50	-252.61	-164.28
31	32	113.40	0.00	-126.28	-270.94	186.64
32	32	113.40	0.00	-113.83	-215.41	145.58
32	33	115.40	0.00	-107.65	-231.18	438.09
33	33	115.40	0.00	-100.10	-37.11	-1235.83
33	34	121.12	0.00	-86.54	-52.90	-423.30
34	34	121.12	0.00	-88.40	-30.31	-559.75
34	35	126.83	0.00	-74.69	-59.36	324.76
35	35	126.83	0.00	-17.11	-12.38	-475.17
35	36	132.55	0.00	14.34	-39.67	-13.87
36	36	132.55	0.00	-10.92	-5.23	-234.10
36	37	138.27	0.00	27.28	-20.86	179.34
37	37	138.27	0.00	-34.69	-3.61	-399.36
37	38	143.98	0.00	12.63	-7.71	50.74
38	38	143.98	0.00	-35.17	-2.07	-201.09
38	39	149.70	0.00	27.10	-4.88	0.00
101	101	0.00	0.00	-72.64	-53.82	0.00
101	102	5.72	0.00	-72.64	-53.82	415.28
102	102	5.72	0.00	-65.91	-57.72	381.22
102	103	11.43	0.00	-65.91	-57.72	758.00
103	103	11.43	0.00	-38.29	-22.57	504.21
103	104	17.15	0.00	-38.29	-22.57	728.79
104	104	17.15	0.00	-21.05	-4.38	367.14
104	105	22.87	0.00	-21.05	-4.38	507.48
105	105	22.87	0.00	-15.43	-9.74	360.92
105	106	28.58	0.00	-15.43	-9.74	455.10
106	106	28.58	0.00	-11.68	-9.02	336.26
106	107	34.30	0.00	-11.68	-9.02	403.04
107	107	34.30	0.00	28.91	-14.49	-1174.93
107	108	36.30	0.00	28.91	-14.49	-1232.75
108	108	36.30	0.00	25.73	-24.38	-1232.75
108	109	38.65	0.00	25.73	-24.38	-1293.21
109	109	38.65	0.00	21.87	-35.96	-1293.21
109	110	41.00	0.00	21.87	-35.96	-1344.60
110	110	41.00	0.00	15.70	-47.83	-1284.69
110	111	43.35	0.00	15.70	-47.83	-1321.59
111	111	43.35	0.00	-2.20	-58.14	-666.72
111	112	45.85	0.00	-2.20	-58.14	-663.22
112	112	45.85	0.00	-89.95	-133.10	-637.85
112	113	48.35	0.00	-89.95	-133.10	-462.98
113	113	48.35	0.00	-57.47	-176.48	-462.98
113	114	50.70	0.00	-57.47	-178.46	-257.43
114	114	50.70	0.00	-99.07	-223.40	-257.43
114	115	53.05	0.00	-99.07	-223.40	-24.61
115	115	53.05	0.00	-104.94	-257.62	-24.61
115	116	55.40	0.00	-104.94	-257.62	222.01
116	116	55.40	0.00	-96.99	-266.26	222.01
116	117	57.40	0.00	-96.99	-266.26	419.86
117	117	57.40	0.00	-77.01	-136.80	-567.44
117	118	63.22	0.00	-77.01	-136.80	-118.49
118	118	63.22	0.00	-68.03	-106.98	-156.14
118	119	69.03	0.00	-68.03	-106.98	237.59
119	119	69.03	0.00	-56.47	-54.99	-48.32
119	120	74.85	0.00	-56.47	-54.99	279.16
120	120	74.85	0.00	-44.05	-17.61	49.89
120	121	80.67	0.00	-44.05	-17.61	186.34
121	121	80.67	0.00	-34.66	-6.75	-100.56
121	122	86.48	0.00	-34.66	-6.75	101.03
122	122	86.48	0.00	-32.95	-4.97	62.38
122	123	92.30	0.00	-32.95	-4.97	254.01
123	123	92.30	0.00	-6.10	-19.19	-733.41
123	124	94.30	0.00	-6.10	-19.19	-721.21
124	124	94.30	0.00	-9.54	-29.95	-721.21
124	125	96.65	0.00	-9.54	-29.95	-688.78
125	125	96.65	0.00	-13.65	-42.47	-666.78
125	126	99.00	0.00	-13.65	-42.47	-666.70
126	126	99.00	0.00	-18.67	-56.03	-666.70
126	127	101.35	0.00	-18.67	-56.03	-622.83
127	127	101.35	0.00	-27.53	-70.05	-622.83
127	128	103.85	0.00	-27.53	-70.05	-554.02
128	128	103.85	0.00	-48.45	-142.45	221.64
128	129	106.35	0.00	-49.45	-142.45	-96.00
129	129	106.35	0.00	-58.59	-197.03	334.66
129	130	108.70	0.00	-58.59	-197.03	-474.80
130	130	108.70	0.00	-71.68	-249.69	534.82
130	131	111.05	0.00	-71.68	-249.89	703.28
131	131	111.05	0.00	-79.09	-292.57	703.28
131	132	113.40	0.00	-79.09	-292.97	869.14
132	132	113.40	0.00	-73.58	-314.21	869.14
132	133	115.40	0.00	-73.58	-314.21	1036.30
133	133	115.40	0.00	-61.90	-193.47	-541.67
133	134	121.12	0.00	-61.98	-193.47	-167.32
134	134	121.12	0.00	-55.01	-163.79	-308.18
134	135	126.83	0.00	-55.01	-163.79	0.25
135	135	126.83	0.00	-36.23	-102.58	-132.32
135	136	132.55	0.00	-36.23	-102.58	86.26
136	136	132.55	0.00	-26.66	-60.60	-255.37
136	137	138.27	0.00	-26.66	-60.60	-91.51
137	137	138.27	0.00	-32.19	-11.59	345.30
137	138	143.98	0.00	-32.19	-11.59	161.32
138	138	143.98	0.00	-34.18	-2.07	-155.38
138	139	149.70	0.00	-34.18	-2.07	0.00

[redacted]

Envolvente de tron do cargas plono gonérico. 82X-

Cont ast

Barra	Nudo	X	M (T)	Vy (T)	Mz (Tnd	Mz (Tnd
1	1	0.00	0.00	-132.29	-47.09	0.00
1	2	5.72	0.00	-119.82	-90.56	666.61
2	2	5.72	0.00	-79.75	-71.94	645.76
2	3	11.43	0.00	-49.34	-114.12	1384.25
3	3	11.43	0.00	-19.47	-45.88	815.60
3	4	17.15	0.00	29.07	-60.64	1231.21
4	4	17.15	0.00	23.52	-20.07	1010.95
4	5	22.87	0.00	66.81	-38.07	1208.11
5	5	22.87	0.00	-13.16	-9.52	406.18
5	6	28.58	0.00	37.87	-27.05	725.44
6	6	28.58	0.00	38.00	-12.49	588.97
6	7	34.30	0.00	100.19	-43.00	-470.22
7	7	34.30	0.00	43.44	-14.55	-1203.80
7	8	36.30	0.00	89.42	-14.98	-1233.61
8	8	36.30	0.00	43.82	-24.69	-1264.69
8	9	36.65	0.00	88.04	-25.39	-1343.87
9	9	36.65	0.00	47.48	-37.42	-1387.20
9	10	41.00	0.00	73.31	-40.56	-1473.36
10	10	41.00	0.00	52.21	-55.37	-1498.76
10	11	43.35	0.00	78.48	-61.55	-1617.14
11	11	43.35	0.00	99.50	-100.40	-1621.46
11	12	45.85	0.00	91.10	-111.85	-1795.07
12	12	45.85	0.00	-246.53	-86.97	-1987.64
12	13	48.35	0.00	-244.41	-65.57	-1350.25
13	13	48.35	0.00	-231.81	-164.24	-1813.50
13	14	50.70	0.00	-229.27	-177.04	-1237.22
14	14	50.70	0.00	-190.97	-206.52	-1261.47
14	15	53.05	0.00	-165.94	-224.23	-764.15
15	15	53.05	0.00	-155.62	-238.10	-905.54
15	16	55.40	0.00	-149.35	-246.04	-377.09
16	16	55.40	0.00	-135.50	-200.78	-425.78
16	17	57.40	0.00	-129.16	-216.05	-82.63
17	17	57.40	0.00	-112.21	-47.18	-1191.92
17	18	63.22	0.00	-97.36	-62.15	-309.76
18	18	63.22	0.00	-105.91	-41.05	-357.45
18	19	69.03	0.00	-90.03	-69.41	556.51
19	19	69.03	0.00	-41.73	-25.93	-76.59
19	20	74.85	0.00	-7.44	-52.61	493.75
20	20	74.85	0.00	-19.86	-11.73	123.95
20	21	80.67	0.00	21.89	-32.15	545.37
21	21	80.67	0.00	-37.36	-6.48	-69.74
21	22	86.48	0.00	12.91	-25.81	356.85
22	22	86.48	0.00	10.65	-10.55	309.17
22	23	92.30	0.00	71.86	-42.68	341.79
23	23	92.30	0.00	6.10	-19.24	-757.50
23	24	94.30	0.00	25.90	-20.16	-721.01
24	24	94.30	0.00	9.54	-30.17	-769.70
24	25	96.65	0.00	33.80	-31.25	-750.73
25	25	96.65	0.00	13.65	-43.53	-792.12
25	26	99.00	0.00	39.35	-46.85	-798.85
26	26	99.00	0.00	18.67	-61.58	-824.20
26	27	101.35	0.00	45.85	-67.81	-964.32
27	27	101.35	0.00	50.83	-105.92	-1316.57
27	28	103.85	0.00	90.15	-117.47	-1481.13
28	28	103.85	0.00	-263.24	-102.48	-1709.72
28	29	106.35	0.00	-261.15	-111.17	-1086.32
29	29	106.35	0.00	-214.13	-184.10	-1103.66
29	30	108.70	0.00	-210.67	-196.95	-568.14
30	30	108.70	0.00	-171.32	-232.44	-583.57
30	31	111.05	0.00	-166.42	-248.33	-140.95
31	31	111.05	0.00	-134.50	-252.61	-164.28
31	32	113.40	0.00	-126.28	-270.94	186.64
32	32	113.40	0.00	-113.83	-215.41	145.58
32	33	115.40	0.00	-107.65	-231.18	438.09
33	33	115.40	0.00	-100.10	-37.11	-1235.83
33	34	121.12	0.00	-86.54	-52.90	-423.30
34	34	121.12	0.00	-88.40	-30.31	-559.75
34	35	126.83	0.00	-74.69	-59.36	324.76
35	35	126.83	0.00	-17.11	-12.38	-475.17
35	36	132.55	0.00	14.34	-39.67	-13.87
36	36	132.55	0.00	-10.92	-5.23	-234.10
36	37	138.27	0.00	27.28	-20.86	179.34
37	37	138.27	0.00	-34.69	-3.61	-399.36
37	38	143.98	0.00	12.63	-7.71	50.74
38	38	143.98	0.00	-35.17	-2.07	-201.09
38	39	149.70	0.00	27.10	-4.88	0.00
101	101	0.00	0.00	-72.64	-53.82	0.00
101	102	5.72	0.00	-72.64	-53.82	415.28
102	102	5.72	0.00	-65.91	-57.72	381.22
102	103	11.43	0.00	-65.91	-57.72	758.00
103	103	11.43	0.00	-38.29	-22.57	504.21
103	104	17.15	0.00	-38.29	-22.57	728.79
104	104	17.15	0.00	-21.05	-4.38	367.14
104	105	22.87	0.00	-21.05	-4.38	507.48
105	105	22.87	0.00	-15.43	-9.74	360.92
105	106	28.58	0.00	-15.43	-9.74	455.10
106	106	28.58	0.00	-11.68	-9.02	336.26
106	107	34.30	0.00	-11.68	-9.02	403.04
107	107	34.30	0.00	28.91	-14.49	-1174.93
107	108	36.30	0.00	28.91	-14.49	-1232.75
108	108	36.30	0.00	25.73	-24.38	-1232.75
108	109	38.65	0.00	25.73	-24.38	-1293.21
109	109	38.65	0.00	21.87	-35.96	-1293.21
109	110	41.00	0.00	21.87	-35.96	-1344.60
110	110	41.00	0.00	15.70	-47.83	-1284.69
110	111	43.35	0.00	15.70	-47.83	-1321.59
111	111	43.35	0.00	-2.20	-58.14	-666.72
111	112	45.85	0.00	-2.20	-58.14	-663.22
112	112	45.85	0.00	-89.95	-133.10	-637.85
112	113	48.35	0.00	-89.95	-133.10	-462.98
113	113	48.35	0.00	-57.47	-176.48	-462.98
113	114	50.70	0.00	-57.47	-178.46	-257.43
114	114	50.70	0.00	-99.07	-223.40	-257.43
114	115	53.05	0.00	-99.07	-223.40	-24.61
115	115	53.05	0.00	-104.94	-257.62	-24.61
115	116	55.40	0.00	-104.94	-257.62	222.01
116	116	55.40	0.00	-96.99	-266.26	222.01
116	117	57.40	0.00	-96.99	-266.26	419.86
117	117	57.40	0.00	-77.01	-136.80	-567.44
117	118	63.22	0.00	-77.01	-136.80	-118.49
118	118	63.22	0.00	-68.03	-106.98	-156.14
118	119	69.03	0.00	-68.03	-106.98	237.59
119	119	69.03	0.00	-56.47	-54.99	-48.32
119	120	74.85	0.00	-56.47	-54.99	279.16
120	120	74.85	0.00	-44.05	-17.61	49.89
120	121	80.67	0.00	-44.05	-17.61	186.34
121	121	80.67	0.00	-34.66	-6.75	-100.56
121	122	86.48	0.00	-34.66	-6.75	101.03
122	122	86.48	0.00	-32.95	-4.97	62.38
122	123	92.30	0.00	-32.95	-4.97	254.01
123	123	92.30	0.00	-6.10	-19.19	-733.41
123	124	94.30	0.00	-6.10	-19.19	-721.21
124	124	94.30	0.00	-9.54	-29.95	-721.21
124	125	96.65	0.00	-9.54	-29.95	-688.78
125	125	96.65	0.00	-13.65	-42.47	-666.78
125	126	99.00	0.00	-13.65	-42.47	-666.70
126	126	99.00	0.00	-18.67	-56.03	-666.70
126	127	101.35	0.00	-18.67	-56.03	-622.83
127	127	101.35	0.00	-27.53	-70.05	-622.83
127	128	103.85	0.00	-27.53	-70.05	-554.02
128	128	103.85	0.00	-48.45	-142.45	221.64
128	129	106.35	0.00	-49.45	-142.45	-96.00
129	129	106.35	0.00	-58.59	-197.03	334.66
129	130	108.70	0.00	-58.59	-197.03	-474.80
130	130	108.70	0.00	-71.68	-249.69	534.82
130	131	111.05	0.00	-71.68	-249.89	703.28
131	131	111.05	0.00	-79.09	-292.57	703.28
131	132	113.40	0.00	-79.09	-292.97	869.14
132	132	113.40	0.00	-73.58	-314.21	869.14
132	133	115.40	0.00	-73.58	-314.21	1036.30
133	133	115.40	0.00	-61.90	-193.47	-541.67
133	134	121.12	0.00	-61.98	-193.47	-167.32
134	134	121.12	0.00	-55.01	-163.79	-308.18
134	135	126.83	0.00	-55.01	-163.79	0.25
135	135	126.83	0.00	-36.23	-102.58	-132.32
135	136	132.55	0.00	-36.23	-102.58	86.26
136	136	132.55	0.00	-26.66	-60.60	-255.37
136	137	138.27	0.00	-26.66	-60.60	-91.51
137	137	138.27	0.00	-32.19	-11.59	345.30
137	138	143.98	0.00	-32.19	-11.59	161.32
138	138	143.98	0.00	-34.18	-2.07	-155.38
138	139	149.70	0.00	-34.18	-2.07	0.00

[redacted]

Dimensiones de tres ejes tangue planos ganaderos. V1r

Conf: vac

TIR B K INT .NI

Secmo	Rueda	X	X (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	33.63	1.54	0.00
[redacted]	2	5.72	0.00	-49.23	-77.21	-49.59
	2	5.72	0.00	42.01	-52.31	-49.59
	3	11.43	0.00	60.74	-123.22	-27.11
3	3	11.43	0.00	57.65	-80.00	-27.11
3	4	17.15	0.00	82.55	-139.55	-26.15
4	4	17.15	0.00	77.67	-83.40	-26.15
4	5	22.87	0.00	116.65	-133.77	-160.69
5	5	22.87	0.00	104.30	-79.72	-160.69
5	6	28.58	0.00	152.93	-131.19	-525.32
6	6	28.58	0.00	143.65	-67.19	-525.32
6	7	34.30	0.00	202.40	-166.70	-1246.71
7	7	34.30	0.00	185.86	85.01	-1246.71
7	8	36.30	0.00	174.70	73.73	-1512.15
8	8	36.30	0.00	173.68	143.26	-1512.15
8	9	38.65	0.00	188.70	130.35	-1679.69
9	9	38.65	0.00	205.62	131.88	-1679.69
9	10	41.00	0.00	226.84	117.48	-2326.82
10	10	41.00	0.00	243.16	99.30	-2326.82
10	11	43.35	0.00	268.34	98.83	-2904.89
11	11	43.35	0.00	266.19	-14.73	-2904.89
11	12	45.85	0.00	318.17	-36.38	-3644.85
12	12	45.85	0.00	30.39	-2.09	504.19
12	13	48.35	0.00	33.86	-20.68	438.23
13	13	48.35	0.00	30.67	-0.69	-438.23
13	14	50.70	0.00	35.22	-21.16	396.05
14	14	50.70	0.00	31.79	-1.90	396.05
14	15	53.05	0.00	37.53	-24.45	366.00
15	15	53.05	0.00	33.69	-3.97	366.00
15	16	55.40	0.00	40.56	-27.86	344.52
16	16	55.40	0.00	36.17	-5.75	344.52
16	17	57.40	0.00	42.71	-25.09	330.11
17	17	57.40	0.00	38.16	3.11	330.11
17	18	63.22	0.00	90.85	-18.61	336.45
18	18	63.22	0.00	47.26	-8.53	336.45
18	19	69.03	0.00	72.72	-48.36	343.99
19	19	69.03	0.00	63.57	-17.40	343.99
19	20	74.85	0.00	96.96	-63.66	281.22
20	20	74.85	0.00	83.75	-18.96	281.22
20	21	80.67	0.00	123.84	-64.46	81.30
21	21	80.67	0.00	110.45	-18.30	81.30
21	22	86.48	0.00	156.36	-68.23	-344.00
22	22	86.48	0.00	146.56	-37.23	-344.00
22	23	92.30	0.00	209.23	-107.28	-1125.19
23	23	92.30	0.00	183.67	100.67	-1125.19
23	24	94.30	0.00	182.26	86.46	-1406.76
24	24	94.30	0.00	161.43	139.53	-1406.76
24	25	98.65	0.00	204.18	123.45	-1794.07
25	25	98.65	0.00	212.56	119.50	-1794.07
25	26	99.00	0.00	236.46	104.97	-2270.29
26	26	99.00	0.00	248.00	74.34	-2270.29
[redacted]	27	101.35	0.00	274.08	57.74	-2650.67
	27	101.35	0.00	293.12	-24.77	-2650.67
	28	103.65	0.00	321.08	-48.42	-3602.95
	28	103.65	0.00	11.05	-5.05	485.30
28	29	106.35	0.00	14.00	-22.84	478.83
29	29	106.35	0.00	11.47	-3.39	478.93
29	30	108.70	0.00	15.88	-23.80	481.66
30	30	108.70	0.00	12.69	-5.17	481.66
30	31	111.05	0.00	16.32	-27.65	487.99
31	31	111.05	0.00	14.62	-7.78	487.99
31	32	113.40	0.00	21.38	-31.94	523.71
32	32	113.40	0.00	18.99	-9.94	523.71
32	33	115.40	0.00	23.36	-29.61	550.49
33	33	115.40	0.00	16.85	-0.87	550.49
33	34	121.12	0.00	30.21	-21.54	662.87
34	34	121.12	0.00	26.83	-10.05	662.87
34	35	126.83	0.00	50.50	-46.77	832.36
35	35	126.83	0.00	41.39	-17.49	832.36
35	36	132.55	0.00	72.32	-57.29	934.56
36	36	132.55	0.00	58.40	-8.27	934.56
36	37	138.27	0.00	95.62	-39.91	924.62
37	37	138.27	0.00	81.04	15.50	924.62
37	38	143.98	0.00	125.42	-3.77	990.69
38	38	143.98	0.00	120.61	26.72	990.69
38	39	149.70	0.00	178.53	15.28	0.00
101	101	0.00	0.00	33.08	1.54	0.00
101	102	5.72	0.00	33.08	1.54	-169.13
102	102	5.72	0.00	33.45	2.69	-169.13
102	103	11.43	0.00	33.45	2.69	-380.34
103	103	11.43	0.00	34.62	28.00	-220.94
103	104	17.15	0.00	34.62	28.00	-518.64
104	104	17.15	0.00	44.75	124.79	-20.75
104	105	22.87	0.00	44.75	124.79	-282.58
105	105	22.87	0.00	61.62	185.86	-99.33
105	106	28.58	0.00	61.62	105.86	-451.60
106	106	28.58	0.00	70.74	222.06	-295.55
106	107	34.30	0.00	70.74	222.06	-699.94
107	107	34.30	0.00	120.67	274.33	-904.22
107	108	36.30	0.00	120.67	274.33	-845.55
108	108	36.30	0.00	125.34	216.64	-511.82
108	109	38.65	0.00	125.34	216.64	-1100.18
109	109	38.65	0.00	119.90	162.49	-1084.94
109	110	41.00	0.00	119.90	162.49	-1366.47
110	110	41.00	0.00	108.61	111.97	-1356.47
110	111	43.35	0.00	109.61	111.97	-1816.05
111	111	43.35	0.00	83.04	77.37	-1546.84
111	112	45.85	0.00	83.04	77.37	-1791.44
112	112	45.85	0.00	28.57	7.86	418.22
112	113	48.35	0.00	28.57	7.86	346.78
113	[redacted]	48.35	0.00	26.69	2.76	411.13
		50.70	0.00	26.69	2.79	343.72
		50.70	0.00	28.57	2.67	351.33
		53.05	0.00	26.97	2.67	283.26
		53.05	0.00	26.35	2.12	303.27
115	116	55.40	0.00	29.35	2.12	234.30
116	116	55.40	0.00	29.96	1.23	266.00
116	117	57.40	0.00	29.96	1.23	206.07
117	117	57.40	0.00	33.33	3.70	294.59
117	118	63.22	0.00	33.33	3.70	100.73
118	118	63.22	0.00	36.89	4.01	242.53
118	119	69.03	0.00	36.89	4.01	27.97
119	119	69.03	0.00	43.34	15.89	102.37
119	120	74.85	0.00	43.34	15.89	-59.72
120	120	74.85	0.00	55.45	53.77	295.16
120	121	80.67	0.00	58.45	53.77	-33.18
121	121	80.67	0.00	72.53	109.73	131.22
121	122	86.48	0.00	72.53	109.73	-280.97
122	122	86.48	0.00	81.36	141.42	-140.87
122	123	92.30	0.00	81.36	141.42	-622.13
123	123	92.30	0.00	129.11	224.61	-533.62
123	124	94.30	0.00	129.11	224.61	-701.84
124	124	94.30	0.00	133.84	199.07	-760.15
124	125	98.65	0.00	133.84	199.07	-1074.98
125	125	98.65	0.00	129.92	144.52	-1054.86
125	126	99.00	0.00	126.92	144.52	-1357.52
126	126	99.00	0.00	119.53	90.64	-1350.01
127	127	101.35	0.00	119.53	90.64	-1630.91
127	127	101.35	0.00	103.68	67.08	-1596.57
127	128	103.65	0.00	103.68	97.08	-1825.77
128	128	103.65	0.00	10.70	5.70	-424.47
128	129	106.35	0.00	10.70	5.70	397.72
129	129	106.35	0.00	10.55	0.10	-664.93
129	130	108.70	0.00	10.55	0.10	-440.13
130	130	108.70	0.00	10.66	-0.54	446.14
130	131	111.05	0.00	10.66	-0.54	-423.09
131	131	111.05	0.00	10.55	-1.55	644.32
131	132	113.40	0.00	10.55	-1.55	416.76
132	132	113.40	0.00	11.39	-2.69	452.70
132	133	115.40	0.00	11.39	-2.69	225.91
133	133	115.40	0.00	14.72	-0.48	525.63
134	134	121.12	0.00	14.72	-0.48	641.93
134	134	121.12	0.00	17.68	-4.31	587.54
135	135	126.83	0.00	17.55	-4.31	-664.86
135	136	126.83	0.00	24.06	-2.23	576.10
136	136	132.55	0.00	24.88	-2.23	537.10
136	136	132.55	0.00	43.33	-22.77	1020.18
137	137	138.27	0.00	43.33	-22.77	781.46
137	138	138.27	0.00	67.82	15.96	840.99
138	[redacted]	143.98	0.00	67.82	15.96	-653.23
138		143.98	0.00	79.28	33.88	-653.23
		149.70	0.00	78.20	33.88	0.00

[redacted]

Dimensiones de tres ejes tangue planos ganaderos. V1r

Conf: vac

Secmo	Rueda	X	X (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-178.53	-15.28	0.00
1	2	5.72	0.00	-120.82	-26.71	660.67
2	2	5.72	0.00	-120.42	3.77	660.67
2	3	11.43	0.00	-61.04	-15.50	924.62
3	3	11.43	0.00	-58.62	38.91	924.62
3	4	17.15	0.00	-80.40	5.37	934.56
4	4	17.15	0.00	-72.32	57.20	934.56
4	5	22.87	0.00	-41.32	17.48	532.37
5	5	22.87	0.00	-60.50	46.77	532.37
5	6	28.58	0.00	-20.63	10.00	992.05
6	6	28.58	0.00	-39.21	21.54	662.86
6	7	34.30	0.00	-16.85	0.87	550.48
7	7	34.30	0.00	-23.36	29.61	550.49
7	8	36.30	0.00	-16.86	8.84	523.71
8	8	36.30	0.00	-21.36	31.84	523.71
9	9	38.65	0.00	-14.62	7.76	487.99
9	9	38.65	0.00	-19.32	27.95	487.99
9	10	41.00	0.00	-12.99	5.17	481.86
10	10	41.00	0.00	-15.86	23.00	481.86
10	11	43.35	0.00	-11.47	3.39	478.83
11	11	43.35	0.00	-14.80	22.84	478.83
11	12	45.85	0.00	-11.05	5.05	485.30
12	12	45.85	0.00	-321.06	-48.42	-3602.95
12	13	48.35	0.00	-293.13	24.78	-2650.67
13	13	48.35	0.00	-274.08	-57.74	-2650.67
13	14	50.70	0.00	-249.00	-74.34	-2270.29
14	14	50.70	0.00	-236.46	-104.97	-2270.29
14	15	53.05	0.00	-212.56	-119.50	-1794.07
15	15	53.05	0.00	-204.18	-123.45	-1794.07
15	16	55.40	0.00	-181.43	-139.53	-1406.76
16	16	55.40	0.00	-182.36	-68.46	-1406.76
16	17	57.40	0.00	-163.67	-100.67	-1125.19
17	17	57.40	0.00	-208.23	107.28	-1125.19
17	18	63.22	0.00	-146.56	37.23	-344.00
18	18	63.22	0.00	-156.36	68.23	-344.00
18	19	69.03	0.00	-110.45	18.30	81.30
19	19	69.03	0.00	-123.84	64.46	81.30
19	20	74.85	0.00	-83.75	18.96	281.22
20	20	74.85	0.00	-96.96	63.66	281.22
20	21	80.67	0.00	-63.57	17.40	343.99
21	21	80.67	0.00	-72.72	48.26	343.99
21	22	86.48	0.00	-47.26	6.53	336.45
22	22	86.48	0.00	-50.85	18.61	336.45
22	23	92.30	0.00	-36.16	-3.11	330.11
23	23	92.30	0.00	-42.71	25.09	330.11
23	24	94.30	0.00	-36.17	5.75	344.52
24	24	94.30	0.00	-40.56	27.86	344.52
24	25	98.65	0.00	-33.69	3.97	366.00
25	25	98.65	0.00	-37.53	24.45	366.00
25	26	99.00	0.00	-31.79	1.90	396.06
26	26	99.00	0.00	-35.22	21.16	396.05
26	27	101.35	0.00	-30.67	0.69	-438.23
27	27	101.35	0.00	-33.86	20.68	-438.23
27	28	103.65	0.00	-30.39	2.09	504.19
28	28	103.65	0.00	-316.17	36.39	-3644.85
28	29	106.35	0.00	-264.18	14.73	-2904.89
29	29	106.35	0.00	-268.34	-68.83	-2904.89
29	30	108.70	0.00	-243.18	-86.39	-2336.82
30	30	108.70	0.00	-229.64	-117.46	-2336.82
30	31	111.05	0.00	-205.62	-131.88	-1679.69
31	31	111.05	0.00	-198.79	-130.35	-1679.69
31	32	113.40	0.00	-173.89	-143.26	-1512.14
32	32	113.40	0.00	-174.70	-73.73	-1512.14
32	33	115.40	0.00	-155.86	-65.61	-1246.71
33	33	115.40	0.00	-202.40	166.70	-1246.71
33	34	121.12	0.00	-143.65	87.18	-525.29
34	34	121.12	0.00	-152.63	131.19	-525.29
34	35	126.83	0.00	-104.39	79.72	-160.67
35	35	126.83	0.00	-118.85	133.77	-160.67
35	36	132.55	0.00	-77.97	83.40	-26.15
36	36	132.55	0.00	-92.55	139.55	-26.15
36	37	138.27	0.00	-57.65	80.00	-27.12
37	37	138.27	0.00	-66.74	123.21	-27.12
37	38	143.98	0.00	-42.01	52.31	-99.59
38	38	143.98	0.00	-48.23	77.22	-99.59
38	39	149.70	0.00	-33.83	-1.54	0.00
101	101	0.00	0.00	-79.28	-33.89	0.00
101	102	5.72	0.00	-79.28	-33.89	453.20
102	102	5.72	0.00	-67.82	-15.96	453.20
102	103	11.43	0.00	-67.82	-15.96	640.50
103	103	11.43	0.00	-43.33	22.77	781.50
103	104	17.15	0.00	-43.33	22.77	1029.20
104	104	17.15	0.00	-24.66	2.23	537.11
104	105	22.87	0.00	-24.66	2.23	678.10
105	105	22.87	0.00	-17.96	4.31	484.85
105	106	28.58	0.00	-17.96	4.31	597.53
106	106	28.58	0.00	-14.72	0.49	441.48
106	107	34.30	0.00	-14.72	0.49	525.63
107	107	34.30	0.00	-11.39	2.69	429.91
107	108	36.30	0.00	-11.39	2.69	452.70
108	108	36.30	0.00	-10.86	1.55	416.76
108	109	38.65	0.00	-10.86	1.55	444.32
109	109	38.65	0.00	-10.66	0.54	423.09
109	110	41.00	0.00	-10.66	0.54	446.14
110	110	41.00	0.00	-10.55	-0.10	440.13
110	111	43.35	0.00	-10.55	-0.10	464.83
111	111	43.35	0.00	-10.70	-3.70	397.72
111	112	45.85	0.00	-10.70	-3.70	424.47
112	112	45.85	0.00	-103.66	-97.08	-1025.77
112	113	48.35	0.00	-103.66	-97.08	-1596.57
113	113	48.35	0.00	-118.53	-98.64	-1630.91
113	114	50.70	0.00	-118.53	-98.64	-1350.01
114	114	50.70	0.00	-128.92	-144.52	-1357.52
114	115	53.05	0.00	-126.92	-144.52	-1054.86
115	115	53.05	0.00	-133.84	-188.07	-1074.98
115	116	55.40	0.00	-133.84	-188.07	-760.15
116	116	55.40	0.00	-129.11	-224.61	-791.84
116	117	57.40	0.00	-129.11	-224.61	-533.62
117	117	57.40	0.00	-81.36	-141.42	-622.13
117	118	63.22	0.00	-81.36	-141.42	-146.87
118	118	63.22	0.00	-72.53	-109.73	-280.97
118	119	69.03	0.00	-72.53	-109.73	131.22
119	119	69.03	0.00	-56.45	-53.77	-33.18
119	120	74.85	0.00	-56.45	-53.77	295.16
120	120	74.85	0.00	-43.34	-15.89	-59.72
120	121	80.67	0.00	-43.34	-15.89	102.37
121	121	80.67	0.00	-36.89	-4.01	27.97
121	122	86.48	0.00	-36.89	-4.01	242.53
122	122	86.48	0.00	-33.33	-3.70	100.73
122	123	92.30	0.00	-33.33	-3.70	294.59
123	123	92.30	0.00	-29.96	-1.23	206.07
123	124	94.30	0.00	-29.96	-1.23	266.00
124	124	94.30	0.00	-29.35	-2.12	234.30
124	125	98.65	0.00	-28.35	-2.12	303.27
125	125	98.65	0.00	-28.97	-2.67	283.26
125	126	99.00	0.00	-28.97	-2.67	351.33
126	126	99.00	0.00	-28.69	-2.79	343.72
126	127	101.35	0.00	-26.68	-2.79	411.13
127	127	101.35	0.00	-28.57	-7.86	346.79
127	128	103.65	0.00	-28.57	-7.98	418.22
128	128	103.65	0.00	-93.04	-77.37	-1781.44
128	129	106.35	0.00	-93.04	-77.37	-1548.84
129	129	108.35	0.00	-108.61	-111.97	-1816.05
129	130	108.70	0.00	-100.61	-111.97	-1356.47
130	130	108.70	0.00	-119.80	-182.49	-1366.47
130	131	111.05	0.00	-118.90	-182.49	-1084.94
131	131	111.05	0.00	-125.34	-216.64	-1108.18
131	132	113.40	0.00	-125.34	-216.64	-811.82
132	132	113.40	0.00	-120.67	-274.33	-845.55
132	133	115.40	0.00	-120.67	-274.33	-604.22
133	133	115.40	0.00	-70.74	-222.06	-699.94
133	134	121.12	0.00	-70.74	-222.06	-295.53
134	134	121.12	0.00	-61.62	-185.86	-451.59
134	135	126.83	0.00	-61.62	-185.86	-99.36
135	135	126.83	0.00	-44.75	-124.79	-282.58
135	136	132.55	0.00	-44.75	-124.79	-26.74
136	136	132.55	0.00	-34.62	-28.01	-516.84
136	137	138.27	0.00	-34.62	-28.01	-320.93
137	137	138.27	0.00	-33.45	-2.89	-380.33
137	138	143.98	0.00	-33.45	-2.89	-169.14
138	138	143.98	0.00	-33.08	-1.54	-169.14
138	139	149.70	0.00	-33.08	-1.54	0.00

[redacted]

Desviamento da linha de esgoto pluvial projetada, 500

Cont 100

Barra	Nódo	X	Y (m)	Vx (m)	Mz (Tm)	Rz (Tm)
1	1	0.00	0.00	-24.25	12.56	0.00
	2	5.72	0.00	33.48	1.54	-191.30
	2	5.72	0.00	-41.57	23.91	194.48
	3	11.43	0.00	3.81	4.64	-20.61
2	3	11.43	0.00	-38.75	49.74	333.63
3	4	17.15	0.00	-2.53	15.10	-25.80
4	4	17.15	0.00	-23.11	20.80	93.77
4	5	22.87	0.00	7.82	21.06	-399.76
5	5	22.87	0.00	-2.91	50.30	-251.53
5	6	28.56	0.00	21.16	11.59	-675.26
6	6	28.56	0.00	15.15	21.55	-594.56
6	7	34.30	0.00	28.71	1.02	-998.58
7	7	34.30	0.00	62.40	136.12	-454.48
7	8	38.30	0.00	99.78	119.44	199.19
8	8	38.30	0.00	108.63	187.56	257.64
8	9	38.65	0.00	116.38	173.42	-75.82
9	9	38.65	0.00	141.88	169.84	-34.83
9	10	41.00	0.00	147.32	188.27	-427.19
10	10	41.00	0.00	177.80	182.71	-402.84
10	11	43.35	0.00	182.38	132.30	-990.85
11	11	43.35	0.00	195.62	88.78	-980.95
11	12	45.85	0.00	188.37	70.99	-1370.64
12	12	45.85	0.00	-101.56	104.04	-1445.88
12	13	48.35	0.00	-73.60	82.36	-1245.41
13	13	48.35	0.00	-38.67	81.83	-779.45
13	14	50.70	0.00	-13.58	45.33	-752.30
14	14	50.70	0.00	-33.64	48.31	-729.00
14	15	53.05	0.00	-9.94	21.79	-728.94
15	15	53.05	0.00	-28.70	35.16	-666.89
15	16	55.40	0.00	-6.95	21.96	-712.62
16	16	55.40	0.00	-23.13	26.23	-686.53
16	17	57.40	0.00	-4.44	14.01	-703.74
17	17	57.40	0.00	-121.50	110.12	65.55
17	18	63.22	0.00	-62.82	48.07	362.23
18	18	63.22	0.00	-68.06	80.00	447.17
18	19	68.03	0.00	-20.15	30.07	347.21
19	19	68.03	0.00	-46.67	76.25	433.71
19	20	74.85	0.00	-8.79	30.74	185.98
20	20	74.85	0.00	-19.90	75.44	376.48
20	21	80.67	0.00	13.39	29.16	-6.42
21	21	80.67	0.00	17.56	80.13	78.08
21	22	86.48	0.00	43.04	16.28	-654.72
22	22	86.48	0.00	35.88	29.45	-369.77
22	23	92.30	0.00	30.56	7.73	-660.63
23	23	92.30	0.00	116.53	139.77	-91.35
23	24	94.30	0.00	123.08	120.44	-305.41
24	24	94.30	0.00	133.81	198.47	-348.53
24	25	96.65	0.00	140.80	162.58	-736.18
25	25	96.65	0.00	165.09	175.74	-999.14
25	26	99.00	0.00	170.53	153.19	-1145.24
26	26	99.00	0.00	200.19	140.83	-1121.94
	27	101.35	0.00	204.75	120.36	-1631.59
	27	101.35	0.00	165.56	79.30	-1188.03
	28	103.85	0.00	168.13	60.52	-1649.87
28	28	103.85	0.00	-165.75	162.32	-1770.72
28	29	106.35	0.00	-77.76	60.67	-1585.03
29	29	106.35	0.00	-74.48	58.98	-1565.03
29	30	108.70	0.00	-46.32	-52.42	-1454.52
30	30	108.70	0.00	-69.82	43.61	-1429.97
30	31	111.05	0.00	-45.61	29.21	-1346.88
31	31	111.05	0.00	-65.80	35.29	-1305.79
31	32	113.40	0.00	-42.89	22.36	-1246.07
32	32	113.40	0.00	-58.95	34.77	-1164.63
32	33	115.40	0.00	-40.10	22.89	-1152.71
33	33	115.40	0.00	-157.04	165.05	288.36
33	34	121.12	0.00	-96.49	87.34	752.44
34	34	121.12	0.00	-104.84	132.72	832.84
34	35	126.83	0.00	-56.40	81.25	923.25
35	35	126.83	0.00	-99.64	137.37	981.47
35	36	132.55	0.00	-28.46	87.00	814.64
36	36	132.55	0.00	-36.68	146.36	934.36
36	37	136.27	0.00	-1.76	88.63	614.02
37	37	136.27	0.00	16.11	143.35	954.08
37	38	143.98	0.00	42.84	72.45	-629.62
38	38	143.98	0.00	106.05	165.47	812.42
38	39	149.70	0.00	120.45	26.72	0.00
101	101	0.00	0.00	24.60	0.99	0.00
101	102	5.72	0.00	24.60	6.99	-140.63
102	102	5.72	0.00	22.73	26.34	-64.34
102	103	11.43	0.00	22.73	26.38	-194.31
103	103	11.43	0.00	29.36	65.62	-41.84
103	104	17.15	0.00	29.36	65.62	-208.90
104	104	17.15	0.00	40.27	130.11	139.17
104	105	22.87	0.00	40.27	130.11	-81.03
105	105	22.87	0.00	58.39	180.81	-48.59
105	106	28.56	0.00	58.39	180.81	-205.16
106	106	28.56	0.00	67.32	222.57	-178.72
106	107	34.30	0.00	67.32	222.57	-563.56
107	107	34.30	0.00	80.47	267.77	550.04
107	108	36.30	0.00	80.47	267.77	789.11
108	108	36.30	0.00	88.02	236.28	788.11
108	109	38.65	0.00	88.02	236.28	562.26
109	109	38.65	0.00	85.58	199.82	582.26
109	110	41.00	0.00	85.56	199.82	361.18
110	110	41.00	0.00	87.42	147.10	16.53
110	111	43.35	0.00	87.42	147.10	-188.91
111	111	43.35	0.00	79.58	111.09	-508.91
111	112	45.85	0.00	79.58	111.09	-506.80
112	112	45.85	0.00	20.93	47.72	-539.22
112	113	48.35	0.00	20.83	47.72	-581.54
		48.35	0.00	14.52	45.65	-564.07
		50.70	0.00	14.52	45.65	-618.19
		50.70	0.00	9.94	30.82	-637.64
	.5	53.05	0.00	9.94	30.82	-661.00
		53.05	0.00	6.95	21.78	-661.00
115	115	55.40	0.00	6.95	21.78	-677.32
116	116	55.40	0.00	4.44	13.97	-677.32
116	117	57.40	0.00	4.44	13.97	-696.20
117	117	57.40	0.00	21.34	3.71	259.83
117	118	63.22	0.00	31.34	3.71	77.63
118	118	63.22	0.00	31.78	5.08	77.63
118	119	68.03	0.00	31.78	5.08	-107.23
119	119	68.03	0.00	41.35	15.90	180.82
119	120	74.85	0.00	41.35	15.90	-59.72
120	120	74.65	0.00	54.48	53.78	295.16
120	121	80.67	0.00	54.46	53.78	-21.63
121	121	80.67	0.00	67.43	107.79	295.42
121	122	86.48	0.00	67.43	107.79	-125.77
122	122	86.48	0.00	79.36	141.43	-125.77
122	123	92.30	0.00	79.36	141.43	-567.47
123	123	92.30	0.00	103.58	237.55	358.05
123	124	94.30	0.00	103.58	237.55	151.47
124	124	94.30	0.00	111.44	206.73	151.47
124	125	96.65	0.00	111.44	206.73	-110.40
125	125	96.65	0.00	105.88	172.67	-110.40
125	126	99.00	0.00	105.88	172.67	-358.65
126	126	99.00	0.00	105.37	136.50	-368.10
126	127	101.35	0.00	105.37	136.50	-635.72
127	127	101.35	0.00	96.04	108.94	-620.25
127	128	103.85	0.00	96.04	108.94	-958.34
128	128	103.85	0.00	-2.75	39.42	-848.07
128	129	106.35	0.00	-2.75	39.42	-841.21
129	129	106.35	0.00	-11.64	35.23	-954.21
129	130	106.70	0.00	-11.64	35.23	-936.67
130	130	108.70	0.00	-23.56	26.59	-1290.52
130	131	111.05	0.00	-23.54	26.58	-1244.11
131	131	111.05	0.00	-26.45	10.06	-1244.11
131	132	113.40	0.00	-26.45	10.05	-1181.97
132	132	113.40	0.00	-28.51	10.76	-1181.97
132	133	115.40	0.00	-28.51	10.76	-1124.35
133	133	115.40	0.00	10.84	0.02	376.80
133	134	121.12	0.00	10.84	0.02	314.27
134	134	121.12	0.00	14.73	0.63	431.11
134	135	126.83	0.00	14.73	0.63	368.93
135	135	126.83	0.00	20.16	3.09	466.57
135	136	132.55	0.00	20.16	3.09	371.19
136	136	132.55	0.00	38.09	14.85	720.26
136	137	136.27	0.00	38.09	14.85	502.49
137	137	136.27	0.00	57.11	39.05	654.86
137	138	143.98	0.00	57.11	39.05	328.43
		143.98	0.00	70.79	39.33	-654.72
		149.70	0.00	70.79	39.33	0.00

[redacted]

Desviamento da linha de esgoto pluvial projetada, 500

Cont 100

Barra	Nódo	X	Y (m)	Vx (T)	Mz (Tm)	Rz (Tm)
1	1	0.00	0.00	-120.45	-20.71	0.00
1	2	5.72	0.00	-105.05	-105.47	612.39
2	2	5.72	0.00	-42.84	-72.64	-490.58
2	3	11.43	0.00	-18.11	-140.36	954.12
3	3	11.43	0.00	1.79	-88.83	814.03
3	4	17.15	0.00	36.66	-146.36	534.37
4	4	17.15	0.00	20.46	-47.00	914.64
4	5	22.87	0.00	68.84	-137.37	981.47
5	5	22.87	0.00	56.39	-61.25	923.24
5	6	28.56	0.00	104.64	-152.72	832.65
6	6	28.56	0.00	99.49	-97.34	752.42
6	7	34.30	0.00	157.94	-166.88	266.36
7	7	34.30	0.00	93.10	-52.88	-1152.70
7	8	38.30	0.00	58.95	-34.77	-1184.62
8	9	38.30	0.00	42.88	-22.38	-1246.07
8	9	38.65	0.00	65.60	-35.29	-1305.79
9	9	38.65	0.00	45.81	-29.21	-1348.87
9	10	41.00	0.00	68.82	-43.81	-1429.97
10	10	41.00	0.00	49.32	-42.42	-1454.52
10	11	43.35	0.00	74.48	-58.96	-1585.02
11	11	43.35	0.00	77.76	-60.67	-1585.02
11	12	45.85	0.00	105.75	-102.32	-1775.71
12	12	45.85	0.00	-100.13	-90.52	-1649.07
12	13	48.35	0.00	-162.56	-78.30	-1166.03
13	13	48.35	0.00	-204.75	-120.36	-1531.98
13	14	50.70	0.00	-200.19	-140.83	-1121.93
14	14	50.70	0.00	-170.83	-153.19	-1145.23
14	15	53.05	0.00	-165.09	-175.74	-999.13
15	15	53.05	0.00	-140.80	-162.58	-736.16
15	16	55.40	0.00	-133.91	-186.47	-349.62
16	16	55.40	0.00	-123.08	-120.44	-365.41
16	17	57.40	0.00	-119.53	-139.77	-91.35
17	17	57.40	0.00	-50.56	-7.73	-660.63
17	18	63.22	0.00	-35.89	-29.45	-369.77
18	18	63.22	0.00	-43.04	-19.29	-654.72
18	19	69.03	0.00	-17.58	-60.13	78.08
19	19	68.03	0.00	-13.39	-29.16	-6.42
19	20	74.85	0.00	19.90	-75.44	376.47
20	20	74.85	0.00	6.79	-30.74	185.98
20	21	80.67	0.00	46.67	-76.24	-433.71
21	21	80.67	0.00	20.15	-30.07	347.21
21	22	86.48	0.00	68.06	-80.00	447.17
22	22	86.48	0.00	62.82	-48.07	362.22
22	23	92.30	0.00	121.50	-118.12	65.55
23	23	92.30	0.00	4.44	-14.01	-703.73
23	24	94.30	0.00	23.13	-26.23	-666.83
24	24	94.30	0.00	6.95	-21.96	-712.61
24	25	96.65	0.00	28.70	-35.16	-668.89
25	25	96.65	0.00	9.94	-31.79	-728.94
25	26	99.00	0.00	33.84	-46.31	-738.98
26	26	99.00	0.00	13.59	-45.33	-752.29
26	27	101.35	0.00	36.67	-61.83	-779.45
27	27	101.35	0.00	73.60	-82.36	-1245.41
27	28	103.85	0.00	101.56	-104.04	-1445.89
28	28	103.85	0.00	-186.37	-70.89	-1370.63
28	29	106.35	0.00	-195.82	-99.78	-660.94
29	29	106.35	0.00	-182.39	-132.20	-880.94
29	30	108.70	0.00	-177.80	-152.71	-902.64
30	30	108.70	0.00	-147.32	-166.27	-427.19
30	31	111.05	0.00	-141.69	-188.94	-34.83
31	31	111.05	0.00	-116.36	-173.42	-75.91
31	32	113.40	0.00	-109.63	-197.56	257.64
32	32	113.40	0.00	-98.78	-118.44	196.18
32	33	115.40	0.00	-82.40	-136.12	-454.48
33	33	115.40	0.00	-20.71	-1.02	-998.58
33	34	121.12	0.00	-15.15	-21.70	-594.56
34	34	121.12	0.00	-21.16	-11.58	-675.26
34	35	126.83	0.00	2.50	-90.30	-251.56
35	35	126.83	0.00	-7.82	-21.06	-288.78
35	36	132.55	0.00	23.11	-90.90	93.77
36	36	132.55	0.00	2.53	-15.10	-25.87
36	37	136.27	0.00	39.75	-45.74	263.48
37	37	136.27	0.00	-3.81	-4.64	-56.59
37	38	143.98	0.00	41.57	-23.91	194.48
38	38	143.98	0.00	-33.46	-1.54	-191.31
38	39	149.70	0.00	24.25	-12.98	0.00
101	101	0.00	0.00	-70.78	-39.33	0.00
101	102	5.72	0.00	-70.79	-38.33	404.70
102	102	5.72	0.00	-57.11	-39.65	328.41
102	103	11.43	0.00	-57.11	-39.65	654.87
103	103	11.43	0.00	-36.09	-14.65	502.50
103	104	17.15	0.00	-36.09	-14.85	720.26
104	104	17.15	0.00	-20.18	-3.09	371.18
104	105	22.87	0.00	-20.18	-3.09	488.55
105	105	22.87	0.00	-14.73	-0.63	346.93
105	106	28.56	0.00	-14.73	-0.63	431.11
106	106	28.56	0.00	-10.84	-0.02	314.27
106	107	34.30	0.00	-10.84	-0.02	376.80
107	107	34.30	0.00	28.81	-10.76	-1124.35
107	108	36.30	0.00	28.81	-10.76	-1181.96
108	108	36.30	0.00	26.45	-16.08	-1181.86
108	109	38.65	0.00	26.45	-16.08	-1244.11
109	109	38.65	0.00	23.58	-26.58	-1244.11
109	110	41.00	0.00	23.58	-26.58	-1299.52
110	110	41.00	0.00	11.64	-35.23	-936.87
110	111	43.35	0.00	11.64	-35.23	-984.21
111	111	43.35	0.00	2.75	-30.42	-841.21
111	112	45.85	0.00	2.75	-30.42	-548.07
112	112	45.85	0.00	-98.04	-108.94	-968.34
112	113	48.35	0.00	-98.04	-108.94	-628.24
113	113	48.35	0.00	-105.37	-136.50	-635.71
113	114	50.70	0.00	-105.37	-136.50	-388.10
114	114	50.70	0.00	-108.89	-172.67	-388.64
114	115	53.05	0.00	-108.88	-172.67	-110.40
115	115	53.05	0.00	-111.44	-208.73	-110.40
115	116	55.40	0.00	-111.44	-208.73	151.48
116	116	55.40	0.00	-103.59	-237.55	151.48
116	117	57.40	0.00	-103.59	-237.55	358.66
117	117	57.40	0.00	-79.36	-141.43	-567.48
117	118	63.22	0.00	-75.36	-141.43	-125.77
118	118	63.22	0.00	-67.43	-107.79	-125.77
118	119	68.03	0.00	-67.43	-107.79	266.42
119	119	68.03	0.00	-54.46	-53.78	-21.63
119	120	74.85	0.00	-54.48	-53.78	295.16
120	120	74.85	0.00	-41.35	-15.90	-59.72
120	121	80.67	0.00	-41.35	-15.80	180.82
121	121	80.67	0.00	-31.78	-5.06	-107.23
121	122	86.48	0.00	-31.78	-5.06	77.63
122	122	86.48	0.00	-31.34	-3.71	77.63
122	123	92.30	0.00	-31.34	-3.71	259.83
123	123	92.30	0.00	-4.44	-13.97	-696.20
123	124	94.30	0.00	-4.44	-13.97	-677.32
124	124	94.30	0.00	-6.95	-21.78	-677.32
124	125	96.65	0.00	-6.95	-21.78	-660.99
125	125	96.65	0.00	-9.94	-30.82	-660.88
125	126	99.00	0.00	-9.94	-30.62	-637.64
126	126	99.00	0.00	-14.52	-40.65	-618.19
126	127	101.35	0.00	-14.52	-40.65	-564.07
127	127	101.35	0.00	-20.93	-47.72	-581.53
127	128	103.85	0.00	-20.93	-47.72	-539.22
128	128	103.85	0.00	-79.56	-111.09	-506.80
128	129	106.35	0.00	-78.59	-111.09	-308.91
129	129	106.35	0.00	-67.42	-147.10	-188.91
129	130	106.70	0.00	-67.42	-147.10	16.53
130	130	108.70	0.00	-65.56	-189.62	361.18
130	131	111.05	0.00	-65.56	-189.62	582.26
131	131	111.05	0.00	-66.02	-236.28	582.26
131	132	113.40	0.00	-66.02	-236.28	788.11
132	132	113.40	0.00	-60.47	-267.77	788.11
132	133	115.40	0.00	-60.47	-267.77	550.04
133	133	115.40	0.00	-67.32	-222.57	-563.56
133	134	121.12	0.00	-67.32	-222.57	-178.70
134	134	121.12	0.00	-56.39	-160.81	-285.18
134	135	126.83	0.00	-56.39	-160.81	46.57
135	135	126.83	0.00	-40.27	-130.11	-91.06
135	136	132.55	0.00	-40.27	-130.11	139.16
136	136	132.55	0.00	-29.38	-65.82	-208.90
136	137	136.27	0.00	-29.38	-65.82	-41.83
137	137	136.27	0.00	-22.74	-26.38	-184.31
137	138	143.98	0.00	-22.74	-26.38	-64.35
138	138	143.98	0.00	-24.60	-6.99	-140.63
138	139	149.70	0.00	-24.60	-6.99	0.00

[redacted]

Desviación de tres ejes paso geométrico, 3D?

Cost ver

Barra	Nudo	X	Y (ft)	W (ft)	Mx (Tnd)	My (Tnd)
1	1	0.00	0.00	-25.23	16.48	0.00
1	2	5.72	0.00	34.66	1.74	-193.26
2	2	5.72	0.00	-12.99	17.51	41.29
[redacted]	3	11.43	0.00	34.27	3.82	-384.17
[redacted]	3	11.43	0.00	-37.05	37.17	160.34
3	4	17.15	0.00	16.54	11.14	-239.56
4	4	17.15	0.00	-35.14	54.59	87.20
4	5	22.87	0.00	5.33	16.44	-301.49
5	5	33.87	0.00	-1.52	46.76	-262.16
5	6	39.56	0.00	22.04	10.21	-791.00
6	6	39.56	0.00	16.03	30.49	-816.23
6	7	34.30	0.00	29.75	1.10	-1022.87
7	7	34.30	0.00	97.16	170.48	457.94
7	8	30.30	0.00	103.56	151.06	197.96
8	8	38.30	0.00	115.94	222.89	347.75
8	9	36.65	0.00	122.62	200.37	-102.71
9	9	36.65	0.00	153.52	210.01	-93.26
9	10	41.00	0.00	158.97	188.31	-504.83
10	10	41.00	0.00	162.63	168.82	-479.70
10	11	43.35	0.00	197.03	150.00	-973.63
11	11	43.35	0.00	213.12	98.95	-973.63
11	12	45.85	0.00	216.23	81.87	-1525.83
12	12	45.85	0.00	-107.10	109.58	-1402.38
12	13	46.35	0.00	-77.84	91.01	-1276.48
13	13	46.35	0.00	-42.52	64.00	-847.68
13	14	50.70	0.00	-16.43	51.23	-613.75
14	14	50.70	0.00	-36.05	47.01	-777.70
14	15	53.05	0.00	-11.27	36.02	-775.10
15	15	53.05	0.00	-31.40	34.26	-734.80
15	16	55.40	0.00	-7.88	24.53	-756.54
16	16	55.40	0.00	-24.32	24.51	-709.28
16	17	57.40	0.00	-5.04	15.89	-746.51
17	17	57.40	0.00	-101.03	90.75	255.41
17	18	63.22	0.00	-40.80	32.42	401.01
18	18	63.22	0.00	-46.46	59.05	447.36
18	19	69.03	0.00	2.81	18.68	207.28
19	19	69.03	0.00	-46.40	60.71	461.84
19	20	74.85	0.00	-5.28	22.97	195.49
20	20	74.85	0.00	-16.32	68.94	392.01
20	21	80.67	0.00	15.70	26.61	-16.84
21	21	80.67	0.00	42.63	59.99	237.52
21	22	86.48	0.00	68.50	22.31	-452.72
22	22	86.48	0.00	62.18	36.82	-406.35
22	23	92.30	0.00	77.08	17.08	-1078.28
23	23	92.30	0.00	122.12	168.69	-78.36
23	24	94.30	0.00	126.67	148.47	-353.73
24	24	94.30	0.00	140.64	206.41	-346.43
24	25	98.65	0.00	147.47	196.20	-752.90
25	25	98.65	0.00	174.00	193.87	-712.80
25	26	99.00	0.00	178.57	173.31	-1161.05
26	25	99.00	0.00	210.68	154.50	-1145.00
26	27	101.35	0.00	215.17	138.32	-1660.77
27	[redacted]	101.35	0.00	188.19	84.80	-1252.15
[redacted]	[redacted]	103.85	0.00	202.33	69.81	-1799.47
[redacted]	[redacted]	103.85	0.00	-109.86	109.14	-1788.18
[redacted]	[redacted]	106.35	0.00	-78.07	87.57	-1579.14
[redacted]	[redacted]	106.35	0.00	-75.10	60.16	-1579.14
29	29	108.70	0.00	-46.94	46.84	-1498.25
29	30	108.70	0.00	-89.09	42.26	-1444.12
30	31	111.05	0.00	-44.96	31.42	-1363.55
31	31	111.05	0.00	-66.52	31.08	-1344.10
31	32	113.40	0.00	-44.84	22.05	-1281.05
32	32	113.40	0.00	-61.52	26.52	-1231.27
32	33	115.40	0.00	-42.08	20.29	-1193.50
33	33	115.40	0.00	-103.04	115.97	293.91
33	34	121.12	0.00	-102.91	58.53	780.35
34	34	121.12	0.00	-105.97	92.20	983.16
34	35	126.83	0.00	-58.99	51.45	981.57
35	35	126.83	0.00	-72.20	108.46	1000.80
35	36	132.55	0.00	-29.82	65.87	851.50
36	36	132.55	0.00	-24.56	125.49	1167.55
36	37	136.27	0.00	11.30	74.78	780.18
37	37	136.27	0.00	47.50	134.07	1334.70
37	38	143.98	0.00	74.78	71.82	812.62
38	38	143.98	0.00	112.13	101.90	852.15
38	39	149.70	0.00	126.06	33.78	0.00
101	101	0.00	0.00	26.34	5.36	0.00
101	102	5.72	0.00	26.34	5.36	-150.58
102	102	5.72	0.00	23.71	20.75	-77.14
102	103	11.43	0.00	23.71	20.75	-212.67
103	103	11.43	0.00	29.74	58.12	-61.66
103	104	17.15	0.00	29.74	58.12	-231.72
104	104	17.15	0.00	40.33	122.56	119.08
104	105	22.87	0.00	40.33	122.56	-111.44
105	105	22.87	0.00	59.22	184.16	30.17
105	106	28.58	0.00	59.22	184.16	-302.63
106	106	28.58	0.00	66.36	215.61	-163.72
106	107	34.30	0.00	66.36	215.61	-563.08
107	107	34.30	0.00	76.81	299.99	998.50
107	108	36.30	0.00	76.81	299.99	940.69
108	108	36.30	0.00	65.86	257.89	840.99
108	109	36.65	0.00	65.86	257.89	636.88
109	109	36.65	0.00	62.12	211.66	624.52
109	110	41.00	0.00	62.12	211.66	431.54
110	110	41.00	0.00	79.66	165.19	139.09
110	111	43.35	0.00	79.66	165.19	-46.63
111	111	43.35	0.00	70.35	122.60	-232.68
111	112	45.85	0.00	70.35	122.60	-606.57
112	112	45.85	0.00	23.53	55.33	-537.62
112	113	46.35	0.00	23.53	55.33	-598.65
113	113	46.35	0.00	15.33	45.93	-627.88
113	114	50.70	0.00	15.33	45.93	-603.90
114	[redacted]	50.70	0.00	11.27	35.00	-671.53
[redacted]	[redacted]	53.05	0.00	11.27	35.00	-696.02
[redacted]	[redacted]	53.05	0.00	7.88	24.71	-696.02
[redacted]	[redacted]	55.40	0.00	7.88	24.71	-716.54
116	116	55.40	0.00	5.04	15.84	-716.54
116	117	57.40	0.00	5.04	15.84	-726.61
117	117	57.40	0.00	32.77	4.15	253.70
117	118	63.22	0.00	32.77	4.15	83.11
118	118	63.22	0.00	34.47	5.67	102.04
118	119	69.03	0.00	34.47	5.67	-98.45
119	119	69.03	0.00	44.10	16.85	182.69
119	120	74.85	0.00	44.10	16.85	-83.81
120	120	74.85	0.00	57.13	54.82	253.41
120	121	80.67	0.00	57.13	54.82	-38.92
121	121	80.67	0.00	69.78	108.81	252.21
121	122	86.48	0.00	69.78	108.81	-153.73
122	122	86.48	0.00	80.07	141.57	-114.79
122	123	92.30	0.00	80.07	141.57	-560.51
123	123	92.30	0.00	103.30	249.88	399.60
123	124	94.30	0.00	103.30	249.88	193.20
124	124	94.30	0.00	110.62	227.40	193.20
124	125	98.65	0.00	110.62	227.40	-96.75
125	125	98.65	0.00	107.62	191.49	-96.75
125	126	99.00	0.00	107.62	191.49	-319.95
126	126	99.00	0.00	99.97	151.74	-327.29
126	127	101.35	0.00	99.97	151.74	-562.22
127	127	101.35	0.00	86.72	116.52	-593.44
127	128	103.85	0.00	86.72	116.52	-615.25
128	128	103.65	0.00	-1.36	46.09	-681.24
128	129	106.35	0.00	-1.36	46.09	-677.94
129	129	106.35	0.00	-12.50	39.61	-1061.89
129	130	108.70	0.00	-12.50	39.61	-1032.51
130	130	108.70	0.00	-23.17	30.01	-1324.96
130	131	111.05	0.00	-23.17	30.01	-1270.52
131	131	111.05	0.00	-26.77	20.39	-1264.06
131	132	113.40	0.00	-26.77	20.39	-1221.96
132	132	113.40	0.00	-29.43	12.12	-1221.96
132	133	115.40	0.00	-29.43	12.12	-1163.08
133	133	115.40	0.00	11.56	0.02	398.50
133	134	121.12	0.00	11.56	0.02	332.39
134	134	121.12	0.00	15.36	0.07	451.30
134	135	126.83	0.00	15.36	0.07	363.37
135	135	126.83	0.00	20.99	3.55	505.00
135	136	132.55	0.00	20.99	3.55	385.18
136	136	132.55	0.00	26.18	17.50	735.98
136	137	136.27	0.00	26.18	17.50	511.92
137	137	136.27	0.00	58.26	45.05	982.91
137	138	143.98	0.00	58.26	45.05	329.79
138	139	143.88	0.00	70.53	44.52	403.22
38	139	149.70	0.00	70.53	44.52	0.00

[redacted]

Desviación de tres ejes paso geométrico, 3D?

Cost ver

Barra	Nudo	X	Y (ft)	W (ft)	Mx (Tnd)	My (Tnd)
1	1	0.00	0.00	-126.07	-23.78	0.00
1	2	5.72	0.00	-112.13	-101.80	852.12
2	2	5.72	0.00	-74.77	-71.82	812.59
2	3	11.43	0.00	-67.55	-134.07	1334.72
3	3	11.43	0.00	-11.30	-74.00	795.22
3	4	17.15	0.00	34.56	-125.49	1187.96
4	4	17.15	0.00	29.52	-65.87	831.50
4	5	22.87	0.00	72.20	-105.46	1000.80
5	5	22.87	0.00	58.28	-61.45	001.57
5	6	39.56	0.00	100.87	-62.21	893.17
6	6	39.56	0.00	102.91	-58.54	760.34
6	7	34.30	0.00	163.84	-115.07	293.91
7	7	34.30	0.00	42.08	-39.28	-1190.50
7	8	30.30	0.00	61.52	-25.52	-1231.26
8	8	38.30	0.00	44.84	-22.05	-1281.05
8	9	36.65	0.00	68.52	-31.08	-1344.10
9	10	41.00	0.00	44.88	-31.42	-1363.55
10	11	43.35	0.00	75.10	-60.16	-1579.14
11	11	43.35	0.00	70.67	-67.57	-1578.14
11	12	45.85	0.00	109.06	-108.14	-1788.18
12	12	45.85	0.00	-202.33	-69.81	-1799.47
12	13	46.35	0.00	-160.19	-54.80	-1252.15
13	13	46.35	0.00	-215.17	-138.32	-1660.76
13	14	50.70	0.00	-210.09	-154.50	-1145.00
14	14	50.70	0.00	-179.57	-173.31	-1161.05
14	15	53.05	0.00	-174.00	-193.87	-712.80
15	15	53.05	0.00	-147.47	-196.20	-752.90
15	16	55.40	0.00	-140.64	-206.41	-346.43
16	16	55.40	0.00	-126.67	-148.47	-353.73
16	17	57.40	0.00	-122.12	-168.69	-78.36
17	17	57.40	0.00	-77.08	-17.08	-1078.28
17	18	63.22	0.00	-62.18	-36.82	-406.35
18	18	63.22	0.00	-68.50	-22.31	-452.72
18	19	69.03	0.00	-42.63	-59.99	237.52
19	19	69.03	0.00	-15.70	-26.61	-16.84
19	20	74.85	0.00	16.32	-68.94	392.01
20	20	74.85	0.00	5.28	-22.97	195.49
20	21	80.67	0.00	46.40	-60.71	461.84
21	21	80.67	0.00	-2.81	-15.68	207.28
21	22	86.48	0.00	46.46	-59.05	447.36
22	22	86.48	0.00	40.80	-32.42	401.01
22	23	92.30	0.00	101.03	-90.75	255.41
23	23	92.30	0.00	5.04	-15.89	-746.51
23	24	94.30	0.00	24.32	-24.51	-709.28
24	24	94.30	0.00	7.88	-24.53	-756.54
24	25	98.65	0.00	31.40	-34.26	-734.80
25	25	98.65	0.00	11.27	-36.02	-775.10
25	26	99.00	0.00	36.06	-47.01	-777.70
26	26	99.00	0.00	16.43	-51.23	-613.75
26	27	101.35	0.00	42.52	-64.00	-847.68
27	27	101.35	0.00	77.84	-91.01	-1276.48
27	28	103.85	0.00	107.10	-108.58	-1402.38
28	28	103.85	0.00	-216.23	-81.87	-1525.83
28	29	106.35	0.00	-213.12	-98.95	-973.63
29	29	106.35	0.00	-197.03	-150.00	-973.63
29	30	108.70	0.00	-182.63	-168.82	-479.70
30	30	108.70	0.00	-158.97	-188.31	-504.83
30	31	111.05	0.00	-153.52	-210.01	-93.26
31	31	111.05	0.00	-122.62	-200.37	-102.71
31	32	113.40	0.00	-115.84	-222.88	247.75
32	32	113.40	0.00	-103.56	-151.06	197.96
32	33	115.40	0.00	-97.16	-170.48	457.94
33	33	115.40	0.00	-29.75	-1.10	-1022.87
33	34	121.12	0.00	-15.03	-20.41	-416.21
34	34	121.12	0.00	-22.04	-10.81	-701.03
34	35	126.83	0.00	1.92	-46.78	-262.18
35	35	126.83	0.00	-6.33	-16.44	-301.51
35	36	132.55	0.00	23.14	-54.59	87.20
36	36	132.55	0.00	-10.94	-11.14	-239.84
36	37	136.27	0.00	27.06	-37.16	160.36
37	37	136.27	0.00	-34.27	-3.02	-394.16
37	38	143.98	0.00	12.29	-17.50	41.27
38	38	143.98	0.00	-34.68	-1.74	-195.27
38	39	149.70	0.00	25.24	-10.46	0.00
101	101	0.00	0.00	-70.53	-44.52	0.00
101	102	5.72	0.00	-70.53	-44.52	403.20
102	102	5.72	0.00	-56.28	-45.07	329.76
102	103	11.43	0.00	-58.28	-45.07	682.92
103	103	11.43	0.00	-38.19	-17.58	511.93
103	104	17.15	0.00	-38.18	-17.56	735.56
104	104	17.15	0.00	-20.96	-3.55	385.17
104	105	22.87	0.00	-20.96	-3.55	504.98
105	105	22.87	0.00	-15.38	-0.67	363.37
105	106	28.58	0.00	-15.38	-0.67	451.30
106	106	28.58	0.00	-11.56	-0.02	332.39
106	107	34.30	0.00	-11.56	-0.02	398.50
107	107	34.30	0.00	29.43	-12.12	-1163.09
107	108	36.30	0.00	29.43	-12.12	-1221.96
108	108	36.30	0.00	26.77	-20.39	-1221.96
108	109	36.65	0.00	26.77	-20.39	-1204.86
109	109	36.65	0.00	23.17	-30.01	-1270.52
109	110	41.00	0.00	23.17	-30.01	-1324.97
110	110	41.00	0.00	13.50	-39.61	-1032.52
110	111	43.35	0.00	12.50	-39.61	-1061.89
111	111	43.35	0.00	1.36	-46.09	-677.94
111	112	45.85	0.00	1.36	-46.09	-661.24
112	112	45.85	0.00	-66.72	-116.52	-615.24
112	113	46.35	0.00	-66.72	-116.52	-583.44
113	113	46.35	0.00	-66.97	-151.74	-562.22
113	114	50.70	0.00	-66.97	-151.74	-327.29
114	114	50.70	0.00	-107.62	-191.49	-319.95
114	115	53.05	0.00	-107.62	-191.49	-96.75
115	115	53.05	0.00	-110.62	-227.40	-96.75
115	116	55.40	0.00	-110.62	-227.40	193.20
116	116	55.40	0.00	-103.30	-249.88	193.20
116	117	57.40	0.00	-103.30	-249.88	399.60
117	117	57.40	0.00	-80.07	-141.57	-560.51
117	118	63.22	0.00	-80.07	-141.57	-114.79
118	118	63.22	0.00	-69.79	-108.81	-153.73
118	119	69.03	0.00	-69.79	-108.81	252.21
119	119	69.03	0.00	-57.13	-54.82	-38.92
119	120	74.85	0.00	-57.13	-54.82	253.41
120	120	74.85	0.00	-44.10	-16.85	-83.81
120	121	80.67	0.00	-44.10	-16.85	182.69
121	121	80.67	0.00	-34.47	-5.67	-98.45
121	122	86.48	0.00	-34.47	-5.67	102.04
122	122	86.48	0.00	-32.77	-4.15	83.11
122	123	92.30	0.00	-32.77	-4.15	253.70
123	123	92.30	0.00	-5.04	-15.84	-726.61
123	124	94.30	0.00	-5.04	-15.84	-716.54
124	124	94.30	0.00	-7.88	-24.71	-716.54
124	125	98.65	0.00	-7.88	-24.71	-696.02
125	125	98.65	0.00	-11.27	-35.00	-696.02
125	126	99.00	0.00	-11.27	-35.00	-671.53
126	126	99.00	0.00	-15.33	-45.93	-603.90
126	127	101.35	0.00	-15.33	-45.93	-627.88
127	127	101.35	0.00	-23.53	-55.33	-596.65
127	128	103.85	0.00	-23.53	-55.33	-537.62
128	128	103.65	0.00	-70.35	-122.60	-606.57
128	129	106.35	0.00	-70.35	-122.60	-232.68
129	129	106.35	0.00	-79.66	-165.19	-46.63
129	130	106.70	0.00	-79.66	-165.19	139.09
130	130	108.70	0.00	-62.12	-211.66	431.54
130	131	111.05	0.00	-62.12	-211.66	624.52
131	131	111.05	0.00	-65.66	-257.89	636.88
131	132	113.40	0.00	-65.66	-257.89	840.99
132	132	113.40	0.00	-76.81	-299.99	940.69
132	133	115.40	0.00	-76.81	-299.99	998.50
133	133	115.40	0.00	-80.36	-215.61	-563.09
133	134	121.12	0.00	-66.36	-215.61	-153.70
134	134	121.12	0.00	-56.22	-184.16	-302.61
134	135	126.83	0.00	-56.22	-184.16	30.16
135	135	126.83	0.00	-40.33	-122.56	-111.47
135	136	132.55	0.00	-40.33	-122.56	119.08
136	136	132.55	0.00	-29.74	-56.12	-231.72
136	137	136.27	0.00	-29.74	-56.12	-81.66
137	137	136.27	0.00	-23.71	-20.75	-212.67
137	138	143.98	0.00	-23.71	-20.75	-77.15
138	138	143.98	0.00	-26.34	-5.36	-150.58
138	139	149.70	0.00	-26.34	-5.36	0.00

[redacted]

Envolvente de tren de cargas pisos grandes, VYC

Cort xx.

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Rz (Tm)
1	1	0.00	0.00	34.95	1.74	0.00
1	2	5.72	0.00	48.91	-55.26	-99.63
1	2	5.72	0.00	43.87	-44.26	-66.63
2	3	11.43	0.00	70.34	-105.53	-10.33
		11.43	0.00	58.64	-66.75	-10.33
		17.15	0.00	85.30	-116.45	-10.30
	4	17.15	0.00	60.64	-61.78	-10.30
4	5	22.87	0.00	123.02	-102.35	-157.51
5	5	22.87	0.00	108.69	-69.71	-157.51
5	6	28.58	0.00	156.48	-80.47	-538.51
6	6	28.58	0.00	149.83	-95.28	-538.51
6	7	34.30	0.00	209.96	-115.69	-1294.18
7	7	34.30	0.00	163.35	120.95	-1294.18
7	8	36.30	0.00	182.80	112.72	-1571.10
8	8	36.30	0.00	182.65	170.12	-1571.10
8	9	36.65	0.00	209.53	161.10	-1958.00
8	9	36.65	0.00	217.97	152.00	-1958.00
9	10	41.00	0.00	241.97	161.78	-2442.98
10	10	41.00	0.00	257.76	100.42	-2442.98
10	11	43.35	0.00	263.92	87.10	-3043.60
11	11	43.35	0.00	307.25	-11.16	-3043.60
11	12	45.85	0.00	336.44	-25.74	-3632.58
12	12	45.85	0.00	31.23	-2.82	517.57
12	13	46.35	0.00	34.37	-17.61	450.99
13	13	46.35	0.00	31.51	-0.27	450.99
13	14	50.70	0.00	35.78	-16.45	407.06
14	14	50.70	0.00	32.72	-1.58	407.06
14	15	53.05	0.00	38.25	-22.13	376.65
15	15	53.05	0.00	34.75	-3.86	376.65
15	16	55.40	0.00	41.39	-26.07	354.88
16	16	55.40	0.00	37.39	-5.86	354.88
16	17	57.40	0.00	43.94	-24.06	340.13
17	17	57.40	0.00	37.19	3.62	340.13
17	18	63.22	0.00	52.11	-16.12	347.31
18	18	63.22	0.00	46.57	-4.33	347.31
18	19	68.03	0.00	74.44	-42.01	356.80
19	19	68.03	0.00	65.39	-11.88	356.80
19	20	74.85	0.00	99.41	-52.00	293.75
20	20	74.85	0.00	86.37	-8.03	293.75
20	21	80.67	0.00	127.48	-45.78	98.20
21	21	80.67	0.00	114.26	-9.70	98.20
21	22	86.48	0.00	153.53	-41.10	-352.64
22	22	86.48	0.00	135.08	-11.72	-352.64
22	23	92.30	0.00	215.31	-70.05	-1163.00
23	23	92.30	0.00	171.10	126.72	-1163.00
23	24	94.30	0.00	180.38	118.10	-1457.90
24	24	94.30	0.00	180.10	157.41	-1457.90
24	25	96.65	0.00	213.63	148.08	-1904.35
25	25	96.65	0.00	223.55	135.72	-1904.35
25	26	99.00	0.00	246.34	124.73	-2365.81
26	26	99.00	0.00	263.11	64.81	-2365.81
26	27	101.35	0.00	289.20	71.44	-2979.63
27	27	101.35	0.00	311.20	-24.02	-2979.63
		103.85	0.00	340.66	-42.58	-3779.43
		103.85	0.00	11.36	-5.27	297.47
		109.35	0.00	14.46	-20.27	480.83
		108.35	0.00	11.82	-3.34	480.83
		108.70	0.00	16.00	-21.56	494.03
30	30	108.70	0.00	13.12	-5.29	494.03
30	31	111.05	0.00	18.57	-25.99	511.19
31	31	111.05	0.00	15.19	-6.20	511.19
31	32	113.40	0.00	21.57	-30.72	537.79
32	32	113.40	0.00	17.71	-10.62	537.79
32	33	115.40	0.00	24.10	-29.24	565.22
33	33	115.40	0.00	17.17	-9.93	565.22
33	34	121.12	0.00	30.89	-20.23	701.64
34	34	121.12	0.00	27.57	-9.07	701.64
34	35	126.83	0.00	51.53	-45.05	858.92
35	35	126.83	0.00	42.49	-14.33	858.92
35	36	132.55	0.00	73.86	-50.48	965.09
36	36	132.55	0.00	60.00	-2.06	965.09
36	37	136.27	0.00	97.99	-29.13	958.86
37	37	136.27	0.00	83.57	24.52	958.86
37	38	143.98	0.00	130.14	10.04	720.71
38	38	143.98	0.00	126.06	33.76	720.71
38	39	149.70	0.00	165.98	25.07	0.00
101	101	0.00	0.00	33.84	1.74	0.00
101	102	5.72	0.00	33.84	1.74	-193.47
102	102	5.72	0.00	34.25	3.03	-193.47
102	103	11.43	0.00	34.25	3.03	-369.28
103	103	11.43	0.00	35.16	25.15	-332.87
103	104	17.15	0.00	35.16	25.15	-533.86
104	104	17.15	0.00	44.60	97.00	-231.72
104	105	22.87	0.00	44.60	97.00	-486.65
105	105	22.87	0.00	61.14	179.31	-111.44
105	106	28.58	0.00	61.14	179.31	-460.95
106	106	28.58	0.00	69.78	201.67	-460.95
106	107	34.30	0.00	69.78	201.67	-459.95
107	107	34.30	0.00	118.66	284.64	-604.48
107	108	36.30	0.00	118.86	284.64	-644.20
108	108	36.30	0.00	123.70	235.59	-809.86
108	109	36.65	0.00	123.70	235.59	-1100.54
109	109	36.65	0.00	116.16	161.12	-1079.13
109	110	41.00	0.00	116.16	161.12	-1362.11
110	110	41.00	0.00	103.17	125.61	-1344.07
110	111	43.35	0.00	103.17	125.61	-1586.51
111	111	43.35	0.00	62.96	85.67	-1467.31
111	112	45.85	0.00	62.96	85.67	-1675.31
112	112	45.85	0.00	29.42	11.45	360.31
112	113	46.35	0.00	29.42	11.45	306.75
113	113	46.35	0.00	29.30	3.09	420.06
113	114	50.70	0.00	29.30	3.09	351.23
114	[redacted]	50.70	0.00	29.58	2.83	356.87
114	[redacted]	53.05	0.00	29.58	2.83	288.35
115	[redacted]	53.05	0.00	28.94	2.26	308.50
115	[redacted]	55.40	0.00	28.94	2.26	239.15
115	[redacted]	55.40	0.00	30.51	1.22	271.17
116	117	57.40	0.00	30.51	1.22	210.16
117	117	57.40	0.00	34.07	-5.83	443.62
117	118	63.22	0.00	34.07	-5.83	245.63
118	118	63.22	0.00	37.60	4.63	245.63
118	119	68.03	0.00	37.60	4.63	26.90
119	119	68.03	0.00	44.10	16.65	192.88
119	120	74.85	0.00	44.10	16.65	-63.81
120	120	74.85	0.00	57.13	54.82	283.41
120	121	80.67	0.00	57.13	54.82	-26.92
121	121	80.67	0.00	72.83	107.77	126.96
121	122	86.48	0.00	72.53	107.77	-297.31
122	122	86.48	0.00	81.37	131.80	-297.31
122	123	92.30	0.00	81.37	131.80	-770.63
123	123	92.30	0.00	126.77	235.27	-536.97
123	124	94.30	0.00	126.77	235.27	-764.51
124	124	94.30	0.00	132.67	204.84	-762.50
124	125	96.65	0.00	132.67	204.84	-1074.26
125	125	96.65	0.00	125.92	159.42	-1054.13
125	126	99.00	0.00	125.92	159.42	-1350.05
126	126	99.00	0.00	113.94	100.50	-1342.42
126	127	101.35	0.00	113.94	100.50	-1610.17
127	127	101.35	0.00	94.61	72.85	-1496.84
127	128	103.85	0.00	94.61	72.85	-1733.37
128	128	103.85	0.00	11.25	8.96	365.50
128	129	108.35	0.00	11.25	8.96	357.36
129	129	108.35	0.00	10.79	0.03	475.96
129	130	108.70	0.00	10.79	0.03	450.84
130	130	108.70	0.00	10.87	-0.72	450.66
130	131	111.05	0.00	10.87	-0.72	433.13
131	131	111.05	0.00	11.05	-1.01	454.54
131	132	113.40	0.00	11.05	-1.91	529.56
132	132	113.40	0.00	11.52	-3.23	462.93
132	133	115.40	0.00	11.52	-3.23	439.99
133	133	115.40	0.00	14.99	-13.92	666.32
133	134	121.12	0.00	14.99	-13.92	909.63
134	134	121.12	0.00	16.31	-4.16	908.63
134	135	126.83	0.00	16.31	-4.16	905.60
135	135	126.83	0.00	25.23	-22.01	960.20
135	136	132.55	0.00	25.23	-22.01	736.00
136	136	132.55	0.00	44.61	-15.36	1036.14
136	137	136.27	0.00	44.61	-15.36	783.10
137	137	136.27	0.00	88.82	27.34	839.51
137	138	143.98	0.00	88.82	27.34	448.13
138	139	143.88	0.00	78.03	40.90	448.12
138	139	149.70	0.00	78.03	40.90	0.00

TIRO SIN RNI

[redacted]

Envolvente de tren de cargas pisos grandes, VYC

Cort xx.

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Rz (Tm)
1	1	0.00	0.00	-185.96	-25.09	0.00
1	2	5.72	0.00	-124.07	-33.78	720.68
2	2	5.72	0.00	-130.14	-10.04	720.68
2	3	11.43	0.00	-93.57	-24.52	958.85
3	3	11.43	0.00	-97.90	28.13	856.89
3	4	17.15	0.00	-60.00	2.09	995.08
4	4	17.15	0.00	-73.88	50.46	995.08
4	5	22.87	0.00	-62.46	14.33	856.92
5	5	22.87	0.00	-51.53	-45.05	856.92
5	6	28.58	0.00	-37.57	0.67	791.63
6	6	28.58	0.00	-30.68	20.23	791.63
6	7	34.30	0.00	-17.17	0.93	565.22
7	7	34.30	0.00	-24.10	29.24	565.22
7	9	36.30	0.00	-17.71	10.62	537.79
8	8	36.30	0.00	-21.87	30.72	537.79
8	9	36.65	0.00	-15.18	8.20	511.19
9	9	36.65	0.00	-18.57	25.99	511.19
9	10	41.00	0.00	-13.12	5.28	494.03
10	10	41.00	0.00	-16.00	21.56	494.03
10	11	43.35	0.00	-11.00	3.34	480.83
11	11	43.35	0.00	-14.46	20.27	480.83
11	12	45.85	0.00	-11.35	5.27	507.47
12	13	46.35	0.00	-349.66	42.56	-3779.43
12	13	46.35	0.00	-311.50	24.02	-2979.63
13	13	46.35	0.00	-268.20	-71.44	-2979.63
13	14	50.70	0.00	-263.11	-64.81	-2365.81
14	14	50.70	0.00	-248.34	-124.73	-2365.81
14	15	53.05	0.00	-223.55	-135.72	-1964.35
15	15	53.05	0.00	-213.63	-148.08	-1964.35
15	16	55.40	0.00	-190.10	-157.41	-1457.90
16	16	55.40	0.00	-180.38	-118.10	-1457.90
16	17	57.40	0.00	-171.10	-126.72	-1163.00
17	17	57.40	0.00	-215.31	70.05	-1163.00
17	18	63.22	0.00	-155.08	11.72	-352.64
18	18	63.22	0.00	-163.53	41.10	-352.64
18	19	68.03	0.00	-114.26	9.70	98.20
19	19	68.03	0.00	-127.48	45.78	98.20
19	20	74.85	0.00	-86.37	8.03	293.75
20	20	74.85	0.00	-99.41	52.00	293.75
20	21	80.67	0.00	-65.39	11.88	356.80
21	21	80.67	0.00	-74.44	42.01	356.80
21	22	86.48	0.00	-46.57	4.33	347.31
22	22	86.48	0.00	-52.11	16.12	347.31
22	23	92.30	0.00	-37.19	-3.62	340.13
23	23	92.30	0.00	-43.94	24.06	340.13
23	24	94.30	0.00	-37.39	5.86	354.88
24	24	94.30	0.00	-41.39	26.07	354.88
24	25	96.65	0.00	-34.75	3.86	376.65
25	25	96.65	0.00	-38.29	22.13	376.65
25	26	99.00	0.00	-32.72	1.58	407.06
26	26	99.00	0.00	-35.78	18.45	407.06
26	27	101.35	0.00	-31.51	0.27	450.99
27	27	101.35	0.00	-34.37	17.81	450.99
27	28	103.85	0.00	-31.23	1.81	517.57
28	28	103.85	0.00	-338.44	29.74	-3932.58
28	29	106.35	0.00	-307.25	11.18	-3043.60
29	29	106.35	0.00	-263.82	-97.10	-3043.60
29	30	108.70	0.00	-257.76	-100.42	-2442.98
30	30	108.70	0.00	-241.97	-141.78	-2442.98
30	31	111.05	0.00	-217.97	-152.60	-1958.00
31	31	111.05	0.00	-206.33	-161.10	-1958.00
31	32	113.40	0.00	-182.85	-170.12	-1571.10
32	32	113.40	0.00	-182.80	-112.72	-1571.10
32	33	115.40	0.00	-163.35	-120.95	-1294.18
33	33	115.40	0.00	-209.96	115.79	-1294.18
33	34	121.12	0.00	-149.93	56.36	-539.49
34	34	121.12	0.00	-158.48	80.47	-539.49
34	35	126.83	0.00	-108.80	49.72	-157.53
35	35	126.83	0.00	-123.02	102.35	-157.53
35	36	132.55	0.00	-80.64	61.78	-16.39
36	36	132.55	0.00	-85.50	116.45	-16.39
36	37	136.27	0.00	-59.64	65.75	-18.34
37	37	136.27	0.00	-70.34	108.52	-18.34
37	38	143.98	0.00	-43.07	44.28	-66.82
38	38	143.98	0.00	-48.61	66.29	-66.82
38	39	149.70	0.00	-34.68	-1.74	0.00
101	101	0.00	0.00	-78.03	-40.90	0.00
101	102	5.72	0.00	-78.03	-40.90	446.09
102	102	5.72	0.00	-68.82	-27.34	446.09
102	103	11.43	0.00	-68.82	-27.34	638.53
103	103	11.43	0.00	-44.61	15.36	783.12
103	104	17.15	0.00	-44.61	15.36	1038.15
104	104	17.15	0.00	-25.23	22.00	735.96
104	105	22.87	0.00	-25.23	22.00	580.19
105	105	22.87	0.00	-18.31	4.18	504.98
105	106	28.58	0.00	-18.31	4.18	609.63
106	106	28.58	0.00	-14.99	13.82	609.63
106	107	34.30	0.00	-14.99	13.82	995.31
107	107	34.30	0.00	-11.52	3.23	439.99
107	108	36.30	0.00	-11.52	3.23	462.93
108	108	36.30	0.00	-11.05	1.91	428.58
108	109	36.65	0.00	-11.05	1.91	454.54
109	109	36.65	0.00	-10.87	0.72	453.13
109	110	41.00	0.00	-10.87	0.72	456.68
110	110	41.00	0.00	-10.79	-0.03	459.64
110	111	43.35	0.00	-10.79	-0.03	475.96
111	111	43.35	0.00	-11.25	-8.96	357.38
111	112	45.85	0.00	-11.25	-8.96	365.50
112	112	45.85	0.00	-64.61	-72.65	-1733.37
112	113	46.35	0.00	-64.61	-72.65	-1496.84
113	113	46.35	0.00	-113.84	-108.80	-1610.17
113	114	50.70	0.00	-113.84	-108.80	-1342.42
114	114	50.70	0.00	-125.82	-158.42	-1350.05
114	115	53.05	0.00	-125.82	-158.42	-1054.13
115	115	53.05	0.00	-132.67	-204.84	-1074.26
115	116	55.40	0.00	-132.67	-204.84	-762.50
116	116	55.40	0.00	-128.77	-235.27	-764.51
116	117	57.40	0.00	-128.77	-235.27	-536.97
117	117	57.40	0.00	-81.37	-131.80	-770.63
117	118	63.22	0.00	-81.37	-131.80	-297.31
118	118	63.22	0.00	-72.83	-107.77	-297.31
118	119	68.03	0.00	-72.83	-107.77	126.86
119	119	68.03	0.00	-57.13	-54.82	-26.92
119	120	74.85	0.00	-57.13	-54.82	283.41
120	120	74.85	0.00	-44.10	-16.65	-63.81
120	121	80.67	0.00	-44.10	-16.65	192.88
121	121	80.67	0.00	-37.60	-4.63	26.90
121	122	86.48	0.00	-37.60	-4.63	245.63
122	123	92.30	0.00	-34.07	5.83	245.63
122	123	92.30	0.00	-34.07	5.83	443.62
123	123	92.30	0.00	-30.51	-1.22	210.16
123	124	94.30	0.00	-30.51	-1.22	271.17
124	124	94.30	0.00	-29.84	-2.26	238.15
124	125	96.65	0.00	-29.84	-2.26	308.50
125	125	96.65	0.00	-29.58	-2.83	288.35
125	126	99.00	0.00	-29.58	-2.83	356.87
126	126	99.00	0.00	-29.30	-3.09	351.23
126	127	101.35	0.00	-29.30	-3.09	420.06
127	127	101.35	0.00	-29.42	-11.45	306.75
127	128	103.85	0.00	-29.42	-11.45	360.31
128	128	103.85	0.00	-82.96	-85.67	-1675.31
128	129	108.35	0.00	-82.96	-85.67	-1467.91
129	129	108.35	0.00	-103.17	-125.61	-1586.51
129	130	108.70	0.00	-103.17	-125.61	-1344.07
130	130	108.70	0.00	-116.16	-161.12	-1362.11
130	131	111.05	0.00	-116.16	-161.12	-1079.13
131	131	111.05	0.00	-123.70	-235.59	-1100.54
131	132	113.40	0.00	-123.70	-235.59	-809.86
132	132	113.40	0.00	-110.86	-284.64	-644.20
132	133	115.40	0.00	-119.86	-284.64	-604.48
133	133	115.40	0.00	-99.78	-201.67	-459.91
133	134	121.12	0.00	-99.79	-201.67	-460.94
134	134	121.12	0.00	-61.14	-179.31	-459.94
134	135	126.83	0.00	-61.14	-179.31	-111.47
135	135	126.83	0.00	-44.60	-97.00	-486.67
135	136	132.55	0.00	-44.60	-97.00	-231.72
136	136	132.55	0.00	-35.16	-25.16	-533.86
136	137	136.27	0.00	-35.16	-25.16	-332.85
137	137	136.27	0.00	-34.25	-3.03	-369.27
137	138	143.98	0.00	-34.25	-3.03	-193.48
138	138	143.98	0.00	-33.84	-1.74	-193.48
138	139	149.70	0.00	-33.84	-1.74	0.00

[redacted]

Envolvente de tren de cargas placa granítica. VY+

Qwc =

Barra	Nudo	X	N (T)	Vy (T)	Mx (Tm)	Mz (Tm)
1	1	0.00	0.00	1.81	0.27	0.00
1	2	5.72	0.00	1.81	0.27	-10.33
2	2	5.72	0.00	3.24	6.37	1.66
2	3	11.43	0.00	3.52	17.06	9.86
3	3	11.43	0.00	3.71	15.16	9.86
3	4	17.15	0.00	5.68	24.35	11.04
4	4	17.15	0.00	5.38	23.90	11.04
4	5	22.87	0.00	7.75	34.41	0.01
5	5	22.87	0.00	7.42	33.98	0.01
5	6	28.58	0.00	10.31	45.59	-29.19
6	6	28.58	0.00	10.50	44.11	-29.19
6	7	34.30	0.00	13.74	58.92	-63.40
7	7	34.30	0.00	12.58	44.20	-63.40
7	8	36.30	0.00	13.74	48.28	-105.65
8	8	36.30	0.00	14.52	35.42	-105.65
8	9	36.65	0.00	15.98	38.76	-137.33
9	9	36.65	0.00	16.31	26.00	-134.07
9	10	41.00	0.00	19.85	31.74	-178.80
10	10	41.00	0.00	23.31	16.51	-178.75
10	11	43.35	0.00	24.86	22.25	-233.35
11	11	43.35	0.00	29.83	0.86	-232.52
11	12	45.85	0.00	31.57	7.06	-308.40
12	12	45.85	0.00	1.71	0.02	27.73
12	13	48.35	0.00	1.71	0.02	23.45
13	13	48.35	0.00	1.72	0.48	24.28
13	14	50.70	0.00	1.72	0.48	20.23
14	14	50.70	0.00	1.85	0.35	22.37
14	15	53.05	0.00	1.85	0.35	18.03
15	15	53.05	0.00	2.06	0.04	21.25
15	16	55.40	0.00	2.15	1.49	20.41
16	16	55.40	0.00	2.30	-0.26	20.41
16	17	57.40	0.00	2.47	0.62	19.66
17	17	57.40	0.00	2.08	0.69	19.66
17	18	63.22	0.00	2.68	2.54	20.81
18	18	63.22	0.00	2.67	2.47	20.81
18	19	69.03	0.00	3.75	6.46	23.08
19	19	69.03	0.00	3.66	6.44	23.08
19	20	74.85	0.00	5.31	12.44	21.52
20	20	74.85	0.00	5.08	12.61	21.52
20	21	80.67	0.00	7.26	20.82	10.14
21	21	80.67	0.00	7.13	20.59	10.14
21	22	86.48	0.00	9.87	30.82	-18.35
22	22	86.48	0.00	10.09	29.61	-18.35
22	23	92.30	0.00	13.30	41.97	-71.38
23	23	92.30	0.00	12.68	33.46	-71.38
23	24	94.30	0.00	13.82	37.46	-93.96
24	24	94.30	0.00	14.59	28.01	-93.86
24	25	96.65	0.00	16.04	32.29	-125.74
25	25	96.65	0.00	16.15	20.31	-122.52
25	26	99.00	0.00	19.70	26.05	-166.99
26	26	99.00	0.00	22.09	11.97	-164.86
26	27	101.35	0.00	24.43	17.71	-220.46
27	27	101.35	0.00	29.22	-2.61	-219.62
27	28	103.85	0.00	30.87	3.40	-294.74
28	28	103.85	0.00	0.62	-0.38	26.08
28	29	106.35	0.00	0.62	-0.38	24.54
29	29	106.35	0.00	0.65	-0.02	25.38
29	30	108.70	0.00	0.85	-0.02	23.84
30	30	108.70	0.00	0.80	-0.28	25.00
30	31	111.05	0.00	0.80	-0.26	24.11
31	31	111.05	0.00	1.03	-0.68	27.37
31	32	113.40	0.00	1.11	0.72	29.02
32	32	113.40	0.00	1.26	-1.05	28.02
32	33	115.40	0.00	1.42	-0.24	30.42
33	33	115.40	0.00	1.00	-0.09	30.42
33	34	121.12	0.00	1.51	1.06	36.32
34	34	121.12	0.00	1.50	0.85	36.32
34	35	126.83	0.00	2.41	3.31	48.73
35	35	126.83	0.00	2.27	3.35	48.73
35	36	132.55	0.00	3.85	6.81	56.24
36	36	132.55	0.00	3.27	7.20	58.24
36	37	138.27	0.00	5.08	11.96	62.47
37	37	130.27	0.00	4.81	11.13	62.47
37	38	143.96	0.00	7.39	16.41	51.95
38	38	143.96	0.00	9.31	-1.92	63.96
38	39	148.70	0.00	13.07	12.04	0.00
101	101	0.00	0.00	2.54	-5.57	0.00
101	102	5.72	0.00	2.54	-5.57	-14.53
102	102	5.72	0.00	1.74	0.47	-9.56
102	103	11.43	0.00	1.74	0.47	-19.55
103	103	11.43	0.00	1.74	0.47	-19.55
103	104	17.15	0.00	1.74	0.47	-29.51
104	104	17.15	0.00	1.71	0.37	-29.51
104	105	22.87	0.00	1.71	0.37	-39.28
105	105	22.87	0.00	1.66	0.20	-39.28
105	106	28.58	0.00	1.66	0.20	-48.75
106	106	28.58	0.00	1.60	0.02	-48.75
106	107	34.30	0.00	1.60	0.02	-57.90
107	107	34.30	0.00	2.35	14.71	-23.63
107	108	36.30	0.00	2.35	14.71	-26.53
108	108	36.30	0.00	1.60	19.18	-22.52
108	109	36.65	0.00	1.69	19.18	-26.48
109	109	36.65	0.00	0.46	-1.01	-34.11
109	110	41.00	0.00	0.46	-1.01	-35.19
110	110	41.00	0.00	0.19	-0.40	-16.30
110	111	43.35	0.00	0.19	-0.40	-16.76
111	111	43.35	0.00	0.08	-0.36	-8.49
111	112	45.85	0.00	0.08	-0.36	-8.89
112	112	45.85	0.00	10.24	-2.86	37.19
112	113	48.35	0.00	10.24	-2.86	11.60
113	113	48.35	0.00	5.63	-10.86	12.21
113	114	50.70	0.00	5.63	-10.86	-1.02
114	114	50.70	0.00	3.05	-3.06	-12.33
114	115	53.05	0.00	3.05	-3.06	-19.49
115	115	53.05	0.00	2.03	-5.82	16.34
115	116	55.40	0.00	2.03	-5.82	11.58
116	116	55.40	0.00	1.79	-3.08	18.66
116	117	57.40	0.00	1.79	-3.08	15.09
117	117	57.40	0.00	1.94	0.14	30.82
117	118	63.22	0.00	1.94	0.14	19.56
118	118	63.22	0.00	1.83	0.21	21.11
118	119	69.03	0.00	1.83	0.21	10.46
119	119	69.03	0.00	1.93	1.11	10.46
119	120	74.85	0.00	1.93	1.11	-0.74
120	120	74.85	0.00	2.15	2.33	-0.74
120	121	80.67	0.00	2.15	2.33	-13.23
121	121	80.67	0.00	2.28	3.09	-13.23
121	122	86.48	0.00	2.28	3.09	-28.48
122	122	86.48	0.00	2.16	3.00	-24.92
122	123	92.30	0.00	2.18	3.00	-37.58
123	123	92.30	0.00	3.04	14.64	-21.84
123	124	94.30	0.00	3.04	14.64	-27.92
124	124	94.30	0.00	2.37	17.22	-29.65
124	125	96.65	0.00	2.37	17.22	-26.41
125	125	96.65	0.00	1.06	17.72	8.42
125	126	99.00	0.00	1.06	17.72	6.93
126	126	99.00	0.00	0.33	3.17	-4.36
126	127	101.35	0.00	0.33	3.17	-5.16
127	127	101.35	0.00	0.14	0.78	-4.56
127	128	103.85	0.00	0.14	0.78	-4.89
128	128	103.85	0.00	10.85	-8.08	58.30
128	129	106.35	0.00	10.85	-8.08	31.16
129	129	106.35	0.00	5.86	-19.37	38.43
129	130	108.70	0.00	5.66	-19.37	24.65
130	130	108.70	0.00	2.51	-27.26	43.54
130	131	111.05	0.00	2.51	-27.26	37.63
131	131	111.05	0.00	1.19	-8.97	30.09
131	132	113.40	0.00	1.19	-8.97	27.21
132	132	113.40	0.00	0.92	-4.70	33.21
132	133	115.40	0.00	0.92	-4.70	31.36
133	133	115.40	0.00	1.75	3.15	55.44
133	134	121.12	0.00	1.75	3.15	55.43
134	134	121.12	0.00	1.63	3.77	55.43
134	135	126.83	0.00	1.63	3.77	48.14
135	135	126.83	0.00	2.10	8.99	48.14
135	136	132.55	0.00	2.10	8.99	34.12
136	136	132.55	0.00	2.63	11.51	34.12
136	137	138.27	0.00	2.63	11.51	17.95
137	137	138.27	0.00	2.72	13.96	17.95
137	138	143.96	0.00	2.78	13.96	2.07
138	138	143.96	0.00	1.23	3.33	7.01
138	139	148.70	0.00	1.23	3.33	0.00

5 C PASTOS NI

[redacted]

Envolvente de tren de cargas placa granítica. VY-

Qwc =

Barra	Nudo	X	N (T)	Vy (T)	Mx (Tm)	Mz (Tm)
1	1	0.00	0.00	-13.07	-12.04	0.00
1	2	5.72	0.00	-9.31	1.82	63.96
2	2	5.72	0.00	-7.39	-16.41	51.95
2	3	11.43	0.00	-4.91	-11.13	62.47
3	3	11.43	0.00	-5.68	-11.86	62.47
3	4	17.15	0.00	-3.27	-7.20	58.24
4	4	17.15	0.00	-3.65	-6.61	56.24
4	5	22.87	0.00	-2.27	-3.35	48.73
5	5	22.87	0.00	-2.41	-3.31	48.73
5	6	28.58	0.00	-1.50	-0.95	36.32
6	6	28.58	0.00	-1.51	-1.06	36.32
6	7	34.30	0.00	-1.00	0.00	30.42
7	7	34.30	0.00	-1.42	0.24	30.42
7	8	36.30	0.00	-1.26	1.05	29.02
8	8	36.30	0.00	-1.11	-0.72	29.02
8	9	36.65	0.00	-1.03	0.68	27.37
9	9	36.65	0.00	-0.80	0.28	24.11
9	10	41.00	0.00	-0.80	0.26	28.00
10	10	41.00	0.00	-0.65	0.02	23.84
10	11	43.35	0.00	-0.65	0.02	25.38
11	11	43.35	0.00	-0.61	0.36	24.54
11	12	45.65	0.00	-0.61	0.36	38.08
12	12	45.85	0.00	-30.87	-3.49	-294.74
12	13	48.35	0.00	-29.22	2.61	-219.62
13	13	48.35	0.00	-24.43	-17.71	-220.46
13	14	50.70	0.00	-22.69	-11.97	-164.86
14	14	50.70	0.00	-19.70	-26.05	-166.99
14	15	53.05	0.00	-19.15	-20.31	-122.52
15	15	53.05	0.00	-16.04	-32.29	-125.74
15	16	55.40	0.00	-14.59	-28.01	-93.86
16	16	55.40	0.00	-13.62	-37.46	-93.96
16	17	57.40	0.00	-12.68	-33.46	-71.38
17	17	57.40	0.00	-13.30	-41.97	-71.38
17	18	63.22	0.00	-10.09	-29.61	-18.35
18	18	63.22	0.00	-9.87	-30.82	-18.35
18	19	69.03	0.00	-7.13	-20.59	10.14
19	19	69.03	0.00	-7.26	-20.82	10.14
19	20	74.85	0.00	-5.08	-12.61	21.52
20	20	74.85	0.00	-5.31	-12.44	21.52
20	21	80.67	0.00	-3.66	-6.44	23.08
21	21	80.67	0.00	-3.75	-6.46	23.08
21	22	86.48	0.00	-2.67	-2.47	20.81
22	22	86.48	0.00	-2.66	-2.54	20.81
22	23	92.30	0.00	-2.08	-0.69	19.66
23	23	92.30	0.00	-2.47	-0.62	19.66
23	24	94.30	0.00	-2.30	0.26	20.41
24	24	94.30	0.00	-2.15	-1.49	20.41
24	25	96.65	0.00	-2.06	-0.04	21.25
25	25	96.65	0.00	-1.85	-0.35	18.03
25	26	99.00	0.00	-1.85	-0.35	22.37
26	26	99.00	0.00	-1.72	-0.48	20.23
26	27	101.35	0.00	-1.72	-0.48	24.28
27	27	101.35	0.00	-1.71	-0.02	23.45
27	28	103.85	0.00	-1.71	-0.02	27.73
28	28	103.85	0.00	-31.57	-7.06	-308.40
28	29	106.35	0.00	-29.83	-0.98	-232.52
29	29	106.35	0.00	-24.86	-22.25	-233.35
29	30	108.70	0.00	-23.31	-16.51	-178.75
30	30	108.70	0.00	-19.85	-31.74	-178.80
30	31	111.05	0.00	-16.31	-26.00	-134.07
31	31	111.05	0.00	-15.98	-38.76	-137.33
31	32	113.40	0.00	-14.52	-35.42	-105.65
32	32	113.40	0.00	-13.74	-48.28	-105.65
32	33	115.40	0.00	-12.58	-44.20	-63.40
33	33	115.40	0.00	-13.74	-56.92	-63.40
33	34	121.12	0.00	-10.50	-44.11	-29.19
34	34	121.12	0.00	-10.31	-45.59	-29.19
34	35	126.83	0.00	-7.46	-33.98	0.01
35	35	126.83	0.00	-7.75	-34.41	0.01
35	36	132.55	0.00	-5.36	-23.90	11.04
36	36	132.55	0.00	-5.68	-24.35	11.04
36	37	138.27	0.00	-3.71	-15.16	9.86
37	37	138.27	0.00	-3.52	-17.06	9.86
37	38	143.96	0.00	-2.24	-6.37	1.66
38	38	143.96	0.00	-1.81	-0.27	-10.33
38	39	148.70	0.00	-1.61	-0.27	0.00
101	101	0.00	0.00	-1.23	-3.33	0.00
101	102	5.72	0.00	-1.23	-3.33	7.01
102	102	5.72	0.00	-2.76	-13.96	2.07
102	103	11.43	0.00	-2.78	-13.96	17.96
103	103	11.43	0.00	-2.83	-11.51	17.96
103	104	17.15	0.00	-2.83	-11.51	34.12
104	104	17.15	0.00	-2.10	-6.99	34.12
104	105	22.87	0.00	-2.10	-6.99	46.14
105	105	22.87	0.00	-1.63	-3.77	46.14
105	106	28.58	0.00	-1.63	-3.77	55.43
106	106	28.58	0.00	-1.75	-3.15	55.43
106	107	34.30	0.00	-1.75	-3.15	65.44
107	107	34.30	0.00	-0.92	4.70	31.37
107	108	36.30	0.00	-0.92	4.70	33.21
108	108	36.30	0.00	-1.19	8.97	27.21
108	109	36.65	0.00	-1.19	8.97	30.09
109	109	36.65	0.00	-2.51	27.28	37.63
109	110	41.00	0.00	-2.51	27.28	43.54
110	110	41.00	0.00	-5.86	19.37	24.65
110	111	43.35	0.00	-5.86	19.37	38.43
111	111	43.35	0.00	-10.85	8.08	31.16
111	112	45.85	0.00	-10.85	8.08	58.30
112	112	45.85	0.00	-0.14	-0.78	-4.89
112	113	48.35	0.00	-0.14	-0.78	-4.56
113	113	48.35	0.00	-0.33	-3.17	-5.16
113	114	50.70	0.00	-0.33	-3.17	-4.36
114	114	50.70	0.00	-1.06	-17.72	8.83
114	115	53.05	0.00	-1.08	-17.72	9.42
115	115	53.05	0.00	-2.37	-17.22	-26.41
115	116	55.40	0.00	-2.37	-17.22	-29.65
116	116	55.40	0.00	-3.04	-14.64	-27.92
116	117	57.40	0.00	-3.04	-14.64	-21.84
117	117	57.40	0.00	-2.18	-3.00	-37.58
117	118	63.22	0.00	-2.18	-3.00	-24.92
118	118	63.22	0.00	-2.26	-3.09	-26.48
118	119	69.03	0.00	-2.28	-3.09	-13.23
119	119	69.03	0.00	-2.15	-2.33	-13.23
119	120	74.85	0.00	-2.15	-2.33	-0.74
120	120	74.85	0.00	-1.93	-1.11	-0.74
120	121	80.67	0.00	-1.93	-1.11	10.46
121	121	80.67	0.00	-1.83	-0.21	10.46
121	122	86.48	0.00	-1.83	-0.21	21.11
122	122	86.48	0.00	-1.94	-0.14	19.56
122	123	92.30	0.00	-1.94	-0.14	30.82
123	123	92.30	0.00	-1.79	3.08	15.09
123	124	94.30	0.00	-1.79	3.08	18.66
124	124	94.30	0.00	-2.03	5.92	11.58
124	125	96.65	0.00	-2.03	5.92	18.34
125	125	96.65	0.00	-3.05	3.08	-19.49
125	126	99.00	0.00	-3.05	3.08	-12.33
126	126	99.00	0.00	-5.63	10.96	-1.02
126	127	101.35	0.00	-5.63	10.96	12.21
127	127	101.35	0.00	-10.23	2.96	11.60
127	128	103.85	0.00	-10.23	2.96	37.19
128	128	103.85	0.00	-0.06	0.36	-9.89
128	129	106.35	0.00	-0.06	0.36	-9.49
129	129	106.35	0.00	-0.19	0.40	-16.76
129	130	108.70	0.00	-0.19	0.40	-16.30
130	130	108.70	0.00	-0.46	1.01	-35.19
130	131	111.05	0.00	-0.46	1.01	-34.11
131	131	111.05	0.00	-1.69	-19.18	-26.48
131	132	113.40	0.00	-1.69	-19.18	-22.52
132	132	113.40	0.00	-2.35	-14.71	-28.53
132	133	115.40	0.00	-2.35	-14.71	-23.83
133	133	115.40	0.00	-1.60	-0.02	-57.90
133	134	121.12	0.00	-1.60	-0.02	-48.75
134	134	121.12	0.00	-1.66	-0.20	-48.75
134	135	126.83	0.00	-1.66	-0.20	-39.29
135	135	126.83	0.00	-1.71	-0.37	-39.29
135	136	132.55	0.00	-1.71	-0.37	-29.51
136	136	132.55	0.00	-1.74	-0.47	-29.51
136	137	138.27	0.00	-1.74	-0.47	-19.54
137	137	138.27	0.00	-1.74	-0.47	-19.54
137	138	143.96	0.00	-1.74	-0.47	-8.59
138	138	143.96	0.00	-2.54	5.57	-14.53
138	139	148.70	0.00	-2.54	5.57	0.00

[redacted]

Envelvimento do tram ob largos planos gravitricos, 2021

Cont ccc

Curva	Nodo	X	Xi (T)	Vy (T)	Sfx (Tm)	Sfz (Tm)
[redacted]	1	0.00	0.00	1.81	0.27	0.00
	2	5.72	0.00	1.56	11.29	1.00
	3	5.72	0.00	2.24	9.37	1.68
	3	11.43	0.00	3.52	17.06	9.86
	3	11.43	0.00	3.71	15.18	8.00
3	4	17.15	0.00	5.00	24.25	11.04
4	4	17.15	0.00	5.38	23.90	11.04
4	5	22.87	0.00	7.75	34.41	0.01
5	5	22.87	0.00	7.46	33.98	0.01
5	6	28.58	0.00	10.31	-45.58	-29.18
6	6	28.58	0.00	10.11	44.21	-21.56
6	7	34.30	0.00	13.35	57.02	-73.53
7	7	34.30	0.00	8.63	47.13	4.73
7	8	36.30	0.00	6.89	91.22	-10.01
8	8	36.30	0.00	10.58	36.29	-14.06
8	9	36.85	0.00	12.65	43.63	-36.52
9	9	36.85	0.00	14.05	52.80	-39.78
9	10	41.00	0.00	15.65	36.00	-71.47
10	10	41.00	0.00	18.46	25.83	-74.33
10	11	43.35	0.00	20.24	29.31	-117.93
11	11	43.35	0.00	23.74	15.83	-117.93
11	12	45.85	0.00	25.63	19.01	-179.61
12	12	45.85	0.00	-4.67	12.92	-78.16
12	13	48.35	0.00	-5.11	15.85	-65.65
13	13	48.35	0.00	-2.48	8.27	-53.25
13	14	50.70	0.00	-2.71	10.54	-45.30
14	14	50.70	0.00	-1.65	5.86	-46.14
14	15	53.05	0.00	-1.92	7.73	-40.56
15	15	53.05	0.00	-1.28	4.06	-43.79
15	16	55.40	0.00	-1.20	5.53	-36.76
16	16	55.40	0.00	-0.83	2.61	-40.75
16	17	57.40	0.00	-0.85	3.49	-35.25
17	17	57.40	0.00	2.06	0.89	18.66
17	18	63.22	0.00	2.66	2.54	20.61
18	18	63.22	0.00	2.67	2.47	20.61
18	19	69.03	0.00	3.75	6.46	23.06
19	19	69.03	0.00	3.66	6.44	23.06
19	20	74.85	0.00	5.31	12.44	21.52
20	20	74.85	0.00	5.06	12.61	21.52
20	21	80.67	0.00	7.26	20.82	10.14
21	21	80.67	0.00	7.13	20.59	10.14
21	22	86.48	0.00	9.87	30.62	-18.35
22	22	86.48	0.00	10.09	29.61	-18.35
22	23	92.30	0.00	13.30	41.97	-71.36
23	23	92.30	0.00	8.55	36.32	-16.47
23	24	94.30	0.00	10.69	40.33	-32.70
24	24	94.30	0.00	11.24	32.05	-36.69
24	25	96.65	0.00	12.69	36.34	-60.70
25	25	96.65	0.00	14.39	27.66	-63.83
25	26	98.00	0.00	16.00	31.56	-68.49
[redacted]	26	99.00	0.00	16.45	22.03	-69.32
	27	101.35	0.00	20.23	25.51	-142.62
	27	101.35	0.00	22.40	13.22	-130.52
	28	103.65	0.00	24.46	16.40	-166.84
26	28	103.65	0.00	-5.13	11.55	-103.71
26	29	106.35	0.00	-5.58	14.46	-60.04
29	29	106.35	0.00	-3.86	7.04	-60.04
29	30	108.70	0.00	-4.20	8.30	-78.56
30	30	108.70	0.00	-3.40	4.80	-61.44
30	31	111.05	0.00	-3.46	6.63	-70.18
31	31	111.05	0.00	-2.90	3.19	-73.44
31	32	113.40	0.00	-2.82	4.59	-62.56
32	32	113.40	0.00	-2.49	1.68	-65.62
32	33	115.40	0.00	-2.33	2.09	-57.71
33	33	115.40	0.00	0.80	0.00	20.39
33	34	121.12	0.00	1.11	1.16	30.56
34	34	121.12	0.00	1.50	0.95	38.32
34	35	126.83	0.00	2.41	3.31	48.73
35	35	126.83	0.00	2.27	3.35	48.73
35	36	132.55	0.00	3.65	6.81	58.24
36	36	132.55	0.00	3.27	7.20	58.24
36	37	138.27	0.00	5.06	11.96	62.47
37	37	138.27	0.00	4.91	11.13	62.47
37	38	143.98	0.00	7.39	16.41	51.85
38	38	143.98	0.00	8.09	9.07	51.85
38	39	149.70	0.00	13.07	12.04	0.00
101	101	0.00	0.00	1.68	0.27	0.00
101	102	5.72	0.00	1.60	0.27	-9.59
102	102	5.72	0.00	1.74	0.47	-9.59
102	103	11.43	0.00	1.74	0.47	-19.55
103	103	11.43	0.00	1.74	0.47	-19.55
103	104	17.15	0.00	1.74	0.47	-29.51
104	104	17.15	0.00	1.71	0.37	-29.51
104	105	22.87	0.00	1.71	0.37	-39.26
105	105	22.87	0.00	1.50	0.21	-32.04
105	106	28.58	0.00	1.50	0.21	-40.80
106	106	28.58	0.00	1.35	0.21	-36.11
106	107	34.30	0.00	1.35	0.21	-43.81
107	107	34.30	0.00	0.44	21.29	65.44
107	108	36.30	0.00	0.44	21.29	64.57
108	108	36.30	0.00	-0.09	31.32	64.57
108	109	36.85	0.00	-0.09	31.32	64.78
109	109	36.85	0.00	-2.14	30.98	64.78
109	110	41.00	0.00	-2.14	30.98	69.80
110	110	41.00	0.00	-5.14	25.45	69.80
110	111	43.35	0.00	-5.14	25.45	81.86
111	111	43.35	0.00	-6.67	16.61	58.99
111	112	45.85	0.00	-6.67	16.61	81.86
112	112	45.85	0.00	3.77	10.83	-11.41
112	113	48.35	0.00	3.77	10.83	-20.84
[redacted]	13	48.35	0.00	2.53	7.60	-20.64
	14	50.70	0.00	2.53	7.60	-26.79
	14	50.70	0.00	1.65	5.80	-26.79
115	115	53.05	0.00	1.65	5.60	-31.13
115	115	53.05	0.00	1.29	4.07	-31.13
116	116	55.40	0.00	1.29	4.07	-34.17
116	116	55.40	0.00	0.83	2.60	-34.17
116	117	57.40	0.00	0.83	2.60	-35.83
117	117	57.40	0.00	1.68	0.72	16.03
118	118	63.22	0.00	1.66	0.72	6.25
118	118	63.22	0.00	1.62	0.86	3.91
118	119	69.03	0.00	1.62	0.86	-5.53
119	119	69.03	0.00	1.54	1.33	-0.63
119	120	74.85	0.00	1.84	1.33	-11.35
120	120	74.85	0.00	2.06	2.56	9.86
120	121	80.67	0.00	2.06	2.56	-2.14
121	121	80.67	0.00	2.07	3.74	2.76
121	122	86.48	0.00	2.07	3.74	-9.27
122	122	86.48	0.00	1.92	3.58	-11.61
122	123	92.30	0.00	1.92	3.58	-22.78
123	123	92.30	0.00	2.06	20.32	29.07
123	124	94.30	0.00	2.06	20.32	24.91
124	124	94.30	0.00	1.93	27.21	24.91
124	125	96.65	0.00	1.93	27.21	21.07
125	125	96.65	0.00	-0.13	26.59	21.07
125	126	99.00	0.00	-0.13	26.59	21.38
126	126	99.00	0.00	-2.77	21.93	21.38
126	127	101.35	0.00	-2.77	21.93	27.86
127	127	101.35	0.00	-6.33	14.57	27.86
127	128	103.65	0.00	-6.33	14.57	43.71
128	128	103.65	0.00	2.11	8.91	-33.05
128	129	106.35	0.00	2.11	8.91	-36.32
129	129	106.35	0.00	0.53	6.47	-60.20
129	130	108.70	0.00	0.53	6.47	-61.45
130	130	108.70	0.00	-0.06	4.72	-61.45
130	131	111.05	0.00	-0.06	4.72	-61.26
131	131	111.05	0.00	-0.56	3.17	-61.26
131	132	113.40	0.00	-0.56	3.17	-58.89
132	132	113.40	0.00	-0.99	1.66	-58.89
132	133	115.40	0.00	-0.99	1.66	-57.50
133	133	115.40	0.00	1.47	3.33	50.27
133	134	121.12	0.00	1.47	3.33	41.84
134	134	121.12	0.00	1.47	3.76	47.26
134	135	126.83	0.00	1.47	3.76	38.89
135	135	126.83	0.00	2.10	6.99	46.14
136	136	132.55	0.00	2.10	6.99	34.12
136	136	132.55	0.00	2.83	11.51	34.12
136	137	138.27	0.00	2.83	11.51	17.95
137	137	138.27	0.00	2.78	13.96	17.85
137	138	143.98	0.00	2.78	13.96	2.07
138	138	143.98	0.00	0.36	9.16	2.07
139	139	149.70	0.00	0.36	9.16	0.00

[redacted]

Envelvimento do tram ob largos planos gravitricos, 2021

Cont ccc

Curva	Nodo	X	Xi (T)	Vy (T)	Sfx (Tm)	Sfz (Tm)
1	1	0.00	0.00	-13.07	-12.04	0.00
1	2	5.72	0.00	-9.00	-9.07	51.85
2	2	5.72	0.00	-7.38	-16.41	51.85
2	3	11.43	0.00	-4.81	-11.13	62.47
3	3	11.43	0.00	-5.05	-11.90	62.47
3	4	17.15	0.00	-3.27	-7.20	56.24
4	4	17.15	0.00	-3.65	-6.81	56.24
4	5	22.87	0.00	-2.27	-3.35	48.73
5	5	22.87	0.00	-2.41	-3.31	48.73
5	6	28.58	0.00	-1.50	-0.85	30.32
6	6	28.58	0.00	-1.11	-1.16	30.56
6	7	34.30	0.00	-0.00	0.00	20.39
7	7	34.30	0.00	2.33	-2.69	-57.71
7	8	36.30	0.00	2.48	-1.88	-66.62
8	8	36.30	0.00	2.82	-4.50	-82.56
8	9	36.85	0.00	2.90	-3.19	-73.44
9	9	36.85	0.00	3.46	-6.83	-70.18
9	10	41.00	0.00	3.90	-4.90	-61.44
10	10	41.00	0.00	4.20	-8.30	-78.54
10	11	43.35	0.00	3.95	-7.04	-90.04
11	11	43.35	0.00	5.58	-14.48	-90.04
11	12	45.85	0.00	5.13	-11.55	-103.71
12	12	45.85	0.00	-24.46	-16.40	-166.84
12	13	48.35	0.00	-22.40	-13.22	-130.52
13	13	48.35	0.00	-20.23	-25.51	-142.92
13	14	50.70	0.00	-18.46	-22.03	-98.32
14	14	50.70	0.00	-16.00	-31.56	-95.49
14	15	53.05	0.00	-14.39	-27.66	-63.83
15	15	53.05	0.00	-12.69	-36.34	-60.70
15	16	55.40	0.00	-11.24	-32.05	-36.69
16	16	55.40	0.00	-10.69	-40.33	-32.70
16	17	57.40	0.00	-9.55	-36.32	-16.47
17	17	57.40	0.00	-13.30	-41.97	-71.36
17	18	63.22	0.00	-10.09	-29.61	-18.35
18	18	63.22	0.00	-9.87	-30.62	-18.35
18	19	69.03	0.00	-7.13	-20.59	10.14
19	19	69.03	0.00	-7.26	-20.82	10.14
19	20	74.85	0.00	-5.06	-12.61	21.52
20	20	74.85	0.00	-5.31	-12.44	21.52
20	21	80.67	0.00	-3.66	-6.44	23.06
21	21	80.67	0.00	-3.75	-6.46	23.06
21	22	86.48	0.00	-2.67	-2.47	20.61
22	22	86.48	0.00	-2.66	-2.54	20.61
22	23	92.30	0.00	-2.06	-0.49	18.66
23	23	92.30	0.00	0.66	-3.49	-35.25
23	24	94.30	0.00	0.83	-2.61	-40.75
24	24	94.30	0.00	1.20	-5.53	-36.76
24	25	96.65	0.00	1.29	-4.08	-43.79
25	25	96.65	0.00	1.92	-7.72	-40.56
25	26	98.00	0.00	1.85	-5.66	-48.14
26	26	99.00	0.00	2.71	-10.54	-45.30
26	27	101.35	0.00	2.46	-9.27	-53.25
27	27	101.35	0.00	5.11	-15.85	-65.65
27	28	103.65	0.00	4.87	-12.82	-78.16
28	28	103.65	0.00	-25.63	-19.01	-179.61
28	29	106.35	0.00	-23.74	-15.83	-117.94
29	29	106.35	0.00	-20.24	-29.31	-117.94
29	30	108.70	0.00	-18.46	-25.83	-74.33
30	30	108.70	0.00	-15.65	-36.90	-71.47
30	31	111.05	0.00	-14.03	-32.89	-36.78
31	31	111.05	0.00	-12.05	-43.63	-36.52
31	32	113.40	0.00	-10.59	-39.29	-14.06
32	32	113.40	0.00	-9.99	-51.22	-10.01
32	33	115.40	0.00	-9.83	-47.13	4.73
33	33	115.40	0.00	-13.35	-57.02	-73.53
33	34	121.12	0.00	-10.11	-44.21	-21.56
34	34	121.12	0.00	-10.31	-45.59	-29.18
34	35	126.83	0.00	-7.46	-33.98	0.01
35	35	126.83	0.00	-7.75	-34.41	0.01
35	36	132.55	0.00	-5.36	-23.90	11.04
36	36	132.55	0.00	-5.68	-24.35	11.04
36	37	138.27	0.00	-3.71	-15.18	9.86
37	37	138.27	0.00	-3.52	-17.06	9.86
37	38	143.98	0.00	-2.24	-8.37	1.68
38	38	143.98	0.00	-1.58	-11.26	1.68
38	39	149.70	0.00	-1.81	-0.27	0.00
101	101	0.00	0.00	-0.36	-9.16	0.00
101	102	5.72	0.00	-0.36	-9.16	2.07
102	102	5.72	0.00	-2.76	-13.96	2.07
102	103	11.43	0.00	-2.76	-13.96	17.96
103	103	11.43	0.00	-2.83	-11.51	17.96
103	104	17.15	0.00	-2.83	-11.51	34.12
104	104	17.15	0.00	-2.10	-6.99	34.12
104	105	22.87	0.00	-2.10	-6.99	46.14
105	105	22.87	0.00	-1.47	-3.78	36.89
105	106	28.58	0.00	-1.47	-3.78	47.26
106	106	28.58	0.00	-1.47	-3.33	41.84
106	107	34.30	0.00	-1.47	-3.33	50.27
107	107	34.30	0.00	0.99	-1.88	-57.90
107	108	36.30	0.00	0.99	-1.88	-58.89
108	108	36.30	0.00	0.56	-3.17	-58.89
108	109	36.85	0.00	0.56	-3.17	-61.26
109	109	36.85	0.00	0.08	-4.72	-61.26
109	110	41.00	0.00	0.08	-4.72	-61.45
110	110	41.00	0.00	-0.53	-6.47	-61.45
110	111	43.35	0.00	-0.53	-6.47	-90.20
111	111	43.35	0.00	-2.11	-8.91	-34.32
111	112	45.85	0.00	-2.11	-8.91	-33.05
112	112	45.85	0.00	6.33	-14.57	43.71
112	113	48.35	0.00	6.33	-14.57	27.86
113	113	48.35	0.00	2.77	-21.93	27.86
113	114	50.70	0.00	2.77	-21.93	21.38
114	114	50.70	0.00	0.13	-26.59	21.38
114	115	53.05	0.00	0.13	-26.59	21.07
115	115	53.05	0.00	-1.63	-27.21	21.07
115	116	55.40	0.00	-1.63	-27.21	24.91
116	116	55.40	0.00	-2.08	-20.32	24.91
116	117	57.40	0.00	-2.08	-20.32	29.07
117	117	57.40	0.00	-1.92	-3.58	-22.78
117	118	63.22	0.00	-1.92	-3.58	-11.61
118	118	63.22	0.00	-2.07	-3.74	-9.27
118	119	69.03	0.00	-2.07	-3.74	2.76
119	119	69.03	0.00	-2.06	-2.56	-2.14
119	120	74.85	0.00	-2.06	-2.56	9.86
120	120	74.85	0.00	-1.84	-1.33	-11.35
120	121	80.67	0.00	-1.84	-1.33	-0.63
121	121	80.67	0.00	-1.62	-0.86	-5.53
121	122	86.48	0.00	-1.62	-0.86	3.91
122	122	86.48	0.00	-1.88	-0.72	6.25
122	123	92.30	0.00	-1.66	-0.72	16.03
123	123	92.30	0.00	-0.83	-2.60	-35.83
123	124	94.30	0.00	-0.83	-2.60	-34.17
124	124	94.30	0.00	-1.29	-4.07	-34.17
124	125	96.65	0.00	-1.29	-4.07	-31.13
125	125	96.65	0.00	-1.85	-5.60	-31.13
125	126	99.00	0.00	-1.85	-5.80	-26.78
126	126	99.00	0.00	-2.53	-7.80	-26.79
126	127	101.35	0.00	-2.53	-7.80	-20.84
127	127	101.35	0.00	-3.77	-10.83	-20.84
127	128	103.65	0.00	-3.77	-10.83	-11.41
128	128	103.65	0.00	8.67	-16.61	81.66
128	129	106.35	0.00	8.67	-16.61	59.99
129	129	106.35	0.00	5.14	-25.45	81.86
129	130	108.70	0.00	5.14	-25.45	69.80
130	130	108.70	0.00	2.14	-30.98	69.80
130	131	111.05	0.00	2.14	-30.98	64.78
131	131	111.05	0.00	0.09	-31.32	64.78
131	132	113.40	0.00	0.09	-31.32	64.57
132	132	113.40	0.00	-0.44	-21.29	64.57
132	133	115.40	0.00	-0.44	-21.29	65.44
133	133	115.40	0.00	-1.35	-0.21	-43.81
133	134	121.12	0.00	-1.35	-0.21	-36.11
134	134	121.12	0.00	-1.50	-0.21	-40.80
134	135	126.83	0.00	-1.50	-0.21	-32.04
135	135	126.83	0.00	-1.71	-0.37	-38.29
135	136	132.55	0.00	-1.71	-0.37	-29.51
136	136	132.55	0.00	-1.74	-0.47	-29.51
136	137	138.27	0.00	-1.74	0.47	-19.54
137	137	138.27	0.00	-1.74	-0.47	-10.54
137	138	143.98	0.00	-1.74	0.47	9.59
138	138	143.98	0.00	-1.66	-0.27	9.59
138	139	149.70	0.00	-1.66	-0.27	0.00

[redacted]

Envolvente de sret de cargas pisos guardias. 97%

Cast on

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	2.54	5.57	0.00
1	2	5.72	0.00	2.54	5.57	-14.53
2	2	5.72	0.00	1.74	-0.47	-0.28
2	3	11.43	0.00	1.74	-0.47	-19.55
3	3	11.43	0.00	1.74	-0.47	-18.95
3	4	17.15	0.00	1.74	-0.47	-20.51
4	4	17.15	0.00	1.71	-0.37	-20.51
4	5	22.87	0.00	1.71	-0.37	-39.26
5	5	22.87	0.00	1.68	-0.20	-39.26
5	6	28.58	0.00	1.66	-0.20	-46.75
6	6	28.58	0.00	1.50	-0.02	-45.75
6	7	34.30	0.00	1.00	-0.02	-57.93
7	7	34.30	0.00	2.35	-14.71	-25.63
7	8	38.30	0.00	2.35	-14.71	-26.53
8	8	38.30	0.00	1.00	-19.10	-22.52
8	9	36.85	0.00	1.00	-19.19	-36.49
9	9	36.85	0.00	0.48	1.01	-34.11
9	10	41.00	0.00	0.48	1.01	-35.19
10	10	41.00	0.00	0.19	0.40	-16.30
10	11	43.35	0.00	0.19	0.40	-16.78
11	11	43.35	0.00	0.08	0.30	-9.46
11	12	45.85	0.00	0.09	0.34	-9.99
12	12	45.85	0.00	10.24	2.95	37.18
12	13	48.35	0.00	10.24	2.06	11.60
13	13	48.35	0.00	5.63	10.96	12.21
13	14	50.70	0.00	5.63	10.86	-1.02
14	14	50.70	0.00	3.05	3.06	-12.33
14	15	53.05	0.00	3.05	3.06	-18.49
15	15	53.05	0.00	2.03	5.92	16.34
15	16	55.40	0.00	2.03	5.92	11.56
16	16	55.40	0.00	1.79	3.06	18.66
16	17	57.40	0.00	1.79	3.06	15.09
17	17	57.40	0.00	1.94	-0.14	30.82
17	18	63.22	0.00	1.94	-0.14	19.56
18	18	63.22	0.00	1.83	-0.21	21.11
18	19	69.03	0.00	1.83	-0.21	10.46
19	19	69.03	0.00	1.93	-1.11	10.46
19	20	74.85	0.00	1.93	-1.11	-0.74
20	20	74.85	0.00	2.15	-2.33	-0.74
20	21	80.67	0.00	2.15	-2.33	-13.23
21	21	80.67	0.00	2.28	-3.09	-13.23
21	22	86.48	0.00	2.28	-3.09	-26.46
22	22	86.48	0.00	2.18	-3.00	-24.82
22	23	92.30	0.00	2.18	-3.00	-37.58
23	23	92.30	0.00	3.04	-14.64	-21.84
23	24	94.30	0.00	3.04	-14.64	-27.92
24	24	94.30	0.00	2.37	-17.22	-20.85
24	25	98.65	0.00	2.37	-17.22	-26.41
25	25	98.65	0.00	1.06	-17.72	9.42
25	26	99.00	0.00	1.06	-17.72	6.93
26	26	99.00	0.00	0.33	-3.17	-4.36
26	27	101.35	0.00	0.33	-3.17	-5.16
27	27	101.35	0.00	0.14	-0.78	-4.56
27	28	103.85	0.00	0.14	-0.78	-4.88
28	28	103.85	0.00	10.65	8.08	58.30
28	29	106.35	0.00	10.65	8.08	31.16
29	29	106.35	0.00	5.86	19.37	36.43
29	30	108.70	0.00	5.86	19.37	24.65
30	30	108.70	0.00	2.51	27.28	43.54
30	31	111.05	0.00	2.51	27.28	37.63
31	31	111.05	0.00	1.19	8.97	30.00
31	32	113.40	0.00	1.19	8.97	27.21
32	32	113.40	0.00	0.92	4.70	33.21
32	33	115.40	0.00	0.92	4.70	31.36
33	33	115.40	0.00	1.75	-3.15	65.44
33	34	121.12	0.00	1.75	-3.15	56.43
34	34	121.12	0.00	1.63	-3.77	55.43
34	35	126.83	0.00	1.63	-3.77	46.14
35	35	126.83	0.00	2.10	-8.99	46.14
35	36	132.55	0.00	2.10	-8.99	34.12
36	36	132.55	0.00	2.63	-11.51	34.12
36	37	138.27	0.00	2.63	-11.51	17.95
37	37	138.27	0.00	2.78	-13.96	17.95
37	38	143.98	0.00	2.78	-13.96	2.07
38	38	143.98	0.00	1.23	-3.33	7.01
38	39	149.70	0.00	1.23	-3.33	0.00
101	101	0.00	0.00	-13.07	12.04	0.00
101	102	5.72	0.00	-9.31	-1.92	63.96
102	102	5.72	0.00	-7.39	16.41	51.95
102	103	11.43	0.00	-4.91	11.13	62.47
103	103	11.43	0.00	-5.06	11.96	62.47
103	104	17.15	0.00	-3.27	7.20	58.24
104	104	17.15	0.00	-3.85	6.81	58.24
104	105	22.87	0.00	-2.27	3.35	48.73
105	105	22.87	0.00	-2.41	3.31	48.73
105	106	28.58	0.00	-1.50	0.95	38.32
106	106	28.58	0.00	-1.51	1.06	38.32
106	107	34.30	0.00	-1.00	-0.09	30.42
107	107	34.30	0.00	-1.42	-0.24	30.42
107	108	36.30	0.00	-1.26	-1.05	29.02
108	108	36.30	0.00	-1.11	0.72	29.02
108	109	38.65	0.00	-1.03	-0.68	27.37
109	109	38.65	0.00	-0.80	-0.26	24.11
109	110	41.00	0.00	-0.80	-0.26	26.00
110	110	41.00	0.00	-0.65	-0.02	23.64
110	111	43.35	0.00	-0.65	-0.02	25.38
111	111	43.35	0.00	-0.61	-0.36	24.54
111	112	45.85	0.00	-0.81	-0.36	26.09
112	112	45.85	0.00	-30.87	3.48	-294.74
112	113	48.35	0.00	-29.22	-2.61	-219.62
113	113	48.35	0.00	-24.43	17.71	-230.46
113	114	50.70	0.00	-22.89	11.97	-164.86
114	114	50.70	0.00	-19.70	26.05	-185.99
114	115	53.05	0.00	-18.15	20.31	-122.52
115	115	53.05	0.00	-18.04	32.29	-125.74
115	116	55.40	0.00	-14.59	28.01	-93.86
116	116	55.40	0.00	-13.82	37.46	-93.86
116	117	57.40	0.00	-12.66	33.46	-71.36
117	117	57.40	0.00	-13.30	41.97	-71.36
117	118	63.22	0.00	-10.09	29.51	-16.35
118	118	63.22	0.00	-9.87	30.82	-16.35
118	119	69.03	0.00	-7.13	20.59	10.14
119	119	69.03	0.00	-7.29	20.82	10.14
119	120	74.85	0.00	-5.08	12.81	21.52
120	120	74.85	0.00	-5.31	12.44	21.52
120	121	80.67	0.00	-3.66	6.44	23.08
121	121	80.67	0.00	-3.75	6.46	23.08
121	122	86.48	0.00	-2.67	2.47	20.81
122	122	86.48	0.00	-2.66	2.54	20.81
122	123	92.30	0.00	-2.08	0.69	19.66
123	123	92.30	0.00	-2.47	0.82	19.66
123	124	94.30	0.00	-2.30	-0.26	20.41
124	124	94.30	0.00	-2.15	1.49	20.41
124	125	98.65	0.00	-2.06	0.04	21.25
125	125	98.65	0.00	-1.65	0.35	18.03
125	126	99.00	0.00	-1.65	0.35	22.37
126	126	99.00	0.00	-1.72	0.48	20.23
126	127	101.35	0.00	-1.72	0.48	24.28
127	127	101.35	0.00	-1.71	0.02	23.45
127	128	103.85	0.00	-1.71	0.02	27.73
128	128	103.85	0.00	-31.57	7.06	-309.40
128	129	106.35	0.00	-29.93	0.90	-232.52
129	129	106.35	0.00	-24.66	22.25	-233.35
129	130	108.70	0.00	-23.31	16.51	-176.75
130	130	108.70	0.00	-18.95	31.74	-178.90
130	131	111.05	0.00	-16.31	26.00	-134.07
131	131	111.05	0.00	-15.96	39.76	-137.33
131	132	113.40	0.00	-14.52	35.42	-105.65
132	132	113.40	0.00	-13.74	46.28	-105.65
132	133	115.40	0.00	-12.56	44.20	-93.40
133	133	115.40	0.00	-13.74	56.92	-93.40
133	134	121.12	0.00	-10.50	44.11	-29.18
134	134	121.12	0.00	-10.31	45.59	-29.18
134	135	126.83	0.00	-7.46	33.96	0.01
135	135	126.83	0.00	-7.75	34.41	0.01
135	136	132.55	0.00	-5.38	23.90	11.04
136	136	132.55	0.00	-5.58	24.35	11.04
136	137	138.27	0.00	-3.71	15.16	9.86
137	137	138.27	0.00	-3.52	17.05	9.86
137	138	143.98	0.00	-2.24	8.37	1.66
138	138	143.98	0.00	-1.91	9.27	-10.33
138	139	149.70	0.00	-1.91	9.27	0.00

[redacted]

Envolvente de tres ejemplos planos ganadores, Sin*

Cual cas

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
[redacted]	1	0.00	0.00	-0.35	0.16	0.00
	2	5.72	0.00	-0.35	0.16	2.07
	2	5.72	0.00	-2.76	13.00	2.07
	3	11.43	0.00	-2.76	13.88	17.98
3	3	11.43	0.00	-2.83	11.51	17.88
3	4	17.15	0.00	-2.83	11.51	34.12
4	4	17.15	0.00	-2.10	0.99	34.12
4	5	22.87	0.00	-2.10	0.58	46.14
5	5	22.87	0.00	-1.47	3.75	39.98
5	6	28.58	0.00	-1.47	3.70	47.39
6	6	28.58	0.00	-1.47	3.33	41.84
6	7	34.30	0.00	-1.47	3.33	39.27
7	7	34.30	0.00	0.89	1.89	-57.90
7	8	36.30	0.00	0.89	1.89	-60.69
8	8	36.30	0.00	0.58	3.17	-59.58
8	9	38.65	0.00	0.58	3.17	-61.26
9	9	38.65	0.00	0.06	4.72	-61.26
9	10	41.00	0.00	0.06	4.72	-61.45
10	10	41.00	0.00	-0.53	6.47	-61.45
10	11	43.35	0.00	-0.53	6.47	-60.20
11	11	43.35	0.00	-2.11	8.91	-38.32
11	12	45.85	0.00	-2.11	8.91	-33.05
12	12	45.85	0.00	0.33	14.57	-43.71
12	13	48.35	0.00	0.33	14.57	27.88
13	13	48.35	0.00	2.77	21.83	27.88
13	14	50.70	0.00	2.77	21.83	21.36
14	14	50.70	0.00	0.13	26.58	21.36
14	15	53.05	0.00	0.13	26.58	21.07
15	15	53.05	0.00	-1.63	27.21	21.07
15	16	55.40	0.00	-1.63	27.21	24.91
16	16	55.40	0.00	-2.08	29.32	24.91
16	17	57.40	0.00	-2.08	29.32	29.07
17	17	57.40	0.00	-1.92	3.56	-22.78
17	18	63.22	0.00	-1.92	3.56	-11.61
18	18	63.22	0.00	-2.07	3.74	-9.27
18	19	69.03	0.00	-2.07	3.74	2.79
19	19	69.03	0.00	-2.06	2.56	-2.14
19	20	74.85	0.00	-2.06	2.56	9.86
20	20	74.85	0.00	-1.84	1.33	-11.35
20	21	80.67	0.00	-1.84	1.33	-9.83
21	21	80.67	0.00	-1.62	0.86	-5.53
21	22	86.48	0.00	-1.62	0.86	3.91
22	22	86.48	0.00	-1.68	0.72	5.25
22	23	92.30	0.00	-1.66	0.72	16.03
23	23	92.30	0.00	-0.83	2.60	-35.83
23	24	94.30	0.00	-0.83	2.60	-34.17
24	24	94.30	0.00	-1.29	4.07	-34.17
24	25	96.65	0.00	-1.29	4.07	-31.13
25	25	96.65	0.00	-1.65	5.60	-31.13
25	26	99.00	0.00	-1.65	5.60	-26.79
[redacted]	1	99.00	0.00	-2.53	7.80	-26.79
	7	101.35	0.00	-2.53	7.80	-20.84
	7	101.35	0.00	-3.77	10.83	-20.84
26	26	103.85	0.00	-3.77	10.83	-11.41
26	27	103.85	0.00	8.67	16.61	61.66
28	28	106.35	0.00	8.67	16.61	58.98
28	29	106.35	0.00	5.14	25.45	61.88
29	30	108.70	0.00	5.14	25.45	69.60
30	30	108.70	0.00	2.14	30.96	69.60
30	31	111.05	0.00	2.14	30.96	64.78
31	31	111.05	0.00	0.09	31.32	64.78
31	32	113.40	0.00	0.09	31.32	64.57
32	32	113.40	0.00	-0.44	21.28	64.57
32	33	115.40	0.00	-0.44	21.29	65.44
33	33	115.40	0.00	-1.35	0.21	-43.61
33	34	121.12	0.00	-1.35	0.21	-36.11
34	34	121.12	0.00	-1.50	0.21	-40.60
34	35	126.83	0.00	-1.50	0.21	-32.04
35	35	126.83	0.00	-1.71	0.37	-39.29
35	36	132.55	0.00	-1.71	0.37	-29.51
36	36	132.55	0.00	-1.74	0.47	-29.51
36	37	138.27	0.00	-1.74	0.47	-18.54
37	37	138.27	0.00	-1.74	0.47	-18.54
37	38	143.98	0.00	-1.74	0.47	-8.58
38	38	143.98	0.00	-1.68	0.27	-8.59
38	39	149.70	0.00	-1.68	0.27	0.00
101	101	0.00	0.00	-13.07	12.04	0.00
101	102	5.72	0.00	-9.08	9.07	51.95
102	102	5.72	0.00	-7.39	16.41	51.95
102	103	11.43	0.00	-4.91	11.13	62.47
103	103	11.43	0.00	-5.06	11.98	62.47
103	104	17.15	0.00	-3.27	7.20	56.24
104	104	17.15	0.00	-3.85	6.81	56.24
104	105	22.87	0.00	-2.27	3.35	48.73
105	105	22.87	0.00	-2.41	3.31	48.73
105	106	28.58	0.00	-1.50	0.85	36.32
106	106	28.58	0.00	-1.11	1.16	30.56
106	107	34.30	0.00	-0.60	0.00	20.39
107	107	34.30	0.00	2.33	2.89	-57.71
107	108	36.30	0.00	2.49	1.89	-66.62
108	108	36.30	0.00	2.82	4.58	-62.56
108	109	38.65	0.00	2.90	3.19	-73.44
109	109	38.65	0.00	3.48	6.63	-70.18
109	110	41.00	0.00	3.40	4.80	-91.44
110	110	41.00	0.00	4.20	9.30	-78.56
110	111	43.35	0.00	3.96	7.04	-90.04
111	111	43.35	0.00	5.58	14.48	-90.04
111	112	45.85	0.00	5.13	11.55	-103.71
112	112	45.85	0.00	-24.48	16.40	-166.94
[redacted]	13	48.35	0.00	-22.40	13.22	-130.52
	3	48.35	0.00	-20.23	25.51	-142.92
	14	50.70	0.00	-16.46	22.03	-98.32
	14	50.70	0.00	-16.00	31.56	-98.49
115	115	53.05	0.00	-14.30	27.68	-83.93
115	115	53.05	0.00	-12.99	36.34	-80.70
115	116	55.40	0.00	-11.24	32.05	-96.69
116	116	55.40	0.00	-10.69	40.33	-32.70
116	117	57.40	0.00	-8.55	36.32	-16.47
117	117	57.40	0.00	-13.30	41.97	-71.36
117	118	63.22	0.00	-10.09	29.61	-18.35
118	118	63.22	0.00	-8.67	30.82	-16.35
118	119	69.03	0.00	-7.13	20.59	10.14
119	119	69.03	0.00	-7.26	20.82	10.14
119	120	74.85	0.00	-5.08	12.61	21.52
120	120	74.85	0.00	-5.31	12.44	21.52
120	121	80.67	0.00	-3.66	6.44	23.06
121	121	80.67	0.00	-3.75	6.46	23.06
121	122	86.48	0.00	-2.67	2.47	20.61
122	122	86.48	0.00	-2.88	2.54	20.61
122	123	92.30	0.00	-2.08	0.89	18.66
123	123	92.30	0.00	0.66	3.49	-35.25
123	124	94.30	0.00	0.83	2.61	-40.75
124	124	94.30	0.00	1.20	5.53	-36.76
124	125	96.65	0.00	1.29	4.06	-43.79
125	125	96.65	0.00	1.92	7.72	-40.56
125	126	99.00	0.00	1.85	5.86	-48.14
126	126	99.00	0.00	2.71	10.54	-45.30
126	127	101.35	0.00	2.48	8.27	-53.25
127	127	101.35	0.00	5.11	15.65	-65.65
127	128	103.85	0.00	4.67	12.92	-76.14
128	128	103.85	0.00	-25.83	16.01	-179.61
128	129	106.35	0.00	-23.74	15.63	-117.94
129	129	106.35	0.00	-20.24	20.31	-117.94
129	130	108.70	0.00	-18.46	25.83	-74.33
130	130	108.70	0.00	-15.65	38.90	-71.47
130	131	111.05	0.00	-14.03	32.69	-36.78
131	131	111.05	0.00	-12.05	43.63	-36.52
131	132	113.40	0.00	-10.59	38.20	-14.06
132	132	113.40	0.00	-9.09	51.22	-10.01
132	133	115.40	0.00	-8.83	47.13	4.73
133	133	115.40	0.00	-13.35	57.07	-73.53
133	134	121.12	0.00	-10.11	44.21	-21.58
134	134	121.12	0.00	-10.31	45.58	-20.18
134	135	126.83	0.00	-7.46	33.96	0.01
135	135	126.83	0.00	-7.75	34.41	0.01
135	136	132.55	0.00	-5.36	23.80	11.04
136	136	132.55	0.00	-5.68	24.35	11.04
137	137	138.27	0.00	-3.71	15.16	9.86
137	138	138.27	0.00	-3.52	17.08	9.86
138	138	143.98	0.00	-2.24	8.37	1.66
138	139	143.98	0.00	-1.56	11.26	1.68
139	139	149.70	0.00	-1.01	0.27	0.00

[redacted]

Envolvente de tres ejemplos planos ganadores, Sin*

Cual cas

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	1.66	-0.27	0.00
1	2	5.72	0.00	1.66	-0.27	-9.56
2	2	5.72	0.00	1.74	-0.47	-9.56
2	3	11.43	0.00	1.74	-0.47	-19.55
3	3	11.43	0.00	1.74	-0.47	-19.55
3	4	17.15	0.00	1.74	-0.47	-29.51
4	4	17.15	0.00	1.71	-0.37	-29.51
4	5	22.87	0.00	1.71	-0.37	-39.28
5	5	22.87	0.00	1.50	-0.21	-32.04
5	6	28.58	0.00	1.50	-0.21	-40.60
6	6	28.58	0.00	1.35	-0.21	-36.11
6	7	34.30	0.00	1.35	-0.21	-43.61
7	7	34.30	0.00	0.44	-21.29	65.44
7	8	36.30	0.00	0.44	-21.29	64.57
8	8	36.30	0.00	-0.08	-31.32	64.57
8	9	38.65	0.00	-0.09	-31.32	64.79
9	9	38.65	0.00	-2.14	-30.88	64.78
9	10	41.00	0.00	-2.14	-30.86	69.80
10	10	41.00	0.00	-5.14	-25.45	69.80
10	11	43.35	0.00	-5.14	-25.45	61.86
11	11	43.35	0.00	-6.87	-16.61	59.96
11	12	45.85	0.00	-6.67	-16.91	81.98
12	12	45.85	0.00	3.77	-10.83	-11.41
12	13	48.35	0.00	3.77	-10.83	-20.64
13	13	48.35	0.00	2.53	-7.80	-20.64
13	14	50.70	0.00	2.53	-7.80	-26.79
14	14	50.70	0.00	1.85	-5.80	-26.79
14	15	53.05	0.00	1.85	-5.80	-31.13
15	15	53.05	0.00	1.29	-4.07	-31.13
15	16	55.40	0.00	1.29	-4.07	-34.17
16	16	55.40	0.00	0.83	-2.60	-34.17
16	17	57.40	0.00	0.83	-2.60	-35.83
17	17	57.40	0.00	1.68	-0.72	16.03
17	18	63.22	0.00	1.68	-0.72	5.25
18	18	63.22	0.00	1.62	-0.66	3.91
18	19	69.03	0.00	1.62	-0.66	-5.53
19	19	69.03	0.00	1.84	-1.33	-9.83
19	20	74.85	0.00	1.84	-1.33	-11.35
20	20	74.85	0.00	2.06	-2.56	9.86
20	21	80.67	0.00	2.06	-2.56	-2.14
21	21	80.67	0.00	2.07	-3.74	2.76
21	22	86.48	0.00	2.07	-3.74	-9.27
22	22	86.48	0.00	1.92	-3.56	-11.61
22	23	92.30	0.00	1.92	-3.56	-22.78
23	23	92.30	0.00	2.08	-20.32	29.07
23	24	94.30	0.00	2.08	-20.32	24.91
24	24	94.30	0.00	1.63	-27.21	24.91
24	25	96.65	0.00	1.63	-27.21	21.07
25	25	96.65	0.00	-0.13	-26.59	21.07
25	26	99.00	0.00	-0.13	-26.59	21.36
26	26	99.00	0.00	-2.77	-21.83	21.36
26	27	101.35	0.00	-2.77	-21.83	27.88
27	27	101.35	0.00	-8.33	-14.57	27.88
27	28	103.85	0.00	-8.33	-14.57	-43.71
28	28	103.85	0.00	2.11	-8.91	-33.05
28	29	106.35	0.00	2.11	-8.91	-38.32
29	29	106.35	0.00	0.53	-6.47	-60.20
29	30	108.70	0.00	0.53	-6.47	-61.45
30	30	108.70	0.00	-0.08	-4.72	-61.45
30	31	111.05	0.00	-0.08	-4.72	-61.26
31	31	111.05	0.00	-0.56	-3.17	-61.26
31	32	113.40	0.00	-0.56	-3.17	-58.89
32	32	113.40	0.00	-0.99	-1.68	-58.89
32	33	115.40	0.00	-0.99	-1.68	-57.90
33	33	115.40	0.00	1.47	-3.33	50.27
33	34	121.12	0.00	1.47	-3.33	41.84
34	34	121.12	0.00	1.47	-3.78	47.28
34	35	126.83	0.00	1.47	-3.78	38.89
35	35	126.83	0.00	2.10	-6.99	46.14
35	36	132.55	0.00	2.10	-6.99	34.12
36	36	132.55	0.00	2.83	-11.51	34.12
36	37	138.27	0.00	2.83	-11.51	17.95
37	37	138.27	0.00	2.78	-13.96	17.95
37	38	143.98	0.00	2.78	-13.96	2.07
38	38	143.98	0.00	0.36	-9.16	2.07
38	39	149.70	0.00	0.36	-9.16	0.00
101	101	0.00	0.00	1.81	-0.27	0.00
101	102	5.72	0.00	1.58	-11.26	1.68
102	102	5.72	0.00	2.24	-8.37	1.88
102	103	11.43	0.00	3.52	-17.06	9.86
103	103	11.43	0.00	3.71	-15.16	9.86
103	104	17.15	0.00	5.68	-24.35	11.04
104	104	17.15	0.00	5.36	-23.80	11.04
104	105	22.87	0.00	7.75	-34.41	0.01
105	105	22.87	0.00	7.46	-33.98	0.01
105	106	28.58	0.00	10.31	-45.58	-28.19
106	106	28.58	0.00	10.11	-44.21	-21.56
106	107	34.30	0.00	13.35	-57.02	-73.53
107	107	34.30	0.00	8.83	-47.13	4.73
107	108	36.30	0.00	9.89	-51.22	-10.01
108	108	36.30	0.00	10.59	-39.29	-14.06
108	109	38.65	0.00	12.05	-43.63	-36.52
109	109	38.65	0.00	14.03	-32.68	-36.78
109	110	41.00	0.00	15.85	-36.80	-71.47
110	110	41.00	0.00	18.46	-25.83	-74.33
110	111	43.35	0.00	20.24	-28.31	-117.83
111	111	43.35	0.00	23.74	-15.83	-117.83
111	112	45.85	0.00	25.83	-18.01	-178.61
112	112	45.85	0.00	-4.67	-13.82	-78.16
112	113	48.35	0.00	-5.11	-15.85	-85.65
113	113	48.35	0.00	-2.48	-6.27	-53.25
113	114	50.70	0.00	-2.71	-10.54	-45.30
114	114	50.70	0.00	-1.85	-5.86	-48.14
114	115	53.05	0.00	-1.92	-7.72	-40.56
115	115	53.05	0.00	-1.29	-4.08	-43.79
115	116	55.40	0.00	-1.29	-5.53	-36.76
116	116	55.40	0.00	-0.83	-2.61	-40.75
116	117	57.40	0.00	-0.66	-3.49	-35.25
117	117	57.40	0.00	2.08	-0.69	18.66
117	118	63.22	0.00	2.66	-2.54	20.81
118	118	63.22	0.00	2.67	-2.47	20.81
118	119	69.03	0.00	3.75	-6.46	23.06
119	119	69.03	0.00	3.66	-6.44	23.06
119	120	74.85	0.00	5.31	-12.44	21.52
120	120	74.85	0.00	5.08	-12.61	21.52
120	121	80.67	0.00	7.26	-20.82	10.14
121	121	80.67	0.00	7.13	-20.59	10.14
121	122	86.48	0.00	9.87	-30.92	-18.35
122	122	86.48	0.00	10.09	-29.61	-18.35
122	123	92.30	0.00	13.30	-41.97	-71.36
123	123	92.30	0.00	8.55	-36.32	-16.47
123	124	94.30	0.00	10.69	-40.33	-32.70
124	124	94.30	0.00	11.24	-32.05	-96.69
124	125	96.65	0.00	12.99	-36.34	-83.70
125	125	96.65	0.00	14.39	-27.68	-83.93
125	126	99.00	0.00	16.00	-31.56	-96.49
126	126	99.00	0.00	18.46	-22.03	-89.32
126	127	101.35	0.00	20.23	-25.51	-142.92
127	127	101.35	0.00	22.40	-13.22	-130.52
127	128	103.85	0.00	24.48	-18.40	-188.64
128	128	103.85	0.00	-5.13	-11.55	-103.71
128	129	106.35	0.00	-5.56	-14.48	-90.04
129	129	106.35	0.00	-3.96	-7.04	-90.04
129	130	108.70	0.00	-4.20	-9.30	-76.56
130	130	108.70	0.00	-3.40	-4.80	-61.44
130	131	111.05	0.00	-3.48	-6.63	-70.18
131	131	111.05	0.00	-2.90	-3.19	-73.44
131	132	113.40	0.00	-2.82	-4.58	-62.56
132	132	113.40	0.00	-2.49	-1.09	-66.62
132	133	115.40	0.00	-2.33	-2.89	-57.71
133	133	115.40	0.00	0.60	0.00	20.36
133	134	121.12	0.00	1.11	-1.16	30.56
134	134	121.12	0.00	1.50	-0.95	36.32
134	135	126.83	0.00	2.41	-3.31	46.72
135	135	126.83	0.00	2.27	-3.35	48.73
135	136	132.55	0.00	3.85	-6.81	56.24
136	136	132.55	0.00	3.27	-7.20	56.24
136	137	138.27	0.00	5.06	-11.98	62.47
137	137	138.27	0.00	4.91	-11.13	62.47
137	138	143.98	0.00	7.39	-16.41	51.95
138	138	143.98	0.00	9.09	-9.07	51.95
138	139	149.70	0.00	13.07	-12.04	0.00

TRAB Rest ND.

[redacted]

Envolvente do tipo de cargas pilare gravítico. YY-

Cod. ac

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
[redacted]	1	0.00	0.00	33.77	-1.51	0.00
	2	5.72	0.00	33.77	-1.81	-193.06
	2	5.72	0.00	34.20	-3.16	-193.06
	3	11.43	0.00	34.20	-3.16	-366.56
3	3	11.43	0.00	34.86	-23.30	-334.52
3	4	17.15	0.00	34.86	-23.30	-634.37
4	4	17.15	0.00	43.86	-62.37	-236.71
4	5	22.87	0.00	43.86	-62.37	-489.01
5	5	22.87	0.00	69.03	-173.34	-116.22
5	6	30.58	0.00	69.03	-173.34	-459.45
6	6	30.58	0.00	66.38	-165.29	-459.45
6	7	34.30	0.00	66.38	-165.29	-650.36
7	7	34.30	0.00	117.75	-266.10	-560.18
7	8	36.30	0.00	117.75	-266.10	-831.69
8	8	36.30	0.00	121.10	-242.31	-757.01
8	9	38.85	0.00	121.10	-242.31	-1002.18
9	9	38.85	0.00	112.62	-166.42	-1080.99
9	10	41.00	0.00	112.62	-166.42	-1325.84
10	10	41.00	0.00	86.32	-131.06	-1317.69
10	11	43.35	0.00	86.32	-131.06	-1548.74
11	11	43.35	0.00	76.54	-60.60	-1378.15
11	12	45.85	0.00	76.54	-60.60	-1569.50
12	12	45.85	0.00	29.53	-12.02	380.44
12	13	48.35	0.00	29.53	-12.02	306.62
13	13	48.35	0.00	29.21	-3.21	418.83
13	14	50.70	0.00	29.21	-3.21	350.29
14	14	50.70	0.00	29.49	-3.02	357.53
14	15	53.05	0.00	29.49	-3.02	288.53
15	15	53.05	0.00	29.83	-2.30	308.47
15	16	55.40	0.00	29.83	-2.30	238.37
16	16	55.40	0.00	30.37	-1.20	270.11
16	17	57.40	0.00	30.37	-1.20	209.38
17	17	57.40	0.00	34.00	5.38	441.62
17	18	63.22	0.00	34.00	5.38	243.83
18	18	63.22	0.00	37.46	-4.90	243.83
18	19	69.03	0.00	37.46	-4.90	25.96
19	19	69.03	0.00	43.86	-16.82	190.16
19	20	74.85	0.00	43.86	-16.82	-65.07
20	20	74.85	0.00	56.70	-54.61	288.39
20	21	80.67	0.00	56.70	-54.61	-41.41
21	21	80.67	0.00	72.11	-106.81	122.79
21	22	86.48	0.00	72.11	-106.81	-296.67
22	22	86.48	0.00	80.25	-129.97	-296.67
22	23	92.30	0.00	80.25	-129.97	-763.49
23	23	92.30	0.00	126.80	-237.51	-531.23
23	24	94.30	0.00	126.80	-237.51	-764.82
24	24	94.30	0.00	130.20	-210.46	-753.06
24	25	96.65	0.00	130.20	-210.46	-1059.06
25	25	96.65	0.00	122.58	-165.06	-1039.12
25	26	99.00	0.00	122.58	-165.06	-1327.19
[redacted]		99.00	0.00	109.38	-112.80	-1319.85
		101.35	0.00	109.39	-112.80	-1576.71
	1	101.35	0.00	86.57	-73.41	-1484.40
	8	103.85	0.00	86.57	-73.41	-1656.83
26	26	103.35	0.00	11.44	-12.29	333.18
28	28	106.35	0.00	11.44	-12.29	304.58
28	29	108.35	0.00	10.76	0.00	475.17
29	30	108.70	0.00	10.76	0.00	449.89
29	28	108.70	0.00	10.84	0.81	457.84
30	31	111.05	0.00	10.84	0.81	432.36
31	31	111.05	0.00	10.96	2.07	453.59
31	32	113.40	0.00	10.96	2.07	427.78
32	32	113.40	0.00	11.42	3.47	461.66
32	33	115.40	0.00	11.42	3.47	436.02
33	33	115.40	0.00	14.89	13.62	663.21
33	34	121.12	0.00	14.96	13.62	607.50
34	34	121.12	0.00	18.23	4.05	607.50
34	35	126.83	0.00	18.23	4.05	563.29
35	35	126.83	0.00	25.24	20.73	675.01
36	36	132.55	0.00	25.24	20.73	730.71
36	36	132.55	0.00	44.67	11.27	1026.36
36	37	136.27	0.00	44.67	11.27	773.01
37	37	136.27	0.00	66.39	-32.96	827.06
37	38	143.88	0.00	66.39	-32.96	436.13
38	36	143.56	0.00	76.29	-44.03	436.13
36	39	149.70	0.00	76.29	-44.03	0.00
101	101	0.00	0.00	34.65	-1.81	0.00
101	102	5.72	0.00	48.14	59.58	-64.43
102	102	5.72	0.00	43.02	38.42	-64.43
102	103	11.43	0.00	70.21	96.23	-13.44
103	103	11.43	0.00	59.85	57.30	-13.44
103	104	17.15	0.00	85.72	102.92	-11.01
104	104	17.15	0.00	81.09	49.47	-11.01
104	105	22.87	0.00	123.50	84.33	-153.65
105	105	22.87	0.00	108.30	33.18	-153.65
105	106	28.58	0.00	159.25	67.70	-539.47
106	106	28.58	0.00	150.90	37.05	-539.47
106	107	34.30	0.00	211.02	67.30	-1300.10
107	107	34.30	0.00	165.03	-137.91	-1300.10
107	108	36.30	0.00	184.52	-131.73	-1560.27
108	108	36.30	0.00	164.73	-181.93	-1560.27
108	109	38.85	0.00	200.46	-175.08	-1971.99
109	109	38.85	0.00	219.56	-181.41	-1971.99
109	110	41.00	0.00	245.00	-152.60	-2463.84
110	110	41.00	0.00	261.86	-106.42	-2463.84
110	111	43.35	0.00	288.18	-64.99	-3074.30
111	111	43.35	0.00	313.02	0.15	-3074.30
111	112	45.85	0.00	342.43	25.62	-3878.29
112	112	45.85	0.00	31.24	2.74	517.41
112	[redacted]	48.35	0.00	34.10	16.04	450.90
		48.35	0.00	31.52	0.05	450.90
		50.70	0.00	35.50	16.78	407.18
	4	50.70	0.00	32.75	1.36	407.18
115	115	53.05	0.00	36.15	20.60	377.01
115	115	53.05	0.00	34.83	3.75	377.01
115	116	55.40	0.00	41.54	24.76	355.40
116	116	55.40	0.00	37.51	5.83	355.40
116	117	57.40	0.00	43.98	23.21	340.67
117	117	57.40	0.00	37.22	-3.84	340.67
117	118	63.22	0.00	52.04	14.58	348.19
118	118	63.22	0.00	46.59	3.11	348.19
118	119	69.03	0.00	74.31	39.07	358.28
119	119	69.03	0.00	65.44	8.49	358.28
119	120	74.85	0.00	88.37	45.12	298.26
120	120	74.85	0.00	86.55	2.15	298.26
120	121	80.67	0.00	127.64	35.27	90.61
121	121	80.67	0.00	114.68	-8.80	90.61
121	122	86.48	0.00	163.96	26.20	-352.28
122	122	86.48	0.00	155.84	-1.92	-352.28
122	123	92.30	0.00	216.04	49.41	-1166.71
123	123	92.30	0.00	172.42	-130.71	-1166.71
123	124	94.30	0.00	191.95	-132.10	-1464.53
124	124	94.30	0.00	182.03	-166.19	-1464.53
124	125	96.65	0.00	215.63	-150.01	-1875.40
125	125	96.65	0.00	229.24	-142.39	-1875.40
125	126	99.00	0.00	251.14	-133.42	-2383.19
126	126	99.00	0.00	266.89	-99.15	-2383.19
126	127	101.35	0.00	293.13	-77.66	-3006.09
127	127	101.35	0.00	316.86	73.29	-3006.09
127	126	103.85	0.00	346.24	39.97	-3819.80
128	128	103.85	0.00	11.35	5.32	508.90
126	129	106.35	0.00	14.18	16.42	490.26
128	129	106.35	0.00	11.60	3.27	490.26
129	130	106.70	0.00	15.79	20.03	493.66
130	130	106.70	0.00	13.16	5.28	493.66
130	131	111.05	0.00	16.44	24.65	511.02
131	131	111.05	0.00	15.26	8.30	511.02
131	132	113.40	0.00	21.83	29.64	537.71
132	132	113.40	0.00	17.65	10.64	537.71
132	133	115.40	0.00	24.15	28.63	565.09
133	133	115.40	0.00	17.70	0.95	565.09
133	134	121.12	0.00	30.61	19.26	701.74
134	134	121.12	0.00	27.57	8.42	701.74
134	135	126.83	0.00	51.36	42.45	857.91
135	135	126.83	0.00	42.47	12.47	857.91
135	136	132.55	0.00	73.70	48.17	967.73
136	136	132.55	0.00	60.00	-1.21	967.73
136	137	136.27	0.00	87.87	22.04	953.58
137	137	136.27	0.00	63.74	-28.94	953.58
137	1	143.88	0.00	130.29	-17.19	726.48
		143.88	0.00	127.08	-37.05	726.48
	1	149.70	0.00	167.32	-29.88	0.00

[redacted]

Envolvente de tipo de cargas pilare gravítico. YY-

Cod. ac

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-79.29	44.03	0.00
1	2	5.72	0.00	-79.29	44.03	-256.11
2	2	5.72	0.00	-66.38	32.06	-436.11
2	3	11.43	0.00	-60.36	32.06	627.06
3	3	11.43	0.00	-44.67	-11.27	773.03
3	4	17.15	0.00	-44.67	-11.27	1026.37
4	4	17.15	0.00	-25.24	-20.73	730.71
4	5	22.87	0.00	-25.24	-20.73	575.00
5	5	22.87	0.00	-16.23	-4.05	563.27
5	6	30.58	0.00	-15.23	-4.05	697.50
6	6	30.58	0.00	-14.89	-13.62	697.50
6	7	34.30	0.00	-14.89	-13.62	663.20
7	7	34.30	0.00	-11.42	-3.47	439.82
7	8	36.30	0.00	-11.42	-3.47	481.86
8	8	36.30	0.00	-10.84	-2.07	427.78
8	9	38.85	0.00	-10.96	-2.07	453.59
9	9	38.85	0.00	-10.64	-0.81	432.36
9	10	41.00	0.00	-10.84	-0.81	457.84
10	10	41.00	0.00	-10.76	0.00	449.89
10	11	43.35	0.00	-10.76	0.00	475.17
11	11	43.35	0.00	-11.44	12.29	304.58
11	12	45.85	0.00	-11.44	12.29	333.18
12	12	45.85	0.00	-94.57	73.41	-1306.83
12	13	48.35	0.00	-98.57	73.41	-1484.40
13	13	48.35	0.00	-109.39	112.80	-1576.72
13	14	50.70	0.00	-109.39	112.80	-1319.85
14	14	50.70	0.00	-122.58	165.06	-1327.19
14	15	53.05	0.00	-122.58	165.06	-1039.12
15	15	53.05	0.00	-130.20	210.46	-1059.06
15	16	55.40	0.00	-130.20	210.46	-753.06
16	16	55.40	0.00	-126.80	237.51	-784.82
16	17	57.40	0.00	-126.80	237.51	-531.23
17	17	57.40	0.00	-80.25	129.97	-763.49
17	18	63.22	0.00	-80.25	129.97	-296.67
18	18	63.22	0.00	-72.11	106.81	-296.67
18	19	69.03	0.00	-72.11	106.81	122.79
19	19	69.03	0.00	-56.70	54.61	-41.41
19	20	74.85	0.00	-56.70	54.61	288.39
20	20	74.85	0.00	-43.86	16.82	-65.07
20	21	80.67	0.00	-43.86	16.82	190.16
21	21	80.67	0.00	-37.46	4.90	25.96
21	22	86.48	0.00	-37.46	4.90	243.83
22	22	86.48	0.00	-34.00	-5.38	243.83
22	23	92.30	0.00	-34.00	-5.38	441.62
23	23	92.30	0.00	-30.37	1.20	209.38
23	24	94.30	0.00	-30.37	1.20	270.11
24	24	94.30	0.00	-29.83	2.30	238.37
24	25	96.65	0.00	-29.83	2.30	308.47
25	25	96.65	0.00	-29.49	3.02	288.53
25	26	99.00	0.00	-29.49	3.02	357.53
26	26	99.00	0.00	-29.21	3.21	350.29
26	27	101.35	0.00	-29.21	3.21	418.83
27	27	101.35	0.00	-29.53	12.02	306.62
27	28	103.85	0.00	-29.53	12.02	380.44
28	28	103.85	0.00	-76.54	90.60	-1569.50
28	29	106.35	0.00	-76.54	90.60	-1378.15
29	29	106.35	0.00	-86.32	131.06	-1548.74
29	30	108.70	0.00	-86.32	131.06	-1317.69
30	30	108.70	0.00	-112.62	166.42	-1325.64
30	31	111.05	0.00	-112.62	166.42	-1080.99
31	31	111.05	0.00	-121.10	242.31	-1082.19
31	32	113.40	0.00	-121.10	242.31	-797.61
32	32	113.40	0.00	-117.75	286.10	-631.69
32	33	115.40	0.00	-117.75	286.10	-596.18
33	33	115.40	0.00	-66.36	195.29	-650.37
33	34	121.12	0.00	-66.36	195.29	-459.44
34	34	121.12	0.00	-60.03	173.34	-459.44
34	35	126.83	0.00	-60.03	173.34	-116.30
35	35	126.83	0.00	-43.96	82.37	-466.02
35	36	132.55	0.00	-43.96	82.37	-236.72
36	36	132.55	0.00	-34.96	23.30	-534.36
36	37	136.27	0.00	-34.96	23.30	-334.50
37	37	136.27	0.00	-34.20	3.16	-366.55
37	38	143.88	0.00	-34.20	3.16	-193.07
38	36	143.96	0.00	-33.77	1.81	-193.07
36	39	149.70	0.00	-33.77	1.81	0.00
101	101	0.00	0.00	-187.32	29.88	0.00
101	102	5.72	0.00	-127.08	37.04	726.47
102	102	5.72	0.00	-130.29	17.19	726.47
102	103	11.43	0.00	-63.74	28.84	963.58
103	103	11.43	0.00	-97.87	-22.04	963.58
103	104	17.15	0.00	-69.00	1.21	967.73
104	104	17.15	0.00	-73.79	-46.17	967.73
104	105	22.87	0.00	-42.47	-12.47	857.92
105	105	22.87	0.00	-51.36	-42.45	857.92
105	106	28.58	0.00	-27.57	-9.42	701.73
106	106	28.58	0.00	-30.81	-18.26	701.73
106	107	34.30	0.00	-17.20	-0.85	565.09
107	107	34.30	0.00	-24.15	-28.63	565.09
107	108	36.30	0.00	-17.65	-10.64	537.71
108	108	36.30	0.00	-21.83	-29.64	537.71
108	109	38.85	0.00	-15.28	-8.30	511.02
109	109	38.85	0.00	-16.44	-24.65	511.02
109	110	41.00	0.00	-13.16	-5.28	493.66
110	110	41.00	0.00	-15.79	-20.03	493.66
110	111	43.35	0.00	-11.90	-3.27	480.26
111	111	43.35	0.00	-14.18	-16.82	480.26
111	112	45.85	0.00	-11.35	-5.32	508.90
112	112	45.85	0.00	-346.24	-39.97	-3819.80
112	113	48.35	0.00	-316.86	-23.29	-3006.09
113	113	48.35	0.00	-293.13	77.66	-3006.09
113	114	50.70	0.00	-266.89	99.15	-2383.19
114	114	50.70	0.00	-251.14	133.42	-2383.19
114	115	53.05	0.00	-229.24	142.39	-1875.40
115	115	53.05	0.00	-215.63	150.01	-1875.40
115	116	55.40	0.00	-182.03	166.19	-1464.53
116	116	55.40	0.00	-181.95	132.10	-1464.53
116	117	57.40	0.00	-172.62	138.71	-1169.71
117	117	57.40	0.00	-216.04	-49.41	-1166.71
117	118	63.22	0.00	-155.84	1.92	-352.28
118	118	63.22	0.00	-163.96	-26.20	-352.28
118	119	69.03	0.00	-114.68	8.80	90.61
119	119	69.03	0.00	-127.64	-35.27	90.61
119	120	74.85	0.00	-86.55	-2.15	298.26
120	120	74.85	0.00	-88.37	-45.12	298.26
120	121	80.67	0.00	-85.44	-8.49	358.28
121	121	80.67	0.00	-74.31	-39.07	358.28
121	122	86.48	0.00	-46.59	-3.11	348.19
122	122	86.48	0.00	-52.04	-14.58	348.19
122	123	92.30	0.00	-37.22	3.84	340.67
123	123	92.30	0.00	-43.98	-23.21	340.67
123	124	94.30	0.00	-37.51	-5.83	355.40
124	124	94.30	0.00	-41.54	-24.76	355.40
124	125	96.65	0.00	-34.83	-3.75	377.01
125	125	96.65	0.00	-36.15	-20.60	377.01
125	126	99.00	0.00	-32.75	-1.36	407.18
126	126	99.00	0.00	-35.50	-16.78	407.18
126	127	101.35	0.00	-31.52	-0.05	450.90
127	127	101.35	0.00	-34.10	-16.04	450.90
127	128	103.85	0.00	-31.24	-2.74	517.41
128	128	103.85	0.00	-342.43	-25.62	-3878.29
126	129	106.35	0.00	-313.02	-9.15	-3074.30
129	129	106.35	0.00	-266.18	94.99	-3074.30
129	130	106.70	0.00	-251.86	105.42	-2463.84
130	130	106.70	0.00	-245.00	152.60	-2463.84
130	131	111.05	0.00	-219.96	161.41	-1971.99
131	131	111.05	0.00	-208.46	175.06	-1971.99
131	132	113.40	0.00	-184.73	181.93	-1560.27
132	132	113.40	0.00	-164.52	131.73	-1560.27
132	133	115.40	0.00	-165.03	137.91	-1300.10
133	133	115.40	0.00	-211.02	-67.30	-1300.10
133	134	121.12	0.00	-150.90	-37.04	-539.44
134	134	121.12	0.00	-159.25	-67.70	-539.44
134	135	126.83	0.00	-108.31	-33.18	-153.67
135	135	126.83	0.00	-123.50	-84.33	-153.67
135	136	132.55	0.00	-81.09	-49.47	-11.01
136	136	132.55	0.00	-95.72	-102.62	-11.01
136	137	136.27	0.00	-58.95	-57.30	-13.44
137	137	136.27	0.00	-70.21	-96.32	-13.44
137	138	143.96	0.00	-43.02	-39.42	-64.43
138	138	143.90	0.00	-48.14	-59.56	-64.43
138	139	149.70	0.00	-34.95	1.81	0.00

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Envolvente de tren de cargas placas guardrios. EDV

Cast ws

Barra	Nudo	X	S (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-69.22	46.64	0.00
1	2	5.72	0.00	-69.22	-48.64	395.85
2	2	5.72	0.00	-67.88	47.30	324.77
2	3	11.43	0.00	-67.89	47.30	665.72
3	3	11.43	0.00	-38.03	16.78	597.57
3	4	17.15	0.00	-39.03	16.78	730.71
4	4	17.15	0.00	-20.64	3.75	363.69
4	5	22.87	0.00	-20.95	3.75	993.27
5	5	22.87	0.00	-15.32	0.69	362.60
5	6	28.58	0.00	-15.32	0.69	650.16
6	6	28.58	0.00	-11.54	0.02	331.84
6	7	34.30	0.00	-11.54	0.02	397.81
7	7	34.30	0.00	29.16	12.67	-1160.73
7	8	36.30	0.00	29.16	12.67	-1210.05
8	8	36.30	0.00	29.36	21.32	-1219.05
8	9	39.85	0.00	29.36	21.32	-1281.05
9	9	38.85	0.00	23.00	31.40	-1281.05
9	10	41.00	0.00	23.00	31.40	-1335.10
10	10	41.00	0.00	13.81	41.51	-1124.34
10	11	43.35	0.00	13.81	41.51	-1156.80
11	11	43.35	0.00	0.35	48.97	-971.93
11	12	45.85	0.00	0.35	48.97	-972.90
12	12	45.85	0.00	-62.64	120.22	-726.74
12	13	48.35	0.00	-62.64	120.22	-526.63
13	13	48.35	0.00	-66.36	157.87	-526.63
13	14	50.70	0.00	-66.36	157.87	-302.19
14	14	50.70	0.00	-104.92	188.79	-302.19
14	15	53.05	0.00	-104.92	188.79	-55.62
15	15	53.05	0.00	-106.65	234.10	-55.62
15	16	55.40	0.00	-109.65	234.10	189.70
16	16	55.40	0.00	-101.71	252.93	188.70
16	17	57.40	0.00	-101.71	252.93	-603.13
17	17	57.40	0.00	-78.91	139.69	-574.46
17	18	63.22	0.00	-76.91	138.09	-115.46
18	18	63.22	0.00	-98.01	107.84	-154.14
18	19	69.03	0.00	-99.01	107.84	247.28
19	19	69.03	0.00	-56.70	54.61	-41.41
19	20	74.85	0.00	-56.70	54.61	266.39
20	20	74.85	0.00	-43.86	16.82	-65.07
20	21	80.67	0.00	-43.86	16.82	190.16
21	21	80.67	0.00	-34.36	5.92	-96.54
21	22	86.48	0.00	-34.36	5.92	101.31
22	22	86.48	0.00	-32.66	4.34	82.63
22	23	92.30	0.00	-32.66	4.34	252.60
23	23	92.30	0.00	-5.29	16.83	-724.96
23	24	94.30	0.00	-5.29	16.83	-714.41
24	24	94.30	0.00	-6.27	25.94	-714.41
24	25	96.85	0.00	-6.27	25.94	-594.97
25	25	96.85	0.00	-11.83	38.75	-594.97
25	26	99.00	0.00	-11.83	36.75	-667.17
26		99.00	0.00	-16.18	46.27	-667.17
26		101.35	0.00	-16.18	46.27	-629.15
27		101.35	0.00	-23.80	56.84	-629.15
27		103.85	0.00	-23.80	56.84	-599.65
28	28	103.85	0.00	-84.75	127.27	-383.52
28	29	106.35	0.00	-84.75	127.27	-201.64
29	29	106.35	0.00	-73.75	172.57	53.23
29	30	108.70	0.00	-73.75	172.57	256.55
30	30	108.70	0.00	-76.78	220.64	457.31
30	31	111.05	0.00	-76.78	220.64	652.45
31	31	111.05	0.00	-83.73	265.70	652.45
31	32	113.40	0.00	-83.73	265.70	846.22
32	32	113.40	0.00	-77.17	302.24	649.22
32	33	115.40	0.00	-77.17	302.24	1003.57
33	33	115.40	0.00	-64.83	206.92	-554.97
33	34	121.12	0.00	-64.83	206.92	-182.77
34	34	121.12	0.00	-57.12	178.07	-202.11
34	35	126.83	0.00	-57.12	178.07	24.39
35	35	126.83	0.00	-39.60	116.66	-116.30
35	36	132.55	0.00	-39.60	116.66	110.10
36	36	132.55	0.00	-29.33	53.35	-236.72
36	37	136.27	0.00	-29.33	53.35	-99.05
37	37	136.27	0.00	-23.70	17.49	-217.20
37	38	143.96	0.00	-23.70	17.49	-61.74
38	38	143.96	0.00	-26.70	4.43	-152.64
38	39	148.70	0.00	-26.70	4.43	0.00
101	101	0.00	0.00	-127.08	37.04	0.00
101	102	5.72	0.00	-113.59	98.44	980.10
102	102	5.72	0.00	-74.93	71.52	618.51
102	103	11.43	0.00	-47.75	138.33	1343.81
103	103	11.43	0.00	-11.03	68.08	765.67
103	104	17.15	0.00	24.83	113.38	1183.32
104	104	17.15	0.00	30.32	53.60	655.78
104	105	22.87	0.00	72.73	68.95	1003.35
105	105	22.87	0.00	59.72	35.00	963.99
105	106	28.58	0.00	109.67	09.52	961.60
106	106	28.58	0.00	82.19	41.13	723.24
106	107	34.30	0.00	142.31	51.38	355.43
107	107	34.30	0.00	42.34	18.63	-1196.94
107	108	36.30	0.00	61.63	24.52	-1231.73
108	108	36.30	0.00	42.04	21.61	-1264.50
108	109	38.65	0.00	65.78	29.46	-1320.90
109	109	38.85	0.00	-65.41	32.81	-1363.28
109	110	41.00	0.00	70.44	41.63	-1444.91
110	110	41.00	0.00	48.55	48.81	-1470.01
110	111	43.35	0.00	75.67	60.24	-1581.55
111	111	43.35	0.00	81.06	80.34	-1561.55
111	112	45.85	0.00	110.47	107.01	-1605.80
112	112	45.85	0.00	-206.06	73.75	-1801.59
112		48.35	0.00	-203.22	87.05	-1274.80
		48.35	0.00	-210.19	142.85	-1717.79
		50.70	0.00	-215.13	159.56	-1172.34
		50.70	0.00	-181.96	181.55	-1196.21
115	115	53.05	0.00	-176.25	200.77	-722.53
115	115	53.05	0.00	-148.93	198.09	-782.91
115	116	55.40	0.00	-142.22	217.10	-352.69
116	116	55.40	0.00	-129.83	161.21	-400.13
116	117	57.40	0.00	-123.36	178.59	-80.19
117	117	57.40	0.00	-77.40	22.14	-1060.03
117	118	63.22	0.00	-62.56	40.57	-405.80
118	118	63.22	0.00	-68.75	26.78	-452.30
118	119	69.03	0.00	-43.02	61.74	240.30
119	119	69.03	0.00	-15.66	24.89	-14.96
119	120	74.85	0.00	16.27	61.52	394.73
120	120	74.85	0.00	5.46	16.55	197.79
120	121	80.67	0.00	46.55	51.67	463.85
121	121	80.67	0.00	-2.66	15.08	208.59
121	122	86.48	0.00	46.44	69.86	440.20
122	122	86.48	0.00	41.22	24.06	401.71
122	123	92.30	0.00	101.42	75.40	253.99
123	123	92.30	0.00	5.29	16.83	-745.86
123	124	94.30	0.00	24.61	23.28	-709.00
124	124	94.30	0.00	8.27	26.16	-756.43
124	125	96.85	0.00	31.87	33.33	-735.48
125	125	96.85	0.00	11.83	37.78	-775.87
125	126	99.00	0.00	36.74	46.75	-778.90
126	126	99.00	0.00	16.18	53.65	-003.67
126	127	101.35	0.00	42.42	65.12	-637.40
127	127	101.35	0.00	78.53	94.30	-1260.39
127	128	103.85	0.00	108.92	110.98	-1500.80
128	128	103.85	0.00	220.61	86.51	-1595.55
128	129	106.35	0.00	-217.78	99.82	-1002.49
129	129	106.35	0.00	-200.50	158.50	-1002.49
129	130	108.70	0.00	-196.51	175.26	-500.18
130	130	108.70	0.00	-181.40	199.51	-525.27
130	131	111.05	0.00	-156.12	216.86	-97.69
131	131	111.05	0.00	-127.41	211.84	-140.07
131	132	113.40	0.00	-120.06	233.10	221.94
132	132	113.40	0.00	-104.94	167.36	186.18
132	133	115.40	0.00	-66.53	165.18	461.83
133	133	115.40	0.00	-51.52	5.03	-1093.44
133	134	121.12	0.00	-37.00	23.34	-560.95
134	134	121.12	0.00	-22.01	10.24	-099.32
134	135	126.83	0.00	1.78	44.27	-258.75
135	135	126.83	0.00	-4.30	16.79	-288.11
135	136	132.55	0.00	23.03	50.50	100.93
136	136	132.55	0.00	-10.84	9.57	-238.50
136	137	136.27	0.00	26.50	32.61	164.49
137	137	136.27	0.00	-34.22	3.16	303.66
137	138	143.96	0.00	12.32	14.91	43.51
138	138	143.96	0.00	-34.05	1.21	-196.07
138	139	148.70	0.00	25.60	0.96	0.00

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Envolvente de tren de cargas placas guardrios. EDV

Cast ws

Barra	Nudo	X	S (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	29.70	-4.43	0.00
1	2	5.72	0.00	29.70	-4.43	-152.83
2	2	5.72	0.00	23.70	-17.49	-91.73
2	3	11.43	0.00	23.70	-17.49	-217.21
3	3	11.43	0.00	29.33	-53.35	-68.05
3	4	17.15	0.00	29.33	-53.35	-230.71
4	4	17.15	0.00	39.60	-116.66	110.11
4	5	22.87	0.00	39.60	-116.66	-116.26
5	5	22.87	0.00	57.12	-178.07	24.41
5	6	28.58	0.00	57.12	-178.07	-302.13
6	6	28.58	0.00	64.83	-206.92	-183.79
6	7	34.30	0.00	64.83	-206.92	-554.97
7	7	34.30	0.00	77.17	-302.24	1003.57
7	8	36.30	0.00	77.17	-302.24	848.22
8	8	36.30	0.00	63.73	-265.70	849.22
8	9	38.85	0.00	63.73	-265.70	652.45
9	9	38.65	0.00	79.78	-220.64	652.45
9	10	41.00	0.00	79.78	-220.64	467.30
10	10	41.00	0.00	73.75	-172.57	256.54
10	11	43.35	0.00	73.75	-172.57	63.23
11	11	43.35	0.00	64.75	-127.27	-201.64
11	12	45.85	0.00	64.75	-127.27	-363.52
12	12	45.85	0.00	23.80	-58.54	-569.65
12	13	48.35	0.00	23.80	-58.54	-629.15
13	13	48.35	0.00	16.16	-46.27	-629.15
13	14	50.70	0.00	16.16	-46.27	-667.17
14	14	50.70	0.00	11.83	-36.75	-667.17
14	15	53.05	0.00	11.83	-36.75	-894.97
15	15	53.05	0.00	8.27	-25.94	-894.97
15	16	55.40	0.00	8.27	-25.94	-714.41
16	16	55.40	0.00	5.29	-16.83	-714.41
16	17	57.40	0.00	5.29	-16.83	-724.96
17	17	57.40	0.00	32.66	-4.34	252.60
17	18	63.22	0.00	32.66	-4.34	82.63
18	18	63.22	0.00	34.36	-5.92	101.31
18	19	69.03	0.00	34.36	-5.92	-96.54
19	19	69.03	0.00	43.86	-16.82	190.16
19	20	74.85	0.00	43.86	-16.82	-65.07
20	20	74.85	0.00	56.70	-54.61	266.39
20	21	80.67	0.00	56.70	-54.61	-41.41
21	21	80.67	0.00	69.01	-107.84	247.28
21	22	86.48	0.00	69.01	-107.84	-154.14
22	22	86.48	0.00	78.91	-139.69	-115.46
22	23	92.30	0.00	78.91	-139.69	-574.46
23	23	92.30	0.00	101.71	-252.93	403.13
23	24	94.30	0.00	101.71	-252.93	199.70
24	24	94.30	0.00	108.65	-234.10	198.70
24	25	96.85	0.00	108.65	-234.10	-55.62
25	25	98.65	0.00	104.92	-188.79	-55.62
25	26	99.00	0.00	104.92	-188.79	-302.19
26	26	99.00	0.00	96.36	-157.87	-302.19
26	27	101.35	0.00	96.36	-157.87	-526.63
27	27	101.35	0.00	82.84	-120.22	-526.63
27	28	103.85	0.00	82.84	-120.22	-726.74
28	28	103.85	0.00	-0.35	-48.97	-872.80
28	29	106.35	0.00	-0.35	-48.97	-871.93
29	29	106.35	0.00	-13.81	-41.51	-1156.81
29	30	108.70	0.00	-13.81	-41.51	-1124.35
30	30	108.70	0.00	-23.00	-31.40	-1335.10
30	31	111.05	0.00	-23.00	-31.40	-1281.05
31	31	111.05	0.00	-24.36	-21.32	-1281.05
31	32	113.40	0.00	-26.38	-21.32	-1219.05
32	32	113.40	0.00	-29.16	-12.67	-1219.05
32	33	115.40	0.00	-29.16	-12.67	-1160.73
33	33	115.40	0.00	11.54	-0.02	397.81
33	34	121.12	0.00	11.54	-0.02	331.84
34	34	121.12	0.00	15.32	-0.69	-650.17
34	35	126.83	0.00	15.32	-0.69	362.60
35	35	126.83	0.00	20.66	-3.75	503.29
35	36	132.55	0.00	20.88	-3.75	363.69
36	36	132.55	0.00	39.03	-18.78	730.71
36	37	136.27	0.00	39.03	-18.78	507.55
37	37	136.27	0.00	57.89	-47.29	655.71
37	38	143.98	0.00	57.89	-47.29	324.80
38	38	143.98	0.00	69.22	-46.64	395.70
38	39	148.70	0.00	69.22	-46.64	0.00
101	101	0.00	0.00	-25.60	-5.96	0.00
101	102	5.72	0.00	34.65	-1.81	-196.06
102	102	5.72	0.00	-12.33	-14.91	43.53
102	103	11.43	0.00	34.22	-3.16	-363.67
103	103	11.43	0.00	-26.99	-32.81	164.46
103	104	17.15	0.00	10.88	-9.57	-236.60
104	104	17.15	0.00	-23.03	-50.50	100.93
104	105	22.87	0.00	8.29	-16.79	-299.09
105	105	22.87	0.00	-1.78	-44.27	-259.72
105	106	28.58	0.00	22.01	-10.24	-899.34
106	106	28.58	0.00	37.90	-23.34	-560.99
106	107	34.30	0.00	51.52	-5.03	-1090.44
107	107	34.30	0.00	98.54	-185.18	481.83
107	108	36.30	0.00	104.84	-167.36	189.17
108	108	36.30	0.00	120.86	-233.18	221.94
108	109	38.65	0.00	127.41	-211.84	-140.07
109	109	38.85	0.00	156.12	-218.67	-97.69
108	110	41.00	0.00	161.40	-189.51	-525.27
110	110	41.00	0.00	186.51	-175.26	-500.18
110	111	43.35	0.00	200.50	-158.50	-1002.49
111	111	43.35	0.00	217.78	-88.82	-1002.49
111	112	45.85	0.00	220.61	-86.51	-1565.85
112	112	45.85	0.00	-108.92	-110.98	-1500.80
112	113	48.35	0.00	-79.53	-84.30	-1260.39
113	113	48.35	0.00	-42.42	-65.12	-637.40
113	114	50.70	0.00	-16.16	-53.65	-903.67
114	114	50.70	0.00	-36.74	-46.75	-778.90
114	115	53.05	0.00	-11.83	-37.78	-775.87
115	115	53.05	0.00	-31.87	-33.33	-735.48
115	116	55.40	0.00	-8.27	-26.16	-756.43
116	116	55.40	0.00	-24.61	-23.28	-709.00
116	117	57.40	0.00	-5.29	-16.68	-745.86
117	117	57.40	0.00	-101.42	-75.40	253.99
117	118	63.22	0.00	-41.22	-24.06	401.71
118	118	63.22	0.00	-46.64	-49.88	448.20
118	119	69.03	0.00	2.66	-15.08	208.59
119	119	69.03	0.00	-46.55	-51.67	463.85
119	120	74.85	0.00	-5.46	-16.55	197.79
120	120	74.85	0.00	-16.27	-61.52	394.73
120	121	80.67	0.00	15.66	-24.89	-14.96
121	121	80.67	0.00	43.02	-61.74	240.30
121	122	86.48	0.00	64.75	-26.78	-452.30
122	122	86.48	0.00	62.56	-40.57	-405.80
122	123	92.30	0.00	77.40	-22.14	-1060.03
123	123	92.30	0.00	123.36	-176.59	-80.19
123	124	94.30	0.00	129.83	-161.21	-400.13
124	124	94.30	0.00	142.22	-217.10	-352.68
124	125	96.85	0.00	148.93	-196.09	-762.91
125	125	96.85	0.00	176.25	-200.77	-722.53
125	126	99.00	0.00	181.66	-181.55	-1196.21
126	126	99.00	0.00	215.13	-159.56	-1172.34
126	127	101.35	0.00	218.19	-142.85	-1717.79
127	127	101.35	0.00	203.22	-87.05	-1274.80
127	128	103.85	0.00	208.08	-73.75	-1801.59
128	128	103.85	0.00	110.47	-107.01	-1605.80
128	129	106.35	0.00	-81.06	-90.34	-1561.55
129	129	106.35	0.00	-75.07	-60.24	-1581.55
129	130	108.70	0.00	-49.55	-48.81	-1470.01
130	130	108.70	0.00	-70.44	-41.63	-1444.91
130	131	111.05	0.00	-45.41	-32.81	-1363.28
131	131	111.05	0.00	-65.80	-28.46	-1320.90
131	132	113.40	0.00	-42.04	-21.61	-1264.50
132	132	113.40	0.00	-61.63	-24.52	-1231.73
132	133	115.40	0.00	-42.34	-18.63	-1196.94
133	133	115.40	0.00	-142.31	-51.38	355.43
133	134	121.12	0.00	-62.18	-41.13	723.25
134	134	121.12	0.00	-109.67	-60.52	861.61
134	135	126.83	0.00	-59.73	-35.00	963.99
135	135	126.83	0.00	-72.74	-68.65	1003.35
135	136	132.55	0.00	-30.32	-53.80	655.78
136	136	132.55	0.00	-24.64	-113.39	1193.31
136	137	136.27	0.00	11.03	-66.08	785.64
137	137	136.27	0.00	47.75	-126.32	1343.79
137	138	143.96	0.00	74.94	-71.52	618.55
138	138	143.96	0.00	113.58	-98.44	980.13
138	139	148.70	0.00	127.08	-37.05	0.00

[redacted]

Envolvente de tren de cargas pluma giratoria. VTV

Graf. xx:

TIMBSR. ND . .

