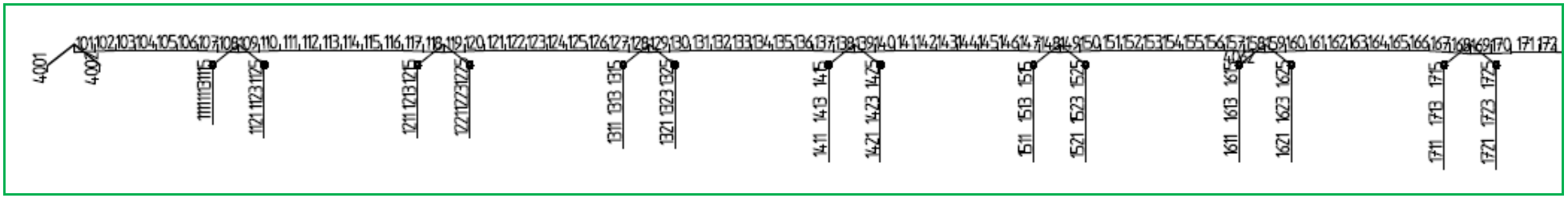
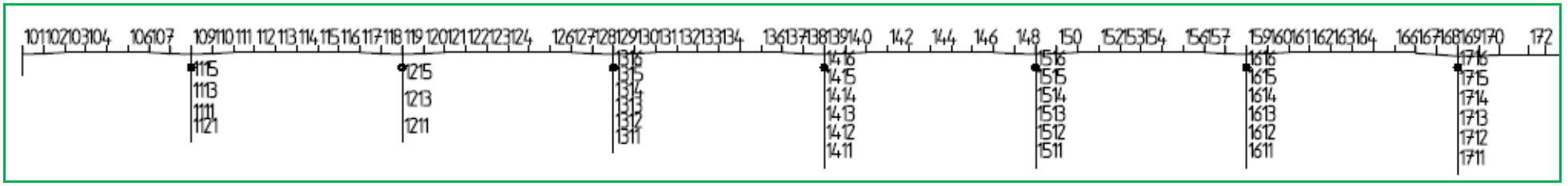
NUMERAÇÃO DE BARRAS, MOLAS E NÓS

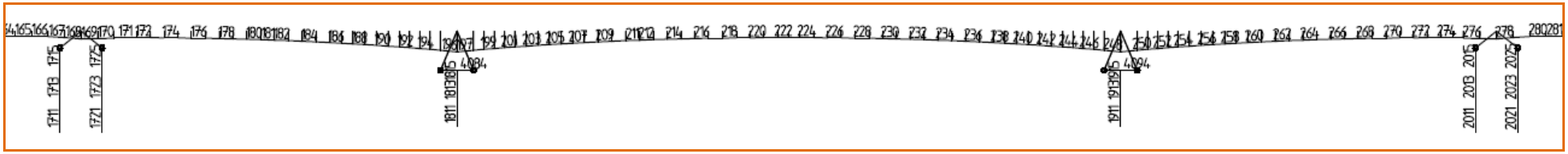
1 - Modelo de Cálculo Global



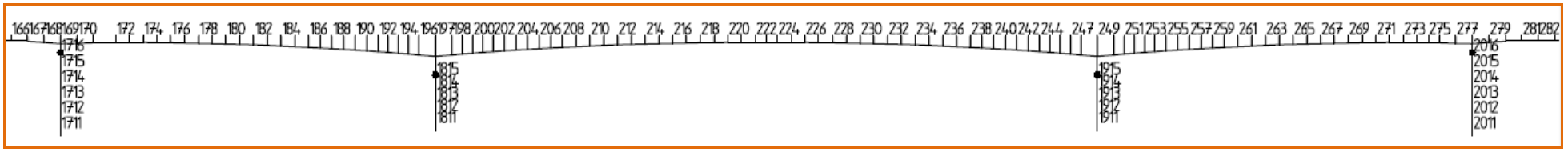
2 - Viaduto Norte – Módulo Norte – Numeração de Barras e Molas



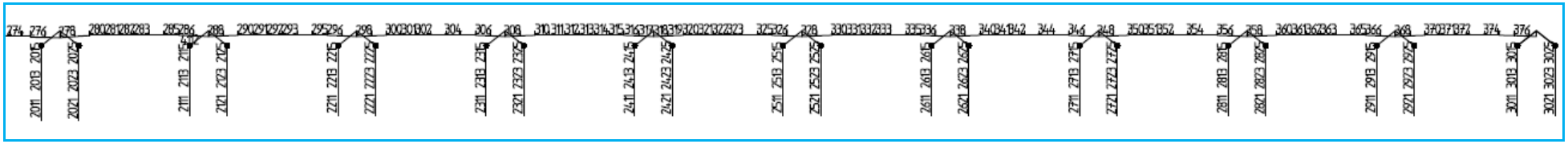
3 - Viaduto Norte - Módulo Norte - Numeração de Nós



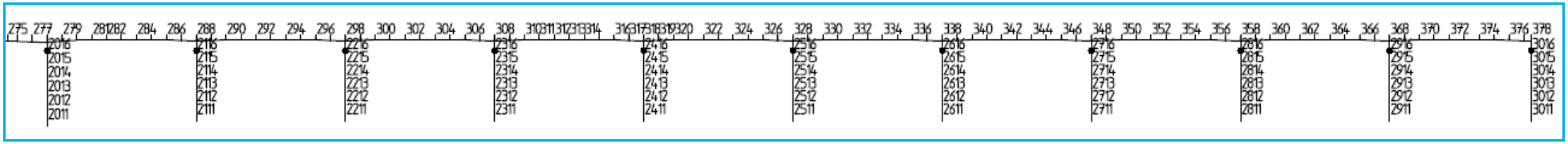
4 – Ponte – Módulo Norte – Numeração de Barras e Molas



5 – Ponte – Módulo Norte – Numerção de Nós



6 - Viaduto Sul - Módulo Norte - Numeração de Barras e Molas



7 - Viaduto Sul - Módulo Norte - Numeração de Nós

FASEAMENTO CONSTRUTIVO

	Carregamentos	Barras/Molas			Datas
Fase 1 - Construção dos pilares do Viaduto Norte					
	Betonagem dos pilares do Viaduto				
1	**Norte**				
	CALC PPP01	1111 a 1115	1121 a 1125	4011 e 4013	
	CALC PPP02	1211a 1215	1221 a 1225	4021 e 4023	
	CALC PPP03	1311 a 1315	1321 a 1325	4031 e 4033	
	CALC PPP04	1411 a 1415	1421 a 1425	4041 e 4043	
	CALC PPP05	1511 a 1515	1521 a 1525	4051 e 4053	
	CALC PPP06	1611 a 1615	1621 a 1625	4061 e 4063	
	CALC PPP07	1711 a 1715	1721 a 1725	4071 e 4073	
2	**Fluência da fase 1**				30
	CREEP				
Fase 2 - Construção do 1º tramo do Viaduto Norte					
	Montagem do Cavalete	Não introduz esforços			
1	**Betonagem sobre cavalete do 1º tramo + 1/5 do 2º tramo**	1 a 9		4012 e 4014	
	CALC PPTR01N				
2	**Introdução da ligação provisória ao encontro E1**			4005 e 4006	
3	**Pré-esforço do 1º tramo + 1/5 do 2º tramo**				
	STRESS PEtramo1Norte				
	CALC PETR01N				
	GROUT PEtramo1Norte				
4	**Fluência da fase 2**				15
	CREEP				
Fase 3 - Construção do 2º tramo do Viaduto Norte					
	Montagem do Cavalete	Não introduz esforços			
1	**Betonagem sobre cavalete do 2º tramo + 1/5 do 3º tramo**	10 a 17		4022 e 4024	
	CALC PPTR02N				
2	**Pré-esforço do 2º tramo + 1/5 do 3º tramo**				
	STRESS PEtramo2Norte				
	CALC PETR02N				
	GROUT PEtramo2Norte				
3	**Fluência da fase 3**				15
	CREEP				
Fase 4 - Construção do 3º tramo do Viaduto Norte					
	Montagem do Cavalete	Não introduz esforços			
1	**Betonagem sobre cavalete do 3º tramo + 1/5 do 4º tramo**	18 a 25		4032 e 4034	
	CALC PPTR03N				
2	**Pré-esforço do 3º tramo + 1/5 do 4º tramo**				
	STRESS PEtramo3Norte				
	CALC PETR03N				
	GROUT PEtramo3Norte				
3	**Fluência da fase 4**				15
	CREEP				

Fase 5 - Construção do 4º tramo do Viaduto Norte				
	Montagem do Cavalete	Não introduz esforços		
2	**Betonagem sobre cavalete do 4º tramo + 1/5 do 5º tramo**	26 a 33	4042 e 4044	
	CALC PPTR04N			
3	**Pré-esforço do 4º tramo + 1/5 do 5º tramo**			
	STRESS PEtramo4Norte			
	CALC PETR04N			
	GROUT PEtramo4Norte			
4	**Fluência da fase 5**			15
	CREEP			
Fase 6 - Construção do 5º tramo do Viaduto Norte				
	Montagem do Cavalete	Não introduz esforços		
1	**Betonagem sobre cavalete do 5º tramo + 1/5 do 6º tramo**	34 a 41	4052 e 4054	
	CALC PPTR05N			
2	**Pré-esforço do 5º tramo + 1/5 do 6º tramo**			
	STRESS PEtramo5Norte			
	CALC PETR05N			
	GROUT PEtramo5Norte			
3	**Fluência da fase 6**			15
	CREEP			
Fase 7 - Construção do 6º tramo do Viaduto Norte				
1	**Desactivação da ligação provisória ao encontro E1**		4005 e 4006	
	CALC DEMOPP4005		4001 e 4002	
	CALC DEMOPE4005			
	CALC DEMOFL4005			
	CALC DEMOPP4006			
	CALC DEMOPE4006			
	CALC DEMOFL4006			
	Montagem do Cavalete	Não introduz esforços		
2	**Betonagem sobre cavalete do 6º tramo + 1/5 do 7º tramo**	42 a 49	4062 e 4064	
	CALC PPTR06N			
3	**Pré-esforço do 6º tramo + 1/5 do 7º tramo**			
	STRESS PEtramo6Norte			
	CALC PETR06N			
	GROUT PEtramo6Norte			
4	**Fluência da fase 7**			15
	CREEP			
Fase 8 - Construção do 7º tramo do Viaduto Norte				
	Montagem do Cavalete	Não introduz esforços		
2	**Betonagem sobre cavalete do 7º tramo + 1/5 do 8º tramo**	50 a 57	4072 e 4074	
	CALC PPTR07N			
3	**Pré-esforço do 7º tramo + 1/5 do 8º tramo**			
	STRESS PEtramo7Norte1			
	CALC PETR07N1			
	GROUT PEtramo7Norte1			
4	**Fluência da fase 8**			15
	CREEP			

	Carregamentos	Barras/Molas			Datas
	Fase 9 - Construção dos pilares do Viaduto Sul				
1	**Betonagem dos pilares do Viaduto Sul**				
	CALC PPP10	2011 a 2015	2021 a 2025	4101 e 4103	
	CALC PPP11	2111a 2115	2121a 2125	4111 e 4113	
	CALC PPP12	2211 a 2215	2221 a 2225	4121 e 4123	
	CALC PPP13	2311 a 2315	2321 a 2325	4131 e 4133	
	CALC PPP14	2411 a 2415	2421 a 2425	4141 e 4143	
	CALC PPP15	2511 a 2515	2521 a 2525	4151 e 4153	
	CALC PPP16	2611 a 2615	2621 a 2625	4161 e 4163	
	CALC PPP17	2711 a 2715	2721 a 2725	4171 e 4173	
	CALC PPP18	2811 a 2815	2821 a 2825	4181 e 4183	
	CALC PPP19	2911 a 2915	2921 a 2925	4191 e 4193	
	CALC PPP20	3011 a 3015	3021 a 3025	4201 e 4203	
2	**Fluência da fase 9**				30
	CREEP				
	Fase 10 - Construção do 1º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços			
1	**Betonagem sobre cavalete do 1º tramo + 1/5 do 2º tramo**	236 ao 245		4192 e 4194	
	CALC PPTR01S				
2	**Introdução da ligação provisória ao Pilar de junta - P20**			4205 e 4206	
3	**Pré-esforço do 1º tramo + 1/5 do 2º tramo**				
	STRESS PEtramo1Sul				
	CALC PETR01S				
	GROUT PEtramo1Sul				
4	**Fluência da fase 10**				15
	CREEP				
	Fase 11 - Construção do 2º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços			
1	**Betonagem sobre cavalete do 2º tramo + 1/5 do 3º tramo**	228 ao 235		4182 e 4184	
	CALC PPTR02S				
2	**Pré-esforço do 2º tramo + 1/5 do 3º tramo**				
	STRESS PEtramo2Sul				
	CALC PETR02S				
	GROUT PEtramo2Sul				
3	**Fluência da fase 11**				15
	CREEP				
	Fase 12 - Construção do 3º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços			
1	**Betonagem sobre cavalete do 3º tramo + 1/5 do 4º tramo**	220 a 227		4172 e 4174	
	CALC PPTR03S				
2	**Pré-esforço do 3º tramo + 1/5 do 4º tramo**				
	STRESS PEtramo3Sul				
	CALC PETR03S				
	GROUT PEtramo3Sul				
3	**Fluência da fase 12**				15

	CREEP			
Fase 13 - Construção do 4º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços		
1	**Betonagem sobre cavalete do 4º tramo + 1/5 do 5º tramo**	212 a 219	4162 e 4164	
	CALC PPTR04S			
2	**Pré-esforço do 4º tramo + 1/5 do 5º tramo**			
	STRESS PEtramo4Sul			
	CALC PETR04S			
	GROUT PEtramo4Sul			
3	**Fluência da fase 13**			15
	CREEP			
Fase 14 - Construção do 5º tramo do Viaduto Sul				
1	**Desactivação da ligação provisória ao pilar de junta - P20**		4205 e 4206	
	CALC DEMOPP4205		4202 e 4204	
	CALC DEMOPE4205			
	CALC DEMOFL4205			
	CALC DEMOPP4206			
	CALC DEMOPE4206			
	CALC DEMOFL4206			
	Montagem do Cavalete	Não introduz esforços		
1	**Betonagem sobre cavalete do 5º tramo + 1/5 do 6º tramo**	204 a 211	4152 e 4154	
	CALC PPTR05S			
2	**Pré-esforço do 5º tramo + 1/5 do 6º tramo**			
	STRESS PEtramo5Sul			
	CALC PETR05S			
	GROUT PEtramo5Sul			
3	**Fluência da fase 14**			15
	CREEP			
Fase 15 - Construção do 6º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços		
1	**Betonagem sobre cavalete do 6º tramo + 1/5 do 7º tramo**	196 a 203	4142 e 4144	
	CALC PPTR06S			
2	**Pré-esforço do 6º tramo + 1/5 do 7º tramo**			
	STRESS PEtramo6Sul			
	CALC PETR06S			
	GROUT PEtramo6Sul			
3	**Fluência da fase 15**			15
	CREEP			
Fase 16 - Construção do 7º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços		
2	**Betonagem sobre cavalete do 7º tramo + 1/5 do 8º tramo**	188 a 195	4132 e 4134	
	CALC PPTR07S			
3	**Pré-esforço do 7º tramo + 1/5 do 8º tramo**			
	STRESS PEtramo7Sul			
	CALC PETR07S			
	GROUT PEtramo7Sul			
4	**Fluência da fase 16**			15
	CREEP			