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Qz (Tm)
1	1	0.00	0.00	32.69	-1.62	0.00
1	2	5.72	0.00	32.88	-1.62	-187.00
2	2	5.72	0.00	33.27	-2.63	-187.00
2	3	11.43	0.00	33.27	-4.63	-378.16
3	3	11.43	0.00	34.27	-25.66	-321.56
3	4	17.15	0.00	34.27	-25.66	-517.48
4	4	17.15	0.00	43.77	-116.37	-34.78
4	5	22.87	0.00	43.77	-116.37	-265.02
5	5	22.87	0.00	69.16	-176.63	-104.29
5	6	28.58	0.00	69.16	-176.63	-440.30
6	6	28.58	0.00	69.84	-213.83	-393.53
6	7	34.30	0.00	69.84	-213.83	-687.47
7	7	34.30	0.00	117.02	-274.84	-592.87
7	8	39.30	0.00	117.02	-274.84	-626.70
8	8	39.30	0.00	122.03	-223.24	-795.18
8	9	39.65	0.00	122.03	223.24	-1061.95
9	9	39.65	0.00	115.46	-168.94	-1051.02
9	10	41.00	0.00	115.46	-168.94	-1332.39
10	10	41.00	0.00	103.66	-117.56	-1324.48
10	11	43.35	0.00	103.66	-117.56	-1598.80
11	11	43.35	0.00	85.54	-61.50	-1452.78
11	12	45.85	0.00	85.54	-61.50	-1606.64
12	12	45.85	0.00	26.50	-6.23	416.15
12	13	48.35	0.00	26.50	-6.23	344.03
13	13	48.35	0.00	28.46	-2.91	-406.37
13	14	50.70	0.00	28.46	-2.91	341.43
14	14	50.70	0.00	26.76	-2.76	348.91
14	15	53.05	0.00	28.76	-2.76	261.32
15	15	53.05	0.00	29.12	-2.15	301.03
15	16	55.40	0.00	29.12	-2.15	232.59
16	16	55.40	0.00	29.70	-1.20	263.86
16	17	57.40	0.00	29.70	-1.20	204.46
17	17	57.40	0.00	33.10	6.00	432.22
17	18	63.22	0.00	33.10	6.00	239.67
18	18	63.22	0.00	36.59	-4.28	239.67
18	19	69.03	0.00	36.58	-4.28	26.83
19	19	69.03	0.00	42.84	-16.02	166.89
19	20	74.85	0.00	42.84	-16.02	-60.90
20	20	74.85	0.00	55.78	-53.34	266.56
20	21	80.67	0.00	55.76	-53.34	-35.80
21	21	80.67	0.00	71.37	-105.29	126.26
21	22	86.48	0.00	71.37	-105.29	-266.80
22	22	86.48	0.00	79.81	-128.93	-266.80
22	23	92.30	0.00	79.81	-128.93	-753.12
23	23	92.30	0.00	126.47	-226.45	-525.36
23	24	94.30	0.00	126.47	-226.45	-776.29
24	24	94.30	0.00	130.63	-194.45	-747.02
24	25	96.65	0.00	130.63	-194.45	-1054.00
25	25	96.65	0.00	124.77	-150.20	-1024.30
25	26	99.00	0.00	124.77	-150.20	-1327.51
26	26	99.00	0.00	114.09	-102.57	-1320.03
26	27	101.35	0.00	114.09	-102.57	-1588.16
27	27	101.35	0.00	96.57	-67.44	-1524.72
27	28	103.85	0.00	96.57	-67.44	-1766.15
28	28	103.85	0.00	10.76	-8.34	373.47
28	29	106.35	0.00	10.76	-8.34	346.52
29	29	106.35	0.00	10.46	-9.06	462.34
29	30	108.70	0.00	10.46	-9.06	437.70
30	30	108.70	0.00	10.58	0.63	445.56
30	31	111.05	0.00	10.58	0.63	420.72
31	31	111.05	0.00	10.77	1.72	441.65
31	32	113.40	0.00	10.77	1.72	416.35
32	32	113.40	0.00	11.25	2.84	449.87
32	33	115.40	0.00	11.25	2.84	427.36
33	33	115.40	0.00	14.58	0.55	521.97
33	34	121.12	0.00	14.58	0.55	498.53
34	34	121.12	0.00	17.81	4.15	593.01
34	35	126.83	0.00	17.81	4.15	491.18
35	35	126.83	0.00	24.46	1.70	571.80
35	36	132.55	0.00	24.46	1.70	531.97
36	36	132.55	0.00	43.23	16.16	1014.66
36	37	138.27	0.00	43.23	16.16	767.53
37	37	138.27	0.00	67.10	-22.09	824.11
37	38	143.98	0.00	67.10	-22.09	440.59
38	38	143.98	0.00	77.07	-37.21	440.59
38	39	149.70	0.00	77.07	-37.21	0.00
101	101	0.00	0.00	32.67	-1.62	0.00
101	102	5.72	0.00	47.53	98.56	-66.70
102	102	5.72	0.00	41.81	-66.77	-66.70
102	103	11.43	0.00	68.34	111.43	-21.63
103	103	11.43	0.00	57.68	70.42	-21.63
103	104	17.15	0.00	92.45	123.83	-20.13
104	104	17.15	0.00	77.67	98.57	-20.13
104	105	22.87	0.00	118.85	113.45	-155.82
105	105	22.87	0.00	104.78	81.23	-155.82
105	106	28.58	0.00	153.12	105.66	-523.35
106	106	28.58	0.00	144.50	73.36	-523.35
106	107	34.30	0.00	202.83	134.74	-1250.67
107	107	34.30	0.00	157.13	-103.97	-1250.67
107	108	39.30	0.00	175.96	-94.36	-1518.72
108	108	39.30	0.00	175.53	-155.73	-1518.72
109	109	39.65	0.00	156.44	-145.26	-1886.23
108	109	39.65	0.00	200.27	-141.09	-1886.23
108	110	41.00	0.00	252.33	-128.98	-2353.24
110	110	41.00	0.00	245.80	-92.66	-2353.24
110	111	43.35	0.00	272.05	-78.27	-2928.09
111	111	43.35	0.00	293.49	12.44	-2928.09
111	112	45.85	0.00	321.62	31.93	-3681.62
112	112	45.85	0.00	30.29	2.79	502.17
112	113	48.35	0.00	33.55	16.66	437.53
113	113	48.35	0.00	30.56	0.44	437.53
113	114	50.70	0.00	34.97	19.23	394.75
114	114	50.70	0.00	31.71	1.68	394.75
114	115	53.05	0.00	37.24	22.66	365.06
115	115	53.05	0.00	33.05	3.83	365.06
115	116	55.40	0.00	40.38	26.32	343.83
116	116	55.40	0.00	36.17	5.70	343.83
116	117	57.40	0.00	42.59	24.04	329.50
117	117	57.40	0.00	36.05	-3.34	329.50
117	118	63.22	0.00	50.59	16.85	336.19
118	118	63.22	0.00	47.10	5.16	336.19
118	119	69.03	0.00	72.31	43.85	344.58
119	119	69.03	0.00	63.39	13.83	344.58
119	120	74.85	0.00	98.46	55.86	282.96
120	120	74.85	0.00	83.64	12.42	282.96
120	121	80.67	0.00	123.55	52.67	83.66
121	121	80.67	0.00	110.51	8.00	83.66
121	122	86.48	0.00	156.27	51.59	-342.34
122	122	86.48	0.00	149.84	22.09	-342.34
122	123	92.30	0.00	208.27	84.18	-1125.17
123	123	92.30	0.00	184.76	-113.49	-1125.17
123	124	94.30	0.00	183.43	-103.54	-1408.92
124	124	94.30	0.00	182.99	-145.78	-1408.92
124	125	96.65	0.00	205.84	-135.03	-1799.69
125	125	96.65	0.00	214.73	-126.40	-1799.69
125	126	99.00	0.00	238.88	-114.15	-2281.13
126	126	99.00	0.00	252.25	-78.85	-2281.13
126	127	101.35	0.00	277.42	-64.39	-2689.39
127	127	101.35	0.00	297.94	23.87	-2689.39
127	128	103.85	0.00	326.05	43.37	-3634.23
126	128	103.85	0.00	11.01	5.08	492.76
128	129	106.35	0.00	14.24	20.95	476.55
129	129	106.35	0.00	11.44	3.30	476.55
129	130	108.70	0.00	15.66	22.13	478.49
130	130	108.70	0.00	12.69	5.14	478.49
130	131	111.05	0.00	16.11	26.27	495.96
131	131	111.05	0.00	14.66	7.87	495.96
131	132	113.40	0.00	21.24	30.64	521.71
132	132	113.40	0.00	17.07	10.14	521.71
132	133	115.40	0.00	23.34	29.84	548.35
133	133	115.40	0.00	16.83	0.88	548.35
133	134	121.12	0.00	30.02	29.39	980.50
134	134	121.12	0.00	26.74	9.31	980.50
134	135	126.83	0.00	50.12	45.74	830.42
135	135	126.83	0.00	41.22	15.36	830.42
135	136	132.55	0.00	71.87	52.35	934.05
136	136	132.55	0.00	58.19	4.82	934.05
136	137	138.27	0.00	95.14	32.07	928.41
137	137	138.27	0.00	90.93	20.31	928.41
137	138	143.98	0.00	129.12	-4.11	694.53
138	138	143.98	0.00	121.49	-30.21	694.53
138	139	149.70	0.00	179.35	-20.52	0.00

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Envolvente de tren de cargas pluma giratoria. VTV

Graf. xx:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Qz (Tm)
1	1	0.00	0.00	-77.07	37.21	0.00
1	2	5.72	0.00	-77.07	37.21	440.56
2	2	5.72	0.00	-67.10	22.09	440.56
2	3	11.43	0.00	-67.10	22.08	634.13
3	3	11.43	0.00	-43.23	-16.16	797.39
3	4	17.15	0.00	-43.23	-16.16	1014.68
4	4	17.15	0.00	-34.48	-1.70	531.86
4	5	22.87	0.00	-34.48	-1.70	671.60
5	5	22.87	0.00	-17.81	-4.15	491.17
5	6	28.58	0.00	-17.81	-4.15	583.01
6	6	28.58	0.00	-14.56	-6.56	430.84
6	7	34.30	0.00	-14.56	-6.56	521.97
7	7	34.30	0.00	-11.25	-2.84	427.36
7	8	39.30	0.00	-11.25	-2.84	449.87
8	8	39.30	0.00	-10.77	-1.72	416.35
8	9	39.65	0.00	-10.77	-1.72	441.65
9	9	39.65	0.00	-10.58	-0.63	420.72
9	10	41.00	0.00	-10.58	-0.63	445.56
10	10	41.00	0.00	-10.46	9.06	437.70
10	11	43.35	0.00	-10.46	9.06	462.34
11	11	43.35	0.00	-10.78	8.34	346.52
11	12	45.85	0.00	-10.78	8.34	373.47
12	12	45.85	0.00	-96.57	67.44	-1765.15
12	13	48.35	0.00	-90.57	67.44	-1524.72
13	13	48.35	0.00	-114.08	102.57	-1588.16
13	14	50.70	0.00	-114.08	102.57	-1320.03
14	14	50.70	0.00	-124.77	150.20	-1327.51
14	15	53.05	0.00	-124.77	150.20	-1034.30
15	15	53.05	0.00	-130.63	194.45	-1054.00
15	16	55.40	0.00	-130.63	194.45	-747.02
16	16	55.40	0.00	-126.47	226.45	-776.29
16	17	57.40	0.00	-126.47	226.45	-525.36
17	17	57.40	0.00	-79.81	128.93	-753.12
17	18	63.22	0.00	-79.81	128.93	-266.80
18	18	63.22	0.00	-71.37	105.29	-266.80
18	19	69.03	0.00	-71.37	105.29	126.26
19	19	69.03	0.00	-55.76	53.34	-35.80
19	20	74.85	0.00	-55.76	53.34	266.56
20	20	74.85	0.00	-42.84	16.02	-60.90
20	21	80.67	0.00	-42.84	16.02	166.89
21	21	80.67	0.00	-36.59	4.28	26.83
21	22	86.48	0.00	-36.58	4.28	239.67
22	22	86.48	0.00	-33.10	-6.00	239.67
22	23	92.30	0.00	-33.10	-6.00	432.22
23	23	92.30	0.00	-29.70	1.20	204.46
23	24	94.30	0.00	-29.70	1.20	263.86
24	24	94.30	0.00	-29.12	2.15	232.59
24	25	96.65	0.00	-29.12	2.15	301.03
25	25	96.65	0.00	-28.76	2.76	261.32
25	26	99.00	0.00	-28.76	2.76	348.91
26	26	99.00	0.00	-28.46	2.91	341.43
26	27	101.35	0.00	-28.46	2.91	406.37
27	27	101.35	0.00	-28.50	6.23	344.03
27	28	103.85	0.00	-28.50	6.23	416.19
28	28	103.65	0.00	-85.54	61.50	-1666.64
28	29	106.35	0.00	-85.54	61.50	-1452.78
29	29	106.35	0.00	-103.66	117.56	-1598.80
29	30	108.70	0.00	-103.66	117.56	-1324.48
30	30	108.70	0.00	-115.46	168.94	-1332.39
30	31	111.05	0.00	-115.46	168.94	-1061.02
31	31	111.05	0.00	-122.03	223.24	-1061.95
31	32	113.40	0.00	-122.03	223.24	-795.18
32	32	113.40	0.00	-117.92	274.84	-828.70
32	33	115.40	0.00	-117.92	274.84	-592.87
33	33	115.40	0.00	-68.84	213.83	-687.47
33	34	121.12	0.00	-68.84	213.83	-293.91
34	34	121.12	0.00	-60.18	178.63	-446.29
34	35	126.83	0.00	-60.18	178.63	-104.32
35	35	126.83	0.00	-43.77	116.37	-265.03
35	36	132.55	0.00	-43.77	116.37	-34.77
36	36	132.55	0.00	-34.27	25.86	-517.48
36	37	138.27	0.00	-34.27	25.86	-321.56
37	37	138.27	0.00	-33.27	2.83	-378.15
37	38	143.98	0.00	-33.27	2.83	-188.00
38	38	143.98	0.00	-32.88	1.62	-188.00
38	39	149.70	0.00	-32.88	1.62	0.00
101	101	0.00	0.00	-179.35	20.52	0.00
101	102	5.72	0.00	-121.49	30.31	984.51
102	102	5.72	0.00	-126.12	4.11	694.51
102	103	11.43	0.00	-80.93	20.31	926.41
103	103	11.43	0.00	-95.14	-32.07	926.41
103	104	17.15	0.00	-58.19	-4.62	934.05
104	104	17.15	0.00	-71.67	-52.35	934.05
104	105	22.87	0.00	-41.22	-15.37	830.42
105	105	22.87	0.00	-50.12	-45.74	830.42
105	106	28.58	0.00	-26.74	-9.31	660.49
106	106	28.58	0.00	-30.02	-20.39	660.49
106	107	34.30	0.00	-16.63	-0.89	548.35
107	107	34.30	0.00	-23.34	-28.84	548.35
107	108	39.30	0.00	-17.07	-10.14	521.71
108	108	39.30	0.00	-21.24	-30.64	521.71
108	109	39.65	0.00	-14.66	-7.87	495.96
109	109	39.65	0.00	-10.11	-26.27	495.96
109	110	41.00	0.00	-12.69	-5.14	478.49
110	110	41.00	0.00	-15.68	-22.13	478.49
110	111	43.35	0.00	-11.44	-3.30	476.55
111	111	43.35	0.00	-14.24	-20.95	476.55
111	112	45.85	0.00	-11.01	-5.08	492.76
112	112	45.85	0.00	-329.05	-43.37	-3634.23
112	113	48.35	0.00	-297.94	-23.87	-2688.39
113	113	48.35	0.00	-277.42	64.38	-2089.39
113	114	50.70	0.00	-252.25	78.85	-2281.13
114	114	50.70	0.00	-238.88	114.15	-2281.13
114	115	53.05	0.00	-214.73	126.40	-1799.69
115	115	53.05	0.00	-205.84	135.03	-1799.69
115	116	55.40	0.00	-182.88	145.79	-1408.92
116	116	55.40	0.00	-183.43	103.54	-1408.92
116	117	57.40	0.00	-184.76	113.49	-1125.17
117	117	57.40	0.00	-208.27	-84.18	-1125.17
117	118	63.22	0.00	-149.84	-22.09	-342.34
118	118	63.22	0.00	-156.27	-51.59	-342.34
118	119	69.03	0.00	-110.51	-8.00	83.66
119	119	69.03	0.00	-123.55	-52.67	83.66
119	120	74.85	0.00	-83.64	-12.42	282.96
120	120	74.85	0.00	-98.46	-55.86	282.96
120	121	80.67	0.00	-83.39	-13.83	344.58
121	121	80.67	0.00	-72.31	-43.85	344.58
121	122	86.48	0.00	-47.10	-5.16	336.19
122	122	86.48	0.00	-50.59	-16.85	336.19
122	123	92.30	0.00	-36.05	3.34	329.50
123	123	92.30	0.00	-42.59	-24.04	329.50
123	124	94.30	0.00	-36.17	-5.70	343.83
124	124	94.30	0.00	-40.38	-26.32	343.83
124	125	96.65	0.00	-33.05	-3.83	365.06
125	125	96.65	0.00	-37.24	-22.66	365.06
125	126	99.00	0.00	-31.71	-1.68	394.75
126	126	99.00	0.00	-34.97	-19.23	394.75
126	127	101.35	0.00	-30.56	-0.44	437.53
127	127	101.35	0.00	-33.55	-18.66	437.53
127	128	103.85	0.00	-30.29	-2.79	502.17
128	128	103.85	0.00	-321.62	-31.93	-3681.62
128	129	106.35	0.00	-293.49	-12.44	-2928.09
129	129	106.35	0.00	-272.05	78.27	-2928.09
129	130	108.70	0.00	-246.80	92.66	-2353.24
130	130	108.70	0.00	-232.33	128.98	-2353.24
130	131	111.05	0.00	-208.27	141.09	-1886.23
131	131	111.05	0.00	-108.44	145.26	-1886.23
131	132	113.40	0.00	-175.54	155.73	-1516.72
132	132	113.40	0.00	-175.96	94.36	-1516.72
132	133	115.40	0.00	-157.13	103.97	-1250.67
133	133	115.40	0.00	-202.83	-134.74	-1250.67
133	134	121.12	0.00	-144.50	-73.37	-523.33
134	134	121.12	0.00	-153.12	-105.66	-523.33
134	135	126.83	0.00	-104.78	-81.23	-155.83
135	135	126.83	0.00	-118.85	-113.45	-155.83
135	136	132.55	0.00	-77.87	-69.57	-20.13
136	136	132.55	0.00	-82.45	-123.83	-20.13
136	137	138.27	0.00	-57.98	-70.42	-21.63
137	137	138.27	0.00	-66.34	-111.43	-21.63
137	138	143.98	0.00	-41.81	-66.77	-66.70
138	138	143.98	0.00	-47.53	-98.56	-66.70
138	139	149.70	0.00	-33.67	1.62	0.00

[redacted]

Envolvente de tren de cargas plano ponderado, ELU*

Cont cas

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tnd)	Mz (Tnd)
[redacted]	1	0.00	0.00	-92.45	41.52	0.00
	2	5.72	0.00	-69.45	41.52	397.91
	2	5.72	0.00	-55.63	41.29	323.78
	3	11.43	0.00	-93.63	41.05	646.88
1	3	11.43	0.00	-36.14	16.11	508.00
1	4	17.15	0.00	-36.14	16.11	718.63
4	4	17.15	0.00	-30.26	3.29	374.62
4	5	22.87	0.00	-26.39	3.29	491.17
5	5	22.87	0.00	-14.67	0.64	353.07
5	6	28.58	0.00	-14.67	0.64	426.64
6	6	28.58	0.00	-11.23	0.02	322.05
6	7	34.30	0.00	-11.23	0.02	387.08
7	7	34.30	0.00	28.77	11.32	-1130.05
7	8	36.30	0.00	26.77	11.32	-1187.56
8	8	36.30	0.00	25.62	19.04	-1176.48
8	9	36.65	0.00	25.92	19.04	-1235.36
9	9	36.65	0.00	22.80	35.02	-1235.36
9	10	41.00	0.00	22.80	35.02	-1266.20
10	10	41.00	0.00	12.67	37.03	-1002.08
10	11	43.35	0.00	12.67	37.03	-1034.05
11	11	43.35	0.00	2.12	42.44	-856.13
11	12	45.85	0.00	2.12	42.44	-881.43
12	12	45.85	0.00	-60.07	110.33	-821.78
12	13	48.35	0.00	-60.07	110.33	-966.61
13	13	48.35	0.00	-88.89	142.46	-966.01
13	14	50.70	0.00	-90.88	142.46	-331.27
14	14	50.70	0.00	-105.51	180.00	-323.79
14	15	53.05	0.00	-108.51	180.00	-73.51
15	15	53.05	0.00	-106.85	215.30	-73.51
15	16	55.40	0.00	-108.85	215.30	182.28
16	16	55.40	0.00	-101.45	240.00	182.28
16	17	57.40	0.00	-101.45	240.00	345.18
17	17	57.40	0.00	-78.57	136.81	-567.85
17	18	63.22	0.00	-78.57	136.81	-110.82
18	18	63.22	0.00	-66.31	106.31	-146.78
18	19	68.03	0.00	-66.31	106.31	248.52
19	19	68.03	0.00	-55.76	53.34	-35.80
19	20	74.85	0.00	-55.76	53.34	268.56
20	20	74.85	0.00	-42.94	16.02	-90.90
20	21	80.67	0.00	-42.94	16.02	184.89
21	21	80.67	0.00	-33.52	5.31	-95.43
21	22	86.48	0.00	-33.52	5.31	99.56
22	22	86.48	0.00	-31.57	3.67	61.59
22	23	92.30	0.00	-31.57	3.67	246.95
23	23	92.30	0.00	-4.69	14.75	-708.09
23	24	94.30	0.00	-4.69	14.75	-696.71
24	24	94.30	0.00	-7.34	23.01	-686.71
24	25	96.65	0.00	-7.34	23.01	-679.47
25	25	96.65	0.00	-10.49	32.56	-679.47
[redacted]	26	99.00	0.00	-10.49	32.56	-664.81
	6	99.00	0.00	-14.28	42.80	-647.33
	27	101.35	0.00	-14.28	42.80	-613.78
1	26	101.35	0.00	-22.00	51.12	-583.17
26	26	103.85	0.00	-22.00	51.12	-528.17
26	28	103.85	0.00	-72.64	115.60	-431.74
28	29	106.35	0.00	-72.64	115.60	-250.13
28	29	106.35	0.00	-60.73	154.53	-71.42
29	30	108.70	0.00	-60.73	154.53	118.28
30	30	108.70	0.00	-81.99	188.59	402.42
30	31	111.05	0.00	-81.99	188.59	585.09
31	31	111.05	0.00	-85.34	244.01	595.09
31	32	113.40	0.00	-85.34	244.01	785.64
32	32	113.40	0.00	-77.80	269.21	826.74
32	33	115.40	0.00	-77.80	269.21	964.55
33	33	115.40	0.00	-65.50	214.40	-552.57
33	34	121.12	0.00	-65.50	214.40	-178.13
34	34	121.12	0.00	-57.33	183.42	-293.91
34	35	126.83	0.00	-57.33	183.42	33.79
35	35	126.83	0.00	-39.69	123.36	-104.32
35	36	132.55	0.00	-39.88	123.36	122.57
36	36	132.55	0.00	-29.18	90.13	-220.63
36	37	136.27	0.00	-29.18	90.13	-54.02
37	37	136.27	0.00	-23.00	22.69	-202.72
37	38	143.96	0.00	-23.00	22.69	-71.23
38	38	143.96	0.00	-25.27	5.93	-144.45
38	39	149.70	0.00	-25.27	5.93	0.00
101	101	0.00	0.00	-121.49	30.21	0.00
101	102	5.72	0.00	-107.63	101.39	820.27
102	102	5.72	0.00	-72.40	88.90	589.53
102	103	11.43	0.00	-45.87	134.57	1267.51
103	103	11.43	0.00	1.73	78.02	820.94
103	104	17.15	0.00	36.51	131.43	942.28
104	104	17.15	0.00	28.54	73.39	622.58
104	105	22.87	0.00	99.61	117.27	958.93
105	105	22.87	0.00	56.64	62.85	530.80
105	106	28.58	0.00	104.97	107.26	536.50
106	106	28.58	0.00	99.33	73.54	747.89
106	107	34.30	0.00	157.86	134.90	378.80
107	107	34.30	0.00	40.60	20.96	-1160.94
107	108	36.30	0.00	58.43	30.57	-1183.94
108	108	36.30	0.00	43.18	21.77	-1242.15
108	109	36.65	0.00	66.06	32.24	-1302.62
109	109	36.65	0.00	46.30	29.56	-1343.62
109	110	41.00	0.00	70.36	41.67	-1428.01
110	110	41.00	0.00	46.88	43.88	-1424.56
110	111	43.35	0.00	72.23	58.30	-1529.84
111	111	43.35	0.00	78.35	82.85	-1564.96
111	112	45.85	0.00	107.46	162.45	-1763.14
[redacted]	112	45.85	0.00	-182.57	64.62	-1678.16
	13	48.35	0.00	-166.31	90.49	-1106.87
	13	48.35	0.00	-209.35	127.09	-1612.66
	14	50.70	0.00	-202.04	145.88	-1086.71
114	114	50.70	0.00	-172.53	101.63	-1133.66
114	115	53.05	0.00	-167.00	162.63	-983.41
115	115	53.05	0.00	-141.90	172.83	-722.42
115	116	55.40	0.00	-135.17	195.32	-331.11
116	116	55.40	0.00	-123.80	133.69	-376.87
116	117	57.40	0.00	-117.47	152.33	-71.07
117	117	57.40	0.00	-72.81	12.50	-993.39
117	118	63.22	0.00	-58.07	32.78	-354.62
118	118	63.22	0.00	-44.98	20.16	-475.36
118	119	68.03	0.00	-19.76	58.87	68.67
119	119	68.03	0.00	-15.27	27.17	-17.81
119	120	74.85	0.00	17.20	69.19	375.10
120	120	74.85	0.00	4.56	25.75	187.81
120	121	80.67	0.00	44.99	66.00	446.05
121	121	80.67	0.00	18.42	23.02	359.57
121	122	86.48	0.00	98.19	98.61	468.20
122	122	86.48	0.00	41.17	36.02	348.47
122	123	92.30	0.00	99.61	100.11	197.72
123	123	92.30	0.00	4.69	14.79	-724.61
123	124	94.30	0.00	23.36	24.75	-866.22
124	124	94.30	0.00	7.34	23.21	-733.09
124	125	96.65	0.00	30.09	33.97	-712.22
125	125	96.65	0.00	10.48	33.55	-751.23
125	126	99.00	0.00	34.44	45.80	-752.70
126	126	99.00	0.00	15.34	47.80	-787.64
126	127	101.35	0.00	40.51	62.26	-819.20
127	127	101.35	0.00	75.09	85.76	-1245.19
127	128	103.85	0.00	103.19	105.19	-1452.90
128	128	103.85	0.00	-203.13	75.59	-1405.71
128	129	106.35	0.00	-199.80	91.46	-986.56
129	129	106.35	0.00	-188.26	139.86	-921.70
129	130	108.70	0.00	-184.14	158.69	-449.19
130	130	108.70	0.00	-149.28	175.79	-445.74
130	131	111.05	0.00	-143.66	196.92	-68.62
131	131	111.05	0.00	-117.89	165.37	-69.63
131	132	113.40	0.00	-111.12	208.14	247.15
132	132	113.40	0.00	-90.45	135.09	198.93
132	133	115.40	0.00	-83.19	153.76	-458.62
133	133	115.40	0.00	-26.80	1.05	993.51
134	134	121.12	0.00	-15.51	20.55	-601.05
134	134	121.12	0.00	-21.41	10.93	-661.34
134	135	126.83	0.00	1.88	47.35	-256.23
135	135	126.83	0.00	-9.11	19.19	-294.35
136	136	132.55	0.00	22.54	56.17	91.34
136	136	132.55	0.00	2.74	12.72	-28.36
136	137	136.27	0.00	39.19	38.84	263.85
[redacted]	137	136.27	0.00	-33.28	2.83	-362.72
	138	143.96	0.00	11.80	19.02	30.26
	138	143.96	0.00	-33.67	1.82	-192.47
	139	149.70	0.00	24.29	11.30	0.00

[redacted]

Envolvente de tren de cargas plano ponderado, ELU*

Cont cas

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tnd)	Mz (Tnd)
1	1	0.00	0.00	25.27	-5.83	0.00
1	2	5.72	0.00	25.27	-5.83	-144.44
2	2	5.72	0.00	23.00	-22.69	-71.22
2	3	11.43	0.00	23.00	-22.88	-302.72
3	3	11.43	0.00	20.18	-90.13	-54.03
3	4	17.15	0.00	20.18	-90.13	-290.63
4	4	17.15	0.00	20.88	-123.36	122.58
4	5	22.87	0.00	20.68	-123.36	-104.28
5	5	22.87	0.00	57.33	-163.42	33.60
5	6	28.58	0.00	57.33	-163.42	-293.53
6	6	28.58	0.00	66.30	-214.40	-178.15
6	7	34.30	0.00	26.50	-214.40	-662.57
7	7	34.30	0.00	77.90	-269.21	984.55
7	8	36.30	0.00	77.90	-266.21	606.74
8	8	36.30	0.00	85.34	-244.01	725.64
8	9	36.65	0.00	85.34	-244.01	595.09
9	9	36.65	0.00	61.98	-196.56	565.09
9	10	41.00	0.00	61.99	-196.56	402.42
10	10	41.00	0.00	60.73	-154.53	118.30
10	11	43.35	0.00	60.73	-154.53	-71.42
11	11	43.35	0.00	72.64	-115.60	-250.13
11	12	45.85	0.00	72.64	-115.60	-431.74
12	12	45.85	0.00	22.00	-51.12	-528.17
12	13	48.35	0.00	22.00	-51.12	-583.18
13	13	48.35	0.00	14.28	-42.80	-613.78
13	14	50.70	0.00	14.28	-42.80	-647.33
14	14	50.70	0.00	10.50	-32.56	-654.61
14	15	53.05	0.00	10.50	-32.56	-679.47
15	15	53.05	0.00	7.34	-23.01	-679.47
15	16	55.40	0.00	7.34	-23.01	-686.71
16	16	55.40	0.00	4.69	-14.75	-686.71
16	17	57.40	0.00	4.69	-14.75	-706.09
17	17	57.40	0.00	31.67	-3.67	246.95
17	18	63.22	0.00	31.67	-3.67	61.59
18	18	63.22	0.00	33.52	-5.31	99.56
18	19	68.03	0.00	33.52	-5.31	-95.43
19	19	68.03	0.00	42.94	-16.02	188.89
19	20	74.85	0.00	42.94	-16.02	-90.90
20	20	74.85	0.00	55.76	-53.34	268.56
20	21	80.67	0.00	55.76	-53.34	-35.80
21	21	80.67	0.00	55.31	-106.31	248.52
21	22	86.48	0.00	98.31	-106.31	-148.78
22	22	86.48	0.00	78.57	-136.81	-110.82
22	23	92.30	0.00	78.57	-136.81	-567.85
23	23	92.30	0.00	101.45	-240.00	345.18
23	24	94.30	0.00	101.45	-240.00	182.28
24	24	94.30	0.00	108.85	-215.30	182.28
24	25	96.65	0.00	108.85	-215.30	-73.51
25	25	96.65	0.00	106.51	-180.00	-73.51
25	26	99.00	0.00	106.51	-180.00	-323.79
26	26	99.00	0.00	99.89	-142.46	-331.28
26	27	101.35	0.00	99.89	-142.46	-568.01
27	27	101.35	0.00	90.07	-110.33	-596.61
27	28	103.85	0.00	90.07	-110.33	-621.78
28	28	103.85	0.00	-2.12	-42.44	-661.43
28	29	106.35	0.00	-2.12	-42.44	-656.13
29	29	106.35	0.00	-12.67	-37.03	-1034.84
29	30	108.70	0.00	-12.67	-37.03	-1005.07
30	30	108.70	0.00	-22.90	-28.02	-1299.20
30	31	111.05	0.00	-22.90	-28.02	-1235.39
31	31	111.05	0.00	-25.82	-19.04	-1235.39
31	32	113.40	0.00	-25.82	-19.04	-1174.48
32	32	113.40	0.00	-28.77	-11.32	-1187.56
32	33	115.40	0.00	-28.77	-11.32	-1130.05
33	33	115.40	0.00	11.23	-0.02	387.08
33	34	121.12	0.00	11.23	-0.02	322.05
34	34	121.12	0.00	14.97	-0.64	-426.63
34	35	126.83	0.00	14.97	-0.64	353.08
35	35	126.83	0.00	20.39	-3.29	491.18
35	36	132.55	0.00	20.39	-3.29	374.63
36	36	132.55	0.00	38.14	-16.11	718.03
36	37	136.27	0.00	38.14	-16.11	499.99
37	37	136.27	0.00	56.64	-41.96	646.66
37	38	143.96	0.00	56.64	-41.96	323.81
38	38	143.96	0.00	68.45	-41.52	397.03
38	39	149.70	0.00	68.45	-41.52	0.00
101	101	0.00	0.00	-24.19	-11.30	0.00
101	102	5.72	0.00	33.67	-1.92	-192.46
102	102	5.72	0.00	-11.91	-19.02	38.29
102	103	11.43	0.00	33.28	-2.83	-382.73
103	103	11.43	0.00	-38.19	-39.67	263.85
103	104	17.15	0.00	-2.24	-12.22	-28.36
104	104	17.15	0.00	-22.54	-56.17	91.34
104	105	22.87	0.00	0.11	-19.19	-294.33
105	105	22.87	0.00	-1.86	-47.36	-256.20
105	106	28.58	0.00	21.41	-10.93	-661.36
106	106	28.58	0.00	15.51	-20.55	-601.05
106	107	34.30	0.00	28.90	-1.05	-993.51
107	107	34.30	0.00	53.19	-153.79	458.62
107	108	36.30	0.00	99.45	-135.09	198.93
108	108	36.30	0.00	111.12	-208.14	247.14
108	109	36.65	0.00	117.89	-165.37	-69.63
109	109	36.65	0.00	143.86	-196.92	-46.63
109	110	41.00	0.00	149.28	-175.79	-445.74
110	110	41.00	0.00	184.14	-156.69	-449.19
110	111	43.35	0.00	188.38	-130.66	-921.70
111	111	43.35	0.00	199.89	-91.46	-986.56
111	112	45.85	0.00	203.13	-75.59	-1405.71
112	112	45.85	0.00	-103.19	-105.19	-1452.90
112	113	48.35	0.00	-75.05	-85.70	-1245.19
113	113	48.35	0.00	-40.51	-62.26	-819.20
113	114	50.70	0.00	-15.34	-47.80	-787.64
114	114	50.70	0.00	-34.44	-45.80	-752.70
114	115	53.05	0.00	-10.48	-33.55	-751.23
115	115	53.05	0.00	-30.09	-33.97	-712.22
115	116	55.40	0.00	-7.34	-23.21	-733.09
116	116	55.40	0.00	-23.36	-24.75	-866.22
116	117	57.40	0.00	-4.69	-14.79	-724.61
117	117	57.40	0.00	-80.61	-103.11	197.72
117	118	63.22	0.00	-41.17	-36.02	348.47
118	118	63.22	0.00	-66.19	-66.61	469.20
118	119	68.03	0.00	-18.42	-23.02	359.57
119	119	68.03	0.00	-64.89	-66.00	446.05
119	120	74.85	0.00	-4.98	-25.75	187.81
120	120	74.85	0.00	-17.80	-69.19	375.10
120	121	80.67	0.00	15.27	-27.17	-17.81
121	121	80.67	0.00	19.78	-58.87	68.67
121	122	86.48	0.00	44.98	-20.16	-475.36
122	122	86.48	0.00	58.07	-32.78	-354.62
122	123	92.30	0.00	72.61	-12.59	-993.39
123	123	92.30	0.00	117.47	-152.33	-71.07
123	124	94.30	0.00	123.90	-133.99	-376.87
124	124	94.30	0.00	135.17	-195.32	-331.11
124	125	96.65	0.00	141.90	-172.83	-722.42
125	125	96.65	0.00	167.00	-102.83	-983.41
125	126	99.00	0.00	172.53	-161.63	-1133.68
126	126	99.00	0.00	202.04	-145.98	-1098.71
126	127	101.35	0.00	206.35	-127.09	-1612.66
127	127	101.35	0.00	189.31	-80.49	-1186.87
127	128	103.85	0.00	182.57	-64.62	-1679.16
128	128	103.85	0.00	-107.48	-102.45	-1763.15
128	129	106.35	0.00	-79.35	-82.95	-1564.96
129	129	106.35	0.00	-72.23	-58.30	-1529.84
129	130	108.70	0.00	-46.99	-43.88	-1424.56
130	130	108.70	0.00	-70.36	-41.67	-1428.01
130	131	111.05	0.00	-46.30	-29.56	-1343.62
131	131	111.05	0.00	-66.06	-32.24	-1302.62
131	132	113.40	0.00	-43.16	-21.77	-1242.16
132	132	113.40	0.00	-58.43	-30.57	-1193.94
132	133	115.40	0.00	-40.80	-20.96	-1160.95
133	133	115.40	0.00	-157.56	-134.90	378.80
133	134	121.12	0.00	-89.33	-73.54	747.81
134	134	121.12	0.00	-104.87	-107.26	536.51
134	135	126.83	0.00	-58.64	-62.85	930.81
135	135	126.83	0.00	-99.61	-117.28	958.83
135	136	132.55	0.00	-28.54	-73.39	822.58
136	136	132.55	0.00	-36.51	-131.43	942.28
136	137	136.27	0.00	-1.73	-78.02	820.02
137	137	136.27	0.00	45.88	-134.56	1267.49
137	138	143.96	0.00	72.41	-99.80	589.57
138	138	143.96	0.00	107.62	-191.39	820.30
138	139	149.70	0.00	121.48	-30.21	0.00

Tramo 8 P. INT 2D

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Envolvente de fran de cargas pisos gravitat. Y'Y'

Cont sec

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	31.54	-1.44	0.00
1	2	5.72	0.00	31.54	-1.44	-180.30
2	2	5.72	0.00	31.06	-2.50	-180.30
2	3	11.43	0.00	31.88	-2.50	-362.53
3	3	11.43	0.00	33.05	-27.41	-365.02
3	4	17.15	0.00	33.05	-27.41	-923.97
4	4	17.15	0.00	42.82	-121.01	-22.54
4	5	22.87	0.00	42.82	-121.01	-267.89
5	5	22.87	0.00	58.13	-178.41	-92.96
5	6	28.58	0.00	58.13	-178.41	-439.72
6	6	28.58	0.00	67.67	-214.16	-251.68
6	7	34.30	0.00	67.67	-214.16	-670.23
7	7	34.30	0.00	115.77	-260.70	-676.78
7	8	36.30	0.00	115.77	-360.70	-510.31
8	8	36.30	0.00	120.42	-203.67	-777.66
8	9	36.65	0.00	120.42	-203.67	-1080.95
9	9	36.65	0.00	115.51	-151.86	-1040.58
9	10	41.00	0.00	115.51	-151.06	-1312.00
10	10	41.00	0.00	106.32	-104.48	-1304.34
10	11	43.35	0.00	106.32	-104.48	-1554.20
11	11	43.35	0.00	91.20	-72.06	-1402.95
11	12	45.85	0.00	91.20	-72.96	-1717.96
12	12	45.85	0.00	27.21	-5.94	432.00
12	13	48.35	0.00	27.21	-5.94	363.97
13	13	48.35	0.00	27.36	-2.61	392.03
13	14	50.70	0.00	27.36	-2.61	327.74
14	14	50.70	0.00	27.62	-2.51	335.03
14	15	53.05	0.00	27.62	-2.51	270.12
15	15	53.05	0.00	28.00	-2.00	268.26
15	16	55.40	0.00	28.00	-2.00	223.47
16	16	55.40	0.00	28.59	-1.18	253.77
16	17	57.40	0.00	28.59	-1.18	186.58
17	17	57.40	0.00	31.60	-3.46	281.18
17	18	63.22	0.00	31.60	-3.46	96.23
18	18	63.22	0.00	35.19	-3.71	231.71
18	19	69.03	0.00	35.19	-3.71	27.02
19	19	69.03	0.00	41.36	-15.06	184.22
19	20	74.85	0.00	41.36	-15.06	-56.38
20	20	74.85	0.00	53.94	-51.29	283.12
20	21	80.67	0.00	53.94	-51.29	-30.61
21	21	80.67	0.00	86.40	-102.04	126.59
21	22	86.48	0.00	99.40	-102.04	-277.10
22	22	86.48	0.00	77.97	-135.45	-141.62
22	23	92.30	0.00	77.97	-135.45	-585.12
23	23	92.30	0.00	123.76	-213.23	-510.52
23	24	94.30	0.00	123.76	-213.23	-756.03
24	24	94.30	0.00	126.45	-177.88	-727.73
24	25	96.65	0.00	126.45	-177.56	-1029.60
25	25	96.65	0.00	124.12	-135.40	-1010.46
25	26	99.00	0.00	124.12	-135.40	-1302.13
26		99.00	0.00	115.66	-92.40	-1294.64
		101.35	0.00	115.66	-92.40	-1568.64
		101.35	0.00	101.19	-52.26	-1536.58
		103.65	0.00	101.19	-52.26	-1791.56
	28	103.85	0.00	10.15	-5.33	494.27
28	29	106.35	0.00	10.15	-5.33	370.89
29	29	106.35	0.00	10.06	-0.11	443.14
29	30	106.70	0.00	10.06	-0.11	419.50
30	30	106.70	0.00	10.17	0.48	427.16
30	31	111.05	0.00	10.17	0.45	493.26
31	31	111.05	0.00	10.39	1.41	423.56
31	32	113.40	0.00	10.39	1.41	369.16
32	32	113.40	0.00	10.69	2.46	431.59
32	33	115.40	0.00	10.69	2.46	408.81
33	33	115.40	0.00	14.05	0.45	501.26
33	34	121.12	0.00	14.05	0.45	420.93
34	34	121.12	0.00	17.14	4.16	569.96
34	35	126.83	0.00	17.14	4.16	472.01
35	35	126.83	0.00	23.53	2.32	647.19
35	36	132.55	0.00	23.53	2.32	512.70
36	36	132.55	0.00	41.25	23.32	984.13
36	37	136.27	0.00	41.25	23.32	748.32
37	37	136.27	0.00	64.77	-12.97	805.84
37	38	143.98	0.00	64.77	-12.97	435.64
38	38	143.98	0.00	76.20	-31.04	-435.64
38	39	149.70	0.00	76.20	-31.04	0.00
101	101	0.00	0.00	32.23	-1.44	0.00
101	102	5.72	0.00	46.12	76.20	-97.23
102	102	5.72	0.00	40.03	51.75	-97.23
102	103	11.43	0.00	65.53	131.45	-27.77
103	103	11.43	0.00	54.83	79.55	-27.77
103	104	17.15	0.00	96.06	138.41	-27.04
104	104	17.15	0.00	73.80	64.31	-27.04
104	105	22.87	0.00	113.01	134.57	-154.55
105	105	22.87	0.00	98.14	82.50	-154.55
105	106	28.58	0.00	145.26	134.00	-500.35
106	106	28.58	0.00	136.59	101.04	-500.35
107	107	34.30	0.00	192.36	170.10	-1186.96
107	107	34.30	0.00	147.78	-74.80	-1186.86
107	108	36.30	0.00	185.71	-62.67	-1438.58
108	108	36.30	0.00	184.79	-131.76	-1436.58
108	109	38.65	0.00	166.57	-116.58	-1784.73
109	109	38.65	0.00	154.66	-122.11	-1784.73
109	110	41.00	0.00	217.70	-107.59	-2218.29
110	110	41.00	0.00	229.89	-79.80	-2219.29
110	111	43.35	0.00	253.89	-53.37	-2754.53
111	111	43.35	0.00	272.19	14.64	-2754.53
111	112	45.85	0.00	298.75	36.21	-3453.14
112	112	45.85	0.00	28.84	2.76	480.28
112		48.35	0.00	32.45	20.40	416.37
		48.35	0.00	29.21	0.74	416.37
		50.70	0.00	33.83	20.63	377.17
		50.70	0.00	30.26	1.89	377.17
		53.05	0.00	35.80	23.90	348.45
115	115	53.05	0.00	32.06	3.82	348.45
115	116	55.40	0.00	38.67	27.05	327.93
116	116	55.40	0.00	34.40	5.49	327.93
116	117	57.40	0.00	40.86	24.24	314.20
117	117	57.40	0.00	34.42	-2.87	314.20
117	118	63.22	0.00	48.46	18.34	320.10
118	118	63.22	0.00	45.01	6.70	320.10
118	119	69.03	0.00	69.31	47.63	326.96
119	119	69.03	0.00	60.53	17.84	326.96
119	120	74.85	0.00	92.27	53.37	266.84
120	120	74.85	0.00	79.70	20.39	266.84
120	121	80.67	0.00	117.89	65.57	76.48
121	121	80.67	0.00	105.03	21.13	76.48
121	122	86.48	0.00	150.65	70.91	-327.78
122	122	86.48	0.00	142.14	40.86	-327.78
122	123	92.30	0.00	198.04	110.37	-1070.20
123	123	92.30	0.00	155.28	-91.12	-1070.20
123	124	94.30	0.00	173.07	-78.69	-1337.22
124	124	94.30	0.00	172.04	-126.65	-1337.22
124	125	96.65	0.00	193.56	-113.23	-1704.35
125	125	96.65	0.00	201.36	-111.16	-1704.35
125	126	99.00	0.00	224.10	-96.53	-2155.40
126	126	99.00	0.00	235.66	-69.08	-2155.40
126	127	101.35	0.00	259.49	-52.52	-2704.57
127	127	101.35	0.00	277.06	23.66	-2704.57
127	128	103.65	0.00	303.60	45.25	-3415.54
128	128	103.85	0.00	10.53	4.80	472.00
128	129	106.35	0.00	14.02	22.41	456.36
129	129	106.35	0.00	10.93	3.26	456.36
129	130	106.70	0.00	15.28	23.38	458.90
130	130	106.70	0.00	12.07	4.93	458.90
130	131	111.05	0.00	17.50	27.06	474.37
131	131	111.05	0.00	13.58	7.37	474.37
131	132	113.40	0.00	20.36	30.65	488.84
132	132	113.40	0.00	16.12	9.38	488.84
132	133	115.40	0.00	22.23	28.45	524.36
133	133	115.40	0.00	15.85	0.82	524.36
133	134	121.12	0.00	28.81	20.90	650.35
134	134	121.12	0.00	25.56	9.84	650.35
134	135	126.83	0.00	48.16	47.48	792.37
135	135	126.83	0.00	38.43	17.39	792.37
135	136	132.55	0.00	66.95	58.28	900.08
136	136	132.55	0.00	59.62	9.18	989.06
136	137	136.27	0.00	91.12	39.60	878.78
137	137	136.27	0.00	77.12	-13.01	878.78
137	138	143.98	0.00	120.35	6.43	955.54
138	138	143.98	0.00	114.87	-24.15	955.54
	139	149.70	0.00	160.50	-12.64	0.00

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Envolvente de fran de cargas pisos gravitat. Y'Y'

Cont sec

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-76.20	31.03	0.00
1	2	5.72	0.00	-76.20	31.03	435.61
2	2	5.72	0.00	-94.77	13.87	435.61
2	3	11.43	0.00	-94.77	13.87	926.86
3	3	11.43	0.00	-41.25	-23.32	748.34
3	4	17.15	0.00	-41.25	-23.32	984.14
4	4	17.15	0.00	-23.53	-2.32	512.71
4	5	22.87	0.00	-23.53	-2.32	647.19
5	5	22.87	0.00	-17.14	-4.16	471.09
5	6	28.58	0.00	-17.14	-4.16	388.86
6	6	28.58	0.00	-14.05	-0.45	420.83
6	7	34.30	0.00	-14.05	-0.45	501.26
7	7	34.30	0.00	-10.69	-2.46	409.81
7	8	36.30	0.00	-10.69	-2.46	431.59
8	8	36.30	0.00	-10.39	-1.41	399.16
8	9	36.65	0.00	-10.39	-1.41	423.56
9	9	36.65	0.00	-10.17	-0.48	493.26
9	10	41.00	0.00	-10.17	-0.48	427.16
10	10	41.00	0.00	-10.08	0.11	419.50
10	11	43.35	0.00	-10.06	0.11	443.14
11	11	43.35	0.00	-10.15	5.33	378.88
11	12	45.85	0.00	-10.15	5.33	404.27
12	12	45.85	0.00	-101.19	82.26	-1791.56
12	13	48.35	0.00	-101.19	82.26	-1536.58
13	13	48.35	0.00	-115.66	92.40	-1566.64
13	14	50.70	0.00	-115.66	92.40	-1294.64
14	14	50.70	0.00	-124.12	135.40	-1302.13
15	15	53.05	0.00	-124.12	135.40	-1010.46
15	15	53.05	0.00	-126.45	177.88	-1029.60
15	16	55.40	0.00	-126.45	177.88	-727.73
16	16	55.40	0.00	-123.76	213.23	-756.03
16	17	57.40	0.00	-123.76	213.23	-510.52
17	17	57.40	0.00	-77.96	135.45	-585.12
17	18	63.22	0.00	-77.86	135.45	-141.62
18	18	63.22	0.00	-69.40	102.04	-277.10
18	19	69.03	0.00	-68.40	102.04	126.59
19	19	69.03	0.00	-53.94	51.29	-30.61
19	20	74.85	0.00	-53.94	51.29	283.12
20	20	74.85	0.00	-41.36	15.06	-56.38
20	21	80.67	0.00	-41.36	15.06	184.22
21	21	80.67	0.00	-35.19	3.71	27.02
21	22	86.48	0.00	-35.19	3.71	231.71
22	22	86.48	0.00	-31.80	3.46	96.23
22	23	92.30	0.00	-31.80	3.46	281.18
23	23	92.30	0.00	-26.59	1.18	186.58
23	24	94.30	0.00	-26.59	1.18	253.77
24	24	94.30	0.00	-28.00	2.00	223.47
24	25	96.65	0.00	-28.00	2.00	288.26
25	25	96.65	0.00	-27.62	2.51	270.12
25	26	99.00	0.00	-27.62	2.51	335.03
26	26	99.00	0.00	-27.36	2.61	327.74
26	27	101.35	0.00	-27.36	2.61	392.03
27	27	101.35	0.00	-27.21	5.94	363.97
27	28	103.85	0.00	-27.21	5.94	432.00
28	28	103.85	0.00	-91.20	72.86	-1717.96
28	29	106.35	0.00	-91.20	72.96	-1489.95
29	29	106.35	0.00	-106.32	104.48	-1554.20
29	30	106.70	0.00	-106.32	104.48	-1304.34
30	30	106.70	0.00	-115.51	151.86	-1312.00
30	31	111.05	0.00	-115.51	151.86	-1040.58
31	31	111.05	0.00	-120.42	203.67	-1060.86
31	32	113.40	0.00	-120.42	203.67	-777.88
32	32	113.40	0.00	-115.77	260.70	-610.31
32	33	115.40	0.00	-115.77	260.70	-576.76
33	33	115.40	0.00	-67.87	214.16	-670.23
33	34	121.12	0.00	-67.97	214.16	-261.67
34	34	121.12	0.00	-59.13	179.41	-430.71
34	35	126.83	0.00	-59.13	178.41	-92.71
35	35	126.83	0.00	-42.92	121.01	-267.89
35	36	132.55	0.00	-42.92	121.01	-22.54
36	36	132.55	0.00	-33.05	27.41	-483.97
36	37	136.27	0.00	-33.05	27.41	-305.09
37	37	136.27	0.00	-31.88	2.50	-362.52
37	38	143.98	0.00	-31.88	2.50	-180.31
38	38	143.98	0.00	-31.54	1.44	-180.31
38	39	149.70	0.00	-31.54	1.44	0.00
101	101	0.00	0.00	-168.50	12.64	0.00
101	102	5.72	0.00	-114.67	24.15	655.53
102	102	5.72	0.00	-120.35	-6.43	655.53
102	103	11.43	0.00	-77.12	13.01	878.78
103	103	11.43	0.00	-91.11	-39.46	878.78
103	104	17.15	0.00	-55.62	-9.19	589.06
104	104	17.15	0.00	-68.95	-56.28	989.06
104	105	22.87	0.00	-38.43	-17.39	792.38
105	105	22.87	0.00	-46.18	-47.48	792.38
105	106	28.58	0.00	-25.56	-9.84	650.35
106	106	28.58	0.00	-28.80	-20.90	650.35
106	107	34.30	0.00	-15.85	-0.82	524.36
107	107	34.30	0.00	-22.23	-28.45	524.36
107	108	36.30	0.00	-18.12	-9.38	488.84
108	108	36.30	0.00	-20.36	-30.85	488.84
108	109	38.65	0.00	-13.88	-7.37	474.37
109	109	38.65	0.00	-17.50	-27.06	474.37
109	110	41.00	0.00	-12.07	-4.93	458.90
110	110	41.00	0.00	-15.28	-23.38	458.90
110	111	43.35	0.00	-10.93	-3.26	456.36
111	111	43.35	0.00	-14.02	-22.41	456.36
111	112	45.85	0.00	-10.53	-4.80	472.00
112	112	45.85	0.00	-303.60	-45.25	-3415.54
112	113	48.35	0.00	-277.06	-23.66	-2704.57
113	113	48.35	0.00	-259.49	52.52	-2704.57
113	114	50.70	0.00	-235.66	69.08	-2155.40
114	114	50.70	0.00	-224.10	96.53	-2155.40
114	115	53.05	0.00	-201.36	111.16	-1704.35
115	115	53.05	0.00	-193.56	113.23	-1704.35
115	116	55.40	0.00	-172.04	126.65	-1337.22
116	116	55.40	0.00	-173.07	78.69	-1337.22
116	117	57.40	0.00	-155.28	91.12	-1070.20
117	117	57.40	0.00	-198.04	-110.37	-1070.20
117	118	63.22	0.00	-142.14	-40.88	-327.78
118	118	63.22	0.00	-150.65	-70.91	-327.78
118	119	69.03	0.00	-105.03	-21.13	76.48
119	119	69.03	0.00	-117.89	-65.57	76.48
119	120	74.85	0.00	-79.70	-20.39	266.84
120	120	74.85	0.00	-92.27	-53.37	266.84
120	121	80.67	0.00	-60.53	-17.84	326.96
121	121	80.67	0.00	-69.31	-47.63	326.96
121	122	86.48	0.00	-45.01	-6.70	320.10
122	122	86.48	0.00	-48.46	-18.34	320.10
122	123	92.30	0.00	-34.42	2.87	314.20
123	123	92.30	0.00	-40.86	-24.24	314.20
123	124	94.30	0.00	-34.40	-5.49	327.93
124	124	94.30	0.00	-38.67	-27.05	327.93
124	125	96.65	0.00	-32.06	-3.82	348.45
125	125	96.65	0.00	-35.80	-23.90	348.45
125	126	99.00	0.00	-30.26	-1.89	377.17
126	126	99.00	0.00	-33.83	-20.63	377.17
126	127	101.35	0.00	-29.21	-0.74	416.37
127	127	101.35	0.00	-32.45	-20.40	416.37
127	128	103.85	0.00	-28.94	-2.78	480.28
128	128	103.85	0.00	-298.75	-36.21	-3453.14
128	129	106.35	0.00	-272.19	-14.64	-2754.53
129	129	106.35	0.00	-253.89	53.37	-2754.53
129	130	106.70	0.00	-229.89	79.80	-2219.29
130	130	106.70	0.00	-217.70	107.59	-2219.29
130	131	111.05	0.00	-184.66	122.11	-1784.73
131	131	111.05	0.00	-166.57	118.59	-1784.73
131	132	113.40	0.00	-164.79	131.76	-1436.58
132	132	113.40	0.00	-185.71	62.67	-1436.58
132	133	115.40	0.00	-147.78	74.80	-1186.86
133	133	115.40	0.00	-192.36	-170.10	-1186.96
133	134	121.12	0.00	-136.58	-101.03	-500.33
134	134	121.12	0.00	-145.25	-134.00	-500.33
134	135	126.83	0.00	-99.14	-82.50	-154.56
135	135	126.83	0.00	-113.01	-134.57	-154.56
135	136	132.55	0.00	-73.90	-64.31	-27.04
136	136	132.55	0.00	-66.06	-138.61	-27.04
136	137	136.27	0.00	-54.82	-79.55	-27.77
137	137	136.27	0.00	-65.52	-121.45	-27.77
137	138	143.98	0.00	-40.03	-51.75	-97.23
138	138	143.98	0.00	-46.12	-76.21	-97.23
138	139	149.70	0.00	-32.23	1.44	0.00

[redacted]

Envolvente de fuerzas pilares gaviotas, 2024

Cort. vol.

Barra	Nudo	X	Vi (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	-67.55	39.62	0.00
1	2	5.72	0.00	-67.55	38.62	388.44
2	2	5.72	0.00	-64.55	38.62	314.77
2	3	11.43	0.00	-64.55	39.56	626.59
3	3	11.43	0.00	-38.34	13.69	480.33
3	4	17.15	0.00	-38.34	13.69	559.08
4	4	17.15	0.00	-19.25	2.86	354.04
4	5	22.87	0.00	-19.25	2.86	454.06
5	5	22.87	0.00	-14.05	0.59	330.73
5	6	28.58	0.00	-14.05	0.59	411.04
6	6	28.58	0.00	-10.62	0.02	328.33
6	7	34.30	0.00	-10.62	0.02	368.05
7	7	34.30	0.00	27.55	10.62	-1071.81
7	8	38.30	0.00	27.55	10.62	-1126.90
8	8	36.30	0.00	25.34	16.85	-1126.90
8	9	39.65	0.00	25.34	16.85	-1166.46
9	9	38.65	0.00	22.67	24.77	-1166.46
9	10	41.00	0.00	22.67	24.77	-1238.73
10	10	41.00	0.00	14.23	33.08	-660.88
10	11	43.35	0.00	14.23	33.08	-632.34
11	11	43.35	0.00	3.62	38.41	-633.52
11	12	45.85	0.00	3.62	38.41	-611.06
12	12	45.85	0.00	-83.50	100.49	-642.71
12	13	48.35	0.00	-83.50	100.49	-606.98
13	13	48.35	0.00	-101.86	127.70	-616.12
13	14	50.70	0.00	-101.86	127.70	-376.75
14	14	50.70	0.00	-105.75	161.61	-356.17
14	15	53.05	0.00	-105.75	161.61	-109.65
15	15	53.05	0.00	-100.93	198.18	-109.65
15	16	55.40	0.00	-100.93	198.18	141.64
16	16	55.40	0.00	-99.30	225.06	141.64
16	17	57.40	0.00	-99.30	225.06	340.25
17	17	57.40	0.00	-76.07	135.47	-562.06
17	18	63.22	0.00	-76.07	135.47	-119.58
18	18	63.22	0.00	-64.52	103.07	-119.58
18	19	69.03	0.00	-64.52	103.07	255.72
19	19	69.03	0.00	-52.04	51.32	-19.60
19	20	74.85	0.00	-52.04	51.32	283.12
20	20	74.85	0.00	-39.47	15.09	-96.38
20	21	80.67	0.00	-39.47	15.09	173.21
21	21	80.67	0.00	-30.31	4.73	-102.11
21	22	86.48	0.00	-30.31	4.73	74.20
22	22	86.48	0.00	-29.90	3.47	74.20
22	23	92.30	0.00	-29.90	3.47	248.12
23	23	92.30	0.00	-4.14	13.02	-654.18
23	24	94.30	0.00	-4.14	13.02	-645.90
24	24	94.30	0.00	-6.47	20.30	-645.90
24	25	96.65	0.00	-6.47	20.30	-630.69
25	25	96.65	0.00	-9.26	28.71	-630.69
25	26	99.00	0.00	-9.26	28.71	-608.92
26	26	99.00	0.00	-13.56	37.90	-680.34
26	27	101.35	0.00	-13.56	37.90	-656.46
27	27	101.35	0.00	-19.52	44.16	-685.64
27	28	103.85	0.00	-19.52	44.16	-516.85
28	28	103.85	0.00	-78.04	104.04	-502.62
28	29	106.35	0.00	-78.04	104.04	-307.53
29	29	106.35	0.00	-82.03	137.44	-176.72
29	30	106.70	0.00	-82.03	137.44	14.05
30	30	106.70	0.00	-82.67	177.11	354.68
30	31	111.05	0.00	-82.67	177.11	549.16
31	31	111.05	0.00	-84.69	221.94	549.16
31	32	113.40	0.00	-84.69	221.94	746.18
32	32	113.40	0.00	-77.33	273.19	746.18
32	33	115.40	0.00	-77.33	273.19	992.64
33	33	115.40	0.00	-64.86	214.64	-546.88
33	34	121.12	0.00	-64.86	214.64	-175.98
34	34	121.12	0.00	-56.04	184.16	-271.79
34	35	126.83	0.00	-56.04	184.16	-46.56
35	35	126.83	0.00	-38.64	126.19	-54.80
35	36	132.55	0.00	-38.64	126.19	135.12
36	36	132.55	0.00	-29.15	64.29	-197.93
36	37	136.27	0.00	-29.15	64.29	-37.00
37	37	136.27	0.00	-21.86	26.42	-183.26
37	38	143.98	0.00	-21.66	26.42	-58.46
38	38	143.98	0.00	-23.29	7.02	-133.13
38	39	149.70	0.00	-23.29	7.02	0.00
101	101	0.00	0.00	-114.32	24.15	0.00
101	102	5.72	0.00	-100.43	101.79	770.58
102	102	5.72	0.00	-40.77	95.85	464.60
102	103	11.43	0.00	-15.27	139.55	905.95
103	103	11.43	0.00	1.59	85.77	583.01
103	104	17.15	0.00	34.82	144.63	868.06
104	104	17.15	0.00	26.91	97.66	774.19
104	105	22.87	0.00	66.12	137.91	914.76
105	105	22.87	0.00	53.42	83.92	678.36
105	106	28.58	0.00	99.53	135.42	783.93
106	106	28.58	0.00	93.37	101.18	717.28
106	107	34.30	0.00	149.14	170.24	277.71
107	107	34.30	0.00	36.06	22.46	-1097.86
107	108	36.30	0.00	56.02	34.58	-1126.09
108	108	36.30	0.00	40.35	21.50	-1174.63
108	109	36.65	0.00	62.13	34.57	-1229.74
109	109	36.65	0.00	43.39	27.86	-1282.21
109	110	41.00	0.00	66.22	42.16	-1300.78
110	110	41.00	0.00	46.64	39.08	-1384.18
110	111	43.35	0.00	70.54	56.42	-1466.55
111	111	43.35	0.00	73.39	75.80	-1498.55
111	112	45.85	0.00	90.85	97.27	-1893.17
112	112	45.85	0.00	-178.65	96.07	-1556.84
112	113	48.35	0.00	-175.13	73.68	-1161.58
113	113	48.35	0.00	-153.79	112.12	-1545.29
113	114	50.70	0.00	-188.37	132.20	-1652.45
114	114	50.70	0.00	-161.86	142.69	-1664.65
114	115	53.05	0.00	-156.33	164.70	-881.89
115	115	53.05	0.00	-133.51	150.96	-999.04
115	116	55.40	0.00	-126.90	174.18	-330.48
116	116	55.40	0.00	-116.74	109.67	-374.04
116	117	57.40	0.00	-110.46	126.42	-65.48
117	117	57.40	0.00	-48.13	0.37	-638.60
117	118	63.22	0.00	-34.10	27.59	-352.51
118	118	63.22	0.00	-20.46	17.01	-443.10
118	119	69.03	0.00	-4.18	57.84	-8.77
119	119	69.03	0.00	-12.77	28.49	-8.77
119	120	74.85	0.00	18.97	74.02	357.48
120	120	74.85	0.00	6.39	31.04	176.20
120	121	80.67	0.00	44.58	76.22	412.20
121	121	80.67	0.00	31.54	31.44	412.20
121	122	86.48	0.00	77.16	61.22	435.41
122	122	86.48	0.00	56.58	50.13	344.83
122	123	92.30	0.00	115.49	118.62	82.58
123	123	92.30	0.00	4.14	13.06	-670.52
123	124	94.30	0.00	21.92	25.49	-635.25
124	124	94.30	0.00	6.47	20.48	-678.80
124	125	96.65	0.00	28.11	33.80	-650.86
125	125	96.65	0.00	9.26	29.63	-694.01
125	126	99.00	0.00	31.86	44.27	-693.58
126	126	99.00	0.00	12.66	42.29	-715.77
127	127	101.35	0.00	36.49	58.05	-740.90
127	127	101.35	0.00	69.47	77.17	-1154.82
127	128	103.85	0.00	98.01	96.54	-1376.63
128	128	103.85	0.00	-186.27	95.56	-1290.97
128	129	106.35	0.00	-184.78	83.47	-609.60
129	129	106.35	0.00	-172.42	123.05	-609.60
129	130	106.70	0.00	-168.07	143.17	-376.20
130	130	106.70	0.00	-130.41	154.70	-399.60
130	131	111.05	0.00	-133.98	176.82	-29.14
131	131	111.05	0.00	-110.58	160.53	-89.91
131	132	113.40	0.00	-104.09	184.11	236.29
132	132	113.40	0.00	-93.57	166.64	190.35
132	133	115.40	0.00	-87.46	125.70	435.25
133	133	115.40	0.00	-37.37	0.98	-540.33
133	134	121.12	0.00	-14.41	21.05	-507.27
134	134	121.12	0.00	-20.16	11.27	-643.91
134	135	126.83	0.00	2.44	48.91	-240.55
135	135	126.83	0.00	-7.46	29.73	-276.85
135	136	132.55	0.00	22.05	59.63	87.83
136	136	132.55	0.00	2.36	15.41	-36.07
136	137	136.27	0.00	37.86	45.70	356.01
137	137	136.27	0.00	-3.56	5.09	-54.92
137	138	143.98	0.00	39.55	24.53	183.99
138	138	143.98	0.00	-31.86	1.44	-182.28
138	139	149.70	0.00	22.85	12.95	0.00

[redacted]

Envolvente de fuerzas pilares gaviotas, 2024

Cort. vol.

Barra	Nudo	X	Vi (T)	Vy (T)	Mz (Tm)	Mz (Tm)
1	1	0.00	0.00	23.29	-7.02	0.00
1	2	5.72	0.00	23.29	-7.02	-139.12
2	2	5.72	0.00	21.09	-35.42	-58.46
2	3	11.43	0.00	21.09	-30.42	-163.28
3	3	11.43	0.00	26.15	-64.39	-37.01
3	4	17.15	0.00	26.15	-64.39	-197.83
4	4	17.15	0.00	36.64	-126.19	136.13
4	5	22.87	0.00	36.64	-126.19	-64.77
5	5	22.87	0.00	59.04	-184.16	46.56
5	6	28.58	0.00	58.04	-164.16	-271.81
6	6	28.58	0.00	64.88	-214.64	-175.98
6	7	34.30	0.00	64.88	-214.64	-546.88
7	7	34.30	0.00	77.33	-273.19	992.64
7	8	36.30	0.00	77.33	-273.19	746.17
8	8	36.30	0.00	64.68	-221.94	746.17
8	9	39.65	0.00	64.68	-221.94	549.16
9	9	38.65	0.00	62.67	-177.11	549.16
9	10	41.00	0.00	62.67	-177.11	354.68
10	10	41.00	0.00	82.03	-137.44	14.05
10	11	43.35	0.00	82.03	-137.44	-175.72
11	11	43.35	0.00	76.04	-104.04	-307.53
11	12	45.85	0.00	76.04	-104.04	-502.62
12	12	45.85	0.00	18.52	-44.16	-618.952
12	13	48.35	0.00	18.52	-44.16	-565.65
13	13	48.35	0.00	13.56	-37.90	-558.40
13	14	50.70	0.00	13.56	-37.90	-500.34
14	14	50.70	0.00	9.26	-28.71	-608.83
14	15	53.05	0.00	9.26	-28.71	-530.66
15	15	53.05	0.00	6.47	-20.30	-630.69
15	16	55.40	0.00	6.47	-20.30	-645.91
16	16	55.40	0.00	4.14	-13.02	-545.91
16	17	57.40	0.00	4.14	-13.02	-654.18
17	17	57.40	0.00	29.90	-3.47	248.12
17	18	63.22	0.00	29.90	-3.47	74.20
18	18	63.22	0.00	30.31	-4.73	74.20
18	19	69.03	0.00	30.31	-4.73	-102.11
19	19	69.03	0.00	36.47	-15.09	173.21
19	20	74.85	0.00	39.47	-15.09	-96.38
20	20	74.85	0.00	52.04	-51.32	283.12
20	21	80.67	0.00	52.04	-51.32	-19.60
21	21	80.67	0.00	64.52	-103.07	255.72
21	22	86.48	0.00	64.52	-103.07	-118.58
22	22	86.48	0.00	76.07	-135.47	-119.58
22	23	92.30	0.00	76.07	-135.47	-562.06
23	23	92.30	0.00	99.30	-225.06	340.24
23	24	94.30	0.00	99.30	-225.06	141.64
24	24	94.30	0.00	106.93	-198.18	141.64
24	25	96.65	0.00	106.93	-198.18	-108.65
25	25	96.65	0.00	105.75	-161.61	-109.65
25	26	99.00	0.00	105.75	-161.61	-356.18
26	26	99.00	0.00	101.86	-127.70	-376.76
26	27	101.35	0.00	101.86	-127.70	-616.13
27	27	101.35	0.00	93.50	-100.49	-608.97
27	28	103.85	0.00	93.50	-100.49	-642.71
28	28	103.85	0.00	-3.02	-36.41	-611.06
28	29	106.35	0.00	-3.02	-36.41	-603.52
29	29	106.35	0.00	-14.23	-33.08	-632.34
29	30	106.70	0.00	-14.23	-33.08	-666.89
30	30	106.70	0.00	-22.67	-24.77	-1239.73
30	31	111.05	0.00	-22.67	-24.77	-1166.46
31	31	111.05	0.00	-25.34	-16.85	-1166.46
31	32	113.40	0.00	-25.34	-16.85	-1126.90
32	32	113.40	0.00	-27.55	-10.02	-1126.90
32	33	115.40	0.00	-27.55	-10.02	-1071.81
33	33	115.40	0.00	10.62	-0.02	368.05
33	34	121.12	0.00	10.62	-0.02	205.33
34	34	121.12	0.00	14.05	-0.59	411.04
34	35	126.83	0.00	14.05	-0.59	330.74
35	35	126.83	0.00	19.25	-2.86	484.10
35	36	132.55	0.00	19.25	-2.86	354.04
36	36	132.55	0.00	36.34	-13.66	688.09
36	37	136.27	0.00	36.34	-13.66	480.32
37	37	136.27	0.00	54.55	-36.86	626.58
37	38	143.98	0.00	54.55	-36.86	314.79
38	38	143.98	0.00	67.95	-36.62	388.46
38	39	149.70	0.00	67.95	-36.62	0.00
101	101	0.00	0.00	-22.95	-12.95	0.00
101	102	5.72	0.00	31.89	-1.44	-182.28
102	102	5.72	0.00	-38.55	-24.53	183.70
102	103	11.43	0.00	3.68	-5.09	-54.94
103	103	11.43	0.00	-37.55	-45.70	268.00
103	104	17.15	0.00	-2.38	-15.41	-26.08
104	104	17.15	0.00	-22.05	-59.63	87.83
104	105	22.87	0.00	7.46	-20.73	-276.82
105	105	22.87	0.00	-2.44	-48.91	-240.53
105	106	28.58	0.00	20.17	-11.27	-643.94
106	106	28.58	0.00	14.41	-21.05	-567.29
106	107	34.30	0.00	27.37	-0.96	-940.32
107	107	34.30	0.00	87.46	-125.70	435.25
107	108	36.30	0.00	93.57	-166.64	180.34
108	108	36.30	0.00	104.09	-184.11	236.28
108	109	36.65	0.00	110.56	-160.63	-50.62
109	109	36.65	0.00	133.99	-176.82	-28.15
109	110	41.00	0.00	136.41	-154.70	-399.61
110	110	41.00	0.00	168.07	-143.17	-376.21
110	111	43.35	0.00	172.42	-123.05	-909.60
111	111	43.35	0.00	184.78	-63.47	-808.60
111	112	45.85	0.00	190.27	-65.86	-1290.97
112	112	45.85	0.00	-96.01	-98.54	-1378.63
112	113	48.35	0.00	-68.47	-77.17	-1184.62
113	113	48.35	0.00	-36.49	-50.85	-740.81
113	114	50.70	0.00	-12.86	-42.29	-715.78
114	114	50.70	0.00	-31.98	-44.27	-693.58
114	115	53.05	0.00	-6.26	-29.63	-694.01
115	115	53.05	0.00	-28.11	-33.80	-656.86
115	116	55.40	0.00	-6.47	-20.49	-678.80
116	116	55.40	0.00	-21.92	-25.49	-635.25
116	117	57.40	0.00	-4.14	-13.06	-670.52
117	117	57.40	0.00	-115.49	-118.62	82.58
117	118	63.22	0.00	-59.59	-50.13	344.83
118	118	63.22	0.00	-77.16	-61.22	435.41
118	119	69.03	0.00	-31.54	-31.44	412.20
119	119	69.03	0.00	-44.58	-76.22	412.20
119	120	74.85	0.00	-6.39	-31.04	176.20
120	120	74.85	0.00	-18.97	-74.02	357.48
120	121	80.67	0.00	12.77	-28.49	-8.77
121	121	80.67	0.00	4.18	-57.84	-8.77
121	122	86.48	0.00	28.48	-17.01	-443.09
122	122	86.48	0.00	34.10	-27.59	-352.51
122	123	92.30	0.00	48.13	-6.37	-636.60
123	123	92.30	0.00	110.46	-128.42	-65.48
123	124	94.30	0.00	116.74	-109.67	-374.04
124	124	94.30	0.00	126.90	-174.18	-330.48
124	125	96.65	0.00	133.51	-150.96	-999.05
125	125	96.65	0.00	156.33	-164.70	-881.89
125	126	99.00	0.00	161.86	-142.69	-1064.65
126	126	99.00	0.00	189.37	-132.20	-1092.45
126	127	101.35	0.00	193.79	-112.12	-1545.29
127	127	101.35	0.00	175.13	-73.68	-1101.58
127	128	103.85	0.00	178.65	-96.07	-1556.84
128	128	103.85	0.00	-99.95	-97.27	-1893.17
128	129	106.35	0.00	-73.39	-75.80	-1498.55
129	129	106.35	0.00	-70.54	-56.42	-1466.55
129	130	106.70	0.00	-46.64	-39.88	-1384.19
130	130	106.70	0.00	-66.22	-42.16	-1360.78
130	131	111.05	0.00	-43.39	-27.86	-1282.22
131	131	111.05	0.00	-42.13	-34.57	-1229.75
131	132	113.40	0.00	-40.35	-21.50	-1174.63
132	132	113.40	0.00	-56.02	-34.58	-1126.09
132	133	115.40	0.00	-36.09	-22.46	-1097.86
133	133	115.40	0.00	-146.14	-170.24	277.72
133	134	121.12	0.00	-83.37	-101.18	717.29
134	134	121.12	0.00	-99.53	-135.42	783.94
134	135	126.83	0.00	-53.42	-83.93	678.37
135	135	126.83	0.00	-66.12	-137.92	914.76
135	136	132.55	0.00	-26.91	-97.66	774.19
136	136	132.55	0.00	-34.82	-144.63	868.06
136	137	136.27	0.00	-1.59	-85.77	583.00
137	137	136.27	0.00	15.27	-139.55	905.93
137	138	143.98	0.00	40.77	-99.85	464.83
138	138	143.98	0.00	100.43	-101.79	770.61
138	139	149.70	0.00	114.32	-24.15	0.00

Anexo Nº 2.3.7.1.2. Reacciones emparrillado

7.1.2. Reacciones emparrillado

Empotrado REACCIONES

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	196.45	0.00
39	0.00	196.45	0.00
12005	0.00	1087.32	0.00
28005	0.00	1087.32	0.00
101	0.00	67.56	0.00
139	0.00	67.56	0.00
12006	0.00	10.98	0.00
28006	0.00	10.98	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-35.23	0.00
39	0.00	-35.23	0.00
12005	0.00	-45.14	0.00
28005	0.00	-45.14	0.00
101	0.00	-33.29	0.00
139	0.00	-33.29	0.00
12006	0.00	-281.73	0.00
28006	0.00	-281.73	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	186.33	0.00
39	0.00	186.33	0.00
12005	0.00	995.08	0.00
28005	0.00	995.08	0.00
101	0.00	71.47	0.00
139	0.00	71.47	0.00
12006	0.00	15.82	0.00
28006	0.00	15.82	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-34.32	0.00
39	0.00	-34.32	0.00
12005	0.00	-43.69	0.00
28005	0.00	-43.69	0.00
101	0.00	-32.59	0.00
139	0.00	-32.59	0.00
12006	0.00	-213.94	0.00
28006	0.00	-213.94	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	210.13	0.00
39	0.00	210.13	0.00
12005	0.00	1237.51	0.00
28005	0.00	1237.51	0.00
101	0.00	57.07	0.00
139	0.00	57.07	0.00
12006	0.00	5.21	0.00
28006	0.00	5.21	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-35.83	0.00
39	0.00	-35.83	0.00
12005	0.00	-46.48	0.00
28005	0.00	-46.48	0.00
101	0.00	-33.52	0.00
139	0.00	-33.52	0.00
12006	0.00	-415.50	0.00
28006	0.00	-415.50	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	67.90	0.00
39	0.00	67.90	0.00
12005	0.00	12.78	0.00
28005	0.00	12.78	0.00
101	0.00	188.51	0.00
139	0.00	188.51	0.00
12006	0.00	1028.32	0.00
28006	0.00	1028.32	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-32.37	0.00
39	0.00	-32.37	0.00
12005	0.00	-248.22	0.00
28005	0.00	-248.22	0.00
101	0.00	-34.18	0.00
139	0.00	-34.18	0.00
12006	0.00	-43.68	0.00
28006	0.00	-43.68	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	69.27	0.00
39	0.00	69.27	0.00
12005	0.00	16.15	0.00
28005	0.00	16.15	0.00
101	0.00	176.44	0.00
139	0.00	176.44	0.00
12006	0.00	934.43	0.00
28006	0.00	934.43	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-31.08	0.00
39	0.00	-31.08	0.00
12005	0.00	-191.10	0.00
28005	0.00	-191.10	0.00
101	0.00	-32.69	0.00
139	0.00	-32.69	0.00
12006	0.00	-41.56	0.00
28006	0.00	-41.56	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	64.56	0.00
39	0.00	64.56	0.00
12005	0.00	8.70	0.00
28005	0.00	8.70	0.00
101	0.00	199.05	0.00
139	0.00	199.05	0.00
12006	0.00	1120.83	0.00
28006	0.00	1120.83	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-33.20	0.00
39	0.00	-33.20	0.00
12005	0.00	-314.02	0.00
28005	0.00	-314.02	0.00
101	0.00	-35.22	0.00
139	0.00	-35.22	0.00
12006	0.00	-45.28	0.00
28006	0.00	-45.28	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	16.43	0.00
39	0.00	16.43	0.00
12005	0.00	133.36	0.00
28005	0.00	133.36	0.00
101	0.00	0.67	0.00
139	0.00	0.67	0.00
12006	0.00	0.00	0.00
28006	0.00	0.00	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-1.89	0.00
39	0.00	-1.89	0.00
12005	0.00	-2.75	0.00
28005	0.00	-2.75	0.00
101	0.00	-5.27	0.00
139	0.00	-5.27	0.00
12006	0.00	-91.38	0.00
28006	0.00	-91.38	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	0.67	0.00
39	0.00	0.67	0.00
12005	0.00	0.00	0.00
28005	0.00	0.00	0.00
101	0.00	16.43	0.00
139	0.00	16.43	0.00
12006	0.00	133.36	0.00
28006	0.00	133.36	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	-5.27	0.00
39	0.00	-5.27	0.00
12005	0.00	-91.38	0.00
28005	0.00	-91.38	0.00
101	0.00	-1.89	0.00
139	0.00	-1.89	0.00
12006	0.00	-2.75	0.00
28006	0.00	-2.75	0.00

[redacted]

gravante sobre los dos nervios

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	7.95	0.00
39	0.00	7.95	0.00
12005	0.00	-7.95	0.00
28005	0.00	-7.95	0.00
101	0.00	7.95	0.00
139	0.00	7.95	0.00
12006	0.00	-7.95	0.00
28006	0.00	-7.95	0.00

[redacted]

PESO PROPIO TOTAL

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	145.91	0.00
39	0.00	145.91	0.00
12005	0.00	1018.14	0.00
28005	0.00	1018.14	0.00
101	0.00	145.91	0.00
139	0.00	145.91	0.00
12006	0.00	1018.14	0.00
28006	0.00	1018.14	0.00

[redacted]

Postesado centrado capites

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	3.89	0.00
39	0.00	3.89	0.00
12005	0.00	-3.82	0.00
28005	0.00	-3.82	0.00
101	0.00	3.89	0.00
139	0.00	3.89	0.00
12006	0.00	-3.82	0.00
28006	0.00	-3.82	0.00

[redacted]

Postesado Inferior Capitel

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
1	0.00	11.19	0.00
39	0.00	11.19	0.00
12005	0.00	-9.36	0.00
28005	0.00	-9.36	0.00
101	0.00	11.19	0.00
139	0.00	11.19	0.00
12006	0.00	-9.36	0.00
28006	0.00	-9.36	0.00

[redacted]vente Tren IPF-75B. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
2	0.00	239.03	-105.82
17	0.00	717.20	-233.65
39	0.00	717.20	-233.65
54	0.00	239.03	-105.82
28	0.00	0.00	0.00

[redacted]

Envolvente Tren IPF-75B. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
2	0.00	-40.24	0.00
17	0.00	-8.48	0.00
39	0.00	-8.48	0.00
54	0.00	-40.24	0.00
28	0.00	0.00	0.00

Anexo Nº 2.3.7.2.1. Reacciones modelo viga

7.2.1. Reacciones modelo viga.

peso propio de capiteles in situ Fase1.1

xcapit

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	651.26	0.00	0.00	0.00	-1.73
39	0.00	0.00	651.26	0.00	0.00	0.00	-1.73
54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

postesado fase 1.2 capitel superior

[1; 1]Pret1.2sup

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	-1.21	0.00	0.00	0.00	0.00
39	0.00	0.00	-1.21	0.00	0.00	0.00	0.00
54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

tesado inferior de capitel fase2.1

r2.1infcapit

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.01	0.00	0.00	0.00	0.03
39	0.00	0.00	0.01	0.00	0.00	0.00	0.03
54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

peso propio de vanos laterales.Artesa

[1; 1]ppvlat

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	-13.19	73.92	0.00	0.00	0.00	0.00
17	0.00	13.19	71.37	0.00	0.00	0.00	-828.56
39	0.00	-13.19	71.37	0.00	0.00	0.00	828.56
54	0.00	13.19	73.92	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

pp artesas de vano central

pvcentral

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	-13.42	72.64	0.00	0.00	0.00	843.37
39	0.00	13.42	72.64	0.00	0.00	0.00	-843.37
54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

peso propio de prelosa

[1; 1]PPprelosa

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	-3.33	18.64	0.00	0.00	0.00	0.00
17	0.00	-0.06	40.58	0.00	0.00	0.00	3.74
39	0.00	0.06	40.58	0.00	0.00	0.00	-3.74
54	0.00	3.33	18.64	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

losa cerca de capiteles FASE4.2

piosa1

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	1.09	0.00	0.00	0.00	0.00
17	0.00	3.50	64.92	0.00	0.00	0.00	-71.23
39	0.00	-3.50	64.92	0.00	0.00	0.00	71.23
54	0.00	0.00	1.09	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

DESBLOQUEO fase6.1

[1; 1]desbloqeo

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.34	0.00	0.00	0.00	0.00
17	0.00	0.00	-0.34	0.00	0.00	0.00	0.00
39	0.00	0.00	-0.34	0.00	0.00	0.00	0.00
54	0.00	0.00	0.34	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

propio de losa 2(completa)

plosa2

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	60.21	0.00	0.00	0.00	0.00
17	0.00	0.00	110.84	0.00	0.00	0.00	0.00
39	0.00	0.00	110.84	0.00	0.00	0.00	0.00
54	0.00	0.00	60.21	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

GRADIENTE

[1; 1]GRADIENTE

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	7.84	0.00	0.00	0.00	0.00
17	0.00	0.00	-7.84	0.00	0.00	0.00	0.00
39	0.00	0.00	-7.84	0.00	0.00	0.00	0.00
54	0.00	0.00	7.84	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CARGAS MUERTAS

.m

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	131.63	0.00	0.00	0.00	0.00
17	0.00	0.00	502.26	0.00	0.00	0.00	0.00
39	0.00	0.00	502.26	0.00	0.00	0.00	0.00
54	0.00	0.00	131.63	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

INCREMENTO DE CARGA MUERTA

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	24.93	0.00	0.00	0.00	0.00
17	0.00	0.00	95.12	0.00	0.00	0.00	0.00
39	0.00	0.00	95.12	0.00	0.00	0.00	0.00
54	0.00	0.00	24.93	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Envolvente Tren IPF-75B. FY+

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	239.03	-0.05	-105.82	4.42	0.00
17	0.00	0.00	717.20	0.05	-233.65	4.52	0.00
39	0.00	0.00	717.20	0.05	-233.65	-4.52	0.00
54	0.00	0.00	239.03	-0.05	-105.82	-4.42	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Envolvente Tren IPF-75B. FY-

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	-40.24	0.00	0.00	0.00	0.00
17	0.00	0.00	-8.48	0.00	0.00	0.00	0.00
39	0.00	0.00	-8.48	0.00	0.00	0.00	0.00
54	0.00	0.00	-40.24	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	15.78	0.00	0.00	0.00	0.00
17	0.00	0.00	49.57	0.00	0.00	0.00	0.00
39	0.00	0.00	49.57	0.00	0.00	0.00	0.00
54	0.00	0.00	15.78	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	-3.98	0.00	0.00	0.00	0.00
17	0.00	0.00	-4.79	0.00	0.00	0.00	0.00
39	0.00	0.00	-4.79	0.00	0.00	0.00	0.00
54	0.00	0.00	-3.98	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

pret3.2pretesadoviat.FAM1.TOT + [1; 1]pret3.2pretesadoviat.FAM2.TOT + [1; 1]pret3.2pretesadoviat.FAM3.TOT + [1; 1]pret3.2pretesadoviat.FAM4.TOT + [1; 1]pret

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.12	0.66	0.00	0.00	0.00	0.00
17	0.00	-0.12	-0.66	0.00	0.00	0.00	7.63
39	0.00	0.12	-0.66	0.00	0.00	0.00	-7.63
54	0.00	-0.12	0.66	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

[1; 1]pret4.2pretesadovc.FAM1.TOT + [1; 1]pret4.2pretesadovc.FAM2.TOT + [1; 1]pret4.2pretesadovc.FAM3.TOT + [1; 1]pret4.2pretesadovc.FAM4.TOT + [1; 1]pret4.2pretesadovc.FAM5.TOT + [1; 1]pret4.2pretesadovc.FAM6.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pretensado Total (t=0)

...et5.1barracorta.FAM1.TOT + [1; 1]pret5.1barracorta.FAM2.TOT + [1; 1]pret5.1barracorta.FAM3.TOT + [1; 1]pret5.1barracorta.FAM4.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.88	0.00	0.00	0.00	0.00
17	0.00	-43.47	-0.88	0.00	0.00	0.00	33.60
39	0.00	43.47	-0.88	0.00	0.00	0.00	-33.60
54	0.00	0.00	0.88	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pretensado Total (t=0)

[1; 1]pret7.1contvc.FAM1.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	8.37	0.00	0.00	0.00	0.00
17	0.00	0.00	-8.24	0.00	0.00	0.00	0.00
39	0.00	0.00	-8.51	0.00	0.00	0.00	0.00
54	0.00	0.00	8.46	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

[redacted]8.1contvlat.FAM1.TOT + [1; 1]pret8.1contvlat.FAM2.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	7.50	0.00	0.00	0.00	0.00
17	0.00	0.00	-7.46	0.00	0.00	0.00	0.00
39	0.00	0.00	-7.46	0.00	0.00	0.00	0.00
54	0.00	0.00	7.50	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

[1; 1]pret9.1postlosa219.FAM1.TOT + [1; 1]pret9.1postlosa219.FAM2.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	-4.06	0.00	0.00	0.00	0.00
17	0.00	0.00	3.94	0.00	0.00	0.00	0.00
39	0.00	0.00	3.94	0.00	0.00	0.00	0.00
54	0.00	0.00	-4.06	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

ensado Total (t=0)

et219vcentF11.FAM1.TOT + [1; 1]pret219vcentF11.FAM2.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	32.25	0.00	0.00	0.00	0.00
17	0.00	0.00	-32.19	0.00	0.00	0.00	0.00
39	0.00	0.00	-32.19	0.00	0.00	0.00	0.00
54	0.00	0.00	32.25	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

[1; 1]pret15.19viatF12.FAM1.TOT + [1; 1]pret15.19viatF12.FAM2.TOT + [1; 1]pret15.19viatF12.FAM3.TOT + [1; 1]pret15.19viatF12.FAM4.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	25.02	0.00	0.00	0.00	0.00
17	0.00	0.00	-24.96	0.00	0.00	0.00	0.00
39	0.00	0.00	-24.96	0.00	0.00	0.00	0.00
54	0.00	0.00	25.02	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

nsado Total (t=0)

[redacted]4419losaF13.FAM1.TOT + [1; 1]pret419losaF13.FAM2.TOT + [1; 1]pret419losaF13.FAM3.TOT + [1; 1]pret419losaF13.FAM4.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	-25.20	0.00	0.00	0.00	0.00
17	0.00	0.00	24.83	0.00	0.00	0.00	0.00
39	0.00	0.00	24.83	0.00	0.00	0.00	0.00
54	0.00	0.00	-25.20	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

peso propio de capiteles in situ Fase1.1

[1; 1]ppcapi14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	1.02	0.00	0.00	0.00	0.00
17	0.00	0.00	650.32	0.00	0.00	0.00	0.00
39	0.00	0.00	650.20	0.00	0.00	0.00	0.00
54	0.00	0.00	0.98	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

...so propio de vanos laterales.Artesa

...ppviat14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	83.22	0.00	0.00	0.00	0.00
17	0.00	0.00	62.15	0.00	0.00	0.00	0.00
39	0.00	0.00	62.15	0.00	0.00	0.00	0.00
54	0.00	0.00	83.22	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

pp artesas de vano central

[1; 1]pvcen14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	-17.94	0.00	0.00	0.00	0.00
17	0.00	0.00	90.67	0.00	0.00	0.00	0.00
39	0.00	0.00	90.67	0.00	0.00	0.00	0.00
54	0.00	0.00	-17.94	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

o propio de prelosa

[1: 1]pprel14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	16.50	0.00	0.00	0.00	0.00
17	0.00	0.00	42.88	0.00	0.00	0.00	0.00
39	0.00	0.00	42.88	0.00	0.00	0.00	0.00
54	0.00	0.00	16.50	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

pp losa cerca de capiteles FASE4.2

[1: 1]pp1losa14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	6.99	0.00	0.00	0.00	0.00
17	0.00	0.00	100.23	0.00	0.00	0.00	0.00
39	0.00	0.00	100.23	0.00	0.00	0.00	0.00
54	0.00	0.00	6.99	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

BLOQUEO fase6.1

esbl14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	0.32	0.00	0.00	0.00	0.00
17	0.00	0.00	-0.32	0.00	0.00	0.00	0.00
39	0.00	0.00	-0.32	0.00	0.00	0.00	0.00
54	0.00	0.00	0.32	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

peso propio de losa 2(completa)

[1; 1]p2losa14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	59.00	0.00	0.00	0.00	0.00
17	0.00	0.00	71.31	0.00	0.00	0.00	0.00
39	0.00	0.00	71.31	0.00	0.00	0.00	0.00
54	0.00	0.00	59.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

sado fase 1.2 capitel superior

rsupc14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	-8.14	0.00	0.00	0.00	0.00
17	0.00	0.00	6.93	0.00	0.00	0.00	0.00
39	0.00	0.00	6.93	0.00	0.00	0.00	0.00
54	0.00	0.00	-8.14	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

postesado inferior de capitel fase2.1

[1; 1]Prinfc14

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	8.42	0.00	0.00	0.00	0.00
17	0.00	0.00	-8.14	0.00	0.00	0.00	0.00
39	0.00	0.00	-8.14	0.00	0.00	0.00	0.00
54	0.00	0.00	8.42	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pretensado Total (t=0)

et3.2pretesadoviat14.FAM1.TOT + [1; 1]pret3.2pretesadoviat14.FAM2.TOT + [1; 1]pret3.2pretesadoviat14.FAM3.TOT + [1; 1]pret3.2pretesadoviat14.FAM4.TOT +

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	15.28	0.00	0.00	0.00	0.00
17	0.00	0.00	-15.28	0.00	0.00	0.00	0.00
39	0.00	0.00	-15.28	0.00	0.00	0.00	0.00
54	0.00	0.00	15.28	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pretensado Total (t=0)

[1; 1]pret4.2vc14.FAM1.TOT + [1; 1]pret4.2vc14.FAM2.TOT + [1; 1]pret4.2vc14.FAM3.TOT + [1; 1]pret4.2vc14.FAM4.TOT + [1; 1]pret4.2vc14.FAM5.TOT + [1; 1]pret4.2

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	21.82	0.00	0.00	0.00	0.00
17	0.00	0.00	-21.82	0.00	0.00	0.00	0.00
39	0.00	0.00	-21.82	0.00	0.00	0.00	0.00
54	0.00	0.00	21.82	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

[redacted]ret5.1barracorta14.FAM1.TOT + [1; 1]pret5.1barracorta14.FAM2.TOT + [1; 1]pret5.1barracorta14.FAM3.TOT + [1; 1]pret5.1barracorta14.FAM4.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	1.55	0.00	0.00	0.00	0.00
17	0.00	0.00	-1.55	0.00	0.00	0.00	0.00
39	0.00	0.00	-1.55	0.00	0.00	0.00	0.00
54	0.00	0.00	1.55	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

[1; 1]pret7.1contvc14.FAM1.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	12.89	0.00	0.00	0.00	0.00
17	0.00	0.00	-12.73	0.00	0.00	0.00	0.00
39	0.00	0.00	-13.09	0.00	0.00	0.00	0.00
54	0.00	0.00	13.02	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

tensado Total (t=0)

/ret8.1contviat14.FAM1.TOT + [1; 1]pret8.1contviat14.FAM2.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	10.87	0.00	0.00	0.00	0.00
17	0.00	0.00	-10.82	0.00	0.00	0.00	0.00
39	0.00	0.00	-10.82	0.00	0.00	0.00	0.00
54	0.00	0.00	10.87	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

Pretensado Total (t=0)

[1; 1]pret9.1postlosa14.FAM1.TOT + [1; 1]pret9.1postlosa14.FAM2.TOT

Coef. exc:

Nudo	X	Fx (T)	Fy (T)	Fz (T)	Mx (Tm)	My (Tm)	Mz (Tm)
2	0.00	0.00	-7.96	0.00	0.00	0.00	0.00
17	0.00	0.00	7.84	0.00	0.00	0.00	0.00
39	0.00	0.00	7.84	0.00	0.00	0.00	0.00
54	0.00	0.00	-7.96	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[redacted]

[redacted]rente Tren IPF-75B. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
2	0.00	239.03	-105.82
17	0.00	717.20	-233.65
39	0.00	717.20	-233.65
54	0.00	239.03	-105.82

Comprobación de Reacciones de trenes en modelo viga.

[redacted]

Envolvente Tren IPF-75B. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
2	0.00	-40.24	0.00
17	0.00	-8.48	0.00
39	0.00	-8.48	0.00
54	0.00	-40.24	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY+

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
2	0.00	252.51	0.00
17	0.00	793.13	0.00
39	0.00	793.13	0.00
54	0.00	252.51	0.00

[redacted]

Envolvente de tren de cargas plano genérico. FY-

Coef. exc:

Nudo	X	Fy (T)	Mx (Tm)
2	0.00	-63.67	0.00
17	0.00	-76.57	0.00
39	0.00	-76.57	0.00
54	0.00	-63.67	0.00

Anexo Nº 2.3.7.2.2. Movimientos modelo viga

7.2.2. Movimientos modelo viga.

PESO PROPIO TOTAL

Cond. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0011
2	5.7170	-0.0059	-0.0009
3	11.4330	-0.0101	-0.0005
4	17.1500	-0.0118	-0.0001
5	22.8670	-0.0108	0.0004
6	28.5830	-0.0078	0.0006
7	34.3000	-0.0043	0.0006
8	36.3000	-0.0033	0.0005
9	38.6500	-0.0022	0.0004
10	41.0000	-0.0013	0.0003
11	43.3500	-0.0006	0.0003
12	45.8500	0.0000	0.0002
13	48.3500	0.0003	0.0001
14	50.7000	0.0005	0.0000
15	53.0500	0.0005	-0.0001
16	55.4000	0.0003	-0.0001
17	57.4000	-0.0001	-0.0002
18	63.2170	-0.0019	-0.0004
19	69.0330	-0.0038	-0.0003
20	74.8500	-0.0046	0.0000
21	80.6670	-0.0038	0.0003
22	86.4830	-0.0019	0.0004
23	92.3000	-0.0001	0.0002
24	94.3000	0.0003	0.0001
25	96.6500	0.0005	0.0001
26	99.0000	0.0005	0.0000
27	101.3500	0.0003	-0.0001
28	103.8500	0.0000	-0.0002
29	106.3500	-0.0006	-0.0003
30	108.7000	-0.0013	-0.0003
31	111.0500	-0.0022	-0.0004
32	113.4000	-0.0033	-0.0005
33	115.4000	-0.0043	-0.0006
34	121.1170	-0.0078	-0.0006
35	126.8330	-0.0108	-0.0004
36	132.5500	-0.0118	0.0001
37	138.2670	-0.0101	0.0005
38	143.9830	-0.0059	0.0009
39	149.7000	0.0000	0.0011
101	0.0000	0.0000	-0.0011
102	5.7170	-0.0059	-0.0009
103	11.4330	-0.0101	-0.0005
104	17.1500	-0.0118	-0.0001
105	22.8670	-0.0108	0.0004
106	28.5830	-0.0078	0.0006
107	34.3000	-0.0043	0.0006
108	36.3000	-0.0033	0.0005
109	38.6500	-0.0022	0.0004
110	41.0000	-0.0013	0.0003
111	43.3500	-0.0006	0.0003
112	45.8500	0.0000	0.0002
113	48.3500	0.0003	0.0001
114	50.7000	0.0005	0.0000
115	53.0500	0.0005	-0.0001
116	55.4000	0.0003	-0.0001
117	57.4000	-0.0001	-0.0002
118	63.2170	-0.0019	-0.0004
119	69.0330	-0.0038	-0.0003
120	74.8500	-0.0046	0.0000
121	80.6670	-0.0038	0.0003
122	86.4830	-0.0019	0.0004
123	92.3000	-0.0001	0.0002
124	94.3000	0.0003	0.0001
125	96.6500	0.0005	0.0001
126	99.0000	0.0005	0.0000
127	101.3500	0.0003	-0.0001
128	103.8500	0.0000	-0.0002
129	106.3500	-0.0006	-0.0003
130	108.7000	-0.0013	-0.0003
131	111.0500	-0.0022	-0.0004
132	113.4000	-0.0033	-0.0005
133	115.4000	-0.0043	-0.0006
134	121.1170	-0.0078	-0.0006
135	126.8330	-0.0108	-0.0004
136	132.5500	-0.0118	0.0001
137	138.2670	-0.0101	0.0005
138	143.9830	-0.0059	0.0009
139	149.7000	0.0000	0.0011

CRAGAS MUERTAS TOTALES

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0009
2	5.7170	-0.0049	-0.0008
3	11.4330	-0.0084	-0.0004
4	17.1500	-0.0098	-0.0001
5	22.8670	-0.0090	0.0003
6	28.5830	-0.0065	0.0005
7	34.3000	-0.0036	0.0005
8	36.3000	-0.0027	0.0004
9	38.6500	-0.0018	0.0003
10	41.0000	-0.0011	0.0003
11	43.3500	-0.0005	0.0002
12	45.8500	0.0000	0.0002
13	48.3500	0.0003	0.0001
14	50.7000	0.0006	0.0001
15	53.0500	0.0006	0.0000
16	55.4000	0.0005	-0.0001
17	57.4000	0.0003	-0.0001
18	63.2170	-0.0010	-0.0003
19	69.0330	-0.0026	-0.0002
20	74.8500	-0.0032	0.0000
21	80.6670	-0.0026	0.0002
22	86.4830	-0.0010	0.0003
23	92.3000	0.0003	0.0001
24	94.3000	0.0005	0.0001
25	96.6500	0.0006	0.0000
26	99.0000	0.0006	-0.0001
27	101.3500	0.0003	-0.0001
28	103.8500	0.0000	-0.0002
29	106.3500	-0.0005	-0.0002
30	108.7000	-0.0011	-0.0003
31	111.0500	-0.0018	-0.0003
32	113.4000	-0.0027	-0.0004
33	115.4000	-0.0036	-0.0005
34	121.1170	-0.0065	-0.0005
35	126.8330	-0.0090	-0.0003
36	132.5500	-0.0098	0.0001
37	138.2670	-0.0084	0.0004
38	143.9830	-0.0049	0.0008
39	149.7000	0.0000	0.0009
101	0.0000	0.0000	-0.0010
102	5.7170	-0.0052	-0.0008
103	11.4330	-0.0089	-0.0005
104	17.1500	-0.0104	0.0000
105	22.8670	-0.0095	0.0003
106	28.5830	-0.0068	0.0006
107	34.3000	-0.0037	0.0005
108	36.3000	-0.0028	0.0004
109	38.6500	-0.0019	0.0004
110	41.0000	-0.0011	0.0003
111	43.3500	-0.0005	0.0002
112	45.8500	0.0000	0.0002
113	48.3500	0.0003	0.0001
114	50.7000	0.0005	0.0001
115	53.0500	0.0006	0.0000
116	55.4000	0.0005	-0.0001
117	57.4000	0.0002	-0.0002
118	63.2170	-0.0013	-0.0003
119	69.0330	-0.0029	-0.0002
120	74.8500	-0.0036	0.0000
121	80.6670	-0.0029	0.0002
122	86.4830	-0.0013	0.0003
123	92.3000	0.0002	0.0002
124	94.3000	0.0005	0.0001
125	96.6500	0.0006	0.0000
126	99.0000	0.0005	-0.0001
127	101.3500	0.0003	-0.0001
128	103.8500	0.0000	-0.0002
129	106.3500	-0.0005	-0.0002
130	108.7000	-0.0011	-0.0003
131	111.0500	-0.0019	-0.0004
132	113.4000	-0.0028	-0.0004
133	115.4000	-0.0037	-0.0005
134	121.1170	-0.0068	-0.0006
135	126.8330	-0.0095	-0.0003
136	132.5500	-0.0104	0.0000
137	138.2670	-0.0089	0.0005
138	143.9830	-0.0052	0.0008
139	149.7000	0.0000	0.0010

INCREMENTO DE 30% DE BALASTO

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0002
2	5.7170	-0.0010	-0.0002
3	11.4330	-0.0016	-0.0001
4	17.1500	-0.0019	0.0000
5	22.8670	-0.0018	0.0001
6	28.5830	-0.0013	0.0001
7	34.3000	-0.0007	0.0001
8	36.3000	-0.0005	0.0001
9	38.6500	-0.0004	0.0001
10	41.0000	-0.0002	0.0001
11	43.3500	-0.0001	0.0000
12	45.8500	0.0000	0.0000
13	48.3500	0.0001	0.0000
14	50.7000	0.0001	0.0000
15	53.0500	0.0001	0.0000
16	55.4000	0.0001	0.0000
17	57.4000	0.0001	0.0000
18	63.2170	-0.0002	-0.0001
19	69.0330	-0.0005	0.0000
20	74.8500	-0.0006	0.0000
21	80.6670	-0.0005	0.0000
22	86.4830	-0.0002	0.0001
23	92.3000	0.0001	0.0000
24	94.3000	0.0001	0.0000
25	96.6500	0.0001	0.0000
26	99.0000	0.0001	0.0000
27	101.3500	0.0001	0.0000
28	103.8500	0.0000	0.0000
29	106.3500	-0.0001	0.0000
30	108.7000	-0.0002	-0.0001
31	111.0500	-0.0004	-0.0001
32	113.4000	-0.0005	-0.0001
33	115.4000	-0.0007	-0.0001
34	121.1170	-0.0013	-0.0001
35	126.8330	-0.0018	-0.0001
36	132.5500	-0.0019	0.0000
37	138.2670	-0.0016	0.0001
38	143.9830	-0.0010	0.0002
39	149.7000	0.0000	0.0002
101	0.0000	0.0000	-0.0002
102	5.7170	-0.0010	-0.0002
103	11.4330	-0.0016	-0.0001
104	17.1500	-0.0019	0.0000
105	22.8670	-0.0018	0.0001
106	28.5830	-0.0013	0.0001
107	34.3000	-0.0007	0.0001
108	36.3000	-0.0005	0.0001
109	38.6500	-0.0004	0.0001
110	41.0000	-0.0002	0.0001
111	43.3500	-0.0001	0.0000
112	45.8500	0.0000	0.0000
113	48.3500	0.0001	0.0000
114	50.7000	0.0001	0.0000
115	53.0500	0.0001	0.0000
116	55.4000	0.0001	0.0000
117	57.4000	0.0001	0.0000
118	63.2170	-0.0002	-0.0001
119	69.0330	-0.0005	0.0000
120	74.8500	-0.0006	0.0000
121	80.6670	-0.0005	0.0000
122	86.4830	-0.0002	0.0001
123	92.3000	0.0001	0.0000
124	94.3000	0.0001	0.0000
125	96.6500	0.0001	0.0000
126	99.0000	0.0001	0.0000
127	101.3500	0.0001	0.0000
128	103.8500	0.0000	0.0000
129	106.3500	-0.0001	0.0000
130	108.7000	-0.0002	-0.0001
131	111.0500	-0.0004	-0.0001
132	113.4000	-0.0005	-0.0001
133	115.4000	-0.0007	-0.0001
134	121.1170	-0.0013	-0.0001
135	126.8330	-0.0018	-0.0001
136	132.5500	-0.0019	0.0000
137	138.2670	-0.0016	0.0001
138	143.9830	-0.0010	0.0002
139	149.7000	0.0000	0.0002

[redacted]

gradiente sobre los dos nervios

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0002
2	5.7170	0.0009	0.0001
3	11.4330	0.0014	0.0001
4	17.1500	0.0015	0.0000
5	22.8670	0.0014	0.0000
6	28.5830	0.0011	-0.0001
7	34.3000	0.0009	0.0000
8	36.3000	0.0008	-0.0001
9	38.6500	0.0006	-0.0001
10	41.0000	0.0005	-0.0001
11	43.3500	0.0003	-0.0001
12	45.8500	0.0000	-0.0001
13	48.3500	-0.0003	-0.0001
14	50.7000	-0.0006	-0.0002
15	53.0500	-0.0010	-0.0002
16	55.4000	-0.0014	-0.0002
17	57.4000	-0.0017	-0.0002
18	63.2170	-0.0026	-0.0001
19	69.0330	-0.0031	-0.0001
20	74.8500	-0.0033	0.0000
21	80.6670	-0.0031	0.0001
22	86.4830	-0.0026	0.0001
23	92.3000	-0.0017	0.0002
4	94.3000	-0.0014	0.0002
5	96.6500	-0.0010	0.0002
26	99.0000	-0.0006	0.0002
27	101.3500	-0.0003	0.0001
28	103.8500	0.0000	0.0001
29	106.3500	0.0003	0.0001
30	108.7000	0.0005	0.0001
31	111.0500	0.0006	0.0001
32	113.4000	0.0008	0.0001
33	115.4000	0.0009	0.0000
34	121.1170	0.0011	0.0001
35	126.8330	0.0014	0.0000
36	132.5500	0.0015	0.0000
37	138.2670	0.0014	-0.0001
38	143.9830	0.0009	-0.0001
39	149.7000	0.0000	-0.0002
101	0.0000	0.0000	0.0002
102	5.7170	0.0009	0.0001
103	11.4330	0.0014	0.0001
104	17.1500	0.0015	0.0000
105	22.8670	0.0014	0.0000
106	28.5830	0.0011	-0.0001
107	34.3000	0.0009	0.0000
108	36.3000	0.0008	-0.0001
109	38.6500	0.0006	-0.0001
110	41.0000	0.0005	-0.0001
1	43.3500	0.0003	-0.0001
2	45.8500	0.0000	-0.0001
113	48.3500	-0.0003	-0.0001
114	50.7000	-0.0006	-0.0002
115	53.0500	-0.0010	-0.0002
116	55.4000	-0.0014	-0.0002
117	57.4000	-0.0017	-0.0002
118	63.2170	-0.0026	-0.0001
119	69.0330	-0.0031	-0.0001
120	74.8500	-0.0033	0.0000
121	80.6670	-0.0031	0.0001
122	86.4830	-0.0026	0.0001
123	92.3000	-0.0017	0.0002
124	94.3000	-0.0014	0.0002
125	96.6500	-0.0010	0.0002
126	99.0000	-0.0006	0.0002
127	101.3500	-0.0003	0.0001
128	103.8500	0.0000	0.0001
129	106.3500	0.0003	0.0001
130	108.7000	0.0005	0.0001
131	111.0500	0.0006	0.0001
132	113.4000	0.0008	0.0001
133	115.4000	0.0009	0.0000
134	121.1170	0.0011	0.0001
135	126.8330	0.0014	0.0000
136	132.5500	0.0015	0.0000
137	138.2670	0.0014	-0.0001
138	143.9830	0.0009	-0.0001
139	149.7000	0.0000	-0.0002

[redacted]

Envolvente de tren de cargas plano genérico. UY

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	-0.0005	-0.0001
3	11.4330	-0.0010	-0.0001
4	17.1500	-0.0010	0.0000
5	22.8670	-0.0010	0.0000
6	28.5830	-0.0008	0.0000
7	34.3000	-0.0005	0.0001
8	36.3000	-0.0004	0.0000
9	38.6500	-0.0004	0.0000
10	41.0000	0.0000	0.0000
11	43.3500	0.0000	0.0000
12	45.8500	0.0000	0.0000
13	48.3500	0.0000	0.0000
14	50.7000	0.0000	0.0000
15	53.0500	-0.0004	0.0000
16	55.4000	-0.0005	-0.0001
17	57.4000	-0.0006	-0.0001
18	63.2170	-0.0009	-0.0001
19	69.0330	-0.0012	0.0000
20	74.8500	-0.0012	0.0000
21	80.6670	-0.0012	0.0000
22	86.4830	-0.0009	0.0001
23	92.3000	-0.0006	0.0001
24	94.3000	-0.0005	0.0001
25	96.6500	-0.0004	0.0000
26	99.0000	0.0000	0.0000
27	101.3500	0.0000	0.0000
28	103.8500	0.0000	0.0000
29	106.3500	0.0000	0.0000
30	108.7000	0.0000	0.0000
31	111.0500	-0.0004	0.0000
32	113.4000	-0.0004	0.0000
33	115.4000	-0.0005	-0.0001
34	121.1170	-0.0008	0.0000
35	126.8330	-0.0010	0.0000
36	132.5500	-0.0010	0.0000
37	138.2670	-0.0010	0.0001
38	143.9830	-0.0005	0.0001
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	0.0000	0.0000
103	11.4330	-0.0004	0.0000
104	17.1500	-0.0004	0.0000
105	22.8670	-0.0004	0.0000
106	28.5830	-0.0004	0.0000
107	34.3000	-0.0004	0.0000
108	36.3000	-0.0004	0.0000
109	38.6500	-0.0002	0.0000
110	41.0000	0.0000	0.0000
111	43.3500	0.0000	0.0000
112	45.8500	0.0000	0.0000
113	48.3500	0.0000	0.0000
114	50.7000	0.0000	0.0000
115	53.0500	-0.0003	0.0000
116	55.4000	-0.0005	-0.0001
117	57.4000	-0.0005	-0.0001
118	63.2170	-0.0006	0.0000
119	69.0330	-0.0006	0.0000
120	74.8500	-0.0006	0.0000
121	80.6670	-0.0006	0.0000
122	86.4830	-0.0006	0.0000
123	92.3000	-0.0005	0.0001
124	94.3000	-0.0005	0.0001
125	96.6500	-0.0003	0.0000
126	99.0000	0.0000	0.0000
127	101.3500	0.0000	0.0000
128	103.8500	0.0000	0.0000
129	106.3500	0.0000	0.0000
130	108.7000	0.0000	0.0000
131	111.0500	-0.0002	0.0000
132	113.4000	-0.0004	0.0000
133	115.4000	-0.0004	0.0000
134	121.1170	-0.0004	0.0000
135	126.8330	-0.0004	0.0000
136	132.5500	-0.0004	0.0000
137	138.2670	-0.0004	0.0000
138	143.9830	0.0000	0.0000
139	149.7000	0.0000	0.0000

Envolvente de tren de cargas plano genérico. UY-

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	0.0000	0.0000
3	11.4330	-0.0004	0.0000
4	17.1500	-0.0004	0.0000
5	22.8670	-0.0004	0.0000
6	28.5830	-0.0004	0.0000
7	34.3000	-0.0004	0.0000
8	36.3000	-0.0004	0.0000
9	38.6500	-0.0002	0.0000
10	41.0000	0.0000	0.0000
11	43.3500	0.0000	0.0000
12	45.8500	0.0000	0.0000
13	48.3500	0.0000	0.0000
14	50.7000	0.0000	0.0000
15	53.0500	-0.0003	0.0000
16	55.4000	-0.0005	-0.0001
17	57.4000	-0.0005	-0.0001
18	63.2170	-0.0006	0.0000
19	69.0330	-0.0006	0.0000
20	74.8500	-0.0006	0.0000
21	80.6670	-0.0006	0.0000
22	86.4830	-0.0006	0.0000
23	92.3000	-0.0005	0.0001
[illegible]	94.3000	-0.0005	0.0001
[illegible]	96.6500	-0.0003	0.0000
26	99.0000	0.0000	0.0000
27	101.3500	0.0000	0.0000
28	103.8500	0.0000	0.0000
29	106.3500	0.0000	0.0000
30	108.7000	0.0000	0.0000
31	111.0500	-0.0002	0.0000
32	113.4000	-0.0004	0.0000
33	115.4000	-0.0004	0.0000
34	121.1170	-0.0004	0.0000
35	126.8330	-0.0004	0.0000
36	132.5500	-0.0004	0.0000
37	138.2670	-0.0004	0.0000
38	143.9830	0.0000	0.0000
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	-0.0005	-0.0001
103	11.4330	-0.0010	-0.0001
104	17.1500	-0.0010	0.0000
105	22.8670	-0.0010	0.0000
106	28.5830	-0.0008	0.0000
107	34.3000	-0.0005	0.0001
108	36.3000	-0.0004	0.0000
109	38.6500	-0.0004	0.0000
110	41.0000	0.0000	0.0000
[illegible]	43.3500	0.0000	0.0000
[illegible]	45.8500	0.0000	0.0000
113	48.3500	0.0000	0.0000
114	50.7000	0.0000	0.0000
115	53.0500	-0.0004	0.0000
116	55.4000	-0.0005	-0.0001
117	57.4000	-0.0006	-0.0001
118	63.2170	-0.0009	-0.0001
119	69.0330	-0.0012	0.0000
120	74.8500	-0.0012	0.0000
121	80.6670	-0.0012	0.0000
122	86.4830	-0.0009	0.0001
123	92.3000	-0.0006	0.0001
124	94.3000	-0.0005	0.0001
125	96.6500	-0.0004	0.0000
126	99.0000	0.0000	0.0000
127	101.3500	0.0000	0.0000
128	103.8500	0.0000	0.0000
129	106.3500	0.0000	0.0000
130	108.7000	0.0000	0.0000
131	111.0500	-0.0004	0.0000
132	113.4000	-0.0004	0.0000
133	115.4000	-0.0005	-0.0001
134	121.1170	-0.0008	0.0000
135	126.8330	-0.0010	0.0000
136	132.5500	-0.0010	0.0000
[illegible]	138.2670	-0.0010	0.0001
[illegible]	143.9830	-0.0005	0.0001
139	149.7000	0.0000	0.0000

Envolvente de tren de cargas plano genérico. GZ+

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0000
2	5.7170	0.0000	0.0000
3	11.4330	0.0002	0.0000
4	17.1500	0.0000	0.0000
5	22.8670	0.0000	0.0000
6	28.5830	0.0000	0.0000
7	34.3000	-0.0002	0.0000
8	36.3000	-0.0004	0.0000
9	38.6500	-0.0002	0.0000
10	41.0000	0.0000	0.0000
11	43.3500	0.0000	0.0000
12	45.8500	0.0000	0.0000
13	48.3500	0.0000	0.0000
14	50.7000	0.0000	0.0000
15	53.0500	0.0002	0.0000
16	55.4000	0.0003	0.0000
17	57.4000	0.0003	0.0000
18	63.2170	0.0000	0.0000
19	69.0330	0.0000	0.0000
20	74.8500	0.0000	0.0000
21	80.6670	0.0000	0.0000
22	86.4830	0.0000	0.0000
23	92.3000	-0.0005	0.0001
24	94.3000	-0.0005	0.0001
25	96.6500	-0.0003	0.0001
26	99.0000	0.0000	0.0001
27	101.3500	0.0000	0.0001
28	103.8500	0.0000	0.0001
29	106.3500	0.0000	0.0001
30	108.7000	0.0000	0.0001
31	111.0500	0.0002	0.0000
32	113.4000	0.0004	0.0000
33	115.4000	0.0004	0.0000
34	121.1170	0.0000	0.0000
35	126.8330	0.0000	0.0000
36	132.5500	0.0000	0.0000
37	138.2670	-0.0002	0.0000
38	143.9830	0.0000	0.0000
39	149.7000	0.0000	0.0000
101	0.0000	0.0000	0.0000
102	5.7170	0.0000	0.0000
103	11.4330	0.0002	0.0000
104	17.1500	0.0000	0.0000
105	22.8670	-0.0005	0.0000
106	28.5830	-0.0007	0.0000
107	34.3000	-0.0005	0.0001
108	36.3000	-0.0004	0.0001
109	38.6500	-0.0004	0.0001
110	41.0000	0.0000	0.0001
111	43.3500	0.0000	0.0000
112	45.8500	0.0000	0.0000
113	48.3500	0.0000	0.0000
114	50.7000	0.0000	0.0000
115	53.0500	0.0003	0.0000
116	55.4000	0.0004	0.0000
117	57.4000	0.0003	0.0000
118	63.2170	0.0000	0.0000
119	69.0330	0.0000	0.0000
120	74.8500	0.0000	0.0000
121	80.6670	-0.0008	0.0000
122	86.4830	-0.0008	0.0001
123	92.3000	-0.0006	0.0001
124	94.3000	-0.0005	0.0001
125	96.6500	-0.0004	0.0001
126	99.0000	0.0000	0.0001
127	101.3500	0.0000	0.0001
128	103.8500	0.0000	0.0001
129	106.3500	0.0000	0.0001
130	108.7000	0.0000	0.0001
131	111.0500	0.0004	0.0001
132	113.4000	0.0004	0.0000
133	115.4000	0.0004	0.0000
134	121.1170	0.0000	0.0000
135	126.8330	0.0000	0.0000
136	132.5500	-0.0002	0.0000
137	138.2670	-0.0009	0.0001
138	143.9830	-0.0005	0.0001
139	149.7000	0.0000	0.0001

[redacted]

Envolvente de tren de cargas plano genérico. GZ+

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0008
2	5.7170	0.0045	0.0008
3	11.4330	0.0083	0.0006
4	17.1500	0.0081	0.0005
5	22.8670	-0.0016	0.0004
6	28.5830	-0.0179	0.0008
7	34.3000	-0.0132	0.0011
8	36.3000	-0.0113	0.0012
9	38.6500	-0.0082	0.0012
10	41.0000	-0.0055	0.0012
11	43.3500	-0.0027	0.0012
12	45.8500	0.0000	0.0011
13	48.3500	0.0026	0.0011
14	50.7000	0.0055	0.0011
15	53.0500	0.0079	0.0010
16	55.4000	0.0103	0.0010
17	57.4000	0.0123	0.0010
18	63.2170	0.0167	0.0006
19	69.0330	0.0085	0.0004
20	74.8500	-0.0023	0.0005
21	80.6670	-0.0106	0.0006
22	86.4830	-0.0186	0.0010
23	92.3000	-0.0124	0.0011
24	94.3000	-0.0104	0.0011
[illegible]	96.6500	-0.0075	0.0011
26	99.0000	-0.0049	0.0011
27	101.3500	-0.0024	0.0010
28	103.8500	0.0000	0.0010
29	106.3500	0.0024	0.0010
30	108.7000	0.0048	0.0009
31	111.0500	0.0067	0.0009
32	113.4000	0.0088	0.0008
33	115.4000	0.0102	0.0007
34	121.1170	0.0120	0.0002
35	126.8330	-0.0067	0.0001
36	132.5500	-0.0179	0.0005
37	138.2670	-0.0169	0.0011
38	143.9830	-0.0095	0.0015
39	149.7000	0.0000	0.0018
101	0.0000	0.0000	0.0008
102	5.7170	0.0043	0.0007
103	11.4330	0.0082	0.0006
104	17.1500	0.0112	0.0004
105	22.8670	0.0039	0.0002
106	28.5830	-0.0155	0.0005
107	34.3000	-0.0122	0.0009
108	36.3000	-0.0105	0.0010
109	38.6500	-0.0079	0.0011
110	41.0000	-0.0055	0.0011
111	43.3500	-0.0026	0.0011
[illegible]	45.8500	0.0000	0.0011
113	48.3500	0.0026	0.0011
114	50.7000	0.0054	0.0011
115	53.0500	0.0078	0.0010
116	55.4000	0.0101	0.0010
117	57.4000	0.0120	0.0010
118	63.2170	0.0166	0.0006
119	69.0330	0.0085	0.0004
120	74.8500	-0.0004	0.0004
121	80.6670	-0.0101	0.0004
122	86.4830	-0.0165	0.0007
123	92.3000	-0.0112	0.0010
124	94.3000	-0.0098	0.0010
125	96.6500	-0.0071	0.0010
126	99.0000	-0.0048	0.0010
127	101.3500	-0.0024	0.0010
128	103.8500	0.0000	0.0010
129	106.3500	0.0022	0.0010
130	108.7000	0.0047	0.0009
131	111.0500	0.0067	0.0008
132	113.4000	0.0084	0.0008
133	115.4000	0.0101	0.0007
134	121.1170	0.0117	0.0002
135	126.8330	-0.0051	0.0001
136	132.5500	-0.0159	0.0005
137	138.2670	-0.0130	0.0009
[illegible]	143.9830	-0.0070	0.0012
[illegible]	149.7000	0.0000	0.0013

[redacted]

Envolvente de tren de cargas plano genérico. GZ-

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0018
2	5.7170	-0.0095	-0.0015
3	11.4330	-0.0169	-0.0011
4	17.1500	-0.0179	-0.0005
5	22.8670	-0.0067	-0.0001
6	28.5830	0.0120	-0.0002
7	34.3000	0.0102	-0.0007
8	36.3000	0.0088	-0.0008
9	38.6500	0.0067	-0.0009
10	41.0000	0.0048	-0.0009
11	43.3500	0.0024	-0.0010
12	45.8500	0.0000	-0.0010
13	48.3500	-0.0024	-0.0010
14	50.7000	-0.0049	-0.0011
15	53.0500	-0.0075	-0.0011
16	55.4000	-0.0104	-0.0011
17	57.4000	-0.0124	-0.0011
18	63.2170	-0.0186	-0.0010
19	69.0330	-0.0106	-0.0006
20	74.8500	-0.0023	-0.0005
21	80.6670	0.0085	-0.0004
22	86.4830	0.0167	-0.0006
23	92.3000	0.0123	-0.0010
24	94.3000	0.0103	-0.0010
25	96.6500	0.0079	-0.0010
26	99.0000	0.0055	-0.0011
27	101.3500	0.0026	-0.0011
28	103.8500	0.0000	-0.0011
29	106.3500	-0.0027	-0.0012
30	108.7000	-0.0055	-0.0012
31	111.0500	-0.0082	-0.0012
32	113.4000	-0.0113	-0.0012
33	115.4000	-0.0132	-0.0011
34	121.1170	-0.0179	-0.0008
35	126.8330	-0.0016	-0.0004
36	132.5500	0.0081	-0.0005
37	138.2670	0.0083	-0.0006
38	143.9830	0.0045	-0.0008
39	149.7000	0.0000	-0.0008
101	0.0000	0.0000	-0.0013
102	5.7170	-0.0070	-0.0012
103	11.4330	-0.0130	-0.0009
104	17.1500	-0.0159	-0.0005
105	22.8670	-0.0051	-0.0001
106	28.5830	0.0117	-0.0002
107	34.3000	0.0101	-0.0007
108	36.3000	0.0084	-0.0008
109	38.6500	0.0067	-0.0008
110	41.0000	0.0047	-0.0009
111	43.3500	0.0022	-0.0010
112	45.8500	0.0000	-0.0010
113	48.3500	-0.0024	-0.0010
114	50.7000	-0.0048	-0.0010
115	53.0500	-0.0071	-0.0010
116	55.4000	-0.0098	-0.0010
117	57.4000	-0.0112	-0.0010
118	63.2170	-0.0165	-0.0007
119	69.0330	-0.0101	-0.0004
120	74.8500	-0.0004	-0.0004
121	80.6670	0.0085	-0.0004
122	86.4830	0.0166	-0.0006
123	92.3000	0.0120	-0.0010
124	94.3000	0.0101	-0.0010
125	96.6500	0.0078	-0.0010
126	99.0000	0.0054	-0.0011
127	101.3500	0.0026	-0.0011
128	103.8500	0.0000	-0.0011
129	106.3500	-0.0026	-0.0011
130	108.7000	-0.0054	-0.0011
131	111.0500	-0.0079	-0.0011
132	113.4000	-0.0105	-0.0010
133	115.4000	-0.0122	-0.0009
134	121.1170	-0.0155	-0.0005
135	126.8330	0.0039	-0.0002
136	132.5500	0.0112	-0.0004
137	138.2670	0.0082	-0.0006
138	143.9830	0.0043	-0.0007
139	149.7000	0.0000	-0.0008

[redacted]

Envolvente de tren de cargas plano genérico. GZ+

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0008
2	5.7170	0.0048	0.0008
3	11.4330	0.0090	0.0007
4	17.1500	0.0083	0.0005
5	22.8670	-0.0019	0.0005
6	28.5830	-0.0189	0.0008
7	34.3000	-0.0141	0.0012
8	36.3000	-0.0116	0.0013
9	38.6500	-0.0084	0.0012
10	41.0000	-0.0058	0.0012
11	43.3500	-0.0027	0.0012
12	45.8500	0.0000	0.0012
13	48.3500	0.0028	0.0012
14	50.7000	0.0056	0.0012
15	53.0500	0.0083	0.0011
16	55.4000	0.0109	0.0011
17	57.4000	0.0125	0.0010
18	63.2170	0.0173	0.0007
19	69.0330	0.0088	0.0004
20	74.8500	-0.0025	0.0005
21	80.6670	-0.0111	0.0006
22	86.4830	-0.0197	0.0011
23	92.3000	-0.0129	0.0012
24	94.3000	-0.0107	0.0012
25	96.6500	-0.0077	0.0012
26	99.0000	-0.0053	0.0011
27	101.3500	-0.0024	0.0011
28	103.8500	0.0000	0.0010
29	106.3500	0.0024	0.0010
30	108.7000	0.0048	0.0010
31	111.0500	0.0070	0.0009
32	113.4000	0.0092	0.0008
33	115.4000	0.0105	0.0007
34	121.1170	0.0122	0.0002
35	126.8330	-0.0072	0.0001
36	132.5500	-0.0189	0.0005
37	138.2670	-0.0180	0.0011
38	143.9830	-0.0101	0.0016
39	149.7000	0.0000	0.0019
101	0.0000	0.0000	0.0008
102	5.7170	0.0048	0.0008
103	11.4330	0.0087	0.0006
104	17.1500	0.0115	0.0004
105	22.8670	0.0043	0.0002
106	28.5830	-0.0156	0.0005
107	34.3000	-0.0124	0.0010
108	36.3000	-0.0107	0.0010
109	38.6500	-0.0079	0.0011
110	41.0000	-0.0055	0.0011
111	43.3500	-0.0027	0.0011
112	45.8500	0.0000	0.0012
113	48.3500	0.0027	0.0012
114	50.7000	0.0055	0.0011
115	53.0500	0.0080	0.0011
116	55.4000	0.0106	0.0010
117	57.4000	0.0125	0.0010
118	63.2170	0.0170	0.0007
119	69.0330	0.0086	0.0004
120	74.8500	-0.0001	0.0004
121	80.6670	-0.0103	0.0004
122	86.4830	-0.0166	0.0008
123	92.3000	-0.0116	0.0010
124	94.3000	-0.0099	0.0010
125	96.6500	-0.0072	0.0010
126	99.0000	-0.0049	0.0010
127	101.3500	-0.0024	0.0010
128	103.8500	0.0000	0.0010
129	106.3500	0.0024	0.0010
130	108.7000	0.0048	0.0010
131	111.0500	0.0068	0.0009
132	113.4000	0.0091	0.0008
133	115.4000	0.0103	0.0007
134	121.1170	0.0121	0.0002
135	126.8330	-0.0054	0.0001
136	132.5500	-0.0167	0.0005
137	138.2670	-0.0130	0.0009
138	143.9830	-0.0071	0.0012
139	149.7000	0.0000	0.0013

[redacted]

Envolvente de tren de cargas plano genérico. GZ-

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0019
2	5.7170	-0.0101	-0.0016
3	11.4330	-0.0180	-0.0011
4	17.1500	-0.0189	-0.0005
5	22.8670	-0.0072	-0.0001
6	28.5830	0.0122	-0.0002
7	34.3000	0.0105	-0.0007
8	36.3000	0.0092	-0.0008
9	38.6500	0.0070	-0.0009
10	41.0000	0.0048	-0.0010
11	43.3500	0.0024	-0.0010
12	45.8500	0.0000	-0.0010
13	48.3500	-0.0024	-0.0011
14	50.7000	-0.0053	-0.0011
15	53.0500	-0.0077	-0.0012
16	55.4000	-0.0107	-0.0012
17	57.4000	-0.0129	-0.0012
18	63.2170	-0.0197	-0.0011
19	69.0330	-0.0111	-0.0006
20	74.8500	-0.0025	-0.0005
21	80.6670	0.0088	-0.0004
22	86.4830	0.0173	-0.0006
23	92.3000	0.0125	-0.0010
24	94.3000	0.0109	-0.0011
25	96.6500	0.0083	-0.0011
26	99.0000	0.0056	-0.0012
27	101.3500	0.0028	-0.0012
28	103.8500	0.0000	-0.0012
29	106.3500	-0.0027	-0.0012
30	108.7000	-0.0058	-0.0012
31	111.0500	-0.0084	-0.0012
32	113.4000	-0.0116	-0.0013
33	115.4000	-0.0141	-0.0012
34	121.1170	-0.0189	-0.0008
35	126.8330	-0.0019	-0.0005
36	132.5500	0.0083	-0.0005
37	138.2670	0.0090	-0.0007
38	143.9830	0.0048	-0.0008
39	149.7000	0.0000	-0.0008
101	0.0000	0.0000	-0.0013
102	5.7170	-0.0071	-0.0012
103	11.4330	-0.0130	-0.0009
104	17.1500	-0.0167	-0.0005
105	22.8670	-0.0054	-0.0001
106	28.5830	0.0121	-0.0002
107	34.3000	0.0103	-0.0007
108	36.3000	0.0091	-0.0008
109	38.6500	0.0068	-0.0009
110	41.0000	0.0048	-0.0010
111	43.3500	0.0024	-0.0010
112	45.8500	0.0000	-0.0010
113	48.3500	-0.0024	-0.0010
114	50.7000	-0.0049	-0.0010
115	53.0500	-0.0072	-0.0010
116	55.4000	-0.0099	-0.0010
117	57.4000	-0.0116	-0.0010
118	63.2170	-0.0166	-0.0008
119	69.0330	-0.0103	-0.0004
120	74.8500	-0.0001	-0.0004
121	80.6670	0.0086	-0.0004
122	86.4830	0.0170	-0.0006
123	92.3000	0.0125	-0.0010
124	94.3000	0.0106	-0.0010
125	96.6500	0.0080	-0.0011
126	99.0000	0.0055	-0.0011
127	101.3500	0.0027	-0.0012
128	103.8500	0.0000	-0.0012
129	106.3500	-0.0027	-0.0011
130	108.7000	-0.0055	-0.0011
131	111.0500	-0.0079	-0.0011
132	113.4000	-0.0107	-0.0010
133	115.4000	-0.0124	-0.0010
134	121.1170	-0.0156	-0.0005
135	126.8330	0.0043	-0.0002
136	132.5500	0.0115	-0.0004
137	138.2670	0.0087	-0.0006
138	143.9830	0.0048	-0.0008
139	149.7000	0.0000	-0.0008

Envolvente de tren de cargas plano genérico. GZ+

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0008
2	5.7170	0.0043	0.0007
3	11.4330	0.0081	0.0006
4	17.1500	0.0112	0.0004
5	22.8670	0.0034	0.0002
6	28.5830	-0.0154	0.0005
7	34.3000	-0.0121	0.0009
8	36.3000	-0.0102	0.0010
9	38.6500	-0.0079	0.0011
10	41.0000	-0.0053	0.0011
11	43.3500	-0.0026	0.0011
12	45.8500	0.0000	0.0011
13	48.3500	0.0026	0.0011
14	50.7000	0.0054	0.0011
15	53.0500	0.0077	0.0010
16	55.4000	0.0101	0.0010
17	57.4000	0.0120	0.0010
18	63.2170	0.0165	0.0006
19	69.0330	0.0085	0.0004
20	74.8500	-0.0005	0.0004
21	80.6670	-0.0100	0.0004
22	86.4830	-0.0161	0.0007
23	92.3000	-0.0112	0.0010
24	94.3000	-0.0096	0.0010
25	96.6500	-0.0071	0.0010
26	99.0000	-0.0048	0.0010
27	101.3500	-0.0024	0.0010
28	103.8500	0.0000	0.0010
29	106.3500	0.0022	0.0010
30	108.7000	0.0047	0.0009
31	111.0500	0.0066	0.0008
32	113.4000	0.0084	0.0008
33	115.4000	0.0100	0.0007
34	121.1170	0.0116	0.0002
35	126.8330	-0.0051	0.0001
36	132.5500	-0.0157	0.0005
37	138.2670	-0.0126	0.0009
38	143.9830	-0.0069	0.0011
39	149.7000	0.0000	0.0013
101	0.0000	0.0000	0.0008
102	5.7170	0.0045	0.0008
103	11.4330	0.0082	0.0006
104	17.1500	0.0081	0.0005
105	22.8670	-0.0016	0.0004
106	28.5830	-0.0179	0.0008
107	34.3000	-0.0132	0.0011
108	36.3000	-0.0113	0.0012
109	38.6500	-0.0082	0.0012
110	41.0000	-0.0055	0.0012
1	43.3500	-0.0027	0.0012
2	45.8500	0.0000	0.0011
113	48.3500	0.0026	0.0011
114	50.7000	0.0055	0.0011
115	53.0500	0.0079	0.0010
116	55.4000	0.0103	0.0010
117	57.4000	0.0122	0.0010
118	63.2170	0.0167	0.0006
119	69.0330	0.0085	0.0004
120	74.8500	-0.0022	0.0005
121	80.6670	-0.0106	0.0006
122	86.4830	-0.0185	0.0010
123	92.3000	-0.0124	0.0011
124	94.3000	-0.0103	0.0011
125	96.6500	-0.0074	0.0011
126	99.0000	-0.0049	0.0011
127	101.3500	-0.0024	0.0010
128	103.8500	0.0000	0.0010
129	106.3500	0.0023	0.0010
130	108.7000	0.0048	0.0009
131	111.0500	0.0067	0.0009
132	113.4000	0.0087	0.0008
133	115.4000	0.0102	0.0007
134	121.1170	0.0118	0.0002
135	126.8330	-0.0067	0.0001
136	132.5500	-0.0179	0.0005
137	138.2670	-0.0169	0.0011
3	143.9830	-0.0094	0.0015
139	149.7000	0.0000	0.0018

Envolvente de tren de cargas plano genérico. GZ-

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0013
2	5.7170	-0.0069	-0.0011
3	11.4330	-0.0126	-0.0009
4	17.1500	-0.0157	-0.0005
5	22.8670	-0.0051	-0.0001
6	28.5830	0.0116	-0.0002
7	34.3000	0.0100	-0.0007
8	36.3000	0.0084	-0.0008
9	38.6500	0.0066	-0.0008
10	41.0000	0.0047	-0.0009
11	43.3500	0.0022	-0.0010
12	45.8500	0.0000	-0.0010
13	48.3500	-0.0024	-0.0010
14	50.7000	-0.0048	-0.0010
15	53.0500	-0.0071	-0.0010
16	55.4000	-0.0096	-0.0010
17	57.4000	-0.0112	-0.0010
18	63.2170	-0.0161	-0.0007
19	69.0330	-0.0100	-0.0004
20	74.8500	-0.0005	-0.0004
21	80.6670	0.0085	-0.0004
22	86.4830	0.0165	-0.0006
23	92.3000	0.0120	-0.0010
24	94.3000	0.0101	-0.0010
25	96.6500	0.0077	-0.0010
26	99.0000	0.0054	-0.0011
27	101.3500	0.0026	-0.0011
28	103.8500	0.0000	-0.0011
29	106.3500	-0.0026	-0.0011
30	108.7000	-0.0053	-0.0011
31	111.0500	-0.0079	-0.0011
32	113.4000	-0.0102	-0.0010
33	115.4000	-0.0121	-0.0009
34	121.1170	-0.0154	-0.0005
35	126.8330	0.0034	-0.0002
36	132.5500	0.0112	-0.0004
37	138.2670	0.0081	-0.0006
38	143.9830	0.0043	-0.0007
39	149.7000	0.0000	-0.0008
101	0.0000	0.0000	-0.0018
102	5.7170	-0.0094	-0.0015
103	11.4330	-0.0169	-0.0011
104	17.1500	-0.0179	-0.0005
105	22.8670	-0.0067	-0.0001
106	28.5830	0.0118	-0.0002
107	34.3000	0.0102	-0.0007
108	36.3000	0.0087	-0.0008
109	38.6500	0.0067	-0.0009
110	41.0000	0.0048	-0.0009
111	43.3500	0.0023	-0.0010
112	45.8500	0.0000	-0.0010
113	48.3500	-0.0024	-0.0010
114	50.7000	-0.0049	-0.0011
115	53.0500	-0.0074	-0.0011
116	55.4000	-0.0103	-0.0011
117	57.4000	-0.0124	-0.0011
118	63.2170	-0.0185	-0.0010
119	69.0330	-0.0106	-0.0006
120	74.8500	-0.0022	-0.0005
121	80.6670	0.0085	-0.0004
122	86.4830	0.0167	-0.0006
123	92.3000	0.0122	-0.0010
124	94.3000	0.0103	-0.0010
125	96.6500	0.0079	-0.0010
126	99.0000	0.0055	-0.0011
127	101.3500	0.0026	-0.0011
128	103.8500	0.0000	-0.0011
129	106.3500	-0.0027	-0.0012
130	108.7000	-0.0055	-0.0012
131	111.0500	-0.0082	-0.0012
132	113.4000	-0.0113	-0.0012
133	115.4000	-0.0132	-0.0011
134	121.1170	-0.0179	-0.0008
135	126.8330	-0.0016	-0.0004
136	132.5500	0.0081	-0.0005
137	138.2670	0.0082	-0.0006
138	143.9830	0.0045	-0.0008
139	149.7000	0.0000	-0.0008

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Envolvente de tren de cargas plano genérico. GZ+

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0008
2	5.7170	0.0043	0.0007
3	11.4330	0.0078	0.0006
4	17.1500	0.0105	0.0004
5	22.8670	0.0032	0.0002
6	28.5830	-0.0149	0.0005
7	34.3000	-0.0116	0.0009
8	36.3000	-0.0097	0.0010
9	38.6500	-0.0075	0.0010
10	41.0000	-0.0050	0.0011
11	43.3500	-0.0025	0.0011
12	45.8500	0.0000	0.0011
13	48.3500	0.0025	0.0011
14	50.7000	0.0051	0.0010
15	53.0500	0.0073	0.0010
16	55.4000	0.0095	0.0009
17	57.4000	0.0118	0.0009
18	63.2170	0.0156	0.0006
19	69.0330	0.0081	0.0003
20	74.8500	-0.0003	0.0003
21	80.6670	-0.0098	0.0004
22	86.4830	-0.0155	0.0007
23	92.3000	-0.0108	0.0009
1	94.3000	-0.0089	0.0009
5	96.6500	-0.0068	0.0010
26	99.0000	-0.0047	0.0010
27	101.3500	-0.0022	0.0010
28	103.8500	0.0000	0.0009
29	106.3500	0.0022	0.0009
30	108.7000	0.0043	0.0009
31	111.0500	0.0062	0.0008
32	113.4000	0.0080	0.0007
33	115.4000	0.0096	0.0007
34	121.1170	0.0111	0.0002
35	126.8330	-0.0049	0.0001
36	132.5500	-0.0152	0.0004
37	138.2670	-0.0123	0.0009
38	143.9830	-0.0067	0.0011
39	149.7000	0.0000	0.0012
101	0.0000	0.0000	0.0008
102	5.7170	0.0043	0.0007
103	11.4330	0.0079	0.0006
104	17.1500	0.0077	0.0005
105	22.8670	-0.0024	0.0004
106	28.5830	-0.0171	0.0007
107	34.3000	-0.0126	0.0011
108	36.3000	-0.0109	0.0011
109	38.6500	-0.0080	0.0011
110	41.0000	-0.0052	0.0011
	43.3500	-0.0025	0.0011
2	45.8500	0.0000	0.0011
113	48.3500	0.0026	0.0011
114	50.7000	0.0052	0.0011
115	53.0500	0.0073	0.0010
116	55.4000	0.0097	0.0010
117	57.4000	0.0119	0.0009
118	63.2170	0.0158	0.0006
119	69.0330	0.0081	0.0003
120	74.8500	-0.0023	0.0004
121	80.6670	-0.0100	0.0006
122	86.4830	-0.0179	0.0009
123	92.3000	-0.0117	0.0011
124	94.3000	-0.0099	0.0011
125	96.6500	-0.0072	0.0011
126	99.0000	-0.0048	0.0010
127	101.3500	-0.0023	0.0010
128	103.8500	0.0000	0.0010
129	106.3500	0.0022	0.0009
130	108.7000	0.0043	0.0009
131	111.0500	0.0063	0.0008
132	113.4000	0.0081	0.0008
133	115.4000	0.0097	0.0007
134	121.1170	0.0113	0.0002
135	126.8330	-0.0064	0.0001
136	132.5500	-0.0169	0.0004
7	138.2670	-0.0162	0.0010
	143.9830	-0.0089	0.0015
39	149.7000	0.0000	0.0016

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Envolvente de tren de cargas plano genérico. GZ-

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0012
2	5.7170	-0.0067	-0.0011
3	11.4330	-0.0123	-0.0009
4	17.1500	-0.0152	-0.0004
5	22.8670	-0.0049	-0.0001
6	28.5830	0.0111	-0.0002
7	34.3000	0.0096	-0.0007
8	36.3000	0.0080	-0.0007
9	38.6500	0.0062	-0.0008
10	41.0000	0.0043	-0.0009
11	43.3500	0.0022	-0.0009
12	45.8500	0.0000	-0.0009
13	48.3500	-0.0022	-0.0010
14	50.7000	-0.0047	-0.0010
15	53.0500	-0.0068	-0.0010
16	55.4000	-0.0089	-0.0009
17	57.4000	-0.0108	-0.0009
18	63.2170	-0.0155	-0.0007
19	69.0330	-0.0098	-0.0004
20	74.8500	-0.0003	-0.0003
21	80.6670	0.0081	-0.0003
22	86.4830	0.0156	-0.0006
23	92.3000	0.0118	-0.0009
24	94.3000	0.0095	-0.0009
25	96.6500	0.0073	-0.0010
26	99.0000	0.0051	-0.0010
27	101.3500	0.0025	-0.0011
28	103.8500	0.0000	-0.0011
29	106.3500	-0.0025	-0.0011
30	108.7000	-0.0050	-0.0011
31	111.0500	-0.0075	-0.0010
32	113.4000	-0.0097	-0.0010
33	115.4000	-0.0116	-0.0009
34	121.1170	-0.0149	-0.0005
35	126.8330	0.0032	-0.0002
36	132.5500	0.0105	-0.0004
37	138.2670	0.0078	-0.0006
38	143.9830	0.0043	-0.0007
39	149.7000	0.0000	-0.0008
101	0.0000	0.0000	-0.0016
102	5.7170	-0.0089	-0.0015
103	11.4330	-0.0162	-0.0010
104	17.1500	-0.0169	-0.0004
105	22.8670	-0.0064	-0.0001
106	28.5830	0.0113	-0.0002
107	34.3000	0.0097	-0.0007
108	36.3000	0.0081	-0.0008
109	38.6500	0.0063	-0.0008
110	41.0000	0.0043	-0.0009
111	43.3500	0.0022	-0.0009
112	45.8500	0.0000	-0.0010
113	48.3500	-0.0023	-0.0010
114	50.7000	-0.0048	-0.0010
115	53.0500	-0.0072	-0.0011
116	55.4000	-0.0099	-0.0011
117	57.4000	-0.0117	-0.0011
118	63.2170	-0.0179	-0.0009
119	69.0330	-0.0100	-0.0006
120	74.8500	-0.0023	-0.0004
121	80.6670	0.0081	-0.0003
122	86.4830	0.0158	-0.0006
123	92.3000	0.0119	-0.0009
124	94.3000	0.0097	-0.0009
125	96.6500	0.0073	-0.0010
126	99.0000	0.0052	-0.0011
127	101.3500	0.0026	-0.0011
128	103.8500	0.0000	-0.0011
129	106.3500	-0.0025	-0.0011
130	108.7000	-0.0052	-0.0011
131	111.0500	-0.0080	-0.0011
132	113.4000	-0.0109	-0.0011
133	115.4000	-0.0126	-0.0011
134	121.1170	-0.0171	-0.0007
135	126.8330	-0.0024	-0.0004
136	132.5500	0.0077	-0.0005
137	138.2670	0.0079	-0.0006
138	143.9830	0.0043	-0.0007
139	149.7000	0.0000	-0.0008

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Envolvente de tren de cargas plano genérico. GZ+

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0008
2	5.7170	0.0047	0.0008
3	11.4330	0.0083	0.0006
4	17.1500	0.0114	0.0004
5	22.8670	0.0040	0.0002
6	28.5830	-0.0156	0.0005
7	34.3000	-0.0124	0.0010
8	36.3000	-0.0106	0.0010
9	38.6500	-0.0079	0.0011
10	41.0000	-0.0055	0.0011
11	43.3500	-0.0027	0.0011
12	45.8500	0.0000	0.0012
13	48.3500	0.0027	0.0012
14	50.7000	0.0055	0.0011
15	53.0500	0.0080	0.0011
16	55.4000	0.0103	0.0010
17	57.4000	0.0124	0.0010
18	63.2170	0.0169	0.0006
19	69.0330	0.0085	0.0004
20	74.8500	-0.0002	0.0004
21	80.6670	-0.0103	0.0004
22	86.4830	-0.0166	0.0008
23	92.3000	-0.0115	0.0010
24	94.3000	-0.0099	0.0010
25	96.6500	-0.0072	0.0010
26	99.0000	-0.0049	0.0010
27	101.3500	-0.0024	0.0010
28	103.8500	0.0000	0.0010
29	106.3500	0.0024	0.0010
30	108.7000	0.0048	0.0009
31	111.0500	0.0067	0.0009
32	113.4000	0.0089	0.0008
33	115.4000	0.0103	0.0007
34	121.1170	0.0120	0.0002
35	126.8330	-0.0053	0.0001
36	132.5500	-0.0166	0.0005
37	138.2670	-0.0129	0.0009
38	143.9830	-0.0070	0.0012
39	149.7000	0.0000	0.0013
101	0.0000	0.0000	0.0008
102	5.7170	0.0048	0.0008
103	11.4330	0.0087	0.0006
104	17.1500	0.0083	0.0005
105	22.8670	-0.0018	0.0004
106	28.5830	-0.0183	0.0008
107	34.3000	-0.0137	0.0012
108	36.3000	-0.0114	0.0012
109	38.6500	-0.0084	0.0012
110	41.0000	-0.0056	0.0012
111	43.3500	-0.0027	0.0012
112	45.8500	0.0000	0.0012
113	48.3500	0.0028	0.0012
114	50.7000	0.0056	0.0011
115	53.0500	0.0081	0.0011
116	55.4000	0.0107	0.0010
117	57.4000	0.0125	0.0010
118	63.2170	0.0172	0.0006
119	69.0330	0.0086	0.0004
120	74.8500	-0.0022	0.0005
121	80.6670	-0.0110	0.0006
122	86.4830	-0.0192	0.0010
123	92.3000	-0.0129	0.0012
124	94.3000	-0.0105	0.0012
125	96.6500	-0.0077	0.0011
126	99.0000	-0.0051	0.0011
127	101.3500	-0.0024	0.0011
128	103.8500	0.0000	0.0010
129	106.3500	0.0024	0.0010
130	108.7000	0.0048	0.0010
131	111.0500	0.0069	0.0009
132	113.4000	0.0092	0.0008
133	115.4000	0.0104	0.0007
134	121.1170	0.0121	0.0002
135	126.8330	-0.0071	0.0001
136	132.5500	-0.0184	0.0005
137	138.2670	-0.0174	0.0011
138	143.9830	-0.0098	0.0016
139	149.7000	0.0000	0.0018

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Envolvente de tren de cargas plano genérico. GZ-

Coef. exc:

Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0013
2	5.7170	-0.0070	-0.0012
3	11.4330	-0.0129	-0.0009
4	17.1500	-0.0166	-0.0005
5	22.8670	-0.0053	-0.0001
6	28.5830	0.0120	-0.0002
7	34.3000	0.0103	-0.0007
8	36.3000	0.0089	-0.0008
9	38.6500	0.0067	-0.0009
10	41.0000	0.0048	-0.0009
11	43.3500	0.0024	-0.0010
12	45.8500	0.0000	-0.0010
13	48.3500	-0.0024	-0.0010
14	50.7000	-0.0049	-0.0010
15	53.0500	-0.0072	-0.0010
16	55.4000	-0.0099	-0.0010
17	57.4000	-0.0115	-0.0010
18	63.2170	-0.0166	-0.0007
19	69.0330	-0.0103	-0.0004
20	74.8500	-0.0002	-0.0004
21	80.6670	0.0085	-0.0004
22	86.4830	0.0169	-0.0006
23	92.3000	0.0124	-0.0010
24	94.3000	0.0103	-0.0010
25	96.6500	0.0080	-0.0011
26	99.0000	0.0055	-0.0011
27	101.3500	0.0027	-0.0012
28	103.8500	0.0000	-0.0012
29	106.3500	-0.0027	-0.0011
30	108.7000	-0.0055	-0.0011
31	111.0500	-0.0079	-0.0011
32	113.4000	-0.0106	-0.0010
33	115.4000	-0.0124	-0.0010
34	121.1170	-0.0156	-0.0005
35	126.8330	0.0040	-0.0002
36	132.5500	0.0114	-0.0004
37	138.2670	0.0083	-0.0006
38	143.9830	0.0047	-0.0008
39	149.7000	0.0000	-0.0008
101	0.0000	0.0000	-0.0018
102	5.7170	-0.0098	-0.0016
103	11.4330	-0.0174	-0.0011
104	17.1500	-0.0184	-0.0005
105	22.8670	-0.0071	-0.0001
106	28.5830	0.0121	-0.0002
107	34.3000	0.0104	-0.0007
108	36.3000	0.0092	-0.0008
109	38.6500	0.0069	-0.0009
110	41.0000	0.0048	-0.0010
111	43.3500	0.0024	-0.0010
112	45.8500	0.0000	-0.0010
113	48.3500	-0.0024	-0.0011
114	50.7000	-0.0051	-0.0011
115	53.0500	-0.0077	-0.0011
116	55.4000	-0.0105	-0.0012
117	57.4000	-0.0129	-0.0012
118	63.2170	-0.0192	-0.0010
119	69.0330	-0.0110	-0.0006
120	74.8500	-0.0022	-0.0005
121	80.6670	0.0086	-0.0004
122	86.4830	0.0172	-0.0006
123	92.3000	0.0125	-0.0010
124	94.3000	0.0107	-0.0010
125	96.6500	0.0081	-0.0011
126	99.0000	0.0056	-0.0011
127	101.3500	0.0028	-0.0012
128	103.8500	0.0000	-0.0012
129	106.3500	-0.0027	-0.0012
130	108.7000	-0.0056	-0.0012
131	111.0500	-0.0084	-0.0012
132	113.4000	-0.0114	-0.0012
133	115.4000	-0.0137	-0.0012
134	121.1170	-0.0183	-0.0008
135	126.8330	-0.0018	-0.0004
136	132.5500	0.0083	-0.0005
137	138.2670	0.0087	-0.0006
138	143.9830	0.0048	-0.0008
139	149.7000	0.0000	-0.0008

[redacted]

Envolvente de tren de cargas plano genérico. GZ+

	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	0.0008
2	5.7170	0.0048	0.0008
3	11.4330	0.0087	0.0007
4	17.1500	0.0083	0.0005
5	22.8670	-0.0018	0.0004
6	28.5830	-0.0182	0.0008
7	34.3000	-0.0137	0.0012
8	36.3000	-0.0114	0.0012
9	38.6500	-0.0084	0.0012
10	41.0000	-0.0056	0.0012
11	43.3500	-0.0027	0.0012
12	45.8500	0.0000	0.0012
13	48.3500	0.0028	0.0012
14	50.7000	0.0056	0.0011
15	53.0500	0.0083	0.0011
16	55.4000	0.0107	0.0010
17	57.4000	0.0125	0.0010
18	63.2170	0.0172	0.0006
19	69.0330	0.0086	0.0004
20	74.8500	-0.0022	0.0005
21	80.6670	-0.0110	0.0006
22	86.4830	-0.0192	0.0010
23	92.3000	-0.0129	0.0012
[illegible]	94.3000	-0.0105	0.0012
[illegible]	96.6500	-0.0076	0.0011
26	99.0000	-0.0051	0.0011
27	101.3500	-0.0024	0.0011
28	103.8500	0.0000	0.0010
29	106.3500	0.0024	0.0010
30	108.7000	0.0048	0.0010
31	111.0500	0.0069	0.0009
32	113.4000	0.0092	0.0008
33	115.4000	0.0104	0.0007
34	121.1170	0.0121	0.0002
35	126.8330	-0.0072	0.0001
36	132.5500	-0.0184	0.0005
37	138.2670	-0.0174	0.0011
38	143.9830	-0.0097	0.0016
39	149.7000	0.0000	0.0018
101	0.0000	0.0000	0.0008
102	5.7170	0.0047	0.0008
103	11.4330	0.0084	0.0006
104	17.1500	0.0114	0.0004
105	22.8670	0.0038	0.0002
106	28.5830	-0.0156	0.0005
107	34.3000	-0.0124	0.0010
108	36.3000	-0.0107	0.0010
109	38.6500	-0.0079	0.0011
110	41.0000	-0.0055	0.0011
[illegible]	43.3500	-0.0027	0.0011
[illegible]	45.8500	0.0000	0.0012
113	48.3500	0.0027	0.0012
114	50.7000	0.0055	0.0011
115	53.0500	0.0080	0.0011
116	55.4000	0.0103	0.0010
117	57.4000	0.0124	0.0010
118	63.2170	0.0170	0.0006
119	69.0330	0.0085	0.0004
120	74.8500	-0.0001	0.0004
121	80.6670	-0.0103	0.0005
122	86.4830	-0.0166	0.0008
123	92.3000	-0.0115	0.0010
124	94.3000	-0.0099	0.0010
125	96.6500	-0.0072	0.0010
126	99.0000	-0.0049	0.0010
127	101.3500	-0.0024	0.0010
128	103.8500	0.0000	0.0010
129	106.3500	0.0024	0.0010
130	108.7000	0.0048	0.0009
131	111.0500	0.0067	0.0009
132	113.4000	0.0089	0.0008
133	115.4000	0.0103	0.0007
134	121.1170	0.0120	0.0002
135	126.8330	-0.0053	0.0001
136	132.5500	-0.0166	0.0005
137	138.2670	-0.0131	0.0009
[illegible]	143.9830	-0.0070	0.0012
[illegible]9	149.7000	0.0000	0.0013

[redacted]

Envolvente de tren de cargas plano genérico. GZ-

Coef. exc:

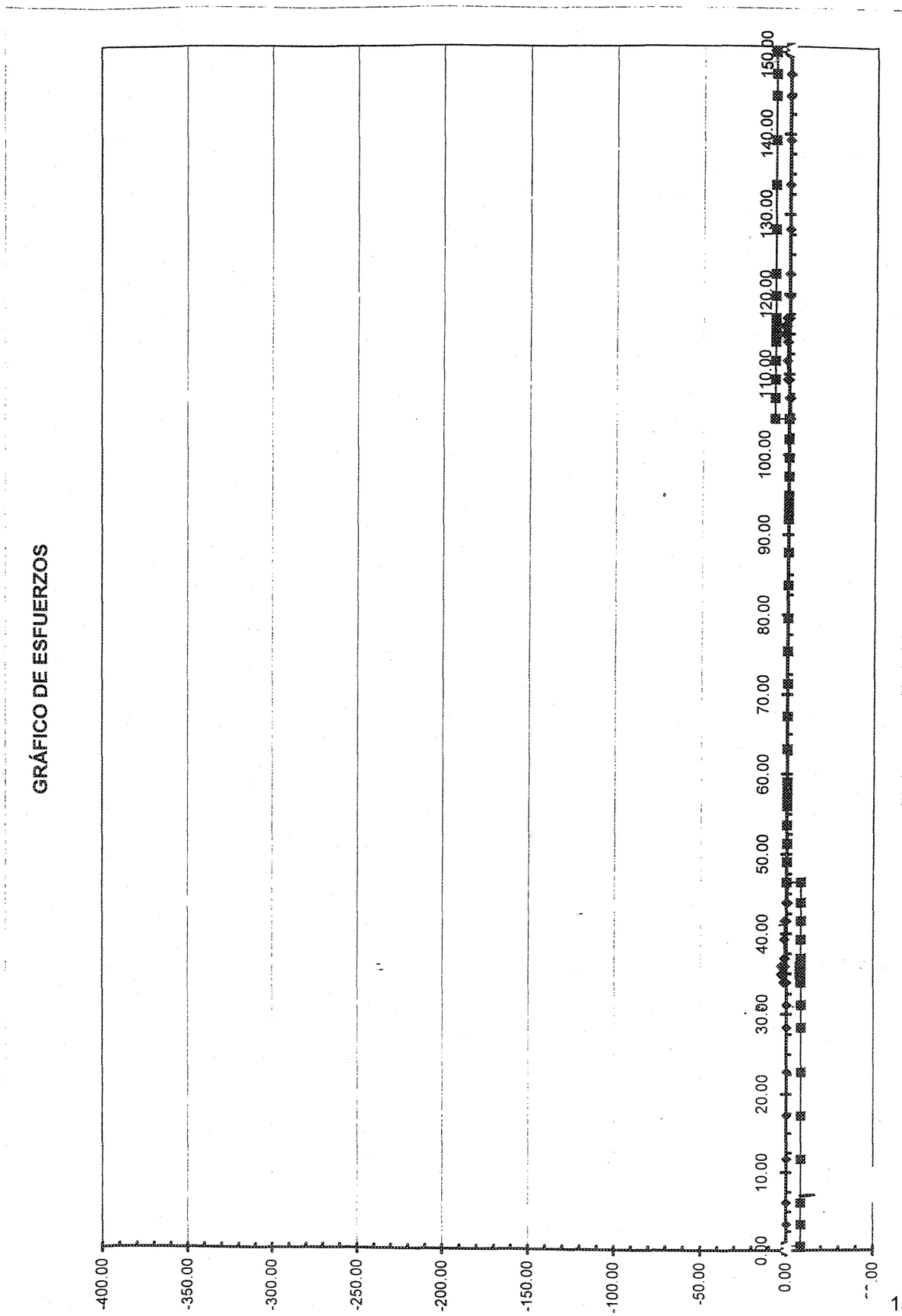
Nudo	X	Uy (m)	Gz (Rad)
1	0.0000	0.0000	-0.0018
2	5.7170	-0.0097	-0.0016
3	11.4330	-0.0174	-0.0011
4	17.1500	-0.0184	-0.0005
5	22.8670	-0.0071	-0.0001
6	28.5830	0.0121	-0.0002
7	34.3000	0.0104	-0.0007
8	36.3000	0.0092	-0.0008
9	38.6500	0.0069	-0.0009
10	41.0000	0.0048	-0.0010
11	43.3500	0.0024	-0.0010
12	45.8500	0.0000	-0.0010
13	48.3500	-0.0024	-0.0011
14	50.7000	-0.0051	-0.0011
15	53.0500	-0.0076	-0.0011
16	55.4000	-0.0105	-0.0012
17	57.4000	-0.0129	-0.0012
18	63.2170	-0.0192	-0.0010
19	69.0330	-0.0110	-0.0006
20	74.8500	-0.0022	-0.0005
21	80.6670	0.0086	-0.0004
22	86.4830	0.0172	-0.0006
23	92.3000	0.0125	-0.0010
24	94.3000	0.0107	-0.0010
25	96.6500	0.0083	-0.0011
26	99.0000	0.0056	-0.0011
27	101.3500	0.0028	-0.0012
28	103.8500	0.0000	-0.0012
29	106.3500	-0.0027	-0.0012
30	108.7000	-0.0056	-0.0012
31	111.0500	-0.0084	-0.0012
32	113.4000	-0.0114	-0.0012
33	115.4000	-0.0137	-0.0012
34	121.1170	-0.0182	-0.0008
35	126.8330	-0.0018	-0.0004
36	132.5500	0.0083	-0.0005
37	138.2670	0.0087	-0.0007
38	143.9830	0.0048	-0.0008
39	149.7000	0.0000	-0.0008
101	0.0000	0.0000	-0.0013
102	5.7170	-0.0070	-0.0012
103	11.4330	-0.0131	-0.0009
104	17.1500	-0.0166	-0.0005
105	22.8670	-0.0053	-0.0001
106	28.5830	0.0120	-0.0002
107	34.3000	0.0103	-0.0007
108	36.3000	0.0089	-0.0008
109	38.6500	0.0067	-0.0009
110	41.0000	0.0048	-0.0009
111	43.3500	0.0024	-0.0010
112	45.8500	0.0000	-0.0010
113	48.3500	-0.0024	-0.0010
114	50.7000	-0.0049	-0.0010
115	53.0500	-0.0072	-0.0010
116	55.4000	-0.0099	-0.0010
117	57.4000	-0.0115	-0.0010
118	63.2170	-0.0166	-0.0008
119	69.0330	-0.0103	-0.0005
120	74.8500	-0.0001	-0.0004
121	80.6670	0.0085	-0.0004
122	86.4830	0.0170	-0.0006
123	92.3000	0.0124	-0.0010
124	94.3000	0.0103	-0.0010
125	96.6500	0.0080	-0.0011
126	99.0000	0.0055	-0.0011
127	101.3500	0.0027	-0.0012
128	103.8500	0.0000	-0.0012
129	106.3500	-0.0027	-0.0011
130	108.7000	-0.0055	-0.0011
131	111.0500	-0.0079	-0.0011
132	113.4000	-0.0107	-0.0010
133	115.4000	-0.0124	-0.0010
134	121.1170	-0.0156	-0.0005
135	126.8330	0.0038	-0.0002
136	132.5500	0.0114	-0.0004
137	138.2670	0.0084	-0.0006
138	143.9830	0.0047	-0.0008
139	149.7000	0.0000	-0.0008

Anexo Nº 2.3.7.2.3. Esfuerzos de hiperestáticos, pérdidas y redistribuciones. Modelo viga

7.2.3. Esfuerzos de hiperestáticos, pérdidas y redistribuciones. Modelo viga.

[1: 1]Peso14 + [-1,-1]Peso15a
Cond. ext.

a	Nudo	X	N (T)	Vy (T)	Mz (Tm)
1	1	0.00	0.00	0.00	0.00
1	2	0.60	0.00	0.00	0.00
2	2	0.60	0.00	8.14	0.00
2	3	3.38	0.00	8.14	-22.58
3	3	3.38	0.00	8.14	-22.58
3	4	6.15	0.00	8.14	-45.17
4	4	6.15	0.00	8.14	-45.17
4	5	11.70	0.00	8.14	-90.33
5	5	11.70	0.00	8.14	-90.33
5	6	17.25	0.00	8.14	-135.50
6	6	17.25	0.00	8.14	-135.50
6	7	22.80	0.00	8.14	-180.66
7	7	22.80	0.00	8.14	-180.66
7	8	28.35	0.00	8.14	-225.83
8	8	28.35	0.00	8.14	-225.83
8	9	31.13	0.00	8.14	-248.41
9	9	31.13	0.00	8.14	-248.41
9	10	33.90	0.00	8.14	-271.00
10	10	33.90	-1.65	7.97	-271.00
10	11	34.90	-1.65	7.97	-279.13
11	11	34.90	-2.98	7.57	-279.13
11	12	35.90	-2.98	7.57	-287.27
12	12	35.90	-0.79	8.10	-287.27
12	13	36.90	-0.79	8.10	-295.41
13	13	36.90	-1.29	8.03	-295.00
13	14	39.25	-1.29	8.03	-314.53
14	14	39.25	-1.19	8.05	-315.00
14	15	41.60	-1.19	8.05	-333.66
15	15	41.60	-0.13	8.13	-334.00
15	16	43.90	-0.13	8.14	-352.38
16	16	43.90	0.80	8.10	-352.00
6	17	46.45	0.81	8.09	-373.13
17	17	46.45	0.00	0.00	-373.00
17	18	49.00	0.00	0.00	-373.13
18	18	49.00	0.00	0.00	-373.00
18	19	51.30	0.00	0.00	-373.13
19	19	51.30	0.00	0.00	-373.00
19	20	53.65	0.00	0.00	-373.13
20	20	53.65	0.00	0.00	-373.00
20	21	56.00	0.00	0.00	-373.13
21	21	56.00	0.00	0.00	-373.13
21	22	57.00	0.00	0.00	-373.13
22	22	57.00	0.00	0.00	-373.13
22	23	58.00	0.00	0.00	-373.13
23	23	58.00	0.00	0.00	-373.13
23	24	59.00	0.00	0.00	-373.13
24	24	59.00	0.00	0.00	-373.13
24	25	63.11	0.00	0.00	-373.13
25	25	63.11	0.00	0.00	-373.13
25	26	67.23	0.00	0.00	-373.13
26	26	67.23	0.00	0.00	-373.13
26	27	71.34	0.00	0.00	-373.13
27	27	71.34	0.00	0.00	-373.13
27	28	75.45	0.00	0.00	-373.13
28	28	75.45	0.00	0.00	-373.13
28	29	79.56	0.00	0.00	-373.13
29	29	79.56	0.00	0.00	-373.13
29	30	83.68	0.00	0.00	-373.13
30	30	83.68	0.00	0.00	-373.13
30	31	87.79	0.00	0.00	-373.13
31	31	87.79	0.00	0.00	-373.13
31	32	91.90	0.00	0.00	-373.13
32	32	91.90	0.00	0.00	-373.13
32	33	92.90	0.00	0.00	-373.13
3	33	92.90	0.00	0.00	-373.13
3	34	93.90	0.00	0.00	-373.13
34	34	93.90	0.00	0.00	-373.13
34	35	94.90	0.00	0.00	-373.13
35	35	94.90	0.00	0.00	-373.00
35	36	97.25	0.00	0.00	-373.13
36	36	97.25	0.00	0.00	-373.00
36	37	99.60	0.00	0.00	-373.13
37	37	99.60	0.00	0.00	-373.00
37	38	101.90	0.00	0.00	-373.13
38	38	101.90	0.00	0.00	-373.00
38	39	104.45	0.00	0.00	-373.13
39	39	104.45	0.81	-8.09	-373.00
39	40	107.00	0.80	-8.10	-352.38
40	40	107.00	-0.13	-8.14	-352.00
40	41	109.30	-0.13	-8.13	-333.66
41	41	109.30	-1.19	-8.05	-334.00
41	42	111.65	-1.19	-8.05	-314.53
42	42	111.65	-1.29	-8.03	-314.00
42	43	114.00	-1.29	-8.03	-295.41
43	43	114.00	-0.79	-8.10	-295.41
43	44	115.00	-0.79	-8.10	-287.27
44	44	115.00	-2.98	-7.57	-287.27
44	45	116.00	-2.98	-7.57	-279.13
45	45	116.00	-1.65	-7.97	-279.13
45	46	117.00	-1.65	-7.97	-271.00
46	46	117.00	0.00	-8.14	-271.00
46	47	119.78	0.00	-8.14	-248.41
47	47	119.78	0.00	-8.14	-248.41
47	48	122.55	0.00	-8.14	-225.83
48	48	122.55	0.00	-8.14	-225.83
48	49	128.10	0.00	-8.14	-180.66
49	49	128.10	0.00	-8.14	-180.66
49	50	133.65	0.00	-8.14	-135.50
50	50	133.65	0.00	-8.14	-135.50
50	51	139.20	0.00	-8.14	-90.33
51	51	139.20	0.00	-8.14	-90.33
51	52	144.75	0.00	-8.14	-45.17
52	52	144.75	0.00	-8.14	-45.17
52	53	147.53	0.00	-8.14	-22.58
53	53	147.53	0.00	-8.14	-22.58
53	54	150.30	0.00	-8.14	0.00
54	54	150.30	0.00	0.00	0.00
54	55	150.90	0.00	0.00	0.00



[redacted]

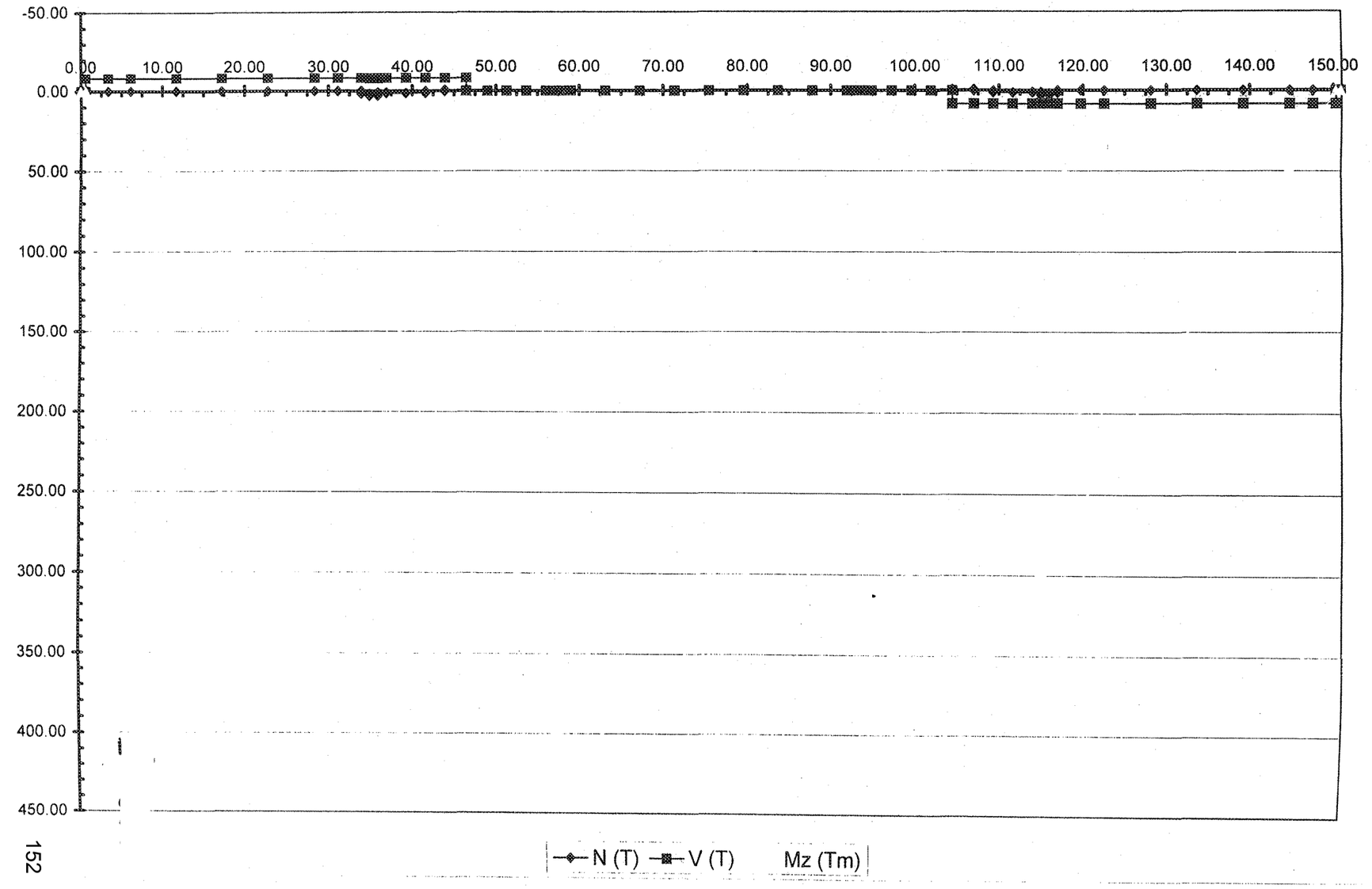
Aporticamiento interior de espesor 2.1 cm

[illegible]

Cad_mc

Nudo	X	N (T)	Vy (T)	Mz (Tm)
1	0.00	0.00	0.00	0.00
1	0.60	0.00	0.00	0.00
2	0.60	0.00	-8.42	0.00
2	3.38	0.00	-8.42	23.35
3	3.38	0.00	-8.42	23.35
3	6.15	0.00	-8.42	46.71
4	6.15	0.00	-8.42	46.71
4	11.70	0.00	-8.42	93.42
5	11.70	0.00	-8.42	93.42
5	17.25	0.00	-8.42	140.12
6	17.25	0.00	-8.42	140.12
6	22.80	0.00	-8.42	186.83
7	22.80	0.00	-8.42	186.83
7	28.35	0.00	-8.42	233.54
8	28.35	0.00	-8.42	233.54
8	31.13	0.00	-8.42	256.90
9	31.13	0.00	-8.42	256.90
9	33.90	0.00	-8.42	280.25
10	33.90	1.71	-8.24	280.25
10	34.90	1.71	-8.24	288.67
11	34.90	3.08	-7.83	288.67
11	35.90	3.08	-7.83	297.08
12	35.90	0.83	-8.37	297.08
12	36.90	0.83	-8.37	306.00
13	36.90	1.34	-8.31	305.50
13	39.25	1.34	-8.31	325.00
14	39.25	1.23	-8.33	325.28
14	41.60	1.23	-8.33	345.00
15	41.60	0.13	-8.41	345.05
15	43.90	0.14	-8.41	365.00
16	43.90	-0.83	-8.37	364.41
16	46.45	-0.83	-8.37	386.00
17	46.45	0.00	0.00	385.87
17	49.00	0.00	0.00	386.00
18	49.00	0.00	0.00	385.87
18	51.30	0.00	0.00	386.00
19	51.30	0.00	0.00	385.87
19	53.65	0.00	0.00	386.00
20	53.65	0.00	0.00	385.87
20	56.00	0.00	0.00	386.00
21	56.00	0.00	0.00	385.87
21	57.00	0.00	0.00	386.00
22	57.00	0.00	0.00	385.87
22	58.00	0.00	0.00	386.00
23	58.00	0.00	0.00	385.87
23	59.00	0.00	0.00	385.87
24	59.00	0.00	0.00	385.87
24	63.11	0.00	0.00	385.88
25	63.11	0.00	0.00	385.88
25	67.23	0.00	0.00	385.88
26	67.23	0.00	0.00	385.88
26	71.34	0.00	0.00	385.86
27	71.34	0.00	0.00	385.86
27	75.45	0.00	0.00	385.86
28	75.45	0.00	0.00	385.86
28	79.56	0.00	0.00	385.86
29	79.56	0.00	0.00	385.86
29	83.68	0.00	0.00	385.88
30	83.68	0.00	0.00	385.88
30	87.79	0.00	0.00	385.88
31	87.79	0.00	0.00	385.88
31	91.90	0.00	0.00	385.89
32	91.90	0.00	0.00	385.89
32	92.90	0.00	0.00	385.89
33	92.90	0.00	0.00	385.89
33	93.90	0.00	0.00	386.00
34	93.90	0.00	0.00	385.88
34	94.90	0.00	0.00	386.00
35	94.90	0.00	0.00	385.89
35	97.25	0.00	0.00	386.00
36	97.25	0.00	0.00	385.89
36	99.60	0.00	0.00	386.00
37	99.60	0.00	0.00	385.89
37	101.90	0.00	0.00	386.00
38	101.90	0.00	0.00	385.89
38	104.45	0.00	-0.01	386.00
39	104.45	-0.83	8.37	385.89
39	107.00	-0.83	8.37	365.00
40	107.00	0.14	8.41	364.43
40	109.30	0.13	8.41	345.00
41	109.30	1.23	8.33	345.07
41	111.65	1.23	8.33	325.00
42	111.65	1.34	8.31	325.30
42	114.00	1.34	8.31	306.00
43	114.00	0.83	8.37	305.52
43	115.00	0.83	8.37	297.00
44	115.00	3.08	7.83	297.09
44	116.00	3.08	7.83	289.00
45	116.00	1.71	8.24	288.68
45	117.00	1.71	8.24	280.26
46	117.00	0.00	8.42	280.26
46	119.78	0.00	8.42	256.91
47	119.78	0.00	8.42	256.91
47	122.55	0.00	8.42	233.55
48	122.55	0.00	8.42	233.55
48	128.10	0.00	8.42	186.84
49	128.10	0.00	8.42	186.84
49	133.65	0.00	8.42	140.13
50	133.65	0.00	8.42	140.13
50	139.20	0.00	8.42	93.42
51	139.20	0.00	8.42	93.42
51	144.75	0.00	8.42	46.71
52	144.75	0.00	8.42	46.71
52	147.53	0.00	8.42	23.36
53	147.53	0.00	8.42	23.36
53	150.30	0.00	8.42	0.00
54	150.30	0.00	0.00	0.00
54	150.90	0.00	0.00	0.00

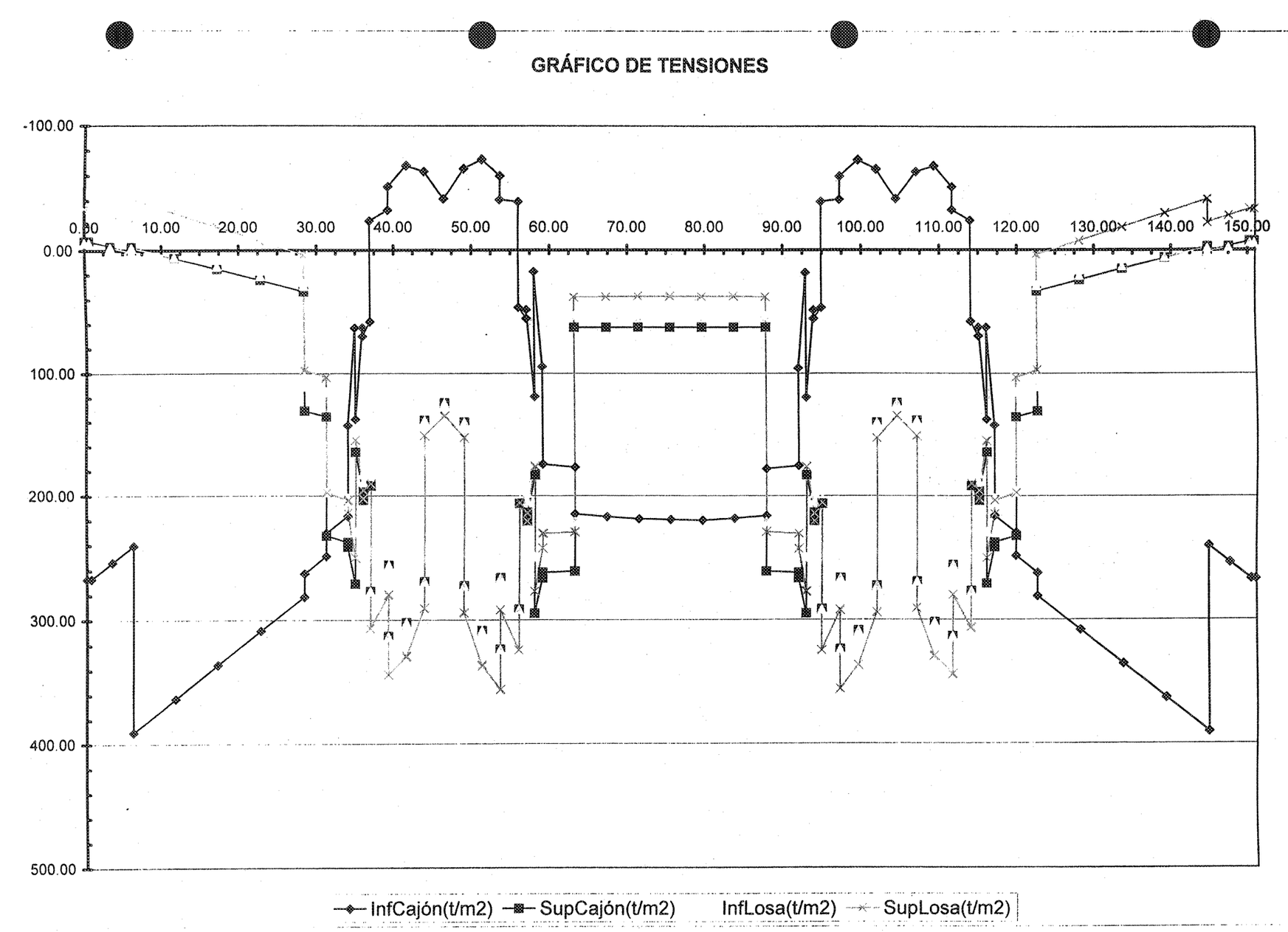
GRÁFICO DE ESFUERZOS



Resultados de envolventes a Servicio Inferior

[illegible]

Nudo	X	N (T)	Vy (T)	Rz (Tm)	Fibra y fibra	Inf.Calcón elg (t/m2)	Fibra y fibra	Sup.Calcón elg (t/m2)	Fibra y fibra	Inf.Losa elg (t/m2)	Fibra y fibra	Sup.Losa elg (t/m2)
1	0.00	229.59	0.00	0.00	-2.85	267.01	-0.3	-7.56	-0.3	-6.14	0	-33.72
2	0.60	229.42	0.00	411.33	-2.85	266.80	-0.3	-7.56	-0.3	-6.13	0	-33.69
3	3.38	228.62	0.01	411.35	-2.85	266.81	-0.3	-7.56	-0.3	-6.14	0	-33.70
4	6.15	227.82	0.01	394.99	-2.85	253.72	-0.3	-3.07	-0.3	-2.34	0	-28.13
5	6.15	356.64	0.01	394.47	-2.85	253.68	-0.3	-3.06	-0.3	-2.34	0	-28.13
6	11.70	354.15	0.01	524.93	-2.85	340.57	-0.3	1.45	-0.3	1.46	0	-22.56
7	17.25	351.69	0.01	480.60	-2.85	335.82	-0.3	6.24	-0.3	5.64	0	-41.48
8	22.80	349.24	0.01	480.60	-2.85	335.82	-0.3	6.23	-0.3	5.63	0	-30.20
9	28.35	346.80	0.01	371.86	-2.85	308.57	-0.3	15.26	-0.3	13.24	0	-18.96
10	33.90	344.35	0.01	480.60	-2.85	335.82	-0.3	15.26	-0.3	13.24	0	-18.96
11	34.90	746.95	0.01	480.60	-2.85	335.82	-0.3	24.29	-0.3	20.86	0	-7.70
12	35.90	1061.25	0.01	426.21	-2.85	308.57	-0.3	24.29	-0.3	20.86	0	-7.70
13	36.90	984.33	0.01	426.21	-2.85	308.57	-0.3	24.29	-0.3	20.86	0	-7.70
14	39.25	985.75	97.43	-1842.21	-3.884	-52.49	-0.3	313.31	-0.3	302.08	0	329.34
15	41.60	1156.53	110.28	-1833.82	-4.442	-67.88	-0.3	302.51	-0.3	302.51	0	329.34
16	43.90	1163.95	-11.34	-1772.56	-5	-83.37	-0.3	289.32	-0.3	289.32	0	290.56
17	46.45	1160.33	-106.18	-1453.95	-5	-83.41	-0.3	123.89	-0.3	138.19	0	151.06
18	49.00	1157.06	20.32	-1802.73	-5	-55.85	-0.3	123.85	-0.3	123.85	0	134.40
19	51.30	1169.04	49.96	-1890.80	-4.442	-72.88	-0.3	139.68	-0.3	139.68	0	152.76
20	53.85	1166.53	-102.33	-1651.42	-3.884	-59.73	-0.3	309.02	-0.3	308.68	0	294.11
21	56.00	995.00	-89.81	-1322.69	-3.884	-40.84	-0.3	323.64	-0.3	323.64	0	336.68
22	57.00	1134.78	-42.45	-529.07	-3.088	-46.31	-0.3	206.18	-0.3	266.22	0	355.73
23	58.00	1079.69	-350.92	-178.23	-2.85	17.58	-0.3	264.69	-0.3	291.49	0	324.27
24	59.00	827.97	-257.71	-131.47	-2.85	174.30	-0.3	261.99	-0.3	291.49	0	291.92
25	63.11	358.98	-126.27	-228.35	-2.85	214.82	-0.3	262.51	-0.3	291.49	0	324.27
26	67.23	360.90	0.02	231.70	-2.85	217.01	-0.3	62.46	-0.3	53.07	0	205.69
27	71.34	362.52	0.02	234.52	-2.85	218.85	-0.3	62.43	-0.3	53.04	0	214.20
28	75.45	363.06	0.02	235.41	-2.85	219.44	-0.3	62.42	-0.3	53.04	0	220.69
29	79.56	363.60	0.02	236.29	-2.85	220.03	-0.3	62.42	-0.3	53.04	0	176.21
30	83.68	362.19	0.02	233.69	-2.85	218.35	-0.3	62.48	-0.3	53.09	0	227.23
31	87.79	360.30	0.02	230.20	-2.85	216.10	-0.3	62.56	-0.3	53.15	0	242.78
32	91.90	828.76	0.02	-124.43	-2.85	177.96	-0.3	260.96	-0.3	221.01	0	230.68
33	92.90	829.30	0.02	-129.76	-2.85	175.52	-0.3	262.06	-0.3	221.94	0	229.42
34	93.90	1081.19	351.45	-176.79	-2.85	118.23	-0.3	266.44	-0.3	225.57	0	242.72
35	94.90	1136.41	351.57	-528.26	-3.088	48.56	-0.3	213.38	-0.3	183.05	0	227.24
36	97.25	995.25	89.85	-1323.58	-3.884	-40.94	-0.3	266.32	-0.3	266.32	0	292.04
37	99.60	1165.63	102.24	-1891.64	-4.442	-73.29	-0.3	308.78	-0.3	308.78	0	336.45
38	101.90	1157.06	-20.27	-1803.50	-5	-55.91	-0.3	272.59	-0.3	272.59	0	294.20
39	104.45	1159.45	-115.12	-1454.99	-5	-41.59	-0.3	123.90	-0.3	123.90	0	134.46
40	107.00	1154.90	145.33	-1773.55	-5	-53.48	-0.3	138.24	-0.3	138.24	0	151.12
41	109.30	1163.04	-41.00	-1834.76	-4.442	-67.97	-0.3	302.61	-0.3	302.61	0	329.45
42	111.65	1158.53	-110.31	-1834.74	-4.442	-68.41	-0.3	313.41	-0.3	302.18	0	329.02
43	114.00	984.33	-97.23	-1011.36	-3.325	-32.60	-0.3	256.00	-0.3	276.97	0	280.16
44	115.00	1117.76	-49.87	-428.24	-3.088	-23.97	-0.3	276.97	-0.3	276.97	0	306.82
45	116.00	1061.25	-353.40	-429.26	-2.85	57.76	-0.3	191.80	-0.3	203.72	0	190.07
46	117.00	805.88	-163.92	-32.58	-2.85	69.80	-0.3	203.72	-0.3	188.95	0	202.25
47	119.78	575.66	-9.03	169.84	-2.85	62.66	-0.3	196.59	-0.3	182.32	0	196.63
48	122.55	576.02	-9.03	197.71	-2.85	137.27	-0.3	164.44	-0.3	151.94	0	154.88
49	128.10	346.80	-9.03	371.22	-2.85	281.04	-0.3	62.64	-0.3	271.05	0	229.44
50	133.65	351.69	-9.03	480.22	-2.85	335.63	-0.3	142.30	-0.3	241.70	0	204.68
51	139.20	354.15	-9.03	534.68	-2.85	362.92	-0.3	216.20	-0.3	237.92	0	201.55
52	144.75	356.64	-9.03	589.30	-2.85	390.29	-0.3	229.96	-0.3	232.68	0	197.13
53	147.53	227.82	-9.03	358.37	-2.85	253.69	-0.3	240.49	-0.3	253.65	0	197.40
54	150.30	228.62	-9.03	364.93	-2.85	253.65	-0.3	266.80	-0.3	266.81	0	154.88
55	150.90	229.59	0.00	411.65	-2.85	267.01	-0.3	266.81	-0.3	266.80	0	197.40



Pantalla de geometría & Valores aplicados

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Cod. cec

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	InfCajón y fibra	InfCajón sig (t/m2)	SupCajón y fibra	SupCajón sig (t/m2)	InfLosa y fibra	InfLosa sig (t/m2)	SupLosa y fibra	SupLosa sig (t/m2)
1	1	0.00	135.80	0.00	177.20	-2.85	125.59	-0.3	7.39	-0.3	6.38	0	-5.49
1	2	0.60	135.80	0.00	177.20	-2.85	125.59	-0.3	7.39	-0.3	6.38	0	-5.49
2	2	0.60	135.80	7.68	177.20	-2.85	125.59	-0.3	7.39	-0.3	6.38	0	-5.49
2	3	3.38	135.80	7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
3	3	3.38	135.80	7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
3	4	6.15	135.80	7.68	134.57	-2.85	104.78	-0.3	15.02	-0.3	12.81	0	3.80
4	4	6.15	164.61	7.68	186.34	-2.85	138.34	-0.3	14.05	-0.3	12.03	0	-0.46
4	5	11.70	164.61	7.68	143.71	-2.85	117.54	-0.3	21.68	-0.3	18.46	0	8.84
5	5	11.70	288.06	7.68	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
5	6	17.25	288.06	7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
6	6	17.25	288.06	7.68	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
6	7	22.80	288.06	7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
7	7	22.80	226.33	7.68	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
7	8	28.35	226.33	7.68	128.92	-2.85	128.09	-0.3	42.11	-0.3	35.76	0	27.12
8	8	28.35	135.80	7.68	-35.95	-2.85	21.57	-0.3	45.54	-0.3	38.56	0	40.97
8	9	31.13	135.80	7.68	-57.26	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
9	9	31.13	135.80	7.68	-57.26	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
9	10	33.90	135.80	7.68	-78.58	-2.85	0.77	-0.3	53.18	-0.3	45.00	0	50.26
10	10	33.90	131.42	35.07	-78.58	-2.85	0.77	-0.3	51.91	-0.3	43.93	0	49.19
10	11	34.90	131.42	35.07	-113.51	-2.85	-17.55	-0.3	58.17	-0.3	49.21	0	56.81
11	11	34.90	131.42	7.15	-253.32	-2.85	-52.59	-0.3	39.86	-0.3	36.10	0	45.98
11	12	35.90	131.42	7.15	-261.00	-3.088	-44.21	-0.3	37.23	-0.3	34.38	0	42.47
12	12	35.90	135.80	7.64	-261.00	-3.088	-43.94	-0.3	37.49	-0.3	34.62	0	42.72
12	13	36.90	135.80	7.64	-268.69	-3.325	-39.05	-0.3	35.92	-0.3	33.24	0	39.95
13	13	36.90	135.80	7.58	-268.69	-3.325	-45.27	-0.3	31.72	-0.3	29.32	0	42.51
13	14	39.25	135.80	7.58	-286.74	-3.884	-33.79	-0.3	32.77	-0.3	30.29	0	38.34
14	14	39.25	164.61	7.60	-286.74	-3.884	-33.78	-0.3	32.78	-0.3	30.30	0	38.35
14	15	41.60	164.61	7.60	-304.78	-4.442	-29.94	-0.3	31.62	-0.3	29.23	0	36.08
15	15	41.60	164.61	-0.13	-304.78	-4.442	-29.84	-0.3	31.72	-0.3	29.33	0	36.18
15	16	43.90	164.61	-0.13	-322.45	-5	-29.29	-0.3	31.23	-0.3	28.84	0	35.69
16	16	43.90	164.61	7.64	-322.45	-5	-21.89	-0.3	34.68	-0.3	32.28	0	42.51
16	17	46.45	164.61	7.64	-342.04	-5	-23.22	-0.3	15.68	-0.3	15.68	0	16.17
17	17	46.45	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	16.13
17	18	49.00	0.00	0.00	-342.04	-5	-31.06	-0.3	33.14	-0.3	33.14	0	37.23
18	18	49.00	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
18	19	51.30	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
19	19	51.30	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.90
19	20	53.65	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.90
20	20	53.65	0.00	0.00	-342.04	-3.325	-49.90	-0.3	45.83	-0.3	42.41	0	54.47
20	21	56.00	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
21	21	56.00	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
21	22	57.00	0.00	0.00	-342.04	-2.85	-70.46	-0.3	53.02	-0.3	49.25	0	62.59
22	22	57.00	0.00	0.00	-342.04	-2.85	-80.39	-0.3	74.50	-0.3	62.98	0	76.53
22	23	58.00	132.98	-27.55	-202.23	-2.85	-47.09	-0.3	69.62	-0.3	58.87	0	70.59
23	23	58.00	132.98	-27.55	-174.97	-2.85	-46.28	-0.3	70.43	-0.3	59.56	0	71.28
23	24	59.00	132.98	0.00	-174.97	-2.85	-46.28	-0.3	70.43	-0.3	59.56	0	71.28
24	24	59.00	135.80	0.00	-174.97	-2.85	-46.28	-0.3	70.43	-0.3	59.56	0	71.28
24	25	63.11	135.80	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.90
25	25	63.11	197.53	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.90
25	26	67.23	197.53	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
26	26	67.23	255.14	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
26	27	71.34	255.14	0.00	-342.04	-5	-31.06	-0.3	33.14	-0.3	33.14	0	37.23
27	27	71.34	279.83	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
27	28	75.45	279.83	0.00	-342.04	-5	-23.22	-0.3	15.68	-0.3	15.68	0	18.17
28	28	75.45	279.83	0.00	-342.04	-5	-21.89	-0.3	14.79	-0.3	14.79	0	17.13
28	29	79.56	279.83	0.00	-322.45	-5	-21.89	-0.3	14.79	-0.3	14.79	0	17.13
29	29	79.56	255.14	0.00	-322.45	-4.442	-29.84	-0.3	31.72	-0.3	31.23	0	35.09
29	30	83.68	255.14	0.00	-304.78	-4.442	-29.94	-0.3	31.62	-0.3	31.23	0	35.09
30	30	83.68	197.53	0.00	-304.78	-3.884	-33.78	-0.3	32.78	-0.3	31.72	0	36.18
30	31	87.79	197.53	0.00	-286.74	-3.884	-33.79	-0.3	32.77	-0.3	31.62	0	36.08
31	31	87.79	135.80	0.00	-286.74	-3.325	-45.27	-0.3	34.68	-0.3	32.77	0	38.34
31	32	91.90	135.80	0.00	-268.69	-3.325	-39.05	-0.3	35.92	-0.3	33.24	0	39.95
32	32	91.90	132.98	27.55	-268.69	-3.088	-43.94	-0.3	37.49	-0.3	34.62	0	42.72
32	33	92.90	132.98	27.55	-261.00	-3.088	-44.21	-0.3	37.23	-0.3	34.38	0	42.47
33	33	92.90	0.00	0.00	-261.00	-2.85	-52.59	-0.3	39.86	-0.3	36.10	0	45.98
33	34	93.90	0.00	0.00	-253.32	-2.85	-17.55	-0.3	58.17	-0.3	49.21	0	56.81
34	34	93.90	0.00	0.00	-113.51	-2.85	-0.50	-0.3	51.91	-0.3	43.93	0	49.19
34	35	94.90	0.00	0.00	-78.58	-2.85	0.77	-0.3	53.18	-0.3	45.00	0	50.26
35	35	94.90	0.00	0.00	-78.58	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
35	36	97.25	0.00	0.00	-57.26	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
36	36	97.25	99.60	0.00	-57.26	-2.85	21.57	-0.3	45.54	-0.3	38.56	0	40.97
36	37	99.60	99.60	0.00	-35.95	-2.85	128.09	-0.3	42.11	-0.3	35.76	0	27.12
37	37	99.60	101.90	0.00	128.92	-2.85	148.90	-0.3	34.48	-0.3	29.32	0	17.63
37	38	101.90	101.90	0.00	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
38	38	101.90	104.45	0.00	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
38	39	104.45	104.45	0.00	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
39	39	104.45	107.00	0.76	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
39	40	107.00	107.00	0.76	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
40	40	107.00	109.30	-0.13	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
40	41	109.30	109.30	-0.13	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
41	41	109.30	111.65	-1.12	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
41	42	111.65	111.65	-1.12	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
42	42	111.65	114.00	-1.22	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
42	43	114.00	114.00	-1.22	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
43	43	114.00	115.00	-0.75	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
43	44	115.00	115.00	-0.75	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
44	44	115.00	116.00	-2.82	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
44	45	116.00	116.00	-2.82	128.92	-2.85	128.09	-0.3	42.11	-0.3	35.76	0	27.12
45	45	116.00	131.42	-7.15	128.92	-2.85	148.90	-0.3	34.48	-0.3	29.32	0	17.63
45	46	117.00	131.42	-7.15	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
46	46	117.00	135.80	-7.68	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
46	47	119.78	135.80	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
47	47	119.78	135.80	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
47	48	122.55	135.80	-7.68	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
48	48	122.55	226.33	-7.68	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
48	49	128.10	226.33	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
49	49	128.10	288.06	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
49	50	133.65	288.06	-7.68	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
50	50	133.65	288.06	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
50	51	139.20	288.06	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.58
51	51	139.20	164.61	-7.68	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
51	52	144.75	164.61	-7.68	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
52	52	144.75	135.80	-7.68	143.71	-2.85	117.54	-0.3	21.68	-0.3	18.46	0	8.84
52	53	147.53	135.80	-7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
53	53	147.53	135.80	-7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
53	54	150.30	135.80	-7.68	177.20	-2.85	125.59	-0.3	7.39	-0.3	6.38	0	-5.49
54	54	150.30	135.80	0.00	177.20	-2.85	125.59	-0.3	7.39	-0.3	6.38	0	-5.49
54	55	150.90	135.80	0.00	177.20	-2.85	125.59	-0.3	7.39	-0.3	6.38	0	-5.49

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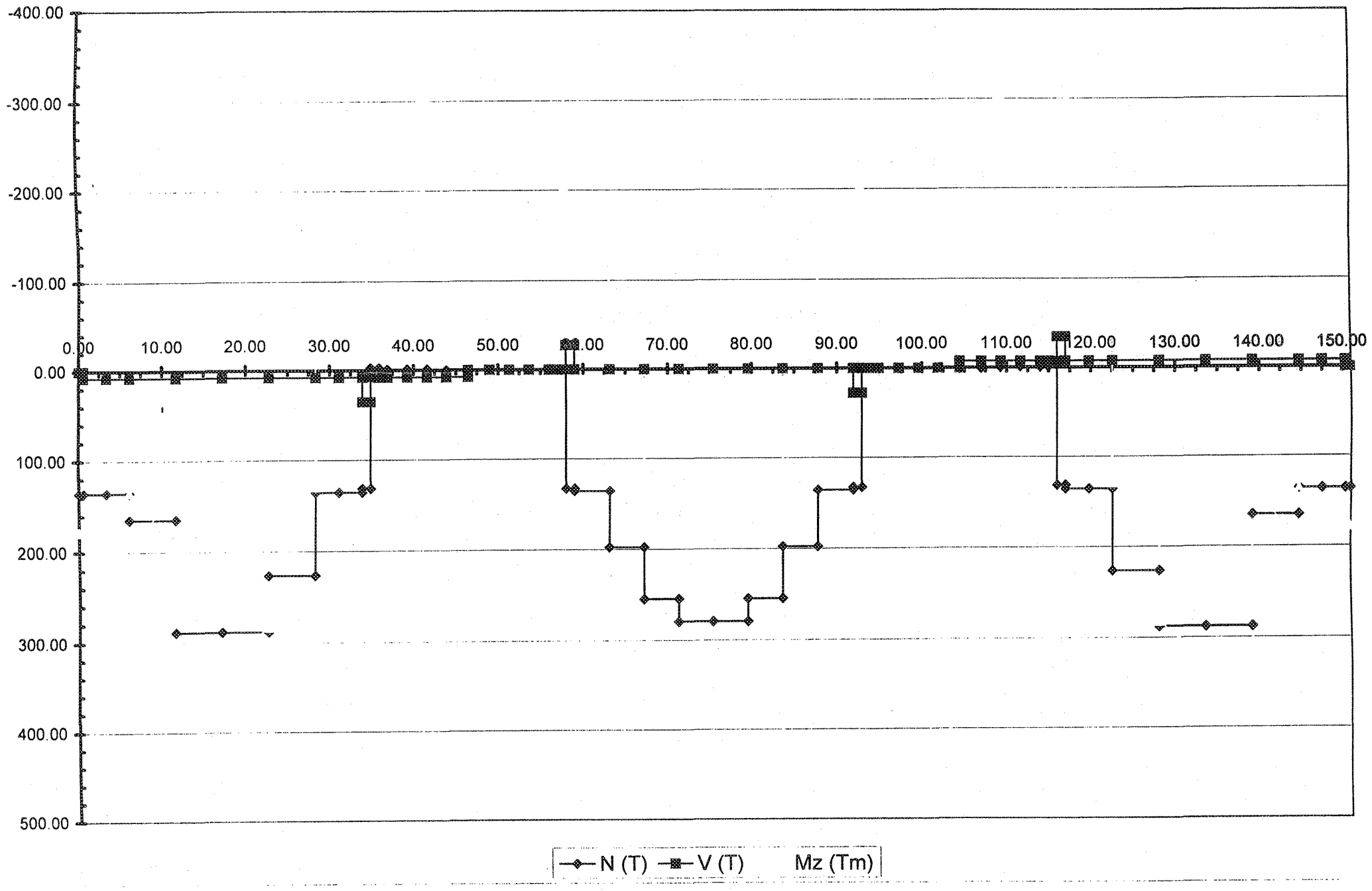

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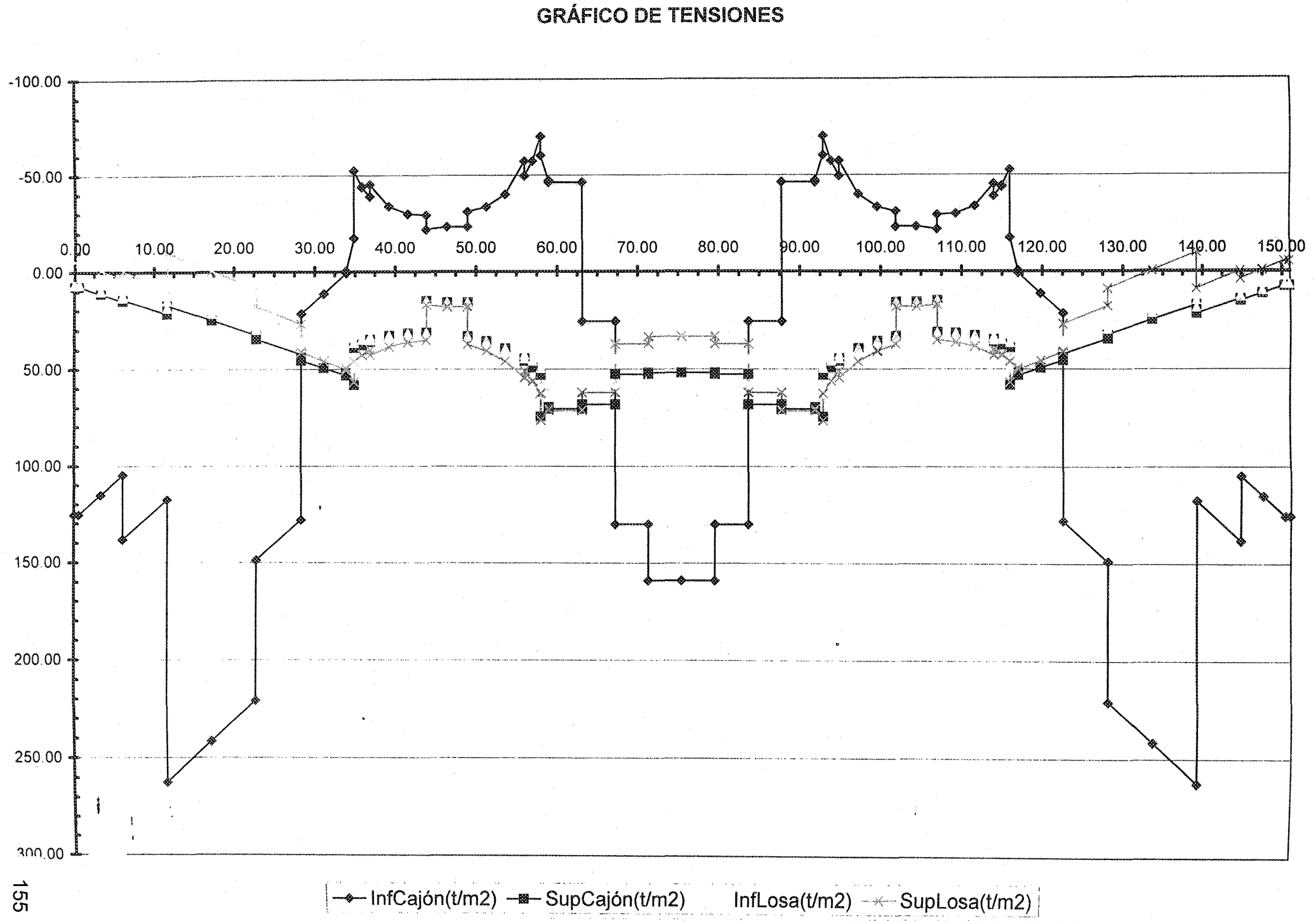

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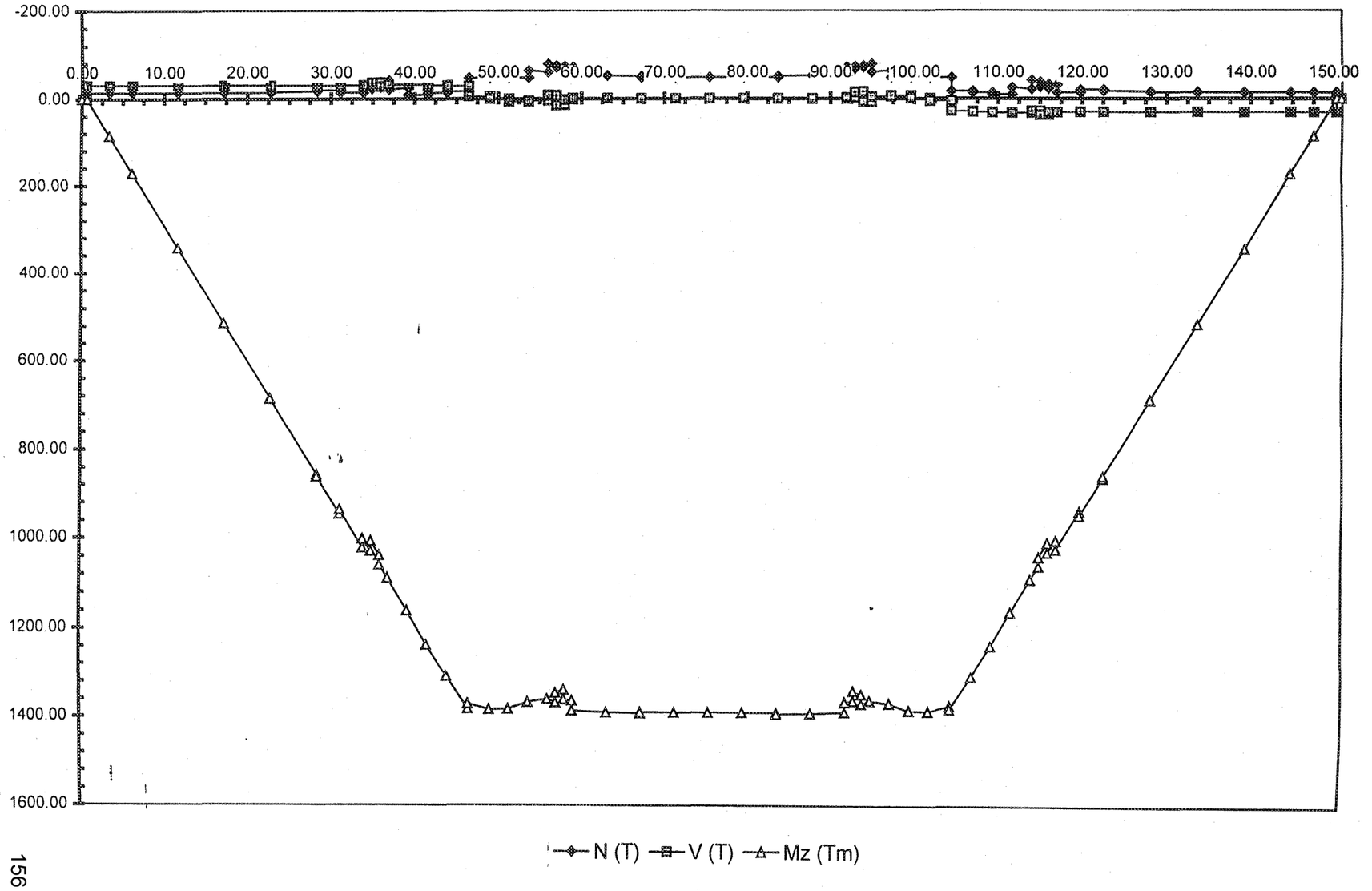

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PRETENSADOS POR FASES TOTALES

[redacted]

Sección	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1261.51	0.00	-1774.60	-2.85	-1552.31	-0.3	316.48	-0.3	20.07	0	104.76
1	2	0.60	-1260.55	0.00	-1773.16	-2.85	-1551.09	-0.3	316.23	-0.3	20.04	0	104.66
2	2	0.60	-1260.55	-44.76	-1773.27	-2.85	-1551.15	-0.3	316.25	-0.3	20.06	0	104.69
2	3	3.38	-1256.15	-44.76	-1643.25	-2.85	-1474.51	-0.3	256.03	-0.3	6.54	0	84.96
3	3	3.38	-1256.15	-44.76	-1642.85	-2.85	-1474.31	-0.3	255.96	-0.3	6.48	0	84.88
3	4	6.15	-1251.76	-44.76	-1512.32	-2.85	-1397.41	-0.3	195.63	-0.3	-7.11	0	65.04
4	4	6.15	-1959.55	-44.76	-2781.49	-2.85	-2225.71	-0.3	219.41	-0.3	12.98	0	169.83
4	5	11.70	-1945.90	-44.76	-2511.48	-2.85	-2066.15	-0.3	98.60	-0.3	-14.38	0	129.39
5	5	11.70	-1945.90	-44.76	-2511.91	-2.85	-2066.36	-0.3	98.67	-0.3	-14.31	0	129.48
5	6	17.25	-1932.34	-44.76	-2242.45	-2.85	-1907.10	-0.3	-22.06	-0.3	-41.60	0	89.15
6	6	17.25	-1932.34	-44.76	-2242.45	-2.85	-1907.10	-0.3	-22.06	-0.3	-41.60	0	89.15
6	7	22.80	-1918.88	-44.76	-1973.16	-2.85	-1747.97	-0.3	-142.76	-0.3	-68.89	0	48.82
7	7	22.80	-1918.15	-2.57	-1973.16	-2.85	-1747.54	-0.3	-142.33	-0.3	-68.89	0	48.82
7	8	28.35	-1904.79	-2.86	-1936.53	-2.85	-1771.06	-0.3	22.09	-0.3	-96.17	0	8.51
8	8	28.35	-3290.03	38.35	-884.93	-2.85	-1377.05	-0.3	-815.75	-0.3	-663.87	0	-603.18
8	9	31.13	-3288.56	38.06	-975.24	-2.85	-1420.32	-0.3	-801.67	-0.3	-649.44	0	-582.56
9	9	31.13	-4685.45	-44.77	78.71	-2.85	-1304.98	-0.3	-1393.92	-0.3	-1149.84	0	-1153.29
9	10	33.90	-4689.15	-44.77	222.64	-2.85	-1234.55	-0.3	-1423.40	-0.3	-1172.21	0	-1185.11
10	10	33.90	-4464.62	-865.01	1199.74	-2.85	-924.48	-0.3	-1449.21	-0.3	-1168.94	0	-1262.99
10	11	34.90	-4466.72	-865.51	2062.49	-2.85	-498.47	-0.3	-1613.16	-0.3	-1299.16	0	-1450.25
11	11	34.90	-6954.29	-1566.57	1671.04	-2.85	-919.27	-0.3	-1213.65	-0.3	-816.47	0	-904.16
11	12	35.90	-6956.27	-1567.41	3215.24	-3.088	-539.14	-0.3	-1310.04	-0.3	-932.34	0	-1047.81
12	12	35.90	-7075.98	543.97	3215.18	-3.088	-548.04	-0.3	-1318.89	-0.3	-964.28	0	-1079.75
12	13	36.90	-7078.13	543.77	2671.07	-3.325	-663.07	-0.3	-863.49	-0.3	-930.41	0	-1035.90
13	13	36.90	-6481.27	-190.29	5900.54	-3.325	30.24	-0.3	-1725.54	-0.3	-1725.54	0	-1899.67
13	14	39.25	-6489.84	-191.67	6363.43	-3.884	0.65	-0.3	-1476.58	-0.3	-1476.58	0	-1600.23
14	14	39.25	-7539.39	-617.73	8354.67	-3.884	113.66	-0.3	-1825.82	-0.3	-1825.82	0	-1988.17
14	15	41.60	-7547.95	-618.99	9831.65	-4.442	237.82	-0.3	-1748.02	-0.3	-1748.02	0	-1891.85
15	15	41.60	-7564.44	365.92	9831.20	-4.442	236.20	-0.3	-1749.56	-0.3	-1749.56	0	-1893.38
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	16	43.90	-7502.35	1014.17	9222.01	-5	255.98	-0.3	-792.96	-0.3	-792.96	0	-859.91
17	17	46.45	-7542.56	703.98	7043.86	-5	105.88	-0.3	-695.31	-0.3	-695.31	0	-746.45
17	17	46.45	-7494.87	-744.35	7008.97	-5	105.86	-0.3	-691.36	-0.3	-691.36	0	-742.24
17	18	49.00	-7473.20	-1056.38	9335.32	-5	265.12	-0.3	-796.70	-0.3	-796.70	0	-864.48
18	18	49.00	-7545.14	-188.41	9336.13	-5	215.06	-0.3	-1537.22	-0.3	-1537.22	0	-1649.06
18	19	51.30	-7557.15	-410.93	10086.05	-4.442	261.84	-0.3	-1775.39	-0.3	-1775.39	0	-1922.95
19	19	51.30	-7546.57	573.40	10084.97	-4.442	262.75	-0.3	-1774.27	-0.3	-1774.27	0	-1921.80
19	20	53.65	-7552.02	574.22	8744.38	-3.884	157.94	-0.3	-1872.01	-0.3	-1872.01	0	-2041.93
20	20	53.65	-6502.47	152.45	6752.95	-3.884	44.91	-0.3	-1522.75	-0.3	-1522.75	0	-1653.97
20	21	56.00	-6500.92	152.20	6395.24	-3.325	110.33	-0.3	-1792.66	-0.3	-1792.66	0	-1981.38
21	21	56.00	-7134.78	-572.83	3124.84	-3.325	-604.52	-0.3	-924.49	-0.3	-997.51	0	-1114.73
21	22	57.00	-7132.87	-573.03	3698.42	-3.088	-474.93	-0.3	-1387.55	-0.3	-1042.17	0	-1173.06
22	22	57.00	-7019.31	1552.95	3697.86	-3.088	-466.96	-0.3	-1379.37	-0.3	-1010.82	0	-1141.69
22	23	58.00	-7017.56	1552.21	2172.25	-2.85	-825.54	-0.3	-1293.40	-0.3	-902.92	0	-1010.41
23	23	58.00	-4526.63	840.54	2563.96	-2.85	-258.77	-0.3	-1697.51	-0.3	-1401.88	0	-1587.06
23	24	59.00	-4524.78	840.09	1727.15	-2.85	-671.66	-0.3	-1539.84	-0.3	-1275.43	0	-1405.21
24	24	59.00	-4765.28	-134.25	696.23	-2.85	-1012.80	-0.3	-1508.97	-0.3	-1274.43	0	-1319.46
24	25	63.11	-4761.05	-134.19	1218.38	-2.85	-754.81	-0.3	-1601.53	-0.3	-1352.64	0	-1432.51
25	25	63.11	-1925.86	-58.94	-1239.91	-2.85	-1372.91	-0.3	-298.39	-0.3	-184.03	0	-113.34
25	26	67.23	-1936.35	-59.26	-1013.57	-2.85	-1195.22	-0.3	-593.95	-0.3	-183.81	0	-112.23
26	26	67.23	-1939.49	-0.09	-1013.57	-2.85	-1197.07	-0.3	-595.80	-0.3	-183.81	0	-112.23
26	27	71.34	-1948.39	-0.09	-1026.53	-2.85	-1207.61	-0.3	-594.47	-0.3	-183.65	0	-111.35
27	27	71.34	-1948.39	-0.09	-1026.53	-2.85	-1207.61	-0.3	-594.47	-0.3	-183.65	0	-111.35
27	28	75.45	-1951.40	-0.09	-1028.93	-2.85	-1211.26	-0.3	-593.34	-0.3	-183.64	0	-111.35
28	28	75.45	-1951.40	-0.09	-1028.93	-2.85	-1211.26	-0.3	-593.34	-0.3	-183.64	0	-111.35
28	29	79.56	-1954.34	-0.09	-1031.24	-2.85	-1214.83	-0.3	-592.21	-0.3	-183.65	0	-111.35
29	29	79.56	-1954.34	-0.09	-1031.24	-2.85	-1214.83	-0.3	-592.21	-0.3	-183.65	0	-111.35
29	30	83.68	-1946.62	-0.09	-1018.63	-2.85	-1205.26	-0.3	-593.81	-0.3	-183.81	0	-112.23
30	30	83.68	-1943.46	59.83	-1018.63	-2.85	-1203.39	-0.3	-591.94	-0.3	-183.81	0	-112.23
30	31	87.79	-1933.04	59.52	-1247.45	-2.85	-1383.08	-0.3	-293.39	-0.3	-184.02	0	-113.34
31	31	87.79	-4768.24	134.77	1210.84	-2.85	-760.59	-0.3	-1602.25	-0.3	-1353.25	0	-1432.62
31	32	91.90	-4772.58	134.85	686.10	-2.85	-1019.89	-0.3	-1509.25	-0.3	-1274.67	0	-1319.03
32	32	91.90	-4531.89	-841.75	1717.02	-2.85	-678.69	-0.3	-1540.07	-0.3	-1275.63	0	-1404.73
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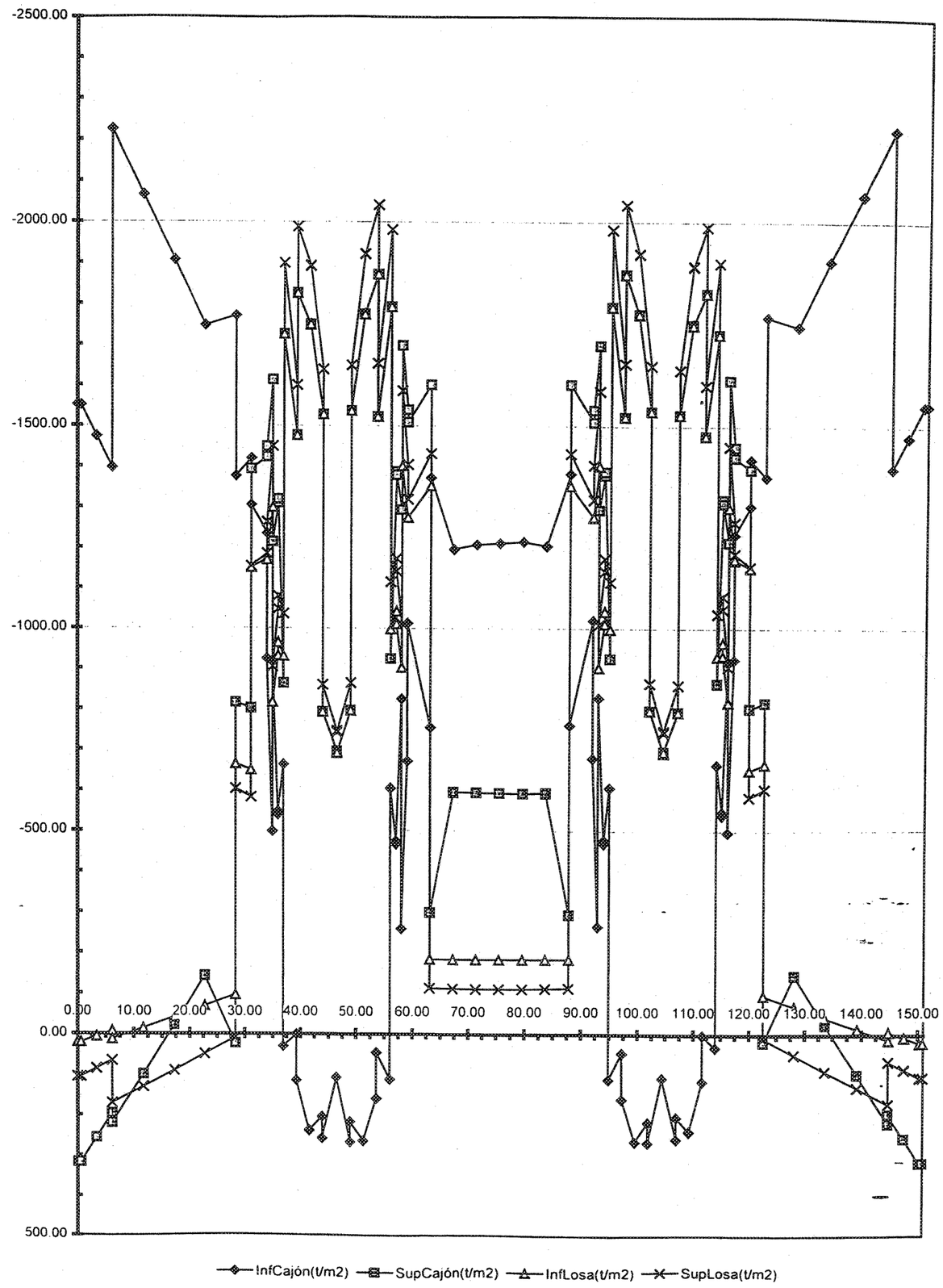
	33	92.90	-7024.34	-1555.07	2163.97	-2.85	-828.16	-0.3	-1293.21	-0.3	-902.62	0	-1009.77
34	34	93.90	-7026.13	-1555.83	3692.67	-3.088	-468.68	-0.3	-1379.52	-0.3	-1010.93	0	-1141.64
34	35	94.90	-7140.20	572.13	3692.11	-3.088	-476.92	-0.3	-1387.56	-0.3	-1042.21	0	-1172.90
35	35	94.90	-7142.14	571.93	3120.21	-3.325	-605.99	-0.3	-924.83	-0.3	-997.67	0	-1114.77
35	36	97.25	-6500.89	-152.38	6397.47	-3.325	110.71	-0.3	-1792.94	-0.3	-1792.94	0	-1981.73
36	36	97.25	-6502.44	-152.63	6756.04	-3.884	45.27	-0.3	-1523.10	-0.3	-1523.10	0	-1654.38
36	37	99.60	-7551.99	-574.40	8747.01	-3.884	158.25	-0.3	-1872.31	-0.3	-1872.31	0	-2042.28
37	37	99.60	-7546.54	-573.58	10089.54	-4.442	263.20	-0.3	-1774.74	-0.3	-1774.74	0	-1922.34
37	38	101.90	-7557.15	410.75	10088.46	-4.442	262.07	-0.3	-1775.64	-0.3	-1775.64	0	-1923.23
38	38	101.90	-7545.14	188.23	9339.21	-5	215.34	-0.3	-1537.51	-0.3	-1537.51	0	-1649.40
38	39	104.45	-7473.21	1056.20	9340.05	-5	265.45	-0.3	-796.92	-0.3	-796.92	0	-864.73
39	39	104.45	-7494.88	744.17	7014.61	-5	106.25	-0.3	-691.61	-0.3	-691.61	0	-742.54
39	40	107.00	-7542.57	-703.89	7046.92	-5	106.08	-0.3	-695.45	-0.3	-695.45	0	-746.61
40	40	107.00	-7502.36	-1014.08	9227.07	-5	256.32	-0.3	-793.19	-0.3	-793.19	0	-860.18
40	41	109.30	-7569.23	-143.05	9226.09	-5	203.05	-0.3	-1528.57	-0.3	-1528.57	0	-1639.10
41	41	109.30	-7564.44	-365.83	9835.54	-4.442	236.62	-0.3	-1750.01	-0.3	-1750.01	0	-1893.90
41	42	111.65	-7547.93	619.08	9835.09	-4.442	238.16	-0.3	-1748.38	-0.3	-1748.38	0	-1892.26
42	42	111.65	-7539.37	617.82	8358.49	-3.884	114.11	-0.3	-1826.26	-0.3	-1826.26	0	-1988.68
42	43	114.00	-6489.83	191.77	6367.33	-3.884	1.11	-0.3	-1477.03	-0.3	-1477.03	0	-1600.75
43	43	114.00	-6481.26	190.39	5904.90	-3.325	30.97	-0.3	-1726.11	-0.3	-1726.11	0	-1900.36
43	44	115.00	-7078.12	-543.68	2673.75	-3.325	-662.73	-0.3	-863.73	-0.3	-930.78	0	-1036.36
44	44	115.00	-7075.97	-543.88	3218.59	-3.088	-547.46	-0.3	-1319.39	-0.3	-964.72	0	-1080.29
44	45	116.00	-6956.24	1567.49	3218.53	-3.088	-538.60	-0.3	-1310.48	-0.3	-932.78	0	-1048.35
45	45	116.00	-6954.26	1566.65	1674.04	-2.85	-918.69	-0.3	-1214.00	-0.3	-816.93	0	-904.75
45	46	117.00	-4466.70	865.61	2065.75	-2.85	-496.86	-0.3	-1613.74	-0.3	-1299.65	0	-1450.95
46	46	117.00	-4464.60	865.11	1202.90	-2.85	-922.92	-0.3	-1449.78	-0.3	-1169.41	0	-1263.67
46	47	119.78	-4689.15	44.86	225.80	-2.85	-1233.00	-0.3	-1423.97	-0.3	-1172.69	0	-1185.80
47	47	119.78	-4685.45	44.86	81.61	-2.85	-1303.55	-0.3	-1394.44	-0.3	-1150.28	0	-1153.93
47	48	122.55	-3288.57	-37.97	-972.35	-2.85	-1418.90	-0.3	-802.20	-0.3	-649.88	0	-583.19
48	48	122.55	-3290.04	-38.26	-882.30	-2.85	-1375.76	-0.3	-816.23	-0.3	-664.27	0	-603.76
48	49	128.10	-1904.79	2.96	-1933.90	-2.85	-1769.00	-0.3	18.86	-0.3	-96.17	0	8.51
49	49	128.10	-1918.15	2.67	-1971.05	-2.85	-1745.89	-0.3	-144.92	-0.3	-68.89	0	48.82
[redacted]	50	133.65	-1918.88	44.85	-1971.05	-2.85	-1746.32	-0.3	-145.35	-0.3	-68.89	0	48.82
	50	133.65	-1932.34	44.85	-2240.87	-2.85	-1905.86	-0.3	-24.00	-0.3	-41.60	0	89.15
	51	139.20	-1932.34	44.85	-2240.87	-2.85	-1905.86	-0.3	-24.00	-0.3	-41.60	0	89.15
51	51	139.20	-1945.90	44.85	-2510.43	-2.85	-2065.32	-0.3	97.31	-0.3	-14.38	0	129.39
51	52	144.75	-1945.90	44.85	-2510.86	-2.85	-2065.53	-0.3	97.39	-0.3	-14.31	0	129.48
52	52	144.75	-1959.55	44.85	-2780.77	-2.85	-2225.21	-0.3	218.73	-0.3	12.95	0	169.79
52	53	147.53	-1251.76	44.85	-1511.90	-2.85	-1397.06	-0.3	195.01	-0.3	-7.09	0	65.06
53	53	147.53	-1256.15	44.85	-1642.98	-2.85	-1474.29	-0.3	255.70	-0.3	6.54	0	84.96
53	54	150.30	-1256.15	44.85	-1642.58	-2.85	-1474.10	-0.3	255.63	-0.3	6.48	0	84.88
54	54	150.30	-1260.55	44.85	-1773.16	-2.85	-1551.09	-0.3	316.23	-0.3	20.04	0	104.66
54	55	150.90	-1261.51	0.00	-1773.27	-2.85	-1551.15	-0.3	316.25	-0.3	20.06	0	104.69
54	55	150.90	-1261.51	0.00	-1774.54	-2.85	-1552.29	-0.3	316.47	-0.3	20.06	0	104.75

GRÁFICO DE TENSIONES



PRETENSADOS POR FASES TOTALES

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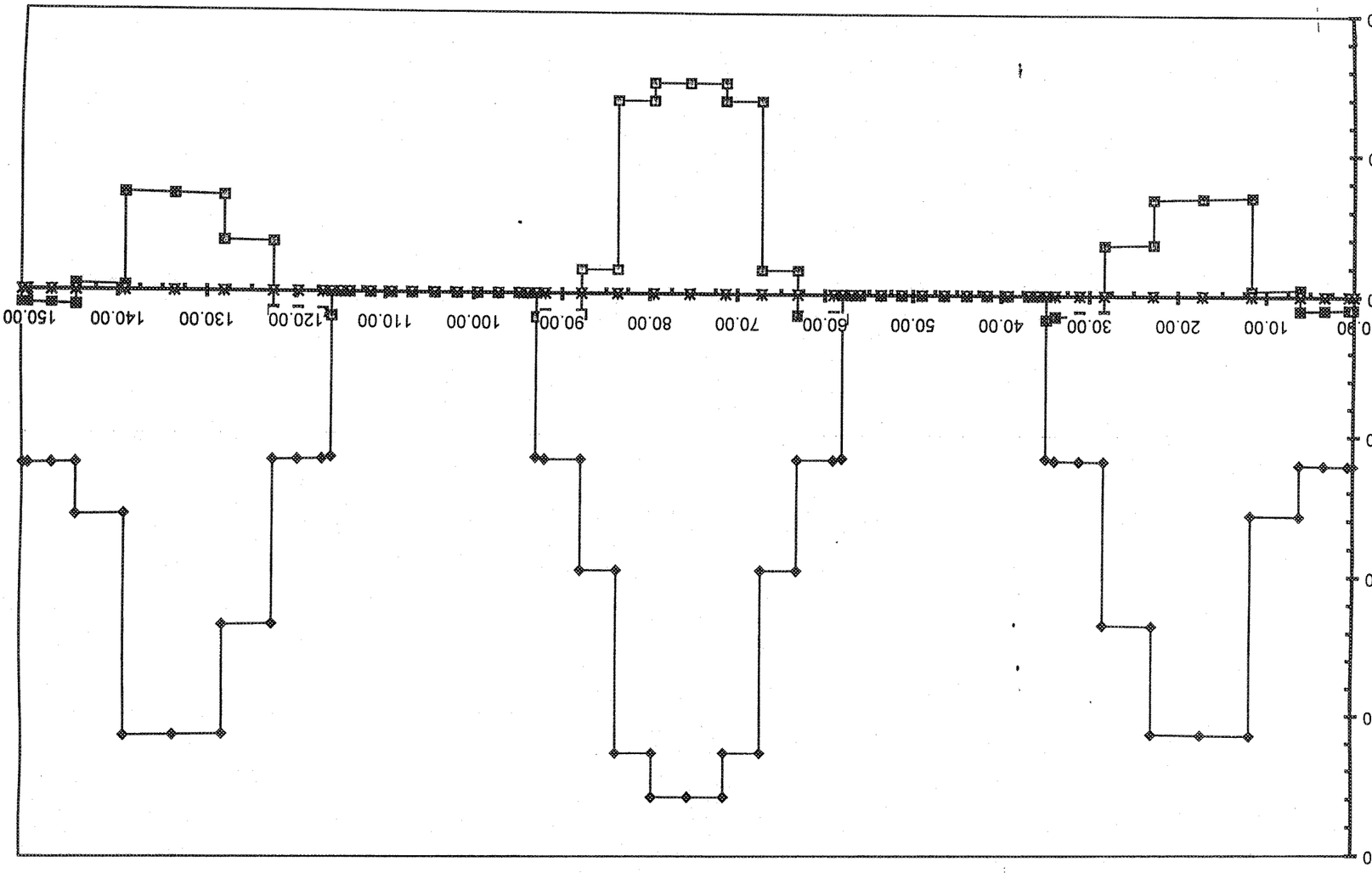
Cast_set

Nudo	X	N (T)	Vy (T)	Mz (T/m)	Fibra y fibra	InfCajón σ/g (t/m2)	Fibra y fibra	SupCajón σ/g (t/m2)	Fibra y fibra	InfLosa σ/g (t/m2)	Fibra y fibra	SupLosa σ/g (t/m2)
1	0.00	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00
1	0.60	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00
2	0.60	-656.16	-0.66	-278.74	-2.85	-606.55	-0.3	-45.92	0	0.00	0	0.00
2	3.38	-656.16	-0.66	-278.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
3	3.38	-656.16	-0.66	-278.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
3	6.15	-656.16	-0.66	-275.09	-2.85	-603.69	-0.3	-50.40	0	0.00	0	0.00
4	6.15	-785.32	-0.66	-402.70	-2.85	-768.10	-0.3	23.85	0	0.00	0	0.00
4	11.70	-785.32	-0.66	-399.05	-2.85	-763.23	-0.3	19.38	0	0.00	0	0.00
5	11.70	-1391.72	-0.66	-956.45	-2.85	-1573.24	-0.3	350.47	0	0.00	0	0.00
5	17.25	-1391.72	-0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
6	17.25	-1391.72	-0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
6	22.80	-1391.72	-0.66	-949.15	-2.85	-1567.51	-0.3	341.52	0	0.00	0	0.00
7	22.80	-1093.52	-0.66	-675.70	-2.85	-1176.63	-0.3	182.41	0	0.00	0	0.00
7	28.35	-1093.52	-0.66	-672.05	-2.85	-1173.76	-0.3	177.93	0	0.00	0	0.00
8	28.35	-656.16	-0.66	-260.50	-2.85	-592.24	-0.3	68.29	0	0.00	0	0.00
8	31.13	-656.16	-0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
9	31.13	-656.16	-0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
9	33.90	-656.16	-0.66	-256.85	-2.85	-589.37	-0.3	-72.77	0	0.00	0	0.00
10	33.90	-656.09	-9.50	-256.85	-2.85	-589.33	-0.3	-72.73	0	0.00	0	0.00
10	34.90	-656.09	-9.50	-247.63	-2.85	-582.09	-0.3	-84.03	0	0.00	0	0.00
11	34.90	0.00	-0.67	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	35.90	0.00	-0.67	0.68	-3.088	0.18	-0.3	-0.31	0	0.00	0	0.00
12	35.90	-0.21	-0.63	0.68	-3.088	0.15	-0.3	-0.34	0	0.00	0	0.00
12	36.90	-0.21	-0.63	1.32	-3.325	0.28	-0.3	-0.54	0	0.00	0	0.00
13	36.90	-0.08	-0.66	1.32	-3.325	0.21	-0.3	-0.18	-0.3	-0.18	0	-0.22
13	39.25	-0.08	-0.66	2.88	-3.884	0.33	-0.3	-0.34	-0.3	-0.34	0	-0.40
14	39.25	-0.02	-0.67	2.88	-3.884	0.34	-0.3	-0.33	-0.3	-0.33	0	-0.39
14	41.60	-0.02	-0.67	4.47	-4.442	0.44	-0.3	-0.47	-0.3	-0.47	0	-0.53
15	41.60	-0.11	-0.66	4.47	-4.442	0.43	-0.3	-0.48	-0.3	-0.48	0	-0.54
15	43.90	-0.11	-0.66	5.99	-5	0.53	-0.3	-0.59	-0.3	-0.59	0	-0.66
16	43.90	-0.19	-0.64	5.99	-5	0.40	-0.3	-0.28	-0.3	-0.28	0	-0.33
16	46.45	-0.19	-0.64	7.63	-5	0.51	-0.3	-0.36	-0.3	-0.36	0	-0.41
17	46.45	0.00	0.00	7.63	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
21	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	58.00	-655.98	8.84	-247.63	-2.85	-582.03	-0.3	-83.97	0	0.00	0	0.00
23	59.00	-655.98	8.84	-256.19	-2.85	-588.75	-0.3	-73.47	0	0.00	0	0.00
24	59.00	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
24	63.11	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
25	63.11	-954.24	0.00	-329.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
25	67.23	-954.24	0.00	-329.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
26	67.23	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
26	71.34	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
27	71.34	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
27	75.45	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
28	75.45	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
28	79.56	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
29	79.56	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
29	83.68	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
30	83.68	-954.24	0.00	-329.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
30	87.79	-954.24	0.00	-329.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
31	87.79	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
31	91.90	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
32	91.90	-655.98	-8.84	-256.19	-2.85	-588.75	-0.3	-73.47	0	0.00	0	0.00
32	92.90	-655.98	-8.84	-247.63	-2.85	-582.03	-0.3	-83.97	0	0.00	0	0.00
33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
35	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	104.45	-0.19	0.64	7.63	-5	0.51	-0.3	-0.36	-0.3	-0.36	0	-0.41
39	107.00	-0.19	0.64	5.99	-5	0.40	-0.3	-0.28	-0.3	-0.28	0	-0.33
40	107.00	-0.11	0.66	5.99	-5	0.53	-0.3	-0.59	-0.3	-0.59	0	-0.66
40	109.30	-0.11	0.66	4.47	-4.442	0.43	-0.3	-0.48	-0.3	-0.48	0	-0.54
41	109.30	-0.02	0.67	4.47	-4.442	0.44	-0.3	-0.47	-0.3	-0.47	0	-0.53
41	111.65	-0.02	0.67	2.88	-3.884	0.34	-0.3	-0.33	-0.3	-0.33	0	-0.39
42	111.65	-0.08	0.66	2.88	-3.884	0.33	-0.3	-0.34	-0.3	-0.34	0	-0.40
42	114.00	-0.08	0.66	1.32	-3.325	0.21	-0.3	-0.18	-0.3	-0.18	0	-0.22
43	114.00	-0.21	0.63	1.32	-3.325	0.28	-0.3	-0.54	0	0.00	0	0.00
43	115.00	-0.21	0.63	0.66	-3.088	0.15	-0.3	-0.34	0	0.00	0	0.00
44	115.00	0.00	0.67	0.66	-3.088	0.18	-0.3	-0.31	0	0.00	0	0.00
44	116.00	0.00	0.67	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	116.00	-656.09	9.50	-247.63	-2.85	-582.09	-0.3	-84.03	0	0.00	0	0.00
45	117.00	-656.09	9.50	-256.85	-2.85	-589.33	-0.3	-72.73	0	0.00	0	0.00
46	117.00	-656.16	0.66	-256.85	-2.85	-589.37	-0.3	-72.77	0	0.00	0	0.00
46	119.76	-656.16	0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
47	119.76	-656.16	0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
47	122.55	-656.16	0.66	-260.50	-2.85	-592.24	-0.3	-68.29	0	0.00	0	0.00
48	122.55	-1093.52	0.66	-672.05	-2.85	-1173.76	-0.3	177.93	0	0.00	0	0.00
48	128.10	-1093.52	0.66	-675.70	-2.85	-1176.63	-0.3	182.41	0	0.00	0	0.00
49	128.10	-1391.72	0.66	-949.15	-2.85	-1567.51	-0.3	341.52	0	0.00	0	0.00
50	133.65	-1391.72	0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
50	133.65	-1391.72	0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
51	139.20	-1391.72	0.66	-956.45	-2.85	-1573.24	-0.3	350.47	0	0.00	0	0.00
51	139.20	-785.32	0.66	-399.05	-2.85	-763.23	-0.3	19.38	0	0.00	0	0.00
52	144.75	-785.32	0.66	-402.70	-2.85	-768.10	-0.3	23.85	0	0.00	0	0.00
52	144.75	-656.16	0.66	-275.09	-2.85	-603.69	-0.3	-50.40	0	0.00	0	0.00
53	147.53	-656.16	0.66	-278.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
53	147.53	-656.16	0.66	-278.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
54	150.30	-656.04	0.00	-278.74	-2.85	-606.55	-0.3	-45.92	0	0.00	0	0.00
54	150.30	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00
55	150.90	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00

GRÁFICO DE TENSIONES



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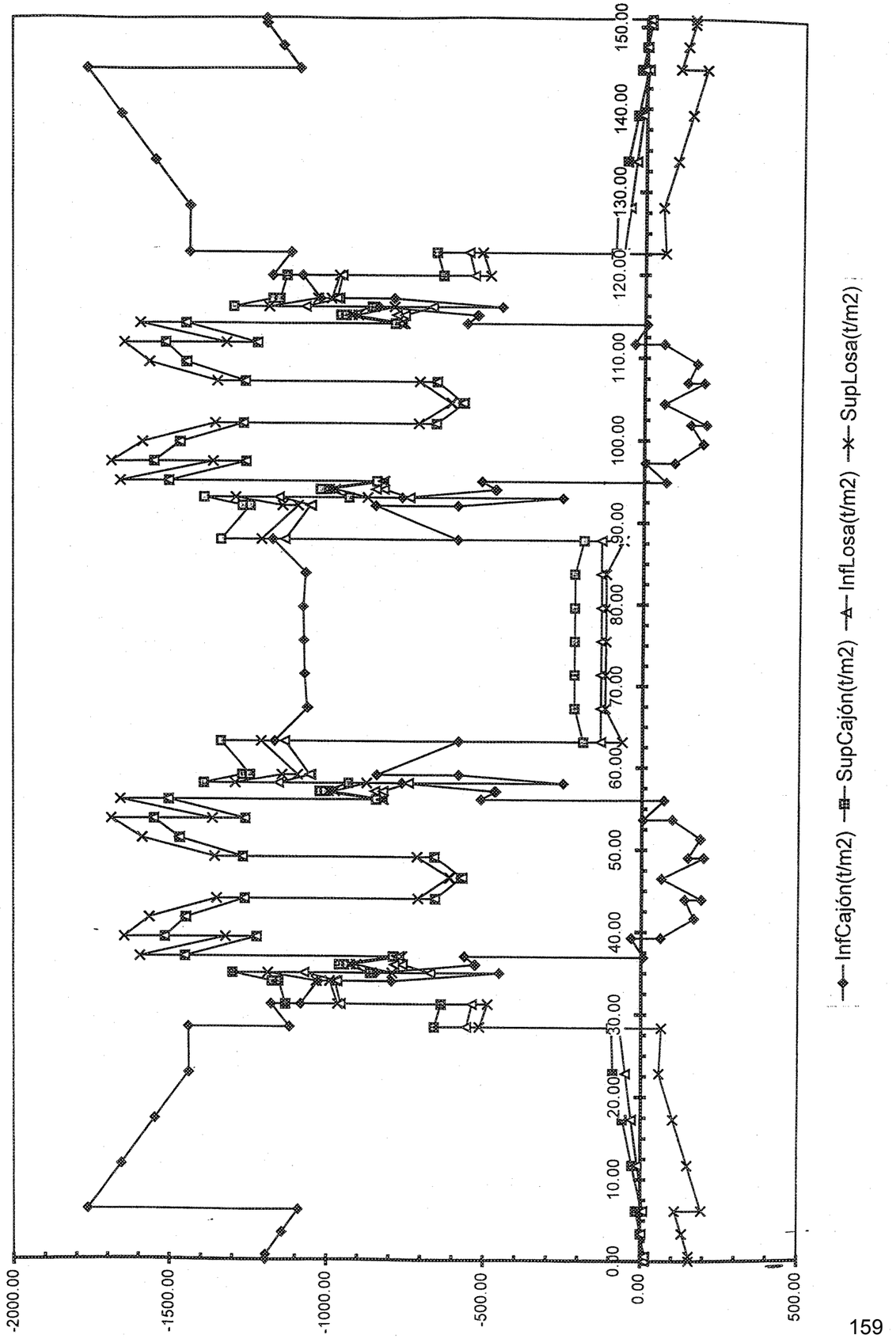
PRETENSADOS POR FASES TOTALES

[redacted]

Cond. ext.:

Cond.	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1031.92	0.00	-1362.94	-2.85	-1194.58	-0.3	16.30	-0.3	12.79	0	155.45
1	2	0.60	-1031.13	0.00	-1361.83	-2.85	-1193.64	-0.3	16.28	-0.3	12.77	0	155.32
2	2	0.60	-1031.13	-35.75	-1361.92	-2.85	-1193.68	-0.3	16.30	-0.3	12.78	0	155.34
2	3	3.38	-1027.53	-35.75	-1258.26	-2.85	-1141.85	-0.3	0.79	-0.3	3.12	0	132.78
3	3	3.38	-1027.53	-35.75	-1257.93	-2.85	-1141.69	-0.3	0.73	-0.3	3.07	0	132.70
3	4	6.15	-1023.94	-35.75	-1153.85	-2.85	-1089.65	-0.3	-14.85	-0.3	-6.65	0	110.05
4	4	6.15	-1602.91	-35.75	-2192.03	-2.85	-1763.03	-0.3	4.24	-0.3	8.84	0	195.10
4	5	11.70	-1591.75	-35.75	-1976.55	-2.85	-1654.25	-0.3	-27.09	-0.3	-10.74	0	149.17
5	5	11.70	-1591.75	-35.75	-1976.90	-2.85	-1654.42	-0.3	-27.03	-0.3	-10.68	0	149.25
5	6	17.25	-1580.65	-35.75	-1761.85	-2.85	-1545.88	-0.3	-58.29	-0.3	-30.21	0	103.41
6	6	17.25	-1580.65	-35.75	-1761.85	-2.85	-1545.88	-0.3	-58.29	-0.3	-30.21	0	103.41
6	7	22.80	-1569.64	-35.75	-1546.95	-2.85	-1437.46	-0.3	-89.55	-0.3	-49.73	0	57.58
7	7	22.80	-1568.91	6.44	-1546.95	-2.85	-1436.93	-0.3	-89.47	-0.3	-49.73	0	57.62
7	8	28.35	-1557.99	6.15	-1564.67	-2.85	-1438.11	-0.3	-94.00	-0.3	-69.25	0	65.51
8	8	28.35	-2714.01	47.36	-686.59	-2.85	-1117.11	-0.3	-657.17	-0.3	-554.85	0	-512.86
8	9	31.13	-2712.90	47.07	-804.71	-2.85	-1174.47	-0.3	-635.55	-0.3	-536.37	0	-486.87
9	9	31.13	-3880.07	-35.76	75.34	-2.85	-1081.15	-0.3	-1129.22	-0.3	-954.05	0	-963.51
9	10	33.90	-3883.27	-35.76	190.82	-2.85	-1025.76	-0.3	-1150.66	-0.3	-971.89	0	-989.50
10	10	33.90	-3717.99	-701.11	1051.47	-2.85	-791.61	-0.3	-1171.94	-0.3	-964.38	0	-1031.59
10	11	34.90	-3719.77	-701.53	1750.81	-2.85	-450.98	-0.3	-1297.12	-0.3	-1069.20	0	-1184.58
11	11	34.90	-5893.34	-1213.32	1596.61	-2.85	-839.87	-0.3	-859.49	-0.3	-668.67	0	-789.46
11	12	35.90	-5895.02	-1214.03	2786.80	-3.088	-529.15	-0.3	-941.76	-0.3	-756.10	0	-903.98
12	12	35.90	-5958.55	593.79	2786.72	-3.088	-525.68	-0.3	-959.24	-0.3	-781.53	0	-923.32
12	13	36.90	-5960.37	593.62	2191.39	-3.325	-560.64	-0.3	-786.65	-0.3	-766.35	0	-757.76
13	13	36.90	-5496.94	-93.09	4890.08	-3.325	6.67	-0.3	-1448.42	-0.3	-1448.42	0	-1592.73
13	14	39.25	-5504.09	-94.24	5121.22	-3.884	-31.62	-0.3	-1220.51	-0.3	-1220.51	0	-1320.01
14	14	39.25	-6382.27	-507.66	6783.86	-3.884	62.58	-0.3	-1512.29	-0.3	-1512.29	0	-1644.10
14	15	41.60	-6389.42	-508.71	7997.83	-4.442	169.68	-0.3	-1445.72	-0.3	-1445.72	0	-1562.73
15	15	41.60	-6401.40	324.90	7997.39	-4.442	168.49	-0.3	-1446.82	-0.3	-1446.82	0	-1563.82
	16	43.90	-6405.28	131.80	7450.40	-5	139.49	-0.3	-1258.88	-0.3	-1258.88	0	-1348.13
	16	43.90	-6347.45	858.82	7449.54	-5	192.62	-0.3	-654.69	-0.3	-654.69	0	-708.77
	17	46.45	-6382.23	597.80	5589.91	-5	64.45	-0.3	-571.35	-0.3	-571.35	0	-611.93
	17	46.45	-6335.43	-629.19	5555.04	-5	64.39	-0.3	-567.44	-0.3	-567.44	0	-607.77
17	18	49.00	-6316.14	-901.74	7532.75	-5	199.83	-0.3	-656.94	-0.3	-656.94	0	-711.63
18	18	49.00	-6377.97	-168.09	7533.40	-5	149.32	-0.3	-1264.63	-0.3	-1264.63	0	-1354.88
18	19	51.30	-6388.11	-360.97	8195.25	-4.442	189.13	-0.3	-1466.15	-0.3	-1466.15	0	-1586.04
19	19	51.30	-6380.94	471.20	8194.33	-4.442	189.73	-0.3	-1465.36	-0.3	-1465.36	0	-1585.25
19	20	53.65	-6385.49	471.89	7092.96	-3.884	98.49	-0.3	-1548.14	-0.3	-1548.14	0	-1685.96
20	20	53.65	-5507.21	62.64	5430.26	-3.884	4.30	-0.3	-1256.34	-0.3	-1256.34	0	-1361.85
20	21	56.00	-5505.92	62.43	5284.21	-3.325	71.48	-0.3	-1500.89	-0.3	-1500.89	0	-1656.83
21	21	56.00	-5999.71	-615.31	2551.84	-3.325	-510.18	-0.3	-841.66	-0.3	-821.45	0	-818.65
21	22	57.00	-5998.09	-615.48	3169.26	-3.088	-463.25	-0.3	-1021.77	-0.3	-844.59	0	-994.22
22	22	57.00	-5939.36	1201.91	3168.79	-3.088	-467.46	-0.3	-1004.78	-0.3	-819.60	0	-975.31
22	23	58.00	-5937.87	1201.29	1994.02	-2.85	-760.29	-0.3	-930.31	-0.3	-738.87	0	-872.02
23	23	58.00	-3761.61	682.04	2148.51	-2.85	-249.89	-0.3	-1388.96	-0.3	-1151.49	0	-1289.49
23	24	59.00	-3760.04	681.66	1469.44	-2.85	-580.71	-0.3	-1267.37	-0.3	-1049.55	0	-1140.99
24	24	59.00	-3937.31	-134.23	564.76	-2.85	-839.80	-0.3	-1241.66	-0.3	-1053.35	0	-1092.23
24	25	63.11	-3933.60	-134.17	1092.11	-2.85	-581.38	-0.3	-1334.99	-0.3	-1132.08	0	-1206.29
25	25	63.11	-1566.88	-58.92	-1011.56	-2.85	-1164.25	-0.3	-187.67	-0.3	-132.09	0	-63.83
25	26	67.23	-1575.45	-59.24	-781.87	-2.85	-1060.01	-0.3	-215.36	-0.3	-131.93	0	-118.55
26	26	67.23	-1578.59	-0.07	-781.87	-2.85	-1062.28	-0.3	-215.69	-0.3	-131.93	0	-118.73
26	27	71.34	-1585.87	-0.07	-792.01	-2.85	-1070.59	-0.3	-215.57	-0.3	-131.80	0	-117.71
27	27	71.34	-1585.87	-0.07	-792.01	-2.85	-1070.59	-0.3	-215.57	-0.3	-131.80	0	-117.71
27	28	75.45	-1588.34	-0.07	-793.52	-2.85	-1073.30	-0.3	-215.61	-0.3	-131.81	0	-117.39
28	28	75.45	-1588.34	-0.07	-793.52	-2.85	-1073.30	-0.3	-215.61	-0.3	-131.81	0	-117.39
28	29	79.56	-1590.74	-0.07	-794.95	-2.85	-1075.93	-0.3	-215.65	-0.3	-131.81	0	-117.08
29	29	79.56	-1590.74	-0.07	-794.95	-2.85	-1075.93	-0.3	-215.65	-0.3	-131.81	0	-117.08
29	30	83.68	-1584.43	-0.07	-784.94	-2.85	-1068.48	-0.3	-215.83	-0.3	-131.92	0	-118.09
30	30	83.68	-1581.27	59.85	-784.94	-2.85	-1066.19	-0.3	-215.50	-0.3	-131.92	0	-117.91
30	31	87.79	-1572.74	59.54	-1017.25	-2.85	-1171.72	-0.3	-187.50	-0.3	-132.05	0	-62.58
31	31	87.79	-3939.48	134.79	1086.41	-2.85	-585.86	-0.3	-1335.66	-0.3	-1132.65	0	-1206.48
31	32	91.90	-3943.28	134.87	556.34	-2.85	-845.63	-0.3	-1241.88	-0.3	-1053.54	0	-1091.85
32	32	91.90	-3765.85	-683.01	1461.02	-2.85	-586.50	-0.3	-1267.54	-0.3	-1049.70	0	-1140.57
	33	92.90	-3767.46	-683.40	2141.38	-2.85	-255.05	-0.3	-1389.37	-0.3	-1151.84	0	-1289.36
	33	92.90	-5943.42	-1203.62	1987.18	-2.85	-762.50	-0.3	-930.06	-0.3	-738.59	0	-871.50
34	34	93.90	-5944.94	-1204.26	3164.41	-3.088	-468.91	-0.3	-1004.86	-0.3	-819.67	0	-975.25
34	34	93.90	-6004.09	614.75	3163.93	-3.088	-464.90	-0.3	-1021.76	-0.3	-844.60	0	-994.05
34	35	94.90	-6005.73	614.58	2548.00	-3.325	-511.42	-0.3	-841.84	-0.3	-821.56	0	-818.71
35	35	94.90	-5505.90	-62.57	5285.79	-3.325	71.75	-0.3	-1501.09	-0.3	-1501.09	0	-1657.07
35	36	97.25	-5507.19	-62.78	5432.46	-3.884	4.56	-0.3	-1256.59	-0.3	-1256.59	0	-1362.14
36	36	97.25	-6385.46	-472.03	7094.90	-3.884	98.72	-0.3	-1548.36	-0.3	-1548.36	0	-1686.22
36	37	99.60	-6380.91	-471.34	8197.90	-4.442	190.08	-0.3	-1465.73	-0.3	-1465.73	0	-1585.67
37	37	99.60	-6388.11	360.84	8196.98	-4.442	189.30	-0.3	-1466.33	-0.3	-1466.33	0	-1586.25
37	38	101.90	-6377.97	167.96	7535.71	-5	149.53	-0.3	-1264.85	-0.3	-1264.85	0	-1355.13
38	38	101.90	-6316.15	901.60	7536.39	-5	200.08	-0.3	-657.11	-0.3	-657.11	0	-711.83
38	39	104.45	-6335.43	629.05	5559.62	-5	64.70	-0.3	-567.65	-0.3	-567.65	0	-608.01
39	39	104.45	-6382.23	-597.74	5591.95	-5	64.59	-0.3	-571.44	-0.3	-571.44	0	-612.04
39	40	107.00	-6347.46	-868.75	7453.52	-5	192.89	-0.3	-654.87	-0.3	-654.87	0	-708.98
40	40	107.00	-6405.28	-131.73	7452.64	-5	139.69	-0.3	-1259.10	-0.3	-1259.10	0	-1348.38
40	41	109.30	-6401.40	-324.83	8000.78	-4.442	168.82	-0.3	-1447.18	-0.3	-1447.18	0	-1564.23
41	41	109.30	-6389.40	508.77	8000.35	-4.442	169.93	-0.3	-1445.98	-0.3	-1445.98	0	-1563.02
41	42	111.65	-6382.26	507.72	6786.82	-3.884	62.93	-0.3	-1512.63	-0.3	-1512.63	0	-1644.50
42	42	111.65	-5504.09	94.32	5124.15	-3.884	-31.27	-0.3	-1220.85	-0.3	-1220.85	0	-1320.41
42	43	114.00	-5496.93	93.16	4893.54	-3.325	7.25	-0.3	-1448.87	-0.3	-1448.87	0	-1593.28
43	43	114.00	-5960.36	-593.55	2193.31	-3.325	-560.36	-0.3	-786.90	-0.3	-766.64	0	-758.05
43	44	115.00	-5958.54	-593.72	2789.35	-3.088	-525.24	-0.3	-959.62	-0.3	-781.87	0	-923.75
44	44	115.00	-5894.99	1214.09	2789.27	-3.088	-528.73	-0.3	-942.11	-0.3	-756.43	0	-904.38
44	45	116.00	-5893.32	1213.38	1598.78	-2.85	-839.42	-0.3	-859.82	-0.3	-669.01	0	-789.86
45	45	116.00	-3719.75	701.61	1753.29	-2.85	-449.76	-0.3	-1297.56	-0.3	-1069.57	0	-1185.12
45	46	117.00	-3717.98	701.19	1053.88	-2.85	-790.43	-0.3	-1172.37	-0.3	-964.74	0	-1032.11
46	46	117.00	-3883.27	35.83	193.22	-2.85	-1024.59	-0.3	-1151.09	-0.3	-972.26	0	-990.02
46	47	119.78	-3880.07	35.83	77.54	-2.85	-1080.08	-0.3	-1129.62	-0.3	-954.38	0	-963.99
47	47	119.78	-2712.91	-47.00	-802.51	-2.85	-1173.40	-0.3	-635.94	-0.3	-536.70	0	-487.35
47	48	122.55	-2714.02	-47.29	-684.59	-2.85	-1116.13	-0.3	-657.53	-0.3	-555.15	0	-513.30
48	48	122.55	-1557.99	-6.07	-1562.68	-2.85	-1437.18	-0.3	-94.18	-0.3	-69.16	0	65.04
48	49	128.10	-1568.91	-6.36	-1545.35	-2.85	-1436.18	-0.3	-89.63	-0.3	-49.65	0	57.24
49	49	128.10	-1569.64	35.82	-1545.35	-2.85	-1436.71	-0.3	-89.70	-0.3	-49.65	0	57.20
	50	133.65	-1580.65	35.82	-1760.65	-2.85	-1545.32	-0.3	-58.40	-0.3	-30.15	0	103.12
	50	133.65	-1580.65	35.82	-1760.65	-2.85	-1545.32	-0.3	-58.40	-0.3	-30.15	0	103.12
51	51	139.20	-1591.75	35.82	-1975.75	-2.85	-1653.88	-0.3	-27.17	-0.3	-10.70	0	148.99
51	51	139.20	-1591.75	35.82	-1976.10	-2.85	-1654.05	-0.3	-27.10	-0.3	-10.65	0	149.06
52	52	144.75	-1602.91	35.82	-2191.47	-2.85	-1762.76	-0.3	4.17	-0.3	8.84	0	194.97
52	52	144.75	-1023.94	35.82	-1153.53	-2.85	-1089.50	-0.3	-14.88	-0.3	-6.62	0	109.97
53	53	147.53	-1027.53	35.82	-1258.05	-2.85	-1141.75	-0.3	0.77	-0.3	3.13	0	132.73
53	53	147.53	-1027.53	35.82	-1257.72	-2.85	-1141.59	-0.3	0.71	-0.3	3.08	0	132.65
54	54	150.30	-1031.13	35.82	-1361.83	-2.85	-1193.64	-0.3	16.28	-0.3	12.77	0	155.32
54	54	150.30	-1031.13	0.00	-1361.92	-2.85	-1193.68	-0.3	16.30	-0.3	12.78	0	155.34
54	55	150.90	-1031.92	0.00	-1362.89	-2.85	-1194.56	-0.3	16.29	-0.3	12.78	0	155.44

GRÁFICO DE TENSIONES

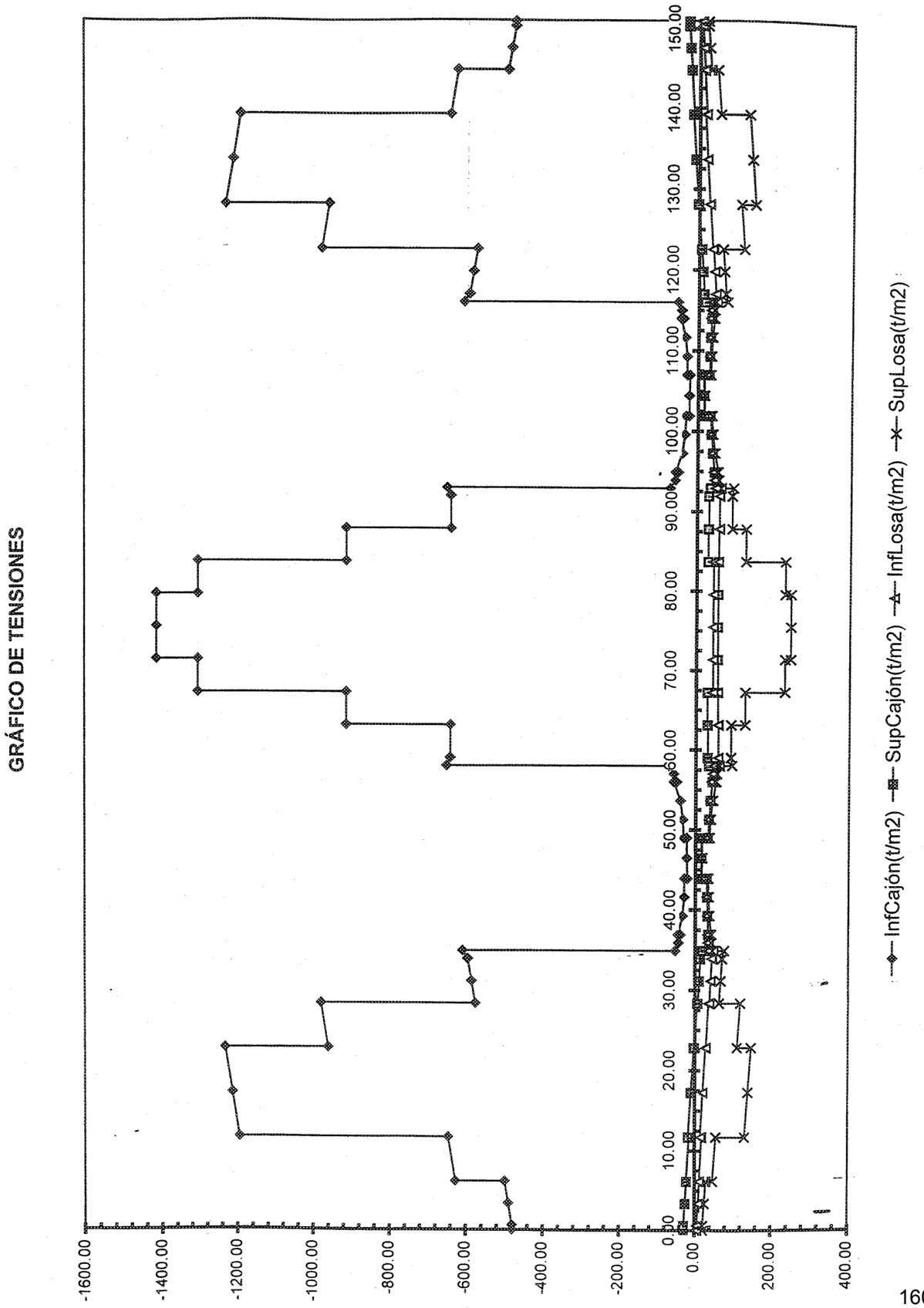


PRETENSADOS POR FASES TOTALES

[1; 1[post2.2]vistascierre6.TOT.Te + [1; 1[post4.2]vistascierre.TOT.Te + [1; 1[PesoPrp]

iCest.cor"

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-520.24	0.00	-101.54	-2.85	-460.02	-0.3	-28.78	-0.3	6.38	0	21.50
1	2	0.60	-520.24	0.00	-101.54	-2.85	-460.02	-0.3	-28.78	-0.3	6.38	0	21.50
2	2	0.60	-520.36	7.02	-101.54	-2.85	-460.11	-0.3	-28.79	-0.3	6.38	0	21.49
2	3	3.38	-520.36	7.02	-121.02	-2.85	-489.64	-0.3	-25.19	-0.3	9.60	0	25.72
3	3	3.38	-520.36	7.02	-121.02	-2.85	-489.64	-0.3	-25.19	-0.3	9.60	0	25.72
3	4	6.15	-520.36	7.02	-140.52	-2.85	-499.19	-0.3	-21.58	-0.3	12.82	0	29.94
4	4	6.15	-630.71	7.02	-216.36	-2.85	-626.35	-0.3	-22.35	-0.3	12.03	0	47.23
4	5	11.70	-630.71	7.02	-255.34	-2.85	-645.43	-0.3	-15.14	-0.3	18.46	0	55.68
5	5	11.70	-1103.66	7.02	-588.72	-2.85	-1194.29	-0.3	-17.61	-0.3	14.76	0	131.73
5	6	17.25	-1103.66	7.02	-627.70	-2.85	-1213.37	-0.3	-10.40	-0.3	21.20	0	140.18
6	6	17.25	-1103.66	7.02	-627.70	-2.85	-1213.37	-0.3	-10.40	-0.3	21.20	0	140.18
6	7	22.80	-1103.66	7.02	-666.68	-2.85	-1232.46	-0.3	-3.19	-0.3	27.63	0	148.63
7	7	22.80	-867.19	7.02	-504.15	-2.85	-959.97	-0.3	-1.54	-0.3	29.32	0	111.58
7	8	28.35	-867.19	7.02	-543.13	-2.85	-979.05	-0.3	5.67	-0.3	35.76	0	120.03
8	8	28.35	-520.36	7.02	-296.45	-2.85	-575.53	-0.3	7.26	-0.3	38.56	0	63.75
8	9	31.13	-520.36	7.02	-315.93	-2.85	-585.07	-0.3	10.87	-0.3	41.78	0	67.97
9	9	31.13	-520.36	7.02	-315.93	-2.85	-585.07	-0.3	10.87	-0.3	41.78	0	67.97
9	10	33.90	-520.36	7.02	-335.43	-2.85	-594.62	-0.3	14.47	-0.3	45.00	0	72.20
10	10	33.90	-524.67	25.57	-335.43	-2.85	-595.83	-0.3	13.22	-0.3	43.93	0	71.13
10	11	34.90	-524.67	25.57	-361.14	-2.85	-608.53	-0.3	18.41	-0.3	49.21	0	76.62
11	11	34.90	-2.82	6.48	-253.32	-2.85	-52.59	-0.3	38.86	-0.3	36.10	0	45.98
11	12	35.90	-2.82	6.48	-260.32	-3.088	-44.09	-0.3	37.12	-0.3	34.38	0	42.36
12	12	35.90	-0.96	7.01	-260.32	-3.088	-43.87	-0.3	37.37	-0.3	34.62	0	42.60
12	13	36.90	-0.96	7.01	-267.37	-3.325	-38.89	-0.3	35.72	-0.3	33.24	0	39.76
13	13	36.90	-1.30	6.92	-267.37	-3.325	-45.06	-0.3	34.50	-0.3	34.50	0	42.39
13	14	39.25	-1.30	6.92	-283.86	-3.884	-33.47	-0.3	32.43	-0.3	32.43	0	37.95
14	14	39.25	-1.14	6.93	-283.86	-3.884	-33.45	-0.3	32.45	-0.3	32.45	0	37.97
14	15	41.60	-1.14	6.93	-300.31	-4.442	-29.50	-0.3	31.16	-0.3	31.16	0	35.55
15	15	41.60	-0.24	7.02	-300.31	-4.442	-29.41	-0.3	31.24	-0.3	31.24	0	35.64
	16	43.90	-0.24	7.02	-316.46	-5	-28.76	-0.3	30.64	-0.3	30.64	0	34.43
	16	43.90	0.57	7.00	-316.46	-5	-21.49	-0.3	14.50	-0.3	14.50	0	16.80
	17	46.45	0.57	7.00	-334.41	-5	-22.71	-0.3	15.32	-0.3	15.32	0	17.75
..	17	46.45	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
17	18	49.00	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
18	18	49.00	0.00	0.00	-342.04	-5	-31.06	-0.3	33.14	-0.3	33.14	0	37.23
18	19	51.30	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
19	19	51.30	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
19	20	53.65	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
20	20	53.65	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
20	21	56.00	0.00	0.00	-342.04	-3.325	-57.40	-0.3	44.38	-0.3	44.38	0	54.47
21	21	56.00	0.00	0.00	-342.04	-3.325	-49.60	-0.3	45.83	-0.3	42.41	0	50.96
21	22	57.00	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
22	22	57.00	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
22	23	58.00	0.00	0.00	-342.04	-2.85	-70.46	-0.3	53.02	-0.3	49.25	0	62.59
23	23	58.00	-523.00	-18.71	-449.86	-2.85	-651.30	-0.3	34.75	-0.3	62.98	0	96.34
23	24	59.00	-523.00	-18.71	-431.16	-2.85	-642.03	-0.3	30.86	-0.3	58.87	0	92.38
24	24	59.00	-520.24	0.00	-431.16	-2.85	-641.26	-0.3	31.66	-0.3	59.56	0	93.06
24	25	63.11	-520.24	0.00	-431.16	-2.85	-641.26	-0.3	31.66	-0.3	59.56	0	93.06
25	25	63.11	-756.71	0.00	-593.69	-2.85	-913.74	-0.3	30.02	-0.3	57.87	0	130.12
25	26	67.23	-756.71	0.00	-593.69	-2.85	-913.74	-0.3	30.02	-0.3	57.87	0	130.12
26	26	67.23	-977.42	0.00	-1039.23	-2.85	-1305.16	-0.3	57.37	-0.3	44.71	0	233.57
26	27	71.34	-977.42	0.00	-1039.23	-2.85	-1305.16	-0.3	57.37	-0.3	44.71	0	233.57
27	27	71.34	-1072.01	0.00	-1104.24	-2.85	-1414.16	-0.3	56.71	-0.3	44.03	0	248.39
27	28	75.45	-1072.01	0.00	-1104.24	-2.85	-1414.16	-0.3	56.71	-0.3	44.03	0	248.39
28	28	75.45	-1072.01	0.00	-1104.24	-2.85	-1414.16	-0.3	56.71	-0.3	44.03	0	248.39
28	29	79.56	-1072.01	0.00	-1104.24	-2.85	-1414.16	-0.3	56.71	-0.3	44.03	0	248.39
29	29	79.56	-977.42	0.00	-1039.23	-2.85	-1305.16	-0.3	57.37	-0.3	44.71	0	233.57
29	30	83.68	-977.42	0.00	-1039.23	-2.85	-1305.16	-0.3	57.37	-0.3	44.71	0	233.57
30	30	83.68	-756.71	0.00	-593.69	-2.85	-913.74	-0.3	30.02	-0.3	57.87	0	130.12
30	31	87.79	-756.71	0.00	-593.69	-2.85	-913.74	-0.3	30.02	-0.3	57.87	0	130.12
31	31	87.79	-520.24	0.00	-431.16	-2.85	-641.26	-0.3	31.66	-0.3	59.56	0	93.06
31	32	91.90	-520.24	0.00	-431.16	-2.85	-641.26	-0.3	31.66	-0.3	59.56	0	93.06
32	32	91.90	-523.00	18.71	-431.16	-2.85	-642.03	-0.3	30.86	-0.3	58.87	0	92.38
	33	92.90	-523.00	18.71	-449.86	-2.85	-651.30	-0.3	34.75	-0.3	62.98	0	96.34
	33	92.90	0.00	0.00	-342.04	-2.85	-70.46	-0.3	53.02	-0.3	49.25	0	62.59
34	34	93.90	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
34	34	93.90	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
34	35	94.90	0.00	0.00	-342.04	-3.325	-49.60	-0.3	45.83	-0.3	42.41	0	50.96
35	35	94.90	0.00	0.00	-342.04	-3.325	-57.40	-0.3	44.38	-0.3	44.38	0	54.47
35	36	97.25	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
36	36	97.25	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
36	37	99.60	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
37	37	99.60	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
37	38	101.90	0.00	0.00	-342.04	-5	-31.06	-0.3	33.14	-0.3	33.14	0	37.23
38	38	101.90	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
38	39	104.45	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
39	39	104.45	0.57	-7.00	-334.41	-5	-22.71	-0.3	15.32	-0.3	15.32	0	17.75
39	40	107.00	0.57	-7.00	-316.46	-5	-21.49	-0.3	14.50	-0.3	14.50	0	16.80
40	40	107.00	-0.24	-7.02	-316.46	-5	-28.76	-0.3	30.64	-0.3	30.64	0	34.43
40	41	109.30	-0.24	-7.02	-300.31	-4.442	-29.41	-0.3	31.24	-0.3	31.24	0	35.64
41	41	109.30	-1.14	-6.93	-300.31	-4.442	-29.50	-0.3	31.16	-0.3	31.16	0	35.55
41	42	111.65	-1.14	-6.93	-283.86	-3.884	-33.45	-0.3	32.45	-0.3	32.45	0	37.97
42	42	111.65	-1.30	-6.92	-283.86	-3.884	-33.47	-0.3	32.43	-0.3	32.43	0	37.95
42	43	114.00	-1.30	-6.92	-267.37	-3.325	-45.06	-0.3	34.50	-0.3	34.50	0	42.39
43	43	114.00	-0.96	-7.01	-267.37	-3.325	-38.89	-0.3	35.72	-0.3	33.24	0	39.76
43	44	115.00	-0.96	-7.01	-260.32	-3.088	-43.87	-0.3	37.37	-0.3	34.62	0	42.60
44	44	115.00	-2.82	-6.48	-260.32	-3.088	-44.09	-0.3	37.12	-0.3	34.38	0	42.36
44	45	116.00	-2.82	-6.48	-253.32	-2.85	-52.59	-0.3	38.86	-0.3	36.10	0	45.98
45	45	116.00	-524.67	-25.57	-361.14	-2.85	-608.53	-0.3	18.41	-0.3	49.21	0	76.62
45	46	117.00	-524.67	-25.57	-335.43	-2.85	-595.83	-0.3	13.22	-0.3	43.93	0	71.13
46	46	117.00	-520.36	-7.02	-335.43	-2.85	-594.62	-0.3	14.47	-0.3	45.00	0	72.20
46	47	119.78	-520.36	-7.02	-315.93	-2.85	-585.07	-0.3	10.87	-0.3	41.78	0	67.97
47	47	119.78	-520.36	-7.02	-315.93	-2.85	-585.07	-0.3	10.87	-0.3	41.78	0	67.97
47	48	122.55	-520.36	-7.02	-296.45	-2.85	-575.53	-0.3	7.26	-0.3	38.56	0	63.75
48	48	122.55	-867.19	-7.02	-543.13	-2.85	-979.05	-0.3	5.67	-0.3	35.76	0	120.03
48	49	128.10	-867.19	-7.02	-504.15	-2.85	-959.97	-0.3	-1.54	-0.3	29.32	0	111.58
49	49	128.10	-1103.66	-7.02	-666.68	-2.85	-1232.46	-0.3	-3.19	-0.3	27.63	0	148.63
50	50	133.65	-1103.66	-7.02	-627.70	-2.85	-1213.37	-0.3	-10.40	-0.3	21.20	0	140.18
50	51	139.20	-1103.66	-7.02	-588.72	-2.85	-1194.29	-0.3	-17.61	-0.3	14.76	0	131.73
51	51	139.20	-630.71	-7.02	-255.34	-2.85	-645.43	-0.3	-15.14	-0.3	18.46	0	55.68
51	52	144.75	-630.71	-7.02	-216.36	-2.85	-626.35	-0.3	-22.35	-0.3	12.03	0	47.23
52	52	144.75	-520.36	-7.02	-140.52	-2.85	-499.19	-0.3	-21.58	-0.3	12.82	0	29.94
52	53	147.53	-520.36	-7.02	-121.02	-2.85	-489.64	-0.3	-25.19	-0.3	9.60	0	25.72
53	53	147.53	-520.36	-7.02	-121.02	-2.85	-489.64	-0.3	-25.19	-0.3	9.60	0	25.72
53	54	150.30	-520.36	-7.02	-101.54	-2.85	-480.11	-0.3	-28.79	-0.3	6.38	0	21.49
54	54	150.30	-520.24	0.00	-101.54	-2.85	-480.02	-0.3	-28.78	-0.3	6.38	0	21.50
54	55	150.90	-520.24	0.00	-101.54	-2.85	-480.02	-0.3	-28.78	-0.3	6.38	0	21.50



Anexo Nº 2.3.9.1. Esfuerzos y tensiones a tiempo cero. Hipótesis simples

9.1. Esfuerzos y tensiones a tiempo cero. Hipótesis simples.

(pasajeropilotecapitoleinstituFase1.1). Tensiones a tiempo T0

[1: 1]pesopil

Cest. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	-2.55	13.83	-6.74	-3.088	-2.24	-0.3	2.62	0	0.00	0	0.00
12	12	35.90	2.00	13.92	-6.74	-3.088	-1.48	-0.3	3.38	0	0.00	0	0.00
12	13	36.90	4.33	30.16	-28.64	-3.325	-6.01	-0.3	11.76	0	0.00	0	0.00
13	13	36.90	-1.94	30.41	-28.64	-3.325	-5.09	-0.3	3.43	-0.3	3.43	0	4.27
13	14	39.25	-4.82	75.70	-151.45	-3.884	-18.33	-0.3	16.83	-0.3	16.83	0	19.77
14	14	39.25	-11.08	75.05	-151.45	-3.884	-19.05	-0.3	16.11	-0.3	16.11	0	19.05
14	15	41.60	-19.35	131.09	-394.45	-4.442	-40.46	-0.3	39.22	-0.3	39.22	0	44.99
15	15	41.60	-2.17	132.49	-394.45	-4.442	-38.81	-0.3	40.87	-0.3	40.87	0	46.64
15	16	43.90	-3.22	196.73	-771.46	-5	-70.32	-0.3	74.47	-0.3	74.47	0	83.72
16	16	43.90	19.46	195.79	-771.46	-5	-51.50	-0.3	36.25	-0.3	36.25	0	41.85
16	17	46.45	32.21	324.04	-1438.00	-5	-96.19	-0.3	67.37	-0.3	67.37	0	77.81
17	17	46.45	32.21	-324.03	-1436.59	-5	-96.09	-0.3	67.31	-0.3	67.31	0	77.74
17	18	49.00	19.46	-195.78	-771.38	-5	-51.49	-0.3	36.25	-0.3	36.25	0	41.85
18	18	49.00	-3.22	-196.72	-771.38	-5	-70.31	-0.3	74.47	-0.3	74.47	0	83.71
18	19	51.30	-2.17	-132.48	-394.41	-4.442	-38.80	-0.3	40.86	-0.3	40.86	0	46.63
19	19	51.30	-19.35	-131.08	-394.41	-4.442	-40.45	-0.3	39.21	-0.3	39.21	0	44.98
19	20	53.65	-11.08	-75.05	-151.74	-3.884	-19.08	-0.3	16.15	-0.3	16.15	0	19.09
20	20	53.65	-4.82	-75.70	-151.74	-3.884	-18.36	-0.3	16.86	-0.3	16.86	0	19.81
20	21	56.00	-1.94	-30.41	-29.15	-3.325	-5.18	-0.3	3.50	-0.3	3.50	0	4.36
21	21	56.00	4.33	-30.16	-29.15	-3.325	-6.12	-0.3	11.96	0	0.00	0	0.00
21	22	57.00	2.00	-13.92	-6.92	-3.088	-1.53	-0.3	3.47	0	0.00	0	0.00
22	22	57.00	-2.55	-13.83	-6.92	-3.088	-2.29	-0.3	2.70	0	0.00	0	0.00
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	34	93.90	-2.55	13.83	-6.74	-3.088	-2.24	-0.3	2.62	0	0.00	0	0.00
34	34	93.90	2.00	13.92	-6.74	-3.088	-1.48	-0.3	3.38	0	0.00	0	0.00
34	35	94.90	4.33	30.16	-28.64	-3.325	-6.01	-0.3	11.76	0	0.00	0	0.00
35	35	94.90	-1.94	30.41	-28.64	-3.325	-5.09	-0.3	3.43	-0.3	3.43	0	4.27
35	36	97.25	-4.82	75.70	-151.45	-3.884	-18.33	-0.3	16.83	-0.3	16.83	0	19.77
36	36	97.25	-11.08	75.05	-151.45	-3.884	-19.05	-0.3	16.11	-0.3	16.11	0	19.05
36	37	99.60	-19.35	131.09	-394.45	-4.442	-40.46	-0.3	39.22	-0.3	39.22	0	44.99
37	37	99.60	-2.17	132.49	-394.45	-4.442	-38.81	-0.3	40.87	-0.3	40.87	0	46.64
37	38	101.90	-3.22	196.73	-771.46	-5	-70.32	-0.3	74.47	-0.3	74.47	0	83.72
38	38	101.90	19.46	195.79	-771.46	-5	-51.50	-0.3	36.25	-0.3	36.25	0	41.85
38	39	104.45	32.21	324.04	-1438.00	-5	-96.19	-0.3	67.37	-0.3	67.37	0	77.81
39	39	104.45	32.21	-324.03	-1436.59	-5	-96.09	-0.3	67.31	-0.3	67.31	0	77.74
39	40	107.00	19.46	-195.78	-771.38	-5	-51.49	-0.3	36.25	-0.3	36.25	0	41.85
40	40	107.00	-3.22	-196.72	-771.38	-5	-70.31	-0.3	74.47	-0.3	74.47	0	83.71
40	41	109.30	-2.17	-132.48	-394.41	-4.442	-38.80	-0.3	40.86	-0.3	40.86	0	46.63
41	41	109.30	-19.35	-131.08	-394.41	-4.442	-40.45	-0.3	39.21	-0.3	39.21	0	44.98
41	42	111.65	-11.08	-75.05	-151.74	-3.884	-19.08	-0.3	16.15	-0.3	16.15	0	19.09
42	42	111.65	-4.82	-75.70	-151.74	-3.884	-18.36	-0.3	16.86	-0.3	16.86	0	19.81
42	43	114.00	-1.94	-30.41	-29.15	-3.325	-5.18	-0.3	3.50	-0.3	3.50	0	4.36
43	43	114.00	4.33	-30.16	-29.15	-3.325	-6.12	-0.3	11.96	0	0.00	0	0.00
43	44	115.00	2.00	-13.92	-6.92	-3.088	-1.53	-0.3	3.47	0	0.00	0	0.00
44	44	115.00	-2.55	-13.83	-6.92	-3.088	-2.29	-0.3	2.70	0	0.00	0	0.00
44	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(postesadolosa1.2capitelsuperior). Tensiones a tiempo To

[1; 1]Pr1.2sup

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	-1363.84	-7.49	628.29	-2.85	-67.40	-0.3	-609.27	0	0.00	0	0.00
11	12	35.90	-1363.84	-7.49	635.90	-3.088	-58.89	-0.3	-517.59	0	0.00	0	0.00
12	12	35.90	-1294.75	428.66	635.90	-3.088	-47.24	-0.3	-505.93	0	0.00	0	0.00
12	13	36.90	-1294.75	428.66	202.86	-3.325	-142.87	-0.3	-268.73	0	0.00	0	0.00
13	13	36.90	-2395.76	88.40	2037.00	-3.325	-13.00	-0.3	-619.14	-0.3	-619.14	0	-679.25
13	14	39.25	-2395.76	88.40	1829.01	-3.884	-60.79	-0.3	-485.38	-0.3	-485.38	0	-520.92
14	14	39.25	-3426.47	-262.70	3820.00	-3.884	54.35	-0.3	-832.43	-0.3	-832.43	0	-906.66
14	15	41.60	-3426.47	-262.70	4444.44	-4.442	106.13	-0.3	-791.58	-0.3	-791.58	0	-856.60
15	15	41.60	-3431.58	184.26	4444.00	-4.442	105.60	-0.3	-792.02	-0.3	-792.02	0	-857.04
15	16	43.90	-3429.71	70.24	4151.73	-5	89.40	-0.3	-689.83	-0.3	-689.83	0	-739.57
	16	43.90	-3398.78	464.89	4152.00	-5	114.21	-0.3	-358.05	-0.3	-358.05	0	-388.20
	17	46.45	-3411.35	338.49	3122.38	-5	43.57	-0.3	-311.57	-0.3	-311.57	0	-334.24
	17	46.45	-3411.35	-338.49	3122.00	-5	43.55	-0.3	-311.56	-0.3	-311.56	0	-334.22
[illegible]	18	49.00	-3398.78	-464.89	4151.73	-5	114.19	-0.3	-358.04	-0.3	-358.04	0	-388.18
18	18	49.00	-3429.71	-70.24	4152.00	-5	89.42	-0.3	-689.86	-0.3	-689.86	0	-739.60
18	19	51.30	-3431.58	-184.26	4444.44	-4.442	105.64	-0.3	-792.07	-0.3	-792.07	0	-857.09
19	19	51.30	-3426.47	262.70	4444.00	-4.442	106.09	-0.3	-791.53	-0.3	-791.53	0	-856.55
19	20	53.65	-3426.47	262.70	3820.41	-3.884	54.40	-0.3	-832.48	-0.3	-832.48	0	-906.72
20	20	53.65	-2395.76	-88.40	1829.00	-3.884	-60.79	-0.3	-485.38	-0.3	-485.38	0	-520.92
20	21	56.00	-2395.76	-88.40	2037.16	-3.325	-12.97	-0.3	-619.16	-0.3	-619.16	0	-679.27
21	21	56.00	-1294.75	-428.66	202.86	-3.325	-142.87	-0.3	-268.73	0	0.00	0	0.00
21	22	57.00	-1294.75	-428.66	635.90	-3.088	-47.24	-0.3	-505.93	0	0.00	0	0.00
22	22	57.00	-1363.84	7.49	635.90	-3.088	-58.89	-0.3	-517.59	0	0.00	0	0.00
22	23	58.00	-1363.84	7.49	628.29	-2.85	-67.40	-0.3	-609.27	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	33	92.90	-1363.84	-7.49	628.29	-2.85	-67.40	-0.3	-609.27	0	0.00	0	0.00
	34	93.90	-1363.84	-7.49	635.90	-3.088	-58.89	-0.3	-517.59	0	0.00	0	0.00
34	34	93.90	-1294.75	428.66	635.90	-3.088	-47.24	-0.3	-505.93	0	0.00	0	0.00
34	35	94.90	-1294.75	428.66	202.86	-3.325	-142.87	-0.3	-268.73	0	0.00	0	0.00
35	35	94.90	-2395.76	88.40	2037.00	-3.325	-13.00	-0.3	-619.14	-0.3	-619.14	0	-679.25
35	36	97.25	-2395.76	88.40	1829.01	-3.884	-60.79	-0.3	-485.38	-0.3	-485.38	0	-520.92
36	36	97.25	-3426.47	-262.70	3820.00	-3.884	54.35	-0.3	-832.43	-0.3	-832.43	0	-906.66
36	37	99.60	-3426.47	-262.70	4444.44	-4.442	106.13	-0.3	-791.58	-0.3	-791.58	0	-856.60
37	37	99.60	-3431.58	184.26	4444.00	-4.442	105.60	-0.3	-792.02	-0.3	-792.02	0	-857.04
37	38	101.90	-3429.71	70.24	4151.73	-5	89.40	-0.3	-689.83	-0.3	-689.83	0	-739.57
38	38	101.90	-3398.78	464.89	4152.00	-5	114.21	-0.3	-358.05	-0.3	-358.05	0	-388.20
38	39	104.45	-3411.35	338.49	3122.38	-5	43.57	-0.3	-311.57	-0.3	-311.57	0	-334.24
39	39	104.45	-3411.35	-338.49	3122.00	-5	43.55	-0.3	-311.56	-0.3	-311.56	0	-334.22
39	40	107.00	-3398.78	-464.89	4151.73	-5	114.19	-0.3	-358.04	-0.3	-358.04	0	-388.18
40	40	107.00	-3429.71	-70.24	4152.00	-5	89.42	-0.3	-689.86	-0.3	-689.86	0	-739.60
40	41	109.30	-3431.58	-184.26	4444.44	-4.442	105.64	-0.3	-792.07	-0.3	-792.07	0	-857.09
41	41	109.30	-3426.47	262.70	4444.00	-4.442	106.09	-0.3	-791.53	-0.3	-791.53	0	-856.55
41	42	111.65	-3426.47	262.70	3820.41	-3.884	54.40	-0.3	-832.48	-0.3	-832.48	0	-906.72
42	42	111.65	-2395.76	-88.40	1829.00	-3.884	-60.79	-0.3	-485.38	-0.3	-485.38	0	-520.92
42	43	114.00	-2395.76	-88.40	2037.16	-3.325	-12.97	-0.3	-619.16	-0.3	-619.16	0	-679.27
43	43	114.00	-1294.75	-428.66	202.86	-3.325	-142.87	-0.3	-268.73	0	0.00	0	0.00
43	44	115.00	-1294.75	-428.66	635.90	-3.088	-47.24	-0.3	-505.93	0	0.00	0	0.00
44	44	115.00	-1363.84	7.49	635.90	-3.088	-58.89	-0.3	-517.59	0	0.00	0	0.00
44	45	116.00	-1363.84	7.49	628.29	-2.85	-67.40	-0.3	-609.27	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(postesadoinferiordecapitelfase2.1). Tensiones a tiempo To

[1; 1]Pr2.1infcapit

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	-1335.78	52.44	-1019.74	-2.85	-601.53	-0.3	277.94	0	0.00	0	0.00
11	12	35.90	-1335.78	52.44	-1073.00	-3.088	-514.27	-0.3	259.72	0	0.00	0	0.00
12	12	35.90	-1249.01	476.47	-1073.06	-3.088	-499.64	-0.3	274.39	0	0.00	0	0.00
12	13	36.90	-1249.01	476.47	-1554.00	-3.325	-543.52	-0.3	420.64	0	0.00	0	0.00
13	13	36.90	-1320.08	210.82	-1554.42	-3.325	-456.29	-0.3	6.25	-0.3	6.25	0	52.12
13	14	39.25	-1320.08	210.82	-2051.00	-3.884	-392.44	-0.3	83.69	-0.3	83.69	0	123.54
14	14	39.25	-1333.01	100.71	-2050.85	-3.884	-393.91	-0.3	82.18	-0.3	82.18	0	122.03
14	15	41.60	-1333.01	100.71	-2290.00	-4.442	-352.00	-0.3	110.54	-0.3	110.54	0	144.05
15	15	41.60	-1308.66	272.87	-2290.08	-4.442	-349.67	-0.3	112.89	-0.3	112.89	0	146.39
15	16	43.90	-1306.88	164.24	-2836.00	-5	-367.10	-0.3	165.18	-0.3	165.18	0	199.16
16	16	43.90	-1279.26	313.70	-2836.27	-5	-256.14	-0.3	66.46	-0.3	66.46	0	87.05
16	17	46.45	-1297.62	128.99	-3403.00	-5	-295.59	-0.3	91.48	-0.3	91.48	0	116.18
17	17	46.45	-1297.62	-128.99	-3403.51	-5	-295.62	-0.3	91.50	-0.3	91.50	0	116.21
17	18	49.00	-1279.26	-313.70	-2836.00	-5	-256.12	-0.3	66.45	-0.3	66.45	0	87.04
18	18	49.00	-1306.88	-164.24	-2836.30	-5	-367.13	-0.3	165.21	-0.3	165.21	0	199.19
18	19	51.30	-1308.66	-272.87	-2290.00	-4.442	-349.66	-0.3	112.88	-0.3	112.88	0	146.38
19	19	51.30	-1333.01	-100.71	-2290.08	-4.442	-352.01	-0.3	110.55	-0.3	110.55	0	144.06
19	20	53.65	-1333.01	-100.71	-2051.00	-3.884	-393.93	-0.3	82.20	-0.3	82.20	0	122.05
20	20	53.65	-1320.08	-210.82	-2050.85	-3.884	-392.42	-0.3	83.67	-0.3	83.67	0	123.52
20	21	56.00	-1320.08	-210.82	-1554.00	-3.325	-456.22	-0.3	6.20	-0.3	6.20	0	52.05
21	21	56.00	-1249.01	-476.47	-1554.42	-3.325	-543.61	-0.3	420.81	0	0.00	0	0.00
21	22	57.00	-1249.01	-476.47	-1073.00	-3.088	-499.63	-0.3	274.36	0	0.00	0	0.00
22	22	57.00	-1335.78	-52.44	-1073.06	-3.088	-514.28	-0.3	259.75	0	0.00	0	0.00
22	23	58.00	-1335.78	-52.44	-1020.00	-2.85	-601.62	-0.3	278.08	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	92.90	-1335.78	52.44	-1019.74	-2.85	-601.53	-0.3	277.94	0	0.00	0	0.00
33	34	93.90	-1335.78	52.44	-1073.00	-3.088	-514.27	-0.3	259.72	0	0.00	0	0.00
34	34	93.90	-1249.01	476.47	-1073.06	-3.088	-499.64	-0.3	274.39	0	0.00	0	0.00
34	35	94.90	-1249.01	476.47	-1554.00	-3.325	-543.52	-0.3	420.64	0	0.00	0	0.00
35	35	94.90	-1320.08	210.82	-1554.42	-3.325	-456.29	-0.3	6.25	-0.3	6.25	0	52.12
35	36	97.25	-1320.08	210.82	-2051.00	-3.884	-392.44	-0.3	83.69	-0.3	83.69	0	123.54
36	36	97.25	-1333.01	100.71	-2050.85	-3.884	-393.91	-0.3	82.18	-0.3	82.18	0	122.03
36	37	99.60	-1333.01	100.71	-2290.00	-4.442	-352.00	-0.3	110.54	-0.3	110.54	0	144.05
37	37	99.60	-1308.66	272.87	-2290.08	-4.442	-349.67	-0.3	112.89	-0.3	112.89	0	146.39
37	38	101.90	-1306.88	164.24	-2836.00	-5	-367.10	-0.3	165.18	-0.3	165.18	0	199.16
38	38	101.90	-1279.26	313.70	-2836.27	-5	-256.14	-0.3	66.46	-0.3	66.46	0	87.05
38	39	104.45	-1297.62	128.99	-3403.00	-5	-295.59	-0.3	91.48	-0.3	91.48	0	116.18
39	39	104.45	-1297.62	-128.99	-3403.51	-5	-295.62	-0.3	91.50	-0.3	91.50	0	116.21
39	40	107.00	-1279.26	-313.70	-2836.00	-5	-256.12	-0.3	66.45	-0.3	66.45	0	87.04
40	40	107.00	-1306.88	-164.24	-2836.30	-5	-367.13	-0.3	165.21	-0.3	165.21	0	199.19
40	41	109.30	-1308.66	-272.87	-2290.00	-4.442	-349.66	-0.3	112.88	-0.3	112.88	0	146.38
41	41	109.30	-1333.01	-100.71	-2290.08	-4.442	-352.01	-0.3	110.55	-0.3	110.55	0	144.06
41	42	111.65	-1333.01	-100.71	-2051.00	-3.884	-393.93	-0.3	82.20	-0.3	82.20	0	122.05
42	42	111.65	-1320.08	-210.82	-2050.85	-3.884	-392.42	-0.3	83.67	-0.3	83.67	0	123.52
42	43	114.00	-1320.08	-210.82	-1554.00	-3.325	-456.22	-0.3	6.20	-0.3	6.20	0	52.05
43	43	114.00	-1249.01	-476.47	-1554.42	-3.325	-543.61	-0.3	420.81	0	0.00	0	0.00
43	44	115.00	-1249.01	-476.47	-1073.00	-3.088	-499.63	-0.3	274.36	0	0.00	0	0.00
44	44	115.00	-1335.78	-52.44	-1073.06	-3.088	-514.28	-0.3	259.75	0	0.00	0	0.00
44	45	116.00	-1335.78	-52.44	-1020.00	-2.85	-601.62	-0.3	278.08	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pesopropiodevanoslaterales.Artesa)). Tensiones a tiempo To

[1; 1]pp[illegible]

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	2.50	-0.75	-2.85	-0.59	-0.3	0.92	0	0.00	0	0.00
2	2	0.60	13.19	-71.42	-0.75	-2.85	7.21	-0.3	8.71	0	0.00	0	0.00
2	3	3.38	13.19	-59.87	181.42	-2.85	150.22	-0.3	-214.67	0	0.00	0	0.00
3	3	3.38	13.19	-59.87	181.42	-2.85	150.22	-0.3	-214.67	0	0.00	0	0.00
3	4	6.15	13.19	-48.32	331.53	-2.85	268.06	-0.3	-398.75	0	0.00	0	0.00
4	4	6.15	13.19	-48.32	331.53	-2.85	268.06	-0.3	-398.75	0	0.00	0	0.00
4	5	11.70	13.19	-25.21	535.58	-2.85	428.25	-0.3	-648.97	0	0.00	0	0.00
5	5	11.70	13.19	-25.21	535.58	-2.85	428.25	-0.3	-648.97	0	0.00	0	0.00
5	6	17.25	13.19	-2.11	611.40	-2.85	487.77	-0.3	-741.94	0	0.00	0	0.00
6	6	17.25	13.19	-2.11	611.40	-2.85	487.77	-0.3	-741.94	0	0.00	0	0.00
6	7	22.80	13.19	21.00	558.98	-2.85	446.62	-0.3	-677.66	0	0.00	0	0.00
7	7	22.80	13.19	21.00	558.98	-2.85	446.62	-0.3	-677.66	0	0.00	0	0.00
7	8	28.35	13.19	44.10	378.34	-2.85	304.81	-0.3	-456.15	0	0.00	0	0.00
8	8	28.35	13.19	44.10	378.34	-2.85	304.81	-0.3	-456.15	0	0.00	0	0.00
8	9	31.13	13.19	55.65	239.93	-2.85	196.15	-0.3	-286.42	0	0.00	0	0.00
9	9	31.13	13.19	55.65	239.93	-2.85	196.15	-0.3	-286.42	0	0.00	0	0.00
9	10	33.90	13.19	67.21	69.46	-2.85	62.32	-0.3	-77.38	0	0.00	0	0.00
10	10	33.90	12.28	67.38	69.46	-2.85	61.79	-0.3	-77.92	0	0.00	0	0.00
10	11	34.90	12.22	71.54	0.00	-2.85	7.22	-0.3	7.22	0	0.00	0	0.00
11	11	34.90	0.00	72.58	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	72.58	-73.81	-3.088	-19.87	-0.3	33.37	0	0.00	0	0.00
12	12	35.90	23.19	68.77	-73.81	-3.088	-15.96	-0.3	37.28	0	0.00	0	0.00
12	13	36.90	23.19	68.77	-143.28	-3.325	-29.82	-0.3	59.08	0	0.00	0	0.00
13	13	36.90	8.63	72.06	-143.28	-3.325	-22.76	-0.3	19.87	-0.3	19.87	0	24.10
13	14	39.25	8.63	72.06	-312.97	-3.884	-35.73	-0.3	36.92	-0.3	36.92	0	43.00
14	14	39.25	2.62	72.53	-312.97	-3.884	-36.43	-0.3	36.23	-0.3	36.23	0	42.31
14	15	41.60	2.62	72.53	-485.26	-4.442	-47.23	-0.3	50.78	-0.3	50.78	0	57.88
15	15	41.60	12.02	71.58	-485.26	-4.442	-46.33	-0.3	51.68	-0.3	51.68	0	58.78
15	16	43.90	12.02	71.58	-649.91	-5	-58.00	-0.3	63.97	-0.3	63.97	0	71.76
	16	43.90	20.18	69.71	-649.91	-5	-43.19	-0.3	30.73	-0.3	30.73	0	35.45
	17	46.45	20.18	69.71	-828.56	-5	-55.34	-0.3	38.90	-0.3	38.90	0	44.92
	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
21	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
21	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
35	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
35	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	39	104.45	20.18	-69.71	-828.56	-5	-55.34	-0.3	38.90	-0.3	38.90	0	44.92
39	40	107.00	20.18	-69.71	-649.91	-5	-43.19	-0.3	30.73	-0.3	30.73	0	35.45
40	40	107.00	12.02	-71.58	-649.91	-5	-58.00	-0.3	63.97	-0.3	63.97	0	71.76
40	41	109.30	12.02	-71.58	-485.26	-4.442	-46.33	-0.3	51.68	-0.3	51.68	0	58.78
41	41	109.30	2.62	-72.53	-485.26	-4.442	-47.23	-0.3	50.78	-0.3	50.78	0	57.88
41	42	111.65	2.62	-72.53	-312.97	-3.884	-36.43	-0.3	36.23	-0.3	36.23	0	42.31
42	42	111.65	8.63	-72.06	-312.97	-3.884	-35.73	-0.3	36.92	-0.3	36.92	0	43.00
42	43	114.00	8.63	-72.06	-143.28	-3.325	-22.76	-0.3	19.87	-0.3	19.87	0	24.10
43	43	114.00	23.19	-68.77	-143.28	-3.325	-29.82	-0.3	59.08	0	0.00	0	0.00
43	44	115.00	23.19	-68.77	-73.81	-3.088	-15.96	-0.3	37.28	0	0.00	0	0.00
44	44	115.00	0.00	-72.58	-73.81	-3.088	-19.87	-0.3	33.37	0	0.00	0	0.00
44	45	116.00	0.00	-72.58	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	12.22	-71.54	0.00	-2.85	7.22	-0.3	7.22	0	0.00	0	0.00
45	46	117.00	12.28	-67.38	69.46	-2.85	61.79	-0.3	-77.92	0	0.00	0	0.00
46	46	117.00	13.19	-67.21	69.46	-2.85	62.32	-0.3	-77.38	0	0.00	0	0.00
46	47	119.78	13.19	-55.65	239.93	-2.85	196.15	-0.3	-286.42	0	0.00	0	0.00
47	47	119.78	13.19	-55.65	239.93	-2.85	196.15	-0.3	-286.42	0	0.00	0	0.00
47	48	122.55	13.19	-44.10	378.34	-2.85	304.81	-0.3	-456.15	0	0.00	0	0.00
48	48	122.55	13.19	-44.10	378.34	-2.85	304.81	-0.3	-456.15	0	0.00	0	0.00
48	49	128.10	13.19	-21.00	558.98	-2.85	446.62	-0.3	-677.66	0	0.00	0	0.00
49	49	128.10	13.19	-21.00	558.98	-2.85	446.62	-0.3	-677.66	0	0.00	0	0.00
	50	133.65	13.19	2.11	611.40	-2.85	487.77	-0.3	-741.94	0	0.00	0	0.00
	50	133.65	13.19	2.11	611.40	-2.85	487.77	-0.3	-741.94	0	0.00	0	0.00
50	51	139.20	13.19	25.21	535.58	-2.85	428.25	-0.3	-648.97	0	0.00	0	0.00
51	51	139.20	13.19	25.21	535.58	-2.85	428.25	-0.3	-648.97	0	0.00	0	0.00
51	52	144.75	13.19	48.32	331.53	-2.85	268.06	-0.3	-398.75	0	0.00	0	0.00
52	52	144.75	13.19	48.32	331.53	-2.85	268.06	-0.3	-398.75	0	0.00	0	0.00
52	53	147.53	13.19	59.87	181.42	-2.85	150.22	-0.3	-214.67	0	0.00	0	0.00
53	53	147.53	13.19	59.87	181.42	-2.85	150.22	-0.3	-214.67	0	0.00	0	0.00
53	54	150.30	13.19	71.42	-0.75	-2.85	7.21	-0.3	8.71	0	0.00	0	0.00
54	54	150.30	0.00	-2.50	-0.75	-2.85	-0.59	-0.3	0.92	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

[1; 1]prst3.2pretensadototal.TOT.To

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00
1	2	0.60	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00
2	2	0.60	-656.16	-0.66	-278.74	-2.85	-606.55	-0.3	-45.92	0	0.00	0	0.00
2	3	3.38	-656.16	-0.66	-276.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
3	3	3.38	-656.16	-0.66	-276.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
3	4	6.15	-656.16	-0.66	-275.09	-2.85	-603.69	-0.3	-50.40	0	0.00	0	0.00
4	4	6.15	-795.32	-0.66	-402.70	-2.85	-786.10	-0.3	23.85	0	0.00	0	0.00
4	5	11.70	-795.32	-0.66	-399.05	-2.85	-783.23	-0.3	19.38	0	0.00	0	0.00
5	5	11.70	-1391.72	-0.66	-956.45	-2.85	-1573.24	-0.3	350.47	0	0.00	0	0.00
5	6	17.25	-1391.72	-0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
6	6	17.25	-1391.72	-0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
6	7	22.80	-1391.72	-0.66	-949.15	-2.85	-1567.51	-0.3	341.52	0	0.00	0	0.00
7	7	22.80	-1093.52	-0.66	-675.70	-2.85	-1176.63	-0.3	182.41	0	0.00	0	0.00
7	8	28.35	-1093.52	-0.66	-672.05	-2.85	-1173.76	-0.3	177.93	0	0.00	0	0.00
8	8	28.35	-656.16	-0.66	-260.50	-2.85	-592.24	-0.3	-68.29	0	0.00	0	0.00
8	9	31.13	-656.16	-0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
9	9	31.13	-656.16	-0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
9	10	33.90	-656.16	-0.66	-256.85	-2.85	-589.37	-0.3	-72.77	0	0.00	0	0.00
10	10	33.90	-656.09	-9.50	-256.85	-2.85	-589.33	-0.3	-72.73	0	0.00	0	0.00
10	11	34.90	-656.09	-9.50	-247.63	-2.85	-582.09	-0.3	-84.03	0	0.00	0	0.00
11	11	34.90	0.00	-0.67	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	-0.67	0.68	-3.088	0.18	-0.3	-0.31	0	0.00	0	0.00
12	12	35.90	-0.21	-0.63	0.68	-3.088	0.15	-0.3	-0.34	0	0.00	0	0.00
12	13	36.90	-0.21	-0.63	1.32	-3.325	0.28	-0.3	-0.54	0	0.00	0	0.00
13	13	36.90	-0.08	-0.66	1.32	-3.325	0.21	-0.3	-0.18	-0.3	-0.18	0	-0.22
13	14	39.25	-0.08	-0.66	2.88	-3.884	0.33	-0.3	-0.34	-0.3	-0.34	0	-0.40
14	14	39.25	-0.02	-0.67	2.88	-3.884	0.34	-0.3	-0.33	-0.3	-0.33	0	-0.39
14	15	41.60	-0.02	-0.67	4.47	-4.442	0.44	-0.3	-0.47	-0.3	-0.47	0	-0.53
15	15	41.60	-0.11	-0.66	4.47	-4.442	0.43	-0.3	-0.48	-0.3	-0.48	0	-0.54
15	16	43.90	-0.11	-0.66	5.99	-5	0.53	-0.3	-0.59	-0.3	-0.59	0	-0.66
16	16	43.90	-0.19	-0.64	5.99	-5	0.40	-0.3	-0.28	-0.3	-0.28	0	-0.33
16	17	46.45	-0.19	-0.64	7.63	-5	0.51	-0.3	-0.36	-0.3	-0.36	0	-0.41
17	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
21	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
21	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
35	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
35	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	39	104.45	-0.19	0.64	7.63	-5	0.51	-0.3	-0.36	-0.3	-0.36	0	-0.41
39	40	107.00	-0.19	0.64	5.99	-5	0.40	-0.3	-0.28	-0.3	-0.28	0	-0.33
40	40	107.00	-0.11	0.66	5.99	-5	0.53	-0.3	-0.59	-0.3	-0.59	0	-0.66
40	41	109.30	-0.11	0.66	4.47	-4.442	0.43	-0.3	-0.48	-0.3	-0.48	0	-0.54
41	41	109.30	-0.02	0.67	4.47	-4.442	0.44	-0.3	-0.47	-0.3	-0.47	0	-0.53
41	42	111.65	-0.02	0.67	2.88	-3.884	0.34	-0.3	-0.33	-0.3	-0.33	0	-0.39
42	42	111.65	-0.08	0.66	2.88	-3.884	0.33	-0.3	-0.34	-0.3	-0.34	0	-0.40
42	43	114.00	-0.08	0.66	1.32	-3.325	0.21	-0.3	-0.18	-0.3	-0.18	0	-0.22
43	43	114.00	-0.21	0.63	1.32	-3.325	0.28	-0.3	-0.54	0	0.00	0	0.00
43	44	115.00	-0.21	0.63	0.68	-3.088	0.15	-0.3	-0.34	0	0.00	0	0.00
44	44	115.00	0.00	0.67	0.68	-3.088	0.18	-0.3	-0.31	0	0.00	0	0.00
44	45	116.00	0.00	0.67	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	-656.09	9.50	-247.63	-2.85	-582.09	-0.3	-84.03	0	0.00	0	0.00
45	46	117.00	-656.09	9.50	-256.85	-2.85	-589.33	-0.3	-72.73	0	0.00	0	0.00
46	46	117.00	-656.16	0.66	-256.85	-2.85	-589.37	-0.3	-72.77	0	0.00	0	0.00
46	47	119.78	-656.16	0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
47	47	119.78	-656.16	0.66	-258.67	-2.85	-590.80	-0.3	-70.54	0	0.00	0	0.00
47	48	122.55	-656.16	0.66	-260.50	-2.85	-592.24	-0.3	-68.29	0	0.00	0	0.00
48	48	122.55	-1093.52	0.66	-672.05	-2.85	-1173.76	-0.3	177.93	0	0.00	0	0.00
48	49	128.10	-1093.52	0.66	-675.70	-2.85	-1176.63	-0.3	182.41	0	0.00	0	0.00
49	49	128.10	-1391.72	0.66	-949.15	-2.85	-1567.51	-0.3	341.52	0	0.00	0	0.00
49	50	133.65	-1391.72	0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
50	50	133.65	-1391.72	0.66	-952.80	-2.85	-1570.37	-0.3	346.00	0	0.00	0	0.00
50	51	139.20	-1391.72	0.66	-956.45	-2.85	-1573.24	-0.3	350.47	0	0.00	0	0.00
51	51	139.20	-795.32	0.66	-399.05	-2.85	-783.23	-0.3	19.38	0	0.00	0	0.00
51	52	144.75	-795.32	0.66	-402.70	-2.85	-786.10	-0.3	23.85	0	0.00	0	0.00
52	52	144.75	-656.16	0.66	-275.09	-2.85	-603.69	-0.3	-50.40	0	0.00	0	0.00
52	53	147.53	-656.16	0.66	-276.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
53	53	147.53	-656.16	0.66	-276.91	-2.85	-605.12	-0.3	-48.17	0	0.00	0	0.00
53	54	150.30	-656.16	0.66	-278.74	-2.85	-606.55	-0.3	-45.92	0	0.00	0	0.00
54	54	150.30	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00
54	55	150.90	-656.04	0.00	-278.74	-2.85	-606.48	-0.3	-45.85	0	0.00	0	0.00

[redacted]

(pretensadovenocontra)). Tensiones a tiempo To

{1; 1]

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
13	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
13	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
	17	46.45	20.54	-70.96	-843.37	-5	-56.33	-0.3	39.59	-0.3	39.59	0	45.72
[illegible]	18	49.00	20.54	-70.96	-661.53	-5	-43.97	-0.3	31.28	-0.3	31.28	0	36.08
18	18	49.00	12.23	-72.85	-661.53	-5	-59.04	-0.3	65.12	-0.3	65.12	0	73.04
18	19	51.30	12.23	-72.85	-493.94	-4.442	-47.16	-0.3	52.61	-0.3	52.61	0	59.83
19	19	51.30	2.67	-73.83	-493.94	-4.442	-48.08	-0.3	51.69	-0.3	51.69	0	58.92
19	20	53.65	2.67	-73.83	-318.57	-3.884	-37.08	-0.3	36.88	-0.3	36.88	0	43.07
20	20	53.65	8.78	-73.35	-318.57	-3.884	-36.37	-0.3	37.58	-0.3	37.58	0	43.77
20	21	56.00	8.78	-73.35	-145.84	-3.325	-23.17	-0.3	20.23	-0.3	20.23	0	24.53
21	21	56.00	23.60	-70.00	-145.84	-3.325	-30.35	-0.3	60.13	0	0.00	0	0.00
21	22	57.00	23.60	-70.00	-75.13	-3.088	-16.25	-0.3	37.95	0	0.00	0	0.00
22	22	57.00	0.00	-73.87	-75.13	-3.088	-20.23	-0.3	33.97	0	0.00	0	0.00
22	23	58.00	0.00	-73.87	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	12.44	-72.82	0.00	-2.85	7.35	-0.3	7.35	0	0.00	0	0.00
23	24	59.00	12.50	-68.66	70.74	-2.85	62.92	-0.3	-79.36	0	0.00	0	0.00
24	24	59.00	13.42	-68.48	70.74	-2.85	63.46	-0.3	-78.82	0	0.00	0	0.00
24	25	63.11	13.42	-51.36	317.17	-2.85	256.92	-0.3	-381.00	0	0.00	0	0.00
25	25	63.11	13.42	-51.36	317.17	-2.85	256.92	-0.3	-381.00	0	0.00	0	0.00
25	26	67.23	13.42	-34.24	493.19	-2.85	395.10	-0.3	-596.85	0	0.00	0	0.00
26	26	67.23	13.42	-34.24	493.19	-2.85	395.10	-0.3	-596.85	0	0.00	0	0.00
26	27	71.34	13.42	-17.12	598.80	-2.85	478.01	-0.3	-726.36	0	0.00	0	0.00
27	27	71.34	13.42	-17.12	598.80	-2.85	478.01	-0.3	-726.36	0	0.00	0	0.00
27	28	75.45	13.42	0.00	634.00	-2.85	505.65	-0.3	-769.52	0	0.00	0	0.00
28	28	75.45	13.42	0.00	634.00	-2.85	505.65	-0.3	-769.52	0	0.00	0	0.00
28	29	79.56	13.42	17.12	598.80	-2.85	478.01	-0.3	-726.36	0	0.00	0	0.00
29	29	79.56	13.42	17.12	598.80	-2.85	478.01	-0.3	-726.36	0	0.00	0	0.00
29	30	83.68	13.42	34.24	493.19	-2.85	395.10	-0.3	-596.85	0	0.00	0	0.00
30	30	83.68	13.42	34.24	493.19	-2.85	395.10	-0.3	-596.85	0	0.00	0	0.00
30	31	87.79	13.42	51.36	317.17	-2.85	256.92	-0.3	-381.00	0	0.00	0	0.00
31	31	87.79	13.42	51.36	317.17	-2.85	256.92	-0.3	-381.00	0	0.00	0	0.00
31	32	91.90	13.42	68.48	70.74	-2.85	63.46	-0.3	-78.82	0	0.00	0	0.00
32	32	91.90	12.50	68.66	70.74	-2.85	62.92	-0.3	-79.36	0	0.00	0	0.00
[illegible]	33	92.90	12.44	72.82	0.00	-2.85	7.35	-0.3	7.35	0	0.00	0	0.00
	33	92.90	0.00	73.87	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	34	93.90	0.00	73.87	-75.13	-3.088	-20.23	-0.3	33.97	0	0.00	0	0.00
[illegible]	34	93.90	23.60	70.00	-75.13	-3.088	-16.25	-0.3	37.95	0	0.00	0	0.00
34	35	94.90	23.60	70.00	-145.84	-3.325	-30.35	-0.3	60.13	0	0.00	0	0.00
35	35	94.90	8.78	73.35	-145.84	-3.325	-23.17	-0.3	20.23	-0.3	20.23	0	24.53
35	36	97.25	8.78	73.35	-318.57	-3.884	-36.37	-0.3	37.58	-0.3	37.58	0	43.77
36	36	97.25	2.67	73.83	-318.57	-3.884	-37.08	-0.3	36.88	-0.3	36.88	0	43.07
36	37	99.60	2.67	73.83	-493.94	-4.442	-48.08	-0.3	51.69	-0.3	51.69	0	58.92
37	37	99.60	12.23	72.85	-493.94	-4.442	-47.16	-0.3	52.61	-0.3	52.61	0	59.83
37	38	101.90	12.23	72.85	-661.53	-5	-59.04	-0.3	65.12	-0.3	65.12	0	73.04
38	38	101.90	20.54	70.96	-661.53	-5	-43.97	-0.3	31.28	-0.3	31.28	0	36.08
38	39	104.45	20.54	70.96	-843.37	-5	-56.33	-0.3	39.59	-0.3	39.59	0	45.72
39	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
43	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
43	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

{ 1; 1]pret4.2pretensadovc.TOT.To

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
13	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
13	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
16	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
16	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
21	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
21	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	-655.98	8.84	-247.63	-2.85	-582.03	-0.3	-83.97	0	0.00	0	0.00
23	24	59.00	-655.98	8.84	-256.19	-2.85	-588.75	-0.3	-73.47	0	0.00	0	0.00
24	24	59.00	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
24	25	63.11	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
25	25	63.11	-954.24	0.00	-529.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
25	26	67.23	-954.24	0.00	-529.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
26	26	67.23	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
26	27	71.34	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
27	27	71.34	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
27	28	75.45	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
28	28	75.45	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
28	29	79.56	-1351.84	0.00	-1264.80	-2.85	-1791.74	-0.3	752.16	0	0.00	0	0.00
29	29	79.56	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
29	30	83.68	-1232.56	0.00	-1155.42	-2.85	-1635.39	-0.3	688.51	0	0.00	0	0.00
30	30	83.68	-954.24	0.00	-529.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
30	31	87.79	-954.24	0.00	-529.64	-2.85	-979.66	-0.3	85.61	0	0.00	0	0.00
31	31	87.79	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
31	32	91.90	-656.04	0.00	-256.19	-2.85	-588.78	-0.3	-73.51	0	0.00	0	0.00
32	32	91.90	-655.98	-8.84	-256.19	-2.85	-588.75	-0.3	-73.47	0	0.00	0	0.00
32	33	92.90	-655.98	-8.84	-247.63	-2.85	-582.03	-0.3	-83.97	0	0.00	0	0.00
33	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
35	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
35	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
43	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
43	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pesopropiodeprelosa). Tensiones a tiempo To

(1; ¿PPprelosa

Coef. esc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.63	-0.19	-2.85	-0.15	-0.3	0.23	0	0.00	0	0.00
2	2	0.60	3.33	-18.01	-0.19	-2.85	1.82	-0.3	2.20	0	0.00	0	0.00
2	3	3.38	3.33	-15.10	45.76	-2.85	37.89	-0.3	-54.15	0	0.00	0	0.00
3	3	3.38	3.33	-15.10	45.76	-2.85	37.89	-0.3	-54.15	0	0.00	0	0.00
3	4	6.15	3.33	-12.19	83.62	-2.85	67.61	-0.3	-100.57	0	0.00	0	0.00
4	4	6.15	3.33	-12.19	83.62	-2.85	67.61	-0.3	-100.57	0	0.00	0	0.00
4	5	11.70	3.33	-6.36	135.08	-2.85	108.01	-0.3	-163.68	0	0.00	0	0.00
5	5	11.70	3.33	-6.36	135.08	-2.85	108.01	-0.3	-163.68	0	0.00	0	0.00
5	6	17.25	3.33	-0.53	154.21	-2.85	123.03	-0.3	-187.13	0	0.00	0	0.00
6	6	17.25	3.33	-0.53	154.21	-2.85	123.03	-0.3	-187.13	0	0.00	0	0.00
6	7	22.80	3.33	5.30	140.99	-2.85	112.65	-0.3	-170.92	0	0.00	0	0.00
7	7	22.80	3.33	5.30	140.99	-2.85	112.65	-0.3	-170.92	0	0.00	0	0.00
7	8	28.35	3.33	11.12	95.43	-2.85	76.88	-0.3	-115.05	0	0.00	0	0.00
8	8	28.35	3.33	11.12	95.43	-2.85	76.88	-0.3	-115.05	0	0.00	0	0.00
8	9	31.13	3.33	14.04	60.52	-2.85	49.48	-0.3	-72.25	0	0.00	0	0.00
9	9	31.13	3.33	14.04	60.52	-2.85	49.48	-0.3	-72.25	0	0.00	0	0.00
9	10	33.90	3.33	16.95	17.52	-2.85	15.72	-0.3	-19.52	0	0.00	0	0.00
10	10	33.90	3.10	16.99	17.52	-2.85	15.59	-0.3	-19.65	0	0.00	0	0.00
10	11	34.90	3.08	18.04	0.00	-2.85	1.82	-0.3	1.82	0	0.00	0	0.00
11	11	34.90	0.00	18.31	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	-0.19	19.36	-19.15	-3.088	-5.19	-0.3	8.63	0	0.00	0	0.00
12	12	35.90	6.00	18.40	-19.15	-3.088	-4.14	-0.3	9.67	0	0.00	0	0.00
12	13	36.90	6.15	19.45	-38.27	-3.325	-7.97	-0.3	15.77	0	0.00	0	0.00
13	13	36.90	2.04	20.30	-38.27	-3.325	-6.12	-0.3	5.27	-0.3	5.27	0	6.40
13	14	39.25	2.04	20.30	-86.07	-3.884	-9.87	-0.3	10.11	-0.3	10.11	0	11.79
14	14	39.25	0.35	20.40	-86.07	-3.884	-10.06	-0.3	9.92	-0.3	9.92	0	11.59
14	15	41.60	0.35	20.40	-134.53	-4.442	-13.13	-0.3	14.04	-0.3	14.04	0	16.01
15	15	41.60	3.00	20.18	-134.53	-4.442	-12.88	-0.3	14.30	-0.3	14.30	0	16.26
15	16	43.90	3.00	20.18	-180.95	-5	-16.18	-0.3	17.78	-0.3	17.78	0	19.95
[illegible]	16	43.90	5.30	19.70	-180.95	-5	-12.04	-0.3	8.54	-0.3	8.54	0	9.85
[illegible]	17	46.45	5.30	19.70	-231.44	-5	-15.48	-0.3	10.85	-0.3	10.85	0	12.53
[illegible]	17	46.45	5.39	-20.02	-235.18	-5	-15.73	-0.3	11.02	-0.3	11.02	0	12.73
[illegible]	18	49.00	5.39	-20.02	-183.88	-5	-12.24	-0.3	8.68	-0.3	8.68	0	10.01
18	18	49.00	3.05	-20.50	-183.88	-5	-16.44	-0.3	18.07	-0.3	18.07	0	20.27
18	19	51.30	3.05	-20.50	-136.72	-4.442	-13.09	-0.3	14.53	-0.3	14.53	0	16.53
19	19	51.30	0.36	-20.73	-136.72	-4.442	-13.34	-0.3	14.27	-0.3	14.27	0	16.27
19	20	53.65	0.36	-20.73	-87.48	-3.884	-10.22	-0.3	10.08	-0.3	10.08	0	11.78
20	20	53.65	2.08	-20.62	-87.48	-3.884	-10.03	-0.3	10.28	-0.3	10.28	0	11.98
20	21	56.00	2.08	-20.62	-38.92	-3.325	-6.22	-0.3	5.36	-0.3	5.36	0	6.51
21	21	56.00	6.26	-19.76	-38.92	-3.325	-8.11	-0.3	16.04	0	0.00	0	0.00
21	22	57.00	6.10	-18.71	-19.48	-3.088	-4.22	-0.3	9.84	0	0.00	0	0.00
22	22	57.00	-0.19	-19.68	-19.48	-3.088	-5.28	-0.3	8.77	0	0.00	0	0.00
22	23	58.00	0.00	-18.63	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	3.14	-18.37	0.00	-2.85	1.86	-0.3	1.86	0	0.00	0	0.00
23	24	59.00	3.15	-17.32	17.84	-2.85	15.87	-0.3	-20.02	0	0.00	0	0.00
24	24	59.00	3.39	-17.27	17.84	-2.85	16.01	-0.3	-19.87	0	0.00	0	0.00
24	25	63.11	3.39	-12.95	80.00	-2.85	64.81	-0.3	-96.10	0	0.00	0	0.00
25	25	63.11	3.39	-12.95	80.00	-2.85	64.81	-0.3	-96.10	0	0.00	0	0.00
25	26	67.23	3.39	-8.64	124.39	-2.85	99.65	-0.3	-150.53	0	0.00	0	0.00
26	26	67.23	3.39	-8.64	124.39	-2.85	99.65	-0.3	-150.53	0	0.00	0	0.00
26	27	71.34	3.39	-4.32	151.03	-2.85	120.57	-0.3	-183.20	0	0.00	0	0.00
27	27	71.34	3.39	-4.32	151.03	-2.85	120.57	-0.3	-183.20	0	0.00	0	0.00
27	28	75.45	3.39	0.00	159.91	-2.85	127.54	-0.3	-194.09	0	0.00	0	0.00
28	28	75.45	3.39	0.00	159.91	-2.85	127.54	-0.3	-194.09	0	0.00	0	0.00
28	29	79.56	3.39	4.32	151.03	-2.85	120.57	-0.3	-183.20	0	0.00	0	0.00
29	29	79.56	3.39	4.32	151.03	-2.85	120.57	-0.3	-183.20	0	0.00	0	0.00
29	30	83.68	3.39	8.64	124.39	-2.85	99.65	-0.3	-150.53	0	0.00	0	0.00
30	30	83.68	3.39	8.64	124.39	-2.85	99.65	-0.3	-150.53	0	0.00	0	0.00
30	31	87.79	3.39	12.95	80.00	-2.85	64.81	-0.3	-96.10	0	0.00	0	0.00
31	31	87.79	3.39	12.95	80.00	-2.85	64.81	-0.3	-96.10	0	0.00	0	0.00
31	32	91.90	3.39	17.27	17.84	-2.85	16.01	-0.3	-19.87	0	0.00	0	0.00
32	32	91.90	3.15	17.32	17.84	-2.85	15.87	-0.3	-20.02	0	0.00	0	0.00
32	33	92.90	3.14	18.37	0.00	-2.85	1.86	-0.3	1.86	0	0.00	0	0.00
[illegible]	33	92.90	0.00	18.63	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	34	93.90	-0.19	19.68	-19.48	-3.088	-5.28	-0.3	8.77	0	0.00	0	0.00
[illegible]	34	93.90	6.10	18.71	-19.48	-3.088	-4.22	-0.3	9.84	0	0.00	0	0.00
34	35	94.90	6.26	19.76	-38.92	-3.325	-8.11	-0.3	16.04	0	0.00	0	0.00
35	35	94.90	2.08	20.62	-38.92	-3.325	-6.22	-0.3	5.36	-0.3	5.36	0	6.51
35	36	97.25	2.08	20.62	-87.48	-3.884	-10.03	-0.3	10.28	-0.3	10.28	0	11.98
36	36	97.25	0.36	20.73	-87.48	-3.884	-10.22	-0.3	10.08	-0.3	10.08	0	11.78
36	37	99.60	0.36	20.73	-136.72	-4.442	-13.34	-0.3	14.27	-0.3	14.27	0	16.27
37	37	99.60	3.05	20.50	-136.72	-4.442	-13.09	-0.3	14.53	-0.3	14.53	0	16.53
37	38	101.90	3.05	20.50	-183.88	-5	-16.44	-0.3	18.07	-0.3	18.07	0	20.27
38	38	101.90	5.39	20.02	-183.88	-5	-12.24	-0.3	8.68	-0.3	8.68	0	10.01
38	39	104.45	5.39	20.02	-235.18	-5	-15.73	-0.3	11.02	-0.3	11.02	0	12.73
39	39	104.45	5.30	-19.70	-231.44	-5	-15.48	-0.3	10.85	-0.3	10.85	0	12.53
39	40	107.00	5.30	-19.70	-180.95	-5	-12.04	-0.3	8.54	-0.3	8.54	0	9.85
40	40	107.00	3.00	-20.18	-180.95	-5	-16.18	-0.3	17.78	-0.3	17.78	0	19.95
40	41	109.30	3.00	-20.18	-134.53	-4.442	-12.88	-0.3	14.30	-0.3	14.30	0	16.26
41	41	109.30	0.35	-20.40	-134.53	-4.442	-13.13	-0.3	14.04	-0.3	14.04	0	16.01
41	42	111.65	0.35	-20.40	-86.07	-3.884	-10.06	-0.3	9.92	-0.3	9.92	0	11.59
42	42	111.65	2.04	-20.30	-86.07	-3.884	-9.87	-0.3	10.11	-0.3	10.11	0	11.79
42	43	114.00	2.04	-20.30	-38.27	-3.325	-6.12	-0.3	5.27	-0.3	5.27	0	6.40
43	43	114.00	6.15	-19.45	-38.27	-3.325	-7.97	-0.3	15.77	0	0.00	0	0.00
43	44	115.00	6.00	-18.40	-19.15	-3.088	-4.14	-0.3	9.67	0	0.00	0	0.00
44	44	115.00	-0.19	-19.36	-19.15	-3.088	-5.19	-0.3	8.63	0	0.00	0	0.00
44	45	116.00	0.00	-18.31	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	3.08	-18.04	0.00	-2.85	1.82	-0.3	1.82	0	0.00	0	0.00
45	46	117.00	3.10	-16.99	17.52	-2.85	15.59	-0.3	-19.65	0	0.00	0	0.00
46	46	117.00	3.33	-16.95	17.52	-2.85	15.72	-0.3	-19.52	0	0.00	0	0.00
46	47	119.78	3.33	-14.04	60.52	-2.85	49.48	-0.3	-72.25	0	0.00	0	0.00
47	47	119.78	3.33	-14.04	60.52	-2.85	49.48	-0.3	-72.25	0	0.00	0	0.00
47	48	122.55	3.33	-11.12	95.43	-2.85	76.88	-0.3	-115.05	0	0.00	0	0.00
48	48	122.55	3.33	-11.12	95.43	-2.85	76.88	-0.3	-115.05	0	0.00	0	0.00
48	49	128.10	3.33	-5.30	140.99	-2.85	112.65	-0.3	-170.92	0	0.00	0	0.00
49	49	128.10	3.33	-5.30	140.99	-2.85	112.65	-0.3	-170.92	0	0.00	0	0.00
49	50	133.65	3.33	0.53	154.21	-2.85	123.03	-0.3	-187.13	0	0.00	0	0.00
[illegible]	50	133.65	3.33	0.53	154.21	-2.85	123.03	-0.3	-187.13	0	0.00	0	0.00
[illegible]	51	139.20	3.33	6.36	135.08	-2.85	108.01	-0.3	-163.68	0	0.00	0	0.00
51	51	139.20	3.33	6.36	135.08	-2.85	108.01	-0.3	-163.68	0	0.00	0	0.00
51	52	144.75	3.33	12.19	83.62	-2.85	67.61	-0.3	-100.57	0	0.00	0	0.00
52	52	144.75	3.33	12.19	83.62	-2.85	67.61	-0.3	-100.57	0	0.00	0	0.00
52	53	147.53	3.33	15.10	45.76	-2.85	37.89	-0.3	-54.15	0	0.00	0	0.00
53	53	147.53	3.33	15.10	45.76	-2.85	37.89	-0.3	-54.15	0	0.00	0	0.00
53	54	150.30	3.33	18.01	-0.19	-2.85	1.82	-0.3	2.20	0	0.00	0	0.00
54	54	150.30	0.00	-0.63	-0.19	-2.85	-0.15	-0.3	0.23	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

(1; 1)prel5.1borrezarte.TOT.To

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-0.88	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-0.88	2.45	-2.85	1.92	-0.3	-3.00	0	0.00	0	0.00
3	3	3.38	0.00	-0.88	2.45	-2.85	1.92	-0.3	-3.00	0	0.00	0	0.00
3	4	6.15	0.00	-0.88	4.90	-2.85	3.85	-0.3	-6.01	0	0.00	0	0.00
4	4	6.15	0.00	-0.88	4.90	-2.85	3.85	-0.3	-6.01	0	0.00	0	0.00
4	5	11.70	0.00	-0.88	9.80	-2.85	7.69	-0.3	-12.02	0	0.00	0	0.00
5	5	11.70	0.00	-0.88	9.80	-2.85	7.69	-0.3	-12.02	0	0.00	0	0.00
5	6	17.25	0.00	-0.88	14.70	-2.85	11.54	-0.3	-18.03	0	0.00	0	0.00
6	6	17.25	0.00	-0.88	14.70	-2.85	11.54	-0.3	-18.03	0	0.00	0	0.00
6	7	22.80	0.00	-0.88	19.60	-2.85	15.39	-0.3	-24.03	0	0.00	0	0.00
7	7	22.80	0.00	-0.88	19.60	-2.85	15.39	-0.3	-24.03	0	0.00	0	0.00
7	8	28.35	0.00	-0.88	24.49	-2.85	19.23	-0.3	-30.03	0	0.00	0	0.00
8	8	28.35	0.00	-0.88	24.49	-2.85	19.23	-0.3	-30.03	0	0.00	0	0.00
8	9	31.13	0.00	-0.88	26.94	-2.85	21.15	-0.3	-33.04	0	0.00	0	0.00
9	9	31.13	0.00	-0.88	26.94	-2.85	21.15	-0.3	-33.04	0	0.00	0	0.00
9	10	33.90	0.00	-0.88	29.39	-2.85	23.07	-0.3	-36.04	0	0.00	0	0.00
10	10	33.90	-545.99	-8.24	-209.51	-2.85	-487.11	-0.3	-65.72	0	0.00	0	0.00
10	11	34.90	-545.99	-8.24	-201.50	-2.85	-480.82	-0.3	-75.54	0	0.00	0	0.00
11	11	34.90	-536.80	-100.09	-201.50	-2.85	-173.51	-0.3	0.27	0	0.00	0	0.00
11	12	35.90	-536.80	-100.09	-102.28	-3.088	-118.11	-0.3	-44.33	0	0.00	0	0.00
12	12	35.90	-540.64	76.67	-102.28	-3.088	-118.75	-0.3	-44.98	0	0.00	0	0.00
12	13	36.90	-540.64	76.67	-179.23	-3.325	-120.85	-0.3	-9.65	0	0.00	0	0.00
13	13	36.90	0.06	-0.88	-8.43	-3.325	-1.41	-0.3	1.10	-0.3	1.10	0	1.35
13	14	39.25	0.06	-0.88	-6.36	-3.884	-0.74	-0.3	0.74	-0.3	0.74	0	0.86
14	14	39.25	0.13	-0.87	-6.36	-3.884	-0.73	-0.3	0.75	-0.3	0.75	0	0.87
14	15	41.60	0.13	-0.87	-4.28	-4.442	-0.41	-0.3	0.46	-0.3	0.46	0	0.52
15	15	41.60	0.01	-0.88	-4.28	-4.442	-0.42	-0.3	0.45	-0.3	0.45	0	0.51
15	16	43.90	0.01	-0.88	-2.25	-5	-0.20	-0.3	0.22	-0.3	0.22	0	0.25
16	16	43.90	-0.09	-0.88	-2.25	-5	-0.16	-0.3	0.10	-0.3	0.10	0	0.11
16	17	46.45	-0.09	-0.88	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	17	46.45	43.25	4.30	-33.60	-5	-0.15	-0.3	3.68	-0.3	3.68	0	3.92
17	18	49.00	43.25	4.30	-44.62	-5	-0.89	-0.3	4.18	-0.3	4.18	0	4.50
18	18	49.00	43.46	-0.71	-44.62	-5	-0.41	-0.3	7.97	-0.3	7.97	0	8.50
18	19	51.30	43.46	-0.71	-42.98	-4.442	-0.04	-0.3	8.65	-0.3	8.65	0	9.27
19	19	51.30	43.00	-6.35	-42.98	-4.442	-0.08	-0.3	8.60	-0.3	8.60	0	9.23
19	20	53.65	43.00	-6.35	-27.91	-3.884	1.67	-0.3	8.15	-0.3	8.15	0	8.69
20	20	53.65	43.38	-2.76	-27.91	-3.884	1.71	-0.3	8.19	-0.3	8.19	0	8.73
20	21	56.00	43.38	-2.76	-21.40	-3.325	2.83	-0.3	9.20	-0.3	9.20	0	9.83
21	21	56.00	-497.49	-71.37	-192.21	-3.325	-117.53	-0.3	1.72	0	0.00	0	0.00
21	22	57.00	-497.49	-71.37	-120.61	-3.088	-116.41	-0.3	-29.41	0	0.00	0	0.00
22	22	57.00	-494.22	91.32	-120.61	-3.088	-115.86	-0.3	-28.86	0	0.00	0	0.00
22	23	58.00	-494.22	91.32	-210.91	-2.85	-168.07	-0.3	13.83	0	0.00	0	0.00
23	23	58.00	-502.54	6.77	-210.91	-2.85	-462.53	-0.3	-38.33	0	0.00	0	0.00
23	24	59.00	-502.54	6.77	-217.45	-2.85	-467.66	-0.3	-30.31	0	0.00	0	0.00
24	24	59.00	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
24	25	63.11	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
25	25	63.11	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
25	26	67.23	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
26	26	67.23	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
26	27	71.34	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
27	27	71.34	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
27	28	75.45	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
28	28	75.45	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
28	29	79.56	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
29	29	79.56	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
29	30	83.68	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
30	30	83.68	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
30	31	87.79	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
31	31	87.79	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
31	32	91.90	43.47	0.00	21.45	-2.85	42.53	-0.3	-0.62	0	0.00	0	0.00
32	32	91.90	-502.54	-6.77	-217.45	-2.85	-467.66	-0.3	-30.31	0	0.00	0	0.00
32	33	92.90	-502.54	-6.77	-210.91	-2.85	-462.53	-0.3	-38.33	0	0.00	0	0.00
33	33	92.90	-494.22	-91.32	-210.91	-2.85	-168.07	-0.3	13.83	0	0.00	0	0.00
33	34	93.90	-494.22	-91.32	-120.61	-3.088	-115.86	-0.3	-28.86	0	0.00	0	0.00
34	34	93.90	-497.49	71.37	-120.61	-3.088	-116.41	-0.3	-29.41	0	0.00	0	0.00
34	35	94.90	-497.49	71.37	-192.21	-3.325	-117.53	-0.3	1.72	0	0.00	0	0.00
35	35	94.90	43.38	2.76	-21.40	-3.325	2.83	-0.3	9.20	-0.3	9.20	0	9.83
35	36	97.25	43.38	2.76	-27.91	-3.884	1.71	-0.3	8.19	-0.3	8.19	0	8.73
36	36	97.25	43.00	6.35	-27.91	-3.884	1.67	-0.3	8.15	-0.3	8.15	0	8.69
36	37	99.60	43.00	6.35	-42.98	-4.442	-0.08	-0.3	8.60	-0.3	8.60	0	9.23
37	37	99.60	43.46	0.71	-42.98	-4.442	-0.04	-0.3	8.65	-0.3	8.65	0	9.27
37	38	101.90	43.46	0.71	-44.62	-5	-0.41	-0.3	7.97	-0.3	7.97	0	8.50
38	38	101.90	43.25	-4.30	-44.62	-5	-0.89	-0.3	4.18	-0.3	4.18	0	4.50
38	39	104.45	43.25	-4.30	-33.60	-5	-0.15	-0.3	3.68	-0.3	3.68	0	3.92
39	39	104.45	-0.09	0.88	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	40	107.00	-0.09	0.88	-2.25	-5	-0.16	-0.3	0.10	-0.3	0.10	0	0.11
40	40	107.00	0.01	0.88	-2.25	-5	-0.20	-0.3	0.22	-0.3	0.22	0	0.25
40	41	109.30	0.01	0.88	-4.28	-4.442	-0.42	-0.3	0.45	-0.3	0.45	0	0.51
41	41	109.30	0.13	0.87	-4.28	-4.442	-0.41	-0.3	0.46	-0.3	0.46	0	0.52
41	42	111.65	0.13	0.87	-6.36	-3.884	-0.73	-0.3	0.75	-0.3	0.75	0	0.87
42	42	111.65	0.06	0.88	-6.36	-3.884	-0.74	-0.3	0.74	-0.3	0.74	0	0.86
42	43	114.00	0.06	0.88	-8.43	-3.325	-1.41	-0.3	1.10	-0.3	1.10	0	1.35
43	43	114.00	-540.64	-76.67	-179.23	-3.325	-120.85	-0.3	-9.65	0	0.00	0	0.00
43	44	115.00	-540.64	-76.67	-102.28	-3.088	-118.75	-0.3	-44.98	0	0.00	0	0.00
44	44	115.00	-536.80	100.09	-102.28	-3.088	-118.11	-0.3	-44.33	0	0.00	0	0.00
44	45	116.00	-536.80	100.09	-201.50	-2.85	-173.51	-0.3	0.27	0	0.00	0	0.00
45	45	116.00	-545.99	8.24	-201.50	-2.85	-480.82	-0.3	-75.54	0	0.00	0	0.00
45	46	117.00	-545.99	8.24	-209.51	-2.85	-487.11	-0.3	-65.72	0	0.00	0	0.00
46	46	117.00	0.00	0.88	29.39	-2.85	23.07	-0.3	-36.04	0	0.00	0	0.00
46	47	119.78	0.00	0.88	26.94	-2.85	21.15	-0.3	-33.04	0	0.00	0	0.00
47	47	119.78	0.00	0.88	26.94	-2.85	21.15	-0.3	-33.04	0	0.00	0	0.00
47	48	122.55	0.00	0.88	24.49	-2.85	19.23	-0.3	-30.03	0	0.00	0	0.00
48	48	122.55	0.00	0.88	24.49	-2.85	19.23	-0.3	-30.03	0	0.00	0	0.00
48	49	128.10	0.00	0.88	19.60	-2.85	15.39	-0.3	-24.03	0	0.00	0	0.00
49	49	128.10	0.00	0.88	19.60	-2.85	15.39	-0.3	-24.03	0	0.00	0	0.00
49	50	133.65	0.00	0.88	14.70	-2.85	11.54	-0.3	-18.03	0	0.00	0	0.00
50	50	133.65	0.00	0.88	14.70	-2.85	11.54	-0.3	-18.03	0	0.00	0	0.00
50	51	139.20	0.00	0.88	9.80	-2.85	7.69	-0.3	-12.02	0	0.00	0	0.00
51	51	139.20	0.00	0.88	9.80	-2.85	7.69	-0.3	-12.02	0	0.00	0	0.00
51	52	144.75	0.00	0.88	4.90	-2.85	3.85	-0.3	-6.01	0	0.00	0	0.00
52	52	144.75	0.00	0.88	4.90	-2.85	3.85	-0.3	-6.01	0	0.00	0	0.00
52	53	147.53	0.00	0.88	2.45	-2.85	1.92	-0.3	-3.00	0	0.00	0	0.00
53	53	147.53	0.00	0.88	2.45	-2.85	1.92	-0.3	-3.00	0	0.00	0	0.00
53	54	150.30	0.00	0.88	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(optoacerradocapitolosFASE 2). Tensiones a tiempo To

[1; 1]poteas1

Coef. ex:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-1.09	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-1.09	3.02	-2.85	2.37	-0.3	-3.70	0	0.00	0	0.00
3	3	3.38	0.00	-1.09	3.02	-2.85	2.37	-0.3	-3.70	0	0.00	0	0.00
3	4	6.15	0.00	-1.09	6.05	-2.85	4.75	-0.3	-7.42	0	0.00	0	0.00
4	4	6.15	0.00	-1.09	6.05	-2.85	4.75	-0.3	-7.42	0	0.00	0	0.00
4	5	11.70	0.00	-1.09	12.10	-2.85	9.50	-0.3	-14.84	0	0.00	0	0.00
5	5	11.70	0.00	-1.09	12.10	-2.85	9.50	-0.3	-14.84	0	0.00	0	0.00
5	6	17.25	0.00	-1.09	18.15	-2.85	14.25	-0.3	-22.26	0	0.00	0	0.00
6	6	17.25	0.00	-1.09	18.15	-2.85	14.25	-0.3	-22.26	0	0.00	0	0.00
6	7	22.80	0.00	-1.09	24.19	-2.85	18.99	-0.3	-29.66	0	0.00	0	0.00
7	7	22.80	0.00	-1.09	24.19	-2.85	18.99	-0.3	-29.66	0	0.00	0	0.00
7	8	28.35	0.00	-1.09	30.24	-2.85	23.74	-0.3	-37.08	0	0.00	0	0.00
8	8	28.35	0.00	-1.09	30.24	-2.85	23.74	-0.3	-37.08	0	0.00	0	0.00
8	9	31.13	0.00	10.57	17.10	-2.85	13.42	-0.3	-20.97	0	0.00	0	0.00
9	9	31.13	0.00	10.57	17.10	-2.85	13.42	-0.3	-20.97	0	0.00	0	0.00
9	10	33.90	0.00	22.22	-28.39	-2.85	-22.29	-0.3	34.81	0	0.00	0	0.00
10	10	33.90	-0.30	22.22	-28.39	-2.85	-22.46	-0.3	34.64	0	0.00	0	0.00
10	11	34.90	-0.36	26.42	-52.71	-2.85	-41.59	-0.3	64.42	0	0.00	0	0.00
11	11	34.90	-4.80	25.98	-52.71	-2.85	-18.22	-0.3	27.24	0	0.00	0	0.00
11	12	35.90	-5.58	30.18	-81.27	-3.088	-22.82	-0.3	35.80	0	0.00	0	0.00
12	12	35.90	4.36	30.38	-81.27	-3.088	-21.15	-0.3	37.48	0	0.00	0	0.00
12	13	36.90	4.96	34.58	-114.08	-3.325	-25.72	-0.3	45.06	0	0.00	0	0.00
13	13	36.90	-2.22	34.86	-114.08	-3.325	-19.47	-0.3	14.48	-0.3	14.48	0	17.84
13	14	39.25	-2.22	34.86	-196.18	-3.884	-23.28	-0.3	22.27	-0.3	22.27	0	26.08
14	14	39.25	-5.10	34.56	-196.18	-3.884	-23.61	-0.3	21.93	-0.3	21.93	0	25.75
14	15	41.60	-5.10	34.56	-278.28	-4.442	-27.72	-0.3	28.49	-0.3	28.49	0	32.56
15	15	41.60	-0.57	34.93	-278.28	-4.442	-27.29	-0.3	28.92	-0.3	28.92	0	32.99
15	16	43.90	-0.57	34.93	-358.63	-5	-32.61	-0.3	34.70	-0.3	34.70	0	38.99
	16	43.90	3.46	34.76	-358.63	-5	-24.22	-0.3	16.58	-0.3	16.58	0	19.18
	17	46.45	3.46	34.76	-447.71	-5	-30.27	-0.3	20.65	-0.3	20.65	0	23.90
	17	46.45	-0.52	-30.19	-376.48	-5	-25.63	-0.3	17.20	-0.3	17.20	0	19.93
	18	49.00	-0.52	-30.19	-299.13	-5	-20.37	-0.3	13.66	-0.3	13.66	0	15.83
18	18	49.00	-3.99	-29.93	-299.13	-5	-27.50	-0.3	28.65	-0.3	28.65	0	32.23
18	19	51.30	-3.99	-29.93	-230.29	-4.442	-22.92	-0.3	23.60	-0.3	23.60	0	26.97
19	19	51.30	-7.84	-29.15	-230.29	-4.442	-23.29	-0.3	23.23	-0.3	23.23	0	26.60
19	20	53.65	-7.84	-29.15	-161.04	-3.884	-19.80	-0.3	17.59	-0.3	17.59	0	20.71
20	20	53.65	-5.40	-29.70	-161.04	-3.884	-19.52	-0.3	17.87	-0.3	17.87	0	21.00
20	21	56.00	-5.40	-29.70	-91.09	-3.325	-16.08	-0.3	11.02	-0.3	11.02	0	13.71
21	21	56.00	0.79	-30.18	-91.09	-3.325	-21.01	-0.3	35.51	0	0.00	0	0.00
21	22	57.00	0.19	-25.98	-62.72	-3.088	-16.85	-0.3	28.39	0	0.00	0	0.00
22	22	57.00	-8.12	-24.68	-62.72	-3.088	-18.26	-0.3	26.99	0	0.00	0	0.00
22	23	58.00	-7.34	-20.48	-39.76	-2.85	-14.49	-0.3	19.80	0	0.00	0	0.00
23	23	58.00	-3.79	-21.42	-39.76	-2.85	-33.45	-0.3	46.52	0	0.00	0	0.00
23	24	59.00	-3.73	-17.22	-20.44	-2.85	-18.25	-0.3	22.86	0	0.00	0	0.00
24	24	59.00	-3.50	-17.27	-20.44	-2.85	-18.11	-0.3	23.00	0	0.00	0	0.00
24	25	63.11	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
25	25	63.11	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
25	26	67.23	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
26	26	67.23	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
26	27	71.34	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
27	27	71.34	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
27	28	75.45	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
28	28	75.45	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
28	29	79.56	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
29	29	79.56	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
29	30	83.68	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
30	30	83.68	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
30	31	87.79	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
31	31	87.79	-3.50	0.00	15.08	-2.85	9.77	-0.3	-20.56	0	0.00	0	0.00
31	32	91.90	-3.50	17.27	-20.44	-2.85	-18.11	-0.3	23.00	0	0.00	0	0.00
32	32	91.90	-3.73	17.22	-20.44	-2.85	-18.25	-0.3	22.86	0	0.00	0	0.00
32	33	92.90	-3.79	21.42	-39.76	-2.85	-33.45	-0.3	46.52	0	0.00	0	0.00
	33	92.90	-7.34	20.48	-39.76	-2.85	-14.49	-0.3	19.80	0	0.00	0	0.00
	34	93.90	-8.12	24.68	-62.72	-3.088	-18.26	-0.3	26.99	0	0.00	0	0.00
	34	93.90	0.19	25.98	-62.72	-3.088	-16.85	-0.3	28.39	0	0.00	0	0.00
34	35	94.90	0.79	30.18	-91.09	-3.325	-21.01	-0.3	35.51	0	0.00	0	0.00
35	35	94.90	-5.40	29.70	-91.09	-3.325	-16.08	-0.3	11.02	-0.3	11.02	0	13.71
35	36	97.25	-5.40	29.70	-161.04	-3.884	-19.52	-0.3	17.87	-0.3	17.87	0	21.00
36	36	97.25	-7.84	29.15	-161.04	-3.884	-19.80	-0.3	17.59	-0.3	17.59	0	20.71
36	37	99.60	-7.84	29.15	-230.29	-4.442	-23.29	-0.3	23.23	-0.3	23.23	0	26.60
37	37	99.60	-3.99	29.93	-230.29	-4.442	-22.92	-0.3	23.60	-0.3	23.60	0	26.97
37	38	101.90	-3.99	29.93	-299.13	-5	-27.50	-0.3	28.65	-0.3	28.65	0	32.23
38	38	101.90	-0.52	30.19	-299.13	-5	-20.37	-0.3	13.66	-0.3	13.66	0	15.83
38	39	104.45	-0.52	30.19	-376.48	-5	-25.63	-0.3	17.20	-0.3	17.20	0	19.93
39	39	104.45	3.46	-34.76	-447.71	-5	-30.27	-0.3	20.65	-0.3	20.65	0	23.90
39	40	107.00	3.46	-34.76	-358.63	-5	-24.22	-0.3	16.58	-0.3	16.58	0	19.18
40	40	107.00	-0.57	-34.93	-358.63	-5	-32.61	-0.3	34.70	-0.3	34.70	0	38.99
40	41	109.30	-0.57	-34.93	-278.28	-4.442	-27.29	-0.3	28.92	-0.3	28.92	0	32.99
41	41	109.30	-5.10	-34.56	-278.28	-4.442	-27.72	-0.3	28.49	-0.3	28.49	0	32.56
41	42	111.65	-5.10	-34.56	-196.18	-3.884	-23.61	-0.3	21.93	-0.3	21.93	0	25.75
42	42	111.65	-2.22	-34.86	-196.18	-3.884	-23.28	-0.3	22.27	-0.3	22.27	0	26.08
42	43	114.00	-2.22	-34.86	-114.08	-3.325	-19.47	-0.3	14.48	-0.3	14.48	0	17.84
43	43	114.00	4.96	-34.58	-114.08	-3.325	-25.72	-0.3	45.06	0	0.00	0	0.00
43	44	115.00	4.36	-30.38	-81.27	-3.088	-21.15	-0.3	37.48	0	0.00	0	0.00
44	44	115.00	-5.58	-30.18	-81.27	-3.088	-22.82	-0.3	35.80	0	0.00	0	0.00
44	45	116.00	-4.80	-25.98	-52.71	-2.85	-18.22	-0.3	27.24	0	0.00	0	0.00
45	45	116.00	-0.36	-26.42	-52.71	-2.85	-41.59	-0.3	64.42	0	0.00	0	0.00
45	46	117.00	-0.30	-22.22	-28.39	-2.85	-22.46	-0.3	34.64	0	0.00	0	0.00
46	46	117.00	0.00	-22.22	-28.39	-2.85	-22.29	-0.3	34.81	0	0.00	0	0.00
46	47	119.78	0.00	-10.57	17.10	-2.85	13.42	-0.3	-20.97	0	0.00	0	0.00
47	47	119.78	0.00	-10.57	17.10	-2.85	13.42	-0.3	-20.97	0	0.00	0	0.00
47	48	122.55	0.00	1.09	30.24	-2.85	23.74	-0.3	-37.08	0	0.00	0	0.00
48	48	122.55	0.00	1.09	30.24	-2.85	23.74	-0.3	-37.08	0	0.00	0	0.00
48	49	128.10	0.00	1.09	24.19	-2.85	18.99	-0.3	-29.66	0	0.00	0	0.00
49	49	128.10	0.00	1.09	24.19	-2.85	18.99	-0.3	-29.66	0	0.00	0	0.00
	50	133.65	0.00	1.09	18.15	-2.85	14.25	-0.3	-22.26	0	0.00	0	0.00
	50	133.65	0.00	1.09	18.15	-2.85	14.25	-0.3	-22.26	0	0.00	0	0.00
	51	139.20	0.00	1.09	12.10	-2.85	9.50	-0.3	-14.84	0	0.00	0	0.00
	51	139.20	0.00	1.09	12.10	-2.85	9.50	-0.3	-14.84	0	0.00	0	0.00
51	52	144.75	0.00	1.09	6.05	-2.85	4.75	-0.3	-7.42	0	0.00	0	0.00
52	52	144.75	0.00	1.09	6.05	-2.85	4.75	-0.3	-7.42	0	0.00	0	0.00
52	53	147.53	0.00	1.09	3.02	-2.85	2.37	-0.3	-3.70	0	0.00	0	0.00
53	53	147.53	0.00	1.09	3.02	-2.85	2.37	-0.3	-3.70	0	0.00	0	0.00
53	54	150.30	0.00	1.09	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(DESBLOQUEOfase8.1). Tensiones a tiempo To

[1; 1]desbloqueo

Coef. ex:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-0.34	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-0.34	0.95	-2.85	0.75	-0.3	-1.16	0	0.00	0	0.00
3	3	3.38	0.00	-0.34	0.95	-2.85	0.75	-0.3	-1.16	0	0.00	0	0.00
3	4	6.15	0.00	-0.34	1.90	-2.85	1.49	-0.3	-2.33	0	0.00	0	0.00
4	4	6.15	0.00	-0.34	1.90	-2.85	1.49	-0.3	-2.33	0	0.00	0	0.00
4	5	11.70	0.00	-0.34	3.80	-2.85	2.98	-0.3	-4.66	0	0.00	0	0.00
5	5	11.70	0.00	-0.34	3.80	-2.85	2.98	-0.3	-4.66	0	0.00	0	0.00
5	6	17.25	0.00	-0.34	5.70	-2.85	4.47	-0.3	-6.99	0	0.00	0	0.00
6	6	17.25	0.00	-0.34	5.70	-2.85	4.47	-0.3	-6.99	0	0.00	0	0.00
6	7	22.80	0.00	-0.34	7.60	-2.85	5.97	-0.3	-9.32	0	0.00	0	0.00
7	7	22.80	-0.03	-0.34	7.60	-2.85	5.95	-0.3	-9.34	0	0.00	0	0.00
7	8	28.35	-0.03	-0.34	9.50	-2.85	7.44	-0.3	-11.67	0	0.00	0	0.00
8	8	28.35	-0.05	-0.34	9.50	-2.85	4.66	-0.3	-1.72	-0.3	-1.45	0	-2.09
8	9	31.13	-0.05	-0.34	10.45	-2.85	5.12	-0.3	-1.89	-0.3	-1.60	0	-2.30
9	9	31.13	0.00	-0.34	10.45	-2.85	5.14	-0.3	-1.88	-0.3	-1.59	0	-2.28
9	10	33.90	0.00	-0.34	11.40	-2.85	5.61	-0.3	-2.05	-0.3	-1.73	0	-2.49
10	10	33.90	0.07	-0.34	11.40	-2.85	5.63	-0.3	-2.03	-0.3	-1.71	0	-2.47
10	11	34.90	0.07	-0.34	11.74	-2.85	5.79	-0.3	-2.09	-0.3	-1.76	0	-2.55
11	11	34.90	0.13	-0.32	11.74	-2.85	2.40	-0.3	-1.78	-0.3	-1.64	0	-2.10
11	12	35.90	0.13	-0.32	12.08	-3.088	2.03	-0.3	-1.71	-0.3	-1.58	0	-1.95
12	12	35.90	0.03	-0.34	12.08	-3.088	2.01	-0.3	-1.72	-0.3	-1.59	0	-1.96
12	13	36.90	0.03	-0.34	12.43	-3.325	1.78	-0.3	-1.62	-0.3	-1.50	0	-1.81
13	13	36.90	0.05	-0.34	12.43	-3.325	2.09	-0.3	-1.61	-0.3	-1.61	0	-1.97
13	14	39.25	0.05	-0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
14	14	39.25	0.05	-0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
14	15	41.60	0.05	-0.34	14.03	-4.442	1.38	-0.3	-1.46	-0.3	-1.46	0	-1.66
15	15	41.60	0.01	-0.34	14.03	-4.442	1.37	-0.3	-1.46	-0.3	-1.46	0	-1.67
15	16	43.90	0.01	-0.34	14.82	-5	1.35	-0.3	-1.44	-0.3	-1.44	0	-1.61
16	16	43.90	-0.03	-0.34	14.82	-5	1.01	-0.3	-0.68	-0.3	-0.68	0	-0.79
16	17	46.45	-0.03	-0.34	15.69	-5	1.07	-0.3	-0.72	-0.3	-0.72	0	-0.83
17	17	46.45	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
17	18	49.00	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
18	18	49.00	0.00	0.00	-5.30	-5	-0.48	-0.3	0.51	-0.3	0.51	0	0.58
18	19	51.30	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
19	19	51.30	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
19	20	53.65	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
20	20	53.65	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
20	21	56.00	0.00	0.00	-5.30	-3.325	-0.89	-0.3	0.69	-0.3	0.69	0	0.84
21	21	56.00	0.00	0.00	-5.30	-3.325	-0.76	-0.3	0.69	-0.3	0.64	0	0.77
21	22	57.00	0.00	0.00	-5.30	-3.088	-0.88	-0.3	0.76	-0.3	0.70	0	0.86
22	22	57.00	0.00	0.00	-5.30	-3.088	-0.88	-0.3	0.76	-0.3	0.70	0	0.86
22	23	58.00	0.00	0.00	-5.30	-2.85	-1.08	-0.3	0.81	-0.3	0.75	0	0.96
23	23	58.00	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
23	24	59.00	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
24	24	59.00	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
24	25	63.11	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
25	25	63.11	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
25	26	67.23	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
26	26	67.23	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
26	27	71.34	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
27	27	71.34	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
27	28	75.45	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
28	28	75.45	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
28	29	79.56	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
29	29	79.56	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
29	30	83.68	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
30	30	83.68	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
30	31	87.79	0.00	0.00	-5.30	-2.85	-4.16	-0.3	6.50	0	0.00	0	0.00
31	31	87.79	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
31	32	91.90	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
32	32	91.90	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
32	33	92.90	0.00	0.00	-5.30	-2.85	-2.61	-0.3	0.95	-0.3	0.80	0	1.16
33	33	92.90	0.00	0.00	-5.30	-2.85	-1.08	-0.3	0.81	-0.3	0.75	0	0.96
33	34	93.90	0.00	0.00	-5.30	-3.088	-0.88	-0.3	0.76	-0.3	0.70	0	0.86
34	34	93.90	0.00	0.00	-5.30	-3.088	-0.88	-0.3	0.76	-0.3	0.70	0	0.86
34	35	94.90	0.00	0.00	-5.30	-3.325	-0.76	-0.3	0.69	-0.3	0.64	0	0.77
35	35	94.90	0.00	0.00	-5.30	-3.325	-0.89	-0.3	0.69	-0.3	0.69	0	0.84
35	36	97.25	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
36	36	97.25	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
36	37	99.60	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
37	37	99.60	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
37	38	101.90	0.00	0.00	-5.30	-5	-0.48	-0.3	0.51	-0.3	0.51	0	0.58
38	38	101.90	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
38	39	104.45	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
39	39	104.45	-0.03	0.34	15.69	-5	1.07	-0.3	-0.72	-0.3	-0.72	0	-0.83
39	40	107.00	-0.03	0.34	14.82	-5	1.01	-0.3	-0.68	-0.3	-0.68	0	-0.79
40	40	107.00	0.01	0.34	14.82	-5	1.35	-0.3	-1.44	-0.3	-1.44	0	-1.61
40	41	109.30	0.01	0.34	14.03	-4.442	1.37	-0.3	-1.46	-0.3	-1.46	0	-1.67
41	41	109.30	0.05	0.34	14.03	-4.442	1.38	-0.3	-1.46	-0.3	-1.46	0	-1.66
41	42	111.65	0.05	0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
42	42	111.65	0.05	0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
42	43	114.00	0.05	0.34	12.43	-3.325	2.09	-0.3	-1.61	-0.3	-1.61	0	-1.97
43	43	114.00	0.03	0.34	12.43	-3.325	1.78	-0.3	-1.62	-0.3	-1.50	0	-1.81
43	44	115.00	0.03	0.34	12.08	-3.088	2.01	-0.3	-1.72	-0.3	-1.59	0	-1.96
44	44	115.00	0.13	0.32	12.08	-3.088	2.03	-0.3	-1.71	-0.3	-1.58	0	-1.95
44	45	116.00	0.13	0.32	11.74	-2.85	2.40	-0.3	-1.78	-0.3	-1.64	0	-2.10
45	45	116.00	0.07	0.34	11.74	-2.85	5.79	-0.3	-2.09	-0.3	-1.76	0	-2.55
45	46	117.00	0.07	0.34	11.40	-2.85	5.63	-0.3	-2.03	-0.3	-1.71	0	-2.47
46	46	117.00	0.00	0.34	11.40	-2.85	5.61	-0.3	-2.05	-0.3	-1.73	0	-2.49
46	47	119.78	0.00	0.34	10.45	-2.85	5.14	-0.3	-1.88	-0.3	-1.59	0	-2.28
47	47	119.78	-0.05	0.34	10.45	-2.85	5.12	-0.3	-1.89	-0.3	-1.60	0	-2.30
47	48	122.55	-0.05	0.34	9.50	-2.85	4.66	-0.3	-1.72	-0.3	-1.45	0	-2.09
48	48	122.55	-0.03	0.34	9.50	-2.85	7.44	-0.3	-11.67	0	0.00	0	0.00
48	49	128.10	-0.03	0.34	7.60	-2.85	5.95	-0.3	-9.34	0	0.00	0	0.00
49	49	128.10	0.00	0.34	7.60	-2.85	5.97	-0.3	-9.32	0	0.00	0	0.00
49	50	133.65	0.00	0.34	5.70	-2.85	4.47	-0.3	-6.99	0	0.00	0	0.00
50	50	133.65	0.00	0.34	5.70	-2.85	4.47	-0.3	-6.99	0	0.00	0	0.00
50	51	139.20	0.00	0.34	3.80	-2.85	2.98	-0.3	-4.66	0	0.00	0	0.00
51	51	139.20	0.00	0.34	3.80	-2.85	2.98	-0.3	-4.66	0	0.00	0	0.00
51	52	144.75	0.00	0.34	1.90	-2.85	1.49	-0.3	-2.33	0	0.00	0	0.00
52	52	144.75	0.00	0.34	1.90	-2.85	1.49	-0.3	-2.33	0	0.00	0	0.00
52	53	147.53	0.00	0.34	0.95	-2.85	0.75	-0.3	-1.16	0	0.00	0	0.00
53	53	147.53	0.00	0.34	0.95	-2.85	0.75	-0.3	-1.16	0	0.00	0	0.00
53	54	150.30	0.00	0.34	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

[illegible]

Coef. [illegible]

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-8.37	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-8.37	23.22	-2.85	18.23	-0.3	-28.47	0	0.00	0	0.00
3	3	3.38	0.00	-8.37	23.22	-2.85	18.23	-0.3	-28.47	0	0.00	0	0.00
3	4	6.15	0.00	-8.37	46.45	-2.85	36.47	-0.3	-56.96	0	0.00	0	0.00
4	4	6.15	0.00	-8.37	46.45	-2.85	36.47	-0.3	-56.96	0	0.00	0	0.00
4	5	11.70	0.00	-8.37	92.89	-2.85	72.92	-0.3	-113.91	0	0.00	0	0.00
5	5	11.70	0.00	-8.37	92.89	-2.85	72.92	-0.3	-113.91	0	0.00	0	0.00
5	6	17.25	0.00	-8.37	139.34	-2.85	109.39	-0.3	-170.87	0	0.00	0	0.00
6	6	17.25	0.00	-8.37	139.34	-2.85	109.39	-0.3	-170.87	0	0.00	0	0.00
6	7	22.80	0.00	-8.37	185.78	-2.85	145.84	-0.3	-227.81	0	0.00	0	0.00
7	7	22.80	-0.66	-8.34	185.78	-2.85	145.45	-0.3	-228.20	0	0.00	0	0.00
7	8	28.35	-0.66	-8.34	232.23	-2.85	181.92	-0.3	-285.16	0	0.00	0	0.00
8	8	28.35	-1.30	-8.27	232.23	-2.85	113.83	-0.3	-42.08	-0.3	-35.56	0	-51.06
8	9	31.13	-1.30	-8.27	255.45	-2.85	125.25	-0.3	-46.26	-0.3	-39.08	0	-56.13
9	9	31.13	0.00	-8.37	255.45	-2.85	125.62	-0.3	-45.88	-0.3	-38.76	0	-55.81
9	10	33.90	0.00	-8.37	278.67	-2.85	137.04	-0.3	-50.05	-0.3	-42.29	0	-60.89
10	10	33.90	1.70	-8.19	278.67	-2.85	137.53	-0.3	-49.56	-0.3	-41.87	0	-60.47
10	11	34.90	1.70	-8.19	287.04	-2.85	141.65	-0.3	-51.06	-0.3	-43.14	0	-62.30
11	11	34.90	3.07	-7.79	287.04	-2.85	58.67	-0.3	-43.49	-0.3	-40.23	0	-51.35
11	12	35.90	3.07	-7.79	295.41	-3.088	49.55	-0.3	-41.72	-0.3	-38.59	0	-47.68
12	12	35.90	0.82	-8.33	295.41	-3.088	49.26	-0.3	-42.00	-0.3	-38.86	0	-47.94
12	13	36.90	0.82	-8.33	303.78	-3.325	43.48	-0.3	-39.66	-0.3	-36.69	0	-44.32
13	13	36.90	1.33	-8.26	303.78	-3.325	51.17	-0.3	-39.23	-0.3	-39.23	0	-48.19
13	14	39.25	1.33	-8.26	323.45	-3.884	38.11	-0.3	-36.98	-0.3	-36.98	0	-43.26
14	14	39.25	1.22	-8.28	323.45	-3.884	38.10	-0.3	-36.99	-0.3	-36.99	0	-43.28
14	15	41.60	1.22	-8.28	343.11	-4.442	33.69	-0.3	-35.61	-0.3	-35.61	0	-40.63
15	15	41.60	0.14	-8.37	343.11	-4.442	33.59	-0.3	-35.71	-0.3	-35.71	0	-40.73
15	16	43.90	0.14	-8.37	362.36	-5	32.91	-0.3	-35.10	-0.3	-35.10	0	-39.44
[illegible]	16	43.90	-0.83	-8.33	362.36	-5	24.60	-0.3	-16.62	-0.3	-16.62	0	-19.25
[illegible]	17	46.45	-0.83	-8.33	383.70	-5	26.05	-0.3	-17.59	-0.3	-17.59	0	-20.38
[illegible]	17	46.45	0.01	-0.13	383.70	-5	26.09	-0.3	-17.55	-0.3	-17.55	0	-20.34
[illegible]	18	49.00	0.01	-0.13	384.04	-5	26.11	-0.3	-17.57	-0.3	-17.57	0	-20.36
18	18	49.00	0.00	-0.13	384.04	-5	34.87	-0.3	-37.21	-0.3	-37.21	0	-41.81
18	19	51.30	0.00	-0.13	384.34	-4.442	37.61	-0.3	-40.02	-0.3	-40.02	0	-45.64
19	19	51.30	-0.02	-0.13	384.34	-4.442	37.61	-0.3	-40.02	-0.3	-40.02	0	-45.65
19	20	53.65	-0.02	-0.13	384.66	-3.884	45.14	-0.3	-44.16	-0.3	-44.16	0	-51.63
20	20	53.65	-0.02	-0.13	384.66	-3.884	45.14	-0.3	-44.16	-0.3	-44.16	0	-51.63
20	21	56.00	-0.02	-0.13	384.97	-3.325	64.59	-0.3	-49.96	-0.3	-49.96	0	-61.32
21	21	56.00	-550.00	54.10	-174.92	-3.325	-87.76	-0.3	-39.89	-0.3	-36.90	0	-32.51
21	22	57.00	-550.74	54.17	-230.06	-3.088	-108.27	-0.3	-37.19	-0.3	-34.40	0	-27.33
22	22	57.00	-514.95	202.65	-230.06	-3.088	-103.72	-0.3	-32.64	-0.3	-30.20	0	-23.12
22	23	58.00	-515.62	202.94	-429.57	-2.85	-161.49	-0.3	-8.60	-0.3	-7.96	0	8.68
23	23	58.00	-542.62	112.32	-429.57	-2.85	-367.77	-0.3	-79.37	-0.3	-67.06	0	-38.40
23	24	59.00	-543.33	112.49	-541.95	-2.85	-423.24	-0.3	-59.39	-0.3	-50.18	0	-14.02
24	24	59.00	-551.75	-58.61	-541.95	-2.85	-425.67	-0.3	-61.82	-0.3	-52.24	0	-16.07
24	25	63.11	-554.76	-58.94	-304.84	-2.85	-309.94	-0.3	-105.28	-0.3	-88.95	0	-68.61
25	25	63.11	-554.76	-58.94	-304.84	-2.85	-567.13	-0.3	46.00	0	0.00	0	0.00
25	26	67.23	-557.76	-59.26	-65.07	-2.85	-360.67	-0.3	-249.79	0	0.00	0	0.00
26	26	67.23	-560.90	-0.09	-65.07	-2.85	-382.53	-0.3	-251.65	0	0.00	0	0.00
26	27	71.34	-563.89	-0.09	-67.44	-2.85	-386.15	-0.3	-250.51	0	0.00	0	0.00
27	27	71.34	-563.89	-0.09	-67.44	-2.85	-386.15	-0.3	-250.51	0	0.00	0	0.00
27	28	75.45	-566.88	-0.09	-69.80	-2.85	-389.77	-0.3	-249.38	0	0.00	0	0.00
28	28	75.45	-566.88	-0.09	-69.80	-2.85	-389.77	-0.3	-249.38	0	0.00	0	0.00
28	29	79.56	-569.84	-0.09	-72.15	-2.85	-393.37	-0.3	-248.25	0	0.00	0	0.00
29	29	79.56	-569.84	-0.09	-72.15	-2.85	-393.37	-0.3	-248.25	0	0.00	0	0.00
29	30	83.68	-568.03	-0.09	-70.13	-2.85	-390.71	-0.3	-249.66	0	0.00	0	0.00
30	30	83.68	-564.87	59.83	-70.13	-2.85	-388.84	-0.3	-247.79	0	0.00	0	0.00
30	31	87.79	-561.95	59.52	-312.38	-2.85	-577.29	-0.3	51.00	0	0.00	0	0.00
31	31	87.79	-561.95	59.52	-312.38	-2.85	-315.72	-0.3	-106.00	-0.3	-89.56	0	-68.71
31	32	91.90	-559.05	59.21	-552.08	-2.85	-432.76	-0.3	-62.11	-0.3	-52.48	0	-15.63
32	32	91.90	-550.47	-114.15	-552.08	-2.85	-430.28	-0.3	-59.64	-0.3	-50.39	0	-13.54
[illegible]	33	92.90	-549.78	-113.99	-438.10	-2.85	-374.03	-0.3	-79.91	-0.3	-67.52	0	-38.28
[illegible]	33	92.90	-522.40	-205.80	-438.10	-2.85	-164.20	-0.3	-8.27	-0.3	-7.65	0	9.32
[illegible]	34	93.90	-521.76	-205.53	-235.81	-3.088	-105.54	-0.3	-32.69	-0.3	-30.24	0	-22.99
[illegible]	34	93.90	-558.07	-55.07	-235.81	-3.088	-110.15	-0.3	-37.30	-0.3	-34.51	0	-27.26
34	35	94.90	-557.36	-55.00	-179.79	-3.325	-89.30	-0.3	-40.09	-0.3	-37.09	0	-32.57
35	35	94.90	0.01	-0.05	387.61	-3.325	65.04	-0.3	-50.30	-0.3	-50.30	0	-61.74
35	36	97.25	0.01	-0.05	387.72	-3.884	45.50	-0.3	-44.51	-0.3	-44.51	0	-52.04
36	36	97.25	0.01	-0.05	387.72	-3.884	45.50	-0.3	-44.51	-0.3	-44.51	0	-52.04
36	37	99.60	0.01	-0.05	387.83	-4.442	37.95	-0.3	-40.38	-0.3	-40.38	0	-46.06
37	37	99.60	0.00	-0.05	387.83	-4.442	37.95	-0.3	-40.38	-0.3	-40.38	0	-46.06
37	38	101.90	0.00	-0.05	387.93	-5	35.22	-0.3	-37.58	-0.3	-37.58	0	-42.23
38	38	101.90	0.00	-0.05	387.93	-5	26.38	-0.3	-17.75	-0.3	-17.75	0	-20.56
38	39	104.45	0.00	-0.05	388.05	-5	26.39	-0.3	-17.75	-0.3	-17.75	0	-20.57
39	39	104.45	-0.84	8.42	388.05	-5	26.35	-0.3	-17.79	-0.3	-17.79	0	-20.61
39	40	107.00	-0.84	8.42	366.47	-5	24.88	-0.3	-16.81	-0.3	-16.81	0	-19.47
40	40	107.00	0.14	8.46	366.47	-5	33.29	-0.3	-35.49	-0.3	-35.49	0	-39.88
40	41	109.30	0.14	8.46	347.00	-4.442	33.97	-0.3	-36.12	-0.3	-36.12	0	-41.20
41	41	109.30	1.24	8.37	347.00	-4.442	34.08	-0.3	-36.01	-0.3	-36.01	0	-41.09
41	42	111.65	1.24	8.37	327.11	-3.884	38.53	-0.3	-37.41	-0.3	-37.41	0	-43.76
42	42	111.65	1.34	8.36	327.11	-3.884	38.54	-0.3	-37.40	-0.3	-37.40	0	-43.75
42	43	114.00	1.34	8.36	307.22	-3.325	51.74	-0.3	-39.67	-0.3	-39.67	0	-48.74
43	43	114.00	0.83	8.42	307.22	-3.325	43.97	-0.3	-40.11	-0.3	-37.11	0	-44.82
43	44	115.00	0.83	8.42	298.76	-3.088	49.82	-0.3	-42.48	-0.3	-39.30	0	-48.48
44	44	115.00	3.10	7.87	298.76	-3.088	50.11	-0.3	-42.19	-0.3	-39.03	0	-48.22
44	45	116.00	3.10	7.87	290.30	-2.85	59.34	-0.3	-43.98	-0.3	-40.69	0	-51.93
45	45	116.00	1.72	8.29	290.30	-2.85	143.25	-0.3	-51.64	-0.3	-43.63	0	-63.01
45	46	117.00	1.72	8.29	281.83	-2.85	139.09	-0.3	-50.12	-0.3	-42.35	0	-61.16
46	46	117.00	0.00	8.46	281.83	-2.85	138.59	-0.3	-50.62	-0.3	-42.77	0	-61.58
46	47	119.78	0.00	8.46	258.35	-2.85	127.05	-0.3	-46.40	-0.3	-39.20	0	-56.45
47	47	119.78	-1.31	8.36	258.35	-2.85	126.67	-0.3	-46.78	-0.3	-39.52	0	-56.77
47	48	122.55	-1.31	8.36	234.86	-2.85	115.12	-0.3	-42.56	-0.3	-35.96	0	-51.63
48	48	122.55	-0.66	8.44	234.86	-2.85	183.98	-0.3	-288.39	0	0.00	0	0.00
48	49	128.10	-0.66	8.44	187.89	-2.85	147.11	-0.3	-230.79	0	0.00	0	0.00
49	49	128.10	0.00	8.46	187.89	-2.85	147.50	-0.3	-230.40	0	0.00	0	0.00
[illegible]	50	133.65	0.00	8.46	140.92	-2.85	110.63	-0.3	-172.80	0	0.00	0	0.00
[illegible]	50	133.65	0.00	8.46	140.92	-2.85	110.63	-0.3	-172.80	0	0.00	0	0.00
[illegible]	51	139.20	0.00	8.46	93.94	-2.85	73.75	-0.3	-115.20	0	0.00	0	0.00
51	51	139.20	0.00	8.46	93.94	-2.85	73.75	-0.3	-115.20	0	0.00	0	0.00
51	52	144.75	0.00	8.46	46.97	-2.85	36.87	-0.3	-57.60	0	0.00	0	0.00
52	52	144.75	0.00	8.46	46.97	-2.85	36.87	-0.3	-57.60	0	0.00	0	0.00
52	53	147.53	0.00	8.46	23.49	-2.85	18.44	-0.3	-28.80	0	0.00	0	0.00
53	53	147.53	0.00	8.46	23.49	-2.85	18.44	-0.3	-28.80	0	0.00	0	0.00
53	54	150.30	0.00	8.46	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

[illegible]

Coef. [illegible]

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-553.72	0.00	-505.54	-2.85	-724.07	-0.3	292.72	0	0.00	0	0.00
1	2	0.60	-553.30	0.00	-505.16	-2.85	-723.52	-0.3	292.51	0	0.00	0	0.00
2	2	0.60	-553.30	-7.50	-505.16	-2.85	-723.52	-0.3	292.51	0	0.00	0	0.00
2	3	3.38	-551.37	-7.50	-482.58	-2.85	-704.66	-0.3	265.96	0	0.00	0	0.00
3	3	3.38	-551.37	-7.50	-482.58	-2.85	-704.66	-0.3	265.96	0	0.00	0	0.00
3	4	6.15	-549.44	-7.50	-460.00	-2.85	-685.79	-0.3	239.41	0	0.00	0	0.00
4	4	6.15	-549.44	-7.50	-460.00	-2.85	-685.79	-0.3	239.41	0	0.00	0	0.00
4	5	11.70	-545.61	-7.50	-414.86	-2.85	-648.09	-0.3	186.32	0	0.00	0	0.00
5	5	11.70	-545.61	-7.50	-414.86	-2.85	-648.09	-0.3	186.32	0	0.00	0	0.00
5	6	17.25	-541.81	-7.50	-369.75	-2.85	-610.43	-0.3	133.25	0	0.00	0	0.00
6	6	17.25	-541.81	-7.50	-369.75	-2.85	-610.43	-0.3	133.25	0	0.00	0	0.00
6	7	22.80	-538.04	-7.50	-324.66	-2.85	-572.81	-0.3	80.18	0	0.00	0	0.00
7	7	22.80	-536.97	34.68	-324.66	-2.85	-572.17	-0.3	80.82	0	0.00	0	0.00
7	8	28.35	-533.23	34.39	-512.10	-2.85	-717.11	-0.3	312.88	0	0.00	0	0.00
8	8	28.35	-528.97	75.56	-512.10	-2.85	-404.42	-0.3	-60.61	-0.3	-51.21	0	-17.04
8	9	31.13	-527.13	75.27	-718.32	-2.85	-505.30	-0.3	-23.04	-0.3	-19.47	0	28.47
9	9	31.13	-532.42	-7.51	-718.32	-2.85	-506.83	-0.3	-24.57	-0.3	-20.76	0	27.18
9	10	33.90	-530.56	-7.51	-694.16	-2.85	-494.41	-0.3	-28.37	-0.3	-23.97	0	22.35
10	10	33.90	-518.01	-115.00	-694.16	-2.85	-490.79	-0.3	-24.75	-0.3	-20.91	0	25.41
10	11	34.90	-517.36	-114.84	-579.17	-2.85	-434.05	-0.3	-45.22	-0.3	-38.21	0	0.45
11	11	34.90	-490.30	-201.13	-579.17	-2.85	-188.18	-0.3	17.95	-0.3	16.60	0	39.04
11	12	35.90	-489.70	-200.87	-380.83	-3.088	-125.60	-0.3	-7.94	-0.3	-7.35	0	4.36
12	12	35.90	-525.96	-59.36	-380.83	-3.088	-130.21	-0.3	-12.55	-0.3	-11.61	0	0.10
12	13	36.90	-525.29	-59.29	-320.55	-3.325	-105.74	-0.3	-18.01	-0.3	-16.66	0	-8.61
13	13	36.90	1.17	-7.37	214.94	-3.325	36.24	-0.3	-27.72	-0.3	-27.72	0	-34.06
13	14	39.25	1.17	-7.37	232.48	-3.884	27.42	-0.3	-26.55	-0.3	-26.55	0	-31.07
14	14	39.25	1.07	-7.39	232.48	-3.884	27.40	-0.3	-26.56	-0.3	-26.56	0	-31.08
14	15	41.60	1.07	-7.39	250.02	-4.442	24.57	-0.3	-25.93	-0.3	-25.93	0	-29.59
15	15	41.60	0.11	-7.46	250.02	-4.442	24.48	-0.3	-26.02	-0.3	-26.02	0	-29.68
15	16	43.90	0.11	-7.46	267.19	-5	24.27	-0.3	-25.88	-0.3	-25.88	0	-29.08
16	16	43.90	-0.75	-7.43	267.19	-5	18.13	-0.3	-12.26	-0.3	-12.26	0	-14.20
16	17	46.45	-0.75	-7.43	286.22	-5	19.43	-0.3	-13.13	-0.3	-13.13	0	-15.21
17	17	46.45	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
17	18	49.00	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
18	18	49.00	-0.02	0.00	286.22	-5	25.99	-0.3	-27.73	-0.3	-27.73	0	-31.16
18	19	51.30	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.81	-0.3	-29.81	0	-33.99
19	19	51.30	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.81	-0.3	-29.81	0	-33.99
19	20	53.65	-0.02	0.00	286.21	-3.884	33.58	-0.3	-32.86	-0.3	-32.86	0	-38.42
20	20	53.65	-0.02	0.00	286.21	-3.884	33.58	-0.3	-32.86	-0.3	-32.86	0	-38.42
20	21	56.00	-0.02	0.00	286.21	-3.325	48.02	-0.3	-37.15	-0.3	-37.15	0	-45.59
21	21	56.00	-0.02	0.00	286.21	-3.325	40.87	-0.3	-37.46	-0.3	-34.65	0	-41.84
21	22	57.00	-0.02	0.00	286.21	-3.088	47.63	-0.3	-40.80	-0.3	-37.74	0	-46.54
22	22	57.00	-0.01	0.01	286.21	-3.088	47.63	-0.3	-40.80	-0.3	-37.74	0	-46.54
22	23	58.00	-0.01	0.01	286.20	-2.85	58.06	-0.3	-43.80	-0.3	-40.52	0	-51.61
23	23	58.00	-0.02	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.44	0	-62.54
23	24	59.00	-0.02	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.44	0	-62.54
24	24	59.00	-0.02	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.44	0	-62.54
24	25	63.11	-0.02	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.44	0	-62.54
25	25	63.11	-0.02	0.00	286.20	-2.85	224.67	-0.3	-350.97	0	0.00	0	0.00
25	26	67.23	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
26	26	67.23	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
26	27	71.34	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
27	27	71.34	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
27	28	75.45	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
28	28	75.45	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
28	29	79.56	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
29	29	79.56	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
29	30	83.68	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
30	30	83.68	-0.02	0.00	286.21	-2.85	224.67	-0.3	-350.98	0	0.00	0	0.00
30	31	87.79	-0.02	0.00	286.20	-2.85	224.67	-0.3	-350.97	0	0.00	0	0.00
31	31	87.79	-0.02	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.44	0	-62.54
31	32	91.90	-0.02	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.44	0	-62.54
32	32	91.90	-0.01	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.43	0	-62.53
32	33	92.90	-0.01	0.00	286.20	-2.85	140.74	-0.3	-51.41	-0.3	-43.43	0	-62.53
33	33	92.90	-0.01	-0.01	286.20	-2.85	58.06	-0.3	-43.80	-0.3	-40.52	0	-51.61
33	34	93.90	-0.01	-0.01	286.21	-3.088	47.63	-0.3	-40.80	-0.3	-37.74	0	-46.54
34	34	93.90	-0.02	0.00	286.21	-3.088	47.63	-0.3	-40.80	-0.3	-37.74	0	-46.54
34	35	94.90	-0.02	0.00	286.21	-3.325	40.87	-0.3	-37.46	-0.3	-34.65	0	-41.84
35	35	94.90	-0.02	0.00	286.21	-3.325	48.02	-0.3	-37.15	-0.3	-37.15	0	-45.59
35	36	97.25	-0.02	0.00	286.21	-3.884	33.58	-0.3	-32.86	-0.3	-32.86	0	-38.42
36	36	97.25	-0.02	0.00	286.21	-3.884	33.58	-0.3	-32.86	-0.3	-32.86	0	-38.42
36	37	99.60	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.81	-0.3	-29.81	0	-33.99
37	37	99.60	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.81	-0.3	-29.81	0	-33.99
37	38	101.90	-0.02	0.00	286.22	-5	25.99	-0.3	-27.73	-0.3	-27.73	0	-31.16
38	38	101.90	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
38	39	104.45	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
39	39	104.45	-0.75	7.43	286.22	-5	19.43	-0.3	-13.13	-0.3	-13.13	0	-15.21
39	40	107.00	-0.75	7.43	267.19	-5	18.13	-0.3	-12.26	-0.3	-12.26	0	-14.20
40	40	107.00	0.11	7.46	267.19	-5	24.27	-0.3	-25.88	-0.3	-25.88	0	-29.08
40	41	109.30	0.11	7.46	250.02	-4.442	24.48	-0.3	-26.02	-0.3	-26.02	0	-29.68
41	41	109.30	1.07	7.39	250.02	-4.442	24.57	-0.3	-25.93	-0.3	-25.93	0	-29.59
41	42	111.65	1.07	7.39	232.48	-3.884	27.40	-0.3	-26.56	-0.3	-26.56	0	-31.08
42	42	111.65	1.17	7.37	232.48	-3.884	27.42	-0.3	-26.55	-0.3	-26.55	0	-31.07
42	43	114.00	1.17	7.37	214.94	-3.325	36.24	-0.3	-27.72	-0.3	-27.72	0	-34.06
43	43	114.00	-525.29	59.29	-320.55	-3.325	-105.74	-0.3	-18.01	-0.3	-16.66	0	-8.61
43	44	115.00	-525.96	59.36	-380.83	-3.088	-130.21	-0.3	-12.55	-0.3	-11.61	0	0.10
44	44	115.00	-489.70	200.87	-380.83	-3.088	-125.60	-0.3	-7.94	-0.3	-7.35	0	4.36
44	45	116.00	-490.30	201.13	-579.17	-2.85	-188.18	-0.3	17.95	-0.3	16.60	0	39.04
45	45	116.00	-517.36	114.84	-579.17	-2.85	-434.05	-0.3	-45.22	-0.3	-38.21	0	0.45
45	46	117.00	-518.01	115.00	-694.16	-2.85	-490.79	-0.3	-24.75	-0.3	-20.91	0	25.41
46	46	117.00	-530.56	7.51	-694.16	-2.85	-494.41	-0.3	-28.37	-0.3	-23.97	0	22.35
46	47	119.78	-532.42	7.51	-718.32	-2.85	-506.83	-0.3	-24.57	-0.3	-20.76	0	27.18
47	47	119.78	-527.13	-75.27	-718.32	-2.85	-505.30	-0.3	-23.04	-0.3	-19.47	0	28.47
47	48	122.55	-528.97	-75.56	-512.10	-2.85	-404.42	-0.3	-60.61	-0.3	-51.21	0	-17.04
48	48	122.55	-533.23	-34.39	-512.10	-2.85	-717.11	-0.3	312.88	0	0.00	0	0.00
48	49	128.10	-536.97	-34.68	-324.66	-2.85	-572.17	-0.3	80.82	0	0.00	0	0.00
49	49	128.10	-538.04	7.50	-324.66	-2.85	-572.81	-0.3	80.18	0	0.00	0	0.00
49	50	133.65	-541.81	7.50	-369.75	-2.85	-610.43	-0.3	133.25	0	0.00	0	0.00
50	50	133.65	-541.81	7.50	-369.75	-2.85	-610.43	-0.3	133.25	0	0.00	0	0.00
50	51	139.20	-545.61	7.50	-414.86	-2.85	-648.09	-0.3	186.32	0	0.00	0	0.00
51	51	139.20	-545.61	7.50	-414.86	-2.85	-648.09	-0.3	186.32	0	0.00	0	0.00
51	52	144.75	-549.44	7.50	-460.00	-2.85	-685.79	-0.3	239.41	0	0.00	0	0.00
52	52	144.75	-549.44	7.50	-460.00	-2.85	-685.79	-0.3	239.41	0	0.00	0	0.00
52	53	147.53	-551.37	7.50	-482.58	-2.85	-704.66	-0.3	265.96	0	0.00	0	0.00
53	53	147.53	-551.37	7.50	-482.58	-2.85	-704.66	-0.3	265.96	0	0.00	0	0.00
53	54	150.30	-553.30	7.50	-505.16	-2.85	-723.52	-0.3	292.51	0	0.00	0	0.00
54	54	150.30	-553.30	0.00	-505.16	-2.85	-723.52	-0.3	292.51	0	0.00	0	0.00
54	55	150.90	-553.72	0.00	-505.54	-2.85	-724.07	-0.3	292.72	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

{ 1; 1pret0.1pretoo219.TOT.To

Coef. ex:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	4.06	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	4.06	-11.26	-2.85	-8.84	-0.3	13.81	0	0.00	0	0.00
3	3	3.38	0.00	4.06	-11.26	-2.85	-8.84	-0.3	13.81	0	0.00	0	0.00
3	4	6.15	0.00	4.06	-22.51	-2.85	-17.67	-0.3	27.60	0	0.00	0	0.00
4	4	6.15	0.00	4.06	-22.51	-2.85	-17.67	-0.3	27.60	0	0.00	0	0.00
4	5	11.70	0.00	4.06	-45.03	-2.85	-35.35	-0.3	55.22	0	0.00	0	0.00
5	5	11.70	0.00	4.06	-45.03	-2.85	-35.35	-0.3	55.22	0	0.00	0	0.00
5	6	17.25	0.00	4.06	-67.54	-2.85	-53.02	-0.3	82.82	0	0.00	0	0.00
6	6	17.25	0.00	4.06	-67.54	-2.85	-53.02	-0.3	82.82	0	0.00	0	0.00
6	7	22.80	0.00	4.06	-90.06	-2.85	-70.70	-0.3	110.44	0	0.00	0	0.00
7	7	22.80	0.32	4.04	-90.06	-2.85	-70.51	-0.3	110.63	0	0.00	0	0.00
7	8	28.35	0.32	4.04	-112.57	-2.85	-88.18	-0.3	138.23	0	0.00	0	0.00
8	8	28.35	0.63	4.01	-112.57	-2.85	-55.18	-0.3	20.40	-0.3	17.24	0	24.75
8	9	31.13	0.63	4.01	-123.83	-2.85	-60.71	-0.3	22.42	-0.3	18.94	0	27.21
9	9	31.13	-697.69	4.06	404.32	-2.85	-2.43	-0.3	-273.88	-0.3	-231.40	0	-258.39
9	10	33.90	-700.29	4.06	395.03	-2.85	-7.75	-0.3	-272.96	-0.3	-230.63	0	-256.99
10	10	33.90	-686.54	-138.11	395.03	-2.85	-3.78	-0.3	-268.99	-0.3	-227.28	0	-253.64
10	11	34.90	-687.44	-138.33	532.42	-2.85	63.52	-0.3	-293.93	-0.3	-248.34	0	-283.88
11	11	34.90	-653.91	-253.20	532.42	-2.85	13.72	-0.3	-175.78	-0.3	-162.61	0	-183.23
11	12	35.90	-654.76	-253.56	781.26	-3.088	46.81	-0.3	-194.56	-0.3	-179.98	0	-204.01
12	12	35.90	-699.13	-64.92	781.26	-3.088	41.17	-0.3	-200.19	-0.3	-185.20	0	-209.22
12	13	36.90	-700.06	-65.01	847.86	-3.325	41.18	-0.3	-190.88	-0.3	-176.58	0	-197.87
13	13	36.90	-694.80	-107.51	847.86	-3.325	39.37	-0.3	-212.92	-0.3	-212.92	0	-237.94
13	14	39.25	-696.95	-107.86	1104.28	-3.884	49.46	-0.3	-206.89	-0.3	-206.89	0	-228.35
14	14	39.25	-698.26	-99.03	1104.01	-3.884	49.28	-0.3	-207.01	-0.3	-207.01	0	-228.46
14	15	41.60	-700.41	-99.34	1341.84	-4.442	64.10	-0.3	-206.93	-0.3	-206.93	0	-226.56
15	15	41.60	-707.38	-7.60	1342.03	-4.442	63.45	-0.3	-207.62	-0.3	-207.62	0	-227.25
15	16	43.90	-709.50	-7.63	1364.40	-5	64.40	-0.3	-191.68	-0.3	-191.68	0	-208.03
	16	43.90	-705.66	74.16	1363.92	-5	57.84	-0.3	-97.30	-0.3	-97.30	0	-107.20
	17	46.45	-707.99	74.39	1179.63	-5	45.19	-0.3	-88.98	-0.3	-88.98	0	-97.55
	17	46.45	-708.39	-70.36	1179.46	-5	45.16	-0.3	-88.99	-0.3	-88.99	0	-97.56
17	18	49.00	-710.72	-70.59	1364.75	-5	57.65	-0.3	-97.59	-0.3	-97.59	0	-107.49
18	18	49.00	-714.12	11.76	1365.06	-5	64.07	-0.3	-192.14	-0.3	-192.14	0	-208.49
18	19	51.30	-716.22	11.79	1342.22	-4.442	62.62	-0.3	-208.49	-0.3	-208.49	0	-228.12
19	19	51.30	-708.63	104.65	1342.47	-4.442	63.37	-0.3	-207.79	-0.3	-207.79	0	-227.43
19	20	53.65	-710.75	104.97	1100.24	-3.884	47.40	-0.3	-208.01	-0.3	-208.01	0	-229.39
20	20	53.65	-709.36	113.95	1100.52	-3.884	47.59	-0.3	-207.88	-0.3	-207.88	0	-229.27
20	21	56.00	-710.62	114.16	834.60	-3.325	34.80	-0.3	-213.55	-0.3	-213.55	0	-238.18
21	21	56.00	-716.25	70.68	834.60	-3.325	37.44	-0.3	-190.99	-0.3	-176.68	0	-197.64
21	22	57.00	-715.35	70.59	762.34	-3.088	35.96	-0.3	-199.56	-0.3	-184.61	0	-208.05
22	22	57.00	-668.81	263.45	762.34	-3.088	41.88	-0.3	-193.65	-0.3	-179.14	0	-202.58
22	23	58.00	-667.99	263.10	503.48	-2.85	5.82	-0.3	-173.38	-0.3	-160.39	0	-179.89
23	23	58.00	-703.00	145.69	503.48	-2.85	44.80	-0.3	-293.22	-0.3	-247.75	0	-281.35
23	24	59.00	-702.13	145.48	358.70	-2.85	-26.15	-0.3	-266.96	-0.3	-225.56	0	-249.50
24	24	59.00	-713.04	-75.64	358.70	-2.85	-29.29	-0.3	-270.11	-0.3	-228.22	0	-252.16
24	25	63.11	-709.35	-75.25	665.54	-2.85	122.66	-0.3	-324.16	-0.3	-273.89	0	-318.30
25	25	63.11	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
25	26	67.23	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
26	26	67.23	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
26	27	71.34	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
27	27	71.34	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
27	28	75.45	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
28	28	75.45	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
28	29	79.56	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
29	29	79.56	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
29	30	83.68	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
30	30	83.68	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
30	31	87.79	0.00	0.00	-183.48	-2.85	-144.04	-0.3	224.99	0	0.00	0	0.00
31	31	87.79	-709.35	75.25	665.54	-2.85	122.66	-0.3	-324.16	-0.3	-273.89	0	-318.30
31	32	91.90	-713.04	75.64	358.70	-2.85	-29.29	-0.3	-270.11	-0.3	-228.22	0	-252.16
32	32	91.90	-702.12	-145.48	358.70	-2.85	-26.14	-0.3	-266.96	-0.3	-225.56	0	-249.50
	33	92.90	-703.00	-145.69	503.47	-2.85	44.80	-0.3	-293.22	-0.3	-247.74	0	-281.34
	33	92.90	-667.99	-263.10	503.47	-2.85	5.81	-0.3	-173.38	-0.3	-160.39	0	-179.89
	34	93.90	-668.81	-263.45	762.34	-3.088	41.88	-0.3	-193.65	-0.3	-179.14	0	-202.58
34	34	93.90	-715.35	-70.59	762.34	-3.088	35.96	-0.3	-199.56	-0.3	-184.61	0	-208.05
34	35	94.90	-716.25	-70.68	834.60	-3.325	37.44	-0.3	-190.99	-0.3	-176.68	0	-197.64
35	35	94.90	-710.62	-114.16	834.60	-3.325	34.80	-0.3	-213.55	-0.3	-213.55	0	-238.18
35	36	97.25	-709.36	-113.95	1100.24	-3.884	47.56	-0.3	-207.85	-0.3	-207.85	0	-229.23
36	36	97.25	-710.75	-104.97	1100.52	-3.884	47.43	-0.3	-208.04	-0.3	-208.04	0	-229.43
36	37	99.60	-708.63	-104.65	1342.22	-4.442	63.35	-0.3	-207.76	-0.3	-207.76	0	-227.40
37	37	99.60	-716.22	-11.79	1342.47	-4.442	62.64	-0.3	-208.51	-0.3	-208.51	0	-228.15
37	38	101.90	-714.12	-11.76	1364.75	-5	64.04	-0.3	-192.11	-0.3	-192.11	0	-208.46
38	38	101.90	-710.72	70.59	1365.06	-5	57.67	-0.3	-97.60	-0.3	-97.60	0	-107.51
38	39	104.45	-708.39	70.36	1179.63	-5	45.17	-0.3	-89.00	-0.3	-89.00	0	-97.57
39	39	104.45	-707.99	-74.39	1179.46	-5	45.18	-0.3	-88.97	-0.3	-88.97	0	-97.54
39	40	107.00	-705.66	-74.16	1364.40	-5	57.87	-0.3	-97.32	-0.3	-97.32	0	-107.22
40	40	107.00	-709.50	7.63	1363.92	-5	64.35	-0.3	-191.64	-0.3	-191.64	0	-207.98
40	41	109.30	-707.38	7.60	1341.84	-4.442	63.43	-0.3	-207.60	-0.3	-207.60	0	-227.23
41	41	109.30	-700.41	99.34	1342.03	-4.442	64.12	-0.3	-206.95	-0.3	-206.95	0	-226.58
41	42	111.65	-698.26	99.03	1104.28	-3.884	49.31	-0.3	-207.04	-0.3	-207.04	0	-228.50
42	42	111.65	-696.95	107.86	1104.01	-3.884	49.43	-0.3	-206.86	-0.3	-206.86	0	-228.31
42	43	114.00	-694.80	107.51	847.86	-3.325	39.37	-0.3	-212.92	-0.3	-212.92	0	-237.94
43	43	114.00	-700.06	65.01	847.86	-3.325	41.18	-0.3	-190.88	-0.3	-176.58	0	-197.87
43	44	115.00	-699.13	64.92	781.26	-3.088	41.17	-0.3	-200.19	-0.3	-185.20	0	-209.22
44	44	115.00	-654.76	253.56	781.26	-3.088	46.81	-0.3	-194.56	-0.3	-179.98	0	-204.01
44	45	116.00	-653.91	253.20	532.42	-2.85	13.72	-0.3	-175.78	-0.3	-162.61	0	-183.23
45	45	116.00	-687.44	138.33	532.42	-2.85	63.52	-0.3	-293.93	-0.3	-248.34	0	-283.88
45	46	117.00	-686.54	138.11	395.03	-2.85	-3.78	-0.3	-268.99	-0.3	-227.28	0	-253.64
46	46	117.00	-700.29	-4.06	395.03	-2.85	-7.75	-0.3	-272.96	-0.3	-230.63	0	-256.99
46	47	119.78	-697.69	-4.06	404.33	-2.85	-2.43	-0.3	-273.88	-0.3	-231.40	0	-258.39
47	47	119.78	0.63	-4.01	-123.83	-2.85	-60.71	-0.3	22.42	-0.3	18.94	0	27.21
47	48	122.55	0.63	-4.01	-112.57	-2.85	-55.18	-0.3	20.40	-0.3	17.24	0	24.75
48	48	122.55	0.32	-4.04	-112.57	-2.85	-88.18	-0.3	138.23	0	0.00	0	0.00
48	49	128.10	0.32	-4.04	-90.06	-2.85	-70.51	-0.3	110.63	0	0.00	0	0.00
49	49	128.10	0.00	-4.06	-90.06	-2.85	-70.70	-0.3	110.44	0	0.00	0	0.00
	50	133.65	0.00	-4.06	-67.54	-2.85	-53.02	-0.3	82.82	0	0.00	0	0.00
	50	133.65	0.00	-4.06	-67.54	-2.85	-53.02	-0.3	82.82	0	0.00	0	0.00
	51	139.20	0.00	-4.06	-45.03	-2.85	-35.35	-0.3	55.22	0	0.00	0	0.00
51	51	139.20	0.00	-4.06	-45.03	-2.85	-35.35	-0.3	55.22	0	0.00	0	0.00
51	52	144.75	0.00	-4.06	-22.51	-2.85	-17.67	-0.3	27.60	0	0.00	0	0.00
52	52	144.75	0.00	-4.06	-22.51	-2.85	-17.67	-0.3	27.60	0	0.00	0	0.00
52	53	147.53	0.00	-4.06	-11.26	-2.85	-8.84	-0.3	13.81	0	0.00	0	0.00
53	53	147.53	0.00	-4.06	-11.26	-2.85	-8.84	-0.3	13.81	0	0.00	0	0.00
53	54	150.30	0.00	-4.06	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pesopropiodelosa2(completa)). Tensiones a tiempo To

{ 1; 1ppiosa2

Coef. ex:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	2.52	-0.76	-2.85	-0.60	-0.3	0.93	0	0.00	0	0.00
2	2	0.60	0.00	-57.69	-0.76	-2.85	-0.60	-0.3	0.93	0	0.00	0	0.00
2	3	3.38	0.00	-46.04	143.17	-2.85	112.39	-0.3	-175.56	0	0.00	0	0.00
3	3	3.38	0.00	-46.04	143.17	-2.85	112.39	-0.3	-175.56	0	0.00	0	0.00
3	4	6.15	0.00	-34.38	254.76	-2.85	200.00	-0.3	-312.40	0	0.00	0	0.00
4	4	6.15	0.00	-34.38	254.76	-2.85	200.00	-0.3	-312.40	0	0.00	0	0.00
4	5	11.70	0.00	-11.07	380.90	-2.85	299.02	-0.3	-467.08	0	0.00	0	0.00
5	5	11.70	0.00	-11.07	380.90	-2.85	299.02	-0.3	-467.08	0	0.00	0	0.00
5	6	17.25	0.00	12.24	377.68	-2.85	296.49	-0.3	-463.13	0	0.00	0	0.00
6	6	17.25	0.00	12.24	377.68	-2.85	296.49	-0.3	-463.13	0	0.00	0	0.00
6	7	22.80	0.00	35.55	245.08	-2.85	192.40	-0.3	-300.53	0	0.00	0	0.00
7	7	22.80	2.79	35.44	245.08	-2.85	194.05	-0.3	-298.88	0	0.00	0	0.00
7	8	28.35	4.62	58.75	-17.09	-2.85	-10.69	-0.3	23.69	0	0.00	0	0.00
8	8	28.35	9.15	58.21	-17.09	-2.85	-5.76	-0.3	5.71	-0.3	4.82	0	5.96
8	9	31.13	9.15	58.21	-180.61	-2.85	-86.18	-0.3	35.08	-0.3	29.64	0	41.69
9	9	31.13	0.00	58.93	-180.61	-2.85	-88.82	-0.3	32.44	-0.3	27.41	0	39.46
9	10	33.90	0.00	58.93	-344.14	-2.85	-169.23	-0.3	61.81	-0.3	52.22	0	75.19
10	10	33.90	-11.96	57.70	-344.14	-2.85	-172.68	-0.3	58.36	-0.3	49.31	0	72.27
10	11	34.90	-11.96	57.70	-403.07	-2.85	-201.66	-0.3	68.94	-0.3	58.25	0	85.15
11	11	34.90	-21.59	54.83	-403.07	-2.85	-84.88	-0.3	58.58	-0.3	54.19	0	69.80
11	12	35.90	-21.59	54.83	-462.00	-3.088	-79.62	-0.3	63.11	-0.3	58.38	0	72.59
12	12	35.90	-5.78	58.64	-462.00	-3.088	-77.62	-0.3	65.12	-0.3	60.24	0	74.45
12	13	36.90	-5.78	58.64	-520.92	-3.325	-75.06	-0.3	67.52	-0.3	62.46	0	75.54
13	13	36.90	-9.34	58.18	-520.92	-3.325	-88.78	-0.3	66.22	-0.3	66.22	0	81.59
13	14	39.25	-9.34	58.18	-659.41	-3.884	-78.45	-0.3	74.62	-0.3	74.62	0	87.44
14	14	39.25	-8.60	58.30	-659.41	-3.884	-78.37	-0.3	74.71	-0.3	74.71	0	87.52
14	15	41.60	-8.60	58.30	-797.89	-4.442	-78.90	-0.3	82.26	-0.3	82.26	0	93.93
15	15	41.60	-0.97	58.92	-797.89	-4.442	-78.17	-0.3	82.99	-0.3	82.99	0	94.66
15	16	43.90	-0.97	58.92	-933.42	-5	-84.84	-0.3	90.35	-0.3	90.35	0	101.54
16	16	43.90	5.83	58.64	-933.42	-5	-63.18	-0.3	42.99	-0.3	42.99	0	49.76
16	17	46.45	5.83	58.64	-1084.00	-5	-73.42	-0.3	49.87	-0.3	49.87	0	57.74
17	17	46.45	5.14	-51.66	-1083.69	-5	-73.44	-0.3	49.83	-0.3	49.83	0	57.69
17	18	49.00	5.14	-51.66	-951.31	-5	-64.43	-0.3	43.77	-0.3	43.77	0	50.68
18	18	49.00	-0.85	-51.91	-951.31	-5	-86.45	-0.3	92.10	-0.3	92.10	0	103.49
18	19	51.30	-0.85	-51.91	-831.90	-4.442	-81.49	-0.3	86.54	-0.3	86.54	0	98.71
19	19	51.30	-7.58	-51.36	-831.90	-4.442	-82.13	-0.3	85.90	-0.3	85.90	0	98.07
19	20	53.65	-7.58	-51.36	-709.90	-3.884	-84.18	-0.3	80.62	-0.3	80.62	0	94.42
20	20	53.65	-8.23	-51.26	-709.90	-3.884	-84.25	-0.3	80.55	-0.3	80.55	0	94.34
20	21	56.00	-8.23	-51.26	-587.91	-3.325	-99.86	-0.3	75.08	-0.3	75.08	0	92.43
21	21	56.00	-5.09	-51.66	-587.91	-3.325	-84.54	-0.3	76.36	-0.3	70.64	0	85.41
21	22	57.00	-5.09	-51.66	-535.99	-3.088	-89.84	-0.3	75.75	-0.3	70.08	0	86.56
22	22	57.00	-19.02	-48.30	-535.99	-3.088	-91.61	-0.3	73.98	-0.3	68.44	0	84.92
22	23	58.00	-19.02	-48.30	-484.08	-2.85	-100.94	-0.3	71.35	-0.3	66.00	0	84.75
23	23	58.00	-10.53	-50.83	-484.08	-2.85	-241.09	-0.3	83.91	-0.3	70.89	0	103.20
23	24	59.00	-10.53	-50.83	-432.16	-2.85	-215.56	-0.3	74.58	-0.3	63.01	0	91.85
24	24	59.00	5.48	-51.62	-432.16	-2.85	-210.94	-0.3	79.20	-0.3	66.92	0	95.76
24	25	63.11	5.48	-51.62	-218.66	-2.85	-105.95	-0.3	40.85	-0.3	34.52	0	49.11
25	25	63.11	5.48	-51.62	-218.66	-2.85	-168.42	-0.3	271.37	0	0.00	0	0.00
25	26	67.23	3.64	-34.35	-40.88	-2.85	-29.94	-0.3	52.28	0	0.00	0	0.00
26	26	67.23	0.00	-34.55	-40.88	-2.85	-32.09	-0.3	50.13	0	0.00	0	0.00
26	27	71.34	0.00	-17.27	65.67	-2.85	51.55	-0.3	-80.53	0	0.00	0	0.00
27	27	71.34	0.00	-17.27	65.67	-2.85	51.55	-0.3	-80.53	0	0.00	0	0.00
27	28	75.45	0.00	0.00	101.18	-2.85	79.43	-0.3	-124.07	0	0.00	0	0.00
28	28	75.45	0.00	0.00	101.18	-2.85	79.43	-0.3	-124.07	0	0.00	0	0.00
28	29	79.56	0.00	17.27	65.67	-2.85	51.55	-0.3	-80.53	0	0.00	0	0.00
29	29	79.56	0.00	17.27	65.67	-2.85	51.55	-0.3	-80.53	0	0.00	0	0.00
29	30	83.68	0.00	34.55	-40.88	-2.85	-32.09	-0.3	50.13	0	0.00	0	0.00
30	30	83.68	3.64	34.35	-40.88	-2.85	-29.94	-0.3	52.28	0	0.00	0	0.00
30	31	87.79	5.48	51.62	-218.66	-2.85	-168.42	-0.3	271.37	0	0.00	0	0.00
31	31	87.79	5.48	51.62	-218.66	-2.85	-105.95	-0.3	40.85	-0.3	34.52	0	49.11
31	32	91.90	5.48	51.62	-432.16	-2.85	-210.94	-0.3	79.20	-0.3	66.92	0	95.76
32	32	91.90	-10.53	50.83	-432.16	-2.85	-215.56	-0.3	74.58	-0.3	63.01	0	91.85
32	33	92.90	-10.53	50.83	-484.08	-2.85	-241.09	-0.3	83.91	-0.3	70.89	0	103.20
33	33	92.90	-19.02	48.30	-484.08	-2.85	-100.94	-0.3	71.35	-0.3	66.00	0	84.75
33	34	93.90	-19.02	48.30	-535.99	-3.088	-91.61	-0.3	73.98	-0.3	68.44	0	84.92
34	34	93.90	-5.09	51.66	-535.99	-3.088	-89.84	-0.3	75.75	-0.3	70.08	0	86.56
34	35	94.90	-5.09	51.66	-587.91	-3.325	-84.54	-0.3	76.36	-0.3	70.64	0	85.41
35	35	94.90	-8.23	51.26	-587.91	-3.325	-99.86	-0.3	75.08	-0.3	75.08	0	92.43
35	36	97.25	-8.23	51.26	-709.90	-3.884	-84.25	-0.3	80.55	-0.3	80.55	0	94.34
36	36	97.25	-7.58	51.36	-709.90	-3.884	-84.18	-0.3	80.62	-0.3	80.62	0	94.42
36	37	99.60	-7.58	51.36	-831.90	-4.442	-82.13	-0.3	85.90	-0.3	85.90	0	98.07
37	37	99.60	-0.85	51.91	-831.90	-4.442	-81.49	-0.3	86.54	-0.3	86.54	0	98.71
37	38	101.90	-0.85	51.91	-951.31	-5	-86.45	-0.3	92.10	-0.3	92.10	0	103.49
38	38	101.90	5.14	51.66	-951.31	-5	-64.43	-0.3	43.77	-0.3	43.77	0	50.68
38	39	104.45	5.14	51.66	-1084.00	-5	-73.46	-0.3	49.84	-0.3	49.84	0	57.71
39	39	104.45	5.83	-58.64	-1083.69	-5	-73.40	-0.3	49.86	-0.3	49.86	0	57.73
39	40	107.00	5.83	-58.64	-933.42	-5	-63.18	-0.3	42.99	-0.3	42.99	0	49.76
40	40	107.00	-0.97	-58.92	-933.42	-5	-84.84	-0.3	90.35	-0.3	90.35	0	101.54
40	41	109.30	-0.97	-58.92	-797.89	-4.442	-78.17	-0.3	82.99	-0.3	82.99	0	94.66
41	41	109.30	-8.60	-58.30	-797.89	-4.442	-78.90	-0.3	82.26	-0.3	82.26	0	93.93
41	42	111.65	-8.60	-58.30	-659.41	-3.884	-78.37	-0.3	74.71	-0.3	74.71	0	87.52
42	42	111.65	-9.34	-58.18	-659.41	-3.884	-78.45	-0.3	74.62	-0.3	74.62	0	87.44
42	43	114.00	-9.34	-58.18	-520.92	-3.325	-88.78	-0.3	66.22	-0.3	66.22	0	81.59
43	43	114.00	-5.78	-58.64	-520.92	-3.325	-75.06	-0.3	67.52	-0.3	62.46	0	75.54
43	44	115.00	-5.78	-58.64	-462.00	-3.088	-77.62	-0.3	65.12	-0.3	60.24	0	74.45
44	44	115.00	-21.59	-54.83	-462.00	-3.088	-79.62	-0.3	63.11	-0.3	58.38	0	72.59
44	45	116.00	-21.59	-54.83	-403.07	-2.85	-84.88	-0.3	58.58	-0.3	54.19	0	69.80
45	45	116.00	-11.96	-57.70	-403.07	-2.85	-201.66	-0.3	68.94	-0.3	58.25	0	85.15
45	46	117.00	-11.96	-57.70	-344.14	-2.85	-172.68	-0.3	58.36	-0.3	49.31	0	72.27
46	46	117.00	0.00	-58.93	-344.14	-2.85	-169.23	-0.3	61.81	-0.3	52.22	0	75.19
46	47	119.78	0.00	-58.93	-180.61	-2.85	-88.82	-0.3	32.44	-0.3	27.41	0	39.46
47	47	119.78	9.15	-58.21	-180.61	-2.85	-86.18	-0.3	35.08	-0.3	29.64	0	41.69
47	48	122.55	9.15	-58.21	-17.09	-2.85	-5.76	-0.3	5.71	-0.3	4.82	0	5.96
48	48	122.55	4.62	-58.75	-17.09	-2.85	-10.69	-0.3	23.69	0	0.00	0	0.00
48	49	128.10	2.79	-35.44	245.08	-2.85	194.05	-0.3	-298.88	0	0.00	0	0.00
49	49	128.10	0.00	-35.55	245.08	-2.85	192.40	-0.3	-300.53	0	0.00	0	0.00
49	50	133.65	0.00	-12.24	377.68	-2.85	296.49	-0.3	-463.13	0	0.00	0	0.00
50	50	133.65	0.00	-12.24	377.68	-2.85	296.49	-0.3	-463.13	0	0.00	0	0.00
50	51	139.20	0.00	11.07	380.90	-2.85	299.02	-0.3	-467.08	0	0.00	0	0.00
51	51	139.20	0.00	11.07	380.90	-2.85	299.02	-0.3	-467.08	0	0.00	0	0.00
51	52	144.75	0.00	34.38	254.76	-2.85	200.00	-0.3	-312.40	0	0.00	0	0.00
52	52	144.75	0.00	34.38	254.76	-2.85	200.00	-0.3	-312.40	0	0.00	0	0.00
52	53	147.53	0.00	46.04	143.17	-2.85	112.39	-0.3	-175.56	0	0.00	0	0.00
53	53	147.53	0.00	46.04	143.17	-2.85	112.39	-0.3	-175.56	0	0.00	0	0.00
53	54	150.30	0.00	57.69	-0.76	-2.85	-0.60	-0.3	0.93	0	0.00	0	0.00
54	54	150.30	0.00	-2.52	-0.76	-2.85	-0.60	-0.3	0.93	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

[1; 1]pret21[illegible]F11.TOT.To

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	-32.25	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	-32.25	89.50	-2.85	44.01	-0.3	-16.07	-0.3	-13.58	0	-19.55
3	3	3.38	0.00	-32.25	89.50	-2.85	44.01	-0.3	-16.07	-0.3	-13.58	0	-19.55
3	4	6.15	0.00	-32.25	179.01	-2.85	88.03	-0.3	-32.15	-0.3	-27.16	0	-39.11
4	4	6.15	0.00	-32.25	179.01	-2.85	88.03	-0.3	-32.15	-0.3	-27.16	0	-39.11
4	5	11.70	0.00	-32.25	358.01	-2.85	176.06	-0.3	-64.30	-0.3	-54.33	0	-78.22
5	5	11.70	0.00	-32.25	358.01	-2.85	176.06	-0.3	-64.30	-0.3	-54.33	0	-78.22
5	6	17.25	0.00	-32.25	537.02	-2.85	264.08	-0.3	-96.45	-0.3	-81.49	0	-117.33
6	6	17.25	0.00	-32.25	537.02	-2.85	264.08	-0.3	-96.45	-0.3	-81.49	0	-117.33
6	7	22.80	0.00	-32.25	716.03	-2.85	352.11	-0.3	-128.60	-0.3	-108.66	0	-156.44
7	7	22.80	0.00	-32.25	716.03	-2.85	352.11	-0.3	-128.60	-0.3	-108.66	0	-156.44
7	8	28.35	0.00	-32.25	895.03	-2.85	440.14	-0.3	-160.75	-0.3	-135.82	0	-195.55
8	8	28.35	0.00	-32.25	895.03	-2.85	440.14	-0.3	-160.75	-0.3	-135.82	0	-195.55
8	9	31.13	0.00	-32.25	984.54	-2.85	484.16	-0.3	-176.83	-0.3	-149.41	0	-215.11
9	9	31.13	0.00	-32.25	984.54	-2.85	484.16	-0.3	-176.83	-0.3	-149.41	0	-215.11
9	10	33.90	0.00	-32.25	1074.04	-2.85	528.17	-0.3	-192.90	-0.3	-162.99	0	-234.66
10	10	33.90	6.54	-31.58	1074.04	-2.85	530.06	-0.3	-191.02	-0.3	-161.39	0	-233.07
10	11	34.90	6.54	-31.58	1106.29	-2.85	545.92	-0.3	-196.81	-0.3	-166.29	0	-240.12
11	11	34.90	11.82	-30.01	1106.29	-2.85	226.12	-0.3	-167.62	-0.3	-155.06	0	-197.91
11	12	35.90	11.82	-30.01	1138.55	-3.088	190.97	-0.3	-160.78	-0.3	-148.74	0	-183.75
12	12	35.90	3.16	-32.10	1138.55	-3.088	189.87	-0.3	-161.88	-0.3	-149.75	0	-184.77
12	13	36.90	3.16	-32.10	1170.80	-3.325	167.57	-0.3	-152.87	-0.3	-141.42	0	-170.82
13	13	36.90	5.11	-31.85	1170.80	-3.325	197.20	-0.3	-151.19	-0.3	-151.19	0	-185.74
13	14	39.25	5.11	-31.85	1246.59	-3.884	146.87	-0.3	-142.52	-0.3	-142.52	0	-166.74
14	14	39.25	4.71	-31.91	1246.59	-3.884	146.83	-0.3	-142.56	-0.3	-142.56	0	-166.78
14	15	41.60	4.71	-31.91	1322.39	-4.442	129.86	-0.3	-137.25	-0.3	-137.25	0	-156.59
15	15	41.60	0.53	-32.25	1322.39	-4.442	129.46	-0.3	-137.65	-0.3	-137.65	0	-156.99
15	16	43.90	0.53	-32.25	1396.57	-5	126.86	-0.3	-135.26	-0.3	-135.26	0	-151.99
	16	43.90	-3.19	-32.10	1396.57	-5	94.81	-0.3	-64.04	-0.3	-64.04	0	-74.18
	17	46.45	-3.19	-32.10	1478.82	-5	100.40	-0.3	-67.80	-0.3	-67.80	0	-78.54
	17	46.45	0.01	-0.06	1478.82	-5	100.56	-0.3	-67.65	-0.3	-67.65	0	-78.38
17	18	49.00	0.01	-0.06	1478.98	-5	100.57	-0.3	-67.65	-0.3	-67.65	0	-78.39
18	18	49.00	0.00	-0.06	1478.98	-5	134.29	-0.3	-143.29	-0.3	-143.29	0	-161.01
18	19	51.30	0.00	-0.06	1479.12	-4.442	144.74	-0.3	-154.02	-0.3	-154.02	0	-175.66
19	19	51.30	-0.01	-0.06	1479.12	-4.442	144.74	-0.3	-154.02	-0.3	-154.02	0	-175.66
19	20	53.65	-0.01	-0.06	1479.27	-3.884	173.59	-0.3	-169.81	-0.3	-169.81	0	-198.56
20	20	53.65	-0.01	-0.06	1479.27	-3.884	173.59	-0.3	-169.81	-0.3	-169.81	0	-198.56
20	21	56.00	-0.01	-0.06	1479.41	-3.325	248.22	-0.3	-192.00	-0.3	-192.00	0	-235.66
21	21	56.00	-692.69	68.24	774.26	-3.325	31.51	-0.3	-180.40	-0.3	-166.89	0	-186.33
21	22	57.00	-693.62	68.33	704.71	-3.088	29.13	-0.3	-188.58	-0.3	-174.46	0	-196.13
22	22	57.00	-648.52	255.33	704.71	-3.088	34.86	-0.3	-182.85	-0.3	-169.15	0	-190.83
22	23	58.00	-649.37	255.70	453.32	-2.85	-1.68	-0.3	-163.01	-0.3	-150.80	0	-168.36
23	23	58.00	-683.39	141.57	453.32	-2.85	25.79	-0.3	-278.55	-0.3	-235.35	0	-265.61
23	24	59.00	-684.29	141.79	311.68	-2.85	-44.12	-0.3	-253.37	-0.3	-214.08	0	-234.88
24	24	59.00	-1407.03	0.00	-958.14	-2.85	-877.05	-0.3	-233.79	-0.3	-197.54	0	-133.59
24	25	63.11	-1414.53	0.00	-971.58	-2.85	-885.83	-0.3	-233.54	-0.3	-197.32	0	-132.49
25	25	63.11	-1414.53	0.00	-971.58	-2.85	-885.83	-0.3	-233.54	-0.3	-197.32	0	-132.49
25	26	67.23	-1422.02	0.00	-985.02	-2.85	-894.60	-0.3	-233.29	-0.3	-197.11	0	-131.37
26	26	67.23	-1422.02	0.00	-985.02	-2.85	-894.60	-0.3	-233.29	-0.3	-197.11	0	-131.37
26	27	71.34	-1427.93	0.00	-995.61	-2.85	-901.51	-0.3	-233.09	-0.3	-196.94	0	-130.50
27	27	71.34	-1427.93	0.00	-995.61	-2.85	-901.51	-0.3	-233.09	-0.3	-196.94	0	-130.50
27	28	75.45	-1427.95	0.00	-995.65	-2.85	-901.53	-0.3	-233.09	-0.3	-196.94	0	-130.50
28	28	75.45	-1427.95	0.00	-995.65	-2.85	-901.53	-0.3	-233.09	-0.3	-196.94	0	-130.50
28	29	79.56	-1427.93	0.00	-995.61	-2.85	-901.51	-0.3	-233.09	-0.3	-196.94	0	-130.50
29	29	79.56	-1427.93	0.00	-995.61	-2.85	-901.51	-0.3	-233.09	-0.3	-196.94	0	-130.50
29	30	83.68	-1422.02	0.00	-985.02	-2.85	-894.60	-0.3	-233.29	-0.3	-197.11	0	-131.37
30	30	83.68	-1422.02	0.00	-985.02	-2.85	-894.60	-0.3	-233.29	-0.3	-197.11	0	-131.37
30	31	87.79	-1414.52	0.00	-971.58	-2.85	-885.82	-0.3	-233.54	-0.3	-197.32	0	-132.48
31	31	87.79	-1414.52	0.00	-971.58	-2.85	-885.82	-0.3	-233.54	-0.3	-197.32	0	-132.48
31	32	91.90	-1407.03	0.00	-958.14	-2.85	-877.05	-0.3	-233.79	-0.3	-197.54	0	-133.59
32	32	91.90	-684.29	-141.79	311.68	-2.85	-44.12	-0.3	-253.37	-0.3	-214.08	0	-234.88
[illegible]	33	92.90	-683.39	-141.57	453.32	-2.85	25.79	-0.3	-278.55	-0.3	-235.35	0	-265.61
	33	92.90	-649.37	-255.70	453.32	-2.85	-1.68	-0.3	-163.01	-0.3	-150.80	0	-168.36
	34	93.90	-648.53	-255.33	704.71	-3.088	34.86	-0.3	-182.85	-0.3	-169.16	0	-190.83
34	34	93.90	-693.62	-68.33	704.71	-3.088	29.13	-0.3	-188.58	-0.3	-174.46	0	-196.13
34	35	94.90	-692.69	-68.24	774.26	-3.325	31.51	-0.3	-180.40	-0.3	-166.89	0	-186.33
35	35	94.90	-0.01	0.06	1479.41	-3.325	248.22	-0.3	-192.00	-0.3	-192.00	0	-235.66
35	36	97.25	-0.01	0.06	1479.27	-3.884	173.59	-0.3	-169.81	-0.3	-169.81	0	-198.56
36	36	97.25	-0.01	0.06	1479.27	-3.884	173.59	-0.3	-169.81	-0.3	-169.81	0	-198.56
36	37	99.60	-0.01	0.06	1479.12	-4.442	144.74	-0.3	-154.02	-0.3	-154.02	0	-175.66
37	37	99.60	0.00	0.06	1479.12	-4.442	144.74	-0.3	-154.02	-0.3	-154.02	0	-175.66
37	38	101.90	0.00	0.06	1478.98	-5	134.29	-0.3	-143.29	-0.3	-143.29	0	-161.01
38	38	101.90	0.01	0.06	1478.98	-5	100.57	-0.3	-67.65	-0.3	-67.65	0	-78.39
38	39	104.45	0.01	0.06	1478.82	-5	100.56	-0.3	-67.65	-0.3	-67.65	0	-78.38
39	39	104.45	-3.19	32.10	1478.82	-5	100.40	-0.3	-67.80	-0.3	-67.80	0	-78.54
39	40	107.00	-3.19	32.10	1396.57	-5	94.81	-0.3	-64.04	-0.3	-64.04	0	-74.18
40	40	107.00	0.53	32.25	1396.57	-5	126.86	-0.3	-135.26	-0.3	-135.26	0	-151.99
40	41	109.30	0.53	32.25	1322.39	-4.442	129.46	-0.3	-137.65	-0.3	-137.65	0	-156.99
41	41	109.30	4.71	31.91	1322.39	-4.442	129.86	-0.3	-137.25	-0.3	-137.25	0	-156.59
41	42	111.65	4.71	31.91	1246.59	-3.884	146.83	-0.3	-142.56	-0.3	-142.56	0	-166.78
42	42	111.65	5.11	31.85	1246.59	-3.884	146.87	-0.3	-142.52	-0.3	-142.52	0	-166.74
42	43	114.00	5.11	31.85	1170.80	-3.325	197.20	-0.3	-151.19	-0.3	-151.19	0	-185.74
43	43	114.00	3.16	32.10	1170.80	-3.325	167.57	-0.3	-152.87	-0.3	-141.42	0	-170.82
43	44	115.00	3.16	32.10	1138.55	-3.088	189.87	-0.3	-161.88	-0.3	-149.75	0	-184.77
44	44	115.00	11.82	30.01	1138.55	-3.088	190.97	-0.3	-160.78	-0.3	-148.74	0	-183.75
44	45	116.00	11.82	30.01	1106.29	-2.85	226.12	-0.3	-167.62	-0.3	-155.06	0	-197.91
45	45	116.00	6.54	31.58	1106.29	-2.85	545.92	-0.3	-196.81	-0.3	-166.29	0	-240.12
45	46	117.00	6.54	31.58	1074.04	-2.85	530.06	-0.3	-191.02	-0.3	-161.39	0	-233.07
46	46	117.00	0.00	32.25	1074.04	-2.85	528.17	-0.3	-192.90	-0.3	-162.99	0	-234.66
46	47	119.78	0.00	32.25	984.53	-2.85	484.15	-0.3	-176.83	-0.3	-149.40	0	-215.11
47	47	119.78	0.00	32.25	984.53	-2.85	484.15	-0.3	-176.83	-0.3	-149.40	0	-215.11
47	48	122.55	0.00	32.25	895.03	-2.85	440.14	-0.3	-160.75	-0.3	-135.82	0	-195.55
48	48	122.55	0.00	32.25	895.03	-2.85	440.14	-0.3	-160.75	-0.3	-135.82	0	-195.55
48	49	128.10	0.00	32.25	716.03	-2.85	352.11	-0.3	-128.60	-0.3	-108.66	0	-156.44
49	49	128.10	0.00	32.25	716.03	-2.85	352.11	-0.3	-128.60	-0.3	-108.66	0	-156.44
	50	133.65	0.00	32.25	537.02	-2.85	264.08	-0.3	-96.45	-0.3	-81.49	0	-117.33
	50	133.65	0.00	32.25	537.02	-2.85	264.08	-0.3	-96.45	-0.3	-81.49	0	-117.33
	51	139.20	0.00	32.25	358.01	-2.85	176.06	-0.3	-64.30	-0.3	-54.33	0	-78.22
51	51	139.20	0.00	32.25	358.01	-2.85	176.06	-0.3	-64.30	-0.3	-54.33	0	-78.22
51	52	144.75	0.00	32.25	179.01	-2.85	88.03	-0.3	-32.15	-0.3	-27.16	0	-39.11
52	52	144.75	0.00	32.25	179.01	-2.85	88.03	-0.3	-32.15	-0.3	-27.16	0	-39.11
52	53	147.53	0.00	32.25	89.50	-2.85	44.01	-0.3	-16.07	-0.3	-13.58	0	-19.55
53	53	147.53	0.00	32.25	89.50	-2.85	44.01	-0.3	-16.07	-0.3	-13.58	0	-19.55
53	54	150.30	0.00	32.25	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo To