Fase 17 - Construção do 8º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços		
1	**Betonagem sobre cavalete do 8º tramo + 1/5 do 9º tramo**	180 a 187	4122 e 4124	
	CALC PPTR08S			
2	**Pré-esforço do 8º tramo + 1/5 do 9º tramo**			
	STRESS PEtramo8Sul			
	CALC PETR08S			
	GROUT PEtramo8Sul			
3	**Fluência da fase 17**			15
	CREEP			
Fase 18 - Construção do 9º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços		
1	**Betonagem sobre cavalete do 9º tramo + 1/5 do 10º tramo**	172 a 179	4112 e 4114	
	CALC PPTR09S			
2	**Pré-esforço do 9º tramo + 1/5 do 10º tramo**			
	STRESS PEtramo9Sul			
	CALC PETR09S			
	GROUT PEtramo9Sul			
3	**Fluência da fase 18**			15
	CREEP			
Fase 19 - Construção do 10º tramo do Viaduto Sul				
	Montagem do Cavalete	Não introduz esforços		
1	**Betonagem sobre cavalete do 10º tramo + 1/5 do 11º tramo**	164 a 171	4102 e 4104	
	CALC PPTR10S			
2	**Pré-esforço do 10º tramo + 1/5 do 11º tramo**			
	STRESS PEtramo10Sul1			
	CALC PETR10S1			
	GROUT PEtramo10Sul1			
3	**Fluência da fase 19**			15
	CREEP			
Fase 20 - Construção dos pilares da ponte				
1	**Betonagem dos pilares da ponte**			
	CALC PPP08	1811 a 1815	4081	
	CALC PPP09	1911 a 1915	4091	
2	**Fluência da fase 20**			30
	CREEP			
Fase 21 - Betonagem sobre cavalete da aduela 0 do P8				
1	**Betonagem da aduela 0 do pilar P8**			
	CALC PPAd00P8	84 e 85		
2	**Montagem do sistema de equilíbrio no P8**		4085 e 4086	
3	**Fluência da fase 21**			30
	CREEP			
Fase 22 - Colocação do Cimbre na aduela 0 do P8				

1	**Colocação do cimbre na aduela 0 do P8**		
	CALC CCAd00P8		
2	**Fluência da fase 22**		10
	CREEP		

Fase 23

1	**Betonagem sobre cimbre da aduela 1 do P8**		
	CALC BCAd01P8	82 e 83, 86 e 87	
2	**Entrada em carga da aduela 1 do P8**		
	CALC ECAd01P8		
3	**Pré-esforço da aduela 1 do P8**		
	STRESS PE-P8-AD1		
	CALC PEAd01P8		
	GROUT PE-P8-AD1		
4	**Avanço do cimbre para a aduela 1 do P8**		
	CALC ACAd01P8		
5	**Fluência da fase 23**		7
	CREEP		

Fase 24

1	**Betonagem sobre cimbre da aduela 2 do P8**		
	CALC BCAd02P8	80 e 81, 88 e 89	
2	**Entrada em carga da aduela 2 do P8**		
	CALC ECAd02P8		
3	**Pré-esforço da aduela 2 do P8**		
	STRESS PE-P8-AD2		
	CALC PEAd02P8		
	GROUT PE-P8-AD2		
4	**Avanço do cimbre para a aduela 2 do P8**		
	CALC ACAd02P8		
5	**Fluência da fase 24**		7
	CREEP		

Fase 25

1	**Betonagem sobre cimbre da aduela 3 do P8**		
	CALC BCAd03P8	78 e 79, 90 e 91	
2	**Entrada em carga da aduela 3 do P8**		
	CALC ECAd03P8		
3	**Pré-esforço da aduela 3 do P8**		
	STRESS PE-P8-AD3		
	CALC PEAd03P8		
	GROUT PE-P8-AD3		
4	**Avanço do cimbre para a aduela 3 do P8**		
	CALC ACAd03P8		
5	**Fluência da fase 25**		7
	CREEP		

Fase 26

1	**Betonagem sobre cimbre da aduela 4 do P8**		
	CALC BCAd04P8	76 e 77, 92 e 93	
2	**Entrada em carga da aduela 4 do P8**		
	CALC ECAd04P8		
3	**Pré-esforço da aduela 4 do P8**		
	STRESS PE-P8-AD4		
	CALC PEAd04P8		
	GROUT PE-P8-AD4		

4	**Avanço do cimbre para a aduela 4 do P8**		
	CALC ACAd04P8		
5	**Fluência da fase 26**		7
	CREEP		

Fase 27

1	**Betonagem sobre cimbre da aduela 5 do P8**		
	CALC BCAd05P8	74 e 75, 94 e 95	
2	**Entrada em carga da aduela 5 do P8**		
	CALC ECAd05P8		
3	**Pré-esforço da aduela 5 do P8**		
	STRESS PE-P8-AD5		
	CALC PEAd05P8		
	GROUT PE-P8-AD5		
4	**Avanço do cimbre para a aduela 5 do P8**		
	CALC ACAd05P8		
5	**Fluência da fase 27**		7
	CREEP		

Fase 28

1	**Betonagem sobre cimbre da aduela 6 do P8**		
	CALC BCAd06P8	72 e 73, 96 e 97	
2	**Entrada em carga da aduela 6 do P8**		
	CALC ECAd06P8		
3	**Pré-esforço da aduela 6 do P8**		
	STRESS PE-P8-AD6		
	CALC PEAd06P8		
	GROUT PE-P8-AD6		
4	**Avanço do cimbre para a aduela 6 do P8**		
	CALC ACAd06P8		
5	**Fluência da fase 28**		7
	CREEP		

Fase 29

1	**Betonagem sobre cimbre da aduela 7 do P8**		
	CALC BCAd07P8	70 e 71, 98 e 99	
2	**Entrada em carga da aduela 7 do P8**		
	CALC ECAd07P8		
3	**Pré-esforço da aduela 7 do P8**		
	STRESS PE-P8-AD7		
	CALC PEAd07P8		
	GROUT PE-P8-AD7		
4	**Avanço do cimbre para a aduela 7 do P8**		
	CALC ACAd07P8		
5	**Fluência da fase 29**		7
	CREEP		

Fase 30

1	**Betonagem sobre cimbre da aduela 8 do P8**		
	CALC BCAd08P8	68 e 69, 100 e 101	
2	**Entrada em carga da aduela 8 do P8**		
	CALC ECAd08P8		
3	**Pré-esforço da aduela 8 do P8**		
	STRESS PE-P8-AD8		
	CALC PEAd08P8		
	GROUT PE-P8-AD8		

4	**Avanço do cimbre para a aduela 8 do P8**		
	CALC ACAd08P8		
5	**Fluência da fase 30**		7
	CREEP		

Fase 31

1	**Betonagem sobre cimbre da aduela 9 do P8**		
	CALC BCAd09P8	66 e 67, 102 e 103	
2	**Entrada em carga da aduela 9 do P8**		
	CALC ECAd09P8		
3	**Pré-esforço da aduela 9 do P8**		
	STRESS PE-P8-AD9		
	CALC PEAd09P8		
	GROUT PE-P8-AD9		
4	**Avanço do cimbre para a aduela 9 do P8**		
	CALC ACAd09P8		
5	**Fluência da fase 31**		7
	CREEP		

Fase 32

1	**Betonagem sobre cimbre da aduela 10 do P8**		
	CALC BCAd10P8	64 e 65, 104 e 105	
2	**Entrada em carga da aduela 10 do P8**		
	CALC ECAd10P8		
3	**Pré-esforço da aduela 10 do P8**		
	STRESS PE-P8-AD10		
	CALC PEAd10P8		
	GROUT PE-P8-AD10		
4	**Avanço do cimbre para a aduela 10 do P8**		
	CALC ACAd010P8		
5	**Fluência da fase 32**		7
	CREEP		

Fase 33

1	**Betonagem sobre cimbre da aduela 11 do P8**		
	CALC BCAd11P8	62 e 63, 106 e 107	
2	**Entrada em carga da aduela 11 do P8**		
	CALC ECAd11P8		
3	**Pré-esforço da aduela 11 do P8**		
	STRESS PE-P8-AD11		
	CALC PEAd11P8		
	GROUT PE-P8-AD11		
4	**Avanço do cimbre para a aduela 11 do P8**		
	CALC ACAd11P8		
5	**Fluência da fase 33**		7
	CREEP		

Fase 34

1	**Betonagem sobre cimbre da aduela 12 do P8**		
	CALC BCAd12P8	60 e 61, 108 e 109	
2	**Entrada em carga da aduela 12 do P8**		
	CALC ECAd12P8		
3	**Pré-esforço da aduela 12 do P8**		
	STRESS PE-P8-AD12		
	CALC PEAd12P8		
	GROUT PE-P8-AD12		

4	**Retirada do cimbre da aduela 11 do P8**			
	CALC RCAd11P8			
5	**Fluência da fase 34**			7
	CREEP			

Fase 35

1	**Betonagem sobre cavalete do fecho P7-P8**			
	CALC PPAdfP7P8	58 e 59		
2	**Pré-esforço de continuidade do tramo P7-P8**			
	STRESS PECONT-P7-P8-1			
	CALC PECP7P81			
	GROUT PECONT-P7-P8-1			
	STRESS PECONT-P7-P8-2			
	CALC PECP7P82			
	GROUT PECONT-P7-P8-2			
	STRESS PEtramo7Norte2			
	CALC PETR07N2			
	GROUT PEtramo7Norte2			
3	**Fluência da fase 35**			7
	CREEP			

Fase 36 - Betonagem sobre cavalete da aduela 0 do P9

1	**Desmontagem do sistema de equilíbrio do P8, entrada em carga dos aparelhos de apoio definitivos**			
	CALC DEMOPP4085			
	CALC DEMOPE4085		4085 e 4086	
	CALC DEMOFL4085		4082 e 4084	
	CALC DEMOPP4086			
	CALC DEMOPE4086			
	CALC DEMOFL4086			
2	**Betonagem da aduela 0 do pilar P9**			
	CALC PPAd00P9	136 e 137		
3	**Montagem do sistema de equilíbrio no P9**		4095 e 4096	
4	**Fluência da fase 36**			30
	CREEP			

Fase 37 - Colocação do Cimbre na aduela 0 do P9

1	**Colocação do cimbre na aduela 0 do P9**			
	CALC CCAd00P9			
2	**Fluência da fase 37**			10
	CREEP			

Fase 38

1	**Betonagem sobre cimbre da aduela 1 do P9**			
	CALC BCAd01P9	134 e 135, 138 e 139		
2	**Entrada em carga da aduela 1 do P9**			
	CALC ECAd01P9			
3	**Pré-esforço da aduela 1 do P9**			
	STRESS PE-P9-AD1			
	CALC PEAd01P9			
	GROUT PE-P9-AD1			
4	**Avanço do cimbre para a aduela 1 do P9**			
	CALC ACAd01P9			
5	**Fluência da fase 38**			7
	CREEP			

Fase 39

1	**Betonagem sobre cimbre da aduela 2 do P9**		
	CALC BCAd02P9	132 e 133, 140 e 141	
2	**Entrada em carga da aduela 2 do P9**		
	CALC ECAd02P9		
3	**Pré-esforço da aduela 2 do P9**		
	STRESS PE-P9-AD2		
	CALC PEAd02P9		
	GROUT PE-P9-AD2		
4	**Avanço do cimbre para a aduela 2 do P9**		
	CALC ACAd02P9		
5	**Fluência da fase 39**		7
	CREEP		

Fase 40

1	**Betonagem sobre cimbre da aduela 3 do P9**		
	CALC BCAd03P9	130 e 131, 142 e 143	
2	**Entrada em carga da aduela 3 do P9**		
	CALC ECAd03P9		
3	**Pré-esforço da aduela 3 do P9**		
	STRESS PE-P9-AD3		
	CALC PEAd03P9		
	GROUT PE-P9-AD3		
4	**Avanço do cimbre para a aduela 3 do P9**		
	CALC ACAd03P9		
5	**Fluência da fase 40**		7
	CREEP		

Fase 41

1	**Betonagem sobre cimbre da aduela 4 do P9**		
	CALC BCAd04P9	128 e 129, 144 e 145	
2	**Entrada em carga da aduela 4 do P9**		
	CALC ECAd04P9		
3	**Pré-esforço da aduela 4 do P9**		
	STRESS PE-P9-AD4		
	CALC PEAd04P9		
	GROUT PE-P9-AD4		
4	**Avanço do cimbre para a aduela 4 do P9**		
	CALC ACAd04P9		
5	**Fluência da fase 41**		7
	CREEP		

Fase 42

1	**Betonagem sobre cimbre da aduela 5 do P9**		
	CALC BCAd05P9	126 e 127, 146 e 147	
2	**Entrada em carga da aduela 5 do P9**		
	CALC ECAd05P9		
3	**Pré-esforço da aduela 5 do P9**		
	STRESS PE-P9-AD5		
	CALC PEAd05P9		
	GROUT PE-P9-AD5		
4	**Avanço do cimbre para a aduela 5 do P9**		
	CALC ACAd05P9		
5	**Fluência da fase 42**		7
	CREEP		

Fase 43

1	**Betonagem sobre cimbre da aduela 6 do P9**		
	CALC BCAd06P9	124 e 125, 148 e 149	
2	**Entrada em carga da aduela 6 do P9**		
	CALC ECAd06P9		
3	**Pré-esforço da aduela 6 do P9**		
	STRESS PE-P9-AD6		
	CALC PEAd06P9		
	GROUT PE-P9-AD6		
4	**Avanço do cimbre para a aduela 6 do P9**		
	CALC ACAd06P9		
5	**Fluência da fase 43**		7
	CREEP		

Fase 44

1	**Betonagem sobre cimbre da aduela 7 do P9**		
	CALC BCAd07P9	122 e 123, 150 e 151	
2	**Entrada em carga da aduela 7 do P9**		
	CALC ECAd07P9		
3	**Pré-esforço da aduela 7 do P9**		
	STRESS PE-P9-AD7		
	CALC PEAd07P9		
	GROUT PE-P9-AD7		
4	**Avanço do cimbre para a aduela 7 do P9**		
	CALC ACAd07P9		
5	**Fluência da fase 44**		7
	CREEP		

Fase 45

1	**Betonagem sobre cimbre da aduela 8 do P9**		
	CALC BCAd08P9	120 e 121, 152 e 153	
2	**Entrada em carga da aduela 8 do P9**		
	CALC ECAd08P9		
3	**Pré-esforço da aduela 8 do P9**		
	STRESS PE-P9-AD8		
	CALC PEAd08P9		
	GROUT PE-P9-AD8		
4	**Avanço do cimbre para a aduela 8 do P9**		
	CALC ACAd08P9		
5	**Fluência da fase 45**		7
	CREEP		

Fase 46

1	**Betonagem sobre cimbre da aduela 9 do P9**		
	CALC BCAd09P9	118 e 119, 154 e 155	
2	**Entrada em carga da aduela 9 do P9**		
	CALC ECAd09P9		
3	**Pré-esforço da aduela 9 do P9**		
	STRESS PE-P9-AD9		
	CALC PEAd09P9		
	GROUT PE-P9-AD9		
4	**Avanço do cimbre para a aduela 9 do P9**		
	CALC ACAd09P9		
5	**Fluência da fase 46**		7
	CREEP		

Fase 47

1	**Betonagem sobre cimbre da aduela 10 do P9**		
	CALC BCAd10P9	116 e 117, 156 e 157	
2	**Entrada em carga da aduela 10 do P9**		
	CALC ECAd10P9		
3	**Pré-esforço da aduela 10 do P9**		
	STRESS PE-P9-AD10		
	CALC PEAd10P9		
	GROUT PE-P9-AD10		
4	**Avanço do cimbre para a aduela 10 do P9**		
	CALC ACAd010P9		
5	**Fluência da fase 47**		7
	CREEP		

Fase 48

1	**Betonagem sobre cimbre da aduela 11 do P9**		
	CALC BCAd11P9	114 e 115, 158 e 159	
2	**Entrada em carga da aduela 11 do P9**		
	CALC ECAd11P9		
3	**Pré-esforço da aduela 11 do P9**		
	STRESS PE-P9-AD11		
	CALC PEAd11P9		
	GROUT PE-P9-AD11		
4	**Avanço do cimbre para a aduela 11 do P9**		
	CALC ACAd11P9		
5	**Fluência da fase 48**		7
	CREEP		

Fase 49

1	**Betonagem sobre cimbre da aduela 12 do P9**		
	CALC BCAd12P9	112 e 113, 160 e 161	
2	**Entrada em carga da aduela 12 do P9**		
	CALC ECAd12P9		
3	**Pré-esforço da aduela 12 do P9**		
	STRESS PE-P9-AD12		
	CALC PEAd12P9		
	GROUT PE-P9-AD12		
4	**Retirada do cimbre da aduela 11 do P9**		
	CALC RCAd11P9		
5	**Fluência da fase 49**		7
	CREEP		

Fase 50			
1	**Betonagem sobre cavalete do fecho P9-P10**		
	CALC PPAdfP9P10	162 e 163	
2	**Pré-esforço de continuidade do tramo P9-P10**		
	STRESS PECONT-P9-P10-1		
	CALC PECP9P101		
	GROUT PECONT-P9-P10-1		
	STRESS PECONT-P9-P10-2		
	CALC PECP9P102		
	GROUT PECONT-P9-P10-2		
	STRESS PEtramo10Sul2		
	CALC PETR10S2		
	GROUT PEtramo10Sul2		
3	**Fluência da fase 50**		7
	CREEP		
Fase 51			
1	**Desmontagem do sistema de equilíbrio do P9, entrada em carga dos aparelhos de apoio definitivos**		
	CALC DEMOPP4095		
	CALC DEMOPE4095	4095 e 4096	
	CALC DEMOFL4095	4092 e 4094	
	CALC DEMOPP4096		
	CALC DEMOPE4096		
	CALC DEMOFL4096		
2	**Fluência da fase 51**		10
	CREEP		
Fase 52			
1	**Betonagem sobre cavalete do fecho P8-P9**		
	CALC PPAdfP8P9	110 e 111	
2	**Pré-esforço de continuidade do tramo P8-P9**		
	STRESS PECONT-P8-P9-1		
	CALC PECP8P91		
	GROUT PECONT-P8-P9-1		
	STRESS PECONT-P8-P9-2		
	CALC PECP8P92		
	GROUT PECONT-P8-P9-2		
3	**Fluência da fase 52**		7
	CREEP		
Fase 53 - Final da Fase construtiva			
1	**Colocação da restante carga permanente**		
	CALC RCP		
2	**Fluência da fase 53**		30
	CREEP		
Fase 1000 - Tempo infinito			
1	**Fluência da fase 1000**		7346
	CREEP		

ESFORÇOS NO FINAL DA FASE CONSTRUTIVA

ELEM	X/L	Nx	Qy	Qz	Mx	My	Mz	
129	0	-21824	-4838	0	0	7	6294	Pilar 3
129	1	-19810	2029	0	0	7	7822	
130	0	-19763	2044	0	0	7	7819	
130	1	-19440	1592	0	0	6	423	
131	0	-17793	1146	0	0	6	1749	
131	1	-18168	844	0	0	5	-1191	
132	0	-18168	844	0	0	5	-1191	
132	1	-18447	453	0	0	4	-3220	
133	0	-18447	453	0	0	4	-3220	
133	1	-18754	-12	0	0	4	-4285	
134	0	-18754	-12	0	0	4	-4285	
134	1	-19140	-532	0	0	3	-4290	
135	0	-19140	-532	0	0	3	-4290	
135	1	-19591	-1090	0	0	2	-2945	
136	0	-19591	-1090	0	0	2	-2945	
136	1	-19997	-1664	0	0	1	187	
137	0	-20034	-1708	0	0	1	157	
137	1	-20216	-2199	0	0	1	8137	
138	0	-20264	-2184	0	0	1	8141	
138	1	-21831	4815	0	0	0	6653	
139	0	-21831	-4775	0	0	0	6654	
139	1	-19816	2092	0	0	0	7989	Pilar 4
140	0	-19769	2107	0	0	0	7986	
140	1	-19446	1655	0	0	-1	396	
141	0	-17799	1208	0	0	-1	1722	
141	1	-18175	907	0	0	-1	-1411	
142	0	-18175	907	0	0	-1	-1411	
142	1	-18457	516	0	0	-1	-3635	
143	0	-18457	516	0	0	-1	-3635	
143	1	-18765	51	0	0	-1	-4892	
144	0	-18765	51	0	0	-1	-4892	
144	1	-19152	-469	0	0	-2	-5086	
145	0	-19152	-469	0	0	-2	-5086	
145	1	-19603	-1027	0	0	-2	-3926	
146	0	-19603	-1027	0	0	-2	-3926	
146	1	-20007	-1601	0	0	-2	-976	
147	0	-20044	-1645	0	0	-2	-1006	
147	1	-20222	-2135	0	0	-2	6795	
148	0	-20270	-2121	0	0	-2	6798	
148	1	-21835	4878	0	0	-3	5124	
149	0	-21836	-4991	0	0	-3	5125	Pilar 5
149	1	-19822	1877	0	0	-2	7103	

ELEM	X/L	Nx	Qy	Qz	Mx	My	Mz	
169	0	-55701	-4464	0	0	-1	-5649	Pilar 7
169	1	-55839	-3419	0	0	-1	2152	
170	0	-55827	-3415	0	0	-1	2157	
170	1	-55945	-2416	0	0	-1	6041	
171	0	-48114	-1684	0	0	-1	6023	
171	1	-48329	-285	0	0	-1	9467	
172	0	-55675	-288	0	0	-1	15869	
172	1	-55788	876	0	0	-1	15162	
173	0	-50527	871	0	0	-1	12116	
173	1	-50443	2030	0	0	-1	9345	
174	0	-57692	2023	0	0	-1	15989	
174	1	-57576	3178	0	0	-1	11065	
175	0	-57578	3172	0	0	-1	11063	
175	1	-57439	4324	0	0	-1	3811	
176	0	-71596	4309	0	0	-1	17942	
176	1	-71550	5462	0	0	-1	8962	
177	0	-71555	5453	0	0	-1	8959	
177	1	-71647	6614	0	0	-1	-2479	
178	0	-85694	6589	0	0	-1	12820	
178	1	-85853	7754	0	0	-1	155	
179	0	-79072	7474	0	0	-1	13266	
179	1	-79262	8619	0	0	-1	-1300	
180	0	-93177	8584	0	0	-1	15729	
180	1	-93296	9736	0	0	-1	540	
181	0	-86416	9354	0	0	-1	14546	
181	1	-86583	10486	0	0	-1	-2299	
182	0	-100398	10440	0	0	-1	16888	
182	1	-100658	11592	0	0	-1	-467	
183	0	-93688	11136	0	0	-1	14393	
183	1	-93960	12277	0	0	-1	-4481	
184	0	-107717	12220	0	0	-1	15800	
184	1	-108020	13386	0	0	-1	-3275	
185	0	-100982	12831	0	0	-1	12637	
185	1	-101287	13988	0	0	-1	-7780	
186	0	-115008	13922	0	0	-1	14124	
186	1	-115279	14919	0	0	-1	-2802	
187	0	-101008	13674	0	0	-1	30751	
187	1	-101363	14636	0	0	-1	13503	
188	0	-115032	14558	0	0	-1	38370	
188	1	-115358	15547	0	0	0	21627	
189	0	-115361	15533	0	0	0	21634	
189	1	-115678	16546	0	0	0	3768	
190	0	-129289	16457	0	0	0	32126	
190	1	-129604	17499	0	0	0	15037	
191	0	-129606	17483	0	0	0	15041	
191	1	-129873	18552	0	0	0	-3260	
192	0	-143934	18449	0	0	0	30175	
192	1	-144214	19417	0	0	0	15166	
193	0	-144214	19401	0	0	0	15165	
193	1	-144301	20392	0	0	0	-1202	
194	0	-157761	20279	0	0	0	34636	
194	1	-157921	21296	0	0	0	19574	
195	0	-157918	21278	0	0	0	19566	
195	1	-158015	22320	0	0	0	3445	
196	0	-158878	22376	0	0	0	6064	
196	1	-158834	24112	0	0	0	-22529	

197	0	-158834	-25104	0	0	0	-22527 Pilar 8
197	1	-159047	-23369	0	0	0	9546
198	0	-158185	-23314	0	0	0	6931
198	1	-158180	-22272	0	0	0	25121
199	0	-158183	-22290	0	0	0	25130
199	1	-158033	-21274	0	0	0	42015
200	0	-144197	-21388	0	0	0	5176
200	1	-144016	-20398	0	0	0	23161
201	0	-144016	-20414	0	0	0	23162
201	1	-143744	-19447	0	0	0	40056
202	0	-130172	-19549	0	0	0	7783
202	1	-129920	-18480	0	0	0	28159
203	0	-129918	-18496	0	0	0	28155
203	1	-129619	-17455	0	0	0	47321
204	0	-115755	-17545	0	0	0	18438
204	1	-115457	-16533	0	0	0	38417
205	0	-115454	-16546	0	0	0	38410
205	1	-115149	-15559	0	0	0	57266
206	0	-101489	-15636	0	0	0	32418
206	1	-101156	-14675	0	0	0	51776
207	0	-115708	-15934	0	0	0	17686
207	1	-115450	-14934	0	0	0	36634
208	0	-101737	-14999	0	0	0	14878
208	1	-101444	-13838	0	0	0	37683
209	0	-115929	-14943	0	0	0	5381
209	1	-115682	-13734	0	0	0	27180
210	0	-101944	-13789	0	0	0	7087
210	1	-101720	-12608	0	0	0	28646
211	0	-116121	-13545	0	0	0	-1800
211	1	-115945	-12310	0	0	0	18548
212	0	-102168	-12354	0	0	0	-440
212	1	-102072	-11141	0	0	0	19339
213	0	-116377	-11894	0	0	0	-7765
213	1	-116358	-10624	0	0	0	10553
214	0	-102498	-10657	0	0	0	-6310
214	1	-102389	-9395	0	0	0	11328
215	0	-116613	-9977	0	0	0	-12766
215	1	-116554	-8654	0	0	0	3145
216	0	-102591	-8677	0	0	0	-12100
216	1	-102497	-7362	0	0	0	2680
217	0	-116831	-7796	0	0	0	-20532
217	1	-116824	-6414	0	0	0	-7778
218	0	-102723	-6429	0	0	0	-21893
218	1	-102676	-5053	0	0	0	-10740
219	0	-109710	-5193	0	0	0	-21708
219	1	-109698	-3786	0	0	0	-12982
220	0	-102542	-3793	0	0	0	-19748
220	1	-102414	-2389	0	0	0	-13184
221	0	-102415	-2394	0	0	0	-13186
221	1	-102201	-994	0	0	0	-9101
222	0	-91424	-996	0	0	0	-10041
222	1	-91136	-8	0	0	0	-8578
223	0	-91136	-8	0	0	0	-8578 ½ Vão
223	1	-91364	980	0	0	0	-9918
224	0	-101054	976	0	0	0	-7305
224	1	-101247	2375	0	0	0	-11312
225	0	-101245	2367	0	0	0	-11308
225	1	-101410	3771	0	0	0	-17884
226	0	-108798	3762	0	0	0	-11435
226	1	-108789	5170	0	0	0	-20108
227	0	-101678	5024	0	0	0	-8986
227	1	-101664	6398	0	0	0	-20025
228	0	-116030	6384	0	0	0	-5981
228	1	-115971	7763	0	0	0	-18660
229	0	-102134	7339	0	0	0	3862
229	1	-102157	8653	0	0	0	-10859
230	0	-116406	8635	0	0	0	4559
230	1	-116389	9956	0	0	0	-11324
231	0	-102375	9378	0	0	0	12542
231	1	-102410	10638	0	0	0	-5086
232	0	-116575	10614	0	0	0	12110
232	1	-116514	11882	0	0	0	-6216
233	0	-102360	11134	0	0	0	20734
233	1	-102380	12345	0	0	0	933
234	0	-116477	12314	0	0	0	20374
234	1	-116570	13546	0	0	0	2
235	0	-102263	12614	0	0	0	30328
235	1	-102412	13793	0	0	0	8740
236	0	-116475	13755	0	0	0	29354
236	1	-116638	14959	0	0	0	7537
237	0	-102208	13860	0	0	0	39719
237	1	-102424	15017	0	0	0	16901
238	0	-116466	14973	0	0	0	39235
238	1	-116651	15969	0	0	0	20291
239	0	-102129	14715	0	0	0	54234
239	1	-102397	15672	0	0	0	34895
240	0	-116409	15619	0	0	0	60420
240	1	-116639	16602	0	0	0	41601
241	0	-116641	16592	0	0	0	41603
241	1	-116865	17600	0	0	0	21655
242	0	-130827	17538	0	0	0	50772
242	1	-131044	18574	0	0	0	31620
243	0	-131044	18563	0	0	0	31620
243	1	-131216	19626	0	0	0	11247
244	0	-145642	19554	0	0	0	45576
244	1	-145834	20515	0	0	0	28765
245	0	-145833	20504	0	0	0	28763
245	1	-145832	21489	0	0	0	10577
246	0	-159651	21410	0	0	0	47396
246	1	-159718	22420	0	0	0	30541
247	0	-159716	22408	0	0	0	30534
247	1	-159723	23442	0	0	0	12610
248	0	-160445	23492	0	0	0	14793
248	1	-160271	25216	0	0	0	-16744
249	0	-159840	-24171	0	0	0	-15320 Pilar 9
249	1	-160180	-22447	0	0	0	13695
250	0	-159456	-22397	0	0	0	11506
250	1	-159538	-21363	0	0	0	27789
251	0	-159541	-21375	0	0	0	27795
251	1	-159477	-20366	0	0	0	42755
252	0	-145275	-20446	0	0	0	4914

252	1	-145174	-19462	0	0	0	20993
253	0	-145175	-19473	0	0	0	20995
253	1	-144985	-18512	0	0	0	35970
254	0	-131055	-18582	0	0	0	2822
254	1	-130890	-17520	0	0	0	21042
255	0	-130890	-17530	0	0	0	21041
255	1	-130680	-16496	0	0	0	38038
256	0	-116459	-16557	0	0	0	8381
256	1	-116243	-15550	0	0	0	26209
257	0	-116242	-15560	0	0	0	26206
257	1	-116021	-14578	0	0	0	42900
258	0	-102017	-14630	0	0	0	17390
258	1	-101758	-13673	0	0	0	34598
259	0	-116216	-14924	0	0	0	688
259	1	-116039	-13928	0	0	0	17504
260	0	-101985	-13972	0	0	0	-4874
260	1	-101778	-12815	0	0	0	15407
261	0	-108956	-13367	0	0	0	-665
261	1	-108749	-12201	0	0	0	18216
262	0	-94668	-12238	0	0	0	-2441
262	1	-94473	-11098	0	0	0	16232
263	0	-101612	-11555	0	0	0	1217
263	1	-101420	-10401	0	0	0	18337
264	0	-87302	-10431	0	0	0	-1158
264	1	-87179	-9299	0	0	0	15450
265	0	-94263	-9676	0	0	0	1234
265	1	-94175	-8525	0	0	0	16163
266	0	-79987	-8548	0	0	0	-1121
266	1	-79797	-7406	0	0	0	13209
267	0	-86815	-7688	0	0	0	-145
267	1	-86640	-6525	0	0	0	12295
268	0	-72360	-6541	0	0	0	-3251
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269	0	-72221	-5394	0	0	0	8016
269	1	-72214	-4257	0	0	0	16866
270	0	-57856	-4266	0	0	0	2513
270	1	-57925	-3136	0	0	0	9719
271	0	-57924	-3140	0	0	0	9719
271	1	-57979	-2015	0	0	0	14644
272	0	-50654	-2018	0	0	0	7896
272	1	-50670	-897	0	0	0	10772
273	0	-56028	-899	0	0	0	13819
273	1	-55884	221	0	0	0	14655
274	0	-48447	219	0	0	0	8195
274	1	-48307	970	0	0	0	7297
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275	1	-48135	1711	0	0	0	4955
276	0	-55843	2451	0	0	0	5254
276	1	-55691	3495	0	0	0	1231
277	0	-55699	3498	0	0	0	1229
277	1	-55539	4568	0	0	0	-6831
278	0	-55526	-2131	0	0	0	-6831 Pilar10
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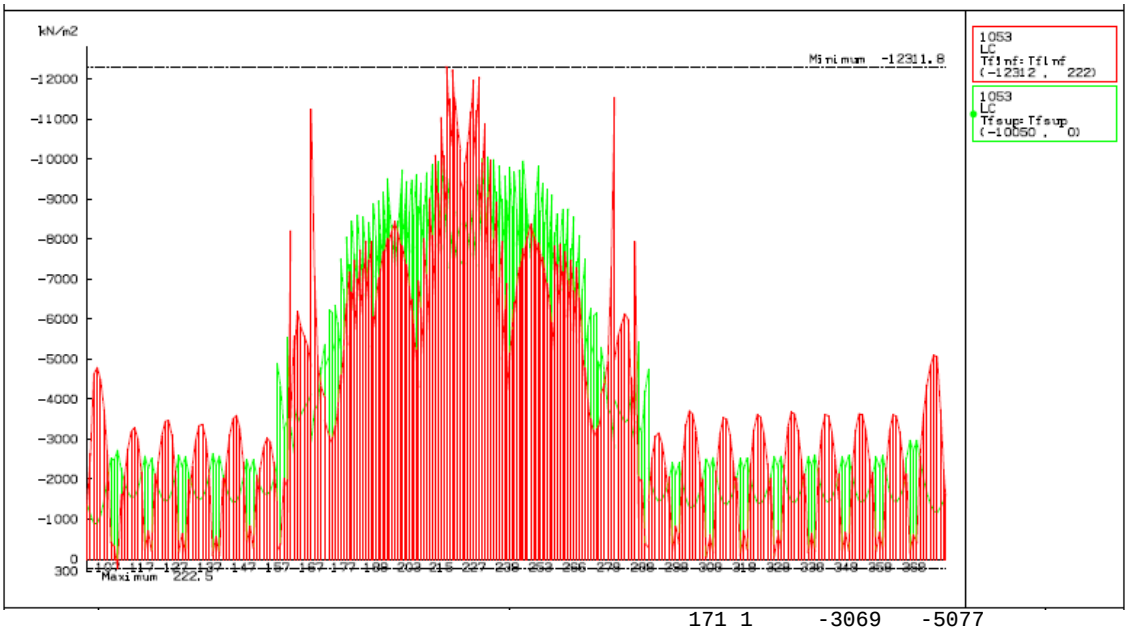
TENSÕES NO FINAL DA FASE CONSTRUTIVA (KN/M^2)