[1; 1]pret15.19vxxF12.TOT.To

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-707.79	0.00	-1269.06	-2.85	-828.25	-0.3	23.76	-0.3	20.07	0	104.76
1	2	0.60	-707.25	0.00	-1268.00	-2.85	-827.57	-0.3	23.72	-0.3	20.04	0	104.66
2	2	0.60	-707.25	-25.02	-1268.11	-2.85	-827.62	-0.3	23.74	-0.3	20.06	0	104.69
2	3	3.38	-704.78	-25.02	-1194.66	-2.85	-790.79	-0.3	11.26	-0.3	9.52	0	89.24
3	3	3.38	-704.78	-25.02	-1194.26	-2.85	-790.59	-0.3	11.19	-0.3	9.46	0	89.15
3	4	6.15	-702.32	-25.02	-1120.32	-2.85	-753.52	-0.3	-1.38	-0.3	-1.17	0	73.60
4	4	6.15	-1410.11	-25.02	-2389.49	-2.85	-1581.82	-0.3	22.40	-0.3	18.92	0	178.39
4	5	11.70	-1400.29	-25.02	-2232.59	-2.85	-1501.83	-0.3	-2.95	-0.3	-2.49	0	146.50
5	5	11.70	-1400.29	-25.02	-2233.02	-2.85	-1502.04	-0.3	-2.87	-0.3	-2.43	0	146.59
5	6	17.25	-1390.53	-25.02	-2076.68	-2.85	-1422.35	-0.3	-28.14	-0.3	-23.77	0	114.81
6	6	17.25	-1390.53	-25.02	-2076.68	-2.85	-1422.35	-0.3	-28.14	-0.3	-23.77	0	114.81
6	7	22.80	-1380.84	-25.02	-1920.46	-2.85	-1342.73	-0.3	-53.40	-0.3	-45.12	0	83.04
7	7	22.80	-1380.84	-25.02	-1920.46	-2.85	-1342.73	-0.3	-53.40	-0.3	-45.12	0	83.04
7	8	28.35	-1371.22	-25.02	-1764.37	-2.85	-1263.20	-0.3	-78.66	-0.3	-66.46	0	51.28
8	8	28.35	-1371.22	-25.02	-1764.37	-2.85	-1263.20	-0.3	-78.66	-0.3	-66.46	0	51.28
8	9	31.13	-1366.43	-25.02	-1686.36	-2.85	-1223.45	-0.3	-91.29	-0.3	-77.13	0	35.41
9	9	31.13	-1366.43	-25.02	-1686.36	-2.85	-1223.45	-0.3	-91.29	-0.3	-77.13	0	35.41
9	10	33.90	-1361.66	-25.02	-1608.39	-2.85	-1183.73	-0.3	-103.92	-0.3	-87.80	0	19.53
10	10	33.90	-664.18	-163.17	-392.39	-2.85	-384.55	-0.3	-121.12	-0.3	-102.33	0	-76.15
10	11	34.90	-663.35	-162.96	-228.92	-2.85	-303.93	-0.3	-150.24	-0.3	-126.94	0	-111.66
11	11	34.90	-625.98	-273.38	-228.92	-2.85	-136.70	-0.3	-55.22	-0.3	-51.09	0	-42.22
11	12	35.90	-625.20	-273.04	41.93	-3.088	-72.47	-0.3	-85.42	-0.3	-79.02	0	-80.31
12	12	35.90	-676.03	-91.74	41.93	-3.088	-78.93	-0.3	-91.88	-0.3	-85.00	0	-86.29
12	13	36.90	-675.17	-91.65	134.93	-3.325	-57.80	-0.3	-94.73	-0.3	-87.63	0	-91.02
13	13	36.90	3.94	-24.65	824.73	-3.325	138.96	-0.3	-106.45	-0.3	-106.45	0	-130.79
13	14	39.25	3.94	-24.65	883.39	-3.884	104.12	-0.3	-100.96	-0.3	-100.96	0	-118.12
14	14	39.25	3.63	-24.70	883.39	-3.884	104.08	-0.3	-100.99	-0.3	-100.99	0	-118.16
14	15	41.60	3.63	-24.70	942.06	-4.442	92.54	-0.3	-97.75	-0.3	-97.75	0	-111.53
15	15	41.60	0.39	-24.96	942.06	-4.442	92.22	-0.3	-98.06	-0.3	-98.06	0	-111.84
15	16	43.90	0.39	-24.96	999.46	-5	90.79	-0.3	-96.80	-0.3	-96.80	0	-108.77
16	16	43.90	-2.49	-24.84	999.46	-5	67.84	-0.3	-45.84	-0.3	-45.84	0	-53.10
16	17	46.45	-2.49	-24.84	1063.11	-5	72.17	-0.3	-48.75	-0.3	-48.75	0	-56.47
17	17	46.45	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
17	18	49.00	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
18	18	49.00	-0.02	0.00	1063.11	-5	96.53	-0.3	-103.00	-0.3	-103.00	0	-115.74
18	19	51.30	-0.02	0.00	1063.11	-4.442	104.03	-0.3	-110.70	-0.3	-110.70	0	-126.25
19	19	51.30	-0.02	0.00	1063.11	-4.442	104.03	-0.3	-110.70	-0.3	-110.70	0	-126.25
19	20	53.65	-0.02	0.00	1063.11	-3.884	124.75	-0.3	-122.04	-0.3	-122.04	0	-142.70
20	20	53.65	-0.02	0.00	1063.11	-3.884	124.75	-0.3	-122.04	-0.3	-122.04	0	-142.70
20	21	56.00	-0.02	0.00	1063.10	-3.325	178.37	-0.3	-137.97	-0.3	-137.97	0	-169.34
21	21	56.00	-0.02	0.00	1063.10	-3.325	151.83	-0.3	-139.14	-0.3	-128.72	0	-155.41
21	22	57.00	-0.02	0.00	1063.10	-3.088	176.91	-0.3	-151.53	-0.3	-140.18	0	-172.87
22	22	57.00	-0.02	0.01	1063.10	-3.088	176.91	-0.3	-151.53	-0.3	-140.18	0	-172.87
22	23	58.00	-0.02	0.01	1063.09	-2.85	215.65	-0.3	-162.71	-0.3	-150.52	0	-191.70
23	23	58.00	-0.02	0.00	1063.09	-2.85	522.78	-0.3	-190.94	-0.3	-161.33	0	-232.28
23	24	59.00	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
24	24	59.00	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
24	25	63.11	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
25	25	63.11	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
25	26	67.23	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
26	26	67.23	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
26	27	71.34	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
27	27	71.34	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
27	28	75.45	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
28	28	75.45	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
28	29	79.56	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
29	29	79.56	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
29	30	83.68	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
30	30	83.68	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
30	31	87.79	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
31	31	87.79	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
31	32	91.90	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
32	32	91.90	-0.02	0.00	1063.08	-2.85	522.77	-0.3	-190.94	-0.3	-161.33	0	-232.27
32	33	92.90	-0.02	0.00	1063.09	-2.85	522.78	-0.3	-190.94	-0.3	-161.33	0	-232.28
33	33	92.90	-0.02	-0.01	1063.09	-2.85	215.65	-0.3	-162.71	-0.3	-150.52	0	-191.70
33	34	93.90	-0.02	-0.01	1063.10	-3.088	176.91	-0.3	-151.53	-0.3	-140.18	0	-172.87
34	34	93.90	-0.02	0.00	1063.10	-3.088	176.91	-0.3	-151.53	-0.3	-140.18	0	-172.87
34	35	94.90	-0.02	0.00	1063.10	-3.325	151.83	-0.3	-139.14	-0.3	-128.72	0	-155.41
35	35	94.90	-0.02	0.00	1063.10	-3.325	178.37	-0.3	-137.97	-0.3	-137.97	0	-169.34
35	36	97.25	-0.02	0.00	1063.11	-3.884	124.75	-0.3	-122.04	-0.3	-122.04	0	-142.70
36	36	97.25	-0.02	0.00	1063.11	-3.884	124.75	-0.3	-122.04	-0.3	-122.04	0	-142.70
36	37	99.60	-0.02	0.00	1063.11	-4.442	104.03	-0.3	-110.70	-0.3	-110.70	0	-126.25
37	37	99.60	-0.02	0.00	1063.11	-4.442	104.03	-0.3	-110.70	-0.3	-110.70	0	-126.25
37	38	101.90	-0.02	0.00	1063.11	-5	96.53	-0.3	-103.00	-0.3	-103.00	0	-115.74
38	38	101.90	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
38	39	104.45	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
39	39	104.45	-2.49	24.84	1063.11	-5	72.17	-0.3	-48.75	-0.3	-48.75	0	-56.47
39	40	107.00	-2.49	24.84	999.46	-5	67.84	-0.3	-45.84	-0.3	-45.84	0	-53.10
40	40	107.00	0.39	24.96	999.46	-5	90.79	-0.3	-96.80	-0.3	-96.80	0	-108.77
40	41	109.30	0.39	24.96	942.06	-4.442	92.22	-0.3	-98.06	-0.3	-98.06	0	-111.84
41	41	109.30	3.63	24.70	942.06	-4.442	92.54	-0.3	-97.75	-0.3	-97.75	0	-111.53
41	42	111.65	3.63	24.70	883.39	-3.884	104.08	-0.3	-100.99	-0.3	-100.99	0	-118.16
42	42	111.65	3.94	24.65	883.39	-3.884	104.12	-0.3	-100.96	-0.3	-100.96	0	-118.12
42	43	114.00	3.94	24.65	824.73	-3.325	138.96	-0.3	-106.45	-0.3	-106.45	0	-130.79
43	43	114.00	-675.17	91.65	134.93	-3.325	-57.80	-0.3	-94.73	-0.3	-87.63	0	-91.02
43	44	115.00	-676.03	91.74	41.93	-3.088	-78.93	-0.3	-91.88	-0.3	-85.00	0	-86.29
44	44	115.00	-625.20	273.04	41.93	-3.088	-72.47	-0.3	-85.42	-0.3	-79.02	0	-80.31
44	45	116.00	-625.98	273.38	-228.92	-2.85	-136.70	-0.3	-55.22	-0.3	-51.09	0	-42.22
45	45	116.00	-663.35	162.96	-228.92	-2.85	-303.93	-0.3	-150.24	-0.3	-126.94	0	-111.66
45	46	117.00	-664.18	163.17	-392.39	-2.85	-384.55	-0.3	-121.12	-0.3	-102.33	0	-76.15
46	46	117.00	-1361.66	25.02	-1608.39	-2.85	-1183.73	-0.3	-103.92	-0.3	-87.80	0	19.53
46	47	119.78	-1366.43	25.02	-1686.36	-2.85	-1223.45	-0.3	-91.29	-0.3	-77.13	0	35.41
47	47	119.78	-1366.43	25.02	-1686.36	-2.85	-1223.45	-0.3	-91.29	-0.3	-77.13	0	35.41
47	48	122.55	-1371.22	25.02	-1764.37	-2.85	-1263.20	-0.3	-78.66	-0.3	-66.46	0	51.28
48	48	122.55	-1371.22	25.02	-1764.37	-2.85	-1263.20	-0.3	-78.66	-0.3	-66.46	0	51.28
48	49	128.10	-1380.84	25.02	-1920.46	-2.85	-1342.73	-0.3	-53.40	-0.3	-45.12	0	83.04
49	49	128.10	-1380.84	25.02	-1920.46	-2.85	-1342.73	-0.3	-53.40	-0.3	-45.12	0	83.04
49	50	133.65	-1390.53	25.02	-2076.68	-2.85	-1422.35	-0.3	-28.14	-0.3	-23.77	0	114.81
50	50	133.65	-1390.53	25.02	-2076.68	-2.85	-1422.35	-0.3	-28.14	-0.3	-23.77	0	114.81
50	51	139.20	-1400.29	25.02	-2232.59	-2.85	-1501.83	-0.3	-2.95	-0.3	-2.49	0	146.50
51	51	139.20	-1400.29	25.02	-2233.02	-2.85	-1502.04	-0.3	-2.87	-0.3	-2.43	0	146.59
51	52	144.75	-1410.11	25.02	-2389.29	-2.85	-1581.72	-0.3	22.36	-0.3	18.89	0	178.34
52	52	144.75	-702.32	25.02	-1120.42	-2.85	-753.57	-0.3	-1.36	-0.3	-1.15	0	73.62
52	53	147.53	-704.78	25.02	-1194.66	-2.85	-790.79	-0.3	11.26	-0.3	9.52	0	89.24
53	53	147.53	-704.78	25.02	-1194.26	-2.85	-790.59	-0.3	11.19	-0.3	9.46	0	89.15
53	54	150.30	-707.25	25.02	-1268.00	-2.85	-827.57	-0.3	23.72	-0.3	20.04	0	104.66
54	54	150.30	-707.25	0.00	-1268.11	-2.85	-827.62	-0.3	23.74	-0.3	20.06	0	104.69
54	55	150.90	-707.79	0.00	-1269.00	-2.85	-828.22	-0.3	23.75	-0.3	20.06	0	104.75

[redacted]

(PretensadoTotal(t=0)): Tensiones a tiempo To

[1; \pret\Bloo F13.TOT.To

Coef. exc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	25.20	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	25.20	-69.92	-2.85	-34.38	-0.3	12.56	-0.3	10.61	0	15.28
3	3	3.38	0.00	25.20	-69.92	-2.85	-34.38	-0.3	12.56	-0.3	10.61	0	15.28
3	4	6.15	0.00	25.20	-139.85	-2.85	-68.77	-0.3	25.12	-0.3	21.22	0	30.56
4	4	6.15	0.00	25.20	-139.85	-2.85	-68.77	-0.3	25.12	-0.3	21.22	0	30.56
4	5	11.70	0.00	25.20	-279.70	-2.85	-137.55	-0.3	50.24	-0.3	42.44	0	61.11
5	5	11.70	0.00	25.20	-279.70	-2.85	-137.55	-0.3	50.24	-0.3	42.44	0	61.11
5	6	17.25	0.00	25.20	-419.54	-2.85	-206.31	-0.3	75.35	-0.3	63.67	0	91.66
6	6	17.25	0.00	25.20	-419.54	-2.85	-206.31	-0.3	75.35	-0.3	63.67	0	91.66
6	7	22.80	0.00	25.20	-559.39	-2.85	-275.09	-0.3	100.47	-0.3	84.89	0	122.22
7	7	22.80	0.00	25.20	-559.39	-2.85	-275.09	-0.3	100.47	-0.3	84.89	0	122.22
7	8	28.35	0.00	25.20	-699.24	-2.85	-343.86	-0.3	125.59	-0.3	106.11	0	152.77
8	8	28.35	-1389.17	25.20	352.36	-2.85	-227.45	-0.3	-464.01	-0.3	-392.05	0	-415.57
8	9	31.13	-1394.33	25.20	286.34	-2.85	-261.40	-0.3	-453.64	-0.3	-383.29	0	-402.40
9	9	31.13	-2088.91	25.20	812.14	-2.85	-203.20	-0.3	-748.44	-0.3	-632.37	0	-686.57
9	10	33.90	-2096.64	25.20	748.06	-2.85	-236.94	-0.3	-739.16	-0.3	-624.53	0	-674.45
10	10	33.90	-2058.14	-400.72	748.06	-2.85	-225.84	-0.3	-728.06	-0.3	-615.15	0	-665.07
10	11	34.90	-2060.82	-401.37	1146.33	-2.85	-30.76	-0.3	-800.36	-0.3	-676.24	0	-752.74
11	11	34.90	-1962.57	-745.92	1146.33	-2.85	-50.45	-0.3	-458.43	-0.3	-424.09	0	-468.49
11	12	35.90	-1965.08	-747.00	1878.30	-3.088	62.86	-0.3	-517.42	-0.3	-478.66	0	-536.42
12	12	35.90	-2094.44	-181.38	1878.30	-3.088	46.43	-0.3	-533.86	-0.3	-493.87	0	-551.63
12	13	36.90	-2097.19	-181.65	2064.62	-3.325	55.47	-0.3	-509.60	-0.3	-471.43	0	-523.27
13	13	36.90	-2082.24	-308.99	2064.28	-3.325	38.00	-0.3	-576.25	-0.3	-576.25	0	-637.17
13	14	39.25	-2088.66	-310.02	2801.59	-3.884	88.64	-0.3	-561.73	-0.3	-561.73	0	-616.17
14	14	39.25	-2092.41	-283.56	2801.96	-3.884	88.26	-0.3	-562.20	-0.3	-562.20	0	-616.65
14	15	41.60	-2098.82	-284.51	3482.07	-4.442	139.35	-0.3	-563.98	-0.3	-563.98	0	-614.92
15	15	41.60	-2118.00	-9.69	3481.95	-4.442	137.50	-0.3	-565.80	-0.3	-565.80	0	-616.74
15	16	43.90	-2124.32	-9.79	3519.50	-5	141.45	-0.3	-519.12	-0.3	-519.12	0	-561.28
	16	43.90	-2111.30	235.00	3519.03	-5	134.85	-0.3	-265.41	-0.3	-265.41	0	-290.96
	17	46.45	-2118.25	235.69	2933.00	-5	94.66	-0.3	-238.95	-0.3	-238.95	0	-260.24
	17	46.45	-2120.74	-210.62	2932.77	-5	94.52	-0.3	-239.06	-0.3	-239.06	0	-260.35
17	18	49.00	-2127.67	-211.31	3487.11	-5	131.87	-0.3	-264.76	-0.3	-264.76	0	-290.08
18	18	49.00	-2137.85	35.21	3487.64	-5	137.42	-0.3	-517.17	-0.3	-517.17	0	-558.95
18	19	51.30	-2144.11	35.31	3419.58	-4.442	128.89	-0.3	-561.81	-0.3	-561.81	0	-611.84
19	19	51.30	-2121.39	313.30	3418.77	-4.442	130.99	-0.3	-559.55	-0.3	-559.55	0	-609.56
19	20	53.65	-2124.72	313.80	2689.39	-3.884	71.33	-0.3	-552.99	-0.3	-552.99	0	-605.25
20	20	53.65	-2120.58	340.67	2688.94	-3.884	71.75	-0.3	-552.47	-0.3	-552.47	0	-604.72
20	21	56.00	-2117.77	340.21	1885.19	-3.325	2.70	-0.3	-558.27	-0.3	-558.27	0	-613.90
21	21	56.00	-2134.55	210.65	1885.36	-3.325	25.61	-0.3	-490.41	-0.3	-453.67	0	-501.01
21	22	57.00	-2131.87	210.38	1669.83	-3.088	6.98	-0.3	-508.90	-0.3	-470.78	0	-522.13
22	22	57.00	-1993.16	785.13	1669.33	-3.088	24.52	-0.3	-491.21	-0.3	-454.41	0	-505.74
22	23	58.00	-1990.71	784.08	898.35	-2.85	-104.81	-0.3	-424.54	-0.3	-392.73	0	-427.53
23	23	58.00	-2095.04	434.19	898.35	-2.85	-162.57	-0.3	-765.69	-0.3	-646.95	0	-706.90
23	24	59.00	-2092.45	433.56	466.89	-2.85	-374.00	-0.3	-687.45	-0.3	-580.84	0	-612.00
24	24	59.00	-2136.89	0.00	466.89	-2.85	-386.82	-0.3	-700.27	-0.3	-591.67	0	-622.83
24	25	63.11	-2125.84	0.00	458.53	-2.85	-387.74	-0.3	-695.58	-0.3	-587.71	0	-618.31
25	25	63.11	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
25	26	67.23	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
26	26	67.23	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
26	27	71.34	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
27	27	71.34	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
27	28	75.45	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
28	28	75.45	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
28	29	79.56	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
29	29	79.56	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
29	30	83.68	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
30	30	83.68	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
30	31	87.79	0.00	0.00	-1150.74	-2.85	-565.89	-0.3	206.68	-0.3	174.63	0	251.42
31	31	87.79	-2125.85	0.00	458.53	-2.85	-387.75	-0.3	-695.59	-0.3	-587.71	0	-618.31
31	32	91.90	-2136.89	0.00	466.89	-2.85	-386.82	-0.3	-700.27	-0.3	-591.67	0	-622.83
32	32	91.90	-2092.44	-433.56	466.89	-2.85	-374.00	-0.3	-687.45	-0.3	-580.84	0	-612.00
	33	92.90	-2095.04	-434.19	898.35	-2.85	-162.57	-0.3	-765.69	-0.3	-646.95	0	-706.90
	33	92.90	-1990.71	-784.08	898.35	-2.85	-104.81	-0.3	-424.54	-0.3	-392.73	0	-427.53
	34	93.90	-1993.16	-785.13	1669.83	-3.088	24.61	-0.3	-491.28	-0.3	-454.47	0	-505.83
34	34	93.90	-2131.87	-210.38	1669.33	-3.088	6.90	-0.3	-508.83	-0.3	-470.71	0	-522.05
34	35	94.90	-2134.55	-210.65	1885.18	-3.325	25.58	-0.3	-490.38	-0.3	-453.65	0	-500.98
35	35	94.90	-2117.77	-340.21	1885.36	-3.325	2.72	-0.3	-558.29	-0.3	-558.29	0	-613.93
35	36	97.25	-2120.58	-340.67	2689.39	-3.884	71.81	-0.3	-552.52	-0.3	-552.52	0	-604.78
36	36	97.25	-2124.72	-313.80	2688.94	-3.884	71.28	-0.3	-552.94	-0.3	-552.94	0	-605.19
36	37	99.60	-2121.39	-313.30	3419.58	-4.442	131.07	-0.3	-559.63	-0.3	-559.63	0	-609.66
37	37	99.60	-2144.11	-35.31	3418.77	-4.442	128.81	-0.3	-561.73	-0.3	-561.73	0	-611.74
37	38	101.90	-2137.85	-35.21	3487.11	-5	137.37	-0.3	-517.12	-0.3	-517.12	0	-558.89
38	38	101.90	-2127.67	211.31	3487.64	-5	131.91	-0.3	-264.78	-0.3	-264.78	0	-290.11
38	39	104.45	-2120.74	210.62	2933.00	-5	94.54	-0.3	-239.07	-0.3	-239.07	0	-260.36
39	39	104.45	-2118.25	-235.69	2932.77	-5	94.64	-0.3	-238.94	-0.3	-238.94	0	-260.23
39	40	107.00	-2111.30	-235.00	3519.50	-5	134.89	-0.3	-265.43	-0.3	-265.43	0	-290.98
40	40	107.00	-2124.32	9.79	3519.03	-5	141.40	-0.3	-519.07	-0.3	-519.07	0	-561.23
40	41	109.30	-2118.00	9.69	3482.07	-4.442	137.51	-0.3	-565.82	-0.3	-565.82	0	-616.76
41	41	109.30	-2098.82	284.51	3481.95	-4.442	139.34	-0.3	-563.96	-0.3	-563.96	0	-614.90
41	42	111.65	-2092.41	283.56	2801.59	-3.884	88.21	-0.3	-562.16	-0.3	-562.16	0	-616.60
42	42	111.65	-2088.66	310.02	2801.96	-3.884	88.69	-0.3	-561.77	-0.3	-561.77	0	-616.22
42	43	114.00	-2082.24	308.99	2064.62	-3.325	38.06	-0.3	-576.29	-0.3	-576.29	0	-637.22
43	43	114.00	-2097.19	181.65	2064.28	-3.325	55.43	-0.3	-509.56	-0.3	-471.38	0	-523.22
43	44	115.00	-2094.44	181.38	1878.30	-3.088	46.43	-0.3	-533.86	-0.3	-493.87	0	-551.63
44	44	115.00	-1965.08	747.00	1878.30	-3.088	62.86	-0.3	-517.42	-0.3	-478.66	0	-536.42
44	45	116.00	-1962.57	745.92	1146.33	-2.85	-50.45	-0.3	-458.43	-0.3	-424.09	0	-468.49
45	45	116.00	-2060.82	401.37	1146.33	-2.85	-30.76	-0.3	-800.36	-0.3	-676.24	0	-752.74
45	46	117.00	-2058.14	400.72	748.06	-2.85	-225.84	-0.3	-728.06	-0.3	-615.15	0	-665.07
46	46	117.00	-2096.64	-25.20	748.06	-2.85	-236.94	-0.3	-739.16	-0.3	-624.53	0	-674.45
46	47	119.78	-2088.91	-25.20	812.14	-2.85	-203.20	-0.3	-748.44	-0.3	-632.37	0	-686.57
47	47	119.78	-1394.33	-25.20	286.34	-2.85	-261.40	-0.3	-453.64	-0.3	-383.29	0	-402.40
47	48	122.55	-1389.17	-25.20	352.36	-2.85	-227.45	-0.3	-464.01	-0.3	-392.05	0	-415.57
48	48	122.55	0.00	-25.20	-699.24	-2.85	-343.86	-0.3	125.59	-0.3	106.11	0	152.77
48	49	128.10	0.00	-25.20	-559.39	-2.85	-275.09	-0.3	100.47	-0.3	84.89	0	122.22
49	49	128.10	0.00	-25.20	-559.39	-2.85	-275.09	-0.3	100.47	-0.3	84.89	0	122.22
	50	133.65	0.00	-25.20	-419.54	-2.85	-206.31	-0.3	75.35	-0.3	63.67	0	91.66
	50	133.65	0.00	-25.20	-419.54	-2.85	-206.31	-0.3	75.35	-0.3	63.67	0	91.65
	51	139.20	0.00	-25.20	-279.70	-2.85	-137.55	-0.3	50.24	-0.3	42.44	0	61.11
51	51	139.20	0.00	-25.20	-279.70	-2.85	-137.55	-0.3	50.24	-0.3	42.44	0	61.11
51	52	144.75	0.00	-25.20	-139.85	-2.85	-68.77	-0.3	25.12	-0.3	21.22	0	30.56
52	52	144.75	0.00	-25.20	-139.85	-2.85	-68.77	-0.3	25.12	-0.3	21.22	0	30.56
52	53	147.53	0.00	-25.20	-69.92	-2.85	-34.38	-0.3	12.56	-0.3	10.61	0	15.28
53	53	147.53	0.00	-25.20	-69.92	-2.85	-34.38	-0.3	12.56	-0.3	10.61	0	15.28
53	54	150.30	0.00	-25.20	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(GRADIENTE(EXCYREP)). Tensiones a tiempo To

[1; 1]GRADIENTE

Coef. exc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	-7.84	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	-7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
3	3	3.38	0.00	-7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
3	4	6.15	0.00	-7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
4	4	6.15	0.00	-7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
4	5	11.70	0.00	-7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
5	5	11.70	0.00	-7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
5	6	17.25	0.00	-7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
6	6	17.25	0.00	-7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
6	7	22.80	0.00	-7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
7	7	22.80	0.00	-7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
7	8	28.35	0.00	-7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
8	8	28.35	0.00	-7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
8	9	31.13	0.00	-7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
9	9	31.13	0.00	-7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
9	10	33.90	0.00	-7.84	261.08	-2.85	128.39	-0.3	-46.89	-0.3	-39.62	0	-57.04
10	10	33.90	1.59	-7.68	261.08	-2.85	128.85	-0.3	-46.43	-0.3	-39.23	0	-56.65
10	11	34.90	1.59	-7.68	268.92	-2.85	132.70	-0.3	-47.84	-0.3	-40.42	0	-58.37
11	11	34.90	2.87	-7.29	268.92	-2.85	54.97	-0.3	-40.74	-0.3	-37.69	0	-48.11
11	12	35.90	2.87	-7.29	276.76	-3.088	46.42	-0.3	-39.08	-0.3	-36.16	0	-44.67
12	12	35.90	0.77	-7.80	276.76	-3.088	46.15	-0.3	-39.35	-0.3	-36.40	0	-44.91
12	13	36.90	0.77	-7.80	284.60	-3.325	40.73	-0.3	-37.16	-0.3	-34.38	0	-41.52
13	13	36.90	1.24	-7.74	284.60	-3.325	47.93	-0.3	-36.75	-0.3	-36.75	0	-45.15
13	14	39.25	1.24	-7.74	303.02	-3.884	35.70	-0.3	-34.64	-0.3	-34.64	0	-40.53
14	14	39.25	1.14	-7.76	303.02	-3.884	35.69	-0.3	-34.65	-0.3	-34.65	0	-40.54
14	15	41.60	1.14	-7.76	321.44	-4.442	31.56	-0.3	-33.36	-0.3	-33.36	0	-38.06
15	15	41.60	0.13	-7.84	321.44	-4.442	31.47	-0.3	-33.46	-0.3	-33.46	0	-38.16
15	16	43.90	0.13	-7.84	339.48	-5	30.84	-0.3	-32.88	-0.3	-32.88	0	-36.95
16	16	43.90	-0.78	-7.80	339.48	-5	23.05	-0.3	-15.57	-0.3	-15.57	0	-18.03
16	17	46.45	-0.78	-7.80	359.47	-5	24.40	-0.3	-16.48	-0.3	-16.48	0	-19.09
17	17	46.45	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
17	18	49.00	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
18	18	49.00	0.00	0.00	359.47	-5	32.64	-0.3	-34.83	-0.3	-34.83	0	-39.13
18	19	51.30	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
19	19	51.30	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
19	20	53.65	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
20	20	53.65	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
20	21	56.00	0.00	0.00	359.47	-3.325	60.31	-0.3	-46.65	-0.3	-46.65	0	-57.26
21	21	56.00	0.00	0.00	359.47	-3.325	51.34	-0.3	-47.05	-0.3	-43.52	0	-52.55
21	22	57.00	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
22	22	57.00	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
22	23	58.00	0.00	0.00	359.47	-2.85	72.92	-0.3	-55.02	-0.3	-50.90	0	-64.82
23	23	58.00	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
23	24	59.00	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
24	24	59.00	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
24	25	63.11	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
25	25	63.11	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
25	26	67.23	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
26	26	67.23	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
26	27	71.34	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
27	27	71.34	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
27	28	75.45	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
28	28	75.45	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
28	29	79.56	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
29	29	79.56	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
29	30	83.68	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
30	30	83.68	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
30	31	87.79	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
31	31	87.79	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
31	32	91.90	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
32	32	91.90	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
32	33	92.90	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
33	33	92.90	0.00	0.00	359.47	-2.85	72.92	-0.3	-55.02	-0.3	-50.90	0	-64.82
33	34	93.90	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
34	34	93.90	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
34	35	94.90	0.00	0.00	359.47	-3.325	51.34	-0.3	-47.05	-0.3	-43.52	0	-52.55
35	35	94.90	0.00	0.00	359.47	-3.325	60.31	-0.3	-46.65	-0.3	-46.65	0	-57.26
35	36	97.25	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
36	36	97.25	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
36	37	99.60	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
37	37	99.60	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
37	38	101.90	0.00	0.00	359.47	-5	32.64	-0.3	-34.83	-0.3	-34.83	0	-39.13
38	38	101.90	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
38	39	104.45	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
39	39	104.45	-0.78	7.80	359.47	-5	24.40	-0.3	-16.48	-0.3	-16.48	0	-19.09
39	40	107.00	-0.78	7.80	339.48	-5	23.05	-0.3	-15.57	-0.3	-15.57	0	-18.03
40	40	107.00	0.13	7.84	339.48	-5	30.84	-0.3	-32.88	-0.3	-32.88	0	-36.95
40	41	109.30	0.13	7.84	321.44	-4.442	31.47	-0.3	-33.46	-0.3	-33.46	0	-38.16
41	41	109.30	1.14	7.76	321.44	-4.442	31.56	-0.3	-33.36	-0.3	-33.36	0	-38.06
41	42	111.65	1.14	7.76	303.02	-3.884	35.69	-0.3	-34.65	-0.3	-34.65	0	-40.54
42	42	111.65	1.24	7.74	303.02	-3.884	35.70	-0.3	-34.64	-0.3	-34.64	0	-40.53
42	43	114.00	1.24	7.74	284.60	-3.325	47.93	-0.3	-36.75	-0.3	-36.75	0	-45.15
43	43	114.00	0.77	7.80	284.60	-3.325	40.73	-0.3	-37.16	-0.3	-34.38	0	-41.52
43	44	115.00	0.77	7.80	276.76	-3.088	46.15	-0.3	-39.35	-0.3	-36.40	0	-44.91
44	44	115.00	2.87	7.29	276.76	-3.088	46.42	-0.3	-39.08	-0.3	-36.16	0	-44.67
44	45	116.00	2.87	7.29	268.92	-2.85	54.97	-0.3	-40.74	-0.3	-37.69	0	-48.11
45	45	116.00	1.59	7.68	268.92	-2.85	132.70	-0.3	-47.84	-0.3	-40.42	0	-58.37
45	46	117.00	1.59	7.68	261.08	-2.85	128.85	-0.3	-46.43	-0.3	-39.23	0	-56.65
46	46	117.00	0.00	7.84	261.08	-2.85	128.39	-0.3	-46.89	-0.3	-39.62	0	-57.04
46	47	119.78	0.00	7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
47	47	119.78	0.00	7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
47	48	122.55	0.00	7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
48	48	122.55	0.00	7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
48	49	128.10	0.00	7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
49	49	128.10	0.00	7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
49	50	133.65	0.00	7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
50	50	133.65	0.00	7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
50	51	139.20	0.00	7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
51	51	139.20	0.00	7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
51	52	144.75	0.00	7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
52	52	144.75	0.00	7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
52	53	147.53	0.00	7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
53	53	147.53	0.00	7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
53	54	150.30	0.00	7.84	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(CARGASMUERTAS(EXCYREP)). Tensiones a tiempo To

[1; 1]pm

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	5.02	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
2	2	0.60	0.00	-126.62	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
2	3	3.38	0.00	-103.41	317.65	-2.85	156.21	-0.3	-57.05	-0.3	-48.20	0	-69.40
3	3	3.38	0.00	-103.41	317.65	-2.85	156.21	-0.3	-57.05	-0.3	-48.20	0	-69.40
3	4	6.15	0.00	-80.20	572.40	-2.85	281.48	-0.3	-102.81	-0.3	-86.86	0	-125.06
4	4	6.15	0.00	-80.20	572.40	-2.85	281.48	-0.3	-102.81	-0.3	-86.86	0	-125.06
4	5	11.70	0.00	-33.78	888.67	-2.85	437.01	-0.3	-159.61	-0.3	-134.86	0	-194.16
5	5	11.70	0.00	-33.78	888.67	-2.85	437.01	-0.3	-159.61	-0.3	-134.86	0	-194.16
5	6	17.25	0.00	12.64	947.32	-2.85	465.85	-0.3	-170.14	-0.3	-143.76	0	-206.98
6	6	17.25	0.00	12.64	947.32	-2.85	465.85	-0.3	-170.14	-0.3	-143.76	0	-206.98
6	7	22.80	0.00	59.06	748.32	-2.85	367.99	-0.3	-134.40	-0.3	-113.56	0	-163.50
7	7	22.80	0.00	59.06	748.32	-2.85	367.99	-0.3	-134.40	-0.3	-113.56	0	-163.50
7	8	28.35	0.00	105.48	291.70	-2.85	143.45	-0.3	-52.39	-0.3	-44.27	0	-63.73
8	8	28.35	0.00	105.48	291.70	-2.85	143.45	-0.3	-52.39	-0.3	-44.27	0	-63.73
8	9	31.13	0.00	128.69	-33.22	-2.85	-16.34	-0.3	5.97	-0.3	5.04	0	7.26
9	9	31.13	0.00	128.69	-33.22	-2.85	-16.34	-0.3	5.97	-0.3	5.04	0	7.26
9	10	33.90	0.00	151.90	-422.55	-2.85	-207.79	-0.3	75.89	-0.3	64.12	0	92.32
10	10	33.90	-30.82	148.75	-422.55	-2.85	-216.68	-0.3	67.00	-0.3	56.61	0	84.81
10	11	34.90	-32.55	157.11	-578.73	-2.85	-293.99	-0.3	94.55	-0.3	79.89	0	118.51
11	11	34.90	-58.79	149.29	-578.73	-2.85	-125.88	-0.3	80.10	-0.3	74.10	0	96.51
11	12	35.90	-62.09	157.65	-743.67	-3.088	-131.64	-0.3	98.11	-0.3	90.76	0	113.63
12	12	35.90	-16.63	168.62	-743.67	-3.088	-125.87	-0.3	103.89	-0.3	96.10	0	118.97
12	13	36.90	-17.45	176.98	-917.31	-3.325	-133.00	-0.3	118.07	-0.3	109.22	0	132.25
13	13	36.90	-28.19	175.59	-917.31	-3.325	-158.08	-0.3	114.87	-0.3	114.87	0	141.94
13	14	39.25	-31.35	195.25	-1359.00	-3.884	-163.08	-0.3	152.40	-0.3	152.40	0	178.81
14	14	39.25	-28.88	195.63	-1358.62	-3.884	-162.75	-0.3	152.64	-0.3	152.64	0	179.04
14	15	41.60	-31.78	215.28	-1647.00	-4.442	-183.79	-0.3	189.28	-0.3	189.28	0	216.30
15	15	41.60	-3.57	217.59	-1646.67	-4.442	-181.05	-0.3	191.95	-0.3	191.95	0	218.96
15	16	43.90	-3.88	236.82	-2369.00	-5	-215.43	-0.3	229.20	-0.3	229.20	0	257.58
	16	43.90	23.43	235.69	-2369.32	-5	-159.95	-0.3	109.54	-0.3	109.54	0	126.74
	17	46.45	25.55	257.02	-3001.00	-5	-202.80	-0.3	138.54	-0.3	138.54	0	160.33
	17	46.45	24.13	-242.78	-3000.62	-5	-202.85	-0.3	138.45	-0.3	138.45	0	160.24
17	18	49.00	22.01	-221.45	-2406.00	-5	-162.52	-0.3	111.15	-0.3	111.15	0	128.62
18	18	49.00	-3.65	-222.51	-2405.82	-5	-218.76	-0.3	232.78	-0.3	232.78	0	261.61
18	19	51.30	-3.33	-203.27	-1916.00	-4.442	-187.81	-0.3	199.19	-0.3	199.19	0	227.22
19	19	51.30	-29.69	-201.12	-1916.11	-4.442	-190.35	-0.3	196.67	-0.3	196.67	0	224.70
19	20	53.65	-26.78	-181.46	-1462.00	-3.884	-174.64	-0.3	164.75	-0.3	164.75	0	193.16
20	20	53.65	-29.08	-181.11	-1461.70	-3.884	-174.87	-0.3	164.45	-0.3	164.45	0	192.86
20	21	56.00	-25.92	-161.46	-1054.00	-3.325	-180.68	-0.3	132.95	-0.3	132.95	0	164.05
21	21	56.00	-16.05	-162.73	-1054.03	-3.325	-152.36	-0.3	136.12	-0.3	125.92	0	152.39
21	22	57.00	-15.22	-154.37	-894.71	-3.088	-150.82	-0.3	125.59	-0.3	116.18	0	143.70
22	22	57.00	-56.84	-144.33	-894.71	-3.088	-156.11	-0.3	120.30	-0.3	111.29	0	138.81
22	23	58.00	-53.55	-135.97	-744.09	-2.85	-158.66	-0.3	106.16	-0.3	98.21	0	127.03
23	23	58.00	-29.65	-143.09	-744.09	-2.85	-374.47	-0.3	125.09	-0.3	105.69	0	155.35
23	24	59.00	-27.92	-134.73	-602.23	-2.85	-304.21	-0.3	100.11	-0.3	84.58	0	124.77
24	24	59.00	0.00	-137.59	-602.23	-2.85	-296.15	-0.3	108.16	-0.3	91.39	0	131.58
24	25	63.11	0.00	-103.19	-107.13	-2.85	-52.68	-0.3	19.24	-0.3	16.26	0	23.41
25	25	63.11	0.00	-103.19	-107.13	-2.85	-52.68	-0.3	19.24	-0.3	16.26	0	23.41
25	26	67.23	0.00	-68.79	246.52	-2.85	121.23	-0.3	-44.28	-0.3	-37.41	0	-53.86
26	26	67.23	0.00	-68.79	246.52	-2.85	121.23	-0.3	-44.28	-0.3	-37.41	0	-53.86
26	27	71.34	0.00	-34.40	458.70	-2.85	225.57	-0.3	-82.38	-0.3	-69.61	0	-100.22
27	27	71.34	0.00	-34.40	458.70	-2.85	225.57	-0.3	-82.38	-0.3	-69.61	0	-100.22
27	28	75.45	0.00	0.00	529.43	-2.85	260.35	-0.3	-95.09	-0.3	-80.34	0	-115.67
28	28	75.45	0.00	0.00	529.43	-2.85	260.35	-0.3	-95.09	-0.3	-80.34	0	-115.67
28	29	79.56	0.00	34.40	458.70	-2.85	225.57	-0.3	-82.38	-0.3	-69.61	0	-100.22
29	29	79.56	0.00	34.40	458.70	-2.85	225.57	-0.3	-82.38	-0.3	-69.61	0	-100.22
29	30	83.68	0.00	68.79	246.52	-2.85	121.23	-0.3	-44.28	-0.3	-37.41	0	-53.86
30	30	83.68	0.00	68.79	246.52	-2.85	121.23	-0.3	-44.28	-0.3	-37.41	0	-53.86
30	31	87.79	0.00	103.19	-107.13	-2.85	-52.68	-0.3	19.24	-0.3	16.26	0	23.41
31	31	87.79	0.00	103.19	-107.13	-2.85	-52.68	-0.3	19.24	-0.3	16.26	0	23.41
31	32	91.90	0.00	137.59	-602.23	-2.85	-296.15	-0.3	108.16	-0.3	91.39	0	131.58
32	32	91.90	-27.92	134.73	-602.23	-2.85	-304.21	-0.3	100.11	-0.3	84.58	0	124.77
	33	92.90	-29.65	143.09	-744.09	-2.85	-374.47	-0.3	125.09	-0.3	105.69	0	155.35
	33	92.90	-53.55	135.97	-744.09	-2.85	-158.66	-0.3	106.16	-0.3	98.21	0	127.03
	34	93.90	-56.84	144.33	-894.71	-3.088	-156.11	-0.3	120.30	-0.3	111.29	0	138.81
34	34	93.90	-15.22	154.37	-894.71	-3.088	-150.82	-0.3	125.59	-0.3	116.18	0	143.70
34	35	94.90	-16.05	162.73	-1054.00	-3.325	-152.36	-0.3	136.11	-0.3	125.92	0	152.38
35	35	94.90	-25.92	161.46	-1054.03	-3.325	-180.69	-0.3	132.95	-0.3	132.95	0	164.06
35	36	97.25	-29.08	181.11	-1462.00	-3.884	-174.91	-0.3	164.49	-0.3	164.49	0	192.90
36	36	97.25	-26.78	181.46	-1461.70	-3.884	-174.61	-0.3	164.72	-0.3	164.72	0	193.12
36	37	99.60	-29.69	201.12	-1916.00	-4.442	-190.34	-0.3	196.66	-0.3	196.66	0	224.69
37	37	99.60	-3.33	203.27	-1916.11	-4.442	-187.82	-0.3	199.20	-0.3	199.20	0	227.23
37	38	101.90	-3.65	222.51	-2406.00	-5	-218.77	-0.3	232.80	-0.3	232.80	0	261.63
38	38	101.90	22.01	221.45	-2405.82	-5	-162.50	-0.3	111.14	-0.3	111.14	0	128.61
38	39	104.45	24.13	242.78	-3001.00	-5	-202.87	-0.3	138.47	-0.3	138.47	0	160.26
39	39	104.45	25.55	-257.02	-3000.62	-5	-202.77	-0.3	138.52	-0.3	138.52	0	160.31
39	40	107.00	23.43	-235.69	-2369.00	-5	-159.93	-0.3	109.53	-0.3	109.53	0	126.73
40	40	107.00	-3.88	-236.82	-2369.32	-5	-215.46	-0.3	229.23	-0.3	229.23	0	257.61
40	41	109.30	-3.57	-217.59	-1647.00	-4.442	-181.08	-0.3	191.98	-0.3	191.98	0	219.00
41	41	109.30	-31.78	-215.28	-1646.67	-4.442	-183.76	-0.3	189.24	-0.3	189.24	0	216.26
41	42	111.65	-28.88	-195.63	-1359.00	-3.884	-162.80	-0.3	152.69	-0.3	152.69	0	179.09
42	42	111.65	-31.35	-195.25	-1358.62	-3.884	-163.04	-0.3	152.36	-0.3	152.36	0	178.76
42	43	114.00	-28.19	-175.59	-917.31	-3.325	-158.08	-0.3	114.87	-0.3	114.87	0	141.94
43	43	114.00	-17.45	-176.98	-917.31	-3.325	-133.00	-0.3	118.07	-0.3	109.22	0	132.25
43	44	115.00	-16.63	-168.62	-743.67	-3.088	-125.87	-0.3	103.89	-0.3	96.10	0	118.97
44	44	115.00	-62.09	-157.65	-743.67	-3.088	-131.64	-0.3	98.11	-0.3	90.76	0	113.63
44	45	116.00	-58.79	-149.29	-578.73	-2.85	-125.88	-0.3	80.10	-0.3	74.10	0	96.51
45	45	116.00	-32.55	-157.11	-578.73	-2.85	-293.99	-0.3	94.55	-0.3	79.89	0	118.51
45	46	117.00	-30.82	-148.75	-422.55	-2.85	-216.68	-0.3	67.00	-0.3	56.61	0	84.81
46	46	117.00	0.00	-151.90	-422.55	-2.85	-207.79	-0.3	75.89	-0.3	64.12	0	92.32
46	47	119.78	0.00	-128.69	-33.22	-2.85	-16.34	-0.3	5.97	-0.3	5.04	0	7.26
47	47	119.78	0.00	-128.69	-33.22	-2.85	-16.34	-0.3	5.97	-0.3	5.04	0	7.26
47	48	122.55	0.00	-105.48	291.70	-2.85	143.45	-0.3	-52.39	-0.3	-44.27	0	-63.73
48	48	122.55	0.00	-105.48	291.70	-2.85	143.45	-0.3	-52.39	-0.3	-44.27	0	-63.73
48	49	128.10	0.00	-59.06	748.32	-2.85	367.99	-0.3	-134.40	-0.3	-113.56	0	-163.50
49	49	128.10	0.00	-59.06	748.32	-2.85	367.99	-0.3	-134.40	-0.3	-113.56	0	-163.50
	50	133.65	0.00	-12.64	947.32	-2.85	465.85	-0.3	-170.14	-0.3	-143.76	0	-206.98
	50	133.65	0.00	-12.64	947.32	-2.85	465.85	-0.3	-170.14	-0.3	-143.76	0	-206.98
	51	139.20	0.00	33.78	888.67	-2.85	437.01	-0.3	-159.61	-0.3	-134.86	0	-194.16
51	51	139.20	0.00	33.78	888.67	-2.85	437.01	-0.3	-159.61	-0.3	-134.86	0	-194.16
51	52	144.75	0.00	80.20	572.40	-2.85	281.48	-0.3	-102.81	-0.3	-86.86	0	-125.06
52	52	144.75	0.00	80.20	572.40	-2.85	281.48	-0.3	-102.81	-0.3	-86.86	0	-125.06
52	53	147.53	0.00	103.41	317.65	-2.85	156.21	-0.3	-57.05	-0.3	-48.20	0	-69.40
53	53	147.53	0.00	103.41	317.65	-2.85	156.21	-0.3	-57.05	-0.3	-48.20	0	-69.40
53	54	150.30	0.00	126.62	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
54	54	150.30	0.00	-5.02	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(INCREMENTODECARGAMUERTA(EXCYREP)). Tensiones a tiempo To

[1; 1]InerCd

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.95	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
2	2	0.60	0.00	-23.98	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
2	3	3.38	0.00	-19.58	60.16	-2.85	29.58	-0.3	-10.81	-0.3	-9.13	0	-13.14
3	3	3.38	0.00	-19.58	60.16	-2.85	29.58	-0.3	-10.81	-0.3	-9.13	0	-13.14
3	4	6.15	0.00	-15.19	108.40	-2.85	53.31	-0.3	-19.47	-0.3	-16.45	0	-23.68
4	4	6.15	0.00	-15.19	108.40	-2.85	53.31	-0.3	-19.47	-0.3	-16.45	0	-23.68
4	5	11.70	0.00	-6.40	168.30	-2.85	82.76	-0.3	-30.23	-0.3	-25.54	0	-36.77
5	5	11.70	0.00	-6.40	168.30	-2.85	82.76	-0.3	-30.23	-0.3	-25.54	0	-36.77
5	6	17.25	0.00	2.39	179.41	-2.85	88.23	-0.3	-32.22	-0.3	-27.23	0	-39.20
6	6	17.25	0.00	2.39	179.41	-2.85	88.23	-0.3	-32.22	-0.3	-27.23	0	-39.20
6	7	22.80	0.00	11.19	141.72	-2.85	69.69	-0.3	-25.45	-0.3	-21.51	0	-30.96
7	7	22.80	0.00	11.19	141.72	-2.85	69.69	-0.3	-25.45	-0.3	-21.51	0	-30.96
7	8	28.35	0.00	19.98	55.24	-2.85	27.16	-0.3	-9.92	-0.3	-8.38	0	-12.07
8	8	28.35	0.00	19.98	55.24	-2.85	27.16	-0.3	-9.92	-0.3	-8.38	0	-12.07
8	9	31.13	0.00	24.37	-6.29	-2.85	-3.09	-0.3	1.13	-0.3	0.95	0	1.37
9	9	31.13	0.00	24.37	-6.29	-2.85	-3.09	-0.3	1.13	-0.3	0.95	0	1.37
9	10	33.90	0.00	28.77	-80.02	-2.85	-39.35	-0.3	14.37	-0.3	12.14	0	17.48
10	10	33.90	-5.84	28.17	-80.02	-2.85	-41.04	-0.3	12.69	-0.3	10.72	0	16.06
10	11	34.90	-6.17	29.75	-109.60	-2.85	-55.68	-0.3	17.90	-0.3	15.13	0	22.44
11	11	34.90	-11.13	28.27	-109.60	-2.85	-23.84	-0.3	15.17	-0.3	14.03	0	18.28
11	12	35.90	-11.76	29.86	-140.84	-3.088	-24.93	-0.3	18.58	-0.3	17.19	0	21.52
12	12	35.90	-3.15	31.93	-140.84	-3.088	-23.84	-0.3	19.67	-0.3	18.20	0	22.53
12	13	36.90	-3.30	33.52	-173.72	-3.325	-25.19	-0.3	22.36	-0.3	20.68	0	25.05
13	13	36.90	-5.34	33.25	-173.72	-3.325	-29.94	-0.3	21.75	-0.3	21.75	0	26.88
13	14	39.25	-5.94	36.98	-257.30	-3.884	-30.88	-0.3	28.85	-0.3	28.85	0	33.85
14	14	39.25	-5.47	37.05	-257.30	-3.884	-30.82	-0.3	28.91	-0.3	28.91	0	33.91
14	15	41.60	-6.02	40.77	-349.73	-4.442	-34.80	-0.3	35.84	-0.3	35.84	0	40.96
15	15	41.60	-0.68	41.21	-349.73	-4.442	-34.29	-0.3	36.35	-0.3	36.35	0	41.47
15	16	43.90	-0.73	44.85	-448.71	-5	-40.80	-0.3	43.41	-0.3	43.41	0	48.79
16	16	43.90	4.44	44.64	-448.71	-5	-30.29	-0.3	20.75	-0.3	20.75	0	24.00
16	17	46.45	4.84	48.68	-568.27	-5	-38.40	-0.3	26.23	-0.3	26.23	0	30.36
17	17	46.45	4.57	-45.98	-568.27	-5	-38.42	-0.3	26.22	-0.3	26.22	0	30.35
17	18	49.00	4.17	-41.94	-455.62	-5	-30.78	-0.3	21.05	-0.3	21.05	0	24.36
18	18	49.00	-0.69	-42.14	-455.62	-5	-41.43	-0.3	44.09	-0.3	44.09	0	49.54
18	19	51.30	-0.63	-38.50	-362.88	-4.442	-35.57	-0.3	37.73	-0.3	37.73	0	43.03
19	19	51.30	-5.62	-38.09	-362.88	-4.442	-36.05	-0.3	37.25	-0.3	37.25	0	42.56
19	20	53.65	-5.07	-34.37	-276.82	-3.884	-33.07	-0.3	31.19	-0.3	31.19	0	36.57
20	20	53.65	-5.51	-34.30	-276.82	-3.884	-33.12	-0.3	31.14	-0.3	31.14	0	36.52
20	21	56.00	-4.91	-30.58	-199.62	-3.325	-34.22	-0.3	25.18	-0.3	25.18	0	31.07
21	21	56.00	-3.04	-30.82	-199.62	-3.325	-28.86	-0.3	25.78	-0.3	23.85	0	28.86
21	22	57.00	-2.88	-29.24	-169.44	-3.088	-28.56	-0.3	23.79	-0.3	22.00	0	27.21
22	22	57.00	-10.76	-27.33	-169.44	-3.088	-29.56	-0.3	22.78	-0.3	21.08	0	26.29
22	23	58.00	-10.14	-25.75	-140.92	-2.85	-30.05	-0.3	20.11	-0.3	18.60	0	24.06
23	23	58.00	-5.61	-27.10	-140.92	-2.85	-70.92	-0.3	23.69	-0.3	20.02	0	29.42
23	24	59.00	-5.29	-25.51	-114.05	-2.85	-57.61	-0.3	18.96	-0.3	16.02	0	23.63
24	24	59.00	0.00	-26.06	-114.05	-2.85	-56.09	-0.3	20.48	-0.3	17.31	0	24.92
24	25	63.11	0.00	-19.54	-20.29	-2.85	-9.98	-0.3	3.64	-0.3	3.08	0	4.43
25	25	63.11	0.00	-19.54	-20.29	-2.85	-9.98	-0.3	3.64	-0.3	3.08	0	4.43
25	26	67.23	0.00	-13.03	46.69	-2.85	22.96	-0.3	-8.39	-0.3	-7.09	0	-10.20
26	26	67.23	0.00	-13.03	46.69	-2.85	22.96	-0.3	-8.39	-0.3	-7.09	0	-10.20
26	27	71.34	0.00	-6.51	86.87	-2.85	42.72	-0.3	-15.60	-0.3	-13.18	0	-18.98
27	27	71.34	0.00	-6.51	86.87	-2.85	42.72	-0.3	-15.60	-0.3	-13.18	0	-18.98
27	28	75.45	0.00	0.00	100.27	-2.85	49.31	-0.3	-18.01	-0.3	-15.22	0	-21.91
28	28	75.45	0.00	0.00	100.27	-2.85	49.31	-0.3	-18.01	-0.3	-15.22	0	-21.91
28	29	79.56	0.00	6.51	86.87	-2.85	42.72	-0.3	-15.60	-0.3	-13.18	0	-18.98
29	29	79.56	0.00	6.51	86.87	-2.85	42.72	-0.3	-15.60	-0.3	-13.18	0	-18.98
29	30	83.68	0.00	13.03	46.69	-2.85	22.96	-0.3	-8.39	-0.3	-7.09	0	-10.20
30	30	83.68	0.00	13.03	46.69	-2.85	22.96	-0.3	-8.39	-0.3	-7.09	0	-10.20
30	31	87.79	0.00	19.54	-20.29	-2.85	-9.98	-0.3	3.64	-0.3	3.08	0	4.43
31	31	87.79	0.00	19.54	-20.29	-2.85	-9.98	-0.3	3.64	-0.3	3.08	0	4.43
31	32	91.90	0.00	26.06	-114.05	-2.85	-56.09	-0.3	20.48	-0.3	17.31	0	24.92
32	32	91.90	-5.29	25.51	-114.05	-2.85	-57.61	-0.3	18.96	-0.3	16.02	0	23.63
32	33	92.90	-5.61	27.10	-140.92	-2.85	-70.92	-0.3	23.69	-0.3	20.02	0	29.42
33	33	92.90	-10.14	25.75	-140.92	-2.85	-30.05	-0.3	20.11	-0.3	18.60	0	24.06
33	34	93.90	-10.76	27.33	-169.44	-3.088	-29.56	-0.3	22.78	-0.3	21.08	0	26.29
34	34	93.90	-2.88	29.24	-169.44	-3.088	-28.56	-0.3	23.79	-0.3	22.00	0	27.21
34	35	94.90	-3.04	30.82	-199.62	-3.325	-28.86	-0.3	25.78	-0.3	23.85	0	28.86
35	35	94.90	-4.91	30.58	-199.62	-3.325	-34.22	-0.3	25.18	-0.3	25.18	0	31.07
35	36	97.25	-5.51	34.30	-276.82	-3.884	-33.12	-0.3	31.14	-0.3	31.14	0	36.52
36	36	97.25	-5.07	34.37	-276.82	-3.884	-33.07	-0.3	31.19	-0.3	31.19	0	36.57
36	37	99.60	-5.62	38.09	-362.88	-4.442	-36.05	-0.3	37.25	-0.3	37.25	0	42.56
37	37	99.60	-0.63	38.50	-362.88	-4.442	-35.57	-0.3	37.73	-0.3	37.73	0	43.03
37	38	101.90	-0.69	42.14	-455.62	-5	-41.43	-0.3	44.09	-0.3	44.09	0	49.54
38	38	101.90	4.17	41.94	-455.62	-5	-30.78	-0.3	21.05	-0.3	21.05	0	24.36
38	39	104.45	4.57	45.98	-568.27	-5	-38.42	-0.3	26.22	-0.3	26.22	0	30.35
39	39	104.45	4.84	-48.68	-568.27	-5	-38.40	-0.3	26.23	-0.3	26.23	0	30.36
39	40	107.00	4.44	-44.64	-448.71	-5	-30.29	-0.3	20.75	-0.3	20.75	0	24.00
40	40	107.00	-0.73	-44.85	-448.71	-5	-40.80	-0.3	43.41	-0.3	43.41	0	48.79
40	41	109.30	-0.68	-41.21	-349.73	-4.442	-34.29	-0.3	36.35	-0.3	36.35	0	41.47
41	41	109.30	-6.02	-40.77	-349.73	-4.442	-34.80	-0.3	35.84	-0.3	35.84	0	40.96
41	42	111.65	-5.47	-37.05	-257.30	-3.884	-30.82	-0.3	28.91	-0.3	28.91	0	33.91
42	42	111.65	-5.94	-36.98	-257.30	-3.884	-30.88	-0.3	28.85	-0.3	28.85	0	33.85
42	43	114.00	-5.34	-33.25	-173.72	-3.325	-29.94	-0.3	21.75	-0.3	21.75	0	26.88
43	43	114.00	-3.30	-33.52	-173.72	-3.325	-25.19	-0.3	22.36	-0.3	20.68	0	25.05
43	44	115.00	-3.15	-31.93	-140.84	-3.088	-23.84	-0.3	19.67	-0.3	18.20	0	22.53
44	44	115.00	-11.76	-29.86	-140.84	-3.088	-24.93	-0.3	18.58	-0.3	17.19	0	21.52
44	45	116.00	-11.13	-28.27	-109.60	-2.85	-23.84	-0.3	15.17	-0.3	14.03	0	18.28
45	45	116.00	-6.17	-29.75	-109.60	-2.85	-55.68	-0.3	17.90	-0.3	15.13	0	22.44
45	46	117.00	-5.84	-28.17	-80.02	-2.85	-41.04	-0.3	12.69	-0.3	10.72	0	16.06
46	46	117.00	0.00	-28.77	-80.02	-2.85	-39.35	-0.3	14.37	-0.3	12.14	0	17.48
46	47	119.78	0.00	-24.37	-6.29	-2.85	-3.09	-0.3	1.13	-0.3	0.95	0	1.37
47	47	119.78	0.00	-24.37	-6.29	-2.85	-3.09	-0.3	1.13	-0.3	0.95	0	1.37
47	48	122.55	0.00	-19.98	55.24	-2.85	27.16	-0.3	-9.92	-0.3	-8.38	0	-12.07
48	48	122.55	0.00	-19.98	55.24	-2.85	27.16	-0.3	-9.92	-0.3	-8.38	0	-12.07
48	49	128.10	0.00	-11.19	141.72	-2.85	69.69	-0.3	-25.45	-0.3	-21.51	0	-30.96
49	49	128.10	0.00	-11.19	141.72	-2.85	69.69	-0.3	-25.45	-0.3	-21.51	0	-30.96
49	50	133.65	0.00	-2.39	179.41	-2.85	88.23	-0.3	-32.22	-0.3	-27.23	0	-39.20
50	50	133.65	0.00	-2.39	179.41	-2.85	88.23	-0.3	-32.22	-0.3	-27.23	0	-39.20
50	51	139.20	0.00	6.40	168.30	-2.85	82.76	-0.3	-30.23	-0.3	-25.54	0	-36.77
51	51	139.20	0.00	6.40	168.30	-2.85	82.76	-0.3	-30.23	-0.3	-25.54	0	-36.77
51	52	144.75	0.00	15.19	108.40	-2.85	53.31	-0.3	-19.47	-0.3	-16.45	0	-23.68
52	52	144.75	0.00	15.19	108.40	-2.85	53.31	-0.3	-19.47	-0.3	-16.45	0	-23.68
52	53	147.53	0.00	19.58	60.16	-2.85	29.58	-0.3	-10.81	-0.3	-9.13	0	-13.14
53	53	147.53	0.00	19.58	60.16	-2.85	29.58	-0.3	-10.81	-0.3	-9.13	0	-13.14
53	54	150.30	0.00	23.98	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
54	54	150.30	0.00	-0.95	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(EnvolventeTren(PF-75B.MZ+(EXCYREP)). Tensiones a tiempo To

{ 1: 1(PF75B.ENV_IPF75B.MZ+

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.74	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
2	2	0.60	0.00	-18.76	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
2	3	3.38	0.00	-249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
3	3	3.38	0.00	-249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
3	4	6.15	0.00	-207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
4	4	6.15	0.00	-207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
4	5	11.70	0.00	-125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
5	5	11.70	0.00	-125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
5	6	17.25	0.00	-46.67	2757.89	-2.85	1356.22	-0.3	-495.33	-0.3	-418.51	0	-602.56
6	6	17.25	0.00	-46.67	2757.89	-2.85	1356.22	-0.3	-495.33	-0.3	-418.51	0	-602.56
6	7	22.80	0.00	35.84	2787.78	-2.85	1370.92	-0.3	-500.70	-0.3	-423.05	0	-609.09
7	7	22.80	0.00	35.84	2787.78	-2.85	1370.92	-0.3	-500.70	-0.3	-423.05	0	-609.09
7	8	28.35	0.00	113.31	2365.35	-2.85	1163.18	-0.3	-424.83	-0.3	-358.94	0	-516.80
8	8	28.35	0.00	113.31	2365.35	-2.85	1163.18	-0.3	-424.83	-0.3	-358.94	0	-516.80
8	9	31.13	0.00	154.57	1995.79	-2.85	981.45	-0.3	-358.45	-0.3	-302.86	0	-436.05
9	9	31.13	0.00	154.57	1995.79	-2.85	981.45	-0.3	-358.45	-0.3	-302.86	0	-436.05
9	10	33.90	0.00	171.97	1520.42	-2.85	747.68	-0.3	-273.07	-0.3	-230.73	0	-332.19
10	10	33.90	-28.16	168.39	1520.42	-2.85	739.56	-0.3	-281.20	-0.3	-237.59	0	-339.05
10	11	34.90	-26.48	167.01	1384.79	-2.85	673.35	-0.3	-256.35	-0.3	-216.60	0	-309.01
11	11	34.90	-47.82	158.70	1384.79	-2.85	274.02	-0.3	-218.84	-0.3	-202.44	0	-256.08
11	12	35.90	-31.70	105.21	1246.37	-3.088	203.38	-0.3	-181.68	-0.3	-168.07	0	-206.40
12	12	35.90	-8.49	112.53	1246.37	-3.088	206.33	-0.3	-178.73	-0.3	-165.34	0	-203.67
12	13	36.90	-6.10	80.82	1133.77	-3.325	161.22	-0.3	-149.08	-0.3	-137.91	0	-166.38
13	13	36.90	-9.85	80.20	1133.77	-3.325	188.77	-0.3	-148.60	-0.3	-148.60	0	-182.06
13	14	39.25	-10.56	85.95	939.43	-3.884	109.03	-0.3	-109.06	-0.3	-109.06	0	-127.31
14	14	39.25	-9.73	86.12	939.43	-3.884	109.12	-0.3	-108.96	-0.3	-108.96	0	-127.22
14	15	41.60	-6.67	59.02	789.43	-4.442	76.61	-0.3	-82.84	-0.3	-82.84	0	-94.39
15	15	41.60	-0.75	59.65	789.43	-4.442	77.18	-0.3	-82.27	-0.3	-82.27	0	-93.82
15	16	43.90	-0.48	38.47	678.87	-5	61.60	-0.3	-65.81	-0.3	-65.81	0	-73.95
	16	43.90	2.91	38.28	678.87	-5	46.31	-0.3	-30.91	-0.3	-30.91	0	-35.84
	17	46.45	1.24	16.25	607.76	-5	41.39	-0.3	-27.74	-0.3	-27.74	0	-32.15
	17	46.45	-2.07	27.28	607.76	-5	41.22	-0.3	-27.90	-0.3	-27.90	0	-32.32
	18	49.00	-0.41	5.36	569.37	-5	38.70	-0.3	-26.07	-0.3	-26.07	0	-30.20
18	18	49.00	0.07	5.38	569.37	-5	51.71	-0.3	-55.16	-0.3	-55.16	0	-61.98
18	19	51.30	-0.19	-15.41	575.82	-4.442	56.33	-0.3	-59.98	-0.3	-59.98	0	-68.40
19	19	51.30	-1.72	-15.24	575.82	-4.442	56.18	-0.3	-60.12	-0.3	-60.12	0	-68.55
19	20	53.65	-1.74	-15.40	614.06	-3.884	71.86	-0.3	-70.69	-0.3	-70.69	0	-82.62
20	20	53.65	-1.89	-15.36	614.06	-3.884	71.84	-0.3	-70.71	-0.3	-70.71	0	-82.64
20	21	56.00	-5.84	-47.52	691.69	-3.325	115.19	-0.3	-90.63	-0.3	-90.63	0	-111.04
21	21	56.00	-3.61	-47.89	691.69	-3.325	98.37	-0.3	-90.94	-0.3	-84.13	0	-101.50
21	22	57.00	-5.20	-68.98	764.43	-3.088	126.55	-0.3	-109.62	-0.3	-101.41	0	-124.92
22	22	57.00	-19.43	-64.49	764.43	-3.088	124.74	-0.3	-111.43	-0.3	-103.08	0	-126.59
22	23	58.00	-27.81	-92.29	846.45	-2.85	167.70	-0.3	-133.56	-0.3	-123.55	0	-156.34
23	23	58.00	-15.40	-97.12	846.45	-2.85	411.81	-0.3	-156.47	-0.3	-132.20	0	-188.69
23	24	59.00	-17.02	-101.77	916.74	-2.85	445.91	-0.3	-169.56	-0.3	-143.26	0	-204.44
24	24	59.00	0.00	-103.93	916.74	-2.85	450.82	-0.3	-164.65	-0.3	-139.12	0	-200.30
24	25	63.11	0.00	-112.20	1350.38	-2.85	664.06	-0.3	-242.53	-0.3	-204.92	0	-295.04
25	25	63.11	0.00	-112.20	1350.38	-2.85	664.06	-0.3	-242.53	-0.3	-204.92	0	-295.04
25	26	67.23	0.00	-114.21	1934.33	-2.85	951.23	-0.3	-347.41	-0.3	-293.54	0	-422.62
26	26	67.23	0.00	-114.21	1934.33	-2.85	951.23	-0.3	-347.41	-0.3	-293.54	0	-422.62
26	27	71.34	0.00	-57.22	2289.99	-2.85	1126.13	-0.3	-411.29	-0.3	-347.51	0	-500.33
27	27	71.34	0.00	-57.22	2289.99	-2.85	1126.13	-0.3	-411.29	-0.3	-347.51	0	-500.33
27	28	75.45	0.00	0.00	2408.91	-2.85	1184.61	-0.3	-432.65	-0.3	-365.56	0	-526.31
28	28	75.45	0.00	0.00	2408.91	-2.85	1184.61	-0.3	-432.65	-0.3	-365.56	0	-526.31
28	29	79.56	0.00	57.22	2290.04	-2.85	1126.15	-0.3	-411.30	-0.3	-347.52	0	-500.34
29	29	79.56	0.00	57.22	2290.04	-2.85	1126.15	-0.3	-411.30	-0.3	-347.52	0	-500.34
29	30	83.68	0.00	114.21	1934.47	-2.85	951.29	-0.3	-347.44	-0.3	-293.56	0	-422.66
30	30	83.68	0.00	114.21	1934.47	-2.85	951.29	-0.3	-347.44	-0.3	-293.56	0	-422.66
30	31	87.79	0.00	112.20	1350.58	-2.85	664.16	-0.3	-242.57	-0.3	-204.95	0	-295.08
31	31	87.79	0.00	112.20	1350.58	-2.85	664.16	-0.3	-242.57	-0.3	-204.95	0	-295.08
31	32	91.90	0.00	103.91	917.01	-2.85	450.95	-0.3	-164.70	-0.3	-139.16	0	-200.35
32	32	91.90	-17.02	101.76	917.01	-2.85	446.04	-0.3	-169.61	-0.3	-143.31	0	-204.50
	33	92.90	-15.39	97.11	846.68	-2.85	411.92	-0.3	-156.51	-0.3	-132.24	0	-188.74
	33	92.90	-27.80	92.27	846.68	-2.85	167.74	-0.3	-133.59	-0.3	-123.59	0	-156.38
	34	93.90	-19.43	64.49	764.44	-3.088	124.74	-0.3	-111.43	-0.3	-103.08	0	-126.59
	34	93.90	-5.20	68.97	764.44	-3.088	126.55	-0.3	-109.62	-0.3	-101.41	0	-124.92
34	35	94.90	-3.61	47.89	691.71	-3.325	98.38	-0.3	-90.94	-0.3	-84.13	0	-101.50
35	35	94.90	-5.84	47.51	691.71	-3.325	115.19	-0.3	-90.63	-0.3	-90.63	0	-111.05
35	36	97.25	-1.89	15.36	614.09	-3.884	71.84	-0.3	-70.71	-0.3	-70.71	0	-82.64
36	36	97.25	-1.74	15.38	614.09	-3.884	71.86	-0.3	-70.69	-0.3	-70.69	0	-82.63
36	37	99.60	-1.72	15.24	575.84	-4.442	56.18	-0.3	-60.13	-0.3	-60.13	0	-68.55
37	37	99.60	-0.19	15.40	575.84	-4.442	56.33	-0.3	-59.98	-0.3	-59.98	0	-68.40
37	38	101.90	0.07	-5.38	569.41	-5	51.71	-0.3	-55.16	-0.3	-55.16	0	-61.98
38	38	101.90	-0.41	-5.37	569.41	-5	38.70	-0.3	-26.07	-0.3	-26.07	0	-30.20
38	39	104.45	-2.07	-27.28	607.79	-5	41.23	-0.3	-27.91	-0.3	-27.91	0	-32.32
39	39	104.45	1.24	-16.25	607.79	-5	41.39	-0.3	-27.74	-0.3	-27.74	0	-32.15
39	40	107.00	2.91	-38.28	678.90	-5	46.31	-0.3	-30.91	-0.3	-30.91	0	-35.84
40	40	107.00	-0.48	-38.47	678.90	-5	61.60	-0.3	-65.82	-0.3	-65.82	0	-73.95
40	41	109.30	-0.75	-59.65	789.48	-4.442	77.18	-0.3	-82.28	-0.3	-82.28	0	-93.83
41	41	109.30	-6.67	-59.02	789.48	-4.442	76.62	-0.3	-82.85	-0.3	-82.85	0	-94.40
41	42	111.65	-9.73	-86.12	939.47	-3.884	109.13	-0.3	-108.97	-0.3	-108.97	0	-127.22
42	42	111.65	-10.56	-85.95	939.47	-3.884	109.03	-0.3	-109.06	-0.3	-109.06	0	-127.32
42	43	114.00	-9.85	-80.20	1133.81	-3.325	188.78	-0.3	-148.60	-0.3	-148.60	0	-182.06
43	43	114.00	-6.10	-80.82	1133.81	-3.325	161.23	-0.3	-149.09	-0.3	-137.92	0	-166.39
43	44	115.00	-8.49	-112.53	1246.41	-3.088	206.34	-0.3	-178.74	-0.3	-165.35	0	-203.68
44	44	115.00	-31.70	-105.21	1246.41	-3.088	203.39	-0.3	-181.69	-0.3	-168.07	0	-206.41
44	45	116.00	-47.82	-158.70	1384.56	-2.85	273.97	-0.3	-218.80	-0.3	-202.41	0	-256.04
45	45	116.00	-26.48	-167.01	1384.56	-2.85	673.23	-0.3	-256.31	-0.3	-216.56	0	-308.96
45	46	117.00	-28.16	-168.40	1520.17	-2.85	739.44	-0.3	-281.15	-0.3	-237.55	0	-339.00
46	46	117.00	0.00	-171.97	1520.17	-2.85	747.56	-0.3	-273.03	-0.3	-230.69	0	-332.14
46	47	119.78	0.00	-154.57	1995.57	-2.85	981.34	-0.3	-358.41	-0.3	-302.83	0	-436.00
47	47	119.78	0.00	-154.57	1995.57	-2.85	981.34	-0.3	-358.41	-0.3	-302.83	0	-436.00
47	48	122.55	0.00	-113.31	2365.16	-2.85	1163.09	-0.3	-424.79	-0.3	-358.92	0	-516.75
48	48	122.55	0.00	-113.31	2365.16	-2.85	1163.09	-0.3	-424.79	-0.3	-358.92	0	-516.75
48	49	128.10	0.00	-35.84	2787.70	-2.85	1370.88	-0.3	-500.68	-0.3	-423.04	0	-609.07
49	49	128.10	0.00	-35.84	2787.70	-2.85	1370.88	-0.3	-500.68	-0.3	-423.04	0	-609.07
	50	133.65	0.00	46.67	2757.82	-2.85	1356.19	-0.3	-495.32	-0.3	-418.50	0	-602.55
	50	133.65	0.00	46.67	2757.82	-2.85	1356.19	-0.3	-495.32	-0.3	-418.50	0	-602.55
	51	139.20	0.00	125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
51	51	139.20	0.00	125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
51	52	144.75	0.00	207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
52	52	144.75	0.00	207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
52	53	147.53	0.00	249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
53	53	147.53	0.00	249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
53	54	150.30	0.00	18.76	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
54	54	150.30	0.00	-0.74	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(EnvolventeTren(PF-75B.MZ-(EXCYREP)). Tensiones a tiempo To

{ 1: 1(PF75B.ENV_IPF75B.MZ-

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	8.92	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
2	2	0.60	0.00	-34.13	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
2	3	3.38	0.00	53.97	-146.40	-2.85	-71.99	-0.3	26.29	-0.3	22.22	0	31.99
3	3	3.38	0.00	53.97	-146.40	-2.85	-71.99	-0.3	26.29	-0.3	22.22	0	31.99
3	4	6.15	0.00	57.42	-300.07	-2.85	-147.56	-0.3	53.89	-0.3	45.54	0	65.56
4	4	6.15	0.00	57.42	-300.07	-2.85	-147.56	-0.3	53.89	-0.3	45.54	0	65.56
4	5	11.70	0.00	64.29	-635.87	-2.85	-312.70	-0.3	114.21	-0.3	96.49	0	138.93
5	5	11.70	0.00	64.29	-635.87	-2.85	-312.70	-0.3	114.21	-0.3	96.49	0	138.93
5	6	17.25	0.00	71.17	-1009.62	-2.85	-496.49	-0.3	181.33	-0.3	153.21	0	220.59
6	6	17.25	0.00	71.17	-1009.62	-2.85	-496.49	-0.3	181.33	-0.3	153.21	0	220.59
6	7	22.80	0.00	78.04	-1421.32	-2.85	-698.95	-0.3	255.28	-0.3	215.69	0	310.54
7	7	22.80	0.00	78.04	-1421.32	-2.85	-698.95	-0.3	255.28	-0.3	215.69	0	310.54
7	8	28.35	0.00	84.92	-1870.96	-2.85	-920.06	-0.3	336.03	-0.3	283.92	0	408.78
8	8	28.35	0.00	84.92	-1870.96	-2.85	-920.06	-0.3	336.03	-0.3	283.92	0	408.78
8	9	31.13	0.00	88.35	-2110.02	-2.85	-1037.62	-0.3	378.97	-0.3	320.20	0	461.01
9	9	31.13	0.00	88.35	-2110.02	-2.85	-1037.62	-0.3	378.97	-0.3	320.20	0	461.01
9	10	33.90	0.00	112.64	-2363.64	-2.85	-1162.34	-0.3	424.52	-0.3	358.69	0	516.42
10	10	33.90	-18.44	110.30	-2363.64	-2.85	-1167.66	-0.3	419.20	-0.3	354.19	0	511.93
10	11	34.90	-22.82	143.91	-2544.04	-2.85	-1257.64	-0.3	450.34	-0.3	380.50	0	550.28
11	11	34.90	-41.20	136.75	-2544.04	-2.85	-522.01	-0.3	383.43	-0.3	354.70	0	453.25
11	12	35.90	-51.82	171.98	-2704.18	-3.088	-456.58	-0.3	378.86	-0.3	350.47	0	433.64
12	12	35.90	-13.88	183.93	-2704.18	-3.088	-451.76	-0.3	383.68	-0.3	354.93	0	438.09
12	13	36.90	-17.35	230.02	-2885.50	-3.325	-414.08	-0.3	375.67	-0.3	347.53	0	419.98
13	13	36.90	-28.03	228.22	-2885.50	-3.325	-488.29	-0.3	370.33	-0.3	370.33	0	455.48
13	14	39.25	-31.48	256.24	-3436.96	-3.884	-406.94	-0.3	390.93	-0.3	390.93	0	457.71
14	14	39.25	-28.99	256.73	-3436.96	-3.884	-406.65	-0.3	391.21	-0.3	391.21	0	458.00
14	15	41.60	-35.87	317.63	-4110.16	-4.442	-405.65	-0.3	424.54	-0.3	424.54	0	484.67
15	15	41.60	-4.02	321.03	-4110.16	-4.442	-402.59	-0.3	427.60	-0.3	427.60	0	487.73
15	16	43.90	-4.70	375.27	-4879.71	-5	-443.48	-0.3	472.38	-0.3	472.38	0	530.84
16	16	43.90	28.40	373.48	-4879.71	-5	-330.41	-0.3	224.62	-0.3	224.62	0	260.05
16	17	46.45	32.87	432.17	-5870.28	-5	-397.55	-0.3	270.15	-0.3	270.15	0	312.77
17	17	46.45	36.49	-479.80	-5870.28	-5	-397.37	-0.3	270.33	-0.3	270.33	0	312.95
17	18	49.00	29.36	-386.01	-4798.50	-5	-324.84	-0.3	220.95	-0.3	220.95	0	255.79
18	18	49.00	-4.86	-387.87	-4798.50	-5	-436.12	-0.3	464.50	-0.3	464.50	0	521.99
18	19	51.30	-4.19	-334.00	-3994.08	-4.442	-391.25	-0.3	415.49	-0.3	415.49	0	473.93
19	19	51.30	-37.32	-330.48	-3994.08	-4.442	-394.43	-0.3	412.32	-0.3	412.32	0	470.75
19	20	53.65	-33.49	-296.53	-3279.92	-3.884	-388.74	-0.3	372.67	-0.3	372.67	0	436.40
20	20	53.65	-36.36	-295.96	-3279.92	-3.884	-389.07	-0.3	372.34	-0.3	372.34	0	436.07
20	21	56.00	-31.30	-254.76	-2672.48	-3.325	-453.03	-0.3	342.20	-0.3	342.20	0	421.07
21	21	56.00	-19.37	-256.77	-2672.48	-3.325	-383.88	-0.3	347.56	-0.3	321.52	0	388.63
21	22	57.00	-16.65	-220.73	-2458.19	-3.088	-411.18	-0.3	348.26	-0.3	322.17	0	397.77
22	22	57.00	-62.18	-206.38	-2458.19	-3.088	-416.97	-0.3	342.48	-0.3	316.82	0	392.42
22	23	58.00	-53.16	-176.42	-2258.42	-2.85	-465.80	-0.3	337.99	-0.3	312.67	0	400.15
23	23	58.00	-29.43	-185.67	-2258.42	-2.85	-1119.09	-0.3	397.13	-0.3	335.55	0	486.26
23	24	59.00	-25.13	-150.25	-2034.39	-2.85	-1007.68	-0.3	358.14	-0.3	302.60	0	438.36
24	24	59.00	0.00	-153.44	-2034.39	-2.85	-1000.43	-0.3	365.39	-0.3	308.72	0	444.49
24	25	63.11	0.00	-83.83	-1532.93	-2.85	-753.83	-0.3	275.32	-0.3	232.62	0	334.92
25	25	63.11	0.00	-83.83	-1532.93	-2.85	-753.83	-0.3	275.32	-0.3	232.62	0	334.92
25	26	67.23	0.00	-20.07	-1434.21	-2.85	-705.29	-0.3	257.59	-0.3	217.64	0	313.36
26	26	67.23	0.00	-20.07	-1434.21	-2.85	-705.29	-0.3	257.59	-0.3	217.64	0	313.36
26	27	71.34	0.00	-14.98	-1362.53	-2.85	-670.04	-0.3	244.72	-0.3	206.77	0	297.69
27	27	71.34	0.00	-14.98	-1362.53	-2.85	-670.04	-0.3	244.72	-0.3	206.77	0	297.69
27	28	75.45	0.00	-9.89	-1311.70	-2.85	-645.04	-0.3	235.59	-0.3	199.05	0	286.59
28	28	75.45	0.00	-9.89	-1311.70	-2.85	-645.04	-0.3	235.59	-0.3	199.05	0	286.59
28	29	79.56	0.00	14.98	-1362.48	-2.85	-670.01	-0.3	244.71	-0.3	206.76	0	297.68
29	29	79.56	0.00	14.98	-1362.48	-2.85	-670.01	-0.3	244.71	-0.3	206.76	0	297.68
29	30	83.68	0.00	20.07	-1434.15	-2.85	-705.26	-0.3	257.58	-0.3	217.63	0	313.34
30	30	83.68	0.00	20.07	-1434.15	-2.85	-705.26	-0.3	257.58	-0.3	217.63	0	313.34
30	31	87.79	0.00	83.83	-1532.87	-2.85	-753.80	-0.3	275.31	-0.3	232.61	0	334.91
31	31	87.79	0.00	83.83	-1532.87	-2.85	-753.80	-0.3	275.31	-0.3	232.61	0	334.91
31	32	91.90	0.00	153.44	-2034.32	-2.85	-1000.40	-0.3	365.37	-0.3	308.71	0	444.47
32	32	91.90	-25.13	150.24	-2034.32	-2.85	-1007.65	-0.3	358.12	-0.3	302.59	0	438.35
32	33	92.90	-29.43	185.66	-2258.34	-2.85	-1119.05	-0.3	397.12	-0.3	335.53	0	486.24
33	33	92.90	-53.16	176.42	-2258.34	-2.85	-465.78	-0.3	337.98	-0.3	312.66	0	400.13
33	34	93.90	-62.18	206.38	-2458.10	-3.088	-416.95	-0.3	342.46	-0.3	316.81	0	392.40
34	34	93.90	-16.65	220.73	-2458.10	-3.088	-411.17	-0.3	348.25	-0.3	322.16	0	397.75
34	35	94.90	-19.37	256.77	-2672.39	-3.325	-383.87	-0.3	347.55	-0.3	321.51	0	388.62
35	35	94.90	-31.30	254.76	-2672.39	-3.325	-453.02	-0.3	342.19	-0.3	342.19	0	421.05
35	36	97.25	-36.36	295.96	-3279.83	-3.884	-389.06	-0.3	372.33	-0.3	372.33	0	436.06
36	36	97.25	-33.49	296.53	-3279.83	-3.884	-388.73	-0.3	372.66	-0.3	372.66	0	436.39
36	37	99.60	-37.32	330.46	-3993.98	-4.442	-394.42	-0.3	412.30	-0.3	412.30	0	470.73
37	37	99.60	-4.19	334.00	-3993.98	-4.442	-391.24	-0.3	415.48	-0.3	415.48	0	473.91
37	38	101.90	-4.86	387.87	-4798.40	-5	-436.11	-0.3	464.49	-0.3	464.49	0	521.97
38	38	101.90	29.36	386.01	-4798.40	-5	-324.83	-0.3	220.95	-0.3	220.95	0	255.79
38	39	104.45	36.49	479.80	-5870.36	-5	-397.37	-0.3	270.34	-0.3	270.34	0	312.96
39	39	104.45	32.87	-432.19	-5870.36	-5	-397.55	-0.3	270.16	-0.3	270.16	0	312.78
39	40	107.00	28.40	-373.48	-4879.80	-5	-330.42	-0.3	224.63	-0.3	224.63	0	260.05
40	40	107.00	-4.70	-375.27	-4879.80	-5	-443.49	-0.3	472.39	-0.3	472.39	0	530.85
40	41	109.30	-4.02	-321.03	-4110.23	-4.442	-402.60	-0.3	427.61	-0.3	427.61	0	487.74
41	41	109.30	-35.87	-317.63	-4110.23	-4.442	-405.66	-0.3	424.55	-0.3	424.55	0	484.68
41	42	111.65	-28.99	-256.73	-3437.03	-3.884	-406.66	-0.3	391.22	-0.3	391.22	0	458.01
42	42	111.65	-31.48	-256.24	-3437.03	-3.884	-406.95	-0.3	390.94	-0.3	390.94	0	457.72
42	43	114.00	-28.03	-228.22	-2885.57	-3.325	-488.30	-0.3	370.34	-0.3	370.34	0	455.49
43	43	114.00	-17.35	-230.02	-2885.57	-3.325	-414.09	-0.3	375.68	-0.3	347.54	0	419.99
43	44	115.00	-13.88	-183.93	-2704.24	-3.088	-451.77	-0.3	383.69	-0.3	354.94	0	438.10
44	44	115.00	-51.82	-171.98	-2704.24	-3.088	-456.59	-0.3	378.86	-0.3	350.48	0	433.64
44	45	116.00	-41.20	-136.75	-2544.10	-2.85	-522.02	-0.3	383.44	-0.3	354.71	0	453.26
45	45	116.00	-22.82	-143.91	-2544.10	-2.85	-1257.67	-0.3	450.35	-0.3	380.51	0	550.29
45	46	117.00	-18.45	-110.30	-2363.70	-2.85	-1167.70	-0.3	419.21	-0.3	354.20	0	511.94
46	46	117.00	0.00	-112.64	-2363.70	-2.85	-1162.37	-0.3	424.53	-0.3	358.69	0	516.44
46	47	119.78	0.00	-88.35	-2110.08	-2.85	-1037.65	-0.3	378.98	-0.3	320.21	0	461.02
47	47	119.78	0.00	-88.35	-2110.08	-2.85	-1037.65	-0.3	378.98	-0.3	320.21	0	461.02
47	48	122.55	0.00	-84.92	-1871.01	-2.85	-920.09	-0.3	336.04	-0.3	283.93	0	408.79
48	48	122.55	0.00	-84.92	-1871.01	-2.85	-920.09	-0.3	336.04	-0.3	283.93	0	408.79
48	49	128.10	0.00	-78.04	-1421.36	-2.85	-698.97	-0.3	255.28	-0.3	215.69	0	310.55
49	49	128.10	0.00	-78.04	-1421.36	-2.85	-698.97	-0.3	255.28	-0.3	215.69	0	310.55
49	50	133.65	0.00	-71.17	-1009.65	-2.85	-496.51	-0.3	181.34	-0.3	153.22	0	220.59
50	50	133.65	0.00	-71.17	-1009.65	-2.85	-496.51	-0.3	181.34	-0.3	153.22	0	220.59
50	51	139.20	0.00	-64.29	-635.90	-2.85	-312.71	-0.3	114.21	-0.3	96.50	0	138.94
51	51	139.20	0.00	-64.29	-635.90	-2.85	-312.71	-0.3	114.21	-0.3	96.50	0	138.94
51	52	144.75	0.00	-57.42	-300.08	-2.85	-147.57	-0.3	53.90	-0.3	45.54	0	65.56
52	52	144.75	0.00	-57.42	-300.08	-2.85	-147.57	-0.3	53.90	-0.3	45.54	0	65.56
52	53	147.53	0.00	-53.97	-146.41	-2.85	-72.00	-0.3	26.30	-0.3	22.22	0	31.99
53	53	147.53	0.00	-53.97	-146.41	-2.85	-72.00	-0.3	26.30	-0.3	22.22	0	31.99
53	54	150.30	0.00	44.81	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
54	54	150.30	0.00	-8.92	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

(Envolventedetrendecargasplanogenérico.MZ+(EXCYREP)). Tensiones a tiempo To

[1: 1]xxxxxxx.ENV_TREN_GENERICO.MZ+

Coef. xxx:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	-13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
3	3	3.38	0.00	-13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
3	4	6.15	0.00	-11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
4	4	6.15	0.00	-11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
4	5	11.70	0.00	-7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
5	5	11.70	0.00	-7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
5	6	17.25	0.00	-2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
6	6	17.25	0.00	-2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
6	7	22.80	0.00	1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
7	7	22.80	0.00	1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
7	8	28.35	0.00	5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
8	8	28.35	0.00	5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
8	9	31.13	0.00	7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
9	9	31.13	0.00	7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
9	10	33.90	0.00	8.25	94.92	-2.85	46.68	-0.3	-17.05	-0.3	-14.40	0	-20.74
10	10	33.90	-1.67	8.07	94.92	-2.85	46.20	-0.3	-17.53	-0.3	-14.81	0	-21.15
10	11	34.90	-1.48	7.13	87.19	-2.85	42.45	-0.3	-16.09	-0.3	-13.59	0	-19.41
11	11	34.90	-2.67	6.78	87.19	-2.85	17.30	-0.3	-13.73	-0.3	-12.70	0	-16.08
11	12	35.90	-2.09	5.31	80.72	-3.088	13.17	-0.3	-11.77	-0.3	-10.89	0	-13.37
12	12	35.90	-0.56	5.68	80.72	-3.088	13.36	-0.3	-11.58	-0.3	-10.71	0	-13.19
12	13	36.90	-0.35	3.58	74.81	-3.325	10.64	-0.3	-9.83	-0.3	-9.09	0	-10.97
13	13	36.90	-0.57	3.55	74.81	-3.325	12.47	-0.3	-9.79	-0.3	-9.79	0	-12.00
13	14	39.25	-0.59	3.70	65.93	-3.884	7.67	-0.3	-7.64	-0.3	-7.64	0	-8.92
14	14	39.25	-0.55	3.70	65.93	-3.884	7.67	-0.3	-7.63	-0.3	-7.63	0	-8.91
14	15	41.60	-0.27	1.83	60.44	-4.442	5.89	-0.3	-6.32	-0.3	-6.32	0	-7.20
15	15	41.60	-0.03	1.85	60.44	-4.442	5.91	-0.3	-6.30	-0.3	-6.30	0	-7.18
15	16	43.90	-0.01	0.34	57.80	-5	5.25	-0.3	-5.60	-0.3	-5.60	0	-6.29
[illegible]	16	43.90	0.03	0.34	57.80	-5	3.93	-0.3	-2.64	-0.3	-2.64	0	-3.06
[illegible]	17	46.45	-0.13	-1.28	58.76	-5	3.99	-0.3	-2.69	-0.3	-2.69	0	-3.12
[illegible]	17	46.45	-0.35	3.48	58.76	-5	3.98	-0.3	-2.71	-0.3	-2.71	0	-3.13
[illegible]	18	49.00	-0.19	1.87	52.02	-5	3.53	-0.3	-2.39	-0.3	-2.39	0	-2.77
18	18	49.00	0.03	1.88	52.02	-5	4.73	-0.3	-5.04	-0.3	-5.04	0	-5.66
18	19	51.30	0.01	0.40	49.08	-4.442	4.80	-0.3	-5.11	-0.3	-5.11	0	-5.83
19	19	51.30	0.06	0.40	49.08	-4.442	4.81	-0.3	-5.10	-0.3	-5.10	0	-5.82
19	20	53.65	0.04	0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
20	20	53.65	0.04	0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
20	21	56.00	-0.07	-0.45	50.37	-3.325	8.44	-0.3	-6.55	-0.3	-6.55	0	-8.03
21	21	56.00	-0.05	-0.46	50.37	-3.325	7.19	-0.3	-6.60	-0.3	-6.10	0	-7.37
21	22	57.00	-0.19	-1.92	52.68	-3.088	8.74	-0.3	-7.53	-0.3	-6.97	0	-8.59
22	22	57.00	-0.71	-1.80	52.68	-3.088	8.68	-0.3	-7.60	-0.3	-7.03	0	-8.65
22	23	58.00	-1.15	-2.93	55.11	-2.85	11.01	-0.3	-8.60	-0.3	-7.96	0	-10.09
23	23	58.00	-0.64	-3.08	55.11	-2.85	26.92	-0.3	-10.08	-0.3	-8.52	0	-12.20
23	24	59.00	-0.83	-4.00	58.05	-2.85	28.31	-0.3	-10.67	-0.3	-9.01	0	-12.89
24	24	59.00	0.00	-4.08	58.05	-2.85	28.55	-0.3	-10.43	-0.3	-8.81	0	-12.68
24	25	63.11	0.00	-5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
25	25	63.11	0.00	-5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
25	26	67.23	0.00	-6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
26	26	67.23	0.00	-6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
26	27	71.34	0.00	-3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
27	27	71.34	0.00	-3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
27	28	75.45	0.00	0.00	132.97	-2.85	65.39	-0.3	-23.88	-0.3	-20.18	0	-29.05
28	28	75.45	0.00	0.00	132.97	-2.85	65.39	-0.3	-23.88	-0.3	-20.18	0	-29.05
28	29	79.56	0.00	3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
29	29	79.56	0.00	3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
29	30	83.68	0.00	6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
30	30	83.68	0.00	6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
30	31	87.79	0.00	5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
31	31	87.79	0.00	5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
31	32	91.90	0.00	4.08	58.05	-2.85	28.55	-0.3	-10.43	-0.3	-8.81	0	-12.68
32	32	91.90	-0.83	4.00	58.05	-2.85	28.31	-0.3	-10.67	-0.3	-9.01	0	-12.89
[illegible]	33	92.90	-0.64	3.08	55.11	-2.85	26.92	-0.3	-10.08	-0.3	-8.52	0	-12.20
[illegible]	33	92.90	-1.15	2.93	55.11	-2.85	11.01	-0.3	-8.60	-0.3	-7.96	0	-10.09
[illegible]	34	93.90	-0.71	1.80	52.68	-3.088	8.68	-0.3	-7.60	-0.3	-7.03	0	-8.65
[illegible]	34	93.90	-0.19	1.92	52.68	-3.088	8.74	-0.3	-7.53	-0.3	-6.97	0	-8.59
34	35	94.90	-0.05	0.46	50.37	-3.325	7.19	-0.3	-6.60	-0.3	-6.10	0	-7.37
35	35	94.90	-0.07	0.45	50.37	-3.325	8.44	-0.3	-6.55	-0.3	-6.55	0	-8.03
35	36	97.25	0.04	-0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
36	36	97.25	0.04	-0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
36	37	99.60	0.06	-0.40	49.08	-4.442	4.81	-0.3	-5.10	-0.3	-5.10	0	-5.82
37	37	99.60	0.01	-0.40	49.08	-4.442	4.80	-0.3	-5.11	-0.3	-5.11	0	-5.83
37	38	101.90	0.03	-1.88	52.02	-5	4.73	-0.3	-5.04	-0.3	-5.04	0	-5.66
38	38	101.90	-0.19	-1.87	52.02	-5	3.53	-0.3	-2.39	-0.3	-2.39	0	-2.77
38	39	104.45	-0.35	-3.48	58.76	-5	3.98	-0.3	-2.71	-0.3	-2.71	0	-3.13
39	39	104.45	-0.13	1.28	58.76	-5	3.99	-0.3	-2.69	-0.3	-2.69	0	-3.12
39	40	107.00	0.03	-0.34	57.80	-5	3.93	-0.3	-2.64	-0.3	-2.64	0	-3.06
40	40	107.00	-0.01	-0.34	57.80	-5	5.25	-0.3	-5.60	-0.3	-5.60	0	-6.29
40	41	109.30	-0.03	-1.85	60.44	-4.442	5.91	-0.3	-6.30	-0.3	-6.30	0	-7.18
41	41	109.30	-0.27	-1.83	60.44	-4.442	5.89	-0.3	-6.32	-0.3	-6.32	0	-7.20
41	42	111.65	-0.55	-3.70	65.93	-3.884	7.67	-0.3	-7.63	-0.3	-7.63	0	-8.91
42	42	111.65	-0.59	-3.70	65.93	-3.884	7.67	-0.3	-7.64	-0.3	-7.64	0	-8.92
42	43	114.00	-0.57	-3.55	74.81	-3.325	12.47	-0.3	-9.79	-0.3	-9.79	0	-12.00
43	43	114.00	-0.35	-3.58	74.81	-3.325	10.64	-0.3	-9.83	-0.3	-9.09	0	-10.97
43	44	115.00	-0.56	-5.68	80.72	-3.088	13.36	-0.3	-11.58	-0.3	-10.71	0	-13.19
44	44	115.00	-2.09	-5.31	80.72	-3.088	13.17	-0.3	-11.77	-0.3	-10.89	0	-13.37
44	45	116.00	-2.67	-6.78	87.19	-2.85	17.30	-0.3	-13.73	-0.3	-12.70	0	-16.08
45	45	116.00	-1.48	-7.13	87.19	-2.85	42.45	-0.3	-16.09	-0.3	-13.59	0	-19.41
45	46	117.00	-1.67	-8.07	94.92	-2.85	46.20	-0.3	-17.53	-0.3	-14.81	0	-21.15
46	46	117.00	0.00	-8.25	94.92	-2.85	46.68	-0.3	-17.05	-0.3	-14.40	0	-20.74
46	47	119.78	0.00	-7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
47	47	119.78	0.00	-7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
47	48	122.55	0.00	-5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
48	48	122.55	0.00	-5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
48	49	128.10	0.00	-1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
49	49	128.10	0.00	-1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
[illegible]	50	133.65	0.00	2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
[illegible]	50	133.65	0.00	2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
[illegible]	51	139.20	0.00	7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
51	51	139.20	0.00	7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
51	52	144.75	0.00	11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
52	52	144.75	0.00	11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
52	53	147.53	0.00	13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
53	53	147.53	0.00	13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

(Envolventedetrendecargasplanogenérico.MZ-(EXCYREP)). Tensiones a tiempo To

[1: 1]xxxxxxx.ENV_TREN_GENERICO.MZ-

Coef. xxx:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.45	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
2	2	0.60	0.00	0.00	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
2	3	3.38	0.00	3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
3	3	3.38	0.00	3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
3	4	6.15	0.00	3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
4	4	6.15	0.00	3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
4	5	11.70	0.00	3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
5	5	11.70	0.00	3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
5	6	17.25	0.00	3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
6	6	17.25	0.00	3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
6	7	22.80	0.00	3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
7	7	22.80	0.00	3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
7	8	28.35	0.00	3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
8	8	28.35	0.00	3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
8	9	31.13	0.00	3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
9	9	31.13	0.00	3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
9	10	33.90	0.00	5.38	-132.86	-2.85	-65.34	-0.3	23.86	-0.3	20.16	0	29.03
10	10	33.90	-1.09	5.27	-132.86	-2.85	-65.65	-0.3	23.55	-0.3	19.90	0	28.76
10	11	34.90	-1.44	6.94	-139.13	-2.85	-68.83	-0.3	24.57	-0.3	20.76	0	30.05
11	11	34.90	-2.60	6.59	-139.13	-2.85	-28.60	-0.3	20.92	-0.3	19.35	0	24.74
11	12	35.90	-3.45	8.76	-147.40	-3.088	-24.97	-0.3	20.57	-0.3	19.03	0	23.56
12	12	35.90	-0.92	9.37	-147.40	-3.088	-24.65	-0.3	20.89	-0.3	19.33	0	23.86
12	13	36.90	-1.20	12.22	-156.99	-3.325	-22.56	-0.3	20.41	-0.3	18.88	0	22.82
13	13	36.90	-1.95	12.12	-156.99	-3.325	-26.63	-0.3	20.09	-0.3	20.09	0	24.72
13	14	39.25	-2.20	13.72	-187.48	-3.884	-22.25	-0.3	21.27	-0.3	21.27	0	24.91
14	14	39.25	-2.03	13.74	-187.48	-3.884	-22.23	-0.3	21.29	-0.3	21.29	0	24.93
14	15	41.60	-2.56	17.36	-225.51	-4.442	-22.31	-0.3	23.24	-0.3	23.24	0	26.54
15	15	41.60	-0.29	17.55	-225.51	-4.442	-22.10	-0.3	23.45	-0.3	23.45	0	26.75
15	16	43.90	-0.34	20.78	-269.47	-5	-24.50	-0.3	26.08	-0.3	26.08	0	29.31
16	16	43.90	2.06	20.68	-269.47	-5	-18.22	-0.3	12.43	-0.3	12.43	0	14.38
16	17	46.45	2.41	24.20	-326.73	-5	-22.10	-0.3	15.07	-0.3	15.07	0	17.44
17	17	46.45	2.50	-25.13	-326.73	-5	-22.09	-0.3	15.07	-0.3	15.07	0	17.44
17	18	49.00	2.15	-21.61	-266.96	-5	-18.05	-0.3	12.32	-0.3	12.32	0	14.26
18	18	49.00	-0.36	-21.72	-266.96	-5	-24.27	-0.3	25.83	-0.3	25.83	0	29.03
18	19	51.30	-0.30	-18.51	-220.38	-4.442	-21.59	-0.3	22.92	-0.3	22.92	0	26.14
19	19	51.30	-2.70	-18.32	-220.38	-4.442	-21.82	-0.3	22.69	-0.3	22.69	0	25.91
19	20	53.65	-2.42	-16.41	-179.34	-3.884	-21.32	-0.3	20.31	-0.3	20.31	0	23.79
20	20	53.65	-2.63	-16.38	-179.34	-3.884	-21.35	-0.3	20.29	-0.3	20.29	0	23.77
20	21	56.00	-2.24	-13.95	-144.82	-3.325	-24.63	-0.3	18.46	-0.3	18.46	0	22.74
21	21	56.00	-1.39	-14.06	-144.82	-3.325	-20.84	-0.3	18.80	-0.3	17.39	0	21.02
21	22	57.00	-1.17	-11.85	-132.92	-3.088	-22.27	-0.3	18.80	-0.3	17.39	0	21.48
22	22	57.00	-4.36	-11.08	-132.92	-3.088	-22.67	-0.3	18.39	-0.3	17.01	0	21.10
22	23	58.00	-3.64	-9.25	-121.89	-2.85	-25.25	-0.3	18.13	-0.3	16.77	0	21.49
23	23	58.00	-2.02	-9.73	-121.89	-2.85	-60.52	-0.3	21.31	-0.3	18.00	0	26.14
23	24	59.00	-1.68	-8.09	-112.12	-2.85	-55.62	-0.3	19.65	-0.3	16.60	0	24.09
24	24	59.00	0.00	-8.26	-112.12	-2.85	-55.14	-0.3	20.14	-0.3	17.01	0	24.50
24	25	63.11	0.00	-3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
25	25	63.11	0.00	-3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
25	26	67.23	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
26	26	67.23	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
26	27	71.34	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
27	27	71.34	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
27	28	75.45	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
28	28	75.45	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
28	29	79.56	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
29	29	79.56	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
29	30	83.68	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
30	30	83.68	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
30	31	87.79	0.00	3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
31	31	87.79	0.00	3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
31	32	91.90	0.00	8.26	-112.12	-2.85	-55.14	-0.3	20.14	-0.3	17.01	0	24.50
32	32	91.90	-1.68	8.09	-112.12	-2.85	-55.62	-0.3	19.65	-0.3	16.60	0	24.09
32	33	92.90	-2.02	9.73	-121.89	-2.85	-60.52	-0.3	21.31	-0.3	18.00	0	26.14
33	33	92.90	-3.64	9.25	-121.89	-2.85	-25.25	-0.3	18.13	-0.3	16.77	0	21.49
33	34	93.90	-4.36	11.08	-132.92	-3.088	-22.67	-0.3	18.39	-0.3	17.01	0	21.10
34	34	93.90	-1.17	11.85	-132.92	-3.088	-22.27	-0.3	18.80	-0.3	17.39	0	21.48
34	35	94.90	-1.39	14.06	-144.82	-3.325	-20.84	-0.3	18.80	-0.3	17.39	0	21.02
35	35	94.90	-2.24	13.95	-144.82	-3.325	-24.63	-0.3	18.46	-0.3	18.46	0	22.74
35	36	97.25	-2.63	16.38	-179.34	-3.884	-21.35	-0.3	20.29	-0.3	20.29	0	23.77
36	36	97.25	-2.42	16.41	-179.34	-3.884	-21.32	-0.3	20.31	-0.3	20.31	0	23.79
36	37	99.60	-2.70	18.32	-220.38	-4.442	-21.82	-0.3	22.69	-0.3	22.69	0	25.91
37	37	99.60	-0.30	18.51	-220.38	-4.442	-21.59	-0.3	22.92	-0.3	22.92	0	26.14
37	38	101.90	-0.36	21.72	-266.96	-5	-24.27	-0.3	25.83	-0.3	25.83	0	29.03
38	38	101.90	2.15	21.61	-266.96	-5	-18.05	-0.3	12.32	-0.3	12.32	0	14.26
38	39	104.45	2.50	25.13	-326.73	-5	-22.09	-0.3	15.07	-0.3	15.07	0	17.44
39	39	104.45	2.41	-24.20	-326.73	-5	-22.10	-0.3	15.07	-0.3	15.07	0	17.44
39	40	107.00	2.06	-20.68	-269.47	-5	-18.22	-0.3	12.43	-0.3	12.43	0	14.38
40	40	107.00	-0.34	-20.78	-269.47	-5	-24.50	-0.3	26.08	-0.3	26.08	0	29.31
40	41	109.30	-0.29	-17.55	-225.51	-4.442	-22.10	-0.3	23.45	-0.3	23.45	0	26.75
41	41	109.30	-2.56	-17.36	-225.51	-4.442	-22.31	-0.3	23.24	-0.3	23.24	0	26.54
41	42	111.65	-2.03	-13.74	-187.48	-3.884	-22.23	-0.3	21.29	-0.3	21.29	0	24.93
42	42	111.65	-2.20	-13.72	-187.48	-3.884	-22.25	-0.3	21.27	-0.3	21.27	0	24.91
42	43	114.00	-1.95	-12.12	-156.99	-3.325	-26.63	-0.3	20.09	-0.3	20.09	0	24.72
43	43	114.00	-1.20	-12.22	-156.99	-3.325	-22.56	-0.3	20.41	-0.3	18.88	0	22.82
43	44	115.00	-0.92	-9.37	-147.40	-3.088	-24.65	-0.3	20.89	-0.3	19.33	0	23.86
44	44	115.00	-3.45	-8.76	-147.40	-3.088	-24.97	-0.3	20.57	-0.3	19.03	0	23.56
44	45	116.00	-2.60	-6.59	-139.13	-2.85	-28.60	-0.3	20.92	-0.3	19.35	0	24.74
45	45	116.00	-1.44	-6.94	-139.13	-2.85	-68.83	-0.3	24.57	-0.3	20.76	0	30.05
45	46	117.00	-1.09	-5.27	-132.86	-2.85	-65.65	-0.3	23.55	-0.3	19.90	0	28.76
46	46	117.00	0.00	-5.38	-132.86	-2.85	-65.34	-0.3	23.86	-0.3	20.16	0	29.03
46	47	119.78	0.00	-3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
47	47	119.78	0.00	-3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
47	48	122.55	0.00	-3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
48	48	122.55	0.00	-3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
48	49	128.10	0.00	-3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
49	49	128.10	0.00	-3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
49	50	133.65	0.00	-3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
50	50	133.65	0.00	-3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
50	51	139.20	0.00	-3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
51	51	139.20	0.00	-3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
51	52	144.75	0.00	-3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
52	52	144.75	0.00	-3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
52	53	147.53	0.00	-3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
53	53	147.53	0.00	-3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
53	54	150.30	0.00	0.00	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
54	54	150.30	0.00	-0.45	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

Anexo Nº 2.3.9.2. Tensiones a tiempo infinito. Hipótesis simples. Redistribuciones y pérdidas

9.2. Tensiones a tiempo infinito. Hipótesis simples. Redistribuciones y Pérdidas.

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	-2.55	13.83	-6.74	-3.088	-1.68	-0.3	0.90	0	0.73	0	0.96
12	12	35.90	2.00	13.92	-6.74	-3.088	-0.76	-0.3	1.19	0	0.97	0	1.14
12	13	36.90	4.33	30.16	-28.64	-3.325	-3.47	-0.3	4.41	0	3.59	0	4.26
13	13	36.90	-1.94	30.41	-28.64	-3.325	-5.09	-0.3	3.43	-0.3	3.43	0	4.27
13	14	39.25	-4.82	75.70	-151.45	-3.884	-18.33	-0.3	16.83	-0.3	16.83	0	19.77
14	14	39.25	-11.08	75.05	-151.45	-3.884	-19.05	-0.3	16.11	-0.3	16.11	0	19.05
14	15	41.60	-19.35	131.09	-394.45	-4.442	-40.46	-0.3	39.21	-0.3	39.21	0	44.98
15	15	41.60	-2.17	132.49	-394.45	-4.442	-38.81	-0.3	40.86	-0.3	40.86	0	46.63
15	16	43.90	-3.22	196.73	-771.46	-5	-70.33	-0.3	74.47	-0.3	74.47	0	83.71
-	16	43.90	19.46	195.79	-771.46	-5	-51.50	-0.3	36.25	-0.3	36.25	0	41.85
	17	46.45	32.21	324.04	-1438.00	-5	-96.19	-0.3	67.37	-0.3	67.37	0	77.81
	17	46.45	32.21	-324.03	-1436.59	-5	-96.10	-0.3	67.30	-0.3	67.30	0	77.73
./	18	49.00	19.46	-195.78	-771.38	-5	-51.49	-0.3	36.25	-0.3	36.25	0	41.85
18	18	49.00	-3.22	-196.72	-771.38	-5	-70.32	-0.3	74.46	-0.3	74.46	0	83.70
18	19	51.30	-2.17	-132.48	-394.41	-4.442	-38.81	-0.3	40.85	-0.3	40.85	0	46.62
19	19	51.30	-19.35	-131.08	-394.41	-4.442	-40.46	-0.3	39.21	-0.3	39.21	0	44.98
19	20	53.65	-11.08	-75.05	-151.74	-3.884	-19.08	-0.3	16.14	-0.3	16.14	0	19.09
20	20	53.65	-4.82	-75.70	-151.74	-3.884	-18.36	-0.3	16.86	-0.3	16.86	0	19.81
20	21	56.00	-1.94	-30.41	-29.15	-3.325	-5.18	-0.3	3.49	-0.3	3.49	0	4.36
21	21	56.00	4.33	-30.16	-29.15	-3.325	-3.55	-0.3	4.48	0	3.65	0	4.33
21	22	57.00	2.00	-13.92	-6.92	-3.088	-0.79	-0.3	1.22	0	0.99	0	1.17
22	22	57.00	-2.55	-13.83	-6.92	-3.088	-1.71	-0.3	0.93	0	0.75	0	0.98
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	34	93.90	-2.55	13.83	-6.74	-3.088	-1.68	-0.3	0.90	0	0.73	0	0.96
[illegible]	34	93.90	2.00	13.92	-6.74	-3.088	-0.76	-0.3	1.19	0	0.97	0	1.14
34	35	94.90	4.33	30.16	-28.64	-3.325	-3.47	-0.3	4.41	0	3.59	0	4.26
35	35	94.90	-1.94	30.41	-28.64	-3.325	-5.09	-0.3	3.43	-0.3	3.43	0	4.27
35	36	97.25	-4.82	75.70	-151.45	-3.884	-18.33	-0.3	16.83	-0.3	16.83	0	19.77
36	36	97.25	-11.08	75.05	-151.45	-3.884	-19.05	-0.3	16.11	-0.3	16.11	0	19.05
36	37	99.60	-19.35	131.09	-394.45	-4.442	-40.46	-0.3	39.21	-0.3	39.21	0	44.98
37	37	99.60	-2.17	132.49	-394.45	-4.442	-38.81	-0.3	40.86	-0.3	40.86	0	46.63
37	38	101.90	-3.22	196.73	-771.46	-5	-70.33	-0.3	74.47	-0.3	74.47	0	83.71
38	38	101.90	19.46	195.79	-771.46	-5	-51.50	-0.3	36.25	-0.3	36.25	0	41.85
38	39	104.45	32.21	324.04	-1438.00	-5	-96.19	-0.3	67.37	-0.3	67.37	0	77.81
39	39	104.45	32.21	-324.03	-1436.59	-5	-96.10	-0.3	67.30	-0.3	67.30	0	77.73
39	40	107.00	19.46	-195.78	-771.38	-5	-51.49	-0.3	36.25	-0.3	36.25	0	41.85
40	40	107.00	-3.22	-196.72	-771.38	-5	-70.32	-0.3	74.46	-0.3	74.46	0	83.70
40	41	109.30	-2.17	-132.48	-394.41	-4.442	-38.81	-0.3	40.85	-0.3	40.85	0	46.62
41	41	109.30	-19.35	-131.08	-394.41	-4.442	-40.46	-0.3	39.21	-0.3	39.21	0	44.98
41	42	111.65	-11.08	-75.05	-151.74	-3.884	-19.08	-0.3	16.14	-0.3	16.14	0	19.09
42	42	111.65	-4.82	-75.70	-151.74	-3.884	-18.36	-0.3	16.86	-0.3	16.86	0	19.81
42	43	114.00	-1.94	-30.41	-29.15	-3.325	-5.18	-0.3	3.49	-0.3	3.49	0	4.36
43	43	114.00	4.33	-30.16	-29.15	-3.325	-3.55	-0.3	4.48	0	3.65	0	4.33
43	44	115.00	2.00	-13.92	-6.92	-3.088	-0.79	-0.3	1.22	0	0.99	0	1.17
44	44	115.00	-2.55	-13.83	-6.92	-3.088	-1.71	-0.3	0.93	0	0.75	0	0.98
44	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(postesadolcse1.2capitolsuperior). Tensiones a tiempo Tinf

[1; 1]Prot1.2sup

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	-1363.84	-7.49	628.29	-2.85	-197.48	-0.3	-208.99	0	-169.27	0	-168.60
11	12	35.90	-1363.84	-7.49	635.90	-3.088	-166.85	-0.3	-189.12	0	-155.04	0	-154.39
12	12	35.90	-1294.75	428.66	635.90	-3.088	-152.82	-0.3	-184.63	0	-151.31	0	-151.63
12	13	36.90	-1294.75	428.66	202.86	-3.325	-199.15	-0.3	-105.80	0	-87.38	0	-78.21
13	13	36.90	-2395.76	88.40	2037.00	-3.325	-12.91	-0.3	-619.04	-0.3	-619.04	0	-679.15
13	14	39.25	-2395.76	88.40	1829.01	-3.884	-60.72	-0.3	-485.33	-0.3	-485.33	0	-520.86
14	14	39.25	-3426.47	-262.70	3820.00	-3.884	54.48	-0.3	-832.33	-0.3	-832.33	0	-906.55
14	15	41.60	-3426.47	-262.70	4444.44	-4.442	106.21	-0.3	-791.48	-0.3	-791.48	0	-856.50
15	15	41.60	-3431.58	184.26	4444.00	-4.442	105.67	-0.3	-791.93	-0.3	-791.93	0	-856.94
15	16	43.90	-3429.71	70.24	4151.73	-5	89.44	-0.3	-689.80	-0.3	-689.80	0	-739.54
16	16	43.90	-3398.78	464.89	4152.00	-5	114.23	-0.3	-358.02	-0.3	-358.02	0	-388.16
16	17	46.45	-3411.35	338.49	3122.38	-5	43.60	-0.3	-311.54	-0.3	-311.54	0	-334.21
17	17	46.45	-3411.35	-338.49	3122.00	-5	43.57	-0.3	-311.53	-0.3	-311.53	0	-334.19
17	18	49.00	-3398.78	-464.89	4151.73	-5	114.21	-0.3	-358.00	-0.3	-358.00	0	-388.15
18	18	49.00	-3429.71	-70.24	4152.00	-5	89.46	-0.3	-689.83	-0.3	-689.83	0	-739.57
18	19	51.30	-3431.58	-184.26	4444.44	-4.442	105.72	-0.3	-791.97	-0.3	-791.97	0	-856.99
19	19	51.30	-3426.47	262.70	4444.00	-4.442	106.16	-0.3	-791.43	-0.3	-791.43	0	-856.45
19	20	53.65	-3426.47	262.70	3820.41	-3.884	54.53	-0.3	-832.38	-0.3	-832.38	0	-906.61
20	20	53.65	-2395.76	-88.40	1829.00	-3.884	-60.72	-0.3	-485.33	-0.3	-485.33	0	-520.86
20	21	56.00	-2395.76	-88.40	2037.16	-3.325	-12.88	-0.3	-619.06	-0.3	-619.06	0	-679.18
21	21	56.00	-1294.75	-428.66	202.86	-3.325	-199.15	-0.3	-105.80	0	-87.38	0	-78.21
21	22	57.00	-1294.75	-428.66	635.90	-3.088	-152.82	-0.3	-184.63	0	-151.31	0	-151.63
22	22	57.00	-1363.84	7.49	635.90	-3.088	-166.85	-0.3	-189.12	0	-155.04	0	-154.39
22	23	58.00	-1363.84	7.49	628.29	-2.85	-197.48	-0.3	-208.99	0	-169.27	0	-168.60
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	92.90	-1363.84	-7.49	628.29	-2.85	-197.48	-0.3	-208.99	0	-169.27	0	-168.60
33	34	93.90	-1363.84	-7.49	635.90	-3.088	-166.85	-0.3	-189.12	0	-155.04	0	-154.39
34	34	93.90	-1294.75	428.66	635.90	-3.088	-152.82	-0.3	-184.63	0	-151.31	0	-151.63
34	35	94.90	-1294.75	428.66	202.86	-3.325	-199.15	-0.3	-105.80	0	-87.38	0	-78.21
35	35	94.90	-2395.76	88.40	2037.00	-3.325	-12.91	-0.3	-619.04	-0.3	-619.04	0	-679.15
35	36	97.25	-2395.76	88.40	1829.01	-3.884	-60.72	-0.3	-485.33	-0.3	-485.33	0	-520.86
36	36	97.25	-3426.47	-262.70	3820.00	-3.884	54.48	-0.3	-832.33	-0.3	-832.33	0	-906.55
36	37	99.60	-3426.47	-262.70	4444.44	-4.442	106.21	-0.3	-791.48	-0.3	-791.48	0	-856.50
37	37	99.60	-3431.58	184.26	4444.00	-4.442	105.67	-0.3	-791.93	-0.3	-791.93	0	-856.94
37	38	101.90	-3429.71	70.24	4151.73	-5	89.44	-0.3	-689.80	-0.3	-689.80	0	-739.54
38	38	101.90	-3398.78	464.89	4152.00	-5	114.23	-0.3	-358.02	-0.3	-358.02	0	-388.16
38	39	104.45	-3411.35	338.49	3122.38	-5	43.60	-0.3	-311.54	-0.3	-311.54	0	-334.21
39	39	104.45	-3411.35	-338.49	3122.00	-5	43.57	-0.3	-311.53	-0.3	-311.53	0	-334.19
39	40	107.00	-3398.78	-464.89	4151.73	-5	114.21	-0.3	-358.00	-0.3	-358.00	0	-388.15
40	40	107.00	-3429.71	-70.24	4152.00	-5	89.46	-0.3	-689.83	-0.3	-689.83	0	-739.57
40	41	109.30	-3431.58	-184.26	4444.44	-4.442	105.72	-0.3	-791.97	-0.3	-791.97	0	-856.99
41	41	109.30	-3426.47	262.70	4444.00	-4.442	106.16	-0.3	-791.43	-0.3	-791.43	0	-856.45
41	42	111.65	-3426.47	262.70	3820.41	-3.884	54.53	-0.3	-832.38	-0.3	-832.38	0	-906.61
42	42	111.65	-2395.76	-88.40	1829.00	-3.884	-60.72	-0.3	-485.33	-0.3	-485.33	0	-520.86
42	43	114.00	-2395.76	-88.40	2037.16	-3.325	-12.88	-0.3	-619.06	-0.3	-619.06	0	-679.18
43	43	114.00	-1294.75	-428.66	202.86	-3.325	-199.15	-0.3	-105.80	0	-87.38	0	-78.21
43	44	115.00	-1294.75	-428.66	635.90	-3.088	-152.82	-0.3	-184.63	0	-151.31	0	-151.63
44	44	115.00	-1363.84	7.49	635.90	-3.088	-166.85	-0.3	-189.12	0	-155.04	0	-154.39
44	45	116.00	-1363.84	7.49	628.29	-2.85	-197.48	-0.3	-208.99	0	-169.27	0	-168.60
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pesteoadainferiordecapiteliese2.1). Tensiones a tiempo Tinf

[1; 1[Pv2.txt]

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	-1335.78	52.44	-1019.74	-2.85	-538.42	-0.3	76.55	0	58.22	0	121.02
11	12	35.90	-1335.78	52.44	-1073.00	-3.088	-456.79	-0.3	82.71	0	65.21	0	115.03
12	12	35.90	-1249.01	476.47	-1073.06	-3.088	-439.19	-0.3	88.36	0	69.91	0	118.51
12	13	36.90	-1249.01	476.47	-1554.00	-3.325	-451.07	-0.3	151.64	0	122.17	0	174.76
13	13	36.90	-1320.08	210.82	-1554.42	-3.325	-456.31	-0.3	6.22	-0.3	6.22	0	52.09
13	14	39.25	-1320.08	210.82	-2051.00	-3.884	-392.47	-0.3	83.67	-0.3	83.67	0	123.52
14	14	39.25	-1333.01	100.71	-2050.85	-3.884	-393.94	-0.3	82.17	-0.3	82.17	0	122.02
14	15	41.60	-1333.01	100.71	-2290.00	-4.442	-352.02	-0.3	110.51	-0.3	110.51	0	144.01
15	15	41.60	-1308.66	272.87	-2290.08	-4.442	-349.70	-0.3	112.85	-0.3	112.85	0	146.36
15	16	43.90	-1306.88	164.24	-2836.00	-5	-367.12	-0.3	165.17	-0.3	165.17	0	199.15
[illegible]	16	43.90	-1279.26	313.70	-2836.27	-5	-256.14	-0.3	66.46	-0.3	66.46	0	87.05
	17	46.45	-1297.62	128.99	-3403.00	-5	-295.58	-0.3	91.47	-0.3	91.47	0	116.18
	17	46.45	-1297.62	-128.99	-3403.51	-5	-295.62	-0.3	91.50	-0.3	91.50	0	116.21
[illegible]	18	49.00	-1279.26	-313.70	-2836.00	-5	-256.12	-0.3	66.45	-0.3	66.45	0	87.04
18	18	49.00	-1306.88	-164.24	-2836.30	-5	-367.15	-0.3	165.20	-0.3	165.20	0	199.18
18	19	51.30	-1308.66	-272.87	-2290.00	-4.442	-349.69	-0.3	112.85	-0.3	112.85	0	146.35
19	19	51.30	-1333.01	-100.71	-2290.08	-4.442	-352.03	-0.3	110.52	-0.3	110.52	0	144.02
19	20	53.65	-1333.01	-100.71	-2051.00	-3.884	-393.96	-0.3	82.18	-0.3	82.18	0	122.04
20	20	53.65	-1320.08	-210.82	-2050.85	-3.884	-392.45	-0.3	83.65	-0.3	83.65	0	123.50
20	21	56.00	-1320.08	-210.82	-1554.00	-3.325	-456.24	-0.3	6.17	-0.3	6.17	0	52.03
21	21	56.00	-1249.01	-476.47	-1554.42	-3.325	-451.13	-0.3	151.70	0	122.22	0	174.82
21	22	57.00	-1249.01	-476.47	-1073.00	-3.088	-439.18	-0.3	88.35	0	69.90	0	118.50
22	22	57.00	-1335.78	-52.44	-1073.06	-3.088	-456.80	-0.3	82.72	0	65.22	0	115.04
22	23	58.00	-1335.78	-52.44	-1020.00	-2.85	-538.48	-0.3	76.59	0	58.26	0	121.06
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	33	92.90	-1335.78	52.44	-1019.74	-2.85	-538.42	-0.3	76.55	0	58.22	0	121.02
	34	93.90	-1335.78	52.44	-1073.00	-3.088	-456.79	-0.3	82.71	0	65.21	0	115.03
	34	93.90	-1249.01	476.47	-1073.06	-3.088	-439.19	-0.3	88.36	0	69.91	0	118.51
34	35	94.90	-1249.01	476.47	-1554.00	-3.325	-451.07	-0.3	151.64	0	122.17	0	174.76
35	35	94.90	-1320.08	210.82	-1554.42	-3.325	-456.31	-0.3	6.22	-0.3	6.22	0	52.09
35	36	97.25	-1320.08	210.82	-2051.00	-3.884	-392.47	-0.3	83.67	-0.3	83.67	0	123.52
36	36	97.25	-1333.01	100.71	-2050.85	-3.884	-393.94	-0.3	82.17	-0.3	82.17	0	122.02
36	37	99.60	-1333.01	100.71	-2290.00	-4.442	-352.02	-0.3	110.51	-0.3	110.51	0	144.01
37	37	99.60	-1308.66	272.87	-2290.08	-4.442	-349.70	-0.3	112.85	-0.3	112.85	0	146.36
37	38	101.90	-1306.88	164.24	-2836.00	-5	-367.12	-0.3	165.17	-0.3	165.17	0	199.15
38	38	101.90	-1279.26	313.70	-2836.27	-5	-256.14	-0.3	66.46	-0.3	66.46	0	87.05
38	39	104.45	-1297.62	128.99	-3403.00	-5	-295.58	-0.3	91.47	-0.3	91.47	0	116.18
39	39	104.45	-1297.62	-128.99	-3403.51	-5	-295.62	-0.3	91.50	-0.3	91.50	0	116.21
39	40	107.00	-1279.26	-313.70	-2836.00	-5	-256.12	-0.3	66.45	-0.3	66.45	0	87.04
40	40	107.00	-1306.88	-164.24	-2836.30	-5	-367.15	-0.3	165.20	-0.3	165.20	0	199.18
40	41	109.30	-1308.66	-272.87	-2290.00	-4.442	-349.69	-0.3	112.85	-0.3	112.85	0	146.35
41	41	109.30	-1333.01	-100.71	-2290.08	-4.442	-352.03	-0.3	110.52	-0.3	110.52	0	144.02
41	42	111.65	-1333.01	-100.71	-2051.00	-3.884	-393.96	-0.3	82.18	-0.3	82.18	0	122.04
42	42	111.65	-1320.08	-210.82	-2050.85	-3.884	-392.45	-0.3	83.65	-0.3	83.65	0	123.50
42	43	114.00	-1320.08	-210.82	-1554.00	-3.325	-456.24	-0.3	6.17	-0.3	6.17	0	52.03
43	43	114.00	-1249.01	-476.47	-1554.42	-3.325	-451.13	-0.3	151.70	0	122.22	0	174.82
43	44	115.00	-1249.01	-476.47	-1073.00	-3.088	-439.18	-0.3	88.35	0	69.90	0	118.50
44	44	115.00	-1335.78	-52.44	-1073.06	-3.088	-456.80	-0.3	82.72	0	65.22	0	115.04
44	45	116.00	-1335.78	-52.44	-1020.00	-2.85	-538.48	-0.3	76.59	0	58.26	0	121.06
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pesopropiodevanceslaterales.Artosa): Tensiones a tiempo Tinf

[1; 1]ppvtxt

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	2.50	-0.75	-2.85	-0.35	-0.3	0.09	0	0.12	0	0.17
2	2	0.60	13.19	-71.42	-0.75	-2.85	9.18	-0.3	1.46	0	1.68	0	0.93
2	3	3.38	13.19	-59.87	181.42	-2.85	94.99	-0.3	-19.49	0	-27.65	0	-41.16
3	3	3.38	13.19	-59.87	181.42	-2.85	94.99	-0.3	-19.49	0	-27.65	0	-41.16
3	4	6.15	13.19	-48.32	331.53	-2.85	165.69	-0.3	-36.75	0	-51.82	0	-75.83
4	4	6.15	13.19	-48.32	331.53	-2.85	165.69	-0.3	-36.75	0	-51.82	0	-75.83
4	5	11.70	13.19	-25.21	535.58	-2.85	261.79	-0.3	-60.22	0	-84.67	0	-122.97
5	5	11.70	13.19	-25.21	535.58	-2.85	261.79	-0.3	-60.22	0	-84.67	0	-122.97
5	6	17.25	13.19	-2.11	611.40	-2.85	297.51	-0.3	-68.94	0	-96.88	0	-140.48
6	6	17.25	13.19	-2.11	611.40	-2.85	297.51	-0.3	-68.94	0	-96.88	0	-140.48
6	7	22.80	13.19	21.00	558.98	-2.85	272.82	-0.3	-62.91	0	-88.44	0	-128.37
7	7	22.80	13.19	21.00	558.98	-2.85	272.82	-0.3	-62.91	0	-88.44	0	-128.37
7	8	28.35	13.19	44.10	378.34	-2.85	187.73	-0.3	-42.14	0	-59.36	0	-86.64
8	8	28.35	13.19	44.10	378.34	-2.85	187.73	-0.3	-42.14	0	-59.36	0	-86.64
8	9	31.13	13.19	55.65	239.93	-2.85	122.54	-0.3	-26.22	0	-37.07	0	-54.67
9	9	31.13	13.19	55.65	239.93	-2.85	122.54	-0.3	-26.22	0	-37.07	0	-54.67
9	10	33.90	13.19	67.21	69.46	-2.85	42.25	-0.3	-6.62	0	-9.63	0	-15.29
10	10	33.90	12.28	67.38	69.46	-2.85	41.59	-0.3	-6.71	0	-9.73	0	-15.35
10	11	34.90	12.22	71.54	0.00	-2.85	8.84	-0.3	1.27	0	1.44	0	0.70
11	11	34.90	0.00	72.58	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	72.58	-73.81	-3.088	-12.77	-0.3	11.66	0	9.45	0	11.59
12	12	35.90	23.19	68.77	-73.81	-3.088	-8.06	-0.3	13.17	0	10.70	0	12.52
12	13	36.90	23.19	68.77	-143.28	-3.325	-17.10	-0.3	22.14	0	18.04	0	21.37
13	13	36.90	8.63	72.06	-143.28	-3.325	-22.77	-0.3	19.87	-0.3	19.87	0	24.10
13	14	39.25	8.63	72.06	-312.97	-3.884	-35.74	-0.3	36.91	-0.3	36.91	0	43.00
14	14	39.25	2.62	72.53	-312.97	-3.884	-36.43	-0.3	36.22	-0.3	36.22	0	42.30
14	15	41.60	2.62	72.53	-485.26	-4.442	-47.24	-0.3	50.77	-0.3	50.77	0	57.87
15	15	41.60	12.02	71.58	-485.26	-4.442	-46.34	-0.3	51.67	-0.3	51.67	0	58.77
15	16	43.90	12.02	71.58	-649.91	-5	-58.01	-0.3	63.97	-0.3	63.97	0	71.76
16	16	43.90	20.18	69.71	-649.91	-5	-43.20	-0.3	30.72	-0.3	30.72	0	35.44
16	17	46.45	20.18	69.71	-828.56	-5	-55.34	-0.3	38.90	-0.3	38.90	0	44.91
17	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
21	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
21	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
35	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
35	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	39	104.45	20.18	-69.71	-828.56	-5	-55.34	-0.3	38.90	-0.3	38.90	0	44.91
39	40	107.00	20.18	-69.71	-649.91	-5	-43.20	-0.3	30.72	-0.3	30.72	0	35.44
40	40	107.00	12.02	-71.58	-649.91	-5	-58.01	-0.3	63.97	-0.3	63.97	0	71.76
40	41	109.30	12.02	-71.58	-485.26	-4.442	-46.34	-0.3	51.67	-0.3	51.67	0	58.77
41	41	109.30	2.62	-72.53	-485.26	-4.442	-47.24	-0.3	50.77	-0.3	50.77	0	57.87
41	42	111.65	2.62	-72.53	-312.97	-3.884	-36.43	-0.3	36.22	-0.3	36.22	0	42.30
42	42	111.65	8.63	-72.06	-312.97	-3.884	-35.74	-0.3	36.91	-0.3	36.91	0	43.00
42	43	114.00	8.63	-72.06	-143.28	-3.325	-22.77	-0.3	19.87	-0.3	19.87	0	24.10
43	43	114.00	23.19	-68.77	-143.28	-3.325	-17.10	-0.3	22.14	0	18.04	0	21.37
43	44	115.00	23.19	-68.77	-73.81	-3.088	-8.06	-0.3	13.17	0	10.70	0	12.52
44	44	115.00	0.00	-72.58	-73.81	-3.088	-12.77	-0.3	11.66	0	9.45	0	11.59
44	45	116.00	0.00	-72.58	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	12.22	-71.54	0.00	-2.85	8.84	-0.3	1.27	0	1.44	0	0.70
45	46	117.00	12.28	-67.38	69.46	-2.85	41.59	-0.3	-6.71	0	-9.73	0	-15.35
46	46	117.00	13.19	-67.21	69.46	-2.85	42.25	-0.3	-6.62	0	-9.63	0	-15.29
46	47	119.78	13.19	-55.65	239.93	-2.85	122.54	-0.3	-26.22	0	-37.07	0	-54.67
47	47	119.78	13.19	-55.65	239.93	-2.85	122.54	-0.3	-26.22	0	-37.07	0	-54.67
47	48	122.55	13.19	-44.10	378.34	-2.85	187.73	-0.3	-42.14	0	-59.36	0	-86.64
48	48	122.55	13.19	-44.10	378.34	-2.85	187.73	-0.3	-42.14	0	-59.36	0	-86.64
48	49	128.10	13.19	-21.00	558.98	-2.85	272.82	-0.3	-62.91	0	-88.44	0	-128.37
49	49	128.10	13.19	-21.00	558.98	-2.85	272.82	-0.3	-62.91	0	-88.44	0	-128.37
49	50	133.65	13.19	2.11	611.40	-2.85	297.51	-0.3	-68.94	0	-96.88	0	-140.48
50	50	133.65	13.19	2.11	611.40	-2.85	297.51	-0.3	-68.94	0	-96.88	0	-140.48
50	51	139.20	13.19	25.21	535.58	-2.85	261.79	-0.3	-60.22	0	-84.67	0	-122.97
51	51	139.20	13.19	25.21	535.58	-2.85	261.79	-0.3	-60.22	0	-84.67	0	-122.97
51	52	144.75	13.19	48.32	331.53	-2.85	165.69	-0.3	-36.75	0	-51.82	0	-75.83
52	52	144.75	13.19	48.32	331.53	-2.85	165.69	-0.3	-36.75	0	-51.82	0	-75.83
52	53	147.53	13.19	59.87	181.42	-2.85	94.99	-0.3	-19.49	0	-27.65	0	-41.16
53	53	147.53	13.19	59.87	181.42	-2.85	94.99	-0.3	-19.49	0	-27.65	0	-41.16
53	54	150.30	13.19	71.42	-0.75	-2.85	9.18	-0.3	1.46	0	1.68	0	0.93
54	54	150.30	0.00	-2.50	-0.75	-2.85	-0.35	-0.3	0.09	0	0.12	0	0.17
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo Tinf

[1; 1]prot5.2pretensadoTotal.TOT.Te

Coef. ecc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-656.04	0.00	-278.74	-2.85	-605.60	-0.3	-36.17	0	-32.54	0	26.99
1	2	0.60	-656.04	0.00	-278.74	-2.85	-605.60	-0.3	-36.17	0	-32.54	0	26.99
2	2	0.60	-656.16	-0.66	-278.74	-2.85	-605.69	-0.3	-36.19	0	-32.55	0	26.99
2	3	3.38	-656.16	-0.66	-276.91	-2.85	-604.83	-0.3	-36.40	0	-32.84	0	26.57
3	3	3.38	-656.16	-0.66	-276.91	-2.85	-604.83	-0.3	-36.40	0	-32.84	0	26.57
3	4	6.15	-656.16	-0.66	-275.09	-2.85	-603.97	-0.3	-36.61	0	-33.14	0	26.14
4	4	6.15	-795.32	-0.66	-402.70	-2.85	-764.69	-0.3	-36.40	0	-29.01	0	47.69
4	5	11.70	-795.32	-0.66	-399.05	-2.85	-762.97	-0.3	-36.82	0	-29.60	0	46.85
5	5	11.70	-1391.72	-0.66	-956.45	-2.85	-1456.70	-0.3	-34.75	0	-10.23	0	141.61
5	6	17.25	-1391.72	-0.66	-952.80	-2.85	-1454.98	-0.3	-35.17	0	-10.82	0	140.77
6	6	17.25	-1391.72	-0.66	-952.80	-2.85	-1454.98	-0.3	-35.17	0	-10.82	0	140.77
6	7	22.80	-1391.72	-0.66	-949.15	-2.85	-1453.26	-0.3	-35.59	0	-11.41	0	139.93
7	7	22.80	-1093.52	-0.66	-675.70	-2.85	-1108.87	-0.3	-36.02	0	-20.25	0	93.76
7	8	28.35	-1093.52	-0.66	-672.05	-2.85	-1107.15	-0.3	-36.44	0	-20.84	0	92.91
8	8	28.35	-656.16	-0.66	-260.50	-2.85	-597.10	-0.3	-38.28	0	-35.49	0	22.77
8	9	31.13	-656.16	-0.66	-258.67	-2.85	-596.24	-0.3	-38.49	0	-35.78	0	22.35
9	9	31.13	-656.16	-0.66	-258.67	-2.85	-596.24	-0.3	-38.49	0	-35.78	0	22.35
9	10	33.90	-656.16	-0.66	-256.85	-2.85	-595.38	-0.3	-38.70	0	-36.07	0	21.93
10	10	33.90	-656.09	-9.50	-256.85	-2.85	-595.33	-0.3	-38.70	0	-36.07	0	21.94
10	11	34.90	-656.09	-9.50	-247.63	-2.85	-590.99	-0.3	-39.76	0	-37.55	0	19.81
11	11	34.90	0.00	-0.67	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	-0.67	0.68	-3.088	0.12	-0.3	-0.11	0	-0.09	0	-0.11
12	12	35.90	-0.21	-0.63	0.68	-3.088	0.08	-0.3	-0.12	0	-0.10	0	-0.12
12	13	36.90	-0.21	-0.63	1.32	-3.325	0.16	-0.3	-0.20	0	-0.17	0	-0.20
13	13	36.90	-0.08	-0.66	1.32	-3.325	0.21	-0.3	-0.18	-0.3	-0.18	0	-0.22
13	14	39.25	-0.08	-0.66	2.88	-3.884	0.33	-0.3	-0.34	-0.3	-0.34	0	-0.40
14	14	39.25	-0.02	-0.67	2.88	-3.884	0.34	-0.3	-0.33	-0.3	-0.33	0	-0.39
14	15	41.60	-0.02	-0.67	4.47	-4.442	0.44	-0.3	-0.47	-0.3	-0.47	0	-0.53
15	15	41.60	-0.11	-0.66	4.47	-4.442	0.43	-0.3	-0.48	-0.3	-0.48	0	-0.54
15	16	43.90	-0.11	-0.66	5.99	-5	0.53	-0.3	-0.59	-0.3	-0.59	0	-0.66
	16	43.90	-0.19	-0.64	5.99	-5	0.40	-0.3	-0.28	-0.3	-0.28	0	-0.33
	17	46.45	-0.19	-0.64	7.63	-5	0.51	-0.3	-0.36	-0.3	-0.36	0	-0.41
	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
21	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
21	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
35	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
35	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	39	104.45	-0.19	0.64	7.63	-5	0.51	-0.3	-0.36	-0.3	-0.36	0	-0.41
39	40	107.00	-0.19	0.64	5.99	-5	0.40	-0.3	-0.28	-0.3	-0.28	0	-0.33
40	40	107.00	-0.11	0.66	5.99	-5	0.53	-0.3	-0.59	-0.3	-0.59	0	-0.66
40	41	109.30	-0.11	0.66	4.47	-4.442	0.43	-0.3	-0.48	-0.3	-0.48	0	-0.54
41	41	109.30	-0.02	0.67	4.47	-4.442	0.44	-0.3	-0.47	-0.3	-0.47	0	-0.53
41	42	111.65	-0.02	0.67	2.88	-3.884	0.34	-0.3	-0.33	-0.3	-0.33	0	-0.39
42	42	111.65	-0.08	0.66	2.88	-3.884	0.33	-0.3	-0.34	-0.3	-0.34	0	-0.40
42	43	114.00	-0.08	0.66	1.32	-3.325	0.21	-0.3	-0.18	-0.3	-0.18	0	-0.22
43	43	114.00	-0.21	0.63	1.32	-3.325	0.16	-0.3	-0.20	0	-0.17	0	-0.20
43	44	115.00	-0.21	0.63	0.68	-3.088	0.08	-0.3	-0.12	0	-0.10	0	-0.12
44	44	115.00	0.00	0.67	0.68	-3.088	0.12	-0.3	-0.11	0	-0.09	0	-0.11
44	45	116.00	0.00	0.67	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	-656.09	9.50	-247.63	-2.85	-590.99	-0.3	-39.76	0	-37.55	0	19.81
45	46	117.00	-656.09	9.50	-256.85	-2.85	-595.33	-0.3	-38.70	0	-36.07	0	21.94
46	46	117.00	-656.16	0.66	-256.85	-2.85	-595.38	-0.3	-38.70	0	-36.07	0	21.93
46	47	119.78	-656.16	0.66	-258.67	-2.85	-596.24	-0.3	-38.49	0	-35.78	0	22.35
47	47	119.78	-656.16	0.66	-258.67	-2.85	-596.24	-0.3	-38.49	0	-35.78	0	22.35
47	48	122.55	-656.16	0.66	-260.50	-2.85	-597.10	-0.3	-38.28	0	-35.49	0	22.77
48	48	122.55	-1093.52	0.66	-672.05	-2.85	-1107.15	-0.3	-36.44	0	-20.84	0	92.91
48	49	128.10	-1093.52	0.66	-675.70	-2.85	-1108.87	-0.3	-36.02	0	-20.25	0	93.76
49	49	128.10	-1391.72	0.66	-949.15	-2.85	-1453.26	-0.3	-35.59	0	-11.41	0	139.93
49	50	133.65	-1391.72	0.66	-952.80	-2.85	-1454.98	-0.3	-35.17	0	-10.82	0	140.77
	50	133.65	-1391.72	0.66	-952.80	-2.85	-1454.98	-0.3	-35.17	0	-10.82	0	140.77
	51	139.20	-1391.72	0.66	-956.45	-2.85	-1456.70	-0.3	-34.75	0	-10.23	0	141.61
	51	139.20	-795.32	0.66	-399.05	-2.85	-762.97	-0.3	-36.82	0	-29.60	0	46.85
51	52	144.75	-795.32	0.66	-402.70	-2.85	-764.69	-0.3	-36.40	0	-29.01	0	47.69
52	52	144.75	-656.16	0.66	-275.09	-2.85	-603.97	-0.3	-36.61	0	-33.14	0	26.14
52	53	147.53	-656.16	0.66	-276.91	-2.85	-604.83	-0.3	-36.40	0	-32.84	0	26.57
53	53	147.53	-656.16	0.66	-276.91	-2.85	-604.83	-0.3	-36.40	0	-32.84	0	26.57
53	54	150.30	-656.16	0.66	-278.74	-2.85	-605.69	-0.3	-36.19	0	-32.55	0	26.99
54	54	150.30	-656.04	0.00	-278.74	-2.85	-605.60	-0.3	-36.17	0	-32.54	0	26.99
54	55	150.90	-656.04	0.00	-278.74	-2.85	-605.60	-0.3	-36.17	0	-32.54	0	26.99

[redacted]

(ppartesadovanocentral). Tensiones a tiempo Tinf

[1; 1]ppvcentral

Coef. ecc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m3)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
13	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
13	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
16	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
16	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
17	17	46.45	20.54	-70.96	-843.37	-5	-56.33	-0.3	39.59	-0.3	39.59	0	45.71
17	18	49.00	20.54	-70.96	-661.53	-5	-43.97	-0.3	31.27	-0.3	31.27	0	36.08
18	18	49.00	12.23	-72.85	-661.53	-5	-59.05	-0.3	65.11	-0.3	65.11	0	73.04
18	19	51.30	12.23	-72.85	-493.94	-4.442	-47.17	-0.3	52.60	-0.3	52.60	0	59.82
19	19	51.30	2.67	-73.83	-493.94	-4.442	-48.09	-0.3	51.68	-0.3	51.68	0	58.91
19	20	53.65	2.67	-73.83	-318.57	-3.884	-37.08	-0.3	36.87	-0.3	36.87	0	43.06
20	20	53.65	8.78	-73.35	-318.57	-3.884	-36.38	-0.3	37.57	-0.3	37.57	0	43.76
20	21	56.00	8.78	-73.35	-145.84	-3.325	-23.17	-0.3	20.22	-0.3	20.22	0	24.53
21	21	56.00	23.60	-70.00	-145.84	-3.325	-17.41	-0.3	22.54	0	18.37	0	21.75
21	22	57.00	23.60	-70.00	-75.13	-3.088	-8.21	-0.3	13.40	0	10.89	0	12.74
22	22	57.00	0.00	-73.87	-75.13	-3.088	-13.00	-0.3	11.87	0	9.62	0	11.80
22	23	58.00	0.00	-73.87	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	12.44	-72.82	0.00	-2.85	8.99	-0.3	1.29	0	1.47	0	0.71
23	24	59.00	12.50	-68.66	70.74	-2.85	42.36	-0.3	-6.84	0	-9.91	0	-15.63
24	24	59.00	13.42	-68.48	70.74	-2.85	43.02	-0.3	-6.74	0	-9.81	0	-15.58
24	25	63.11	13.42	-51.36	317.17	-2.85	159.09	-0.3	-35.08	0	-49.48	0	-72.50
25	25	63.11	13.42	-51.36	317.17	-2.85	159.09	-0.3	-35.08	0	-49.48	0	-72.50
25	26	67.23	13.42	-34.24	493.19	-2.85	242.00	-0.3	-55.32	0	-77.82	0	-113.16
26	26	67.23	13.42	-34.24	493.19	-2.85	242.00	-0.3	-55.32	0	-77.82	0	-113.16
26	27	71.34	13.42	-17.12	598.80	-2.85	291.74	-0.3	-67.47	0	-94.82	0	-137.56
27	27	71.34	13.42	-17.12	598.80	-2.85	291.74	-0.3	-67.47	0	-94.82	0	-137.56
27	28	75.45	13.42	0.00	634.00	-2.85	308.32	-0.3	-71.51	0	-100.49	0	-145.69
28	28	75.45	13.42	0.00	634.00	-2.85	308.32	-0.3	-71.51	0	-100.49	0	-145.69
28	29	79.56	13.42	17.12	598.80	-2.85	291.74	-0.3	-67.47	0	-94.82	0	-137.56
29	29	79.56	13.42	17.12	598.80	-2.85	291.74	-0.3	-67.47	0	-94.82	0	-137.56
29	30	83.68	13.42	34.24	493.19	-2.85	242.00	-0.3	-55.32	0	-77.82	0	-113.16
30	30	83.68	13.42	34.24	493.19	-2.85	242.00	-0.3	-55.32	0	-77.82	0	-113.16
30	31	87.79	13.42	51.36	317.17	-2.85	159.09	-0.3	-35.08	0	-49.48	0	-72.50
31	31	87.79	13.42	51.36	317.17	-2.85	159.09	-0.3	-35.08	0	-49.48	0	-72.50
31	32	91.90	13.42	68.48	70.74	-2.85	43.02	-0.3	-6.74	0	-9.81	0	-15.58
32	32	91.90	12.50	68.66	70.74	-2.85	42.36	-0.3	-6.84	0	-9.91	0	-15.63
32	33	92.90	12.44	72.82	0.00	-2.85	8.99	-0.3	1.29	0	1.47	0	0.71
33	33	92.90	0.00	73.87	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	34	93.90	0.00	73.87	-75.13	-3.088	-13.00	-0.3	11.87	0	9.62	0	11.80
34	34	93.90	23.60	70.00	-75.13	-3.088	-8.21	-0.3	13.40	0	10.89	0	12.74
34	35	94.90	23.60	70.00	-145.84	-3.325	-17.41	-0.3	22.54	0	18.37	0	21.75
35	35	94.90	8.78	73.35	-145.84	-3.325	-23.17	-0.3	20.22	-0.3	20.22	0	24.53
35	36	97.25	8.78	73.35	-318.57	-3.884	-36.38	-0.3	37.57	-0.3	37.57	0	43.76
36	36	97.25	2.67	73.83	-318.57	-3.884	-37.08	-0.3	36.87	-0.3	36.87	0	43.06
36	37	99.60	2.67	73.83	-493.94	-4.442	-48.09	-0.3	51.68	-0.3	51.68	0	58.91
37	37	99.60	12.23	72.85	-493.94	-4.442	-47.17	-0.3	52.60	-0.3	52.60	0	59.82
37	38	101.90	12.23	72.85	-661.53	-5	-59.05	-0.3	65.11	-0.3	65.11	0	73.04
38	38	101.90	20.54	70.96	-661.53	-5	-43.97	-0.3	31.27	-0.3	31.27	0	36.08
38	39	104.45	20.54	70.96	-843.37	-5	-56.33	-0.3	39.59	-0.3	39.59	0	45.71
39	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
43	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
43	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(ProtensadoTotal(t=0)). Tensiones a tiempo Tinf

[1; 1]prot4.2pretensadoTOT.Te

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	12	35.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
12	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
13	13	36.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
13	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	14	39.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
14	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	15	41.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
15	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
[illegible]	16	43.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
[illegible]	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
[illegible]	17	46.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
[illegible]	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	18	49.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
18	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	19	51.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
19	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	20	53.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
20	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
21	21	56.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
21	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	22	57.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
22	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	-655.98	8.84	-247.63	-2.85	-590.91	-0.3	-39.74	0	-37.54	0	19.81
23	24	59.00	-655.98	8.84	-256.19	-2.85	-594.94	-0.3	-38.76	0	-36.16	0	21.79
24	24	59.00	-656.04	0.00	-256.19	-2.85	-594.98	-0.3	-38.77	0	-36.17	0	21.79
24	25	63.11	-656.04	0.00	-256.19	-2.85	-594.98	-0.3	-38.77	0	-36.17	0	21.79
25	25	63.11	-954.24	0.00	-529.64	-2.85	-939.38	-0.3	-38.33	0	-27.33	0	67.96
25	26	67.23	-954.24	0.00	-529.64	-2.85	-939.38	-0.3	-38.33	0	-27.33	0	67.96
26	26	67.23	-1232.56	0.00	-1155.42	-2.85	-1435.34	-0.3	4.69	0	40.58	0	196.65
26	27	71.34	-1232.56	0.00	-1155.42	-2.85	-1435.34	-0.3	4.69	0	40.58	0	196.65
27	27	71.34	-1351.84	0.00	-1264.80	-2.85	-1573.10	-0.3	4.86	0	44.12	0	215.11
27	28	75.45	-1351.84	0.00	-1264.80	-2.85	-1573.10	-0.3	4.86	0	44.12	0	215.11
28	28	75.45	-1351.84	0.00	-1264.80	-2.85	-1573.10	-0.3	4.86	0	44.12	0	215.11
28	29	79.56	-1351.84	0.00	-1264.80	-2.85	-1573.10	-0.3	4.86	0	44.12	0	215.11
29	29	79.56	-1232.56	0.00	-1155.42	-2.85	-1435.34	-0.3	4.69	0	40.58	0	196.65
29	30	83.68	-1232.56	0.00	-1155.42	-2.85	-1435.34	-0.3	4.69	0	40.58	0	196.65
30	30	83.68	-954.24	0.00	-529.64	-2.85	-939.38	-0.3	-38.33	0	-27.33	0	67.96
30	31	87.79	-954.24	0.00	-529.64	-2.85	-939.38	-0.3	-38.33	0	-27.33	0	67.96
31	31	87.79	-656.04	0.00	-256.19	-2.85	-594.98	-0.3	-38.77	0	-36.17	0	21.79
31	32	91.90	-656.04	0.00	-256.19	-2.85	-594.98	-0.3	-38.77	0	-36.17	0	21.79
32	32	91.90	-655.98	-8.84	-256.19	-2.85	-594.94	-0.3	-38.76	0	-36.16	0	21.79
32	33	92.90	-655.98	-8.84	-247.63	-2.85	-590.91	-0.3	-39.74	0	-37.54	0	19.81
[illegible]	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	34	93.90	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
34	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
35	35	94.90	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
35	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	36	97.25	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
36	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	37	99.60	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
37	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	38	101.90	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
38	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	39	104.45	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	40	107.00	0.00	0.00	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
40	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	41	109.30	0.00	0.00	0.00	-4.442	0.00	-0.3	0.00	-0.3	0.00	0	0.00
41	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	42	111.65	0.00	0.00	0.00	-3.884	0.00	-0.3	0.00	-0.3	0.00	0	0.00
42	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	-0.3	0.00	0	0.00
43	43	114.00	0.00	0.00	0.00	-3.325	0.00	-0.3	0.00	0	0.00	0	0.00
43	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	44	115.00	0.00	0.00	0.00	-3.088	0.00	-0.3	0.00	0	0.00	0	0.00
44	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
[illegible]	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pesopropiodeprelosa)). Tensiones a tiempo Tinf

[1; 1]PPprelosa

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.63	-0.19	-2.85	-0.09	-0.3	0.02	0	0.03	0	0.04
2	2	0.60	3.33	-16.01	-0.19	-2.85	2.32	-0.3	0.37	0	0.42	0	0.23
2	3	3.38	3.33	-15.10	45.76	-2.85	23.96	-0.3	-4.92	0	-6.97	0	-10.38
3	3	3.38	3.33	-15.10	45.76	-2.85	23.96	-0.3	-4.92	0	-6.97	0	-10.38
3	4	6.15	3.33	-12.19	83.62	-2.85	41.79	-0.3	-9.27	0	-13.07	0	-19.13
4	4	6.15	3.33	-12.19	83.62	-2.85	41.79	-0.3	-9.27	0	-13.07	0	-19.13
4	5	11.70	3.33	-6.36	135.08	-2.85	66.03	-0.3	-15.19	0	-21.35	0	-31.01
5	5	11.70	3.33	-6.36	135.08	-2.85	66.03	-0.3	-15.19	0	-21.35	0	-31.01
5	6	17.25	3.33	-0.53	154.21	-2.85	75.04	-0.3	-17.39	0	-24.43	0	-35.43
6	6	17.25	3.33	-0.53	154.21	-2.85	75.04	-0.3	-17.39	0	-24.43	0	-35.43
6	7	22.80	3.33	5.30	140.99	-2.85	68.81	-0.3	-15.87	0	-22.31	0	-32.38
7	7	22.80	3.33	5.30	140.99	-2.85	68.81	-0.3	-15.87	0	-22.31	0	-32.38
7	8	28.35	3.33	11.12	95.43	-2.85	47.36	-0.3	-10.63	0	-14.97	0	-21.85
8	8	28.35	3.33	11.12	95.43	-2.85	47.36	-0.3	-10.63	0	-14.97	0	-21.85
8	9	31.13	3.33	14.04	60.52	-2.85	30.91	-0.3	-6.61	0	-9.35	0	-13.79
9	9	31.13	3.33	14.04	60.52	-2.85	30.91	-0.3	-6.61	0	-9.35	0	-13.79
9	10	33.90	3.33	16.95	17.52	-2.85	10.66	-0.3	-1.67	0	-2.43	0	-3.86
10	10	33.90	3.10	16.99	17.52	-2.85	10.49	-0.3	-1.69	0	-2.45	0	-3.87
10	11	34.90	3.08	18.04	0.00	-2.85	2.23	-0.3	0.32	0	0.36	0	0.18
11	11	34.90	0.00	18.31	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	12	35.90	-0.19	19.36	-19.15	-3.088	-3.35	-0.3	3.01	0	2.44	0	3.00
12	12	35.90	6.00	18.40	-19.15	-3.088	-2.09	-0.3	3.42	0	2.78	0	3.25
12	13	36.90	6.15	19.45	-38.27	-3.325	-4.58	-0.3	5.91	0	4.82	0	5.71
13	13	36.90	2.04	20.30	-38.27	-3.325	-6.12	-0.3	5.27	-0.3	5.27	0	6.40
13	14	39.25	2.04	20.30	-86.07	-3.884	-9.87	-0.3	10.11	-0.3	10.11	0	11.79
14	14	39.25	0.35	20.40	-86.07	-3.884	-10.06	-0.3	9.92	-0.3	9.92	0	11.59
14	15	41.60	0.35	20.40	-134.53	-4.442	-13.13	-0.3	14.04	-0.3	14.04	0	16.01
15	15	41.60	3.00	20.18	-134.53	-4.442	-12.88	-0.3	14.29	-0.3	14.29	0	16.26
15	16	43.90	3.00	20.18	-180.95	-5	-16.18	-0.3	17.78	-0.3	17.78	0	19.95
16	16	43.90	5.30	19.70	-180.95	-5	-12.04	-0.3	8.54	-0.3	8.54	0	9.85
16	17	46.45	5.30	19.70	-231.44	-5	-15.48	-0.3	10.85	-0.3	10.85	0	12.53
17	17	46.45	5.39	-20.02	-235.18	-5	-15.73	-0.3	11.02	-0.3	11.02	0	12.73
17	18	49.00	5.39	-20.02	-183.88	-5	-12.24	-0.3	8.68	-0.3	8.68	0	10.01
18	18	49.00	3.05	-20.50	-183.88	-5	-16.44	-0.3	18.07	-0.3	18.07	0	20.27
18	19	51.30	3.05	-20.50	-136.72	-4.442	-13.09	-0.3	14.53	-0.3	14.53	0	16.53
19	19	51.30	0.36	-20.73	-136.72	-4.442	-13.35	-0.3	14.27	-0.3	14.27	0	16.27
19	20	53.65	0.36	-20.73	-87.48	-3.884	-10.23	-0.3	10.08	-0.3	10.08	0	11.78
20	20	53.65	2.08	-20.62	-87.48	-3.884	-10.03	-0.3	10.28	-0.3	10.28	0	11.98
20	21	56.00	2.08	-20.62	-38.92	-3.325	-6.22	-0.3	5.36	-0.3	5.36	0	6.51
21	21	56.00	6.26	-19.76	-38.92	-3.325	-4.65	-0.3	6.01	0	4.90	0	5.80
21	22	57.00	6.10	-18.71	-19.48	-3.088	-2.13	-0.3	3.47	0	2.82	0	3.30
22	22	57.00	-0.19	-19.68	-19.48	-3.088	-3.41	-0.3	3.07	0	2.48	0	3.05
22	23	58.00	0.00	-18.63	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	23	58.00	3.14	-18.37	0.00	-2.85	2.27	-0.3	0.33	0	0.37	0	0.18
23	24	59.00	3.15	-17.32	17.84	-2.85	10.68	-0.3	-1.72	0	-2.50	0	-3.94
24	24	59.00	3.39	-17.27	17.84	-2.85	10.85	-0.3	-1.70	0	-2.47	0	-3.93
24	25	63.11	3.39	-12.95	80.00	-2.85	40.13	-0.3	-8.85	0	-12.48	0	-18.29
25	25	63.11	3.39	-12.95	80.00	-2.85	40.13	-0.3	-8.85	0	-12.48	0	-18.29
25	26	67.23	3.39	-8.64	124.39	-2.85	61.04	-0.3	-13.95	0	-19.63	0	-28.54
26	26	67.23	3.39	-8.64	124.39	-2.85	61.04	-0.3	-13.95	0	-19.63	0	-28.54
26	27	71.34	3.39	-4.32	151.03	-2.85	73.59	-0.3	-17.02	0	-23.92	0	-34.69
27	27	71.34	3.39	-4.32	151.03	-2.85	73.59	-0.3	-17.02	0	-23.92	0	-34.69
27	28	75.45	3.39	0.00	159.91	-2.85	77.77	-0.3	-18.04	0	-25.35	0	-36.75
28	28	75.45	3.39	0.00	159.91	-2.85	77.77	-0.3	-18.04	0	-25.35	0	-36.75
28	29	79.56	3.39	4.32	151.03	-2.85	73.59	-0.3	-17.02	0	-23.92	0	-34.69
29	29	79.56	3.39	4.32	151.03	-2.85	73.59	-0.3	-17.02	0	-23.92	0	-34.69
29	30	83.68	3.39	8.64	124.39	-2.85	61.04	-0.3	-13.95	0	-19.63	0	-28.54
30	30	83.68	3.39	8.64	124.39	-2.85	61.04	-0.3	-13.95	0	-19.63	0	-28.54
30	31	87.79	3.39	12.95	80.00	-2.85	40.13	-0.3	-8.85	0	-12.48	0	-18.29
31	31	87.79	3.39	12.95	80.00	-2.85	40.13	-0.3	-8.85	0	-12.48	0	-18.29
31	32	91.90	3.39	17.27	17.84	-2.85	10.85	-0.3	-1.70	0	-2.47	0	-3.93
32	32	91.90	3.15	17.32	17.84	-2.85	10.68	-0.3	-1.72	0	-2.50	0	-3.94
32	33	92.90	3.14	18.37	0.00	-2.85	2.27	-0.3	0.33	0	0.37	0	0.18
33	33	92.90	0.00	18.63	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	34	93.90	-0.19	19.68	-19.48	-3.088	-3.41	-0.3	3.07	0	2.48	0	3.05
34	34	93.90	6.10	18.71	-19.48	-3.088	-2.13	-0.3	3.47	0	2.82	0	3.30
34	35	94.90	6.26	19.76	-38.92	-3.325	-4.65	-0.3	6.01	0	4.90	0	5.80
35	35	94.90	2.08	20.62	-38.92	-3.325	-6.22	-0.3	5.36	-0.3	5.36	0	6.51
35	36	97.25	2.08	20.62	-87.48	-3.884	-10.03	-0.3	10.28	-0.3	10.28	0	11.98
36	36	97.25	0.36	20.73	-87.48	-3.884	-10.23	-0.3	10.08	-0.3	10.08	0	11.78
36	37	99.60	0.36	20.73	-136.72	-4.442	-13.35	-0.3	14.27	-0.3	14.27	0	16.27
37	37	99.60	3.05	20.50	-136.72	-4.442	-13.09	-0.3	14.53	-0.3	14.53	0	16.53
37	38	101.90	3.05	20.50	-183.88	-5	-16.44	-0.3	18.07	-0.3	18.07	0	20.27
38	38	101.90	5.39	20.02	-183.88	-5	-12.24	-0.3	8.68	-0.3	8.68	0	10.01
38	39	104.45	5.39	20.02	-235.18	-5	-15.73	-0.3	11.02	-0.3	11.02	0	12.73
39	39	104.45	5.30	-19.70	-231.44	-5	-15.48	-0.3	10.85	-0.3	10.85	0	12.53
39	40	107.00	5.30	-19.70	-180.95	-5	-12.04	-0.3	8.54	-0.3	8.54	0	9.85
40	40	107.00	3.00	-20.18	-180.95	-5	-16.18	-0.3	17.78	-0.3	17.78	0	19.95
40	41	109.30	3.00	-20.18	-134.53	-4.442	-12.88	-0.3	14.29	-0.3	14.29	0	16.26
41	41	109.30	0.35	-20.40	-134.53	-4.442	-13.13	-0.3	14.04	-0.3	14.04	0	16.01
41	42	111.65	0.35	-20.40	-86.07	-3.884	-10.06	-0.3	9.92	-0.3	9.92	0	11.59
42	42	111.65	2.04	-20.30	-86.07	-3.884	-9.87	-0.3	10.11	-0.3	10.11	0	11.79
42	43	114.00	2.04	-20.30	-38.27	-3.325	-6.12	-0.3	5.27	-0.3	5.27	0	6.40
43	43	114.00	6.15	-19.45	-38.27	-3.325	-4.58	-0.3	5.91	0	4.82	0	5.71
43	44	115.00	6.00	-18.40	-19.15	-3.088	-2.09	-0.3	3.42	0	2.78	0	3.25
44	44	115.00	-0.19	-19.36	-19.15	-3.088	-3.35	-0.3	3.01	0	2.44	0	3.00
44	45	116.00	0.00	-18.31	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	45	116.00	3.08	-18.04	0.00	-2.85	2.23	-0.3	0.32	0	0.36	0	0.18
45	46	117.00	3.10	-16.99	17.52	-2.85	10.49	-0.3	-1.69	0	-2.45	0	-3.87
46	46	117.00	3.33	-16.95	17.52	-2.85	10.66	-0.3	-1.67	0	-2.43	0	-3.86
46	47	119.78	3.33	-14.04	60.52	-2.85	30.91	-0.3	-6.61	0	-9.35	0	-13.79
47	47	119.78	3.33	-14.04	60.52	-2.85	30.91	-0.3	-6.61	0	-9.35	0	-13.79
47	48	122.55	3.33	-11.12	95.43	-2.85	47.36	-0.3	-10.63	0	-14.97	0	-21.85
48	48	122.55	3.33	-11.12	95.43	-2.85	47.36	-0.3	-10.63	0	-14.97	0	-21.85
48	49	128.10	3.33	-5.30	140.99	-2.85	68.81	-0.3	-15.87	0	-22.31	0	-32.38
49	49	128.10	3.33	-5.30	140.99	-2.85	68.81	-0.3	-15.87	0	-22.31	0	-32.38
49	50	133.65	3.33	0.53	154.21	-2.85	75.04	-0.3	-17.39	0	-24.43	0	-35.43
50	50	133.65	3.33	0.53	154.21	-2.85	75.04	-0.3	-17.39	0	-24.43	0	-35.43
50	51	139.20	3.33	6.36	135.08	-2.85	66.03	-0.3	-15.19	0	-21.35	0	-31.01
51	51	139.20	3.33	6.36	135.08	-2.85	66.03	-0.3	-15.19	0	-21.35	0	-31.01
51	52	144.75	3.33	12.19	83.62	-2.85	41.79	-0.3	-9.27	0	-13.07	0	-19.13
52	52	144.75	3.33	12.19	83.62	-2.85	41.79	-0.3	-9.27	0	-13.07	0	-19.13
52	53	147.53	3.33	15.10	45.76	-2.85	23.96	-0.3	-4.92	0	-6.97	0	-10.38
53	53	147.53	3.33	15.10	45.76	-2.85	23.96	-0.3	-4.92	0	-6.97	0	-10.38
53	54	150.30	3.33	18.01	-0.19	-2.85	2.32	-0.3	0.37	0	0.42	0	0.23
54	54	150.30	0.00	-0.63	-0.19	-2.85	-0.09	-0.3	0.02	0	0.03	0	0.04
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo Tinf

[1: 1]pre0 ...TOT.Te

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-0.88	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-0.88	2.45	-2.85	1.15	-0.3	-0.28	0	-0.39	0	-0.57
3	3	3.38	0.00	-0.88	2.45	-2.85	1.15	-0.3	-0.28	0	-0.39	0	-0.57
3	4	6.15	0.00	-0.88	4.90	-2.85	2.31	-0.3	-0.56	0	-0.79	0	-1.13
4	4	6.15	0.00	-0.88	4.90	-2.85	2.31	-0.3	-0.56	0	-0.79	0	-1.13
4	5	11.70	0.00	-0.88	9.80	-2.85	4.62	-0.3	-1.13	0	-1.58	0	-2.26
5	5	11.70	0.00	-0.88	9.80	-2.85	4.62	-0.3	-1.13	0	-1.58	0	-2.26
5	6	17.25	0.00	-0.88	14.70	-2.85	6.92	-0.3	-1.69	0	-2.37	0	-3.40
6	6	17.25	0.00	-0.88	14.70	-2.85	6.92	-0.3	-1.69	0	-2.37	0	-3.40
6	7	22.80	0.00	-0.88	19.60	-2.85	9.23	-0.3	-2.25	0	-3.16	0	-4.53
7	7	22.80	0.00	-0.88	19.60	-2.85	9.23	-0.3	-2.25	0	-3.16	0	-4.53
7	8	28.35	0.00	-0.88	24.49	-2.85	11.53	-0.3	-2.82	0	-3.94	0	-5.66
8	8	28.35	0.00	-0.88	24.49	-2.85	11.53	-0.3	-2.82	0	-3.94	0	-5.66
8	9	31.13	0.00	-0.88	26.94	-2.85	12.69	-0.3	-3.10	0	-4.34	0	-6.22
9	9	31.13	0.00	-0.88	26.94	-2.85	12.69	-0.3	-3.10	0	-4.34	0	-6.22
9	10	33.90	0.00	-0.88	29.39	-2.85	13.84	-0.3	-3.38	0	-4.73	0	-6.79
10	10	33.90	-545.99	-8.24	-209.51	-2.85	-493.43	-0.3	-32.69	0	-30.70	0	17.28
10	11	34.90	-545.99	-8.24	-201.50	-2.85	-489.66	-0.3	-33.61	0	-31.99	0	15.43
11	11	34.90	-536.80	-100.09	-201.50	-2.85	-172.42	-0.3	-5.07	0	-5.14	0	12.18
11	12	35.90	-536.80	-100.09	-102.28	-3.088	-126.66	-0.3	-18.73	0	-15.90	0	-5.41
12	12	35.90	-540.64	76.67	-102.28	-3.088	-127.44	-0.3	-18.98	0	-16.10	0	-5.57
12	13	36.90	-540.64	76.67	-179.23	-3.325	-122.22	-0.3	-5.91	0	-5.34	0	5.09
13	13	36.90	0.06	-0.88	-8.43	-3.325	-1.41	-0.3	1.10	-0.3	1.10	0	1.35
13	14	39.25	0.06	-0.88	-6.36	-3.884	-0.74	-0.3	0.74	-0.3	0.74	0	0.86
14	14	39.25	0.13	-0.87	-6.36	-3.884	-0.73	-0.3	0.74	-0.3	0.74	0	0.87
14	15	41.60	0.13	-0.87	-4.28	-4.442	-0.41	-0.3	0.46	-0.3	0.46	0	0.52
15	15	41.60	0.01	-0.88	-4.28	-4.442	-0.42	-0.3	0.45	-0.3	0.45	0	0.51
15	16	43.90	0.01	-0.88	-2.25	-5	-0.20	-0.3	0.22	-0.3	0.22	0	0.25
	16	43.90	-0.09	-0.88	-2.25	-5	-0.16	-0.3	0.10	-0.3	0.10	0	0.11
	17	46.45	-0.09	-0.88	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
	17	46.45	43.25	4.30	-33.60	-5	-0.15	-0.3	3.68	-0.3	3.68	0	3.92
[illegible]	18	49.00	43.25	4.30	-44.62	-5	-0.90	-0.3	4.18	-0.3	4.18	0	4.50
18	18	49.00	43.46	-0.71	-44.62	-5	-0.41	-0.3	7.97	-0.3	7.97	0	8.50
18	19	51.30	43.46	-0.71	-42.98	-4.442	-0.04	-0.3	8.64	-0.3	8.64	0	9.27
19	19	51.30	43.00	-6.35	-42.98	-4.442	-0.08	-0.3	8.60	-0.3	8.60	0	9.23
19	20	53.65	43.00	-6.35	-27.91	-3.884	1.67	-0.3	8.15	-0.3	8.15	0	8.69
20	20	53.65	43.38	-2.76	-27.91	-3.884	1.71	-0.3	8.19	-0.3	8.19	0	8.73
20	21	56.00	43.38	-2.76	-21.40	-3.325	2.83	-0.3	9.20	-0.3	9.20	0	9.83
21	21	56.00	-497.49	-71.37	-192.21	-3.325	-116.50	-0.3	-1.48	0	-1.70	0	8.58
21	22	57.00	-497.49	-71.37	-120.61	-3.088	-121.86	-0.3	-13.28	0	-11.43	0	-0.96
22	22	57.00	-494.22	91.32	-120.61	-3.088	-121.19	-0.3	-13.07	0	-11.25	0	-0.83
22	23	58.00	-494.22	91.32	-210.91	-2.85	-164.10	-0.3	-0.30	0	-1.25	0	15.66
23	23	58.00	-502.54	6.77	-210.91	-2.85	-462.68	-0.3	-28.01	0	-25.34	0	20.08
23	24	59.00	-502.54	6.77	-217.45	-2.85	-465.76	-0.3	-27.26	0	-24.29	0	21.59
24	24	59.00	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
24	25	63.11	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
25	25	63.11	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
25	26	67.23	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
26	26	67.23	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
26	27	71.34	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
27	27	71.34	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
27	28	75.45	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
28	28	75.45	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
28	29	79.56	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
29	29	79.56	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
29	30	83.68	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
30	30	83.68	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
30	31	87.79	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
31	31	87.79	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
31	32	91.90	43.47	0.00	21.45	-2.85	41.53	-0.3	2.05	0	1.68	0	-2.48
32	32	91.90	-502.54	-6.77	-217.45	-2.85	-465.76	-0.3	-27.26	0	-24.29	0	21.59
[illegible]	33	92.90	-502.54	-6.77	-210.91	-2.85	-462.68	-0.3	-28.01	0	-25.34	0	20.08
	33	92.90	-494.22	-91.32	-210.91	-2.85	-164.10	-0.3	-0.30	0	-1.25	0	15.66
	34	93.90	-494.22	-91.32	-120.61	-3.088	-121.19	-0.3	-13.07	0	-11.25	0	-0.83
	34	93.90	-497.49	71.37	-120.61	-3.088	-121.86	-0.3	-13.28	0	-11.43	0	-0.96
34	35	94.90	-497.49	71.37	-192.21	-3.325	-116.50	-0.3	-1.48	0	-1.70	0	8.58
35	35	94.90	43.38	2.76	-21.40	-3.325	2.83	-0.3	9.20	-0.3	9.20	0	9.83
35	36	97.25	43.38	2.76	-27.91	-3.884	1.71	-0.3	8.19	-0.3	8.19	0	8.73
36	36	97.25	43.00	6.35	-27.91	-3.884	1.67	-0.3	8.15	-0.3	8.15	0	8.69
36	37	99.60	43.00	6.35	-42.98	-4.442	-0.08	-0.3	8.60	-0.3	8.60	0	9.23
37	37	99.60	43.46	0.71	-42.98	-4.442	-0.04	-0.3	8.64	-0.3	8.64	0	9.27
37	38	101.90	43.46	0.71	-44.62	-5	-0.41	-0.3	7.97	-0.3	7.97	0	8.50
38	38	101.90	43.25	-4.30	-44.62	-5	-0.90	-0.3	4.18	-0.3	4.18	0	4.50
38	39	104.45	43.25	-4.30	-33.60	-5	-0.15	-0.3	3.68	-0.3	3.68	0	3.92
39	39	104.45	-0.09	0.88	0.00	-5	0.00	-0.3	0.00	-0.3	0.00	0	0.00
39	40	107.00	-0.09	0.88	-2.25	-5	-0.16	-0.3	0.10	-0.3	0.10	0	0.11
40	40	107.00	0.01	0.88	-2.25	-5	-0.20	-0.3	0.22	-0.3	0.22	0	0.25
40	41	109.30	0.01	0.88	-4.28	-4.442	-0.42	-0.3	0.45	-0.3	0.45	0	0.51
41	41	109.30	0.13	0.87	-4.28	-4.442	-0.41	-0.3	0.46	-0.3	0.46	0	0.52
41	42	111.65	0.13	0.87	-6.36	-3.884	-0.73	-0.3	0.74	-0.3	0.74	0	0.87
42	42	111.65	0.06	0.88	-6.36	-3.884	-0.74	-0.3	0.74	-0.3	0.74	0	0.86
42	43	114.00	0.06	0.88	-8.43	-3.325	-1.41	-0.3	1.10	-0.3	1.10	0	1.35
43	43	114.00	-540.64	-76.67	-179.23	-3.325	-122.22	-0.3	-5.91	0	-5.34	0	5.09
43	44	115.00	-540.64	-76.67	-102.28	-3.088	-127.44	-0.3	-18.98	0	-16.10	0	-5.57
44	44	115.00	-536.80	100.09	-102.28	-3.088	-126.66	-0.3	-18.73	0	-15.90	0	-5.41
44	45	116.00	-536.80	100.09	-201.50	-2.85	-172.42	-0.3	-5.07	0	-5.14	0	12.18
45	45	116.00	-545.99	8.24	-201.50	-2.85	-489.66	-0.3	-33.61	0	-31.99	0	15.43
45	46	117.00	-545.99	8.24	-209.51	-2.85	-493.43	-0.3	-32.69	0	-30.70	0	17.28
46	46	117.00	0.00	0.88	29.39	-2.85	13.84	-0.3	-3.38	0	-4.73	0	-6.79
46	47	119.78	0.00	0.88	26.94	-2.85	12.69	-0.3	-3.10	0	-4.34	0	-6.22
47	47	119.78	0.00	0.88	26.94	-2.85	12.69	-0.3	-3.10	0	-4.34	0	-6.22
47	48	122.55	0.00	0.88	24.49	-2.85	11.53	-0.3	-2.82	0	-3.94	0	-5.66
48	48	122.55	0.00	0.88	24.49	-2.85	11.53	-0.3	-2.82	0	-3.94	0	-5.66
48	49	128.10	0.00	0.88	19.60	-2.85	9.23	-0.3	-2.25	0	-3.16	0	-4.53
49	49	128.10	0.00	0.88	19.60	-2.85	9.23	-0.3	-2.25	0	-3.16	0	-4.53
	50	133.65	0.00	0.88	14.70	-2.85	6.92	-0.3	-1.69	0	-2.37	0	-3.40
	50	133.65	0.00	0.88	14.70	-2.85	6.92	-0.3	-1.69	0	-2.37	0	-3.40
	51	139.20	0.00	0.88	9.80	-2.85	4.62	-0.3	-1.13	0	-1.58	0	-2.26
[illegible]	51	139.20	0.00	0.88	9.80	-2.85	4.62	-0.3	-1.13	0	-1.58	0	-2.26
51	52	144.75	0.00	0.88	4.90	-2.85	2.31	-0.3	-0.56	0	-0.79	0	-1.13
52	52	144.75	0.00	0.88	4.90	-2.85	2.31	-0.3	-0.56	0	-0.79	0	-1.13
52	53	147.53	0.00	0.88	2.45	-2.85	1.15	-0.3	-0.28	0	-0.39	0	-0.57
53	53	147.53	0.00	0.88	2.45	-2.85	1.15	-0.3	-0.28	0	-0.39	0	-0.57
53	54	150.30	0.00	0.88	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pplosacercadecapitelesFASE4.2). Tensiones a tiempo Tinf

[1: 1]pplosa1

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-1.09	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-1.09	3.02	-2.85	1.42	-0.3	-0.35	0	-0.49	0	-0.70
3	3	3.38	0.00	-1.09	3.02	-2.85	1.42	-0.3	-0.35	0	-0.49	0	-0.70
3	4	6.15	0.00	-1.09	6.05	-2.85	2.85	-0.3	-0.70	0	-0.97	0	-1.40
4	4	6.15	0.00	-1.09	6.05	-2.85	2.85	-0.3	-0.70	0	-0.97	0	-1.40
4	5	11.70	0.00	-1.09	12.10	-2.85	5.70	-0.3	-1.39	0	-1.95	0	-2.80
5	5	11.70	0.00	-1.09	12.10	-2.85	5.70	-0.3	-1.39	0	-1.95	0	-2.80
5	6	17.25	0.00	-1.09	18.15	-2.85	8.55	-0.3	-2.09	0	-2.92	0	-4.19
6	6	17.25	0.00	-1.09	18.15	-2.85	8.55	-0.3	-2.09	0	-2.92	0	-4.19
6	7	22.80	0.00	-1.09	24.19	-2.85	11.39	-0.3	-2.78	0	-3.89	0	-5.59
7	7	22.80	0.00	-1.09	24.19	-2.85	11.39	-0.3	-2.78	0	-3.89	0	-5.59
7	8	28.35	0.00	-1.09	30.24	-2.85	14.24	-0.3	-3.48	0	-4.87	0	-6.99
8	8	28.35	0.00	-1.09	30.24	-2.85	14.24	-0.3	-3.48	0	-4.87	0	-6.99
8	9	31.13	0.00	10.57	17.10	-2.85	8.05	-0.3	-1.97	0	-2.75	0	-3.95
9	9	31.13	0.00	10.57	17.10	-2.85	8.05	-0.3	-1.97	0	-2.75	0	-3.95
9	10	33.90	0.00	22.22	-28.39	-2.85	-13.37	-0.3	3.26	0	4.57	0	6.56
10	10	33.90	-0.30	22.22	-28.39	-2.85	-13.59	-0.3	3.23	0	4.54	0	6.54
10	11	34.90	-0.36	26.42	-52.71	-2.85	-25.09	-0.3	6.02	0	8.44	0	12.16
11	11	34.90	-4.80	25.98	-52.71	-2.85	-12.28	-0.3	8.71	0	6.93	0	9.02
11	12	35.90	-5.58	30.18	-81.27	-3.088	-15.19	-0.3	12.48	0	10.10	0	12.54
12	12	35.90	4.36	30.38	-81.27	-3.088	-13.17	-0.3	13.12	0	10.64	0	12.93
12	13	36.90	4.96	34.58	-114.08	-3.325	-16.01	-0.3	16.83	0	13.70	0	16.50
13	13	36.90	-2.22	34.86	-114.08	-3.325	-19.47	-0.3	14.47	-0.3	14.47	0	17.84
13	14	39.25	-2.22	34.86	-196.18	-3.884	-23.28	-0.3	22.26	-0.3	22.26	0	26.07
14	14	39.25	-5.10	34.56	-196.18	-3.884	-23.61	-0.3	21.93	-0.3	21.93	0	25.74
14	15	41.60	-5.10	34.56	-278.28	-4.442	-27.72	-0.3	28.48	-0.3	28.48	0	32.55
15	15	41.60	-0.57	34.93	-278.28	-4.442	-27.29	-0.3	28.92	-0.3	28.92	0	32.99
15	16	43.90	-0.57	34.93	-358.63	-5	-32.61	-0.3	34.70	-0.3	34.70	0	38.99
16	16	43.90	3.46	34.76	-358.63	-5	-24.22	-0.3	16.57	-0.3	16.57	0	19.18
16	17	46.45	3.46	34.76	-447.71	-5	-30.27	-0.3	20.65	-0.3	20.65	0	23.90
17	17	46.45	-0.52	-30.19	-376.48	-5	-25.63	-0.3	17.19	-0.3	17.19	0	19.93
17	18	49.00	-0.52	-30.19	-299.13	-5	-20.37	-0.3	13.66	-0.3	13.66	0	15.83
18	18	49.00	-3.99	-29.93	-299.13	-5	-27.50	-0.3	28.65	-0.3	28.65	0	32.23
18	19	51.30	-3.99	-29.93	-230.29	-4.442	-22.92	-0.3	23.59	-0.3	23.59	0	26.96
19	19	51.30	-7.84	-29.15	-230.29	-4.442	-23.29	-0.3	23.22	-0.3	23.22	0	26.59
19	20	53.65	-7.84	-29.15	-161.04	-3.884	-19.80	-0.3	17.58	-0.3	17.58	0	20.71
20	20	53.65	-5.40	-29.70	-161.04	-3.884	-19.52	-0.3	17.86	-0.3	17.86	0	20.99
20	21	56.00	-5.40	-29.70	-91.09	-3.325	-16.09	-0.3	11.02	-0.3	11.02	0	13.71
21	21	56.00	0.79	-30.18	-91.09	-3.325	-13.34	-0.3	13.25	0	10.79	0	13.06
21	22	57.00	0.19	-25.98	-62.72	-3.088	-10.81	-0.3	9.92	0	8.04	0	9.85
22	22	57.00	-8.12	-24.68	-62.72	-3.088	-12.50	-0.3	9.38	0	7.59	0	9.52
22	23	58.00	-7.34	-20.48	-39.76	-2.85	-10.17	-0.3	6.30	0	5.00	0	6.64
23	23	58.00	-3.79	-21.42	-39.76	-2.85	-21.47	-0.3	4.18	0	5.95	0	8.97
23	24	59.00	-3.73	-17.22	-20.44	-2.85	-12.32	-0.3	1.96	0	2.85	0	4.51
24	24	59.00	-3.50	-17.27	-20.44	-2.85	-12.16	-0.3	1.99	0	2.88	0	4.52
24	25	63.11	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
25	25	63.11	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
25	26	67.23	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
26	26	67.23	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
26	27	71.34	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
27	27	71.34	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
27	28	75.45	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
28	28	75.45	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
28	29	79.56	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
29	29	79.56	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
29	30	83.68	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
30	30	83.68	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
30	31	87.79	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
31	31	87.79	-3.50	0.00	15.08	-2.85	4.57	-0.3	-2.10	0	-2.84	0	-3.68
31	32	91.90	-3.50	17.27	-20.44	-2.85	-12.16	-0.3	1.99	0	2.88	0	4.52
32	32	91.90	-3.73	17.22	-20.44	-2.85	-12.32	-0.3	1.96	0	2.85	0	4.51
32	33	92.90	-3.79	21.42	-39.76	-2.85	-21.47	-0.3	4.18	0	5.95	0	8.97
33	33	92.90	-7.34	20.48	-39.76	-2.85	-10.17	-0.3	6.30	0	5.00	0	6.64
33	34	93.90	-8.12	24.68	-62.72	-3.088	-12.50	-0.3	9.38	0	7.59	0	9.52
34	34	93.90	0.19	25.98	-62.72	-3.088	-10.81	-0.3	9.92	0	8.04	0	9.85
34	35	94.90	0.79	30.18	-91.09	-3.325	-13.34	-0.3	13.25	0	10.79	0	13.06
35	35	94.90	-5.40	29.70	-91.09	-3.325	-16.09	-0.3	11.02	-0.3	11.02	0	13.71
35	36	97.25	-5.40	29.70	-161.04	-3.884	-19.52	-0.3	17.86	-0.3	17.86	0	20.99
36	36	97.25	-7.84	29.15	-161.04	-3.884	-19.80	-0.3	17.58	-0.3	17.58	0	20.71
36	37	99.60	-7.84	29.15	-230.29	-4.442	-23.29	-0.3	23.22	-0.3	23.22	0	26.59
37	37	99.60	-3.99	29.93	-230.29	-4.442	-22.92	-0.3	23.59	-0.3	23.59	0	26.96
37	38	101.90	-3.99	29.93	-299.13	-5	-27.50	-0.3	28.65	-0.3	28.65	0	32.23
38	38	101.90	-0.52	30.19	-299.13	-5	-20.37	-0.3	13.66	-0.3	13.66	0	15.83
38	39	104.45	-0.52	30.19	-376.48	-5	-25.63	-0.3	17.19	-0.3	17.19	0	19.93
39	39	104.45	3.46	-34.76	-447.71	-5	-30.27	-0.3	20.65	-0.3	20.65	0	23.90
39	40	107.00	3.46	-34.76	-358.63	-5	-24.22	-0.3	16.57	-0.3	16.57	0	19.18
40	40	107.00	-0.57	-34.93	-358.63	-5	-32.61	-0.3	34.70	-0.3	34.70	0	38.99
40	41	109.30	-0.57	-34.93	-278.28	-4.442	-27.29	-0.3	28.92	-0.3	28.92	0	32.99
41	41	109.30	-5.10	-34.56	-278.28	-4.442	-27.72	-0.3	28.48	-0.3	28.48	0	32.55
41	42	111.65	-5.10	-34.56	-196.18	-3.884	-23.61	-0.3	21.93	-0.3	21.93	0	25.74
42	42	111.65	-2.22	-34.86	-196.18	-3.884	-23.28	-0.3	22.26	-0.3	22.26	0	26.07
42	43	114.00	-2.22	-34.86	-114.08	-3.325	-19.47	-0.3	14.47	-0.3	14.47	0	17.84
43	43	114.00	4.96	-34.58	-114.08	-3.325	-16.01	-0.3	16.83	0	13.70	0	16.50
43	44	115.00	4.36	-30.38	-81.27	-3.088	-13.17	-0.3	13.12	0	10.64	0	12.93
44	44	115.00	-5.58	-30.18	-81.27	-3.088	-15.19	-0.3	12.48	0	10.10	0	12.54
44	45	116.00	-4.80	-25.98	-52.71	-2.85	-12.28	-0.3	8.71	0	6.93	0	9.02
45	45	116.00	-0.36	-26.42	-52.71	-2.85	-25.09	-0.3	6.02	0	8.44	0	12.16
45	46	117.00	-0.30	-22.22	-28.39	-2.85	-13.59	-0.3	3.23	0	4.54	0	6.54
46	46	117.00	0.00	-22.22	-28.39	-2.85	-13.37	-0.3	3.26	0	4.57	0	6.56
46	47	119.78	0.00	-10.57	17.10	-2.85	8.05	-0.3	-1.97	0	-2.75	0	-3.95
47	47	119.78	0.00	-10.57	17.10	-2.85	8.05	-0.3	-1.97	0	-2.75	0	-3.95
47	48	122.55	0.00	1.09	30.24	-2.85	14.24	-0.3	-3.48	0	-4.87	0	-6.99
48	48	122.55	0.00	1.09	30.24	-2.85	14.24	-0.3	-3.48	0	-4.87	0	-6.99
48	49	128.10	0.00	1.09	24.19	-2.85	11.39	-0.3	-2.78	0	-3.89	0	-5.59
49	49	128.10	0.00	1.09	24.19	-2.85	11.39	-0.3	-2.78	0	-3.89	0	-5.59
49	50	133.65	0.00	1.09	18.15	-2.85	8.55	-0.3	-2.09	0	-2.92	0	-4.19
50	50	133.65	0.00	1.09	18.15	-2.85	8.55	-0.3	-2.09	0	-2.92	0	-4.19
50	51	139.20	0.00	1.09	12.10	-2.85	5.70	-0.3	-1.39	0	-1.95	0	-2.80
51	51	139.20	0.00	1.09	12.10	-2.85	5.70	-0.3	-1.39	0	-1.95	0	-2.80
51	52	144.75	0.00	1.09	6.05	-2.85	2.85	-0.3	-0.70	0	-0.97	0	-1.40
52	52	144.75	0.00	1.09	6.05	-2.85	2.85	-0.3	-0.70	0	-0.97	0	-1.40
52	53	147.53	0.00	1.09	3.02	-2.85	1.42	-0.3	-0.35	0	-0.49	0	-0.70
53	53	147.53	0.00	1.09	3.02	-2.85	1.42	-0.3	-0.35	0	-0.49	0	-0.70
53	54	150.30	0.00	1.09	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(DESBLOQUEOfase6.1). Tensiones a tiempo Tinf

{ 1; 1|desbloqueo

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-0.34	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-0.34	0.95	-2.85	0.45	-0.3	-0.11	0	-0.15	0	-0.22
3	3	3.38	0.00	-0.34	0.95	-2.85	0.45	-0.3	-0.11	0	-0.15	0	-0.22
3	4	6.15	0.00	-0.34	1.90	-2.85	0.89	-0.3	-0.22	0	-0.31	0	-0.44
4	4	6.15	0.00	-0.34	1.90	-2.85	0.89	-0.3	-0.22	0	-0.31	0	-0.44
4	5	11.70	0.00	-0.34	3.80	-2.85	1.79	-0.3	-0.44	0	-0.61	0	-0.88
5	5	11.70	0.00	-0.34	3.80	-2.85	1.79	-0.3	-0.44	0	-0.61	0	-0.88
5	6	17.25	0.00	-0.34	5.70	-2.85	2.68	-0.3	-0.66	0	-0.92	0	-1.32
6	6	17.25	0.00	-0.34	5.70	-2.85	2.68	-0.3	-0.66	0	-0.92	0	-1.32
6	7	22.80	0.00	-0.34	7.60	-2.85	3.58	-0.3	-0.87	0	-1.22	0	-1.76
7	7	22.80	-0.03	-0.34	7.60	-2.85	3.56	-0.3	-0.88	0	-1.23	0	-1.76
7	8	28.35	-0.03	-0.34	9.50	-2.85	4.45	-0.3	-1.10	0	-1.53	0	-2.20
8	8	28.35	-0.05	-0.34	9.50	-2.85	4.62	-0.3	-1.71	-0.3	-1.45	0	-2.08
8	9	31.13	-0.05	-0.34	10.45	-2.85	5.09	-0.3	-1.88	-0.3	-1.59	0	-2.29
9	9	31.13	0.00	-0.34	10.45	-2.85	5.10	-0.3	-1.87	-0.3	-1.58	0	-2.28
9	10	33.90	0.00	-0.34	11.40	-2.85	5.56	-0.3	-2.04	-0.3	-1.72	0	-2.49
10	10	33.90	0.07	-0.34	11.40	-2.85	5.58	-0.3	-2.02	-0.3	-1.70	0	-2.47
10	11	34.90	0.07	-0.34	11.74	-2.85	5.75	-0.3	-2.08	-0.3	-1.76	0	-2.54
11	11	34.90	0.13	-0.32	11.74	-2.85	2.44	-0.3	-1.80	-0.3	-1.67	0	-2.13
11	12	35.90	0.13	-0.32	12.08	-3.088	2.05	-0.3	-1.72	-0.3	-1.59	0	-1.97
12	12	35.90	0.03	-0.34	12.08	-3.088	2.03	-0.3	-1.74	-0.3	-1.60	0	-1.98
12	13	36.90	0.03	-0.34	12.43	-3.325	1.81	-0.3	-1.66	-0.3	-1.54	0	-1.85
13	13	36.90	0.05	-0.34	12.43	-3.325	2.09	-0.3	-1.61	-0.3	-1.61	0	-1.97
13	14	39.25	0.05	-0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
14	14	39.25	0.05	-0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
14	15	41.60	0.05	-0.34	14.03	-4.442	1.38	-0.3	-1.46	-0.3	-1.46	0	-1.66
15	15	41.60	0.01	-0.34	14.03	-4.442	1.37	-0.3	-1.46	-0.3	-1.46	0	-1.66
15	16	43.90	0.01	-0.34	14.82	-5	1.35	-0.3	-1.43	-0.3	-1.43	0	-1.61
[illegible]	16	43.90	-0.03	-0.34	14.82	-5	1.01	-0.3	-0.68	-0.3	-0.68	0	-0.79
[illegible]	17	46.45	-0.03	-0.34	15.69	-5	1.07	-0.3	-0.72	-0.3	-0.72	0	-0.83
[illegible]	17	46.45	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
17	18	49.00	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
18	18	49.00	0.00	0.00	-5.30	-5	-0.48	-0.3	0.51	-0.3	0.51	0	0.58
18	19	51.30	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
19	19	51.30	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
19	20	53.65	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
20	20	53.65	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
20	21	56.00	0.00	0.00	-5.30	-3.325	-0.89	-0.3	0.69	-0.3	0.69	0	0.84
21	21	56.00	0.00	0.00	-5.30	-3.325	-0.77	-0.3	0.71	-0.3	0.66	0	0.79
21	22	57.00	0.00	0.00	-5.30	-3.088	-0.89	-0.3	0.76	-0.3	0.70	0	0.87
22	22	57.00	0.00	0.00	-5.30	-3.088	-0.89	-0.3	0.76	-0.3	0.70	0	0.87
22	23	58.00	0.00	0.00	-5.30	-2.85	-1.09	-0.3	0.82	-0.3	0.76	0	0.97
23	23	58.00	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
23	24	59.00	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
24	24	59.00	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
24	25	63.11	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
25	25	63.11	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
25	26	67.23	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
26	26	67.23	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
26	27	71.34	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
27	27	71.34	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
27	28	75.45	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
28	28	75.45	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
28	29	79.56	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
29	29	79.56	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
29	30	83.68	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
30	30	83.68	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
30	31	87.79	0.00	0.00	-5.30	-2.85	-2.50	-0.3	0.61	0	0.85	0	1.22
31	31	87.79	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
31	32	91.90	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
32	32	91.90	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
32	33	92.90	0.00	0.00	-5.30	-2.85	-2.59	-0.3	0.95	-0.3	0.80	0	1.16
[illegible]	33	92.90	0.00	0.00	-5.30	-2.85	-1.09	-0.3	0.82	-0.3	0.76	0	0.97
[illegible]	34	93.90	0.00	0.00	-5.30	-3.088	-0.89	-0.3	0.76	-0.3	0.70	0	0.87
[illegible]	34	93.90	0.00	0.00	-5.30	-3.088	-0.89	-0.3	0.76	-0.3	0.70	0	0.87
34	35	94.90	0.00	0.00	-5.30	-3.325	-0.77	-0.3	0.71	-0.3	0.66	0	0.79
35	35	94.90	0.00	0.00	-5.30	-3.325	-0.89	-0.3	0.69	-0.3	0.69	0	0.84
35	36	97.25	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
36	36	97.25	0.00	0.00	-5.30	-3.884	-0.62	-0.3	0.61	-0.3	0.61	0	0.71
36	37	99.60	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
37	37	99.60	0.00	0.00	-5.30	-4.442	-0.52	-0.3	0.55	-0.3	0.55	0	0.63
37	38	101.90	0.00	0.00	-5.30	-5	-0.48	-0.3	0.51	-0.3	0.51	0	0.58
38	38	101.90	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
38	39	104.45	0.00	0.00	-5.30	-5	-0.36	-0.3	0.24	-0.3	0.24	0	0.28
39	39	104.45	-0.03	0.34	15.69	-5	1.07	-0.3	-0.72	-0.3	-0.72	0	-0.83
39	40	107.00	-0.03	0.34	14.82	-5	1.01	-0.3	-0.68	-0.3	-0.68	0	-0.79
40	40	107.00	0.01	0.34	14.82	-5	1.35	-0.3	-1.43	-0.3	-1.43	0	-1.61
40	41	109.30	0.01	0.34	14.03	-4.442	1.37	-0.3	-1.46	-0.3	-1.46	0	-1.66
41	41	109.30	0.05	0.34	14.03	-4.442	1.38	-0.3	-1.46	-0.3	-1.46	0	-1.66
41	42	111.65	0.05	0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
42	42	111.65	0.05	0.34	13.23	-3.884	1.56	-0.3	-1.51	-0.3	-1.51	0	-1.77
42	43	114.00	0.05	0.34	12.43	-3.325	2.09	-0.3	-1.61	-0.3	-1.61	0	-1.97
43	43	114.00	0.03	0.34	12.43	-3.325	1.81	-0.3	-1.66	-0.3	-1.54	0	-1.85
43	44	115.00	0.03	0.34	12.08	-3.088	2.03	-0.3	-1.74	-0.3	-1.60	0	-1.98
44	44	115.00	0.13	0.32	12.08	-3.088	2.05	-0.3	-1.72	-0.3	-1.59	0	-1.97
44	45	116.00	0.13	0.32	11.74	-2.85	2.44	-0.3	-1.80	-0.3	-1.67	0	-2.13
45	45	116.00	0.07	0.34	11.74	-2.85	5.75	-0.3	-2.08	-0.3	-1.76	0	-2.54
45	46	117.00	0.07	0.34	11.40	-2.85	5.58	-0.3	-2.02	-0.3	-1.70	0	-2.47
46	46	117.00	0.00	0.34	11.40	-2.85	5.56	-0.3	-2.04	-0.3	-1.72	0	-2.49
46	47	119.78	0.00	0.34	10.45	-2.85	5.10	-0.3	-1.87	-0.3	-1.58	0	-2.28
47	47	119.78	-0.05	0.34	10.45	-2.85	5.09	-0.3	-1.88	-0.3	-1.59	0	-2.29
47	48	122.55	-0.05	0.34	9.50	-2.85	4.62	-0.3	-1.71	-0.3	-1.45	0	-2.08
48	48	122.55	-0.03	0.34	9.50	-2.85	4.45	-0.3	-1.10	0	-1.53	0	-2.20
48	49	128.10	-0.03	0.34	7.60	-2.85	3.56	-0.3	-0.88	0	-1.23	0	-1.76
49	49	128.10	0.00	0.34	7.60	-2.85	3.58	-0.3	-0.87	0	-1.22	0	-1.76
49	50	133.65	0.00	0.34	5.70	-2.85	2.68	-0.3	-0.66	0	-0.92	0	-1.32
[illegible]	50	133.65	0.00	0.34	5.70	-2.85	2.68	-0.3	-0.66	0	-0.92	0	-1.32
[illegible]	51	139.20	0.00	0.34	3.80	-2.85	1.79	-0.3	-0.44	0	-0.61	0	-0.88
51	51	139.20	0.00	0.34	3.80	-2.85	1.79	-0.3	-0.44	0	-0.61	0	-0.88
51	52	144.75	0.00	0.34	1.90	-2.85	0.89	-0.3	-0.22	0	-0.31	0	-0.44
52	52	144.75	0.00	0.34	1.90	-2.85	0.89	-0.3	-0.22	0	-0.31	0	-0.44
52	53	147.53	0.00	0.34	0.95	-2.85	0.45	-0.3	-0.11	0	-0.15	0	-0.22
53	53	147.53	0.00	0.34	0.95	-2.85	0.45	-0.3	-0.11	0	-0.15	0	-0.22
53	54	150.30	0.00	0.34	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo Tinf