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129	0	-631	-2301	Pilar 3
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131	0	-1392	-2093	
131	1	-2314	-1792	
132	0	-2314	-1792	
132	1	-2971	-1582	
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136	1	-2087	-2149	
137	0	-2088	-2138	
137	1	-86	-2623	
138	0	-94	-2632	
138	1	-571	-2335	
139	0	-571	-2335	Pilar 4
139	1	-86	-2577	
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145	0	-3589	-1442	
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146	0	-3266	-1630	
146	1	-2422	-2016	
147	0	-2423	-2006	
147	1	-367	-2485	
148	0	-375	-2494	
148	1	-829	-2190	
149	0	-829	-2190	Pilar 5
149	1	-272	-2486	
169	0	-4831	-3881	Pilar 7
169	1	-4288	-4765	
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177	0	-5196	-6736	
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178	0	-5949	-8042	
178	1	-7173	-7052	
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196	1	-8429	-7315	
197	0	-8433	-7320	Pilar 8
197	1	-8090	-8427	
198	0	-8106	-8319	
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246	1	-7794	-9228	
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247	1	-8051	-8528	
248	0	-8039	-8619	
248	1	-8383	-7514	
249	0	-8326	-7521 Pilar 9	
249	1	-8046	-8577	
250	0	-8059	-8485	
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264	0	-6957	-6601	
264	1	-5727	-7738	
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273	1	-3060	-6147	
274	0	-3236	-4987	
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275	0	-3326	-4906	
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276	0	-4129	-5294	
276	1	-4375	-4677	
277	0	-4375	-4677	
277	1	-4934	-3772	
278	0	-4926	-3765 Pilar 10	
278	1	-7185	-3614	

ESFORÇOS AOS 8000 DIAS

ELEM	X/L	Nx	Qy	Qz	Mx	My	Mz	
129	0	-21306	-4826	-1	0	17	5541	Pilar 3
129	1	-19297	2042	-1	0	15	7349	
130	0	-19267	2064	-1	0	15	7346	
130	1	-18933	1613	-1	0	12	408	
131	0	-17314	1141	-1	0	12	1712	
131	1	-17674	840	-1	0	10	-945	
132	0	-17674	840	-1	0	10	-945	
132	1	-17933	449	-1	0	8	-2773	
133	0	-17933	449	-1	0	8	-2773	
133	1	-18224	-16	-1	0	6	-3743	
134	0	-18224	-16	-1	0	6	-3743	
134	1	-18606	-536	-1	0	3	-3785	
135	0	-18606	-536	-1	0	3	-3785	
135	1	-19068	-1094	-1	0	1	-2611	
136	0	-19068	-1094	-1	0	1	-2611	
136	1	-19490	-1668	-1	0	-1	245	
137	0	-19516	-1737	-1	0	-1	224	
137	1	-19712	-2227	-1	0	-3	7761	
138	0	-19742	-2204	-1	0	-3	7764	
138	1	-21305	4794	-1	0	-5	6018	
139	0	-21306	-4762	0	0	-5	6018	Pilar 4
139	1	-19297	2106	0	0	-6	7634	
140	0	-19267	2128	0	0	-6	7631	
140	1	-18931	1677	0	0	-7	503	
141	0	-17312	1205	0	0	-7	1807	
141	1	-17671	903	0	0	-8	-1039	
142	0	-17671	903	0	0	-8	-1039	
142	1	-17927	513	0	0	-9	-3052	
143	0	-17927	513	0	0	-9	-3052	
143	1	-18215	48	0	0	-9	-4209	
144	0	-18215	48	0	0	-9	-4209	
144	1	-18595	-472	0	0	-10	-4441	
145	0	-18595	-472	0	0	-10	-4441	
145	1	-19057	-1030	0	0	-11	-3462	
146	0	-19057	-1030	0	0	-11	-3462	
146	1	-19483	-1604	0	0	-12	-806	
147	0	-19508	-1674	0	0	-12	-826	
147	1	-19712	-2163	0	0	-13	6512	
148	0	-19743	-2140	0	0	-13	6515	
148	1	-21311	4858	0	0	-13	4580	
149	0	-21312	-4924	0	0	-13	4581	Pilar 5
149	1	-19298	1944	0	0	-13	6678	
169	0	-51126	-4497	0	0	-10	-7357	Pilar 7
169	1	-51329	-3453	0	0	-10	826	
170	0	-51338	-3440	0	0	-10	806	
170	1	-51483	-2442	0	0	-10	5169	
171	0	-43438	-1757	0	0	-10	6020	
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189	1	107357	16113	0	0	-4	-11877	
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197	1	148594	-22628	0	0	-2	-18931	
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205	0	106452	-16110	0	0	-1	22616
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213	0	106134	-11615	0	0	-1	-6459
213	1	106135	-10345	0	0	-1	12019
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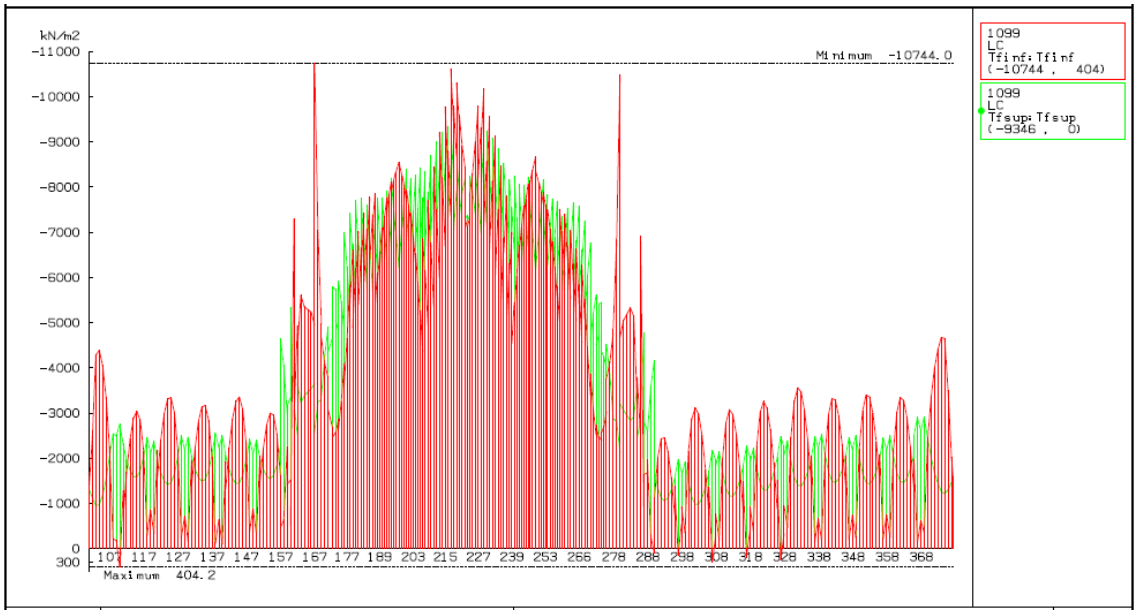
TENSÕES AOS 8000 DIAS (KN/M2)



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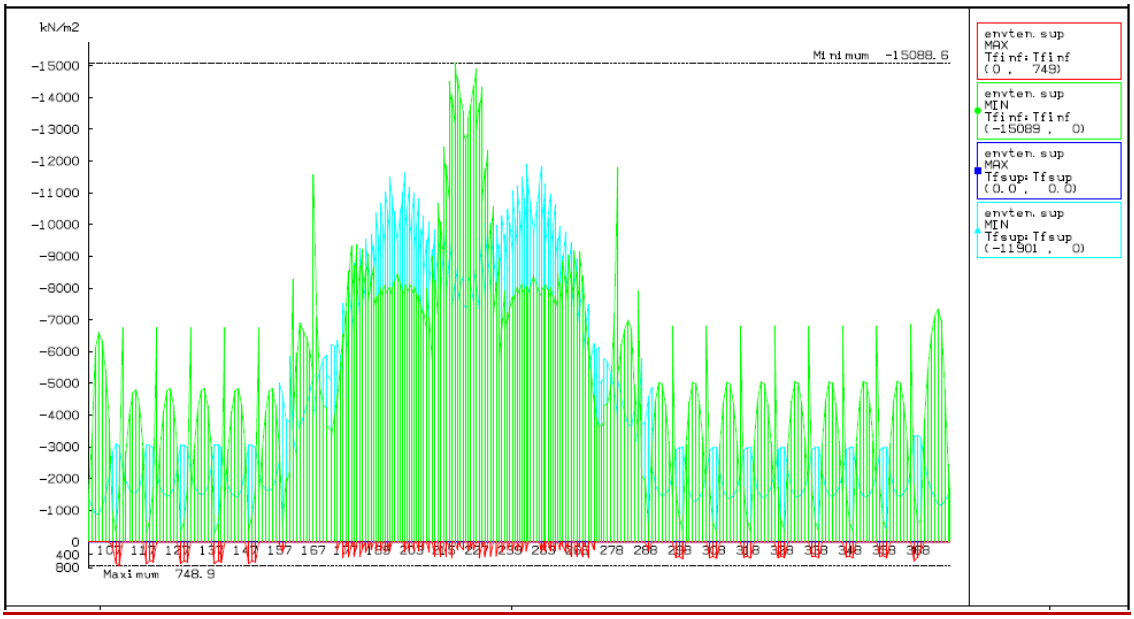

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195	0	0	0		195	0	-7975	-10897
195	1	0	0		195	1	-8176	-10311
196	0	0	0		196	0	-8160	-10416
196	1	0	0		196	1	-8429	-9477
197	0	0	0 Pilar 8		197	0	-8433	-9480
197	1	0	0		197	1	-8090	-10483
198	0	0	0		198	0	-8106	-10377
198	1	0	0		198	1	-7880	-11006
199	0	0	0		199	0	-7880	-11005
199	1	296	0		199	1	-7814	-11637
200	0	0	0		200	0	-8081	-9888
200	1	0	0		200	1	-7994	-10526
201	0	0	0		201	0	-7993	-10525
201	1	283	0		201	1	-7887	-11175
202	0	0	0		202	0	-8143	-9429
202	1	0	0		202	1	-7988	-10191
203	0	0	0		203	0	-7987	-10189
203	1	277	0		203	1	-7797	-10977
204	0	0	0		204	0	-8048	-9158
204	1	0	0		204	1	-7813	-9967
205	0	0	0		205	0	-7812	-9965
205	1	259	0		205	1	-7531	-10807
206	0	0	0		206	0	-7766	-8985
206	1	0	0		206	1	-7429	-9846
207	0	0	0		207	0	-7428	-9407
207	1	241	0		207	1	-7038	-10281
208	0	0	0		208	0	-7258	-8422
208	1	0	0		208	1	-6708	-9492
209	0	0	0		209	0	-7996	-9009
209	1	323	0		209	1	-6797	-10085
210	0	0	0		210	0	-7089	-8115
210	1	0	0		210	1	-5722	-9212
211	0	0	0		211	0	-8998	-8678
211	1	442	0		211	1	-7840	-9846
212	0	0	0		212	0	-8246	-7756
212	1	0	0		212	1	-7170	-9110
213	0	0	0		213	0	-10659	-8617
213	1	455	0		213	1	-9678	-9937
214	0	0	0		214	0	-10097	-7799
214	1	0	0		214	1	-9006	-9098
215	0	0	0		215	0	-12428	-8700

215	1	466	0		215	1	-11437	-9925
216	0	0	0		216	0	-11866	-7741
216	1	104	0		216	1	-10827	-8896
217	0	104	0		217	0	-14511	-8473
217	1	476	0		217	1	-13624	-9500
218	0	0	0		218	0	-14060	-7273
218	1	0	0		218	1	-13200	-8172
219	0	0	0		219	0	-15089	-7960
219	1	242	0		219	1	-14383	-8680
220	0	0	0		220	0	-14603	-7546
220	1	131	0		220	1	-14001	-8077
221	0	131	0		221	0	-14001	-8077
221	1	244	0		221	1	-13561	-8392
222	0	0	0		222	0	-12883	-7374
222	1	0	0		222	1	-12678	-7465
223	0	0	0 ½ Vão		223	0	-12678	-7465
223	1	0	0		223	1	-12861	-7378
224	0	244	0		224	0	-13312	-8429
224	1	131	0		224	1	-13745	-8118
225	0	131	0		225	0	-13745	-8118
225	1	0	0		225	1	-14362	-7588
226	0	242	0		226	0	-14192	-8719
226	1	0	0		226	1	-14902	-7999
227	0	0	0		227	0	-12970	-8216
227	1	0	0		227	1	-13828	-7317
228	0	476	0		228	0	-13418	-9563
228	1	104	0		228	1	-14305	-8532
229	0	104	0		229	0	-10712	-8949
229	1	0	0		229	1	-11750	-7789
230	0	466	0		230	0	-11326	-10008
230	1	0	0		230	1	-12318	-8776
231	0	0	0		231	0	-8918	-9176
231	1	0	0		231	1	-10010	-7867
232	0	455	0		232	0	-9586	-10050
232	1	0	0		232	1	-10570	-8718
233	0	0	0		233	0	-7093	-9213
233	1	0	0		233	1	-8172	-7848
234	0	442	0		234	0	-7757	-9985
234	1	0	0		234	1	-8905	-8833
235	0	0	0		235	0	-5644	-9367
235	1	0	0		235	1	-7017	-8255
236	0	323	0		236	0	-6714	-10280
236	1	0	0		236	1	-7920	-9187
237	0	0	0		237	0	-6678	-9668
237	1	0	0		237	1	-7231	-8581
238	0	241	0		238	0	-7003	-10493
238	1	0	0		238	1	-7396	-9604
239	0	0	0		239	0	-7397	-10040
239	1	0	0		239	1	-7736	-9165
240	0	259	0		240	0	-7493	-11042
240	1	0	0		240	1	-7776	-10184
241	0	0	0		241	0	-7777	-10186
241	1	0	0		241	1	-8015	-9361
242	0	273	0		242	0	-7760	-11199
242	1	0	0		242	1	-7953	-10395
243	0	0	0		243	0	-7954	-10396
243	1	0	0		243	1	-8112	-9618
244	0	293	0		244	0	-7838	-11483
244	1	0	0		244	1	-7946	-10817
245	0	0	0		245	0	-7947	-10818
245	1	0	0		245	1	-8038	-10151
246	0	289	0		246	0	-7770	-11901
246	1	0	0		246	1	-7838	-11254
247	0	0	0		247	0	-7839	-11254
247	1	0	0		247	1	-8051	-10622
248	0	0	0		248	0	-8039	-10706
248	1	0	0		248	1	-8383	-9702
249	0	0	0		249	0	-8326	-9698
249	1	0	0 Pilar 9		249	1	-8046	-10681
250	0	0	0		250	0	-8059	-10596
250	1	0	0		250	1	-7851	-11211
251	0	0	0		251	0	-7850	-11210
251	1	296	0		251	1	-7755	-11825
252	0	0	0		252	0	-8033	-10025
252	1	208	0		252	1	-7943	-10642
253	0	208	0		253	0	-7943	-10641
253	1	283	0		253	1	-7834	-11266
254	0	0	0		254	0	-8100	-9468
254	1	0	0		254	1	-7941	-10197
255	0	0	0		255	0	-7940	-10195
255	1	277	0		255	1	-7747	-10946
256	0	0	0		256	0	-8009	-9072
256	1	0	0		256	1	-7770	-9836
257	0	0	0		257	0	-7769	-9835
257	1	259	0		257	1	-7485	-10626
258	0	0	0		258	0	-7730	-8749

258	1	0	0	258	1	-7390	-9551
259	0	0	0	259	0	-8442	-9115
259	1	241	0	259	1	-7907	-9925
260	0	0	0	260	0	-8134	-8008
260	1	118	0	260	1	-7374	-8992
261	0	118	0	261	0	-8843	-8748
261	1	323	0	261	1	-8045	-9740
262	0	0	0	262	0	-8352	-7709
262	1	191	0	262	1	-7419	-8709
263	0	191	0	263	0	-9044	-8447
263	1	442	0	263	1	-8080	-9435
264	0	0	0	264	0	-8501	-7273
264	1	0	0	264	1	-7420	-8253
265	0	0	0	265	0	-9161	-7970
265	1	455	0	265	1	-8065	-8916
266	0	0	0	266	0	-8497	-6702
266	1	133	0	266	1	-7274	-7616
267	0	133	0	267	0	-9150	-7318
267	1	466	0	267	1	-7955	-8160
268	0	0	0	268	0	-8389	-5900
268	1	104	0	268	1	-7157	-6726
269	0	104	0	269	0	-7156	-6725
269	1	476	0	269	1	-5992	-7485
270	0	0	0	270	0	-6430	-5197
270	1	0	0	270	1	-5346	-5816
271	0	0	0	271	0	-5345	-5816
271	1	242	0	271	1	-4398	-6261
272	0	0	0	272	0	-4600	-5101
272	1	0	0	272	1	-3821	-5361
273	0	0	0	273	0	-3906	-6079
273	1	0	0	273	1	-3491	-6147
274	0	0	0	274	0	-3665	-4987
274	1	0	0	274	1	-3659	-5072
275	0	0	0	275	0	-3659	-5072
275	1	0	0	275	1	-3804	-5160
276	0	0	0	276	0	-4293	-5781
276	1	0	0	276	1	-4375	-5645
277	0	0	0	277	0	-4375	-5646
277	1	0	0	277	1	-4934	-5267
278	0	0	0 Pilar 10	278	0	-4926	-5254
278	1	0	0	278	1	-7185	-4834

ESTADO LIMITE ÚLTIMO – MOMENTOS FLECTORES RESISTENTES

ELEMENTO 197 – PILAR P8

**** ELEMENT 197 PNT 1 ULTIMATE STATE (ITER 13) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-143068.14	693.70	-37634.17	20.2138	-0.2631	-0.0048
arminf	A_500	-655.48	2.86	-2152.15	0.0073	-3.2833	-0.0044
armsup	A_500	-335.48	3.12	1213.32	0.0049	3.6167	-0.0093
601	Strand	-772.15	-0.00	2493.19	0.0114	3.2289	0.0000
602	Strand	-772.15	-0.00	2493.19	0.0114	3.2289	0.0000
603	Strand	-772.15	-0.00	2493.19	0.0114	3.2289	0.0000
604	Strand	-772.15	-0.00	2493.19	0.0114	3.2289	0.0000
605	Strand	-772.15	-0.00	2493.19	0.0114	3.2289	0.0000
606	Strand	-386.08	-0.00	1246.59	0.0057	3.2289	0.0000
706	Strand	-382.29	-0.00	1320.04	0.0057	3.4530	0.0000
707	Strand	-764.58	-0.00	2640.09	0.0114	3.4530	0.0000
708	Strand	-764.58	-0.00	2640.09	0.0114	3.4530	0.0000
709	Strand	-764.58	-0.00	2640.09	0.0114	3.4530	0.0000
710	Strand	-764.58	-0.00	2640.09	0.0114	3.4530	0.0000
711	Strand	-382.29	-0.00	1320.04	0.0057	3.4530	0.0000
712	Strand	-382.29	-0.00	1320.04	0.0057	3.4530	0.0000
		TOTAL ULT+Mz	-152511.09		699.68	-10339.99	

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
197	B_40	-0.339	-6161.4	3.6667	-0.448	-7891.6	-3.3333
arminf	A_500	-0.446	-89164.5	-3.2833	-0.447	-89464.1	-3.2833
armsup	A_500	-0.341	-68153.0	3.6167	-0.342	-68498.0	3.6167
601	Strand	5.823	1134900.9	3.2289	6.171	1203254.6	(PRIMARY)
602	Strand	5.918	1153491.8	3.2289	6.266	1221855.0	(PRIMARY)
603	Strand	5.989	1167196.9	3.2289	6.336	1235567.3	(PRIMARY)
604	Strand	6.059	1180944.7	3.2289	6.407	1249322.2	(PRIMARY)
605	Strand	6.021	1173576.9	3.2289	6.369	1241950.5	(PRIMARY)
606	Strand	5.966	1162792.8	3.2289	6.314	1231160.9	(PRIMARY)
706	Strand	5.974	1164257.5	3.4530	6.318	1231961.7	(PRIMARY)
707	Strand	5.918	1153421.3	3.4530	6.262	1221119.9	(PRIMARY)
708	Strand	5.863	1142615.9	3.4530	6.207	1210308.9	(PRIMARY)
709	Strand	5.807	1131797.1	3.4530	6.151	1199484.5	(PRIMARY)
710	Strand	5.751	1120953.0	3.4530	6.096	1188634.8	(PRIMARY)
711	Strand	5.696	1110068.4	3.4530	6.040	1177744.6	(PRIMARY)
712	Strand	5.635	1098278.4	3.4530	5.979	1165948.5	(PRIMARY)

**** ELEMENT 197 PNT 1 LOAD CAPACITY MAX-MZ (ITER 64) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-119903.03	679.00	409220.06	20.2138	3.4129	-0.0057
arminf	A_500	3192.47	0.00	10481.93	0.0073	-3.2833	0.0000
armsup	A_500	-1830.32	20.37	6619.68	0.0049	3.6167	-0.0111
601	Strand	-2660.43	-0.00	8590.23	0.0114	3.2289	0.0000
602	Strand	-2660.43	-0.00	8590.23	0.0114	3.2289	0.0000
603	Strand	-2660.43	-0.00	8590.23	0.0114	3.2289	0.0000
604	Strand	-2660.43	-0.00	8590.23	0.0114	3.2289	0.0000
605	Strand	-2660.43	-0.00	8590.23	0.0114	3.2289	0.0000
606	Strand	-1330.21	-0.00	4295.12	0.0057	3.2289	0.0000
706	Strand	-1758.12	-0.00	6070.80	0.0057	3.4530	0.0000
707	Strand	-3516.24	-0.00	12141.60	0.0114	3.4530	0.0000
708	Strand	-3516.24	-0.00	12141.60	0.0114	3.4530	0.0000
709	Strand	-3516.24	-0.00	12141.60	0.0114	3.4530	0.0000
710	Strand	-3516.24	-0.00	12141.60	0.0114	3.4530	0.0000
711	Strand	-1758.12	-0.00	6070.80	0.0057	3.4530	0.0000
712	Strand	-1758.12	-0.00	6070.80	0.0057	3.4530	0.0000
		TOTAL MAX MZ	-152512.58		699.37	540346.74	
		SEC. MAX MZ	-639.90		699.37	28843.54	

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
197	B_40	10.086	0.5	-3.3333	-1.959	-19825.0	3.6667
arminf	*! A_500	10.000	435001.0	-3.2833	9.990	435001.0	-3.2833
armsup	A_500	-1.858	-371649.1	3.6167	-1.869	-373899.6	3.6167
601	Strand	4.973	969262.5	3.2289	6.171	1203254.6	(PRIMARY)
602	Strand	5.069	987853.4	3.2289	6.266	1221855.0	(PRIMARY)
603	Strand	5.139	1001558.5	3.2289	6.336	1235567.3	(PRIMARY)
604	Strand	5.209	1015306.3	3.2289	6.407	1249322.2	(PRIMARY)
605	Strand	5.172	1007938.5	3.2289	6.369	1241950.5	(PRIMARY)
606	Strand	5.116	997154.4	3.2289	6.314	1231160.9	(PRIMARY)
706	Strand	4.735	922883.2	3.4530	6.318	1231961.7	(PRIMARY)
707	Strand	4.680	912047.1	3.4530	6.262	1221119.9	(PRIMARY)
708	Strand	4.624	901241.6	3.4530	6.207	1210308.9	(PRIMARY)

709	Strand	4.569	890422.8	3.4530	6.151	1199484.5	(PRIMARY)
710	Strand	4.513	879578.7	3.4530	6.096	1188634.8	(PRIMARY)
711	Strand	4.457	868694.1	3.4530	6.040	1177744.6	(PRIMARY)
712	Strand	4.397	856904.1	3.4530	5.979	1165948.5	(PRIMARY)

**** ELEMENT 197 PNT 1 ULTIMATE STATE (ITER 14) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-157652.85	525.23	-383378.92	20.2138	-2.4318	-0.0033
arminfA_500		-1634.51	5.56	-5366.62	0.0073	-3.2833	-0.0034
armsupA_500		395.24	6.07	-1429.44	0.0049	3.6167	0.0154
601	Strand	704.95	0.00	-2276.19	0.0114	3.2289	0.0000
602	Strand	704.95	0.00	-2276.19	0.0114	3.2289	0.0000
603	Strand	704.95	0.00	-2276.19	0.0114	3.2289	0.0000
604	Strand	704.95	0.00	-2276.19	0.0114	3.2289	0.0000
605	Strand	704.95	0.00	-2276.19	0.0114	3.2289	0.0000
606	Strand	352.47	0.00	-1138.10	0.0057	3.2289	0.0000
706	Strand	407.18	0.00	-1405.98	0.0057	3.4530	0.0000
707	Strand	814.35	0.00	-2811.96	0.0114	3.4530	0.0000
708	Strand	814.35	0.00	-2811.96	0.0114	3.4530	0.0000
709	Strand	814.35	0.00	-2811.96	0.0114	3.4530	0.0000
710	Strand	814.35	0.00	-2811.96	0.0114	3.4530	0.0000
711	Strand	407.18	0.00	-1405.98	0.0057	3.4530	0.0000
712	Strand	407.18	0.00	-1405.98	0.0057	3.4530	0.0000
	TOTAL ULT-Mz	-150535.98	536.86	-418159.84			

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
197	B_40	0.416	0.0	3.6667	-1.126	-16046.1	-3.3333
arminfA_500		-1.112	-222424.1	-3.2833	-1.115	-223006.3	-3.2833
armsupA_500		0.404	80831.5	3.6167	0.401	80161.0	3.6167
601	Strand	6.488	1264470.7	3.2289	6.171	1203254.6	(PRIMARY)
602	Strand	6.583	1283061.5	3.2289	6.266	1221855.0	(PRIMARY)
603	Strand	6.654	1296766.7	3.2289	6.336	1235567.3	(PRIMARY)
604	Strand	6.724	1310514.5	3.2289	6.407	1249322.2	(PRIMARY)
605	Strand	6.686	1303146.7	3.2289	6.369	1241950.5	(PRIMARY)
606	Strand	6.631	1292362.6	3.2289	6.314	1231160.9	(PRIMARY)
706	Strand	6.684	1302760.1	3.4530	6.318	1231961.7	(PRIMARY)
707	Strand	6.629	1291924.0	3.4530	6.262	1221119.9	(PRIMARY)
708	Strand	6.573	1281118.5	3.4530	6.207	1210308.9	(PRIMARY)
709	Strand	6.518	1270299.7	3.4530	6.151	1199484.5	(PRIMARY)
710	Strand	6.462	1259455.6	3.4530	6.096	1188634.8	(PRIMARY)
711	Strand	6.406	1248571.0	3.4530	6.040	1177744.6	(PRIMARY)
712	Strand	6.346	1236781.0	3.4530	5.979	1165948.5	(PRIMARY)

**** ELEMENT 197 PNT 1 LOAD CAPACITY MIN-MZ (ITER 107) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-179166.45	537.10	-491567.18	20.2138	-2.7436	-0.0030
arminfA_500		-3192.47	0.00	-10481.93	0.0073	-3.2833	-0.0000
armsupA_500		2135.85	0.00	-7724.69	0.0049	3.6167	0.0000
601	Strand	2842.78	0.00	-9179.02	0.0114	3.2289	0.0000
602	Strand	2630.84	0.00	-8494.71	0.0114	3.2289	0.0000
603	Strand	2474.60	0.00	-7990.23	0.0114	3.2289	0.0000
604	Strand	2317.88	0.00	-7484.18	0.0114	3.2289	0.0000
605	Strand	2401.87	0.00	-7755.39	0.0114	3.2289	0.0000
606	Strand	1262.41	0.00	-4076.17	0.0057	3.2289	0.0000
706	Strand	1257.84	0.00	-4343.34	0.0057	3.4530	0.0000
707	Strand	2639.22	0.00	-9113.24	0.0114	3.4530	0.0000
708	Strand	2762.40	0.00	-9538.58	0.0114	3.4530	0.0000
709	Strand	2885.74	0.00	-9964.46	0.0114	3.4530	0.0000
710	Strand	3009.36	0.00	-10391.33	0.0114	3.4530	0.0000
711	Strand	1566.72	0.00	-5409.90	0.0057	3.4530	0.0000
712	Strand	1633.92	0.00	-5641.95	0.0057	3.4530	0.0000
	TOTAL MIN MZ	-150537.47	537.10	-609156.28			
	SEC. MIN MZ	1335.20	537.10	-1120659.48			

PART	MAT	EPS-MAX	SIG-MAX	EY		EPS-MIN	SIG-MIN	EY
197	B_40	8.910	0.4	3.6667	*!	-3.499	-19834.2	-3.3333
arminfA_500		-3.389	-435000.9	-3.2833	*!	-3.411	-435000.9	-3.2833
armsupA_500		8.814	435000.8	3.6167		8.788	435000.8	3.6167
601	Strand	14.286	1452000.0	3.2289		6.171	1203254.6	(PRIMARY)
602	Strand	14.381	1452000.0	3.2289		6.266	1221855.0	(PRIMARY)
603	Strand	14.452	1452000.0	3.2289		6.336	1235567.3	(PRIMARY)
604	Strand	14.522	1452000.0	3.2289		6.407	1249322.2	(PRIMARY)
605	Strand	14.484	1452000.0	3.2289		6.369	1241950.5	(PRIMARY)
606	Strand	14.429	1452000.0	3.2289		6.314	1231160.9	(PRIMARY)
706	Strand	14.830	1452000.0	3.4530		6.318	1231961.7	(PRIMARY)
707	Strand	14.774	1452000.0	3.4530		6.262	1221119.9	(PRIMARY)
708	Strand	14.718	1452000.0	3.4530		6.207	1210308.9	(PRIMARY)
709	Strand	14.663	1452000.0	3.4530		6.151	1199484.5	(PRIMARY)
710	Strand	14.607	1452000.0	3.4530		6.096	1188634.8	(PRIMARY)

711	Strand	14.551	1452000.0	3.4530	6.040	1177744.6	(PRIMARY)
712	Strand	14.491	1452000.0	3.4530	5.979	1165948.5	(PRIMARY)

**** ELEMENT 197 PNT 2 ULTIMATE STATE (ITER 13) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-141153.58	592.96	-8362.88	19.3306	-0.0592	-0.0042
arminfA_500		-620.68	2.58	-1953.54	0.0073	-3.1474	-0.0042
armsupA_500		-389.75	2.80	1305.46	0.0049	3.3495	-0.0072
601	Strand	-885.28	-0.00	2622.85	0.0114	2.9627	0.0000
602	Strand	-885.28	-0.00	2622.85	0.0114	2.9627	0.0000
603	Strand	-885.28	-0.00	2622.85	0.0114	2.9627	0.0000
604	Strand	-885.28	-0.00	2622.85	0.0114	2.9627	0.0000
605	Strand	-885.28	-0.00	2622.85	0.0114	2.9627	0.0000
606	Strand	-442.64	-0.00	1311.42	0.0057	2.9627	0.0000
706	Strand	-441.65	-0.00	1407.46	0.0057	3.1868	0.0000
707	Strand	-883.29	-0.00	2814.91	0.0114	3.1868	0.0000
708	Strand	-883.29	-0.00	2814.91	0.0114	3.1868	0.0000
709	Strand	-883.29	-0.00	2814.91	0.0114	3.1868	0.0000
710	Strand	-883.29	-0.00	2814.91	0.0114	3.1868	0.0000
711	Strand	-441.65	-0.00	1407.45	0.0057	3.1868	0.0000
712	Strand	-441.65	-0.00	1407.46	0.0057	3.1868	0.0000
		TOTAL ULT+Mz	-151891.15	598.35	20896.72		