{ 1; 1|pret7.tcerovc.TOT.To

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	-8.37	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	-8.37	23.22	-2.85	10.94	-0.3	-2.67	0	-3.74	0	-5.36
3	3	3.38	0.00	-8.37	23.22	-2.85	10.94	-0.3	-2.67	0	-3.74	0	-5.36
3	4	6.15	0.00	-8.37	46.45	-2.85	21.88	-0.3	-5.34	0	-7.48	0	-10.73
4	4	6.15	0.00	-8.37	46.45	-2.85	21.88	-0.3	-5.34	0	-7.48	0	-10.73
4	5	11.70	0.00	-8.37	92.89	-2.85	43.75	-0.3	-10.68	0	-14.96	0	-21.46
5	5	11.70	0.00	-8.37	92.89	-2.85	43.75	-0.3	-10.68	0	-14.96	0	-21.46
5	6	17.25	0.00	-8.37	139.34	-2.85	65.63	-0.3	-16.02	0	-22.43	0	-32.19
6	6	17.25	0.00	-8.37	139.34	-2.85	65.63	-0.3	-16.02	0	-22.43	0	-32.19
6	7	22.80	0.00	-8.37	185.78	-2.85	87.50	-0.3	-21.36	0	-29.91	0	-42.92
7	7	22.80	-0.66	-8.34	185.78	-2.85	87.03	-0.3	-21.43	0	-29.99	0	-42.95
7	8	28.35	-0.66	-8.34	232.23	-2.85	108.90	-0.3	-26.78	0	-37.47	0	-53.68
8	8	28.35	-1.30	-8.27	232.23	-2.85	112.95	-0.3	-41.94	-0.3	-35.38	0	-50.94
8	9	31.13	-1.30	-8.27	255.45	-2.85	124.29	-0.3	-46.10	-0.3	-38.89	0	-56.01
9	9	31.13	0.00	-8.37	255.45	-2.85	124.66	-0.3	-45.73	-0.3	-38.57	0	-55.69
9	10	33.90	0.00	-8.37	278.67	-2.85	135.99	-0.3	-49.88	-0.3	-42.08	0	-60.75
10	10	33.90	1.70	-8.19	278.67	-2.85	136.48	-0.3	-49.39	-0.3	-41.66	0	-60.34
10	11	34.90	1.70	-8.19	287.04	-2.85	140.57	-0.3	-50.89	-0.3	-42.93	0	-62.16
11	11	34.90	3.07	-7.79	287.04	-2.85	59.57	-0.3	-44.05	-0.3	-40.93	0	-52.12
11	12	35.90	3.07	-7.79	295.41	-3.088	50.02	-0.3	-42.15	-0.3	-38.93	0	-48.08
12	12	35.90	0.82	-8.33	295.41	-3.088	49.73	-0.3	-42.43	-0.3	-39.19	0	-48.35
12	13	36.90	0.82	-8.33	303.78	-3.325	44.14	-0.3	-40.61	-0.3	-37.58	0	-45.18
13	13	36.90	1.33	-8.26	303.78	-3.325	51.17	-0.3	-39.22	-0.3	-39.22	0	-48.18
13	14	39.25	1.33	-8.26	323.45	-3.884	38.12	-0.3	-36.97	-0.3	-36.97	0	-43.26
14	14	39.25	1.22	-8.28	323.45	-3.884	38.10	-0.3	-36.99	-0.3	-36.99	0	-43.27
14	15	41.60	1.22	-8.28	343.11	-4.442	33.70	-0.3	-35.60	-0.3	-35.60	0	-40.62
15	15	41.60	0.14	-8.37	343.11	-4.442	33.59	-0.3	-35.71	-0.3	-35.71	0	-40.73
15	16	43.90	0.14	-8.37	362.36	-5	32.92	-0.3	-35.09	-0.3	-35.09	0	-39.43
16	16	43.90	-0.83	-8.33	362.36	-5	24.60	-0.3	-16.62	-0.3	-16.62	0	-19.25
16	17	46.45	-0.83	-8.33	383.70	-5	26.05	-0.3	-17.59	-0.3	-17.59	0	-20.38
17	17	46.45	0.01	-0.13	383.70	-5	26.09	-0.3	-17.55	-0.3	-17.55	0	-20.34
17	18	49.00	0.01	-0.13	384.04	-5	26.12	-0.3	-17.57	-0.3	-17.57	0	-20.35
18	18	49.00	0.00	-0.13	384.04	-5	34.87	-0.3	-37.21	-0.3	-37.21	0	-41.81
18	19	51.30	0.00	-0.13	384.34	-4.442	37.62	-0.3	-40.01	-0.3	-40.01	0	-45.64
19	19	51.30	-0.02	-0.13	384.34	-4.442	37.61	-0.3	-40.02	-0.3	-40.02	0	-45.64
19	20	53.65	-0.02	-0.13	384.66	-3.884	45.15	-0.3	-44.15	-0.3	-44.15	0	-51.63
20	20	53.65	-0.02	-0.13	384.66	-3.884	45.15	-0.3	-44.15	-0.3	-44.15	0	-51.63
20	21	56.00	-0.02	-0.13	384.97	-3.325	64.60	-0.3	-49.95	-0.3	-49.95	0	-61.31
21	21	56.00	-550.00	54.10	-174.92	-3.325	-88.06	-0.3	-39.26	-0.3	-36.61	0	-32.24
21	22	57.00	-550.74	54.17	-230.06	-3.088	-108.59	-0.3	-36.82	-0.3	-34.39	0	-27.26
22	22	57.00	-514.95	202.65	-230.06	-3.088	-104.05	-0.3	-32.27	-0.3	-30.17	0	-23.03
22	23	58.00	-515.62	202.94	-429.57	-2.85	-162.74	-0.3	-7.67	-0.3	-6.72	0	10.03
23	23	58.00	-542.62	112.32	-429.57	-2.85	-365.90	-0.3	-79.38	-0.3	-67.53	0	-38.75
23	24	59.00	-543.33	112.49	-541.95	-2.85	-420.95	-0.3	-59.47	-0.3	-50.74	0	-14.43
24	24	59.00	-551.75	-58.61	-541.95	-2.85	-423.38	-0.3	-61.89	-0.3	-52.79	0	-16.48
24	25	63.11	-554.76	-58.94	-304.84	-2.85	-308.53	-0.3	-105.20	-0.3	-89.33	0	-68.91
25	25	63.11	-554.76	-58.94	-304.84	-2.85	-544.67	-0.3	-22.64	0	-16.38	0	38.80
25	26	67.23	-557.76	-59.26	-65.07	-2.85	-433.91	-0.3	-50.52	0	-55.34	0	-16.76
26	26	67.23	-560.90	-0.09	-65.07	-2.85	-436.18	-0.3	-50.85	0	-55.71	0	-16.94
26	27	71.34	-563.89	-0.09	-67.44	-2.85	-439.46	-0.3	-50.89	0	-55.68	0	-16.56
27	27	71.34	-563.89	-0.09	-67.44	-2.85	-439.46	-0.3	-50.89	0	-55.68	0	-16.56
27	28	75.45	-566.88	-0.09	-69.80	-2.85	-442.73	-0.3	-50.93	0	-55.65	0	-16.19
28	28	75.45	-566.88	-0.09	-69.80	-2.85	-442.73	-0.3	-50.93	0	-55.65	0	-16.19
28	29	79.56	-569.84	-0.09	-72.15	-2.85	-445.98	-0.3	-50.97	0	-55.62	0	-15.81
29	29	79.56	-569.84	-0.09	-72.15	-2.85	-445.98	-0.3	-50.97	0	-55.62	0	-15.81
29	30	83.68	-568.03	-0.09	-70.13	-2.85	-443.72	-0.3	-51.01	0	-55.74	0	-16.18
30	30	83.68	-564.87	59.83	-70.13	-2.85	-441.43	-0.3	-50.68	0	-55.36	0	-16.00
30	31	87.79	-561.95	59.52	-312.38	-2.85	-553.42	-0.3	-22.52	0	-16.02	0	40.13
31	31	87.79	-561.95	59.52	-312.38	-2.85	-314.28	-0.3	-105.93	-0.3	-89.95	0	-69.02
31	32	91.90	-559.05	59.21	-552.08	-2.85	-430.42	-0.3	-62.18	-0.3	-53.04	0	-16.05
32	32	91.90	-550.47	-114.15	-552.08	-2.85	-427.95	-0.3	-59.71	-0.3	-50.95	0	-13.96
32	33	92.90	-549.78	-113.99	-438.10	-2.85	-372.13	-0.3	-79.92	-0.3	-67.99	0	-38.64
33	33	92.90	-522.40	-205.80	-438.10	-2.85	-165.47	-0.3	-7.32	-0.3	-6.39	0	10.69
33	34	93.90	-521.76	-205.53	-235.81	-3.088	-105.88	-0.3	-32.31	-0.3	-30.20	0	-22.89
34	34	93.90	-558.07	-55.07	-235.81	-3.088	-110.49	-0.3	-36.92	-0.3	-34.49	0	-27.18
34	35	94.90	-557.36	-55.00	-179.79	-3.325	-89.61	-0.3	-39.45	-0.3	-36.79	0	-32.29
35	35	94.90	0.01	-0.05	387.61	-3.325	65.05	-0.3	-50.29	-0.3	-50.29	0	-61.73
35	36	97.25	0.01	-0.05	387.72	-3.884	45.51	-0.3	-44.50	-0.3	-44.50	0	-52.03
36	36	97.25	0.01	-0.05	387.72	-3.884	45.51	-0.3	-44.50	-0.3	-44.50	0	-52.03
36	37	99.60	0.01	-0.05	387.83	-4.442	37.96	-0.3	-40.38	-0.3	-40.38	0	-46.05
37	37	99.60	0.00	-0.05	387.83	-4.442	37.96	-0.3	-40.38	-0.3	-40.38	0	-46.05
37	38	101.90	0.00	-0.05	387.93	-5	35.23	-0.3	-37.58	-0.3	-37.58	0	-42.23
38	38	101.90	0.00	-0.05	387.93	-5	26.38	-0.3	-17.74	-0.3	-17.74	0	-20.56
38	39	104.45	0.00	-0.05	388.05	-5	26.39	-0.3	-17.75	-0.3	-17.75	0	-20.57
39	39	104.45	-0.84	8.42	388.05	-5	26.35	-0.3	-17.79	-0.3	-17.79	0	-20.61
39	40	107.00	-0.84	8.42	366.47	-5	24.88	-0.3	-16.80	-0.3	-16.80	0	-19.46
40	40	107.00	0.14	8.46	366.47	-5	33.29	-0.3	-35.49	-0.3	-35.49	0	-39.88
40	41	109.30	0.14	8.46	347.00	-4.442	33.97	-0.3	-36.11	-0.3	-36.11	0	-41.19
41	41	109.30	1.24	8.37	347.00	-4.442	34.08	-0.3	-36.01	-0.3	-36.01	0	-41.08
41	42	111.65	1.24	8.37	327.11	-3.884	38.54	-0.3	-37.40	-0.3	-37.40	0	-43.76
42	42	111.65	1.34	8.36	327.11	-3.884	38.55	-0.3	-37.39	-0.3	-37.39	0	-43.75
42	43	114.00	1.34	8.36	307.22	-3.325	51.75	-0.3	-39.66	-0.3	-39.66	0	-48.73
43	43	114.00	0.83	8.42	307.22	-3.325	44.64	-0.3	-41.07	-0.3	-38.01	0	-45.69
43	44	115.00	0.83	8.42	298.76	-3.088	50.30	-0.3	-42.92	-0.3	-39.64	0	-48.90
44	44	115.00	3.10	7.87	298.76	-3.088	50.59	-0.3	-42.63	-0.3	-39.37	0	-48.63
44	45	116.00	3.10	7.87	290.30	-2.85	60.25	-0.3	-44.55	-0.3	-41.39	0	-52.71
45	45	116.00	1.72	8.29	290.30	-2.85	142.16	-0.3	-51.47	-0.3	-43.42	0	-62.87
45	46	117.00	1.72	8.29	281.83	-2.85	138.03	-0.3	-49.95	-0.3	-42.14	0	-61.02
46	46	117.00	0.00	8.46	281.83	-2.85	137.53	-0.3	-50.45	-0.3	-42.56	0	-61.44
46	47	119.78	0.00	8.46	258.35	-2.85	126.07	-0.3	-46.24	-0.3	-39.01	0	-56.32
47	47	119.78	-1.31	8.36	258.35	-2.85	125.70	-0.3	-46.62	-0.3	-39.33	0	-56.64
47	48	122.55	-1.31	8.36	234.86	-2.85	114.23	-0.3	-42.42	-0.3	-35.78	0	-51.52
48	48	122.55	-0.66	8.44	234.86	-2.85	110.14	-0.3	-27.08	0	-37.89	0	-54.29
48	49	128.10	-0.66	8.44	187.89	-2.85	88.02	-0.3	-21.68	0	-30.33	0	-43.44
49	49	128.10	0.00	8.46	187.89	-2.85	88.50	-0.3	-21.61	0	-30.25	0	-43.40
49	50	133.65	0.00	8.46	140.92	-2.85	66.37	-0.3	-16.21	0	-22.69	0	-32.55
50	50	133.65	0.00	8.46	140.92	-2.85	66.37	-0.3	-16.21	0	-22.69	0	-32.55
50	51	139.20	0.00	8.46	93.94	-2.85	44.25	-0.3	-10.80	0	-15.12	0	-21.70
51	51	139.20	0.00	8.46	93.94	-2.85	44.25	-0.3	-10.80	0	-15.12	0	-21.70
51	52	144.75	0.00	8.46	46.97	-2.85	22.12	-0.3	-5.40	0	-7.56	0	-10.85
52	52	144.75	0.00	8.46	46.97	-2.85	22.12	-0.3	-5.40	0	-7.56	0	-10.85
52	53	147.53	0.00	8.46	23.49	-2.85	11.06	-0.3	-2.70	0	-3.78	0	-5.43
53	53	147.53	0.00	8.46	23.49	-2.85	11.06	-0.3	-2.70	0	-3.78	0	-5.43
53	54	150.30	0.00	8.46	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)): Tensiones a tiempo Tinf

[1; 1)prot3.1ocn6dd.TOT.To

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-553.72	0.00	-505.54	-2.85	-638.45	-0.3	0.55	0	16.05	0	85.22
1	2	0.60	-553.30	0.00	-505.16	-2.85	-637.97	-0.3	0.55	0	16.04	0	85.15
2	2	0.60	-553.30	-7.50	-505.16	-2.85	-637.97	-0.3	0.55	0	16.04	0	85.15
2	3	3.38	-551.37	-7.50	-482.58	-2.85	-625.94	-0.3	-1.85	0	12.63	0	80.05
3	3	3.38	-551.37	-7.50	-482.58	-2.85	-625.94	-0.3	-1.85	0	12.63	0	80.05
3	4	6.15	-549.44	-7.50	-460.00	-2.85	-613.91	-0.3	-4.24	0	9.23	0	74.94
4	4	6.15	-549.44	-7.50	-460.00	-2.85	-613.91	-0.3	-4.24	0	9.23	0	74.94
4	5	11.70	-545.61	-7.50	-414.86	-2.85	-589.88	-0.3	-9.03	0	2.41	0	64.73
5	5	11.70	-545.61	-7.50	-414.86	-2.85	-589.88	-0.3	-9.03	0	2.41	0	64.73
5	6	17.25	-541.81	-7.50	-369.75	-2.85	-565.88	-0.3	-13.83	0	-4.40	0	54.53
6	6	17.25	-541.81	-7.50	-369.75	-2.85	-565.88	-0.3	-13.83	0	-4.40	0	54.53
6	7	22.80	-538.04	-7.50	-324.66	-2.85	-541.92	-0.3	-18.62	0	-11.22	0	44.33
7	7	22.80	-536.97	34.68	-324.66	-2.85	-541.14	-0.3	-18.51	0	-11.09	0	44.39
7	8	28.35	-533.23	34.39	-512.10	-2.85	-626.72	-0.3	3.44	0	19.53	0	87.90
8	8	28.35	-528.97	75.56	-512.10	-2.85	-402.25	-0.3	-60.68	-0.3	-51.74	0	-17.43
8	9	31.13	-527.13	75.27	-718.32	-2.85	-502.35	-0.3	-23.23	-0.3	-20.15	0	27.97
9	9	31.13	-532.42	-7.51	-718.32	-2.85	-503.88	-0.3	-24.76	-0.3	-21.44	0	26.68
9	10	33.90	-530.56	-7.51	-694.16	-2.85	-491.55	-0.3	-28.55	-0.3	-24.64	0	21.87
10	10	33.90	-518.01	-115.00	-694.16	-2.85	-487.94	-0.3	-24.93	-0.3	-21.58	0	24.93
10	11	34.90	-517.36	-114.84	-579.17	-2.85	-431.63	-0.3	-45.33	-0.3	-38.78	0	0.02
11	11	34.90	-490.30	-201.13	-579.17	-2.85	-189.91	-0.3	19.17	-0.3	18.19	0	40.78
11	12	35.90	-489.70	-200.87	-380.83	-3.088	-126.17	-0.3	-7.35	-0.3	-7.13	0	4.67
12	12	35.90	-525.96	-59.36	-380.83	-3.088	-130.78	-0.3	-11.96	-0.3	-11.41	0	0.39
12	13	36.90	-525.29	-59.29	-320.55	-3.325	-106.36	-0.3	-16.93	-0.3	-15.93	0	-7.92
13	13	36.90	1.17	-7.37	214.94	-3.325	36.24	-0.3	-27.72	-0.3	-27.72	0	-34.06
13	14	39.25	1.17	-7.37	232.48	-3.884	27.42	-0.3	-26.55	-0.3	-26.55	0	-31.07
14	14	39.25	1.07	-7.39	232.48	-3.884	27.41	-0.3	-26.56	-0.3	-26.56	0	-31.08
14	15	41.60	1.07	-7.39	250.02	-4.442	24.57	-0.3	-25.93	-0.3	-25.93	0	-29.58
15	15	41.60	0.11	-7.46	250.02	-4.442	24.48	-0.3	-26.02	-0.3	-26.02	0	-29.68
15	16	43.90	0.11	-7.46	267.19	-5	24.27	-0.3	-25.88	-0.3	-25.88	0	-29.08
	16	43.90	-0.75	-7.43	267.19	-5	18.13	-0.3	-12.26	-0.3	-12.26	0	-14.20
	17	46.45	-0.75	-7.43	286.22	-5	19.43	-0.3	-13.13	-0.3	-13.13	0	-15.21
	17	46.45	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
17	18	49.00	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
18	18	49.00	-0.02	0.00	286.22	-5	25.99	-0.3	-27.73	-0.3	-27.73	0	-31.16
18	19	51.30	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.80	-0.3	-29.80	0	-33.99
19	19	51.30	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.80	-0.3	-29.80	0	-33.99
19	20	53.65	-0.02	0.00	286.21	-3.884	33.59	-0.3	-32.85	-0.3	-32.85	0	-38.41
20	20	53.65	-0.02	0.00	286.21	-3.884	33.59	-0.3	-32.85	-0.3	-32.85	0	-38.41
20	21	56.00	-0.02	0.00	286.21	-3.325	48.03	-0.3	-37.14	-0.3	-37.14	0	-45.58
21	21	56.00	-0.02	0.00	286.21	-3.325	41.50	-0.3	-38.35	-0.3	-35.49	0	-42.65
21	22	57.00	-0.02	0.00	286.21	-3.088	48.08	-0.3	-41.22	-0.3	-38.07	0	-46.94
22	22	57.00	-0.01	0.01	286.21	-3.088	48.08	-0.3	-41.22	-0.3	-38.07	0	-46.94
22	23	58.00	-0.01	0.01	286.20	-2.85	58.96	-0.3	-44.36	-0.3	-41.21	0	-52.38
23	23	58.00	-0.02	0.00	286.20	-2.85	139.66	-0.3	-51.24	-0.3	-43.22	0	-62.40
23	24	59.00	-0.02	0.00	286.20	-2.85	139.66	-0.3	-51.24	-0.3	-43.22	0	-62.40
24	24	59.00	-0.02	0.00	286.20	-2.85	139.66	-0.3	-51.24	-0.3	-43.22	0	-62.40
24	25	63.11	-0.02	0.00	286.20	-2.85	139.66	-0.3	-51.24	-0.3	-43.22	0	-62.40
25	25	63.11	-0.02	0.00	286.20	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.11
25	26	67.23	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
26	26	67.23	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
26	27	71.34	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
27	27	71.34	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
27	28	75.45	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
28	28	75.45	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
28	29	79.56	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
29	29	79.56	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
29	30	83.68	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
30	30	83.68	-0.02	0.00	286.21	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.12
30	31	87.79	-0.02	0.00	286.20	-2.85	134.79	-0.3	-32.92	0	-46.08	0	-66.11
31	31	87.79	-0.02	0.00	286.20	-2.85	139.66	-0.3	-51.24	-0.3	-43.22	0	-62.40
31	32	91.90	-0.02	0.00	286.20	-2.85	139.66	-0.3	-51.24	-0.3	-43.22	0	-62.40
32	32	91.90	-0.01	0.00	286.20	-2.85	139.66	-0.3	-51.23	-0.3	-43.22	0	-62.39
	33	92.90	-0.01	0.00	286.20	-2.85	139.66	-0.3	-51.23	-0.3	-43.22	0	-62.39
	33	92.90	-0.01	-0.01	286.20	-2.85	58.96	-0.3	-44.36	-0.3	-41.21	0	-52.38
	34	93.90	-0.01	-0.01	286.21	-3.088	48.08	-0.3	-41.22	-0.3	-38.07	0	-46.94
34	34	93.90	-0.02	0.00	286.21	-3.088	48.08	-0.3	-41.22	-0.3	-38.07	0	-46.94
34	35	94.90	-0.02	0.00	286.21	-3.325	41.50	-0.3	-38.35	-0.3	-35.49	0	-42.65
35	35	94.90	-0.02	0.00	286.21	-3.325	48.03	-0.3	-37.14	-0.3	-37.14	0	-45.58
35	36	97.25	-0.02	0.00	286.21	-3.884	33.59	-0.3	-32.85	-0.3	-32.85	0	-38.41
36	36	97.25	-0.02	0.00	286.21	-3.884	33.59	-0.3	-32.85	-0.3	-32.85	0	-38.41
36	37	99.60	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.80	-0.3	-29.80	0	-33.99
37	37	99.60	-0.02	0.00	286.22	-4.442	28.01	-0.3	-29.80	-0.3	-29.80	0	-33.99
37	38	101.90	-0.02	0.00	286.22	-5	25.99	-0.3	-27.73	-0.3	-27.73	0	-31.16
38	38	101.90	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
38	39	104.45	-0.02	0.00	286.22	-5	19.46	-0.3	-13.09	-0.3	-13.09	0	-15.17
39	39	104.45	-0.75	7.43	286.22	-5	19.43	-0.3	-13.13	-0.3	-13.13	0	-15.21
39	40	107.00	-0.75	7.43	267.19	-5	18.13	-0.3	-12.26	-0.3	-12.26	0	-14.20
40	40	107.00	0.11	7.46	267.19	-5	24.27	-0.3	-25.88	-0.3	-25.88	0	-29.08
40	41	109.30	0.11	7.46	250.02	-4.442	24.48	-0.3	-26.02	-0.3	-26.02	0	-29.68
41	41	109.30	1.07	7.39	250.02	-4.442	24.57	-0.3	-25.93	-0.3	-25.93	0	-29.58
41	42	111.65	1.07	7.39	232.48	-3.884	27.41	-0.3	-26.56	-0.3	-26.56	0	-31.08
42	42	111.65	1.17	7.37	232.48	-3.884	27.42	-0.3	-26.55	-0.3	-26.55	0	-31.07
42	43	114.00	1.17	7.37	214.94	-3.325	36.24	-0.3	-27.72	-0.3	-27.72	0	-34.06
43	43	114.00	-525.29	59.29	-320.55	-3.325	-106.36	-0.3	-16.93	-0.3	-15.93	0	-7.92
43	44	115.00	-525.96	59.36	-380.83	-3.088	-130.78	-0.3	-11.96	-0.3	-11.41	0	0.39
44	44	115.00	-489.70	200.87	-380.83	-3.088	-126.17	-0.3	-7.35	-0.3	-7.13	0	4.67
44	45	116.00	-490.30	201.13	-579.17	-2.85	-189.91	-0.3	19.17	-0.3	18.19	0	40.78
45	45	116.00	-517.36	114.84	-579.17	-2.85	-431.63	-0.3	-45.33	-0.3	-38.78	0	0.02
45	46	117.00	-518.01	115.00	-694.16	-2.85	-487.94	-0.3	-24.93	-0.3	-21.58	0	24.93
46	46	117.00	-530.56	7.51	-694.16	-2.85	-491.55	-0.3	-28.55	-0.3	-24.64	0	21.87
46	47	119.78	-532.42	7.51	-718.32	-2.85	-503.88	-0.3	-24.76	-0.3	-21.44	0	26.68
47	47	119.78	-527.13	-75.27	-718.32	-2.85	-502.35	-0.3	-23.23	-0.3	-20.15	0	27.97
47	48	122.55	-528.97	-75.56	-512.10	-2.85	-402.25	-0.3	-60.68	-0.3	-51.74	0	-17.43
48	48	122.55	-533.23	-34.39	-512.10	-2.85	-626.72	-0.3	3.44	0	19.53	0	87.90
48	49	128.10	-536.97	-34.68	-324.66	-2.85	-541.14	-0.3	-18.51	0	-11.09	0	44.39
49	49	128.10	-538.04	7.50	-324.66	-2.85	-541.92	-0.3	-18.62	0	-11.22	0	44.33
	50	133.65	-541.81	7.50	-369.75	-2.85	-565.88	-0.3	-13.83	0	-4.40	0	54.53
	50	133.65	-541.81	7.50	-369.75	-2.85	-565.88	-0.3	-13.83	0	-4.40	0	54.53
	51	139.20	-545.61	7.50	-414.86	-2.85	-589.88	-0.3	-9.03	0	2.41	0	64.73
51	51	139.20	-545.61	7.50	-414.86	-2.85	-589.88	-0.3	-9.03	0	2.41	0	64.73
51	52	144.75	-549.44	7.50	-460.00	-2.85	-613.91	-0.3	-4.24	0	9.23	0	74.94
52	52	144.75	-549.44	7.50	-460.00	-2.85	-613.91	-0.3	-4.24	0	9.23	0	74.94
52	53	147.53	-551.37	7.50	-482.58	-2.85	-625.94	-0.3	-1.85	0	12.63	0	80.05
53	53	147.53	-551.37	7.50	-482.58	-2.85	-625.94	-0.3	-1.85	0	12.63	0	80.05
53	54	150.30	-553.30	7.50	-505.16	-2.85	-637.97	-0.3	0.55	0	16.04	0	85.15
54	54	150.30	-553.30	0.00	-505.16	-2.85	-637.97	-0.3	0.55	0	16.04	0	85.15
54	55	150.90	-553.72	0.00	-505.54	-2.85	-638.45	-0.3	0.55	0	16.05	0	85.22

[redacted]

(PretensadoTotal(t=0)): Tensiones a tiempo Tinf

[1; 1)prot3.1pcc0eea216.TOT.To

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	4.06	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	4.06	-11.26	-2.85	-5.30	-0.3	1.29	0	1.81	0	2.60
3	3	3.38	0.00	4.06	-11.26	-2.85	-5.30	-0.3	1.29	0	1.81	0	2.60
3	4	6.15	0.00	4.06	-22.51	-2.85	-10.60	-0.3	2.59	0	3.62	0	5.20
4	4	6.15	0.00	4.06	-22.51	-2.85	-10.60	-0.3	2.59	0	3.62	0	5.20
4	5	11.70	0.00	4.06	-45.03	-2.85	-21.21	-0.3	5.18	0	7.25	0	10.40
5	5	11.70	0.00	4.06	-45.03	-2.85	-21.21	-0.3	5.18	0	7.25	0	10.40
5	6	17.25	0.00	4.06	-67.54	-2.85	-31.81	-0.3	7.77	0	10.87	0	15.60
6	6	17.25	0.00	4.06	-67.54	-2.85	-31.81	-0.3	7.77	0	10.87	0	15.60
6	7	22.80	0.00	4.06	-90.06	-2.85	-42.42	-0.3	10.36	0	14.50	0	20.80
7	7	22.80	0.32	4.04	-90.06	-2.85	-42.19	-0.3	10.39	0	14.54	0	20.82
7	8	28.35	0.32	4.04	-112.57	-2.85	-52.79	-0.3	12.98	0	18.16	0	26.02
8	8	28.35	0.63	4.01	-112.57	-2.85	-54.75	-0.3	20.33	-0.3	17.15	0	24.69
8	9	31.13	0.63	4.01	-123.83	-2.85	-60.25	-0.3	22.35	-0.3	18.85	0	27.15
9	9	31.13	-697.69	4.06	404.32	-2.85	-3.63	-0.3	-273.31	-0.3	-231.29	0	-258.38
9	10	33.90	-700.29	4.06	395.03	-2.85	-8.91	-0.3	-272.39	-0.3	-230.52	0	-256.99
10	10	33.90	-686.54	-138.11	395.03	-2.85	-4.95	-0.3	-268.43	-0.3	-227.17	0	-253.63
10	11	34.90	-687.44	-138.33	532.42	-2.85	61.84	-0.3	-293.29	-0.3	-248.13	0	-283.80
11	11	34.90	-653.91	-253.20	532.42	-2.85	15.52	-0.3	-176.69	-0.3	-163.64	0	-184.40
11	12	35.90	-654.76	-253.56	781.26	-3.088	48.10	-0.3	-195.66	-0.3	-181.17	0	-205.39
12	12	35.90	-699.13	-64.92	781.26	-3.088	42.46	-0.3	-201.29	-0.3	-186.40	0	-210.62
12	13	36.90	-700.06	-65.01	847.86	-3.325	43.13	-0.3	-193.42	-0.3	-179.34	0	-200.54
13	13	36.90	-694.80	-107.51	847.86	-3.325	39.40	-0.3	-212.89	-0.3	-212.89	0	-237.91
13	14	39.25	-696.95	-107.86	1104.28	-3.884	49.49	-0.3	-206.86	-0.3	-206.86	0	-228.32
14	14	39.25	-698.26	-99.03	1104.01	-3.884	49.31	-0.3	-206.98	-0.3	-206.98	0	-228.43
14	15	41.60	-700.41	-99.34	1341.84	-4.442	64.12	-0.3	-206.90	-0.3	-206.90	0	-226.53
15	15	41.60	-707.38	-7.60	1342.03	-4.442	63.47	-0.3	-207.59	-0.3	-207.59	0	-227.23
15	16	43.90	-709.50	-7.63	1364.40	-5	64.41	-0.3	-191.67	-0.3	-191.67	0	-208.02
16	16	43.90	-705.66	74.16	1363.92	-5	57.84	-0.3	-97.29	-0.3	-97.29	0	-107.19
16	17	46.45	-707.99	74.39	1179.63	-5	45.20	-0.3	-88.97	-0.3	-88.97	0	-97.54
17	17	46.45	-708.39	-70.36	1179.46	-5	45.17	-0.3	-88.99	-0.3	-88.99	0	-97.55
17	18	49.00	-710.72	-70.59	1364.75	-5	57.65	-0.3	-97.58	-0.3	-97.58	0	-107.48
18	18	49.00	-714.12	11.76	1365.06	-5	64.08	-0.3	-192.13	-0.3	-192.13	0	-208.48
18	19	51.30	-716.22	11.79	1342.22	-4.442	62.64	-0.3	-208.46	-0.3	-208.46	0	-228.10
19	19	51.30	-708.63	104.65	1342.47	-4.442	63.39	-0.3	-207.76	-0.3	-207.76	0	-227.40
19	20	53.65	-710.75	104.97	1100.24	-3.884	47.43	-0.3	-207.99	-0.3	-207.99	0	-229.36
20	20	53.65	-709.36	113.95	1100.52	-3.884	47.63	-0.3	-207.86	-0.3	-207.86	0	-229.24
20	21	56.00	-710.62	114.16	834.60	-3.325	34.83	-0.3	-213.51	-0.3	-213.51	0	-238.14
21	21	56.00	-716.25	70.68	834.60	-3.325	39.36	-0.3	-193.49	-0.3	-179.41	0	-200.28
21	22	57.00	-715.35	70.59	762.34	-3.088	37.22	-0.3	-200.63	-0.3	-185.80	0	-209.44
22	22	57.00	-668.81	263.45	762.34	-3.088	43.13	-0.3	-194.72	-0.3	-180.31	0	-203.94
22	23	58.00	-667.99	263.10	503.48	-2.85	7.53	-0.3	-174.23	-0.3	-161.34	0	-180.98
23	23	58.00	-703.00	145.69	503.48	-2.85	43.23	-0.3	-292.59	-0.3	-247.56	0	-281.29
23	24	59.00	-702.13	145.48	358.70	-2.85	-27.17	-0.3	-266.42	-0.3	-225.48	0	-249.52
24	24	59.00	-713.04	-75.64	358.70	-2.85	-30.31	-0.3	-269.56	-0.3	-228.15	0	-252.18
24	25	63.11	-709.35	-75.25	665.54	-2.85	120.49	-0.3	-323.42	-0.3	-273.58	0	-318.17
25	25	63.11	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
25	26	67.23	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
26	26	67.23	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
26	27	71.34	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
27	27	71.34	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
27	28	75.45	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
28	28	75.45	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
28	29	79.56	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
29	29	79.56	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
29	30	83.68	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
30	30	83.68	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
30	31	87.79	0.00	0.00	-183.48	-2.85	-86.42	-0.3	21.10	0	29.54	0	42.38
31	31	87.79	-709.35	75.25	665.54	-2.85	120.49	-0.3	-323.42	-0.3	-273.58	0	-318.17
31	32	91.90	-713.04	75.64	358.70	-2.85	-30.31	-0.3	-269.56	-0.3	-228.15	0	-252.18
32	32	91.90	-702.12	-145.48	358.70	-2.85	-27.16	-0.3	-266.42	-0.3	-225.48	0	-249.51
32	33	92.90	-703.00	-145.69	503.47	-2.85	43.23	-0.3	-292.59	-0.3	-247.56	0	-281.29
33	33	92.90	-667.99	-263.10	503.47	-2.85	7.52	-0.3	-174.23	-0.3	-161.34	0	-180.98
33	34	93.90	-668.81	-263.45	762.34	-3.088	43.13	-0.3	-194.72	-0.3	-180.31	0	-203.94
34	34	93.90	-715.35	-70.59	762.34	-3.088	37.22	-0.3	-200.63	-0.3	-185.80	0	-209.44
34	35	94.90	-716.25	-70.68	834.60	-3.325	39.36	-0.3	-193.49	-0.3	-179.41	0	-200.28
35	35	94.90	-710.62	-114.16	834.60	-3.325	34.83	-0.3	-213.51	-0.3	-213.51	0	-238.14
35	36	97.25	-709.36	-113.95	1100.24	-3.884	47.59	-0.3	-207.83	-0.3	-207.83	0	-229.20
36	36	97.25	-710.75	-104.97	1100.52	-3.884	47.47	-0.3	-208.02	-0.3	-208.02	0	-229.40
36	37	99.60	-708.63	-104.65	1342.22	-4.442	63.37	-0.3	-207.73	-0.3	-207.73	0	-227.37
37	37	99.60	-716.22	-11.79	1342.47	-4.442	62.67	-0.3	-208.49	-0.3	-208.49	0	-228.13
37	38	101.90	-714.12	-11.76	1364.75	-5	64.05	-0.3	-192.10	-0.3	-192.10	0	-208.45
38	38	101.90	-710.72	70.59	1365.06	-5	57.67	-0.3	-97.59	-0.3	-97.59	0	-107.50
38	39	104.45	-708.39	70.36	1179.63	-5	45.18	-0.3	-88.99	-0.3	-88.99	0	-97.56
39	39	104.45	-707.99	-74.39	1179.46	-5	45.19	-0.3	-88.97	-0.3	-88.97	0	-97.53
39	40	107.00	-705.66	-74.16	1364.40	-5	57.88	-0.3	-97.31	-0.3	-97.31	0	-107.22
40	40	107.00	-709.50	7.63	1363.92	-5	64.37	-0.3	-191.63	-0.3	-191.63	0	-207.97
40	41	109.30	-707.38	7.60	1341.84	-4.442	63.45	-0.3	-207.57	-0.3	-207.57	0	-227.20
41	41	109.30	-700.41	99.34	1342.03	-4.442	64.14	-0.3	-206.92	-0.3	-206.92	0	-226.56
41	42	111.65	-698.26	99.03	1104.28	-3.884	49.34	-0.3	-207.01	-0.3	-207.01	0	-228.47
42	42	111.65	-696.95	107.86	1104.01	-3.884	49.46	-0.3	-206.83	-0.3	-206.83	0	-228.28
42	43	114.00	-694.80	107.51	847.86	-3.325	39.40	-0.3	-212.89	-0.3	-212.89	0	-237.91
43	43	114.00	-700.06	65.01	847.86	-3.325	43.13	-0.3	-193.42	-0.3	-179.34	0	-200.54
43	44	115.00	-699.13	64.92	781.26	-3.088	42.46	-0.3	-201.29	-0.3	-186.40	0	-210.62
44	44	115.00	-654.76	253.56	781.26	-3.088	48.10	-0.3	-195.66	-0.3	-181.17	0	-205.39
44	45	116.00	-653.91	253.20	532.42	-2.85	15.52	-0.3	-176.69	-0.3	-163.64	0	-184.40
45	45	116.00	-687.44	138.33	532.42	-2.85	61.84	-0.3	-293.29	-0.3	-248.13	0	-283.80
45	46	117.00	-686.54	138.11	395.03	-2.85	-4.95	-0.3	-268.43	-0.3	-227.17	0	-253.63
46	46	117.00	-700.29	-4.06	395.03	-2.85	-8.91	-0.3	-272.39	-0.3	-230.52	0	-256.99
46	47	119.78	-697.69	-4.06	404.33	-2.85	-3.62	-0.3	-273.31	-0.3	-231.29	0	-258.38
47	47	119.78	0.63	-4.01	-123.83	-2.85	-60.25	-0.3	22.35	-0.3	18.85	0	27.15
47	48	122.55	0.63	-4.01	-112.57	-2.85	-54.75	-0.3	20.33	-0.3	17.15	0	24.69
48	48	122.55	0.32	-4.04	-112.57	-2.85	-52.79	-0.3	12.98	0	18.16	0	26.02
48	49	128.10	0.32	-4.04	-90.06	-2.85	-42.19	-0.3	10.39	0	14.54	0	20.82
49	49	128.10	0.00	-4.06	-90.06	-2.85	-42.42	-0.3	10.36	0	14.50	0	20.80
49	50	133.65	0.00	-4.06	-67.54	-2.85	-31.81	-0.3	7.77	0	10.87	0	15.60
50	50	133.65	0.00	-4.06	-67.54	-2.85	-31.81	-0.3	7.77	0	10.87	0	15.60
50	51	139.20	0.00	-4.06	-45.03	-2.85	-21.21	-0.3	5.18	0	7.25	0	10.40
51	51	139.20	0.00	-4.06	-45.03	-2.85	-21.21	-0.3	5.18	0	7.25	0	10.40
51	52	144.75	0.00	-4.06	-22.51	-2.85	-10.60	-0.3	2.59	0	3.62	0	5.20
52	52	144.75	0.00	-4.06	-22.51	-2.85	-10.60	-0.3	2.59	0	3.62	0	5.20
52	53	147.53	0.00	-4.06	-11.26	-2.85	-5.30	-0.3	1.29	0	1.81	0	2.60
53	53	147.53	0.00	-4.06	-11.26	-2.85	-5.30	-0.3	1.29	0	1.81	0	2.60
53	54	150.30	0.00	-4.06	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(pesopropiodelosa2(completa)); Tensiones a tiempo Tinf

[1; 1pplosa2

Coef. exc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	2.52	-0.76	-2.85	-0.36	-0.3	0.09	0	0.12	0	0.18
2	2	0.60	0.00	-57.69	-0.76	-2.85	-0.36	-0.3	0.09	0	0.12	0	0.18
2	3	3.38	0.00	-46.04	143.17	-2.85	67.43	-0.3	-16.46	0	-23.05	0	-33.07
3	3	3.38	0.00	-46.04	143.17	-2.85	67.43	-0.3	-16.46	0	-23.05	0	-33.07
3	4	6.15	0.00	-34.38	254.76	-2.85	119.99	-0.3	-29.30	0	-41.02	0	-58.85
4	4	6.15	0.00	-34.38	254.76	-2.85	119.99	-0.3	-29.30	0	-41.02	0	-58.85
4	5	11.70	0.00	-11.07	380.90	-2.85	179.40	-0.3	-43.80	0	-61.32	0	-87.99
5	5	11.70	0.00	-11.07	380.90	-2.85	179.40	-0.3	-43.80	0	-61.32	0	-87.99
5	6	17.25	0.00	12.24	377.68	-2.85	177.89	-0.3	-43.43	0	-60.81	0	-87.24
6	6	17.25	0.00	12.24	377.68	-2.85	177.89	-0.3	-43.43	0	-60.81	0	-87.24
6	7	22.80	0.00	35.55	245.08	-2.85	115.43	-0.3	-28.18	0	-39.46	0	-56.61
7	7	22.80	2.79	35.44	245.08	-2.85	117.45	-0.3	-27.89	0	-39.13	0	-56.45
7	8	28.35	4.62	58.75	-17.09	-2.85	-4.71	-0.3	2.45	0	3.30	0	4.21
8	8	28.35	9.15	58.21	-17.09	-2.85	-5.70	-0.3	5.69	-0.3	4.81	0	5.96
8	9	31.13	9.15	58.21	-180.61	-2.85	-85.50	-0.3	34.96	-0.3	29.50	0	41.61
9	9	31.13	0.00	58.93	-180.61	-2.85	-88.14	-0.3	32.33	-0.3	27.27	0	39.37
9	10	33.90	0.00	58.93	-344.14	-2.85	-167.94	-0.3	61.60	-0.3	51.97	0	75.02
10	10	33.90	-11.96	57.70	-344.14	-2.85	-171.38	-0.3	58.16	-0.3	49.05	0	72.10
10	11	34.90	-11.96	57.70	-403.07	-2.85	-200.14	-0.3	68.71	-0.3	57.95	0	84.95
11	11	34.90	-21.59	54.83	-403.07	-2.85	-86.14	-0.3	59.37	-0.3	55.17	0	70.89
11	12	35.90	-21.59	54.83	-462.00	-3.088	-80.36	-0.3	63.79	-0.3	58.90	0	73.22
12	12	35.90	-5.78	58.64	-462.00	-3.088	-78.35	-0.3	65.79	-0.3	60.76	0	75.09
12	13	36.90	-5.78	58.64	-520.92	-3.325	-76.19	-0.3	69.14	-0.3	63.98	0	77.00
13	13	36.90	-9.34	58.18	-520.92	-3.325	-88.80	-0.3	66.21	-0.3	66.21	0	81.58
13	14	39.25	-9.34	58.18	-659.41	-3.884	-78.47	-0.3	74.61	-0.3	74.61	0	87.43
14	14	39.25	-8.60	58.30	-659.41	-3.884	-78.38	-0.3	74.70	-0.3	74.70	0	87.51
14	15	41.60	-8.60	58.30	-797.89	-4.442	-78.91	-0.3	82.24	-0.3	82.24	0	93.92
15	15	41.60	-0.97	58.92	-797.89	-4.442	-78.18	-0.3	82.98	-0.3	82.98	0	94.65
15	16	43.90	-0.97	58.92	-933.42	-5	-84.85	-0.3	90.35	-0.3	90.35	0	101.53
	16	43.90	5.83	58.64	-933.42	-5	-63.18	-0.3	42.98	-0.3	42.98	0	49.76
	17	46.45	5.83	58.64	-1084.00	-5	-73.42	-0.3	49.87	-0.3	49.87	0	57.74
	17	46.45	5.14	-51.66	-1083.69	-5	-73.44	-0.3	49.82	-0.3	49.82	0	57.69
17	18	49.00	5.14	-51.66	-951.31	-5	-64.43	-0.3	43.77	-0.3	43.77	0	50.67
18	18	49.00	-0.85	-51.91	-951.31	-5	-86.46	-0.3	92.09	-0.3	92.09	0	103.49
18	19	51.30	-0.85	-51.91	-831.90	-4.442	-81.50	-0.3	86.53	-0.3	86.53	0	98.70
19	19	51.30	-7.58	-51.36	-831.90	-4.442	-82.15	-0.3	85.88	-0.3	85.88	0	98.05
19	20	53.65	-7.58	-51.36	-709.90	-3.884	-84.19	-0.3	80.61	-0.3	80.61	0	94.40
20	20	53.65	-8.23	-51.26	-709.90	-3.884	-84.27	-0.3	80.54	-0.3	80.54	0	94.33
20	21	56.00	-8.23	-51.26	-587.91	-3.325	-99.88	-0.3	75.06	-0.3	75.06	0	92.41
21	21	56.00	-5.09	-51.66	-587.91	-3.325	-85.83	-0.3	78.20	-0.3	72.36	0	87.06
21	22	57.00	-5.09	-51.66	-535.99	-3.088	-90.69	-0.3	76.54	-0.3	70.69	0	87.30
22	22	57.00	-19.02	-48.30	-535.99	-3.088	-92.46	-0.3	74.77	-0.3	69.04	0	85.66
22	23	58.00	-19.02	-48.30	-484.08	-2.85	-102.46	-0.3	72.29	-0.3	67.18	0	86.06
23	23	58.00	-10.53	-50.83	-484.08	-2.85	-239.26	-0.3	83.62	-0.3	70.53	0	102.96
23	24	59.00	-10.53	-50.83	-432.16	-2.85	-213.93	-0.3	74.32	-0.3	62.69	0	91.64
24	24	59.00	5.48	-51.62	-432.16	-2.85	-209.32	-0.3	78.93	-0.3	66.59	0	95.55
24	25	63.11	5.48	-51.62	-218.66	-2.85	-105.13	-0.3	40.72	-0.3	34.35	0	49.01
25	25	63.11	5.48	-51.62	-218.66	-2.85	-99.03	-0.3	25.72	0	35.85	0	50.82
25	26	67.23	3.64	-34.35	-40.88	-2.85	-16.62	-0.3	5.08	0	7.01	0	9.65
26	26	67.23	0.00	-34.55	-40.88	-2.85	-19.25	-0.3	4.70	0	6.58	0	9.44
26	27	71.34	0.00	-17.27	65.67	-2.85	30.93	-0.3	-7.55	0	-10.57	0	-15.17
27	27	71.34	0.00	-17.27	65.67	-2.85	30.93	-0.3	-7.55	0	-10.57	0	-15.17
27	28	75.45	0.00	0.00	101.18	-2.85	47.66	-0.3	-11.64	0	-16.29	0	-23.37
28	28	75.45	0.00	0.00	101.18	-2.85	47.66	-0.3	-11.64	0	-16.29	0	-23.37
28	29	79.56	0.00	17.27	65.67	-2.85	30.93	-0.3	-7.55	0	-10.57	0	-15.17
29	29	79.56	0.00	17.27	65.67	-2.85	30.93	-0.3	-7.55	0	-10.57	0	-15.17
29	30	83.68	0.00	34.55	-40.88	-2.85	-19.25	-0.3	4.70	0	6.58	0	9.44
30	30	83.68	3.64	34.35	-40.88	-2.85	-16.62	-0.3	5.08	0	7.01	0	9.65
30	31	87.79	5.48	51.62	-218.66	-2.85	-99.03	-0.3	25.72	0	35.85	0	50.82
31	31	87.79	5.48	51.62	-218.66	-2.85	-105.13	-0.3	40.72	-0.3	34.35	0	49.01
31	32	91.90	5.48	51.62	-432.16	-2.85	-209.32	-0.3	78.93	-0.3	66.59	0	95.55
32	32	91.90	-10.53	50.83	-432.16	-2.85	-213.93	-0.3	74.32	-0.3	62.69	0	91.64
	33	92.90	-10.53	50.83	-484.08	-2.85	-239.26	-0.3	83.62	-0.3	70.53	0	102.96
	33	92.90	-19.02	48.30	-484.08	-2.85	-102.46	-0.3	72.29	-0.3	67.18	0	86.06
	34	93.90	-19.02	48.30	-535.99	-3.088	-92.46	-0.3	74.77	-0.3	69.04	0	85.66
34	34	93.90	-5.09	51.66	-535.99	-3.088	-90.69	-0.3	76.54	-0.3	70.69	0	87.30
34	35	94.90	-5.09	51.66	-587.91	-3.325	-85.83	-0.3	78.20	-0.3	72.36	0	87.06
35	35	94.90	-8.23	51.26	-587.91	-3.325	-99.88	-0.3	75.06	-0.3	75.06	0	92.41
35	36	97.25	-8.23	51.26	-709.90	-3.884	-84.27	-0.3	80.54	-0.3	80.54	0	94.33
36	36	97.25	-7.58	51.36	-709.90	-3.884	-84.19	-0.3	80.61	-0.3	80.61	0	94.40
36	37	99.60	-7.58	51.36	-831.90	-4.442	-82.15	-0.3	85.88	-0.3	85.88	0	98.05
37	37	99.60	-0.85	51.91	-831.90	-4.442	-81.50	-0.3	86.53	-0.3	86.53	0	98.70
37	38	101.90	-0.85	51.91	-951.31	-5	-86.46	-0.3	92.09	-0.3	92.09	0	103.49
38	38	101.90	5.14	51.66	-951.31	-5	-64.43	-0.3	43.77	-0.3	43.77	0	50.67
38	39	104.45	5.14	51.66	-1084.00	-5	-73.46	-0.3	49.84	-0.3	49.84	0	57.71
39	39	104.45	5.83	-58.64	-1083.69	-5	-73.40	-0.3	49.86	-0.3	49.86	0	57.72
39	40	107.00	5.83	-58.64	-933.42	-5	-63.18	-0.3	42.98	-0.3	42.98	0	49.76
40	40	107.00	-0.97	-58.92	-933.42	-5	-84.85	-0.3	90.35	-0.3	90.35	0	101.53
40	41	109.30	-0.97	-58.92	-797.89	-4.442	-78.18	-0.3	82.98	-0.3	82.98	0	94.65
41	41	109.30	-8.60	-58.30	-797.89	-4.442	-78.91	-0.3	82.24	-0.3	82.24	0	93.92
41	42	111.65	-8.60	-58.30	-659.41	-3.884	-78.38	-0.3	74.70	-0.3	74.70	0	87.51
42	42	111.65	-9.34	-58.18	-659.41	-3.884	-78.47	-0.3	74.61	-0.3	74.61	0	87.43
42	43	114.00	-9.34	-58.18	-520.92	-3.325	-88.80	-0.3	66.21	-0.3	66.21	0	81.58
43	43	114.00	-5.78	-58.64	-520.92	-3.325	-76.19	-0.3	69.14	-0.3	63.98	0	77.00
43	44	115.00	-5.78	-58.64	-462.00	-3.088	-78.35	-0.3	65.79	-0.3	60.76	0	75.09
44	44	115.00	-21.59	-54.83	-462.00	-3.088	-80.36	-0.3	63.79	-0.3	58.90	0	73.22
44	45	116.00	-21.59	-54.83	-403.07	-2.85	-86.14	-0.3	59.37	-0.3	55.17	0	70.89
45	45	116.00	-11.96	-57.70	-403.07	-2.85	-200.14	-0.3	68.71	-0.3	57.95	0	84.95
45	46	117.00	-11.96	-57.70	-344.14	-2.85	-171.38	-0.3	58.16	-0.3	49.05	0	72.10
46	46	117.00	0.00	-58.93	-344.14	-2.85	-167.94	-0.3	61.60	-0.3	51.97	0	75.02
46	47	119.78	0.00	-58.93	-180.61	-2.85	-88.14	-0.3	32.33	-0.3	27.27	0	39.37
47	47	119.78	9.15	-58.21	-180.61	-2.85	-85.50	-0.3	34.96	-0.3	29.50	0	41.61
47	48	122.55	9.15	-58.21	-17.09	-2.85	-5.70	-0.3	5.69	-0.3	4.81	0	5.96
48	48	122.55	4.62	-58.75	-17.09	-2.85	-4.71	-0.3	2.45	0	3.30	0	4.21
48	49	128.10	2.79	-35.44	245.08	-2.85	117.45	-0.3	-27.89	0	-39.13	0	-56.45
49	49	128.10	0.00	-35.55	245.08	-2.85	115.43	-0.3	-28.18	0	-39.46	0	-56.61
	50	133.65	0.00	-12.24	377.68	-2.85	177.89	-0.3	-43.43	0	-60.81	0	-87.24
	50	133.65	0.00	-12.24	377.68	-2.85	177.89	-0.3	-43.43	0	-60.81	0	-87.24
	51	139.20	0.00	11.07	380.90	-2.85	179.40	-0.3	-43.80	0	-61.32	0	-87.99
51	51	139.20	0.00	11.07	380.90	-2.85	179.40	-0.3	-43.80	0	-61.32	0	-87.99
51	52	144.75	0.00	34.38	254.76	-2.85	119.99	-0.3	-29.30	0	-41.02	0	-58.85
52	52	144.75	0.00	34.38	254.76	-2.85	119.99	-0.3	-29.30	0	-41.02	0	-58.85
52	53	147.53	0.00	46.04	143.17	-2.85	67.43	-0.3	-16.46	0	-23.05	0	-33.07
53	53	147.53	0.00	46.04	143.17	-2.85	67.43	-0.3	-16.46	0	-23.05	0	-33.07
53	54	150.30	0.00	57.69	-0.76	-2.85	-0.36	-0.3	0.09	0	0.12	0	0.18
54	54	150.30	0.00	-2.52	-0.76	-2.85	-0.36	-0.3	0.09	0	0.12	0	0.18
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

(PretensadoTotal(t=0)); Tensiones a tiempo Tinf

[1; 1\prot210vcontF11.TOT.Te

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	-32.25	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	-32.25	89.50	-2.85	43.68	-0.3	-16.02	-0.3	-13.51	0	-19.51
3	3	3.38	0.00	-32.25	89.50	-2.85	43.68	-0.3	-16.02	-0.3	-13.51	0	-19.51
3	4	6.15	0.00	-32.25	179.01	-2.85	87.36	-0.3	-32.04	-0.3	-27.03	0	-39.02
4	4	6.15	0.00	-32.25	179.01	-2.85	87.36	-0.3	-32.04	-0.3	-27.03	0	-39.02
4	5	11.70	0.00	-32.25	358.01	-2.85	174.71	-0.3	-64.08	-0.3	-54.06	0	-78.05
5	5	11.70	0.00	-32.25	358.01	-2.85	174.71	-0.3	-64.08	-0.3	-54.06	0	-78.05
5	6	17.25	0.00	-32.25	537.02	-2.85	262.07	-0.3	-96.13	-0.3	-81.09	0	-117.07
6	6	17.25	0.00	-32.25	537.02	-2.85	262.07	-0.3	-96.13	-0.3	-81.09	0	-117.07
6	7	22.80	0.00	-32.25	716.03	-2.85	349.42	-0.3	-128.17	-0.3	-108.12	0	-156.09
7	7	22.80	0.00	-32.25	716.03	-2.85	349.42	-0.3	-128.17	-0.3	-108.12	0	-156.09
7	8	28.35	0.00	-32.25	895.03	-2.85	436.77	-0.3	-160.21	-0.3	-135.15	0	-195.12
8	8	28.35	0.00	-32.25	895.03	-2.85	436.77	-0.3	-160.21	-0.3	-135.15	0	-195.12
8	9	31.13	0.00	-32.25	984.54	-2.85	480.46	-0.3	-176.23	-0.3	-148.67	0	-214.63
9	9	31.13	0.00	-32.25	984.54	-2.85	480.46	-0.3	-176.23	-0.3	-148.67	0	-214.63
9	10	33.90	0.00	-32.25	1074.04	-2.85	524.13	-0.3	-192.25	-0.3	-162.18	0	-234.14
10	10	33.90	6.54	-31.58	1074.04	-2.85	526.02	-0.3	-190.37	-0.3	-160.58	0	-232.55
10	11	34.90	6.54	-31.58	1106.29	-2.85	541.75	-0.3	-196.14	-0.3	-165.45	0	-239.58
11	11	34.90	11.82	-30.01	1106.29	-2.85	229.60	-0.3	-169.77	-0.3	-157.73	0	-200.88
11	12	35.90	11.82	-30.01	1138.55	-3.088	192.78	-0.3	-162.45	-0.3	-150.03	0	-185.33
12	12	35.90	3.16	-32.10	1138.55	-3.088	191.68	-0.3	-163.55	-0.3	-151.05	0	-186.35
12	13	36.90	3.16	-32.10	1170.80	-3.325	170.13	-0.3	-156.53	-0.3	-144.84	0	-174.11
13	13	36.90	5.11	-31.85	1170.80	-3.325	197.23	-0.3	-151.15	-0.3	-151.15	0	-185.71
13	14	39.25	5.11	-31.85	1246.59	-3.884	146.90	-0.3	-142.50	-0.3	-142.50	0	-166.72
14	14	39.25	4.71	-31.91	1246.59	-3.884	146.85	-0.3	-142.54	-0.3	-142.54	0	-166.76
14	15	41.60	4.71	-31.91	1322.39	-4.442	129.87	-0.3	-137.22	-0.3	-137.22	0	-156.57
15	15	41.60	0.53	-32.25	1322.39	-4.442	129.47	-0.3	-137.62	-0.3	-137.62	0	-156.97
15	16	43.90	0.53	-32.25	1396.57	-5	126.87	-0.3	-135.26	-0.3	-135.26	0	-151.99
16	16	43.90	-3.19	-32.10	1396.57	-5	94.81	-0.3	-64.04	-0.3	-64.04	0	-74.18
16	17	46.45	-3.19	-32.10	1478.82	-5	100.40	-0.3	-67.80	-0.3	-67.80	0	-78.54
17	17	46.45	0.01	-0.06	1478.82	-5	100.56	-0.3	-67.64	-0.3	-67.64	0	-78.38
17	18	49.00	0.01	-0.06	1478.98	-5	100.57	-0.3	-67.65	-0.3	-67.65	0	-78.39
18	18	49.00	0.00	-0.06	1478.98	-5	134.31	-0.3	-143.28	-0.3	-143.28	0	-161.00
18	19	51.30	0.00	-0.06	1479.12	-4.442	144.76	-0.3	-153.99	-0.3	-153.99	0	-175.63
19	19	51.30	-0.01	-0.06	1479.12	-4.442	144.76	-0.3	-153.99	-0.3	-153.99	0	-175.63
19	20	53.65	-0.01	-0.06	1479.27	-3.884	173.62	-0.3	-169.79	-0.3	-169.79	0	-198.53
20	20	53.65	-0.01	-0.06	1479.27	-3.884	173.62	-0.3	-169.79	-0.3	-169.79	0	-198.53
20	21	56.00	-0.01	-0.06	1479.41	-3.325	248.26	-0.3	-191.95	-0.3	-191.95	0	-235.61
21	21	56.00	-692.69	68.24	774.26	-3.325	33.30	-0.3	-182.72	-0.3	-169.43	0	-188.79
21	22	57.00	-693.62	68.33	704.71	-3.088	30.30	-0.3	-189.57	-0.3	-175.57	0	-197.42
22	22	57.00	-648.52	255.33	704.71	-3.088	36.03	-0.3	-183.84	-0.3	-170.25	0	-192.10
22	23	58.00	-649.37	255.70	453.32	-2.85	-0.13	-0.3	-163.77	-0.3	-151.64	0	-169.32
23	23	58.00	-683.39	141.57	453.32	-2.85	24.40	-0.3	-277.96	-0.3	-235.20	0	-265.57
23	24	59.00	-684.29	141.79	311.68	-2.85	-44.98	-0.3	-252.87	-0.3	-214.03	0	-234.91
24	24	59.00	-1407.03	0.00	-958.14	-2.85	-872.80	-0.3	-233.72	-0.3	-198.64	0	-134.44
24	25	63.11	-1414.53	0.00	-971.58	-2.85	-881.52	-0.3	-233.47	-0.3	-198.44	0	-133.34
25	25	63.11	-1414.53	0.00	-971.58	-2.85	-881.52	-0.3	-233.47	-0.3	-198.44	0	-133.34
25	26	67.23	-1422.02	0.00	-985.02	-2.85	-890.23	-0.3	-233.22	-0.3	-198.23	0	-132.24
26	26	67.23	-1422.02	0.00	-985.02	-2.85	-890.23	-0.3	-233.22	-0.3	-198.23	0	-132.24
26	27	71.34	-1427.93	0.00	-995.61	-2.85	-897.10	-0.3	-233.03	-0.3	-198.08	0	-131.37
27	27	71.34	-1427.93	0.00	-995.61	-2.85	-897.10	-0.3	-233.03	-0.3	-198.08	0	-131.37
27	28	75.45	-1427.95	0.00	-995.65	-2.85	-897.13	-0.3	-233.03	-0.3	-198.08	0	-131.37
28	28	75.45	-1427.95	0.00	-995.65	-2.85	-897.13	-0.3	-233.03	-0.3	-198.08	0	-131.37
28	29	79.56	-1427.93	0.00	-995.61	-2.85	-897.10	-0.3	-233.03	-0.3	-198.08	0	-131.37
29	29	79.56	-1427.93	0.00	-995.61	-2.85	-897.10	-0.3	-233.03	-0.3	-198.08	0	-131.37
29	30	83.68	-1422.02	0.00	-985.02	-2.85	-890.23	-0.3	-233.22	-0.3	-198.23	0	-132.24
30	30	83.68	-1422.02	0.00	-985.02	-2.85	-890.23	-0.3	-233.22	-0.3	-198.23	0	-132.24
30	31	87.79	-1414.52	0.00	-971.58	-2.85	-881.51	-0.3	-233.47	-0.3	-198.43	0	-133.34
31	31	87.79	-1414.52	0.00	-971.58	-2.85	-881.51	-0.3	-233.47	-0.3	-198.43	0	-133.34
31	32	91.90	-1407.03	0.00	-958.14	-2.85	-872.80	-0.3	-233.72	-0.3	-198.64	0	-134.44
32	32	91.90	-684.29	-141.79	311.68	-2.85	-44.98	-0.3	-252.87	-0.3	-214.03	0	-234.91
32	33	92.90	-683.39	-141.57	453.32	-2.85	24.40	-0.3	-277.96	-0.3	-235.20	0	-265.57
33	33	92.90	-649.37	-255.70	453.32	-2.85	-0.13	-0.3	-163.77	-0.3	-151.64	0	-169.32
33	34	93.90	-648.53	-255.33	704.71	-3.088	36.03	-0.3	-183.84	-0.3	-170.25	0	-192.10
34	34	93.90	-693.62	-68.33	704.71	-3.088	30.30	-0.3	-189.57	-0.3	-175.57	0	-197.42
34	35	94.90	-692.69	-68.24	774.26	-3.325	33.30	-0.3	-182.72	-0.3	-169.43	0	-188.79
35	35	94.90	-0.01	0.06	1479.41	-3.325	248.26	-0.3	-191.95	-0.3	-191.95	0	-235.61
35	36	97.25	-0.01	0.06	1479.27	-3.884	173.62	-0.3	-169.79	-0.3	-169.79	0	-198.53
36	36	97.25	-0.01	0.06	1479.27	-3.884	173.62	-0.3	-169.79	-0.3	-169.79	0	-198.53
36	37	99.60	-0.01	0.06	1479.12	-4.442	144.76	-0.3	-153.99	-0.3	-153.99	0	-175.63
37	37	99.60	0.00	0.06	1479.12	-4.442	144.76	-0.3	-153.99	-0.3	-153.99	0	-175.63
37	38	101.90	0.00	0.06	1478.98	-5	134.31	-0.3	-143.28	-0.3	-143.28	0	-161.00
38	38	101.90	0.01	0.06	1478.98	-5	100.57	-0.3	-67.65	-0.3	-67.65	0	-78.39
38	39	104.45	0.01	0.06	1478.82	-5	100.56	-0.3	-67.64	-0.3	-67.64	0	-78.38
39	39	104.45	-3.19	32.10	1478.82	-5	100.40	-0.3	-67.80	-0.3	-67.80	0	-78.54
39	40	107.00	-3.19	32.10	1396.57	-5	94.81	-0.3	-64.04	-0.3	-64.04	0	-74.18
40	40	107.00	0.53	32.25	1396.57	-5	126.87	-0.3	-135.26	-0.3	-135.26	0	-151.99
40	41	109.30	0.53	32.25	1322.39	-4.442	129.47	-0.3	-137.62	-0.3	-137.62	0	-156.97
41	41	109.30	4.71	31.91	1322.39	-4.442	129.87	-0.3	-137.22	-0.3	-137.22	0	-156.57
41	42	111.65	4.71	31.91	1246.59	-3.884	146.85	-0.3	-142.54	-0.3	-142.54	0	-166.76
42	42	111.65	5.11	31.85	1246.59	-3.884	146.90	-0.3	-142.50	-0.3	-142.50	0	-166.72
42	43	114.00	5.11	31.85	1170.80	-3.325	197.23	-0.3	-151.15	-0.3	-151.15	0	-185.71
43	43	114.00	3.16	32.10	1170.80	-3.325	170.13	-0.3	-156.53	-0.3	-144.84	0	-174.11
43	44	115.00	3.16	32.10	1138.55	-3.088	191.68	-0.3	-163.55	-0.3	-151.05	0	-186.35
44	44	115.00	11.82	30.01	1138.55	-3.088	192.78	-0.3	-162.45	-0.3	-150.03	0	-185.33
44	45	116.00	11.82	30.01	1106.29	-2.85	229.60	-0.3	-169.77	-0.3	-157.73	0	-200.88
45	45	116.00	6.54	31.58	1106.29	-2.85	541.75	-0.3	-196.14	-0.3	-165.45	0	-239.58
45	46	117.00	6.54	31.58	1074.04	-2.85	526.02	-0.3	-190.37	-0.3	-160.58	0	-232.55
46	46	117.00	0.00	32.25	1074.04	-2.85	524.13	-0.3	-192.25	-0.3	-162.18	0	-234.14
46	47	119.78	0.00	32.25	984.53	-2.85	480.45	-0.3	-176.23	-0.3	-148.66	0	-214.63
47	47	119.78	0.00	32.25	984.53	-2.85	480.45	-0.3	-176.23	-0.3	-148.66	0	-214.63
47	48	122.55	0.00	32.25	895.03	-2.85	436.77	-0.3	-160.21	-0.3	-135.15	0	-195.12
48	48	122.55	0.00	32.25	895.03	-2.85	436.77	-0.3	-160.21	-0.3	-135.15	0	-195.12
48	49	128.10	0.00	32.25	716.03	-2.85	349.42	-0.3	-128.17	-0.3	-108.12	0	-156.09
49	49	128.10	0.00	32.25	716.03	-2.85	349.42	-0.3	-128.17	-0.3	-108.12	0	-156.09
49	50	133.65	0.00	32.25	537.02	-2.85	262.07	-0.3	-96.13	-0.3	-81.09	0	-117.07
50	50	133.65	0.00	32.25	537.02	-2.85	262.07	-0.3	-96.13	-0.3	-81.09	0	-117.07
50	51	139.20	0.00	32.25	358.01	-2.85	174.71	-0.3	-64.08	-0.3	-54.06	0	-78.05
51	51	139.20	0.00	32.25	358.01	-2.85	174.71	-0.3	-64.08	-0.3	-54.06	0	-78.05
51	52	144.75	0.00	32.25	179.01	-2.85	87.36	-0.3	-32.04	-0.3	-27.03	0	-39.02
52	52	144.75	0.00	32.25	179.01	-2.85	87.36	-0.3	-32.04	-0.3	-27.03	0	-39.02
52	53	147.53	0.00	32.25	89.50	-2.85	43.68	-0.3	-16.02	-0.3	-13.51	0	-19.51
53	53	147.53	0.00	32.25	89.50	-2.85	43.68	-0.3	-16.02	-0.3	-13.51	0	-19.51
53	54	150.30	0.00	32.25	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

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(PretensadoTotal(t=0)). Tensiones a tiempo Tinf

[1; 1]prat15.18dcsF12.TOT.To

Coef. xxx:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-707.79	0.00	-1269.06	-2.85	-823.14	-0.3	23.32	-0.3	18.93	0	103.95
1	2	0.60	-707.25	0.00	-1268.00	-2.85	-822.47	-0.3	23.28	-0.3	18.90	0	103.86
2	2	0.60	-707.25	-25.02	-1268.11	-2.85	-822.53	-0.3	23.30	-0.3	18.92	0	103.88
2	3	3.38	-704.78	-25.02	-1194.66	-2.85	-785.97	-0.3	10.87	-0.3	8.43	0	88.47
3	3	3.38	-704.78	-25.02	-1194.26	-2.85	-785.78	-0.3	10.80	-0.3	8.37	0	88.38
3	4	6.15	-702.32	-25.02	-1120.32	-2.85	-748.98	-0.3	-1.73	-0.3	-2.20	0	72.86
4	4	6.15	-1410.11	-25.02	-2389.49	-2.85	-1572.18	-0.3	21.61	-0.3	16.75	0	176.84
4	5	11.70	-1400.29	-25.02	-2232.59	-2.85	-1492.79	-0.3	-3.65	-0.3	-4.55	0	145.03
5	5	11.70	-1400.29	-25.02	-2233.02	-2.85	-1493.00	-0.3	-3.57	-0.3	-4.48	0	145.13
5	6	17.25	-1390.53	-25.02	-2076.68	-2.85	-1413.89	-0.3	-28.75	-0.3	-25.71	0	113.43
6	6	17.25	-1390.53	-25.02	-2076.68	-2.85	-1413.89	-0.3	-28.75	-0.3	-25.71	0	113.43
6	7	22.80	-1380.84	-25.02	-1920.46	-2.85	-1334.87	-0.3	-53.92	-0.3	-46.94	0	81.74
7	7	22.80	-1380.84	-25.02	-1920.46	-2.85	-1334.87	-0.3	-53.92	-0.3	-46.94	0	81.74
7	8	28.35	-1371.22	-25.02	-1764.37	-2.85	-1255.92	-0.3	-79.09	-0.3	-68.16	0	50.05
8	8	28.35	-1371.22	-25.02	-1764.37	-2.85	-1255.92	-0.3	-79.09	-0.3	-68.16	0	50.05
8	9	31.13	-1366.43	-25.02	-1686.36	-2.85	-1216.48	-0.3	-91.67	-0.3	-78.77	0	34.22
9	9	31.13	-1366.43	-25.02	-1686.36	-2.85	-1216.48	-0.3	-91.67	-0.3	-78.77	0	34.22
9	10	33.90	-1361.66	-25.02	-1608.39	-2.85	-1177.05	-0.3	-104.26	-0.3	-89.38	0	18.38
10	10	33.90	-664.18	-163.17	-392.39	-2.85	-382.77	-0.3	-121.05	-0.3	-102.81	0	-76.52
10	11	34.90	-663.35	-162.96	-228.92	-2.85	-302.76	-0.3	-150.07	-0.3	-127.29	0	-111.95
11	11	34.90	-625.98	-273.38	-228.92	-2.85	-137.30	-0.3	-54.66	-0.3	-50.29	0	-41.36
11	12	35.90	-625.20	-273.04	41.93	-3.088	-72.36	-0.3	-85.44	-0.3	-79.35	0	-80.65
12	12	35.90	-676.03	-91.74	41.93	-3.088	-78.81	-0.3	-91.89	-0.3	-85.35	0	-86.65
12	13	36.90	-675.17	-91.65	134.93	-3.325	-57.40	-0.3	-95.05	-0.3	-88.30	0	-91.67
13	13	36.90	3.94	-24.65	824.73	-3.325	138.98	-0.3	-106.43	-0.3	-106.43	0	-130.76
13	14	39.25	3.94	-24.65	883.39	-3.884	104.14	-0.3	-100.94	-0.3	-100.94	0	-118.11
14	14	39.25	3.63	-24.70	883.39	-3.884	104.10	-0.3	-100.98	-0.3	-100.98	0	-118.14
14	15	41.60	3.63	-24.70	942.06	-4.442	92.55	-0.3	-97.73	-0.3	-97.73	0	-111.51
15	15	41.60	0.39	-24.96	942.06	-4.442	92.24	-0.3	-98.04	-0.3	-98.04	0	-111.82
15	16	43.90	0.39	-24.96	999.46	-5	90.79	-0.3	-96.79	-0.3	-96.79	0	-108.77
[illegible]	16	43.90	-2.49	-24.84	999.46	-5	67.84	-0.3	-45.84	-0.3	-45.84	0	-53.09
	17	46.45	-2.49	-24.84	1063.11	-5	72.17	-0.3	-48.75	-0.3	-48.75	0	-56.47
	17	46.45	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
17	18	49.00	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
18	18	49.00	-0.02	0.00	1063.11	-5	96.54	-0.3	-103.00	-0.3	-103.00	0	-115.73
18	19	51.30	-0.02	0.00	1063.11	-4.442	104.04	-0.3	-110.68	-0.3	-110.68	0	-126.24
19	19	51.30	-0.02	0.00	1063.11	-4.442	104.04	-0.3	-110.68	-0.3	-110.68	0	-126.24
19	20	53.65	-0.02	0.00	1063.11	-3.884	124.77	-0.3	-122.03	-0.3	-122.03	0	-142.68
20	20	53.65	-0.02	0.00	1063.11	-3.884	124.77	-0.3	-122.03	-0.3	-122.03	0	-142.68
20	21	56.00	-0.02	0.00	1063.10	-3.325	178.40	-0.3	-137.94	-0.3	-137.94	0	-169.31
21	21	56.00	-0.02	0.00	1063.10	-3.325	154.15	-0.3	-142.46	-0.3	-131.83	0	-158.40
21	22	57.00	-0.02	0.00	1063.10	-3.088	178.60	-0.3	-153.09	-0.3	-141.39	0	-174.35
22	22	57.00	-0.02	0.01	1063.10	-3.088	178.60	-0.3	-153.09	-0.3	-141.39	0	-174.35
22	23	58.00	-0.02	0.01	1063.09	-2.85	218.99	-0.3	-164.78	-0.3	-153.09	0	-194.55
23	23	58.00	-0.02	0.00	1063.09	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
23	24	59.00	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
24	24	59.00	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
24	25	63.11	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
25	25	63.11	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
25	26	67.23	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
26	26	67.23	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
26	27	71.34	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
27	27	71.34	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
27	28	75.45	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
28	28	75.45	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
28	29	79.56	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
29	29	79.56	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
29	30	83.68	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
30	30	83.68	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
30	31	87.79	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
31	31	87.79	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
31	32	91.90	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
32	32	91.90	-0.02	0.00	1063.08	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
[illegible]	33	92.90	-0.02	0.00	1063.09	-2.85	518.78	-0.3	-190.30	-0.3	-160.53	0	-231.76
	33	92.90	-0.02	-0.01	1063.09	-2.85	218.99	-0.3	-164.78	-0.3	-153.09	0	-194.55
	34	93.90	-0.02	-0.01	1063.10	-3.088	178.60	-0.3	-153.09	-0.3	-141.39	0	-174.35
34	34	93.90	-0.02	0.00	1063.10	-3.088	178.60	-0.3	-153.09	-0.3	-141.39	0	-174.35
34	35	94.90	-0.02	0.00	1063.10	-3.325	154.15	-0.3	-142.46	-0.3	-131.83	0	-158.40
35	35	94.90	-0.02	0.00	1063.10	-3.325	178.40	-0.3	-137.94	-0.3	-137.94	0	-169.31
35	36	97.25	-0.02	0.00	1063.11	-3.884	124.77	-0.3	-122.03	-0.3	-122.03	0	-142.68
36	36	97.25	-0.02	0.00	1063.11	-3.884	124.77	-0.3	-122.03	-0.3	-122.03	0	-142.68
36	37	99.60	-0.02	0.00	1063.11	-4.442	104.04	-0.3	-110.68	-0.3	-110.68	0	-126.24
37	37	99.60	-0.02	0.00	1063.11	-4.442	104.04	-0.3	-110.68	-0.3	-110.68	0	-126.24
37	38	101.90	-0.02	0.00	1063.11	-5	96.54	-0.3	-103.00	-0.3	-103.00	0	-115.73
38	38	101.90	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
38	39	104.45	-0.02	0.00	1063.11	-5	72.29	-0.3	-48.63	-0.3	-48.63	0	-56.35
39	39	104.45	-2.49	24.84	1063.11	-5	72.17	-0.3	-48.75	-0.3	-48.75	0	-56.47
39	40	107.00	-2.49	24.84	999.46	-5	67.84	-0.3	-45.84	-0.3	-45.84	0	-53.09
40	40	107.00	0.39	24.96	999.46	-5	90.79	-0.3	-96.79	-0.3	-96.79	0	-108.77
40	41	109.30	0.39	24.96	942.06	-4.442	92.24	-0.3	-98.04	-0.3	-98.04	0	-111.82
41	41	109.30	3.63	24.70	942.06	-4.442	92.55	-0.3	-97.73	-0.3	-97.73	0	-111.51
41	42	111.65	3.63	24.70	883.39	-3.884	104.10	-0.3	-100.98	-0.3	-100.98	0	-118.14
42	42	111.65	3.94	24.65	883.39	-3.884	104.14	-0.3	-100.94	-0.3	-100.94	0	-118.11
42	43	114.00	3.94	24.65	824.73	-3.325	138.98	-0.3	-106.43	-0.3	-106.43	0	-130.76
43	43	114.00	-675.17	91.65	134.93	-3.325	-57.40	-0.3	-95.05	-0.3	-88.30	0	-91.67
43	44	115.00	-676.03	91.74	41.93	-3.088	-78.81	-0.3	-91.89	-0.3	-85.35	0	-86.65
44	44	115.00	-625.20	273.04	41.93	-3.088	-72.36	-0.3	-85.44	-0.3	-79.35	0	-80.65
44	45	116.00	-625.98	273.38	-228.92	-2.85	-137.30	-0.3	-54.66	-0.3	-50.29	0	-41.36
45	45	116.00	-663.35	162.96	-228.92	-2.85	-302.76	-0.3	-150.07	-0.3	-127.29	0	-111.95
45	46	117.00	-664.18	163.17	-392.39	-2.85	-382.77	-0.3	-121.05	-0.3	-102.81	0	-76.52
46	46	117.00	-1361.66	25.02	-1608.39	-2.85	-1177.05	-0.3	-104.26	-0.3	-89.38	0	18.38
46	47	119.78	-1366.43	25.02	-1686.36	-2.85	-1216.48	-0.3	-91.67	-0.3	-78.77	0	34.22
47	47	119.78	-1366.43	25.02	-1686.36	-2.85	-1216.48	-0.3	-91.67	-0.3	-78.77	0	34.22
47	48	122.55	-1371.22	25.02	-1764.37	-2.85	-1255.92	-0.3	-79.09	-0.3	-68.16	0	50.05
48	48	122.55	-1371.22	25.02	-1764.37	-2.85	-1255.92	-0.3	-79.09	-0.3	-68.16	0	50.05
48	49	128.10	-1380.84	25.02	-1920.46	-2.85	-1334.87	-0.3	-53.92	-0.3	-46.94	0	81.74
49	49	128.10	-1380.84	25.02	-1920.46	-2.85	-1334.87	-0.3	-53.92	-0.3	-46.94	0	81.74
[illegible]	50	133.65	-1390.53	25.02	-2076.68	-2.85	-1413.89	-0.3	-28.75	-0.3	-25.71	0	113.43
	50	133.65	-1390.53	25.02	-2076.68	-2.85	-1413.89	-0.3	-28.75	-0.3	-25.71	0	113.43
[illegible]	51	139.20	-1400.29	25.02	-2232.59	-2.85	-1492.79	-0.3	-3.65	-0.3	-4.55	0	145.03
51	51	139.20	-1400.29	25.02	-2233.02	-2.85	-1493.00	-0.3	-3.57	-0.3	-4.48	0	145.13
51	52	144.75	-1410.11	25.02	-2389.29	-2.85	-1572.09	-0.3	21.57	-0.3	16.72	0	176.80
52	52	144.75	-702.32	25.02	-1120.42	-2.85	-749.03	-0.3	-1.71	-0.3	-2.18	0	72.89
52	53	147.53	-704.78	25.02	-1194.66	-2.85	-785.97	-0.3	10.87	-0.3	8.43	0	88.47
53	53	147.53	-704.78	25.02	-1194.26	-2.85	-785.78	-0.3	10.80	-0.3	8.37	0	88.38
53	54	150.30	-707.25	25.02	-1268.00	-2.85	-822.47	-0.3	23.28	-0.3	18.90	0	103.86
54	54	150.30	-707.25	0.00	-1268.11	-2.85	-822.53	-0.3	23.30	-0.3	18.92	0	103.88
54	55	150.90	-707.79	0.00	-1269.00	-2.85	-823.12	-0.3	23.31	-0.3	18.92	0	103.94

[redacted]

(PretensadoTotal(t=0)). Tensiones a tiempo Tinf

[1; 1]prat41?5losaF13.TOT.To

Coef. xxx:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	25.20	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	25.20	-69.92	-2.85	-34.12	-0.3	12.52	-0.3	10.56	0	15.24
3	3	3.38	0.00	25.20	-69.92	-2.85	-34.12	-0.3	12.52	-0.3	10.56	0	15.24
3	4	6.15	0.00	25.20	-139.85	-2.85	-68.25	-0.3	25.03	-0.3	21.12	0	30.49
4	4	6.15	0.00	25.20	-139.85	-2.85	-68.25	-0.3	25.03	-0.3	21.12	0	30.49
4	5	11.70	0.00	25.20	-279.70	-2.85	-136.49	-0.3	50.07	-0.3	42.23	0	60.97
5	5	11.70	0.00	25.20	-279.70	-2.85	-136.49	-0.3	50.07	-0.3	42.23	0	60.97
5	6	17.25	0.00	25.20	-419.54	-2.85	-204.74	-0.3	75.10	-0.3	63.35	0	91.46
6	6	17.25	0.00	25.20	-419.54	-2.85	-204.74	-0.3	75.10	-0.3	63.35	0	91.46
6	7	22.80	0.00	25.20	-559.39	-2.85	-272.98	-0.3	100.13	-0.3	84.47	0	121.95
7	7	22.80	0.00	25.20	-559.39	-2.85	-272.98	-0.3	100.13	-0.3	84.47	0	121.95
7	8	28.35	0.00	25.20	-699.24	-2.85	-341.23	-0.3	125.16	-0.3	105.59	0	152.43
8	8	28.35	-1389.17	25.20	352.36	-2.85	-228.13	-0.3	-463.15	-0.3	-392.16	0	-415.77
8	9	31.13	-1394.33	25.20	286.34	-2.85	-261.83	-0.3	-452.82	-0.3	-383.45	0	-402.64
9	9	31.13	-2088.91	25.20	812.14	-2.85	-205.28	-0.3	-746.98	-0.3	-632.33	0	-686.74
9	10	33.90	-2096.64	25.20	748.06	-2.85	-238.78	-0.3	-737.74	-0.3	-624.54	0	-674.66
10	10	33.90	-2058.14	-400.72	748.06	-2.85	-227.69	-0.3	-726.65	-0.3	-615.14	0	-665.26
10	11	34.90	-2060.82	-401.37	1146.33	-2.85	-34.11	-0.3	-798.71	-0.3	-675.94	0	-752.74
11	11	34.90	-1962.57	-745.92	1146.33	-2.85	-46.47	-0.3	-460.29	-0.3	-426.09	0	-470.80
11	12	35.90	-1965.08	-747.00	1878.30	-3.088	65.99	-0.3	-520.04	-0.3	-481.69	0	-539.92
12	12	35.90	-2094.44	-181.38	1878.30	-3.088	49.56	-0.3	-536.47	-0.3	-496.96	0	-555.19
12	13	36.90	-2097.19	-181.65	2064.62	-3.325	60.29	-0.3	-515.74	-0.3	-478.32	0	-529.93
13	13	36.90	-2082.24	-308.99	2064.28	-3.325	38.09	-0.3	-576.16	-0.3	-576.16	0	-637.07
13	14	39.25	-2088.66	-310.02	2801.59	-3.884	88.73	-0.3	-561.66	-0.3	-561.66	0	-616.09
14	14	39.25	-2092.41	-283.56	2801.96	-3.884	88.34	-0.3	-562.13	-0.3	-562.13	0	-616.57
14	15	41.60	-2098.82	-284.51	3482.07	-4.442	139.41	-0.3	-563.90	-0.3	-563.90	0	-614.84
15	15	41.60	-2118.00	-9.69	3481.95	-4.442	137.56	-0.3	-565.73	-0.3	-565.73	0	-616.67
15	16	43.90	-2124.32	-9.79	3519.50	-5	141.48	-0.3	-519.09	-0.3	-519.09	0	-561.26
16	16	43.90	-2111.30	235.00	3519.03	-5	134.87	-0.3	-265.39	-0.3	-265.39	0	-290.93
16	17	46.45	-2118.25	235.69	2933.00	-5	94.68	-0.3	-238.92	-0.3	-238.92	0	-260.22
17	17	46.45	-2120.74	-210.62	2932.77	-5	94.54	-0.3	-239.04	-0.3	-239.04	0	-260.33
17	18	49.00	-2127.67	-211.31	3487.11	-5	131.89	-0.3	-264.74	-0.3	-264.74	0	-290.05
18	18	49.00	-2137.85	35.21	3487.64	-5	137.45	-0.3	-517.14	-0.3	-517.14	0	-558.92
18	19	51.30	-2144.11	35.31	3419.58	-4.442	128.95	-0.3	-561.74	-0.3	-561.74	0	-611.77
19	19	51.30	-2121.39	313.30	3418.77	-4.442	131.05	-0.3	-559.48	-0.3	-559.48	0	-609.49
19	20	53.65	-2124.72	313.80	2689.39	-3.884	71.42	-0.3	-552.92	-0.3	-552.92	0	-605.18
20	20	53.65	-2120.58	340.67	2688.94	-3.884	71.84	-0.3	-552.40	-0.3	-552.40	0	-604.64
20	21	56.00	-2117.77	340.21	1885.19	-3.325	2.78	-0.3	-558.18	-0.3	-558.18	0	-613.81
21	21	56.00	-2134.55	210.65	1885.36	-3.325	30.04	-0.3	-495.98	-0.3	-460.05	0	-507.18
21	22	57.00	-2131.87	210.38	1669.83	-3.088	9.78	-0.3	-511.20	-0.3	-473.65	0	-525.41
22	22	57.00	-1993.16	785.13	1669.33	-3.088	27.32	-0.3	-493.51	-0.3	-457.21	0	-508.96
22	23	58.00	-1990.71	784.08	898.35	-2.85	-101.60	-0.3	-425.91	-0.3	-394.13	0	-429.16
23	23	58.00	-2095.04	434.19	898.35	-2.85	-164.98	-0.3	-764.18	-0.3	-646.84	0	-707.03
23	24	59.00	-2092.45	433.56	466.89	-2.85	-374.78	-0.3	-686.20	-0.3	-581.06	0	-612.34
24	24	59.00	-2136.89	0.00	466.89	-2.85	-387.58	-0.3	-699.00	-0.3	-591.90	0	-623.18
24	25	63.11	-2125.84	0.00	458.53	-2.85	-388.48	-0.3	-694.32	-0.3	-587.94	0	-618.66
25	25	63.11	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
25	26	67.23	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
26	26	67.23	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
26	27	71.34	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
27	27	71.34	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
27	28	75.45	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
28	28	75.45	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
28	29	79.56	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
29	29	79.56	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
29	30	83.68	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
30	30	83.68	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
30	31	87.79	0.00	0.00	-1150.74	-2.85	-561.56	-0.3	205.98	-0.3	173.76	0	250.86
31	31	87.79	-2125.85	0.00	458.53	-2.85	-388.48	-0.3	-694.32	-0.3	-587.95	0	-618.67
31	32	91.90	-2136.89	0.00	466.89	-2.85	-387.58	-0.3	-699.00	-0.3	-591.90	0	-623.18
32	32	91.90	-2092.44	-433.56	466.89	-2.85	-374.78	-0.3	-686.20	-0.3	-581.06	0	-612.34
32	33	92.90	-2095.04	-434.19	898.35	-2.85	-164.98	-0.3	-764.18	-0.3	-646.84	0	-707.03
33	33	92.90	-1990.71	-784.08	898.35	-2.85	-101.60	-0.3	-425.91	-0.3	-394.13	0	-429.16
33	34	93.90	-1993.16	-785.13	1669.83	-3.088	27.40	-0.3	-493.59	-0.3	-457.28	0	-509.05
34	34	93.90	-2131.87	-210.38	1669.33	-3.088	9.70	-0.3	-511.13	-0.3	-473.58	0	-525.33
34	35	94.90	-2134.55	-210.65	1885.18	-3.325	30.01	-0.3	-495.95	-0.3	-460.02	0	-507.15
35	35	94.90	-2117.77	-340.21	1885.36	-3.325	2.80	-0.3	-558.20	-0.3	-558.20	0	-613.84
35	36	97.25	-2120.58	-340.67	2689.39	-3.884	71.89	-0.3	-552.45	-0.3	-552.45	0	-604.70
36	36	97.25	-2124.72	-313.80	2688.94	-3.884	71.36	-0.3	-552.87	-0.3	-552.87	0	-605.12
36	37	99.60	-2121.39	-313.30	3419.58	-4.442	131.13	-0.3	-559.56	-0.3	-559.56	0	-609.59
37	37	99.60	-2144.11	-35.31	3418.77	-4.442	128.87	-0.3	-561.66	-0.3	-561.66	0	-611.67
37	38	101.90	-2137.85	-35.21	3487.11	-5	137.41	-0.3	-517.09	-0.3	-517.09	0	-558.87
38	38	101.90	-2127.67	211.31	3487.64	-5	131.93	-0.3	-264.76	-0.3	-264.76	0	-290.08
38	39	104.45	-2120.74	210.62	2933.00	-5	94.55	-0.3	-239.05	-0.3	-239.05	0	-260.34
39	39	104.45	-2118.25	-235.69	2932.77	-5	94.66	-0.3	-238.91	-0.3	-238.91	0	-260.21
39	40	107.00	-2111.30	-235.00	3519.50	-5	134.90	-0.3	-265.41	-0.3	-265.41	0	-290.96
40	40	107.00	-2124.32	9.79	3519.03	-5	141.44	-0.3	-519.05	-0.3	-519.05	0	-561.21
40	41	109.30	-2118.00	9.69	3482.07	-4.442	137.57	-0.3	-565.74	-0.3	-565.74	0	-616.68
41	41	109.30	-2098.82	284.51	3481.95	-4.442	139.40	-0.3	-563.89	-0.3	-563.89	0	-614.83
41	42	111.65	-2092.41	283.56	2801.59	-3.884	88.30	-0.3	-562.09	-0.3	-562.09	0	-616.52
42	42	111.65	-2088.66	310.02	2801.96	-3.884	88.77	-0.3	-561.70	-0.3	-561.70	0	-616.14
42	43	114.00	-2082.24	308.99	2064.62	-3.325	38.15	-0.3	-576.20	-0.3	-576.20	0	-637.13
43	43	114.00	-2097.19	181.65	2064.28	-3.325	60.24	-0.3	-515.69	-0.3	-478.27	0	-529.88
43	44	115.00	-2094.44	181.38	1878.30	-3.088	49.56	-0.3	-536.47	-0.3	-496.96	0	-555.19
44	44	115.00	-1965.08	747.00	1878.30	-3.088	65.99	-0.3	-520.04	-0.3	-481.69	0	-539.92
44	45	116.00	-1962.57	745.92	1146.33	-2.85	-46.47	-0.3	-460.29	-0.3	-426.09	0	-470.80
45	45	116.00	-2060.82	401.37	1146.33	-2.85	-34.11	-0.3	-798.71	-0.3	-675.94	0	-752.74
45	46	117.00	-2058.14	400.72	748.06	-2.85	-227.69	-0.3	-726.65	-0.3	-615.14	0	-665.26
46	46	117.00	-2096.64	-25.20	748.06	-2.85	-238.78	-0.3	-737.74	-0.3	-624.54	0	-674.66
46	47	119.78	-2088.91	-25.20	812.14	-2.85	-205.28	-0.3	-746.98	-0.3	-632.33	0	-686.74
47	47	119.78	-1394.33	-25.20	286.34	-2.85	-261.83	-0.3	-452.82	-0.3	-383.45	0	-402.64
47	48	122.55	-1389.17	-25.20	352.36	-2.85	-228.13	-0.3	-463.15	-0.3	-392.16	0	-415.77
48	48	122.55	0.00	-25.20	-699.24	-2.85	-341.23	-0.3	125.16	-0.3	105.59	0	152.43
48	49	128.10	0.00	-25.20	-559.39	-2.85	-272.98	-0.3	100.13	-0.3	84.47	0	121.95
49	49	128.10	0.00	-25.20	-559.39	-2.85	-272.98	-0.3	100.13	-0.3	84.47	0	121.95
49	50	133.65	0.00	-25.20	-419.54	-2.85	-204.74	-0.3	75.10	-0.3	63.35	0	91.46
50	50	133.65	0.00	-25.20	-419.54	-2.85	-204.74	-0.3	75.10	-0.3	63.35	0	91.46
50	51	139.20	0.00	-25.20	-279.70	-2.85	-136.49	-0.3	50.07	-0.3	42.23	0	60.97
51	51	139.20	0.00	-25.20	-279.70	-2.85	-136.49	-0.3	50.07	-0.3	42.23	0	60.97
51	52	144.75	0.00	-25.20	-139.85	-2.85	-68.25	-0.3	25.03	-0.3	21.12	0	30.49
52	52	144.75	0.00	-25.20	-139.85	-2.85	-68.25	-0.3	25.03	-0.3	21.12	0	30.49
52	53	147.53	0.00	-25.20	-69.92	-2.85	-34.12	-0.3	12.52	-0.3	10.56	0	15.24
53	53	147.53	0.00	-25.20	-69.92	-2.85	-34.12	-0.3	12.52	-0.3	10.56	0	15.24
53	54	150.30	0.00	-25.20	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(GRADIENTE(EXCYREP)). Tensiones a tiempo Tinf

[1, 1]GRADIENTE

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	-7.84	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	-7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
3	3	3.38	0.00	-7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
3	4	6.15	0.00	-7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
4	4	6.15	0.00	-7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
4	5	11.70	0.00	-7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
5	5	11.70	0.00	-7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
5	6	17.25	0.00	-7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
6	6	17.25	0.00	-7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
6	7	22.80	0.00	-7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
7	7	22.80	0.00	-7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
7	8	28.35	0.00	-7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
8	8	28.35	0.00	-7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
8	9	31.13	0.00	-7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
9	9	31.13	0.00	-7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
9	10	33.90	0.00	-7.84	261.08	-2.85	128.39	-0.3	-46.89	-0.3	-39.62	0	-57.04
10	10	33.90	1.59	-7.68	261.08	-2.85	128.85	-0.3	-46.43	-0.3	-39.23	0	-56.65
10	11	34.90	1.59	-7.68	268.92	-2.85	132.70	-0.3	-47.84	-0.3	-40.42	0	-58.37
11	11	34.90	2.87	-7.29	268.92	-2.85	54.97	-0.3	-40.74	-0.3	-37.69	0	-48.11
11	12	35.90	2.87	-7.29	276.76	-3.088	46.42	-0.3	-39.08	-0.3	-36.16	0	-44.67
12	12	35.90	0.77	-7.80	276.76	-3.088	46.15	-0.3	-39.35	-0.3	-36.40	0	-44.91
12	13	36.90	0.77	-7.80	284.60	-3.325	40.73	-0.3	-37.16	-0.3	-34.38	0	-41.52
13	13	36.90	1.24	-7.74	284.60	-3.325	47.93	-0.3	-36.75	-0.3	-36.75	0	-45.15
13	14	39.25	1.24	-7.74	303.02	-3.884	35.70	-0.3	-34.64	-0.3	-34.64	0	-40.53
14	14	39.25	1.14	-7.76	303.02	-3.884	35.69	-0.3	-34.65	-0.3	-34.65	0	-40.54
14	15	41.60	1.14	-7.76	321.44	-4.442	31.56	-0.3	-33.36	-0.3	-33.36	0	-38.06
15	15	41.60	0.13	-7.84	321.44	-4.442	31.47	-0.3	-33.46	-0.3	-33.46	0	-38.16
15	16	43.90	0.13	-7.84	339.48	-5	30.84	-0.3	-32.88	-0.3	-32.88	0	-36.95
	16	43.90	-0.78	-7.80	339.48	-5	23.05	-0.3	-15.57	-0.3	-15.57	0	-18.03
	17	46.45	-0.78	-7.80	359.47	-5	24.40	-0.3	-16.48	-0.3	-16.48	0	-19.09
	17	46.45	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
17	18	49.00	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
18	18	49.00	0.00	0.00	359.47	-5	32.64	-0.3	-34.83	-0.3	-34.83	0	-39.13
18	19	51.30	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
19	19	51.30	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
19	20	53.65	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
20	20	53.65	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
20	21	56.00	0.00	0.00	359.47	-3.325	60.31	-0.3	-46.65	-0.3	-46.65	0	-57.26
21	21	56.00	0.00	0.00	359.47	-3.325	51.34	-0.3	-47.05	-0.3	-43.52	0	-52.55
21	22	57.00	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
22	22	57.00	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
22	23	58.00	0.00	0.00	359.47	-2.85	72.92	-0.3	-55.02	-0.3	-50.90	0	-64.82
23	23	58.00	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
23	24	59.00	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
24	24	59.00	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
24	25	63.11	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
25	25	63.11	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
25	26	67.23	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
26	26	67.23	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
26	27	71.34	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
27	27	71.34	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
27	28	75.45	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
28	28	75.45	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
28	29	79.56	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
29	29	79.56	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
29	30	83.68	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
30	30	83.68	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
30	31	87.79	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
31	31	87.79	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
31	32	91.90	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
32	32	91.90	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
[illegible]	33	92.90	0.00	0.00	359.47	-2.85	176.77	-0.3	-64.56	-0.3	-54.55	0	-78.54
	33	92.90	0.00	0.00	359.47	-2.85	72.92	-0.3	-55.02	-0.3	-50.90	0	-64.82
	34	93.90	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
34	34	93.90	0.00	0.00	359.47	-3.088	59.82	-0.3	-51.24	-0.3	-47.40	0	-58.45
34	35	94.90	0.00	0.00	359.47	-3.325	51.34	-0.3	-47.05	-0.3	-43.52	0	-52.55
35	35	94.90	0.00	0.00	359.47	-3.325	60.31	-0.3	-46.65	-0.3	-46.65	0	-57.26
35	36	97.25	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
36	36	97.25	0.00	0.00	359.47	-3.884	42.18	-0.3	-41.27	-0.3	-41.27	0	-48.25
36	37	99.60	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
37	37	99.60	0.00	0.00	359.47	-4.442	35.18	-0.3	-37.43	-0.3	-37.43	0	-42.69
37	38	101.90	0.00	0.00	359.47	-5	32.64	-0.3	-34.83	-0.3	-34.83	0	-39.13
38	38	101.90	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
38	39	104.45	0.00	0.00	359.47	-5	24.44	-0.3	-16.44	-0.3	-16.44	0	-19.05
39	39	104.45	-0.78	7.80	359.47	-5	24.40	-0.3	-16.48	-0.3	-16.48	0	-19.09
39	40	107.00	-0.78	7.80	339.48	-5	23.05	-0.3	-15.57	-0.3	-15.57	0	-18.03
40	40	107.00	0.13	7.84	339.48	-5	30.84	-0.3	-32.88	-0.3	-32.88	0	-36.95
40	41	109.30	0.13	7.84	321.44	-4.442	31.47	-0.3	-33.46	-0.3	-33.46	0	-38.16
41	41	109.30	1.14	7.76	321.44	-4.442	31.56	-0.3	-33.36	-0.3	-33.36	0	-38.06
41	42	111.65	1.14	7.76	303.02	-3.884	35.69	-0.3	-34.65	-0.3	-34.65	0	-40.54
42	42	111.65	1.24	7.74	303.02	-3.884	35.70	-0.3	-34.64	-0.3	-34.64	0	-40.53
42	43	114.00	1.24	7.74	284.60	-3.325	47.93	-0.3	-36.75	-0.3	-36.75	0	-45.15
43	43	114.00	0.77	7.80	284.60	-3.325	40.73	-0.3	-37.16	-0.3	-34.38	0	-41.52
43	44	115.00	0.77	7.80	276.76	-3.088	46.15	-0.3	-39.35	-0.3	-36.40	0	-44.91
44	44	115.00	2.87	7.29	276.76	-3.088	46.42	-0.3	-39.08	-0.3	-36.16	0	-44.67
44	45	116.00	2.87	7.29	268.92	-2.85	54.97	-0.3	-40.74	-0.3	-37.69	0	-48.11
45	45	116.00	1.59	7.68	268.92	-2.85	132.70	-0.3	-47.84	-0.3	-40.42	0	-58.37
45	46	117.00	1.59	7.68	261.08	-2.85	128.85	-0.3	-46.43	-0.3	-39.23	0	-56.65
46	46	117.00	0.00	7.84	261.08	-2.85	128.39	-0.3	-46.89	-0.3	-39.62	0	-57.04
46	47	119.78	0.00	7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
47	47	119.78	0.00	7.84	239.32	-2.85	117.69	-0.3	-42.98	-0.3	-36.32	0	-52.29
47	48	122.55	0.00	7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
48	48	122.55	0.00	7.84	217.56	-2.85	106.99	-0.3	-39.07	-0.3	-33.01	0	-47.53
48	49	128.10	0.00	7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
49	49	128.10	0.00	7.84	174.05	-2.85	85.59	-0.3	-31.26	-0.3	-26.41	0	-38.03
	50	133.65	0.00	7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
	50	133.65	0.00	7.84	130.54	-2.85	64.19	-0.3	-23.45	-0.3	-19.81	0	-28.52
[illegible]	51	139.20	0.00	7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
51	51	139.20	0.00	7.84	87.03	-2.85	42.80	-0.3	-15.63	-0.3	-13.21	0	-19.01
51	52	144.75	0.00	7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
52	52	144.75	0.00	7.84	43.51	-2.85	21.40	-0.3	-7.81	-0.3	-6.60	0	-9.51
52	53	147.53	0.00	7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
53	53	147.53	0.00	7.84	21.76	-2.85	10.70	-0.3	-3.91	-0.3	-3.30	0	-4.75
53	54	150.30	0.00	7.84	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(CARGASMUERTAS(EXCYREP)). Tensiones a tiempo Tinf

[1; 1]cm

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	5.02	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
2	2	0.60	0.00	-126.62	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
2	3	3.38	0.00	-103.41	317.65	-2.85	155.01	-0.3	-56.86	-0.3	-47.97	0	-69.25
3	3	3.38	0.00	-103.41	317.65	-2.85	155.01	-0.3	-56.86	-0.3	-47.97	0	-69.25
3	4	6.15	0.00	-80.20	572.40	-2.85	279.33	-0.3	-102.46	-0.3	-86.43	0	-124.78
4	4	6.15	0.00	-80.20	572.40	-2.85	279.33	-0.3	-102.46	-0.3	-86.43	0	-124.78
4	5	11.70	0.00	-33.78	888.67	-2.85	433.67	-0.3	-159.07	-0.3	-134.19	0	-193.73
5	5	11.70	0.00	-33.78	888.67	-2.85	433.67	-0.3	-159.07	-0.3	-134.19	0	-193.73
5	6	17.25	0.00	12.64	947.32	-2.85	462.29	-0.3	-169.57	-0.3	-143.05	0	-206.52
6	6	17.25	0.00	12.64	947.32	-2.85	462.29	-0.3	-169.57	-0.3	-143.05	0	-206.52
6	7	22.80	0.00	59.06	748.32	-2.85	365.18	-0.3	-133.95	-0.3	-113.00	0	-163.13
7	7	22.80	0.00	59.06	748.32	-2.85	365.18	-0.3	-133.95	-0.3	-113.00	0	-163.13
7	8	28.35	0.00	105.48	291.70	-2.85	142.35	-0.3	-52.21	-0.3	-44.05	0	-63.59
8	8	28.35	0.00	105.48	291.70	-2.85	142.35	-0.3	-52.21	-0.3	-44.05	0	-63.59
8	9	31.13	0.00	128.69	-33.22	-2.85	-16.21	-0.3	5.95	-0.3	5.02	0	7.24
9	9	31.13	0.00	128.69	-33.22	-2.85	-16.21	-0.3	5.95	-0.3	5.02	0	7.24
9	10	33.90	0.00	151.90	-422.55	-2.85	-206.20	-0.3	75.64	-0.3	63.81	0	92.12
10	10	33.90	-30.82	148.75	-422.55	-2.85	-215.08	-0.3	66.76	-0.3	56.28	0	84.60
10	11	34.90	-32.55	157.11	-578.73	-2.85	-291.79	-0.3	94.22	-0.3	79.45	0	118.22
11	11	34.90	-58.79	149.29	-578.73	-2.85	-127.68	-0.3	81.24	-0.3	75.52	0	98.09
11	12	35.90	-62.09	157.65	-743.67	-3.088	-132.82	-0.3	99.20	-0.3	91.58	0	114.64
12	12	35.90	-16.63	168.62	-743.67	-3.088	-127.05	-0.3	104.98	-0.3	96.95	0	120.00
12	13	36.90	-17.45	176.98	-917.31	-3.325	-135.00	-0.3	120.93	-0.3	111.90	0	134.83
13	13	36.90	-28.19	175.59	-917.31	-3.325	-158.11	-0.3	114.85	-0.3	114.85	0	141.92
13	14	39.25	-31.35	195.25	-1359.00	-3.884	-163.11	-0.3	152.38	-0.3	152.38	0	178.79
14	14	39.25	-28.88	195.63	-1358.62	-3.884	-162.78	-0.3	152.62	-0.3	152.62	0	179.02
14	15	41.60	-31.78	215.28	-1847.00	-4.442	-183.82	-0.3	189.24	-0.3	189.24	0	216.26
15	15	41.60	-3.57	217.59	-1846.67	-4.442	-181.08	-0.3	191.91	-0.3	191.91	0	218.93
15	16	43.90	-3.88	236.82	-2369.00	-5	-215.45	-0.3	229.18	-0.3	229.18	0	257.56
16	16	43.90	23.43	235.69	-2369.32	-5	-159.95	-0.3	109.53	-0.3	109.53	0	126.73
16	17	46.45	25.55	257.02	-3001.00	-5	-202.80	-0.3	138.53	-0.3	138.53	0	160.32
17	17	46.45	24.13	-242.78	-3000.62	-5	-202.85	-0.3	138.44	-0.3	138.44	0	160.23
17	18	49.00	22.01	-221.45	-2406.00	-5	-162.52	-0.3	111.14	-0.3	111.14	0	128.61
18	18	49.00	-3.65	-222.51	-2405.82	-5	-218.78	-0.3	232.77	-0.3	232.77	0	261.59
18	19	51.30	-3.33	-203.27	-1916.00	-4.442	-187.84	-0.3	199.16	-0.3	199.16	0	227.19
19	19	51.30	-29.69	-201.12	-1916.11	-4.442	-190.38	-0.3	196.64	-0.3	196.64	0	224.67
19	20	53.65	-26.78	-181.46	-1462.00	-3.884	-174.67	-0.3	164.73	-0.3	164.73	0	193.14
20	20	53.65	-29.08	-181.11	-1461.70	-3.884	-174.90	-0.3	164.43	-0.3	164.43	0	192.83
20	21	56.00	-25.92	-161.46	-1054.00	-3.325	-180.71	-0.3	132.92	-0.3	132.92	0	164.02
21	21	56.00	-16.05	-162.73	-1054.03	-3.325	-154.66	-0.3	139.41	-0.3	129.00	0	155.35
21	22	57.00	-15.22	-154.37	-894.71	-3.088	-152.24	-0.3	126.91	-0.3	117.20	0	144.94
22	22	57.00	-56.84	-144.33	-894.71	-3.088	-157.53	-0.3	121.62	-0.3	112.29	0	140.03
22	23	58.00	-53.55	-135.97	-744.09	-2.85	-160.99	-0.3	107.62	-0.3	100.03	0	129.05
23	23	58.00	-29.65	-143.09	-744.09	-2.85	-371.66	-0.3	124.65	-0.3	105.12	0	154.98
23	24	59.00	-27.92	-134.73	-602.23	-2.85	-301.93	-0.3	99.76	-0.3	84.12	0	124.47
24	24	59.00	0.00	-137.59	-602.23	-2.85	-293.89	-0.3	107.80	-0.3	90.94	0	131.29
24	25	63.11	0.00	-103.19	-107.13	-2.85	-52.28	-0.3	19.18	-0.3	16.18	0	23.35
25	25	63.11	0.00	-103.19	-107.13	-2.85	-52.28	-0.3	19.18	-0.3	16.18	0	23.35
25	26	67.23	0.00	-68.79	246.52	-2.85	120.30	-0.3	-44.13	-0.3	-37.22	0	-53.74
26	26	67.23	0.00	-68.79	246.52	-2.85	120.30	-0.3	-44.13	-0.3	-37.22	0	-53.74
26	27	71.34	0.00	-34.40	458.70	-2.85	223.85	-0.3	-82.11	-0.3	-69.26	0	-100.00
27	27	71.34	0.00	-34.40	458.70	-2.85	223.85	-0.3	-82.11	-0.3	-69.26	0	-100.00
27	28	75.45	0.00	0.00	529.43	-2.85	258.36	-0.3	-94.77	-0.3	-79.94	0	-115.42
28	28	75.45	0.00	0.00	529.43	-2.85	258.36	-0.3	-94.77	-0.3	-79.94	0	-115.42
28	29	79.56	0.00	34.40	458.70	-2.85	223.85	-0.3	-82.11	-0.3	-69.26	0	-100.00
29	29	79.56	0.00	34.40	458.70	-2.85	223.85	-0.3	-82.11	-0.3	-69.26	0	-100.00
29	30	83.68	0.00	68.79	246.52	-2.85	120.30	-0.3	-44.13	-0.3	-37.22	0	-53.74
30	30	83.68	0.00	68.79	246.52	-2.85	120.30	-0.3	-44.13	-0.3	-37.22	0	-53.74
30	31	87.79	0.00	103.19	-107.13	-2.85	-52.28	-0.3	19.18	-0.3	16.18	0	23.35
31	31	87.79	0.00	103.19	-107.13	-2.85	-52.28	-0.3	19.18	-0.3	16.18	0	23.35
31	32	91.90	0.00	137.59	-602.23	-2.85	-293.89	-0.3	107.80	-0.3	90.94	0	131.29
32	32	91.90	-27.92	134.73	-602.23	-2.85	-301.93	-0.3	99.76	-0.3	84.12	0	124.47
32	33	92.90	-29.65	143.09	-744.09	-2.85	-371.66	-0.3	124.65	-0.3	105.12	0	154.98
33	33	92.90	-53.55	135.97	-744.09	-2.85	-160.99	-0.3	107.62	-0.3	100.03	0	129.05
33	34	93.90	-56.84	144.33	-894.71	-3.088	-157.53	-0.3	121.62	-0.3	112.29	0	140.03
34	34	93.90	-15.22	154.37	-894.71	-3.088	-152.24	-0.3	126.91	-0.3	117.20	0	144.94
34	35	94.90	-16.05	162.73	-1054.00	-3.325	-154.66	-0.3	139.41	-0.3	128.99	0	155.34
35	35	94.90	-25.92	161.46	-1054.03	-3.325	-180.71	-0.3	132.92	-0.3	132.92	0	164.03
35	36	97.25	-29.08	181.11	-1462.00	-3.884	-174.94	-0.3	164.47	-0.3	164.47	0	192.87
36	36	97.25	-26.78	181.46	-1461.70	-3.884	-174.64	-0.3	164.70	-0.3	164.70	0	193.10
36	37	99.60	-29.69	201.12	-1916.00	-4.442	-190.37	-0.3	196.63	-0.3	196.63	0	224.66
37	37	99.60	-3.33	203.27	-1916.11	-4.442	-187.85	-0.3	199.17	-0.3	199.17	0	227.20
37	38	101.90	-3.65	222.51	-2406.00	-5	-218.79	-0.3	232.79	-0.3	232.79	0	261.61
38	38	101.90	22.01	221.45	-2405.82	-5	-162.51	-0.3	111.13	-0.3	111.13	0	128.60
38	39	104.45	24.13	242.78	-3001.00	-5	-202.87	-0.3	138.46	-0.3	138.46	0	160.25
39	39	104.45	25.55	-257.02	-3000.62	-5	-202.78	-0.3	138.51	-0.3	138.51	0	160.30
39	40	107.00	23.43	-235.69	-2369.00	-5	-159.93	-0.3	109.52	-0.3	109.52	0	126.72
40	40	107.00	-3.88	-236.82	-2369.32	-5	-215.48	-0.3	229.21	-0.3	229.21	0	257.60
40	41	109.30	-3.57	-217.59	-1847.00	-4.442	-181.11	-0.3	191.95	-0.3	191.95	0	218.97
41	41	109.30	-31.78	-215.28	-1846.67	-4.442	-183.78	-0.3	189.21	-0.3	189.21	0	216.22
41	42	111.65	-28.88	-195.63	-1359.00	-3.884	-162.83	-0.3	152.67	-0.3	152.67	0	179.07
42	42	111.65	-31.35	-195.25	-1358.62	-3.884	-163.06	-0.3	152.34	-0.3	152.34	0	178.74
42	43	114.00	-28.19	-175.59	-917.31	-3.325	-158.11	-0.3	114.85	-0.3	114.85	0	141.92
43	43	114.00	-17.45	-176.98	-917.31	-3.325	-135.00	-0.3	120.93	-0.3	111.90	0	134.83
43	44	115.00	-16.63	-168.62	-743.67	-3.088	-127.05	-0.3	104.98	-0.3	96.95	0	120.00
44	44	115.00	-62.09	-157.65	-743.67	-3.088	-132.82	-0.3	99.20	-0.3	91.58	0	114.64
44	45	116.00	-58.79	-149.29	-578.73	-2.85	-127.68	-0.3	81.24	-0.3	75.52	0	98.09
45	45	116.00	-32.55	-157.11	-578.73	-2.85	-291.79	-0.3	94.22	-0.3	79.45	0	118.22
45	46	117.00	-30.82	-148.75	-422.55	-2.85	-215.08	-0.3	66.76	-0.3	56.28	0	84.60
46	46	117.00	0.00	-151.90	-422.55	-2.85	-206.20	-0.3	75.64	-0.3	63.81	0	92.12
46	47	119.78	0.00	-128.69	-33.22	-2.85	-16.21	-0.3	5.95	-0.3	5.02	0	7.24
47	47	119.78	0.00	-128.69	-33.22	-2.85	-16.21	-0.3	5.95	-0.3	5.02	0	7.24
47	48	122.55	0.00	-105.48	291.70	-2.85	142.35	-0.3	-52.21	-0.3	-44.05	0	-63.59
48	48	122.55	0.00	-105.48	291.70	-2.85	142.35	-0.3	-52.21	-0.3	-44.05	0	-63.59
48	49	128.10	0.00	-59.06	748.32	-2.85	365.18	-0.3	-133.95	-0.3	-113.00	0	-163.13
49	49	128.10	0.00	-59.06	748.32	-2.85	365.18	-0.3	-133.95	-0.3	-113.00	0	-163.13
49	50	133.65	0.00	-12.64	947.32	-2.85	462.29	-0.3	-169.57	-0.3	-143.05	0	-206.52
50	50	133.65	0.00	-12.64	947.32	-2.85	462.29	-0.3	-169.57	-0.3	-143.05	0	-206.52
50	51	139.20	0.00	33.78	888.67	-2.85	433.67	-0.3	-159.07	-0.3	-134.19	0	-193.73
51	51	139.20	0.00	33.78	888.67	-2.85	433.67	-0.3	-159.07	-0.3	-134.19	0	-193.73
51	52	144.75	0.00	80.20	572.40	-2.85	279.33	-0.3	-102.46	-0.3	-86.43	0	-124.78
52	52	144.75	0.00	80.20	572.40	-2.85	279.33	-0.3	-102.46	-0.3	-86.43	0	-124.78
52	53	147.53	0.00	103.41	317.65	-2.85	155.01	-0.3	-56.86	-0.3	-47.97	0	-69.25
53	53	147.53	0.00	103.41	317.65	-2.85	155.01	-0.3	-56.86	-0.3	-47.97	0	-69.25
53	54	150.30	0.00	126.62	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
54	54	150.30	0.00	-5.02	-1.51	-2.85	-0.74	-0.3	0.27	-0.3	0.23	0	0.33
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(INCREMENTODECARGAMUERTA(EXCYREP)). Tensiones a tiempo Tinf

[1; 1]IncrCM

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.95	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
2	2	0.60	0.00	-23.98	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
2	3	3.38	0.00	-19.58	60.16	-2.85	29.36	-0.3	-10.77	-0.3	-9.08	0	-13.11
3	3	3.38	0.00	-19.58	60.16	-2.85	29.36	-0.3	-10.77	-0.3	-9.08	0	-13.11
3	4	6.15	0.00	-15.19	108.40	-2.85	52.90	-0.3	-19.40	-0.3	-16.37	0	-23.63
4	4	6.15	0.00	-15.19	108.40	-2.85	52.90	-0.3	-19.40	-0.3	-16.37	0	-23.63
4	5	11.70	0.00	-6.40	168.30	-2.85	82.13	-0.3	-30.13	-0.3	-25.41	0	-36.69
5	5	11.70	0.00	-6.40	168.30	-2.85	82.13	-0.3	-30.13	-0.3	-25.41	0	-36.69
5	6	17.25	0.00	2.39	179.41	-2.85	87.55	-0.3	-32.11	-0.3	-27.09	0	-39.11
6	6	17.25	0.00	2.39	179.41	-2.85	87.55	-0.3	-32.11	-0.3	-27.09	0	-39.11
6	7	22.80	0.00	11.19	141.72	-2.85	69.16	-0.3	-25.37	-0.3	-21.40	0	-30.89
7	7	22.80	0.00	11.19	141.72	-2.85	69.16	-0.3	-25.37	-0.3	-21.40	0	-30.89
7	8	28.35	0.00	19.98	55.24	-2.85	26.96	-0.3	-9.89	-0.3	-8.34	0	-12.04
8	8	28.35	0.00	19.98	55.24	-2.85	26.96	-0.3	-9.89	-0.3	-8.34	0	-12.04
8	9	31.13	0.00	24.37	-6.29	-2.85	-3.07	-0.3	1.13	-0.3	0.95	0	1.37
9	9	31.13	0.00	24.37	-6.29	-2.85	-3.07	-0.3	1.13	-0.3	0.95	0	1.37
9	10	33.90	0.00	28.77	-80.02	-2.85	-39.05	-0.3	14.32	-0.3	12.08	0	17.44
10	10	33.90	-5.84	28.17	-80.02	-2.85	-40.73	-0.3	12.64	-0.3	10.66	0	16.02
10	11	34.90	-6.17	29.75	-109.60	-2.85	-55.26	-0.3	17.84	-0.3	15.04	0	22.39
11	11	34.90	-11.13	28.27	-109.60	-2.85	-24.18	-0.3	15.39	-0.3	14.30	0	18.58
11	12	35.90	-11.76	29.86	-140.84	-3.088	-25.15	-0.3	18.79	-0.3	17.34	0	21.71
12	12	35.90	-3.15	31.93	-140.84	-3.088	-24.06	-0.3	19.88	-0.3	18.36	0	22.73
12	13	36.90	-3.30	33.52	-173.72	-3.325	-25.57	-0.3	22.90	-0.3	21.19	0	25.53
13	13	36.90	-5.34	33.25	-173.72	-3.325	-29.94	-0.3	21.75	-0.3	21.75	0	26.88
13	14	39.25	-5.94	36.98	-257.30	-3.884	-30.88	-0.3	28.85	-0.3	28.85	0	33.85
14	14	39.25	-5.47	37.05	-257.30	-3.884	-30.83	-0.3	28.90	-0.3	28.90	0	33.90
14	15	41.60	-6.02	40.77	-349.73	-4.442	-34.81	-0.3	35.83	-0.3	35.83	0	40.95
15	15	41.60	-0.68	41.21	-349.73	-4.442	-34.29	-0.3	36.35	-0.3	36.35	0	41.46
15	16	43.90	-0.73	44.85	-448.71	-5	-40.81	-0.3	43.41	-0.3	43.41	0	48.79
[illegible]	16	43.90	4.44	44.64	-448.71	-5	-30.29	-0.3	20.74	-0.3	20.74	0	24.00
[illegible]	17	46.45	4.84	48.68	-568.27	-5	-38.40	-0.3	26.23	-0.3	26.23	0	30.36
[illegible]	17	46.45	4.57	-45.98	-568.27	-5	-38.42	-0.3	26.22	-0.3	26.22	0	30.34
[illegible]	18	49.00	4.17	-41.94	-455.62	-5	-30.78	-0.3	21.05	-0.3	21.05	0	24.35
18	18	49.00	-0.69	-42.14	-455.62	-5	-41.43	-0.3	44.08	-0.3	44.08	0	49.54
18	19	51.30	-0.63	-38.50	-362.88	-4.442	-35.58	-0.3	37.72	-0.3	37.72	0	43.03
19	19	51.30	-5.62	-38.09	-362.88	-4.442	-36.05	-0.3	37.24	-0.3	37.24	0	42.55
19	20	53.65	-5.07	-34.37	-276.82	-3.884	-33.07	-0.3	31.19	-0.3	31.19	0	36.57
20	20	53.65	-5.51	-34.30	-276.82	-3.884	-33.12	-0.3	31.14	-0.3	31.14	0	36.52
20	21	56.00	-4.91	-30.58	-199.62	-3.325	-34.23	-0.3	25.17	-0.3	25.17	0	31.06
21	21	56.00	-3.04	-30.82	-199.62	-3.325	-29.29	-0.3	26.40	-0.3	24.43	0	29.42
21	22	57.00	-2.88	-29.24	-169.44	-3.088	-28.83	-0.3	24.03	-0.3	22.20	0	27.45
22	22	57.00	-10.76	-27.33	-169.44	-3.088	-29.83	-0.3	23.03	-0.3	21.27	0	26.52
22	23	58.00	-10.14	-25.75	-140.92	-2.85	-30.49	-0.3	20.38	-0.3	18.94	0	24.44
23	23	58.00	-5.61	-27.10	-140.92	-2.85	-70.38	-0.3	23.61	-0.3	19.91	0	29.35
23	24	59.00	-5.29	-25.51	-114.05	-2.85	-57.18	-0.3	18.89	-0.3	15.93	0	23.57
24	24	59.00	0.00	-26.06	-114.05	-2.85	-55.66	-0.3	20.41	-0.3	17.22	0	24.86
24	25	63.11	0.00	-19.54	-20.29	-2.85	-9.90	-0.3	3.63	-0.3	3.06	0	4.42
25	25	63.11	0.00	-19.54	-20.29	-2.85	-9.90	-0.3	3.63	-0.3	3.06	0	4.42
25	26	67.23	0.00	-13.03	46.69	-2.85	22.78	-0.3	-8.36	-0.3	-7.05	0	-10.18
26	26	67.23	0.00	-13.03	46.69	-2.85	22.78	-0.3	-8.36	-0.3	-7.05	0	-10.18
26	27	71.34	0.00	-6.51	86.87	-2.85	42.39	-0.3	-15.55	-0.3	-13.12	0	-18.94
27	27	71.34	0.00	-6.51	86.87	-2.85	42.39	-0.3	-15.55	-0.3	-13.12	0	-18.94
27	28	75.45	0.00	0.00	100.27	-2.85	48.93	-0.3	-17.95	-0.3	-15.14	0	-21.86
28	28	75.45	0.00	0.00	100.27	-2.85	48.93	-0.3	-17.95	-0.3	-15.14	0	-21.86
28	29	79.56	0.00	6.51	86.87	-2.85	42.39	-0.3	-15.55	-0.3	-13.12	0	-18.94
29	29	79.56	0.00	6.51	86.87	-2.85	42.39	-0.3	-15.55	-0.3	-13.12	0	-18.94
29	30	83.68	0.00	13.03	46.69	-2.85	22.78	-0.3	-8.36	-0.3	-7.05	0	-10.18
30	30	83.68	0.00	13.03	46.69	-2.85	22.78	-0.3	-8.36	-0.3	-7.05	0	-10.18
30	31	87.79	0.00	19.54	-20.29	-2.85	-9.90	-0.3	3.63	-0.3	3.06	0	4.42
31	31	87.79	0.00	19.54	-20.29	-2.85	-9.90	-0.3	3.63	-0.3	3.06	0	4.42
31	32	91.90	0.00	26.06	-114.05	-2.85	-55.66	-0.3	20.41	-0.3	17.22	0	24.86
32	32	91.90	-5.29	25.51	-114.05	-2.85	-57.18	-0.3	18.89	-0.3	15.93	0	23.57
32	33	92.90	-5.61	27.10	-140.92	-2.85	-70.38	-0.3	23.61	-0.3	19.91	0	29.35
[illegible]	33	92.90	-10.14	25.75	-140.92	-2.85	-30.49	-0.3	20.38	-0.3	18.94	0	24.44
[illegible]	34	93.90	-10.76	27.33	-169.44	-3.088	-29.83	-0.3	23.03	-0.3	21.27	0	26.52
[illegible]	34	93.90	-2.88	29.24	-169.44	-3.088	-28.83	-0.3	24.03	-0.3	22.20	0	27.45
34	35	94.90	-3.04	30.82	-199.62	-3.325	-29.29	-0.3	26.40	-0.3	24.43	0	29.42
35	35	94.90	-4.91	30.58	-199.62	-3.325	-34.23	-0.3	25.17	-0.3	25.17	0	31.06
35	36	97.25	-5.51	34.30	-276.82	-3.884	-33.12	-0.3	31.14	-0.3	31.14	0	36.52
36	36	97.25	-5.07	34.37	-276.82	-3.884	-33.07	-0.3	31.19	-0.3	31.19	0	36.57
36	37	99.60	-5.62	38.09	-362.88	-4.442	-36.05	-0.3	37.24	-0.3	37.24	0	42.55
37	37	99.60	-0.63	38.50	-362.88	-4.442	-35.58	-0.3	37.72	-0.3	37.72	0	43.03
37	38	101.90	-0.69	42.14	-455.62	-5	-41.43	-0.3	44.08	-0.3	44.08	0	49.54
38	38	101.90	4.17	41.94	-455.62	-5	-30.78	-0.3	21.05	-0.3	21.05	0	24.35
38	39	104.45	4.57	45.98	-568.27	-5	-38.42	-0.3	26.22	-0.3	26.22	0	30.34
39	39	104.45	4.84	-48.68	-568.27	-5	-38.40	-0.3	26.23	-0.3	26.23	0	30.36
39	40	107.00	4.44	-44.64	-448.71	-5	-30.29	-0.3	20.74	-0.3	20.74	0	24.00
40	40	107.00	-0.73	-44.85	-448.71	-5	-40.81	-0.3	43.41	-0.3	43.41	0	48.79
40	41	109.30	-0.68	-41.21	-349.73	-4.442	-34.29	-0.3	36.35	-0.3	36.35	0	41.46
41	41	109.30	-6.02	-40.77	-349.73	-4.442	-34.81	-0.3	35.83	-0.3	35.83	0	40.95
41	42	111.65	-5.47	-37.05	-257.30	-3.884	-30.83	-0.3	28.90	-0.3	28.90	0	33.90
42	42	111.65	-5.94	-36.98	-257.30	-3.884	-30.88	-0.3	28.85	-0.3	28.85	0	33.85
42	43	114.00	-5.34	-33.25	-173.72	-3.325	-29.94	-0.3	21.75	-0.3	21.75	0	26.88
43	43	114.00	-3.30	-33.52	-173.72	-3.325	-25.57	-0.3	22.90	-0.3	21.19	0	25.53
43	44	115.00	-3.15	-31.93	-140.84	-3.088	-24.06	-0.3	19.88	-0.3	18.36	0	22.73
44	44	115.00	-11.76	-29.86	-140.84	-3.088	-25.15	-0.3	18.79	-0.3	17.34	0	21.71
44	45	116.00	-11.13	-28.27	-109.60	-2.85	-24.18	-0.3	15.39	-0.3	14.30	0	18.58
45	45	116.00	-6.17	-29.75	-109.60	-2.85	-55.26	-0.3	17.84	-0.3	15.04	0	22.39
45	46	117.00	-5.84	-28.17	-80.02	-2.85	-40.73	-0.3	12.64	-0.3	10.66	0	16.02
46	46	117.00	0.00	-28.77	-80.02	-2.85	-39.05	-0.3	14.32	-0.3	12.08	0	17.44
46	47	119.78	0.00	-24.37	-6.29	-2.85	-3.07	-0.3	1.13	-0.3	0.95	0	1.37
47	47	119.78	0.00	-24.37	-6.29	-2.85	-3.07	-0.3	1.13	-0.3	0.95	0	1.37
47	48	122.55	0.00	-19.98	55.24	-2.85	26.96	-0.3	-9.89	-0.3	-8.34	0	-12.04
48	48	122.55	0.00	-19.98	55.24	-2.85	26.96	-0.3	-9.89	-0.3	-8.34	0	-12.04
48	49	128.10	0.00	-11.19	141.72	-2.85	69.16	-0.3	-25.37	-0.3	-21.40	0	-30.89
49	49	128.10	0.00	-11.19	141.72	-2.85	69.16	-0.3	-25.37	-0.3	-21.40	0	-30.89
49	50	133.65	0.00	-2.39	179.41	-2.85	87.55	-0.3	-32.11	-0.3	-27.09	0	-39.11
[illegible]	50	133.65	0.00	-2.39	179.41	-2.85	87.55	-0.3	-32.11	-0.3	-27.09	0	-39.11
[illegible]	51	139.20	0.00	6.40	168.30	-2.85	82.13	-0.3	-30.13	-0.3	-25.41	0	-36.69
[illegible]	51	139.20	0.00	6.40	168.30	-2.85	82.13	-0.3	-30.13	-0.3	-25.41	0	-36.69
51	52	144.75	0.00	15.19	108.40	-2.85	52.90	-0.3	-19.40	-0.3	-16.37	0	-23.63
52	52	144.75	0.00	15.19	108.40	-2.85	52.90	-0.3	-19.40	-0.3	-16.37	0	-23.63
52	53	147.53	0.00	19.58	60.16	-2.85	29.36	-0.3	-10.77	-0.3	-9.08	0	-13.11
53	53	147.53	0.00	19.58	60.16	-2.85	29.36	-0.3	-10.77	-0.3	-9.08	0	-13.11
53	54	150.30	0.00	23.98	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
54	54	150.30	0.00	-0.95	-0.29	-2.85	-0.14	-0.3	0.05	-0.3	0.04	0	0.06
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(EnvolventeTrenIPF-75B.MZ+(EXCYREP)). Tensiones a tiempo Tinf

[1; 1]IPF75B.ENV_IPF75B.MZ+

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.74	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
2	2	0.60	0.00	-18.76	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
2	3	3.38	0.00	-249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
3	3	3.38	0.00	-249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
3	4	6.15	0.00	-207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
4	4	6.15	0.00	-207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
4	5	11.70	0.00	-125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
5	5	11.70	0.00	-125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
5	6	17.25	0.00	-46.67	2757.89	-2.85	1356.22	-0.3	-495.33	-0.3	-418.51	0	-602.56
6	6	17.25	0.00	-46.67	2757.89	-2.85	1356.22	-0.3	-495.33	-0.3	-418.51	0	-602.56
6	7	22.80	0.00	35.84	2787.78	-2.85	1370.92	-0.3	-500.70	-0.3	-423.05	0	-609.09
7	7	22.80	0.00	35.84	2787.78	-2.85	1370.92	-0.3	-500.70	-0.3	-423.05	0	-609.09
7	8	28.35	0.00	113.31	2365.35	-2.85	1163.18	-0.3	-424.83	-0.3	-358.94	0	-516.80
8	8	28.35	0.00	113.31	2365.35	-2.85	1163.18	-0.3	-424.83	-0.3	-358.94	0	-516.80
8	9	31.13	0.00	154.57	1995.79	-2.85	981.45	-0.3	-358.45	-0.3	-302.86	0	-436.05
9	9	31.13	0.00	154.57	1995.79	-2.85	981.45	-0.3	-358.45	-0.3	-302.86	0	-436.05
9	10	33.90	0.00	171.97	1520.42	-2.85	747.68	-0.3	-273.07	-0.3	-230.73	0	-332.19
10	10	33.90	-28.16	168.39	1520.42	-2.85	739.56	-0.3	-281.20	-0.3	-237.59	0	-339.05
10	11	34.90	-26.48	167.01	1384.79	-2.85	673.35	-0.3	-256.35	-0.3	-216.60	0	-309.01
11	11	34.90	-47.82	158.70	1384.79	-2.85	274.02	-0.3	-218.84	-0.3	-202.44	0	-256.08
11	12	35.90	-31.70	105.21	1246.37	-3.088	203.38	-0.3	-181.68	-0.3	-168.07	0	-206.40
12	12	35.90	-8.49	112.53	1246.37	-3.088	206.33	-0.3	-178.73	-0.3	-165.34	0	-203.67
12	13	36.90	-6.10	80.82	1133.77	-3.325	161.22	-0.3	-149.08	-0.3	-137.91	0	-166.38
13	13	36.90	-9.85	80.20	1133.77	-3.325	188.77	-0.3	-148.60	-0.3	-148.60	0	-182.06
13	14	39.25	-10.56	85.95	939.43	-3.884	109.03	-0.3	-109.06	-0.3	-109.06	0	-127.31
14	14	39.25	-9.73	86.12	939.43	-3.884	109.12	-0.3	-108.96	-0.3	-108.96	0	-127.22
14	15	41.60	-6.67	59.02	789.43	-4.442	76.61	-0.3	-82.84	-0.3	-82.84	0	-94.39
15	15	41.60	-0.75	59.65	789.43	-4.442	77.18	-0.3	-82.27	-0.3	-82.27	0	-93.82
15	16	43.90	-0.48	38.47	678.87	-5	61.60	-0.3	-65.81	-0.3	-65.81	0	-73.95
16	16	43.90	2.91	38.28	678.87	-5	46.31	-0.3	-30.91	-0.3	-30.91	0	-35.84
16	17	46.45	1.24	16.25	607.76	-5	41.39	-0.3	-27.74	-0.3	-27.74	0	-32.15
17	17	46.45	-2.07	27.28	607.76	-5	41.22	-0.3	-27.90	-0.3	-27.90	0	-32.32
17	18	49.00	-0.41	5.36	569.37	-5	38.70	-0.3	-26.07	-0.3	-26.07	0	-30.20
18	18	49.00	0.07	5.38	569.37	-5	51.71	-0.3	-55.16	-0.3	-55.16	0	-61.98
18	19	51.30	-0.19	-15.41	575.82	-4.442	56.33	-0.3	-59.98	-0.3	-59.98	0	-68.40
19	19	51.30	-1.72	-15.24	575.82	-4.442	56.18	-0.3	-60.12	-0.3	-60.12	0	-68.55
19	20	53.65	-1.74	-15.40	614.06	-3.884	71.86	-0.3	-70.69	-0.3	-70.69	0	-82.62
20	20	53.65	-1.89	-15.36	614.06	-3.884	71.84	-0.3	-70.71	-0.3	-70.71	0	-82.64
20	21	56.00	-5.84	-47.52	691.69	-3.325	115.19	-0.3	-90.63	-0.3	-90.63	0	-111.04
21	21	56.00	-3.61	-47.89	691.69	-3.325	98.37	-0.3	-90.94	-0.3	-84.13	0	-101.50
21	22	57.00	-5.20	-68.98	764.43	-3.088	126.55	-0.3	-109.62	-0.3	-101.41	0	-124.92
22	22	57.00	-19.43	-64.49	764.43	-3.088	124.74	-0.3	-111.43	-0.3	-103.08	0	-126.59
22	23	58.00	-27.81	-92.29	846.45	-2.85	167.70	-0.3	-133.56	-0.3	-123.55	0	-156.34
23	23	58.00	-15.40	-97.12	846.45	-2.85	411.81	-0.3	-156.47	-0.3	-132.20	0	-188.69
23	24	59.00	-17.02	-101.77	916.74	-2.85	445.91	-0.3	-169.56	-0.3	-143.26	0	-204.44
24	24	59.00	0.00	-103.93	916.74	-2.85	450.82	-0.3	-164.65	-0.3	-139.12	0	-200.30
24	25	63.11	0.00	-112.20	1350.38	-2.85	664.06	-0.3	-242.53	-0.3	-204.92	0	-295.04
25	25	63.11	0.00	-112.20	1350.38	-2.85	664.06	-0.3	-242.53	-0.3	-204.92	0	-295.04
25	26	67.23	0.00	-114.21	1934.33	-2.85	951.23	-0.3	-347.41	-0.3	-293.54	0	-422.62
26	26	67.23	0.00	-114.21	1934.33	-2.85	951.23	-0.3	-347.41	-0.3	-293.54	0	-422.62
26	27	71.34	0.00	-57.22	2289.99	-2.85	1126.13	-0.3	-411.29	-0.3	-347.51	0	-500.33
27	27	71.34	0.00	-57.22	2289.99	-2.85	1126.13	-0.3	-411.29	-0.3	-347.51	0	-500.33
27	28	75.45	0.00	0.00	2408.91	-2.85	1184.61	-0.3	-432.65	-0.3	-365.56	0	-526.31
28	28	75.45	0.00	0.00	2408.91	-2.85	1184.61	-0.3	-432.65	-0.3	-365.56	0	-526.31
28	29	79.56	0.00	57.22	2290.04	-2.85	1126.15	-0.3	-411.30	-0.3	-347.52	0	-500.34
29	29	79.56	0.00	57.22	2290.04	-2.85	1126.15	-0.3	-411.30	-0.3	-347.52	0	-500.34
29	30	83.68	0.00	114.21	1934.47	-2.85	951.29	-0.3	-347.44	-0.3	-293.56	0	-422.66
30	30	83.68	0.00	114.21	1934.47	-2.85	951.29	-0.3	-347.44	-0.3	-293.56	0	-422.66
30	31	87.79	0.00	112.20	1350.58	-2.85	664.16	-0.3	-242.57	-0.3	-204.95	0	-295.08
31	31	87.79	0.00	112.20	1350.58	-2.85	664.16	-0.3	-242.57	-0.3	-204.95	0	-295.08
31	32	91.90	0.00	103.91	917.01	-2.85	450.95	-0.3	-164.70	-0.3	-139.16	0	-200.35
32	32	91.90	-17.02	101.76	917.01	-2.85	446.04	-0.3	-169.61	-0.3	-143.31	0	-204.50
32	33	92.90	-15.39	97.11	846.68	-2.85	411.92	-0.3	-156.51	-0.3	-132.24	0	-188.74
33	33	92.90	-27.80	92.27	846.68	-2.85	167.74	-0.3	-133.59	-0.3	-123.59	0	-156.38
33	34	93.90	-19.43	64.49	764.44	-3.088	124.74	-0.3	-111.43	-0.3	-103.08	0	-126.59
34	34	93.90	-5.20	68.97	764.44	-3.088	126.55	-0.3	-109.62	-0.3	-101.41	0	-124.92
34	35	94.90	-3.61	47.89	691.71	-3.325	98.38	-0.3	-90.94	-0.3	-84.13	0	-101.50
35	35	94.90	-5.84	47.51	691.71	-3.325	115.19	-0.3	-90.63	-0.3	-90.63	0	-111.05
35	36	97.25	-1.89	15.36	614.09	-3.884	71.84	-0.3	-70.71	-0.3	-70.71	0	-82.64
36	36	97.25	-1.74	15.38	614.09	-3.884	71.86	-0.3	-70.69	-0.3	-70.69	0	-82.63
36	37	99.60	-1.72	15.24	575.84	-4.442	56.18	-0.3	-60.13	-0.3	-60.13	0	-68.55
37	37	99.60	-0.19	15.40	575.84	-4.442	56.33	-0.3	-59.98	-0.3	-59.98	0	-68.40
37	38	101.90	0.07	-5.38	569.41	-5	51.71	-0.3	-55.16	-0.3	-55.16	0	-61.98
38	38	101.90	-0.41	-5.37	569.41	-5	38.70	-0.3	-26.07	-0.3	-26.07	0	-30.20
38	39	104.45	-2.07	-27.28	607.79	-5	41.23	-0.3	-27.91	-0.3	-27.91	0	-32.32
39	39	104.45	1.24	-16.25	607.79	-5	41.39	-0.3	-27.74	-0.3	-27.74	0	-32.15
39	40	107.00	2.91	-38.28	678.90	-5	46.31	-0.3	-30.91	-0.3	-30.91	0	-35.84
40	40	107.00	-0.48	-38.47	678.90	-5	61.60	-0.3	-65.82	-0.3	-65.82	0	-73.95
40	41	109.30	-0.75	-59.65	789.48	-4.442	77.18	-0.3	-82.28	-0.3	-82.28	0	-93.83
41	41	109.30	-6.67	-59.02	789.48	-4.442	76.62	-0.3	-82.85	-0.3	-82.85	0	-94.40
41	42	111.65	-9.73	-86.12	939.47	-3.884	109.13	-0.3	-108.97	-0.3	-108.97	0	-127.22
42	42	111.65	-10.56	-85.95	939.47	-3.884	109.03	-0.3	-109.06	-0.3	-109.06	0	-127.32
42	43	114.00	-9.85	-80.20	1133.81	-3.325	188.78	-0.3	-148.60	-0.3	-148.60	0	-182.06
43	43	114.00	-6.10	-80.82	1133.81	-3.325	161.23	-0.3	-149.09	-0.3	-137.92	0	-166.39
43	44	115.00	-8.49	-112.53	1246.41	-3.088	206.34	-0.3	-178.74	-0.3	-165.35	0	-203.68
44	44	115.00	-31.70	-105.21	1246.41	-3.088	203.39	-0.3	-181.69	-0.3	-168.07	0	-206.41
44	45	116.00	-47.82	-158.70	1384.56	-2.85	273.97	-0.3	-218.80	-0.3	-202.41	0	-256.04
45	45	116.00	-26.48	-167.01	1384.56	-2.85	673.23	-0.3	-256.31	-0.3	-216.56	0	-308.96
45	46	117.00	-28.16	-168.40	1520.17	-2.85	739.44	-0.3	-281.15	-0.3	-237.55	0	-339.00
46	46	117.00	0.00	-171.97	1520.17	-2.85	747.56	-0.3	-273.03	-0.3	-230.69	0	-332.14
46	47	119.78	0.00	-154.57	1995.57	-2.85	981.34	-0.3	-358.41	-0.3	-302.83	0	-436.00
47	47	119.78	0.00	-154.57	1995.57	-2.85	981.34	-0.3	-358.41	-0.3	-302.83	0	-436.00
47	48	122.55	0.00	-113.31	2365.16	-2.85	1163.09	-0.3	-424.79	-0.3	-358.92	0	-516.75
48	48	122.55	0.00	-113.31	2365.16	-2.85	1163.09	-0.3	-424.79	-0.3	-358.92	0	-516.75
48	49	128.10	0.00	-35.84	2787.70	-2.85	1370.88	-0.3	-500.68	-0.3	-423.04	0	-609.07
49	49	128.10	0.00	-35.84	2787.70	-2.85	1370.88	-0.3	-500.68	-0.3	-423.04	0	-609.07
49	50	133.65	0.00	46.67	2757.82	-2.85	1356.19	-0.3	-495.32	-0.3	-418.50	0	-602.55
50	50	133.65	0.00	46.67	2757.82	-2.85	1356.19	-0.3	-495.32	-0.3	-418.50	0	-602.55
50	51	139.20	0.00	125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
51	51	139.20	0.00	125.41	2291.46	-2.85	1126.85	-0.3	-411.56	-0.3	-347.73	0	-500.65
51	52	144.75	0.00	207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
52	52	144.75	0.00	207.93	1371.64	-2.85	674.52	-0.3	-246.35	-0.3	-208.15	0	-299.68
52	53	147.53	0.00	249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
53	53	147.53	0.00	249.19	740.95	-2.85	364.37	-0.3	-133.08	-0.3	-112.44	0	-161.89
53	54	150.30	0.00	18.76	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
54	54	150.30	0.00	-0.74	-0.22	-2.85	-0.11	-0.3	0.04	-0.3	0.03	0	0.05
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(EnvolventeTrenPF-75B.MZ-(EXCYREP)). Tensiones a tiempo Tinf

[1; 1pPF75B.ENV_PF75B.MZ-

Coef. ext:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	8.92	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
2	2	0.60	0.00	-34.13	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
2	3	3.38	0.00	53.97	-146.40	-2.85	-71.99	-0.3	26.29	-0.3	22.22	0	31.99
3	3	3.38	0.00	53.97	-146.40	-2.85	-71.99	-0.3	26.29	-0.3	22.22	0	31.99
3	4	6.15	0.00	57.42	-300.07	-2.85	-147.56	-0.3	53.89	-0.3	45.54	0	65.56
4	4	6.15	0.00	57.42	-300.07	-2.85	-147.56	-0.3	53.89	-0.3	45.54	0	65.56
4	5	11.70	0.00	64.29	-635.87	-2.85	-312.70	-0.3	114.21	-0.3	96.49	0	138.93
5	5	11.70	0.00	64.29	-635.87	-2.85	-312.70	-0.3	114.21	-0.3	96.49	0	138.93
5	6	17.25	0.00	71.17	-1009.62	-2.85	-496.49	-0.3	181.33	-0.3	153.21	0	220.59
6	6	17.25	0.00	71.17	-1009.62	-2.85	-496.49	-0.3	181.33	-0.3	153.21	0	220.59
6	7	22.80	0.00	78.04	-1421.32	-2.85	-698.95	-0.3	255.28	-0.3	215.69	0	310.54
7	7	22.80	0.00	78.04	-1421.32	-2.85	-698.95	-0.3	255.28	-0.3	215.69	0	310.54
7	8	28.35	0.00	84.92	-1870.96	-2.85	-920.06	-0.3	336.03	-0.3	283.92	0	408.78
8	8	28.35	0.00	84.92	-1870.96	-2.85	-920.06	-0.3	336.03	-0.3	283.92	0	408.78
8	9	31.13	0.00	88.35	-2110.02	-2.85	-1037.62	-0.3	378.97	-0.3	320.20	0	461.01
9	9	31.13	0.00	88.35	-2110.02	-2.85	-1037.62	-0.3	378.97	-0.3	320.20	0	461.01
9	10	33.90	0.00	112.64	-2363.64	-2.85	-1162.34	-0.3	424.52	-0.3	358.69	0	516.42
10	10	33.90	-18.44	110.30	-2363.64	-2.85	-1167.66	-0.3	419.20	-0.3	354.19	0	511.93
10	11	34.90	-22.82	143.91	-2544.04	-2.85	-1257.64	-0.3	450.34	-0.3	380.50	0	550.28
11	11	34.90	-41.20	136.75	-2544.04	-2.85	-522.01	-0.3	383.43	-0.3	354.70	0	453.25
11	12	35.90	-51.82	171.98	-2704.18	-3.088	-456.58	-0.3	378.86	-0.3	350.47	0	433.64
12	12	35.90	-13.88	183.93	-2704.18	-3.088	-451.76	-0.3	383.68	-0.3	354.93	0	438.09
12	13	36.90	-17.35	230.02	-2885.50	-3.325	-414.08	-0.3	375.67	-0.3	347.53	0	419.98
13	13	36.90	-28.03	228.22	-2885.50	-3.325	-488.29	-0.3	370.33	-0.3	370.33	0	455.48
13	14	39.25	-31.48	256.24	-3436.96	-3.884	-406.94	-0.3	390.93	-0.3	390.93	0	457.71
14	14	39.25	-28.99	256.73	-3436.96	-3.884	-406.65	-0.3	391.21	-0.3	391.21	0	458.00
14	15	41.60	-35.87	317.63	-4110.16	-4.442	-405.65	-0.3	424.54	-0.3	424.54	0	484.67
15	15	41.60	-4.02	321.03	-4110.16	-4.442	-402.59	-0.3	427.60	-0.3	427.60	0	487.73
15	16	43.90	-4.70	375.27	-4879.71	-5	-443.48	-0.3	472.38	-0.3	472.38	0	530.84
[illegible]	16	43.90	28.40	373.48	-4879.71	-5	-330.41	-0.3	224.62	-0.3	224.62	0	260.05
	17	46.45	32.87	432.17	-5870.28	-5	-397.55	-0.3	270.15	-0.3	270.15	0	312.77
	17	46.45	36.49	-479.80	-5870.28	-5	-397.37	-0.3	270.33	-0.3	270.33	0	312.95
	18	49.00	29.36	-386.01	-4798.50	-5	-324.84	-0.3	220.95	-0.3	220.95	0	255.79
18	18	49.00	-4.86	-387.87	-4798.50	-5	-436.12	-0.3	464.50	-0.3	464.50	0	521.99
18	19	51.30	-4.19	-334.00	-3994.08	-4.442	-391.25	-0.3	415.49	-0.3	415.49	0	473.93
19	19	51.30	-37.32	-330.48	-3994.08	-4.442	-394.43	-0.3	412.32	-0.3	412.32	0	470.75
19	20	53.65	-33.49	-296.53	-3279.92	-3.884	-388.74	-0.3	372.67	-0.3	372.67	0	436.40
20	20	53.65	-36.36	-295.96	-3279.92	-3.884	-389.07	-0.3	372.34	-0.3	372.34	0	436.07
20	21	56.00	-31.30	-254.76	-2672.48	-3.325	-453.03	-0.3	342.20	-0.3	342.20	0	421.07
21	21	56.00	-19.37	-256.77	-2672.48	-3.325	-383.88	-0.3	347.56	-0.3	321.52	0	388.63
21	22	57.00	-16.65	-220.73	-2458.19	-3.088	-411.18	-0.3	348.26	-0.3	322.17	0	397.77
22	22	57.00	-62.18	-206.38	-2458.19	-3.088	-416.97	-0.3	342.48	-0.3	316.82	0	392.42
22	23	58.00	-53.16	-176.42	-2258.42	-2.85	-465.80	-0.3	337.99	-0.3	312.67	0	400.15
23	23	58.00	-29.43	-185.67	-2258.42	-2.85	-1119.09	-0.3	397.13	-0.3	335.55	0	486.26
23	24	59.00	-25.13	-150.25	-2034.39	-2.85	-1007.68	-0.3	358.14	-0.3	302.60	0	438.36
24	24	59.00	0.00	-153.44	-2034.39	-2.85	-1000.43	-0.3	365.39	-0.3	308.72	0	444.49
24	25	63.11	0.00	-83.83	-1532.93	-2.85	-753.83	-0.3	275.32	-0.3	232.62	0	334.92
25	25	63.11	0.00	-83.83	-1532.93	-2.85	-753.83	-0.3	275.32	-0.3	232.62	0	334.92
25	26	67.23	0.00	-20.07	-1434.21	-2.85	-705.29	-0.3	257.59	-0.3	217.64	0	313.36
26	26	67.23	0.00	-20.07	-1434.21	-2.85	-705.29	-0.3	257.59	-0.3	217.64	0	313.36
26	27	71.34	0.00	-14.98	-1362.53	-2.85	-670.04	-0.3	244.72	-0.3	206.77	0	297.69
27	27	71.34	0.00	-14.98	-1362.53	-2.85	-670.04	-0.3	244.72	-0.3	206.77	0	297.69
27	28	75.45	0.00	-9.89	-1311.70	-2.85	-645.04	-0.3	235.59	-0.3	199.05	0	286.59
28	28	75.45	0.00	-9.89	-1311.70	-2.85	-645.04	-0.3	235.59	-0.3	199.05	0	286.59
28	29	79.56	0.00	14.98	-1362.48	-2.85	-670.01	-0.3	244.71	-0.3	206.76	0	297.68
29	29	79.56	0.00	14.98	-1362.48	-2.85	-670.01	-0.3	244.71	-0.3	206.76	0	297.68
29	30	83.68	0.00	20.07	-1434.15	-2.85	-705.26	-0.3	257.58	-0.3	217.63	0	313.34
30	30	83.68	0.00	20.07	-1434.15	-2.85	-705.26	-0.3	257.58	-0.3	217.63	0	313.34
30	31	87.79	0.00	83.83	-1532.87	-2.85	-753.80	-0.3	275.31	-0.3	232.61	0	334.91
31	31	87.79	0.00	83.83	-1532.87	-2.85	-753.80	-0.3	275.31	-0.3	232.61	0	334.91
31	32	91.90	0.00	153.44	-2034.32	-2.85	-1000.40	-0.3	365.37	-0.3	308.71	0	444.47
32	32	91.90	-25.13	150.24	-2034.32	-2.85	-1007.65	-0.3	358.12	-0.3	302.59	0	438.35
32	33	92.90	-29.43	185.66	-2258.34	-2.85	-1119.05	-0.3	397.12	-0.3	335.53	0	486.24
	33	92.90	-53.16	176.42	-2258.34	-2.85	-465.78	-0.3	337.98	-0.3	312.66	0	400.13
	34	93.90	-62.18	206.38	-2458.10	-3.088	-416.95	-0.3	342.46	-0.3	316.81	0	392.40
	34	93.90	-16.65	220.73	-2458.10	-3.088	-411.17	-0.3	348.25	-0.3	322.16	0	397.75
34	35	94.90	-19.37	256.77	-2672.39	-3.325	-383.87	-0.3	347.55	-0.3	321.51	0	388.62
35	35	94.90	-31.30	254.76	-2672.39	-3.325	-453.02	-0.3	342.19	-0.3	342.19	0	421.05
35	36	97.25	-36.36	295.96	-3279.83	-3.884	-389.06	-0.3	372.33	-0.3	372.33	0	436.06
36	36	97.25	-33.49	296.53	-3279.83	-3.884	-388.73	-0.3	372.66	-0.3	372.66	0	436.39
36	37	99.60	-37.32	330.46	-3993.98	-4.442	-394.42	-0.3	412.30	-0.3	412.30	0	470.73
37	37	99.60	-4.19	334.00	-3993.98	-4.442	-391.24	-0.3	415.48	-0.3	415.48	0	473.91
37	38	101.90	-4.86	387.87	-4798.40	-5	-436.11	-0.3	464.49	-0.3	464.49	0	521.97
38	38	101.90	29.36	386.01	-4798.40	-5	-324.83	-0.3	220.95	-0.3	220.95	0	255.79
38	39	104.45	36.49	479.80	-5870.36	-5	-397.37	-0.3	270.34	-0.3	270.34	0	312.96
39	39	104.45	32.87	-432.19	-5870.36	-5	-397.55	-0.3	270.16	-0.3	270.16	0	312.78
39	40	107.00	28.40	-373.48	-4879.80	-5	-330.42	-0.3	224.63	-0.3	224.63	0	260.05
40	40	107.00	-4.70	-375.27	-4879.80	-5	-443.49	-0.3	472.39	-0.3	472.39	0	530.85
40	41	109.30	-4.02	-321.03	-4110.23	-4.442	-402.60	-0.3	427.61	-0.3	427.61	0	487.74
41	41	109.30	-35.87	-317.63	-4110.23	-4.442	-405.66	-0.3	424.55	-0.3	424.55	0	484.68
41	42	111.65	-28.99	-256.73	-3437.03	-3.884	-406.66	-0.3	391.22	-0.3	391.22	0	458.01
42	42	111.65	-31.48	-256.24	-3437.03	-3.884	-406.95	-0.3	390.94	-0.3	390.94	0	457.72
42	43	114.00	-28.03	-228.22	-2885.57	-3.325	-488.30	-0.3	370.34	-0.3	370.34	0	455.49
43	43	114.00	-17.35	-230.02	-2885.57	-3.325	-414.09	-0.3	375.68	-0.3	347.54	0	419.99
43	44	115.00	-13.88	-183.93	-2704.24	-3.088	-451.77	-0.3	383.69	-0.3	354.94	0	438.10
44	44	115.00	-51.82	-171.98	-2704.24	-3.088	-456.59	-0.3	378.86	-0.3	350.48	0	433.64
44	45	116.00	-41.20	-136.75	-2544.10	-2.85	-522.02	-0.3	383.44	-0.3	354.71	0	453.26
45	45	116.00	-22.82	-143.91	-2544.10	-2.85	-1257.67	-0.3	450.35	-0.3	380.51	0	550.29
45	46	117.00	-18.45	-110.30	-2363.70	-2.85	-1167.70	-0.3	419.21	-0.3	354.20	0	511.94
46	46	117.00	0.00	-112.64	-2363.70	-2.85	-1162.37	-0.3	424.53	-0.3	358.69	0	516.44
46	47	119.78	0.00	-88.35	-2110.08	-2.85	-1037.65	-0.3	378.98	-0.3	320.21	0	461.02
47	47	119.78	0.00	-88.35	-2110.08	-2.85	-1037.65	-0.3	378.98	-0.3	320.21	0	461.02
47	48	122.55	0.00	-84.92	-1871.01	-2.85	-920.09	-0.3	336.04	-0.3	283.93	0	408.79
48	48	122.55	0.00	-84.92	-1871.01	-2.85	-920.09	-0.3	336.04	-0.3	283.93	0	408.79
48	49	128.10	0.00	-78.04	-1421.36	-2.85	-698.97	-0.3	255.28	-0.3	215.69	0	310.55
49	49	128.10	0.00	-78.04	-1421.36	-2.85	-698.97	-0.3	255.28	-0.3	215.69	0	310.55
49	50	133.65	0.00	-71.17	-1009.65	-2.85	-496.51	-0.3	181.34	-0.3	153.22	0	220.59
	50	133.65	0.00	-71.17	-1009.65	-2.85	-496.51	-0.3	181.34	-0.3	153.22	0	220.59
	51	139.20	0.00	-64.29	-635.90	-2.85	-312.71	-0.3	114.21	-0.3	96.50	0	138.94
	51	139.20	0.00	-64.29	-635.90	-2.85	-312.71	-0.3	114.21	-0.3	96.50	0	138.94
51	52	144.75	0.00	-57.42	-300.08	-2.85	-147.57	-0.3	53.90	-0.3	45.54	0	65.56
52	52	144.75	0.00	-57.42	-300.08	-2.85	-147.57	-0.3	53.90	-0.3	45.54	0	65.56
52	53	147.53	0.00	-53.97	-146.41	-2.85	-72.00	-0.3	26.30	-0.3	22.22	0	31.99
53	53	147.53	0.00	-53.97	-146.41	-2.85	-72.00	-0.3	26.30	-0.3	22.22	0	31.99
53	54	150.30	0.00	44.81	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
54	54	150.30	0.00	-8.92	-2.66	-2.85	-1.31	-0.3	0.48	-0.3	0.40	0	0.58
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(Envolventedetrendecargasplanogenérico.MZ+(EXCYREP)). Tensiones a tiempo Tinf

[1; 1]pcpooooo.ENV_TREN_GENERICO.MZ+

Coef. ext:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	3	3.38	0.00	-13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
3	3	3.38	0.00	-13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
3	4	6.15	0.00	-11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
4	4	6.15	0.00	-11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
4	5	11.70	0.00	-7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
5	5	11.70	0.00	-7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
5	6	17.25	0.00	-2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
6	6	17.25	0.00	-2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
6	7	22.80	0.00	1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
7	7	22.80	0.00	1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
7	8	28.35	0.00	5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
8	8	28.35	0.00	5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
8	9	31.13	0.00	7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
9	9	31.13	0.00	7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
9	10	33.90	0.00	8.25	94.92	-2.85	46.68	-0.3	-17.05	-0.3	-14.40	0	-20.74
10	10	33.90	-1.67	8.07	94.92	-2.85	46.20	-0.3	-17.53	-0.3	-14.81	0	-21.15
10	11	34.90	-1.48	7.13	87.19	-2.85	42.45	-0.3	-16.09	-0.3	-13.59	0	-19.41
11	11	34.90	-2.67	6.78	87.19	-2.85	17.30	-0.3	-13.73	-0.3	-12.70	0	-16.08
11	12	35.90	-2.09	5.31	80.72	-3.088	13.17	-0.3	-11.77	-0.3	-10.89	0	-13.37
12	12	35.90	-0.56	5.68	80.72	-3.088	13.36	-0.3	-11.58	-0.3	-10.71	0	-13.19
12	13	36.90	-0.35	3.58	74.81	-3.325	10.64	-0.3	-9.83	-0.3	-9.09	0	-10.97
13	13	36.90	-0.57	3.55	74.81	-3.325	12.47	-0.3	-9.79	-0.3	-9.79	0	-12.00
13	14	39.25	-0.59	3.70	65.93	-3.884	7.67	-0.3	-7.64	-0.3	-7.64	0	-8.92
14	14	39.25	-0.55	3.70	65.93	-3.884	7.67	-0.3	-7.63	-0.3	-7.63	0	-8.91
14	15	41.60	-0.27	1.83	60.44	-4.442	5.89	-0.3	-6.32	-0.3	-6.32	0	-7.20
15	15	41.60	-0.03	1.85	60.44	-4.442	5.91	-0.3	-6.30	-0.3	-6.30	0	-7.18
15	16	43.90	-0.01	0.34	57.80	-5	5.25	-0.3	-5.60	-0.3	-5.60	0	-6.29
16	16	43.90	0.03	0.34	57.80	-5	3.93	-0.3	-2.64	-0.3	-2.64	0	-3.06
16	17	46.45	-0.13	-1.28	58.76	-5	3.99	-0.3	-2.69	-0.3	-2.69	0	-3.12
17	17	46.45	-0.35	3.48	58.76	-5	3.98	-0.3	-2.71	-0.3	-2.71	0	-3.13
17	18	49.00	-0.19	1.87	52.02	-5	3.53	-0.3	-2.39	-0.3	-2.39	0	-2.77
18	18	49.00	0.03	1.88	52.02	-5	4.73	-0.3	-5.04	-0.3	-5.04	0	-5.66
18	19	51.30	0.01	0.40	49.08	-4.442	4.80	-0.3	-5.11	-0.3	-5.11	0	-5.83
19	19	51.30	0.06	0.40	49.08	-4.442	4.81	-0.3	-5.10	-0.3	-5.10	0	-5.82
19	20	53.65	0.04	0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
20	20	53.65	0.04	0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
20	21	56.00	-0.07	-0.45	50.37	-3.325	8.44	-0.3	-6.55	-0.3	-6.55	0	-8.03
21	21	56.00	-0.05	-0.46	50.37	-3.325	7.19	-0.3	-6.60	-0.3	-6.10	0	-7.37
21	22	57.00	-0.19	-1.92	52.68	-3.088	8.74	-0.3	-7.53	-0.3	-6.97	0	-8.59
22	22	57.00	-0.71	-1.80	52.68	-3.088	8.68	-0.3	-7.60	-0.3	-7.03	0	-8.65
22	23	58.00	-1.15	-2.93	55.11	-2.85	11.01	-0.3	-8.60	-0.3	-7.96	0	-10.09
23	23	58.00	-0.64	-3.08	55.11	-2.85	26.92	-0.3	-10.08	-0.3	-8.52	0	-12.20
23	24	59.00	-0.83	-4.00	58.05	-2.85	28.31	-0.3	-10.67	-0.3	-9.01	0	-12.89
24	24	59.00	0.00	-4.08	58.05	-2.85	28.55	-0.3	-10.43	-0.3	-8.81	0	-12.68
24	25	63.11	0.00	-5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
25	25	63.11	0.00	-5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
25	26	67.23	0.00	-6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
26	26	67.23	0.00	-6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
26	27	71.34	0.00	-3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
27	27	71.34	0.00	-3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
27	28	75.45	0.00	0.00	132.97	-2.85	65.39	-0.3	-23.88	-0.3	-20.18	0	-29.05
28	28	75.45	0.00	0.00	132.97	-2.85	65.39	-0.3	-23.88	-0.3	-20.18	0	-29.05
28	29	79.56	0.00	3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
29	29	79.56	0.00	3.08	126.63	-2.85	62.27	-0.3	-22.74	-0.3	-19.22	0	-27.67
29	30	83.68	0.00	6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
30	30	83.68	0.00	6.17	107.60	-2.85	52.91	-0.3	-19.33	-0.3	-16.33	0	-23.51
30	31	87.79	0.00	5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
31	31	87.79	0.00	5.32	76.31	-2.85	37.53	-0.3	-13.71	-0.3	-11.58	0	-16.67
31	32	91.90	0.00	4.08	58.05	-2.85	28.55	-0.3	-10.43	-0.3	-8.81	0	-12.68
32	32	91.90	-0.83	4.00	58.05	-2.85	28.31	-0.3	-10.67	-0.3	-9.01	0	-12.89
32	33	92.90	-0.64	3.08	55.11	-2.85	26.92	-0.3	-10.08	-0.3	-8.52	0	-12.20
33	33	92.90	-1.15	2.93	55.11	-2.85	11.01	-0.3	-8.60	-0.3	-7.96	0	-10.09
33	34	93.90	-0.71	1.80	52.68	-3.088	8.68	-0.3	-7.60	-0.3	-7.03	0	-8.65
34	34	93.90	-0.19	1.92	52.68	-3.088	8.74	-0.3	-7.53	-0.3	-6.97	0	-8.59
34	35	94.90	-0.05	0.46	50.37	-3.325	7.19	-0.3	-6.60	-0.3	-6.10	0	-7.37
35	35	94.90	-0.07	0.45	50.37	-3.325	8.44	-0.3	-6.55	-0.3	-6.55	0	-8.03
35	36	97.25	0.04	-0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
36	36	97.25	0.04	-0.24	48.54	-3.884	5.70	-0.3	-5.57	-0.3	-5.57	0	-6.51
36	37	99.60	0.06	-0.40	49.08	-4.442	4.81	-0.3	-5.10	-0.3	-5.10	0	-5.82
37	37	99.60	0.01	-0.40	49.08	-4.442	4.80	-0.3	-5.11	-0.3	-5.11	0	-5.83
37	38	101.90	0.03	-1.88	52.02	-5	4.73	-0.3	-5.04	-0.3	-5.04	0	-5.66
38	38	101.90	-0.19	-1.87	52.02	-5	3.53	-0.3	-2.39	-0.3	-2.39	0	-2.77
38	39	104.45	-0.35	-3.48	58.76	-5	3.98	-0.3	-2.71	-0.3	-2.71	0	-3.13
39	39	104.45	-0.13	1.28	58.76	-5	3.99	-0.3	-2.69	-0.3	-2.69	0	-3.12
39	40	107.00	0.03	-0.34	57.80	-5	3.93	-0.3	-2.64	-0.3	-2.64	0	-3.06
40	40	107.00	-0.01	-0.34	57.80	-5	5.25	-0.3	-5.60	-0.3	-5.60	0	-6.29
40	41	109.30	-0.03	-1.85	60.44	-4.442	5.91	-0.3	-6.30	-0.3	-6.30	0	-7.18
41	41	109.30	-0.27	-1.83	60.44	-4.442	5.89	-0.3	-6.32	-0.3	-6.32	0	-7.20
41	42	111.65	-0.55	-3.70	65.93	-3.884	7.67	-0.3	-7.63	-0.3	-7.63	0	-8.91
42	42	111.65	-0.59	-3.70	65.93	-3.884	7.67	-0.3	-7.64	-0.3	-7.64	0	-8.92
42	43	114.00	-0.57	-3.55	74.81	-3.325	12.47	-0.3	-9.79	-0.3	-9.79	0	-12.00
43	43	114.00	-0.35	-3.58	74.81	-3.325	10.64	-0.3	-9.83	-0.3	-9.09	0	-10.97
43	44	115.00	-0.56	-5.68	80.72	-3.088	13.36	-0.3	-11.58	-0.3	-10.71	0	-13.19
44	44	115.00	-2.09	-5.31	80.72	-3.088	13.17	-0.3	-11.77	-0.3	-10.89	0	-13.37
44	45	116.00	-2.67	-6.78	87.19	-2.85	17.30	-0.3	-13.73	-0.3	-12.70	0	-16.08
45	45	116.00	-1.48	-7.13	87.19	-2.85	42.45	-0.3	-16.09	-0.3	-13.59	0	-19.41
45	46	117.00	-1.67	-8.07	94.92	-2.85	46.20	-0.3	-17.53	-0.3	-14.81	0	-21.15
46	46	117.00	0.00	-8.25	94.92	-2.85	46.68	-0.3	-17.05	-0.3	-14.40	0	-20.74
46	47	119.78	0.00	-7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
47	47	119.78	0.00	-7.57	118.46	-2.85	58.25	-0.3	-21.28	-0.3	-17.98	0	-25.88
47	48	122.55	0.00	-5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
48	48	122.55	0.00	-5.49	136.57	-2.85	67.16	-0.3	-24.53	-0.3	-20.72	0	-29.84
48	49	128.10	0.00	-1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
49	49	128.10	0.00	-1.32	155.46	-2.85	76.45	-0.3	-27.92	-0.3	-23.59	0	-33.97
49	50	133.65	0.00	2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
50	50	133.65	0.00	2.84	151.25	-2.85	74.38	-0.3	-27.17	-0.3	-22.95	0	-33.05
50	51	139.20	0.00	7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
51	51	139.20	0.00	7.00	123.93	-2.85	60.94	-0.3	-22.26	-0.3	-18.81	0	-27.08
51	52	144.75	0.00	11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
52	52	144.75	0.00	11.17	73.52	-2.85	36.15	-0.3	-13.20	-0.3	-11.16	0	-16.06
52	53	147.53	0.00	13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
53	53	147.53	0.00	13.25	39.65	-2.85	19.50	-0.3	-7.12	-0.3	-6.02	0	-8.66
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(Envolventedetrendecargasplanogenérico.MZ-(EXCYREF)). Tensiones a tiempo Tinf

[1; 1]xxxxxx.ENV_TREN_GENERICO.MZ-

Coef. esc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.45	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
2	2	0.60	0.00	0.00	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
2	3	3.38	0.00	3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
3	3	3.38	0.00	3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
3	4	6.15	0.00	3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
4	4	6.15	0.00	3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
4	5	11.70	0.00	3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
5	5	11.70	0.00	3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
5	6	17.25	0.00	3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
6	6	17.25	0.00	3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
6	7	22.80	0.00	3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
7	7	22.80	0.00	3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
7	8	28.35	0.00	3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
8	8	28.35	0.00	3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
8	9	31.13	0.00	3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
9	9	31.13	0.00	3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
9	10	33.90	0.00	5.38	-132.86	-2.85	-65.34	-0.3	23.86	-0.3	20.16	0	29.03
10	10	33.90	-1.09	5.27	-132.86	-2.85	-65.65	-0.3	23.55	-0.3	19.90	0	28.76
10	11	34.90	-1.44	6.94	-139.13	-2.85	-68.83	-0.3	24.57	-0.3	20.76	0	30.05
11	11	34.90	-2.60	6.59	-139.13	-2.85	-28.60	-0.3	20.92	-0.3	19.35	0	24.74
11	12	35.90	-3.45	8.76	-147.40	-3.088	-24.97	-0.3	20.57	-0.3	19.03	0	23.56
12	12	35.90	-0.92	9.37	-147.40	-3.088	-24.65	-0.3	20.89	-0.3	19.33	0	23.86
12	13	36.90	-1.20	12.22	-156.99	-3.325	-22.56	-0.3	20.41	-0.3	18.88	0	22.82
13	13	36.90	-1.95	12.12	-156.99	-3.325	-26.63	-0.3	20.09	-0.3	20.09	0	24.72
13	14	39.25	-2.20	13.72	-187.48	-3.884	-22.25	-0.3	21.27	-0.3	21.27	0	24.91
14	14	39.25	-2.03	13.74	-187.48	-3.884	-22.23	-0.3	21.29	-0.3	21.29	0	24.93
14	15	41.60	-2.56	17.36	-225.51	-4.442	-22.31	-0.3	23.24	-0.3	23.24	0	26.54
15	15	41.60	-0.29	17.55	-225.51	-4.442	-22.10	-0.3	23.45	-0.3	23.45	0	26.75
15	16	43.90	-0.34	20.78	-269.47	-5	-24.50	-0.3	26.08	-0.3	26.08	0	29.31
	16	43.90	2.06	20.68	-269.47	-5	-18.22	-0.3	12.43	-0.3	12.43	0	14.38
	17	46.45	2.41	24.20	-326.73	-5	-22.10	-0.3	15.07	-0.3	15.07	0	17.44
	17	46.45	2.50	-25.13	-326.73	-5	-22.09	-0.3	15.07	-0.3	15.07	0	17.44
	18	49.00	2.15	-21.61	-266.96	-5	-18.05	-0.3	12.32	-0.3	12.32	0	14.26
18	18	49.00	-0.36	-21.72	-266.96	-5	-24.27	-0.3	25.83	-0.3	25.83	0	29.03
18	19	51.30	-0.30	-18.51	-220.38	-4.442	-21.59	-0.3	22.92	-0.3	22.92	0	26.14
19	19	51.30	-2.70	-18.32	-220.38	-4.442	-21.82	-0.3	22.69	-0.3	22.69	0	25.91
19	20	53.65	-2.42	-16.41	-179.34	-3.884	-21.32	-0.3	20.31	-0.3	20.31	0	23.79
20	20	53.65	-2.63	-16.38	-179.34	-3.884	-21.35	-0.3	20.29	-0.3	20.29	0	23.77
20	21	56.00	-2.24	-13.95	-144.82	-3.325	-24.63	-0.3	18.46	-0.3	18.46	0	22.74
21	21	56.00	-1.39	-14.06	-144.82	-3.325	-20.84	-0.3	18.80	-0.3	17.39	0	21.02
21	22	57.00	-1.17	-11.85	-132.92	-3.088	-22.27	-0.3	18.80	-0.3	17.39	0	21.48
22	22	57.00	-4.36	-11.08	-132.92	-3.088	-22.67	-0.3	18.39	-0.3	17.01	0	21.10
22	23	58.00	-3.64	-9.25	-121.89	-2.85	-25.25	-0.3	18.13	-0.3	16.77	0	21.49
23	23	58.00	-2.02	-9.73	-121.89	-2.85	-60.52	-0.3	21.31	-0.3	18.00	0	26.14
23	24	59.00	-1.68	-8.09	-112.12	-2.85	-55.62	-0.3	19.65	-0.3	16.60	0	24.09
24	24	59.00	0.00	-8.26	-112.12	-2.85	-55.14	-0.3	20.14	-0.3	17.01	0	24.50
24	25	63.11	0.00	-3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
25	25	63.11	0.00	-3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
25	26	67.23	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
26	26	67.23	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
26	27	71.34	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
27	27	71.34	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
27	28	75.45	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
28	28	75.45	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
28	29	79.56	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
29	29	79.56	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
29	30	83.68	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
30	30	83.68	0.00	0.00	-85.56	-2.85	-42.07	-0.3	15.37	-0.3	12.98	0	18.69
30	31	87.79	0.00	3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
31	31	87.79	0.00	3.93	-85.98	-2.85	-42.28	-0.3	15.44	-0.3	13.05	0	18.79
31	32	91.90	0.00	8.26	-112.12	-2.85	-55.14	-0.3	20.14	-0.3	17.01	0	24.50
32	32	91.90	-1.68	8.09	-112.12	-2.85	-55.62	-0.3	19.65	-0.3	16.60	0	24.09
32	33	92.90	-2.02	9.73	-121.89	-2.85	-60.52	-0.3	21.31	-0.3	18.00	0	26.14
	33	92.90	-3.64	9.25	-121.89	-2.85	-25.25	-0.3	18.13	-0.3	16.77	0	21.49
	34	93.90	-4.36	11.08	-132.92	-3.088	-22.67	-0.3	18.39	-0.3	17.01	0	21.10
	34	93.90	-1.17	11.85	-132.92	-3.088	-22.27	-0.3	18.80	-0.3	17.39	0	21.48
34	35	94.90	-1.39	14.06	-144.82	-3.325	-20.84	-0.3	18.80	-0.3	17.39	0	21.02
35	35	94.90	-2.24	13.95	-144.82	-3.325	-24.63	-0.3	18.46	-0.3	18.46	0	22.74
35	36	97.25	-2.63	16.38	-179.34	-3.884	-21.35	-0.3	20.29	-0.3	20.29	0	23.77
36	36	97.25	-2.42	16.41	-179.34	-3.884	-21.32	-0.3	20.31	-0.3	20.31	0	23.79
36	37	99.60	-2.70	18.32	-220.38	-4.442	-21.82	-0.3	22.69	-0.3	22.69	0	25.91
37	37	99.60	-0.30	18.51	-220.38	-4.442	-21.59	-0.3	22.92	-0.3	22.92	0	26.14
37	38	101.90	-0.36	21.72	-266.96	-5	-24.27	-0.3	25.83	-0.3	25.83	0	29.03
38	38	101.90	2.15	21.61	-266.96	-5	-18.05	-0.3	12.32	-0.3	12.32	0	14.26
38	39	104.45	2.50	25.13	-326.73	-5	-22.09	-0.3	15.07	-0.3	15.07	0	17.44
39	39	104.45	2.41	-24.20	-326.73	-5	-22.10	-0.3	15.07	-0.3	15.07	0	17.44
39	40	107.00	2.06	-20.68	-269.47	-5	-18.22	-0.3	12.43	-0.3	12.43	0	14.38
40	40	107.00	-0.34	-20.78	-269.47	-5	-24.50	-0.3	26.08	-0.3	26.08	0	29.31
40	41	109.30	-0.29	-17.55	-225.51	-4.442	-22.10	-0.3	23.45	-0.3	23.45	0	26.75
41	41	109.30	-2.56	-17.36	-225.51	-4.442	-22.31	-0.3	23.24	-0.3	23.24	0	26.54
41	42	111.65	-2.03	-13.74	-187.48	-3.884	-22.23	-0.3	21.29	-0.3	21.29	0	24.93
42	42	111.65	-2.20	-13.72	-187.48	-3.884	-22.25	-0.3	21.27	-0.3	21.27	0	24.91
42	43	114.00	-1.95	-12.12	-156.99	-3.325	-26.63	-0.3	20.09	-0.3	20.09	0	24.72
43	43	114.00	-1.20	-12.22	-156.99	-3.325	-22.56	-0.3	20.41	-0.3	18.88	0	22.82
43	44	115.00	-0.92	-9.37	-147.40	-3.088	-24.65	-0.3	20.89	-0.3	19.33	0	23.86
44	44	115.00	-3.45	-8.76	-147.40	-3.088	-24.97	-0.3	20.57	-0.3	19.03	0	23.56
44	45	116.00	-2.60	-6.59	-139.13	-2.85	-28.60	-0.3	20.92	-0.3	19.35	0	24.74
45	45	116.00	-1.44	-6.94	-139.13	-2.85	-68.83	-0.3	24.57	-0.3	20.76	0	30.05
45	46	117.00	-1.09	-5.27	-132.86	-2.85	-65.65	-0.3	23.55	-0.3	19.90	0	28.76
46	46	117.00	0.00	-5.38	-132.86	-2.85	-65.34	-0.3	23.86	-0.3	20.16	0	29.03
46	47	119.78	0.00	-3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
47	47	119.78	0.00	-3.98	-121.48	-2.85	-59.74	-0.3	21.82	-0.3	18.43	0	26.54
47	48	122.55	0.00	-3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
48	48	122.55	0.00	-3.98	-110.45	-2.85	-54.31	-0.3	19.84	-0.3	16.76	0	24.13
48	49	128.10	0.00	-3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
49	49	128.10	0.00	-3.98	-88.39	-2.85	-43.47	-0.3	15.88	-0.3	13.41	0	19.31
49	50	133.65	0.00	-3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
	50	133.65	0.00	-3.98	-66.32	-2.85	-32.61	-0.3	11.91	-0.3	10.06	0	14.49
	51	139.20	0.00	-3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
	51	139.20	0.00	-3.98	-44.26	-2.85	-21.77	-0.3	7.95	-0.3	6.72	0	9.67
51	52	144.75	0.00	-3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
52	52	144.75	0.00	-3.98	-22.20	-2.85	-10.92	-0.3	3.99	-0.3	3.37	0	4.85
52	53	147.53	0.00	-3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
53	53	147.53	0.00	-3.98	-11.17	-2.85	-5.49	-0.3	2.01	-0.3	1.70	0	2.44
53	54	150.30	0.00	0.00	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
54	54	150.30	0.00	-0.45	-0.14	-2.85	-0.07	-0.3	0.03	-0.3	0.02	0	0.03
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(Redistribuciones). Tensiones a tiempo Tinf

[1; 1]Redistri

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
2	2	0.60	-13.94	-30.85	0.00	-2.85	-4.01	-0.3	-4.01	-0.3	-3.40	0	-3.40
2	3	3.38	-13.94	-30.83	85.57	-2.85	37.74	-0.3	-19.33	-0.3	-16.32	0	-22.06
3	3	3.38	-13.94	-30.83	85.57	-2.85	37.74	-0.3	-19.33	-0.3	-16.32	0	-22.06
3	4	6.15	-13.94	-30.84	171.14	-2.85	79.50	-0.3	-34.65	-0.3	-29.24	0	-40.71
4	4	6.15	-13.94	-30.84	171.14	-2.85	79.50	-0.3	-34.65	-0.3	-29.24	0	-40.71
4	5	11.70	-13.94	-30.85	342.30	-2.85	163.03	-0.3	-65.29	-0.3	-55.09	0	-78.02
5	5	11.70	-13.94	-30.85	342.30	-2.85	163.03	-0.3	-65.29	-0.3	-55.09	0	-78.02
5	6	17.25	-13.94	-30.84	513.41	-2.85	246.53	-0.3	-95.92	-0.3	-80.93	0	-115.32
6	6	17.25	-13.94	-30.84	513.41	-2.85	246.53	-0.3	-95.92	-0.3	-80.93	0	-115.32
6	7	22.80	-13.94	-30.86	684.58	-2.85	330.06	-0.3	-126.55	-0.3	-106.77	0	-152.64
7	7	22.80	-15.48	-30.51	685.89	-2.85	330.26	-0.3	-127.23	-0.3	-107.35	0	-153.30
7	8	28.35	-17.03	-30.49	855.63	-2.85	412.64	-0.3	-158.06	-0.3	-133.36	0	-190.68
8	8	28.35	-20.03	-29.86	861.28	-2.85	414.54	-0.3	-159.94	-0.3	-134.94	0	-192.65
8	9	31.13	-20.03	-29.86	945.43	-2.85	455.60	-0.3	-175.00	-0.3	-147.65	0	-210.99
9	9	31.13	-13.94	-30.89	935.43	-2.85	452.48	-0.3	-171.46	-0.3	-144.65	0	-207.33
9	10	33.90	-13.94	-30.90	1021.19	-2.85	494.33	-0.3	-186.81	-0.3	-157.60	0	-226.02
10	10	33.90	-31.48	-31.45	1000.61	-2.85	479.23	-0.3	-188.18	-0.3	-158.77	0	-225.81
10	11	34.90	-33.01	-31.46	1028.16	-2.85	492.24	-0.3	-193.55	-0.3	-163.31	0	-232.19
11	11	34.90	-23.04	-37.38	1005.70	-2.85	203.86	-0.3	-159.20	-0.3	-147.89	0	-187.11
11	12	35.90	-26.21	-38.02	1037.06	-3.088	170.90	-0.3	-152.67	-0.3	-141.02	0	-173.17
12	12	35.90	-38.07	-27.73	1059.02	-3.088	173.08	-0.3	-157.33	-0.3	-145.34	0	-178.17
12	13	36.90	-42.50	-27.65	1087.93	-3.325	152.90	-0.3	-150.63	-0.3	-139.41	0	-166.61
13	13	36.90	-21.62	-32.40	1087.85	-3.325	179.35	-0.3	-144.35	-0.3	-144.35	0	-176.45
13	14	39.25	-25.28	-32.80	1160.53	-3.884	133.31	-0.3	-136.11	-0.3	-136.11	0	-158.66
14	14	39.25	-9.32	-32.22	1160.61	-3.884	135.15	-0.3	-134.29	-0.3	-134.29	0	-156.84
14	15	41.60	-9.32	-32.21	1237.21	-4.442	120.19	-0.3	-129.70	-0.3	-129.70	0	-147.80
15	15	41.60	-13.44	-30.71	1237.17	-4.442	119.79	-0.3	-130.09	-0.3	-130.09	0	-148.19
15	16	43.90	-13.44	-30.70	1308.39	-5	117.69	-0.3	-127.88	-0.3	-127.88	0	-143.56
16	16	43.90	-16.88	-28.95	1308.47	-5	88.14	-0.3	-60.68	-0.3	-60.68	0	-70.18
16	17	46.45	-16.87	-28.96	1382.49	-5	93.17	-0.3	-64.07	-0.3	-64.07	0	-74.11
17	17	46.45	-47.97	-5.19	1371.18	-5	90.87	-0.3	-65.09	-0.3	-65.09	0	-75.05
17	18	49.00	-47.97	-5.20	1384.32	-5	91.76	-0.3	-65.69	-0.3	-65.69	0	-75.74
18	18	49.00	-48.25	0.37	1384.35	-5	121.67	-0.3	-138.16	-0.3	-138.16	0	-154.75
18	19	51.30	-48.25	0.37	1383.47	-4.442	130.77	-0.3	-148.66	-0.3	-148.66	0	-168.90
19	19	51.30	-47.79	6.66	1383.15	-4.442	130.78	-0.3	-148.59	-0.3	-148.59	0	-168.82
19	20	53.65	-47.79	6.66	1367.70	-3.884	155.03	-0.3	-162.48	-0.3	-162.48	0	-189.05
20	20	53.65	-64.29	4.45	1367.46	-3.884	153.11	-0.3	-164.35	-0.3	-164.35	0	-190.92
20	21	56.00	-60.61	4.04	1361.00	-3.325	219.41	-0.3	-185.56	-0.3	-185.56	0	-225.73
21	21	56.00	-79.16	-7.96	1360.88	-3.325	188.30	-0.3	-191.38	-0.3	-177.14	0	-211.16
21	22	57.00	-74.72	-7.89	1368.37	-3.088	220.40	-0.3	-206.53	-0.3	-190.81	0	-233.23
22	22	57.00	-70.98	15.41	1346.39	-3.088	217.18	-0.3	-202.89	-0.3	-187.45	0	-229.18
22	23	58.00	-67.83	14.78	1338.99	-2.85	266.06	-0.3	-217.31	-0.3	-201.84	0	-254.06
23	23	58.00	-73.32	1.62	1361.34	-2.85	643.22	-0.3	-264.80	-0.3	-223.45	0	-314.66
23	24	59.00	-71.77	1.62	1364.24	-2.85	645.08	-0.3	-264.87	-0.3	-223.51	0	-314.92
24	24	59.00	-52.83	-1.16	1386.98	-2.85	661.63	-0.3	-263.48	-0.3	-222.32	0	-315.25
24	25	63.11	-52.83	-1.16	1390.77	-2.85	663.48	-0.3	-264.16	-0.3	-222.90	0	-316.08
25	25	63.11	-52.88	-0.65	1390.77	-2.85	663.47	-0.3	-264.18	-0.3	-222.91	0	-316.09
25	26	67.23	-51.31	-0.65	1392.65	-2.85	664.84	-0.3	-264.06	-0.3	-222.81	0	-316.12
26	26	67.23	-48.25	-0.09	1390.18	-2.85	664.51	-0.3	-262.74	-0.3	-221.69	0	-314.83
26	27	71.34	-48.25	-0.08	1390.56	-2.85	664.70	-0.3	-262.81	-0.3	-221.75	0	-314.92
27	27	71.34	-48.25	-0.08	1390.56	-2.85	664.70	-0.3	-262.81	-0.3	-221.75	0	-314.92
27	28	75.45	-48.25	-0.09	1390.95	-2.85	664.89	-0.3	-262.88	-0.3	-221.81	0	-315.00
28	28	75.45	-48.25	-0.09	1390.95	-2.85	664.89	-0.3	-262.88	-0.3	-221.81	0	-315.00
28	29	79.56	-48.25	-0.09	1391.32	-2.85	665.07	-0.3	-262.94	-0.3	-221.86	0	-315.08
29	29	79.56	-48.25	-0.09	1391.32	-2.85	665.07	-0.3	-262.94	-0.3	-221.86	0	-315.08
29	30	83.68	-48.25	-0.08	1391.71	-2.85	665.26	-0.3	-263.01	-0.3	-221.92	0	-315.17
30	30	83.68	-51.30	0.48	1394.20	-2.85	665.60	-0.3	-264.34	-0.3	-223.04	0	-316.45
30	31	87.79	-52.86	0.48	1393.08	-2.85	664.60	-0.3	-264.59	-0.3	-223.25	0	-316.59
31	31	87.79	-52.81	0.99	1393.08	-2.85	664.61	-0.3	-264.57	-0.3	-223.24	0	-316.58
31	32	91.90	-52.81	0.99	1390.06	-2.85	663.14	-0.3	-264.03	-0.3	-222.78	0	-315.92
32	32	91.90	-71.74	-1.80	1367.25	-2.85	646.56	-0.3	-265.40	-0.3	-223.96	0	-315.57
32	33	92.90	-73.29	-1.80	1364.52	-2.85	644.78	-0.3	-265.36	-0.3	-223.93	0	-315.35
33	33	92.90	-67.77	-14.96	1342.07	-2.85	266.71	-0.3	-217.78	-0.3	-202.27	0	-254.61
33	34	93.90	-70.92	-15.59	1349.21	-3.088	217.66	-0.3	-203.29	-0.3	-187.81	0	-229.64
34	34	93.90	-74.70	7.71	1371.00	-3.088	220.84	-0.3	-206.91	-0.3	-191.16	0	-233.66
34	35	94.90	-79.14	7.79	1363.98	-3.325	188.76	-0.3	-191.80	-0.3	-177.52	0	-211.62
35	35	94.90	-60.59	-4.22	1364.00	-3.325	219.92	-0.3	-185.95	-0.3	-185.95	0	-226.20
35	36	97.25	-64.25	-4.62	1370.16	-3.884	153.43	-0.3	-164.65	-0.3	-164.65	0	-191.27
36	36	97.25	-47.76	-6.84	1369.94	-3.884	155.30	-0.3	-162.73	-0.3	-162.73	0	-189.35
36	37	99.60	-47.77	-6.83	1386.36	-4.442	131.10	-0.3	-148.92	-0.3	-148.92	0	-169.20
37	37	99.60	-48.25	-0.55	1386.06	-4.442	131.02	-0.3	-148.93	-0.3	-148.93	0	-169.21
37	38	101.90	-48.25	-0.55	1387.65	-5	121.97	-0.3	-138.48	-0.3	-138.48	0	-155.11
38	38	101.90	-48.00	5.02	1387.70	-5	91.99	-0.3	-65.85	-0.3	-65.85	0	-75.92
38	39	104.45	-48.00	5.00	1374.78	-5	91.11	-0.3	-65.26	-0.3	-65.26	0	-75.24
39	39	104.45	-16.87	28.96	1383.26	-5	93.23	-0.3	-64.10	-0.3	-64.10	0	-74.15
39	40	107.00	-16.88	28.94	1309.28	-5	88.20	-0.3	-60.72	-0.3	-60.72	0	-70.23
40	40	107.00	-13.44	30.70	1309.37	-5	117.78	-0.3	-127.98	-0.3	-127.98	0	-143.66
40	41	109.30	-13.44	30.70	1238.14	-4.442	119.89	-0.3	-130.19	-0.3	-130.19	0	-148.31
41	41	109.30	-9.33	32.20	1238.12	-4.442	120.28	-0.3	-129.80	-0.3	-129.80	0	-147.91
41	42	111.65	-9.32	32.20	1161.51	-3.884	135.26	-0.3	-134.39	-0.3	-134.39	0	-156.96
42	42	111.65	-25.28	32.78	1162.44	-3.884	133.53	-0.3	-136.33	-0.3	-136.33	0	-158.92
42	43	114.00	-21.62	32.38	1087.97	-3.325	179.37	-0.3	-144.37	-0.3	-144.37	0	-176.47
43	43	114.00	-42.50	27.64	1087.58	-3.325	152.85	-0.3	-150.58	-0.3	-139.36	0	-166.55
43	44	115.00	-38.07	27.72	1059.07	-3.088	173.09	-0.3	-157.34	-0.3	-145.35	0	-178.18
44	44	115.00	-26.20	38.01	1037.26	-3.088	170.93	-0.3	-152.69	-0.3	-141.05	0	-173.20
44	45	116.00	-23.04	37.37	1005.47	-2.85	203.81	-0.3	-159.17	-0.3	-147.85	0	-187.07
45	45	116.00	-33.01	31.44	1027.66	-2.85	491.99	-0.3	-193.46	-0.3	-163.23	0	-232.08
45	46	117.00	-31.49	31.43	1000.13	-2.85	478.99	-0.3	-188.09	-0.3	-158.70	0	-225.71
46	46	117.00	-13.94	30.90	1020.71	-2.85	494.09	-0.3	-186.72	-0.3	-157.53	0	-225.92
46	47	119.78	-13.94	30.89	934.98	-2.85	452.26	-0.3	-171.38	-0.3	-144.58	0	-207.23
47	47	119.78	-20.02	29.86	944.98	-2.85	455.38	-0.3	-174.92	-0.3	-147.58	0	-210.89
47	48	122.55	-20.02	29.86	860.88	-2.85	414.34	-0.3	-159.86	-0.3	-134.88	0	-192.56
48	48	122.55	-17.03	30.48	855.23	-2.85	412.45	-0.3	-157.99	-0.3	-133.30	0	-190.60
48	49	128.10	-15.48	30.50	685.56	-2.85	330.10	-0.3	-127.17	-0.3	-107.30	0	-153.23
49	49	128.10	-13.94	30.86	684.25	-2.85	329.90	-0.3	-126.50	-0.3	-106.72	0	-152.57
49	50	133.65	-13.94	30.84	513.17	-2.85	246.41	-0.3	-95.87	-0.3	-80.89	0	-115.27
50	50	133.65	-13.94	30.84	513.17	-2.85	246.41	-0.3	-95.87	-0.3	-80.89	0	-115.27
50	51	139.20	-13.94	30.85	342.14	-2.85	162.95	-0.3	-65.26	-0.3	-55.06	0	-77.99
51	51	139.20	-13.94	30.85	342.14	-2.85	162.95	-0.3	-65.26	-0.3	-55.06	0	-77.99
51	52	144.75	-13.94	30.84	171.07	-2.85	79.47	-0.3	-34.64	-0.3	-29.23	0	-40.69
52	52	144.75	-13.94	30.84	171.07	-2.85	79.47	-0.3	-34.64	-0.3	-29.23	0	-40.69
52	53	147.53	-13.94	30.83	85.54	-2.85	37.73	-0.3	-19.33	-0.3	-16.32	0	-22.05
53	53	147.53	-13.94	30.83	85.54	-2.85	37.73	-0.3	-19.33	-0.3	-16.32	0	-22.05
53	54	150.30	-13.94	30.85	0.00	-2.85	-4.01	-0.3	-4.01	-0.3	-3.40	0	-3.40
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	-0.3	0.00	0	0.00

[redacted]

(Perdidasdepretensadoatiempoinfinito). Tensiones a tiempo Tinf

[1; 1]PerdPret

Coef. ecc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	229.59	0.00	411.66	-2.85	267.01	-0.3	-7.57	-0.3	-6.14	0	-33.72
1	2	0.60	229.42	0.00	411.33	-2.85	266.80	-0.3	-7.56	-0.3	-6.13	0	-33.69
2	2	0.60	229.42	9.01	411.35	-2.85	266.81	-0.3	-7.56	-0.3	-6.14	0	-33.70
2	3	3.38	228.62	9.01	384.99	-2.85	253.72	-0.3	-3.07	-0.3	-2.35	0	-28.14
3	3	3.38	228.62	9.01	384.92	-2.85	253.68	-0.3	-3.06	-0.3	-2.34	0	-28.13
3	4	6.15	227.82	9.01	358.47	-2.85	240.55	-0.3	1.45	-0.3	1.46	0	-22.56
4	4	6.15	356.64	9.01	589.46	-2.85	390.37	-0.3	-2.80	-0.3	-1.99	0	-41.48
4	5	11.70	354.15	9.01	534.93	-2.85	363.04	-0.3	6.24	-0.3	5.64	0	-30.20
5	5	11.70	354.15	9.01	535.01	-2.85	363.08	-0.3	6.23	-0.3	5.63	0	-30.22
5	6	17.25	351.69	9.01	480.60	-2.85	335.82	-0.3	15.26	-0.3	13.24	0	-18.96
6	6	17.25	351.69	9.01	480.60	-2.85	335.82	-0.3	15.26	-0.3	13.24	0	-18.96
6	7	22.80	349.24	9.01	426.21	-2.85	308.57	-0.3	24.29	-0.3	20.86	0	-7.70
7	7	22.80	349.24	9.01	426.21	-2.85	308.57	-0.3	24.29	-0.3	20.86	0	-7.70
7	8	28.35	346.80	9.01	371.86	-2.85	281.35	-0.3	33.32	-0.3	28.47	0	3.55
8	8	28.35	576.02	9.01	198.34	-2.85	262.68	-0.3	130.39	-0.3	110.60	0	97.31
8	9	31.13	575.66	9.01	170.53	-2.85	249.01	-0.3	135.27	-0.3	114.71	0	103.29
9	9	31.13	805.38	9.01	-3.37	-2.85	230.30	-0.3	232.55	-0.3	197.02	0	197.25
9	10	33.90	805.88	9.01	-31.82	-2.85	216.57	-0.3	237.79	-0.3	201.44	0	203.57
10	10	33.90	746.63	163.90	-148.27	-2.85	142.67	-0.3	241.57	-0.3	204.57	0	214.50
10	11	34.90	746.95	163.98	-311.68	-2.85	63.02	-0.3	270.91	-0.3	229.32	0	250.20
11	11	34.90	1060.95	353.25	-74.43	-2.85	137.44	-0.3	164.31	-0.3	151.82	0	154.73
11	12	35.90	1061.25	353.38	-428.44	-3.088	62.80	-0.3	196.47	-0.3	182.21	0	195.49
12	12	35.90	1117.43	49.82	-428.46	-3.088	69.93	-0.3	203.61	-0.3	188.84	0	202.12
12	13	36.90	1117.76	49.85	-479.68	-3.325	57.87	-0.3	191.70	-0.3	177.96	0	189.95
13	13	36.90	984.33	97.20	-1010.46	-3.325	-23.82	-0.3	276.86	-0.3	276.86	0	306.68
13	14	39.25	985.75	97.43	-1242.21	-3.884	-32.49	-0.3	255.89	-0.3	255.89	0	280.03
14	14	39.25	1157.12	110.07	-1570.81	-3.884	-51.36	-0.3	313.31	-0.3	313.31	0	343.83
14	15	41.60	1158.53	110.28	-1833.82	-4.442	-68.31	-0.3	302.08	-0.3	302.08	0	328.91
15	15	41.60	1163.04	-41.02	-1833.81	-4.442	-67.88	-0.3	302.51	-0.3	302.51	0	329.34
15	16	43.90	1163.95	-11.34	-1772.56	-5	-63.37	-0.3	269.32	-0.3	269.32	0	290.56
	16	43.90	1154.90	-145.35	-1772.47	-5	-63.41	-0.3	138.19	-0.3	138.19	0	151.06
	17	46.45	1160.33	-106.18	-1453.95	-5	-41.48	-0.3	123.89	-0.3	123.89	0	134.45
	17	46.45	1159.44	115.16	-1453.93	-5	-41.52	-0.3	123.85	-0.3	123.85	0	134.40
17	18	49.00	1157.06	154.64	-1802.57	-5	-65.35	-0.3	139.68	-0.3	139.68	0	152.76
18	18	49.00	1167.17	20.32	-1802.73	-5	-65.84	-0.3	272.52	-0.3	272.52	0	294.11
18	19	51.30	1169.04	49.96	-1890.80	-4.442	-72.88	-0.3	309.02	-0.3	309.02	0	336.68
19	19	51.30	1165.63	-102.20	-1890.64	-4.442	-73.19	-0.3	308.68	-0.3	308.68	0	336.34
19	20	53.65	1166.53	-102.33	-1651.42	-3.884	-59.73	-0.3	323.64	-0.3	323.64	0	355.73
20	20	53.65	995.26	-89.81	-1322.69	-3.884	-40.84	-0.3	266.22	-0.3	266.22	0	291.92
20	21	56.00	995.00	-89.77	-1111.03	-3.325	-39.11	-0.3	291.49	-0.3	291.49	0	324.27
21	21	56.00	1135.07	-42.48	-573.00	-3.325	46.31	-0.3	206.18	-0.3	191.37	0	205.69
21	22	57.00	1134.78	-42.45	-529.16	-3.088	55.22	-0.3	220.32	-0.3	204.28	0	220.69
22	22	57.00	1079.95	-351.04	-529.07	-3.088	48.27	-0.3	213.34	-0.3	197.80	0	214.20
22	23	58.00	1079.69	-350.92	-178.23	-2.85	118.76	-0.3	183.10	-0.3	169.26	0	176.21
23	23	58.00	765.02	-158.50	-415.45	-2.85	17.59	-0.3	294.69	-0.3	249.40	0	277.23
23	24	59.00	764.74	-158.43	-257.71	-2.85	94.48	-0.3	266.38	-0.3	225.51	0	242.78
24	24	59.00	827.97	0.02	-131.47	-2.85	174.30	-0.3	261.99	-0.3	221.88	0	230.69
24	25	63.11	827.45	0.02	-126.27	-2.85	176.69	-0.3	260.91	-0.3	220.96	0	229.42
25	25	63.11	358.98	0.02	228.35	-2.85	214.82	-0.3	62.51	-0.3	53.11	0	37.81
25	26	67.23	360.90	0.02	231.70	-2.85	217.01	-0.3	62.46	-0.3	53.07	0	37.55
26	26	67.23	360.90	0.02	231.70	-2.85	217.01	-0.3	62.46	-0.3	53.07	0	37.55
26	27	71.34	362.52	0.02	234.52	-2.85	218.85	-0.3	62.43	-0.3	53.04	0	37.33
27	27	71.34	362.52	0.02	234.52	-2.85	218.85	-0.3	62.43	-0.3	53.04	0	37.33
27	28	75.45	363.06	0.02	235.41	-2.85	219.44	-0.3	62.42	-0.3	53.04	0	37.27
28	28	75.45	363.06	0.02	235.41	-2.85	219.44	-0.3	62.42	-0.3	53.04	0	37.27
28	29	79.56	363.60	0.02	236.29	-2.85	220.03	-0.3	62.42	-0.3	53.04	0	37.21
29	29	79.56	363.60	0.02	236.29	-2.85	220.03	-0.3	62.42	-0.3	53.04	0	37.21
29	30	83.68	362.19	0.02	233.69	-2.85	218.35	-0.3	62.48	-0.3	53.09	0	37.43
30	30	83.68	362.19	0.02	233.69	-2.85	218.35	-0.3	62.48	-0.3	53.09	0	37.43
30	31	87.79	360.30	0.02	230.20	-2.85	216.10	-0.3	62.56	-0.3	53.15	0	37.73
31	31	87.79	828.76	0.02	-124.43	-2.85	177.96	-0.3	260.96	-0.3	221.01	0	229.34
31	32	91.90	829.30	0.02	-129.76	-2.85	175.52	-0.3	262.07	-0.3	221.94	0	230.64
32	32	91.90	766.04	158.74	-256.00	-2.85	95.69	-0.3	266.44	-0.3	225.57	0	242.72
32	33	92.90	766.32	158.81	-414.04	-2.85	18.65	-0.3	294.81	-0.3	249.50	0	277.24
	33	92.90	1080.92	351.45	-176.79	-2.85	119.23	-0.3	183.05	-0.3	169.22	0	176.11
	34	93.90	1081.19	351.57	-528.26	-3.088	48.56	-0.3	213.38	-0.3	197.84	0	214.22
34	34	93.90	1136.11	42.62	-528.18	-3.088	55.55	-0.3	220.34	-0.3	204.31	0	220.68
34	35	94.90	1136.41	42.65	-572.21	-3.325	46.58	-0.3	206.23	-0.3	191.41	0	205.72
35	35	94.90	994.99	89.81	-1111.68	-3.325	-39.22	-0.3	291.57	-0.3	291.57	0	324.37
35	36	97.25	995.25	89.85	-1323.58	-3.884	-40.94	-0.3	266.32	-0.3	266.32	0	292.04
36	36	97.25	1166.53	102.37	-1652.11	-3.884	-59.82	-0.3	323.72	-0.3	323.72	0	355.82
36	37	99.60	1165.63	102.24	-1891.64	-4.442	-73.29	-0.3	308.78	-0.3	308.78	0	336.46
37	37	99.60	1169.04	-49.91	-1891.48	-4.442	-72.95	-0.3	309.09	-0.3	309.09	0	336.76
37	38	101.90	1167.17	-20.27	-1803.50	-5	-65.91	-0.3	272.59	-0.3	272.59	0	294.20
38	38	101.90	1157.06	-154.60	-1803.66	-5	-65.42	-0.3	139.73	-0.3	139.73	0	152.82
38	39	104.45	1159.45	-115.12	-1454.99	-5	-41.59	-0.3	123.90	-0.3	123.90	0	134.46
39	39	104.45	1160.34	106.15	-1454.97	-5	-41.55	-0.3	123.94	-0.3	123.94	0	134.50
39	40	107.00	1154.90	145.33	-1773.55	-5	-63.48	-0.3	138.24	-0.3	138.24	0	151.12
40	40	107.00	1163.95	11.32	-1773.45	-5	-63.45	-0.3	269.41	-0.3	269.41	0	290.66
40	41	109.30	1163.04	41.00	-1834.76	-4.442	-67.97	-0.3	302.61	-0.3	302.61	0	329.45
41	41	109.30	1158.53	-110.31	-1834.74	-4.442	-68.41	-0.3	302.18	-0.3	302.18	0	329.02
41	42	111.65	1157.11	-110.10	-1571.67	-3.884	-51.46	-0.3	313.41	-0.3	313.41	0	343.94
42	42	111.65	985.74	-97.45	-1243.18	-3.884	-32.60	-0.3	256.00	-0.3	256.00	0	280.16
42	43	114.00	984.33	-97.23	-1011.36	-3.325	-23.97	-0.3	276.97	-0.3	276.97	0	306.82
43	43	114.00	1117.76	-49.87	-480.44	-3.325	57.76	-0.3	191.80	-0.3	178.06	0	190.07
43	44	115.00	1117.43	-49.84	-429.24	-3.088	69.80	-0.3	203.72	-0.3	188.95	0	202.25
44	44	115.00	1061.25	-353.40	-429.26	-3.088	62.66	-0.3	196.59	-0.3	182.32	0	195.63
44	45	116.00	1060.94	-353.27	-75.26	-2.85	137.27	-0.3	164.44	-0.3	151.94	0	154.88
45	45	116.00	746.95	-164.00	-312.46	-2.85	62.64	-0.3	271.05	-0.3	229.44	0	250.37
45	46	117.00	746.62	-163.92	-149.02	-2.85	142.30	-0.3	241.70	-0.3	204.68	0	214.66
46	46	117.00	805.86	-9.03	-32.58	-2.85	216.19	-0.3	237.93	-0.3	201.55	0	203.74
46	47	119.78	805.38	-9.03	-4.07	-2.85	229.96	-0.3	232.68	-0.3	197.13	0	197.40
47	47	119.78	575.66	-9.03	169.84	-2.85	248.67	-0.3	135.39	-0.3	114.82	0	103.44
47	48	122.55	576.02	-9.03	197.71	-2.85	262.38	-0.3	130.50	-0.3	110.69	0	97.45
48	48	122.55	346.80	-9.03	371.22	-2.85	281.03	-0.3	33.43	-0.3	28.56	0	3.69
48	49	128.10	349.24	-9.03	425.70	-2.85	308.32	-0.3	24.38	-0.3	20.93	0	-7.59
49	49	128.10	349.24	-9.03	425.70	-2.85	308.32	-0.3	24.38	-0.3	20.93	0	-7.59
49	50	133.65	351.69	-9.03	480.22	-2.85	335.63	-0.3	15.33	-0.3	13.30	0	-18.88
	50	133.65	351.69	-9.03	480.22	-2.85	335.63	-0.3	15.33	-0.3	13.30	0	-18.88
	51	139.20	354.15	-9.03	534.68	-2.85	362.92	-0.3	6.29	-0.3	5.68	0	-30.15
51	51	139.20	354.15	-9.03	534.76	-2.85	362.96	-0.3	6.27	-0.3	5.66	0	-30.17
51	52	144.75	356.64	-9.03	589.30	-2.85	390.29	-0.3	-2.77	-0.3	-1.96	0	-41.45
52	52	144.75	227.82	-9.03	358.37	-2.85	240.50	-0.3	1.46	-0.3	1.47	0	-22.54
52	53	147.53	228.62	-9.03	384.93	-2.85	253.69	-0.3	-3.06	-0.3	-2.34	0	-28.13
53	53	147.53	228.62	-9.03	384.86	-2.85	253.65	-0.3	-3.05	-0.3	-2.33	0	-28.12
53	54	150.30	229.42	-9.03	411.33	-2.85	266.80	-0.3	-7.56	-0.3	-6.13	0	-33.69
54	54	150.30	229.42	0.00	411.35	-2.85	266.81	-0.3	-7.56	-0.3	-6.14	0	-33.70
54	55	150.90	229.59	0.00	411.65	-2.85	267.01	-0.3	-7.56	-0.3	-6.14	0	-33.72

[redacted]

(Perdidasdepretensadoatiempoinfinito). Tensiones a tiempo Tinf

[1; 1]PerdPret

Coef. ecc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	135.80	0.00	177.20	-2.85	125.58	-0.3	7.39	-0.3	6.38	0	-5.49
1	2	0.60	135.80	0.00	177.20	-2.85	125.58	-0.3	7.39	-0.3	6.38	0	-5.49
2	2	0.60	135.80	7.68	177.20	-2.85	125.58	-0.3	7.39	-0.3	6.38	0	-5.49
2	3	3.38	135.80	7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
3	3	3.38	135.80	7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
3	4	6.15	135.80	7.68	134.57	-2.85	104.78	-0.3	15.02	-0.3	12.82	0	3.80
4	4	6.15	164.61	7.68	186.34	-2.85	138.34	-0.3	14.05	-0.3	12.03	0	-0.46
4	5	11.70	164.61	7.68	143.71	-2.85	117.54	-0.3	21.68	-0.3	18.46	0	8.84
5	5	11.70	288.06	7.68	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
5	6	17.25	288.06	7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.59
6	6	17.25	288.06	7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.59
6	7	22.80	288.06	7.68	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
7	7	22.80	226.33	7.68	171.55	-2.85	148.90	-0.3	34.48	-0.3	29.32	0	17.83
7	8	28.35	226.33	7.68	128.92	-2.85	128.10	-0.3	42.11	-0.3	35.76	0	27.12
8	8	28.35	135.80	7.68	-35.95	-2.85	21.57	-0.3	45.55	-0.3	38.56	0	40.97
8	9	31.13	135.80	7.68	-57.26	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
9	9	31.13	135.80	7.68	-57.26	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
9	10	33.90	135.80	7.68	-78.58	-2.85	0.76	-0.3	53.18	-0.3	45.00	0	50.27
10	10	33.90	131.42	35.07	-78.58	-2.85	-0.50	-0.3	51.91	-0.3	43.93	0	49.20
10	11	34.90	131.42	35.07	-113.51	-2.85	-17.54	-0.3	58.17	-0.3	49.21	0	56.81
11	11	34.90	-2.82	7.15	-253.32	-2.85	-52.59	-0.3	38.86	-0.3	36.10	0	45.98
11	12	35.90	-2.82	7.15	-261.00	-3.088	-44.21	-0.3	37.23	-0.3	34.38	0	42.47
12	12	35.90	-0.75	7.64	-261.00	-3.088	-43.94	-0.3	37.49	-0.3	34.62	0	42.72
12	13	36.90	-0.75	7.64	-268.69	-3.325	-39.05	-0.3	35.92	-0.3	33.24	0	39.96
13	13	36.90	-1.22	7.58	-268.69	-3.325	-45.27	-0.3	34.68	-0.3	34.68	0	42.61
13	14	39.25	-1.22	7.58	-286.74	-3.884	-33.79	-0.3	32.77	-0.3	32.77	0	38.34
14	14	39.25	-1.12	7.60	-286.74	-3.884	-33.78	-0.3	32.78	-0.3	32.78	0	38.35
14	15	41.60	-1.12	7.60	-304.78	-4.442	-29.94	-0.3	31.62	-0.3	31.62	0	36.08
15	15	41.60	-0.13	7.68	-304.78	-4.442	-29.84	-0.3	31.72	-0.3	31.72	0	36.18
15	16	43.90	-0.13	7.68	-322.45	-5	-29.29	-0.3	31.23	-0.3	31.23	0	35.09
16	16	43.90	0.76	7.64	-322.45	-5	-21.89	-0.3	14.79	-0.3	14.79	0	17.13
16	17	46.45	0.76	7.64	-342.04	-5	-23.22	-0.3	15.68	-0.3	15.68	0	18.17
17	17	46.45	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
17	18	49.00	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
18	18	49.00	0.00	0.00	-342.04	-5	-31.06	-0.3	33.14	-0.3	33.14	0	37.23
18	19	51.30	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
19	19	51.30	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
19	20	53.65	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
20	20	53.65	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
20	21	56.00	0.00	0.00	-342.04	-3.325	-57.40	-0.3	44.38	-0.3	44.38	0	54.47
21	21	56.00	0.00	0.00	-342.04	-3.325	-49.60	-0.3	45.83	-0.3	42.41	0	50.96
21	22	57.00	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
22	22	57.00	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
22	23	58.00	0.00	0.00	-342.04	-2.85	-70.46	-0.3	53.02	-0.3	49.25	0	62.59
23	23	58.00	132.98	-27.55	-202.23	-2.85	-60.39	-0.3	74.50	-0.3	62.98	0	76.53
23	24	59.00	132.98	-27.55	-174.97	-2.85	-47.09	-0.3	69.62	-0.3	58.87	0	70.59
24	24	59.00	135.80	0.00	-174.97	-2.85	-46.27	-0.3	70.43	-0.3	59.56	0	71.28
24	25	63.11	135.80	0.00	-174.97	-2.85	-46.27	-0.3	70.43	-0.3	59.56	0	71.28
25	25	63.11	197.53	0.00	-64.05	-2.85	25.63	-0.3	68.35	-0.3	57.87	0	62.16
25	26	67.23	197.53	0.00	-64.05	-2.85	25.63	-0.3	68.35	-0.3	57.87	0	62.16
26	26	67.23	255.14	0.00	116.19	-2.85	130.18	-0.3	52.68	-0.3	44.71	0	36.92
26	27	71.34	255.14	0.00	116.19	-2.85	130.18	-0.3	52.68	-0.3	44.71	0	36.92
27	27	71.34	279.83	0.00	160.56	-2.85	158.94	-0.3	51.85	-0.3	44.03	0	33.28
27	28	75.45	279.83	0.00	160.56	-2.85	158.94	-0.3	51.85	-0.3	44.03	0	33.28
28	28	75.45	279.83	0.00	160.56	-2.85	158.94	-0.3	51.85	-0.3	44.03	0	33.28
28	29	79.56	279.83	0.00	160.56	-2.85	158.94	-0.3	51.85	-0.3	44.03	0	33.28
29	29	79.56	255.14	0.00	116.19	-2.85	130.18	-0.3	52.68	-0.3	44.71	0	36.92
29	30	83.68	255.14	0.00	116.19	-2.85	130.18	-0.3	52.68	-0.3	44.71	0	36.92
30	30	83.68	197.53	0.00	-64.05	-2.85	25.63	-0.3	68.35	-0.3	57.87	0	62.16
30	31	87.79	197.53	0.00	-64.05	-2.85	25.63	-0.3	68.35	-0.3	57.87	0	62.16
31	31	87.79	135.80	0.00	-174.97	-2.85	-46.27	-0.3	70.43	-0.3	59.56	0	71.28
31	32	91.90	135.80	0.00	-174.97	-2.85	-46.27	-0.3	70.43	-0.3	59.56	0	71.28
32	32	91.90	132.98	27.55	-174.97	-2.85	-47.09	-0.3	69.62	-0.3	58.87	0	70.59
32	33	92.90	132.98	27.55	-202.23	-2.85	-60.39	-0.3	74.50	-0.3	62.98	0	76.53
33	33	92.90	0.00	0.00	-342.04	-2.85	-70.46	-0.3	53.02	-0.3	49.25	0	62.59
33	34	93.90	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
34	34	93.90	0.00	0.00	-342.04	-3.088	-57.46	-0.3	49.25	-0.3	45.49	0	56.09
34	35	94.90	0.00	0.00	-342.04	-3.325	-49.60	-0.3	45.83	-0.3	42.41	0	50.96
35	35	94.90	0.00	0.00	-342.04	-3.325	-57.40	-0.3	44.38	-0.3	44.38	0	54.47
35	36	97.25	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
36	36	97.25	0.00	0.00	-342.04	-3.884	-40.15	-0.3	39.26	-0.3	39.26	0	45.91
36	37	99.60	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
37	37	99.60	0.00	0.00	-342.04	-4.442	-33.48	-0.3	35.61	-0.3	35.61	0	40.61
37	38	101.90	0.00	0.00	-342.04	-5	-31.06	-0.3	33.14	-0.3	33.14	0	37.23
38	38	101.90	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
38	39	104.45	0.00	0.00	-342.04	-5	-23.26	-0.3	15.64	-0.3	15.64	0	18.13
39	39	104.45	0.76	-7.64	-342.04	-5	-23.22	-0.3	15.68	-0.3	15.68	0	18.17
39	40	107.00	0.76	-7.64	-322.45	-5	-21.89	-0.3	14.79	-0.3	14.79	0	17.13
40	40	107.00	-0.13	-7.68	-322.45	-5	-29.29	-0.3	31.23	-0.3	31.23	0	35.09
40	41	109.30	-0.13	-7.68	-304.78	-4.442	-29.84	-0.3	31.72	-0.3	31.72	0	36.18
41	41	109.30	-1.12	-7.60	-304.78	-4.442	-29.94	-0.3	31.62	-0.3	31.62	0	36.08
41	42	111.65	-1.12	-7.60	-286.74	-3.884	-33.78	-0.3	32.78	-0.3	32.78	0	38.35
42	42	111.65	-1.22	-7.58	-286.74	-3.884	-33.79	-0.3	32.77	-0.3	32.77	0	38.34
42	43	114.00	-1.22	-7.58	-268.69	-3.325	-45.27	-0.3	34.68	-0.3	34.68	0	42.61
43	43	114.00	-0.75	-7.64	-268.69	-3.325	-39.05	-0.3	35.92	-0.3	33.24	0	39.96
43	44	115.00	-0.75	-7.64	-261.00	-3.088	-43.94	-0.3	37.49	-0.3	34.62	0	42.72
44	44	115.00	-2.82	-7.15	-261.00	-3.088	-44.21	-0.3	37.23	-0.3	34.38	0	42.47
44	45	116.00	-2.82	-7.15	-253.32	-2.85	-52.59	-0.3	38.86	-0.3	36.10	0	45.98
45	45	116.00	131.42	-35.07	-113.51	-2.85	-17.54	-0.3	58.17	-0.3	49.21	0	56.81
45	46	117.00	131.42	-35.07	-78.58	-2.85	-0.50	-0.3	51.91	-0.3	43.93	0	49.20
46	46	117.00	135.80	-7.68	-78.58	-2.85	0.76	-0.3	53.18	-0.3	45.00	0	50.27
46	47	119.78	135.80	-7.68	-57.26	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
47	47	119.78	135.80	-7.68	-57.26	-2.85	11.17	-0.3	49.36	-0.3	41.78	0	45.62
47	48	122.55	135.80	-7.68	-35.95	-2.85	21.57	-0.3	45.55	-0.3	38.56	0	40.97
48	48	122.55	226.33	-7.68	128.92	-2.85	128.10	-0.3	42.11	-0.3	35.76	0	27.12
48	49	128.10	226.33	-7.68	171.55	-2.85	148.90	-0.3	34.48	-0.3	29.32	0	17.83
49	49	128.10	288.06	-7.68	282.47	-2.85	220.81	-0.3	32.40	-0.3	27.63	0	8.71
49	50	133.65	288.06	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.59
50	50	133.65	288.06	-7.68	325.10	-2.85	241.61	-0.3	24.77	-0.3	21.20	0	-0.59
50	51	139.20	288.06	-7.68	367.73	-2.85	262.41	-0.3	17.14	-0.3	14.76	0	-9.88
51	51	139.20	164.61	-7.68	143.71	-2.85	117.54	-0.3	21.68	-0.3	18.46	0	8.84
51	52	144.75	164.61	-7.68	186.34	-2.85	138.34	-0.3	14.05	-0.3	12.03	0	-0.46
52	52	144.75	135.80	-7.68	134.57	-2.85	104.78	-0.3	15.02	-0.3	12.82	0	3.80
52	53	147.53	135.80	-7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
53	53	147.53	135.80	-7.68	155.89	-2.85	115.18	-0.3	11.21	-0.3	9.60	0	-0.85
53	54	150.30	135.80	-7.68	177.20	-2.85	125.58	-0.3	7.39	-0.3	6.38	0	-5.49
54	54	150.30	135.80	0.00	177.20	-2.85	125.58	-0.3	7.39	-0.3	6.38	0	-5.49
54	55	150.90	135.80	0.00	177.20	-2.85	125.58	-0.3	7.39	-0.3	6.38	0	-5.49

Anexo Nº 2.3.10.1 Control tensional. Tensiones a tiempo cero de combinaciones de hipótesis

10.1. Control tensional. Tensiones a tiempo cero de combinaciones de hipótesis.

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	-1500.22	-8.24	691.12	-2.85	-74.14	-0.3	-670.20	0	0.00	0	0.00
11	12	35.90	-1502.77	5.59	692.75	-3.088	-67.03	-0.3	-566.73	0	0.00	0	0.00
12	12	35.90	-1422.23	485.45	692.75	-3.088	-53.44	-0.3	-553.14	0	0.00	0	0.00
12	13	36.90	-1419.90	501.69	194.51	-3.325	-163.16	-0.3	-283.84	0	0.00	0	0.00
13	13	36.90	-2637.28	127.65	2212.06	-3.325	-19.39	-0.3	-677.62	-0.3	-677.62	0	-742.90
13	14	39.25	-2640.16	172.94	1860.46	-3.884	-85.20	-0.3	-517.09	-0.3	-517.09	0	-553.24
14	14	39.25	-3780.20	-213.92	4050.55	-3.884	40.74	-0.3	-899.57	-0.3	-899.57	0	-978.27
14	15	41.60	-3788.47	-157.88	4494.43	-4.442	76.29	-0.3	-831.52	-0.3	-831.52	0	-897.27
15	15	41.60	-3776.91	335.18	4493.95	-4.442	77.35	-0.3	-830.36	-0.3	-830.36	0	-896.11
15	16	43.90	-3775.90	273.99	3795.44	-5	28.01	-0.3	-684.34	-0.3	-684.34	0	-729.81
16	16	43.90	-3719.20	707.17	3795.74	-5	74.13	-0.3	-357.60	-0.3	-357.60	0	-385.16
	17	46.45	-3720.28	696.38	1996.62	-5	-48.26	-0.3	-275.36	-0.3	-275.36	0	-289.85
	17	46.45	-3720.28	-696.37	1997.61	-5	-48.19	-0.3	-275.40	-0.3	-275.40	0	-289.91
	18	49.00	-3719.20	-707.16	3795.52	-5	74.12	-0.3	-357.59	-0.3	-357.59	0	-385.15
18	18	49.00	-3775.90	-273.98	3795.82	-5	28.05	-0.3	-684.38	-0.3	-684.38	0	-729.85
18	19	51.30	-3776.91	-335.17	4494.47	-4.442	77.40	-0.3	-830.42	-0.3	-830.42	0	-896.17
19	19	51.30	-3788.47	157.89	4493.99	-4.442	76.24	-0.3	-831.48	-0.3	-831.48	0	-897.22
19	20	53.65	-3780.20	213.92	4050.71	-3.884	40.76	-0.3	-899.58	-0.3	-899.58	0	-978.30
20	20	53.65	-2640.16	-172.94	1860.16	-3.884	-85.23	-0.3	-517.06	-0.3	-517.06	0	-553.20
20	21	56.00	-2637.28	-127.65	2211.73	-3.325	-19.45	-0.3	-677.58	-0.3	-677.58	0	-742.84
21	21	56.00	-1419.90	-501.69	194.00	-3.325	-163.28	-0.3	-283.64	0	0.00	0	0.00
21	22	57.00	-1422.23	-485.45	692.57	-3.088	-53.49	-0.3	-553.06	0	0.00	0	0.00
22	22	57.00	-1502.77	-5.59	692.57	-3.088	-67.08	-0.3	-566.65	0	0.00	0	0.00
22	23	58.00	-1500.22	8.24	691.12	-2.85	-74.14	-0.3	-670.20	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	33	92.90	-1500.22	-8.24	691.12	-2.85	-74.14	-0.3	-670.20	0	0.00	0	0.00
	34	93.90	-1502.77	5.59	692.75	-3.088	-67.03	-0.3	-566.73	0	0.00	0	0.00
	34	93.90	-1422.23	485.45	692.75	-3.088	-53.44	-0.3	-553.14	0	0.00	0	0.00
34	35	94.90	-1419.90	501.69	194.51	-3.325	-163.16	-0.3	-283.84	0	0.00	0	0.00
35	35	94.90	-2637.28	127.65	2212.06	-3.325	-19.39	-0.3	-677.62	-0.3	-677.62	0	-742.90
35	36	97.25	-2640.16	172.94	1860.46	-3.884	-85.20	-0.3	-517.09	-0.3	-517.09	0	-553.24
36	36	97.25	-3780.20	-213.92	4050.55	-3.884	40.74	-0.3	-899.57	-0.3	-899.57	0	-978.27
36	37	99.60	-3788.47	-157.88	4494.43	-4.442	76.29	-0.3	-831.52	-0.3	-831.52	0	-897.27
37	37	99.60	-3776.91	335.18	4493.95	-4.442	77.35	-0.3	-830.36	-0.3	-830.36	0	-896.11
37	38	101.90	-3775.90	273.99	3795.44	-5	28.01	-0.3	-684.34	-0.3	-684.34	0	-729.81
38	38	101.90	-3719.20	707.17	3795.74	-5	74.13	-0.3	-357.60	-0.3	-357.60	0	-385.16
38	39	104.45	-3720.28	696.38	1996.62	-5	-48.26	-0.3	-275.36	-0.3	-275.36	0	-289.85
39	39	104.45	-3720.28	-696.37	1997.61	-5	-48.19	-0.3	-275.40	-0.3	-275.40	0	-289.91
39	40	107.00	-3719.20	-707.16	3795.52	-5	74.12	-0.3	-357.59	-0.3	-357.59	0	-385.15
40	40	107.00	-3775.90	-273.98	3795.82	-5	28.05	-0.3	-684.38	-0.3	-684.38	0	-729.85
40	41	109.30	-3776.91	-335.17	4494.47	-4.442	77.40	-0.3	-830.42	-0.3	-830.42	0	-896.17
41	41	109.30	-3788.47	157.89	4493.99	-4.442	76.24	-0.3	-831.48	-0.3	-831.48	0	-897.22
41	42	111.65	-3780.20	213.92	4050.71	-3.884	40.76	-0.3	-899.58	-0.3	-899.58	0	-978.30
42	42	111.65	-2640.16	-172.94	1860.16	-3.884	-85.23	-0.3	-517.06	-0.3	-517.06	0	-553.20
42	43	114.00	-2637.28	-127.65	2211.73	-3.325	-19.45	-0.3	-677.58	-0.3	-677.58	0	-742.84
43	43	114.00	-1419.90	-501.69	194.00	-3.325	-163.28	-0.3	-283.64	0	0.00	0	0.00
43	44	115.00	-1422.23	-485.45	692.57	-3.088	-53.49	-0.3	-553.06	0	0.00	0	0.00
44	44	115.00	-1502.77	-5.59	692.57	-3.088	-67.08	-0.3	-566.65	0	0.00	0	0.00
44	45	116.00	-1500.22	8.24	691.12	-2.85	-74.14	-0.3	-670.20	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 1

[1; 1]ppcopt + [.9; 1.1]Prt1.2sup

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	34.90	-1227.46	-6.74	565.46	-2.85	-60.66	-0.3	-548.34	0	0.00	0	0.00
11	12	35.90	-1230.01	7.09	565.57	-3.088	-55.25	-0.3	-463.21	0	0.00	0	0.00
12	12	35.90	-1163.28	399.71	565.57	-3.088	-43.99	-0.3	-451.95	0	0.00	0	0.00
12	13	36.90	-1160.95	415.95	153.93	-3.325	-134.58	-0.3	-230.09	0	0.00	0	0.00
13	13	36.90	-2158.12	109.97	1804.66	-3.325	-16.79	-0.3	-553.79	-0.3	-553.79	0	-607.05
13	14	39.25	-2161.00	155.26	1494.66	-3.884	-73.04	-0.3	-420.01	-0.3	-420.01	0	-449.06
14	14	39.25	-3094.90	-161.38	3286.55	-3.884	29.87	-0.3	-733.08	-0.3	-733.08	0	-796.94
14	15	41.60	-3103.17	-105.34	3605.55	-4.442	55.06	-0.3	-673.21	-0.3	-673.21	0	-725.95
15	15	41.60	-3090.59	298.32	3605.15	-4.442	56.23	-0.3	-671.96	-0.3	-671.96	0	-724.70
15	16	43.90	-3089.96	259.95	2965.10	-5	10.14	-0.3	-546.38	-0.3	-546.38	0	-581.90
16	16	43.90	-3039.44	614.19	2965.34	-5	51.29	-0.3	-285.99	-0.3	-285.99	0	-307.52
16	17	46.45	-3038.01	628.68	1372.14	-5	-56.97	-0.3	-213.04	-0.3	-213.04	0	-223.01
17	17	46.45	-3038.01	-628.67	1373.21	-5	-56.90	-0.3	-213.09	-0.3	-213.09	0	-223.06
17	18	49.00	-3039.44	-614.18	2965.18	-5	51.28	-0.3	-285.99	-0.3	-285.99	0	-307.51
18	18	49.00	-3089.96	-259.94	2965.42	-5	10.17	-0.3	-546.41	-0.3	-546.41	0	-581.93
18	19	51.30	-3090.59	-298.31	3605.59	-4.442	56.27	-0.3	-672.00	-0.3	-672.00	0	-724.75
19	19	51.30	-3103.17	105.35	3605.19	-4.442	55.03	-0.3	-673.17	-0.3	-673.17	0	-725.91
19	20	53.65	-3094.90	161.38	3286.63	-3.884	29.88	-0.3	-733.09	-0.3	-733.09	0	-796.95
20	20	53.65	-2161.00	-155.26	1494.36	-3.884	-73.07	-0.3	-419.98	-0.3	-419.98	0	-449.02
20	21	56.00	-2158.12	-109.97	1804.29	-3.325	-16.85	-0.3	-553.74	-0.3	-553.74	0	-606.99
21	21	56.00	-1160.95	-415.95	153.42	-3.325	-134.70	-0.3	-229.89	0	0.00	0	0.00
21	22	57.00	-1163.28	-399.71	565.39	-3.088	-44.04	-0.3	-451.87	0	0.00	0	0.00
22	22	57.00	-1230.01	-7.09	565.39	-3.088	-55.30	-0.3	-463.13	0	0.00	0	0.00
22	23	58.00	-1227.46	6.74	565.46	-2.85	-60.66	-0.3	-548.34	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	92.90	-1227.46	-6.74	565.46	-2.85	-60.66	-0.3	-548.34	0	0.00	0	0.00
33	34	93.90	-1230.01	7.09	565.57	-3.088	-55.25	-0.3	-463.21	0	0.00	0	0.00
34	34	93.90	-1163.28	399.71	565.57	-3.088	-43.99	-0.3	-451.95	0	0.00	0	0.00
34	35	94.90	-1160.95	415.95	153.93	-3.325	-134.58	-0.3	-230.09	0	0.00	0	0.00
35	35	94.90	-2158.12	109.97	1804.66	-3.325	-16.79	-0.3	-553.79	-0.3	-553.79	0	-607.05
35	36	97.25	-2161.00	155.26	1494.66	-3.884	-73.04	-0.3	-420.01	-0.3	-420.01	0	-449.06
36	36	97.25	-3094.90	-161.38	3286.55	-3.884	29.87	-0.3	-733.08	-0.3	-733.08	0	-796.94
36	37	99.60	-3103.17	-105.34	3605.55	-4.442	55.06	-0.3	-673.21	-0.3	-673.21	0	-725.95
37	37	99.60	-3090.59	298.32	3605.15	-4.442	56.23	-0.3	-671.96	-0.3	-671.96	0	-724.70
37	38	101.90	-3089.96	259.95	2965.10	-5	10.14	-0.3	-546.38	-0.3	-546.38	0	-581.90
38	38	101.90	-3039.44	614.19	2965.34	-5	51.29	-0.3	-285.99	-0.3	-285.99	0	-307.52
38	39	104.45	-3038.01	628.68	1372.14	-5	-56.97	-0.3	-213.04	-0.3	-213.04	0	-223.01
39	39	104.45	-3038.01	-628.67	1373.21	-5	-56.90	-0.3	-213.09	-0.3	-213.09	0	-223.06
39	40	107.00	-3039.44	-614.18	2965.18	-5	51.28	-0.3	-285.99	-0.3	-285.99	0	-307.51
40	40	107.00	-3089.96	-259.94	2965.42	-5	10.17	-0.3	-546.41	-0.3	-546.41	0	-581.93
40	41	109.30	-3090.59	-298.31	3605.59	-4.442	56.27	-0.3	-672.00	-0.3	-672.00	0	-724.75
41	41	109.30	-3103.17	105.35	3605.19	-4.442	55.03	-0.3	-673.17	-0.3	-673.17	0	-725.91
41	42	111.65	-3094.90	161.38	3286.63	-3.884	29.88	-0.3	-733.09	-0.3	-733.09	0	-796.95
42	42	111.65	-2161.00	-155.26	1494.36	-3.884	-73.07	-0.3	-419.98	-0.3	-419.98	0	-449.02
42	43	114.00	-2158.12	-109.97	1804.29	-3.325	-16.85	-0.3	-553.74	-0.3	-553.74	0	-606.99
43	43	114.00	-1160.95	-415.95	153.42	-3.325	-134.70	-0.3	-229.89	0	0.00	0	0.00
43	44	115.00	-1163.28	-399.71	565.39	-3.088	-44.04	-0.3	-451.87	0	0.00	0	0.00
44	44	115.00	-1230.01	-7.09	565.39	-3.088	-55.30	-0.3	-463.13	0	0.00	0	0.00
44	45	116.00	-1227.46	6.74	565.46	-2.85	-60.66	-0.3	-548.34	0	0.00	0	0.00
45	45	116.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	55	150.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 2

1: 1[pasapp] + [,0; 1.1]Port.2sup + [,0; 1.1]Pt2.1indsup2

Cost. ccc:

	Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	1	0.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
1	1	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	2	0.60	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
2	2	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	3	3.38	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
3	3	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	4	6.15	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
4	4	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	5	11.70	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
5	5	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	6	17.25	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
6	6	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	7	22.80	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
7	7	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	8	28.35	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
8	8	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	9	31.13	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
9	9	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	10	33.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
10	10	11	34.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
11	11	11	34.90	-2696.81	50.94	-556.25	-2.85	-722.35	-0.3	-242.61	0	0.00	0	0.00
11	11	12	35.90	-2699.36	64.77	-614.73	-3.088	-620.94	-0.3	-177.52	0	0.00	0	0.00
12	12	12	35.90	-2537.19	923.83	-614.80	-3.088	-593.60	-0.3	-150.13	0	0.00	0	0.00
12	12	13	36.90	-2534.86	940.07	-1555.47	-3.325	-732.45	-0.3	232.62	0	0.00	0	0.00
13	13	13	36.90	-3610.21	341.87	94.80	-3.325	-518.71	-0.3	-546.92	-0.3	-546.92	0	-549.71
13	13	14	39.25	-3613.09	387.16	-761.44	-3.884	-504.72	-0.3	-327.96	-0.3	-327.96	0	-313.16
14	14	14	39.25	-4561.21	-50.60	1030.62	-3.884	-403.43	-0.3	-642.68	-0.3	-642.68	0	-662.70
14	14	15	41.60	-4569.48	5.44	1086.55	-4.442	-332.14	-0.3	-551.61	-0.3	-551.61	0	-567.50
15	15	15	41.60	-4530.12	598.48	1086.06	-4.442	-328.41	-0.3	-547.78	-0.3	-547.78	0	-563.67
15	15	16	43.90	-4527.53	440.61	-154.50	-5	-393.67	-0.3	-364.67	-0.3	-364.67	0	-362.82
16	16	16	43.90	-4446.63	959.26	-154.56	-5	-230.46	-0.3	-212.89	-0.3	-212.89	0	-211.76
16	17	17	46.45	-4465.39	770.57	-2371.16	-5	-382.12	-0.3	-112.42	-0.3	-112.42	0	-95.20
17	17	17	46.45	-4465.39	-770.56	-2370.65	-5	-382.08	-0.3	-112.44	-0.3	-112.44	0	-95.23
17	18	18	49.00	-4446.63	-959.25	-154.42	-5	-230.46	-0.3	-212.89	-0.3	-212.89	0	-211.77
18	18	18	49.00	-4527.53	-440.60	-154.51	-5	-393.67	-0.3	-364.67	-0.3	-364.67	0	-362.82
18	19	19	51.30	-4530.12	-598.47	1086.59	-4.442	-328.36	-0.3	-547.83	-0.3	-547.83	0	-563.73
19	19	19	51.30	-4569.48	-5.43	1086.10	-4.442	-332.19	-0.3	-551.56	-0.3	-551.56	0	-567.45
19	20	20	53.65	-4561.21	50.60	1030.53	-3.884	-403.44	-0.3	-642.67	-0.3	-642.67	0	-662.69
20	20	20	53.65	-3613.09	-387.16	-761.58	-3.884	-504.74	-0.3	-327.94	-0.3	-327.94	0	-313.15
20	21	21	56.00	-3610.21	-341.87	94.89	-3.325	-518.69	-0.3	-546.93	-0.3	-546.93	0	-549.73
21	21	21	56.00	-2534.86	-940.07	-1556.44	-3.325	-732.68	-0.3	233.00	0	0.00	0	0.00
21	22	22	57.00	-2537.19	-923.83	-614.91	-3.088	-593.63	-0.3	-150.07	0	0.00	0	0.00
22	22	22	57.00	-2699.36	-64.77	-614.98	-3.088	-621.01	-0.3	-177.41	0	0.00	0	0.00
22	23	23	58.00	-2696.81	-50.94	-556.54	-2.85	-722.44	-0.3	-242.45	0	0.00	0	0.00
23	23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	33	92.90	-2696.81	50.94	-556.25	-2.85	-722.35	-0.3	-242.61	0	0.00	0	0.00
33	33	34	93.90	-2699.36	64.77	-614.73	-3.088	-620.94	-0.3	-177.52	0	0.00	0	0.00
34	34	34	93.90	-2537.19	923.83	-614.80	-3.088	-593.60	-0.3	-150.13	0	0.00	0	0.00
34	35	35	94.90	-2534.86	940.07	-1555.47	-3.325	-732.45	-0.3	232.62	0	0.00	0	0.00
35	35	35	94.90	-3610.21	341.87	94.80	-3.325	-518.71	-0.3	-546.92	-0.3	-546.92	0	-549.71
35	36	36	97.25	-3613.09	387.16	-761.44	-3.884	-504.72	-0.3	-327.96	-0.3	-327.96	0	-313.16
36	36	36	97.25	-4561.21	-50.60	1030.62	-3.884	-403.43	-0.3	-642.68	-0.3	-642.68	0	-662.70
36	37	37	99.60	-4569.48	5.44	1086.55	-4.442	-332.14	-0.3	-551.61	-0.3	-551.61	0	-567.50
37	37	37	99.60	-4530.12	598.48	1086.06	-4.442	-328.41	-0.3	-547.78	-0.3	-547.78	0	-563.67
37	38	38	101.90	-4527.53	440.61	-154.50	-5	-393.67	-0.3	-364.67	-0.3	-364.67	0	-362.82
38	38	38	101.90	-4446.63	959.26	-154.56	-5	-230.46	-0.3	-212.89	-0.3	-212.89	0	-211.76
38	39	39	104.45	-4465.39	770.57	-2371.16	-5	-382.12	-0.3	-112.42	-0.3	-112.42	0	-95.20
39	39	39	104.45	-4465.39	-770.56	-2370.65	-5	-382.08	-0.3	-112.44	-0.3	-112.44	0	-95.23
39	40	40	107.00	-4446.63	-959.25	-154.42	-5	-230.46	-0.3	-212.89	-0.3	-212.89	0	-211.77
40	40	40	107.00	-4527.53	-440.60	-154.51	-5	-393.67	-0.3	-364.67	-0.3	-364.67	0	-362.82
40	41	41	109.30	-4530.12	-598.47	1086.59	-4.442	-328.36	-0.3	-547.83	-0.3	-547.83	0	-563.73
41	41	41	109.30	-4569.48	-5.43	1086.10	-4.442	-332.19	-0.3	-551.56	-0.3	-551.56	0	-567.45
41	42	42	111.65	-4561.21	50.60	1030.53	-3.884	-403.44	-0.3	-642.67	-0.3	-642.67	0	-662.69
42	42	43	114.00	-3610.21	-341.87	94.89	-3.325	-518.69	-0.3	-546.93	-0.3	-546.93	0	-549.73
43	43	43	114.00	-2534.86	-940.07	-1556.44	-3.325	-732.68	-0.3	233.00	0	0.00	0	0.00
43	44	44	115.00	-2537.19	-923.83	-614.91	-3.088	-593.63	-0.3	-150.07	0	0.00	0	0.00
44	44	45	115.00	-2699.36	-64.77	-614.98	-3.088	-621.01	-0.3	-177.41	0	0.00	0	0.00
44	45	45	116.00	-2696.81	-50.94	-556.54	-2.85	-722.44	-0.3	-242.45	0	0.00	0	0.00
45	45	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
45	46	46	117.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	46	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
46	47	47	119.78	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	47	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
47	48	48	122.55	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	48	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
48	49	49	128.10	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	49	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
49	50	50	133.65	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	50	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
50	51	51	139.20	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
51	51	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	52	52	144.75	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
52	53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	53	53	147.53	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
53	54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
54	54	54	150.30	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00

Construcción sin gradiente en fase constructiva 3

[1; 1]pppost = [.5; 1.1]Pret1.2sup + [.5; 1.1]Pr2.1vtosup2 + [1; 1]ppvist + [.85; 1.05]pret3.2preloseavist.TOT.Te

Cast. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-688.84	0.00	-292.68	-2.85	-536.81	-0.3	-48.15	0	0.00	0	0.00
1	2	0.60	-688.84	2.50	-293.43	-2.85	-537.40	-0.3	-47.23	0	0.00	0	0.00
2	2	0.60	-675.78	-72.11	-293.43	-2.85	-529.68	-0.3	-39.51	0	0.00	0	0.00
2	3	3.38	-675.78	-60.56	-109.34	-2.85	-485.16	-0.3	-265.25	0	0.00	0	0.00
3	3	3.38	-675.78	-60.56	-109.34	-2.85	-485.16	-0.3	-265.25	0	0.00	0	0.00
3	4	6.15	-675.78	-49.01	42.69	-2.85	-365.82	-0.3	-451.67	0	0.00	0	0.00
4	4	6.15	-821.90	-49.01	-91.30	-2.85	-557.35	-0.3	-373.70	0	0.00	0	0.00
4	5	11.70	-821.90	-25.90	116.58	-2.85	-394.15	-0.3	-628.62	0	0.00	0	0.00
5	5	11.70	-1448.12	-25.90	468.69	-2.85	-1223.65	-0.3	-280.97	0	0.00	0	0.00
5	6	17.25	-1448.12	-2.80	-389.04	-2.85	-1161.12	-0.3	-378.64	0	0.00	0	0.00
6	6	17.25	-1448.12	-2.80	-389.04	-2.85	-1161.12	-0.3	-378.64	0	0.00	0	0.00
6	7	22.80	-1448.12	20.31	-437.63	-2.85	-1199.26	-0.3	-319.06	0	0.00	0	0.00
7	7	22.80	-1135.01	20.31	-150.51	-2.85	-788.84	-0.3	-486.13	0	0.00	0	0.00
7	8	28.35	-1135.01	43.41	-327.31	-2.85	-927.64	-0.3	-269.32	0	0.00	0	0.00
8	8	28.35	-675.78	43.41	104.82	-2.85	-317.04	-0.3	-527.86	0	0.00	0	0.00
8	9	31.13	-675.78	54.96	-31.67	-2.85	-424.19	-0.3	-360.49	0	0.00	0	0.00
9	9	31.13	-675.78	54.96	-31.67	-2.85	-424.19	-0.3	-360.49	0	0.00	0	0.00
9	10	33.90	-675.78	66.52	-200.23	-2.85	-556.52	-0.3	-153.79	0	0.00	0	0.00
10	10	33.90	-676.61	57.41	-200.23	-2.85	-557.01	-0.3	-154.28	0	0.00	0	0.00
10	11	34.90	-676.67	61.57	-260.01	-2.85	-603.97	-0.3	-81.01	0	0.00	0	0.00
11	11	34.90	-2696.81	122.89	-556.25	-2.85	-722.35	-0.3	-242.61	0	0.00	0	0.00
11	12	35.90	-2699.36	136.72	-687.89	-3.088	-640.64	-0.3	-144.44	0	0.00	0	0.00
12	12	35.90	-2514.20	992.00	-687.96	-3.088	-609.42	-0.3	-113.17	0	0.00	0	0.00
12	13	36.90	-2511.87	1008.24	-1697.49	-3.325	-762.01	-0.3	291.18	0	0.00	0	0.00
13	13	36.90	-3601.66	413.31	-47.23	-3.325	-541.27	-0.3	-527.22	-0.3	-527.22	0	-525.82
13	14	39.25	-3604.54	458.60	-1071.68	-3.884	-540.14	-0.3	-291.36	-0.3	-291.36	0	-270.54
14	14	39.25	-4558.61	21.29	720.38	-3.884	-439.53	-0.3	-606.77	-0.3	-606.77	0	-620.76
14	15	41.60	-4566.88	77.33	605.53	-4.442	-378.96	-0.3	-501.27	-0.3	-501.27	0	-510.13
15	15	41.60	-4518.20	669.43	605.05	-4.442	-374.34	-0.3	-496.55	-0.3	-496.55	0	-505.40
15	16	43.90	-4515.61	511.56	-798.72	-5	-451.17	-0.3	-301.26	-0.3	-301.26	0	-291.69
16	16	43.90	-4426.63	1028.36	-798.78	-5	-273.28	-0.3	-182.43	-0.3	-182.43	0	-176.83
16	17	46.45	-4445.39	839.67	-3192.47	-5	-436.98	-0.3	-73.86	-0.3	-73.86	0	-50.68
17	17	46.45	-4465.39	-770.56	-2370.65	-5	-382.08	-0.3	-112.44	-0.3	-112.44	0	-95.23
17	18	49.00	-4446.63	-959.25	-154.42	-5	-230.46	-0.3	-212.89	-0.3	-212.89	0	-211.77
18	18	49.00	-4527.53	-440.60	-154.51	-5	-393.67	-0.3	-364.67	-0.3	-364.67	0	-362.82
18	19	51.30	-4530.12	-598.47	1086.59	-4.442	-328.36	-0.3	-547.83	-0.3	-547.83	0	-563.73
19	19	51.30	-4569.48	-5.43	1086.10	-4.442	-332.19	-0.3	-551.56	-0.3	-551.56	0	-567.45
19	20	53.65	-4561.21	50.60	1030.53	-3.884	-403.44	-0.3	-642.67	-0.3	-642.67	0	-662.69
20	20	53.65	-3613.09	-387.16	-761.58	-3.884	-504.74	-0.3	-327.94	-0.3	-327.94	0	-313.15
20	21	56.00	-3610.21	-341.87	94.89	-3.325	-518.69	-0.3	-546.93	-0.3	-546.93	0	-549.73
21	21	56.00	-2534.86	-940.07	-1556.44	-3.325	-732.68	-0.3	233.00	0	0.00	0	0.00
21	22	57.00	-2537.19	-923.83	-614.91	-3.088	-593.63	-0.3	-150.07	0	0.00	0	0.00
22	22	57.00	-2699.36	-64.77	-614.98	-3.088	-621.01	-0.3	-177.41	0	0.00	0	0.00
22	23	58.00	-2696.81	-50.94	-556.54	-2.85	-722.44	-0.3	-242.45	0	0.00	0	0.00
23	23	58.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
23	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	24	59.00	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
24	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	25	63.11	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
25	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	26	67.23	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
26	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	27	71.34	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
27	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	28	75.45	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
28	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	29	79.56	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
29	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	30	83.68	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
30	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	31	87.79	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
31	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	32	91.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
32	33	92.90	0.00	0.00	0.00	-2.85	0.00	-0.3	0.00	0	0.00	0	0.00
33	33	92.90	-2696.81	50.94	-556.25	-2.85	-722.35	-0.3	-242.61	0	0.00	0	0.00
33	34	93.90	-2699.36	64.77	-614.73	-3.088	-620.94	-0.3	-177.52	0	0.00	0	0.00
34	34	93.90	-2537.19	923.83	-614.80	-3.088	-593.60	-0.3	-150.13	0	0.00	0	0.00
34	35	94.90	-2534.86	940.07	-1555.47	-3.325	-732.45	-0.3	232.62	0	0.00	0	0.00
35	35	94.90	-3610.21	341.87	94.80	-3.325	-518.71	-0.3	-546.92	-0.3	-546.92	0	-549.71
35	36	97.25	-3613.09	387.16	-761.44	-3.884	-504.72	-0.3	-327.96	-0.3	-327.96	0	-313.16
36	36	97.25	-4561.21	-50.60	1030.62	-3.884	-403.43	-0.3	-642.68	-0.3	-642.68	0	-662.70
36	37	99.60	-4569.48	5.44	1086.55	-4.442	-332.14	-0.3	-551.61	-0.3	-551.61	0	-567.50
37	37	99.60	-4530.12	598.48	1086.06	-4.442	-328.41	-0.3	-547.78	-0.3	-547.78	0	-563.67
37	38	101.90	-4527.53	440.61	-154.50	-5	-393.67	-0.3	-364.67	-0.3	-364.67	0	-362.82
38	38	101.90	-4446.63	959.26	-154.56	-5	-230.46	-0.3	-212.89	-0.3	-212.89	0	-211.76
38	39	104.45	-4465.39	770.57	-2371.16	-5	-382.12	-0.3	-112.42	-0.3	-112.42	0	-95.20
39	39	104.45	-4445.39	-839.66	-3191.96	-5	-436.94	-0.3	-73.88	-0.3	-73.88	0	-50.71
39	40	107.00	-4426.63	-1028.35	-798.64	-5	-273.27	-0.3	-182.43	-0.3	-182.43	0	-176.63
40	40	107.00	-4515.61	-511.55	-798.73	-5	-451.17	-0.3	-301.26	-0.3	-301.26	0	-291.69
40	41	109.30	-4518.20	-669.42	605.57	-4.442	-374.29	-0.3	-496.60	-0.3	-496.60	0	-505.46
41	41	109.30	-4566.88	-77.32	605.09	-4.442	-379.01	-0.3	-501.22	-0.3	-501.22	0	-510.08
41	42	111.65	-4558.61	-21.29	720.29	-3.884	-439.54	-0.3	-606.76	-0.3	-606.76	0	-620.75
42	42	111.65	-3604.54	-458.60	-1071.81	-3.884	-540.16	-0.3	-291.35	-0.3	-291.35	0	-270.52
42	43	114.00	-3601.66	-413.31	-47.13	-3.325	-541.26	-0.3	-527.23	-0.3	-527.23	0	-525.84
43	43	114.00	-2511.87	-1008.24	-1698.46	-3.325	-762.24	-0.3	291.55	0	0.00	0	0.00
43	44	115.00	-2514.20	-992.00	-688.07	-3.088	-609.45	-0.3	-113.12	0	0.00	0	0.00
44	44	115.00	-2699.36	-136.72	-688.14	-3.088	-640.71	-0.3	-144.33	0	0.00	0	0.00
44	45	116.00	-2696.81	-122.89	-556.54	-2.85	-722.44	-0.3	-242.45	0	0.00	0	0.00
45	45	116.00	-676.67	-61.57	-260.01	-2.85	-603.97	-0.3	-81.01	0	0.00	0	0.00
45	46	117.00	-676.61	-57.41	-200.23	-2.85	-557.01	-0.3	-154.28	0	0.00	0	0.00
46	46	117.00	-675.78	-66.52	-200.23	-2.85	-556.52	-0.3	-153.79	0	0.00	0	0.00
46	47	119.78	-675.78	-54.96	-31.67	-2.85	-424.19	-0.3	-360.49	0	0.00	0	0.00
47	47	119.78	-675.78	-54.96	-31.67	-2.85	-424.19	-0.3	-360.49	0	0.00	0	0.00
47	48	122.55	-675.78	-43.41	104.82	-2.85	-317.04	-0.3	-527.86	0	0.00	0	0.00
48	48	122.55	-1135.01	-43.41	-327.31	-2.85	-927.64	-0.3	-269.32	0	0.00	0	0.00
48	49	128.10	-1135.01	-20.31	-150.51	-2.85	-788.84	-0.3	-486.13	0	0.00	0	0.00
49	49	128.10	-1448.12	-20.31	-437.63	-2.85	-1199.26	-0.3	-319.06	0	0.00	0	0.00
49	50	133.65	-1448.12	2.80	-389.04	-2.85	-1161.12	-0.3	-378.64	0	0.00	0	0.00
50	50	133.65	-1448.12	2.80	-389.04	-2.85	-1161.12	-0.3	-378.64	0	0.00	0	0.00
50	51	139.20	-1448.12	25.90	-468.69	-2.85	-1223.65	-0.3	-280.97	0	0.00	0	0.00
51	51	139.20	-821.90	25.90	116.58	-2.85	-394.15	-0.3	-628.62	0	0.00	0	0.00
51	52	144.75	-821.90	49.01	-91.30	-2.85	-557.35	-0.3	-373.70	0	0.00	0	0.00
52	52	144.75	-675.78	49.01	42.69	-2.85	-365.82	-0.3	-451.67	0	0.00	0	0.00
52	53	147.53	-675.78	60.56	-109.34	-2.85	-485.16	-0.3	-265.25	0	0.00	0	0.00
53	53	147.53	-675.78	60.56	-109.34	-2.85	-485.16	-0.3	-265.25	0	0.00	0	0.00
53	54	150.30	-675.78	72.11	-293.43	-2.85	-629.68	-0.3	-39.51	0	0.00	0	0.00
54	54	150.30	-888.84	-2.50	-293.43	-2.85	-637.40	-0.3	-47.23	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 4

[1; 1]pocsp2 + [.9; 1.1]Prct1.2sup + [.9; 1.1]Pr2.Wvlosa2 + [1; 1]ppvlat + [.95; 1.05]prot3.2protesestvist.TOT.Te + [1; 1]ppvcontral + [1; 1]PPprelosa + [.95; 1.05]prot4.2protesesdovc.TOT.Te

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-623.24	0.00	-264.80	-2.85	-576.16	-0.3	-43.56	0	0.00	0	0.00
1	2	0.60	-623.24	3.13	-265.74	-2.85	-576.90	-0.3	-42.41	0	0.00	0	0.00
2	2	0.60	-606.83	-90.06	-265.74	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00
2	3	3.38	-606.83	-75.60	-35.88	-2.85	-386.75	-0.3	-314.58	0	0.00	0	0.00
3	3	3.38	-606.83	-75.60	-35.88	-2.85	-386.75	-0.3	-314.58	0	0.00	0	0.00
3	4	6.15	-606.83	-61.14	153.81	-2.85	-237.83	-0.3	-547.20	0	0.00	0	0.00
4	4	6.15	-739.03	-61.14	32.59	-2.85	-411.12	-0.3	-476.66	0	0.00	0	0.00
4	5	11.70	-739.03	-32.20	291.56	-2.85	-207.82	-0.3	-794.24	0	0.00	0	0.00
5	5	11.70	-1305.61	-32.20	-237.97	-2.85	-958.32	-0.3	-479.69	0	0.00	0	0.00
5	6	17.25	-1305.61	-3.27	-139.55	-2.85	-881.06	-0.3	-600.38	0	0.00	0	0.00
6	6	17.25	-1305.61	-3.27	-139.55	-2.85	-881.06	-0.3	-600.38	0	0.00	0	0.00
6	7	22.80	-1305.61	25.67	-201.72	-2.85	-929.86	-0.3	-524.14	0	0.00	0	0.00
7	7	22.80	-1022.32	25.67	58.06	-2.85	-558.53	-0.3	-675.29	0	0.00	0	0.00
7	8	28.35	-1022.32	54.59	-164.68	-2.85	-733.38	-0.3	-402.17	0	0.00	0	0.00
8	8	28.35	-606.83	54.59	226.30	-2.85	-180.93	-0.3	-636.08	0	0.00	0	0.00
8	9	31.13	-606.83	69.06	54.71	-2.85	-315.63	-0.3	-425.68	0	0.00	0	0.00
9	9	31.13	-606.83	69.06	54.71	-2.85	-315.63	-0.3	-425.68	0	0.00	0	0.00
9	10	33.90	-606.83	83.53	-157.03	-2.85	-481.86	-0.3	-166.03	0	0.00	0	0.00
10	10	33.90	-607.91	75.34	-157.03	-2.85	-482.49	-0.3	-166.66	0	0.00	0	0.00
10	11	34.90	-607.99	80.56	-235.25	-2.85	-543.95	-0.3	-70.79	0	0.00	0	0.00
11	11	34.90	-2702.43	129.21	-226.65	-2.85	-615.52	-0.3	-420.05	0	0.00	0	0.00
11	12	35.90	-2705.17	144.02	-365.20	-3.088	-554.74	-0.3	-291.31	0	0.00	0	0.00
12	12	35.90	-2517.37	1000.78	-365.25	-3.088	-523.07	-0.3	-259.60	0	0.00	0	0.00
12	13	36.90	-2514.89	1018.07	-1384.26	-3.325	-689.83	-0.3	169.02	0	0.00	0	0.00
13	13	36.90	-3814.76	409.06	632.92	-3.325	-458.71	-0.3	-647.05	-0.3	-647.05	0	-665.72
13	14	39.25	-3817.64	454.35	-381.45	-3.884	-483.65	-0.3	-395.10	-0.3	-395.10	0	-387.68
14	14	39.25	-4976.96	-31.05	1808.77	-3.884	-359.91	-0.3	-779.80	-0.3	-779.80	0	-814.95
14	15	41.60	-4985.23	24.99	1818.34	-4.442	-300.42	-0.3	-667.70	-0.3	-667.70	0	-694.30
15	15	41.60	-4939.80	671.83	1817.78	-4.442	-296.12	-0.3	-663.28	-0.3	-663.28	0	-689.88
[illegible]	16	43.90	-4937.19	512.88	418.47	-5	-376.00	-0.3	-454.54	-0.3	-454.54	0	-459.55
[illegible]	16	43.90	-4845.25	1078.24	418.53	-5	-211.21	-0.3	-258.82	-0.3	-258.82	0	-261.86
[illegible]	17	46.45	-4862.85	901.21	-2118.07	-5	-384.57	-0.3	-143.66	-0.3	-143.66	0	-128.28
17	17	46.45	-4862.20	-903.44	-2144.10	-5	-386.31	-0.3	-142.43	-0.3	-142.43	0	-126.87
17	18	49.00	-4844.60	-1080.47	397.71	-5	-212.60	-0.3	-257.83	-0.3	-257.83	0	-260.72
18	18	49.00	-4936.81	-515.15	397.74	-5	-377.85	-0.3	-452.50	-0.3	-452.50	0	-457.26
18	19	51.30	-4939.42	-674.10	1802.81	-4.442	-297.55	-0.3	-661.69	-0.3	-661.69	0	-688.06
19	19	51.30	-4985.15	-27.31	1802.26	-4.442	-301.99	-0.3	-666.02	-0.3	-666.02	0	-692.38
19	20	53.65	-4976.88	28.72	1798.76	-3.884	-361.07	-0.3	-778.64	-0.3	-778.64	0	-813.60
20	20	53.65	-3817.37	-456.65	-391.66	-3.884	-484.81	-0.3	-393.89	-0.3	-393.89	0	-386.28
20	21	56.00	-3814.49	-411.36	628.37	-3.325	-459.44	-0.3	-646.41	-0.3	-646.41	0	-664.96
21	21	56.00	-2514.14	-1020.27	-1389.74	-3.325	-690.99	-0.3	171.26	0	0.00	0	0.00
21	22	57.00	-2516.63	-1002.98	-367.74	-3.088	-523.61	-0.3	-258.35	0	0.00	0	0.00
22	22	57.00	-2705.17	-146.34	-367.79	-3.088	-555.44	-0.3	-290.13	0	0.00	0	0.00
22	23	58.00	-2702.43	-131.46	-226.88	-2.85	-615.60	-0.3	-419.92	0	0.00	0	0.00
23	23	58.00	-607.60	-82.79	-235.25	-2.85	-543.72	-0.3	-70.56	0	0.00	0	0.00
23	24	59.00	-607.53	-77.58	-154.80	-2.85	-480.52	-0.3	-169.17	0	0.00	0	0.00
24	24	59.00	-606.43	-85.75	-154.80	-2.85	-479.87	-0.3	-168.52	0	0.00	0	0.00
24	25	63.11	-606.43	-64.31	153.79	-2.85	-237.61	-0.3	-546.93	0	0.00	0	0.00
25	25	63.11	-889.72	-64.31	-105.99	-2.85	-608.95	-0.3	-395.78	0	0.00	0	0.00
25	26	67.23	-889.72	-42.88	114.42	-2.85	-435.92	-0.3	-666.06	0	0.00	0	0.00
26	26	67.23	-1154.12	-42.88	-480.07	-2.85	-1058.86	-0.3	-93.29	0	0.00	0	0.00
26	27	71.34	-1154.12	-21.44	-347.82	-2.85	-955.04	-0.3	-255.47	0	0.00	0	0.00
27	27	71.34	-1267.44	-21.44	-451.73	-2.85	-1103.57	-0.3	-195.01	0	0.00	0	0.00
27	28	75.45	-1267.44	0.00	-407.65	-2.85	-1068.97	-0.3	-249.06	0	0.00	0	0.00
28	28	75.45	-1267.44	0.00	-407.65	-2.85	-1068.97	-0.3	-249.06	0	0.00	0	0.00
28	29	79.56	-1267.44	21.44	-451.73	-2.85	-1103.57	-0.3	-195.01	0	0.00	0	0.00
29	29	79.56	-1154.12	21.44	-347.82	-2.85	-955.04	-0.3	-255.47	0	0.00	0	0.00
29	30	83.68	-1154.12	42.88	-480.07	-2.85	-1058.86	-0.3	-93.29	0	0.00	0	0.00
30	30	83.68	-889.72	42.88	114.42	-2.85	-435.92	-0.3	-666.06	0	0.00	0	0.00
30	31	87.79	-889.72	64.31	-105.99	-2.85	-608.95	-0.3	-395.78	0	0.00	0	0.00
31	31	87.79	-606.43	64.31	153.79	-2.85	-237.61	-0.3	-546.93	0	0.00	0	0.00
[illegible]	32	91.90	-606.43	85.75	-154.80	-2.85	-479.87	-0.3	-168.52	0	0.00	0	0.00
[illegible]	32	91.90	-607.53	77.58	-154.80	-2.85	-480.52	-0.3	-169.17	0	0.00	0	0.00
[illegible]	33	92.90	-607.60	82.79	-235.25	-2.85	-543.72	-0.3	-70.56	0	0.00	0	0.00
33	33	92.90	-2702.43	131.46	-226.65	-2.85	-615.52	-0.3	-420.05	0	0.00	0	0.00
33	34	93.90	-2705.17	146.34	-367.56	-3.088	-555.37	-0.3	-290.24	0	0.00	0	0.00
34	34	93.90	-2516.63	1002.98	-367.61	-3.088	-523.58	-0.3	-258.41	0	0.00	0	0.00
34	35	94.90	-2514.14	1020.27	-1388.85	-3.325	-690.78	-0.3	170.91	0	0.00	0	0.00
35	35	94.90	-3814.49	411.36	628.32	-3.325	-459.44	-0.3	-646.41	-0.3	-646.41	0	-664.95
35	36	97.25	-3817.37	456.65	-391.49	-3.884	-484.79	-0.3	-393.91	-0.3	-393.91	0	-386.31
36	36	97.25	-4976.88	-28.72	1798.74	-3.884	-361.08	-0.3	-778.64	-0.3	-778.64	0	-813.59
36	37	99.60	-4985.15	27.32	1802.77	-4.442	-301.94	-0.3	-666.07	-0.3	-666.07	0	-692.45
37	37	99.60	-4939.42	674.11	1802.22	-4.442	-297.61	-0.3	-661.63	-0.3	-661.63	0	-687.99
37	38	101.90	-4936.81	515.16	397.63	-5	-377.86	-0.3	-452.49	-0.3	-452.49	0	-457.25
38	38	101.90	-4844.60	1080.48	397.69	-5	-212.60	-0.3	-257.83	-0.3	-257.83	0	-260.72
38	39	104.45	-4862.20	903.45	-2144.63	-5	-386.34	-0.3	-142.41	-0.3	-142.41	0	-126.84
39	39	104.45	-4862.85	-901.20	-2117.54	-5	-384.53	-0.3	-143.68	-0.3	-143.68	0	-128.31
39	40	107.00	-4845.25	-1078.23	418.55	-5	-211.21	-0.3	-258.82	-0.3	-258.82	0	-261.86
40	40	107.00	-4937.19	-512.87	418.58	-5	-375.99	-0.3	-454.55	-0.3	-454.55	0	-459.56
40	41	109.30	-4939.80	-671.82	1818.38	-4.442	-296.06	-0.3	-663.35	-0.3	-663.35	0	-689.95
41	41	109.30	-4985.23	-24.98	1817.82	-4.442	-300.47	-0.3	-667.65	-0.3	-667.65	0	-694.24
41	42	111.65	-4976.96	31.05	1808.80	-3.884	-359.90	-0.3	-779.80	-0.3	-779.80	0	-814.95
42	42	111.65	-3817.64	-454.35	-381.62	-3.884	-483.67	-0.3	-395.08	-0.3	-395.08	0	-387.66
42	43	114.00	-3814.76	-409.06	632.96	-3.325	-458.70	-0.3	-647.05	-0.3	-647.05	0	-665.73
43	43	114.00	-2514.89	-1018.07	-1385.15	-3.325	-690.03	-0.3	169.37	0	0.00	0	0.00
43	44	115.00	-2517.37	-1000.78	-365.38	-3.088	-523.10	-0.3	-259.54	0	0.00	0	0.00
44	44	115.00	-2705.17	-144.02	-365.43	-3.088	-554.80	-0.3	-291.20	0	0.00	0	0.00
44	45	116.00	-2702.43	-129.21	-226.88	-2.85	-615.60	-0.3	-419.92	0	0.00	0	0.00
45	45	116.00	-607.99	-80.56	-235.25	-2.85	-543.95	-0.3	-70.79	0	0.00	0	0.00
45	46	117.00	-607.91	-75.34	-157.03	-2.85	-482.49	-0.3	-166.66	0	0.00	0	0.00
46	46	117.00	-606.83	-83.53	-157.03	-2.85	-481.86	-0.3	-166.03	0	0.00	0	0.00
46	47	119.78	-606.83	-69.06	54.71	-2.85	-315.63	-0.3	-425.68	0	0.00	0	0.00
47	47	119.78	-606.83	-69.06	54.71	-2.85	-315.63	-0.3	-425.68	0	0.00	0	0.00
47	48	122.55	-606.83	-54.59	226.30	-2.85	-180.93	-0.3	-636.08	0	0.00	0	0.00
[illegible]	48	122.55	-1022.32	-54.59	-164.68	-2.85	-733.38	-0.3	-402.17	0	0.00	0	0.00
[illegible]	49	128.10	-1022.32	-25.67	58.06	-2.85	-558.53	-0.3	-675.29	0	0.00	0	0.00
[illegible]	49	128.10	-1305.61	-25.67	-201.72	-2.85	-929.86	-0.3	-524.14	0	0.00	0	0.00
[illegible]	50	133.65	-1305.61	3.27	-139.55	-2.85	-881.06	-0.3	-600.38	0	0.00	0	0.00
50	50	133.65	-1305.61	3.27	-139.55	-2.85	-881.06	-0.3	-600.38	0	0.00	0	0.00
50	51	139.20	-1305.61	32.20	-237.97	-2.85	-958.32	-0.3	-479.69	0	0.00	0	0.00
51	51	139.20	-739.03	32.20	291.56	-2.85	-207.82	-0.3	-794.24	0	0.00	0	0.00
51	52	144.75	-739.03	61.14	32.59	-2.85	-411.12	-0.3	-476.66	0	0.00	0	0.00
52	52	144.75	-606.83	61.14	153.81	-2.85	-237.83	-0.3	-547.20	0	0.00	0	0.00
52	53	147.53	-606.83	75.60	-35.88	-2.85	-386.75	-0.3	-314.58	0	0.00	0	0.00
53	53	147.53	-606.83	75.60	-35.88	-2.85	-386.75	-0.3	-314.58	0	0.00	0	0.00
53	54	150.30	-606.83	90.06	-265.74	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 4

[1; 1]pocsp2 + [.9; 1.1]Prct1.2sup + [.9; 1.1]Pr2.Wvlosa2 + [1; 1]ppvlat + [.95; 1.05]prot3.2protesestvist.TOT.Te + [1; 1]ppvcontral + [1; 1]PPprelosa + [.95; 1.05]prot4.2protesesdovc.TOT.Te

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-688.84	0.00	-292.68	-2.85	-636.81	-0.3	-48.15	0	0.00	0	0.00
1	2	0.60	-688.84	3.13	-293.62	-2.85	-637.55	-0.3	-46.99	0	0.00	0	0.00
2	2	0.60	-672.45	-90.12	-293.62	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00
2	3	3.38	-672.45	-75.66	-63.58	-2.85	-447.27	-0.3	-319.40	0	0.00	0	0.00
3	3	3.38	-672.45	-75.66	-63.58	-2.85	-447.27	-0.3	-319.40	0	0.00	0	0.00
3	4	6.15	-672.45	-61.20	126.31	-2.85	-298.20	-0.3	-552.24	0	0.00	0	0.00
4	4	6.15	-818.57	-61.20	-7.68	-2.85	-489.73	-0.3	-474.28	0	0.00	0	0.00
4	5	11.70	-818.57	-32.26	251.66	-2.85	-286.14	-0.3	-792.30	0	0.00	0	0.00
5	5	11.70	-1444.79	-32.26	-333.61	-2.85	-1115.64	-0.3	-444.65	0	0.00	0	0.00
5	6	17.25	-1444.79	-3.33	-234.83	-2.85	-1038.09	-0.3	-565.78	0	0.00	0	0.00
6	6	17.25	-1444.79	-3.33	-234.83	-2.85	-1038.09	-0.3	-565.78	0	0.00	0	0.00
6	7	22.80	-1444.79	25.61	-296.64	-2.85	-1086.61	-0.3	-489.99	0	0.00	0	0.00
7	7	22.80	-1131.68	25.61	-9.51	-2.85	-676.19	-0.3	-657.05	0	0.00	0	0.00
7	8	28.35	-1131.68	54.53	-231.88	-2.85	-850.76	-0.3	-384.37	0	0.00	0	0.00
8	8	28.35	-672.45	54.53	200.25	-2.85	-240.16	-0.3	-642.91	0	0.00	0	0.00
8	9	31.13	-672.45	69.00	28.85	-2.85	-374.71	-0.3	-432.73	0	0.00	0	0.00
9	9	31.13	-672.45	69.00	28.85	-2.85	-374.71	-0.3	-432.73	0	0.00	0	0.00
9	10	33.90	-672.45	83.47	-182.71	-2.85	-540.79	-0.3	-173.30	0	0.00	0	0.00
10	10	33.90	-673.51	74.40	-182.71	-2.85	-541.42	-0.3	-173.93	0	0.00	0	0.00
10	11	34.90	-673.59	79.61	-260.01	-2.85	-602.15	-0.3	-79.19	0	0.00	0	0.00
11	11	34.90	-2696.81	141.20	-556.25	-2.85	-722.35	-0.3	-242.61	0	0.00	0	0.00
11	12	35.90	-2699.55	156.08	-707.04	-3.088	-645.83	-0.3	-135.82	0	0.00	0	0.00
12	12	35.90	-2508.20	1010.40	-707.11	-3.088	-613.56	-0.3	-103.50	0	0.00	0	0.00
12	13	36.90	-2505.72	1027.69	-1735.76	-3.325	-769.98	-0.3	306.95	0	0.00	0	0.00
13	13	36.90	-3599.62	433.61	-85.50	-3.325	-547.39	-0.3	-521.95	-0.3	-521.95	0	-519.43
13	14	39.25	-3602.50	478.90	-1157.75	-3.884	-550.01	-0.3	-281.25	-0.3	-281.25	0	-258.75
14	14	39.25	-4558.26	41.69	634.31	-3.884	-449.59	-0.3	-596.84	-0.3	-596.84	0	-609.17
14	15	41.60	-4566.53	97.73	471.00	-4.442	-392.09	-0.3	-487.23	-0.3	-487.23	0	-494.12
15	15	41.60	-4515.20	689.61	470.52	-4.442	-387.22	-0.3	-482.25	-0.3	-482.25	0	-489.14
15	16	43.90	-4512.61	531.74	-979.67	-5	-467.35	-0.3	-283.48	-0.3	-283.48	0	-271.74
16	16	43.90	-4421.33	1048.06	-979.73	-5	-285.32	-0.3	-173.89	-0.3	-173.89	0	-166.77
16	17	46.45	-4440.09	859.37	-3423.91	-5	-452.45	-0.3	-63.01	-0.3	-63.01	0	-38.15
17	17	46.45	-4439.46	-861.54	-3449.20	-5	-454.14	-0.3	-61.82	-0.3	-61.82	0	-36.78
17	18	49.00	-4420.70	-1050.23	-999.83	-5	-286.66	-0.3	-172.94	-0.3	-172.94	0	-165.68
18	18	49.00	-4512.25	-533.95	-999.92	-5	-469.16	-0.3	-281.48	-0.3	-281.48	0	-269.50
18	19	51.30	-4514.84	-691.82	455.93	-4.442	-388.61	-0.3	-480.70	-0.3	-480.70	0	-487.37
19	19	51.30	-4566.46	-99.99	455.44	-4.442	-393.61	-0.3	-485.60	-0.3	-485.60	0	-492.26
19	20	53.65	-4558.18	-43.96	624.48	-3.884	-450.74	-0.3	-595.71	-0.3	-595.71	0	-607.84
20	20	53.65	-3602.23	-481.13	-1167.63	-3.884	-551.14	-0.3	-280.08	-0.3	-280.08	0	-257.39
20	21	56.00	-3599.35	-435.84	-89.87	-3.325	-548.08	-0.3	-521.34	-0.3	-521.34	0	-518.69
21	21	56.00	-2505.00	-1029.83	-1741.20	-3.325	-771.14	-0.3	309.17	0	0.00	0	0.00
21	22	57.00	-2507.49	-1012.54	-709.52	-3.088	-614.09	-0.3	-102.29	0	0.00	0	0.00
22	22	57.00	-2699.55	-158.32	-709.59	-3.088	-646.51	-0.3	-134.67	0	0.00	0	0.00
22	23	58.00	-2696.81	-143.44	-556.54	-2.85	-722.44	-0.3	-242.45	0	0.00	0	0.00
23	23	58.00	-673.20	-81.91	-260.01	-2.85	-601.92	-0.3	-78.96	0	0.00	0	0.00
23	24	59.00	-673.13	-76.70	-180.42	-2.85	-539.40	-0.3	-176.52	0	0.00	0	0.00
24	24	59.00	-672.03	-85.75	-180.42	-2.85	-538.75	-0.3	-175.87	0	0.00	0	0.00
24	25	63.11	-672.03	-64.31	128.17	-2.85	-296.49	-0.3	-554.28	0	0.00	0	0.00
25	25	63.11	-985.14	-64.31	-158.95	-2.85	-706.92	-0.3	-387.22	0	0.00	0	0.00
25	26	67.23	-985.14	-42.88	61.46	-2.85	-533.89	-0.3	-657.50	0	0.00	0	0.00
26	26	67.23	-1277.38	-42.88	-595.61	-2.85	-1222.40	-0.3	-24.44	0	0.00	0	0.00
26	27	71.34	-1277.38	-21.44	-463.36	-2.85	-1118.58	-0.3	-186.62	0	0.00	0	0.00
27	27	71.34	-1402.62	-21.44	-578.21	-2.85	-1282.74	-0.3	-119.79	0	0.00	0	0.00
27	28	75.45	-1402.62	0.00	-534.13	-2.85	-1248.14	-0.3	-173.84	0	0.00	0	0.00
28	28	75.45	-1402.62	0.00	-534.13	-2.85	-1248.14	-0.3	-173.84	0	0.00	0	0.00
28	29	79.56	-1402.62	21.44	-578.21	-2.85	-1282.74	-0.3	-119.79	0	0.00	0	0.00
29	29	79.56	-1277.38	21.44	-463.36	-2.85	-1118.58	-0.3	-186.62	0	0.00	0	0.00
29	30	83.68	-1277.38	42.88	-595.61	-2.85	-1222.40	-0.3	-24.44	0	0.00	0	0.00
30	30	83.68	-985.14	42.88	61.46	-2.85	-533.89	-0.3	-657.50	0	0.00	0	0.00
30	31	87.79	-985.14	64.31	-158.95	-2.85	-706.92	-0.3	-387.22	0	0.00	0	0.00
31	31	87.79	-672.03	64.31	128.17	-2.85	-296.49	-0.3	-554.28	0	0.00	0	0.00
31	32	91.90	-672.03	85.75	-180.42	-2.85	-538.75	-0.3	-175.87	0	0.00	0	0.00
32	32	91.90	-673.13	76.70	-180.42	-2.85	-539.40	-0.3	-176.52	0	0.00	0	0.00
32	33	92.90	-673.20	81.91	-260.01	-2.85	-601.92	-0.3	-78.96	0	0.00	0	0.00
33	33	92.90	-2696.81	143.44	-556.25	-2.85	-722.35	-0.3	-242.61	0	0.00	0	0.00
33	34	93.90	-2699.55	158.32	-709.34	-3.088	-646.45	-0.3	-134.78	0	0.00	0	0.00
34	34	93.90	-2507.49	1012.54	-709.41	-3.088	-614.06	-0.3	-102.34	0	0.00	0	0.00
34	35	94.90	-2505.00	1029.83	-1740.23	-3.325	-770.91	-0.3	308.79	0	0.00	0	0.00
35	35	94.90	-3599.35	435.84	-89.96	-3.325	-548.10	-0.3	-521.33	-0.3	-521.33	0	-518.68
35	36	97.25	-3602.23	481.13	-1167.49	-3.884	-551.12	-0.3	-280.10	-0.3	-280.10	0	-257.41
36	36	97.25	-4558.18	43.96	624.57	-3.884	-450.73	-0.3	-595.72	-0.3	-595.72	0	-607.85
36	37	99.60	-4566.46	100.00	455.89	-4.442	-393.57	-0.3	-485.65	-0.3	-485.65	0	-492.32
37	37	99.60	-4514.84	691.83	455.40	-4.442	-388.66	-0.3	-480.64	-0.3	-480.64	0	-487.31
37	38	101.90	-4512.25	533.96	-999.91	-5	-469.16	-0.3	-281.48	-0.3	-281.48	0	-269.51
38	38	101.90	-4420.70	1050.24	-999.97	-5	-286.67	-0.3	-172.93	-0.3	-172.93	0	-165.67
38	39	104.45	-4439.46	861.55	-3449.71	-5	-454.88	-0.3	-61.80	-0.3	-61.80	0	-36.75
39	39	104.45	-4440.09	-859.36	-3423.40	-5	-452.42	-0.3	-63.03	-0.3	-63.03	0	-38.18
39	40	107.00	-4421.33	-1048.05	-979.59	-5	-285.31	-0.3	-173.89	-0.3	-173.89	0	-166.78
40	40	107.00	-4512.61	-531.73	-979.68	-5	-467.35	-0.3	-283.48	-0.3	-283.48	0	-271.74
40	41	109.30	-4515.20	-689.60	471.04	-4.442	-387.16	-0.3	-482.31	-0.3	-482.31	0	-489.20
41	41	109.30	-4566.53	-97.72	470.56	-4.442	-392.14	-0.3	-487.18	-0.3	-487.18	0	-494.07
41	42	111.65	-4558.26	-41.69	634.22	-3.884	-449.60	-0.3	-596.83	-0.3	-596.83	0	-609.16
42	42	111.65	-3602.50	-478.90	-1157.88	-3.884	-550.03	-0.3	-281.23	-0.3	-281.23	0	-258.73
42	43	114.00	-3599.62	-433.61	-85.40	-3.325	-547.37	-0.3	-521.96	-0.3	-521.96	0	-519.44
43	43	114.00	-2505.72	-1027.69	-1736.73	-3.325	-770.21	-0.3	307.33	0	0.00	0	0.00
43	44	115.00	-2508.20	-1010.40	-707.22	-3.088	-613.59	-0.3	-103.45	0	0.00	0	0.00
44	44	115.00	-2699.55	-156.08	-707.29	-3.088	-645.90	-0.3	-135.70	0	0.00	0	0.00
44	45	116.00	-2696.81	-141.20	-556.54	-2.85	-722.44	-0.3	-242.45	0	0.00	0	0.00
45	45	116.00	-673.59	-79.61	-260.01	-2.85	-602.15	-0.3	-79.19	0	0.00	0	0.00
45	46	117.00	-673.51	-74.40	-182.71	-2.85	-541.42	-0.3	-173.93	0	0.00	0	0.00
46	46	117.00	-672.45	-83.47	-182.71	-2.85	-540.79	-0.3	-173.30	0	0.00	0	0.00
46	47	119.78	-672.45	-69.00	28.85	-2.85	-374.71	-0.3	-432.73	0	0.00	0	0.00
47	47	119.78	-672.45	-69.00	28.85	-2.85	-374.71	-0.3	-432.73	0	0.00	0	0.00
47	48	122.55	-672.45	-54.53	200.25	-2.85	-240.16	-0.3	-642.91	0	0.00	0	0.00
48	48	122.55	-1131.68	-54.53	-231.88	-2.85	-850.76	-0.3	-384.37	0	0.00	0	0.00
48	49	128.10	-1131.68	-25.61	-9.51	-2.85	-676.19	-0.3	-657.05	0	0.00	0	0.00
49	49	128.10	-1444.79	-25.61	-296.64	-2.85	-1086.61	-0.3	-489.99	0	0.00	0	0.00
49	50	133.65	-1444.79	3.33	-234.83	-2.85	-1038.09	-0.3	-565.78	0	0.00	0	0.00
50	50	133.65	-1444.79	3.33	-234.83	-2.85	-1038.09	-0.3	-565.78	0	0.00	0	0.00
50	51	139.20	-1444.79	32.26	-333.61	-2.85	-1115.64	-0.3	-444.65	0	0.00	0	0.00
51	51	139.20	-818.57	32.26	251.66	-2.85	-286.14	-0.3	-792.30	0	0.00	0	0.00
51	52	144.75	-818.57	61.20	-7.68	-2.85	-489.73	-0.3	-474.28	0	0.00	0	0.00
52	52	144.75	-672.45	61.20	126.31	-2.85	-298.20	-0.3	-552.24	0	0.00	0	0.00
52	53	147.53	-672.45	75.66	-63.58	-2.85	-447.27	-0.3	-319.40	0	0.00	0	0.00
53	53	147.53	-672.45	75.66	-63.58	-2.85	-447.27	-0.3	-319.40	0	0.00	0	0.00
53	54	150.30	-672.45	90.12	-293.62	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00
54	54	150.30	-688.84	-3.13	-293.62	-2.85	-637.55	-0.3	-46.99	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 5

[illegible]

Coef. ex:

[illegible]	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-623.24	0.00	-264.80	-2.85	-576.16	-0.3	-43.56	0	0.00	0	0.00
1	2	0.60	-623.24	3.13	-265.74	-2.85	-576.90	-0.3	-42.41	0	0.00	0	0.00
2	2	0.60	-606.83	-91.94	-265.74	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00
2	3	3.38	-606.83	-77.66	-30.17	-2.85	-382.27	-0.3	-321.59	0	0.00	0	0.00
3	3	3.38	-606.83	-77.66	-30.17	-2.85	-382.27	-0.3	-321.59	0	0.00	0	0.00
3	4	6.15	-606.83	-63.20	165.25	-2.85	-228.85	-0.3	-561.23	0	0.00	0	0.00
4	4	6.15	-739.03	-63.20	44.03	-2.85	-402.14	-0.3	-490.69	0	0.00	0	0.00
4	5	11.70	-739.03	-34.26	314.44	-2.85	-189.85	-0.3	-822.29	0	0.00	0	0.00
5	5	11.70	-1305.61	-34.26	-215.09	-2.85	-940.36	-0.3	-507.75	0	0.00	0	0.00
5	6	17.25	-1305.61	-5.33	-105.23	-2.85	-854.11	-0.3	-642.46	0	0.00	0	0.00
6	6	17.25	-1305.61	-5.33	-105.23	-2.85	-854.11	-0.3	-642.46	0	0.00	0	0.00
6	7	22.80	-1305.61	23.62	-155.97	-2.85	-893.95	-0.3	-580.24	0	0.00	0	0.00
7	7	22.80	-1022.32	23.62	103.81	-2.85	-522.61	-0.3	-731.40	0	0.00	0	0.00
7	8	28.35	-1022.32	52.54	-107.50	-2.85	-688.49	-0.3	-472.28	0	0.00	0	0.00
8	8	28.35	-606.83	52.54	283.47	-2.85	-136.05	-0.3	-706.20	0	0.00	0	0.00
8	9	31.13	-606.83	78.67	101.45	-2.85	-278.94	-0.3	-482.99	0	0.00	0	0.00
9	9	31.13	-606.83	78.67	101.45	-2.85	-278.94	-0.3	-482.99	0	0.00	0	0.00
9	10	33.90	-606.83	104.79	-153.09	-2.85	-478.76	-0.3	-170.86	0	0.00	0	0.00
10	10	33.90	-1099.60	90.15	-373.98	-2.85	-943.35	-0.3	-191.17	0	0.00	0	0.00
10	11	34.90	-1099.74	99.56	-469.31	-2.85	-1018.27	-0.3	-74.35	0	0.00	0	0.00
11	11	34.90	-3190.35	65.11	-460.71	-2.85	-789.91	-0.3	-392.57	0	0.00	0	0.00
11	12	35.90	-3193.87	84.12	-538.52	-3.088	-683.85	-0.3	-295.40	0	0.00	0	0.00
12	12	35.90	-2999.58	1100.16	-538.57	-3.088	-651.09	-0.3	-262.60	0	0.00	0	0.00
12	13	36.90	-2996.50	1121.65	-1659.65	-3.325	-824.32	-0.3	205.39	0	0.00	0	0.00
13	13	36.90	-3816.93	443.12	511.25	-3.325	-479.45	-0.3	-631.58	-0.3	-631.58	0	-646.66
13	14	39.25	-3819.81	488.41	-583.36	-3.884	-507.59	-0.3	-372.17	-0.3	-372.17	0	-360.83
14	14	39.25	-4981.94	2.72	1606.87	-3.884	-384.17	-0.3	-757.20	-0.3	-757.20	0	-788.42
14	15	41.60	-4990.21	58.76	1536.21	-4.442	-328.51	-0.3	-638.80	-0.3	-638.80	0	-661.27
15	15	41.60	-4940.36	705.96	1535.65	-4.442	-323.78	-0.3	-633.96	-0.3	-633.96	0	-656.42
[illegible]	16	43.90	-4937.75	547.02	57.82	-5	-408.79	-0.3	-419.64	-0.3	-419.64	0	-420.34
[illegible]	16	43.90	-4841.87	1112.21	57.87	-5	-235.57	-0.3	-242.15	-0.3	-242.15	0	-242.57
[illegible]	17	46.45	-4859.47	935.18	-2565.78	-5	-414.85	-0.3	-123.01	-0.3	-123.01	0	-104.38
17	17	46.45	-4823.80	-929.76	-2550.82	-5	-412.06	-0.3	-121.93	-0.3	-121.93	0	-103.41
17	18	49.00	-4806.20	-1106.79	58.43	-5	-233.77	-0.3	-240.41	-0.3	-240.41	0	-240.84
18	18	49.00	-4901.69	-545.72	58.45	-5	-405.71	-0.3	-416.68	-0.3	-416.68	0	-417.38
18	19	51.30	-4904.30	-704.67	1533.84	-4.442	-320.50	-0.3	-630.31	-0.3	-630.31	0	-652.75
19	19	51.30	-4954.29	-62.17	1533.29	-4.442	-325.35	-0.3	-635.05	-0.3	-635.05	0	-657.48
19	20	53.65	-4946.02	-6.14	1612.60	-3.884	-379.37	-0.3	-753.73	-0.3	-753.73	0	-785.06
20	20	53.65	-3783.73	-488.83	-577.81	-3.884	-502.79	-0.3	-368.66	-0.3	-368.66	0	-357.43
20	21	56.00	-3780.85	-443.54	518.02	-3.325	-472.97	-0.3	-627.11	-0.3	-627.11	0	-642.40
21	21	56.00	-2961.10	-1114.68	-1653.82	-3.325	-817.78	-0.3	208.32	0	0.00	0	0.00
21	22	57.00	-2964.19	-1093.19	-539.01	-3.088	-645.24	-0.3	-256.43	0	0.00	0	0.00
22	22	57.00	-3158.08	-88.83	-539.06	-3.088	-677.96	-0.3	-289.12	0	0.00	0	0.00
22	23	58.00	-3154.56	-69.75	-456.46	-2.85	-781.35	-0.3	-387.68	0	0.00	0	0.00
23	23	58.00	-1063.68	-98.12	-464.83	-2.85	-993.45	-0.3	-58.54	0	0.00	0	0.00
23	24	59.00	-1063.55	-88.71	-370.95	-2.85	-919.67	-0.3	-173.59	0	0.00	0	0.00
24	24	59.00	-562.11	-103.02	-151.65	-2.85	-451.21	-0.3	-146.20	0	0.00	0	0.00
24	25	63.11	-562.11	-64.31	192.46	-2.85	-181.07	-0.3	-568.17	0	0.00	0	0.00
25	25	63.11	-845.40	-64.31	-67.31	-2.85	-552.40	-0.3	-417.01	0	0.00	0	0.00
25	26	67.23	-845.40	-42.88	153.10	-2.85	-379.37	-0.3	-687.29	0	0.00	0	0.00
26	26	67.23	-1109.81	-42.88	-441.39	-2.85	-1002.31	-0.3	-114.53	0	0.00	0	0.00
26	27	71.34	-1109.81	-21.44	-309.14	-2.85	-898.49	-0.3	-276.71	0	0.00	0	0.00
27	27	71.34	-1223.12	-21.44	-413.06	-2.85	-1047.02	-0.3	-216.24	0	0.00	0	0.00
27	28	75.45	-1223.12	0.00	-368.98	-2.85	-1012.42	-0.3	-270.30	0	0.00	0	0.00
28	28	75.45	-1223.12	0.00	-368.98	-2.85	-1012.42	-0.3	-270.30	0	0.00	0	0.00
28	29	79.56	-1223.12	21.44	-413.06	-2.85	-1047.02	-0.3	-216.24	0	0.00	0	0.00
29	29	79.56	-1109.81	21.44	-309.14	-2.85	-898.49	-0.3	-276.71	0	0.00	0	0.00
29	30	83.68	-1109.81	42.88	-441.39	-2.85	-1002.31	-0.3	-114.53	0	0.00	0	0.00
30	30	83.68	-845.40	42.88	153.10	-2.85	-379.37	-0.3	-687.29	0	0.00	0	0.00
30	31	87.79	-845.40	64.31	-67.31	-2.85	-552.40	-0.3	-417.01	0	0.00	0	0.00
31	31	87.79	-562.11	64.31	192.46	-2.85	-181.07	-0.3	-568.17	0	0.00	0	0.00
3¹	32	91.90	-562.11	103.02	-151.65	-2.85	-451.21	-0.3	-146.20	0	0.00	0	0.00
[illegible]	32	91.90	-1063.55	88.71	-370.95	-2.85	-919.67	-0.3	-173.59	0	0.00	0	0.00
[illegible]	33	92.90	-1063.68	98.12	-464.83	-2.85	-993.45	-0.3	-58.54	0	0.00	0	0.00
[illegible]	33	92.90	-3154.56	69.75	-456.23	-2.85	-781.27	-0.3	-387.80	0	0.00	0	0.00
33	34	93.90	-3158.08	88.83	-538.83	-3.088	-677.90	-0.3	-289.23	0	0.00	0	0.00
34	34	93.90	-2964.19	1093.19	-538.88	-3.088	-645.20	-0.3	-256.49	0	0.00	0	0.00
34	35	94.90	-2961.10	1114.68	-1652.93	-3.325	-817.57	-0.3	207.97	0	0.00	0	0.00
35	35	94.90	-3780.85	443.54	517.97	-3.325	-472.98	-0.3	-627.10	-0.3	-627.10	0	-642.39
35	36	97.25	-3783.73	488.83	-577.65	-3.884	-502.77	-0.3	-368.67	-0.3	-368.67	0	-357.45
36	36	97.25	-4946.02	6.14	1612.58	-3.884	-379.37	-0.3	-753.72	-0.3	-753.72	0	-785.06
36	37	99.60	-4954.29	62.18	1533.80	-4.442	-325.30	-0.3	-635.10	-0.3	-635.10	0	-657.54
37	37	99.60	-4904.30	704.68	1533.25	-4.442	-320.56	-0.3	-630.25	-0.3	-630.25	0	-652.68
37	38	101.90	-4901.69	545.73	58.35	-5	-405.72	-0.3	-416.67	-0.3	-416.67	0	-417.37
38	38	101.90	-4806.20	1106.80	58.40	-5	-233.77	-0.3	-240.41	-0.3	-240.41	0	-240.84
38	39	104.45	-4823.80	929.77	-2551.35	-5	-412.10	-0.3	-121.90	-0.3	-121.90	0	-103.38
39	39	104.45	-4859.47	-935.17	-2565.25	-5	-414.81	-0.3	-123.03	-0.3	-123.03	0	-104.41
39	40	107.00	-4641.87	-1112.20	57.90	-5	-235.57	-0.3	-242.15	-0.3	-242.15	0	-242.57
40	40	107.00	-4937.75	-547.01	57.92	-5	-408.78	-0.3	-419.65	-0.3	-419.65	0	-420.35
40	41	109.30	-4940.36	-705.95	1536.25	-4.442	-323.72	-0.3	-634.02	-0.3	-634.02	0	-656.50
41	41	109.30	-4990.21	-58.75	1535.69	-4.442	-328.56	-0.3	-638.75	-0.3	-638.75	0	-661.21
41	42	111.65	-4981.94	-2.72	1606.89	-3.884	-384.17	-0.3	-757.20	-0.3	-757.20	0	-788.42
42	42	111.65	-3819.81	-488.41	-583.53	-3.884	-507.61	-0.3	-372.15	-0.3	-372.15	0	-360.81
42	43	114.00	-3816.93	-443.12	511.30	-3.325	-479.44	-0.3	-631.58	-0.3	-631.58	0	-646.67
43	43	114.00	-2996.50	-1121.65	-1660.53	-3.325	-824.52	-0.3	205.73	0	0.00	0	0.00
43	44	115.00	-2999.58	-1100.16	-538.70	-3.088	-651.12	-0.3	-262.54	0	0.00	0	0.00
44	44	115.00	-3193.87	-84.12	-538.75	-3.088	-683.92	-0.3	-295.30	0	0.00	0	0.00
44	45	116.00	-3190.35	-65.11	-460.94	-2.85	-789.98	-0.3	-392.45	0	0.00	0	0.00
45	45	116.00	-1099.74	-99.56	-469.31	-2.85	-1018.27	-0.3	-74.35	0	0.00	0	0.00
45	46	117.00	-1099.60	-90.15	-373.98	-2.85	-943.35	-0.3	-191.17	0	0.00	0	0.00
46	46	117.00	-606.83	-104.79	-153.09	-2.85	-478.76	-0.3	-170.86	0	0.00	0	0.00
46	47	119.78	-606.83	-78.67	101.45	-2.85	-278.94	-0.3	-482.99	0	0.00	0	0.00
47	47	119.78	-606.83	-78.67	101.45	-2.85	-278.94	-0.3	-482.99	0	0.00	0	0.00
47	48	122.55	-606.83	-52.54	283.47	-2.85	-136.05	-0.3	-706.20	0	0.00	0	0.00
[illegible]	48	122.55	-1022.32	-52.54	-107.50	-2.85	-688.49	-0.3	-472.28	0	0.00	0	0.00
[illegible]	49	128.10	-1022.32	-23.62	103.81	-2.85	-522.61	-0.3	-731.40	0	0.00	0	0.00
[illegible]	49	128.10	-1305.61	-23.62	-155.97	-2.85	-893.95	-0.3	-580.24	0	0.00	0	0.00
[illegible]	50	133.65	-1305.61	5.33	-105.23	-2.85	-854.11	-0.3	-642.46	0	0.00	0	0.00
50	50	133.65	-1305.61	5.33	-105.23	-2.85	-854.11	-0.3	-642.46	0	0.00	0	0.00
50	51	139.20	-1305.61	34.26	-215.09	-2.85	-940.36	-0.3	-507.75	0	0.00	0	0.00
51	51	139.20	-739.03	34.26	314.44	-2.85	-189.85	-0.3	-822.29	0	0.00	0	0.00
51	52	144.75	-739.03	63.20	44.03	-2.85	-402.14	-0.3	-490.69	0	0.00	0	0.00
52	52	144.75	-606.83	63.20	165.25	-2.85	-228.85	-0.3	-561.23	0	0.00	0	0.00
52	53	147.53	-606.83	77.66	-30.17	-2.85	-382.27	-0.3	-321.59	0	0.00	0	0.00
53	53	147.53	-606.83	77.66	-30.17	-2.85	-382.27	-0.3	-321.59	0	0.00	0	0.00
53	54	150.30	-608.83	91.94	-265.74	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 5

[illegible]

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-688.84	0.00	-292.68	-2.85	-636.81	-0.3	-48.15	0	0.00	0	0.00
1	2	0.60	-688.84	3.13	-293.62	-2.85	-637.55	-0.3	-46.99	0	0.00	0	0.00
2	2	0.60	-672.45	-92.01	-293.62	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00
2	3	3.38	-672.45	-77.55	-58.35	-2.85	-443.16	-0.3	-325.80	0	0.00	0	0.00
3	3	3.38	-672.45	-77.55	-58.35	-2.85	-443.16	-0.3	-325.80	0	0.00	0	0.00
3	4	6.15	-672.45	-63.09	136.77	-2.85	-289.99	-0.3	-565.07	0	0.00	0	0.00
4	4	6.15	-818.57	-63.09	2.78	-2.85	-481.52	-0.3	-487.10	0	0.00	0	0.00
4	5	11.70	-818.57	-34.15	272.58	-2.85	-269.72	-0.3	-817.95	0	0.00	0	0.00
5	5	11.70	-1444.79	-34.15	-312.69	-2.85	-1099.22	-0.3	-470.30	0	0.00	0	0.00
5	6	17.25	-1444.79	-5.22	-203.45	-2.85	-1013.46	-0.3	-604.26	0	0.00	0	0.00
6	6	17.25	-1444.79	-5.22	-203.45	-2.85	-1013.46	-0.3	-604.26	0	0.00	0	0.00
6	7	22.80	-1444.79	23.73	-254.81	-2.85	-1053.78	-0.3	-541.28	0	0.00	0	0.00
7	7	22.80	-1131.68	23.73	32.32	-2.85	-643.35	-0.3	-708.35	0	0.00	0	0.00
7	8	28.35	-1131.68	52.65	-179.60	-2.85	-809.72	-0.3	-448.48	0	0.00	0	0.00
8	8	28.35	-672.45	52.65	252.53	-2.85	-199.11	-0.3	-707.02	0	0.00	0	0.00
8	9	31.13	-672.45	78.78	70.19	-2.85	-342.25	-0.3	-483.43	0	0.00	0	0.00
9	9	31.13	-672.45	78.78	70.19	-2.85	-342.25	-0.3	-483.43	0	0.00	0	0.00
9	10	33.90	-672.45	104.90	-184.65	-2.85	-542.32	-0.3	-170.93	0	0.00	0	0.00
10	10	33.90	-1274.40	87.55	-441.56	-2.85	-1099.71	-0.3	-211.59	0	0.00	0	0.00
10	11	34.90	-1274.54	96.96	-534.37	-2.85	-1172.65	-0.3	-97.86	0	0.00	0	0.00
11	11	34.90	-3292.09	57.08	-830.61	-2.85	-931.44	-0.3	-215.07	0	0.00	0	0.00
11	12	35.90	-3295.61	76.16	-900.82	-3.088	-798.57	-0.3	-148.78	0	0.00	0	0.00
12	12	35.90	-3098.54	1125.12	-900.89	-3.088	-765.34	-0.3	-115.50	0	0.00	0	0.00
12	13	36.90	-3095.46	1146.61	-2047.00	-3.325	-928.65	-0.3	341.39	0	0.00	0	0.00
13	13	36.90	-3601.77	467.50	-208.85	-3.325	-568.41	-0.3	-506.26	-0.3	-506.26	0	-500.10
13	14	39.25	-3604.65	512.79	-1360.92	-3.884	-574.10	-0.3	-258.17	-0.3	-258.17	0	-231.73
14	14	39.25	-4563.22	75.30	431.14	-3.884	-474.01	-0.3	-574.09	-0.3	-574.09	0	-582.47
14	15	41.60	-4571.49	131.34	188.01	-4.442	-420.26	-0.3	-458.24	-0.3	-458.24	0	-460.99
15	15	41.60	-4515.76	723.58	187.53	-4.442	-414.96	-0.3	-452.84	-0.3	-452.84	0	-455.58
15	16	43.90	-4513.17	565.71	-1340.78	-5	-500.18	-0.3	-248.54	-0.3	-248.54	0	-232.47
16	16	43.90	-4417.97	1081.86	-1340.83	-5	-309.71	-0.3	-157.20	-0.3	-157.20	0	-147.47
16	17	46.45	-4436.71	893.34	-3871.62	-5	-482.73	-0.3	-42.36	-0.3	-42.36	0	-14.25
17	17	46.45	-4392.40	-887.00	-3862.64	-5	-479.93	-0.3	-40.58	-0.3	-40.58	0	-12.54
17	18	49.00	-4373.64	-1075.69	-1348.05	-5	-308.01	-0.3	-154.68	-0.3	-154.68	0	-144.89
18	18	49.00	-4468.43	-564.66	-1348.13	-5	-497.10	-0.3	-244.07	-0.3	-244.07	0	-227.92
18	19	51.30	-4471.02	-722.53	178.36	-4.442	-411.57	-0.3	-447.59	-0.3	-447.59	0	-450.20
19	19	51.30	-4527.00	-136.13	177.87	-4.442	-416.98	-0.3	-452.91	-0.3	-452.91	0	-455.51
19	20	53.65	-4518.72	-80.10	432.74	-3.884	-468.70	-0.3	-569.16	-0.3	-569.16	0	-577.57
20	20	53.65	-3559.91	-513.87	-1359.37	-3.884	-568.77	-0.3	-253.21	-0.3	-253.21	0	-226.79
20	21	56.00	-3557.03	-468.58	-204.50	-3.325	-561.05	-0.3	-500.20	-0.3	-500.20	0	-494.17
21	21	56.00	-3051.45	-1138.52	-2043.72	-3.325	-921.43	-0.3	346.57	0	0.00	0	0.00
21	22	57.00	-3054.54	-1117.03	-904.91	-3.088	-759.00	-0.3	-106.25	0	0.00	0	0.00
22	22	57.00	-3251.32	-82.55	-904.98	-3.088	-792.21	-0.3	-139.42	0	0.00	0	0.00
22	23	58.00	-3247.80	-63.47	-828.30	-2.85	-921.81	-0.3	-207.44	0	0.00	0	0.00
23	23	58.00	-1229.78	-95.88	-531.77	-2.85	-1144.16	-0.3	-74.60	0	0.00	0	0.00
23	24	59.00	-1229.65	-86.47	-440.05	-2.85	-1072.08	-0.3	-186.99	0	0.00	0	0.00
24	24	59.00	-636.41	-103.02	-181.55	-2.85	-518.59	-0.3	-153.43	0	0.00	0	0.00
24	25	63.11	-636.41	-64.31	162.56	-2.85	-248.45	-0.3	-575.40	0	0.00	0	0.00
25	25	63.11	-949.52	-64.31	-124.57	-2.85	-658.87	-0.3	-408.33	0	0.00	0	0.00
25	26	67.23	-949.52	-42.88	95.84	-2.85	-485.84	-0.3	-678.61	0	0.00	0	0.00
26	26	67.23	-1241.76	-42.88	-561.23	-2.85	-1174.35	-0.3	-45.56	0	0.00	0	0.00
26	27	71.34	-1241.76	-21.44	-428.98	-2.85	-1070.53	-0.3	-207.73	0	0.00	0	0.00
27	27	71.34	-1367.00	-21.44	-543.83	-2.85	-1234.70	-0.3	-140.90	0	0.00	0	0.00
27	28	75.45	-1367.00	0.00	-499.75	-2.85	-1200.10	-0.3	-194.96	0	0.00	0	0.00
28	28	75.45	-1367.00	0.00	-499.75	-2.85	-1200.10	-0.3	-194.96	0	0.00	0	0.00
28	29	79.56	-1367.00	21.44	-543.83	-2.85	-1234.70	-0.3	-140.90	0	0.00	0	0.00
29	29	79.56	-1241.76	21.44	-428.98	-2.85	-1070.53	-0.3	-207.73	0	0.00	0	0.00
29	30	83.68	-1241.76	42.88	-561.23	-2.85	-1174.35	-0.3	-45.56	0	0.00	0	0.00
30	30	83.68	-949.52	42.88	95.84	-2.85	-485.84	-0.3	-678.61	0	0.00	0	0.00
30	31	87.79	-949.52	64.31	-124.57	-2.85	-658.87	-0.3	-408.33	0	0.00	0	0.00
31	31	87.79	-636.41	64.31	162.56	-2.85	-248.45	-0.3	-575.40	0	0.00	0	0.00
31	32	91.90	-636.41	103.02	-181.55	-2.85	-518.59	-0.3	-153.43	0	0.00	0	0.00
32	32	91.90	-1229.65	86.47	-440.05	-2.85	-1072.08	-0.3	-186.99	0	0.00	0	0.00
32	33	92.90	-1229.78	95.88	-531.77	-2.85	-1144.16	-0.3	-74.60	0	0.00	0	0.00
33	33	92.90	-3247.80	63.47	-828.01	-2.85	-921.71	-0.3	-207.59	0	0.00	0	0.00
33	34	93.90	-3251.32	82.55	-904.73	-3.088	-792.15	-0.3	-139.53	0	0.00	0	0.00
34	34	93.90	-3054.54	1117.03	-904.80	-3.088	-758.97	-0.3	-106.30	0	0.00	0	0.00
34	35	94.90	-3051.45	1138.52	-2042.75	-3.325	-921.21	-0.3	346.19	0	0.00	0	0.00
35	35	94.90	-3557.03	468.58	-204.59	-3.325	-561.07	-0.3	-500.19	-0.3	-500.19	0	-494.15
35	36	97.25	-3559.91	513.87	-1359.23	-3.884	-568.76	-0.3	-253.22	-0.3	-253.22	0	-226.81
36	36	97.25	-4518.72	80.10	432.82	-3.884	-468.69	-0.3	-569.17	-0.3	-569.17	0	-577.58
36	37	99.60	-4527.00	136.14	178.32	-4.442	-416.94	-0.3	-452.96	-0.3	-452.96	0	-455.57
37	37	99.60	-4471.02	722.54	177.83	-4.442	-411.62	-0.3	-447.54	-0.3	-447.54	0	-450.14
37	38	101.90	-4468.43	564.67	-1348.13	-5	-497.10	-0.3	-244.07	-0.3	-244.07	0	-227.92
38	38	101.90	-4373.64	1075.70	-1348.18	-5	-308.02	-0.3	-154.67	-0.3	-154.67	0	-144.89
38	39	104.45	-4392.40	887.01	-3863.15	-5	-479.96	-0.3	-40.56	-0.3	-40.56	0	-12.51
39	39	104.45	-4436.71	-893.33	-3871.11	-5	-482.70	-0.3	-42.39	-0.3	-42.39	0	-14.28
39	40	107.00	-4417.97	-1081.85	-1340.70	-5	-309.70	-0.3	-157.21	-0.3	-157.21	0	-147.48
40	40	107.00	-4513.17	-565.70	-1340.79	-5	-500.18	-0.3	-248.54	-0.3	-248.54	0	-232.47
40	41	109.30	-4515.76	-723.57	188.05	-4.442	-414.91	-0.3	-452.89	-0.3	-452.89	0	-455.65
41	41	109.30	-4571.49	-131.33	187.57	-4.442	-420.30	-0.3	-458.19	-0.3	-458.19	0	-460.94
41	42	111.65	-4563.22	-75.30	431.05	-3.884	-474.02	-0.3	-574.08	-0.3	-574.08	0	-582.46
42	42	111.65	-3604.65	-512.79	-1361.06	-3.884	-574.12	-0.3	-258.16	-0.3	-258.16	0	-231.71
42	43	114.00	-3601.77	-467.50	-208.76	-3.325	-568.39	-0.3	-506.27	-0.3	-506.27	0	-500.11
43	43	114.00	-3095.46	-1146.61	-2047.97	-3.325	-928.87	-0.3	341.76	0	0.00	0	0.00
43	44	115.00	-3098.54	-1125.12	-901.00	-3.088	-765.37	-0.3	-115.44	0	0.00	0	0.00
44	44	115.00	-3295.61	-76.16	-901.07	-3.088	-798.64	-0.3	-148.66	0	0.00	0	0.00
44	45	116.00	-3292.09	-57.08	-830.90	-2.85	-931.53	-0.3	-214.92	0	0.00	0	0.00
45	45	116.00	-1274.54	-96.96	-534.37	-2.85	-1172.65	-0.3	-97.86	0	0.00	0	0.00
45	46	117.00	-1274.40	-87.55	-441.56	-2.85	-1099.71	-0.3	-211.59	0	0.00	0	0.00
46	46	117.00	-672.45	-104.90	-184.65	-2.85	-542.32	-0.3	-170.93	0	0.00	0	0.00
46	47	119.78	-672.45	-78.78	70.19	-2.85	-342.25	-0.3	-483.43	0	0.00	0	0.00
47	47	119.78	-672.45	-78.78	70.19	-2.85	-342.25	-0.3	-483.43	0	0.00	0	0.00
47	48	122.55	-672.45	-52.65	252.53	-2.85	-199.11	-0.3	-707.02	0	0.00	0	0.00
48	48	122.55	-1131.68	-52.65	-179.60	-2.85	-809.72	-0.3	-448.48	0	0.00	0	0.00
48	49	128.10	-1131.68	-23.73	32.32	-2.85	-643.35	-0.3	-708.35	0	0.00	0	0.00
49	49	128.10	-1444.79	-23.73	-254.81	-2.85	-1053.78	-0.3	-541.28	0	0.00	0	0.00
49	50	133.65	-1444.79	5.22	-203.45	-2.85	-1013.46	-0.3	-604.26	0	0.00	0	0.00
50	50	133.65	-1444.79	5.22	-203.45	-2.85	-1013.46	-0.3	-604.26	0	0.00	0	0.00
50	51	139.20	-1444.79	34.15	-312.69	-2.85	-1099.22	-0.3	-470.30	0	0.00	0	0.00
51	51	139.20	-818.57	34.15	272.58	-2.85	-269.72	-0.3	-817.95	0	0.00	0	0.00
51	52	144.75	-818.57	63.09	2.78	-2.85	-481.52	-0.3	-487.10	0	0.00	0	0.00
52	52	144.75	-672.45	63.09	136.77	-2.85	-289.99	-0.3	-565.07	0	0.00	0	0.00
52	53	147.53	-672.45	77.55	-58.35	-2.85	-443.16	-0.3	-325.80	0	0.00	0	0.00
53	53	147.53	-672.45	77.55	-58.35	-2.85	-443.16	-0.3	-325.80	0	0.00	0	0.00
53	54	150.30	-672.45	92.01	-293.62	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 6

(1; 1)ppcaja2 + (.9; 1.1)Pret1.2sup + (.9; 1.1)Pr2.1infcaja + (1; 1)ppvlat + (.95; 1.05)pret3.2pretlosadevlat.TOT.To + (1; 1)ppvcentral + (1; 1)PPprelosa + (.95; 1.05)pret4.2pretlosadove.TOT.To + (1; 1)pplosa1 + (.9; 1.1)pret5.1barrecorta.TOT.To + (1. 1)desbloqeo

Coef. esc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-623.24	0.00	-264.80	-2.85	-576.16	-0.3	-43.56	0	0.00	0	0.00
1	2	0.60	-623.24	3.13	-265.74	-2.85	-576.90	-0.3	-42.41	0	0.00	0	0.00
2	2	0.60	-606.83	-92.28	-265.74	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00
2	3	3.38	-606.83	-78.00	-29.22	-2.85	-381.52	-0.3	-322.75	0	0.00	0	0.00
3	3	3.38	-606.83	-78.00	-29.22	-2.85	-381.52	-0.3	-322.75	0	0.00	0	0.00
3	4	6.15	-606.83	-63.54	167.15	-2.85	-227.36	-0.3	-563.56	0	0.00	0	0.00
4	4	6.15	-739.03	-63.54	45.93	-2.85	-400.65	-0.3	-493.02	0	0.00	0	0.00
4	5	11.70	-739.03	-34.60	318.24	-2.85	-186.87	-0.3	-826.95	0	0.00	0	0.00
5	5	11.70	-1305.61	-34.60	-211.29	-2.85	-937.37	-0.3	-512.41	0	0.00	0	0.00
5	6	17.25	-1305.61	-5.67	-99.53	-2.85	-849.64	-0.3	-649.45	0	0.00	0	0.00
6	6	17.25	-1305.61	-5.67	-99.53	-2.85	-849.64	-0.3	-649.45	0	0.00	0	0.00
6	7	22.80	-1305.61	23.28	-148.37	-2.85	-887.98	-0.3	-589.56	0	0.00	0	0.00
7	7	22.80	-1022.35	23.28	111.41	-2.85	-516.66	-0.3	-740.73	0	0.00	0	0.00
7	8	28.35	-1022.35	52.20	-98.00	-2.85	-681.05	-0.3	-483.95	0	0.00	0	0.00
8	8	28.35	-606.88	52.20	292.97	-2.85	-131.39	-0.3	-707.92	-0.3	-1.45	0	-2.09
8	9	31.13	-606.88	78.33	111.90	-2.85	-273.82	-0.3	-484.88	-0.3	-1.60	0	-2.30
9	9	31.13	-606.83	78.33	111.90	-2.85	-273.80	-0.3	-484.86	-0.3	-1.59	0	-2.28
9	10	33.90	-606.83	104.45	-141.69	-2.85	-473.16	-0.3	-172.91	-0.3	-1.73	0	-2.49
10	10	33.90	-1099.53	89.81	-362.58	-2.85	-937.72	-0.3	-193.20	-0.3	-1.71	0	-2.47
10	11	34.90	-1099.67	99.22	-457.57	-2.85	-1012.48	-0.3	-76.44	-0.3	-1.76	0	-2.55
11	11	34.90	-3190.22	64.79	-448.97	-2.85	-787.51	-0.3	-394.35	-0.3	-1.64	0	-2.10
11	12	35.90	-3193.74	83.80	-526.44	-3.088	-681.83	-0.3	-297.11	-0.3	-1.58	0	-1.95
12	12	35.90	-2999.55	1099.82	-526.49	-3.088	-649.08	-0.3	-264.32	-0.3	-1.59	0	-1.96
12	13	36.90	-2996.47	1121.31	-1647.22	-3.325	-822.54	-0.3	203.77	-0.3	-1.50	0	-1.81
13	13	36.90	-3816.88	442.78	523.68	-3.325	-477.35	-0.3	-633.18	-0.3	-633.18	0	-648.64
13	14	39.25	-3819.76	488.07	-570.13	-3.884	-506.03	-0.3	-373.68	-0.3	-373.68	0	-362.60
14	14	39.25	-4981.89	2.38	1620.10	-3.884	-382.62	-0.3	-758.71	-0.3	-758.71	0	-790.19
14	15	41.60	-4990.16	58.42	1550.24	-4.442	-327.13	-0.3	-640.26	-0.3	-640.26	0	-662.94
	15	41.60	-4940.35	705.62	1549.68	-4.442	-322.41	-0.3	-635.42	-0.3	-635.42	0	-658.09
	16	43.90	-4937.74	546.68	72.64	-5	-407.44	-0.3	-421.08	-0.3	-421.08	0	-421.95
	16	43.90	-4841.90	1111.87	72.69	-5	-234.56	-0.3	-242.83	-0.3	-242.83	0	-243.36
	17	46.45	-4859.50	934.84	-2550.09	-5	-413.78	-0.3	-123.73	-0.3	-123.73	0	-105.21
17	17	46.45	-4823.80	-929.76	-2556.12	-5	-412.43	-0.3	-121.69	-0.3	-121.69	0	-103.13
17	18	49.00	-4806.20	-1106.79	53.13	-5	-234.13	-0.3	-240.17	-0.3	-240.17	0	-240.56
18	18	49.00	-4901.69	-545.72	53.15	-5	-406.19	-0.3	-416.17	-0.3	-416.17	0	-416.80
18	19	51.30	-4904.30	-704.67	1528.54	-4.442	-321.02	-0.3	-629.76	-0.3	-629.76	0	-652.12
19	19	51.30	-4954.29	-62.17	1527.99	-4.442	-325.87	-0.3	-634.50	-0.3	-634.50	0	-656.85
19	20	53.65	-4946.02	-6.14	1607.30	-3.884	-379.99	-0.3	-753.12	-0.3	-753.12	0	-784.35
20	20	53.65	-3783.73	-488.83	-583.11	-3.884	-503.41	-0.3	-368.05	-0.3	-368.05	0	-356.72
20	21	56.00	-3780.85	-443.54	512.72	-3.325	-473.86	-0.3	-626.42	-0.3	-626.42	0	-641.55
21	21	56.00	-2961.10	-1114.68	-1659.12	-3.325	-818.53	-0.3	209.01	-0.3	0.64	0	0.77
21	22	57.00	-2964.19	-1093.19	-544.31	-3.088	-646.12	-0.3	-255.67	-0.3	0.70	0	0.86
22	22	57.00	-3158.08	-88.83	-544.36	-3.088	-678.85	-0.3	-288.36	-0.3	0.70	0	0.86
22	23	58.00	-3154.56	-69.75	-461.76	-2.85	-782.42	-0.3	-386.86	-0.3	0.75	0	0.96
23	23	58.00	-1063.68	-98.12	-470.13	-2.85	-996.05	-0.3	-57.59	-0.3	0.80	0	1.16
23	24	59.00	-1063.55	-88.71	-376.25	-2.85	-922.28	-0.3	-172.63	-0.3	0.80	0	1.16
24	24	59.00	-562.11	-103.02	-156.95	-2.85	-453.81	-0.3	-145.25	-0.3	0.80	0	1.16
24	25	63.11	-562.11	-64.31	187.16	-2.85	-183.67	-0.3	-567.22	-0.3	0.80	0	1.16
25	25	63.11	-845.40	-64.31	-72.61	-2.85	-556.56	-0.3	-410.51	0	0.00	0	0.00
25	26	67.23	-845.40	-42.88	147.80	-2.85	-383.53	-0.3	-680.80	0	0.00	0	0.00
26	26	67.23	-1109.81	-42.88	-446.69	-2.85	-1006.47	-0.3	-108.03	0	0.00	0	0.00
26	27	71.34	-1109.81	-21.44	-314.44	-2.85	-902.65	-0.3	-270.21	0	0.00	0	0.00
27	27	71.34	-1223.12	-21.44	-418.36	-2.85	-1051.18	-0.3	-209.74	0	0.00	0	0.00
27	28	75.45	-1223.12	0.00	-374.28	-2.85	-1016.58	-0.3	-263.80	0	0.00	0	0.00
28	28	75.45	-1223.12	0.00	-374.28	-2.85	-1016.58	-0.3	-263.80	0	0.00	0	0.00
28	29	79.56	-1223.12	21.44	-418.36	-2.85	-1051.18	-0.3	-209.74	0	0.00	0	0.00
29	29	79.56	-1109.81	21.44	-314.44	-2.85	-902.65	-0.3	-270.21	0	0.00	0	0.00
29	30	83.68	-1109.81	42.88	-446.69	-2.85	-1006.47	-0.3	-108.03	0	0.00	0	0.00
30	30	83.68	-845.40	42.88	147.80	-2.85	-383.53	-0.3	-680.80	0	0.00	0	0.00
30	31	87.79	-845.40	64.31	-72.61	-2.85	-556.56	-0.3	-410.51	0	0.00	0	0.00
31	31	87.79	-562.11	64.31	187.16	-2.85	-183.67	-0.3	-567.22	-0.3	0.80	0	1.16
	32	91.90	-562.11	103.02	-156.95	-2.85	-453.81	-0.3	-145.25	-0.3	0.80	0	1.16
	32	91.90	-1063.55	88.71	-376.25	-2.85	-922.28	-0.3	-172.63	-0.3	0.80	0	1.16
	33	92.90	-1063.68	98.12	-470.13	-2.85	-996.05	-0.3	-57.59	-0.3	0.80	0	1.16
33	33	92.90	-3154.56	69.75	-461.53	-2.85	-782.35	-0.3	-386.99	-0.3	0.75	0	0.96
33	34	93.90	-3158.08	88.83	-544.13	-3.088	-678.78	-0.3	-288.47	-0.3	0.70	0	0.86
34	34	93.90	-2964.19	1093.19	-544.18	-3.088	-646.08	-0.3	-255.73	-0.3	0.70	0	0.86
34	35	94.90	-2961.10	1114.68	-1658.23	-3.325	-818.33	-0.3	208.67	-0.3	0.64	0	0.77
35	35	94.90	-3780.85	443.54	512.67	-3.325	-473.86	-0.3	-626.42	-0.3	-626.42	0	-641.55
35	36	97.25	-3783.73	488.83	-582.95	-3.884	-503.39	-0.3	-368.07	-0.3	-368.07	0	-356.74
36	36	97.25	-4946.02	6.14	1607.28	-3.884	-380.00	-0.3	-753.11	-0.3	-753.11	0	-784.35
36	37	99.60	-4954.29	62.18	1528.50	-4.442	-325.82	-0.3	-634.55	-0.3	-634.55	0	-656.91
37	37	99.60	-4904.30	704.68	1527.95	-4.442	-321.07	-0.3	-629.70	-0.3	-629.70	0	-652.05
37	38	101.90	-4901.69	545.73	53.05	-5	-406.20	-0.3	-416.16	-0.3	-416.16	0	-416.79
38	38	101.90	-4806.20	1106.80	53.10	-5	-234.13	-0.3	-240.17	-0.3	-240.17	0	-240.56
38	39	104.45	-4823.80	929.77	-2556.65	-5	-412.46	-0.3	-121.66	-0.3	-121.66	0	-103.10
39	39	104.45	-4859.50	-934.83	-2549.56	-5	-413.75	-0.3	-123.75	-0.3	-123.75	0	-105.24
39	40	107.00	-4841.90	-1111.86	72.72	-5	-234.56	-0.3	-242.83	-0.3	-242.83	0	-243.36
40	40	107.00	-4937.74	-546.67	72.74	-5	-407.43	-0.3	-421.09	-0.3	-421.09	0	-421.96
40	41	109.30	-4940.35	-705.61	1550.28	-4.442	-322.35	-0.3	-635.48	-0.3	-635.48	0	-658.16
41	41	109.30	-4990.16	-58.41	1549.72	-4.442	-327.18	-0.3	-640.20	-0.3	-640.20	0	-662.87
41	42	111.65	-4981.89	-2.38	1620.12	-3.884	-382.61	-0.3	-758.71	-0.3	-758.71	0	-790.19
42	42	111.65	-3819.76	-488.07	-570.30	-3.884	-506.05	-0.3	-373.66	-0.3	-373.66	0	-362.58
42	43	114.00	-3816.88	-442.78	523.73	-3.325	-477.35	-0.3	-633.19	-0.3	-633.19	0	-648.64
43	43	114.00	-2996.47	-1121.31	-1648.10	-3.325	-822.75	-0.3	204.11	-0.3	-1.50	0	-1.81
43	44	115.00	-2999.55	-1099.82	-526.62	-3.088	-649.11	-0.3	-264.26	-0.3	-1.59	0	-1.96
44	44	115.00	-3193.74	-83.80	-526.67	-3.088	-681.89	-0.3	-297.00	-0.3	-1.58	0	-1.95
44	45	116.00	-3190.22	-64.79	-449.20	-2.85	-787.58	-0.3	-394.22	-0.3	-1.64	0	-2.10
45	45	116.00	-1099.67	-99.22	-457.57	-2.85	-1012.48	-0.3	-76.44	-0.3	-1.76	0	-2.55
45	46	117.00	-1099.53	-89.81	-362.58	-2.85	-937.72	-0.3	-193.20	-0.3	-1.71	0	-2.47
46	46	117.00	-606.83	-104.45	-141.69	-2.85	-473.16	-0.3	-172.91	-0.3	-1.73	0	-2.49
46	47	119.78	-606.83	-78.33	111.90	-2.85	-273.80	-0.3	-484.86	-0.3	-1.59	0	-2.28
47	47	119.78	-606.88	-78.33	111.90	-2.85	-273.82	-0.3	-484.88	-0.3	-1.60	0	-2.30
47	48	122.55	-606.88	-52.20	292.97	-2.85	-131.39	-0.3	-707.92	-0.3	-1.45	0	-2.09
	48	122.55	-1022.35	-52.20	-98.00	-2.85	-681.05	-0.3	-483.95	0	0.00	0	0.00
	49	128.10	-1022.35	-23.28	111.41	-2.85	-516.66	-0.3	-740.73	0	0.00	0	0.00
	49	128.10	-1305.61	-23.28	-148.37	-2.85	-887.98	-0.3	-589.56	0	0.00	0	0.00
49	50	133.65	-1305.61	5.67	-99.53	-2.85	-849.64	-0.3	-649.45	0	0.00	0	0.00
50	50	133.65	-1305.61	5.67	-99.53	-2.85	-849.64	-0.3	-649.45	0	0.00	0	0.00
50	51	139.20	-1305.61	34.60	-211.29	-2.85	-937.37	-0.3	-512.41	0	0.00	0	0.00
51	51	139.20	-739.03	34.60	318.24	-2.85	-186.87	-0.3	-826.95	0	0.00	0	0.00
51	52	144.75	-739.03	63.54	45.93	-2.85	-400.65	-0.3	-493.02	0	0.00	0	0.00
52	52	144.75	-606.83	63.54	167.15	-2.85	-227.36	-0.3	-563.56	0	0.00	0	0.00
52	53	147.53	-606.83	78.00	-29.22	-2.85	-381.52	-0.3	-322.75	0	0.00	0	0.00
53	53	147.53	-606.83	78.00	-29.22	-2.85	-381.52	-0.3	-322.75	0	0.00	0	0.00
53	54	150.30	-606.83	92.28	-265.74	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 6

(1; 1)ppcaja2 + (.9; 1.1)Pret1.2sup + (.9; 1.1)Pr2.1infcaja + (1; 1)ppvlat + (.95; 1.05)pret3.2pretlosadevlat.TOT.To + (1; 1)ppvcentral + (1; 1)PPprelosa + (.95; 1.05)pret4.2pretlosadove.TOT.To + (1; 1)pplosa1 + (.9; 1.1)pret5.1barrecorta.TOT To + (1. 1)desbloqeo

Coef. esc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-688.84	0.00	-292.88	-2.85	-636.81	-0.3	-48.15	0	0.00	0	0.00
1	2	0.60	-688.84	3.13	-293.62	-2.85	-637.55	-0.3	-46.99	0	0.00	0	0.00
2	2	0.60	-672.45	-92.34	-293.62	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00
2	3	3.38	-672.45	-77.88	-57.40	-2.85	-442.42	-0.3	-326.97	0	0.00	0	0.00
3	3	3.38	-672.45	-77.88	-57.40	-2.85	-442.42	-0.3	-326.97	0	0.00	0	0.00
3	4	6.15	-672.45	-63.43	138.67	-2.85	-288.50	-0.3	-567.40	0	0.00	0	0.00
4	4	6.15	-818.57	-63.43	4.68	-2.85	-480.03	-0.3	-489.43	0	0.00	0	0.00
4	5	11.70	-818.57	-34.49	276.38	-2.85	-266.73	-0.3	-822.61	0	0.00	0	0.00
5	5	11.70	-1444.79	-34.49	-308.89	-2.85	-1096.23	-0.3	-474.96	0	0.00	0	0.00
5	6	17.25	-1444.79	-5.56	-197.75	-2.85	-1008.98	-0.3	-611.25	0	0.00	0	0.00
6	6	17.25	-1444.79	-5.56	-197.75	-2.85	-1008.98	-0.3	-611.25	0	0.00	0	0.00
6	7	22.80	-1444.79	23.39	-247.21	-2.85	-1047.81	-0.3	-550.60	0	0.00	0	0.00
7	7	22.80	-1131.71	23.39	39.92	-2.85	-637.40	-0.3	-717.68	0	0.00	0	0.00
7	8	28.35	-1131.71	52.31	-170.10	-2.85	-802.27	-0.3	-460.15	0	0.00	0	0.00
8	8	28.35	-672.50	52.31	262.03	-2.85	-194.46	-0.3	-708.74	-0.3	-1.45	0	-2.09
8	9	31.13	-672.50	78.44	80.64	-2.85	-337.13	-0.3	-485.32	-0.3	-1.60	0	-2.30
9	9	31.13	-672.45	78.44	80.64	-2.85	-337.11	-0.3	-485.31	-0.3	-1.59	0	-2.28
9	10	33.90	-672.45	104.56	-173.25	-2.85	-536.71	-0.3	-172.97	-0.3	-1.73	0	-2.49
10	10	33.90	-1274.33	87.21	-430.16	-2.85	-1094.08	-0.3	-213.62	-0.3	-1.71	0	-2.47
10	11	34.90	-1274.47	96.62	-522.63	-2.85	-1166.85	-0.3	-99.95	-0.3	-1.76	0	-2.55
11	11	34.90	-3291.96	56.76	-818.87	-2.85	-929.04	-0.3	-216.85	-0.3	-1.64	0	-2.10
11	12	35.90	-3295.48	75.84	-888.74	-3.088	-796.54	-0.3	-150.48	-0.3	-1.58	0	-1.95
12	12	35.90	-3098.51	1124.78	-888.81	-3.088	-763.32	-0.3	-117.21	-0.3	-1.59	0	-1.96
12	13	36.90	-3095.43	1146.27	-2034.57	-3.325	-926.87	-0.3	339.76	-0.3	-1.50	0	-1.81
13	13	36.90	-3601.72	467.16	-196.42	-3.325	-566.31	-0.3	-507.87	-0.3	-507.87	0	-502.07
13	14	39.25	-3604.60	512.45	-1347.69	-3.884	-572.54	-0.3	-259.68	-0.3	-259.68	0	-233.50
14	14	39.25	-4563.17	74.96	444.37	-3.884	-472.45	-0.3	-575.60	-0.3	-575.60	0	-584.24
14	15	41.60	-4571.44	131.00	202.04	-4.442	-418.88	-0.3	-459.69	-0.3	-459.69	0	-462.65
15	15	41.60	-4515.75	723.24	201.56	-4.442	-413.59	-0.3	-454.30	-0.3	-454.30	0	-457.25
15	16	43.90	-4513.16	565.36	-1325.96	-5	-498.84	-0.3	-249.97	-0.3	-249.97	0	-234.09
16	16	43.90	-4418.00	1081.52	-1326.01	-5	-308.71	-0.3	-157.88	-0.3	-157.88	0	-148.26
16	17	46.45	-4436.74	893.00	-3855.93	-5	-481.66	-0.3	-43.08	-0.3	-43.08	0	-15.09
17	17	46.45	-4392.40	-887.00	-3867.94	-5	-480.29	-0.3	-40.34	-0.3	-40.34	0	-12.26
17	18	49.00	-4373.64	-1075.69	-1353.35	-5	-308.37	-0.3	-154.44	-0.3	-154.44	0	-144.61
18	18	49.00	-4468.43	-564.66	-1353.43	-5	-497.58	-0.3	-243.56	-0.3	-243.56	0	-227.34
18	19	51.30	-4471.02	-722.53	173.06	-4.442	-412.08	-0.3	-447.04	-0.3	-447.04	0	-449.57
19	19	51.30	-4527.00	-136.13	172.57	-4.442	-417.50	-0.3	-452.36	-0.3	-452.36	0	-454.88
19	20	53.65	-4518.72	-80.10	427.44	-3.884	-469.32	-0.3	-568.55	-0.3	-568.55	0	-576.86
20	20	53.65	-3559.91	-513.87	-1364.67	-3.884	-569.40	-0.3	-252.60	-0.3	-252.60	0	-226.08
20	21	56.00	-3557.03	-468.58	-209.80	-3.325	-561.94	-0.3	-499.51	-0.3	-499.51	0	-493.32
21	21	56.00	-3051.45	-1138.52	-2049.02	-3.325	-922.19	-0.3	347.26	-0.3	0.64	0	0.77
21	22	57.00	-3054.54	-1117.03	-910.21	-3.088	-759.88	-0.3	-105.50	-0.3	0.70	0	0.86
22	22	57.00	-3251.32	-82.55	-910.28	-3.088	-793.10	-0.3	-138.67	-0.3	0.70	0	0.86
22	23	58.00	-3247.80	-63.47	-833.60	-2.85	-922.88	-0.3	-206.63	-0.3	0.75	0	0.96
23	23	58.00	-1229.78	-95.88	-537.07	-2.85	-1146.76	-0.3	-73.65	-0.3	0.80	0	1.16
23	24	59.00	-1229.65	-86.47	-445.35	-2.85	-1074.68	-0.3	-186.04	-0.3	0.80	0	1.16
24	24	59.00	-636.41	-103.02	-186.85	-2.85	-521.20	-0.3	-152.48	-0.3	0.80	0	1.16
24	25	63.11	-636.41	-64.31	157.26	-2.85	-251.06	-0.3	-574.45	-0.3	0.80	0	1.16
25	25	63.11	-949.52	-64.31	-129.87	-2.85	-663.03	-0.3	-401.83	0	0.00	0	0.00
25	26	67.23	-949.52	-42.88	90.54	-2.85	-490.00	-0.3	-672.11	0	0.00	0	0.00
26	26	67.23	-1241.76	-42.88	-566.53	-2.85	-1178.51	-0.3	-39.06	0	0.00	0	0.00
26	27	71.34	-1241.76	-21.44	-434.28	-2.85	-1074.69	-0.3	-201.23	0	0.00	0	0.00
27	27	71.34	-1367.00	-21.44	-549.13	-2.85	-1238.86	-0.3	-134.41	0	0.00	0	0.00
27	28	75.45	-1367.00	0.00	-505.05	-2.85	-1204.26	-0.3	-188.46	0	0.00	0	0.00
28	28	75.45	-1367.00	0.00	-505.05	-2.85	-1204.26	-0.3	-188.46	0	0.00	0	0.00
28	29	79.56	-1367.00	21.44	-549.13	-2.85	-1238.86	-0.3	-134.41	0	0.00	0	0.00
29	29	79.56	-1241.76	21.44	-434.28	-2.85	-1074.69	-0.3	-201.23	0	0.00	0	0.00
29	30	83.68	-1241.76	42.88	-566.53	-2.85	-1178.51	-0.3	-39.06	0	0.00	0	0.00
30	30	83.68	-949.52	42.88	90.54	-2.85	-490.00	-0.3	-672.11	0	0.00	0	0.00
30	31	87.79	-949.52	64.31	-129.87	-2.85	-663.03	-0.3	-401.83	0	0.00	0	0.00
31	31	87.79	-636.41	64.31	157.26	-2.85	-251.06	-0.3	-574.45	-0.3	0.80	0	1.16
31	32	91.90	-636.41	103.02	-186.85	-2.85	-521.20	-0.3	-152.48	-0.3	0.80	0	1.16
32	32	91.90	-1229.65	86.47	-445.35	-2.85	-1074.68	-0.3	-186.04	-0.3	0.80	0	1.16
32	33	92.90	-1229.78	95.88	-537.07	-2.85	-1146.76	-0.3	-73.65	-0.3	0.80	0	1.16
33	33	92.90	-3247.80	63.47	-833.31	-2.85	-922.79	-0.3	-206.78	-0.3	0.75	0	0.96
33	34	93.90	-3251.32	82.55	-910.03	-3.088	-793.03	-0.3	-138.78	-0.3	0.70	0	0.86
34	34	93.90	-3054.54	1117.03	-910.10	-3.088	-759.85	-0.3	-105.56	-0.3	0.70	0	0.86
34	35	94.90	-3051.45	1138.52	-2048.05	-3.325	-921.96	-0.3	346.89	-0.3	0.64	0	0.77
35	35	94.90	-3557.03	468.58	-209.89	-3.325	-561.96	-0.3	-499.50	-0.3	-499.50	0	-493.31
35	36	97.25	-3559.91	513.87	-1364.53	-3.884	-569.38	-0.3	-252.61	-0.3	-252.61	0	-226.10
36	36	97.25	-4518.72	80.10	427.52	-3.884	-469.31	-0.3	-568.56	-0.3	-568.56	0	-576.87
36	37	99.60	-4527.00	136.14	173.02	-4.442	-417.46	-0.3	-452.41	-0.3	-452.41	0	-454.94
37	37	99.60	-4471.02	722.54	172.53	-4.442	-412.14	-0.3	-446.98	-0.3	-446.98	0	-449.51
37	38	101.90	-4468.43	564.67	-1353.43	-5	-497.58	-0.3	-243.56	-0.3	-243.56	0	-227.35
38	38	101.90	-4373.64	1075.70	-1353.48	-5	-308.38	-0.3	-154.43	-0.3	-154.43	0	-144.61
38	39	104.45	-4392.40	887.01	-3868.45	-5	-480.32	-0.3	-40.32	-0.3	-40.32	0	-12.23
39	39	104.45	-4436.74	-892.99	-3855.42	-5	-481.63	-0.3	-43.10	-0.3	-43.10	0	-15.11
39	40	107.00	-4418.00	-1081.51	-1325.88	-5	-308.70	-0.3	-157.89	-0.3	-157.89	0	-148.26
40	40	107.00	-4513.16	-565.36	-1325.97	-5	-498.84	-0.3	-249.97	-0.3	-249.97	0	-234.09
40	41	109.30	-4515.75	-723.23	202.08	-4.442	-413.54	-0.3	-454.35	-0.3	-454.35	0	-457.31
41	41	109.30	-4571.44	-130.99	201.60	-4.442	-418.93	-0.3	-459.65	-0.3	-459.65	0	-462.60
41	42	111.65	-4563.17	-74.96	444.28	-3.884	-472.46	-0.3	-575.59	-0.3	-575.59	0	-584.23
42	42	111.65	-3604.60	-512.45	-1347.83	-3.884	-572.56	-0.3	-259.67	-0.3	-259.67	0	-233.48
42	43	114.00	-3601.72	-467.16	-196.33	-3.325	-566.30	-0.3	-507.88	-0.3	-507.88	0	-502.08
43	43	114.00	-3095.43	-1146.27	-2035.54	-3.325	-927.09	-0.3	340.14	-0.3	-1.50	0	-1.81
43	44	115.00	-3098.51	-1124.78	-888.92	-3.088	-763.35	-0.3	-117.16	-0.3	-1.59	0	-1.96
44	44	115.00	-3295.48	-75.84	-888.99	-3.088	-796.61	-0.3	-150.37	-0.3	-1.58	0	-1.95
44	45	116.00	-3291.96	-56.76	-819.16	-2.85	-929.13	-0.3	-216.70	-0.3	-1.64	0	-2.10
45	45	116.00	-1274.47	-96.62	-522.63	-2.85	-1166.85	-0.3	-99.95	-0.3	-1.76	0	-2.55
45	46	117.00	-1274.33	-87.21	-430.16	-2.85	-1094.08	-0.3	-213.62	-0.3	-1.71	0	-2.47
46	46	117.00	-672.45	-104.56	-173.25	-2.85	-536.71	-0.3	-172.97	-0.3	-1.73	0	-2.49
46	47	119.78	-672.45	-78.44	80.64	-2.85	-337.11	-0.3	-485.31	-0.3	-1.59	0	-2.28
47	47	119.78	-672.50	-78.44	80.64	-2.85	-337.13	-0.3	-485.32	-0.3	-1.60	0	-2.30
47	48	122.55	-672.50	-52.31	262.03	-2.85	-194.46	-0.3	-708.74	-0.3	-1.45	0	-2.09
48	48	122.55	-1131.71	-52.31	-170.10	-2.85	-802.27	-0.3	-460.15	0	0.00	0	0.00
48	49	128.10	-1131.71	-23.39	39.92	-2.85	-637.40	-0.3	-717.68	0	0.00	0	0.00
49	49	128.10	-1444.79	-23.39	-247.21	-2.85	-1047.81	-0.3	-550.60	0	0.00	0	0.00
49	50	133.65	-1444.79	5.56	-197.75	-2.85	-1008.98	-0.3	-611.25	0	0.00	0	0.00
50	50	133.65	-1444.79	5.56	-197.75	-2.85	-1008.98	-0.3	-611.25	0	0.00	0	0.00
50	51	139.20	-1444.79	34.49	-308.89	-2.85	-1096.23	-0.3	-474.96	0	0.00	0	0.00
51	51	139.20	-818.57	34.49	276.38	-2.85	-266.73	-0.3	-822.61	0	0.00	0	0.00
51	52	144.75	-818.57	63.43	4.68	-2.85	-480.03	-0.3	-489.43	0	0.00	0	0.00
52	52	144.75	-672.45	63.43	138.67	-2.85	-288.50	-0.3	-567.40	0	0.00	0	0.00
52	53	147.53	-672.45	77.88	-57.40	-2.85	-442.42	-0.3	-326.97	0	0.00	0	0.00
53	53	147.53	-672.45	77.88	-57.40	-2.85	-442.42	-0.3	-326.97	0	0.00	0	0.00
53	54	150.30	-672.45	92.34	-293.62	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 7

[illegible]

Coef. acc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-623.24	0.00	-264.80	-2.85	-576.16	-0.3	-43.56	0	0.00	0	0.00
1	2	0.60	-623.24	3.13	-265.74	-2.85	-576.90	-0.3	-42.41	0	0.00	0	0.00
2	2	0.60	-606.83	-99.81	-265.74	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00
2	3	3.38	-606.83	-87.20	-3.68	-2.85	-361.47	-0.3	-354.07	0	0.00	0	0.00
3	3	3.38	-606.83	-87.20	-3.68	-2.85	-361.47	-0.3	-354.07	0	0.00	0	0.00
3	4	6.15	-606.83	-72.74	218.25	-2.85	-187.25	-0.3	-626.22	0	0.00	0	0.00
4	4	6.15	-739.03	-72.74	97.02	-2.85	-360.54	-0.3	-555.68	0	0.00	0	0.00
4	5	11.70	-739.03	-43.80	420.42	-2.85	-106.66	-0.3	-952.25	0	0.00	0	0.00
5	5	11.70	-1305.61	-43.80	-109.11	-2.85	-857.16	-0.3	-637.71	0	0.00	0	0.00
5	6	17.25	-1305.61	-14.87	53.74	-2.85	-729.31	-0.3	-837.41	0	0.00	0	0.00
6	6	17.25	-1305.61	-14.87	53.74	-2.85	-729.31	-0.3	-837.41	0	0.00	0	0.00
6	7	22.80	-1305.61	14.07	55.99	-2.85	-727.55	-0.3	-840.16	0	0.00	0	0.00
7	7	22.80	-1023.08	14.10	315.76	-2.85	-356.66	-0.3	-991.76	0	0.00	0	0.00
7	8	28.35	-1023.08	43.02	157.45	-2.85	-480.94	-0.3	-797.63	0	0.00	0	0.00
8	8	28.35	-608.31	43.10	548.43	-2.85	-6.18	-0.3	-754.21	-0.3	-40.57	0	-58.25
8	9	31.13	-608.31	69.23	392.89	-2.85	-136.05	-0.3	-535.76	-0.3	-44.59	0	-64.04
9	9	31.13	-606.83	69.12	392.89	-2.85	-135.62	-0.3	-535.33	-0.3	-44.23	0	-63.68
9	10	33.90	-606.83	95.24	164.85	-2.85	-322.42	-0.3	-227.96	-0.3	-48.25	0	-69.46
10	10	33.90	-1097.66	80.80	-56.04	-2.85	-786.44	-0.3	-247.72	-0.3	-47.77	0	-68.99
10	11	34.90	-1097.80	90.21	-141.82	-2.85	-856.67	-0.3	-132.61	-0.3	-49.22	0	-71.08
11	11	34.90	-3186.84	56.22	-133.22	-2.85	-722.97	-0.3	-442.19	-0.3	-45.90	0	-58.58
11	12	35.90	-3190.36	75.23	-201.49	-3.088	-627.32	-0.3	-343.00	-0.3	-44.03	0	-54.39
12	12	35.90	-2998.65	1090.66	-201.54	-3.088	-594.89	-0.3	-310.52	-0.3	-44.33	0	-54.70
12	13	36.90	-2995.57	1112.15	-1313.06	-3.325	-774.71	-0.3	160.13	-0.3	-41.86	0	-50.57
13	13	36.90	-3815.42	433.70	857.84	-3.325	-421.07	-0.3	-676.33	-0.3	-676.33	0	-701.65
13	14	39.25	-3818.30	478.99	-214.33	-3.884	-464.11	-0.3	-414.36	-0.3	-414.36	0	-410.19
14	14	39.25	-4980.55	-6.73	1975.89	-3.884	-340.71	-0.3	-799.40	-0.3	-799.40	0	-837.79
14	15	41.60	-4988.82	49.31	1927.66	-4.442	-290.07	-0.3	-679.43	-0.3	-679.43	0	-707.63
	15	41.60	-4940.20	696.42	1927.10	-4.442	-285.46	-0.3	-674.70	-0.3	-674.70	0	-702.90
	16	43.90	-4937.59	537.47	471.23	-5	-371.24	-0.3	-459.68	-0.3	-459.68	0	-465.33
	16	43.90	-4842.82	1102.70	471.29	-5	-207.51	-0.3	-261.11	-0.3	-261.11	0	-264.53
	17	46.45	-4860.42	925.67	-2128.02	-5	-385.13	-0.3	-143.08	-0.3	-143.08	0	-127.63
17	17	46.45	-4823.79	-929.90	-2134.05	-5	-383.72	-0.3	-140.99	-0.3	-140.99	0	-125.50
17	18	49.00	-4806.19	-1106.93	475.57	-5	-205.40	-0.3	-259.50	-0.3	-259.50	0	-262.95
18	18	49.00	-4901.69	-545.86	475.60	-5	-367.83	-0.3	-457.10	-0.3	-457.10	0	-462.79
18	19	51.30	-4904.30	-704.81	1951.32	-4.442	-279.65	-0.3	-673.78	-0.3	-673.78	0	-702.33
19	19	51.30	-4954.31	-62.32	1950.76	-4.442	-284.50	-0.3	-678.52	-0.3	-678.52	0	-707.06
19	20	53.65	-4946.04	-6.29	2030.43	-3.884	-330.34	-0.3	-801.69	-0.3	-801.69	0	-841.15
20	20	53.65	-3783.75	-488.98	-159.99	-3.884	-453.76	-0.3	-416.62	-0.3	-416.62	0	-413.51
20	21	56.00	-3780.87	-443.69	936.18	-3.325	-402.81	-0.3	-681.38	-0.3	-681.38	0	-709.01
21	21	56.00	-3456.10	-1065.99	-1816.55	-3.325	-897.52	-0.3	173.11	-0.3	-32.57	0	-28.48
21	22	57.00	-3459.85	-1044.44	-751.36	-3.088	-743.56	-0.3	-289.15	-0.3	-30.27	0	-23.73
22	22	57.00	-3621.54	93.56	-751.42	-3.088	-772.19	-0.3	-317.74	-0.3	-26.48	0	-19.95
22	23	58.00	-3618.62	112.90	-848.37	-2.85	-927.76	-0.3	-394.61	-0.3	-6.41	0	8.77
23	23	58.00	-1552.04	2.97	-856.74	-2.85	-1327.05	-0.3	-129.02	-0.3	-59.55	0	-33.40
23	24	59.00	-1552.54	12.53	-864.00	-2.85	-1303.19	-0.3	-226.09	-0.3	-44.36	0	-11.46
24	24	59.00	-1058.69	-155.77	-644.70	-2.85	-836.91	-0.3	-200.89	-0.3	-46.21	0	-13.30
24	25	63.11	-1061.40	-117.36	-87.19	-2.85	-462.62	-0.3	-661.97	-0.3	-79.25	0	-60.59
25	25	63.11	-1344.69	-117.36	-346.97	-2.85	-1066.98	-0.3	-369.12	0	0.00	0	0.00
25	26	67.23	-1347.39	-96.21	89.23	-2.85	-726.13	-0.3	-905.61	0	0.00	0	0.00
26	26	67.23	-1614.62	-42.96	-505.26	-2.85	-1350.74	-0.3	-334.52	0	0.00	0	0.00
26	27	71.34	-1617.31	-21.52	-375.14	-2.85	-1250.19	-0.3	-495.67	0	0.00	0	0.00
27	27	71.34	-1730.62	-21.52	-479.05	-2.85	-1398.72	-0.3	-435.20	0	0.00	0	0.00
27	28	75.45	-1733.31	-0.08	-437.10	-2.85	-1367.37	-0.3	-488.24	0	0.00	0	0.00
28	28	75.45	-1733.31	-0.08	-437.10	-2.85	-1367.37	-0.3	-488.24	0	0.00	0	0.00
28	29	79.56	-1735.98	21.36	-483.29	-2.85	-1405.21	-0.3	-433.17	0	0.00	0	0.00
29	29	79.56	-1622.66	21.36	-379.38	-2.85	-1256.68	-0.3	-493.63	0	0.00	0	0.00
29	30	83.68	-1621.03	42.80	-509.81	-2.85	-1358.11	-0.3	-332.73	0	0.00	0	0.00
30	30	83.68	-1353.78	96.73	84.68	-2.85	-733.49	-0.3	-903.81	0	0.00	0	0.00
30	31	87.79	-1351.16	117.88	-353.76	-2.85	-1076.13	-0.3	-364.62	0	0.00	0	0.00
31	31	87.79	-1067.87	117.88	-93.98	-2.85	-467.82	-0.3	-662.62	-0.3	-79.80	0	-60.68
	32	91.90	-1065.26	156.31	-653.82	-2.85	-843.29	-0.3	-201.15	-0.3	-46.43	0	-12.91
	32	91.90	-1558.97	-14.03	-873.12	-2.85	-1309.53	-0.3	-226.31	-0.3	-44.54	0	-11.03
	33	92.90	-1558.48	-4.47	-864.42	-2.85	-1332.68	-0.3	-129.50	-0.3	-59.96	0	-33.29
33	33	92.90	-3624.72	-115.47	-855.82	-2.85	-930.12	-0.3	-394.44	-0.3	-6.14	0	9.34
33	34	93.90	-3627.67	-96.15	-756.36	-3.088	-773.77	-0.3	-317.89	-0.3	-26.52	0	-19.83
34	34	93.90	-3466.45	1043.63	-756.41	-3.088	-745.22	-0.3	-289.30	-0.3	-30.36	0	-23.67
34	35	94.90	-3462.72	1065.18	-1820.04	-3.325	-898.69	-0.3	172.59	-0.3	-32.74	0	-28.54
35	35	94.90	-3780.84	443.49	939.04	-3.325	-402.33	-0.3	-681.75	-0.3	-681.75	0	-709.46
35	36	97.25	-3783.72	488.78	-156.46	-3.884	-453.34	-0.3	-417.02	-0.3	-417.02	0	-413.98
36	36	97.25	-4946.01	6.09	2033.77	-3.884	-329.95	-0.3	-802.07	-0.3	-802.07	0	-841.59
36	37	99.60	-4954.27	62.13	1955.12	-4.442	-284.07	-0.3	-678.97	-0.3	-678.97	0	-707.58
37	37	99.60	-4904.30	704.62	1954.56	-4.442	-279.33	-0.3	-674.12	-0.3	-674.12	0	-702.71
37	38	101.90	-4901.69	545.67	479.77	-5	-367.45	-0.3	-457.50	-0.3	-457.50	0	-463.25
38	38	101.90	-4806.20	1106.74	479.82	-5	-205.11	-0.3	-259.69	-0.3	-259.69	0	-263.17
38	39	104.45	-4823.80	929.72	-2129.80	-5	-383.44	-0.3	-141.19	-0.3	-141.19	0	-125.72
39	39	104.45	-4860.43	-925.56	-2122.70	-5	-384.77	-0.3	-143.32	-0.3	-143.32	0	-127.91
39	40	107.00	-4842.83	-1102.59	475.84	-5	-207.20	-0.3	-261.32	-0.3	-261.32	0	-264.77
40	40	107.00	-4937.59	-537.36	475.86	-5	-370.82	-0.3	-460.13	-0.3	-460.13	0	-465.83
40	41	109.30	-4940.20	-696.31	1931.98	-4.442	-284.98	-0.3	-675.21	-0.3	-675.21	0	-703.48
41	41	109.30	-4988.80	-49.21	1931.42	-4.442	-289.70	-0.3	-679.82	-0.3	-679.82	0	-708.07
41	42	111.65	-4980.53	6.82	1979.94	-3.884	-340.23	-0.3	-799.86	-0.3	-799.86	0	-838.34
42	42	111.65	-3818.28	-478.88	-210.47	-3.884	-463.66	-0.3	-414.80	-0.3	-414.80	0	-410.71
42	43	114.00	-3815.40	-433.59	861.67	-3.325	-420.43	-0.3	-676.83	-0.3	-676.83	0	-702.26
43	43	114.00	-2995.56	-1112.05	-1310.16	-3.325	-774.38	-0.3	159.98	-0.3	-42.32	0	-51.12
43	44	115.00	-2998.64	-1090.56	-197.98	-3.088	-594.31	-0.3	-310.99	-0.3	-44.81	0	-55.29
44	44	115.00	-3190.33	-75.15	-198.04	-3.088	-626.77	-0.3	-343.41	-0.3	-44.51	0	-54.99
44	45	116.00	-3186.81	-56.13	-129.87	-2.85	-722.31	-0.3	-442.61	-0.3	-46.40	0	-59.23
45	45	116.00	-1097.78	-90.10	-138.24	-2.85	-854.90	-0.3	-133.25	-0.3	-49.76	0	-71.86
45	46	117.00	-1097.64	-80.69	-52.56	-2.85	-784.73	-0.3	-248.33	-0.3	-48.30	0	-69.75
46	46	117.00	-606.83	-95.14	168.32	-2.85	-320.71	-0.3	-228.59	-0.3	-48.77	0	-70.22
46	47	119.78	-606.83	-69.02	396.08	-2.85	-134.05	-0.3	-535.90	-0.3	-44.71	0	-64.37
47	47	119.78	-608.32	-69.13	396.08	-2.85	-134.48	-0.3	-536.33	-0.3	-45.07	0	-64.74
47	48	122.55	-608.32	-43.00	551.32	-2.85	-4.76	-0.3	-754.73	-0.3	-41.01	0	-58.88
	48	122.55	-1023.08	-42.91	160.35	-2.85	-478.67	-0.3	-801.18	0	0.00	0	0.00
	49	128.10	-1023.08	-13.99	318.08	-2.85	-354.84	-0.3	-994.60	0	0.00	0	0.00
	49	128.10	-1305.61	-13.97	58.31	-2.85	-725.73	-0.3	-843.00	0	0.00	0	0.00
49	50	133.65	-1305.61	14.97	55.48	-2.85	-727.95	-0.3	-639.54	0	0.00	0	0.00
50	50	133.65	-1305.61	14.97	55.48	-2.85	-727.95	-0.3	-839.54	0	0.00	0	0.00
50	51	139.20	-1305.61	43.90	-107.95	-2.85	-856.25	-0.3	-639.12	0	0.00	0	0.00
51	51	139.20	-739.03	43.90	421.58	-2.85	-105.75	-0.3	-953.67	0	0.00	0	0.00
51	52	144.75	-739.03	72.84	97.59	-2.85	-360.09	-0.3	-556.38	0	0.00	0	0.00
52	52	144.75	-606.83	72.84	216.82	-2.85	-186.80	-0.3	-626.92	0	0.00	0	0.00
52	53	147.53	-606.83	87.30	-3.38	-2.85	-381.24	-0.3	-354.44	0	0.00	0	0.00
53	53	147.53	-606.83	87.30	-3.38	-2.85	-381.24	-0.3	-354.44	0	0.00	0	0.00
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-2.85	-567.20	-0.3	-32.71	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 7

[illegible]

Coef. acc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-688.84	0.00	-292.68	-2.85	-636.81	-0.3	-48.15	0	0.00	0	0.00
1	2	0.60	-688.84	3.13	-293.62	-2.85	-637.55	-0.3	-46.99	0	0.00	0	0.00
2	2	0.60	-672.45	-99.88	-293.62	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00
2	3	3.38	-672.45	-85.42	-36.50	-2.85	-426.01	-0.3	-352.60	0	0.00	0	0.00
3	3	3.38	-672.45	-85.42	-36.50	-2.85	-426.01	-0.3	-352.60	0	0.00	0	0.00
3	4	6.15	-672.45	-70.96	160.47	-2.85	-255.68	-0.3	-618.66	0	0.00	0	0.00
4	4	6.15	-818.57	-70.96	46.48	-2.85	-447.21	-0.3	-540.70	0	0.00	0	0.00
4	5	11.70	-818.57	-42.02	359.98	-2.85	-201.10	-0.3	-925.13	0	0.00	0	0.00
5	5	11.70	-1444.79	-42.02	-225.29	-2.85	-1030.60	-0.3	-577.47	0	0.00	0	0.00
5	6	17.25	-1444.79	-13.09	-72.34	-2.85	-910.53	-0.3	-765.03	0	0.00	0	0.00
6	6	17.25	-1444.79	-13.09	-72.34	-2.85	-910.53	-0.3	-765.03	0	0.00	0	0.00
6	7	22.80	-1444.79	15.85	-80.01	-2.85	-916.55	-0.3	-755.63	0	0.00	0	0.00
7	7	22.80	-1132.30	15.88	207.12	-2.85	-506.49	-0.3	-923.07	0	0.00	0	0.00
7	8	28.35	-1132.30	44.80	38.91	-2.85	-638.55	-0.3	-716.80	0	0.00	0	0.00
8	8	28.35	-673.67	44.86	471.03	-2.85	-92.01	-0.3	-746.62	-0.3	-33.46	0	-48.04
8	9	31.13	-673.67	70.99	310.55	-2.85	-224.41	-0.3	-526.95	-0.3	-36.77	0	-52.81
9	9	31.13	-672.45	70.90	310.55	-2.85	-224.06	-0.3	-526.60	-0.3	-36.47	0	-52.51
9	10	33.90	-672.45	97.02	77.55	-2.85	-413.38	-0.3	-218.02	-0.3	-39.79	0	-57.29
10	10	33.90	-1272.80	79.84	-179.36	-2.85	-970.30	-0.3	-258.22	-0.3	-39.40	0	-56.90
10	11	34.90	-1272.94	89.25	-264.30	-2.85	-1039.37	-0.3	-145.91	-0.3	-40.59	0	-58.62
11	11	34.90	-3289.20	49.75	-560.54	-2.85	-876.23	-0.3	-255.99	-0.3	-37.85	0	-48.31
11	12	35.90	-3292.72	68.83	-622.87	-3.088	-751.95	-0.3	-188.03	-0.3	-36.31	0	-44.86
12	12	35.90	-3097.77	1117.28	-622.94	-3.088	-718.99	-0.3	-155.02	-0.3	-36.56	0	-45.11
12	13	36.90	-3094.69	1138.77	-1761.16	-3.325	-887.74	-0.3	604.06	-0.3	-34.53	0	-41.70
13	13	36.90	-3600.53	459.72	76.98	-3.325	-520.26	-0.3	-543.17	-0.3	-543.17	0	-545.44
13	14	39.25	-3603.41	505.01	-1056.59	-3.884	-538.24	-0.3	-292.96	-0.3	-292.96	0	-272.43
14	14	39.25	-4562.07	67.51	735.47	-3.884	-438.16	-0.3	-608.90	-0.3	-608.90	0	-623.19
14	15	41.60	-4570.34	123.55	510.84	-4.442	-388.56	-0.3	-491.74	-0.3	-491.74	0	-499.22
15	15	41.60	-4515.63	715.70	510.36	-4.442	-383.36	-0.3	-486.44	-0.3	-486.44	0	-493.91
15	16	43.90	-4513.03	557.83	-999.83	-5	-469.21	-0.3	-281.56	-0.3	-281.56	0	-269.58
16	16	43.90	-4418.75	1074.02	-999.89	-5	-286.57	-0.3	-172.84	-0.3	-172.84	0	-165.58
16	17	46.45	-4437.49	885.50	-3510.60	-5	-458.22	-0.3	-58.91	-0.3	-58.91	0	-33.43
17	17	46.45	-4392.39	-887.12	-3522.61	-5	-456.81	-0.3	-56.13	-0.3	-56.13	0	-30.56
17	18	49.00	-4373.63	-1075.81	-1007.71	-5	-284.87	-0.3	-170.25	-0.3	-170.25	0	-162.93
18	18	49.00	-4468.43	-564.78	-1007.80	-5	-466.20	-0.3	-277.05	-0.3	-277.05	0	-264.97
18	19	51.30	-4471.02	-722.65	518.96	-4.442	-378.24	-0.3	-483.06	-0.3	-483.06	0	-490.65
19	19	51.30	-4527.01	-136.24	516.48	-4.442	-383.66	-0.3	-488.38	-0.3	-488.38	0	-495.97
19	20	53.65	-4518.74	-80.21	773.63	-3.884	-428.70	-0.3	-608.29	-0.3	-608.29	0	-623.33
20	20	53.65	-3559.93	-513.99	-1018.47	-3.884	-528.77	-0.3	-292.34	-0.3	-292.34	0	-272.55
20	21	56.00	-3557.05	-468.70	136.68	-3.325	-503.81	-0.3	-544.48	-0.3	-544.48	0	-548.51
21	21	56.00	-3656.45	-1079.01	-2241.43	-3.325	-1018.73	-0.3	303.39	-0.3	-39.95	0	-34.98
21	22	57.00	-3660.35	-1057.44	-1163.28	-3.088	-878.97	-0.3	-146.41	-0.3	-37.15	0	-29.20
22	22	57.00	-3817.76	140.36	-1163.34	-3.088	-907.19	-0.3	-174.58	-0.3	-32.52	0	-24.57
22	23	58.00	-3814.98	159.76	-1306.13	-2.85	-1100.52	-0.3	-216.09	-0.3	-8.00	0	10.51
23	23	58.00	-1826.67	27.67	-1009.60	-2.85	-1551.31	-0.3	-160.96	-0.3	-72.97	0	-41.08
23	24	59.00	-1827.32	37.27	-1041.50	-2.85	-1540.25	-0.3	-251.38	-0.3	-54.40	0	-14.26
24	24	59.00	-1243.33	-167.49	-783.00	-2.85	-989.43	-0.3	-220.48	-0.3	-56.66	0	-16.52
24	25	63.11	-1246.65	-129.14	-178.07	-2.85	-591.99	-0.3	-690.25	-0.3	-97.04	0	-74.31
25	25	63.11	-1559.76	-129.14	-465.19	-2.85	-1286.87	-0.3	-351.23	0	0.00	0	0.00
25	26	67.23	-1563.06	-108.07	18.97	-2.85	-908.74	-0.3	-946.88	0	0.00	0	0.00
26	26	67.23	-1858.75	-42.98	-638.10	-2.85	-1599.29	-0.3	-315.87	0	0.00	0	0.00
26	27	71.34	-1862.03	-21.54	-508.46	-2.85	-1499.46	-0.3	-476.79	0	0.00	0	0.00
27	27	71.34	-1987.28	-21.54	-623.31	-2.85	-1663.63	-0.3	-409.97	0	0.00	0	0.00
27	28	75.45	-1990.57	-0.10	-581.83	-2.85	-1633.01	-0.3	-462.78	0	0.00	0	0.00
28	28	75.45	-1990.57	-0.10	-581.83	-2.85	-1633.01	-0.3	-462.78	0	0.00	0	0.00
28	29	79.56	-1993.82	21.34	-628.49	-2.85	-1671.56	-0.3	-407.48	0	0.00	0	0.00
29	29	79.56	-1868.58	21.34	-513.64	-2.85	-1507.39	-0.3	-474.31	0	0.00	0	0.00
29	30	83.68	-1866.59	42.78	-643.67	-2.85	-1608.30	-0.3	-313.68	0	0.00	0	0.00
30	30	83.68	-1570.88	108.69	13.40	-2.85	-917.73	-0.3	-944.68	0	0.00	0	0.00
30	31	87.79	-1567.66	129.78	-473.49	-2.85	-1298.06	-0.3	-345.73	0	0.00	0	0.00
31	31	87.79	-1254.55	129.78	-186.36	-2.85	-598.35	-0.3	-691.04	-0.3	-97.71	0	-74.43
31	32	91.90	-1251.36	168.15	-794.14	-2.85	-997.23	-0.3	-220.80	-0.3	-56.92	0	-16.04
32	32	91.90	-1835.17	-39.09	-1052.64	-2.85	-1547.99	-0.3	-251.64	-0.3	-54.62	0	-13.74
32	33	92.90	-1834.54	-29.51	-1018.98	-2.85	-1558.20	-0.3	-161.55	-0.3	-73.46	0	-40.95
33	33	92.90	-3822.44	-162.91	-1315.22	-2.85	-1103.40	-0.3	-215.88	-0.3	-7.67	0	11.20
33	34	93.90	-3825.25	-143.53	-1169.42	-3.088	-909.12	-0.3	-174.74	-0.3	-32.56	0	-24.42
34	34	93.90	-3668.41	1056.45	-1169.49	-3.088	-881.02	-0.3	-146.58	-0.3	-37.26	0	-29.12
34	35	94.90	-3664.54	1078.02	-2245.82	-3.325	-1020.19	-0.3	302.79	-0.3	-40.15	0	-35.05
35	35	94.90	-3557.03	468.53	138.96	-3.325	-503.42	-0.3	-544.77	-0.3	-544.77	0	-548.87
35	36	97.25	-3559.91	513.82	-1015.58	-3.884	-528.43	-0.3	-292.67	-0.3	-292.67	0	-272.94
36	36	97.25	-4518.72	80.05	776.47	-3.884	-428.36	-0.3	-608.62	-0.3	-608.62	0	-623.71
36	37	99.60	-4526.99	136.09	522.06	-4.442	-383.30	-0.3	-488.75	-0.3	-488.75	0	-496.39
37	37	99.60	-4471.02	722.50	521.58	-4.442	-377.98	-0.3	-483.33	-0.3	-483.33	0	-490.96
37	38	101.90	-4468.43	564.63	-1004.29	-5	-465.88	-0.3	-277.39	-0.3	-277.39	0	-265.35
38	38	101.90	-4373.64	1075.66	-1004.34	-5	-284.64	-0.3	-170.40	-0.3	-170.40	0	-163.11
38	39	104.45	-4392.40	886.97	-3519.20	-5	-456.57	-0.3	-56.29	-0.3	-56.29	0	-30.74
39	39	104.45	-4437.50	-885.41	-3506.18	-5	-457.92	-0.3	-59.12	-0.3	-59.12	0	-33.66
39	40	107.00	-4418.75	-1073.93	-996.05	-5	-286.31	-0.3	-173.01	-0.3	-173.01	0	-165.78
40	40	107.00	-4513.03	-557.74	-996.14	-5	-468.88	-0.3	-281.92	-0.3	-281.92	0	-269.98
40	41	109.30	-4515.63	-715.61	514.38	-4.442	-382.96	-0.3	-486.86	-0.3	-486.86	0	-494.39
41	41	109.30	-4570.32	-123.45	513.90	-4.442	-388.26	-0.3	-492.06	-0.3	-492.06	0	-499.58
41	42	111.65	-4562.05	-67.42	738.68	-3.884	-437.78	-0.3	-609.26	-0.3	-609.26	0	-623.62
42	42	111.65	-3603.40	-504.92	-1053.43	-3.884	-537.87	-0.3	-293.33	-0.3	-293.33	0	-272.86
42	43	114.00	-3600.52	-459.63	80.17	-3.325	-519.73	-0.3	-543.58	-0.3	-543.58	0	-545.95
43	43	114.00	-3094.68	-1138.69	-1759.04	-3.325	-887.52	-0.3	304.04	-0.3	-34.90	0	-42.15
43	44	115.00	-3097.76	-1117.20	-620.04	-3.088	-718.51	-0.3	-155.39	-0.3	-36.96	0	-45.60
44	44	115.00	-3292.69	-68.75	-620.10	-3.088	-751.51	-0.3	-188.34	-0.3	-36.70	0	-45.34
44	45	116.00	-3289.17	-49.67	-557.89	-2.85	-875.73	-0.3	-256.28	-0.3	-38.26	0	-48.84
45	45	116.00	-1272.93	-89.16	-261.36	-2.85	-1037.92	-0.3	-146.43	-0.3	-41.04	0	-59.25
45	46	117.00	-1272.79	-79.75	-176.52	-2.85	-968.90	-0.3	-258.72	-0.3	-39.83	0	-57.51
46	46	117.00	-672.45	-96.94	80.40	-2.85	-411.98	-0.3	-218.53	-0.3	-40.22	0	-57.91
46	47	119.78	-672.45	-70.82	313.16	-2.85	-222.77	-0.3	-527.07	-0.3	-36.87	0	-53.08
47	47	119.78	-673.68	-70.91	313.16	-2.85	-223.13	-0.3	-527.42	-0.3	-37.17	0	-53.38
47	48	122.55	-673.68	-44.78	473.40	-2.85	-90.85	-0.3	-747.04	-0.3	-33.82	0	-48.56
48	48	122.55	-1132.30	-44.71	41.27	-2.85	-636.69	-0.3	-719.70	0	0.00	0	0.00
48	49	128.10	-1132.30	-15.79	209.02	-2.85	-505.00	-0.3	-925.40	0	0.00	0	0.00
49	49	128.10	-1444.79	-15.77	-78.11	-2.85	-915.06	-0.3	-757.96	0	0.00	0	0.00
49	50	133.65	-1444.79	13.17	-70.92	-2.85	-909.42	-0.3	-766.77	0	0.00	0	0.00
50	50	133.65	-1444.79	13.17	-70.92	-2.85	-909.42	-0.3	-766.77	0	0.00	0	0.00
50	51	139.20	-1444.79	42.10	-224.35	-2.85	-1029.86	-0.3	-578.63	0	0.00	0	0.00
51	51	139.20	-818.57	42.10	360.92	-2.85	-200.36	-0.3	-926.29	0	0.00	0	0.00
51	52	144.75	-818.57	71.04	46.95	-2.85	-446.84	-0.3	-541.27	0	0.00	0	0.00
52	52	144.75	-672.45	71.04	160.94	-2.85	-255.31	-0.3	-619.24	0	0.00	0	0.00
52	53	147.53	-672.45	85.50	-36.26	-2.85	-425.82	-0.3	-352.89	0	0.00	0	0.00
53	53	147.53	-672.45	85.50	-36.26	-2.85	-425.82	-0.3	-352.89	0	0.00	0	0.00
53	54	150.30	-672.45	99.96	-293.82	-2.85	-627.86	-0.3	-37.31	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 8

[1; 1]ppcepl + [.9; 1.1]Pret1.2sup + [.9, 1.1]Pr2.1infcepl + [1; 1]ppvtd + [.95; 1.05]pret3.2pretcondvtd.TOT.To + [1; 1]pvcontrol + [1; 1]PPprelosa + [.95; 1.05]pret4.2pretcondvc.TOT.To + [1; 1]pplosa1 + [.9; 1.1]pret5.1barrecorte.TOT.To + [1; 1]doblesso + [.9; 1.1]pret7 1contvc TOT To + [.9; 1.1]pret8 1contvtd TOT To

Coef. exc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
[illegible]	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.89	0	0.00	0	0.00
1	2	0.60	-1121.21	3.13	-720.39	-2.85	-1228.07	-0.3	220.85	0	0.00	0	0.00
2	2	0.60	-1104.80	-106.56	-720.39	-2.85	-1218.37	-0.3	230.54	0	0.00	0	0.00
2	3	3.38	-1103.07	-93.95	-438.00	-2.85	-995.66	-0.3	-114.71	0	0.00	0	0.00
3	3	3.38	-1103.07	-93.95	-438.00	-2.85	-995.66	-0.3	-114.71	0	0.00	0	0.00
3	4	6.15	-1101.33	-79.49	-195.75	-2.85	-804.46	-0.3	-410.75	0	0.00	0	0.00
4	4	6.15	-1233.53	-79.49	-316.98	-2.85	-977.75	-0.3	-340.21	0	0.00	0	0.00
4	5	11.70	-1230.08	-50.55	47.05	-2.85	-689.94	-0.3	-784.56	0	0.00	0	0.00
5	5	11.70	-1796.66	-50.55	-482.48	-2.85	-1440.44	-0.3	-470.02	0	0.00	0	0.00
5	6	17.25	-1793.24	-21.62	-279.03	-2.85	-1278.70	-0.3	-717.48	0	0.00	0	0.00
6	6	17.25	-1793.24	-21.62	-279.03	-2.85	-1278.70	-0.3	-717.48	0	0.00	0	0.00
6	7	22.80	-1789.85	7.32	-236.21	-2.85	-1243.08	-0.3	-767.99	0	0.00	0	0.00
7	7	22.80	-1506.35	45.31	23.57	-2.85	-871.62	-0.3	-919.02	0	0.00	0	0.00
7	8	28.35	-1502.99	73.97	-303.44	-2.85	-1126.34	-0.3	-516.04	0	0.00	0	0.00
8	8	28.35	-1084.39	111.10	87.54	-2.85	-370.16	-0.3	-808.76	-0.3	-86.66	0	-73.58
8	9	31.13	-1082.73	136.97	-253.60	-2.85	-590.82	-0.3	-556.50	-0.3	-62.11	0	-38.42
9	9	31.13	-1086.01	62.36	-253.60	-2.85	-591.77	-0.3	-557.44	-0.3	-62.91	0	-39.22
9	10	33.90	-1084.34	88.48	-459.90	-2.85	-767.38	-0.3	-253.50	-0.3	-69.82	0	-49.35
10	10	33.90	-1563.87	-22.70	-680.78	-2.85	-1228.15	-0.3	-269.99	-0.3	-66.60	0	-46.12
10	11	34.90	-1563.42	-13.15	-663.08	-2.85	-1247.32	-0.3	-173.31	-0.3	-83.61	0	-70.68
11	11	34.90	-3628.11	-124.80	-654.48	-2.85	-892.34	-0.3	-426.04	-0.3	-30.96	0	-23.45
11	12	35.90	-3631.09	-105.55	-544.23	-3.088	-740.36	-0.3	-350.15	-0.3	-50.64	0	-50.47
12	12	35.90	-3472.01	1037.23	-544.29	-3.088	-712.07	-0.3	-321.82	-0.3	-54.78	0	-54.60
12	13	36.90	-3468.33	1058.79	-1601.55	-3.325	-869.88	-0.3	143.93	-0.3	-56.86	0	-58.32
13	13	36.90	-3814.13	425.59	1094.27	-3.325	-381.21	-0.3	-706.83	-0.3	-706.83	0	-739.12
13	14	39.25	-3817.01	470.88	41.39	-3.884	-433.95	-0.3	-443.56	-0.3	-443.56	0	-444.37
14	14	39.25	-4979.37	-14.85	2231.62	-3.884	-310.56	-0.3	-828.62	-0.3	-828.62	0	-871.98
14	15	41.60	-4987.64	41.19	2202.68	-4.442	-263.05	-0.3	-707.95	-0.3	-707.95	0	-740.18
15	15	41.60	-4940.07	688.21	2202.12	-4.442	-258.54	-0.3	-703.33	-0.3	-703.33	0	-735.55
[illegible]	16	43.90	-4937.47	529.26	765.14	-5	-344.54	-0.3	-488.15	-0.3	-488.15	0	-497.32
[illegible]	16	43.90	-4843.64	1094.53	765.20	-5	-187.56	-0.3	-274.60	-0.3	-274.60	0	-260.15
[illegible]	17	46.45	-4861.24	917.50	-1813.18	-5	-363.76	-0.3	-157.52	-0.3	-157.52	0	-144.36
[illegible]	17	46.45	-4823.81	-929.90	-1819.21	-5	-362.32	-0.3	-155.40	-0.3	-155.40	0	-142.19
17	18	49.00	-4806.21	-1106.93	790.41	-5	-183.99	-0.3	-273.90	-0.3	-273.90	0	-279.64
18	18	49.00	-4901.71	-545.86	790.44	-5	-339.25	-0.3	-487.60	-0.3	-487.60	0	-497.07
18	19	51.30	-4904.32	-704.81	2266.16	-4.442	-248.84	-0.3	-706.57	-0.3	-706.57	0	-739.72
19	19	51.30	-4954.33	-62.32	2265.60	-4.442	-253.69	-0.3	-711.31	-0.3	-711.31	0	-744.45
19	20	53.65	-4946.06	-6.29	2345.26	-3.884	-293.40	-0.3	-837.84	-0.3	-837.84	0	-883.41
20	20	53.65	-3783.77	-488.98	154.84	-3.884	-416.82	-0.3	-452.77	-0.3	-452.77	0	-455.78
20	21	56.00	-3780.89	-443.69	1251.01	-3.325	-349.99	-0.3	-722.25	-0.3	-722.25	0	-759.16
21	21	56.00	-3456.12	-1065.99	-1501.72	-3.325	-852.56	-0.3	131.91	-0.3	-70.69	0	-74.51
21	22	57.00	-3459.87	-1044.44	-436.53	-3.088	-691.17	-0.3	-334.02	-0.3	-71.78	0	-74.93
22	22	57.00	-3621.55	93.57	-436.59	-3.088	-719.80	-0.3	-362.62	-0.3	-67.99	0	-71.14
22	23	58.00	-3618.63	112.91	-533.55	-2.85	-863.90	-0.3	-442.79	-0.3	-50.99	0	-48.00
23	23	58.00	-1552.06	2.97	-541.92	-2.85	-1172.24	-0.3	-185.57	-0.3	-107.33	0	-102.19
23	24	59.00	-1552.57	12.53	-549.18	-2.85	-1148.38	-0.3	-282.64	-0.3	-92.14	0	-80.25
24	24	59.00	-1058.71	-155.77	-329.88	-2.85	-682.11	-0.3	-257.44	-0.3	-93.99	0	-82.09
24	25	63.11	-1061.42	-117.36	227.63	-2.85	-307.81	-0.3	-718.52	-0.3	-127.03	0	-129.38
25	25	63.11	-1344.71	-117.36	-32.15	-2.85	-819.84	-0.3	-755.18	0	0.00	0	0.00
25	26	67.23	-1347.41	-96.21	404.07	-2.85	-478.99	-0.3	-1291.69	0	0.00	0	0.00
26	26	67.23	-1614.64	-42.96	-190.43	-2.85	-1103.60	-0.3	-720.60	0	0.00	0	0.00
26	27	71.34	-1617.33	-21.52	-60.31	-2.85	-1003.04	-0.3	-881.74	0	0.00	0	0.00
27	27	71.34	-1730.64	-21.52	-164.22	-2.85	-1151.58	-0.3	-821.28	0	0.00	0	0.00
27	28	75.45	-1733.34	-0.08	-122.26	-2.85	-1120.23	-0.3	-874.32	0	0.00	0	0.00
28	28	75.45	-1733.34	-0.08	-122.26	-2.85	-1120.23	-0.3	-874.32	0	0.00	0	0.00
28	29	79.56	-1736.00	21.36	-168.46	-2.85	-1158.07	-0.3	-819.25	0	0.00	0	0.00
29	29	79.56	-1622.68	21.36	-64.55	-2.85	-1009.54	-0.3	-879.71	0	0.00	0	0.00
29	30	83.68	-1621.05	42.80	-194.98	-2.85	-1110.97	-0.3	-718.80	0	0.00	0	0.00
30	30	83.68	-1353.81	96.73	399.51	-2.85	-486.35	-0.3	-1289.89	0	0.00	0	0.00
30	31	87.79	-1351.18	117.88	-38.94	-2.85	-828.99	-0.3	-750.68	0	0.00	0	0.00
31	31	87.79	-1067.89	117.88	220.84	-2.85	-313.01	-0.3	-719.17	-0.3	-127.58	0	-129.47
31	32	91.90	-1065.28	156.31	-339.00	-2.85	-688.48	-0.3	-257.70	-0.3	-94.21	0	-81.70
32	32	91.90	-1558.98	-14.03	-558.30	-2.85	-1154.72	-0.3	-282.85	-0.3	-92.32	0	-79.82
[illegible]	33	92.90	-1558.49	-4.47	-549.60	-2.85	-1177.87	-0.3	-186.05	-0.3	-107.74	0	-102.08
[illegible]	33	92.90	-3624.74	-115.48	-541.00	-2.85	-866.26	-0.3	-442.62	-0.3	-50.71	0	-47.43
[illegible]	34	93.90	-3627.68	-96.16	-441.53	-3.088	-721.38	-0.3	-362.77	-0.3	-68.03	0	-71.02
34	34	93.90	-3466.47	1043.63	-441.58	-3.088	-692.83	-0.3	-334.18	-0.3	-71.87	0	-74.87
34	35	94.90	-3462.74	1065.18	-1505.21	-3.325	-853.73	-0.3	131.38	-0.3	-70.86	0	-74.57
35	35	94.90	-3780.86	443.49	1253.87	-3.325	-349.51	-0.3	-722.61	-0.3	-722.61	0	-759.61
35	36	97.25	-3783.74	488.78	158.38	-3.884	-416.40	-0.3	-453.17	-0.3	-453.17	0	-456.25
36	36	97.25	-4946.03	6.09	2348.60	-3.884	-293.00	-0.3	-838.22	-0.3	-838.22	0	-883.85
36	37	99.60	-4954.30	62.13	2269.96	-4.442	-253.26	-0.3	-711.76	-0.3	-711.76	0	-744.97
37	37	99.60	-4904.32	704.62	2269.40	-4.442	-248.52	-0.3	-706.91	-0.3	-706.91	0	-740.11
37	38	101.90	-4901.71	545.67	794.61	-5	-338.87	-0.3	-488.01	-0.3	-488.01	0	-497.53
38	38	101.90	-4806.22	1106.74	794.66	-5	-183.71	-0.3	-274.09	-0.3	-274.09	0	-279.86
38	39	104.45	-4823.82	929.72	-1814.96	-5	-362.03	-0.3	-155.59	-0.3	-155.59	0	-142.41
39	39	104.45	-4861.25	-917.39	-1807.86	-5	-363.40	-0.3	-157.77	-0.3	-157.77	0	-144.64
39	40	107.00	-4843.65	-1094.42	769.74	-5	-187.25	-0.3	-274.81	-0.3	-274.81	0	-280.39
40	40	107.00	-4937.47	-529.15	769.77	-5	-344.12	-0.3	-488.60	-0.3	-488.60	0	-497.82
40	41	109.30	-4940.07	-688.10	2207.00	-4.442	-258.06	-0.3	-703.84	-0.3	-703.84	0	-736.13
41	41	109.30	-4987.62	-41.08	2206.44	-4.442	-262.67	-0.3	-708.34	-0.3	-708.34	0	-740.62
41	42	111.65	-4979.35	14.95	2235.67	-3.884	-310.09	-0.3	-829.08	-0.3	-829.08	0	-872.53
42	42	111.65	-3817.00	-470.77	45.25	-3.884	-433.50	-0.3	-444.01	-0.3	-444.01	0	-444.89
42	43	114.00	-3814.12	-425.48	1098.10	-3.325	-380.57	-0.3	-707.32	-0.3	-707.32	0	-739.73
43	43	114.00	-3468.32	-1058.69	-1598.66	-3.325	-869.54	-0.3	143.78	-0.3	-57.31	0	-58.87
43	44	115.00	-3472.00	-1037.14	-540.73	-3.088	-711.49	-0.3	-322.28	-0.3	-55.27	0	-55.20
44	44	115.00	-3631.06	105.64	-540.78	-3.088	-739.81	-0.3	-350.56	-0.3	-51.12	0	-51.06
44	45	116.00	-3628.08	124.88	-651.12	-2.85	-891.68	-0.3	-426.45	-0.3	-31.46	0	-24.09
45	45	116.00	-1563.40	13.26	-659.49	-2.85	-1245.55	-0.3	-173.94	-0.3	-84.15	0	-71.46
45	46	117.00	-1563.84	22.81	-677.31	-2.85	-1226.44	-0.3	-270.61	-0.3	-67.12	0	-46.88
46	46	117.00	-1084.34	-88.38	-456.42	-2.85	-765.67	-0.3	-254.12	-0.3	-70.35	0	-50.11
46	47	119.78	-1086.01	-62.26	-250.41	-2.85	-590.20	-0.3	-558.02	-0.3	-63.40	0	-39.91
47	47	119.78	-1082.74	-136.87	-250.41	-2.85	-589.25	-0.3	-557.07	-0.3	-62.60	0	-39.12
47	48	122.55	-1084.40	-111.00	90.43	-2.85	-368.74	-0.3	-809.29	-0.3	-87.10	0	-74.22
48	48	122.55	-1502.99	-73.86	-300.54	-2.85	-1124.07	-0.3	-519.59	0	0.00	0	0.00
48	49	128.10	-1506.35	-45.20	25.89	-2.85	-869.80	-0.3	-921.87	0	0.00	0	0.00
[illegible]	49	128.10	-1789.85	-7.22	-233.89	-2.85	-1241.25	-0.3	-770.84	0	0.00	0	0.00
[illegible]	50	133.65	-1793.24	21.72	-277.29	-2.85	-1277.33	-0.3	-719.61	0	0.00	0	0.00
[illegible]	50	133.65	-1793.24	21.72	-277.29	-2.85	-1277.33	-0.3	-719.61	0	0.00	0	0.00
[illegible]	51	139.20	-1796.65	50.65	-481.33	-2.85	-1439.53	-0.3	-471.44	0	0.00	0	0.00
51	51	139.20	-1230.08	50.65	48.20	-2.85	-689.03	-0.3	-785.98	0	0.00	0	0.00
51	52	144.75	-1233.53	79.59	-316.41	-2.85	-977.30	-0.3	-340.91	0	0.00	0	0.00
52	52	144.75	-1101.33	79.59	-195.18	-2.85	-804.01	-0.3	-411.45	0	0.00	0	0.00
52	53	147.53	-1103.07	94.05	-437.70	-2.85	-995.43	-0.3	-115.08	0	0.00	0	0.00
53	53	147.53	-1103.07	94.05	-437.70	-2.85	-995.43	-0.3	-115.08	0	0.00	0	0.00
53	54	150.30	-1104.80	106.64	-720.39	-2.85	-1218.37	-0.3	230.54	0	0.00	0	0.00
54	54	150.30	-1121.21	-3.13	-720.39	-2.85	-1228.07	-0.3	220.85	0	0.00	0	0.00
54	55	150.90	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.89	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 8

[1; 1]ppcepl + [.9; 1.1]Pret1.2sup + [.9, 1.1]Pr2.1infcepl + [1; 1]ppvtd + [.95; 1.05]pret3.2pretcondvtd.TOT.To + [1; 1]pvcontrol + [1; 1]PPprelosa + [.95; 1.05]pret4.2pretcondvc.TOT.To + [1; 1]pplosa1 + [.9; 1.1]pret5.1barrecorte.TOT.To + [1, 1]doblesso + [.9; 1.1]prot7 1contvc TOT.To + [.9; 1 1]pret8.1contvtd TOT To

Coef. exc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	0	0.00	0	0.00
1	2	0.60	-1297.47	3.13	-849.29	-2.85	-1433.42	-0.3	274.76	0	0.00	0	0.00
2	2	0.60	-1281.08	-108.13	-849.29	-2.85	-1423.73	-0.3	284.45	0	0.00	0	0.00
2	3	3.38	-1278.96	-93.67	-567.34	-2.85	-1201.14	-0.3	-60.04	0	0.00	0	0.00
3	3	3.38	-1278.96	-93.67	-567.34	-2.85	-1201.14	-0.3	-60.04	0	0.00	0	0.00
3	4	6.15	-1276.83	-79.21	-325.53	-2.85	-1010.05	-0.3	-355.31	0	0.00	0	0.00
4	4	6.15	-1422.95	-79.21	-459.52	-2.85	-1201.58	-0.3	-277.35	0	0.00	0	0.00
4	5	11.70	-1418.74	-50.27	-96.37	-2.85	-914.00	-0.3	-720.18	0	0.00	0	0.00
5	5	11.70	-2044.96	-50.27	-681.64	-2.85	-1743.50	-0.3	-372.52	0	0.00	0	0.00
5	6	17.25	-2040.78	-21.34	-479.07	-2.85	-1582.01	-0.3	-618.46	0	0.00	0	0.00
6	6	17.25	-2040.78	-21.34	-479.07	-2.85	-1582.01	-0.3	-618.46	0	0.00	0	0.00
6	7	22.80	-2036.63	7.60	-437.13	-2.85	-1546.63	-0.3	-667.43	0	0.00	0	0.00
7	7	22.80	-1722.97	54.03	-150.01	-2.85	-1135.89	-0.3	-834.17	0	0.00	0	0.00
7	8	28.35	-1718.85	82.63	-524.40	-2.85	-1427.37	-0.3	-372.63	0	0.00	0	0.00
8	8	28.35	-1255.54	127.98	-92.28	-2.85	-536.87	-0.3	-813.29	-0.3	-89.79	0	-66.78
8	9	31.13	-1253.51	153.79	-479.60	-2.85	-780.24	-0.3	-552.30	-0.3	-58.19	0	-21.50
9	9	31.13	-1258.11	62.64	-479.60	-2.85	-781.56	-0.3	-553.63	-0.3	-59.31	0	-22.62
9	10	33.90	-1256.06	88.76	-686.02	-2.85	-957.22	-0.3	-249.23	-0.3	-66.16	0	-32.70
10	10	33.90	-1842.62	-46.66	-942.94	-2.85	-1510.17	-0.3	-285.45	-0.3	-62.41	0	-28.95
10	11	34.90	-1842.04	-37.07	-901.38	-2.85	-1516.83	-0.3	-195.65	-0.3	-82.62	0	-58.13
11	11	34.90	-3828.53	-171.50	-1197.62	-2.85	-1083.24	-0.3	-236.25	-0.3	-19.59	0	-5.38
11	12	35.90	-3831.39	-152.13	-1041.79	-3.088	-890.11	-0.3	-196.76	-0.3	-44.39	0	-40.06
12	12	35.90	-3676.33	1051.99	-1041.85	-3.088	-862.21	-0.3	-168.82	-0.3	-49.33	0	-45.00
12	13	36.90	-3672.51	1073.55	-2113.77	-3.325	-1004.05	-0.3	284.26	-0.3	-52.85	0	-51.17
13	13	36.90	-3599.47	453.09	270.43	-3.325	-487.65	-0.3	-568.12	-0.3	-568.12	0	-576.10
13	14	39.25	-3602.35	498.38	-847.35	-3.884	-513.57	-0.3	-316.86	-0.3	-316.86	0	-300.40
14	14	39.25	-4561.11	60.85	944.70	-3.884	-413.50	-0.3	-632.80	-0.3	-632.80	0	-651.16
14	15	41.60	-4569.38	116.89	735.86	-4.442	-366.45	-0.3	-515.08	-0.3	-515.08	0	-525.85
15	15	41.60	-4515.53	708.99	735.38	-4.442	-361.33	-0.3	-509.86	-0.3	-509.86	0	-520.62
15	16	43.90	-4512.94	551.12	-759.36	-5	-447.37	-0.3	-304.85	-0.3	-304.85	0	-295.75
16	16	43.90	-4419.42	1067.33	-759.42	-5	-270.25	-0.3	-183.87	-0.3	-183.87	0	-178.36
16	17	46.45	-4438.16	878.82	-3253.00	-5	-440.74	-0.3	-70.73	-0.3	-70.73	0	-47.11
17	17	46.45	-4392.41	-887.12	-3265.01	-5	-439.29	-0.3	-67.92	-0.3	-67.92	0	-44.21
17	18	49.00	-4373.65	-1075.81	-750.11	-5	-267.35	-0.3	-182.03	-0.3	-182.03	0	-176.59
18	18	49.00	-4468.45	-564.78	-750.20	-5	-442.81	-0.3	-302.01	-0.3	-302.01	0	-293.02
18	19	51.30	-4471.04	-722.65	776.56	-4.442	-353.03	-0.3	-509.88	-0.3	-509.88	0	-521.24
19	19	51.30	-4527.03	-136.24	776.08	-4.442	-358.45	-0.3	-515.21	-0.3	-515.21	0	-526.56
19	20	53.65	-4518.76	-80.21	1031.22	-3.884	-398.48	-0.3	-637.87	-0.3	-637.87	0	-657.91
20	20	53.65	-3559.95	-513.99	-760.88	-3.884	-498.55	-0.3	-321.91	-0.3	-321.91	0	-307.13
20	21	56.00	-3557.07	-468.70	394.27	-3.325	-460.59	-0.3	-577.91	-0.3	-577.91	0	-589.55
21	21	56.00	-3656.46	-1079.01	-1983.84	-3.325	-981.94	-0.3	269.67	-0.3	-71.14	0	-72.64
21	22	57.00	-3660.37	-1057.44	-905.69	-3.088	-836.11	-0.3	-183.12	-0.3	-71.11	0	-71.09
22	22	57.00	-3817.77	140.37	-905.75	-3.088	-864.32	-0.3	-211.29	-0.3	-66.48	0	-66.46
22	23	58.00	-3814.99	159.77	-1048.55	-2.85	-1048.27	-0.3	-255.51	-0.3	-44.47	0	-35.94
23	23	58.00	-1826.68	27.67	-752.02	-2.85	-1424.65	-0.3	-207.23	-0.3	-112.06	0	-97.36
23	24	59.00	-1827.33	37.27	-783.92	-2.85	-1413.59	-0.3	-297.64	-0.3	-93.49	0	-70.54
24	24	59.00	-1243.35	-167.49	-525.42	-2.85	-862.77	-0.3	-266.75	-0.3	-95.75	0	-72.80
24	25	63.11	-1246.66	-129.14	79.51	-2.85	-465.32	-0.3	-736.52	-0.3	-136.13	0	-130.59
25	25	63.11	-1559.77	-129.14	-207.61	-2.85	-1084.67	-0.3	-667.10	0	0.00	0	0.00
25	26	67.23	-1563.07	-108.07	276.56	-2.85	-706.53	-0.3	-1262.77	0	0.00	0	0.00
26	26	67.23	-1858.76	-42.98	-380.51	-2.85	-1397.08	-0.3	-631.76	0	0.00	0	0.00
26	27	71.34	-1862.05	-21.54	-250.87	-2.85	-1297.25	-0.3	-792.68	0	0.00	0	0.00
27	27	71.34	-1987.30	-21.54	-365.72	-2.85	-1461.42	-0.3	-725.85	0	0.00	0	0.00
27	28	75.45	-1990.59	-0.10	-324.24	-2.85	-1430.80	-0.3	-778.66	0	0.00	0	0.00
28	28	75.45	-1990.59	-0.10	-324.24	-2.85	-1430.80	-0.3	-778.66	0	0.00	0	0.00
28	29	79.56	-1993.84	21.34	-370.90	-2.85	-1469.36	-0.3	-723.36	0	0.00	0	0.00
29	29	79.56	-1868.60	21.34	-256.05	-2.85	-1305.19	-0.3	-790.19	0	0.00	0	0.00
29	30	83.68	-1866.61	42.78	-386.08	-2.85	-1406.09	-0.3	-629.56	0	0.00	0	0.00
30	30	83.68	-1570.89	108.69	270.99	-2.85	-715.52	-0.3	-1260.56	0	0.00	0	0.00
30	31	87.79	-1567.68	129.78	-215.91	-2.85	-1095.86	-0.3	-661.61	0	0.00	0	0.00
31	31	87.79	-1254.57	129.78	71.22	-2.85	-471.68	-0.3	-737.31	-0.3	-136.80	0	-130.71
31	32	91.90	-1251.38	168.15	-536.56	-2.85	-870.57	-0.3	-267.07	-0.3	-96.01	0	-72.32
32	32	91.90	-1835.18	-39.09	-795.06	-2.85	-1421.33	-0.3	-297.91	-0.3	-93.71	0	-70.02
32	33	92.90	-1834.55	-29.51	-761.40	-2.85	-1431.53	-0.3	-207.81	-0.3	-112.55	0	-97.23
33	33	92.90	-3822.45	-162.92	-1057.64	-2.85	-1051.15	-0.3	-255.31	-0.3	-44.14	0	-35.24
33	34	93.90	-3825.26	-143.54	-911.83	-3.088	-866.26	-0.3	-211.45	-0.3	-66.53	0	-66.31
34	34	93.90	-3668.43	1056.45	-911.90	-3.088	-838.15	-0.3	-183.30	-0.3	-71.23	0	-71.01
34	35	94.90	-3664.56	1078.02	-1988.23	-3.325	-983.41	-0.3	269.07	-0.3	-71.34	0	-72.71
35	35	94.90	-3557.04	468.53	396.55	-3.325	-460.21	-0.3	-578.20	-0.3	-578.20	0	-589.91
35	36	97.25	-3559.92	513.82	-758.00	-3.884	-498.21	-0.3	-322.24	-0.3	-322.24	0	-307.51
36	36	97.25	-4518.73	80.05	1034.06	-3.884	-398.14	-0.3	-638.19	-0.3	-638.19	0	-658.28
36	37	99.60	-4527.00	136.09	779.66	-4.442	-358.10	-0.3	-515.58	-0.3	-515.58	0	-526.98
37	37	99.60	-4471.04	722.50	779.18	-4.442	-352.77	-0.3	-510.16	-0.3	-510.16	0	-521.55
37	38	101.90	-4468.45	564.63	-746.69	-5	-442.49	-0.3	-302.35	-0.3	-302.35	0	-293.40
38	38	101.90	-4373.66	1075.66	-746.74	-5	-267.12	-0.3	-182.19	-0.3	-182.19	0	-176.77
38	39	104.45	-4392.42	886.97	-3261.61	-5	-439.06	-0.3	-68.08	-0.3	-68.08	0	-44.40
39	39	104.45	-4438.17	-878.73	-3248.58	-5	-440.44	-0.3	-70.93	-0.3	-70.93	0	-47.35
39	40	107.00	-4419.43	-1067.24	-755.58	-5	-269.99	-0.3	-184.05	-0.3	-184.05	0	-178.56
40	40	107.00	-4512.94	-551.03	-755.67	-5	-447.04	-0.3	-305.21	-0.3	-305.21	0	-296.15
40	41	109.30	-4515.53	-708.90	739.40	-4.442	-360.93	-0.3	-510.28	-0.3	-510.28	0	-521.10
41	41	109.30	-4569.36	-116.80	738.92	-4.442	-366.15	-0.3	-515.40	-0.3	-515.40	0	-526.21
41	42	111.65	-4561.09	-60.77	947.91	-3.884	-413.12	-0.3	-633.17	-0.3	-633.17	0	-651.59
42	42	111.65	-3602.34	-498.29	-844.19	-3.884	-513.20	-0.3	-317.22	-0.3	-317.22	0	-300.82
42	43	114.00	-3599.46	-453.00	273.62	-3.325	-487.11	-0.3	-568.53	-0.3	-568.53	0	-576.61
43	43	114.00	-3672.50	-1073.47	-2111.64	-3.325	-1003.83	-0.3	284.23	-0.3	-53.22	0	-51.62
43	44	115.00	-3676.32	-1051.91	-1038.95	-3.088	-861.74	-0.3	-169.20	-0.3	-49.73	0	-45.49
44	44	115.00	-3831.36	152.20	-1039.02	-3.088	-889.67	-0.3	-197.08	-0.3	-44.79	0	-40.55
44	45	116.00	-3828.50	171.57	-1194.98	-2.85	-1082.73	-0.3	-236.54	-0.3	-20.00	0	-5.90
45	45	116.00	-1842.02	37.16	-898.45	-2.85	-1515.38	-0.3	-196.17	-0.3	-83.06	0	-58.77
45	46	117.00	-1842.60	46.75	-940.09	-2.85	-1508.77	-0.3	-285.95	-0.3	-62.83	0	-29.56
46	46	117.00	-1256.06	-88.68	-683.18	-2.85	-955.83	-0.3	-249.74	-0.3	-66.59	0	-33.32
46	47	119.78	-1258.11	-62.56	-476.99	-2.85	-780.28	-0.3	-554.10	-0.3	-59.71	0	-23.19
47	47	119.78	-1253.52	-153.71	-476.99	-2.85	-778.96	-0.3	-552.77	-0.3	-58.59	0	-22.07
47	48	122.55	-1255.54	-127.90	-89.91	-2.85	-535.71	-0.3	-813.72	-0.3	-90.15	0	-67.30
48	48	122.55	-1718.85	-82.54	-522.04	-2.85	-1425.51	-0.3	-375.54	0	0.00	0	0.00
48	49	128.10	-1722.97	-53.94	-148.11	-2.85	-1134.39	-0.3	-836.50	0	0.00	0	0.00
49	49	128.10	-2036.63	-7.52	-435.23	-2.85	-1545.14	-0.3	-669.76	0	0.00	0	0.00
49	50	133.65	-2040.78	21.42	-477.65	-2.85	-1580.89	-0.3	-620.20	0	0.00	0	0.00
50	50	133.65	-2040.78	21.42	-477.65	-2.85	-1580.89	-0.3	-620.20	0	0.00	0	0.00
50	51	139.20	-2044.96	50.35	-680.69	-2.85	-1742.76	-0.3	-373.68	0	0.00	0	0.00
51	51	139.20	-1418.74	50.35	-95.42	-2.85	-913.26	-0.3	-721.34	0	0.00	0	0.00
51	52	144.75	-1422.95	79.29	-459.05	-2.85	-1201.21	-0.3	-277.92	0	0.00	0	0.00
52	52	144.75	-1276.83	79.29	-325.06	-2.85	-1009.66	-0.3	-355.88	0	0.00	0	0.00
52	53	147.53	-1278.96	93.75	-567.10	-2.85	-1200.94	-0.3	-60.34	0	0.00	0	0.00
53	53	147.53	-1278.96	93.75	-567.10	-2.85	-1200.94	-0.3	-60.34	0	0.00	0	0.00
53	54	150.30	-1281.08	108.21	-849.29	-2.85	-1423.73	-0.3	284.45	0	0.00	0	0.00
54	54	150.30	-1297.47	-3.13	-849.29	-2.85	-1433.42	-0.3	274.76	0	0.00	0	0.00
54	55	150.90	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 0

[1, 1]ppcopt + [9, 1.1]Prd1 2sup + [.9, 1.1]Pr2 1infsopt + [1; 1]ppvlat + [.66, 1.05]prd3.2prolosadoviat TOT.To + [1, 1]ppcontrol + [1, 1]PPpotoso + [.66, 1.05]prd4.2prolosadovia TOT To + [1, 1]ppiosa1 + [.9, 1.1]prd5.1losmarcs TOT To + [1, 1]dosbloques + [9, 1.1]pret7 1convic TOT To + [9, 1.1]pret8 1convier TOT To + [9, 1.1]pret9 1posilosa219 TOT To

Coef. esc.

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.89	0	0.00	0	0.00
1	2	0.60	-1121.21	3.13	-720.39	-2.85	-1228.07	-0.3	220.85	0	0.00	0	0.00
2	2	0.60	-1104.80	-102.91	-720.39	-2.85	-1218.37	-0.3	230.54	0	0.00	0	0.00
2	3	3.38	-1103.07	-90.30	-446.13	-2.85	-1003.62	-0.3	-102.29	0	0.00	0	0.00
3	3	3.38	-1103.07	-90.30	-446.13	-2.85	-1003.62	-0.3	-102.29	0	0.00	0	0.00
3	4	6.15	-1101.33	-75.84	-216.01	-2.85	-820.36	-0.3	-385.90	0	0.00	0	0.00
4	4	6.15	-1233.53	-75.84	-337.24	-2.85	-993.65	-0.3	-315.36	0	0.00	0	0.00
4	5	11.70	-1230.08	-46.90	6.52	-2.85	-721.75	-0.3	-734.87	0	0.00	0	0.00
5	5	11.70	-1796.66	-46.90	-523.01	-2.85	-1472.25	-0.3	-420.32	0	0.00	0	0.00
5	6	17.25	-1793.24	-17.97	-339.82	-2.85	-1326.42	-0.3	-642.94	0	0.00	0	0.00
6	6	17.25	-1793.24	-17.97	-339.82	-2.85	-1326.42	-0.3	-642.94	0	0.00	0	0.00
6	7	22.80	-1789.85	10.97	-317.26	-2.85	-1306.71	-0.3	-668.60	0	0.00	0	0.00
7	7	22.80	-1506.07	48.95	-57.48	-2.85	-935.08	-0.3	-819.46	0	0.00	0	0.00
7	8	28.35	-1502.70	77.61	-404.75	-2.85	-1205.71	-0.3	-391.64	0	0.00	0	0.00
8	8	28.35	-1083.82	114.71	-13.78	-2.85	-419.82	-0.3	-790.40	-0.3	-71.15	0	-51.31
8	9	31.13	-1082.16	140.58	-365.04	-2.85	-645.46	-0.3	-536.32	-0.3	-45.06	0	-13.93
9	9	31.13	-1853.47	66.83	191.16	-2.85	-594.44	-0.3	-858.71	-0.3	-317.46	0	-323.44
9	10	33.90	-1854.66	92.95	-25.36	-2.85	-775.91	-0.3	-553.75	-0.3	-323.51	0	-332.04
10	10	33.90	-2319.06	-174.62	-246.25	-2.85	-1232.31	-0.3	-565.88	-0.3	-316.60	0	-325.13
10	11	34.90	-2319.60	-165.31	-77.42	-2.85	-1177.45	-0.3	-496.63	-0.3	-356.79	0	-382.94
11	11	34.90	-4347.41	-403.32	-68.81	-2.85	-877.25	-0.3	-619.39	-0.3	-209.83	0	-225.01
11	12	35.90	-4351.33	-384.47	315.15	-3.088	-688.87	-0.3	-564.16	-0.3	-248.62	0	-274.87
12	12	35.90	-4241.06	965.82	315.10	-3.088	-666.78	-0.3	-542.03	-0.3	-258.50	0	-284.75
12	13	36.90	-4238.40	987.28	-668.91	-3.325	-824.58	-0.3	-66.04	-0.3	-251.09	0	-275.97
13	13	36.90	-4578.41	307.33	2026.92	-3.325	-337.91	-0.3	-941.04	-0.3	-941.04	0	-1000.86
13	14	39.25	-4583.65	352.23	1256.10	-3.884	-379.55	-0.3	-671.14	-0.3	-671.14	0	-695.55
14	14	39.25	-5747.46	-123.79	3446.03	-3.884	-256.36	-0.3	-1056.33	-0.3	-1056.33	0	-1123.29
14	15	41.60	-5758.09	-68.09	3678.70	-4.442	-192.54	-0.3	-935.58	-0.3	-935.58	0	-989.40
15	15	41.60	-5718.19	679.85	3678.36	-4.442	-188.74	-0.3	-931.71	-0.3	-931.71	0	-985.53
15	16	43.90	-5717.92	520.87	2265.98	-5	-273.70	-0.3	-699.00	-0.3	-699.00	0	-726.15
16	16	43.90	-5619.87	1176.11	2265.51	-5	-123.94	-0.3	-381.62	-0.3	-381.62	0	-398.07
16	17	46.45	-5640.03	999.33	-515.59	-5	-314.05	-0.3	-255.40	-0.3	-255.40	0	-251.66
17	17	46.45	-5603.04	-1007.30	-521.80	-5	-312.64	-0.3	-253.29	-0.3	-253.29	0	-249.50
17	18	49.00	-5588.00	-1164.58	2291.64	-5	-120.59	-0.3	-381.24	-0.3	-381.24	0	-397.88
18	18	49.00	-5687.24	-532.93	2292.00	-5	-268.77	-0.3	-698.95	-0.3	-698.95	0	-726.41
[illegible]	19	51.30	-5692.16	-691.84	3742.60	-4.442	-179.96	-0.3	-935.90	-0.3	-935.90	0	-990.66
[illegible]	19	51.30	-5733.82	52.80	3742.32	-4.442	-183.98	-0.3	-939.87	-0.3	-939.87	0	-994.62
[illegible]	20	53.65	-5727.69	109.18	3555.52	-3.884	-241.26	-0.3	-1066.65	-0.3	-1066.65	0	-1135.74
[illegible]	20	53.65	-4564.07	-363.63	1365.42	-3.884	-364.47	-0.3	-681.44	-0.3	-681.44	0	-707.97
20	21	56.00	-4562.57	-318.11	2169.07	-3.325	-311.71	-0.3	-957.15	-0.3	-957.15	0	-1021.16
21	21	56.00	-4243.99	-988.24	-583.66	-3.325	-811.38	-0.3	-78.18	-0.3	-265.04	0	-291.91
21	22	57.00	-4246.76	-956.79	402.04	-3.088	-651.61	-0.3	-553.54	-0.3	-274.85	0	-303.79
22	22	57.00	-4357.24	383.36	401.99	-3.088	-673.74	-0.3	-575.63	-0.3	-265.04	0	-293.98
22	23	58.00	-4353.42	402.32	20.28	-2.85	-857.51	-0.3	-633.50	-0.3	-227.41	0	-245.88
23	23	58.00	-2325.36	163.23	11.91	-2.85	-1122.96	-0.3	-508.11	-0.3	-379.85	0	-411.67
23	24	59.00	-2324.91	172.56	-154.61	-2.85	-1177.14	-0.3	-576.30	-0.3	-340.26	0	-354.70
24	24	59.00	-1843.05	-238.97	64.69	-2.85	-714.33	-0.3	-554.56	-0.3	-345.03	0	-359.47
24	25	63.11	-1841.70	-200.13	959.72	-2.85	-172.88	-0.3	-1075.09	-0.3	-428.31	0	-479.51
25	25	63.11	-1344.71	-117.36	-197.28	-2.85	-949.48	-0.3	-552.69	0	0.00	0	0.00
25	26	67.23	-1347.41	-96.21	238.93	-2.85	-608.63	-0.3	-1089.19	0	0.00	0	0.00
26	26	67.23	-1614.64	-42.96	-355.56	-2.85	-1233.24	-0.3	-518.10	0	0.00	0	0.00
26	27	71.34	-1617.33	-21.52	-225.44	-2.85	-1132.68	-0.3	-679.25	0	0.00	0	0.00
27	27	71.34	-1730.64	-21.52	-329.35	-2.85	-1281.21	-0.3	-618.79	0	0.00	0	0.00
27	28	75.45	-1733.34	-0.08	-287.40	-2.85	-1249.87	-0.3	-671.83	0	0.00	0	0.00
28	28	75.45	-1733.34	-0.08	-287.40	-2.85	-1249.87	-0.3	-671.83	0	0.00	0	0.00
28	29	79.56	-1736.00	21.36	-333.59	-2.85	-1287.70	-0.3	-616.75	0	0.00	0	0.00
29	29	79.56	-1622.68	21.36	-229.68	-2.85	-1139.17	-0.3	-677.21	0	0.00	0	0.00
29	30	83.68	-1621.05	42.80	-360.11	-2.85	-1240.60	-0.3	-516.31	0	0.00	0	0.00
30	30	83.68	-1353.81	96.73	234.38	-2.85	-615.98	-0.3	-1087.39	0	0.00	0	0.00
30	31	87.79	-1351.18	117.88	-204.07	-2.85	-958.63	-0.3	-548.19	0	0.00	0	0.00
31	31	87.79	-1848.17	200.65	952.94	-2.85	-178.08	-0.3	-1075.74	-0.3	-428.85	0	-479.60
31	32	91.90	-1849.62	239.51	55.57	-2.85	-720.71	-0.3	-554.82	-0.3	-345.25	0	-359.08
32	32	91.90	-2331.31	-174.05	-163.73	-2.85	-1183.47	-0.3	-576.51	-0.3	-340.44	0	-354.27
32	33	92.90	-2331.79	-164.73	4.22	-2.85	-1126.60	-0.3	-508.59	-0.3	-380.25	0	-411.56
33	33	92.90	-4359.52	-404.89	12.82	-2.85	-859.87	-0.3	-633.33	-0.3	-227.14	0	-245.31
33	34	93.90	-4363.37	-385.95	397.05	-3.088	-675.32	-0.3	-575.78	-0.3	-265.08	0	-293.86
34	34	93.90	-4253.35	965.98	396.99	-3.088	-653.28	-0.3	-553.70	-0.3	-274.94	0	-303.72
34	35	94.90	-4250.62	987.43	-587.15	-3.325	-812.55	-0.3	-78.71	-0.3	-265.21	0	-291.97
35	35	94.90	-4562.54	317.91	2171.93	-3.325	-311.23	-0.3	-957.51	-0.3	-957.51	0	-1021.61
35	36	97.25	-4564.03	363.43	1368.64	-3.884	-364.09	-0.3	-681.81	-0.3	-681.81	0	-708.40
36	36	97.25	-5727.85	-109.38	3559.17	-3.884	-240.83	-0.3	-1067.06	-0.3	-1067.06	0	-1136.22
36	37	99.60	-5733.79	-52.99	3746.40	-4.442	-183.58	-0.3	-940.29	-0.3	-940.29	0	-995.10
37	37	99.60	-5692.16	691.65	3746.12	-4.442	-179.61	-0.3	-936.27	-0.3	-936.27	0	-991.07
[illegible]	38	101.90	-5687.24	532.74	2295.84	-5	-268.42	-0.3	-699.32	-0.3	-699.32	0	-726.83
[illegible]	38	101.90	-5588.01	1184.39	2296.23	-5	-120.27	-0.3	-381.45	-0.3	-381.45	0	-398.12
[illegible]	39	104.45	-5603.05	1007.11	-517.36	-5	-312.34	-0.3	-253.49	-0.3	-253.49	0	-249.74
39	39	104.45	-5640.04	-999.22	-510.45	-5	-313.70	-0.3	-255.64	-0.3	-255.64	0	-251.93
39	40	107.00	-5619.88	-1176.00	2270.58	-5	-123.59	-0.3	-381.86	-0.3	-381.86	0	-398.34
40	40	107.00	-5717.92	-520.76	2270.08	-5	-273.33	-0.3	-699.40	-0.3	-699.40	0	-726.59
40	41	109.30	-5718.19	-679.74	3683.02	-4.442	-186.28	-0.3	-932.20	-0.3	-932.20	0	-986.08
41	41	109.30	-5758.07	68.20	3682.67	-4.442	-192.14	-0.3	-935.99	-0.3	-935.99	0	-989.86
41	42	111.65	-5747.44	123.89	3450.38	-3.884	-255.84	-0.3	-1056.83	-0.3	-1056.83	0	-1123.87
42	42	111.65	-4583.64	-352.12	1259.67	-3.884	-379.13	-0.3	-671.55	-0.3	-671.55	0	-696.03
42	43	114.00	-4578.40	-307.22	2030.75	-3.325	-337.26	-0.3	-941.54	-0.3	-941.54	0	-1001.47
43	43	114.00	-4238.38	-987.18	-666.01	-3.325	-824.25	-0.3	-66.19	-0.3	-251.55	0	-276.52
43	44	115.00	-4241.04	-965.72	318.66	-3.088	-666.20	-0.3	-542.50	-0.3	-258.98	0	-285.35
44	44	115.00	-4351.29	384.55	318.60	-3.088	-688.32	-0.3	-564.57	-0.3	-249.10	0	-275.47
44	45	116.00	-4347.38	403.40	-65.46	-2.85	-876.59	-0.3	-619.81	-0.3	-210.33	0	-225.65
45	45	116.00	-2319.58	165.42	-73.83	-2.85	-1175.68	-0.3	-497.27	-0.3	-357.33	0	-383.72
45	46	117.00	-2319.04	174.73	-242.77	-2.85	-1230.60	-0.3	-566.50	-0.3	-317.12	0	-325.88
46	46	117.00	-1854.66	-92.85	-21.69	-2.85	-774.20	-0.3	-554.38	-0.3	-324.04	0	-332.80
46	47	119.78	-1853.47	-66.73	194.36	-2.85	-592.87	-0.3	-859.28	-0.3	-317.94	0	-324.14
47	47	119.78	-1082.17	-140.48	-361.85	-2.85	-643.90	-0.3	-536.89	-0.3	-45.55	0	-14.63
47	48	122.55	-1083.83	-114.61	-10.88	-2.85	-418.40	-0.3	-790.93	-0.3	-71.59	0	-51.95
48	48	122.55	-1502.70	-77.50	-401.86	-2.85	-1203.44	-0.3	-395.18	0	0.00	0	0.00
48	49	128.10	-1506.07	-48.84	-55.16	-2.85	-933.26	-0.3	-822.31	0	0.00	0	0.00
49	49	128.10	-1789.85	-10.87	-314.94	-2.85	-1304.89	-0.3	-671.44	0	0.00	0	0.00
49	50	133.65	-1793.24	18.07	-338.08	-2.85	-1325.05	-0.3	-645.08	0	0.00	0	0.00
50	50	133.65	-1793.24	18.07	-338.08	-2.85	-1325.05	-0.3	-645.08	0	0.00	0	0.00
50	51	139.20	-1796.66	47.00	-521.85	-2.85	-1471.35	-0.3	-421.74	0	0.00	0	0.00
51	51	139.20	-1230.08	47.00	7.68	-2.85	-720.84	-0.3	-736.28	0	0.00	0	0.00
51	52	144.75	-1233.53	75.94	-336.67	-2.85	-993.20	-0.3	-316.07	0	0.00	0	0.00
52	52	144.75	-1101.33	75.94	-215.44	-2.85	-819.91	-0.3	-386.61	0	0.00	0	0.00
52	53	147.53	-1103.07	90.40	-447.84	-2.85	-1003.38	-0.3	-102.65	0	0.00	0	0.00
53	53	147.53	-1103.07	90.40	-447.84	-2.85	-1003.38	-0.3	-102.65	0	0.00	0	0.00
53	54	150.30	-1104.80	102.99	-720.39	-2.85	-1218.37	-0.3	230.54	0	0.00	0	0.00
54	54	150.30	-1121.21	-3.13	-720.39	-2.85	-1228.07	-0.3	220.85	0	0.00	0	0.00
54	55	150.90	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.89	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 9

[1, 1]ppcopt + [9, 1.1]Prd1 2sup + [.9, 1.1]Pr2 1infsopt + [1; 1]ppvlat + [.66, 1.05]prd3.2prolosadoviat TOT.To + [1, 1]ppcontrol + [1, 1]PPpotoso + [.66, 1.05]prd4.2prolosadovia TOT To + [1, 1]ppiosa1 + [.9, 1.1]prd5.1losmarcs TOT To + [1, 1]dosbloques + [9, 1.1]pret7 1convic TOT To + [9, 1.1]pret8 1convier TOT To + [9, 1.1]pret9 1posilosa219 TOT To

Coef. esc.