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
197	B_40	-0.395	-7067.6	3.3995	-0.424	-7514.0	-3.1974
arminfA_500		-0.422	-84437.2	-3.1474	-0.424	-84707.4	-3.1474
armsupA_500		-0.396	-79224.6	3.3495	-0.398	-79534.1	3.3495
601	Strand	5.763	1123174.3	2.9627	6.161	1201450.7	(PRIMARY)
602	Strand	5.779	1126293.7	2.9627	6.177	1204571.7	(PRIMARY)
603	Strand	5.932	1156068.3	2.9627	6.330	1234361.7	(PRIMARY)
604	Strand	5.921	1154011.0	2.9627	6.320	1232303.3	(PRIMARY)
605	Strand	5.967	1162873.6	2.9627	6.365	1241170.5	(PRIMARY)
606	Strand	5.912	1152215.1	2.9627	6.310	1230506.5	(PRIMARY)
706	Strand	5.915	1152824.5	3.1868	6.313	1230941.5	(PRIMARY)
707	Strand	5.860	1142127.8	3.1868	6.258	1220239.4	(PRIMARY)
708	Strand	5.805	1131450.7	3.1868	6.203	1209556.7	(PRIMARY)
709	Strand	5.750	1120745.1	3.1868	6.148	1198845.6	(PRIMARY)
710	Strand	5.695	1109998.8	3.1868	6.093	1188093.7	(PRIMARY)
711	Strand	5.640	1099195.9	3.1868	6.037	1177285.3	(PRIMARY)
712	Strand	5.580	1087444.9	3.1868	5.977	1165528.2	(PRIMARY)

**** ELEMENT 197 PNT 2 LOAD CAPACITY MAX-MZ (ITER 66) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-119227.68	580.05	375513.81	19.3306	3.1496	-0.0049
arminfA_500		3192.47	0.00	10048.14	0.0073	-3.1474	0.0000
armsupA_500		-1859.59	18.11	6228.63	0.0049	3.3495	-0.0097
601	Strand	-2635.04	-0.00	7806.92	0.0114	2.9627	0.0000
602	Strand	-2635.04	-0.00	7806.92	0.0114	2.9627	0.0000
603	Strand	-2635.04	-0.00	7806.92	0.0114	2.9627	0.0000
604	Strand	-2635.04	-0.00	7806.92	0.0114	2.9627	0.0000
605	Strand	-2635.04	-0.00	7806.91	0.0114	2.9627	0.0000
606	Strand	-1317.52	-0.00	3903.46	0.0057	2.9627	0.0000
706	Strand	-1773.14	-0.00	5650.72	0.0057	3.1868	0.0000
707	Strand	-3546.28	-0.00	11301.44	0.0114	3.1868	0.0000
708	Strand	-3546.27	-0.00	11301.43	0.0114	3.1868	0.0000
709	Strand	-3546.28	-0.00	11301.44	0.0114	3.1868	0.0000
710	Strand	-3546.28	-0.00	11301.44	0.0114	3.1868	0.0000
711	Strand	-1773.14	-0.00	5650.71	0.0057	3.1868	0.0000
712	Strand	-1773.14	-0.00	5650.72	0.0057	3.1868	0.0000
		TOTAL MAX MZ	-151892.02	598.16	496886.53		
		SEC. MAX MZ	-498.32	598.16	27559.98		

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
197	B_40	10.092	0.5	-3.1974	-1.993	-19833.1	3.3995
arminfA_500	*!	10.000	435001.0	-3.1474	9.991	435001.0	-3.1474
armsupA_500		-1.889	-377734.8	3.3495	-1.899	-379736.1	3.3495
601	Strand	4.975	969686.6	2.9627	6.161	1201450.7	(PRIMARY)
602	Strand	4.991	972806.1	2.9627	6.177	1204571.7	(PRIMARY)
603	Strand	5.144	1002580.8	2.9627	6.330	1234361.7	(PRIMARY)
604	Strand	5.134	1000523.4	2.9627	6.320	1232303.3	(PRIMARY)
605	Strand	5.179	1009386.1	2.9627	6.365	1241170.5	(PRIMARY)
606	Strand	5.124	998727.5	2.9627	6.310	1230506.5	(PRIMARY)
706	Strand	4.716	919229.2	3.1868	6.313	1230941.5	(PRIMARY)
707	Strand	4.662	908532.4	3.1868	6.258	1220239.4	(PRIMARY)
708	Strand	4.607	897855.6	3.1868	6.203	1209556.7	(PRIMARY)
709	Strand	4.552	887149.8	3.1868	6.148	1198845.6	(PRIMARY)
710	Strand	4.497	876403.5	3.1868	6.093	1188093.7	(PRIMARY)
711	Strand	4.441	865600.8	3.1868	6.037	1177285.3	(PRIMARY)
712	Strand	4.381	853849.7	3.1868	5.977	1165528.2	(PRIMARY)

**** ELEMENT 197 PNT 2 ULTIMATE STATE (ITER 14) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-150795.46	461.15	-332495.27	19.3306	-2.2049	-0.0031
arminf	A_500	-1537.51	4.35	-4839.22	0.0073	-3.1474	-0.0028
armsup	A_500	144.57	4.72	-484.23	0.0049	3.3495	0.0326
601	Strand	169.09	0.00	-500.97	0.0114	2.9627	0.0000
602	Strand	169.09	0.00	-500.97	0.0114	2.9627	0.0000
603	Strand	169.09	0.00	-500.97	0.0114	2.9627	0.0000
604	Strand	169.09	0.00	-500.97	0.0114	2.9627	0.0000
605	Strand	169.09	0.00	-500.97	0.0114	2.9627	0.0000
606	Strand	84.54	0.00	-250.48	0.0057	2.9627	0.0000
706	Strand	130.33	0.00	-415.33	0.0057	3.1868	0.0000
707	Strand	260.66	0.00	-830.67	0.0114	3.1868	0.0000
708	Strand	260.66	0.00	-830.67	0.0114	3.1868	0.0000
709	Strand	260.66	0.00	-830.67	0.0114	3.1868	0.0000
710	Strand	260.66	0.00	-830.67	0.0114	3.1868	0.0000
711	Strand	130.33	0.00	-415.33	0.0057	3.1868	0.0000
712	Strand	130.33	0.00	-415.33	0.0057	3.1868	0.0000
TOTAL ULT-Mz		-149824.81	470.22	-345142.71			

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
197	B_40	0.159	0.0	3.3995	-1.058	-15432.0	-3.1974
arminf	A_500	-1.046	-209270.7	-3.1474	-1.049	-209725.5	-3.1474
armsup	A_500	0.149	29704.1	3.3495	0.146	29183.1	3.3495
601	Strand	6.237	1215662.8	2.9627	6.161	1201450.7	(PRIMARY)
602	Strand	6.253	1218782.2	2.9627	6.177	1204571.7	(PRIMARY)
603	Strand	6.406	1248556.9	2.9627	6.330	1234361.7	(PRIMARY)
604	Strand	6.396	1246499.5	2.9627	6.320	1232303.3	(PRIMARY)
605	Strand	6.441	1255362.1	2.9627	6.365	1241170.5	(PRIMARY)
606	Strand	6.386	1244703.6	2.9627	6.310	1230506.5	(PRIMARY)
706	Strand	6.430	1253170.6	3.1868	6.313	1230941.5	(PRIMARY)
707	Strand	6.375	1242474.0	3.1868	6.258	1220239.4	(PRIMARY)
708	Strand	6.320	1231796.8	3.1868	6.203	1209556.7	(PRIMARY)
709	Strand	6.265	1221091.2	3.1868	6.148	1198845.6	(PRIMARY)
710	Strand	6.210	1210344.9	3.1868	6.093	1188093.7	(PRIMARY)
711	Strand	6.155	1199542.0	3.1868	6.037	1177285.3	(PRIMARY)
712	Strand	6.094	1187791.0	3.1868	5.977	1165528.2	(PRIMARY)

**** ELEMENT 197 PNT 2 LOAD CAPACITY MIN-MZ (ITER 121) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
197	B_40	-178935.04	470.24	-460020.66	19.3306	-2.5709	-0.0026
arminf	A_500	-3192.47	0.00	-10048.14	0.0073	-3.1474	-0.0000
armsup	A_500	2135.85	0.00	-7153.96	0.0049	3.3495	0.0000
601	Strand	2863.33	0.00	-8483.29	0.0114	2.9627	0.0000
602	Strand	2827.77	0.00	-8377.93	0.0114	2.9627	0.0000
603	Strand	2488.34	0.00	-7372.29	0.0114	2.9627	0.0000
604	Strand	2511.79	0.00	-7441.78	0.0114	2.9627	0.0000
605	Strand	2410.76	0.00	-7142.44	0.0114	2.9627	0.0000
606	Strand	1266.13	0.00	-3751.22	0.0057	2.9627	0.0000
706	Strand	1263.66	0.00	-4027.08	0.0057	3.1868	0.0000
707	Strand	2649.25	0.00	-8442.76	0.0114	3.1868	0.0000
708	Strand	2770.97	0.00	-8830.66	0.0114	3.1868	0.0000
709	Strand	2893.02	0.00	-9219.60	0.0114	3.1868	0.0000
710	Strand	3015.52	0.00	-9610.01	0.0114	3.1868	0.0000
711	Strand	1569.34	0.00	-5001.24	0.0057	3.1868	0.0000
712	Strand	1636.32	0.00	-5214.70	0.0057	3.1868	0.0000
TOTAL MIN MZ		-149825.45	470.24	-570137.76			
SEC. MIN MZ		1568.25	470.24	-1039464.31			

PART	MAT	EPS-MAX	SIG-MAX	EY		EPS-MIN	SIG-MIN	EY
197	B_40	5.706	0.3	3.3995	*!	-3.500	-19834.2	-3.1974
arminf	A_500	-3.413	-435000.9	-3.1474	*!	-3.430	-435000.9	-3.1474
armsup	A_500	5.630	435000.4	3.3495		5.609	435000.4	3.3495
601	Strand	11.243	1452000.0	2.9627		6.161	1201450.7	(PRIMARY)
602	Strand	11.259	1452000.0	2.9627		6.177	1204571.7	(PRIMARY)
603	Strand	11.411	1452000.0	2.9627		6.330	1234361.7	(PRIMARY)
604	Strand	11.401	1452000.0	2.9627		6.320	1232303.3	(PRIMARY)
605	Strand	11.446	1452000.0	2.9627		6.365	1241170.5	(PRIMARY)
606	Strand	11.392	1452000.0	2.9627		6.310	1230506.5	(PRIMARY)
706	Strand	11.706	1452000.0	3.1868		6.313	1230941.5	(PRIMARY)
707	Strand	11.651	1452000.0	3.1868		6.258	1220239.4	(PRIMARY)
708	Strand	11.596	1452000.0	3.1868		6.203	1209556.7	(PRIMARY)
709	Strand	11.541	1452000.0	3.1868		6.148	1198845.6	(PRIMARY)
710	Strand	11.486	1452000.0	3.1868		6.093	1188093.7	(PRIMARY)
711	Strand	11.431	1452000.0	3.1868		6.037	1177285.3	(PRIMARY)
712	Strand	11.370	1452000.0	3.1868		5.977	1165528.2	(PRIMARY)

ELEMENTO 222 – Meio Vão entre o Pilar P8 e Pilar P9

**** ELEMENT 222 PNT 1 ULTIMATE STATE (ITER 14) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-87135.50	-50.53	73460.50	11.1929	0.8431	0.0006
arminf	A_500	834.67	-0.55	1509.81	0.0073	-1.8089	-0.0007
armsup	A_500	-884.45	-0.56	965.06	0.0049	1.0911	0.0006
1205	Strand	1150.90	0.00	1966.73	0.0114	-1.7089	0.0000
1206	Strand	1150.90	0.00	1966.73	0.0114	-1.7089	0.0000
1207	Strand	1150.90	0.00	1966.73	0.0114	-1.7089	0.0000
1208	Strand	575.45	0.00	983.36	0.0057	-1.7089	0.0000
1308	Strand	462.88	0.00	698.42	0.0057	-1.5089	0.0000
1309	Strand	925.75	0.00	1396.83	0.0114	-1.5089	0.0000
1310	Strand	925.75	0.00	1396.83	0.0114	-1.5089	0.0000
1311	Strand	462.88	0.00	698.42	0.0057	-1.5089	0.0000
		TOTAL ULT+Mz	-80379.89	-51.65	87009.42		

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40	0.594	0.0	-1.8589	-0.926	-14116.7	1.1411
arminf	A_500	0.569	113759.6	-1.8089	0.569	113702.8	-1.8089
armsup	A_500	-0.901	-180102.3	1.0911	-0.901	-180164.3	1.0911
1205	Strand	6.176	1203769.2	-1.7089	5.658	1103383.0	(PRIMARY)
1206	Strand	6.251	1218238.7	-1.7089	5.733	1117860.0	(PRIMARY)
1207	Strand	6.332	1234134.2	-1.7089	5.814	1133763.6	(PRIMARY)
1208	Strand	6.415	1250207.0	-1.7089	5.897	1149844.7	(PRIMARY)
1308	Strand	6.322	1232119.7	-1.5089	5.905	1151508.0	(PRIMARY)
1309	Strand	6.404	1248219.9	-1.5089	5.988	1167616.5	(PRIMARY)
1310	Strand	6.391	1245573.3	-1.5089	5.974	1164968.5	(PRIMARY)
1311	Strand	6.249	1217836.9	-1.5089	5.832	1137217.8	(PRIMARY)

**** ELEMENT 222 PNT 1 LOAD CAPACITY MAX-MZ (ITER 68) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-104634.59	-51.66	98841.16	11.1929	0.9446	0.0005
arminf	A_500	3192.47	-0.00	5774.75	0.0073	-1.8089	-0.0000
armsup	A_500	-2135.85	-0.00	2330.50	0.0049	1.0911	0.0000
1205	Strand	3980.73	0.00	6802.53	0.0114	-1.7089	0.0000
1206	Strand	3815.78	0.00	6520.65	0.0114	-1.7089	0.0000
1207	Strand	3634.57	0.00	6210.99	0.0114	-1.7089	0.0000
1208	Strand	1725.67	0.00	2948.94	0.0057	-1.7089	0.0000
1308	Strand	1716.19	0.00	2589.50	0.0057	-1.5089	0.0000
1309	Strand	3248.84	0.00	4902.07	0.0114	-1.5089	0.0000
1310	Strand	3279.01	0.00	4947.59	0.0114	-1.5089	0.0000
1311	Strand	1797.61	0.00	2712.34	0.0057	-1.5089	0.0000
		TOTAL MAX MZ	-80379.57	-51.66	144581.02		
		SEC. MAX MZ	4058.45	-51.66	280950.75		

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40	10.215	0.5	-1.8589	-2.661	-19833.7	1.1411
arminf	*! A_500	10.000	435001.0	-1.8089	9.999	435001.0	-1.8089
armsup	A_500	-2.445	-435000.2	1.0911	-2.446	-435000.2	1.0911
1205	Strand	15.229	1452000.0	-1.7089	5.658	1103383.0	(PRIMARY)
1206	Strand	15.303	1452000.0	-1.7089	5.733	1117860.0	(PRIMARY)
1207	Strand	15.384	1452000.0	-1.7089	5.814	1133763.6	(PRIMARY)
1208	Strand	15.467	1452000.0	-1.7089	5.897	1149844.7	(PRIMARY)
1308	Strand	14.617	1452000.0	-1.5089	5.905	1151508.0	(PRIMARY)
1309	Strand	14.700	1452000.0	-1.5089	5.988	1167616.5	(PRIMARY)
1310	Strand	14.686	1452000.0	-1.5089	5.974	1164968.5	(PRIMARY)
1311	Strand	14.544	1452000.0	-1.5089	5.832	1137217.8	(PRIMARY)

**** ELEMENT 222 PNT 1 ULTIMATE STATE (ITER 13) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-74738.91	208.02	-9728.31	11.1929	-0.1302	-0.0028
arminf	A_500	-658.79	1.38	-1191.67	0.0073	-1.8089	-0.0021
armsup	A_500	-319.50	1.40	348.62	0.0049	1.0911	-0.0044
1205	Strand	-987.78	-0.00	-1687.98	0.0114	-1.7089	0.0000
1206	Strand	-987.78	-0.00	-1687.98	0.0114	-1.7089	0.0000
1207	Strand	-987.78	-0.00	-1687.98	0.0114	-1.7089	0.0000
1208	Strand	-493.89	-0.00	-843.99	0.0057	-1.7089	0.0000
1308	Strand	-484.43	-0.00	-730.94	0.0057	-1.5089	0.0000
1309	Strand	-968.86	-0.00	-1461.87	0.0114	-1.5089	0.0000
1310	Strand	-968.86	-0.00	-1461.87	0.0114	-1.5089	0.0000
1311	Strand	-484.43	-0.00	-730.94	0.0057	-1.5089	0.0000
		TOTAL ULT-Mz	-82080.99	210.80	-20864.91		