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	0	0.00	0	0.00
1	2	0.60	-1297.47	3.13	-849.29	-2.85	-1433.42	-0.3	274.76	0	0.00	0	0.00
2	2	0.60	-1281.08	-104.47	-849.29	-2.85	-1423.73	-0.3	284.45	0	0.00	0	0.00
2	3	3.38	-1278.96	-89.20	-579.73	-2.85	-1210.86	-0.3	-44.85	0	0.00	0	0.00
3	3	3.38	-1278.96	-89.20	-579.73	-2.85	-1210.86	-0.3	-44.85	0	0.00	0	0.00
3	4	6.15	-1276.83	-74.74	-350.29	-2.85	-1029.49	-0.3	-324.95	0	0.00	0	0.00
4	4	6.15	-1422.95	-74.74	-484.28	-2.85	-1221.02	-0.3	-246.98	0	0.00	0	0.00
4	5	11.70	-1418.74	-45.80	-145.90	-2.85	-952.89	-0.3	-659.44	0	0.00	0	0.00
5	5	11.70	-2044.96	-45.80	-731.17	-2.85	-1782.39	-0.3	-311.78	0	0.00	0	0.00
5	6	17.25	-2040.78	-16.87	-553.36	-2.85	-1640.33	-0.3	-527.35	0	0.00	0	0.00
6	6	17.25	-2040.78	-16.87	-553.36	-2.85	-1640.33	-0.3	-527.35	0	0.00	0	0.00
6	7	22.80	-2036.63	12.07	-536.20	-2.85	-1624.41	-0.3	-545.95	0	0.00	0	0.00
7	7	22.80	-1722.62	58.47	-249.08	-2.85	-1213.45	-0.3	-712.48	0	0.00	0	0.00
7	8	28.35	-1718.50	87.07	-648.23	-2.85	-1524.37	-0.3	-220.58	0	0.00	0	0.00
8	8	28.35	-1254.84	132.39	-216.10	-2.85	-597.57	-0.3	-790.85	-0.3	-70.83	0	-39.56
8	9	31.13	-1252.82	158.20	-615.82	-2.85	-847.02	-0.3	-527.64	-0.3	-37.35	0	8.43
9	9	31.13	-1886.03	66.30	-115.72	-2.85	-783.75	-0.3	-800.12	-0.3	-267.57	0	-255.17
9	10	33.90	-1886.33	92.42	-330.50	-2.85	-964.20	-0.3	-494.89	-0.3	-273.72	0	-263.99
10	10	33.90	-2460.50	-170.96	-587.41	-2.85	-1513.57	-0.3	-527.54	-0.3	-266.95	0	-257.22
10	11	34.90	-2460.74	-161.57	-422.20	-2.85	-1459.66	-0.3	-460.18	-0.3	-306.13	0	-313.62
11	11	34.90	-4417.05	-399.38	-718.45	-2.85	-1070.69	-0.3	-394.45	-0.3	-165.94	0	-170.28
11	12	35.90	-4420.68	-380.33	-338.65	-3.088	-847.98	-0.3	-371.87	-0.3	-206.38	0	-223.67
12	12	35.90	-4305.54	993.56	-338.72	-3.088	-825.16	-0.3	-349.00	-0.3	-216.01	0	-233.30
12	13	36.90	-4302.56	1015.05	-1350.69	-3.325	-966.99	-0.3	112.47	-0.3	-211.77	0	-229.25
13	13	36.90	-4224.79	356.33	1033.50	-3.325	-452.22	-0.3	-759.75	-0.3	-759.75	0	-790.25
13	14	39.25	-4229.61	401.31	146.50	-3.884	-469.05	-0.3	-503.06	-0.3	-503.06	0	-505.91
14	14	39.25	-5189.54	-28.27	1938.31	-3.884	-369.15	-0.3	-819.11	-0.3	-819.11	0	-856.78
14	15	41.60	-5199.75	27.49	1943.52	-4.442	-308.76	-0.3	-701.32	-0.3	-701.32	0	-729.75
15	15	41.60	-5152.17	702.15	1943.20	-4.442	-304.22	-0.3	-696.72	-0.3	-696.72	0	-725.15
15	16	43.90	-5151.49	544.25	468.60	-5	-389.41	-0.3	-477.36	-0.3	-477.36	0	-482.98
16	16	43.90	-5054.51	1134.08	468.11	-5	-218.19	-0.3	-271.44	-0.3	-271.44	0	-274.84
16	17	46.45	-5075.35	945.77	-2191.34	-5	-400.06	-0.3	-150.82	-0.3	-150.82	0	-134.91
17	17	46.45	-5029.96	-950.44	-2203.50	-5	-398.65	-0.3	-148.01	-0.3	-148.01	0	-132.02
17	18	49.00	-5013.30	-1139.34	478.16	-5	-215.47	-0.3	-269.86	-0.3	-269.86	0	-273.33
18	18	49.00	-5111.16	-554.19	478.36	-5	-385.15	-0.3	-474.93	-0.3	-474.93	0	-480.66
18	19	51.30	-5115.64	-712.04	1984.56	-4.442	-296.67	-0.3	-697.52	-0.3	-697.52	0	-726.56
19	19	51.30	-5164.80	-42.06	1984.30	-4.442	-301.41	-0.3	-702.21	-0.3	-702.21	0	-731.24
19	20	53.65	-5158.44	14.26	2021.44	-3.884	-355.81	-0.3	-825.08	-0.3	-825.08	0	-864.36
20	20	53.65	-4198.37	-411.43	229.58	-3.884	-455.71	-0.3	-509.01	-0.3	-509.01	0	-513.47
20	21	56.00	-4196.63	-365.95	1145.41	-3.325	-429.27	-0.3	-770.10	-0.3	-770.10	0	-803.91
21	21	56.00	-4301.09	-1015.40	-1232.70	-3.325	-948.25	-0.3	97.78	-0.3	-230.15	0	-250.51
21	22	57.00	-4304.18	-993.91	-219.58	-3.088	-803.74	-0.3	-362.73	-0.3	-237.26	0	-258.34
22	22	57.00	-4419.70	377.48	-219.65	-3.088	-826.63	-0.3	-385.57	-0.3	-227.71	0	-248.78
22	23	58.00	-4416.18	396.56	-595.42	-2.85	-1043.03	-0.3	-411.55	-0.3	-188.82	0	-197.84
23	23	58.00	-2459.38	158.79	-298.89	-2.85	-1384.33	-0.3	-471.12	-0.3	-335.03	0	-350.57
23	24	59.00	-2459.25	168.20	-461.09	-2.85	-1437.12	-0.3	-537.91	-0.3	-296.50	0	-295.09
24	24	59.00	-1885.09	-235.57	-202.59	-2.85	-889.13	-0.3	-509.85	-0.3	-301.15	0	-299.74
24	25	63.11	-1885.08	-196.87	678.50	-2.85	-354.93	-0.3	-1028.26	-0.3	-382.63	0	-417.06
25	25	63.11	-1559.77	-129.14	-409.44	-2.85	-1243.12	-0.3	-419.61	0	0.00	0	0.00
25	26	67.23	-1563.07	-108.07	74.73	-2.85	-864.97	-0.3	-1015.27	0	0.00	0	0.00
26	26	67.23	-1858.76	-42.98	-582.34	-2.85	-1555.53	-0.3	-384.26	0	0.00	0	0.00
26	27	71.34	-1862.05	-21.54	-452.70	-2.85	-1455.70	-0.3	-545.18	0	0.00	0	0.00
27	27	71.34	-1987.30	-21.54	-567.55	-2.85	-1619.87	-0.3	-478.35	0	0.00	0	0.00
27	28	75.45	-1990.59	-0.10	-526.06	-2.85	-1589.24	-0.3	-531.17	0	0.00	0	0.00
28	28	75.45	-1990.59	-0.10	-526.06	-2.85	-1589.24	-0.3	-531.17	0	0.00	0	0.00
28	29	79.56	-1993.84	21.34	-572.73	-2.85	-1627.80	-0.3	-475.87	0	0.00	0	0.00
29	29	79.56	-1868.60	21.34	-457.88	-2.85	-1463.63	-0.3	-542.70	0	0.00	0	0.00
29	30	83.68	-1866.61	42.78	-587.91	-2.85	-1564.53	-0.3	-382.07	0	0.00	0	0.00
30	30	83.68	-1570.89	108.69	69.16	-2.85	-873.97	-0.3	-1013.07	0	0.00	0	0.00
30	31	87.79	-1567.68	129.78	-417.73	-2.85	-1254.30	-0.3	-414.11	0	0.00	0	0.00
31	31	87.79	-1892.99	197.51	670.20	-2.85	-361.29	-0.3	-1029.05	-0.3	-383.30	0	-417.18
31	32	91.90	-1893.12	236.23	-213.73	-2.85	-896.93	-0.3	-510.17	-0.3	-301.41	0	-299.27
32	32	91.90	-2467.09	-170.03	-472.23	-2.85	-1444.86	-0.3	-538.17	-0.3	-296.72	0	-294.57
32	33	92.90	-2467.25	-160.63	-308.28	-2.85	-1391.22	-0.3	-471.71	-0.3	-335.52	0	-350.44
33	33	92.90	-4423.64	-399.71	-604.52	-2.85	-1045.92	-0.3	-411.34	-0.3	-188.49	0	-197.14
33	34	93.90	-4427.19	-380.65	-225.73	-3.088	-828.57	-0.3	-385.73	-0.3	-227.75	0	-248.64
34	34	93.90	-4312.25	992.92	-225.79	-3.088	-805.79	-0.3	-362.90	-0.3	-237.37	0	-258.26
34	35	94.90	-4309.18	1014.41	-1237.09	-3.325	-949.71	-0.3	97.18	-0.3	-230.36	0	-250.59
35	35	94.90	-4196.60	365.79	1147.69	-3.325	-428.89	-0.3	-770.40	-0.3	-770.40	0	-804.26
35	36	97.25	-4198.35	411.27	232.22	-3.884	-455.40	-0.3	-509.31	-0.3	-509.31	0	-513.82
36	36	97.25	-5158.41	-14.42	2024.53	-3.884	-355.45	-0.3	-825.43	-0.3	-825.43	0	-864.77
36	37	99.60	-5164.77	41.91	1987.66	-4.442	-301.06	-0.3	-702.56	-0.3	-702.56	0	-731.64
37	37	99.60	-5115.64	711.89	1987.40	-4.442	-296.39	-0.3	-697.82	-0.3	-697.82	0	-726.89
37	38	101.90	-5111.16	554.04	481.58	-5	-384.85	-0.3	-475.24	-0.3	-475.24	0	-481.01
38	38	101.90	-5013.31	1139.19	481.81	-5	-215.22	-0.3	-270.03	-0.3	-270.03	0	-273.52
38	39	104.45	-5029.97	950.29	-2199.94	-5	-398.40	-0.3	-148.18	-0.3	-148.18	0	-132.21
39	39	104.45	-5075.36	-945.68	-2187.07	-5	-399.77	-0.3	-151.01	-0.3	-151.01	0	-135.13
39	40	107.00	-5054.52	-1133.98	472.38	-5	-217.90	-0.3	-271.63	-0.3	-271.63	0	-275.06
40	40	107.00	-5151.49	-544.16	471.86	-5	-389.12	-0.3	-477.68	-0.3	-477.68	0	-483.33
40	41	109.30	-5152.17	-702.06	1947.06	-4.442	-303.85	-0.3	-697.12	-0.3	-697.12	0	-725.61
41	41	109.30	-5199.73	-27.40	1946.75	-4.442	-308.44	-0.3	-701.65	-0.3	-701.65	0	-730.13
41	42	111.65	-5189.53	28.35	1941.76	-3.884	-368.74	-0.3	-819.51	-0.3	-819.51	0	-857.24
42	42	111.65	-4229.60	-401.22	149.42	-3.884	-468.71	-0.3	-503.40	-0.3	-503.40	0	-506.30
42	43	114.00	-4224.78	-356.24	1036.69	-3.325	-451.68	-0.3	-760.16	-0.3	-760.16	0	-790.76
43	43	114.00	-4302.56	-1014.96	-1348.57	-3.325	-966.77	-0.3	112.44	-0.3	-212.14	0	-229.70
43	44	115.00	-4305.54	-993.48	-335.82	-3.088	-824.69	-0.3	-349.38	-0.3	-216.41	0	-233.79
44	44	115.00	-4420.65	380.41	-335.88	-3.088	-847.54	-0.3	-372.18	-0.3	-206.77	0	-224.15
44	45	116.00	-4417.02	399.45	-715.80	-2.85	-1070.39	-0.3	-394.74	-0.3	-166.35	0	-170.81
45	45	116.00	-2460.72	161.66	-419.27	-2.85	-1458.21	-0.3	-460.71	-0.3	-306.57	0	-314.25
45	46	117.00	-2460.48	171.05	-584.57	-2.85	-1512.17	-0.3	-528.05	-0.3	-267.38	0	-257.84
46	46	117.00	-1886.33	-92.33	-327.65	-2.85	-962.80	-0.3	-495.40	-0.3	-274.16	0	-264.61
46	47	119.78	-1886.03	-66.21	-113.10	-2.85	-782.46	-0.3	-800.59	-0.3	-267.97	0	-255.74
47	47	119.78	-1252.83	-158.12	-613.21	-2.85	-845.74	-0.3	-528.11	-0.3	-37.75	0	7.86
47	48	122.55	-1254.85	-132.31	-213.74	-2.85	-596.41	-0.3	-791.28	-0.3	-71.19	0	-40.08
48	48	122.55	-1718.50	-86.98	-645.86	-2.85	-1522.51	-0.3	-223.48	0	0.00	0	0.00
48	49	128.10	-1722.62	-58.38	-247.18	-2.85	-1211.96	-0.3	-714.81	0	0.00	0	0.00
49	49	128.10	-2036.63	-11.99	-534.30	-2.85	-1622.91	-0.3	-548.28	0	0.00	0	0.00
49	50	133.65	-2040.78	16.95	-551.94	-2.85	-1639.22	-0.3	-529.10	0	0.00	0	0.00
50	50	133.65	-2040.78	16.95	-551.94	-2.85	-1639.22	-0.3	-529.10	0	0.00	0	0.00
50	51	139.20	-2044.96	45.88	-730.23	-2.85	-1781.65	-0.3	-312.94	0	0.00	0	0.00
51	51	139.20	-1418.74	45.88	-144.96	-2.85	-952.14	-0.3	-660.60	0	0.00	0	0.00
51	52	144.75	-1422.95	74.82	-483.81	-2.85	-1220.65	-0.3	-247.56	0	0.00	0	0.00
52	52	144.75	-1276.83	74.82	-349.82	-2.85	-1029.12	-0.3	-325.52	0	0.00	0	0.00
52	53	147.53	-1278.96	89.28	-579.48	-2.85	-1210.67	-0.3	-45.15	0	0.00	0	0.00
53	53	147.53	-1278.96	89.28	-579.48	-2.85	-1210.67	-0.3	-45.15	0	0.00	0	0.00
53	54	150.30	-1281.08	104.56	-849.29	-2.85	-1423.73	-0.3	284.45	0	0.00	0	0.00
54	54	150.30	-1297.47	-3.13	-849.29	-2.85	-1433.42	-0.3	274.76	0	0.00	0	0.00
54	55	150.90	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	0	0.00	0	0.00

Construcción sin gradiente en fase constructiva 10

[illegible]

Cod. exc

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
[illegible]	1	0.00	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.89	0	0.00	0	0.00
1	2	0.60	-1121.21	5.65	-721.15	-2.85	-1228.66	-0.3	221.78	0	0.00	0	0.00
2	2	0.60	-1104.80	-160.60	-721.15	-2.85	-1218.97	-0.3	231.47	0	0.00	0	0.00
2	3	3.38	-1103.07	-136.34	-304.98	-2.85	-891.22	-0.3	-277.85	0	0.00	0	0.00
3	3	3.38	-1103.07	-136.34	-304.98	-2.85	-891.22	-0.3	-277.85	0	0.00	0	0.00
3	4	6.15	-1101.33	-110.22	38.75	-2.85	-620.37	-0.3	-698.31	0	0.00	0	0.00
4	4	6.15	-1233.53	-110.22	-82.48	-2.85	-793.66	-0.3	-627.77	0	0.00	0	0.00
4	5	11.70	-1230.08	-57.97	387.42	-2.85	-422.73	-0.3	-1201.95	0	0.00	0	0.00
5	5	11.70	-1796.66	-57.97	-142.11	-2.85	-1173.23	-0.3	-887.41	0	0.00	0	0.00
5	6	17.25	-1793.24	-5.73	37.86	-2.85	-1029.92	-0.3	-1106.08	0	0.00	0	0.00
6	6	17.25	-1793.24	-5.73	37.86	-2.85	-1029.92	-0.3	-1108.08	0	0.00	0	0.00
6	7	22.80	-1789.85	46.52	-72.18	-2.85	-1114.31	-0.3	-969.13	0	0.00	0	0.00
7	7	22.80	-1503.26	84.39	187.60	-2.85	-741.03	-0.3	-1118.34	0	0.00	0	0.00
7	8	28.35	-1498.08	136.36	-421.84	-2.85	-1216.39	-0.3	-367.95	0	0.00	0	0.00
8	8	28.35	-1074.67	172.92	-30.87	-2.85	-425.56	-0.3	-784.69	-0.3	-66.32	0	-45.35
8	9	31.13	-1073.01	198.79	-545.65	-2.85	-731.64	-0.3	-501.24	-0.3	-15.42	0	27.76
9	9	31.13	-1853.47	125.76	10.55	-2.85	-683.26	-0.3	-826.27	-0.3	-290.05	0	-283.98
9	10	33.90	-1854.66	151.88	-369.50	-2.85	-945.14	-0.3	-491.94	-0.3	-271.29	0	-256.85
10	10	33.90	-2331.02	-116.92	-590.39	-2.85	-1405.00	-0.3	-507.53	-0.3	-267.29	0	-252.85
10	11	34.90	-2331.56	-107.61	-480.49	-2.85	-1379.11	-0.3	-427.66	-0.3	-298.54	0	-297.79
11	11	34.90	-4369.00	-348.49	-471.88	-2.85	-962.13	-0.3	-560.81	-0.3	-155.64	0	-155.20
11	12	35.90	-4372.92	-329.64	-146.85	-3.088	-768.50	-0.3	-501.05	-0.3	-190.24	0	-202.29
12	12	35.90	-4246.84	1024.46	-146.90	-3.088	-744.40	-0.3	-476.91	-0.3	-198.26	0	-210.30
12	13	36.90	-4244.18	1045.92	-1188.83	-3.325	-899.64	-0.3	1.48	-0.3	-188.63	0	-200.43
13	13	36.90	-4587.75	365.51	1506.00	-3.325	-426.69	-0.3	-874.82	-0.3	-874.82	0	-919.26
13	14	39.25	-4592.99	410.41	596.69	-3.884	-458.00	-0.3	-596.52	-0.3	-596.52	0	-608.11
14	14	39.25	-5756.06	-65.49	2786.62	-3.884	-334.73	-0.3	-981.62	-0.3	-981.62	0	-1035.77
14	15	41.60	-5766.69	-9.79	2880.81	-4.442	-271.44	-0.3	-853.32	-0.3	-853.32	0	-895.46
15	15	41.60	-5719.16	738.77	2880.47	-4.442	-268.91	-0.3	-848.72	-0.3	-848.72	0	-890.86
15	16	43.90	-5718.89	579.79	1332.56	-5	-358.54	-0.3	-608.65	-0.3	-608.65	0	-624.61
16	16	43.90	-5614.04	1234.75	1332.09	-5	-187.12	-0.3	-338.64	-0.3	-338.64	0	-348.31
16	17	46.45	-5634.20	1057.97	-1599.59	-5	-387.47	-0.3	-205.53	-0.3	-205.53	0	-193.91
17	17	46.45	-5597.90	-1058.96	-1605.49	-5	-386.07	-0.3	-203.46	-0.3	-203.46	0	-191.81
17	18	49.00	-5582.86	-1236.24	1340.33	-5	-185.02	-0.3	-337.47	-0.3	-337.47	0	-347.20
18	18	49.00	-5688.09	-584.84	1340.69	-5	-355.22	-0.3	-606.85	-0.3	-606.85	0	-622.91
18	19	51.30	-5693.01	-743.75	2910.70	-4.442	-261.44	-0.3	-849.36	-0.3	-849.36	0	-891.94
19	19	51.30	-5741.40	1.44	2910.42	-4.442	-266.12	-0.3	-853.98	-0.3	-853.98	0	-896.55
[illegible]	20	53.65	-5735.47	57.82	2845.62	-3.884	-325.43	-0.3	-986.03	-0.3	-986.03	0	-1041.32
[illegible]	20	53.65	-4572.30	-414.89	655.52	-3.884	-446.72	-0.3	-600.89	-0.3	-600.89	0	-613.63
[illegible]	21	56.00	-4570.80	-369.37	1581.16	-3.325	-411.57	-0.3	-882.07	-0.3	-882.07	0	-928.73
[illegible]	21	56.00	-4249.08	-1039.90	-1171.57	-3.325	-895.92	-0.3	-1.82	-0.3	-194.39	0	-206.50
21	22	57.00	-4251.85	-1018.45	-133.95	-3.088	-741.45	-0.3	-477.79	-0.3	-204.77	0	-217.23
22	22	57.00	-4376.26	335.06	-134.00	-3.088	-765.35	-0.3	-501.65	-0.3	-196.61	0	-209.06
22	23	58.00	-4372.44	354.02	-483.81	-2.85	-958.45	-0.3	-562.16	-0.3	-161.41	0	-161.13
23	23	58.00	-2335.89	112.40	-472.17	-2.85	-1364.05	-0.3	-424.21	-0.3	-308.96	0	-308.47
23	24	59.00	-2335.44	121.73	-586.77	-2.85	-1392.70	-0.3	-501.72	-0.3	-277.25	0	-262.84
24	24	59.00	-1837.57	-290.59	-367.47	-2.85	-925.27	-0.3	-475.36	-0.3	-278.12	0	-263.71
24	25	63.11	-1838.22	-251.75	741.06	-2.85	-278.82	-0.3	-1034.24	-0.3	-393.79	0	-430.40
25	25	63.11	-1339.23	-168.98	-415.94	-2.85	-1117.90	-0.3	-281.31	0	0.00	0	0.00
25	26	67.23	-1343.77	-130.56	198.05	-2.85	-638.57	-0.3	-1036.91	0	0.00	0	0.00
26	26	67.23	-1614.64	-77.51	-396.44	-2.85	-1265.33	-0.3	-467.97	0	0.00	0	0.00
26	27	71.34	-1617.33	-38.79	-159.77	-2.85	-1081.13	-0.3	-759.78	0	0.00	0	0.00
27	27	71.34	-1730.64	-38.79	-263.68	-2.85	-1229.66	-0.3	-699.31	0	0.00	0	0.00
27	28	75.45	-1733.34	-0.08	-186.22	-2.85	-1170.44	-0.3	-795.90	0	0.00	0	0.00
28	28	75.45	-1733.34	-0.08	-186.22	-2.85	-1170.44	-0.3	-795.90	0	0.00	0	0.00
28	29	79.56	-1736.00	38.63	-267.92	-2.85	-1236.15	-0.3	-697.28	0	0.00	0	0.00
29	29	79.56	-1622.68	38.63	-164.01	-2.85	-1067.62	-0.3	-757.74	0	0.00	0	0.00
29	30	83.68	-1621.05	77.35	-400.99	-2.85	-1272.70	-0.3	-466.18	0	0.00	0	0.00
30	30	83.68	-1350.17	131.08	193.50	-2.85	-645.92	-0.3	-1035.11	0	0.00	0	0.00
30	31	87.79	-1345.70	169.50	-422.73	-2.85	-1127.05	-0.3	-276.82	0	0.00	0	0.00
31	31	87.79	-1842.69	252.27	734.28	-2.85	-284.03	-0.3	-1034.89	-0.3	-394.34	0	-430.49
31	32	91.90	-1844.14	291.13	-376.59	-2.85	-931.64	-0.3	-475.62	-0.3	-278.33	0	-263.32
32	32	91.90	-2341.84	-123.22	-595.89	-2.85	-1399.03	-0.3	-501.93	-0.3	-277.42	0	-262.41
32	33	92.90	-2342.32	-113.90	-479.86	-2.85	-1389.68	-0.3	-424.68	-0.3	-309.36	0	-308.36
33	33	92.90	-4378.54	-356.59	-471.26	-2.85	-960.81	-0.3	-561.99	-0.3	-161.14	0	-160.55
33	34	93.90	-4382.39	-337.65	-136.94	-3.088	-766.93	-0.3	-501.80	-0.3	-196.64	0	-208.94
34	34	93.90	-4258.44	1017.64	-139.00	-3.088	-743.12	-0.3	-477.95	-0.3	-204.87	0	-217.17
34	35	94.90	-4255.71	1039.09	-1175.06	-3.325	-897.10	-0.3	-2.35	-0.3	-194.56	0	-206.56
35	35	94.90	-4570.77	369.17	1584.02	-3.325	-411.09	-0.3	-882.43	-0.3	-882.43	0	-929.18
35	36	97.25	-4572.26	414.69	658.74	-3.884	-448.34	-0.3	-601.26	-0.3	-601.26	0	-614.06
36	36	97.25	-5735.43	-58.02	2649.27	-3.884	-325.00	-0.3	-986.44	-0.3	-986.44	0	-1041.81
36	37	99.60	-5741.37	-1.63	2914.50	-4.442	-265.71	-0.3	-854.40	-0.3	-854.40	0	-897.04
37	37	99.60	-5693.01	743.56	2914.22	-4.442	-261.10	-0.3	-849.73	-0.3	-849.73	0	-892.36
37	38	101.90	-5688.09	584.65	1344.53	-5	-354.87	-0.3	-607.22	-0.3	-607.22	0	-623.33
38	38	101.90	-5582.87	1236.05	1344.92	-5	-184.71	-0.3	-337.68	-0.3	-337.68	0	-347.45
38	39	104.45	-5597.91	1058.77	-1601.36	-5	-385.79	-0.3	-203.65	-0.3	-203.65	0	-192.03
39	39	104.45	-5634.21	-1057.86	-1594.14	-5	-387.10	-0.3	-205.78	-0.3	-205.78	0	-194.20
[illegible]	40	107.00	-5614.05	-1234.64	1337.16	-5	-186.76	-0.3	-338.87	-0.3	-338.87	0	-348.58
[illegible]	40	107.00	-5718.89	-579.68	1336.66	-5	-358.17	-0.3	-609.04	-0.3	-609.04	0	-625.06
[illegible]	41	109.30	-5719.16	-738.66	2885.13	-4.442	-268.46	-0.3	-849.21	-0.3	-849.21	0	-891.42
[illegible]	41	109.30	-5766.67	9.90	2884.78	-4.442	-271.05	-0.3	-853.73	-0.3	-853.73	0	-895.93
41	42	111.65	-5756.04	65.59	2790.97	-3.884	-334.21	-0.3	-982.12	-0.3	-982.12	0	-1036.35
42	42	111.65	-4592.98	-410.30	600.25	-3.884	-457.58	-0.3	-596.93	-0.3	-596.93	0	-608.59
42	43	114.00	-4587.74	-365.40	1509.83	-3.325	-426.05	-0.3	-875.32	-0.3	-875.32	0	-919.87
43	43	114.00	-4244.16	-1045.82	-1188.93	-3.325	-899.30	-0.3	1.33	-0.3	-189.09	0	-200.98
43	44	115.00	-4246.82	-1024.36	-143.34	-3.088	-743.82	-0.3	-477.38	-0.3	-198.74	0	-210.90
44	44	115.00	-4372.88	329.72	-143.40	-3.088	-767.94	-0.3	-501.47	-0.3	-190.72	0	-202.88
44	45	116.00	-4388.97	348.57	-468.53	-2.85	-961.47	-0.3	-561.23	-0.3	-156.14	0	-155.85
45	45	116.00	-2331.54	107.72	-476.90	-2.85	-1377.34	-0.3	-426.32	-0.3	-299.08	0	-298.57
45	46	117.00	-2331.00	117.03	-586.91	-2.85	-1403.28	-0.3	-508.14	-0.3	-267.81	0	-253.60
46	46	117.00	-1854.66	-151.78	-366.03	-2.85	-943.43	-0.3	-492.57	-0.3	-271.82	0	-257.61
46	47	119.78	-1853.47	-125.66	13.75	-2.85	-681.68	-0.3	-826.84	-0.3	-290.53	0	-284.68
47	47	119.78	-1073.02	-198.69	-542.46	-2.85	-730.07	-0.3	-501.82	-0.3	-15.91	0	27.06
47	48	122.55	-1074.68	-172.82	-27.97	-2.85	-424.16	-0.3	-785.22	-0.3	-66.77	0	-45.98
48	48	122.55	-1498.08	-136.25	-418.95	-2.85	-1214.12	-0.3	-371.50	0	0.00	0	0.00
48	49	128.10	-1503.28	-84.28	189.92	-2.85	-739.21	-0.3	-1121.19	0	0.00	0	0.00
49	49	128.10	-1789.85	-46.42	-69.86	-2.85	-1112.49	-0.3	-971.97	0	0.00	0	0.00
49	50	133.65	-1793.24	5.83	39.60	-2.85	-1028.56	-0.3	-1108.21	0	0.00	0	0.00
50	50	133.65	-1793.24	5.83	39.60	-2.85	-1028.56	-0.3	-1108.21	0	0.00	0	0.00
50	51	139.20	-1796.66	58.07	-140.95	-2.85	-1172.32	-0.3	-888.82	0	0.00	0	0.00
51	51	139.20	-1230.08	58.07	388.58	-2.85	-421.82	-0.3	-1203.37	0	0.00	0	0.00
51	52	144.75	-1233.53	110.32	-81.91	-2.85	-793.21	-0.3	-626.47	0	0.00	0	0.00
52	52	144.75	-1101.33	110.32	39.32	-2.85	-619.92	-0.3	-699.01	0	0.00	0	0.00
52	53	147.53	-1103.07	136.44	-304.67	-2.85	-890.99	-0.3	-278.21	0	0.00	0	0.00
53	53	147.53	-1103.07	136.44	-304.67	-2.85	-890.99	-0.3	-278.21	0	0.00	0	0.00
53	54	150.30	-1104.80	160.68	-721.15	-2.85	-1218.97	-0.3	231.47	0	0.00	0	0.00
54	54	150.30	-1121.21	-5.65	-721.15	-2.85	-1228.66	-0.3	221.78	0	0.00	0	0.00
54	55	150.90	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.89	0	0.00	0	0.00

Construcción sin gradiente en fase constructiva 10

[illegible]

Cod. exc

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	0	0.00	0	0.00
1	2	0.60	-1297.47	5.65	-850.05	-2.85	-1434.02	-0.3	275.70	0	0.00	0	0.00
2	2	0.60	-1281.08	-162.16	-850.05	-2.85	-1424.33	-0.3	285.38	0	0.00	0	0.00
2	3	3.38	-1278.96	-135.24	-436.56	-2.85	-1098.46	-0.3	-220.42	0	0.00	0	0.00
3	3	3.38	-1278.96	-135.24	-436.56	-2.85	-1098.46	-0.3	-220.42	0	0.00	0	0.00
3	4	6.15	-1276.83	-109.12	-95.53	-2.85	-829.49	-0.3	-637.35	0	0.00	0	0.00
4	4	6.15	-1422.95	-109.12	-229.52	-2.85	-1021.02	-0.3	-559.39	0	0.00	0	0.00
4	5	11.70	-1418.74	-56.87	235.00	-2.85	-653.86	-0.3	-1126.52	0	0.00	0	0.00
5	5	11.70	-2044.98	-56.87	-350.27	-2.85	-1483.37	-0.3	-778.87	0	0.00	0	0.00
5	6	17.25	-2040.78	-4.63	-175.68	-2.85	-1343.84	-0.3	-990.49	0	0.00	0	0.00
6	6	17.25	-2040.78	-4.63	-175.68	-2.85	-1343.84	-0.3	-990.49	0	0.00	0	0.00
6	7	22.80	-2036.63	47.62	-291.12	-2.85	-1432.01	-0.3	-846.48	0	0.00	0	0.00
7	7	22.80	-1719.83	93.91	-4.00	-2.85	-1019.40	-0.3	-1011.37	0	0.00	0	0.00
7	8	28.35	-1713.86	145.82	-665.32	-2.85	-1535.06	-0.3	-196.89	0	0.00	0	0.00
8	8	28.35	-1245.69	190.60	-233.19	-2.85	-603.33	-0.3	-785.14	-0.3	-66.01	0	-33.59
8	9	31.13	-1243.67	216.41	-796.43	-2.85	-933.20	-0.3	-492.56	-0.3	-7.71	0	50.12
9	9	31.13	-1866.03	125.23	-296.33	-2.85	-872.57	-0.3	-767.68	-0.3	-240.17	0	-215.71
9	10	33.90	-1866.33	151.35	-674.64	-2.85	-1133.43	-0.3	-433.08	-0.3	-221.50	0	-188.80
10	10	33.90	-2472.46	-113.26	-931.55	-2.85	-1686.26	-0.3	-469.18	-0.3	-217.65	0	-184.95
10	11	34.90	-2472.70	-103.87	-825.27	-2.85	-1661.33	-0.3	-391.24	-0.3	-247.88	0	-228.47
11	11	34.90	-4438.64	-344.55	-1121.52	-2.85	-1155.77	-0.3	-335.87	-0.3	-111.75	0	-100.48
11	12	35.90	-4442.27	-325.50	-800.65	-3.088	-927.60	-0.3	-308.76	-0.3	-148.00	0	-151.08
12	12	35.90	-4311.32	1052.20	-800.72	-3.088	-902.78	-0.3	-283.88	-0.3	-155.77	0	-158.85
12	13	36.90	-4308.34	1073.69	-1871.61	-3.325	-1042.05	-0.3	179.99	-0.3	-149.31	0	-153.71
13	13	36.90	-4234.13	414.51	512.58	-3.325	-541.00	-0.3	-693.53	-0.3	-693.53	0	-708.66
13	14	39.25	-4238.95	459.49	-512.91	-3.884	-547.51	-0.3	-428.44	-0.3	-428.44	0	-418.47
14	14	39.25	-5198.14	30.03	1278.90	-3.884	-447.51	-0.3	-744.40	-0.3	-744.40	0	-769.25
14	15	41.60	-5208.35	85.79	1145.63	-4.442	-387.66	-0.3	-619.06	-0.3	-619.06	0	-635.82
15	15	41.60	-5153.14	761.07	1145.31	-4.442	-382.40	-0.3	-613.73	-0.3	-613.73	0	-630.49
15	16	43.90	-5152.46	603.17	-464.82	-5	-474.25	-0.3	-387.01	-0.3	-387.01	0	-381.44
16	16	43.90	-5048.68	1192.72	-465.31	-5	-281.38	-0.3	-228.45	-0.3	-228.45	0	-225.07
16	17	46.45	-5069.52	1004.41	-3275.34	-5	-473.49	-0.3	-100.94	-0.3	-100.94	0	-77.16
17	17	46.45	-5024.82	-1002.10	-3287.19	-5	-472.08	-0.3	-98.19	-0.3	-98.19	0	-74.32
17	18	49.00	-5008.16	-1191.00	-473.15	-5	-279.91	-0.3	-226.09	-0.3	-226.09	0	-222.65
18	18	49.00	-5112.01	-606.10	-472.95	-5	-471.60	-0.3	-382.83	-0.3	-382.83	0	-377.15
18	19	51.30	-5116.49	-763.95	1152.66	-4.442	-378.16	-0.3	-610.98	-0.3	-610.98	0	-627.84
19	19	51.30	-5172.38	-93.42	1152.40	-4.442	-383.55	-0.3	-616.32	-0.3	-616.32	0	-633.17
19	20	53.65	-5166.02	-37.10	1311.54	-3.884	-439.99	-0.3	-744.46	-0.3	-744.46	0	-769.94
20	20	53.65	-4206.60	-462.69	-480.32	-3.884	-539.97	-0.3	-428.46	-0.3	-428.46	0	-419.13
20	21	56.00	-4204.86	-417.21	557.50	-3.325	-529.13	-0.3	-695.02	-0.3	-695.02	0	-711.48
21	21	56.00	-4306.18	-1067.06	-1820.61	-3.325	-1032.79	-0.3	174.15	-0.3	-159.51	0	-165.11
21	22	57.00	-4309.27	-1045.57	-755.57	-3.088	-893.58	-0.3	-286.98	-0.3	-187.19	0	-171.78
22	22	57.00	-4438.72	329.18	-755.64	-3.088	-918.25	-0.3	-311.59	-0.3	-159.27	0	-163.86
22	23	58.00	-4435.20	348.26	-1079.50	-2.85	-1143.97	-0.3	-340.21	-0.3	-122.82	0	-113.09
23	23	58.00	-2469.91	107.96	-782.97	-2.85	-1625.42	-0.3	-387.22	-0.3	-264.14	0	-247.37
23	24	59.00	-2469.78	117.37	-893.25	-2.85	-1652.67	-0.3	-463.33	-0.3	-233.48	0	-203.24
24	24	59.00	-1879.61	-287.19	-634.75	-2.85	-1100.07	-0.3	-430.65	-0.3	-234.23	0	-203.99
24	25	63.11	-1879.60	-248.49	459.84	-2.85	-460.87	-0.3	-987.41	-0.3	-348.11	0	-367.95
25	25	63.11	-1554.29	-180.76	-628.10	-2.85	-1411.53	-0.3	-148.24	0	0.00	0	0.00
25	26	67.23	-1559.43	-142.42	33.85	-2.85	-894.92	-0.3	-962.99	0	0.00	0	0.00
26	26	67.23	-1858.76	-77.53	-623.22	-2.85	-1587.62	-0.3	-334.13	0	0.00	0	0.00
26	27	71.34	-1862.05	-38.81	-387.03	-2.85	-1404.14	-0.3	-625.71	0	0.00	0	0.00
27	27	71.34	-1987.30	-38.81	-501.88	-2.85	-1568.31	-0.3	-558.88	0	0.00	0	0.00
27	28	75.45	-1990.59	-0.10	-424.88	-2.85	-1509.81	-0.3	-655.24	0	0.00	0	0.00
28	28	75.45	-1990.59	-0.10	-424.88	-2.85	-1509.81	-0.3	-655.24	0	0.00	0	0.00
28	29	79.56	-1993.84	38.61	-507.06	-2.85	-1576.25	-0.3	-556.40	0	0.00	0	0.00
29	29	79.56	-1866.60	38.61	-392.21	-2.85	-1412.08	-0.3	-623.22	0	0.00	0	0.00
29	30	83.68	-1866.61	77.33	-628.79	-2.85	-1596.62	-0.3	-331.94	0	0.00	0	0.00
30	30	83.68	-1567.25	143.04	28.28	-2.85	-903.91	-0.3	-960.79	0	0.00	0	0.00
30	31	87.79	-1562.20	181.40	-636.39	-2.85	-1422.72	-0.3	-142.74	0	0.00	0	0.00
31	31	87.79	-1887.51	249.13	451.54	-2.85	-467.23	-0.3	-988.20	-0.3	-348.78	0	-368.07
31	32	91.90	-1887.64	287.85	-645.89	-2.85	-1107.87	-0.3	-430.97	-0.3	-234.50	0	-203.51
32	32	91.90	-2477.62	-119.20	-904.39	-2.85	-1660.41	-0.3	-463.59	-0.3	-233.70	0	-202.71
32	33	92.90	-2477.78	-109.80	-792.36	-2.85	-1632.31	-0.3	-387.80	-0.3	-264.63	0	-247.24
33	33	92.90	-4442.66	-351.41	-1088.60	-2.85	-1146.86	-0.3	-340.00	-0.3	-122.49	0	-112.39
33	34	93.90	-4446.21	-332.35	-761.72	-3.088	-920.18	-0.3	-311.75	-0.3	-159.32	0	-163.71
34	34	93.90	-4317.34	1044.58	-761.78	-3.088	-895.63	-0.3	-287.15	-0.3	-167.30	0	-171.70
34	35	94.90	-4314.27	1066.07	-1825.00	-3.325	-1034.26	-0.3	173.55	-0.3	-159.71	0	-165.18
35	35	94.90	-4204.83	417.05	559.78	-3.325	-528.75	-0.3	-695.32	-0.3	-695.32	0	-711.83
35	36	97.25	-4206.58	462.53	-477.68	-3.884	-539.65	-0.3	-428.76	-0.3	-428.76	0	-419.48
36	36	97.25	-5165.99	36.94	1314.63	-3.884	-439.63	-0.3	-744.81	-0.3	-744.81	0	-770.35
36	37	99.60	-5172.35	93.27	1155.76	-4.442	-383.22	-0.3	-616.66	-0.3	-616.66	0	-633.57
37	37	99.60	-5116.49	763.80	1155.50	-4.442	-377.88	-0.3	-611.28	-0.3	-611.28	0	-628.18
37	38	101.90	-5112.01	605.95	-469.73	-5	-471.30	-0.3	-383.14	-0.3	-383.14	0	-377.52
38	38	101.90	-5008.17	1190.85	-469.50	-5	-279.66	-0.3	-226.26	-0.3	-226.26	0	-222.85
38	39	104.45	-5024.83	1001.95	-3283.94	-5	-471.86	-0.3	-98.34	-0.3	-98.34	0	-74.49
39	39	104.45	-5069.53	-1004.32	-3270.76	-5	-473.17	-0.3	-101.15	-0.3	-101.15	0	-77.40
39	40	107.00	-5048.69	-1192.62	-481.04	-5	-281.09	-0.3	-228.65	-0.3	-228.65	0	-225.30
40	40	107.00	-5152.46	-603.08	-481.56	-5	-473.96	-0.3	-387.33	-0.3	-387.33	0	-381.80
40	41	109.30	-5153.14	-760.98	1149.17	-4.442	-382.02	-0.3	-614.13	-0.3	-614.13	0	-630.94
41	41	109.30	-5208.33	-85.70	1148.86	-4.442	-387.34	-0.3	-619.40	-0.3	-619.40	0	-636.20
41	42	111.65	-5198.13	-29.95	1282.35	-3.884	-447.11	-0.3	-744.80	-0.3	-744.80	0	-769.72
42	42	111.65	-4238.94	-459.40	-510.00	-3.884	-547.17	-0.3	-428.77	-0.3	-428.77	0	-418.86
42	43	114.00	-4234.12	-414.42	515.77	-3.325	-540.47	-0.3	-693.94	-0.3	-693.94	0	-709.16
43	43	114.00	-4308.34	-1073.60	-1869.49	-3.325	-1041.83	-0.3	179.96	-0.3	-149.68	0	-154.16
43	44	115.00	-4311.32	-1052.12	-797.82	-3.088	-902.30	-0.3	-284.26	-0.3	-156.17	0	-159.34
44	44	115.00	-4442.24	325.58	-797.88	-3.088	-927.17	-0.3	-309.07	-0.3	-148.39	0	-151.56
44	45	116.00	-4438.61	344.62	-1118.87	-2.85	-1155.26	-0.3	-336.16	-0.3	-112.16	0	-101.01
45	45	116.00	-2472.68	103.96	-822.34	-2.85	-1659.88	-0.3	-391.76	-0.3	-248.32	0	-229.10
45	46	117.00	-2472.44	113.35	-928.71	-2.85	-1684.85	-0.3	-469.69	-0.3	-218.07	0	-185.56
46	46	117.00	-1886.33	-151.26	-671.79	-2.85	-1132.03	-0.3	-433.59	-0.3	-221.93	0	-189.42
46	47	119.78	-1886.03	-125.14	-293.71	-2.85	-871.28	-0.3	-768.15	-0.3	-240.56	0	-216.28
47	47	119.78	-1243.68	-216.33	-793.82	-2.85	-931.92	-0.3	-493.03	-0.3	-8.11	0	49.55
47	48	122.55	-1245.70	-190.52	-230.83	-2.85	-602.17	-0.3	-785.57	-0.3	-66.37	0	-34.11
48	48	122.55	-1713.88	-145.73	-662.95	-2.85	-1533.20	-0.3	-199.80	0	0.00	0	0.00
48	49	128.10	-1719.83	-93.82	-2.10	-2.85	-1017.91	-0.3	-1013.70	0	0.00	0	0.00
49	49	128.10	-2036.63	-47.54	-289.22	-2.85	-1430.52	-0.3	-848.81	0	0.00	0	0.00
49	50	133.65	-2040.78	4.71	-174.26	-2.85	-1342.72	-0.3	-992.23	0	0.00	0	0.00
50	50	133.65	-2040.78	4.71	-174.26	-2.85	-1342.72	-0.3	-992.23	0	0.00	0	0.00
50	51	139.20	-2044.96	56.95	-349.33	-2.85	-1482.62	-0.3	-780.03	0	0.00	0	0.00
51	51	139.20	-1418.74	56.95	235.94	-2.85	-653.12	-0.3	-1127.68	0	0.00	0	0.00
51	52	144.75	-1422.95	109.20	-229.05	-2.85	-1020.65	-0.3	-559.96	0	0.00	0	0.00
52	52	144.75	-1276.83	109.20	-95.06	-2.85	-829.12	-0.3	-637.92	0	0.00	0	0.00
52	53	147.53	-1278.96	135.32	-436.31	-2.85	-1098.27	-0.3	-220.72	0	0.00	0	0.00
53	53	147.53	-1278.96	135.32	-436.31	-2.85	-1098.27	-0.3	-220.72	0	0.00	0	0.00
53	54	150.30	-1281.08	162.25	-850.05	-2.85	-1424.33	-0.3	285.38	0	0.00	0	0.00
54	54	150.30	-1297.47	-5.65	-850.05	-2.85	-1434.02	-0.3	275.70	0	0.00	0	0.00
54	55	150.90	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	0	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 11

[illegible]

Coef. esc:

		X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
[illegible]	1	0.00	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.69	-0.3	0.00	0	0.00
1	2	0.60	-1121.21	5.65	-721.15	-2.85	-1228.66	-0.3	221.78	-0.3	0.00	0	0.00
2	2	0.60	-1104.80	-189.62	-721.15	-2.85	-1218.97	-0.3	231.47	-0.3	0.00	0	0.00
2	3	3.38	-1103.07	-171.81	-206.51	-2.85	-842.81	-0.3	-295.53	-0.3	-14.94	0	-21.51
3	3	3.38	-1103.07	-171.81	-206.51	-2.85	-842.81	-0.3	-295.53	-0.3	-14.94	0	-21.51
3	4	6.15	-1101.33	-145.69	235.08	-2.85	-523.53	-0.3	-733.67	-0.3	-29.88	0	-43.02
4	4	6.15	-1233.53	-145.69	114.43	-2.85	-696.82	-0.3	-663.13	-0.3	-29.88	0	-43.02
4	5	11.70	-1230.08	-93.44	761.23	-2.85	-229.07	-0.3	-1272.66	-0.3	-59.76	0	-86.04
5	5	11.70	-1798.68	-93.44	251.70	-2.85	-979.57	-0.3	-958.14	-0.3	-59.76	0	-86.04
5	6	17.25	-1793.24	-41.20	628.58	-2.85	-739.43	-0.3	-1212.18	-0.3	-89.64	0	-129.06
6	6	17.25	-1793.24	-41.20	628.59	-2.85	-739.43	-0.3	-1212.18	-0.3	-89.64	0	-129.06
6	7	22.80	-1789.85	11.05	715.45	-2.85	-726.86	-0.3	-1110.59	-0.3	-119.52	0	-172.09
7	7	22.80	-1503.28	48.91	975.23	-2.85	-353.71	-0.3	-1259.81	-0.3	-119.52	0	-172.09
7	8	28.35	-1498.06	100.86	562.69	-2.85	-732.24	-0.3	-544.78	-0.3	-149.40	0	-215.11
8	8	28.35	-1074.67	137.45	953.67	-2.85	56.57	-0.3	-961.52	-0.3	-215.73	0	-260.45
8	9	31.13	-1073.01	163.32	537.34	-2.85	-199.07	-0.3	-695.75	-0.3	-178.77	0	-208.86
9	9	31.13	-1853.47	90.26	1093.54	-2.85	-150.68	-0.3	-1020.78	-0.3	-454.39	0	-520.60
9	10	33.90	-1854.66	116.40	811.94	-2.85	-364.15	-0.3	-704.13	-0.3	-450.58	0	-514.98
10	10	33.90	-2323.83	-151.66	591.05	-2.85	-821.93	-0.3	-717.64	-0.3	-444.82	0	-509.23
10	11	34.90	-2324.37	-142.35	738.43	-2.85	-778.60	-0.3	-644.17	-0.3	-481.45	0	-561.92
11	11	34.90	-4356.00	-381.50	745.04	-2.85	-713.39	-0.3	-745.19	-0.3	-326.20	0	-372.90
11	12	35.90	-4359.91	-362.65	1105.56	-3.088	-558.43	-0.3	-677.91	-0.3	-353.85	0	-404.41
12	12	35.90	-4243.36	969.15	1105.50	-3.088	-535.55	-0.3	-654.98	-0.3	-362.99	0	-413.55
12	13	36.90	-4240.70	1010.61	98.05	-3.325	-715.31	-0.3	-166.68	-0.3	-344.19	0	-388.33
13	13	36.90	-4582.13	330.47	2793.88	-3.325	-209.77	-0.3	-1041.13	-0.3	-1041.13	0	-1123.56
13	14	39.25	-4587.37	375.38	1967.94	-3.884	-296.44	-0.3	-753.29	-0.3	-753.29	0	-791.53
14	14	39.25	-5750.86	-100.59	4157.87	-3.884	-173.22	-0.3	-1138.44	-0.3	-1138.44	0	-1219.23
14	15	41.60	-5761.51	-44.89	4335.44	-4.442	-128.60	-0.3	-1004.29	-0.3	-1004.29	0	-1067.72
15	15	41.60	-5718.58	703.30	4335.09	-4.442	-124.51	-0.3	-1000.14	-0.3	-1000.14	0	-1063.56
15	16	43.90	-5718.30	544.31	2866.79	-5	-219.00	-0.3	-757.44	-0.3	-757.44	0	-791.81
16	16	43.90	-5617.55	1199.44	2868.32	-5	-82.83	-0.3	-409.08	-0.3	-409.08	0	-429.91
16	17	46.45	-5637.71	1022.66	27.12	-5	-277.03	-0.3	-280.11	-0.3	-280.11	0	-280.31
17	17	46.45	-5597.89	-1059.03	21.21	-5	-275.46	-0.3	-277.87	-0.3	-277.87	0	-278.03
17	18	49.00	-5582.85	-1236.31	2967.21	-5	-74.39	-0.3	-411.89	-0.3	-411.89	0	-433.43
18	18	49.00	-5686.09	-584.90	2967.57	-5	-207.50	-0.3	-764.47	-0.3	-764.47	0	-800.03
18	19	51.30	-5693.01	-743.82	4537.73	-4.442	-102.23	-0.3	-1018.78	-0.3	-1018.78	0	-1085.17
19	19	51.30	-5741.41	1.37	4537.45	-4.442	-106.90	-0.3	-1023.40	-0.3	-1023.40	0	-1089.78
19	20	53.65	-5735.48	57.75	4472.82	-3.884	-134.49	-0.3	-1172.82	-0.3	-1172.82	0	-1259.74
20	20	53.65	-4572.31	-414.96	2262.71	-3.884	-257.77	-0.3	-787.69	-0.3	-787.69	0	-832.05
20	21	56.00	-4570.81	-369.44	3208.52	-3.325	-138.53	-0.3	-1093.27	-0.3	-1093.27	0	-1187.95
[illegible]	21	56.00	-5011.04	-964.84	-319.68	-3.325	-861.26	-0.3	-200.26	-0.3	-377.97	0	-411.47
[illegible]	[illegible]	57.00	-5014.83	-843.29	641.23	-3.088	-709.41	-0.3	-685.23	-0.3	-396.68	0	-432.97
[illegible]	22	57.00	-5089.63	615.93	641.16	-3.088	-727.00	-0.3	-702.79	-0.3	-382.68	0	-418.97
[illegible]	23	58.00	-5086.75	635.29	34.85	-2.85	-960.29	-0.3	-741.47	-0.3	-327.29	0	-346.32
23	23	58.00	-3067.62	268.13	26.48	-2.85	-1335.68	-0.3	-730.62	-0.3	-567.85	0	-600.64
23	24	59.00	-3068.16	277.70	-243.92	-2.85	-1441.23	-0.3	-780.43	-0.3	-512.73	0	-521.21
24	24	59.00	-3103.90	-290.59	-1229.80	-2.85	-1714.61	-0.3	-685.78	-0.3	-455.90	0	-383.95
24	25	63.11	-3109.30	-251.75	-133.36	-2.85	-1076.07	-0.3	-1244.42	-0.3	-571.38	0	-549.64
25	25	63.11	-2612.30	-168.98	-1290.36	-2.85	-1915.14	-0.3	-491.50	-0.3	-177.59	0	-119.24
25	26	67.23	-2623.59	-130.56	-688.47	-2.85	-1443.71	-0.3	-1246.87	-0.3	-177.40	0	-118.24
26	26	67.23	-2894.46	-77.51	-1282.96	-2.85	-2070.46	-0.3	-677.93	-0.3	-177.40	0	-118.24
26	27	71.34	-2902.47	-38.79	-1055.82	-2.85	-1892.48	-0.3	-969.56	-0.3	-177.25	0	-117.45
27	27	71.34	-3015.78	-38.79	-1159.73	-2.85	-2041.02	-0.3	-909.10	-0.3	-177.25	0	-117.45
27	28	75.45	-3018.49	-0.08	-1082.30	-2.85	-1981.82	-0.3	-1005.68	-0.3	-177.25	0	-117.45
28	28	75.45	-3018.49	-0.08	-1082.30	-2.85	-1981.82	-0.3	-1005.68	-0.3	-177.25	0	-117.45
28	29	79.56	-3021.14	38.63	-1163.97	-2.85	-2047.51	-0.3	-907.06	-0.3	-177.25	0	-117.45
29	29	79.56	-2907.82	38.63	-1060.06	-2.85	-1898.98	-0.3	-967.53	-0.3	-177.25	0	-117.45
29	30	83.68	-2900.87	77.35	-1287.51	-2.85	-2077.83	-0.3	-676.14	-0.3	-177.40	0	-118.24
30	30	83.68	-2629.98	131.08	-693.02	-2.85	-1451.06	-0.3	-1245.07	-0.3	-177.40	0	-118.24
30	31	87.79	-2618.77	169.50	-1297.15	-2.85	-1924.29	-0.3	-487.00	-0.3	-177.59	0	-119.23
31	31	87.79	-3115.76	252.27	-140.15	-2.85	-1081.27	-0.3	-1245.07	-0.3	-571.92	0	-549.73
31	32	91.90	-3110.47	291.13	-1238.91	-2.85	-1720.99	-0.3	-686.03	-0.3	-456.11	0	-383.56
32	32	91.90	-3094.56	-279.19	-253.04	-2.85	-1447.57	-0.3	-780.64	-0.3	-512.91	0	-520.78
32	33	92.90	-3094.05	-269.63	18.79	-2.85	-1341.31	-0.3	-731.09	-0.3	-568.25	0	-600.52
33	33	92.90	-5092.85	-637.66	27.39	-2.85	-962.65	-0.3	-741.30	-0.3	-327.02	0	-345.75
33	34	93.90	-5095.77	-618.52	636.24	-3.088	-726.58	-0.3	-702.93	-0.3	-382.72	0	-418.85
34	34	93.90	-5021.43	942.48	636.18	-3.088	-711.07	-0.3	-685.39	-0.3	-396.77	0	-432.91
34	35	94.90	-5017.67	964.03	-323.38	-3.325	-862.44	-0.3	-200.79	-0.3	-378.14	0	-411.52
35	35	94.90	-4570.78	369.24	3211.38	-3.325	-138.04	-0.3	-1093.63	-0.3	-1093.63	0	-1168.40
35	36	97.25	-4572.27	414.76	2285.94	-3.884	-257.39	-0.3	-788.05	-0.3	-788.05	0	-832.47
36	36	97.25	-5735.44	-57.95	4476.47	-3.884	-134.06	-0.3	-1173.24	-0.3	-1173.24	0	-1260.22
36	37	99.60	-5741.38	-1.56	4541.53	-4.442	-108.50	-0.3	-1023.82	-0.3	-1023.82	0	-1090.26
37	37	99.60	-5693.01	743.63	4541.25	-4.442	-101.88	-0.3	-1019.15	-0.3	-1019.15	0	-1085.58
37	38	101.90	-5686.09	584.71	2971.40	-5	-207.15	-0.3	-764.85	-0.3	-764.85	0	-800.44
38	38	101.90	-5582.86	1236.12	2971.80	-5	-74.06	-0.3	-412.10	-0.3	-412.10	0	-433.68
38	39	104.45	-5597.90	1058.84	25.34	-5	-275.18	-0.3	-278.06	-0.3	-278.06	0	-278.25
39	39	104.45	-5637.72	-1022.55	32.56	-5	-276.66	-0.3	-280.36	-0.3	-280.36	0	-280.60
39	40	107.00	-5617.56	-1199.33	2873.39	-5	-82.49	-0.3	-409.32	-0.3	-409.32	0	-430.18
40	40	107.00	-5718.30	-544.21	2872.89	-5	-218.63	-0.3	-757.83	-0.3	-757.83	0	-792.25
40	41	109.30	-5718.58	-703.19	4339.76	-4.442	-124.05	-0.3	-1000.62	-0.3	-1000.62	0	-1064.11
41	41	109.30	-5761.49	45.00	4339.41	-4.442	-128.21	-0.3	-1004.70	-0.3	-1004.70	0	-1068.19
41	42	111.65	-5750.85	100.69	4182.22	-3.884	-172.70	-0.3	-1138.94	-0.3	-1138.94	0	-1219.81
42	42	111.65	-4587.36	-375.27	1971.50	-3.884	-296.02	-0.3	-753.69	-0.3	-753.69	0	-792.00
[illegible]	43	114.00	-4582.12	-330.36	2797.71	-3.325	-209.13	-0.3	-1041.62	-0.3	-1041.62	0	-1124.19
[illegible]	43	114.00	-4240.69	-1010.51	100.95	-3.325	-714.98	-0.3	-166.83	-0.3	-344.65	0	-386.88
[illegible]	44	115.00	-4243.35	-989.05	1109.06	-3.088	-534.97	-0.3	-655.45	-0.3	-363.47	0	-414.15
44	44	115.00	-4359.88	362.73	1109.01	-3.088	-557.88	-0.3	-678.33	-0.3	-354.33	0	-405.01
44	45	116.00	-4355.97	381.59	748.39	-2.85	-712.74	-0.3	-745.61	-0.3	-326.70	0	-373.55
45	45	116.00	-2324.35	142.46	740.02	-2.85	-776.83	-0.3	-644.81	-0.3	-481.99	0	-562.70
45	46	117.00	-2323.80	151.77	594.53	-2.85	-820.22	-0.3	-716.26	-0.3	-445.35	0	-509.98
46	46	117.00	-1854.66	-116.30	815.42	-2.85	-362.45	-0.3	-704.76	-0.3	-451.10	0	-515.74
46	47	119.78	-1853.47	-90.18	1096.73	-2.85	-149.11	-0.3	-1021.35	-0.3	-454.86	0	-521.30
47	47	119.78	-1073.02	-163.22	540.52	-2.85	-197.51	-0.3	-696.32	-0.3	-180.25	0	-209.56
47	48	122.55	-1074.68	-137.35	956.56	-2.85	59.99	-0.3	-962.04	-0.3	-216.17	0	-261.09
48	48	122.55	-1498.08	-100.77	565.59	-2.85	-729.97	-0.3	-548.32	-0.3	-149.40	0	-215.11
48	49	128.10	-1503.26	-48.80	977.55	-2.85	-351.88	-0.3	-1262.65	-0.3	-119.52	0	-172.09
49	49	128.10	-1789.85	-10.95	717.77	-2.85	-725.16	-0.3	-1113.44	-0.3	-119.52	0	-172.09
49	50	133.65	-1793.24	41.30	630.32	-2.85	-738.07	-0.3	-1214.31	-0.3	-89.64	0	-129.06
50	50	133.65	-1793.24	41.30	630.32	-2.85	-738.07	-0.3	-1214.31	-0.3	-89.64	0	-129.06
50	51	139.20	-1796.66	93.54	252.86	-2.85	-978.66	-0.3	-959.55	-0.3	-59.76	0	-86.04
51	51	139.20	-1230.08	93.54	782.39	-2.85	-228.16	-0.3	-1274.10	-0.3	-59.76	-0	-86.04
51	52	144.75	-1233.53	145.79	115.00	-2.85	-696.37	-0.3	-663.83	-0.3	-29.88	0	-43.02
52	52	144.75	-1101.33	145.79	236.23	-2.85	-523.09	-0.3	-734.37	-0.3	-29.88	0	-43.02
52	53	147.53	-1103.07	171.91	-206.22	-2.85	-842.58	-0.3	-295.90	-0.3	-14.94	0	-21.51
53	53	147.53	-1103.07	171.91	-206.22	-2.85	-842.58	-0.3	-295.90	-0.3	-14.94	0	-21.51
53	54	150.30	-1104.80	189.70	-721.15	-2.85	-1218.97	-0.3	231.47	-0.3	0.00	0	0.00
54	54	150.30	-1121.21	-5.65	-721.15	-2.65	-1228.66	-0.3	221.78	-0.3	0.00	0	0.00
54	55	150.90	-1121.59	0.00	-719.79	-2.85	-1227.82	-0.3	219.69	-0.3	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 11

[illegible]

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	-0.3	0.00	0	0.00
1	2	0.60	-1297.47	5.65	-850.05	-2.85	-1434.02	-0.3	275.70	-0.3	0.00	0	0.00
2	2	0.60	-1281.08	-191.19	-850.05	-2.85	-1424.33	-0.3	285.38	-0.3	0.00	0	0.00
2	3	3.38	-1278.96	-164.27	-356.01	-2.85	-1058.85	-0.3	-234.88	-0.3	-12.22	0	-17.60
3	3	3.38	-1278.96	-164.27	-356.01	-2.85	-1058.85	-0.3	-234.88	-0.3	-12.22	0	-17.60
3	4	6.15	-1276.83	-138.15	65.58	-2.85	-750.26	-0.3	-686.29	-0.3	-24.45	0	-35.20
4	4	6.15	-1422.95	-138.15	-88.41	-2.85	-841.79	-0.3	-588.32	-0.3	-24.45	0	-35.20
4	5	11.70	-1418.74	-85.90	557.21	-2.85	-495.41	-0.3	-1184.39	-0.3	-48.90	0	-70.40
5	5	11.70	-2044.96	-85.90	-28.06	-2.85	-1324.92	-0.3	-836.74	-0.3	-48.90	0	-70.40
5	6	17.25	-2040.78	-33.66	307.64	-2.85	-1106.16	-0.3	-1077.29	-0.3	-73.34	0	-105.60
6	6	17.25	-2040.78	-33.66	307.64	-2.85	-1106.16	-0.3	-1077.29	-0.3	-73.34	0	-105.60
6	7	22.80	-2036.63	18.59	353.31	-2.85	-1115.10	-0.3	-982.22	-0.3	-97.79	0	-140.60
7	7	22.80	-1719.83	64.89	640.43	-2.85	-702.50	-0.3	-1127.11	-0.3	-97.79	0	-140.80
7	8	28.35	-1713.88	116.80	140.21	-2.85	-1138.93	-0.3	-341.57	-0.3	-122.24	0	-176.00
8	8	28.35	-1245.69	161.57	572.33	-2.85	-207.21	-0.3	-829.82	-0.3	-168.25	0	-209.59
8	9	31.13	-1243.67	187.39	89.66	-2.85	-497.46	-0.3	-651.70	-0.3	-142.18	0	-143.46
9	9	31.13	-1886.03	96.20	589.76	-2.85	-436.83	-0.3	-926.82	-0.3	-374.63	0	-409.30
9	10	33.90	-1886.33	122.32	292.00	-2.85	-658.08	-0.3	-606.70	-0.3	-368.19	0	-400.00
10	10	33.90	-2466.57	-141.68	35.09	-2.85	-1209.21	-0.3	-641.10	-0.3	-362.90	0	-394.71
10	11	34.90	-2466.81	-132.29	170.39	-2.85	-1170.00	-0.3	-568.37	-0.3	-397.54	0	-444.57
11	11	34.90	-4428.00	-371.56	-125.86	-2.85	-952.26	-0.3	-486.73	-0.3	-251.30	0	-278.60
11	12	35.90	-4431.63	-352.51	224.04	-3.088	-755.73	-0.3	-453.46	-0.3	-281.86	0	-316.45
12	12	35.90	-4306.48	1023.31	223.98	-3.088	-731.90	-0.3	-429.58	-0.3	-290.55	0	-325.14
12	13	36.90	-4305.50	1044.80	-817.89	-3.325	-891.23	-0.3	42.40	-0.3	-276.59	0	-307.45
13	13	36.90	-4229.53	385.85	1566.30	-3.325	-363.53	-0.3	-829.60	-0.3	-829.60	0	-875.82
13	14	39.25	-4234.35	430.82	609.02	-3.884	-415.32	-0.3	-556.70	-0.3	-556.70	0	-568.54
14	14	39.25	-5193.90	1.31	2400.83	-3.884	-315.37	-0.3	-872.71	-0.3	-872.71	0	-919.36
14	15	41.60	-5204.11	57.07	2335.78	-4.442	-270.79	-0.3	-742.58	-0.3	-742.58	0	-776.75
15	15	41.60	-5152.66	732.04	2335.47	-4.442	-265.89	-0.3	-737.61	-0.3	-737.61	0	-771.78
15	16	43.90	-5151.98	574.15	792.09	-5	-360.08	-0.3	-508.75	-0.3	-508.75	0	-518.24
16	16	43.90	-5051.55	1163.83	791.60	-5	-196.05	-0.3	-286.09	-0.3	-286.09	0	-291.84
16	17	46.45	-5072.39	975.52	-1944.40	-5	-383.13	-0.3	-161.96	-0.3	-161.96	0	-147.85
17	17	46.45	-5024.81	-1002.16	-1956.25	-5	-381.58	-0.3	-159.07	-0.3	-159.07	0	-144.67
17	18	49.00	-5008.15	-1191.05	857.94	-5	-189.39	-0.3	-286.98	-0.3	-286.96	0	-293.21
18	18	49.00	-5112.01	-606.16	858.13	-5	-350.73	-0.3	-511.79	-0.3	-511.79	0	-522.07
18	19	51.30	-5116.49	-764.00	2483.87	-4.442	-247.89	-0.3	-749.60	-0.3	-749.60	0	-785.93
19	19	51.30	-5172.39	-93.47	2483.61	-4.442	-253.28	-0.3	-754.93	-0.3	-754.93	0	-791.27
19	20	53.65	-5166.02	-37.15	2642.88	-3.884	-283.76	-0.3	-897.29	-0.3	-897.29	0	-948.64
20	20	53.65	-4206.61	-462.74	851.03	-3.884	-383.74	-0.3	-581.30	-0.3	-581.30	0	-597.83
20	21	56.00	-4204.87	-417.27	1888.97	-3.325	-305.74	-0.3	-867.82	-0.3	-867.82	0	-923.57
21	21	56.00	-4929.60	-1005.64	-1123.78	-3.325	-1004.43	-0.3	11.78	-0.3	-309.71	0	-332.80
21	22	57.00	-4933.53	-964.07	-121.33	-3.088	-867.36	-0.3	-456.70	-0.3	-324.20	0	-348.29
22	22	57.00	-5022.39	558.96	-121.40	-3.088	-886.87	-0.3	-476.16	-0.3	-311.51	0	-335.61
22	23	58.00	-5019.63	578.39	-671.51	-2.85	-1145.48	-0.3	-486.92	-0.3	-258.54	0	-264.62
23	23	58.00	-3084.96	235.38	-374.98	-2.85	-1602.21	-0.3	-637.92	-0.3	-475.96	0	-486.42
23	24	59.00	-3085.64	244.98	-812.74	-2.85	-1692.38	-0.3	-691.37	-0.3	-426.15	0	-414.63
24	24	59.00	-3427.34	-287.19	-1688.70	-2.85	-2084.83	-0.3	-687.82	-0.3	-451.52	0	-350.94
24	25	63.11	-3435.58	-248.49	-606.90	-2.85	-1435.28	-0.3	-1244.30	-0.3	-565.17	0	-513.69
25	25	63.11	-3110.28	-180.76	-1696.84	-2.85	-2385.94	-0.3	-405.13	-0.3	-217.06	0	-145.73
25	26	67.23	-3123.66	-142.42	-1049.68	-2.85	-1878.97	-0.3	-1219.61	-0.3	-216.82	0	-144.51
26	26	67.23	-3422.99	-77.53	-1706.74	-2.85	-2571.68	-0.3	-590.75	-0.3	-216.82	0	-144.51
26	27	71.34	-3432.78	-38.81	-1462.20	-2.85	-2395.80	-0.3	-882.11	-0.3	-216.64	0	-143.55
27	27	71.34	-3558.02	-38.81	-1597.05	-2.85	-2559.97	-0.3	-815.28	-0.3	-216.64	0	-143.55
27	28	75.45	-3561.33	-0.10	-1520.10	-2.85	-2501.50	-0.3	-911.64	-0.3	-216.64	0	-143.55
28	28	75.45	-3561.33	-0.10	-1520.10	-2.85	-2501.50	-0.3	-911.64	-0.3	-216.64	0	-143.55
28	29	79.56	-3564.56	38.61	-1602.23	-2.85	-2567.91	-0.3	-812.80	-0.3	-216.64	0	-143.55
29	29	79.56	-3439.32	38.61	-1487.38	-2.85	-2403.74	-0.3	-879.62	-0.3	-216.64	0	-143.55
29	30	83.68	-3430.83	77.33	-1712.31	-2.85	-2580.68	-0.3	-588.56	-0.3	-216.82	0	-144.51
30	30	83.68	-3131.48	143.04	-1055.24	-2.85	-1887.96	-0.3	-1217.41	-0.3	-216.82	0	-144.51
30	31	87.79	-3118.17	181.40	-1705.13	-2.85	-2397.12	-0.3	-399.63	-0.3	-217.05	0	-145.73
31	31	87.79	-3443.48	249.13	-617.19	-2.85	-1441.64	-0.3	-1245.09	-0.3	-565.84	0	-513.80
31	32	91.90	-3435.37	287.85	-1699.85	-2.85	-2072.63	-0.3	-688.14	-0.3	-451.79	0	-350.46
32	32	91.90	-3093.48	-246.81	-623.88	-2.85	-1700.12	-0.3	-691.63	-0.3	-426.37	0	-414.10
32	33	92.90	-3092.83	-237.21	-384.37	-2.85	-1609.09	-0.3	-638.50	-0.3	-476.45	0	-486.28
33	33	92.90	-5027.09	-581.54	-680.61	-2.85	-1148.37	-0.3	-486.71	-0.3	-258.21	0	-263.92
33	34	93.90	-5029.89	-562.14	-127.48	-3.088	-888.81	-0.3	-476.32	-0.3	-311.56	0	-335.46
34	34	93.90	-4941.59	983.08	-127.54	-3.088	-869.41	-0.3	-456.88	-0.3	-324.31	0	-348.21
34	35	94.90	-4937.69	1004.65	-1128.16	-3.325	-1005.90	-0.3	11.18	-0.3	-309.91	0	-332.88
35	35	94.90	-4204.84	417.10	1891.25	-3.325	-305.35	-0.3	-868.11	-0.3	-868.11	0	-923.93
35	36	97.25	-4206.59	462.58	853.66	-3.884	-383.42	-0.3	-581.60	-0.3	-581.60	0	-596.18
36	36	97.25	-5166.00	36.99	2645.97	-3.884	-283.40	-0.3	-897.64	-0.3	-897.64	0	-949.06
36	37	99.60	-5172.36	93.32	2486.97	-4.442	-252.95	-0.3	-755.28	-0.3	-755.28	0	-791.66
37	37	99.60	-5116.49	763.85	2486.71	-4.442	-247.61	-0.3	-749.89	-0.3	-749.89	0	-786.27
37	38	101.90	-5112.01	606.01	861.36	-5	-350.44	-0.3	-512.11	-0.3	-512.11	0	-522.43
38	38	101.90	-5008.16	1190.90	861.58	-5	-189.15	-0.3	-287.14	-0.3	-287.14	0	-293.40
38	39	104.45	-5024.82	1002.00	-1953.00	-5	-381.36	-0.3	-159.22	-0.3	-159.22	0	-145.04
39	39	104.45	-5072.40	-975.43	-1939.82	-5	-382.81	-0.3	-162.17	-0.3	-162.17	0	-148.09
39	40	107.00	-5051.56	-1163.73	795.87	-5	-195.76	-0.3	-286.28	-0.3	-286.28	0	-292.06
40	40	107.00	-5151.98	-574.05	795.35	-5	-359.79	-0.3	-509.06	-0.3	-509.06	0	-518.59
40	41	109.30	-5152.66	-731.95	2339.32	-4.442	-265.51	-0.3	-738.02	-0.3	-738.02	0	-772.24
41	41	109.30	-5204.09	-56.98	2339.01	-4.442	-270.47	-0.3	-742.92	-0.3	-742.92	0	-777.14
41	42	111.65	-5193.89	-1.23	2404.28	-3.884	-314.96	-0.3	-873.10	-0.3	-873.10	0	-919.82
42	42	111.65	-4234.34	-430.73	611.94	-3.884	-414.98	-0.3	-557.04	-0.3	-557.04	0	-568.93
42	43	114.00	-4229.52	-385.76	1569.49	-3.325	-362.99	-0.3	-830.01	-0.3	-830.01	0	-876.33
43	43	114.00	-4305.49	-1044.71	-815.77	-3.325	-891.02	-0.3	42.37	-0.3	-276.96	0	-307.90
43	44	115.00	-4308.47	-1023.23	226.88	-3.088	-731.42	-0.3	-429.95	-0.3	-290.95	0	-325.63
44	44	115.00	-4431.60	352.59	226.81	-3.088	-755.29	-0.3	-453.78	-0.3	-282.25	0	-316.94
44	45	116.00	-4427.98	371.63	-123.21	-2.85	-951.75	-0.3	-487.02	-0.3	-251.71	0	-279.12
45	45	116.00	-2466.79	132.38	173.32	-2.85	-1168.55	-0.3	-568.89	-0.3	-397.98	0	-445.21
45	46	117.00	-2468.56	141.77	37.93	-2.85	-1207.80	-0.3	-641.60	-0.3	-363.33	0	-395.33
46	46	117.00	-1866.33	-122.24	294.84	-2.85	-656.68	-0.3	-607.21	-0.3	-368.62	0	-400.62
46	47	119.78	-1866.03	-96.12	592.37	-2.85	-435.54	-0.3	-927.29	-0.3	-375.03	0	-409.87
47	47	119.78	-1243.68	-187.30	92.26	-2.85	-496.18	-0.3	-652.17	-0.3	-142.57	0	-144.05
47	48	122.55	-1245.70	-161.49	574.70	-2.85	-206.05	-0.3	-930.25	-0.3	-188.61	0	-210.11
48	48	122.55	-1713.88	-116.71	142.57	-2.85	-1137.07	-0.3	-344.47	-0.3	-122.24	0	-176.00
48	49	128.10	-1719.83	-64.80	642.33	-2.85	-701.01	-0.3	-1129.44	-0.3	-97.79	0	-140.80
49	49	128.10	-2036.63	-18.51	355.21	-2.85	-1113.61	-0.3	-964.55	-0.3	-97.79	0	-140.80
49	50	133.65	-2040.78	33.74	309.06	-2.85	-1105.05	-0.3	-1079.04	-0.3	-73.34	0	-105.60
50	50	133.65	-2040.78	33.74	309.06	-2.85	-1105.05	-0.3	-1079.04	-0.3	-73.34	0	-105.60
50	51	139.20	-2044.96	85.98	-27.12	-2.85	-1324.17	-0.3	-837.90	-0.3	-48.90	0	-70.40
51	51	139.20	-1418.74	85.98	558.15	-2.85	-494.67	-0.3	-1185.55	-0.3	-48.90	0	-70.40
51	52	144.75	-1422.95	138.23	-67.94	-2.85	-941.43	-0.3	-588.90	-0.3	-24.45	0	-35.20
52	52	144.75	-1276.83	138.23	66.05	-2.85	-749.90	-0.3	-666.86	-0.3	-24.45	0	-35.20
52	53	147.53	-1278.96	164.35	-355.76	-2.85	-1058.66	-0.3	-235.18	-0.3	-12.22	0	-17.60
53	53	147.53	-1278.96	164.35	-355.76	-2.85	-1058.66	-0.3	-235.18	-0.3	-12.22	0	-17.60
53	54	150.30	-1281.08	191.27	-850.05	-2.85	-1424.33	-0.3	285.38	-0.3	0.00	0	0.00
54	54	150.30	-1297.47	-5.65	-850.05	-2.85	-1434.02	-0.3	275.70	-0.3	0.00	0	0.00
54	55	150.90	-1297.93	0.00	-848.77	-2.85	-1433.28	-0.3	273.85	-0.3	0.00	0	0.00

[redacted]

Construcción sin gradiente en fase constructiva 12

[illegible]

Coef cs

Barra	Nodo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
[illegible]	1	0.00	-1758.00	0.00	-1881.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.20
[illegible]	2	0.60	-1757.73	5.65	-1862.35	-2.85	-1973.46	-0.3	243.13	-0.3	18.04	0	94.20
2	2	0.60	-1741.33	-212.14	-1862.45	-2.85	-1963.83	-0.3	252.84	-0.3	18.05	0	94.22
2	3	3.38	-1737.37	-194.33	-1281.71	-2.85	-1554.52	-0.3	-285.40	-0.3	-6.39	0	56.81
3	3	3.38	-1737.37	-194.33	-1281.35	-2.85	-1554.34	-0.3	-285.46	-0.3	-6.43	0	58.73
3	4	6.15	-1733.42	-168.21	-772.63	-2.85	-1201.71	-0.3	-734.91	-0.3	-30.93	0	23.22
4	4	6.15	-2502.63	-168.21	-2035.11	-2.85	-2120.46	-0.3	-642.98	-0.3	-12.85	0	117.53
4	5	11.70	-2480.34	-115.96	-1228.10	-2.85	-1580.72	-0.3	-1275.34	-0.3	-62.01	0	45.81
5	5	11.70	-3056.92	-115.96	-1758.02	-2.85	-2331.41	-0.3	-960.72	-0.3	-61.95	0	45.89
5	6	17.25	-3044.72	-63.72	-1240.43	-2.85	-2019.54	-0.3	-1237.50	-0.3	-111.04	0	-25.73
6	6	17.25	-3044.72	-63.72	-1240.43	-2.85	-2019.54	-0.3	-1237.50	-0.3	-111.04	0	-25.73
6	7	22.80	-3032.61	-11.47	-1012.86	-2.85	-1935.44	-0.3	-1158.65	-0.3	-160.13	0	-97.35
7	7	22.80	-2746.03	26.40	-753.19	-2.85	-1562.16	-0.3	-1307.87	-0.3	-160.13	0	-97.35
7	8	26.35	-2732.16	78.37	-1025.24	-2.85	-1869.11	-0.3	-615.57	-0.3	-208.22	0	-168.95
8	8	28.35	-2305.77	114.93	-634.27	-2.85	-1076.30	-0.3	-1032.32	-0.3	-275.54	0	-214.30
8	9	31.13	-2302.80	140.80	-860.36	-2.85	-1300.17	-0.3	-777.91	-0.3	-249.19	0	-176.90
9	9	31.13	-3063.26	67.78	-424.19	-2.85	-1251.79	-0.3	-1102.94	-0.3	-523.61	0	-488.73
9	10	33.90	-3060.15	93.69	-635.61	-2.85	-1429.51	-0.3	-797.65	-0.3	-529.60	0	-497.40
10	10	33.90	-2921.59	-298.51	237.90	-2.85	-1165.03	-0.3	-826.65	-0.3	-536.93	0	-577.76
10	11	34.90	-2921.39	-289.01	530.41	-2.85	-1052.14	-0.3	-779.39	-0.3	-565.70	0	-662.41
11	11	34.90	-4919.38	-627.54	539.01	-2.85	-836.42	-0.3	-794.89	-0.3	-372.16	0	-410.90
11	12	35.90	-5047.63	-662.99	1151.68	-3.088	-838.15	-0.3	-771.87	-0.3	-440.77	0	-492.75
12	12	35.90	-4965.99	886.24	1151.63	-3.088	-622.36	-0.3	-756.05	-0.3	-456.48	0	-508.46
12	13	36.90	-4863.39	909.79	246.48	-3.325	-778.89	-0.3	-270.88	-0.3	-440.59	0	-488.45
13	13	36.90	-4577.79	303.36	3701.08	-3.325	-56.92	-0.3	-1158.22	-0.3	-1158.22	0	-1267.44
13	14	39.25	-4583.04	348.26	2939.67	-3.884	-181.91	-0.3	-864.34	-0.3	-864.34	0	-921.46
14	14	39.25	-5745.86	-127.76	5129.80	-3.884	-58.73	-0.3	-1249.53	-0.3	-1249.53	0	-1349.21
14	15	41.60	-5757.52	-72.05	5371.71	-4.442	-26.81	-0.3	-1111.81	-0.3	-1111.81	0	-1190.40
15	15	41.60	-5716.15	675.64	5371.36	-4.442	-23.06	-0.3	-1108.00	-0.3	-1108.00	0	-1186.58
15	16	43.90	-5717.87	516.85	3968.20	-5	-119.14	-0.3	-863.92	-0.3	-863.92	0	-911.46
16	16	43.90	-5620.29	1172.11	3967.72	-5	-8.21	-0.3	-459.51	-0.3	-459.51	0	-486.32
16	17	46.45	-5640.45	595.34	1198.54	-5	-197.65	-0.3	-333.74	-0.3	-333.74	0	-342.43
17	17	46.45	-5597.91	-1059.03	1190.63	-5	-195.94	-0.3	-331.37	-0.3	-331.37	0	-340.01
17	18	49.00	-5562.87	-1236.31	4136.63	-5	5.13	-0.3	-465.38	-0.3	-465.38	0	-495.42
18	18	49.00	-5688.12	-584.90	4135.99	-5	-101.32	-0.3	-877.78	-0.3	-877.78	0	-927.34
18	19	51.30	-5693.04	-743.62	5707.15	-4.442	12.20	-0.3	-1140.55	-0.3	-1140.55	0	-1224.05
19	19	51.30	-5741.44	1.37	5708.87	-4.442	7.53	-0.3	-1145.17	-0.3	-1145.17	0	-1228.66
19	20	53.65	-5735.50	57.75	5642.24	-3.884	2.74	-0.3	-1307.07	-0.3	-1307.07	0	-1416.71
20	20	53.65	-4572.33	-414.96	3452.13	-3.884	-120.55	-0.3	-921.93	-0.3	-921.93	0	-989.02
20	21	56.00	-4570.84	-389.44	4377.93	-3.325	57.67	-0.3	-1245.03	-0.3	-1245.03	0	-1374.23
21	21	56.00	-5011.06	-964.84	849.53	-3.325	-894.25	-0.3	-353.32	-0.3	-519.56	0	-582.42
21	22	57.00	-5014.85	-943.29	1810.64	-3.088	-514.81	-0.3	-851.91	-0.3	-550.87	0	-623.13
22	22	57.00	-5089.66	615.94	1810.59	-3.088	-532.40	-0.3	-859.47	-0.3	-535.87	0	-609.13
22	23	58.00	-5086.77	635.30	1204.25	-2.85	-723.07	-0.3	-920.46	-0.3	-492.87	0	-557.19
[illegible]	23	58.00	-3067.64	258.13	1165.88	-2.85	-700.62	-0.3	-940.65	-0.3	-745.31	0	-856.14
[illegible]	24	59.00	-3088.18	277.70	925.47	-2.85	-866.18	-0.3	-990.46	-0.3	-690.19	0	-776.71
[illegible]	24	59.00	-3103.62	-280.58	-60.41	-2.85	-1139.56	-0.3	-895.61	-0.3	-633.36	0	-639.45
[illegible]	25	63.11	-3109.32	-251.75	1036.03	-2.85	-501.02	-0.3	-1454.46	-0.3	-746.84	0	-805.14
[illegible]	25	63.11	-2612.33	-108.98	-120.96	-2.85	-1340.09	-0.3	-701.53	-0.3	-355.05	0	-374.74
25	26	67.23	-2623.61	-130.56	480.82	-2.85	-868.65	-0.3	-1456.91	-0.3	-354.86	0	-373.74
26	26	67.23	-2894.46	-77.51	-113.57	-2.85	-1495.41	-0.3	-867.97	-0.3	-354.86	0	-373.74
26	27	71.34	-2902.49	-38.79	113.57	-2.85	-1317.43	-0.3	-1179.59	-0.3	-354.71	0	-372.95
27	27	71.34	-3015.80	-38.79	9.66	-2.85	-1465.97	-0.3	-1119.13	-0.3	-354.71	0	-372.95
27	28	75.45	-3018.51	-0.08	87.08	-2.85	-1406.76	-0.3	-1215.71	-0.3	-354.71	0	-372.95
28	28	75.45	-3018.51	-0.09	87.09	-2.85	-1406.76	-0.3	-1215.71	-0.3	-354.71	0	-372.95
28	29	79.56	-3021.16	36.63	5.42	-2.85	-1472.46	-0.3	-1117.10	-0.3	-354.71	0	-372.95
29	29	79.56	-2907.84	38.63	108.33	-2.85	-1323.92	-0.3	-1177.56	-0.3	-354.71	0	-372.95
29	30	83.68	-2900.89	77.35	-118.12	-2.85	-1502.78	-0.3	-886.17	-0.3	-354.86	0	-373.74
30	30	83.68	-2630.01	131.08	476.37	-2.85	-876.01	-0.3	-1455.10	-0.3	-354.86	0	-373.74
30	31	87.79	-2618.79	169.50	-127.76	-2.85	-1349.24	-0.3	-687.03	-0.3	-355.05	0	-374.74
31	31	87.79	-3115.78	252.27	1029.24	-2.85	-506.22	-0.3	-1455.10	-0.3	-749.39	0	-805.23
31	32	91.90	-3110.49	291.13	-69.53	-2.85	-1145.94	-0.3	-886.07	-0.3	-633.58	0	-639.06
32	32	91.90	-3094.58	-279.19	916.35	-2.85	-872.51	-0.3	-990.67	-0.3	-690.37	0	-776.28
32	33	92.90	-3094.07	-260.63	1168.19	-2.85	-766.26	-0.3	-941.13	-0.3	-745.71	0	-858.03
33	33	92.90	-5092.87	-637.67	1196.79	-2.85	-725.44	-0.3	-920.28	-0.3	-492.59	0	-556.62
33	34	93.90	-5095.20	-616.53	1805.65	-3.088	-533.98	-0.3	-869.62	-0.3	-536.91	0	-609.01
34	34	93.90	-5021.45	942.48	1805.59	-3.088	-516.47	-0.3	-852.07	-0.3	-550.97	0	-623.07
34	35	94.90	-5017.69	964.03	848.03	-3.325	-695.43	-0.3	-353.84	-0.3	-519.73	0	-582.48
35	35	94.90	-4570.80	359.24	4380.79	-3.325	58.16	-0.3	-1245.40	-0.3	-1245.40	0	-1374.66
35	36	97.25	-4572.30	414.76	3455.36	-3.884	-120.16	-0.3	-922.30	-0.3	-922.30	0	-989.44
36	36	97.25	-5735.47	-57.95	5645.89	-3.884	3.17	-0.3	-1307.49	-0.3	-1307.49	0	-1417.19
36	37	99.60	-5741.40	-1.56	5710.95	-4.442	7.94	-0.3	-1145.59	-0.3	-1145.59	0	-1229.14
37	37	99.60	-5693.04	743.63	5710.67	-4.442	12.55	-0.3	-1140.92	-0.3	-1140.92	0	-1224.46
37	38	101.90	-5688.12	584.71	4140.82	-5	-100.97	-0.3	-878.15	-0.3	-878.15	0	-927.76
38	38	101.90	-5562.88	1236.12	4141.22	-5	5.44	-0.3	-465.60	-0.3	-465.60	0	-495.66
38	39	104.45	-5597.92	1059.64	1194.76	-5	-195.66	-0.3	-331.56	-0.3	-331.56	0	-340.23
39	39	104.45	-5640.46	-895.23	1201.98	-5	-197.28	-0.3	-333.99	-0.3	-333.99	0	-342.72
39	40	107.00	-5620.30	-1172.00	3972.80	-5	-7.87	-0.3	-459.74	-0.3	-459.74	0	-488.59
40	40	107.00	-5717.87	-516.75	3972.30	-5	-118.77	-0.3	-864.32	-0.3	-864.32	0	-911.90
40	41	109.30	-5718.15	-675.73	5376.03	-4.442	-22.61	-0.3	-1108.48	-0.3	-1108.48	0	-1187.13
41	41	109.30	-5757.50	72.17	5375.68	-4.442	-26.42	-0.3	-1112.22	-0.3	-1112.22	0	-1190.87
41	42	111.65	-5746.86	127.86	5133.95	-3.884	-58.21	-0.3	-1250.03	-0.3	-1250.03	0	-1349.79
42	42	111.65	-4583.03	-348.15	2943.23	-3.884	-181.49	-0.3	-864.75	-0.3	-864.75	0	-921.94
42	43	114.00	-4577.76	-303.25	3704.91	-3.325	-56.27	-0.3	-1156.72	-0.3	-1156.72	0	-1268.05
43	43	114.00	-4863.36	-909.69	249.37	-3.325	-778.55	-0.3	-271.03	-0.3	-441.05	0	-489.00
43	44	115.00	-4988.98	-886.14	1155.19	-3.088	-621.78	-0.3	-756.52	-0.3	-456.97	0	-508.06
44	44	115.00	-5047.60	663.06	1155.13	-3.088	-637.59	-0.3	-772.29	-0.3	-441.26	0	-493.35
44	45	116.00	-4919.35	627.63	542.36	-2.85	-835.77	-0.3	-795.31	-0.3	-372.68	0	-411.54
45	45	116.00	-2921.36	299.12	533.99	-2.85	-1050.37	-0.3	-780.03	-0.3	-596.24	0	-663.19
45	46	117.00	-2921.57	288.62	241.38	-2.85	-1166.32	-0.3	-827.27	-0.3	-537.45	0	-578.51
[illegible]	46	117.00	-3090.15	-93.78	-632.13	-2.85	-1427.81	-0.3	-798.28	-0.3	-530.12	0	-488.15
[illegible]	47	119.78	-3083.28	-67.68	-420.99	-2.85	-1250.22	-0.3	-1103.51	-0.3	-524.30	0	-489.43
[illegible]	47	119.76	-2302.61	-140.70	-877.20	-2.85	-1296.61	-0.3	-776.48	-0.3	-249.67	0	-177.89
[illegible]	48	122.55	-2308.78	-114.63	-631.37	-2.85	-1076.88	-0.3	-1032.84	-0.3	-275.98	0	-214.93
48	48	122.55	-2732.18	-78.26	-1022.35	-2.85	-1866.64	-0.3	-619.12	-0.3	-209.22	0	-168.95
48	49	128.10	-2746.03	-26.29	-750.65	-2.85	-1560.34	-0.3	-1310.71	-0.3	-160.13	0	-97.35
49	49	128.10	-3032.61	11.57	-1010.64	-2.85	-1933.62	-0.3	-1161.50	-0.3	-160.13	0	-97.35
49	50	133.65	-3044.72	63.62	-1238.69	-2.85	-2018.18	-0.3	-1239.63	-0.3	-111.04	0	-25.73
50	50	133.65	-3044.72	63.82	-1238.69	-2.85	-2018.18	-0.3	-1239.63	-0.3	-111.04	0	-25.73
50	51	139.20	-3056.92	116.05	-1758.47	-2.85	-2330.31	-0.3	-962.21	-0.3	-62.01	0	45.81
51	51	139.20	-2480.34	116.06	-1227.33	-2.85	-1580.00	-0.3	-1276.68	-0.3	-61.95	0	45.89
51	52	144.75	-2502.63	168.31	-2035.36	-2.85	-2119.93	-0.3	-643.71	-0.3	-12.86	0	117.49
52	52	144.75	-1733.42	168.31	-772.14	-2.85	-1201.30	-0.3	-735.60	-0.3	-30.92	0	23.24
52	53	147.53	-1737.37	194.43	-1281.41	-2.85	-1554.29	-0.3	-285.76	-0.3	-6.39	0	56.81
53	53	147.53	-1737.37	194.43	-1281.05	-2.85	-1554.11	-0.3	-285.82	-0.3	-6.43	0	58.73
53	54	150.30	-1741.33	212.22	-1862.35	-2.85	-1963.78	-0.3	252.82	-0.3	18.04	0	94.20
54	54	150.30	-1757.73	-5.65	-1862.45	-2.85	-1973.52	-0.3	243.15	-0.3	18.05	0	94.22
54	55	150.90	-1758.60	0.00	-1861.89	-2.85	-1973.22	-0.3	241.26	-0.3	18.06	0	94.28

[redacted]

Construcción sin gradiente en fase constructiva 12

[illegible]

Coef cs

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.86	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	5.65	-2244.95	-2.85	-2344.34	-0.3	301.79	-0.3	22.05	0	115.13
2	2	0.60	-2059.05	-210.71	-2244.87	-2.85	-2334.72	-0.3	311.50	-0.3	22.07	0	115.16
2	3	3.38	-2054.21	-191.79	-1670.13	-2.85	-1926.72	-0.3	-222.50	-0.3	-1.76	0	80.57
3	3	3.38	-2054.21	-191.79	-1669.69	-2.85	-1928.51	-0.3	-222.56	-0.3	-1.82	0	80.47
3	4	6.15	-2049.38	-165.67	-1103.77	-2.85	-1579.14	-0.3	-987.80	-0.3	-25.73	0	45.76
4	4	6.15	-2974.07	-165.67	-2696.85	-2.85	-2681.80	-0.3	-563.60	-0.3	-3.63	0	161.02
4	5	11.70	-2959.06	-113.42	-1898.64	-2.85	-2147.43	-0.3	-1187.64	-0.3	-51.64	0	90.75
5	5	11.70	-3585.28	-113.42	-2484.38	-2.85	-2977.17	-0.3	-839.80	-0.3	-51.57	0	90.85
5	6	17.25	-3570.36	-61.18	-1976.71	-2.85	-2670.74	-0.3	-1109.24	-0.3	-99.50	0	20.70
6	6	17.25	-3570.36	-61.18	-1976.71	-2.85	-2670.74	-0.3	-1109.24	-0.3	-99.50	0	20.70
6	7	22.80	-3555.55	-8.93	-1759.20	-2.85	-2362.11	-0.3	-1020.97	-0.3	-147.42	0	-49.45
7	7	22.80	-3238.75	37.36	-1472.07	-2.85	-2179.50	-0.3	-1165.85	-0.3	-147.42	0	-49.45
7	8	26.35	-3222.22	89.27	-1800.60	-2.85	-2526.45	-0.3	-426.10	-0.3	-195.35	0	-119.56
8	8	28.35	-2754.03	134.05	-1388.47	-2.85	-1598.72	-0.3	-1016.35	-0.3	-261.35	0	-153.18
8	9	31.13	-2746.74	159.86	-1765.34	-2.85	-1843.25	-0.3	-752.12	-0.3	-227.02	0	-104.53
9	9	31.13	-3389.10	68.68	-1285.24	-2.85	-1792.62	-0.3	-1027.24	-0.3	-458.48	0	-370.36
9	10	33.90	-3384.15	94.80	-1477.23	-2.85	-1980.19	-0.3	-721.00	-0.3	-464.77	0	-378.51
10	10	33.90	-3197.17	-321.17	-398.54	-2.85	-1632.22	-0.3	-774.33	-0.3	-475.47	0	-478.47
10	11	34.90	-3196.50	-311.55	-81.43	-2.85	-1504.32	-0.3	-733.63	-0.3	-537.17	0	-567.40
11	11	34.90	-5116.58	-672.27	-377.67	-2.85	-1102.63	-0.3	-547.47	-0.3	-307.50	0	-325.04
11	12	35.90	-4984.31	-596.25	261.78	-3.088	-820.95	-0.3	-530.34	-0.3	-352.98	0	-368.73
12	12	35.90	-4916.91	940.74	261.71	-3.088	-802.93	-0.3	-512.27	-0.3	-367.05	0	-402.80
12	13	36.90	-4913.15	962.31	-696.46	-3.325	-943.25	-0.3	-42.85	-0.3	-355.46	0	-369.37
13	13	36.90	-4225.99	383.66	2308.56	-3.325	-238.46	-0.3	-925.41	-0.3	-925.41	0	-993.53
13	14	39.25	-4230.80	406.64	1404.07	-3.884	-321.62	-0.3	-647.56	-0.3	-647.56	0	-674.85
14	14	39.25	-5190.64	-20.92	3195.88	-3.884	-221.70	-0.3	-963.60	-0.3	-963.60	0	-1025.70
14	15	41.60	-5200.84	34.84	3183.63	-4.442	-187.51	-0.3	-830.56	-0.3	-830.56	0	-877.13
15	15	41.60	-5152.31	709.58	3183.32	-4.442	-182.88	-0.3	-825.87	-0.3	-825.87	0	-872.44
15	16	43.90	-5151.63	551.68	1691.80	-5	-278.37	-0.3	-595.87	-0.3	-595.87	0	-616.13
16	16	43.90	-5053.80	1141.47	1691.12	-5	-135.00	-0.3	-327.35	-0.3	-327.35	0	-339.62
16	17	46.45	-5074.63	953.16	-987.60	-5	-318.18	-0.3	-205.84	-0.3	-205.84	0	-198.67
17	17	46.45	-5024.83	-1002.16	-998.45	-5	-316.52	-0.3	-202.84	-0.3	-202.84	0	-195.58
17	18	49.00	-5006.17	-1191.05	1814.73	-5	-124.33	-0.3	-330.74	-0.3	-330.74	0	-343.92
18	18	49.00	-5112.03	-606.16	1814.93	-5	-263.86	-0.3	-604.50	-0.3	-604.50	0	-626.24
18	19	51.30	-5116.51	-764.00	3440.67	-4.442	-154.27	-0.3	-849.23	-0.3	-849.23	0	-899.56
19	19	51.30	-5172.41	-93.47	3440.41	-4.442	-159.65	-0.3	-854.56	-0.3	-854.56	0	-904.90
19	20	53.65	-5166.04	-37.15	3569.68	-3.884	-171.49	-0.3	-1007.13	-0.3	-1007.13	0	-1077.06
20	20	53.65	-4206.63	-462.74	1607.83	-3.884	-271.46	-0.3	-691.13	-0.3	-691.13	0	-726.26
20	21	56.00	-4204.89	-417.27	2645.76	-3.325	-145.21	-0.3	-992.00	-0.3	-992.00	0	-1075.96
21	21	56.00	-4929.62	-1005.64	-166.98	-3.325	-867.79	-0.3	-113.44	-0.3	-425.55	0	-472.67
21	22	57.00	-4933.55	-984.07	835.46	-3.088	-706.15	-0.3	-593.08	-0.3	-450.36	0	-503.66
22	22	57.00	-5022.41	558.98	835.39	-3.088	-727.65	-0.3	-612.54	-0.3	-437.67	0	-491.19
22	23	58.00	-5019.65	578.40	285.27	-2.85	-951.40	-0.3	-633.38	-0.3	-394.01	0	-437.14
23	23	58.00	-3084.98	235.38	581.80	-2.85	-1131.70	-0.3	-909.76	-0.3	-621.15	0	-695.47
23	24	59.00	-3095.66	244.98	344.03	-2.85	-1221.89	-0.3	-863.21	-0.3	-571.35	0	-623.68
24	24	59.00	-3427.36	-287.19	-731.93	-2.85	-1594.33	-0.3	-859.67	-0.3	-596.72	0	-559.99
24	25	63.11	-3435.60	-248.49	347.87	-2.85	-964.79	-0.3	-1416.15	-0.3	-710.37	0	-722.73
25	25	63.11	-3110.29	-180.76	-740.07	-2.85	-1915.45	-0.3	-576.98	-0.3	-362.25	0	-354.76
25	26	67.23	-3123.67	-142.42	-62.80	-2.85	-1408.48	-0.3	-1391.46	-0.3	-362.02	0	-353.56
26	26	67.23	-3423.00	-77.53	-749.97	-2.85	-2101.18	-0.3	-782.60	-0.3	-362.02	0	-353.56
26	27	71.34	-3432.79	-38.61	-525.43	-2.85	-1925.30	-0.3	-1053.96	-0.3	-361.83	0	-352.60
27	27	71.34	-3558.04	-38.61	-640.26	-2.85	-2069.47	-0.3	-987.13	-0.3	-361.83	0	-352.60
27	28	75.45	-3561.35	-0.10	-563.33	-2.85	-2031.00	-0.3	-1083.49	-0.3	-361.83	0	-352.59
28	28	75.45	-3561.35	-0.10	-563.33	-2.85	-2031.00	-0.3	-1083.49	-0.3	-361.63	0	-352.59
28	29	79.56	-3564.58	38.61	-645.46	-2.85	-2097.41	-0.3	-984.64	-0.3	-361.83	0	-352.60
29	29	79.56	-3439.34	38.61	-530.61	-2.85	-1933.24	-0.3	-1051.47	-0.3	-361.83	0	-352.60
29	30	83.68	-3430.85	77.33	-755.54	-2.85	-2110.18	-0.3	-760.40	-0.3	-362.02	0	-353.56
30	30	83.68	-3131.49	143.04	-98.47	-2.85	-1417.47	-0.3	-1389.25	-0.3	-362.02	0	-353.56
30	31	87.79	-3118.19	181.40	-748.36	-2.85	-1926.63	-0.3	-571.48	-0.3	-362.25	0	-354.78
31	31	87.79	-3443.50	249.13	339.58	-2.85	-971.14	-0.3	-1416.94	-0.3	-711.03	0	-722.85
31	32	91.90	-3435.39	287.85	-743.07	-2.85	-1602.13	-0.3	-859.98	-0.3	-596.98	0	-559.51
32	32	91.90	-3093.50	-246.81	332.89	-2.85	-1229.63	-0.3	-863.47	-0.3	-571.57	0	-623.15
32	33	92.90	-3092.85	-237.21	572.41	-2.85	-1138.59	-0.3	-810.35	-0.3	-621.64	0	-695.33
33	33	92.90	-5027.11	-581.55	276.17	-2.85	-954.28	-0.3	-633.15	-0.3	-393.68	0	-436.45
33	34	93.90	-5029.91	-562.15	829.31	-3.088	-729.59	-0.3	-612.70	-0.3	-437.72	0	-491.06
34	34	93.90	-4941.61	983.08	829.25	-3.088	-710.19	-0.3	-593.26	-0.3	-450.47	0	-503.80
34	35	94.90	-4937.71	1004.65	-171.37	-3.325	-869.26	-0.3	-114.04	-0.3	-425.76	0	-472.75
35	35	94.90	-4204.86	417.10	2848.04	-3.325	-144.82	-0.3	-992.29	-0.3	-992.29	0	-1076.34
35	36	97.25	-4206.60	462.58	1810.46	-3.884	-271.15	-0.3	-691.43	-0.3	-691.43	0	-726.61
36	36	97.25	-5166.02	36.99	3602.77	-3.884	-171.12	-0.3	-1007.48	-0.3	-1007.48	0	-1077.49
36	37	99.60	-5172.38	93.32	3443.77	-4.442	-159.32	-0.3	-854.91	-0.3	-854.91	0	-905.29
37	37	99.60	-5116.51	763.85	3443.51	-4.442	-153.99	-0.3	-849.52	-0.3	-849.52	0	-899.90
37	38	101.90	-5112.03	606.01	1818.16	-5	-263.56	-0.3	-604.81	-0.3	-604.81	0	-626.59
38	38	101.90	-5008.18	1150.90	1818.38	-5	-124.06	-0.3	-330.91	-0.3	-330.91	0	-344.11
38	39	104.45	-5024.84	1002.00	-996.20	-5	-316.30	-0.3	-202.99	-0.3	-202.99	0	-195.75
39	39	104.45	-5074.64	-953.07	-983.02	-5	-317.66	-0.3	-205.05	-0.3	-206.05	0	-198.92
39	40	107.00	-5053.80	-1141.38	1695.38	-5	-134.71	-0.3	-327.54	-0.3	-327.54	0	-339.85
40	40	107.00	-5151.63	-551.59	1694.86	-5	-278.06	-0.3	-596.18	-0.3	-596.18	0	-616.49
40	41	109.30	-5152.31	-709.49	3187.17	-4.442	-182.51	-0.3	-826.27	-0.3	-826.27	0	-872.89
41	41	109.30	-5200.83	-34.75	3186.86	-4.442	-187.19	-0.3	-830.89	-0.3	-830.89	0	-877.51
41	42	111.65	-5190.62	21.00	3199.33	-3.884	-221.29	-0.3	-963.99	-0.3	-963.99	0	-1026.16
42	42	111.65	-4230.79	-408.55	1406.99	-3.884	-321.27	-0.3	-647.90	-0.3	-647.90	0	-675.24
42	43	114.00	-4225.98	-363.57	2311.75	-3.325	-237.93	-0.3	-925.82	-0.3	-925.82	0	-994.04
43	43	114.00	-4913.14	-962.23	-694.33	-3.325	-943.03	-0.3	-42.88	-0.3	-355.63	0	-369.82
43	44	115.00	-4916.90	-940.66	264.62	-3.088	-802.46	-0.3	-512.64	-0.3	-367.44	0	-403.29
44	44	115.00	-4994.28	598.32	264.55	-3.088	-820.51	-0.3	-530.65	-0.3	-353.37	0	-369.22
44	45	116.00	-5116.55	672.35	-375.02	-2.85	-1102.12	-0.3	-547.76	-0.3	-307.91	0	-325.57
45	45	116.00	-3196.48	311.64	-78.49	-2.85	-1502.87	-0.3	-734.15	-0.3	-537.61	0	-568.03
45	46	117.00	-3197.16	321.26	-383.70	-2.85	-1630.81	-0.3	-774.83	-0.3	-475.89	0	-479.09
46	46	117.00	-3384.15	-94.72	-1474.39	-2.85	-1958.79	-0.3	-721.52	-0.3	-465.20	0	-379.13
46	47	119.78	-3389.10	-69.60	-1262.63	-2.85	-1781.34	-0.3	-1027.71	-0.3	-459.87	0	-370.93
47	47	119.78	-2746.75	-158.78	-1762.74	-2.85	-1841.98	-0.3	-752.59	-0.3	-227.42	0	-105.10
47	48	122.55	-2754.04	-133.97	-1365.11	-2.85	-1595.56	-0.3	-1016.77	-0.3	-261.72	0	-153.70
48	48	122.55	-3222.22	-89.18	-1798.24	-2.85	-2525.59	-0.3	-431.00	-0.3	-195.35	0	-119.58
48	49	128.10	-3238.75	-37.27	-1470.18	-2.85	-2178.01	-0.3	-1188.18	-0.3	-147.42	0	-49.45
49	49	128.10	-3555.55	9.01	-1757.30	-2.85	-2590.62	-0.3	-1023.29	-0.3	-147.42	0	-49.45
49	50	133.65	-3570.36	61.26	-1975.29	-2.85	-2669.63	-0.3	-1109.99	-0.3	-99.50	0	20.70
50	50	133.65	-3570.36	61.26	-1975.29	-2.85	-2669.63	-0.3	-1109.99	-0.3	-99.50	0	20.70
50	51	139.20	-3585.28	113.50	-2482.97	-2.85	-2976.19	-0.3	-841.14	-0.3	-51.64	0	90.75
51	51	139.20	-2959.06	113.50	-1898.17	-2.85	-2145.92	-0.3	-1188.71	-0.3	-51.57	0	90.85
51	52	144.75	-2974.07	165.75	-2695.16	-2.85	-2681.32	-0.3	-564.30	-0.3	-3.67	0	160.98
52	52	144.75	-2049.38	165.75	-1166.42	-2.85	-1578.83	-0.3	-668.36	-0.3	-25.71	0	45.78
52	53	147.53	-2054.21	191.87	-1669.89	-2.85	-1928.53	-0.3	-222.79	-0.3	-1.76	0	80.57
53	53	147.53	-2054.21	191.87	-1669.45	-2.85	-1928.32	-0.3	-222.87	-0.3	-1.82	0	80.47
53	54	150.30	-2059.05	218.79	-2244.85	-2.85	-2334.66	-0.3	311.48	-0.3	22.05	0	115.13
54	54	150.30	-2075.45	-5.65	-2244.97	-2.85	-2344.40	-0.3	301.81	-0.3	22.07	0	115.16
54	55	150.90	-2076.50	0.00	-2244.67	-2.85	-2344.32	-0.3	299.97	-0.3	22.07	0	115.23

Barra	Modo	Δ	N (T)	Vy (T)	Mz (Tm)	Fibra y Barra	beCalón σ/a (Kn/m2)	Fibra y Barra	SupCalón σ/a (Kn/m2)	Fibra y Barra	beLosa σ/a (Kn/m2)	Fibra y Barra	SupLosa σ/a (Kn/m2)
1	1	0.00	-3076.50	0.00	-2244.74	-2.85	-2344.36	-0.3	358.00	-0.3	22.66	0	115.24
2	2	0.00	-3075.45	0.65	-2244.26	-2.85	-2344.54	-0.3	391.79	-0.3	22.05	0	115.13
3	3	0.00	-3039.05	-999.03	-2344.07	-2.85	-2354.73	-0.3	311.59	-0.3	22.07	0	115.16
4	3	3.36	-3054.21	-984.07	-1747.65	-2.85	-1998.54	-0.3	309.65	-0.3	9.82	0	87.37
5	3	3.36	-3054.21	-984.07	-1746.61	-2.85	-1999.33	-0.3	308.79	-0.3	9.05	0	87.27
6	4	6.15	-3040.36	-137.55	-1326.81	-2.85	-1654.70	-0.3	-540.17	-0.3	-2.39	0	79.37
7	4	6.15	-3074.07	-137.55	-2950.66	-2.85	-2757.45	-0.3	-530.04	-0.3	10.71	0	184.54
8	5	11.70	-3050.68	-83.70	-2208.31	-2.85	-2206.73	-0.3	-1132.56	-0.3	-4.85	0	157.07
9	5	11.70	-3026.26	85.70	-1702.05	-2.85	-2139.46	-0.3	-794.64	-0.3	-4.66	0	156.08
10	6	17.25	-3070.36	-33.45	-2436.21	-2.85	-2687.00	-0.3	-1625.36	-0.3	-29.40	0	121.53
11	6	17.25	-3070.39	-33.45	-2436.21	-2.85	-2687.00	-0.3	-1625.36	-0.3	-29.48	0	121.53
12	7	22.80	-3056.55	18.79	-2574.53	-2.85	-2554.79	-0.3	-816.45	-0.3	-54.05	0	84.99
13	7	22.80	-3039.75	66.98	-2067.40	-2.85	-2482.68	-0.3	-1675.33	-0.3	-54.05	0	84.99
14	8	28.35	-3022.22	117.00	-2560.77	-2.85	-2859.09	-0.3	-399.65	-0.3	-78.63	0	48.47
15	8	28.35	-3004.29	166.73	-1051.35	-2.85	-1601.43	-0.3	-1433.86	-0.3	-614.20	0	-537.19
16	9	31.13	-3001.84	162.54	-1927.83	-2.85	-2079.52	-0.3	-1160.40	-0.3	-571.86	0	-488.93
17	9	31.13	-3269.12	51.36	-534.31	-2.85	-1995.50	-0.3	-1700.84	-0.3	-1029.61	0	-999.27
18	10	33.80	-3271.13	117.40	-993.98	-2.85	-2173.43	-0.3	-1396.25	-0.3	-1028.85	0	-995.52
19	10	33.80	-3049.50	-661.82	276.71	-2.85	-1535.47	-0.3	-1428.56	-0.3	-1029.10	0	-1077.53
20	11	34.90	-3051.23	-672.76	959.27	-2.85	-1532.00	-0.3	-1453.96	-0.3	-1145.76	0	-1244.86
21	11	34.90	-4982.88	-1343.60	654.03	-2.85	-1140.03	-0.3	-660.08	-0.3	-885.18	0	-746.88
22	12	35.50	-4782.00	-1270.55	1052.25	-3.066	-764.37	-0.3	-596.02	-0.3	-783.77	0	-671.51
23	12	35.50	-4801.90	777.50	1052.18	-3.066	-761.14	-0.3	-592.74	-0.3	-511.53	0	-899.27
24	13	38.90	-6000.62	706.82	1181.70	-3.325	-663.33	-0.3	-301.50	-0.3	-779.74	0	-660.31
25	13	38.90	-6100.00	65.57	4186.41	-3.325	-204.26	-0.3	-1444.03	-0.3	-1444.03	0	-1566.86
26	14	39.25	-6110.60	129.62	3925.30	-3.884	-241.84	-0.3	-1153.12	-0.3	-1153.12	0	-1229.40
27	14	39.25	-7073.81	-276.13	5717.65	-3.884	-142.27	-0.3	-1499.58	-0.3	-1499.58	0	-1580.68
28	15	41.00	-7069.76	-221.22	6317.07	-4.442	-62.06	-0.3	-1336.13	-0.3	-1336.13	0	-1430.56
29	15	41.00	-7058.51	700.66	6317.07	-4.442	-59.14	-0.3	-1335.09	-0.3	-1335.09	0	-1427.50
30	16	43.90	-7083.52	542.87	4059.15	-5	-151.07	-0.3	-1053.07	-0.3	-1063.07	0	-1121.29
31	16	43.90	-6953.51	1352.97	4958.25	-5	-13.63	-0.3	-566.22	-0.3	-566.22	0	-601.49
32	17	46.45	-6861.06	1118.28	1652.10	-5	-232.86	-0.3	-420.90	-0.3	-420.90	0	-432.88
33	17	46.45	-6933.50	-1191.71	1640.04	-5	-231.45	-0.3	-417.99	-0.3	-417.99	0	-429.80
34	18	49.00	-6923.07	-1381.23	4053.13	-5	-5.65	-0.3	-599.03	-0.3	-599.03	0	-604.99
35	18	49.00	-7038.08	-574.47	6503.80	-5	-140.18	-0.3	-1089.95	-0.3	-1089.95	0	-1129.29
36	19	51.30	-7046.21	-732.22	6518.29	-4.442	-38.26	-0.3	-1354.86	-0.3	-1354.86	0	-1450.22
37	19	51.30	-7061.56	198.50	6517.30	-4.442	-41.76	-0.3	-1356.16	-0.3	-1356.16	0	-1453.50
38	20	53.65	-7075.39	245.27	6020.13	-3.884	-167.29	-0.3	-1504.82	-0.3	-1504.82	0	-1621.80
39	20	53.65	-5115.15	-156.14	4227.87	-3.884	-205.88	-0.3	-1185.35	-0.3	-1185.35	0	-1270.51
40	21	56.00	-5110.56	-111.08	4543.43	-3.325	-142.78	-0.3	-1484.44	-0.3	-1484.44	0	-1628.49
41	21	56.00	-5090.71	-816.06	1529.64	-3.325	-404.74	-0.3	-554.81	-0.3	-633.85	0	-623.56
42	22	57.00	-5852.23	-794.73	2338.30	-3.066	-701.87	-0.3	-1051.10	-0.3	-574.06	0	-973.80
43	22	57.00	-4818.25	1265.60	2337.79	-3.066	-705.56	-0.3	-1054.63	-0.3	-848.64	0	-946.36
44	23	58.00	-5811.29	1284.07	1093.78	-2.85	-1045.72	-0.3	-1015.44	-0.3	-747.47	0	-821.92
45	23	58.00	-4870.52	626.15	1300.32	-2.85	-1276.02	-0.3	-1488.88	-0.3	-1203.41	0	-1331.68
46	24	59.00	-4868.67	935.18	764.24	-2.85	-1558.49	-0.3	-1461.92	-0.3	-1094.11	0	-1174.48
47	24	59.00	-5350.56	-297.19	-311.73	-2.85	-1842.47	-0.3	-1489.92	-0.3	-1129.22	0	-1120.53
48	25	63.11	-5349.86	-296.49	1302.55	-2.85	-1313.76	-0.3	-2042.17	-0.3	-1238.31	0	-1279.21
49	25	63.11	-3110.29	-160.76	-2005.99	-2.85	-2537.92	-0.3	-345.63	-0.3	-170.16	0	-78.22
50	26	67.23	-3123.67	-142.42	-1356.72	-2.85	-2030.95	-0.3	-1164.11	-0.3	-169.93	0	-76.99
51	26	67.23	-3423.03	-77.53	-2015.78	-2.85	-2723.08	-0.3	-535.25	-0.3	-169.93	0	-78.99
52	27	71.34	-3432.78	-36.81	-1791.24	-2.85	-2547.76	-0.3	-426.61	-0.3	-169.74	0	-76.03
53	27	71.34	-3559.04	-39.61	-1606.09	-2.85	-2711.95	-0.3	-756.78	-0.3	-169.74	0	-76.03
54	28	75.45	-3561.35	-0.10	-1629.14	-2.85	-2653.48	-0.3	-858.14	-0.3	-169.74	0	-76.03
55	28	75.45	-3561.35	-0.10	-1629.14	-2.85	-2653.48	-0.3	-858.14	-0.3	-169.74	0	-76.03
56	29	79.56	-3564.56	39.61	-1811.27	-2.85	-2719.88	-0.3	-757.30	-0.3	-169.74	0	-76.03
57	29	79.56	-3439.34	38.61	-1795.42	-2.85	-2555.72	-0.3	-824.12	-0.3	-169.74	0	-76.03
58	30	83.66	-3430.85	77.33	-2021.35	-2.85	-2732.98	-0.3	-533.06	-0.3	-169.93	0	-76.99
59	30	83.66	-3131.49	143.04	-1384.29	-2.85	-2099.84	-0.3	-1161.91	-0.3	-169.93	0	-76.99
60	31	87.79	-3118.19	181.40	-2014.17	-2.85	-2549.10	-0.3	-1161.91	-0.3	-170.16	0	-76.21
61	31	87.79	-3356.76	219.13	752.25	-2.85	-3320.12	-0.3	-2042.97	-0.3	-1239.98	0	-1279.33
62	32	91.90	-3356.58	267.85	-322.87	-2.85	-1850.27	-0.3	-1480.23	-0.3	-1129.49	0	-1120.06
63	32	91.90	-4976.69	-537.01	753.09	-2.85	-1568.22	-0.3	-1462.18	-0.3	-1094.32	0	-1173.95
64	33	92.50	-4976.39	-827.90	1300.52	-2.85	-1284.01	-0.3	-1498.47	-0.3	-1203.90	0	-1331.54
65	33	92.90	-6518.75	-1287.22	1064.68	-2.85	-1048.61	-0.3	-1015.23	-0.3	-747.13	0	-821.22
66	34	93.90	-6923.75	-1266.77	2332.16	-3.066	-767.45	-0.3	-1054.85	-0.3	-846.74	0	-946.29
67	34	93.90	-6923.29	793.74	2331.64	-3.066	-763.99	-0.3	-1051.21	-0.3	-874.11	0	-973.64
68	35	94.90	-6858.81	815.07	1525.28	-3.325	-546.23	-0.3	-555.39	-0.3	-834.04	0	-923.63
69	35	94.90	-6110.85	110.91	4544.66	-3.325	-142.37	-0.3	-1484.75	-0.3	-1484.75	0	-1628.87
70	36	97.25	-6115.13	155.96	4230.91	-3.884	-264.52	-0.3	-1168.70	-0.3	-1270.91	0	-1622.16
71	36	97.25	-7078.26	-245.43	6022.82	-3.884	-106.97	-0.3	-1505.13	-0.3	-1505.13	0	-1622.16
72	37	99.50	-7061.63	-186.65	6521.39	-4.442	-41.36	-0.3	-1358.56	-0.3	-1358.56	0	-1453.99
73	37	99.50	-7046.21	732.07	6520.40	-4.442	-34.06	-0.3	-1355.08	-0.3	-1355.08	0	-1450.47
74	38	101.90	-6923.06	1381.08	-4957.26	-5	-138.93	-0.3	-1070.21	-0.3	-1070.21	0	-1129.58
75	38	101.90	-6923.51	1191.56	1643.50	-5	-5.37	-0.3	-569.22	-0.3	-569.22	0	-605.21
76	39	104.45	-6981.07	-1185.19	1656.47	-5	-232.66	-0.3	-421.10	-0.3	-421.10	0	-430.06
77	39	104.45	-6853.97	-1352.68	4842.93	-5	-13.31	-0.3	-566.43	-0.3	-566.43	0	-601.74
78	40	107.00	-7053.52	-542.76	4861.99	-5	-150.81	-0.3	-1083.35	-0.3	-1083.35	0	-1121.60
79	40	107.00	-7058.51	-700.77	6321.04	-4.442	-58.75	-0.3	-1335.50	-0.3	-1335.50	0	-1427.99
80	41	109.30	-7068.76	221.31	6320.62	-4.442	-61.79	-0.3	-1336.46	-0.3	-1336.46	0	-1430.92
81	41	109.30	-7073.79	276.21	5720.77	-3.884	-141.80	-0.3	-1469.94	-0.3	-1469.94	0	-1581.10
82	42	111.65	-5110.59	-129.53	3926.75	-3.884	-241.46	-0.3	-1153.49	-0.3	-1153.49	0	-1229.83
83	42	111.65	-5109.99	-85.48	4169.91	-3.325	-203.67	-0.3	-1444.48	-0.3	-1444.48	0	-1567.54
84	43	114.00	-6800.62	-786.74	1163.52	-3.325	-863.15	-0.3	-501.48	-0.3	-760.08	0	-660.72
85	43	114.00	-6801.89	-777.42	1855.09	-3.066	-760.67	-0.3	-893.12	-0.3	-811.92	0	-699.76
86	44	115.00	-4762.95	1270.62	1855.02	-3.066	-763.94	-0.3	-996.34	-0.3	-764.17	0	-672.00
87	44	115.00	-6853.97	-1352.68	4842.93	-5	-13.31	-0.3	-566.43	-0.3	-566.43	0	-601.74
88	45	116.00	-6882.87	1343.67	656.68	-2.85	-1147.52	-0.3	-960.35	-0.3	-889.59	0	-747.21
89	45	116.00	-5051.22	672.87	953.21	-2.85	-1530.55	-0.3	-1454.48	-0.3	-1146.23	0	-1245.50
90	46	117.00	-5049.48	681.81	279.56	-2.85	-1634.07	-0.3	-1430.06	-0.3	-1029.53	0	-1077.85
91	46	117.00	-5271.13	-117.40	-601.13	-2.85	-2172.03	-0.3	-1366.76	-0.3	-1027.28	0	-986.14
92	47	118.78	-5269.12	-91.28	-531.70	-2.85	-1864.22	-0.3	-1701.31	-0.3	-1029.01	0	-988.84
93	47	118.78	-4091.85	-182.48	-1505.03	-2.85	-2077.24	-0.3	-1160.87	-0.3	-572.38	0	-467.26
94	48	122.55	-4054.30	-158.85	-1048.88	-2.85	-1800.27	-0.3	-1434.38	-0.3	-814.56	0	-527.71
95	48	122.55	-3222.22	-116.91	-2567.40	-2.85	-2804.83	-0.3	-292.85	-0.3	-78.63	0	48.47
96	49	128.10	-3230.75	-64.98	-2585.50	-2.85	-2480.60	-0.3	-1077.66	-0.3	-54.05	0	84.99
97	49	128.10	-3229.55	-18.71	-2372.63	-2.85	-2803.21	-0.3	-812.76	-0.3	-54.05	0	84.99
98	50	133.65	-3570.36	33.54	-2436.78	-2.85	-2858.57	-0.3	-1027.10	-0.3	-29.46	0	121.53
99	50	133.55	-3570.36	33.54	-2439.78	-2.85	-2866.57	-0.3	-1027.10	-0.3	-29.46	0	121.53
100	51	139.20	-3585.28	85.78	-2760.84	-2.85	-3127.48	-0.3	-765.88	-0.3	-4.85	0	157.97
101	51	139.20	-2958.05	85.78	-2205.84	-2.85	-2268.22	-0.3	-1133.45	-0.3	-4.66	0	156.08
102	52	144.75	-2974.07	138.03	-2930.00	-2.85	-2756.87	-0.3	-530.67	-0.3	19.88	0	194.59
103	52	144.75	-2949.38	138.03	-1320.25	-2.85	-1954.48	-0.3	-840.73	-0.3	-2.37	0	79.39
104	53	147.53	-3054.21	164.15	-1746.80	-2.85	-1988.35	-0.3	-208.98	-0.3	9.82	0	97.37
105	53	147.53	-3054.21	164.15	-1746.36	-2.85	-1988.14	-0.3	-209.06	-0.3	9.85	0	97.27
106	54	150.30	-2059.05	196.11	-2244.55	-2.85	-2334.88	-0.3	311.48	-0.3	22.05	0	115.13
107	54	150.30	-2075.45	-5.65	-2244.87	-2.85	-2344.40	-0.3	301.81	-0.3	22.07	0	115.16
108	55	150.90	-2076.50	0.00	-2244.87	-2.85	-2344.32	-0.3	299.87	-0.3	22.07	0	115.23

[redacted]

C. Permanentes sin gradiente

[1; 1]ppcapt + [1; 1]ppvlat + [1; 1]ppvcentral + [1; 1]PPprelosa + [1; 1]pplosa1 + [1; 1]doblosqas + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]incrCM + [.9; 1.1]PRETENSADOS + [.05; 1.05]PRET

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.06	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-286.34	-989.86	-2.85	-1412.51	-0.3	-332.44	-0.3	-51.44	0	-6.08
3	3	3.38	-1737.37	-286.34	-989.50	-2.85	-1412.33	-0.3	-332.50	-0.3	-51.50	0	-8.16
3	4	6.15	-1733.42	-232.62	-263.76	-2.85	-954.48	-0.3	-815.56	-0.3	-109.71	0	-90.21
4	4	6.15	-2502.63	-232.62	-1527.25	-2.85	-1673.24	-0.3	-723.62	-0.3	-91.63	0	4.10
4	5	11.70	-2490.34	-125.16	-515.00	-2.85	-1236.07	-0.3	-1381.92	-0.3	-173.34	0	-114.48
5	5	11.70	-3056.92	-125.16	-1044.92	-2.85	-1986.76	-0.3	-1067.30	-0.3	-173.28	0	-114.40
5	6	17.25	-3044.72	-17.71	-629.49	-2.85	-1728.15	-0.3	-1314.98	-0.3	-208.42	0	-165.94
6	6	17.25	-3044.72	-17.71	-629.49	-2.85	-1728.15	-0.3	-1314.98	-0.3	-208.42	0	-165.94
6	7	22.80	-3032.61	89.76	-810.66	-2.85	-1848.00	-0.3	-1151.99	-0.3	-197.06	0	-150.52
7	7	22.80	-2745.90	127.62	-550.88	-2.85	-1474.65	-0.3	-1301.13	-0.3	-197.06	0	-150.52
7	8	28.35	-2732.05	234.80	-1537.96	-2.85	-2136.23	-0.3	-469.66	-0.3	-139.20	0	-68.15
8	8	28.35	-3558.76	271.35	-200.55	-2.85	-1227.03	-0.3	-1465.67	-0.3	-646.76	0	-614.79
8	9	31.13	-3557.44	276.08	-1002.99	-2.85	-1674.79	-0.3	-1130.13	-0.3	-552.37	0	-479.02
9	9	31.13	-5760.83	193.30	-38.70	-2.85	-1834.61	-0.3	-1944.56	-0.3	-1234.91	0	-1225.56
9	10	33.90	-5764.90	238.23	-615.78	-2.85	-2194.22	-0.3	-1575.68	-0.3	-1186.96	0	-1156.08
10	10	33.90	-5556.16	-676.01	459.03	-2.85	-1864.59	-0.3	-1615.51	-0.3	-1192.35	0	-1250.73
10	11	34.90	-5560.01	-660.37	1120.32	-2.85	-1568.03	-0.3	-1637.34	-0.3	-1307.83	0	-1416.60
11	11	34.90	-7723.64	-1431.46	924.97	-2.85	-1213.94	-0.3	-1186.05	-0.3	-785.51	0	-848.64
11	12	35.90	-7732.01	-1406.61	2303.76	-3.088	-827.30	-0.3	-1220.02	-0.3	-895.20	0	-989.84
12	12	35.90	-7767.48	924.17	2303.69	-3.088	-823.04	-0.3	-1215.72	-0.3	-924.16	0	-1018.80
12	13	36.90	-7767.43	952.21	1363.21	-3.325	-979.70	-0.3	-657.14	-0.3	-873.95	0	-958.56
13	13	36.90	-7155.11	147.80	4915.63	-3.325	-234.80	-0.3	-1697.51	-0.3	-1697.51	0	-1842.57
13	14	39.25	-7169.98	207.50	4508.25	-3.884	-295.24	-0.3	-1341.80	-0.3	-1341.80	0	-1429.41
14	14	39.25	-8338.52	-261.13	6698.99	-3.884	-172.50	-0.3	-1727.63	-0.3	-1727.63	0	-1857.80
14	15	41.60	-8358.56	-190.54	7245.86	-4.442	-92.99	-0.3	-1556.55	-0.3	-1556.55	0	-1662.55
15	15	41.60	-8312.57	895.96	7245.69	-4.442	-88.60	-0.3	-1552.12	-0.3	-1552.12	0	-1658.12
15	16	43.90	-8319.15	730.73	5351.71	-5	-211.64	-0.3	-1216.08	-0.3	-1216.08	0	-1280.20
	16	43.90	-8179.60	1684.23	5350.34	-5	-40.79	-0.3	-649.35	-0.3	-649.35	0	-688.20
	17	46.45	-8209.36	1488.56	1309.51	-5	-317.04	-0.3	-465.98	-0.3	-465.98	0	-475.49
	17	46.45	-8162.04	-1512.45	1298.91	-5	-315.55	-0.3	-463.07	-0.3	-463.07	0	-472.48
17	18	49.00	-8152.67	-1710.14	5445.94	-5	-32.96	-0.3	-652.39	-0.3	-652.39	0	-691.93
18	18	49.00	-8295.40	-759.53	5447.01	-5	-200.99	-0.3	-1223.33	-0.3	-1223.33	0	-1288.58
18	19	51.30	-8307.30	-924.46	7448.98	-4.442	-68.20	-0.3	-1572.78	-0.3	-1572.78	0	-1681.75
19	19	51.30	-8357.04	161.56	7447.68	-4.442	-73.10	-0.3	-1577.42	-0.3	-1577.42	0	-1686.37
19	20	53.65	-8352.40	234.43	6999.61	-3.884	-138.82	-0.3	-1763.74	-0.3	-1763.74	0	-1899.75
20	20	53.65	-7183.88	-229.75	4809.34	-3.884	-261.51	-0.3	-1377.97	-0.3	-1377.97	0	-1471.42
20	21	56.00	-7176.73	-168.80	5282.18	-3.325	-176.50	-0.3	-1748.28	-0.3	-1748.28	0	-1904.16
21	21	56.00	-7831.38	-963.78	1684.70	-3.325	-939.38	-0.3	-705.89	-0.3	-923.90	0	-1016.50
21	22	57.00	-7831.70	-935.73	2637.45	-3.088	-774.25	-0.3	-1268.35	-0.3	-981.43	0	-1086.46
22	22	57.00	-7797.20	1410.89	2636.84	-3.088	-778.75	-0.3	-1272.63	-0.3	-952.55	0	-1057.56
22	23	58.00	-7789.09	1435.93	1257.17	-2.85	-1153.21	-0.3	-1244.73	-0.3	-846.85	0	-922.77
23	23	58.00	-5625.25	653.56	1452.80	-2.85	-1409.06	-0.3	-1705.06	-0.3	-1384.70	0	-1515.48
23	24	59.00	-5621.68	669.25	798.98	-2.85	-1702.36	-0.3	-1683.45	-0.3	-1270.59	0	-1351.57
24	24	59.00	-5846.26	-413.85	-335.03	-2.85	-2065.68	-0.3	-1637.55	-0.3	-1260.07	0	-1247.83
24	25	63.11	-5841.60	-347.19	1198.29	-2.85	-1209.39	-0.3	-2271.77	-0.3	-1439.40	0	-1506.52
25	25	63.11	-2621.01	-252.63	-1517.63	-2.85	-2050.08	-0.3	-391.42	-0.3	-152.45	0	-83.03
25	26	67.23	-2632.29	-212.38	-535.68	-2.85	-1391.76	-0.3	-1215.05	-0.3	-209.93	0	-165.07
26	26	67.23	-2903.16	-159.33	-1130.17	-2.85	-2018.52	-0.3	-646.11	-0.3	-209.93	0	-165.07
26	27	71.34	-2911.17	-79.70	-650.68	-2.85	-1716.44	-0.3	-983.06	-0.3	-248.07	0	-219.42
27	27	71.34	-3024.49	-79.70	-754.59	-2.85	-1864.97	-0.3	-922.60	-0.3	-248.07	0	-219.42
27	28	75.45	-3027.20	-0.08	-593.03	-2.85	-1764.40	-0.3	-1034.29	-0.3	-260.84	0	-237.80
28	28	75.45	-3027.20	-0.08	-593.03	-2.85	-1764.40	-0.3	-1034.29	-0.3	-260.84	0	-237.80
28	29	79.56	-3029.84	79.54	-758.83	-2.85	-1871.46	-0.3	-920.57	-0.3	-248.07	0	-219.42
29	29	79.56	-2916.53	79.54	-654.92	-2.85	-1722.93	-0.3	-981.03	-0.3	-248.07	0	-219.42
29	30	83.68	-2909.58	159.17	-1134.73	-2.85	-2025.88	-0.3	-644.32	-0.3	-209.93	0	-165.07
30	30	83.68	-2638.69	212.90	-540.23	-2.85	-1399.11	-0.3	-1213.25	-0.3	-209.93	0	-165.07
30	31	87.79	-2627.47	253.15	-1524.41	-2.85	-2059.23	-0.3	-386.92	-0.3	-152.44	0	-83.03
31	31	87.79	-5849.51	347.83	1189.99	-2.85	-1215.75	-0.3	-2272.56	-0.3	-1440.07	0	-1506.64
31	32	91.90	-5854.29	414.51	-346.17	-2.85	-2073.47	-0.3	-1637.87	-0.3	-1260.34	0	-1247.36
32	32	91.90	-5629.50	-671.07	787.84	-2.85	-1710.09	-0.3	-1683.71	-0.3	-1270.81	0	-1351.04
	33	92.90	-5633.12	-655.40	1443.40	-2.85	-1415.95	-0.3	-1705.64	-0.3	-1385.19	0	-1515.35
	33	92.90	-7796.54	-1439.08	1248.06	-2.85	-1156.10	-0.3	-1244.52	-0.3	-846.52	0	-922.07
	34	93.90	-7804.70	-1414.05	2631.31	-3.088	-780.60	-0.3	-1272.87	-0.3	-952.67	0	-1057.50
34	34	93.90	-7839.76	934.74	2630.69	-3.088	-776.39	-0.3	-1268.45	-0.3	-981.47	0	-1086.29
34	35	94.90	-7839.48	962.79	1680.15	-3.325	-940.86	-0.3	-706.47	-0.3	-924.08	0	-1016.55
35	35	94.90	-7176.70	168.60	5285.11	-3.325	-176.00	-0.3	-1748.66	-0.3	-1748.66	0	-1904.62
35	36	97.25	-7183.84	229.55	4812.72	-3.884	-261.11	-0.3	-1378.35	-0.3	-1378.35	0	-1471.87
36	36	97.25	-8352.37	-234.63	7003.09	-3.884	-138.41	-0.3	-1764.13	-0.3	-1764.13	0	-1900.21
36	37	99.60	-8357.00	-161.75	7452.77	-4.442	-72.60	-0.3	-1577.95	-0.3	-1577.95	0	-1686.98
37	37	99.60	-8307.30	924.28	7451.48	-4.442	-67.95	-0.3	-1573.04	-0.3	-1573.04	0	-1682.05
37	38	101.90	-8295.40	759.34	5450.14	-5	-200.71	-0.3	-1223.63	-0.3	-1223.63	0	-1288.92
38	38	101.90	-8152.68	1709.95	5451.24	-5	-32.60	-0.3	-652.64	-0.3	-652.64	0	-692.21
38	39	104.45	-8162.05	1512.26	1301.01	-5	-315.27	-0.3	-463.25	-0.3	-463.25	0	-472.70
39	39	104.45	-8209.37	-1488.45	1314.97	-5	-316.66	-0.3	-466.23	-0.3	-466.23	0	-475.78
39	40	107.00	-8179.61	-1684.12	5356.31	-5	-40.39	-0.3	-649.63	-0.3	-649.63	0	-688.51
40	40	107.00	-8319.15	-730.62	5354.91	-5	-211.34	-0.3	-1216.39	-0.3	-1216.39	0	-1280.55
40	41	109.30	-8312.57	-895.85	7250.18	-4.442	-88.16	-0.3	-1552.59	-0.3	-1552.59	0	-1658.65
41	41	109.30	-8358.54	190.65	7250.01	-4.442	-92.59	-0.3	-1556.98	-0.3	-1556.98	0	-1663.04
41	42	111.65	-8338.50	261.23	6702.52	-3.884	-172.09	-0.3	-1728.03	-0.3	-1728.03	0	-1858.27
42	42	111.65	-7169.97	-207.39	4512.63	-3.884	-294.73	-0.3	-1342.31	-0.3	-1342.31	0	-1429.99
42	43	114.00	-7155.10	-147.69	4919.92	-3.325	-234.08	-0.3	-1698.06	-0.3	-1698.06	0	-1843.25
43	43	114.00	-7767.42	-952.11	1365.65	-3.325	-979.44	-0.3	-657.21	-0.3	-874.36	0	-959.06
43	44	115.00	-7767.47	-924.07	2307.26	-3.088	-822.46	-0.3	-1216.19	-0.3	-924.64	0	-1019.39
44	44	115.00	-7731.97	1406.69	2307.20	-3.088	-826.75	-0.3	-1220.43	-0.3	-895.68	0	-990.43
44	45	116.00	-7723.61	1431.55	928.27	-2.85	-1213.30	-0.3	-1186.44	-0.3	-786.01	0	-849.29
45	45	116.00	-5559.99	660.48	1123.91	-2.85	-1566.27	-0.3	-1637.97	-0.3	-1308.37	0	-1417.38
45	46	117.00	-5556.14	676.12	462.50	-2.85	-1862.88	-0.3	-1616.13	-0.3	-1192.87	0	-1251.49
46	46	117.00	-5764.90	-238.13	-612.31	-2.85	-2192.51	-0.3	-1576.30	-0.3	-1187.48	0	-1156.84
46	47	119.78	-5760.83	-193.20	-35.51	-2.85	-1833.04	-0.3	-1945.13	-0.3	-1235.40	0	-1226.26
47	47	119.78	-3557.45	-276.00	-1000.39	-2.85	-1673.51	-0.3	-1130.60	-0.3	-552.76	0	-479.59
47	48	122.55	-3558.77	-271.27	-198.18	-2.85	-1225.87	-0.3	-1466.09	-0.3	-647.12	0	-615.31
48	48	122.55	-2732.05	-234.71	-1535.60	-2.85	-2134.38	-0.3	-472.57	-0.3	-139.20	0	-68.15
48	49	128.10	-2745.90	-127.53	-548.98	-2.85	-1473.15	-0.3	-1303.46	-0.3	-197.06	0	-150.52
	49	128.10	-3032.61	-89.68	-808.76	-2.85	-1846.51	-0.3	-1154.32	-0.3	-197.06	0	-150.52
	50	133.65	-3044.72	17.79	-628.07	-2.85	-1727.03	-0.3	-1316.72	-0.3	-208.42	0	-165.94
	50	133.65	-3044.72	17.79	-628.07	-2.85	-1727.03	-0.3	-1316.72	-0.3	-208.42	0	-165.94
50	51	139.20	-3056.92	125.24	-1043.58	-2.85	-1985.83	-0.3	-1068.53	-0.3	-173.34	0	-114.48
51	51	139.20	-2490.34	125.24	-514.44	-2.85	-1235.52	-0.3	-1383.00	-0.3	-173.28	0	-114.40
51	52	144.75	-2502.63	232.70	-1526.60	-2.85	-1872.78	-0.3	-724.23	-0.3	-91.66	0	4.06
52	52	144.75	-1733.42	232.70	-263.39	-2.85	-954.15	-0.3	-816.12	-0.3	-109.70	0	-90.19
52	53	147.53	-1737.37	286.42	-989.62	-2.85	-1412.32	-0.3	-332.74	-0.3	-51.44	0	-6.08
53	53	147.53	-1737.37	286.42	-989.26	-2.85	-1412.14	-0.3	-332.80	-0.3	-51.50	0	-8.16
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.46
54	54	150.30	-1757.73	-9.72	-1863.67	-2.85	-1974.13	-0.3	243.37	-0.3	18.24	0	94.49

[redacted]

C. Permanentes sin gradiente

[1; 1]ppcapt + [1; 1]ppvlat + [1; 1]ppvcentral + [1; 1]PPprelosa + [1; 1]pplosa1 + [1; 1]doblosqas + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]incrCM + [.9; 1.1]PRETENSADOS + [.05; 1.05]PRET

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	11.62	-2246.85	-2.85	-2345.23	-0.3	302.11	-0.3	22.32	0	115.52
2	2	0.60	-2059.05	-349.08	-2246.77	-2.85	-2335.60	-0.3	311.82	-0.3	22.34	0	115.55
2	3	3.38	-2054.21	-256.20	-1466.52	-2.85	-1827.09	-0.3	-264.44	-0.3	-31.88	0	37.20
3	3	3.38	-2054.21	-256.20	-1466.08	-2.85	-1826.87	-0.3	-264.52	-0.3	-31.94	0	37.11
3	4	6.15	-2049.38	-211.26	-810.54	-2.85	-1400.94	-0.3	-742.53	-0.3	-78.23	0	-29.83
4	4	6.15	-2974.07	-211.26	-2340.61	-2.85	-2503.60	-0.3	-638.42	-0.3	-56.13	0	85.44
4	5	11.70	-2959.06	-121.38	-1393.80	-2.85	-1893.15	-0.3	-1299.80	-0.3	-125.13	0	-15.06
5	5	11.70	-3585.28	-121.38	-1979.54	-2.85	-2722.88	-0.3	-952.07	-0.3	-125.06	0	-14.96
5	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	7	22.80	-3555.55	58.36	-1583.64	-2.85	-2493.73	-0.3	-1095.49	-0.3	-167.83	0	-78.83
7	7	22.80	-3238.88	104.66	-1296.52	-2.85	-2081.20	-0.3	-1260.45	-0.3	-167.83	0	-78.83
7	8	28.35	-3222.36	194.20	-2102.96	-2.85	-2662.15	-0.3	-427.61	-0.3	-141.67	0	-42.31
8	8	28.35	-4282.38	238.99	-514.07	-2.85	-1616.00	-0.3	-1615.80	-0.3	-762.77	0	-711.29
8	9	31.13	-4280.76	332.36	-1236.49	-2.85	-2024.12	-0.3	-1295.26	-0.3	-680.34	0	-592.78
9	9	31.13	-4889.35	250.92	-92.88	-2.85	-1638.88	-0.3	-1670.57	-0.3	-1003.04	0	-992.15
9	10	33.90	-4892.68	304.65	-846.04	-2.85	-2084.95	-0.3	-1269.53	-0.3	-928.23	0	-884.09
10	10	33.90	-4740.52	-447.61	33.35	-2.85	-1820.70	-0.3	-1307.57	-0.3	-937.12	0	-966.02
10	11	34.90	-4744.61	-428.71	463.86	-2.85	-1637.90	-0.3	-1287.30	-0.3	-1017.74	0	-1081.67
11	11	34.90	-6355.04	-1061.61	371.57	-2.85	-1077.76	-0.3	-912.98	-0.3	-594.15	0	-631.25
11	12	35.90	-6364.27	-1033.34	1378.96	-3.088	-769.35	-0.3	-920.82	-0.3	-674.36	0	-737.24
12	12	35.90	-6358.56	879.29	1378.91	-3.088	-761.13	-0.3	-912.55	-0.3	-694.90	0	-757.78
12	13	36.90	-6358.39	910.55	481.43	-3.325	-897.49	-0.3	-439.67	-0.3	-646.50	0	-701.29
13	13	36.90	-5869.53	252.42	3387.95	-3.325	-300.74	-0.3	-1308.87	-0.3	-1308.87	0	-1408.85
13	14	39.25	-5883.88	319.86	2720.67	-3.884	-357.16	-0.3	-988.75	-0.3	-988.75	0	-1041.61
14	14	39.25	-6841.58	-63.41	4513.17	-3.884	-256.91	-0.3	-1304.62	-0.3	-1304.62	0	-1392.31
14	15	41.60	-6861.00	14.86	4579.62	-4.442	-210.20	-0.3	-1135.22	-0.3	-1135.22	0	-1202.22
15	15	41.60	-6801.03	905.26	4579.55	-4.442	-204.46	-0.3	-1129.46	-0.3	-1129.46	0	-1196.45
15	16	43.90	-6806.75	791.87	2609.10	-5	-333.85	-0.3	-823.55	-0.3	-823.55	0	-854.80
16	16	43.90	-6670.23	1570.74	2607.92	-5	-152.61	-0.3	-449.24	-0.3	-449.24	0	-468.18
16	17	46.45	-6691.15	1445.18	-1236.57	-5	-415.07	-0.3	-274.42	-0.3	-274.42	0	-265.44
17	17	46.45	-6653.92	-1455.54	-1241.43	-5	-413.56	-0.3	-272.35	-0.3	-272.35	0	-263.34
17	18	49.00	-6649.69	-1582.74	2667.64	-5	-147.53	-0.3	-450.96	-0.3	-450.96	0	-470.33
18	18	49.00	-6787.75	-806.13	2668.55	-5	-326.86	-0.3	-827.71	-0.3	-827.71	0	-859.68
18	19	51.30	-6797.13	-919.28	4706.00	-4.442	-191.71	-0.3	-1142.25	-0.3	-1142.25	0	-1211.10
19	19	51.30	-6858.96	-29.30	4704.92	-4.442	-197.75	-0.3	-1148.07	-0.3	-1148.07	0	-1216.90
19	20	53.65	-6852.14	50.85	4697.09	-3.884	-236.54	-0.3	-1326.94	-0.3	-1326.94	0	-1418.22
20	20	53.65	-5894.40	-328.84	2905.11	-3.884	-336.73	-0.3	-1011.13	-0.3	-1011.13	0	-1067.58
20	21	56.00	-5886.37	-260.40	3603.89	-3.325	-267.01	-0.3	-1339.39	-0.3	-1339.39	0	-1445.74
21	21	56.00	-6410.50	-910.86	660.50	-3.325	-876.18	-0.3	-469.44	-0.3	-676.70	0	-735.83
21	22	57.00	-6410.88	-879.61	1558.89	-3.088	-736.39	-0.3	-943.27	-0.3	-728.99	0	-797.42
22	22	57.00	-6414.86	1045.64	1558.38	-3.088	-744.48	-0.3	-951.19	-0.3	-708.23	0	-776.64
22	23	58.00	-6405.85	1073.99	540.87	-2.85	-1048.20	-0.3	-945.83	-0.3	-629.07	0	-672.57
23	23	58.00	-4796.75	432.14	633.40	-2.85	-1557.34	-0.3	-1326.57	-0.3	-1064.29	0	-1139.23
23	24	59.00	-4792.90	451.09	199.84	-2.85	-1742.12	-0.3	-1344.92	-0.3	-983.47	0	-1023.27
24	24	59.00	-4958.80	-439.12	-727.99	-2.85	-2034.16	-0.3	-1302.14	-0.3	-970.57	0	-934.10
24	25	63.11	-4955.00	-359.43	888.41	-2.85	-1137.26	-0.3	-1951.53	-0.3	-1162.72	0	-1211.16
25	25	63.11	-3101.61	-303.49	-1859.15	-2.85	-2442.59	-0.3	-435.25	-0.3	-183.09	0	-96.83
25	26	67.23	-3114.99	-198.18	-884.74	-2.85	-1774.69	-0.3	-1308.51	-0.3	-232.52	0	-167.11
26	26	67.23	-3414.32	-133.29	-1541.81	-2.85	-2467.39	-0.3	-679.65	-0.3	-232.52	0	-167.11
26	27	71.34	-3424.11	-66.70	-1145.26	-2.85	-2206.94	-0.3	-1001.90	-0.3	-258.44	0	-203.73
27	27	71.34	-3549.35	-66.70	-1260.11	-2.85	-2371.10	-0.3	-935.07	-0.3	-258.44	0	-203.73
27	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	29	79.56	-3555.90	66.50	-1265.29	-2.85	-2379.04	-0.3	-932.59	-0.3	-258.44	0	-203.73
29	29	79.56	-3430.65	66.50	-1150.45	-2.85	-2214.87	-0.3	-999.41	-0.3	-258.44	0	-203.73
29	30	83.68	-3422.16	133.09	-1547.37	-2.85	-2476.40	-0.3	-677.46	-0.3	-232.52	0	-167.11
30	30	83.68	-3122.81	198.80	-890.31	-2.85	-1783.68	-0.3	-1306.30	-0.3	-232.52	0	-167.11
30	31	87.79	-3109.51	304.13	-1867.45	-2.85	-2453.77	-0.3	-429.75	-0.3	-183.09	0	-96.83
31	31	87.79	-4961.47	359.95	881.63	-2.85	-1142.47	-0.3	-1952.17	-0.3	-1163.26	0	-1211.25
31	32	91.90	-4965.37	439.66	-737.11	-2.85	-2040.54	-0.3	-1302.40	-0.3	-970.79	0	-933.71
32	32	91.90	-4799.30	-452.59	190.72	-2.85	-1748.45	-0.3	-1345.12	-0.3	-983.64	0	-1022.84
32	33	92.90	-4803.18	-433.64	625.72	-2.85	-1562.98	-0.3	-1327.04	-0.3	-1064.69	0	-1139.12
33	33	92.90	-6411.96	-1076.56	533.42	-2.85	-1050.56	-0.3	-945.66	-0.3	-628.80	0	-672.00
33	34	93.90	-6421.00	-1048.23	1553.89	-3.088	-745.99	-0.3	-951.40	-0.3	-708.33	0	-776.60
34	34	93.90	-6417.48	878.80	1553.39	-3.088	-738.13	-0.3	-943.36	-0.3	-729.02	0	-797.28
34	35	94.90	-6417.13	910.05	656.87	-3.325	-877.38	-0.3	-469.95	-0.3	-676.85	0	-735.87
35	35	94.90	-5888.34	260.24	3606.37	-3.325	-266.58	-0.3	-1339.71	-0.3	-1339.71	0	-1446.13
35	36	97.25	-5894.38	328.67	2907.88	-3.884	-336.40	-0.3	-1011.44	-0.3	-1011.44	0	-1067.95
36	36	97.25	-6852.11	-51.01	4700.05	-3.884	-236.19	-0.3	-1327.28	-0.3	-1327.28	0	-1418.61
36	37	99.60	-6858.94	29.15	4709.11	-4.442	-197.34	-0.3	-1148.50	-0.3	-1148.50	0	-1217.40
37	37	99.60	-6797.13	919.13	4708.02	-4.442	-191.51	-0.3	-1142.46	-0.3	-1142.46	0	-1211.34
37	38	101.90	-6787.75	805.98	2671.06	-5	-326.63	-0.3	-827.96	-0.3	-827.96	0	-859.95
38	38	101.90	-6649.70	1582.59	2672.00	-5	-147.24	-0.3	-451.16	-0.3	-451.16	0	-470.56
38	39	104.45	-6653.93	1455.38	-1238.45	-5	-413.35	-0.3	-272.49	-0.3	-272.49	0	-263.50
39	39	104.45	-6691.15	-1445.09	-1231.71	-5	-414.74	-0.3	-274.64	-0.3	-274.64	0	-265.70
39	40	107.00	-6670.23	-1570.64	2612.87	-5	-152.27	-0.3	-449.47	-0.3	-449.47	0	-468.44
40	40	107.00	-6806.75	-791.78	2611.67	-5	-333.62	-0.3	-823.79	-0.3	-823.79	0	-855.08
40	41	109.30	-6801.03	-905.17	4583.16	-4.442	-204.10	-0.3	-1129.83	-0.3	-1129.83	0	-1196.88
41	41	109.30	-6860.99	-14.77	4583.09	-4.442	-209.86	-0.3	-1135.58	-0.3	-1135.58	0	-1202.63
41	42	111.65	-6841.56	63.49	4515.94	-3.884	-256.59	-0.3	-1304.93	-0.3	-1304.93	0	-1392.68
42	42	111.65	-5883.87	-319.77	2724.27	-3.884	-356.74	-0.3	-989.16	-0.3	-989.16	0	-1042.10
42	43	114.00	-5869.52	-252.33	3391.36	-3.325	-300.17	-0.3	-1309.31	-0.3	-1309.31	0	-1409.39
43	43	114.00	-6358.38	-910.47	483.33	-3.325	-897.30	-0.3	-439.69	-0.3	-646.84	0	-701.69
43	44	115.00	-6358.55	-879.21	1381.80	-3.088	-760.66	-0.3	-912.93	-0.3	-695.30	0	-758.27
44	44	115.00	-6364.25	1033.41	1381.74	-3.088	-768.91	-0.3	-921.14	-0.3	-674.75	0	-737.72
44	45	116.00	-6355.01	1061.68	374.27	-2.85	-1077.23	-0.3	-913.30	-0.3	-594.56	0	-631.78
45	45	116.00	-4744.59	428.80	466.79	-2.85	-1636.46	-0.3	-1287.82	-0.3	-1018.18	0	-1082.30
45	46	117.00	-4740.50	447.70	36.20	-2.85	-1819.29	-0.3	-1308.08	-0.3	-937.55	0	-966.63
46	46	117.00	-4892.68	-304.57	-843.19	-2.85	-2083.55	-0.3	-1270.04	-0.3	-928.66	0	-884.71
46	47	119.78	-4889.35	-250.84	-90.27	-2.85	-1637.59	-0.3	-1671.04	-0.3	-1003.43	0	-992.72
47	47	119.78	-4280.78	-332.26	-1233.31	-2.85	-2022.56	-0.3	-1295.83	-0.3	-680.83	0	-593.48
47	48	122.55	-4282.39	-238.89	-511.18	-2.85	-1614.58	-0.3	-1616.32	-0.3	-763.21	0	-711.92
48	48	122.55	-3222.36	-194.09	-2100.06	-2.85	-2659.88	-0.3	-431.16	-0.3	-141.67	0	-42.31
48	49	128.10	-3238.88	-104.55	-1294.20	-2.85	-2079.38	-0.3	-1263.30	-0.3	-167.83	0	-78.83
49	49	128.10	-3555.55	-58.26	-1581.32	-2.85	-2491.91	-0.3	-1098.33	-0.3	-167.83	0	-78.83
49	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	51	139.20	-3585.28	121.48	-1977.92	-2.85	-2721.74	-0.3	-953.57	-0.3	-125.13	0	-15.06
51	51	139.20	-2959.06	121.48	-1393.12	-2.85	-1892.47	-0.3	-1301.14	-0.3	-125.06	0	-14.96
51	52	144.75	-2974.07	211.36	-2339.82	-2.85	-2503.05	-0.3	-639.16	-0.3	-56.17	0	85.39
52	52	144.75	-2049.38	211.36	-810.07	-2.85	-1400.55	-0.3	-743.22	-0.3	-78.22	0	-29.81
52	53	147.53	-2054.21	256.30	-1466.22	-2.85	-1826.86	-0.3	-264.80	-0.3	-31.88	0	37.20
53	53	147.53	-2054.21	256.30	-1465.78	-2.85	-1826.64	-0.3	-264.88	-0.3	-31.94	0	37.11
53	54	150.30	-2059.05	349.18	-2246.65	-2.85	-2335.54	-0.3	311.80	-0.3	22.32	0	115.52

[redacted]

C. Permanentes con gradiente

[1; 1]ppcaja2 + [1; 1]ppvist + [1; 1]ppcentral + [1; 1]PPprotesa + [1; 1]pplosa1 + [1; 1]doblequo + [1; 1]pplosa2 + [1; 1]pra + [-1; 1]merCM + [.9; 1.1]PRETENSADOS + [.95; 1.05]PRET + [0; 1]GRADIENTE

Coef. osc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.08	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-294.18	-968.10	-2.85	-1401.81	-0.3	-336.35	-0.3	-54.75	0	-10.83
3	3	3.38	-1737.37	-294.18	-967.74	-2.85	-1401.63	-0.3	-336.41	-0.3	-54.80	0	-10.91
3	4	6.15	-1733.42	-240.46	-220.25	-2.85	-933.08	-0.3	-823.37	-0.3	-116.31	0	-99.71
4	4	6.15	-2502.63	-240.46	-1483.74	-2.85	-1851.84	-0.3	-731.44	-0.3	-98.23	0	-5.40
4	5	11.70	-2490.34	-133.00	-427.97	-2.85	-1193.27	-0.3	-1397.55	-0.3	-186.54	0	-133.50
5	5	11.70	-3056.92	-133.00	-957.89	-2.85	-1943.96	-0.3	-1082.93	-0.3	-186.48	0	-133.41
5	6	17.25	-3044.72	-25.55	-498.95	-2.85	-1663.95	-0.3	-1338.43	-0.3	-228.23	0	-194.47
6	6	17.25	-3044.72	-25.55	-498.95	-2.85	-1663.95	-0.3	-1338.43	-0.3	-228.23	0	-194.47
6	7	22.80	-3032.61	81.92	-636.61	-2.85	-1762.41	-0.3	-1183.26	-0.3	-223.48	0	-188.55
7	7	22.80	-2745.90	119.78	-376.83	-2.85	-1389.05	-0.3	-1332.39	-0.3	-223.48	0	-188.55
7	8	28.35	-2732.05	226.96	-1320.41	-2.85	-2029.25	-0.3	-508.74	-0.3	-172.22	0	-115.68
8	8	28.35	-3558.76	263.51	17.01	-2.85	-1120.05	-0.3	-1504.74	-0.3	-679.78	0	-662.32
8	9	31.13	-3557.44	268.24	-763.67	-2.85	-1557.10	-0.3	-1173.11	-0.3	-588.68	0	-531.31
9	9	31.13	-5760.83	185.46	200.62	-2.85	-1716.92	-0.3	-1987.55	-0.3	-1271.23	0	-1277.85
9	10	33.90	-5764.90	230.39	-354.70	-2.85	-2065.83	-0.3	-1622.57	-0.3	-1226.57	0	-1213.12
10	10	33.90	-5554.57	-683.69	720.11	-2.85	-1735.74	-0.3	-1661.95	-0.3	-1231.58	0	-1307.39
10	11	34.90	-5558.42	-668.05	1389.24	-2.85	-1435.33	-0.3	-1685.18	-0.3	-1348.25	0	-1474.97
11	11	34.90	-7720.77	-1438.75	1193.89	-2.85	-1158.97	-0.3	-1226.79	-0.3	-823.20	0	-896.75
11	12	35.90	-7729.14	-1413.90	2580.52	-3.088	-780.88	-0.3	-1259.10	-0.3	-931.36	0	-1034.50
12	12	35.90	-7766.71	916.37	2580.45	-3.088	-776.89	-0.3	-1255.07	-0.3	-960.56	0	-1063.71
12	13	36.90	-7766.66	944.41	1647.81	-3.325	-938.97	-0.3	-694.30	-0.3	-908.33	0	-1000.08
13	13	36.90	-7153.87	140.06	5200.23	-3.325	-186.86	-0.3	-1734.26	-0.3	-1734.26	0	-1887.72
13	14	39.25	-7168.74	199.76	4811.27	-3.884	-259.54	-0.3	-1376.45	-0.3	-1376.45	0	-1469.94
14	14	39.25	-8337.38	-268.89	7002.01	-3.884	-136.81	-0.3	-1762.28	-0.3	-1762.28	0	-1898.34
14	15	41.60	-8357.42	-198.30	7567.30	-4.442	-61.43	-0.3	-1589.91	-0.3	-1589.91	0	-1700.62
15	15	41.60	-8312.44	888.12	7567.13	-4.442	-57.13	-0.3	-1585.58	-0.3	-1585.58	0	-1696.28
	16	43.90	-8319.02	722.89	5691.19	-5	-180.80	-0.3	-1248.96	-0.3	-1248.96	0	-1317.14
	16	43.90	-8180.38	1676.43	5689.82	-5	-17.75	-0.3	-664.92	-0.3	-664.92	0	-706.23
	17	46.45	-8210.14	1480.76	1668.98	-5	-292.63	-0.3	-482.46	-0.3	-482.46	0	-494.58
17	17	46.45	-8162.04	-1512.45	1656.38	-5	-291.11	-0.3	-479.51	-0.3	-479.51	0	-491.53
17	18	49.00	-8152.67	-1710.14	5805.41	-5	-8.52	-0.3	-668.84	-0.3	-668.84	0	-710.99
18	18	49.00	-8295.40	-759.53	5806.48	-5	-168.35	-0.3	-1258.15	-0.3	-1258.15	0	-1327.72
18	19	51.30	-8307.30	-924.46	7808.45	-4.442	-33.02	-0.3	-1610.21	-0.3	-1610.21	0	-1724.44
19	19	51.30	-8357.04	161.56	7807.15	-4.442	-37.92	-0.3	-1614.85	-0.3	-1614.85	0	-1729.06
19	20	53.65	-8352.40	234.43	7359.08	-3.884	-96.64	-0.3	-1805.00	-0.3	-1805.00	0	-1948.00
20	20	53.65	-7163.88	-229.75	5168.81	-3.884	-219.33	-0.3	-1419.23	-0.3	-1419.23	0	-1519.67
20	21	56.00	-7176.73	-168.80	5641.65	-3.325	-116.19	-0.3	-1794.93	-0.3	-1794.93	0	-1961.42
21	21	56.00	-7831.38	-963.78	2044.17	-3.325	-888.04	-0.3	-752.94	-0.3	-967.42	0	-1069.05
21	22	57.00	-7831.70	-935.73	2996.92	-3.088	-714.43	-0.3	-1319.59	-0.3	-1028.83	0	-1144.91
22	22	57.00	-7797.20	1410.89	2996.31	-3.088	-718.93	-0.3	-1323.87	-0.3	-999.95	0	-1116.01
22	23	58.00	-7789.09	1435.93	1616.64	-2.85	-1080.29	-0.3	-1299.74	-0.3	-897.75	0	-987.59
23	23	58.00	-5625.25	653.56	1812.27	-2.85	-1232.29	-0.3	-1769.62	-0.3	-1439.25	0	-1594.02
23	24	59.00	-5621.68	669.25	1158.46	-2.85	-1525.59	-0.3	-1748.02	-0.3	-1325.14	0	-1430.11
24	24	59.00	-5846.26	-413.85	24.44	-2.85	-1888.90	-0.3	-1702.12	-0.3	-1314.62	0	-1326.37
24	25	63.11	-5841.60	-347.19	1557.76	-2.85	-1032.62	-0.3	-2336.33	-0.3	-1493.95	0	-1585.06
25	25	63.11	-2621.01	-252.63	-1158.16	-2.85	-1873.31	-0.3	-455.98	-0.3	-207.00	0	-161.57
25	26	67.23	-2632.29	-212.38	-176.21	-2.85	-1214.99	-0.3	-1279.61	-0.3	-264.48	0	-243.61
26	26	67.23	-2903.16	-159.33	-770.70	-2.85	-1841.74	-0.3	-710.67	-0.3	-264.48	0	-243.61
26	27	71.34	-2911.17	-79.70	-291.21	-2.85	-1539.66	-0.3	-1047.63	-0.3	-302.62	0	-297.96
27	27	71.34	-3024.49	-79.70	-395.12	-2.85	-1688.20	-0.3	-987.16	-0.3	-302.62	0	-297.96
27	28	75.45	-3027.20	-0.08	-233.56	-2.85	-1587.62	-0.3	-1098.86	-0.3	-315.39	0	-316.33
28	28	75.45	-3027.20	-0.08	-233.56	-2.85	-1587.62	-0.3	-1098.86	-0.3	-315.39	0	-316.33
28	29	79.56	-3029.84	79.54	-399.36	-2.85	-1694.69	-0.3	-985.13	-0.3	-302.62	0	-297.96
29	29	79.56	-2916.53	79.54	-295.44	-2.85	-1546.16	-0.3	-1045.59	-0.3	-302.62	0	-297.96
29	30	83.68	-2909.58	159.17	-775.26	-2.85	-1849.11	-0.3	-708.88	-0.3	-264.48	0	-243.61
30	30	83.68	-2638.69	212.90	-180.77	-2.85	-1222.34	-0.3	-1277.81	-0.3	-264.48	0	-243.61
30	31	87.79	-2627.47	253.15	-1164.94	-2.85	-1882.46	-0.3	-451.48	-0.3	-206.99	0	-161.57
31	31	87.79	-5849.51	347.83	1549.46	-2.85	-1038.98	-0.3	-2337.12	-0.3	-1494.62	0	-1585.18
31	32	91.90	-5854.29	414.51	13.30	-2.85	-1896.70	-0.3	-1702.43	-0.3	-1314.89	0	-1325.90
	32	91.90	-5629.50	-871.07	1147.31	-2.85	-1533.32	-0.3	-1748.27	-0.3	-1325.36	0	-1429.58
	33	92.90	-5633.12	-655.40	1802.87	-2.85	-1239.18	-0.3	-1770.20	-0.3	-1439.74	0	-1593.89
33	33	92.90	-7796.54	-1439.08	1607.53	-2.85	-1083.18	-0.3	-1299.53	-0.3	-897.41	0	-986.89
33	34	93.90	-7804.70	-1414.05	2990.78	-3.088	-720.78	-0.3	-1324.11	-0.3	-1000.07	0	-1115.95
34	34	93.90	-7839.76	934.74	2990.16	-3.088	-716.57	-0.3	-1319.68	-0.3	-1028.87	0	-1144.74
34	35	94.90	-7839.48	962.79	2039.62	-3.325	-889.53	-0.3	-753.52	-0.3	-967.61	0	-1069.10
35	35	94.90	-7176.70	168.60	5644.58	-3.325	-115.69	-0.3	-1795.31	-0.3	-1795.31	0	-1961.88
35	36	97.25	-7183.84	229.55	5172.19	-3.884	-218.93	-0.3	-1419.62	-0.3	-1419.62	0	-1520.12
36	36	97.25	-8352.37	-234.63	7362.56	-3.884	-96.23	-0.3	-1805.40	-0.3	-1805.40	0	-1948.46
36	37	99.60	-8357.00	-161.75	7812.24	-4.442	-37.42	-0.3	-1615.38	-0.3	-1615.38	0	-1729.67
37	37	99.60	-8307.30	924.28	7810.95	-4.442	-32.78	-0.3	-1610.47	-0.3	-1610.47	0	-1724.74
37	38	101.90	-8295.40	759.34	5809.61	-5	-168.06	-0.3	-1258.46	-0.3	-1258.46	0	-1328.06
38	38	101.90	-8152.68	1709.95	5810.72	-5	-8.16	-0.3	-669.08	-0.3	-669.08	0	-711.27
38	39	104.45	-8162.05	1512.26	1660.48	-5	-290.83	-0.3	-479.70	-0.3	-479.70	0	-491.75
39	39	104.45	-8210.15	-1480.65	1674.44	-5	-292.26	-0.3	-482.72	-0.3	-482.72	0	-494.87
39	40	107.00	-8180.39	-1676.32	5695.79	-5	-17.34	-0.3	-665.19	-0.3	-665.19	0	-706.55
40	40	107.00	-8319.02	-722.78	5694.39	-5	-180.51	-0.3	-1249.27	-0.3	-1249.27	0	-1317.49
40	41	109.30	-8312.44	-888.01	7571.62	-4.442	-56.69	-0.3	-1586.04	-0.3	-1586.04	0	-1696.81
41	41	109.30	-8357.40	198.41	7571.45	-4.442	-61.02	-0.3	-1590.34	-0.3	-1590.34	0	-1701.11
41	42	111.65	-8337.36	268.99	7005.54	-3.884	-136.40	-0.3	-1762.69	-0.3	-1762.69	0	-1898.82
42	42	111.65	-7168.73	-199.65	4815.65	-3.884	-259.03	-0.3	-1376.95	-0.3	-1376.95	0	-1470.52
42	43	114.00	-7153.86	-139.95	5204.52	-3.325	-186.14	-0.3	-1734.81	-0.3	-1734.81	0	-1888.40
43	43	114.00	-7766.65	-944.31	1650.25	-3.325	-938.71	-0.3	-694.37	-0.3	-908.74	0	-1000.56
43	44	115.00	-7766.70	-916.27	2584.02	-3.088	-776.31	-0.3	-1255.54	-0.3	-961.04	0	-1064.31
44	44	115.00	-7729.10	1413.98	2583.96	-3.088	-780.33	-0.3	-1259.51	-0.3	-931.84	0	-1035.10
44	45	116.00	-7720.74	1438.84	1197.19	-2.85	-1158.33	-0.3	-1227.19	-0.3	-823.70	0	-897.39
45	45	116.00	-5558.40	668.16	1392.83	-2.85	-1433.56	-0.3	-1685.81	-0.3	-1348.79	0	-1475.75
45	46	117.00	-5554.55	683.80	723.58	-2.85	-1734.03	-0.3	-1662.57	-0.3	-1232.10	0	-1308.14
46	46	117.00	-5764.90	-230.29	-351.23	-2.85	-2064.12	-0.3	-1623.19	-0.3	-1227.10	0	-1213.88
46	47	119.78	-5760.83	-185.36	203.81	-2.85	-1715.35	-0.3	-1988.12	-0.3	-1271.71	0	-1278.54
47	47	119.78	-3557.45	-268.16	-761.07	-2.85	-1555.83	-0.3	-1173.58	-0.3	-589.08	0	-531.88
47	48	122.55	-3558.77	-263.43	19.37	-2.85	-1118.89	-0.3	-1505.17	-0.3	-680.14	0	-662.84
48	48	122.55	-2732.05	-226.87	-1318.04	-2.85	-2027.39	-0.3	-511.64	-0.3	-172.22	0	-115.68
	49	128.10	-2745.90	-119.69	-374.93	-2.85	-1387.56	-0.3	-1334.72	-0.3	-223.48	0	-188.55
	49	128.10	-3032.61	-81.84	-634.71	-2.85	-1760.92	-0.3	-1185.58	-0.3	-223.48	0	-188.55
	50	133.65	-3044.72	25.63	-497.53	-2.85	-1662.84	-0.3	-1340.17	-0.3	-228.23	0	-194.47
50	50	133.65	-3044.72	25.63	-497.53	-2.85	-1662.84	-0.3	-1340.17	-0.3	-228.23	0	-194.47
50	51	139.20	-3056.92	133.08	-956.55	-2.85	-1943.03	-0.3	-1084.16	-0.3	-186.54	0	-133.50
51	51	139.20	-2490.34	133.08	-427.41	-2.85	-1192.72	-0.3	-1398.64	-0.3	-186.48	0	-133.41
51	52	144.75	-2502.63	240.54	-1483.09	-2.85	-1851.39	-0.3	-732.04	-0.3	-98.26	0	-5.44
52	52	144.75	-1733.42	240.54	-219.88	-2.85	-932.76	-0.3	-823.93	-0.3	-116.30	0	-99.69
52	53	147.53	-1737.37	294.26	-967.86	-2.85	-1401.62	-0.3	-336.65	-0.3	-54.75	0	-10.83
53	53	147.53	-1737.37	294.26	-967.50	-2.85	-1401.44	-0.3	-336.71	-0.3	-54.80	0	-10.91
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1984.38	-0.3	253.04	-0.3	18.22	0	94.46

[redacted]

C. Permanentes con gradiente

[1; 1]ppcaja2 + [1; 1]ppvist + [1; 1]ppcentral + [1; 1]PPprotesa + [1; 1]pplosa1 + [1; 1]doblequo + [1; 1]pplosa2 + [1; 1]pra + [-1; 1]merCM + [.9; 1.1]PRETENSADOS + [.95; 1.05]PRET + [0; 1]GRADIENTE

Coef. osc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	11.62	-2246.65	-2.85	-2345.23	-0.3	302.11	-0.3	22.32	0	115.52
2	2	0.60	-2059.05	-349.08	-2246.77	-2.85	-2335.60	-0.3	311.82	-0.3	22.34	0	115.55
2	3	3.38	-2054.21	-256.20	-1466.52	-2.85	-1827.09	-0.3	-264.44	-0.3	-31.88	0	37.20
3	3	3.38	-2054.21	-256.20	-1466.08	-2.85	-1826.87	-0.3	-264.52	-0.3	-31.94	0	37.11
3	4	6.15	-2049.38	-211.26	-810.54	-2.85	-1400.94	-0.3	-742.53	-0.3	-78.23	0	-29.83
4	4	6.15	-2974.07	-211.26	-2340.61	-2.85	-2503.60	-0.3	-638.42	-0.3	-56.13	0	85.44
4	5	11.70	-2959.06	-121.38	-1393.80	-2.85	-1893.15	-0.3	-1299.80	-0.3	-125.13	0	-15.06
5	5	11.70	-3585.28	-121.38	-1979.54	-2.85	-2722.88	-0.3	-952.07	-0.3	-125.06	0	-14.96
5	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	7	22.80	-3555.55	58.36	-1583.64	-2.85	-2493.73	-0.3	-1095.49	-0.3	-167.83	0	-78.83
7	7	22.80	-3238.88	104.66	-1296.52	-2.85	-2081.20	-0.3	-1260.45	-0.3	-167.83	0	-78.83
7	8	28.35	-3222.36	194.20	-2102.96	-2.85	-2662.15	-0.3	-427.61	-0.3	-141.67	0	-42.31
8	8	28.35	-4282.38	238.99	-514.07	-2.85	-1616.00	-0.3	-1615.80	-0.3	-762.77	0	-711.29
8	9	31.13	-4280.76	332.36	-1236.49	-2.85	-2024.12	-0.3	-1295.26	-0.3	-680.34	0	-592.78
9	9	31.13	-4889.35	250.92	-92.88	-2.85	-1638.88	-0.3	-1670.57	-0.3	-1003.04	0	-992.15
9	10	33.90	-4892.68	304.65	-846.04	-2.85	-2084.95	-0.3	-1269.53	-0.3	-928.23	0	-884.09
10	10	33.90	-4740.52	-447.61	33.35	-2.85	-1820.70	-0.3	-1307.57	-0.3	-937.12	0	-966.02
10	11	34.90	-4744.61	-428.71	463.86	-2.85	-1637.90	-0.3	-1287.30	-0.3	-1017.74	0	-1081.67
11	11	34.90	-6355.04	-1061.61	371.57	-2.85	-1077.76	-0.3	-912.98	-0.3	-594.15	0	-631.25
11	12	35.90	-6364.27	-1033.34	1378.96	-3.088	-769.35	-0.3	-920.82	-0.3	-674.36	0	-737.24
12	12	35.90	-6358.56	879.29	1378.91	-3.088	-761.13	-0.3	-912.55	-0.3	-694.90	0	-757.78
12	13	36.90	-6358.39	910.55	481.43	-3.325	-897.49	-0.3	-439.67	-0.3	-646.50	0	-701.29
13	13	36.90	-5869.53	252.42	3387.95	-3.325	-300.74	-0.3	-1308.87	-0.3	-1308.87	0	-1408.85
13	14	39.25	-5883.88	319.86	2720.67	-3.884	-357.16	-0.3	-988.75	-0.3	-988.75	0	-1041.61
14	14	39.25	-6841.58	-63.41	4513.17	-3.884	-256.91	-0.3	-1304.62	-0.3	-1304.62	0	-1392.31
14	15	41.60	-6861.00	14.86	4579.62	-4.442	-210.20	-0.3	-1135.22	-0.3	-1135.22	0	-1202.22
15	15	41.60	-6801.03	905.26	4579.55	-4.442	-204.46	-0.3	-1129.46	-0.3	-1129.46	0	-1196.45
15	16	43.90	-6806.75	791.87	2609.10	-5	-333.85	-0.3	-823.55	-0.3	-823.55	0	-854.80
16	16	43.90	-6670.23	1570.74	2607.92	-5	-152.61	-0.3	-449.24	-0.3	-449.24	0	-468.18
16	17	46.45	-6691.15	1445.18	-1236.57	-5	-415.07	-0.3	-274.42	-0.3	-274.42	0	-265.44
17	17	46.45	-6653.92	-1455.54	-1241.43	-5	-413.56	-0.3	-272.35	-0.3	-272.35	0	-263.34
17	18	49.00	-6649.69	-1582.74	2667.64	-5	-147.53	-0.3	-450.96	-0.3	-450.96	0	-470.33
18	18	49.00	-6787.75	-808.13	2668.55	-5	-326.86	-0.3	-827.71	-0.3	-827.71	0	-859.68
18	19	51.30	-6797.13	-919.28	4706.00	-4.442	-191.71	-0.3	-1142.25	-0.3	-1142.25	0	-1211.10
19	19	51.30	-6858.96	-29.30	4704.92	-4.442	-197.75	-0.3	-1148.07	-0.3	-1148.07	0	-1216.90
19	20	53.65	-6852.14	50.85	4697.09	-3.884	-236.54	-0.3	-1326.94	-0.3	-1326.94	0	-1418.22
20	20	53.65	-5894.40	-328.84	2905.11	-3.884	-336.73	-0.3	-1011.13	-0.3	-1011.13	0	-1067.58
20	21	56.00	-5886.37	-260.40	3603.89	-3.325	-267.01	-0.3	-1339.39	-0.3	-1339.39	0	-1445.74
21	21	56.00	-6410.50	-910.86	660.50	-3.325	-876.18	-0.3	-469.44	-0.3	-676.70	0	-735.83
21	22	57.00	-6410.88	-879.61	1558.89	-3.088	-736.39	-0.3	-943.27	-0.3	-728.99	0	-797.42
22	22	57.00	-6414.86	1045.64	1558.38	-3.088	-744.48	-0.3	-951.19	-0.3	-708.23	0	-776.64
22	23	58.00	-6405.85	1073.99	540.87	-2.85	-1048.20	-0.3	-945.83	-0.3	-629.07	0	-672.57
23	23	58.00	-4796.75	432.14	633.40	-2.85	-1557.34	-0.3	-1326.57	-0.3	-1064.29	0	-1139.23
23	24	59.00	-4792.90	451.09	199.84	-2.85	-1742.12	-0.3	-1344.92	-0.3	-983.47	0	-1023.27
24	24	59.00	-4958.80	-439.12	-727.99	-2.85	-2034.16	-0.3	-1302.14	-0.3	-970.57	0	-934.10
24	25	63.11	-4955.00	-359.43	888.41	-2.85	-1137.26	-0.3	-1951.53	-0.3	-1162.72	0	-1211.16
25	25	63.11	-3101.61	-303.49	-1859.15	-2.85	-2442.59	-0.3	-435.25	-0.3	-183.09	0	-96.83
25	26	67.23	-3114.99	-198.18	-884.74	-2.85	-1774.69	-0.3	-1308.51	-0.3	-232.52	0	-167.11
26	26	67.23	-3414.32	-133.29	-1541.81	-2.85	-2467.39	-0.3	-679.65	-0.3	-232.52	0	-167.11
26	27	71.34	-3424.11	-66.70	-1145.26	-2.85	-2206.94	-0.3	-1001.90	-0.3	-258.44	0	-203.73
27	27	71.34	-3549.35	-66.70	-1260.11	-2.85	-2371.10	-0.3	-935.07	-0.3	-258.44	0	-203.73
27	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	29	79.56	-3555.90	66.50	-1265.29	-2.85	-2379.04	-0.3	-932.59	-0.3	-258.44	0	-203.73
29	29	79.56	-3430.65	66.50	-1150.45	-2.85	-2214.87	-0.3	-999.41	-0.3	-258.44	0	-203.73
29	30	83.68	-3422.16	133.09	-1547.37	-2.85	-2476.40	-0.3	-677.46	-0.3	-232.52	0	-167.11
30	30	83.68	-3122.81	198.80	-890.31	-2.85	-1783.68	-0.3	-1306.30	-0.3	-232.52	0	-167.11
30	31	87.79	-3109.51	304.13	-1867.45	-2.85	-2453.77	-0.3	-429.75	-0.3	-183.09	0	-96.83
31	31	87.79	-4961.47	359.95	881.63	-2.85	-1142.47	-0.3	-1952.17	-0.3	-1163.26	0	-1211.25
31	32	91.90	-4965.37	439.66	-737.11	-2.85	-2040.54	-0.3	-1302.40	-0.3	-970.79	0	-933.71
32	32	91.90	-4799.30	-452.59	190.72	-2.85	-1748.45	-0.3	-1345.12	-0.3	-983.64	0	-1022.84
32	33	92.90	-4803.18	-433.64	625.72	-2.85	-1562.98	-0.3	-1327.04	-0.3	-1084.69	0	-1139.12
33	33	92.90	-6411.96	-1076.56	533.42	-2.85	-1050.56	-0.3	-945.66	-0.3	-628.80	0	-672.00
33	34	93.90	-6421.00	-1048.23	1553.89	-3.088	-745.99	-0.3	-951.40	-0.3	-708.33	0	-776.60
34	34	93.90	-6417.48	878.80	1553.39	-3.088	-738.13	-0.3	-943.36	-0.3	-729.02	0	-797.28
34	35	94.90	-6417.13	910.05	656.87	-3.325	-877.38	-0.3	-469.95	-0.3	-676.85	0	-735.87
35	35	94.90	-5886.34	260.24	3606.37	-3.325	-266.58	-0.3	-1339.71	-0.3	-1339.71	0	-1446.13
35	36	97.25	-5894.38	328.67	2907.88	-3.884	-336.40	-0.3	-1011.44	-0.3	-1011.44	0	-1067.95
36	36	97.25	-6852.11	-51.01	4700.05	-3.884	-236.19	-0.3	-1327.28	-0.3	-1327.28	0	-1418.61
36	37	99.60	-6858.94	29.15	4709.11	-4.442	-197.34	-0.3	-1148.50	-0.3	-1148.50	0	-1217.40
37	37	99.60	-6797.13	919.13	4708.02	-4.442	-191.51	-0.3	-1142.46	-0.3	-1142.46	0	-1211.34
37	38	101.90	-6787.75	805.98	2671.06	-5	-326.63	-0.3	-827.96	-0.3	-827.96	0	-859.95
38	38	101.90	-6649.70	1582.59	2672.00	-5	-147.24	-0.3	-451.16	-0.3	-451.16	0	-470.56
38	39	104.45	-6653.93	1455.38	-1238.45	-5	-413.35	-0.3	-272.49	-0.3	-272.49	0	-263.50
39	39	104.45	-6691.15	-1445.09	-1231.71	-5	-414.74	-0.3	-274.64	-0.3	-274.64	0	-265.70
39	40	107.00	-6670.23	-1570.64	2612.87	-5	-152.27	-0.3	-449.47	-0.3	-449.47	0	-468.44
40	40	107.00	-6806.75	-791.78	2611.67	-5	-333.62	-0.3	-823.79	-0.3	-823.79	0	-855.08
40	41	109.30	-6801.03	-905.17	4583.16	-4.442	-204.10	-0.3	-1129.83	-0.3	-1129.83	0	-1196.88
41	41	109.30	-6860.99	-14.77	4583.09	-4.442	-209.86	-0.3	-1135.58	-0.3	-1135.58	0	-1202.63
41	42	111.65	-6841.56	63.49	4515.94	-3.884	-256.59	-0.3	-1304.93	-0.3	-1304.93	0	-1392.68
42	42	111.65	-5883.87	-319.77	2724.27	-3.884	-356.74	-0.3	-989.16	-0.3	-989.16	0	-1042.10
42	43	114.00	-5869.52	-252.33	3391.36	-3.325	-300.17	-0.3	-1309.31	-0.3	-1309.31	0	-1409.39
43	43	114.00	-6358.38	-910.47	483.33	-3.325	-897.30	-0.3	-439.69	-0.3	-646.84	0	-701.69
43	44	115.00	-6358.55	-879.21	1381.80	-3.088	-760.66	-0.3	-912.93	-0.3	-695.30	0	-758.27
44	44	115.00	-6364.25	1033.41	1381.74	-3.088	-768.91	-0.3	-921.14	-0.3	-674.75	0	-737.72
44	45	116.00	-6355.01	1061.68	374.27	-2.85	-1077.23	-0.3	-913.30	-0.3	-594.56	0	-631.78
45	45	116.00	-4744.59	428.80	466.79	-2.85	-1636.46	-0.3	-1287.82	-0.3	-1018.18	0	-1082.30
45	46	117.00	-4740.50	447.70	36.20	-2.85	-1819.29	-0.3	-1308.08	-0.3	-937.55	0	-966.63
46	46	117.00	-4892.68	-304.57	-843.19	-2.85	-2083.55	-0.3	-1270.04	-0.3	-928.66	0	-884.71
46	47	119.78	-4889.35	-250.84	-90.27	-2.85	-1637.59	-0.3	-1671.04	-0.3	-1003.43	0	-992.72
47	47	119.78	-4280.78	-332.26	-1233.31	-2.85	-2022.56	-0.3	-1295.83	-0.3	-680.83	0	-593.48
47	48	122.55	-4282.39	-238.89	-511.18	-2.85	-1614.58	-0.3	-1616.32	-0.3	-763.21	0	-711.92
48	48	122.55	-3222.36	-194.09	-2100.06	-2.85	-2659.88	-0.3	-431.16	-0.3	-141.67	0	-42.31
48	49	128.10	-3238.88	-104.55	-1294.20	-2.85	-2079.38	-0.3	-1263.30	-0.3	-167.83	0	-78.83
49	49	128.10	-3555.55	-58.26	-1581.32	-2.85	-2491.91	-0.3	-1098.33	-0.3	-167.83	0	-78.83
49	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	51	139.20	-3585.28	121.48	-1977.92	-2.85	-2721.74	-0.3	-953.57	-0.3	-125.13	0	-15.06
51	51	139.20	-2959.06	121.48	-1393.12	-2.85	-1892.47	-0.3	-1301.14	-0.3	-125.06	0	-14.96
51	52	144.75	-2974.07	211.36	-2339.82	-2.85	-2503.05	-0.3	-639.16	-0.3	-56.17	0	85.39
52	52	144.75	-2049.38	211.36	-810.07	-2.85	-1400.55	-0.3	-743.22	-0.3	-78.22	0	-29.81
52	53	147.53	-2054.21	256.30	-1466.22	-2.85	-1826.86	-0.3	-264.80	-0.3	-31.88	0	37.20
53	53	147.53	-2054.21	256.30	-1465.78	-2.85	-1826.64	-0.3	-264.88	-0.3	-31.94	0	37.11
53	54	150.30	-2059.05	349.18	-2248.65	-2.85	-2335.54	-0.3	311.80	-0.3	22.32	0	115.52

[redacted]

C. Cuasi-Permanentes con gradiente

[1; 1]ppcopt + [1; 1]ppvist + [1; 1]ppvcentral + [1; 1]PPprolosa + [1; 1]pplosa1 + [1; 1]dasbloque + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]norCM + [.2; 1.1]PRETENSADOS + [.95; 1.05]PRET + [0; 0]PF75B.ENV_IPF75B.MZ+ + [0; 0]........ENV_TREN_GENERICO.MZ+ + [0; 2]GRADIENTE

Coef. nº

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.08	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-287.91	-985.51	-2.85	-1410.37	-0.3	-333.22	-0.3	-52.10	0	-7.03
3	3	3.38	-1737.37	-287.91	-985.15	-2.85	-1410.19	-0.3	-333.29	-0.3	-52.16	0	-7.11
3	4	6.15	-1733.42	-234.19	-255.06	-2.85	-950.20	-0.3	-817.12	-0.3	-111.03	0	-92.11
4	4	6.15	-2502.63	-234.19	-1518.54	-2.85	-1868.96	-0.3	-725.18	-0.3	-92.95	0	2.20
4	5	11.70	-2490.34	-126.73	-497.59	-2.85	-1227.51	-0.3	-1385.04	-0.3	-175.98	0	-118.29
5	5	11.70	-3056.92	-126.73	-1027.51	-2.85	-1978.20	-0.3	-1070.43	-0.3	-175.92	0	-118.20
5	6	17.25	-3044.72	-19.28	-603.39	-2.85	-1715.31	-0.3	-1319.67	-0.3	-212.39	0	-171.65
6	6	17.25	-3044.72	-19.28	-603.39	-2.85	-1715.31	-0.3	-1319.67	-0.3	-212.39	0	-171.65
6	7	22.80	-3032.61	88.19	-775.85	-2.85	-1830.88	-0.3	-1158.25	-0.3	-202.35	0	-158.13
7	7	22.80	-2745.90	126.05	-516.07	-2.85	-1457.53	-0.3	-1307.38	-0.3	-202.35	0	-158.13
7	8	28.35	-2732.05	233.23	-1494.45	-2.85	-2114.84	-0.3	-477.48	-0.3	-145.81	0	-77.65
8	8	28.35	-3558.76	269.78	-157.04	-2.85	-1205.64	-0.3	-1473.48	-0.3	-653.37	0	-624.29
8	9	31.13	-3557.44	274.51	-955.13	-2.85	-1651.25	-0.3	-1138.73	-0.3	-559.63	0	-489.48
9	9	31.13	-5760.83	191.73	9.17	-2.85	-1811.07	-0.3	-1953.16	-0.3	-1242.18	0	-1236.02
9	10	33.90	-5764.90	236.66	-563.57	-2.85	-2168.54	-0.3	-1585.05	-0.3	-1194.88	0	-1167.49
10	10	33.90	-5555.84	-677.54	511.24	-2.85	-1838.82	-0.3	-1624.80	-0.3	-1200.19	0	-1262.07
10	11	34.90	-5559.69	-661.90	1174.10	-2.85	-1541.49	-0.3	-1646.90	-0.3	-1315.91	0	-1428.27
11	11	34.90	-7723.07	-1432.92	978.76	-2.85	-1202.94	-0.3	-1194.20	-0.3	-793.05	0	-858.26
11	12	35.90	-7731.43	-1408.06	2359.11	-3.088	-818.02	-0.3	-1227.84	-0.3	-902.43	0	-998.77
12	12	35.90	-7767.33	922.61	2359.04	-3.088	-813.81	-0.3	-1223.59	-0.3	-931.44	0	-1027.78
12	13	36.90	-7767.28	950.65	1420.13	-3.325	-971.56	-0.3	-664.57	-0.3	-880.83	0	-966.86
13	13	36.90	-7154.86	146.25	4972.55	-3.325	-225.21	-0.3	-1704.86	-0.3	-1704.86	0	-1851.60
13	14	39.25	-7169.73	205.95	4568.85	-3.884	-288.10	-0.3	-1348.73	-0.3	-1348.73	0	-1437.51
14	14	39.25	-8338.29	-262.68	6759.60	-3.884	-165.37	-0.3	-1734.56	-0.3	-1734.56	0	-1865.91
14	15	41.60	-8358.33	-192.09	7310.15	-4.442	-86.68	-0.3	-1563.22	-0.3	-1563.22	0	-1670.16
15	15	41.60	-8312.54	894.39	7309.96	-4.442	-82.30	-0.3	-1558.81	-0.3	-1558.81	0	-1665.75
	16	43.90	-8319.12	729.16	5419.60	-5	-205.47	-0.3	-1222.66	-0.3	-1222.66	0	-1287.59
	16	43.90	-8179.75	1682.67	5418.24	-5	-36.18	-0.3	-652.47	-0.3	-652.47	0	-691.80
	17	46.45	-8209.51	1487.00	1381.40	-5	-312.15	-0.3	-469.28	-0.3	-469.28	0	-479.31
17	17	46.45	-8162.04	-1512.45	1368.80	-5	-310.66	-0.3	-466.35	-0.3	-466.35	0	-476.29
17	18	49.00	-8152.67	-1710.14	5517.84	-5	-28.07	-0.3	-655.68	-0.3	-655.68	0	-695.74
18	18	49.00	-8295.40	-759.53	5518.91	-5	-194.46	-0.3	-1230.29	-0.3	-1230.29	0	-1296.41
18	19	51.30	-8307.30	-924.46	7520.87	-4.442	-61.16	-0.3	-1580.27	-0.3	-1580.27	0	-1690.29
19	19	51.30	-8357.04	161.56	7519.57	-4.442	-66.06	-0.3	-1584.90	-0.3	-1584.90	0	-1694.91
19	20	53.65	-8352.40	234.43	7071.50	-3.884	-130.39	-0.3	-1771.99	-0.3	-1771.99	0	-1909.40
20	20	53.65	-7183.88	-229.75	4881.23	-3.884	-253.07	-0.3	-1386.22	-0.3	-1386.22	0	-1481.07
20	21	56.00	-7176.73	-168.80	5354.07	-3.325	-164.44	-0.3	-1757.61	-0.3	-1757.61	0	-1915.61
21	21	56.00	-7831.38	-963.78	1756.60	-3.325	-929.11	-0.3	-715.30	-0.3	-932.60	0	-1027.01
21	22	57.00	-7831.70	-935.73	2709.35	-3.088	-762.29	-0.3	-1278.60	-0.3	-990.91	0	-1098.15
22	22	57.00	-7797.20	1410.89	2708.73	-3.088	-766.79	-0.3	-1282.88	-0.3	-962.03	0	-1069.25
22	23	58.00	-7789.09	1435.93	1329.06	-2.85	-1138.63	-0.3	-1255.73	-0.3	-857.03	0	-935.73
23	23	58.00	-5625.25	653.56	1524.69	-2.85	-1373.71	-0.3	-1717.97	-0.3	-1395.61	0	-1531.19
23	24	59.00	-5621.68	669.25	870.88	-2.85	-1667.00	-0.3	-1696.37	-0.3	-1281.50	0	-1367.28
24	24	59.00	-5846.26	-413.85	-263.13	-2.85	-2030.32	-0.3	-1650.47	-0.3	-1270.98	0	-1263.54
24	25	63.11	-5841.60	-347.19	1270.18	-2.85	-1174.04	-0.3	-2284.68	-0.3	-1450.31	0	-1522.23
25	25	63.11	-2621.01	-252.63	-1445.73	-2.85	-2014.73	-0.3	-404.33	-0.3	-163.36	0	-98.74
25	26	67.23	-2632.29	-212.38	-463.79	-2.85	-1356.40	-0.3	-1227.96	-0.3	-220.84	0	-180.77
26	26	67.23	-2903.16	-159.33	-1058.28	-2.85	-1983.16	-0.3	-659.02	-0.3	-220.84	0	-180.77
26	27	71.34	-2911.17	-79.70	-578.78	-2.85	-1681.08	-0.3	-995.98	-0.3	-258.98	0	-235.13
27	27	71.34	-3024.49	-79.70	-682.69	-2.85	-1829.62	-0.3	-935.51	-0.3	-258.98	0	-235.13
27	28	75.45	-3027.20	-0.08	-521.13	-2.85	-1729.04	-0.3	-1047.21	-0.3	-271.75	0	-253.50
28	28	75.45	-3027.20	-0.08	-521.13	-2.85	-1729.04	-0.3	-1047.21	-0.3	-271.75	0	-253.50
28	29	79.56	-3029.84	79.54	-686.93	-2.85	-1836.11	-0.3	-933.48	-0.3	-258.98	0	-235.13
29	29	79.56	-2916.53	79.54	-583.02	-2.85	-1687.57	-0.3	-993.94	-0.3	-258.98	0	-235.13
29	30	83.68	-2909.58	159.17	-1062.83	-2.85	-1990.53	-0.3	-657.23	-0.3	-220.84	0	-180.77
30	30	83.68	-2638.69	212.90	-468.34	-2.85	-1363.76	-0.3	-1226.16	-0.3	-220.84	0	-180.77
30	31	87.79	-2627.47	253.15	-1452.52	-2.85	-2023.88	-0.3	-399.83	-0.3	-163.35	0	-98.74
31	31	87.79	-5849.51	347.83	1261.89	-2.85	-1180.40	-0.3	-2285.47	-0.3	-1450.98	0	-1522.35
31	32	91.90	-5854.29	414.51	-274.28	-2.85	-2038.12	-0.3	-1650.78	-0.3	-1271.25	0	-1263.06
	32	91.90	-5629.50	-671.07	859.74	-2.85	-1674.74	-0.3	-1696.62	-0.3	-1281.72	0	-1366.75
	33	92.90	-5633.12	-655.40	1515.30	-2.85	-1380.59	-0.3	-1718.55	-0.3	-1396.10	0	-1531.06
	33	92.90	-7796.54	-1439.08	1319.95	-2.85	-1141.52	-0.3	-1255.52	-0.3	-856.70	0	-935.03
33	34	93.90	-7804.70	-1414.05	2703.20	-3.088	-768.63	-0.3	-1283.12	-0.3	-962.15	0	-1069.19
34	34	93.90	-7839.76	934.74	2702.59	-3.088	-764.43	-0.3	-1278.69	-0.3	-990.95	0	-1097.98
34	35	94.90	-7839.48	962.79	1752.05	-3.325	-930.60	-0.3	-715.88	-0.3	-932.79	0	-1027.06
35	35	94.90	-7176.70	168.60	5357.00	-3.325	-163.94	-0.3	-1757.99	-0.3	-1757.99	0	-1916.07
35	36	97.25	-7183.84	229.55	4884.62	-3.884	-252.67	-0.3	-1386.60	-0.3	-1386.60	0	-1481.52
36	36	97.25	-8352.37	-234.63	7074.99	-3.884	-129.97	-0.3	-1772.38	-0.3	-1772.38	0	-1909.86
36	37	99.60	-8357.00	-161.75	7524.67	-4.442	-65.56	-0.3	-1585.43	-0.3	-1585.43	0	-1695.51
37	37	99.60	-8307.30	924.28	7523.37	-4.442	-60.92	-0.3	-1580.53	-0.3	-1580.53	0	-1690.59
37	38	101.90	-8295.40	759.34	5522.04	-5	-194.18	-0.3	-1230.59	-0.3	-1230.59	0	-1296.75
38	38	101.90	-8152.68	1709.95	5523.14	-5	-27.71	-0.3	-655.93	-0.3	-655.93	0	-696.03
38	39	104.45	-8162.05	1512.26	1372.91	-5	-310.38	-0.3	-466.54	-0.3	-466.54	0	-476.51
39	39	104.45	-8209.52	-1486.89	1386.87	-5	-311.78	-0.3	-469.53	-0.3	-469.53	0	-479.60
39	40	107.00	-8179.76	-1682.56	5424.20	-5	-35.78	-0.3	-652.74	-0.3	-652.74	0	-692.12
40	40	107.00	-8319.12	-729.05	5422.81	-5	-205.18	-0.3	-1222.97	-0.3	-1222.97	0	-1287.94
40	41	109.30	-8312.54	-894.28	7314.47	-4.442	-81.87	-0.3	-1559.28	-0.3	-1559.28	0	-1666.28
41	41	109.30	-8358.31	192.20	7314.30	-4.442	-86.27	-0.3	-1563.65	-0.3	-1563.65	0	-1670.66
41	42	111.65	-8338.27	262.78	6763.13	-3.884	-164.95	-0.3	-1734.96	-0.3	-1734.96	0	-1866.38
42	42	111.65	-7169.72	-205.84	4573.23	-3.884	-287.59	-0.3	-1349.23	-0.3	-1349.23	0	-1438.10
42	43	114.00	-7154.85	-146.14	4976.84	-3.325	-224.49	-0.3	-1705.41	-0.3	-1705.41	0	-1852.28
43	43	114.00	-7767.27	-950.55	1422.57	-3.325	-971.29	-0.3	-664.64	-0.3	-881.24	0	-967.36
43	44	115.00	-7767.31	-922.51	2362.62	-3.088	-813.23	-0.3	-1224.06	-0.3	-931.92	0	-1028.38
44	44	115.00	-7731.40	1408.15	2362.55	-3.088	-817.47	-0.3	-1228.25	-0.3	-902.91	0	-999.37
44	45	116.00	-7723.03	1433.01	982.06	-2.85	-1202.30	-0.3	-1194.59	-0.3	-793.55	0	-858.91
45	45	116.00	-5559.67	662.01	1177.69	-2.85	-1539.72	-0.3	-1647.54	-0.3	-1316.45	0	-1429.05
45	46	117.00	-5555.82	677.65	514.72	-2.85	-1837.11	-0.3	-1625.42	-0.3	-1200.72	0	-1262.82
46	46	117.00	-5764.90	-236.56	-560.09	-2.85	-2166.83	-0.3	-1585.68	-0.3	-1195.41	0	-1168.25
46	47	119.78	-5760.83	-191.63	12.36	-2.85	-1809.50	-0.3	-1953.73	-0.3	-1242.66	0	-1236.71
47	47	119.78	-3557.45	-274.43	-952.53	-2.85	-1649.98	-0.3	-1139.20	-0.3	-560.03	0	-490.05
47	48	122.55	-3558.77	-269.70	-154.67	-2.85	-1204.48	-0.3	-1473.91	-0.3	-653.73	0	-624.81
48	48	122.55	-2732.05	-233.14	-1492.09	-2.85	-2112.98	-0.3	-480.38	-0.3	-145.81	0	-77.65
	49	128.10	-2745.90	-125.96	-514.17	-2.85	-1456.04	-0.3	-1309.71	-0.3	-202.35	0	-158.13
	49	128.10	-3032.61	-88.11	-773.95	-2.85	-1829.39	-0.3	-1160.58	-0.3	-202.35	0	-158.13
	50	133.65	-3044.72	19.36	-601.96	-2.85	-1714.19	-0.3	-1321.41	-0.3	-212.39	0	-171.65
50	50	133.65	-3044.72	19.36	-601.96	-2.85	-1714.19	-0.3	-1321.41	-0.3	-212.39	0	-171.65
50	51	139.20	-3056.92	126.81	-1026.18	-2.85	-1977.27	-0.3	-1071.66	-0.3	-175.98	0	-118.29
51	51	139.20	-2490.34	126.81	-497.04	-2.85	-1228.96	-0.3	-1386.13	-0.3	-175.92	0	-118.20
51	52	144.75	-2502.63	234.27	-1517.90	-2.85	-1868.50	-0.3	-725.79	-0.3	-92.98	0	2.16
52	52	144.75	-1733.42	234.27	-254.68	-2.85	-949.88	-0.3	-817.66	-0.3	-111.02	0	-92.09
52	53	147.53	-1737.37	287.99	-985.26	-2.85	-1410.18	-0.3	-333.52	-0.3	-52.10	0	-7.03
53	53	147.53	-1737.37	287.99	-984.90	-2.85	-1410.00	-0.3	-333.58	-0.3	-52.16	0	-7.11
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.48
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-2.85	-1974.12	-0.3	243.27	-0.3	18.24	0	94.49

[redacted]

C. Cuasi-Permanentes con gradiente

[1; 1]ppcopt + [1; 1]ppvist + [1; 1]ppvcentral + [1; 1]PPprolosa + [1; 1]pplosa1 + [1; 1]dasbloque + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]norCM + [.0; 1.1]PRETENSADOS + [.95; 1.05]PRET + [0; 0]PF75B.ENV_IPF75B.MZ- + [0; 0]........ENV_TREN_GENERICO.MZ- + [0; 2]GRADIENTE