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40	-0.323	-5882.2	1.1411	-0.451	-7941.2	-1.8589

arminfA_500		-0.448	-89695.4	-1.8089	-0.449	-89837.1	-1.8089
armsupA_500		-0.325	-64993.5	1.0911	-0.326	-65148.4	1.0911
1205	Strand	5.214	1016166.4	-1.7089	5.658	1103383.0	(PRIMARY)
1206	Strand	5.288	1030635.8	-1.7089	5.733	1117860.0	(PRIMARY)
1207	Strand	5.370	1046531.3	-1.7089	5.814	1133763.6	(PRIMARY)
1208	Strand	5.452	1062604.1	-1.7089	5.897	1149844.7	(PRIMARY)
1308	Strand	5.469	1065926.2	-1.5089	5.905	1151508.0	(PRIMARY)
1309	Strand	5.552	1082026.3	-1.5089	5.988	1167616.5	(PRIMARY)
1310	Strand	5.538	1079379.8	-1.5089	5.974	1164968.5	(PRIMARY)
1311	Strand	5.396	1051643.3	-1.5089	5.832	1137217.8	(PRIMARY)

**** ELEMENT 222 PNT 1 LOAD CAPACITY MIN-MZ (ITER 63) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-55773.42	210.82	-93154.32	11.1929	-1.6702	-0.0038
arminfA_500		-3192.47	0.00	-5774.74	0.0073	-1.8089	-0.0000
armsupA_500		2135.85	0.00	-2330.50	0.0049	1.0911	0.0000
1205	Strand	-4774.06	-0.00	-8158.22	0.0114	-1.7089	0.0000
1206	Strand	-4774.06	-0.00	-8158.22	0.0114	-1.7089	0.0000
1207	Strand	-4774.06	-0.00	-8158.22	0.0114	-1.7089	0.0000
1208	Strand	-2387.03	-0.00	-4079.11	0.0057	-1.7089	0.0000
1308	Strand	-1423.63	-0.00	-2148.07	0.0057	-1.5089	0.0000
1309	Strand	-2847.26	-0.00	-4296.14	0.0114	-1.5089	0.0000
1310	Strand	-2847.26	-0.00	-4296.14	0.0114	-1.5089	0.0000
1311	Strand	-1423.63	-0.00	-2148.07	0.0057	-1.5089	0.0000
		TOTAL MIN MZ	-82081.03		210.82	-142701.77	
		SEC. MIN MZ	2357.00		210.82	-6332.04	

PART	MAT		EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40		10.222	0.5	1.1411	-2.806	-19833.8	-1.8589
arminfA_500			-2.575	-435000.3	-1.8089	-2.589	-435000.3	-1.8089
armsupA_500		*!	10.000	435001.0	1.0911	9.984	435001.0	1.0911
1205	Strand		3.510	684036.3	-1.7089	5.658	1103383.0	(PRIMARY)
1206	Strand		3.584	698505.8	-1.7089	5.733	1117860.0	(PRIMARY)
1207	Strand		3.665	714401.3	-1.7089	5.814	1133763.6	(PRIMARY)
1208	Strand		3.748	730474.0	-1.7089	5.897	1149844.7	(PRIMARY)
1308	Strand		4.624	901153.6	-1.5089	5.905	1151508.0	(PRIMARY)
1309	Strand		4.706	917253.8	-1.5089	5.988	1167616.5	(PRIMARY)
1310	Strand		4.693	914607.2	-1.5089	5.974	1164968.5	(PRIMARY)
1311	Strand		4.550	886870.8	-1.5089	5.832	1137217.8	(PRIMARY)

**** ELEMENT 222 PNT 2 ULTIMATE STATE (ITER 14) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-87495.15	-46.64	74044.87	11.1929	0.8463	0.0005
arminfA_500		891.38	-0.51	1612.38	0.0073	-1.8089	-0.0006
armsupA_500		-895.23	-0.52	976.81	0.0049	1.0911	0.0006
1205	Strand	1229.47	0.00	2097.35	0.0114	-1.7059	0.0000
1206	Strand	1229.47	0.00	2097.35	0.0114	-1.7059	0.0000
1207	Strand	1229.47	0.00	2097.35	0.0114	-1.7059	0.0000
1208	Strand	614.74	0.00	1048.67	0.0057	-1.7059	0.0000
1308	Strand	498.36	0.00	750.48	0.0057	-1.5059	0.0000
1309	Strand	996.73	0.00	1500.96	0.0114	-1.5059	0.0000
1310	Strand	996.73	0.00	1500.96	0.0114	-1.5059	0.0000
1311	Strand	498.36	0.00	750.48	0.0057	-1.5059	0.0000
		TOTAL ULT+Mz	-80205.67		-47.68	88477.68	

PART	MAT		EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40		0.634	0.0	-1.8589	-0.938	-14241.7	1.1411
arminfA_500			0.607	121484.1	-1.8089	0.607	121431.1	-1.8089
armsupA_500			-0.911	-182298.5	1.0911	-0.912	-182356.5	1.0911
1205	Strand		6.196	1207674.9	-1.7059	5.643	1100394.6	(PRIMARY)
1206	Strand		6.270	1222078.1	-1.7059	5.717	1114805.2	(PRIMARY)
1207	Strand		6.351	1237900.7	-1.7059	5.798	1130635.9	(PRIMARY)
1208	Strand		6.434	1253899.8	-1.7059	5.880	1146643.3	(PRIMARY)
1308	Strand		6.336	1234844.3	-1.5059	5.887	1148004.9	(PRIMARY)
1309	Strand		6.418	1250870.6	-1.5059	5.969	1164039.5	(PRIMARY)
1310	Strand		6.405	1248236.2	-1.5059	5.956	1161403.7	(PRIMARY)
1311	Strand		6.324	1232628.4	-1.5059	5.876	1145787.8	(PRIMARY)

**** ELEMENT 222 PNT 2 LOAD CAPACITY MAX-MZ (ITER 70) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-104635.83	-47.68	98842.07	11.1929	0.9446	0.0005
arminfA_500		3192.47	-0.00	5774.75	0.0073	-1.8089	-0.0000
armsupA_500		-2135.85	-0.00	2330.50	0.0049	1.0911	0.0000
1205	Strand	4014.78	0.00	6848.78	0.0114	-1.7059	0.0000
1206	Strand	3850.58	0.00	6568.68	0.0114	-1.7059	0.0000
1207	Strand	3670.20	0.00	6260.98	0.0114	-1.7059	0.0000
1208	Strand	1743.91	0.00	2974.92	0.0057	-1.7059	0.0000

1308	Strand	1736.15	0.00	2614.46	0.0057	-1.5059	0.0000	
1309	Strand	3289.60	0.00	4953.79	0.0114	-1.5059	0.0000	
1310	Strand	3319.63	0.00	4999.01	0.0114	-1.5059	0.0000	
1311	Strand	1748.78	0.00	2633.48	0.0057	-1.5059	0.0000	
	TOTAL MAX MZ	-80205.57		-47.68	144801.42			
	SEC. MAX MZ	4057.49		-47.68	280631.11			

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40	10.215	0.5	-1.8589	-2.661	-19833.7	1.1411
arminfA_500	*!	10.000	435001.0	-1.8089	9.999	435001.0	-1.8089
armsupA_500		-2.445	-435000.2	1.0911	-2.446	-435000.2	1.0911
1205	Strand	15.201	1452000.0	-1.7059	5.643	1100394.6	(PRIMARY)
1206	Strand	15.274	1452000.0	-1.7059	5.717	1114805.2	(PRIMARY)
1207	Strand	15.356	1452000.0	-1.7059	5.798	1130635.9	(PRIMARY)
1208	Strand	15.438	1452000.0	-1.7059	5.880	1146643.3	(PRIMARY)
1308	Strand	14.586	1452000.0	-1.5059	5.887	1148004.9	(PRIMARY)
1309	Strand	14.669	1452000.0	-1.5059	5.969	1164039.5	(PRIMARY)
1310	Strand	14.655	1452000.0	-1.5059	5.956	1161403.7	(PRIMARY)
1311	Strand	14.575	1452000.0	-1.5059	5.876	1145787.8	(PRIMARY)

**** ELEMENT 222 PNT 2 ULTIMATE STATE (ITER 13) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-74692.93	215.61	-8634.89	11.1929	-0.1156	-0.0029
arminfA_500		-645.37	1.43	-1167.38	0.0073	-1.8089	-0.0022
armsupA_500		-324.28	1.45	353.83	0.0049	1.0911	-0.0045
1205	Strand	-968.27	-0.00	-1651.77	0.0114	-1.7059	0.0000
1206	Strand	-968.27	-0.00	-1651.77	0.0114	-1.7059	0.0000
1207	Strand	-968.27	-0.00	-1651.77	0.0114	-1.7059	0.0000
1208	Strand	-484.14	-0.00	-825.89	0.0057	-1.7059	0.0000
1308	Strand	-475.75	-0.00	-716.43	0.0057	-1.5059	0.0000
1309	Strand	-951.50	-0.00	-1432.86	0.0114	-1.5059	0.0000
1310	Strand	-951.50	-0.00	-1432.86	0.0114	-1.5059	0.0000
1311	Strand	-475.75	-0.00	-716.43	0.0057	-1.5059	0.0000
	TOTAL ULT-Mz	-81906.03		218.49	-19528.21		

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40	-0.328	-5966.6	1.1411	-0.442	-7796.7	-1.8589
arminfA_500		-0.439	-87863.0	-1.8089	-0.440	-88009.9	-1.8089
armsupA_500		-0.330	-65964.0	1.0911	-0.331	-66124.7	1.0911
1205	Strand	5.207	1014890.2	-1.7059	5.643	1100394.6	(PRIMARY)
1206	Strand	5.281	1029293.4	-1.7059	5.717	1114805.2	(PRIMARY)
1207	Strand	5.362	1045116.0	-1.7059	5.798	1130635.9	(PRIMARY)
1208	Strand	5.444	1061115.1	-1.7059	5.880	1146643.3	(PRIMARY)
1308	Strand	5.459	1063947.3	-1.5059	5.887	1148004.9	(PRIMARY)
1309	Strand	5.541	1079973.6	-1.5059	5.969	1164039.5	(PRIMARY)
1310	Strand	5.528	1077339.2	-1.5059	5.956	1161403.7	(PRIMARY)
1311	Strand	5.448	1061731.3	-1.5059	5.876	1145787.8	(PRIMARY)

**** ELEMENT 222 PNT 2 LOAD CAPACITY MIN-MZ (ITER 66) ****

PART	MAT	NX	MY	MZ	AX	EY	EZ
222	B_40	-55777.90	218.50	-93160.73	11.1929	-1.6702	-0.0039
arminfA_500		-3192.47	0.00	-5774.74	0.0073	-1.8089	-0.0000
armsupA_500		2135.85	0.00	-2330.50	0.0049	1.0911	0.0000
1205	Strand	-4746.46	-0.00	-8096.95	0.0114	-1.7059	0.0000
1206	Strand	-4746.46	-0.00	-8096.95	0.0114	-1.7059	0.0000
1207	Strand	-4746.46	-0.00	-8096.95	0.0114	-1.7059	0.0000
1208	Strand	-2373.23	-0.00	-4048.48	0.0057	-1.7059	0.0000
1308	Strand	-1409.82	-0.00	-2123.03	0.0057	-1.5059	0.0000
1309	Strand	-2819.63	-0.00	-4246.07	0.0114	-1.5059	0.0000
1310	Strand	-2819.63	-0.00	-4246.07	0.0114	-1.5059	0.0000
1311	Strand	-1409.82	-0.00	-2123.03	0.0057	-1.5059	0.0000
	TOTAL MIN MZ	-81906.02		218.50	-142343.52		
	SEC. MIN MZ	2357.05		218.50	-6513.82		

PART	MAT	EPS-MAX	SIG-MAX	EY	EPS-MIN	SIG-MIN	EY
222	B_40	10.222	0.5	1.1411	-2.807	-19833.8	-1.8589
arminfA_500		-2.575	-435000.3	-1.8089	-2.590	-435000.3	-1.8089
armsupA_500	*!	10.000	435001.0	1.0911	9.984	435001.0	1.0911
1205	Strand	3.507	683470.6	-1.7059	5.643	1100394.6	(PRIMARY)
1206	Strand	3.581	697873.8	-1.7059	5.717	1114805.2	(PRIMARY)
1207	Strand	3.662	713696.4	-1.7059	5.798	1130635.9	(PRIMARY)
1208	Strand	3.744	729695.5	-1.7059	5.880	1146643.3	(PRIMARY)
1308	Strand	4.618	900075.9	-1.5059	5.887	1148004.9	(PRIMARY)
1309	Strand	4.700	916102.3	-1.5059	5.969	1164039.5	(PRIMARY)
1310	Strand	4.687	913467.9	-1.5059	5.956	1161403.7	(PRIMARY)
1311	Strand	4.607	897860.0	-1.5059	5.876	1145787.8	(PRIMARY)

ESTADO LIMITE ÚLTIMO PARA ESFORÇO TRANSVERSO MÁXIMO E MOMENTO TORSOR ASSOCIADO

Mín Qy

ELE	DIST	Vsd'	Vcd	Vwd	Vrd,max	Vrd	Tsd	Tcd+Ttd	Tld	Trd,max	Trd	
169	204	10505	10353	5136	36540	15489	0	0	18541	0	0	PILAR P7
169	207	8796	7642	5136	26970	12778	0	0	18541	0	0	
170	207	8796	7642	5136	26970	12778	0	0	18541	0	0	
170	210	7201	4930	5136	17400	10066	0	0	18541	0	0	
171	210	6447	4930	4566	17400	9496	0	0	18541	0	0	
171	212	5382	4930	4566	17400	9496	0	0	18541	0	0	
172	212	5382	4930	4566	17400	9496	0	0	18541	0	0	
172	214	4338	4930	4566	17400	9496	0	0	18541	0	0	
173	214	4357	4930	7134	17400	12064	0	0	18541	0	0	
173	216.5	2917	4943	7152	17445	12095	0	0	18595	0	0	
174	216.5	2944	4943	7152	17445	12095	0	0	18595	0	0	
174	219	1503	2490	7207	17578	9697	0	0	18758	0	0	
175	219	1521	2490	7207	17578	9697	0	0	18758	0	0	
175	221.5	90	2522	7298	17801	9820	0	0	19029	0	0	
176	221.5	112	2522	7298	17801	9820	0	0	19029	0	0	
176	224	1301	2566	7426	18113	9992	0	0	19410	0	0	
177	224	1292	2566	11603	18113	14169	0	0	19410	0	0	
177	226.5	2681	5246	11860	18515	17106	0	0	19901	0	0	
178	226.5	2645	5246	11860	18515	17106	0	0	19901	0	0	
178	229	4131	5385	12175	19005	17559	0	0	20505	0	0	
179	229	4125	5385	12175	19005	17559	0	0	20505	0	0	
179	231.5	5419	5549	12546	19585	18095	0	0	21223	0	0	
180	231.5	5257	5549	12546	19585	18095	0	0	21223	0	0	
180	234	6471	5739	12974	20254	18713	0	0	22057	0	0	
181	234	6464	5739	12974	20254	18713	0	0	22057	0	0	
181	236.5	7629	5953	13460	21012	19413	0	0	23008	0	0	
182	236.5	7512	5953	13460	21012	19413	0	0	23008	0	0	
182	239	8592	6193	14003	21859	20196	0	0	24080	0	0	
183	239	8577	6193	14003	21859	20196	0	0	24080	0	0	
183	241.5	9618	6459	14603	22795	21061	0	0	25274	0	0	
184	241.5	9366	6459	14603	22795	21061	0	0	25274	0	0	
184	244	10290	6749	15236	23798	21985	45	387	26594	104	104	
185	244	10235	6749	15238	23800	21988	40	350	26594	93	93	
185	246.5	11098	7065	15935	24895	23000	81	640	28040	182	182	
186	246.5	10799	7065	15934	24896	22999	76	649	28040	175	175	
186	249	11608	7406	16694	26086	24100	105	834	29616	236	236	
187	249	11524	7406	16695	26088	24101	101	819	29616	229	229	
187	251.1	12194	7712	17381	27161	25094	117	908	31041	261	261	
188	251.1	11698	7712	17377	27160	25089	113	985	31041	262	262	
188	253.2	12292	8036	18105	28298	26141	124	1055	32561	285	285	
189	253.2	12240	8036	18106	28301	26143	119	1025	32561	275	275	
189	255.3	12835	8378	18855	29482	27233	167	1413	34176	384	384	
190	255.3	12715	8378	18852	29481	27230	168	1461	34176	390	390	
190	257.4	13316	8737	19680	30763	28417	142	1221	35888	328	328	
191	257.4	13241	8737	19678	30762	28415	143	1250	35888	332	332	
191	259.5	13852	9115	20544	32107	29659	119	1032	37697	276	276	
192	259.5	13693	9115	20541	32106	29656	120	1077	37697	281	281	
192	261.6	14310	9510	21448	33513	30958	97	867	39604	227	227	
193	261.6	14229	9510	21446	33511	30956	99	900	39604	233	233	
193	263.45	14826	9873	22322	34846	32195	0	0	41367	0	0	
194	263.45	14658	9873	22322	34846	32195	0	0	41367	0	0	
194	265.3	15221	10250	23174	36175	33423	0	0	43206	0	0	
195	265.3	15141	10250	23174	36175	33423	0	0	43206	0	0	
195	267.15	15723	10640	24057	37554	34697	0	0	45124	0	0	
196	267.15	15530	10640	24057	37554	34697	0	0	45124	0	0	
196	269	16125	11045	24971	38981	36016	0	0	47119	0	0	
197	272	25482	11730	26520	41400	38250	0	0	50522	0	0	PILAR P8
197	275	24289	11045	24971	38981	36016	0	0	47119	0	0	
198	275	24732	11045	24971	38981	36016	0	0	47119	0	0	
198	276.85	24021	10640	24057	37554	34697	0	0	45124	0	0	
199	276.85	24338	10640	24057	37554	34697	0	0	45124	0	0	
199	278.7	23644	10250	23174	36175	33423	0	0	43206	0	0	
200	278.7	23839	10250	23174	36175	33423	0	0	43206	0	0	
200	280.55	23164	9873	22322	34846	32195	0	0	41367	0	0	
201	280.55	23442	9873	22322	34846	32195	0	0	41367	0	0	
201	282.4	22780	9510	21501	33565	31011	0	0	39604	0	0	
202	282.4	22972	9510	21501	33565	31011	0	0	39604	0	0	