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	11.62	-2246.65	-2.85	-2345.23	-0.3	302.11	-0.3	22.32	0	115.52
2	2	0.60	-2059.05	-349.08	-2246.77	-2.85	-2335.60	-0.3	311.82	-0.3	22.34	0	115.55
2	3	3.38	-2054.21	-256.20	-1466.52	-2.85	-1827.09	-0.3	-264.44	-0.3	-31.88	0	37.20
3	3	3.38	-2054.21	-256.20	-1466.08	-2.85	-1826.87	-0.3	-264.52	-0.3	-31.94	0	37.11
3	4	6.15	-2049.38	-211.26	-810.54	-2.85	-1400.94	-0.3	-742.53	-0.3	-78.23	0	-29.83
4	4	6.15	-2974.07	-211.26	-2340.61	-2.85	-2503.60	-0.3	-638.42	-0.3	-56.13	0	85.44
4	5	11.70	-2959.06	-121.38	-1393.80	-2.85	-1893.15	-0.3	-1299.80	-0.3	-125.13	0	-15.06
5	5	11.70	-3585.28	-121.38	-1979.54	-2.85	-2722.88	-0.3	-952.07	-0.3	-125.06	0	-14.96
5	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	7	22.80	-3555.55	58.36	-1583.64	-2.85	-2493.73	-0.3	-1095.49	-0.3	-167.83	0	-78.83
7	7	22.80	-3238.88	104.66	-1296.52	-2.85	-2081.20	-0.3	-1260.45	-0.3	-167.83	0	-78.83
7	8	28.35	-3222.36	194.20	-2102.96	-2.85	-2662.15	-0.3	-427.61	-0.3	-141.67	0	-42.31
8	8	28.35	-4282.38	238.99	-514.07	-2.85	-1616.00	-0.3	-1615.80	-0.3	-762.77	0	-711.29
8	9	31.13	-4280.76	332.36	-1236.49	-2.85	-2024.12	-0.3	-1295.26	-0.3	-680.34	0	-592.78
9	9	31.13	-4889.35	250.92	-92.88	-2.85	-1638.88	-0.3	-1670.57	-0.3	-1003.04	0	-992.15
9	10	33.90	-4892.68	304.65	-846.04	-2.85	-2084.95	-0.3	-1269.53	-0.3	-928.23	0	-884.09
10	10	33.90	-4740.52	-447.61	33.35	-2.85	-1820.70	-0.3	-1307.57	-0.3	-937.12	0	-966.02
10	11	34.90	-4744.61	-428.71	463.86	-2.85	-1637.90	-0.3	-1287.30	-0.3	-1017.74	0	-1081.67
11	11	34.90	-6355.04	-1061.61	371.57	-2.85	-1077.76	-0.3	-912.98	-0.3	-594.15	0	-631.25
11	12	35.90	-6364.27	-1033.34	1378.96	-3.088	-769.35	-0.3	-920.82	-0.3	-674.36	0	-737.24
12	12	35.90	-6358.56	879.29	1378.91	-3.088	-761.13	-0.3	-912.55	-0.3	-694.90	0	-757.78
12	13	36.90	-6358.39	910.55	481.43	-3.325	-897.49	-0.3	-439.67	-0.3	-646.50	0	-701.29
13	13	36.90	-5869.53	252.42	3387.95	-3.325	-300.74	-0.3	-1308.87	-0.3	-1308.87	0	-1408.85
13	14	39.25	-5883.88	319.86	2720.67	-3.884	-357.16	-0.3	-988.75	-0.3	-988.75	0	-1041.61
14	14	39.25	-6841.58	-63.41	4513.17	-3.884	-256.91	-0.3	-1304.62	-0.3	-1304.62	0	-1392.31
14	15	41.60	-6861.00	14.86	4579.62	-4.442	-210.20	-0.3	-1135.22	-0.3	-1135.22	0	-1202.22
15	15	41.60	-6801.03	905.26	4579.55	-4.442	-204.46	-0.3	-1129.46	-0.3	-1129.46	0	-1196.45
15	16	43.90	-6806.75	791.87	2609.10	-5	-333.85	-0.3	-823.55	-0.3	-823.55	0	-854.80
16	16	43.90	-6670.23	1570.74	2607.92	-5	-152.61	-0.3	-449.24	-0.3	-449.24	0	-468.18
16	17	46.45	-6691.15	1445.18	-1236.57	-5	-415.07	-0.3	-274.42	-0.3	-274.42	0	-265.44
17	17	46.45	-6653.92	-1455.54	-1241.43	-5	-413.56	-0.3	-272.35	-0.3	-272.35	0	-263.34
17	18	49.00	-6649.69	-1582.74	2667.64	-5	-147.53	-0.3	-450.96	-0.3	-450.96	0	-470.33
18	18	49.00	-6787.75	-806.13	2668.55	-5	-326.86	-0.3	-827.71	-0.3	-827.71	0	-859.68
18	19	51.30	-6797.13	-919.28	4706.00	-4.442	-191.71	-0.3	-1142.25	-0.3	-1142.25	0	-1211.10
19	19	51.30	-6858.96	-29.30	4704.92	-4.442	-197.75	-0.3	-1148.07	-0.3	-1148.07	0	-1216.90
19	20	53.65	-6852.14	50.85	4697.09	-3.884	-236.54	-0.3	-1326.94	-0.3	-1326.94	0	-1418.22
20	20	53.65	-5894.40	-328.84	2905.11	-3.884	-336.73	-0.3	-1011.13	-0.3	-1011.13	0	-1067.58
20	21	56.00	-5886.37	-260.40	3603.89	-3.325	-267.01	-0.3	-1339.39	-0.3	-1339.39	0	-1445.74
21	21	56.00	-6410.50	-910.86	660.50	-3.325	-876.18	-0.3	-469.44	-0.3	-676.70	0	-735.83
21	22	57.00	-6410.88	-879.61	1558.89	-3.088	-736.39	-0.3	-943.27	-0.3	-728.99	0	-797.42
22	22	57.00	-6414.86	1045.64	1558.38	-3.088	-744.48	-0.3	-951.19	-0.3	-708.23	0	-776.64
22	23	58.00	-6405.85	1073.99	540.87	-2.85	-1048.20	-0.3	-945.83	-0.3	-629.07	0	-672.57
23	23	58.00	-4796.75	432.14	633.40	-2.85	-1557.34	-0.3	-1326.57	-0.3	-1064.29	0	-1139.23
23	24	59.00	-4792.90	451.09	199.84	-2.85	-1742.12	-0.3	-1344.92	-0.3	-983.47	0	-1023.27
24	24	59.00	-4958.80	-439.12	-727.99	-2.85	-2034.16	-0.3	-1302.14	-0.3	-970.57	0	-934.10
24	25	63.11	-4955.00	-359.43	888.41	-2.85	-1137.26	-0.3	-1951.53	-0.3	-1162.72	0	-1211.16
25	25	63.11	-3101.61	-303.49	-1859.15	-2.85	-2442.59	-0.3	-435.25	-0.3	-183.09	0	-96.83
25	26	67.23	-3114.99	-198.18	-884.74	-2.85	-1774.69	-0.3	-1308.51	-0.3	-232.52	0	-167.11
26	26	67.23	-3414.32	-133.29	-1541.81	-2.85	-2467.39	-0.3	-679.65	-0.3	-232.52	0	-167.11
26	27	71.34	-3424.11	-66.70	-1145.26	-2.85	-2206.94	-0.3	-1001.90	-0.3	-258.44	0	-203.73
27	27	71.34	-3549.35	-66.70	-1260.11	-2.85	-2371.10	-0.3	-935.07	-0.3	-258.44	0	-203.73
27	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	29	79.56	-3555.90	66.50	-1265.29	-2.85	-2379.04	-0.3	-932.59	-0.3	-258.44	0	-203.73
29	29	79.56	-3430.65	66.50	-1150.45	-2.85	-2214.87	-0.3	-999.41	-0.3	-258.44	0	-203.73
29	30	83.68	-3422.16	133.09	-1547.37	-2.85	-2476.40	-0.3	-677.46	-0.3	-232.52	0	-167.11
30	30	83.68	-3122.81	198.80	-890.31	-2.85	-1783.68	-0.3	-1306.30	-0.3	-232.52	0	-167.11
30	31	87.79	-3109.51	304.13	-1867.45	-2.85	-2453.77	-0.3	-429.75	-0.3	-183.09	0	-96.83
31	31	87.79	-4961.47	359.95	881.63	-2.85	-1142.47	-0.3	-1952.17	-0.3	-1163.26	0	-1211.25
31	32	91.90	-4965.37	439.66	-737.11	-2.85	-2040.54	-0.3	-1302.40	-0.3	-970.79	0	-933.71
32	32	91.90	-4799.30	-452.59	190.72	-2.85	-1748.45	-0.3	-1345.12	-0.3	-983.64	0	-1022.84
32	33	92.90	-4803.18	-433.64	625.72	-2.85	-1562.98	-0.3	-1327.04	-0.3	-1064.69	0	-1139.12
33	33	92.90	-6411.96	-1076.56	533.42	-2.85	-1050.56	-0.3	-945.66	-0.3	-628.80	0	-672.00
33	34	93.90	-6421.00	-1048.23	1553.89	-3.088	-745.99	-0.3	-951.40	-0.3	-708.33	0	-776.60
34	34	93.90	-6417.48	878.80	1553.39	-3.088	-738.13	-0.3	-943.36	-0.3	-729.02	0	-797.28
34	35	94.90	-6417.13	910.05	656.87	-3.325	-877.38	-0.3	-469.95	-0.3	-676.85	0	-735.87
35	35	94.90	-5886.34	260.24	3606.37	-3.325	-266.58	-0.3	-1339.71	-0.3	-1339.71	0	-1446.13
35	36	97.25	-5894.38	328.67	2907.88	-3.884	-336.40	-0.3	-1011.44	-0.3	-1011.44	0	-1067.95
36	36	97.25	-6852.11	-51.01	4700.05	-3.884	-236.19	-0.3	-1327.28	-0.3	-1327.28	0	-1418.61
36	37	99.60	-6858.94	29.15	4709.11	-4.442	-197.34	-0.3	-1148.50	-0.3	-1148.50	0	-1217.40
37	37	99.60	-6797.13	919.13	4708.02	-4.442	-191.51	-0.3	-1142.46	-0.3	-1142.46	0	-1211.34
37	38	101.90	-6787.75	805.98	2671.06	-5	-326.63	-0.3	-827.96	-0.3	-827.96	0	-859.95
38	38	101.90	-6649.70	1582.59	2672.00	-5	-147.24	-0.3	-451.16	-0.3	-451.16	0	-470.56
38	39	104.45	-6653.93	1455.38	-1238.45	-5	-413.35	-0.3	-272.49	-0.3	-272.49	0	-263.50
39	39	104.45	-6691.15	-1445.09	-1231.71	-5	-414.74	-0.3	-274.64	-0.3	-274.64	0	-265.70
39	40	107.00	-6670.23	-1570.64	2612.87	-5	-152.27	-0.3	-449.47	-0.3	-449.47	0	-468.44
40	40	107.00	-6806.75	-791.78	2611.67	-5	-333.62	-0.3	-823.79	-0.3	-823.79	0	-855.08
40	41	109.30	-6801.03	-905.17	4583.16	-4.442	-204.10	-0.3	-1129.83	-0.3	-1129.83	0	-1196.88
41	41	109.30	-6860.99	-14.77	4583.09	-4.442	-209.86	-0.3	-1135.58	-0.3	-1135.58	0	-1202.63
41	42	111.65	-6841.56	63.49	4515.94	-3.884	-256.59	-0.3	-1304.93	-0.3	-1304.93	0	-1392.68
42	42	111.65	-5883.87	-319.77	2724.27	-3.884	-356.74	-0.3	-989.16	-0.3	-989.16	0	-1042.10
42	43	114.00	-5869.52	-252.33	3391.36	-3.325	-300.17	-0.3	-1309.31	-0.3	-1309.31	0	-1409.39
43	43	114.00	-6358.38	-910.47	483.33	-3.325	-897.30	-0.3	-439.69	-0.3	-646.84	0	-701.69
43	44	115.00	-6358.55	-879.21	1381.80	-3.088	-760.66	-0.3	-912.93	-0.3	-695.30	0	-758.27
44	44	115.00	-6364.25	1033.41	1381.74	-3.088	-768.91	-0.3	-921.14	-0.3	-674.75	0	-737.72
44	45	116.00	-6355.01	1061.68	374.27	-2.85	-1077.23	-0.3	-913.30	-0.3	-594.56	0	-631.78
45	45	116.00	-4744.59	428.80	466.79	-2.85	-1636.46	-0.3	-1287.82	-0.3	-1018.18	0	-1082.30
45	46	117.00	-4740.50	447.70	36.20	-2.85	-1819.29	-0.3	-1308.08	-0.3	-937.55	0	-966.63
46	46	117.00	-4892.68	-304.57	-843.19	-2.85	-2083.55	-0.3	-1270.04	-0.3	-928.66	0	-884.71
46	47	119.78	-4889.35	-250.84	-90.27	-2.85	-1637.59	-0.3	-1671.04	-0.3	-1003.43	0	-992.72
47	47	119.78	-4280.78	-332.26	-1233.31	-2.85	-2022.56	-0.3	-1295.83	-0.3	-680.83	0	-593.48
47	48	122.55	-4282.39	-238.89	-511.18	-2.85	-1614.58	-0.3	-1616.32	-0.3	-763.21	0	-711.92
48	48	122.55	-3222.36	-194.09	-2100.06	-2.85	-2659.88	-0.3	-431.16	-0.3	-141.67	0	-42.31
48	49	128.10	-3238.88	-104.55	-1294.20	-2.85	-2079.38	-0.3	-1263.30	-0.3	-167.83	0	-78.83
49	49	128.10	-3555.55	-58.26	-1581.32	-2.85	-2491.91	-0.3	-1098.33	-0.3	-167.83	0	-78.83
49	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	51	139.20	-3585.28	121.48	-1977.92	-2.85	-2721.74	-0.3	-953.57	-0.3	-125.13	0	-15.06
51	51	139.20	-2959.06	121.48	-1393.12	-2.85	-1892.47	-0.3	-1301.14	-0.3	-125.06	0	-14.96
51	52	144.75	-2974.07	211.36	-2339.82	-2.85	-2503.05	-0.3	-639.16	-0.3	-56.17	0	85.39
52	52	144.75	-2049.38	211.36	-810.07	-2.85	-1400.55	-0.3	-743.22	-0.3	-78.22	0	-29.81
52	53	147.53	-2054.21	256.30	-1466.22	-2.85	-1826.86	-0.3	-264.80	-0.3	-31.88	0	37.20
53	53	147.53	-2054.21	256.30	-1465.78	-2.85	-1626.64	-0.3	-264.88	-0.3	-31.94	0	37.11
53	54	150.30	-2059.05	349.18	-2246.65	-2.85	-2335.54	-0.3	311.80	-0.3	22.32	0	115.52
54	54	150.30	-2075.45	-11.62	-2246.77	-2.85	-2345.29	-0.3	302.13	-0.3	22.34	0	115.55

[redacted]

Frecuentes sin gradiente. Dominante IPF75B.ENV_IPF75B.MZ+

[1; 0]ppasp2 + [1; 0]ppdst + [1; 1]ppvcentral + [1; 1]PPpreloso + [1; 1]pplosa1 + [1; 1]doblepeo + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]incrCld + [.55; 1.65]PRET + [.9; 1.1]PRETENSADOS + [0; .9]PF75B.ENV_IPF75B.MZ+ + [0; 0]pepeeeee.ENV_TREN_GENERICO.MZ+

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.84	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.08	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-435.86	-545.29	-2.85	-1193.89	-0.3	-412.29	-0.3	-118.91	0	-103.21
3	3	3.38	-1737.37	-435.86	-544.93	-2.85	-1193.71	-0.3	-412.35	-0.3	-118.96	0	-103.29
3	4	6.15	-1733.42	-357.38	559.22	-2.85	-549.77	-0.3	-963.37	-0.3	-234.60	0	-270.02
4	4	6.15	-2502.63	-357.38	-704.26	-2.85	-1468.53	-0.3	-871.43	-0.3	-216.52	0	-175.71
4	5	11.70	-2490.34	-200.41	859.88	-2.85	-559.96	-0.3	-1628.85	-0.3	-381.97	0	-414.87
5	5	11.70	-3056.92	-200.41	329.96	-2.85	-1310.65	-0.3	-1314.24	-0.3	-381.92	0	-414.79
5	6	17.25	-3044.72	-45.71	1025.24	-2.85	-914.42	-0.3	-1612.18	-0.3	-459.53	0	-527.48
6	6	17.25	-3044.72	-45.71	1025.24	-2.85	-914.42	-0.3	-1612.18	-0.3	-459.53	0	-527.48
6	7	22.80	-3032.61	111.26	862.01	-2.85	-1025.45	-0.3	-1452.41	-0.3	-450.89	0	-515.98
7	7	22.80	-2745.90	149.12	1121.79	-2.85	-652.09	-0.3	-1601.55	-0.3	-450.89	0	-515.98
7	8	28.35	-2732.05	302.79	-118.75	-2.85	-1438.32	-0.3	-724.56	-0.3	-354.57	0	-378.22
8	8	28.35	-3558.76	339.33	1218.66	-2.85	-529.12	-0.3	-1720.56	-0.3	-862.13	0	-924.87
8	9	31.13	-3557.44	368.82	194.48	-2.85	-1085.92	-0.3	-1345.20	-0.3	-734.08	0	-740.65
9	9	31.13	-5760.83	286.04	1158.78	-2.85	-1245.74	-0.3	-2159.63	-0.3	-1416.63	0	-1487.19
9	10	33.90	-5764.90	341.41	296.47	-2.85	-1745.61	-0.3	-1739.52	-0.3	-1325.39	0	-1355.39
10	10	33.90	-5573.05	-574.97	1371.28	-2.85	-1420.86	-0.3	-1784.23	-0.3	-1334.90	0	-1454.17
10	11	34.90	-5575.90	-560.16	1951.20	-2.85	-1164.03	-0.3	-1791.15	-0.3	-1437.79	0	-1602.01
11	11	34.90	-7752.33	-1336.24	1755.85	-2.85	-1049.53	-0.3	-1317.35	-0.3	-906.98	0	-1002.29
11	12	35.90	-7751.03	-1343.48	3051.58	-3.088	-705.27	-0.3	-1329.03	-0.3	-996.04	0	-1113.68
12	12	35.90	-7772.57	991.68	3051.51	-3.088	-699.25	-0.3	-1322.95	-0.3	-1023.36	0	-1141.00
12	13	36.90	-7771.09	1000.70	2043.48	-3.325	-882.97	-0.3	-746.59	-0.3	-956.70	0	-1058.39
13	13	36.90	-7161.02	195.92	5595.89	-3.325	-121.54	-0.3	-1786.67	-0.3	-1786.67	0	-1951.80
13	14	39.25	-7176.31	259.07	5071.91	-3.884	-229.83	-0.3	-1407.24	-0.3	-1407.24	0	-1505.79
14	14	39.25	-8344.36	-209.45	7262.65	-3.884	-107.03	-0.3	-1793.01	-0.3	-1793.01	0	-1934.13
14	15	41.60	-8362.56	-155.13	7719.52	-4.442	-47.03	-0.3	-1606.25	-0.3	-1606.25	0	-1719.19
15	15	41.60	-8313.02	931.75	7719.35	-4.442	-42.29	-0.3	-1601.48	-0.3	-1601.48	0	-1714.41
[illegible]	16	43.90	-8319.44	753.81	5759.03	-5	-174.67	-0.3	-1255.57	-0.3	-1255.57	0	-1324.56
[illegible]	16	43.90	-8177.85	1707.19	5757.66	-5	-13.01	-0.3	-667.90	-0.3	-667.90	0	-709.70
[illegible]	17	46.45	-8208.61	1498.31	1674.16	-5	-292.20	-0.3	-482.63	-0.3	-482.63	0	-494.78
17	17	46.45	-8163.28	-1496.08	1661.56	-5	-290.82	-0.3	-479.81	-0.3	-479.81	0	-491.87
17	18	49.00	-8152.92	-1706.92	5787.56	-5	-9.74	-0.3	-668.03	-0.3	-668.03	0	-710.05
18	18	49.00	-8295.35	-756.30	5788.64	-5	-169.97	-0.3	-1256.42	-0.3	-1256.42	0	-1325.77
18	19	51.30	-8307.41	-933.71	7794.47	-4.442	-34.40	-0.3	-1608.77	-0.3	-1608.77	0	-1722.79
19	19	51.30	-8358.07	152.42	7793.17	-4.442	-39.39	-0.3	-1613.49	-0.3	-1613.49	0	-1727.50
19	20	53.65	-8353.45	225.19	7368.04	-3.884	-95.71	-0.3	-1806.15	-0.3	-1806.15	0	-1949.32
20	20	53.65	-7185.01	-238.96	5177.77	-3.884	-218.41	-0.3	-1420.39	-0.3	-1420.39	0	-1521.00
20	21	56.00	-7180.24	-197.31	5697.19	-3.325	-107.39	-0.3	-1802.66	-0.3	-1802.66	0	-1970.79
21	21	56.00	-7833.54	-992.52	2099.72	-3.325	-880.35	-0.3	-760.46	-0.3	-974.37	0	-1077.40
21	22	57.00	-7834.82	-977.12	3096.11	-3.088	-698.32	-0.3	-1334.12	-0.3	-1042.27	0	-1161.41
22	22	57.00	-7808.86	1372.19	3095.49	-3.088	-703.91	-0.3	-1339.48	-0.3	-1014.39	0	-1133.51
22	23	58.00	-7805.77	1380.56	1765.04	-2.85	-1052.59	-0.3	-1324.86	-0.3	-920.99	0	-1016.57
23	23	58.00	-5634.49	595.29	1960.67	-2.85	-1161.98	-0.3	-1798.94	-0.3	-1464.02	0	-1628.70
23	24	59.00	-5631.89	608.19	1349.03	-2.85	-1434.82	-0.3	-1785.19	-0.3	-1356.55	0	-1474.23
24	24	59.00	-5846.26	-476.20	215.02	-2.85	-1795.19	-0.3	-1736.35	-0.3	-1343.54	0	-1368.01
24	25	63.11	-5841.60	-414.51	2008.52	-2.85	-810.95	-0.3	-2417.29	-0.3	-1562.35	0	-1683.55
25	25	63.11	-2621.01	-319.95	-707.40	-2.85	-1651.65	-0.3	-536.94	-0.3	-275.40	0	-260.05
25	26	67.23	-2632.29	-280.91	624.92	-2.85	-821.02	-0.3	-1423.50	-0.3	-386.05	0	-418.64
26	26	67.23	-2903.16	-227.86	30.43	-2.85	-1447.78	-0.3	-854.56	-0.3	-386.05	0	-418.64
26	27	71.34	-2911.17	-114.03	723.32	-2.85	-1040.76	-0.3	-1229.84	-0.3	-456.58	0	-519.62
27	27	71.34	-3024.49	-114.03	619.41	-2.85	-1189.29	-0.3	-1169.38	-0.3	-456.58	0	-519.62
27	28	75.45	-3027.20	-0.08	852.32	-2.85	-1053.63	-0.3	-1293.88	-0.3	-480.17	0	-553.58
28	28	75.45	-3027.20	-0.08	852.32	-2.85	-1053.63	-0.3	-1293.88	-0.3	-480.17	0	-553.58
28	29	79.56	-3029.84	113.87	615.20	-2.85	-1195.77	-0.3	-1167.35	-0.3	-456.58	0	-519.62
29	29	79.56	-2916.53	113.87	719.11	-2.85	-1047.24	-0.3	-1227.81	-0.3	-456.58	0	-519.62
29	30	83.68	-2909.58	227.70	25.96	-2.85	-1455.11	-0.3	-852.78	-0.3	-386.06	0	-418.66
30	30	83.68	-2638.69	281.42	620.45	-2.85	-828.34	-0.3	-1421.71	-0.3	-386.06	0	-418.66
30	31	87.79	-2627.47	320.47	-714.06	-2.85	-1660.74	-0.3	-532.46	-0.3	-275.41	0	-260.08
31	31	87.79	-5849.51	415.15	2000.34	-2.85	-817.25	-0.3	-2418.10	-0.3	-1563.04	0	-1683.69
31	32	91.90	-5854.29	476.85	204.04	-2.85	-1802.90	-0.3	-1736.69	-0.3	-1343.83	0	-1367.57
[illegible]	32	91.90	-5639.71	-610.02	1338.05	-2.85	-1442.47	-0.3	-1785.47	-0.3	-1356.79	0	-1473.74
[illegible]	33	92.90	-5642.35	-597.13	1951.41	-2.85	-1168.80	-0.3	-1799.54	-0.3	-1464.53	0	-1628.59
[illegible]	33	92.90	-7813.22	-1383.72	1756.07	-2.85	-1055.45	-0.3	-1324.67	-0.3	-920.67	0	-1015.90
33	34	93.90	-7816.36	-1375.36	3089.97	-3.088	-705.75	-0.3	-1339.73	-0.3	-1014.52	0	-1133.45
34	34	93.90	-7842.88	976.13	3089.36	-3.088	-700.46	-0.3	-1334.22	-0.3	-1042.32	0	-1161.24
34	35	94.90	-7841.64	991.53	2095.18	-3.325	-881.84	-0.3	-761.04	-0.3	-974.56	0	-1077.45
35	35	94.90	-7180.20	197.11	5700.13	-3.325	-106.89	-0.3	-1803.04	-0.3	-1803.04	0	-1971.25
35	36	97.25	-7184.98	238.76	5181.18	-3.884	-218.00	-0.3	-1420.78	-0.3	-1420.78	0	-1521.46
36	36	97.25	-8353.41	-225.40	7371.55	-3.884	-95.29	-0.3	-1806.55	-0.3	-1806.55	0	-1949.79
36	37	99.60	-8358.04	-152.60	7798.28	-4.442	-38.89	-0.3	-1614.02	-0.3	-1614.02	0	-1728.11
37	37	99.60	-8307.41	933.52	7796.98	-4.442	-34.16	-0.3	-1609.03	-0.3	-1609.03	0	-1723.09
37	38	101.90	-8295.35	756.11	5791.79	-5	-169.68	-0.3	-1256.73	-0.3	-1256.73	0	-1326.11
38	38	101.90	-8152.93	1706.73	5792.89	-5	-9.38	-0.3	-668.28	-0.3	-668.28	0	-710.34
38	39	104.45	-8163.29	1495.89	1665.69	-5	-290.54	-0.3	-480.00	-0.3	-480.00	0	-492.09
39	39	104.45	-8208.62	-1498.20	1679.65	-5	-291.83	-0.3	-482.88	-0.3	-482.88	0	-495.07
39	40	107.00	-8177.86	-1707.08	5763.65	-5	-12.60	-0.3	-668.17	-0.3	-668.17	0	-710.02
40	40	107.00	-8319.44	-753.70	5762.25	-5	-174.38	-0.3	-1255.88	-0.3	-1255.88	0	-1324.92
40	41	109.30	-8313.02	-931.64	7723.87	-4.442	-41.85	-0.3	-1601.95	-0.3	-1601.95	0	-1714.95
41	41	109.30	-8362.54	155.24	7723.70	-4.442	-46.62	-0.3	-1606.69	-0.3	-1606.69	0	-1719.68
41	42	111.65	-8344.34	209.55	7266.21	-3.884	-106.61	-0.3	-1793.41	-0.3	-1793.41	0	-1934.61
42	42	111.65	-7176.30	-258.96	5076.31	-3.884	-229.31	-0.3	-1407.74	-0.3	-1407.74	0	-1506.38
42	43	114.00	-7161.01	-195.81	5600.20	-3.325	-120.81	-0.3	-1787.22	-0.3	-1787.22	0	-1952.49
43	43	114.00	-7771.08	-1000.60	2045.94	-3.325	-882.70	-0.3	-746.66	-0.3	-957.12	0	-1058.89
43	44	115.00	-7772.56	-991.58	3055.11	-3.088	-698.66	-0.3	-1323.43	-0.3	-1023.85	0	-1141.60
44	44	115.00	-7750.99	1343.57	3055.04	-3.088	-704.72	-0.3	-1329.44	-0.3	-996.53	0	-1114.28
44	45	116.00	-7752.30	1336.33	1759.01	-2.85	-1048.92	-0.3	-1317.72	-0.3	-907.46	0	-1002.91
45	45	116.00	-5575.87	560.27	1954.64	-2.85	-1162.33	-0.3	-1791.76	-0.3	-1438.30	0	-1602.76
45	46	117.00	-5573.03	575.08	1374.60	-2.85	-1419.21	-0.3	-1784.82	-0.3	-1335.40	0	-1454.89
46	46	117.00	-5764.90	-341.31	299.79	-2.85	-1743.98	-0.3	-1740.12	-0.3	-1325.90	0	-1356.12
46	47	119.78	-5760.83	-285.94	1161.84	-2.85	-1244.23	-0.3	-2160.18	-0.3	-1417.09	0	-1487.86
47	47	119.78	-3557.45	-368.74	196.95	-2.85	-1084.71	-0.3	-1345.65	-0.3	-734.46	0	-741.19
47	48	122.55	-3558.77	-339.25	1220.91	-2.85	-528.02	-0.3	-1720.97	-0.3	-862.47	0	-925.36
48	48	122.55	-2732.05	-302.70	-116.50	-2.85	-1436.52	-0.3	-727.44	-0.3	-354.55	0	-378.20
[illegible]	49	128.10	-2745.90	-149.03	1123.64	-2.85	-650.63	-0.3	-1603.87	-0.3	-450.89	0	-515.97
[illegible]	49	128.10	-3032.61	-111.18	863.86	-2.85	-1023.98	-0.3	-1454.73	-0.3	-450.89	0	-515.97
[illegible]	50	133.85	-3044.72	45.79	1026.62	-2.85	-913.32	-0.3	-1613.91	-0.3	-459.53	0	-527.47
50	50	133.65	-3044.72	45.79	1026.62	-2.85	-913.32	-0.3	-1613.91	-0.3	-459.53	0	-527.47
50	51	139.20	-3056.92	200.49	331.29	-2.85	-1309.72	-0.3	-1315.47	-0.3	-381.97	0	-414.87
51	51	139.20	-2490.34	200.49	860.43	-2.85	-559.41	-0.3	-1629.94	-0.3	-381.92	0	-414.79
51	52	144.75	-2502.63	357.46	-703.61	-2.85	-1468.07	-0.3	-872.04	-0.3	-216.55	0	-175.75
52	52	144.75	-1733.42	357.46	559.60	-2.85	-549.44	-0.3	-963.93	-0.3	-234.59	0	-270.00
52	53	147.53	-1737.37	435.94	-545.05	-2.85	-1193.69	-0.3	-412.58	-0.3	-118.91	0	-103.21
53	53	147.53	-1737.37	435.94	-544.69	-2.85	-1193.52	-0.3	-412.65	-0.3	-118.96	0	-103.29
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.46

[redacted]

Frecuentes sin gradiente. Dominante IPF75B.ENV_IPF75B.MZ-

[1; 1]ppasp2 + [1; 1]ppdst + [1; 1]ppvcentral + [1; 1]PPpreloso + [1; 1]pplosa1 + [1; 1]doblepeo + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]incrCld + [.9; 1.1]PRETENSADOS + [.55; 1.65]PRET + [0; .9]PF75B.ENV_IPF75B.MZ- + [0; 0]pepeeeee.ENV_TREN_GENERICO.MZ-

Conf. est:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	16.97	-2248.25	-2.85	-2346.01	-0.3	302.40	-0.3	22.56	0	115.87
2	2	0.60	-2059.05	-369.56	-2248.37	-2.85	-2336.39	-0.3	312.11	-0.3	22.58	0	115.90
2	3	3.38	-2054.21	-223.82	-1554.36	-2.85	-1870.28	-0.3	-248.66	-0.3	-18.55	0	56.39
3	3	3.38	-2054.21	-223.82	-1553.92	-2.85	-1870.07	-0.3	-248.74	-0.3	-18.61	0	56.30
3	4	6.15	-2049.38	-176.81	-990.58	-2.85	-1489.48	-0.3	-710.20	-0.3	-50.91	0	9.51
4	4	6.15	-2974.07	-176.81	-2520.66	-2.85	-2592.14	-0.3	-606.08	-0.3	-28.81	0	124.77
4	5	11.70	-2959.06	-82.81	-1775.32	-2.85	-2080.77	-0.3	-1231.28	-0.3	-67.24	0	68.29
5	5	11.70	-3585.28	-82.81	-2361.07	-2.85	-2910.50	-0.3	-883.54	-0.3	-67.16	0	68.40
5	6	17.25	-3570.36	11.19	-2137.86	-2.85	-2740.95	-0.3	-1111.55	-0.3	-70.37	0	62.64
6	6	17.25	-3570.36	11.19	-2137.86	-2.85	-2740.95	-0.3	-1111.55	-0.3	-70.37	0	62.64
6	7	22.80	-3555.55	105.19	-2436.44	-2.85	-2913.10	-0.3	-942.32	-0.3	-38.42	0	107.49
7	7	22.80	-3238.88	151.48	-2149.31	-2.85	-2500.57	-0.3	-1107.28	-0.3	-38.42	0	107.49
7	8	28.35	-3222.36	245.15	-3225.53	-2.85	-3214.19	-0.3	-225.99	-0.3	28.68	0	202.96
8	8	28.35	-4282.38	289.94	-1636.64	-2.85	-2168.04	-0.3	-1414.18	-0.3	-592.42	0	-466.02
8	9	31.13	-4280.76	385.37	-2502.50	-2.85	-2646.69	-0.3	-1067.88	-0.3	-488.22	0	-316.18
9	9	31.13	-4889.35	303.93	-1358.90	-2.85	-2261.45	-0.3	-1443.19	-0.3	-810.92	0	-715.55
9	10	33.90	-4892.68	372.24	-2264.22	-2.85	-2782.35	-0.3	-1014.82	-0.3	-713.02	0	-574.24
10	10	33.90	-4751.59	-381.43	-1384.83	-2.85	-2521.30	-0.3	-1056.05	-0.3	-724.60	0	-658.86
10	11	34.90	-4758.31	-342.37	-1062.56	-2.85	-2392.49	-0.3	-1017.09	-0.3	-789.44	0	-751.50
11	11	34.90	-6379.76	-979.56	-1154.86	-2.85	-1390.96	-0.3	-682.92	-0.3	-381.33	0	-359.31
11	12	35.90	-6395.37	-930.15	-243.55	-3.088	-1043.31	-0.3	-693.51	-0.3	-464.07	0	-477.06
12	12	35.90	-6366.89	989.65	-243.60	-3.088	-1032.19	-0.3	-682.35	-0.3	-481.94	0	-494.92
12	13	36.90	-6368.80	1048.57	-1249.87	-3.325	-1145.93	-0.3	-214.27	-0.3	-437.99	0	-449.30
13	13	36.90	-5886.35	389.35	1656.65	-3.325	-593.72	-0.3	-1086.67	-0.3	-1086.67	0	-1135.56
13	14	39.25	-5902.77	473.60	658.50	-3.884	-601.32	-0.3	-754.19	-0.3	-754.19	0	-766.98
14	14	39.25	-6858.97	90.62	2450.99	-3.884	-500.91	-0.3	-1069.89	-0.3	-1069.89	0	-1117.51
14	15	41.60	-6882.53	205.44	2113.53	-4.442	-453.59	-0.3	-880.49	-0.3	-880.49	0	-911.41
15	15	41.60	-6803.44	1097.88	2113.45	-4.442	-446.01	-0.3	-872.90	-0.3	-872.90	0	-903.82
15	16	43.90	-6809.57	1017.03	-318.73	-5	-599.94	-0.3	-540.12	-0.3	-540.12	0	-536.30
16	16	43.90	-6653.19	1794.82	-319.91	-5	-350.86	-0.3	-314.47	-0.3	-314.47	0	-312.15
16	17	46.45	-6671.42	1704.49	-4758.74	-5	-653.59	-0.3	-112.32	-0.3	-112.32	0	-77.77
17	17	46.45	-6632.03	-1743.42	-4763.60	-5	-651.98	-0.3	-110.15	-0.3	-110.15	0	-75.57
17	18	49.00	-6632.07	-1814.35	-211.46	-5	-342.44	-0.3	-318.39	-0.3	-318.39	0	-316.85
18	18	49.00	-6790.66	-1038.85	-210.55	-5	-588.53	-0.3	-549.01	-0.3	-549.01	0	-546.49
18	19	51.30	-6799.64	-1119.68	2309.56	-4.442	-426.46	-0.3	-892.95	-0.3	-892.95	0	-926.74
19	19	51.30	-6881.35	-227.59	2308.48	-4.442	-434.40	-0.3	-900.68	-0.3	-900.68	0	-934.45
19	20	53.65	-6872.23	-127.07	2729.14	-3.884	-469.79	-0.3	-1103.34	-0.3	-1103.34	0	-1156.37
20	20	53.65	-5916.22	-506.41	937.15	-3.884	-570.17	-0.3	-787.72	-0.3	-787.72	0	-805.93
20	21	56.00	-5905.15	-413.26	2000.40	-3.325	-538.82	-0.3	-1134.07	-0.3	-1134.07	0	-1193.10
21	21	56.00	-6422.12	-1064.92	-942.99	-3.325	-1106.51	-0.3	-260.90	-0.3	-483.79	0	-502.65
21	22	57.00	-6420.87	-1012.05	83.97	-3.088	-983.10	-0.3	-734.31	-0.3	-535.69	0	-558.76
22	22	57.00	-6452.17	921.81	83.47	-3.088	-994.66	-0.3	-745.70	-0.3	-518.14	0	-541.19
22	23	58.00	-6437.75	968.14	-814.18	-2.85	-1327.68	-0.3	-743.04	-0.3	-441.47	0	-432.48
23	23	58.00	-4814.40	320.74	-721.65	-2.85	-2228.80	-0.3	-1088.29	-0.3	-862.96	0	-847.47
23	24	59.00	-4807.98	360.94	-1020.80	-2.85	-2346.73	-0.3	-1130.03	-0.3	-801.91	0	-760.25
24	24	59.00	-4958.80	-531.18	-1948.63	-2.85	-2634.42	-0.3	-1082.91	-0.3	-785.34	0	-667.41
24	25	63.11	-4955.00	-409.73	-31.35	-2.85	-1589.56	-0.3	-1786.33	-0.3	-1023.14	0	-1010.20
25	25	63.11	-3101.61	-353.79	-2778.91	-2.85	-2894.89	-0.3	-270.06	-0.3	-43.52	0	104.12
25	26	67.23	-3114.99	-210.22	-1745.27	-2.85	-2197.86	-0.3	-1153.95	-0.3	-101.93	0	20.90
26	26	67.23	-3414.32	-145.33	-2402.33	-2.85	-2890.56	-0.3	-525.09	-0.3	-101.93	0	20.90
26	27	71.34	-3424.11	-75.69	-1962.78	-2.85	-2608.96	-0.3	-855.07	-0.3	-134.38	0	-25.11
27	27	71.34	-3549.35	-75.69	-2077.63	-2.85	-2773.13	-0.3	-788.24	-0.3	-134.38	0	-25.11
27	28	75.45	-3552.66	-6.03	-1912.85	-2.85	-2671.47	-0.3	-900.37	-0.3	-147.70	0	-44.30
28	28	75.45	-3552.66	-6.03	-1912.85	-2.85	-2671.47	-0.3	-900.37	-0.3	-147.70	0	-44.30
28	29	79.56	-3555.90	75.49	-2082.78	-2.85	-2781.05	-0.3	-785.76	-0.3	-134.38	0	-25.12
29	29	79.56	-3430.65	75.49	-1967.93	-2.85	-2616.88	-0.3	-852.59	-0.3	-134.38	0	-25.12
29	30	83.68	-3422.16	145.13	-2407.86	-2.85	-2899.55	-0.3	-522.91	-0.3	-101.94	0	20.90
30	30	83.68	-3122.81	210.85	-1750.80	-2.85	-2206.83	-0.3	-1151.76	-0.3	-101.94	0	20.90
30	31	87.79	-3109.51	354.43	-2787.17	-2.85	-2906.05	-0.3	-264.57	-0.3	-43.52	0	104.12
31	31	87.79	-4961.47	410.25	-38.10	-2.85	-1594.75	-0.3	-1786.99	-0.3	-1023.69	0	-1010.30
31	32	91.90	-4965.37	531.72	-1957.70	-2.85	-2640.78	-0.3	-1083.18	-0.3	-785.56	0	-667.03
32	32	91.90	-4814.38	-362.44	-1029.87	-2.85	-2353.04	-0.3	-1130.25	-0.3	-802.09	0	-759.83
32	33	92.90	-4820.84	-322.25	-729.29	-2.85	-2234.41	-0.3	-1088.77	-0.3	-863.37	0	-847.37
33	33	92.90	-6443.85	-970.71	-821.58	-2.85	-1330.03	-0.3	-742.88	-0.3	-441.20	0	-431.92
33	34	93.90	-6458.31	-924.40	79.03	-3.088	-996.16	-0.3	-745.92	-0.3	-518.24	0	-541.15
34	34	93.90	-6427.47	1011.24	78.53	-3.088	-984.83	-0.3	-734.41	-0.3	-535.73	0	-558.63
34	35	94.90	-6428.75	1064.11	-946.56	-3.325	-1107.70	-0.3	-261.42	-0.3	-483.95	0	-502.70
35	35	94.90	-5905.12	413.09	2002.94	-3.325	-538.39	-0.3	-1134.40	-0.3	-1134.40	0	-1193.50
35	36	97.25	-5916.19	506.25	939.98	-3.884	-569.83	-0.3	-788.04	-0.3	-788.04	0	-806.31
36	36	97.25	-6872.21	126.91	2732.15	-3.884	-469.43	-0.3	-1103.68	-0.3	-1103.68	0	-1156.77
36	37	99.60	-6881.33	227.42	2312.72	-4.442	-433.99	-0.3	-901.12	-0.3	-901.12	0	-934.95
37	37	99.60	-6799.64	1119.53	2311.64	-4.442	-426.25	-0.3	-893.17	-0.3	-893.17	0	-926.99
37	38	101.90	-6790.66	1038.70	-207.98	-5	-588.30	-0.3	-549.26	-0.3	-549.26	0	-546.77
38	38	101.90	-6632.08	1814.20	-207.04	-5	-342.14	-0.3	-318.59	-0.3	-318.59	0	-317.09
38	39	104.45	-6632.04	1743.26	-4760.67	-5	-651.78	-0.3	-110.29	-0.3	-110.29	0	-75.72
39	39	104.45	-6671.43	-1704.41	-4753.93	-5	-653.27	-0.3	-112.54	-0.3	-112.54	0	-78.03
39	40	107.00	-6653.19	-1794.73	-315.01	-5	-350.52	-0.3	-314.69	-0.3	-314.69	0	-312.41
40	40	107.00	-6809.57	-1016.94	-316.21	-5	-599.71	-0.3	-540.36	-0.3	-540.36	0	-536.57
40	41	109.30	-6803.44	-1097.79	2117.02	-4.442	-445.66	-0.3	-873.27	-0.3	-873.27	0	-904.24
41	41	109.30	-6882.51	-205.35	2116.95	-4.442	-453.26	-0.3	-880.85	-0.3	-880.85	0	-911.82
41	42	111.65	-6858.96	-90.54	2453.72	-3.884	-500.58	-0.3	-1070.20	-0.3	-1070.20	0	-1117.88
42	42	111.65	-5902.76	-473.51	662.05	-3.884	-600.90	-0.3	-754.60	-0.3	-754.60	0	-767.46
42	43	114.00	-5886.34	-389.26	1660.02	-3.325	-593.15	-0.3	-1087.11	-0.3	-1087.11	0	-1136.10
43	43	114.00	-6368.79	-1048.49	-1248.01	-3.325	-1145.75	-0.3	-214.28	-0.3	-438.32	0	-449.70
43	44	115.00	-6366.88	-989.57	-240.75	-3.088	-1031.72	-0.3	-682.72	-0.3	-482.33	0	-495.41
44	44	115.00	-6395.34	930.22	-240.80	-3.088	-1042.87	-0.3	-693.82	-0.3	-464.46	0	-477.54
44	45	116.00	-6379.73	979.63	-1152.19	-2.85	-1390.45	-0.3	-683.24	-0.3	-381.73	0	-359.82
45	45	116.00	-4758.29	342.46	-1059.67	-2.85	-2391.06	-0.3	-1017.61	-0.3	-789.87	0	-752.13
45	46	117.00	-4751.57	381.52	-1382.02	-2.85	-2519.91	-0.3	-1056.55	-0.3	-725.03	0	-659.47
46	46	117.00	-4892.68	-372.16	-2261.41	-2.85	-2780.97	-0.3	-1015.32	-0.3	-713.44	0	-574.85
46	47	119.78	-4889.35	-303.85	-1356.32	-2.85	-2260.18	-0.3	-1443.65	-0.3	-811.31	0	-716.11
47	47	119.78	-4280.78	-385.27	-2499.36	-2.85	-2645.15	-0.3	-1068.44	-0.3	-488.70	0	-316.87
47	48	122.55	-4282.39	-289.85	-1633.78	-2.85	-2166.63	-0.3	-1414.70	-0.3	-592.86	0	-466.65
48	48	122.55	-3222.36	-245.04	-3222.67	-2.85	-3211.93	-0.3	-229.53	-0.3	28.68	0	202.97
48	49	128.10	-3238.88	-151.37	-2147.02	-2.85	-2498.76	-0.3	-1110.13	-0.3	-38.41	0	107.50
49	49	128.10	-3555.55	-105.09	-2434.14	-2.85	-2911.29	-0.3	-945.16	-0.3	-38.41	0	107.50
49	50	133.65	-3570.36	-11.09	-2136.14	-2.85	-2739.60	-0.3	-1113.68	-0.3	-70.36	0	62.64
50	50	133.65	-3570.36	-11.09	-2136.14	-2.85	-2739.60	-0.3	-1113.68	-0.3	-70.36	0	62.64
50	51	139.20	-3585.28	82.90	-2359.46	-2.85	-2909.37	-0.3	-885.04	-0.3	-67.23	0	68.30
51	51	139.20	-2959.06	82.90	-1774.66	-2.85	-2080.10	-0.3	-1232.61	-0.3	-67.16	0	68.40
51	52	144.75	-2974.07	176.91	-2519.87	-2.85	-2591.59	-0.3	-606.82	-0.3	-28.84	0	124.73
52	52	144.75	-2049.38	176.91	-990.12	-2.85	-1489.09	-0.3	-710.88	-0.3	-50.89	0	9.53
52	53	147.53	-2054.21	223.92	-1554.07	-2.85	-1870.05	-0.3	-249.03	-0.3	-18.54	0	56.39
53	53	147.53	-2054.21	223.92	-1553.63	-2.85	-1869.84	-0.3	-249.10	-0.3	-18.61	0	56.30
53	54	150.30	-2059.05	376.06	-2248.25	-2.85	-2336.33	-0.3	312.09	-0.3	22.56	0	115.87
54	54	150.30	-2075.45	-16.97	-2248.37	-2.85	-2346.07	-0.3	302.42	-0.3	22.58	0	115.90

[redacted]

Frecuentes con gradiente. Dominante IPF75B.ENV_IPF75B.MZ+

[1; 1]ppcap2 + [1; 1]pp4at + [1; 1]ppvcentral + [1; 1]PPpretosa + [1; 1]pplosa1 + [1; 1]dsaltloqeo + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]horCM + [.8; 1.1]PRETENSADOS + [.95; 1.05]PRET + [0; .6]IPF75B.ENV_IPF75B.MZ+ + [0; 0]pcpaseee.ENV_TREN_GENERICO.MZ+ + [0, .2]GRADIENTE

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.08	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.87	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-437.42	-540.94	-2.85	-1191.75	-0.3	-413.07	-0.3	-119.57	0	-104.16
3	3	3.38	-1737.37	-437.42	-540.58	-2.85	-1191.57	-0.3	-413.13	-0.3	-119.62	0	-104.24
3	4	6.15	-1733.42	-358.95	567.92	-2.85	-545.49	-0.3	-964.93	-0.3	-235.92	0	-271.92
4	4	6.15	-2502.63	-358.95	-695.56	-2.85	-1464.25	-0.3	-873.00	-0.3	-217.84	0	-177.61
4	5	11.70	-2490.34	-201.98	877.28	-2.85	-551.40	-0.3	-1631.98	-0.3	-384.62	0	-418.68
5	5	11.70	-3056.92	-201.98	347.37	-2.85	-1302.09	-0.3	-1317.36	-0.3	-384.56	0	-418.59
5	6	17.25	-3044.72	-47.28	1051.35	-2.85	-901.58	-0.3	-1616.87	-0.3	-463.49	0	-533.18
6	6	17.25	-3044.72	-47.28	1051.35	-2.85	-901.58	-0.3	-1616.87	-0.3	-463.49	0	-533.18
6	7	22.80	-3032.61	109.70	896.82	-2.85	-1008.33	-0.3	-1458.67	-0.3	-456.18	0	-523.58
7	7	22.80	-2745.90	147.56	1156.60	-2.85	-634.98	-0.3	-1607.80	-0.3	-456.18	0	-523.58
7	8	28.35	-2732.05	301.22	-75.24	-2.85	-1416.92	-0.3	-732.38	-0.3	-361.17	0	-387.73
8	8	28.35	-3558.76	337.77	1262.17	-2.85	-507.73	-0.3	-1728.38	-0.3	-868.73	0	-934.37
8	9	31.13	-3557.44	367.25	242.35	-2.85	-1062.38	-0.3	-1353.80	-0.3	-741.35	0	-751.11
9	9	31.13	-5760.83	284.47	1206.64	-2.85	-1222.20	-0.3	-2168.23	-0.3	-1423.89	0	-1497.65
9	10	33.90	-5764.90	339.84	348.66	-2.85	-1719.93	-0.3	-1748.90	-0.3	-1333.31	0	-1366.80
10	10	33.90	-5572.74	-576.51	1423.49	-2.85	-1395.09	-0.3	-1793.52	-0.3	-1342.75	0	-1465.50
10	11	34.90	-5575.58	-561.70	2004.98	-2.85	-1137.49	-0.3	-1800.72	-0.3	-1445.87	0	-1613.68
11	11	34.90	-7751.76	-1337.70	1809.63	-2.85	-1038.53	-0.3	-1325.50	-0.3	-914.51	0	-1011.92
11	12	35.90	-7750.45	-1344.94	3106.93	-3.088	-695.99	-0.3	-1336.85	-0.3	-1003.27	0	-1122.61
12	12	35.90	-7772.42	990.12	3106.87	-3.088	-690.02	-0.3	-1330.82	-0.3	-1030.64	0	-1149.98
12	13	36.90	-7770.94	999.14	2100.40	-3.325	-874.82	-0.3	-754.02	-0.3	-963.58	0	-1066.70
13	13	36.90	-7160.77	194.37	5652.81	-3.325	-111.95	-0.3	-1794.02	-0.3	-1794.02	0	-1960.83
13	14	39.25	-7176.07	257.52	5132.51	-3.884	-222.69	-0.3	-1414.17	-0.3	-1414.17	0	-1513.90
14	14	39.25	-8344.13	-211.01	7323.25	-3.884	-99.89	-0.3	-1799.94	-0.3	-1799.94	0	-1942.24
14	15	41.60	-8362.33	-156.68	7783.81	-4.442	-40.71	-0.3	-1612.93	-0.3	-1612.93	0	-1726.80
15	15	41.60	-8312.99	930.18	7783.64	-4.442	-36.00	-0.3	-1608.17	-0.3	-1608.17	0	-1722.05
[illegible]	16	43.90	-8319.41	752.25	5826.92	-5	-168.51	-0.3	-1262.15	-0.3	-1262.15	0	-1331.95
[illegible]	16	43.90	-8178.01	1705.63	5825.56	-5	-8.40	-0.3	-671.01	-0.3	-671.01	0	-713.31
[illegible]	17	46.45	-8208.77	1496.75	1746.06	-5	-287.32	-0.3	-485.92	-0.3	-485.92	0	-498.60
17	17	46.45	-8163.28	-1496.08	1733.46	-5	-285.93	-0.3	-483.10	-0.3	-483.10	0	-495.68
17	18	49.00	-8152.92	-1706.92	5859.46	-5	-4.85	-0.3	-671.32	-0.3	-671.32	0	-713.86
18	18	49.00	-8295.35	-756.30	5860.53	-5	-163.44	-0.3	-1263.39	-0.3	-1263.39	0	-1333.60
18	19	51.30	-8307.41	-933.71	7866.36	-4.442	-27.37	-0.3	-1616.25	-0.3	-1616.25	0	-1731.33
19	19	51.30	-8358.07	152.42	7865.06	-4.442	-32.35	-0.3	-1620.98	-0.3	-1620.98	0	-1736.04
19	20	53.65	-8353.45	225.19	7439.94	-3.884	-87.27	-0.3	-1814.40	-0.3	-1814.40	0	-1958.97
20	20	53.65	-7185.01	-238.96	5249.67	-3.884	-209.97	-0.3	-1428.64	-0.3	-1428.64	0	-1530.65
20	21	56.00	-7180.24	-197.31	5769.08	-3.325	-95.32	-0.3	-1811.99	-0.3	-1811.99	0	-1982.24
21	21	56.00	-7833.54	-992.52	2171.61	-3.325	-870.08	-0.3	-769.87	-0.3	-983.08	0	-1087.91
21	22	57.00	-7834.82	-977.12	3168.00	-3.088	-686.36	-0.3	-1344.37	-0.3	-1051.75	0	-1173.10
22	22	57.00	-7808.86	1372.19	3167.39	-3.088	-691.94	-0.3	-1349.73	-0.3	-1023.87	0	-1145.20
22	23	58.00	-7805.77	1380.56	1836.93	-2.85	-1038.01	-0.3	-1335.87	-0.3	-931.17	0	-1029.53
23	23	58.00	-5634.49	595.29	2032.56	-2.85	-1126.62	-0.3	-1811.85	-0.3	-1474.93	0	-1644.41
23	24	59.00	-5631.89	608.19	1420.92	-2.85	-1399.46	-0.3	-1798.10	-0.3	-1367.46	0	-1489.94
24	24	59.00	-5846.26	-476.20	286.91	-2.85	-1759.83	-0.3	-1749.26	-0.3	-1354.45	0	-1383.72
24	25	63.11	-5841.60	-414.51	2080.41	-2.85	-775.60	-0.3	-2430.20	-0.3	-1573.26	0	-1699.26
25	25	63.11	-2621.01	-319.95	-635.50	-2.85	-1616.29	-0.3	-549.86	-0.3	-286.31	0	-275.76
25	26	67.23	-2632.29	-280.91	696.81	-2.85	-785.67	-0.3	-1436.41	-0.3	-396.96	0	-434.35
26	26	67.23	-2903.16	-227.86	102.32	-2.85	-1412.43	-0.3	-867.47	-0.3	-396.96	0	-434.35
26	27	71.34	-2911.17	-114.03	795.21	-2.85	-1005.41	-0.3	-1242.75	-0.3	-467.49	0	-535.32
27	27	71.34	-3024.49	-114.03	691.30	-2.85	-1153.94	-0.3	-1182.29	-0.3	-467.49	0	-535.32
27	28	75.45	-3027.20	-0.08	924.21	-2.85	-1018.28	-0.3	-1306.80	-0.3	-491.08	0	-569.29
28	28	75.45	-3027.20	-0.08	924.21	-2.85	-1018.28	-0.3	-1306.80	-0.3	-491.08	0	-569.29
28	29	79.56	-3029.84	113.87	687.09	-2.85	-1160.42	-0.3	-1180.26	-0.3	-467.49	0	-535.33
29	29	79.56	-2916.53	113.87	791.00	-2.85	-1011.88	-0.3	-1240.72	-0.3	-467.49	0	-535.33
29	30	83.68	-2909.58	227.70	97.85	-2.85	-1419.75	-0.3	-865.69	-0.3	-396.97	0	-434.37
30	30	83.68	-2638.69	281.42	692.34	-2.85	-792.98	-0.3	-1434.62	-0.3	-396.97	0	-434.37
30	31	87.79	-2627.47	320.47	-642.17	-2.85	-1625.38	-0.3	-545.38	-0.3	-286.32	0	-275.79
31	31	87.79	-5849.51	415.15	2072.24	-2.85	-781.90	-0.3	-2431.02	-0.3	-1573.95	0	-1699.40
31	32	91.90	-5854.29	476.85	275.93	-2.85	-1767.55	-0.3	-1749.60	-0.3	-1354.74	0	-1383.28
[illegible]	32	91.90	-5639.71	-610.02	1409.94	-2.85	-1407.12	-0.3	-1798.38	-0.3	-1367.70	0	-1489.45
[illegible]	33	92.90	-5642.35	-597.13	2023.31	-2.85	-1133.44	-0.3	-1812.46	-0.3	-1475.44	0	-1644.30
[illegible]	33	92.90	-7813.22	-1383.72	1827.96	-2.85	-1040.87	-0.3	-1335.68	-0.3	-930.85	0	-1028.86
33	34	93.90	-7816.36	-1375.36	3161.87	-3.088	-693.79	-0.3	-1349.97	-0.3	-1024.00	0	-1145.14
34	34	93.90	-7842.88	976.13	3161.25	-3.088	-688.50	-0.3	-1344.46	-0.3	-1051.80	0	-1172.93
34	35	94.90	-7841.64	991.53	2167.07	-3.325	-871.57	-0.3	-770.45	-0.3	-983.27	0	-1087.96
35	35	94.90	-7180.20	197.11	5772.03	-3.325	-94.82	-0.3	-1812.37	-0.3	-1812.37	0	-1982.70
35	36	97.25	-7184.98	238.76	5253.07	-3.884	-209.57	-0.3	-1429.03	-0.3	-1429.03	0	-1531.11
36	36	97.25	-8353.41	-225.40	7443.44	-3.884	-86.86	-0.3	-1814.80	-0.3	-1814.80	0	-1959.44
36	37	99.60	-8358.04	-152.60	7870.17	-4.442	-31.85	-0.3	-1621.51	-0.3	-1621.51	0	-1736.64
37	37	99.60	-8307.41	933.52	7868.88	-4.442	-27.12	-0.3	-1616.51	-0.3	-1616.51	0	-1731.63
37	38	101.90	-8295.35	756.11	5863.68	-5	-163.15	-0.3	-1263.69	-0.3	-1263.69	0	-1333.94
38	38	101.90	-8152.93	1706.73	5864.78	-5	-4.49	-0.3	-671.57	-0.3	-671.57	0	-714.15
38	39	104.45	-8163.29	1495.89	1737.58	-5	-285.65	-0.3	-483.29	-0.3	-483.29	0	-495.90
39	39	104.45	-8208.78	-1496.64	1751.54	-5	-286.95	-0.3	-486.17	-0.3	-486.17	0	-498.89
39	40	107.00	-8178.02	-1705.52	5831.54	-5	-7.99	-0.3	-671.29	-0.3	-671.29	0	-713.63
40	40	107.00	-8319.41	-752.14	5830.15	-5	-168.21	-0.3	-1262.46	-0.3	-1262.46	0	-1332.31
40	41	109.30	-8312.99	-930.07	7788.15	-4.442	-35.56	-0.3	-1608.64	-0.3	-1608.64	0	-1722.58
41	41	109.30	-8362.31	156.79	7787.99	-4.442	-40.30	-0.3	-1613.36	-0.3	-1613.36	0	-1727.29
41	42	111.65	-8344.11	211.11	7326.81	-3.884	-99.47	-0.3	-1800.34	-0.3	-1800.34	0	-1942.71
42	42	111.65	-7176.06	-257.41	5136.91	-3.884	-222.17	-0.3	-1414.67	-0.3	-1414.67	0	-1514.49
42	43	114.00	-7160.76	-194.26	5657.12	-3.325	-111.22	-0.3	-1794.58	-0.3	-1794.58	0	-1961.52
43	43	114.00	-7770.93	-999.04	2102.86	-3.325	-874.56	-0.3	-754.09	-0.3	-963.99	0	-1067.20
43	44	115.00	-7772.41	-990.02	3110.46	-3.088	-689.43	-0.3	-1331.30	-0.3	-1031.13	0	-1150.58
44	44	115.00	-7750.42	1345.03	3110.40	-3.088	-695.44	-0.3	-1337.26	-0.3	-1003.76	0	-1123.21
44	45	116.00	-7751.72	1337.79	1812.79	-2.85	-1037.92	-0.3	-1325.87	-0.3	-915.00	0	-1012.53
45	45	116.00	-5575.56	561.81	2008.43	-2.85	-1135.79	-0.3	-1801.33	-0.3	-1446.39	0	-1614.43
45	46	117.00	-5572.71	576.61	1426.82	-2.85	-1393.44	-0.3	-1794.11	-0.3	-1343.25	0	-1466.22
46	46	117.00	-5764.90	-339.74	352.01	-2.85	-1718.30	-0.3	-1749.50	-0.3	-1333.82	0	-1367.53
46	47	119.78	-5760.83	-284.37	1209.70	-2.85	-1220.70	-0.3	-2168.78	-0.3	-1424.36	0	-1498.32
47	47	119.78	-3557.45	-367.17	244.81	-2.85	-1061.17	-0.3	-1354.24	-0.3	-741.72	0	-751.65
47	48	122.55	-3558.77	-337.69	1264.42	-2.85	-506.62	-0.3	-1728.78	-0.3	-869.08	0	-934.87
48	48	122.55	-2732.05	-301.13	-72.99	-2.85	-1415.12	-0.3	-735.26	-0.3	-361.16	0	-387.71
[illegible]	49	128.10	-2745.90	-147.47	1158.45	-2.85	-633.51	-0.3	-1610.12	-0.3	-456.17	0	-523.57
[illegible]	49	128.10	-3032.61	-109.61	898.67	-2.85	-1006.86	-0.3	-1460.99	-0.3	-456.17	0	-523.57
[illegible]	50	133.65	-3044.72	47.36	1052.73	-2.85	-900.48	-0.3	-1618.60	-0.3	-463.49	0	-533.18
50	50	133.65	-3044.72	47.36	1052.73	-2.85	-900.48	-0.3	-1618.60	-0.3	-463.49	0	-533.18
50	51	139.20	-3056.92	202.06	348.70	-2.85	-1301.16	-0.3	-1318.59	-0.3	-384.62	0	-418.68
51	51	139.20	-2490.34	202.06	877.64	-2.85	-550.85	-0.3	-1633.07	-0.3	-384.56	0	-418.59
51	52	144.75	-2502.63	359.03	-694.91	-2.85	-1463.79	-0.3	-873.60	-0.3	-217.87	0	-177.65
52	52	144.75	-1733.42	359.03	568.30	-2.85	-545.17	-0.3	-965.49	-0.3	-235.91	0	-271.90
52	53	147.53	-1737.37	437.50	-540.69	-2.85	-1191.55	-0.3	-413.37	-0.3	-119.57	0	-104.16
53	53	147.53	-1737.37	437.50	-540.33	-2.85	-1191.38	-0.3	-413.43	-0.3	-119.62	0	-104.24
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.46
54	54	150.30	[illegible]	[illegible]	-1863.87	-2.85	-1974.13	-0.3	243.37	-0.3	18.24	0	94.49

[redacted]

Frecuentes con gradiente. Dominante IPF75B.ENV_IPF75B.MZ-

[1; 1]ppcap2 + [1; 1]pp4at + [1; 1]ppvcentral + [1; 1]PPpretosa + [1; 1]pplosa1 + [1; 1]dsaltloqeo + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]horCM + [.8; 1.1]PRETENSADOS + [.95; 1.05]PRET + [0; .6]IPF75B.ENV_IPF75B.MZ- + [0; 0]pcpaseee.ENV_TREN_GENERICO.MZ- + [0, .2]GRADIENTE

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	16.97	-2248.25	-2.85	-2346.01	-0.3	302.40	-0.3	22.56	0	115.87
2	2	0.60	-2059.05	-369.56	-2248.37	-2.85	-2336.39	-0.3	312.11	-0.3	22.58	0	115.90
2	3	3.38	-2054.21	-223.82	-1554.36	-2.85	-1870.28	-0.3	-248.66	-0.3	-18.55	0	56.39
3	3	3.38	-2054.21	-223.82	-1553.92	-2.85	-1870.07	-0.3	-248.74	-0.3	-18.61	0	56.30
3	4	6.15	-2049.38	-176.81	-990.58	-2.85	-1489.48	-0.3	-710.20	-0.3	-50.91	0	9.51
4	4	6.15	-2974.07	-176.81	-2520.86	-2.85	-2592.14	-0.3	-606.08	-0.3	-28.81	0	124.77
4	5	11.70	-2959.06	-82.81	-1775.32	-2.85	-2080.77	-0.3	-1231.28	-0.3	-67.24	0	68.29
5	5	11.70	-3585.28	-82.81	-2361.07	-2.85	-2910.50	-0.3	-883.54	-0.3	-67.16	0	68.40
5	6	17.25	-3570.36	11.19	-2137.86	-2.85	-2740.95	-0.3	-1111.55	-0.3	-70.37	0	62.64
6	6	17.25	-3570.36	11.19	-2137.86	-2.85	-2740.95	-0.3	-1111.55	-0.3	-70.37	0	62.64
6	7	22.80	-3555.55	105.19	-2436.44	-2.85	-2913.10	-0.3	-942.32	-0.3	-38.42	0	107.49
7	7	22.80	-3238.88	151.48	-2149.31	-2.85	-2500.57	-0.3	-1107.28	-0.3	-38.42	0	107.49
7	8	28.35	-3222.36	245.15	-3225.53	-2.85	-3214.19	-0.3	-225.99	-0.3	28.68	0	202.96
8	8	28.35	-4282.38	289.94	-1636.64	-2.85	-2168.04	-0.3	-1414.18	-0.3	-592.42	0	-466.02
8	9	31.13	-4280.76	385.37	-2502.50	-2.85	-2646.69	-0.3	-1067.88	-0.3	-488.22	0	-316.18
9	9	31.13	-4889.35	303.93	-1358.90	-2.85	-2261.45	-0.3	-1443.19	-0.3	-810.92	0	-715.55
9	10	33.90	-4892.68	372.24	-2264.22	-2.85	-2782.35	-0.3	-1014.82	-0.3	-713.02	0	-574.24
10	10	33.90	-4751.59	-381.43	-1384.83	-2.85	-2521.30	-0.3	-1056.05	-0.3	-724.60	0	-658.86
10	11	34.90	-4758.31	-342.37	-1062.56	-2.85	-2392.49	-0.3	-1017.09	-0.3	-789.44	0	-751.50
11	11	34.90	-6379.76	-979.56	-1154.86	-2.85	-1390.96	-0.3	-682.92	-0.3	-381.33	0	-359.31
11	12	35.90	-6395.37	-930.15	-243.55	-3.088	-1043.31	-0.3	-693.51	-0.3	-464.07	0	-477.06
12	12	35.90	-6366.89	989.65	-243.60	-3.088	-1032.19	-0.3	-682.35	-0.3	-481.94	0	-494.92
12	13	36.90	-6368.80	1048.57	-1249.87	-3.325	-1145.93	-0.3	-214.27	-0.3	-437.99	0	-449.30
13	13	36.90	-5886.35	389.35	1656.65	-3.325	-593.72	-0.3	-1086.67	-0.3	-1086.67	0	-1135.56
13	14	39.25	-5902.77	473.60	658.50	-3.884	-601.32	-0.3	-754.19	-0.3	-754.19	0	-766.98
14	14	39.25	-6858.97	90.62	2450.99	-3.884	-500.91	-0.3	-1069.89	-0.3	-1069.89	0	-1117.51
14	15	41.60	-6882.53	205.44	2113.53	-4.442	-453.59	-0.3	-880.49	-0.3	-880.49	0	-911.41
15	15	41.60	-6803.44	1097.88	2113.45	-4.442	-446.01	-0.3	-872.90	-0.3	-872.90	0	-903.82
15	16	43.90	-6809.57	1017.03	-318.73	-5	-599.94	-0.3	-540.12	-0.3	-540.12	0	-536.30
16	16	43.90	-6653.19	1794.82	-319.91	-5	-350.86	-0.3	-314.47	-0.3	-314.47	0	-312.15
16	17	46.45	-6671.42	1704.49	-4758.74	-5	-653.59	-0.3	-112.32	-0.3	-112.32	0	-77.77
17	17	46.45	-6632.03	-1743.42	-4763.60	-5	-651.98	-0.3	-110.15	-0.3	-110.15	0	-75.57
17	18	49.00	-6632.07	-1814.35	-211.46	-5	-342.44	-0.3	-318.39	-0.3	-318.39	0	-316.85
18	18	49.00	-6790.66	-1038.85	-210.55	-5	-588.53	-0.3	-549.01	-0.3	-549.01	0	-546.49
18	19	51.30	-6799.64	-1119.68	2309.56	-4.442	-426.46	-0.3	-892.95	-0.3	-892.95	0	-926.74
19	19	51.30	-6881.35	-227.59	2308.48	-4.442	-434.40	-0.3	-900.68	-0.3	-900.68	0	-934.45
19	20	53.65	-6872.23	-127.07	2729.14	-3.884	-469.79	-0.3	-1103.34	-0.3	-1103.34	0	-1156.37
20	20	53.65	-5916.22	-506.41	937.15	-3.884	-570.17	-0.3	-787.72	-0.3	-787.72	0	-805.93
20	21	56.00	-5905.15	-413.26	2000.40	-3.325	-538.82	-0.3	-1134.07	-0.3	-1134.07	0	-1193.10
21	21	56.00	-6422.12	-1064.92	-942.99	-3.325	-1106.51	-0.3	-260.90	-0.3	-483.79	0	-502.65
21	22	57.00	-6420.87	-1012.05	83.97	-3.088	-983.10	-0.3	-734.31	-0.3	-535.69	0	-558.76
22	22	57.00	-6452.17	921.81	83.47	-3.088	-994.66	-0.3	-745.70	-0.3	-518.14	0	-541.19
22	23	58.00	-6437.75	968.14	-814.18	-2.85	-1327.68	-0.3	-743.04	-0.3	-441.47	0	-432.48
23	23	58.00	-4814.40	320.74	-721.65	-2.85	-2228.80	-0.3	-1088.29	-0.3	-862.96	0	-847.47
23	24	59.00	-4807.98	360.94	-1020.80	-2.85	-2346.73	-0.3	-1130.03	-0.3	-801.91	0	-760.25
24	24	59.00	-4958.80	-531.18	-1948.63	-2.85	-2634.42	-0.3	-1082.91	-0.3	-785.34	0	-667.41
24	25	63.11	-4955.00	-409.73	-31.35	-2.85	-1589.56	-0.3	-1786.33	-0.3	-1023.14	0	-1010.20
25	25	63.11	-3101.61	-353.79	-2778.91	-2.85	-2894.89	-0.3	-270.06	-0.3	-43.52	0	104.12
25	26	67.23	-3114.99	-210.22	-1745.27	-2.85	-2197.86	-0.3	-1153.95	-0.3	-101.93	0	20.90
26	26	67.23	-3414.32	-145.33	-2402.33	-2.85	-2890.56	-0.3	-525.09	-0.3	-101.93	0	20.90
26	27	71.34	-3424.11	-75.69	-1962.78	-2.85	-2608.96	-0.3	-855.07	-0.3	-134.38	0	-25.11
27	27	71.34	-3549.35	-75.69	-2077.63	-2.85	-2773.13	-0.3	-788.24	-0.3	-134.38	0	-25.11
27	28	75.45	-3552.66	-6.03	-1912.85	-2.85	-2671.47	-0.3	-900.37	-0.3	-147.70	0	-44.30
28	28	75.45	-3552.66	-6.03	-1912.85	-2.85	-2671.47	-0.3	-900.37	-0.3	-147.70	0	-44.30
28	29	79.56	-3555.90	75.49	-2082.78	-2.85	-2781.05	-0.3	-785.76	-0.3	-134.38	0	-25.12
29	29	79.56	-3430.65	75.49	-1967.93	-2.85	-2616.88	-0.3	-852.59	-0.3	-134.38	0	-25.12
29	30	83.68	-3422.16	145.13	-2407.86	-2.85	-2899.55	-0.3	-522.91	-0.3	-101.94	0	20.90
30	30	83.68	-3122.81	210.85	-1750.80	-2.85	-2206.83	-0.3	-1151.76	-0.3	-101.94	0	20.90
30	31	87.79	-3109.51	354.43	-2787.17	-2.85	-2906.05	-0.3	-264.57	-0.3	-43.52	0	104.12
31	31	87.79	-4961.47	410.25	-38.10	-2.85	-1594.75	-0.3	-1786.99	-0.3	-1023.69	0	-1010.30
31	32	91.90	-4965.37	531.72	-1957.70	-2.85	-2640.78	-0.3	-1083.18	-0.3	-785.56	0	-667.03
32	32	91.90	-4814.38	-362.44	-1029.87	-2.85	-2353.04	-0.3	-1130.25	-0.3	-802.09	0	-759.83
32	33	92.90	-4820.84	-322.25	-729.29	-2.85	-2234.41	-0.3	-1088.77	-0.3	-863.37	0	-847.37
33	33	92.90	-6443.85	-970.71	-821.58	-2.85	-1330.03	-0.3	-742.88	-0.3	-441.20	0	-431.92
33	34	93.90	-6458.31	-924.40	79.03	-3.088	-996.16	-0.3	-745.92	-0.3	-518.24	0	-541.15
34	34	93.90	-6427.47	1011.24	78.53	-3.088	-984.83	-0.3	-734.41	-0.3	-535.73	0	-558.63
34	35	94.90	-6428.75	1064.11	-946.56	-3.325	-1107.70	-0.3	-261.42	-0.3	-483.95	0	-502.70
35	35	94.90	-5905.12	413.09	2002.94	-3.325	-538.39	-0.3	-1134.40	-0.3	-1134.40	0	-1193.50
35	36	97.25	-5916.19	506.25	939.98	-3.884	-569.83	-0.3	-788.04	-0.3	-788.04	0	-806.31
36	36	97.25	-6872.21	126.91	2732.15	-3.884	-469.43	-0.3	-1103.68	-0.3	-1103.68	0	-1156.77
36	37	99.60	-6881.33	227.42	2312.72	-4.442	-433.99	-0.3	-901.12	-0.3	-901.12	0	-934.95
37	37	99.60	-6799.64	1119.53	2311.64	-4.442	-426.25	-0.3	-893.17	-0.3	-893.17	0	-926.99
37	38	101.90	-6790.66	1038.70	-207.98	-5	-588.30	-0.3	-549.26	-0.3	-549.26	0	-546.77
38	38	101.90	-6632.08	1814.20	-207.04	-5	-342.14	-0.3	-318.59	-0.3	-318.59	0	-317.09
38	39	104.45	-6632.04	1743.26	-4760.67	-5	-651.78	-0.3	-110.29	-0.3	-110.29	0	-75.72
39	39	104.45	-6671.43	-1704.41	-4753.93	-5	-653.27	-0.3	-112.54	-0.3	-112.54	0	-78.03
39	40	107.00	-6653.19	-1794.73	-315.01	-5	-350.52	-0.3	-314.69	-0.3	-314.69	0	-312.41
40	40	107.00	-6809.57	-1016.94	-316.21	-5	-599.71	-0.3	-540.36	-0.3	-540.36	0	-536.57
40	41	109.30	-6803.44	-1097.79	2117.02	-4.442	-445.66	-0.3	-873.27	-0.3	-873.27	0	-904.24
41	41	109.30	-6882.51	-205.35	2116.95	-4.442	-453.26	-0.3	-880.85	-0.3	-880.85	0	-911.82
41	42	111.65	-6858.96	-90.54	2453.72	-3.884	-500.58	-0.3	-1070.20	-0.3	-1070.20	0	-1117.88
42	42	111.65	-5902.76	-473.51	662.05	-3.884	-600.90	-0.3	-754.60	-0.3	-754.60	0	-767.46
42	43	114.00	-5886.34	-389.26	1660.02	-3.325	-593.15	-0.3	-1087.11	-0.3	-1087.11	0	-1136.10
43	43	114.00	-6368.79	-1048.49	-1248.01	-3.325	-1145.75	-0.3	-214.28	-0.3	-438.32	0	-449.70
43	44	115.00	-6366.88	-989.57	-240.75	-3.088	-1031.72	-0.3	-682.72	-0.3	-482.33	0	-495.41
44	44	115.00	-6395.34	930.22	-240.80	-3.088	-1042.87	-0.3	-693.82	-0.3	-464.46	0	-477.54
44	45	116.00	-6379.73	979.63	-1152.19	-2.85	-1390.45	-0.3	-683.24	-0.3	-381.73	0	-359.82
45	45	116.00	-4758.29	342.46	-1059.67	-2.85	-2391.06	-0.3	-1017.61	-0.3	-789.87	0	-752.13
45	46	117.00	-4751.57	381.52	-1382.02	-2.85	-2519.91	-0.3	-1056.55	-0.3	-725.03	0	-659.47
46	46	117.00	-4892.68	-372.16	-2261.41	-2.85	-2780.97	-0.3	-1015.32	-0.3	-713.44	0	-574.85
46	47	119.78	-4889.35	-303.85	-1356.32	-2.85	-2260.18	-0.3	-1443.65	-0.3	-811.31	0	-716.11
47	47	119.78	-4280.78	-385.27	-2499.36	-2.85	-2645.15	-0.3	-1068.44	-0.3	-488.70	0	-316.87
47	48	122.55	-4282.39	-289.85	-1633.78	-2.85	-2166.63	-0.3	-1414.70	-0.3	-592.86	0	-466.65
48	48	122.55	-3222.36	-245.04	-3222.67	-2.85	-3211.93	-0.3	-229.53	-0.3	28.68	0	202.97
48	49	128.10	-3238.86	-151.37	-2147.02	-2.85	-2498.76	-0.3	-1110.13	-0.3	-38.41	0	107.50
49	49	128.10	-3555.55	-105.09	-2434.14	-2.85	-2911.29	-0.3	-945.16	-0.3	-38.41	0	107.50
49	50	133.65	-3570.36	-11.09	-2136.14	-2.85	-2739.60	-0.3	-1113.68	-0.3	-70.36	0	62.64
50	50	133.65	-3570.36	-11.09	-2136.14	-2.85	-2739.60	-0.3	-1113.68	-0.3	-70.36	0	62.64
50	51	139.20	-3585.28	82.90	-2359.46	-2.85	-2909.37	-0.3	-885.04	-0.3	-67.23	0	68.30
51	51	139.20	-2959.06	82.90	-1774.66	-2.85	-2080.10	-0.3	-1232.61	-0.3	-67.16	0	68.40
51	52	144.75	-2974.07	176.91	-2519.87	-2.85	-2591.59	-0.3	-606.82	-0.3	-28.84	0	124.73
52	52	144.75	-2049.38	176.91	-990.12	-2.85	-1489.09	-0.3	-710.88	-0.3	-50.89	0	9.53
52	53	147.53	-2054.21	223.92	-1554.07	-2.85	-1870.05	-0.3	-249.03	-0.3	-18.54	0	56.39
53	53	147.53	-2054.21	223.92	-1553.63	-2.85	-1869.84	-0.3	-249.10	-0.3	-18.61	0	56.30
53	54	150.30	-2059.05	376.06	-2248.25	-2.85	-2336.33	-0.3	312.09	-0.3	22.56	0	115.87
54	54	150.30	-2075.45	-16.97	-2248.37	-2.85	-2346.07	-0.3	302.42	-0.3	22.58	0	115.90

[redacted]

Frecuentes con gradiente dominante

{ 1; 1}ppcopt + { 1; 1}ppvia + { 1; 1}ppvcentral + { 1; 1}PPpvoloos + { 1; 1}pplosa1 + { 1; 1}ppbloque + { 1; 1}pplosa2 + { 1; 1}pm + {-1; 1}morCM + { .8; 1.1}PRETENSADOS + { .55; 1.05}PRET + { 0; .5}GRADIENTE + { 0; 0}PF758.ENV_PF758.MZ+ + { 0; 0}scpeesos.ENV_TREN_GENERICO.MZ+

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.08	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1984.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-290.26	-978.98	-2.85	-1407.16	-0.3	-334.39	-0.3	-53.09	0	-8.46
3	3	3.38	-1737.37	-290.26	-978.62	-2.85	-1406.98	-0.3	-334.46	-0.3	-53.15	0	-8.53
3	4	6.15	-1733.42	-236.54	-242.01	-2.85	-943.78	-0.3	-819.47	-0.3	-113.01	0	-94.96
4	4	6.15	-2502.63	-236.54	-1505.49	-2.85	-1862.54	-0.3	-727.53	-0.3	-94.93	0	-0.65
4	5	11.70	-2490.34	-129.08	-471.48	-2.85	-1214.67	-0.3	-1389.73	-0.3	-179.94	0	-123.99
5	5	11.70	-3056.92	-129.08	-1001.40	-2.85	-1965.36	-0.3	-1075.12	-0.3	-179.88	0	-123.91
5	6	17.25	-3044.72	-21.63	-564.22	-2.85	-1696.05	-0.3	-1326.70	-0.3	-218.33	0	-180.20
6	6	17.25	-3044.72	-21.63	-564.22	-2.85	-1696.05	-0.3	-1326.70	-0.3	-218.33	0	-180.20
6	7	22.80	-3032.61	85.64	-723.63	-2.85	-1805.20	-0.3	-1167.62	-0.3	-210.27	0	-169.54
7	7	22.80	-2745.90	123.70	-463.85	-2.85	-1431.85	-0.3	-1316.76	-0.3	-210.27	0	-169.54
7	8	28.35	-2732.05	230.88	-1429.18	-2.85	-2082.74	-0.3	-489.20	-0.3	-155.71	0	-91.91
8	8	28.35	-3558.76	267.43	-91.77	-2.85	-1173.54	-0.3	-1485.20	-0.3	-663.27	0	-638.55
8	9	31.13	-3557.44	272.16	-883.33	-2.85	-1615.95	-0.3	-1151.62	-0.3	-570.52	0	-505.16
9	9	31.13	-5760.83	189.38	80.96	-2.85	-1775.76	-0.3	-1966.05	-0.3	-1253.07	0	-1251.70
9	10	33.90	-5764.90	234.31	-485.24	-2.85	-2130.03	-0.3	-1599.12	-0.3	-1206.77	0	-1184.60
10	10	33.90	-5555.36	-679.85	589.57	-2.85	-1800.17	-0.3	-1638.73	-0.3	-1211.96	0	-1279.06
10	11	34.90	-5559.21	-664.21	1254.78	-2.85	-1501.68	-0.3	-1661.26	-0.3	-1328.04	0	-1445.78
11	11	34.90	-7722.20	-1435.11	1059.43	-2.85	-1186.45	-0.3	-1206.42	-0.3	-804.35	0	-872.70
11	12	35.90	-7730.57	-1410.25	2442.14	-3.088	-804.09	-0.3	-1239.56	-0.3	-913.28	0	-1012.17
12	12	35.90	-7767.09	920.27	2442.07	-3.088	-799.97	-0.3	-1235.39	-0.3	-942.36	0	-1041.25
12	13	36.90	-7767.05	948.31	1505.51	-3.325	-959.34	-0.3	-675.72	-0.3	-891.14	0	-979.32
13	13	36.90	-7154.49	143.93	5057.93	-3.325	-210.83	-0.3	-1715.88	-0.3	-1715.88	0	-1865.15
13	14	39.25	-7169.36	203.63	4659.76	-3.884	-277.39	-0.3	-1359.13	-0.3	-1359.13	0	-1449.67
14	14	39.25	-8337.95	-265.01	6850.50	-3.884	-154.66	-0.3	-1744.96	-0.3	-1744.96	0	-1878.07
14	15	41.60	-8357.99	-194.42	7406.58	-4.442	-77.21	-0.3	-1573.23	-0.3	-1573.23	0	-1681.58
15	15	41.60	-8312.50	892.04	7406.41	-4.442	-72.86	-0.3	-1568.85	-0.3	-1568.85	0	-1677.20
	16	43.90	-8319.08	726.81	5521.45	-5	-196.22	-0.3	-1232.52	-0.3	-1232.52	0	-1298.67
	16	43.90	-8179.99	1680.33	5520.08	-5	-29.27	-0.3	-657.14	-0.3	-657.14	0	-697.21
	17	46.45	-8209.75	1484.66	1489.24	-5	-304.83	-0.3	-474.22	-0.3	-474.22	0	-485.04
17	17	46.45	-8162.04	-1512.45	1476.64	-5	-303.33	-0.3	-471.29	-0.3	-471.29	0	-482.01
17	18	49.00	-8152.67	-1710.14	5625.68	-5	-20.74	-0.3	-660.62	-0.3	-660.62	0	-701.46
18	18	49.00	-8295.40	-759.53	5626.75	-5	-184.67	-0.3	-1240.74	-0.3	-1240.74	0	-1308.15
18	19	51.30	-8307.30	-924.46	7628.71	-4.442	-50.61	-0.3	-1591.50	-0.3	-1591.50	0	-1703.10
19	19	51.30	-8357.04	161.56	7627.41	-4.442	-55.51	-0.3	-1596.13	-0.3	-1596.13	0	-1707.72
19	20	53.65	-8352.40	234.43	7179.34	-3.884	-117.73	-0.3	-1784.37	-0.3	-1784.37	0	-1923.87
20	20	53.65	-7183.88	-229.75	4989.07	-3.884	-240.42	-0.3	-1398.60	-0.3	-1398.60	0	-1495.54
20	21	56.00	-7176.73	-168.80	5461.91	-3.325	-146.34	-0.3	-1771.61	-0.3	-1771.61	0	-1932.79
21	21	56.00	-7831.38	-963.78	1864.44	-3.325	-913.71	-0.3	-729.42	-0.3	-945.66	0	-1042.77
21	22	57.00	-7831.70	-935.73	2817.19	-3.088	-744.34	-0.3	-1293.97	-0.3	-1005.13	0	-1115.68
22	22	57.00	-7797.20	1410.89	2816.57	-3.088	-748.84	-0.3	-1298.25	-0.3	-976.25	0	-1086.78
22	23	58.00	-7789.09	1435.93	1436.90	-2.85	-1116.75	-0.3	-1272.24	-0.3	-872.30	0	-955.18
23	23	58.00	-5625.25	653.56	1632.53	-2.85	-1320.67	-0.3	-1737.34	-0.3	-1411.97	0	-1554.75
23	24	59.00	-5621.68	669.25	978.72	-2.85	-1613.97	-0.3	-1715.73	-0.3	-1297.87	0	-1390.84
24	24	59.00	-5846.26	-413.85	-155.29	-2.85	-1977.29	-0.3	-1669.84	-0.3	-1287.35	0	-1287.10
24	25	63.11	-5841.60	-347.19	1378.02	-2.85	-1121.00	-0.3	-2304.05	-0.3	-1466.68	0	-1545.79
25	25	63.11	-2621.01	-252.63	-1337.89	-2.85	-1961.70	-0.3	-423.70	-0.3	-179.72	0	-122.30
25	26	67.23	-2632.29	-212.38	-355.95	-2.85	-1303.37	-0.3	-1247.33	-0.3	-237.20	0	-204.34
26	26	67.23	-2903.16	-159.33	-950.44	-2.85	-1930.13	-0.3	-678.39	-0.3	-237.20	0	-204.34
26	27	71.34	-2911.17	-79.70	-470.94	-2.85	-1628.05	-0.3	-1015.34	-0.3	-275.35	0	-258.69
27	27	71.34	-3024.49	-79.70	-574.85	-2.85	-1776.58	-0.3	-954.88	-0.3	-275.35	0	-258.69
27	28	75.45	-3027.20	-0.08	-413.29	-2.85	-1676.01	-0.3	-1066.57	-0.3	-288.11	0	-277.06
28	28	75.45	-3027.20	-0.08	-413.29	-2.85	-1676.01	-0.3	-1066.57	-0.3	-288.11	0	-277.06
28	29	79.56	-3029.84	79.54	-579.09	-2.85	-1783.08	-0.3	-952.85	-0.3	-275.35	0	-258.69
29	29	79.56	-2916.53	79.54	-475.18	-2.85	-1634.54	-0.3	-1013.31	-0.3	-275.35	0	-258.69
29	30	83.68	-2909.58	159.17	-954.99	-2.85	-1937.50	-0.3	-676.60	-0.3	-237.20	0	-204.34
30	30	83.68	-2638.69	212.90	-360.50	-2.85	-1310.73	-0.3	-1245.53	-0.3	-237.20	0	-204.34
30	31	87.79	-2627.47	253.15	-1344.68	-2.85	-1970.85	-0.3	-419.20	-0.3	-179.72	0	-122.30
31	31	87.79	-5849.51	347.83	1369.73	-2.85	-1127.36	-0.3	-2304.84	-0.3	-1467.35	0	-1545.91
31	32	91.90	-5854.29	414.51	-166.44	-2.85	-1985.09	-0.3	-1670.15	-0.3	-1287.61	0	-1286.63
	32	91.90	-5629.50	-671.07	967.58	-2.85	-1621.71	-0.3	-1715.99	-0.3	-1298.08	0	-1390.31
	33	92.90	-5633.12	-655.40	1623.14	-2.85	-1327.56	-0.3	-1737.92	-0.3	-1412.46	0	-1554.62
[illegible]	33	92.90	-7796.54	-1439.08	1427.79	-2.85	-1119.64	-0.3	-1272.03	-0.3	-871.97	0	-954.48
33	34	93.90	-7804.70	-1414.05	2811.04	-3.088	-750.69	-0.3	-1298.49	-0.3	-976.37	0	-1086.73
34	34	93.90	-7839.76	934.74	2810.43	-3.088	-746.48	-0.3	-1294.06	-0.3	-1005.17	0	-1115.51
34	35	94.90	-7839.48	962.79	1859.89	-3.325	-915.19	-0.3	-730.00	-0.3	-945.85	0	-1042.82
35	35	94.90	-7176.70	168.60	5464.84	-3.325	-145.85	-0.3	-1771.98	-0.3	-1771.98	0	-1933.25
35	36	97.25	-7183.84	229.55	4992.46	-3.884	-240.02	-0.3	-1398.98	-0.3	-1398.98	0	-1496.00
36	36	97.25	-8352.37	-234.63	7182.83	-3.884	-117.32	-0.3	-1784.76	-0.3	-1784.76	0	-1924.34
36	37	99.60	-8357.00	-161.75	7632.51	-4.442	-55.01	-0.3	-1596.66	-0.3	-1596.66	0	-1708.32
37	37	99.60	-8307.30	924.28	7631.21	-4.442	-50.37	-0.3	-1591.76	-0.3	-1591.76	0	-1703.40
37	38	101.90	-8295.40	759.34	5629.88	-5	-184.39	-0.3	-1241.04	-0.3	-1241.04	0	-1308.49
38	38	101.90	-8152.68	1709.95	5630.98	-5	-20.38	-0.3	-660.86	-0.3	-660.86	0	-701.74
38	39	104.45	-8162.05	1512.26	1480.75	-5	-303.05	-0.3	-471.48	-0.3	-471.48	0	-482.23
39	39	104.45	-8209.76	-1484.55	1494.71	-5	-304.46	-0.3	-474.47	-0.3	-474.47	0	-485.33
39	40	107.00	-8180.00	-1680.22	5526.05	-5	-28.86	-0.3	-657.41	-0.3	-657.41	0	-697.53
40	40	107.00	-8319.08	-726.70	5524.65	-5	-195.93	-0.3	-1232.83	-0.3	-1232.83	0	-1299.02
40	41	109.30	-8312.50	-891.93	7410.90	-4.442	-72.43	-0.3	-1569.31	-0.3	-1569.31	0	-1677.73
41	41	109.30	-8357.97	194.53	7410.73	-4.442	-76.80	-0.3	-1573.66	-0.3	-1573.66	0	-1682.07
41	42	111.65	-8337.93	265.11	6854.03	-3.884	-154.24	-0.3	-1745.36	-0.3	-1745.36	0	-1878.54
42	42	111.65	-7169.35	-203.52	4664.14	-3.884	-276.88	-0.3	-1359.63	-0.3	-1359.63	0	-1450.26
42	43	114.00	-7154.48	-143.82	5062.22	-3.325	-210.11	-0.3	-1716.44	-0.3	-1716.44	0	-1865.83
43	43	114.00	-7767.04	-948.21	1507.95	-3.325	-959.07	-0.3	-675.79	-0.3	-891.55	0	-979.82
43	44	115.00	-7767.08	-920.17	2445.64	-3.088	-799.38	-0.3	-1235.86	-0.3	-942.84	0	-1041.85
44	44	115.00	-7730.54	1410.34	2445.58	-3.088	-803.54	-0.3	-1239.97	-0.3	-913.76	0	-1012.77
44	45	116.00	-7722.17	1435.20	1062.73	-2.85	-1185.81	-0.3	-1206.81	-0.3	-804.86	0	-873.34
45	45	116.00	-5559.19	664.32	1258.37	-2.85	-1499.91	-0.3	-1661.89	-0.3	-1328.58	0	-1446.56
45	46	117.00	-5555.34	679.96	593.04	-2.85	-1798.45	-0.3	-1639.35	-0.3	-1212.46	0	-1279.82
46	46	117.00	-5764.90	-234.21	-481.77	-2.85	-2128.32	-0.3	-1599.75	-0.3	-1207.29	0	-1185.36
46	47	119.78	-5760.83	-189.28	84.15	-2.85	-1774.19	-0.3	-1966.63	-0.3	-1253.55	0	-1252.40
47	47	119.78	-3557.45	-272.08	-880.73	-2.85	-1614.67	-0.3	-1152.09	-0.3	-570.92	0	-505.73
47	48	122.55	-3558.77	-267.35	-89.40	-2.85	-1172.38	-0.3	-1485.63	-0.3	-663.63	0	-639.07
48	48	122.55	-2732.05	-230.79	-1426.82	-2.85	-2080.88	-0.3	-492.10	-0.3	-155.71	0	-91.91
	49	128.10	-2745.90	-123.61	-461.95	-2.85	-1430.36	-0.3	-1319.09	-0.3	-210.27	0	-169.54
	49	128.10	-3032.61	-85.76	-721.73	-2.85	-1803.71	-0.3	-1169.95	-0.3	-210.27	0	-169.54
	50	133.65	-3044.72	21.71	-562.80	-2.85	-1694.93	-0.3	-1328.45	-0.3	-218.33	0	-180.20
50	50	133.65	-3044.72	21.71	-562.80	-2.85	-1694.93	-0.3	-1328.45	-0.3	-218.33	0	-180.20
50	51	139.20	-3056.92	129.16	-1000.07	-2.85	-1964.43	-0.3	-1076.35	-0.3	-179.94	0	-123.99
51	51	139.20	-2490.34	129.16	-470.93	-2.85	-1214.12	-0.3	-1390.82	-0.3	-179.88	0	-123.91
51	52	144.75	-2502.63	236.62	-1504.84	-2.85	-1862.08	-0.3	-728.13	-0.3	-94.96	0	-0.69
52	52	144.75	-1733.42	236.62	-241.63	-2.85	-943.46	-0.3	-820.02	-0.3	-113.00	0	-94.94
52	53	147.53	-1737.37	290.34	-978.74	-2.85	-1406.97	-0.3	-334.69	-0.3	-53.09	0	-8.46
53	53	147.53	-1737.37	290.34	-978.38	-2.85	-1406.79	-0.3	-334.76	-0.3	-53.15	0	-8.53
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.46
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-1974.13	-0.3	243.37	-0.3	18.24	0	94.49

[redacted]

Frecuentes con gradiente dominante

{ 1; 1}ppcopt + { 1; 1}ppvia + { 1; 1}ppvcentral + { 1; 1}PPpvoloos + { 1; 1}pplosa1 + { 1; 1}ppbloque + { 1; 1}pplosa2 + { 1; 1}pm + {-1; 1}morCM + { .8; 1.1}PRETENSADOS + { .55; 1.05}PRET + { 0; .5}GRADIENTE + { 0; 0}PF758.ENV_PF758.MZ- + { 0; 0}scpeesos.ENV_TREN_GENERICO.MZ-

Coef. exc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	11.62	-2246.65	-2.85	-2345.23	-0.3	302.11	-0.3	22.32	0	115.52
2	2	0.60	-2059.05	-349.08	-2246.77	-2.85	-2335.60	-0.3	311.82	-0.3	22.34	0	115.55
2	3	3.38	-2054.21	-256.20	-1466.52	-2.85	-1827.09	-0.3	-264.44	-0.3	-31.88	0	37.20
3	3	3.38	-2054.21	-256.20	-1466.08	-2.85	-1826.87	-0.3	-264.52	-0.3	-31.94	0	37.11
3	4	6.15	-2049.38	-211.26	-810.54	-2.85	-1400.94	-0.3	-742.53	-0.3	-78.23	0	-29.83
4	4	6.15	-2974.07	-211.26	-2340.61	-2.85	-2503.60	-0.3	-638.42	-0.3	-56.13	0	85.44
4	5	11.70	-2959.06	-121.38	-1393.80	-2.85	-1893.15	-0.3	-1299.80	-0.3	-125.13	0	-15.06
5	5	11.70	-3585.28	-121.38	-1979.54	-2.85	-2722.88	-0.3	-952.07	-0.3	-125.06	0	-14.96
5	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	6	17.25	-3570.36	-31.51	-1532.09	-2.85	-2443.06	-0.3	-1220.35	-0.3	-162.29	0	-69.72
6	7	22.80	-3555.55	58.36	-1563.64	-2.85	-2493.73	-0.3	-1095.49	-0.3	-167.83	0	-78.83
7	7	22.80	-3238.88	104.66	-1296.52	-2.85	-2081.20	-0.3	-1260.45	-0.3	-167.83	0	-78.83
7	8	28.35	-3222.36	194.20	-2102.96	-2.85	-2662.15	-0.3	-427.61	-0.3	-141.67	0	-42.31
8	8	28.35	-4282.38	238.99	-514.07	-2.85	-1616.00	-0.3	-1615.80	-0.3	-762.77	0	-711.29
8	9	31.13	-4280.76	332.36	-1236.49	-2.85	-2024.12	-0.3	-1295.26	-0.3	-680.34	0	-592.78
9	9	31.13	-4889.35	250.92	-92.88	-2.85	-1638.88	-0.3	-1670.57	-0.3	-1003.04	0	-992.15
9	10	33.90	-4892.68	304.65	-846.04	-2.85	-2084.95	-0.3	-1269.53	-0.3	-928.23	0	-884.09
10	10	33.90	-4740.52	-447.61	33.35	-2.85	-1820.70	-0.3	-1307.57	-0.3	-937.12	0	-966.02
10	11	34.90	-4744.61	-428.71	463.86	-2.85	-1637.90	-0.3	-1287.30	-0.3	-1017.74	0	-1081.67
11	11	34.90	-6355.04	-1061.61	371.57	-2.85	-1077.76	-0.3	-912.98	-0.3	-594.15	0	-631.25
11	12	35.90	-6364.27	-1033.34	1378.96	-3.088	-769.35	-0.3	-920.82	-0.3	-674.36	0	-737.24
12	12	35.90	-6358.56	879.29	1378.91	-3.088	-761.13	-0.3	-912.55	-0.3	-694.90	0	-757.78
12	13	36.90	-6358.39	910.55	481.43	-3.325	-897.49	-0.3	-439.67	-0.3	-646.50	0	-701.29
13	13	36.90	-5869.53	252.42	3387.95	-3.325	-300.74	-0.3	-1308.87	-0.3	-1308.87	0	-1408.85
13	14	39.25	-5883.88	319.86	2720.67	-3.884	-357.16	-0.3	-988.75	-0.3	-988.75	0	-1041.61
14	14	39.25	-6841.58	-63.41	4513.17	-3.884	-256.91	-0.3	-1304.62	-0.3	-1304.62	0	-1392.31
14	15	41.60	-6861.00	14.86	4579.62	-4.442	-210.20	-0.3	-1135.22	-0.3	-1135.22	0	-1202.22
15	15	41.60	-6801.03	905.26	4579.55	-4.442	-204.46	-0.3	-1129.46	-0.3	-1129.46	0	-1196.45
15	16	43.90	-6806.75	791.87	2609.10	-5	-333.85	-0.3	-823.55	-0.3	-823.55	0	-854.80
16	16	43.90	-6670.23	1570.74	2607.92	-5	-152.61	-0.3	-449.24	-0.3	-449.24	0	-468.18
16	17	46.45	-6691.15	1445.18	-1236.57	-5	-415.07	-0.3	-274.42	-0.3	-274.42	0	-265.44
17	17	46.45	-6653.92	-1455.54	-1241.43	-5	-413.56	-0.3	-272.35	-0.3	-272.35	0	-263.34
17	18	49.00	-6649.69	-1582.74	2667.64	-5	-147.53	-0.3	-450.96	-0.3	-450.96	0	-470.33
18	18	49.00	-6787.75	-806.13	2668.55	-5	-326.86	-0.3	-827.71	-0.3	-827.71	0	-859.68
18	19	51.30	-6797.13	-919.28	4706.00	-4.442	-191.71	-0.3	-1142.25	-0.3	-1142.25	0	-1211.10
19	19	51.30	-6858.96	-29.30	4704.92	-4.442	-197.75	-0.3	-1148.07	-0.3	-1148.07	0	-1216.90
19	20	53.65	-6852.14	50.85	4697.09	-3.884	-236.54	-0.3	-1326.94	-0.3	-1326.94	0	-1418.22
20	20	53.65	-5894.40	-328.84	2905.11	-3.884	-336.73	-0.3	-1011.13	-0.3	-1011.13	0	-1067.58
20	21	56.00	-5886.37	-260.40	3603.89	-3.325	-267.01	-0.3	-1339.39	-0.3	-1339.39	0	-1445.74
21	21	56.00	-6410.50	-910.86	660.50	-3.325	-876.18	-0.3	-469.44	-0.3	-676.70	0	-735.83
21	22	57.00	-6410.88	-879.61	1558.89	-3.088	-736.39	-0.3	-943.27	-0.3	-728.99	0	-797.42
22	22	57.00	-6414.86	1045.64	1558.38	-3.088	-744.48	-0.3	-951.19	-0.3	-708.23	0	-776.64
22	23	58.00	-6405.85	1073.99	540.87	-2.85	-1048.20	-0.3	-945.83	-0.3	-629.07	0	-672.57
23	23	58.00	-4796.75	432.14	633.40	-2.85	-1557.34	-0.3	-1326.57	-0.3	-1064.29	0	-1139.23
23	24	59.00	-4792.90	451.09	199.84	-2.85	-1742.12	-0.3	-1344.92	-0.3	-983.47	0	-1023.27
24	24	59.00	-4958.80	-439.12	-727.99	-2.85	-2034.16	-0.3	-1302.14	-0.3	-970.57	0	-934.10
24	25	63.11	-4955.00	-359.43	888.41	-2.85	-1137.26	-0.3	-1951.53	-0.3	-1162.72	0	-1211.16
25	25	63.11	-3101.61	-303.49	-1859.15	-2.85	-2442.59	-0.3	-435.25	-0.3	-183.09	0	-96.83
25	26	67.23	-3114.99	-198.18	-884.74	-2.85	-1774.69	-0.3	-1308.51	-0.3	-232.52	0	-167.11
26	26	67.23	-3414.32	-133.29	-1541.81	-2.85	-2467.39	-0.3	-679.65	-0.3	-232.52	0	-167.11
26	27	71.34	-3424.11	-66.70	-1145.26	-2.85	-2206.94	-0.3	-1001.90	-0.3	-258.44	0	-203.73
27	27	71.34	-3549.35	-66.70	-1260.11	-2.85	-2371.10	-0.3	-935.07	-0.3	-258.44	0	-203.73
27	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	28	75.45	-3552.66	-0.10	-1125.83	-2.85	-2284.44	-0.3	-1041.73	-0.3	-267.13	0	-216.25
28	29	79.56	-3555.90	66.50	-1265.29	-2.85	-2379.04	-0.3	-932.59	-0.3	-258.44	0	-203.73
29	29	79.56	-3430.65	66.50	-1150.45	-2.85	-2214.87	-0.3	-999.41	-0.3	-258.44	0	-203.73
29	30	83.68	-3422.16	133.09	-1547.37	-2.85	-2476.40	-0.3	-677.46	-0.3	-232.52	0	-167.11
30	30	83.68	-3122.81	198.80	-890.31	-2.85	-1783.68	-0.3	-1306.30	-0.3	-232.52	0	-167.11
30	31	87.79	-3109.51	304.13	-1867.45	-2.85	-2453.77	-0.3	-429.75	-0.3	-183.09	0	-96.83
31	31	87.79	-4961.47	359.95	881.63	-2.85	-1142.47	-0.3	-1952.17	-0.3	-1163.26	0	-1211.25
31	32	91.90	-4965.37	439.66	-737.11	-2.85	-2040.54	-0.3	-1302.40	-0.3	-970.79	0	-933.71
32	32	91.90	-4799.30	-452.59	190.72	-2.85	-1748.45	-0.3	-1345.12	-0.3	-983.64	0	-1022.84
32	33	92.90	-4803.18	-433.64	625.72	-2.85	-1562.98	-0.3	-1327.04	-0.3	-1064.69	0	-1139.12
33	33	92.90	-6411.96	-1076.56	533.42	-2.85	-1050.56	-0.3	-945.66	-0.3	-628.80	0	-672.00
33	34	93.90	-6421.00	-1048.23	1553.89	-3.088	-745.99	-0.3	-951.40	-0.3	-708.33	0	-776.60
34	34	93.90	-6417.48	878.80	1553.39	-3.088	-738.13	-0.3	-943.36	-0.3	-729.02	0	-797.28
34	35	94.90	-6417.13	910.05	656.87	-3.325	-877.38	-0.3	-469.95	-0.3	-676.85	0	-735.87
35	35	94.90	-5886.34	260.24	3606.37	-3.325	-266.58	-0.3	-1339.71	-0.3	-1339.71	0	-1446.13
35	36	97.25	-5894.38	328.67	2907.88	-3.884	-336.40	-0.3	-1011.44	-0.3	-1011.44	0	-1067.95
36	36	97.25	-6852.11	-51.01	4700.05	-3.884	-236.19	-0.3	-1327.28	-0.3	-1327.28	0	-1418.61
36	37	99.60	-6858.94	29.15	4709.11	-4.442	-197.34	-0.3	-1148.50	-0.3	-1148.50	0	-1217.40
37	37	99.60	-6797.13	919.13	4708.02	-4.442	-191.51	-0.3	-1142.46	-0.3	-1142.46	0	-1211.34
37	38	101.90	-6787.75	805.98	2671.06	-5	-326.63	-0.3	-827.96	-0.3	-827.96	0	-859.95
38	38	101.90	-6649.70	1582.59	2672.00	-5	-147.24	-0.3	-451.16	-0.3	-451.16	0	-470.56
38	39	104.45	-6653.93	1455.38	-1238.45	-5	-413.35	-0.3	-272.49	-0.3	-272.49	0	-263.50
39	39	104.45	-6691.15	-1445.09	-1231.71	-5	-414.74	-0.3	-274.64	-0.3	-274.64	0	-265.70
39	40	107.00	-6670.23	-1570.64	2612.87	-5	-152.27	-0.3	-449.47	-0.3	-449.47	0	-468.44
40	40	107.00	-6806.75	-791.78	2611.67	-5	-333.62	-0.3	-823.79	-0.3	-823.79	0	-855.08
40	41	109.30	-6801.03	-905.17	4583.16	-4.442	-204.10	-0.3	-1129.83	-0.3	-1129.83	0	-1196.88
41	41	109.30	-6860.99	-14.77	4583.09	-4.442	-209.86	-0.3	-1135.58	-0.3	-1135.58	0	-1202.63
41	42	111.65	-6841.56	63.49	4515.94	-3.884	-256.59	-0.3	-1304.93	-0.3	-1304.93	0	-1392.68
42	42	111.65	-5883.87	-319.77	2724.27	-3.884	-356.74	-0.3	-989.16	-0.3	-989.16	0	-1042.10
42	43	114.00	-5869.52	-252.33	3391.36	-3.325	-300.17	-0.3	-1309.31	-0.3	-1309.31	0	-1409.39
43	43	114.00	-6358.38	-910.47	483.33	-3.325	-897.30	-0.3	-439.69	-0.3	-646.84	0	-701.69
43	44	115.00	-6358.55	-879.21	1381.80	-3.088	-760.66	-0.3	-912.93	-0.3	-695.30	0	-758.27
44	44	115.00	-6364.25	1033.41	1381.74	-3.088	-768.91	-0.3	-921.14	-0.3	-674.75	0	-737.72
44	45	116.00	-6355.01	1061.68	374.27	-2.85	-1077.23	-0.3	-913.30	-0.3	-594.56	0	-631.78
45	45	116.00	-4744.59	428.80	466.79	-2.85	-1636.46	-0.3	-1287.82	-0.3	-1018.18	0	-1082.30
45	46	117.00	-4740.50	447.70	36.20	-2.85	-1819.29	-0.3	-1308.08	-0.3	-937.55	0	-966.63
46	46	117.00	-4892.68	-304.57	-843.19	-2.85	-2083.55	-0.3	-1270.04	-0.3	-928.66	0	-884.71
46	47	119.78	-4889.35	-250.84	-90.27	-2.85	-1637.59	-0.3	-1671.04	-0.3	-1003.43	0	-992.72
47	47	119.78	-4280.78	-332.26	-1233.31	-2.85	-2022.56	-0.3	-1295.83	-0.3	-680.83	0	-593.48
47	48	122.55	-4282.39	-238.89	-511.18	-2.85	-1614.58	-0.3	-1616.32	-0.3	-763.21	0	-711.92
48	48	122.55	-3222.36	-194.09	-2100.06	-2.85	-2659.88	-0.3	-431.16	-0.3	-141.67	0	-42.31
48	49	128.10	-3238.88	-104.55	-1294.20	-2.85	-2079.38	-0.3	-1263.30	-0.3	-167.83	0	-78.83
49	49	128.10	-3555.55	-58.26	-1581.32	-2.85	-2491.91	-0.3	-1098.33	-0.3	-167.83	0	-78.83
49	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	50	133.65	-3570.36	31.61	-1530.35	-2.85	-2441.69	-0.3	-1222.48	-0.3	-162.29	0	-69.72
50	51	139.20	-3585.28	121.48	-1977.92	-2.85	-2721.74	-0.3	-953.57	-0.3	-125.13	0	-15.06
51	51	139.20	-2959.06	121.48	-1393.12	-2.85	-1892.47	-0.3	-1301.14	-0.3	-125.06	0	-14.96
51	52	144.75	-2974.07	211.36	-2339.82	-2.85	-2503.05	-0.3	-639.16	-0.3	-56.17	0	85.39
52	52	144.75	-2049.38	211.36	-810.07	-2.85	-1400.55	-0.3	-743.22	-0.3	-78.22	0	-29.81
52	53	147.53	-2054.21	256.30	-1466.22	-2.85	-1826.86	-0.3	-264.80	-0.3	-31.88	0	37.20
53	53	147.53	-2054.21	256.30	-1465.78	-2.85	-1826.64	-0.3	-264.88	-0.3	-31.94	0	37.11
53	54	150.30	-2059.05	349.18	-2248.65	-2.85	-2335.54	-0.3	311.60	-0.3	22.32	0	115.52
54	54	150.30	-2075.45	-11.62	-2246.77	-2.85	-2345.29	-0.3	302.13	-0.3	22.34	0	115.55

[redacted]

Infrecuentes sin gradiente. Dominante IPF75B.ENV_IPF75B.MZ+

[illegible] ENV_TREN_GENERICO.MZ+

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.08	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-540.83	-233.05	-2.85	-1040.34	-0.3	-468.37	-0.3	-166.29	0	-171.43
3	3	3.38	-1737.37	-540.83	-232.69	-2.85	-1040.16	-0.3	-468.43	-0.3	-166.34	0	-171.51
3	4	6.15	-1733.42	-445.02	1137.29	-2.85	-265.50	-0.3	-1087.19	-0.3	-322.32	0	-398.32
4	4	6.15	-2502.63	-445.02	-126.20	-2.85	-1184.26	-0.3	-975.26	-0.3	-304.24	0	-302.01
4	5	11.70	-2490.34	-253.37	1826.03	-2.85	-84.84	-0.3	-1802.38	-0.3	-528.59	0	-625.97
5	5	11.70	-3056.92	-253.37	1296.12	-2.85	-835.53	-0.3	-1487.76	-0.3	-528.53	0	-625.88
5	6	17.25	-3044.72	-65.52	2188.90	-2.85	-342.18	-0.3	-1821.18	-0.3	-636.12	0	-781.72
6	6	17.25	-3044.72	-65.52	2188.90	-2.85	-342.18	-0.3	-1821.18	-0.3	-636.12	0	-781.72
6	7	22.80	-3032.61	126.13	2039.31	-2.85	-446.50	-0.3	-1663.86	-0.3	-629.55	0	-773.20
7	7	22.80	-2745.90	163.99	2299.09	-2.85	-73.15	-0.3	-1813.00	-0.3	-629.55	0	-773.20
7	8	28.35	-2732.05	350.31	882.01	-2.85	-946.18	-0.3	-904.30	-0.3	-506.44	0	-596.88
8	8	28.35	-3558.76	386.85	2219.43	-2.85	-36.99	-0.3	-1900.30	-0.3	-1014.00	0	-1143.52
8	9	31.13	-3557.44	433.68	1040.18	-2.85	-670.04	-0.3	-1497.09	-0.3	-862.42	0	-925.43
9	9	31.13	-5760.83	350.89	2004.48	-2.85	-829.86	-0.3	-2311.53	-0.3	-1544.97	0	-1671.97
9	10	33.90	-5764.90	413.50	942.60	-2.85	-1427.87	-0.3	-1855.57	-0.3	-1423.44	0	-1496.56
10	10	33.90	-5584.99	-504.39	2017.42	-2.85	-1106.55	-0.3	-1903.72	-0.3	-1435.86	0	-1598.25
10	11	34.90	-5587.08	-490.50	2539.99	-2.85	-877.71	-0.3	-1900.12	-0.3	-1529.86	0	-1733.38
11	11	34.90	-7772.53	-1270.05	2344.64	-2.85	-933.00	-0.3	-1410.38	-0.3	-993.03	0	-1111.16
11	12	35.90	-7764.54	-1299.27	3582.42	-3.088	-618.66	-0.3	-1406.41	-0.3	-1067.62	0	-1201.59
12	12	35.90	-7776.19	1038.97	3582.35	-3.088	-611.37	-0.3	-1399.08	-0.3	-1093.78	0	-1227.74
12	13	36.90	-7773.67	1034.46	2526.91	-3.325	-814.22	-0.3	-810.16	-0.3	-1015.51	0	-1129.33
13	13	36.90	-7165.19	229.42	6079.33	-3.325	-41.04	-0.3	-1850.02	-0.3	-1850.02	0	-2029.43
13	14	39.25	-7180.77	294.93	5474.05	-3.884	-183.15	-0.3	-1453.91	-0.3	-1453.91	0	-1560.28
14	14	39.25	-8348.47	-173.53	7664.79	-3.884	-60.31	-0.3	-1839.64	-0.3	-1839.64	0	-1988.58
14	15	41.60	-8365.34	-130.79	8059.47	-4.442	-14.03	-0.3	-1641.92	-0.3	-1641.92	0	-1759.82
15	15	41.60	-8313.33	956.35	8059.30	-4.442	-9.05	-0.3	-1636.91	-0.3	-1636.91	0	-1754.82
[illegible]	16	43.90	-8319.63	769.34	6053.70	-5	-147.93	-0.3	-1284.14	-0.3	-1284.14	0	-1358.66
[illegible]	16	43.90	-8176.67	1722.64	6052.33	-5	7.09	-0.3	-681.32	-0.3	-681.32	0	-725.26
[illegible]	17	46.45	-8208.17	1504.29	1940.77	-5	-274.05	-0.3	-494.80	-0.3	-494.80	0	-508.89
[illegible]	17	46.45	-8164.25	-1483.77	1928.17	-5	-272.74	-0.3	-492.05	-0.3	-492.05	0	-506.05
17	18	49.00	-8153.16	-1704.03	6036.12	-5	7.15	-0.3	-679.42	-0.3	-679.42	0	-723.24
18	18	49.00	-8295.31	-753.40	6037.19	-5	-147.39	-0.3	-1280.50	-0.3	-1280.50	0	-1352.82
18	19	51.30	-8307.48	-939.71	8044.43	-4.442	-9.95	-0.3	-1634.80	-0.3	-1634.80	0	-1752.49
19	19	51.30	-8358.73	146.48	8043.13	-4.442	-14.99	-0.3	-1639.58	-0.3	-1639.58	0	-1757.25
19	20	53.65	-8354.13	219.13	7633.08	-3.884	-64.68	-0.3	-1836.65	-0.3	-1836.65	0	-1984.98
20	20	53.65	-7185.75	-245.01	5442.81	-3.884	-187.39	-0.3	-1450.90	-0.3	-1450.90	0	-1556.66
20	21	56.00	-7182.60	-216.50	5994.01	-3.325	-57.93	-0.3	-1841.53	-0.3	-1841.53	0	-2018.42
21	21	56.00	-7835.01	-1011.86	2396.54	-3.325	-838.13	-0.3	-799.47	-0.3	-1010.47	0	-1120.94
21	22	57.00	-7836.97	-1005.48	3422.95	-3.088	-644.21	-0.3	-1380.98	-0.3	-1085.62	0	-1214.81
22	22	57.00	-7816.92	1345.68	3422.34	-3.088	-650.54	-0.3	-1387.09	-0.3	-1058.44	0	-1187.60
22	23	58.00	-7817.36	1342.47	2125.66	-2.85	-981.11	-0.3	-1381.73	-0.3	-973.59	0	-1083.14
23	23	58.00	-5640.91	555.21	2321.29	-2.85	-986.49	-0.3	-1865.56	-0.3	-1520.31	0	-1709.05
23	24	59.00	-5639.03	565.88	1738.95	-2.85	-1245.13	-0.3	-1857.28	-0.3	-1417.46	0	-1561.17
24	24	59.00	-5846.26	-519.41	604.93	-2.85	-1603.44	-0.3	-1806.38	-0.3	-1402.71	0	-1453.20
24	25	63.11	-5841.60	-461.52	2579.19	-2.85	-530.32	-0.3	-2519.79	-0.3	-1648.96	0	-1808.23
25	25	63.11	-2621.01	-366.95	-136.72	-2.85	-1371.01	-0.3	-639.44	-0.3	-362.00	0	-384.74
25	26	67.23	-2632.29	-329.06	1441.69	-2.85	-419.37	-0.3	-1570.20	-0.3	-509.99	0	-597.09
26	26	67.23	-2903.16	-276.01	847.20	-2.85	-1046.13	-0.3	-1001.25	-0.3	-509.99	0	-597.09
26	27	71.34	-2911.17	-138.15	1689.97	-2.85	-565.40	-0.3	-1403.45	-0.3	-603.27	0	-730.82
27	27	71.34	-3024.49	-138.15	1586.06	-2.85	-713.94	-0.3	-1342.99	-0.3	-603.27	0	-730.82
27	28	75.45	-3027.20	-0.08	1869.07	-2.85	-553.64	-0.3	-1476.50	-0.3	-634.46	0	-775.73
28	28	75.45	-3027.20	-0.08	1869.07	-2.85	-553.64	-0.3	-1476.50	-0.3	-634.46	0	-775.73
28	29	79.56	-3029.84	137.99	1581.87	-2.85	-720.40	-0.3	-1340.97	-0.3	-603.27	0	-730.83
29	29	79.56	-2916.53	137.99	1685.78	-2.85	-571.87	-0.3	-1401.43	-0.3	-603.27	0	-730.83
29	30	83.68	-2909.58	275.85	842.78	-2.85	-1053.42	-0.3	-999.49	-0.3	-510.02	0	-597.13
30	30	83.68	-2638.69	329.58	1437.28	-2.85	-426.65	-0.3	-1568.42	-0.3	-510.02	0	-597.13
30	31	87.79	-2627.47	367.48	-143.31	-2.85	-1380.06	-0.3	-634.97	-0.3	-362.03	0	-384.78
31	31	87.79	-5849.51	462.16	2571.10	-2.85	-536.58	-0.3	-2520.61	-0.3	-1649.65	0	-1808.39
31	32	91.90	-5854.29	520.05	594.06	-2.85	-1611.10	-0.3	-1806.74	-0.3	-1403.02	0	-1452.78
[illegible]	32	91.90	-5646.85	-567.71	1728.07	-2.85	-1252.73	-0.3	-1857.58	-0.3	-1417.72	0	-1560.70
[illegible]	33	92.90	-5648.77	-557.06	2312.13	-2.85	-993.26	-0.3	-1866.18	-0.3	-1520.83	0	-1708.97
[illegible]	33	92.90	-7824.80	-1345.64	2116.78	-2.85	-983.95	-0.3	-1381.55	-0.3	-973.29	0	-1082.48
33	34	93.90	-7824.42	-1348.84	3416.82	-3.088	-652.39	-0.3	-1387.34	-0.3	-1058.56	0	-1187.55
34	34	93.90	-7845.04	1004.48	3416.20	-3.088	-646.34	-0.3	-1381.08	-0.3	-1085.67	0	-1214.64
34	35	94.90	-7843.10	1010.87	2392.01	-3.325	-839.61	-0.3	-800.06	-0.3	-1010.66	0	-1120.99
35	35	94.90	-7182.57	216.29	5996.97	-3.325	-57.43	-0.3	-1841.91	-0.3	-1841.91	0	-2018.88
35	36	97.25	-7185.72	244.81	5446.23	-3.884	-186.98	-0.3	-1451.29	-0.3	-1451.29	0	-1557.12
36	36	97.25	-8354.09	-219.35	7636.60	-3.884	-64.27	-0.3	-1837.05	-0.3	-1837.05	0	-1985.44
36	37	99.60	-8358.70	-146.67	8048.25	-4.442	-14.49	-0.3	-1640.11	-0.3	-1640.11	0	-1757.86
37	37	99.60	-8307.48	939.52	8046.95	-4.442	-9.70	-0.3	-1635.06	-0.3	-1635.06	0	-1752.79
37	38	101.90	-8295.31	753.21	6040.36	-5	-147.11	-0.3	-1280.81	-0.3	-1280.81	0	-1353.17
38	38	101.90	-8153.17	1703.83	6041.46	-5	7.51	-0.3	-679.66	-0.3	-679.66	0	-723.52
38	39	104.45	-8164.26	1483.59	1932.31	-5	-272.46	-0.3	-492.24	-0.3	-492.24	0	-506.27
39	39	104.45	-8208.18	-1504.19	1946.27	-5	-273.68	-0.3	-495.05	-0.3	-495.05	0	-509.18
39	40	107.00	-8176.68	-1722.53	6058.33	-5	7.49	-0.3	-681.60	-0.3	-681.60	0	-725.58
40	40	107.00	-8319.63	-769.23	6056.93	-5	-147.64	-0.3	-1284.45	-0.3	-1284.45	0	-1357.01
40	41	109.30	-8313.33	-956.24	8063.83	-4.442	-8.61	-0.3	-1637.38	-0.3	-1637.38	0	-1755.35
41	41	109.30	-8365.31	130.90	8063.67	-4.442	-13.61	-0.3	-1642.35	-0.3	-1642.35	0	-1760.32
41	42	111.65	-8348.45	173.63	7668.37	-3.884	-59.89	-0.3	-1840.05	-0.3	-1840.05	0	-1989.06
42	42	111.65	-7180.76	-294.82	5478.47	-3.884	-182.63	-0.3	-1454.42	-0.3	-1454.42	0	-1560.88
42	43	114.00	-7165.18	-229.31	6083.65	-3.325	-40.31	-0.3	-1850.58	-0.3	-1850.58	0	-2030.12
43	43	114.00	-7773.66	-1034.36	2529.39	-3.325	-813.95	-0.3	-810.23	-0.3	-1015.92	0	-1129.84
43	44	115.00	-7776.18	-1038.87	3585.96	-3.088	-610.78	-0.3	-1399.55	-0.3	-1094.27	0	-1228.35
44	44	115.00	-7764.51	1299.36	3585.90	-3.088	-618.10	-0.3	-1406.82	-0.3	-1068.11	0	-1202.19
44	45	116.00	-7772.49	1270.14	2347.71	-2.85	-932.41	-0.3	-1410.74	-0.3	-993.50	0	-1111.76
45	45	116.00	-5587.06	490.61	2543.34	-2.85	-876.05	-0.3	-1900.72	-0.3	-1530.37	0	-1734.10
45	46	117.00	-5584.96	504.49	2020.64	-2.85	-1104.96	-0.3	-1904.30	-0.3	-1436.34	0	-1598.95
46	46	117.00	-5764.90	-413.40	945.83	-2.85	-1426.28	-0.3	-1856.15	-0.3	-1423.93	0	-1497.27
46	47	119.78	-5760.83	-350.80	2007.45	-2.85	-826.39	-0.3	-2312.06	-0.3	-1545.42	0	-1672.61
47	47	119.78	-3557.45	-433.59	1042.56	-2.85	-668.87	-0.3	-1497.52	-0.3	-862.78	0	-925.95
47	48	122.55	-3558.77	-386.77	2221.60	-2.85	-35.92	-0.3	-1900.70	-0.3	-1014.33	0	-1144.00
48	48	122.55	-2732.05	-350.22	884.19	-2.85	-944.42	-0.3	-907.17	-0.3	-506.41	0	-596.84
[illegible]	49	128.10	-2745.90	-163.90	2300.90	-2.85	-71.69	-0.3	-1815.31	-0.3	-629.54	0	-773.18
[illegible]	49	128.10	-3032.61	-126.05	2041.13	-2.85	-445.05	-0.3	-1666.18	-0.3	-629.54	0	-773.18
[illegible]	50	133.65	-3044.72	65.60	2190.25	-2.85	-341.09	-0.3	-1822.91	-0.3	-636.11	0	-781.71
[illegible]	50	133.65	-3044.72	65.60	2190.25	-2.85	-341.09	-0.3	-1822.91	-0.3	-636.11	0	-781.71
50	51	139.20	-3056.92	253.45	1297.45	-2.85	-834.60	-0.3	-1488.99	-0.3	-528.59	0	-625.97
51	51	139.20	-2490.34	253.45	1826.59	-2.85	-84.29	-0.3	-1803.47	-0.3	-528.53	0	-625.88
51	52	144.75	-2502.63	445.10	-125.55	-2.85	-1183.80	-0.3	-975.86	-0.3	-304.27	0	-302.05
52	52	144.75	-1733.42	445.10	1137.66	-2.85	-265.18	-0.3	-1087.75	-0.3	-322.31	0	-398.30
52	53	147.53	-1737.37	540.91	-232.81	-2.85	-1040.15	-0.3	-468.66	-0.3	-166.29	0	-171.43
53	53	147.53	-1737.37	540.91	-232.45	-2.85	-1039.97	-0.3	-468.73	-0.3	-166.34	0	-171.51
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.46
54	54	150.30	[illegible]	[illegible]	[illegible]	-2.85	-1974.13	-0.3	243.37	-0.3	18.24	0	94.49

[redacted]

Infrecuentes sin gradiente. Dominante IPF75B.ENV_IPF75B.MZ-

[illegible] ENV_TREN_GENERICO.MZ-

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	20.72	-2249.37	-2.85	-2346.56	-0.3	302.60	-0.3	22.73	0	116.12
2	2	0.60	-2059.05	-383.21	-2249.49	-2.85	-2336.94	-0.3	312.31	-0.3	22.75	0	116.14
2	3	3.38	-2054.21	-200.64	-1617.39	-2.85	-1901.28	-0.3	-237.34	-0.3	-8.98	0	70.16
3	3	3.38	-2054.21	-200.64	-1616.95	-2.85	-1901.06	-0.3	-237.42	-0.3	-9.05	0	70.07
3	4	6.15	-2049.38	-152.25	-1119.49	-2.85	-1552.87	-0.3	-687.05	-0.3	-31.35	0	37.67
4	4	6.15	-2974.07	-152.25	-2649.56	-2.85	-2655.53	-0.3	-582.93	-0.3	-9.25	0	152.94
4	5	11.70	-2959.06	-55.50	-2047.37	-2.85	-2214.55	-0.3	-1182.42	-0.3	-25.95	0	127.73
5	5	11.70	-3585.28	-55.50	-2633.12	-2.85	-3044.28	-0.3	-834.68	-0.3	-25.88	0	127.84
5	6	17.25	-3570.36	41.25	-2568.23	-2.85	-2952.59	-0.3	-1034.25	-0.3	-5.06	0	156.67
6	6	17.25	-3570.36	41.25	-2568.23	-2.85	-2952.59	-0.3	-1034.25	-0.3	-5.06	0	156.67
6	7	22.80	-3555.55	137.99	-3040.32	-2.85	-3210.06	-0.3	-833.86	-0.3	53.22	0	239.43
7	7	22.80	-3238.88	184.29	-2753.20	-2.85	-2797.54	-0.3	-998.82	-0.3	53.22	0	239.43
7	8	28.35	-3222.36	280.71	-4018.10	-2.85	-3603.94	-0.3	-83.64	-0.3	148.95	0	376.13
8	8	28.35	-4282.38	325.50	-2429.21	-2.85	-2557.79	-0.3	-1271.83	-0.3	-472.15	0	-292.85
8	9	31.13	-4280.76	422.31	-3395.10	-2.85	-3085.64	-0.3	-907.56	-0.3	-352.77	0	-121.16
9	9	31.13	-4889.35	340.87	-2251.50	-2.85	-2700.40	-0.3	-1282.88	-0.3	-675.46	0	-520.53
9	10	33.90	-4892.68	419.45	-3262.82	-2.85	-3273.43	-0.3	-835.46	-0.3	-561.48	0	-356.06
10	10	33.90	-4759.40	-335.21	-2383.43	-2.85	-3014.62	-0.3	-878.95	-0.3	-574.97	0	-442.58
10	11	34.90	-4768.01	-282.03	-2135.83	-2.85	-2923.08	-0.3	-827.13	-0.3	-628.93	0	-519.37
11	11	34.90	-6397.28	-922.22	-2228.13	-2.85	-1611.21	-0.3	-521.18	-0.3	-231.70	0	-168.11
11	12	35.90	-6417.47	-857.85	-1384.18	-3.088	-1235.93	-0.3	-533.74	-0.3	-316.27	0	-294.18
12	12	35.90	-6372.81	1066.97	-1384.23	-3.088	-1222.75	-0.3	-520.52	-0.3	-332.24	0	-310.14
12	13	36.90	-6376.22	1145.46	-2466.87	-3.325	-1320.59	-0.3	-55.83	-0.3	-291.42	0	-272.17
13	13	36.90	-5898.34	485.49	439.65	-3.325	-799.68	-0.3	-930.51	-0.3	-930.51	0	-943.48
13	14	39.25	-5916.24	581.59	-791.28	-3.884	-773.00	-0.3	-589.31	-0.3	-589.31	0	-573.93
14	14	39.25	-6871.38	198.81	1001.22	-3.884	-672.46	-0.3	-904.89	-0.3	-904.89	0	-924.34
14	15	41.60	-6897.90	339.44	379.26	-4.442	-624.78	-0.3	-701.38	-0.3	-701.38	0	-706.93
15	15	41.60	-6805.17	1233.31	379.18	-4.442	-615.89	-0.3	-692.48	-0.3	-692.48	0	-698.02
15	16	43.90	-6811.59	1175.45	-2378.40	-5	-787.13	-0.3	-340.73	-0.3	-340.73	0	-312.24
16	16	43.90	-6641.00	1952.49	-2379.58	-5	-490.31	-0.3	-219.65	-0.3	-219.65	0	-202.37
16	17	46.45	-6657.31	1887.03	-7237.54	-5	-821.45	-0.3	1.76	-0.3	1.76	0	54.31
17	17	46.45	-6616.43	-1945.39	-7242.40	-5	-819.76	-0.3	4.01	-0.3	4.01	0	56.59
17	18	49.00	-6619.47	-1977.40	-2237.65	-5	-479.59	-0.3	-225.08	-0.3	-225.08	0	-208.83
18	18	49.00	-6792.75	-1202.69	-2236.74	-5	-772.69	-0.3	-352.88	-0.3	-352.88	0	-326.08
18	19	51.30	-6801.44	-1260.68	623.77	-4.442	-591.59	-0.3	-717.59	-0.3	-717.59	0	-726.71
19	19	51.30	-6897.36	-367.11	622.69	-4.442	-600.91	-0.3	-726.68	-0.3	-726.68	0	-735.79
19	20	53.65	-6886.60	-252.25	1345.44	-3.884	-633.82	-0.3	-946.15	-0.3	-946.15	0	-972.29
20	20	53.65	-5931.82	-631.35	-446.55	-3.884	-734.34	-0.3	-630.67	-0.3	-630.67	0	-622.00
20	21	56.00	-5918.56	-520.74	873.48	-3.325	-729.89	-0.3	-989.80	-0.3	-989.80	0	-1015.58
21	21	56.00	-6430.43	-1173.25	-2069.91	-3.325	-1268.40	-0.3	-114.36	-0.3	-348.22	0	-338.79
21	22	57.00	-6428.00	-1105.08	-952.47	-3.088	-1156.48	-0.3	-587.49	-0.3	-399.86	0	-391.06
22	22	57.00	-6478.78	834.82	-952.97	-3.088	-1170.52	-0.3	-601.35	-0.3	-384.60	0	-375.79
22	23	58.00	-6460.47	893.87	-1766.30	-2.85	-1524.10	-0.3	-600.59	-0.3	-309.69	0	-263.82
23	23	58.00	-4826.98	242.58	-1673.77	-2.85	-2700.64	-0.3	-920.91	-0.3	-721.54	0	-642.51
23	24	59.00	-4818.70	297.61	-1879.40	-2.85	-2772.05	-0.3	-978.92	-0.3	-674.23	0	-575.27
24	24	59.00	-4958.80	-595.86	-2807.23	-2.85	-3056.65	-0.3	-928.70	-0.3	-655.04	0	-479.82
24	25	63.11	-4955.00	-444.83	-678.91	-2.85	-1908.01	-0.3	-1670.03	-0.3	-924.87	0	-868.72
25	25	63.11	-3101.61	-388.90	-3426.48	-2.85	-3213.33	-0.3	-153.75	-0.3	54.75	0	245.61
25	26	67.23	-3114.99	-218.25	-2353.17	-2.85	-2496.81	-0.3	-1044.77	-0.3	-9.68	0	153.72
26	26	67.23	-3414.32	-153.36	-3010.24	-2.85	-3189.51	-0.3	-415.91	-0.3	-9.68	0	153.72
26	27	71.34	-3424.11	-81.68	-2542.02	-2.85	-2893.80	-0.3	-751.04	-0.3	-46.48	0	101.44
27	27	71.34	-3549.35	-81.68	-2656.87	-2.85	-3057.97	-0.3	-684.21	-0.3	-46.48	0	101.44
27	28	75.45	-3552.66	-9.99	-2471.76	-2.85	-2946.31	-0.3	-799.99	-0.3	-62.89	0	77.82
28	28	75.45	-3552.66	-9.99	-2471.76	-2.85	-2946.31	-0.3	-799.99	-0.3	-62.89	0	77.82
28	29	79.56	-3555.90	81.48	-2662.00	-2.85	-3065.88	-0.3	-681.73	-0.3	-46.48	0	101.43
29	29	79.56	-3430.65	81.48	-2547.15	-2.85	-2901.71	-0.3	-748.56	-0.3	-46.48	0	101.43
29	30	83.68	-3422.16	153.16	-3015.75	-2.85	-3198.48	-0.3	-413.73	-0.3	-9.69	0	153.71
30	30	83.68	-3122.81	218.87	-2358.68	-2.85	-2505.77	-0.3	-1042.58	-0.3	-9.69	0	153.71
30	31	87.79	-3109.51	389.53	-3434.71	-2.85	-3224.49	-0.3	-148.26	-0.3	54.74	0	245.60
31	31	87.79	-4961.47	445.36	-685.64	-2.85	-1913.18	-0.3	-1670.69	-0.3	-925.43	0	-868.82
31	32	91.90	-4965.37	596.40	-2816.28	-2.85	-3063.00	-0.3	-928.97	-0.3	-655.27	0	-479.44
32	32	91.90	-4825.10	-299.11	-1888.45	-2.85	-2778.35	-0.3	-979.14	-0.3	-674.42	0	-574.86
32	33	92.90	-4833.42	-244.09	-1681.36	-2.85	-2706.24	-0.3	-921.40	-0.3	-721.95	0	-642.42
33	33	92.90	-6466.57	-896.44	-1773.67	-2.85	-1526.45	-0.3	-600.43	-0.3	-309.43	0	-263.27
33	34	93.90	-6484.92	-837.41	-957.38	-3.088	-1172.01	-0.3	-601.58	-0.3	-384.71	0	-375.75
34	34	93.90	-6434.60	1104.27	-957.88	-3.088	-1158.20	-0.3	-587.59	-0.3	-399.91	0	-390.93
34	35	94.90	-6437.05	1172.44	-2073.45	-3.325	-1269.59	-0.3	-114.88	-0.3	-348.39	0	-338.85
35	35	94.90	-5918.54	520.58	876.06	-3.325	-729.45	-0.3	-990.13	-0.3	-990.13	0	-1015.99
35	36	97.25	-5931.79	631.18	-443.69	-3.884	-734.00	-0.3	-631.00	-0.3	-631.00	0	-622.38
36	36	97.25	-6886.57	252.08	1348.48	-3.884	-633.45	-0.3	-946.50	-0.3	-946.50	0	-972.70
36	37	99.60	-6897.34	366.94	626.97	-4.442	-600.48	-0.3	-727.12	-0.3	-727.12	0	-736.30
37	37	99.60	-6801.44	1260.53	625.89	-4.442	-591.39	-0.3	-717.81	-0.3	-717.81	0	-726.96
37	38	101.90	-6792.75	1202.54	-2234.13	-5	-772.45	-0.3	-353.13	-0.3	-353.13	0	-326.37
38	38	101.90	-6619.48	1977.24	-2233.19	-5	-479.29	-0.3	-225.28	-0.3	-225.28	0	-209.07
38	39	104.45	-6616.44	1945.24	-7239.50	-5	-819.56	-0.3	3.88	-0.3	3.88	0	56.44
39	39	104.45	-6657.32	-1886.96	-7232.77	-5	-821.13	-0.3	1.55	-0.3	1.55	0	54.06
39	40	107.00	-6641.01	-1952.40	-2374.71	-5	-489.98	-0.3	-219.87	-0.3	-219.87	0	-202.63
40	40	107.00	-6811.59	-1175.36	-2375.92	-5	-786.90	-0.3	-340.97	-0.3	-340.97	0	-312.51
40	41	109.30	-6805.17	-1233.22	382.73	-4.442	-615.54	-0.3	-692.85	-0.3	-692.85	0	-698.45
41	41	109.30	-6897.88	-339.35	382.65	-4.442	-624.44	-0.3	-701.74	-0.3	-701.74	0	-707.33
41	42	111.65	-6871.36	-198.73	1003.92	-3.884	-672.14	-0.3	-905.19	-0.3	-905.19	0	-924.70
42	42	111.65	-5916.23	-581.50	-787.75	-3.884	-772.58	-0.3	-589.71	-0.3	-589.71	0	-574.41
42	43	114.00	-5898.33	-485.40	443.00	-3.325	-799.12	-0.3	-930.94	-0.3	-930.94	0	-944.01
43	43	114.00	-6376.21	-1145.38	-2465.04	-3.325	-1320.41	-0.3	-55.84	-0.3	-291.75	0	-272.57
43	44	115.00	-6372.80	-1066.89	-1381.40	-3.088	-1222.29	-0.3	-520.88	-0.3	-332.63	0	-310.62
44	44	115.00	-6417.45	857.92	-1381.46	-3.088	-1235.49	-0.3	-534.05	-0.3	-316.66	0	-294.65
44	45	116.00	-6397.25	922.30	-2225.49	-2.85	-1610.70	-0.3	-521.50	-0.3	-232.11	0	-168.63
45	45	116.00	-4767.99	282.12	-2132.96	-2.85	-2921.66	-0.3	-827.64	-0.3	-629.37	0	-520.00
45	46	117.00	-4759.39	335.30	-2380.65	-2.85	-3013.25	-0.3	-879.45	-0.3	-575.39	0	-443.19
46	46	117.00	-4892.68	-419.37	-3260.04	-2.85	-3272.06	-0.3	-835.96	-0.3	-561.90	0	-356.66
46	47	119.78	-4889.35	-340.79	-2248.95	-2.85	-2699.14	-0.3	-1283.33	-0.3	-675.85	0	-521.08
47	47	119.78	-4280.78	-422.21	-3391.98	-2.85	-3084.11	-0.3	-908.12	-0.3	-353.25	0	-121.84
47	48	122.55	-4282.39	-325.41	-2426.37	-2.85	-2556.39	-0.3	-1272.35	-0.3	-472.58	0	-293.48
48	48	122.55	-3222.36	-280.60	-4015.25	-2.85	-3601.69	-0.3	-87.18	-0.3	148.96	0	376.14
48	49	128.10	-3238.88	-184.18	-2750.92	-2.85	-2795.73	-0.3	-1001.66	-0.3	53.23	0	239.44
49	49	128.10	-3555.55	-137.89	-3038.04	-2.85	-3208.26	-0.3	-836.70	-0.3	53.23	0	239.44
49	50	133.65	-3570.36	-41.15	-2566.53	-2.85	-2951.24	-0.3	-1036.38	-0.3	-5.05	0	156.67
50	50	133.65	-3570.36	-41.15	-2566.53	-2.85	-2951.24	-0.3	-1036.38	-0.3	-5.05	0	156.67
50	51	139.20	-3585.28	55.60	-2631.52	-2.85	-3043.16	-0.3	-836.18	-0.3	-25.95	0	127.74
51	51	139.20	-2959.06	55.60	-2046.72	-2.85	-2213.89	-0.3	-1183.74	-0.3	-25.87	0	127.84
51	52	144.75	-2974.07	152.35	-2648.78	-2.85	-2654.98	-0.3	-583.67	-0.3	-9.28	0	152.89
52	52	144.75	-2049.38	152.35	-1119.04	-2.85	-1552.48	-0.3	-687.73	-0.3	-31.33	0	37.70
52	53	147.53	-2054.21	200.74	-1617.10	-2.85	-1901.05	-0.3	-237.70	-0.3	-8.98	0	70.17
53	53	147.53	-2054.21	200.74	-1616.66	-2.85	-1900.83	-0.3	-237.78	-0.3	-9.05	0	70.07
53	54	150.30	-2059.05	393.99	-2249.37	-2.85	-2336.88	-0.3	312.29	-0.3	22.73	0	116.12
54	54	150.30	-2075.45	-20.72	-2249.49	-2.85	-2346.62	-0.3	302.62	-0.3	22.75	0	116.14

[redacted]

Infrecuentes con gradiente. Dominante IPF75B.ENV_IPF75B.MZ+

[1; 1]ppropi2 + [1; 1]ppvtot + [1; 1]ppcontrol + [1; 1]PPpretosa + [1; 1]pplosa1 + [1; 1]dosbloques + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]horCM + [.95; 1.05]PRET + [.9; 1.1]PRETENSADOS + [0; 1]IPF75B.ENV_IPF75B.MZ+ + [0; .4]acpasos.ENV_TREN_GENERICO.MZ+ + [0; .6]GRADIENTE

Coef. acc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.06	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-545.54	-219.99	-2.85	-1033.92	-0.3	-470.71	-0.3	-168.27	0	-174.28
3	3	3.38	-1737.37	-545.54	-219.63	-2.85	-1033.74	-0.3	-470.78	-0.3	-168.33	0	-174.36
3	4	6.15	-1733.42	-449.72	1163.39	-2.85	-252.66	-0.3	-1071.88	-0.3	-326.28	0	-402.02
4	4	6.15	-2502.63	-449.72	-100.09	-2.85	-1171.42	-0.3	-979.94	-0.3	-308.20	0	-307.71
4	5	11.70	-2490.34	-258.08	1878.25	-2.85	-59.16	-0.3	-1811.75	-0.3	-536.51	0	-637.38
5	5	11.70	-3056.92	-258.08	1348.33	-2.85	-809.65	-0.3	-1497.14	-0.3	-536.46	0	-637.29
5	6	17.25	-3044.72	-70.22	2267.22	-2.85	-303.66	-0.3	-1835.24	-0.3	-648.00	0	-798.84
6	6	17.25	-3044.72	-70.22	2267.22	-2.85	-303.66	-0.3	-1835.24	-0.3	-648.00	0	-798.84
6	7	22.80	-3032.61	121.42	2143.74	-2.85	-395.15	-0.3	-1682.62	-0.3	-645.40	0	-796.02
7	7	22.80	-2745.90	159.28	2403.52	-2.85	-21.79	-0.3	-1831.75	-0.3	-645.40	0	-796.02
7	8	28.35	-2732.05	345.60	1012.55	-2.85	-881.99	-0.3	-927.75	-0.3	-526.25	0	-625.40
8	8	28.35	-3558.76	382.15	2349.96	-2.85	27.21	-0.3	-1923.75	-0.3	-1033.81	0	-1172.04
8	9	31.13	-3557.44	428.97	1183.77	-2.85	-599.42	-0.3	-1522.88	-0.3	-884.21	0	-956.80
9	9	31.13	-5760.83	346.19	2148.07	-2.85	-759.24	-0.3	-2337.32	-0.3	-1566.76	0	-1703.34
9	10	33.90	-5764.90	408.79	1099.25	-2.85	-1350.83	-0.3	-1883.70	-0.3	-1447.21	0	-1530.79
10	10	33.90	-5584.03	-509.00	2174.06	-2.85	-1029.25	-0.3	-1931.58	-0.3	-1459.40	0	-1632.24
10	11	34.90	-5586.13	-495.11	2701.34	-2.85	-798.09	-0.3	-1928.83	-0.3	-1554.11	0	-1768.40
11	11	34.90	-7770.81	-1274.43	2505.99	-2.85	-900.02	-0.3	-1434.83	-0.3	-1015.65	0	-1140.02
11	12	35.90	-7762.82	-1303.65	3748.47	-3.088	-590.80	-0.3	-1429.86	-0.3	-1089.32	0	-1228.39
12	12	35.90	-7775.73	1034.29	3748.41	-3.088	-583.68	-0.3	-1422.69	-0.3	-1115.62	0	-1254.69
12	13	36.90	-7773.21	1029.78	2697.67	-3.325	-789.78	-0.3	-832.45	-0.3	-1036.13	0	-1154.25
13	13	36.90	-7164.45	224.77	6250.08	-3.325	-12.28	-0.3	-1872.08	-0.3	-1872.08	0	-2056.52
13	14	39.25	-7180.03	290.29	5655.86	-3.884	-161.73	-0.3	-1474.70	-0.3	-1474.70	0	-1584.60
14	14	39.25	-8347.79	-178.18	7846.60	-3.884	-38.90	-0.3	-1860.44	-0.3	-1860.44	0	-2012.91
14	15	41.60	-8364.65	-135.45	8252.33	-4.442	4.91	-0.3	-1661.94	-0.3	-1661.94	0	-1782.66
15	15	41.60	-8313.25	951.65	8252.16	-4.442	9.83	-0.3	-1656.99	-0.3	-1656.99	0	-1777.71
[illegible]	16	43.90	-8319.56	764.63	6257.38	-5	-129.43	-0.3	-1303.87	-0.3	-1303.87	0	-1378.83
[illegible]	16	43.90	-8177.14	1717.96	6256.02	-5	20.91	-0.3	-690.66	-0.3	-690.66	0	-736.08
[illegible]	17	46.45	-8208.64	1499.61	2156.45	-5	-259.41	-0.3	-504.69	-0.3	-504.69	0	-520.35
[illegible]	17	46.45	-8164.25	-1483.77	2143.85	-5	-258.07	-0.3	-501.92	-0.3	-501.92	0	-517.48
17	18	49.00	-8153.16	-1704.03	6251.80	-5	21.81	-0.3	-689.28	-0.3	-689.28	0	-734.67
18	18	49.00	-8295.31	-753.40	6252.87	-5	-127.81	-0.3	-1301.40	-0.3	-1301.40	0	-1376.31
18	19	51.30	-8307.48	-939.71	8260.11	-4.442	11.16	-0.3	-1657.26	-0.3	-1657.26	0	-1778.10
19	19	51.30	-8358.73	146.48	8258.81	-4.442	6.11	-0.3	-1662.04	-0.3	-1662.04	0	-1782.86
19	20	53.65	-8354.13	219.13	7848.77	-3.884	-39.37	-0.3	-1861.41	-0.3	-1861.41	0	-2013.93
20	20	53.65	-7185.75	-245.01	5658.49	-3.884	-162.08	-0.3	-1475.66	-0.3	-1475.66	0	-1585.61
20	21	56.00	-7182.60	-216.50	6209.70	-3.325	-21.75	-0.3	-1869.52	-0.3	-1869.52	0	-2052.77
21	21	56.00	-7835.01	-1011.86	2612.22	-3.325	-807.33	-0.3	-827.70	-0.3	-1036.58	0	-1152.47
21	22	57.00	-7836.97	-1005.48	3638.64	-3.088	-608.32	-0.3	-1411.72	-0.3	-1114.06	0	-1249.88
22	22	57.00	-7816.92	1345.68	3638.02	-3.088	-614.65	-0.3	-1417.84	-0.3	-1086.88	0	-1222.68
22	23	58.00	-7817.36	1342.47	2341.34	-2.85	-937.36	-0.3	-1414.74	-0.3	-1004.13	0	-1122.04
23	23	58.00	-5640.91	555.21	2536.97	-2.85	-880.42	-0.3	-1904.30	-0.3	-1553.04	0	-1756.18
23	24	59.00	-5639.03	565.88	1954.63	-2.85	-1139.07	-0.3	-1896.02	-0.3	-1450.19	0	-1608.29
24	24	59.00	-5846.26	-519.41	820.61	-2.85	-1497.38	-0.3	-1845.11	-0.3	-1435.44	0	-1500.33
24	25	63.11	-5841.60	-461.52	2794.87	-2.85	-424.25	-0.3	-2558.52	-0.3	-1681.69	0	-1855.36
25	25	63.11	-2621.01	-366.95	78.96	-2.85	-1264.95	-0.3	-678.18	-0.3	-394.73	0	-431.86
25	26	67.23	-2632.29	-329.06	1657.37	-2.85	-313.30	-0.3	-1608.93	-0.3	-542.72	0	-644.22
26	26	67.23	-2903.16	-276.01	1062.88	-2.85	-940.06	-0.3	-1039.99	-0.3	-542.72	0	-644.22
26	27	71.34	-2911.17	-138.15	1905.65	-2.85	-459.34	-0.3	-1442.19	-0.3	-636.00	0	-777.94
27	27	71.34	-3024.49	-138.15	1801.74	-2.85	-607.87	-0.3	-1381.73	-0.3	-636.00	0	-777.94
27	28	75.45	-3027.20	-0.08	2084.75	-2.85	-447.57	-0.3	-1515.23	-0.3	-667.19	0	-822.85
28	28	75.45	-3027.20	-0.08	2084.75	-2.85	-447.57	-0.3	-1515.23	-0.3	-667.19	0	-822.85
28	29	79.56	-3029.84	137.99	1797.55	-2.85	-614.34	-0.3	-1379.70	-0.3	-636.00	0	-777.95
29	29	79.56	-2916.53	137.99	1901.46	-2.85	-465.81	-0.3	-1440.17	-0.3	-636.00	0	-777.95
29	30	83.68	-2909.58	275.85	1058.47	-2.85	-947.36	-0.3	-1038.22	-0.3	-542.75	0	-644.25
30	30	83.68	-2638.69	329.58	1652.96	-2.85	-320.59	-0.3	-1607.16	-0.3	-542.75	0	-644.25
30	31	87.79	-2627.47	367.48	72.37	-2.85	-1274.00	-0.3	-673.71	-0.3	-394.76	0	-431.90
31	31	87.79	-5849.51	462.16	2786.78	-2.85	-430.52	-0.3	-2559.35	-0.3	-1682.38	0	-1855.52
31	32	91.90	-5854.29	520.05	809.74	-2.85	-1505.04	-0.3	-1845.48	-0.3	-1435.75	0	-1499.91
[illegible]	32	91.90	-5646.85	-567.71	1943.75	-2.85	-1146.67	-0.3	-1896.32	-0.3	-1450.45	0	-1607.82
[illegible]	33	92.90	-5648.77	-557.06	2527.81	-2.85	-887.19	-0.3	-1904.92	-0.3	-1553.56	0	-1756.09
[illegible]	33	92.90	-7824.80	-1345.64	2332.46	-2.85	-940.20	-0.3	-1414.56	-0.3	-1003.82	0	-1121.38
33	34	93.90	-7824.42	-1348.84	3632.50	-3.088	-616.49	-0.3	-1418.08	-0.3	-1087.00	0	-1222.62
34	34	93.90	-7845.04	1004.48	3631.89	-3.088	-610.45	-0.3	-1411.82	-0.3	-1114.11	0	-1249.71
34	35	94.90	-7843.10	1010.87	2607.69	-3.325	-808.81	-0.3	-828.28	-0.3	-1036.77	0	-1152.52
35	35	94.90	-7182.57	216.29	6212.65	-3.325	-21.25	-0.3	-1869.90	-0.3	-1869.90	0	-2053.24
35	36	97.25	-7185.72	244.81	5661.91	-3.884	-161.67	-0.3	-1476.05	-0.3	-1476.05	0	-1586.07
36	36	97.25	-8354.09	-219.35	7852.28	-3.884	-38.96	-0.3	-1861.81	-0.3	-1861.81	0	-2014.40
36	37	99.60	-8358.70	-146.67	8263.93	-4.442	6.62	-0.3	-1662.57	-0.3	-1662.57	0	-1783.47
37	37	99.60	-8307.48	939.52	8262.63	-4.442	11.40	-0.3	-1657.52	-0.3	-1657.52	0	-1778.40
37	38	101.90	-8295.31	753.21	6256.04	-5	-127.52	-0.3	-1301.70	-0.3	-1301.70	0	-1376.65
38	38	101.90	-8153.17	1703.83	6257.15	-5	22.18	-0.3	-689.53	-0.3	-689.53	0	-734.95
38	39	104.45	-8164.26	1483.59	2147.99	-5	-257.79	-0.3	-502.11	-0.3	-502.11	0	-517.70
39	39	104.45	-8208.65	-1499.51	2161.95	-5	-259.04	-0.3	-504.94	-0.3	-504.94	0	-520.64
39	40	107.00	-8177.15	-1717.85	6262.02	-5	21.32	-0.3	-690.94	-0.3	-690.94	0	-736.40
40	40	107.00	-8319.56	-764.52	6260.62	-5	-129.14	-0.3	-1304.18	-0.3	-1304.18	0	-1379.18
40	41	109.30	-8313.25	-951.54	8256.70	-4.442	10.27	-0.3	-1657.46	-0.3	-1657.46	0	-1778.25
41	41	109.30	-8364.63	135.56	8256.53	-4.442	5.32	-0.3	-1662.37	-0.3	-1662.37	0	-1783.16
41	42	111.65	-8347.77	178.28	7850.18	-3.884	-38.48	-0.3	-1860.84	-0.3	-1860.84	0	-2013.39
42	42	111.65	-7180.02	-290.18	5660.28	-3.884	-161.21	-0.3	-1475.21	-0.3	-1475.21	0	-1585.20
42	43	114.00	-7164.43	-224.66	6254.41	-3.325	-11.55	-0.3	-1872.64	-0.3	-1872.64	0	-2057.21
43	43	114.00	-7773.20	-1029.68	2700.15	-3.325	-789.51	-0.3	-832.53	-0.3	-1036.55	0	-1154.75
43	44	115.00	-7775.72	-1034.19	3752.02	-3.088	-583.09	-0.3	-1423.16	-0.3	-1116.11	0	-1255.29
44	44	115.00	-7762.79	1303.73	3751.95	-3.088	-590.25	-0.3	-1430.27	-0.3	-1089.81	0	-1228.99
44	45	116.00	-7770.77	1274.51	2509.06	-2.85	-899.43	-0.3	-1435.18	-0.3	-1016.12	0	-1140.62
45	45	116.00	-5586.10	495.22	2704.69	-2.85	-796.43	-0.3	-1929.42	-0.3	-1554.62	0	-1769.13
45	46	117.00	-5584.01	509.10	2177.29	-2.85	-1027.65	-0.3	-1932.16	-0.3	-1459.88	0	-1632.94
46	46	117.00	-5764.90	-408.69	1102.48	-2.85	-1349.25	-0.3	-1884.28	-0.3	-1447.71	0	-1531.50
46	47	119.78	-5760.83	-346.09	2151.04	-2.85	-757.78	-0.3	-2337.85	-0.3	-1567.21	0	-1703.99
47	47	119.78	-3557.45	-428.89	1186.16	-2.85	-598.26	-0.3	-1523.31	-0.3	-884.57	0	-957.32
47	48	122.55	-3558.77	-382.07	2352.14	-2.85	28.27	-0.3	-1924.14	-0.3	-1034.14	0	-1172.52
48	48	122.55	-2732.05	-345.51	1014.73	-2.85	-880.23	-0.3	-930.62	-0.3	-526.22	0	-625.36
[illegible]	49	128.10	-2745.90	-159.19	2405.33	-2.85	-20.34	-0.3	-1834.07	-0.3	-645.39	0	-796.00
[illegible]	49	128.10	-3032.61	-121.34	2145.56	-2.85	-393.70	-0.3	-1684.93	-0.3	-645.39	0	-796.00
[illegible]	50	133.65	-3044.72	70.30	2268.57	-2.85	-302.58	-0.3	-1836.97	-0.3	-647.99	0	-798.82
[illegible]	50	133.65	-3044.72	70.30	2268.57	-2.85	-302.58	-0.3	-1836.97	-0.3	-647.99	0	-798.62
50	51	139.20	-3056.92	258.16	1349.67	-2.85	-808.92	-0.3	-1498.37	-0.3	-536.51	0	-637.38
51	51	139.20	-2490.34	258.16	1878.81	-2.85	-58.61	-0.3	-1812.84	-0.3	-536.46	0	-637.29
51	52	144.75	-2502.63	449.80	-99.44	-2.85	-1170.96	-0.3	-980.55	-0.3	-308.23	0	-307.75
52	52	144.75	-1733.42	449.80	1163.77	-2.85	-252.34	-0.3	-1072.44	-0.3	-326.27	0	-402.00
52	53	147.53	-1737.37	545.62	-219.75	-2.85	-1033.73	-0.3	-471.01	-0.3	-168.27	0	-174.28
53	53	147.53	-1737.37	545.62	-219.39	-2.85	-1033.55	-0.3	-471.07	-0.3	-168.33	0	-174.36
53	54	150.30	-1741.33	292.18	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.46
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-2.85	-1974.13	-0.3	243.37	-0.3	18.24	0	94.49

[redacted]

Infrecuentes con gradiente. Dominante IPF75B.ENV_IPF75B.MZ-

[1; 1]ppropi2 + [1; 1]ppvtot + [1; 1]ppcontrol + [1; 1]PPpretosa + [1; 1]pplosa1 + [1; 1]dosbloques + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]horCM + [.95; 1.05]PRET + [.9; 1.1]PRETENSADOS + [0; 1]IPF75B.ENV_IPF75B.MZ- + [0; .4]acpasos.ENV_TREN_GENERICO.MZ- + [0; .6]GRADIENTE

Coef. acc:

						Fibra	InfCajón	Fibra	SupCajón	Fibra	InfLosa	Fibra	SupLosa
Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)	y fibra	sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.08	0	115.24
1	2	0.60	-2075.45	20.72	-2249.37	-2.85	-2346.56	-0.3	302.60	-0.3	22.73	0	116.12
2	2	0.60	-2059.05	-383.21	-2249.49	-2.85	-2336.94	-0.3	312.31	-0.3	22.75	0	116.14
2	3	3.38	-2054.21	-200.64	-1617.39	-2.85	-1901.28	-0.3	-237.34	-0.3	-8.98	0	70.16
3	3	3.38	-2054.21	-200.64	-1616.95	-2.85	-1901.06	-0.3	-237.42	-0.3	-9.05	0	70.07
3	4	6.15	-2049.38	-152.25	-1119.49	-2.85	-1552.87	-0.3	-687.05	-0.3	-31.35	0	37.67
4	4	6.15	-2974.07	-152.25	-2649.56	-2.85	-2655.53	-0.3	-582.93	-0.3	-9.25	0	152.94
4	5	11.70	-2959.06	-55.50	-2047.37	-2.85	-2214.55	-0.3	-1182.42	-0.3	-25.95	0	127.73
5	5	11.70	-3585.28	-55.50	-2633.12	-2.85	-3044.28	-0.3	-834.68	-0.3	-25.88	0	127.84
5	6	17.25	-3570.36	41.25	-2568.23	-2.85	-2952.59	-0.3	-1034.25	-0.3	-5.06	0	156.67
6	6	17.25	-3570.36	41.25	-2568.23	-2.85	-2952.59	-0.3	-1034.25	-0.3	-5.06	0	156.67
6	7	22.80	-3555.55	137.99	-3040.32	-2.85	-3210.06	-0.3	-833.86	-0.3	53.22	0	239.43
7	7	22.80	-3238.88	184.29	-2753.20	-2.85	-2797.54	-0.3	-998.82	-0.3	53.22	0	239.43
7	8	28.35	-3222.36	280.71	-4018.10	-2.85	-3603.94	-0.3	-83.64	-0.3	148.95	0	376.13
8	8	28.35	-4282.38	325.50	-2429.21	-2.85	-2557.79	-0.3	-1271.83	-0.3	-472.15	0	-292.85
8	9	31.13	-4280.76	422.31	-3395.10	-2.85	-3085.64	-0.3	-907.56	-0.3	-352.77	0	-121.16
9	9	31.13	-4889.35	340.87	-2251.50	-2.85	-2700.40	-0.3	-1282.88	-0.3	-675.46	0	-520.53
9	10	33.90	-4892.68	419.45	-3262.82	-2.85	-3273.43	-0.3	-835.46	-0.3	-561.48	0	-356.06
10	10	33.90	-4759.40	-335.21	-2383.43	-2.85	-3014.62	-0.3	-878.95	-0.3	-574.97	0	-442.58
10	11	34.90	-4768.01	-282.03	-2135.83	-2.85	-2923.08	-0.3	-827.13	-0.3	-628.93	0	-519.37
11	11	34.90	-6397.28	-922.22	-2228.13	-2.85	-1611.21	-0.3	-521.18	-0.3	-231.70	0	-168.11
11	12	35.90	-6417.47	-857.85	-1384.18	-3.088	-1235.93	-0.3	-533.74	-0.3	-316.27	0	-294.18
12	12	35.90	-6372.81	1066.97	-1384.23	-3.088	-1222.75	-0.3	-520.52	-0.3	-332.24	0	-310.14
12	13	36.90	-6376.22	1145.46	-2466.87	-3.325	-1320.59	-0.3	-55.83	-0.3	-291.42	0	-272.17
13	13	36.90	-5898.34	485.49	439.65	-3.325	-799.68	-0.3	-930.51	-0.3	-930.51	0	-943.48
13	14	39.25	-5916.24	581.59	-791.28	-3.884	-773.00	-0.3	-589.31	-0.3	-589.31	0	-573.93
14	14	39.25	-6871.38	198.81	1001.22	-3.884	-672.46	-0.3	-904.89	-0.3	-904.89	0	-924.34
14	15	41.60	-6897.90	339.44	379.26	-4.442	-624.78	-0.3	-701.38	-0.3	-701.38	0	-706.93
15	15	41.60	-6805.17	1233.31	379.18	-4.442	-615.89	-0.3	-692.48	-0.3	-692.48	0	-698.02
15	16	43.90	-6811.59	1175.45	-2378.40	-5	-787.13	-0.3	-340.73	-0.3	-340.73	0	-312.24
16	16	43.90	-6641.00	1952.49	-2379.58	-5	-490.31	-0.3	-219.65	-0.3	-219.65	0	-202.37
16	17	46.45	-6657.31	1887.03	-7237.54	-5	-821.45	-0.3	1.76	-0.3	1.76	0	54.31
17	17	46.45	-6616.43	-1945.39	-7242.40	-5	-819.76	-0.3	4.01	-0.3	4.01	0	56.59
17	18	49.00	-6619.47	-1977.40	-2237.65	-5	-479.59	-0.3	-225.08	-0.3	-225.08	0	-208.83
18	18	49.00	-6792.75	-1202.69	-2236.74	-5	-772.69	-0.3	-352.88	-0.3	-352.88	0	-326.08
18	19	51.30	-6801.44	-1260.68	623.77	-4.442	-591.59	-0.3	-717.59	-0.3	-717.59	0	-726.71
19	19	51.30	-6897.36	-367.11	622.69	-4.442	-600.91	-0.3	-726.68	-0.3	-726.68	0	-735.79
19	20	53.65	-6886.60	-252.25	1345.44	-3.884	-633.82	-0.3	-946.15	-0.3	-946.15	0	-972.29
20	20	53.65	-5931.82	-631.35	-446.55	-3.884	-734.34	-0.3	-630.67	-0.3	-630.67	0	-622.00
20	21	56.00	-5918.56	-520.74	873.48	-3.325	-729.89	-0.3	-989.80	-0.3	-989.80	0	-1015.58
21	21	56.00	-6430.43	-1173.25	-2069.91	-3.325	-1268.40	-0.3	-114.36	-0.3	-348.22	0	-338.79
21	22	57.00	-6428.00	-1105.08	-952.47	-3.088	-1156.48	-0.3	-587.49	-0.3	-399.86	0	-391.06
22	22	57.00	-6478.78	834.82	-952.97	-3.088	-1170.52	-0.3	-601.35	-0.3	-384.60	0	-375.79
22	23	58.00	-6460.47	893.87	-1766.30	-2.85	-1524.10	-0.3	-600.59	-0.3	-309.69	0	-263.82
23	23	58.00	-4826.98	242.58	-1673.77	-2.85	-2700.64	-0.3	-920.91	-0.3	-721.54	0	-642.51
23	24	59.00	-4818.70	297.61	-1879.40	-2.85	-2772.05	-0.3	-978.92	-0.3	-674.23	0	-575.27
24	24	59.00	-4958.80	-595.86	-2807.23	-2.85	-3056.65	-0.3	-928.70	-0.3	-655.04	0	-479.82
24	25	63.11	-4955.00	-444.83	-678.91	-2.85	-1908.01	-0.3	-1670.03	-0.3	-924.87	0	-868.72
25	25	63.11	-3101.61	-388.90	-3426.48	-2.85	-3213.33	-0.3	-153.75	-0.3	54.75	0	245.61
25	26	67.23	-3114.99	-218.25	-2353.17	-2.85	-2496.81	-0.3	-1044.77	-0.3	-9.68	0	153.72
26	26	67.23	-3414.32	-153.36	-3010.24	-2.85	-3189.51	-0.3	-415.91	-0.3	-9.68	0	153.72
26	27	71.34	-3424.11	-81.68	-2542.02	-2.85	-2893.80	-0.3	-751.04	-0.3	-46.48	0	101.44
27	27	71.34	-3549.35	-81.68	-2656.87	-2.85	-3057.97	-0.3	-684.21	-0.3	-46.48	0	101.44
27	28	75.45	-3552.66	-9.99	-2471.76	-2.85	-2946.31	-0.3	-799.99	-0.3	-62.89	0	77.82
28	28	75.45	-3552.66	-9.99	-2471.76	-2.85	-2946.31	-0.3	-799.99	-0.3	-62.89	0	77.82
28	29	79.56	-3555.90	81.48	-2662.00	-2.85	-3065.88	-0.3	-681.73	-0.3	-46.48	0	101.43
29	29	79.56	-3430.65	81.48	-2547.15	-2.85	-2901.71	-0.3	-748.56	-0.3	-46.48	0	101.43
29	30	83.68	-3422.16	153.16	-3015.75	-2.85	-3198.48	-0.3	-413.73	-0.3	-9.69	0	153.71
30	30	83.68	-3122.81	218.87	-2358.68	-2.85	-2505.77	-0.3	-1042.58	-0.3	-9.69	0	153.71
30	31	87.79	-3109.51	389.53	-3434.71	-2.85	-3224.49	-0.3	-148.26	-0.3	54.74	0	245.60
31	31	87.79	-4961.47	445.36	-685.64	-2.85	-1913.18	-0.3	-1670.69	-0.3	-925.43	0	-868.82
31	32	91.90	-4965.37	596.40	-2816.28	-2.85	-3063.00	-0.3	-928.97	-0.3	-655.27	0	-479.44
32	32	91.90	-4825.10	-299.11	-1888.45	-2.85	-2778.35	-0.3	-979.14	-0.3	-674.42	0	-574.86
32	33	92.90	-4833.42	-244.09	-1681.38	-2.85	-2706.24	-0.3	-921.40	-0.3	-721.95	0	-642.42
33	33	92.90	-6466.57	-896.44	-1773.67	-2.85	-1526.45	-0.3	-600.43	-0.3	-309.43	0	-263.27
33	34	93.90	-6484.92	-837.41	-957.38	-3.088	-1172.01	-0.3	-601.58	-0.3	-384.71	0	-375.75
34	34	93.90	-6434.60	1104.27	-957.88	-3.088	-1158.20	-0.3	-587.59	-0.3	-399.91	0	-390.93
34	35	94.90	-6437.05	1172.44	-2073.45	-3.325	-1269.59	-0.3	-114.88	-0.3	-348.39	0	-338.85
35	35	94.90	-5918.54	520.58	876.06	-3.325	-729.45	-0.3	-990.13	-0.3	-990.13	0	-1015.99
35	36	97.25	-5931.79	631.18	-443.69	-3.884	-734.00	-0.3	-631.00	-0.3	-631.00	0	-622.38
36	36	97.25	-6886.57	252.08	1348.48	-3.884	-633.45	-0.3	-946.50	-0.3	-946.50	0	-972.70
36	37	99.60	-6897.34	366.94	626.97	-4.442	-600.48	-0.3	-727.12	-0.3	-727.12	0	-736.30
37	37	99.60	-6801.44	1260.53	625.89	-4.442	-591.39	-0.3	-717.81	-0.3	-717.81	0	-726.96
37	38	101.90	-6792.75	1202.54	-2234.13	-5	-772.45	-0.3	-353.13	-0.3	-353.13	0	-326.37
38	38	101.90	-6619.48	1977.24	-2233.19	-5	-479.29	-0.3	-225.28	-0.3	-225.28	0	-209.07
38	39	104.45	-6616.44	1945.24	-7239.50	-5	-819.56	-0.3	3.88	-0.3	3.88	0	56.44
39	39	104.45	-6657.32	-1886.96	-7232.77	-5	-821.13	-0.3	1.55	-0.3	1.55	0	54.06
39	40	107.00	-6641.01	-1952.40	-2374.71	-5	-489.98	-0.3	-219.87	-0.3	-219.87	0	-202.63
40	40	107.00	-6811.59	-1175.36	-2375.92	-5	-786.90	-0.3	-340.97	-0.3	-340.97	0	-312.51
40	41	109.30	-6805.17	-1233.22	382.73	-4.442	-615.54	-0.3	-692.85	-0.3	-692.85	0	-698.45
41	41	109.30	-6897.88	-339.35	382.65	-4.442	-624.44	-0.3	-701.74	-0.3	-701.74	0	-707.33
41	42	111.65	-6871.36	-198.73	1003.92	-3.884	-672.14	-0.3	-905.19	-0.3	-905.19	0	-924.70
42	42	111.65	-5916.23	-581.50	-787.75	-3.884	-772.58	-0.3	-589.71	-0.3	-589.71	0	-574.41
42	43	114.00	-5898.33	-485.40	443.00	-3.325	-799.12	-0.3	-930.94	-0.3	-930.94	0	-944.01
43	43	114.00	-6376.21	-1145.38	-2465.04	-3.325	-1320.41	-0.3	-55.84	-0.3	-291.75	0	-272.57
43	44	115.00	-6372.80	-1066.89	-1381.40	-3.088	-1222.29	-0.3	-520.88	-0.3	-332.63	0	-310.62
44	44	115.00	-6417.45	857.92	-1381.46	-3.088	-1235.49	-0.3	-534.05	-0.3	-316.66	0	-294.65
44	45	116.00	-6397.25	922.30	-2225.49	-2.85	-1610.70	-0.3	-521.50	-0.3	-232.11	0	-168.63
45	45	116.00	-4767.99	282.12	-2132.96	-2.85	-2921.66	-0.3	-827.64	-0.3	-629.37	0	-520.00
45	46	117.00	-4759.39	335.30	-2380.65	-2.85	-3013.25	-0.3	-879.45	-0.3	-575.39	0	-443.19
46	46	117.00	-4892.68	-419.37	-3260.04	-2.85	-3272.06	-0.3	-835.96	-0.3	-561.90	0	-356.66
46	47	119.78	-4889.35	-340.79	-2248.95	-2.85	-2699.14	-0.3	-1283.33	-0.3	-675.85	0	-521.08
47	47	119.78	-4280.78	-422.21	-3391.98	-2.85	-3084.11	-0.3	-908.12	-0.3	-353.25	0	-121.84
47	48	122.55	-4282.39	-325.41	-2426.37	-2.85	-2556.39	-0.3	-1272.35	-0.3	-472.58	0	-293.48
48	48	122.55	-3222.36	-280.60	-4015.25	-2.85	-3601.69	-0.3	-87.18	-0.3	148.96	0	376.14
48	49	128.10	-3238.88	-184.18	-2750.92	-2.85	-2795.73	-0.3	-1001.66	-0.3	53.23	0	239.44
49	49	128.10	-3555.55	-137.89	-3038.04	-2.85	-3208.26	-0.3	-836.70	-0.3	53.23	0	239.44
49	50	133.65	-3570.36	-41.15	-2566.53	-2.85	-2951.24	-0.3	-1036.38	-0.3	-5.05	0	156.67
50	50	133.65	-3570.36	-41.15	-2566.53	-2.85	-2951.24	-0.3	-1036.38	-0.3	-5.05	0	156.67
50	51	139.20	-3585.28	55.60	-2631.52	-2.85	-3043.16	-0.3	-836.18	-0.3	-25.95	0	127.74
51	51	139.20	-2959.06	55.60	-2046.72	-2.85	-2213.89	-0.3	-1183.74	-0.3	-25.87	0	127.84
51	52	144.75	-2974.07	152.35	-2648.78	-2.85	-2654.98	-0.3	-583.67	-0.3	-9.28	0	152.89
52	52	144.75	-2049.38	152.35	-1119.04	-2.85	-1552.48	-0.3	-687.73	-0.3	-31.33	0	37.70
52	53	147.53	-2054.21	200.74	-1617.10	-2.85	-1901.05	-0.3	-237.70	-0.3	-8.98	0	70.17
53	53	147.53	-2054.21	200.74	-1616.66	-2.85	-1900.83	-0.3	-237.78	-0.3	-9.05	0	70.07
53	54	150.30	-2059.05	393.99	-2249.37	-2.85	-2336.88	-0.3	312.29	-0.3	22.73	0	116.12
54	54	150.30	-2075.45	-20.72	-2249.49	-2.85	-2346.62	-0.3	302.62	-0.3	22.75	0	116.14

[redacted]

Infrecuentes con gradiente dominante

[1; 1]ppsapil + [1; 1]ppvial + [1; 1]ppvcontrol + [1; 1]PPpretosa + [1; 1]pplosa1 + [1; 1]doblaqas + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]morCM + [.95; 1.05]PRET + [.9; 1.1]PRETENSADOS + [0; 1]GRADIENTE + [0; .6]PF75B.ENV_PF75B.MZ+ + [0; .4]tcpooooo.ENV_TREN_GENERICO.MZ+

Coef. esc:

	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-1758.60	0.00	-1861.94	-2.85	-1973.24	-0.3	241.27	-0.3	18.07	0	94.29
1	2	0.60	-1757.73	9.72	-1863.57	-2.85	-1974.08	-0.3	243.35	-0.3	18.22	0	94.46
2	2	0.60	-1741.33	-292.10	-1863.67	-2.85	-1964.43	-0.3	253.06	-0.3	18.24	0	94.49
2	3	3.38	-1737.37	-498.83	-359.48	-2.85	-1102.51	-0.3	-445.66	-0.3	-147.10	0	-143.81
3	3	3.38	-1737.37	-498.83	-359.12	-2.85	-1102.33	-0.3	-445.72	-0.3	-147.16	0	-143.89
3	4	6.15	-1733.42	-411.27	906.47	-2.85	-379.01	-0.3	-1025.74	-0.3	-287.29	0	-345.89
4	4	6.15	-2502.63	-411.27	-357.02	-2.85	-1297.77	-0.3	-933.80	-0.3	-269.21	0	-251.58
4	5	11.70	-2490.34	-236.13	1454.77	-2.85	-267.41	-0.3	-1735.70	-0.3	-472.25	0	-544.85
5	5	11.70	-3056.92	-236.13	924.85	-2.85	-1018.11	-0.3	-1421.08	-0.3	-472.19	0	-544.77
5	6	17.25	-3044.72	-64.02	1767.86	-2.85	-549.23	-0.3	-1745.56	-0.3	-572.23	0	-689.73
6	6	17.25	-3044.72	-64.02	1767.86	-2.85	-549.23	-0.3	-1745.56	-0.3	-572.23	0	-689.73
6	7	22.80	-3032.61	111.12	1655.80	-2.85	-635.09	-0.3	-1594.98	-0.3	-571.35	0	-689.41
7	7	22.80	-2745.90	148.98	1915.58	-2.85	-261.74	-0.3	-1744.12	-0.3	-571.35	0	-689.41
7	8	28.35	-2732.05	319.80	626.50	-2.85	-1071.83	-0.3	-858.41	-0.3	-467.66	0	-541.05
8	8	28.35	-3558.76	356.35	1963.92	-2.85	-162.64	-0.3	-1854.41	-0.3	-975.22	0	-1087.69
8	9	31.13	-3557.44	394.92	880.34	-2.85	-748.64	-0.3	-1468.39	-0.3	-838.16	0	-890.50
9	9	31.13	-5760.83	312.14	1844.64	-2.85	-908.46	-0.3	-2282.82	-0.3	-1520.71	0	-1637.04
9	10	33.90	-5764.90	371.26	899.60	-2.85	-1449.01	-0.3	-1847.85	-0.3	-1416.92	0	-1487.17
10	10	33.90	-5577.76	-545.75	1974.41	-2.85	-1125.62	-0.3	-1893.92	-0.3	-1427.57	0	-1587.09
10	11	34.90	-5580.19	-531.59	2531.95	-2.85	-879.68	-0.3	-1896.69	-0.3	-1526.96	0	-1729.94
11	11	34.90	-7760.09	-1309.08	2336.60	-2.85	-932.84	-0.3	-1407.36	-0.3	-990.24	0	-1108.05
11	12	35.90	-7755.33	-1327.60	3609.90	-3.088	-612.91	-0.3	-1409.16	-0.3	-1070.17	0	-1204.97
12	12	35.90	-7773.73	1008.66	3609.84	-3.088	-606.48	-0.3	-1402.68	-0.3	-1097.12	0	-1231.92
12	13	36.90	-7771.68	1010.49	2584.75	-3.325	-805.73	-0.3	-817.50	-0.3	-1022.30	0	-1137.58
13	13	36.90	-7161.98	205.64	6137.17	-3.325	-30.86	-0.3	-1857.06	-0.3	-1857.06	0	-2038.17
13	14	39.25	-7177.42	270.00	5589.18	-3.884	-169.25	-0.3	-1466.75	-0.3	-1466.75	0	-1575.35
14	14	39.25	-8345.39	-198.51	7779.93	-3.884	-46.45	-0.3	-1852.51	-0.3	-1852.51	0	-2003.68
14	15	41.60	-8362.86	-150.35	8223.02	-4.442	2.21	-0.3	-1658.71	-0.3	-1658.71	0	-1779.01
15	15	41.60	-8313.05	936.58	8222.85	-4.442	6.98	-0.3	-1653.91	-0.3	-1653.91	0	-1774.21
[illegible]	16	43.90	-8319.41	753.80	6257.40	-5	-129.42	-0.3	-1303.85	-0.3	-1303.85	0	-1378.82
[illegible]	16	43.90	-8178.04	1707.19	6256.04	-5	20.87	-0.3	-690.71	-0.3	-690.71	0	-736.13
[illegible]	17	46.45	-8209.20	1493.24	2178.69	-5	-257.92	-0.3	-505.73	-0.3	-505.73	0	-521.55
[illegible]	17	46.45	-8163.83	-1489.23	2166.09	-5	-256.54	-0.3	-502.91	-0.3	-502.91	0	-518.64
17	18	49.00	-8153.08	-1705.10	6281.72	-5	23.85	-0.3	-690.65	-0.3	-690.65	0	-736.25
18	18	49.00	-8295.33	-754.48	6282.79	-5	-125.09	-0.3	-1304.29	-0.3	-1304.29	0	-1379.56
18	19	51.30	-8307.44	-936.63	8288.73	-4.442	13.96	-0.3	-1660.24	-0.3	-1660.24	0	-1781.50
19	19	51.30	-8358.39	149.53	8287.44	-4.442	8.95	-0.3	-1664.99	-0.3	-1664.99	0	-1786.23
19	20	53.65	-8353.78	222.21	7869.74	-3.884	-36.87	-0.3	-1863.78	-0.3	-1863.78	0	-2016.70
20	20	53.65	-7185.37	-241.94	5679.47	-3.884	-159.57	-0.3	-1478.03	-0.3	-1478.03	0	-1588.39
20	21	56.00	-7181.43	-207.00	6215.15	-3.325	-20.66	-0.3	-1870.06	-0.3	-1870.06	0	-2053.47
21	21	56.00	-7834.29	-1002.28	2617.67	-3.325	-806.46	-0.3	-828.33	-0.3	-1037.16	0	-1153.19
21	22	57.00	-7835.93	-991.69	3629.54	-3.088	-609.70	-0.3	-1410.29	-0.3	-1112.74	0	-1248.28
22	22	57.00	-7813.03	1358.57	3628.92	-3.088	-615.67	-0.3	-1416.05	-0.3	-1085.22	0	-1220.74
22	23	58.00	-7811.79	1360.93	2315.84	-2.85	-941.73	-0.3	-1410.03	-0.3	-999.77	0	-1116.70
23	23	58.00	-5637.83	574.63	2511.47	-2.85	-892.07	-0.3	-1898.83	-0.3	-1548.42	0	-1749.85
23	24	59.00	-5635.63	586.23	1915.07	-2.85	-1157.54	-0.3	-1887.93	-0.3	-1443.36	0	-1598.82
24	24	59.00	-5846.26	-498.62	781.05	-2.85	-1516.83	-0.3	-1838.01	-0.3	-1429.44	0	-1491.68
24	25	63.11	-5841.60	-439.08	2668.59	-2.85	-486.36	-0.3	-2535.84	-0.3	-1662.52	0	-1827.76
25	25	63.11	-2621.01	-344.51	-47.33	-2.85	-1327.05	-0.3	-655.49	-0.3	-375.56	0	-404.27
25	26	67.23	-2632.29	-306.22	1414.29	-2.85	-432.84	-0.3	-1565.28	-0.3	-505.84	0	-591.11
26	26	67.23	-2903.16	-253.17	819.80	-2.85	-1059.60	-0.3	-996.33	-0.3	-505.84	0	-591.11
26	27	71.34	-2911.17	-126.71	1591.44	-2.85	-613.85	-0.3	-1385.76	-0.3	-588.32	0	-709.29
27	27	71.34	-3024.49	-126.71	1487.53	-2.85	-762.39	-0.3	-1325.29	-0.3	-588.32	0	-709.29
27	28	75.45	-3027.20	-0.08	1746.76	-2.85	-613.78	-0.3	-1454.53	-0.3	-615.90	0	-749.01
28	28	75.45	-3027.20	-0.08	1746.76	-2.85	-613.78	-0.3	-1454.53	-0.3	-615.90	0	-749.01
28	29	79.56	-3029.84	126.55	1483.33	-2.85	-768.86	-0.3	-1323.27	-0.3	-588.32	0	-709.30
29	29	79.56	-2916.53	126.55	1587.24	-2.85	-620.33	-0.3	-1383.73	-0.3	-588.32	0	-709.30
29	30	83.68	-2909.58	253.01	815.36	-2.85	-1066.91	-0.3	-994.56	-0.3	-505.85	0	-591.13
30	30	83.68	-2638.69	306.73	1409.85	-2.85	-440.14	-0.3	-1563.49	-0.3	-505.85	0	-591.13
30	31	87.79	-2627.47	345.04	-53.96	-2.85	-1336.12	-0.3	-651.02	-0.3	-375.59	0	-404.30
31	31	87.79	-5849.51	439.72	2660.45	-2.85	-492.64	-0.3	-2536.66	-0.3	-1663.21	0	-1827.92
31	32	91.90	-5854.29	499.27	770.13	-2.85	-1524.52	-0.3	-1838.36	-0.3	-1429.74	0	-1491.25
[illegible]	32	91.90	-5643.45	-588.07	1904.14	-2.85	-1165.17	-0.3	-1888.22	-0.3	-1443.61	0	-1598.34
[illegible]	33	92.90	-5645.69	-576.48	2502.26	-2.85	-898.87	-0.3	-1899.44	-0.3	-1548.93	0	-1749.76
[illegible]	33	92.90	-7819.24	-1364.09	2306.92	-2.85	-944.58	-0.3	-1409.85	-0.3	-999.46	0	-1116.03
33	34	93.90	-7820.53	-1361.74	3623.40	-3.088	-617.51	-0.3	-1416.29	-0.3	-1085.34	0	-1220.68
34	34	93.90	-7844.00	990.69	3622.79	-3.088	-611.83	-0.3	-1410.39	-0.3	-1112.78	0	-1248.11
34	35	94.90	-7842.38	1001.29	2613.14	-3.325	-807.95	-0.3	-828.91	-0.3	-1037.35	0	-1153.24
35	35	94.90	-7181.40	206.79	6218.09	-3.325	-20.16	-0.3	-1870.43	-0.3	-1870.43	0	-2053.93
35	36	97.25	-7185.34	241.74	5682.88	-3.884	-159.17	-0.3	-1478.41	-0.3	-1478.41	0	-1588.84
36	36	97.25	-8353.75	-222.42	7873.25	-3.884	-36.46	-0.3	-1864.18	-0.3	-1864.18	0	-2017.17
36	37	99.60	-8358.36	-149.72	8292.55	-4.442	9.45	-0.3	-1665.52	-0.3	-1665.52	0	-1786.83
37	37	99.60	-8307.44	936.44	8291.25	-4.442	14.21	-0.3	-1660.50	-0.3	-1660.50	0	-1781.80
37	38	101.90	-8295.33	754.29	6285.95	-5	-124.81	-0.3	-1304.60	-0.3	-1304.60	0	-1379.91
38	38	101.90	-8153.09	1704.91	6287.05	-5	24.21	-0.3	-690.89	-0.3	-690.89	0	-736.54
38	39	104.45	-8163.84	1489.04	2170.22	-5	-256.26	-0.3	-503.10	-0.3	-503.10	0	-518.86
39	39	104.45	-8209.21	-1493.14	2184.18	-5	-257.55	-0.3	-505.99	-0.3	-505.99	0	-521.84
39	40	107.00	-8178.05	-1707.08	6262.03	-5	21.28	-0.3	-690.98	-0.3	-690.98	0	-736.44
40	40	107.00	-8319.41	-753.69	6260.63	-5	-129.13	-0.3	-1304.17	-0.3	-1304.17	0	-1379.17
40	41	109.30	-8313.05	-936.47	8227.38	-4.442	7.42	-0.3	-1654.39	-0.3	-1654.39	0	-1774.75
41	41	109.30	-8362.84	150.46	8227.21	-4.442	2.63	-0.3	-1659.15	-0.3	-1659.15	0	-1779.51
41	42	111.65	-8345.36	198.61	7783.49	-3.884	-46.03	-0.3	-1852.91	-0.3	-1852.91	0	-2004.16
42	42	111.65	-7177.41	-269.89	5593.60	-3.884	-168.74	-0.3	-1467.25	-0.3	-1467.25	0	-1575.94
42	43	114.00	-7161.97	-205.53	6141.49	-3.325	-30.13	-0.3	-1857.61	-0.3	-1857.61	0	-2038.85
43	43	114.00	-7771.67	-1010.40	2587.22	-3.325	-805.47	-0.3	-817.57	-0.3	-1022.71	0	-1138.08
43	44	115.00	-7773.71	-1008.56	3613.44	-3.088	-605.90	-0.3	-1403.16	-0.3	-1097.61	0	-1232.53
44	44	115.00	-7755.30	1327.69	3613.37	-3.088	-612.36	-0.3	-1409.57	-0.3	-1070.65	0	-1205.57
44	45	116.00	-7760.06	1309.17	2339.72	-2.85	-932.23	-0.3	-1407.72	-0.3	-990.71	0	-1108.66
45	45	116.00	-5580.17	531.70	2535.35	-2.85	-878.00	-0.3	-1897.30	-0.3	-1527.47	0	-1730.68
45	46	117.00	-5577.74	545.85	1977.69	-2.85	-1124.00	-0.3	-1894.50	-0.3	-1428.07	0	-1587.80
46	46	117.00	-5764.90	-371.16	902.88	-2.85	-1447.40	-0.3	-1848.43	-0.3	-1417.42	0	-1487.88
46	47	119.78	-5760.83	-312.04	1847.66	-2.85	-906.97	-0.3	-2283.36	-0.3	-1521.17	0	-1637.70
47	47	119.78	-3557.45	-394.84	882.77	-2.85	-747.45	-0.3	-1468.82	-0.3	-838.53	0	-891.04
47	48	122.55	-3558.77	-356.27	1966.13	-2.85	-161.55	-0.3	-1854.81	-0.3	-975.56	0	-1088.18
48	48	122.55	-2732.05	-319.71	628.72	-2.85	-1070.05	-0.3	-861.29	-0.3	-467.64	0	-541.02
[illegible]	49	128.10	-2745.90	-148.89	1917.41	-2.85	-260.28	-0.3	-1746.44	-0.3	-571.34	0	-689.40
[illegible]	49	128.10	-3032.61	-111.04	1657.64	-2.85	-633.64	-0.3	-1597.30	-0.3	-571.34	0	-689.40
[illegible]	50	133.65	-3044.72	64.10	1769.22	-2.85	-548.14	-0.3	-1747.29	-0.3	-572.22	0	-689.72
[illegible]	50	133.65	-3044.72	64.10	1769.22	-2.85	-548.14	-0.3	-1747.29	-0.3	-572.22	0	-689.72
50	51	139.20	-3056.92	236.21	926.19	-2.85	-1017.17	-0.3	-1422.31	-0.3	-472.25	0	-544.85
51	51	139.20	-2490.34	236.21	1455.33	-2.85	-266.86	-0.3	-1736.78	-0.3	-472.19	0	-544.77
51	52	144.75	-2502.63	411.35	-358.37	-2.85	-1297.31	-0.3	-934.41	-0.3	-269.24	0	-251.62
52	52	144.75	-1733.42	411.35	906.84	-2.85	-378.68	-0.3	-1026.30	-0.3	-267.28	0	-345.87
52	53	147.53	-1737.37	498.91	-359.24	-2.85	-1102.32	-0.3	-445.96	-0.3	-147.10	0	-143.81
53	53	147.53	-1737.37	498.91	-358.86	-2.85	-1102.14	-0.3	-446.02	-0.3	-147.16	0	-143.89
53	54	150.30	-1741.33	292.16	-1863.57	-2.85	-1964.38	-0.3	253.04	-0.3	18.22	0	94.46
54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-2.85	-1974.13	-0.3	243.37	-0.3	18.24	0	94.49

[redacted]

Infrecuentes con gradiente dominante

[1; 1]ppsapil + [1; 1]ppvial + [1; 1]ppvcontrol + [1; 1]PPpretosa + [1; 1]pplosa1 + [1; 1]doblaqas + [1; 1]pplosa2 + [1; 1]pm + [-1; 1]morCM + [.95; 1.05]PRET + [.9; 1.1]PRETENSADOS + [0; 1]GRADIENTE + [0; .6]PF75B.ENV_PF75B.MZ- + [0; .4]tcpooooo.ENV_TREN_GENERICO.MZ-

Coef. esc:

Barra	Nudo	X	N (T)	Vy (T)	Mz (Tm)	Fibra y fibra	InfCajón sig (t/m2)	Fibra y fibra	SupCajón sig (t/m2)	Fibra y fibra	InfLosa sig (t/m2)	Fibra y fibra	SupLosa sig (t/m2)
1	1	0.00	-2076.50	0.00	-2244.74	-2.85	-2344.35	-0.3	299.98	-0.3	22.06	0	115.24
1	2	0.60	-2075.45	18.94	-2248.84	-2.85	-2346.30	-0.3	302.51	-0.3	22.65	0	116.00
2	2	0.60	-2059.05	-376.38	-2248.96	-2.85	-2336.67	-0.3	312.21	-0.3	22.67	0	116.03
2	3	3.38	-2054.21	-211.43	-1588.11	-2.85	-1886.88	-0.3	-242.60	-0.3	-13.42	0	63.77
3	3	3.38	-2054.21	-211.43	-1587.67	-2.85	-1886.66	-0.3	-242.68	-0.3	-13.49	0	63.67
3	4	6.15	-2049.38	-163.73	-1059.47	-2.85	-1523.36	-0.3	-697.82	-0.3	-40.46	0	24.56
4	4	6.15	-2974.07	-163.73	-2589.55	-2.85	-2626.02	-0.3	-593.71	-0.3	-18.36	0	139.82
4	5	11.70	-2959.06	-68.36	-1920.20	-2.85	-2152.01	-0.3	-1205.26	-0.3	-45.25	0	99.95
5	5	11.70	-3585.28	-68.36	-2505.94	-2.85	-2981.74	-0.3	-857.52	-0.3	-45.18	0	100.05
5	6	17.25	-3570.36	27.02	-2366.31	-2.85	-2853.30	-0.3	-1070.52	-0.3	-35.70	0	112.55
6	6	17.25	-3570.36	27.02	-2366.31	-2.85	-2853.30	-0.3	-1070.52	-0.3	-35.70	0	112.55
6	7	22.80	-3555.55	122.39	-2756.06	-2.85	-3070.27	-0.3	-884.92	-0.3	10.08	0	177.32
7	7	22.80	-3238.88	168.68	-2468.93	-2.85	-2657.75	-0.3	-1049.88	-0.3	10.08	0	177.32
7	8	28.35	-3222.36	263.73	-3643.90	-2.85	-3419.93	-0.3	-150.85	-0.3	92.17	0	294.37
8	8	28.35	-4282.38	308.52	-2055.02	-2.85	-2373.77	-0.3	-1339.04	-0.3	-528.93	0	-374.61
8	9	31.13	-4280.76	404.64	-2973.10	-2.85	-2878.11	-0.3	-983.35	-0.3	-416.81	0	-213.36
9	9	31.13	-4889.35	323.20	-1829.49	-2.85	-2492.87	-0.3	-1358.67	-0.3	-739.50	0	-612.73
9	10	33.90	-4892.68	396.92	-2790.09	-2.85	-3040.96	-0.3	-920.37	-0.3	-633.21	0	-459.34
10	10	33.90	-4755.71	-357.27	-1910.70	-2.85	-2781.09	-0.3	-962.79	-0.3	-645.81	0	-544.97
10	11	34.90	-4763.44	-310.81	-1627.03	-2.85	-2671.55	-0.3	-917.20	-0.3	-705.03	0	-629.43
11	11	34.90	-6389.04	-949.57	-1719.32	-2.85	-1506.81	-0.3	-597.87	-0.3	-302.64	0	-258.76
11	12	35.90	-6407.11	-892.25	-843.34	-3.088	-1144.61	-0.3	-609.51	-0.3	-386.36	0	-380.90
12	12	35.90	-6370.03	1030.19	-843.40	-3.088	-1132.40	-0.3	-597.26	-0.3	-403.22	0	-397.76
12	13	36.90	-6372.75	1099.46	-1889.77	-3.325	-1237.77	-0.3	-130.97	-0.3	-360.93	0	-356.17
13	13	36.90	-5892.73	439.85	1016.75	-3.325	-702.02	-0.3	-1004.57	-0.3	-1004.57	0	-1034.58
13	14	39.25	-5909.95	530.34	-103.89	-3.884	-691.61	-0.3	-667.50	-0.3	-667.50	0	-665.48
14	14	39.25	-6865.58	147.47	1688.61	-3.884	-591.13	-0.3	-983.13	-0.3	-983.13	0	-1015.94
14	15	41.60	-6890.72	275.91	1201.29	-4.442	-543.65	-0.3	-786.29	-0.3	-786.29	0	-803.87
15	15	41.60	-6804.36	1169.11	1201.21	-4.442	-535.37	-0.3	-778.00	-0.3	-778.00	0	-795.57
15	16	43.90	-6810.65	1100.40	-1402.46	-5	-698.43	-0.3	-435.21	-0.3	-435.21	0	-418.41
16	16	43.90	-6646.68	1877.79	-1403.64	-5	-424.23	-0.3	-264.57	-0.3	-264.57	0	-254.38
16	17	46.45	-6663.88	1800.60	-6063.48	-5	-741.94	-0.3	-52.27	-0.3	-52.27	0	-8.24
17	17	46.45	-6623.73	-1849.43	-6068.34	-5	-740.29	-0.3	-50.06	-0.3	-50.06	0	-6.00
17	18	49.00	-6625.34	-1900.19	-1277.95	-5	-414.63	-0.3	-269.27	-0.3	-269.27	0	-259.99
18	18	49.00	-6791.78	-1125.11	-1277.04	-5	-685.46	-0.3	-445.78	-0.3	-445.78	0	-430.48
18	19	51.30	-6800.60	-1193.88	1422.59	-4.442	-513.35	-0.3	-800.69	-0.3	-800.69	0	-821.50
19	19	51.30	-6889.90	-301.01	1421.51	-4.442	-522.02	-0.3	-809.14	-0.3	-809.14	0	-829.94
19	20	53.65	-6879.90	-192.94	2001.42	-3.884	-556.07	-0.3	-1020.68	-0.3	-1020.68	0	-1059.57
20	20	53.65	-5924.54	-572.15	209.43	-3.884	-656.52	-0.3	-705.14	-0.3	-705.14	0	-709.21
20	21	56.00	-5912.30	-469.79	1407.97	-3.325	-639.28	-0.3	-1058.24	-0.3	-1058.24	0	-1099.79
21	21	56.00	-6426.55	-1121.90	-1535.42	-3.325	-1191.63	-0.3	-183.87	-0.3	-412.53	0	-416.52
21	22	57.00	-6424.67	-1060.93	-460.83	-3.088	-1074.24	-0.3	-657.14	-0.3	-464.30	0	-470.61
22	22	57.00	-6466.35	876.10	-461.34	-3.088	-1087.13	-0.3	-669.85	-0.3	-447.97	0	-454.27
22	23	58.00	-6449.84	929.15	-1314.62	-2.85	-1430.94	-0.3	-668.19	-0.3	-372.23	0	-343.85
23	23	58.00	-4821.10	279.71	-1222.09	-2.85	-2476.83	-0.3	-1000.34	-0.3	-788.65	0	-739.76
23	24	59.00	-4813.68	327.66	-1472.53	-2.85	-2570.52	-0.3	-1050.54	-0.3	-734.75	0	-662.94
24	24	59.00	-4958.80	-565.17	-2400.35	-2.85	-2856.56	-0.3	-1001.78	-0.3	-716.79	0	-568.72
24	25	63.11	-4955.00	-428.07	-372.32	-2.85	-1757.24	-0.3	-1725.09	-0.3	-971.40	0	-935.70
25	25	63.11	-3101.61	-372.13	-3119.89	-2.85	-3062.57	-0.3	-208.82	-0.3	8.23	0	178.62
25	26	67.23	-3114.99	-214.23	-2066.33	-2.85	-2355.75	-0.3	-1096.29	-0.3	-53.21	0	91.05
26	26	67.23	-3414.32	-149.35	-2723.40	-2.85	-3048.45	-0.3	-467.43	-0.3	-53.21	0	91.05
26	27	71.34	-3424.11	-78.68	-2269.51	-2.85	-2759.79	-0.3	-799.98	-0.3	-87.83	0	41.90
27	27	71.34	-3549.35	-78.68	-2384.36	-2.85	-2923.96	-0.3	-733.15	-0.3	-87.83	0	41.90
27	28	75.45	-3552.66	-8.01	-2209.42	-2.85	-2817.30	-0.3	-847.11	-0.3	-102.70	0	20.50
28	28	75.45	-3552.66	-8.01	-2209.42	-2.85	-2817.30	-0.3	-847.11	-0.3	-102.70	0	20.50
28	29	79.56	-3555.90	78.49	-2389.50	-2.85	-2931.88	-0.3	-730.67	-0.3	-87.84	0	41.90
29	29	79.56	-3430.65	78.49	-2274.65	-2.85	-2767.71	-0.3	-797.50	-0.3	-87.84	0	41.90
29	30	83.68	-3422.16	149.15	-2728.92	-2.85	-3057.43	-0.3	-465.25	-0.3	-53.22	0	91.04
30	30	83.68	-3122.81	214.86	-2071.85	-2.85	-2364.72	-0.3	-1094.09	-0.3	-53.22	0	91.04
30	31	87.79	-3109.51	372.77	-3128.14	-2.85	-3073.73	-0.3	-203.33	-0.3	8.22	0	178.61
31	31	87.79	-4961.47	428.59	-379.06	-2.85	-1762.42	-0.3	-1725.75	-0.3	-971.95	0	-935.81
31	32	91.90	-4965.37	565.71	-2409.41	-2.85	-2862.92	-0.3	-1002.05	-0.3	-717.01	0	-568.34
32	32	91.90	-4820.08	-329.16	-1481.59	-2.85	-2576.82	-0.3	-1050.76	-0.3	-734.93	0	-662.53
32	33	92.90	-4827.53	-281.22	-1229.71	-2.85	-2482.43	-0.3	-1000.82	-0.3	-789.06	0	-739.67
33	33	92.90	-6455.94	-931.73	-1322.01	-2.85	-1433.29	-0.3	-668.03	-0.3	-371.96	0	-343.29
33	34	93.90	-6472.48	-878.69	-465.76	-3.088	-1088.62	-0.3	-670.07	-0.3	-448.08	0	-454.23
34	34	93.90	-6431.27	1060.12	-466.26	-3.088	-1075.97	-0.3	-657.24	-0.3	-464.34	0	-470.48
34	35	94.90	-6433.18	1121.09	-1538.97	-3.325	-1192.81	-0.3	-184.39	-0.3	-412.69	0	-416.57
35	35	94.90	-5912.28	469.63	1410.53	-3.325	-638.85	-0.3	-1058.57	-0.3	-1058.57	0	-1100.20
35	36	97.25	-5924.52	571.99	212.28	-3.884	-656.19	-0.3	-705.46	-0.3	-705.46	0	-709.59
36	36	97.25	-6879.87	192.78	2004.45	-3.884	-555.71	-0.3	-1021.03	-0.3	-1021.03	0	-1059.98
36	37	99.60	-6889.87	300.84	1425.77	-4.442	-521.60	-0.3	-809.58	-0.3	-809.58	0	-830.44
37	37	99.60	-6800.60	1193.73	1424.69	-4.442	-513.14	-0.3	-800.90	-0.3	-800.90	0	-821.75
37	38	101.90	-6791.78	1124.96	-1274.45	-5	-685.23	-0.3	-446.03	-0.3	-446.03	0	-430.76
38	38	101.90	-6625.35	1900.04	-1273.51	-5	-414.32	-0.3	-269.47	-0.3	-269.47	0	-260.23
38	39	104.45	-6623.74	1849.28	-6065.43	-5	-740.09	-0.3	-50.19	-0.3	-50.19	0	-6.16
39	39	104.45	-6663.89	-1800.53	-6058.69	-5	-741.62	-0.3	-52.49	-0.3	-52.49	0	-8.50
39	40	107.00	-6646.69	-1877.70	-1398.75	-5	-423.90	-0.3	-264.80	-0.3	-264.80	0	-254.64
40	40	107.00	-6810.65	-1100.31	-1399.96	-5	-698.21	-0.3	-435.45	-0.3	-435.45	0	-418.68
40	41	109.30	-6804.36	-1169.01	1204.77	-4.442	-535.02	-0.3	-778.37	-0.3	-778.37	0	-795.99
41	41	109.30	-6890.71	-275.82	1204.70	-4.442	-543.31	-0.3	-786.64	-0.3	-786.64	0	-804.27
41	42	111.65	-6865.57	-147.39	1691.32	-3.884	-590.81	-0.3	-983.44	-0.3	-983.44	0	-1016.30
42	42	111.65	-5909.94	-530.25	-100.34	-3.884	-691.20	-0.3	-667.90	-0.3	-667.90	0	-665.95
42	43	114.00	-5892.72	-439.76	1020.11	-3.325	-701.46	-0.3	-1005.01	-0.3	-1005.01	0	-1035.11
43	43	114.00	-6372.74	-1099.38	-1887.92	-3.325	-1237.59	-0.3	-130.98	-0.3	-361.26	0	-356.57
43	44	115.00	-6370.03	-1030.11	-840.56	-3.088	-1131.94	-0.3	-597.62	-0.3	-403.61	0	-398.24
44	44	115.00	-6407.08	892.32	-840.61	-3.088	-1144.18	-0.3	-609.82	-0.3	-386.75	0	-381.38
44	45	116.00	-6389.01	949.65	-1716.67	-2.85	-1506.29	-0.3	-598.18	-0.3	-303.05	0	-259.28
45	45	116.00	-4763.43	310.90	-1624.14	-2.85	-2670.12	-0.3	-917.71	-0.3	-705.47	0	-630.05
45	46	117.00	-4755.70	357.36	-1907.91	-2.85	-2779.71	-0.3	-963.29	-0.3	-646.23	0	-545.58
46	46	117.00	-4892.68	-396.84	-2787.30	-2.85	-3039.58	-0.3	-920.87	-0.3	-633.64	0	-459.95
46	47	119.78	-4889.35	-323.12	-1826.93	-2.85	-2491.61	-0.3	-1359.13	-0.3	-739.89	0	-613.29
47	47	119.78	-4280.78	-404.54	-2969.97	-2.85	-2876.58	-0.3	-983.92	-0.3	-417.29	0	-214.04
47	48	122.55	-4282.39	-308.42	-2052.16	-2.85	-2372.37	-0.3	-1339.56	-0.3	-529.37	0	-375.24
48	48	122.55	-3222.36	-263.62	-3641.05	-2.85	-3417.68	-0.3	-154.39	-0.3	92.17	0	294.38
48	49	128.10	-3238.88	-168.57	-2466.64	-2.85	-2655.94	-0.3	-1052.72	-0.3	10.09	0	177.33
49	49	128.10	-3555.55	-122.29	-2753.77	-2.85	-3068.47	-0.3	-887.76	-0.3	10.09	0	177.33
49	50	133.65	-3570.36	-26.92	-2364.60	-2.85	-2851.94	-0.3	-1072.64	-0.3	-35.69	0	112.55
50	50	133.65	-3570.36	-26.92	-2364.60	-2.85	-2851.94	-0.3	-1072.64	-0.3	-35.69	0	112.55
50	51	139.20	-3585.28	68.45	-2504.34	-2.85	-2980.62	-0.3	-859.02	-0.3	-45.25	0	99.95
51	51	139.20	-2959.06	68.45	-1919.54	-2.85	-2151.35	-0.3	-1206.59	-0.3	-45.17	0	100.06
51	52	144.75	-2974.07	163.83	-2588.77	-2.85	-2625.47	-0.3	-594.45	-0.3	-18.39	0	139.78
52	52	144.75	-2049.38	163.83	-1059.02	-2.85	-1522.97	-0.3	-698.50	-0.3	-40.44	0	24.58
52	53	147.53	-2054.21	211.53	-1587.82	-2.85	-1886.65	-0.3	-242.96	-0.3	-13.42	0	63.77
53	53	147.53	-2054.21	211.53	-1587.38	-2.85	-1886.43	-0.3	-243.04	-0.3	-13.49	0	63.67
53	54	150.30	-2059.05	385.03	-2248.84	-2.85	-2336.61	-0.3	312.19	-0.3	22.65	0	116.00
54	54	150.30	-2075.45	-18.94	-2248.96	-2.85	-2346.36	-0.3	302.53	-0.3	22.67	0	116.03
54	55	[illegible]	[illegible]	0.00	-2244.67	-2.85	-2344.32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]