202	284.5	22239	9115	20608	32170	29723	0	0	37697	0	0	
203	284.5	22504	9115	20608	32170	29723	0	0	37697	0	0	
203	286.6	21780	8737	19755	30838	28492	0	0	35888	0	0	
204	286.6	21952	8737	19755	30838	28492	0	0	35888	0	0	
204	288.7	21239	8378	18942	29569	27320	0	0	34176	0	0	
205	288.7	21447	8378	18942	29569	27320	0	0	34176	0	0	
205	290.8	20736	8036	18169	28363	26205	0	0	32561	0	0	
206	290.8	20866	8036	18169	28363	26205	0	0	32561	0	0	
206	292.9	20157	7712	17437	27220	25149	0	0	31041	0	0	
207	292.9	20706	7712	17437	27220	25149	0	0	31041	0	0	
207	295	19932	7406	16745	26140	24151	0	0	29616	0	0	
208	295	20082	7406	16745	26140	24151	0	0	29616	0	0	
208	297.5	19147	7065	15974	24936	23039	0	0	28040	0	0	
209	297.5	19685	7065	15974	24936	23039	0	0	28040	0	0	
209	300	18658	6749	15259	23821	22009	0	0	26594	0	0	
210	300	18785	6749	15259	23821	22009	0	0	26594	0	0	
210	302.5	17731	6459	14603	22795	21061	0	0	25274	0	0	
211	302.5	18210	6459	14603	22795	21061	0	0	25274	0	0	
211	305	17048	6193	14003	21859	20196	0	0	24080	0	0	
212	305	17140	6193	14003	21859	20196	0	0	24080	0	0	
212	307.5	15938	5953	13460	21012	19413	0	0	23008	0	0	
213	307.5	16374	5953	13460	21012	19413	0	0	23008	0	0	
213	310	15056	5739	12974	20254	18713	0	0	22057	0	0	
214	310	15132	5739	12974	20254	18713	0	0	22057	0	0	
214	312.5	13769	5549	12546	19585	18095	0	0	21223	0	0	
215	312.5	14147	5549	12546	19585	18095	0	0	21223	0	0	
215	315	12661	5385	12175	19005	17559	0	0	20505	0	0	
216	315	12733	5385	12175	19005	17559	0	0	20505	0	0	
216	317.5	11201	5246	11860	18515	17106	0	0	19901	0	0	
217	317.5	11516	5246	11860	18515	17106	0	0	19901	0	0	
217	320	9868	5132	11603	18113	16735	0	0	19410	0	0	
218	320	9943	5132	7426	18113	12558	0	0	19410	0	0	
218	322.5	8260	5044	7298	17801	12342	0	0	19029	0	0	
219	322.5	8418	5044	7298	17801	12342	0	0	19029	0	0	
219	325	6672	4981	7207	17578	12187	0	0	18758	0	0	
220	325	6744	4981	7207	17578	12187	0	0	18758	0	0	
220	327.5	4979	4943	7152	17445	12095	0	0	18595	0	0	
221	327.5	5042	4943	7152	17445	12095	0	0	18595	0	0	
221	330	3274	4930	7134	17400	12064	0	0	18541	0	0	
222	330	3301	4930	4566	17400	9496	0	0	18541	0	0	
222	332	2037	2465	4566	17400	7031	0	0	18541	0	0	1/2 VÃO
223	332	2037	2465	4566	17400	7031	0	0	18541	0	0	
223	334	908	2465	4566	17400	7031	0	0	18541	0	0	
224	334	947	2465	7134	17400	9599	0	0	18541	0	0	
224	336.5	640	2471	7152	17445	9623	0	0	18595	0	0	
225	336.5	569	2471	7152	17445	9623	0	0	18595	0	0	
225	339	2131	2490	7207	17578	9697	0	0	18758	0	0	
226	339	2054	2490	7207	17578	9697	0	0	18758	0	0	
226	341.5	3591	5044	7298	17801	12342	0	0	19029	0	0	
227	341.5	3428	5044	7298	17801	12342	0	0	19029	0	0	
227	344	4891	5132	7426	18113	12558	0	0	19410	0	0	
228	344	4805	5132	11603	18113	16735	0	0	19410	0	0	
228	346.5	6242	5246	11860	18515	17106	0	0	19901	0	0	
229	346.5	5923	5246	11860	18515	17106	0	0	19901	0	0	
229	349	7241	5385	12175	19005	17559	0	0	20505	0	0	
230	349	7397	5385	12175	19005	17559	0	0	20505	0	0	
230	351.5	8647	5549	12546	19585	18095	0	0	21223	0	0	
231	351.5	8308	5549	12546	19585	18095	0	0	21223	0	0	
231	354	9438	5739	12974	20254	18713	0	0	22057	0	0	
232	354	9406	5739	12974	20254	18713	0	0	22057	0	0	
232	356.5	10489	5953	13460	21012	19413	0	0	23008	0	0	
233	356.5	10109	5953	13460	21012	19413	0	0	23008	0	0	
233	359	10973	6193	13953	21796	20146	141	823	24080	280	280	
234	359	10936	6193	13953	21796	20146	141	830	24080	281	281	
234	361.5	11849	6459	14570	22752	21028	101	546	25274	194	194	
235	361.5	11435	6459	14567	22750	21025	101	591	25274	201	201	
235	364	12249	6749	15238	23793	21987	65	360	26594	126	126	
236	364	12199	6749	15237	23792	21987	65	363	26594	127	127	
236	366.5	12885	7065	15974	24936	23039	0	0	28040	0	0	
237	366.5	12429	7065	15974	24936	23039	0	0	28040	0	0	
237	369	13138	7406	16745	26140	24151	0	0	29616	0	0	
238	369	13075	7406	16745	26140	24151	0	0	29616	0	0	
238	371.1	13668	7712	17437	27220	25149	0	0	31041	0	0	
239	371.1	13208	7712	17437	27220	25149	0	0	31041	0	0	
239	373.2	13739	8036	18169	28363	26205	0	0	32561	0	0	
240	373.2	13706	8036	18169	28363	26205	0	0	32561	0	0	

240	375.3	14245	8378	18942	29569	27320	0	0	34176	0	0	
241	375.3	14143	8378	18942	29569	27320	0	0	34176	0	0	
241	377.4	14685	8737	19755	30838	28492	0	0	35888	0	0	
242	377.4	14626	8737	19755	30838	28492	0	0	35888	0	0	
242	379.5	15182	9115	20608	32170	29723	0	0	37697	0	0	
243	379.5	15039	9115	20608	32170	29723	0	0	37697	0	0	
243	381.6	15604	9510	21501	33565	31011	0	0	39604	0	0	
244	381.6	15536	9510	21501	33565	31011	0	0	39604	0	0	
244	383.45	16051	9873	22322	34846	32195	0	0	41367	0	0	
245	383.45	15893	9873	22322	34846	32195	0	0	41367	0	0	
245	385.3	16417	10250	23174	36175	33423	0	0	43206	0	0	
246	385.3	16346	10250	23174	36175	33423	0	0	43206	0	0	
246	387.15	16890	10640	24057	37554	34697	0	0	45124	0	0	
247	387.15	16704	10640	24057	37554	34697	0	0	45124	0	0	
247	389	17263	11045	24971	38981	36016	0	0	47119	0	0	
248	389	16998	11045	24971	38981	36016	0	0	47119	0	0	
248	392	17939	11730	26520	41400	38250	0	0	50522	0	0	PILAR P9
249	392	23978	11730	26520	41400	38250	0	0	50522	0	0	
249	395	22650	11045	24971	38981	36016	0	0	47119	0	0	
250	395	23051	11045	24971	38981	36016	0	0	47119	0	0	
250	396.85	22245	10640	24057	37554	34697	0	0	45124	0	0	
251	396.85	22529	10640	24057	37554	34697	0	0	45124	0	0	
251	398.7	21733	10250	23174	36175	33423	0	0	43206	0	0	
252	398.7	21895	10250	23174	36175	33423	0	0	43206	0	0	
252	400.55	21109	9873	22322	34846	32195	0	0	41367	0	0	
253	400.55	21355	9873	22322	34846	32195	0	0	41367	0	0	
253	402.4	20575	9510	21501	33565	31011	0	0	39604	0	0	
254	402.4	20734	9510	21501	33565	31011	0	0	39604	0	0	
254	404.5	19857	9115	20608	32170	29723	0	0	37697	0	0	
255	404.5	20088	9115	20608	32170	29723	0	0	37697	0	0	
255	406.6	19212	8737	19755	30838	28492	0	0	35888	0	0	
256	406.6	19352	8737	19755	30838	28492	0	0	35888	0	0	
256	408.7	18478	8378	18942	29569	27320	0	0	34176	0	0	
257	408.7	18657	8378	18942	29569	27320	0	0	34176	0	0	
257	410.8	17778	8036	18169	28363	26205	0	0	32561	0	0	
258	410.8	17883	8036	18169	28363	26205	0	0	32561	0	0	
258	412.9	17000	7712	17437	27220	25149	0	0	31041	0	0	
259	412.9	17528	7712	17437	27220	25149	0	0	31041	0	0	
259	415	15678	7406	16409	25627	23815	1390	5515	29616	2272	2272	
260	415	15871	7406	16417	25634	23823	1389	5388	29616	2243	2243	
260	417.5	14901	7065	15669	24473	22734	1253	5011	28040	2058	2058	
261	417.5	15302	7065	15684	24485	22749	1252	4768	28040	2003	2003	
261	420	14287	6749	14990	23410	21740	1117	4443	26594	1830	1830	
262	420	14448	6749	14996	23415	21745	1116	4348	26594	1809	1809	
262	422.5	13420	6459	14357	22428	20816	983	4055	25274	1643	1643	
263	422.5	13923	6459	14374	22441	20833	982	3782	25274	1583	1583	
263	425	12842	6193	13790	21540	19983	852	3534	24080	1429	1429	
264	425	12959	6193	13793	21543	19987	851	3470	24080	1415	1415	
264	427.5	11860	5953	13265	20730	19218	723	3247	23008	1264	1264	
265	427.5	12156	5953	13274	20737	19227	722	3090	23008	1232	1232	
265	430	10721	5739	12974	20254	18713	0	0	22057	0	0	
266	430	10854	5739	12974	20254	18713	0	0	22057	0	0	
266	432.5	9772	5549	12546	19585	18095	0	0	21223	0	0	
267	432.5	10050	5549	12546	19585	18095	0	0	21223	0	0	
267	435	8897	5385	12175	19005	17559	0	0	20505	0	0	
268	435	9010	5385	12175	19005	17559	0	0	20505	0	0	
268	437.5	7826	5246	11860	18515	17106	0	0	19901	0	0	
269	437.5	7940	5246	11860	18515	17106	0	0	19901	0	0	
269	440	6726	5132	11603	18113	16735	0	0	19410	0	0	
270	440	6800	5132	7426	18113	12558	0	0	19410	0	0	
270	442.5	5562	5044	7298	17801	12342	0	0	19029	0	0	
271	442.5	5635	5044	7298	17801	12342	0	0	19029	0	0	
271	445	4373	4981	7207	17578	12187	0	0	18758	0	0	
272	445	4426	4981	7207	17578	12187	0	0	18758	0	0	
272	447.5	3146	4943	7152	17445	12095	0	0	18595	0	0	
273	447.5	3191	4943	7152	17445	12095	0	0	18595	0	0	
273	450	1897	2465	7134	17400	9599	0	0	18541	0	0	
274	450	1924	2465	4566	17400	7031	0	0	18541	0	0	
274	452	1168	2465	4566	17400	7031	0	0	18541	0	0	
275	452	1168	2465	4566	17400	7031	0	0	18541	0	0	
275	454	428	2465	4566	17400	7031	0	0	18541	0	0	
276	454	327	2465	5136	17400	7601	0	0	18541	0	0	
276	457	1398	3821	5136	26970	8957	0	0	18541	0	0	
277	457	1398	3821	5136	26970	8957	0	0	18541	0	0	
277	460	2543	5177	5136	36540	10313	0	0	18541	0	0	PILAR P10
278	460	6730	10353	5136	36540	15489	0	0	18541	0	0	

Max Qy

ELE	DIST	Vsd'	Vcd	Vwd	Vrd,max	Vrd	Tsd	Tcd+Ttd	Tld	Trd,max	Trd	
169	204	2394	5177	5136	36540	10313	0	0	18541	0	0	PILAR P7
169	207	1265	3821	5136	26970	8957	0	0	18541	0	0	
170	207	1265	3821	5136	26970	8957	0	0	18541	0	0	
170	210	238	2465	5136	17400	7601	0	0	18541	0	0	
171	210	516	2465	4566	17400	7031	0	0	18541	0	0	
171	212	1212	2465	4566	17400	7031	0	0	18541	0	0	
172	212	1212	2465	4566	17400	7031	0	0	18541	0	0	
172	214	1929	2465	4566	17400	7031	0	0	18541	0	0	
173	214	1909	2465	7134	17400	9599	0	0	18541	0	0	
173	216.5	3225	4943	7152	17445	12095	0	0	18595	0	0	
174	216.5	3178	4943	7152	17445	12095	0	0	18595	0	0	
174	219	4480	4981	7207	17578	12187	0	0	18758	0	0	
175	219	4425	4981	7207	17578	12187	0	0	18758	0	0	
175	221.5	5708	5044	7298	17801	12342	0	0	19029	0	0	
176	221.5	5632	5044	7298	17801	12342	0	0	19029	0	0	
176	224	6889	5132	7426	18113	12558	0	0	19410	0	0	
177	224	6812	5132	11603	18113	16735	0	0	19410	0	0	
177	226.5	8041	5246	11860	18515	17106	0	0	19901	0	0	
178	226.5	7924	5246	11860	18515	17106	0	0	19901	0	0	
178	229	9122	5385	12175	19005	17559	0	0	20505	0	0	
179	229	9006	5385	12175	19005	17559	0	0	20505	0	0	
179	231.5	10169	5549	12546	19585	18095	0	0	21223	0	0	
180	231.5	9886	5549	12546	19585	18095	0	0	21223	0	0	
180	234	10977	5739	12974	20254	18713	0	0	22057	0	0	
181	234	10840	5739	12974	20254	18713	0	0	22057	0	0	
181	236.5	12258	5953	13276	20738	19230	725	3053	23008	1227	1227	
182	236.5	11867	5953	13264	20729	19217	726	3257	23008	1268	1268	
182	239	12971	6193	13793	21542	19986	854	3476	24080	1418	1418	
183	239	12849	6193	13789	21539	19983	854	3539	24080	1432	1432	
183	241.5	13931	6459	14373	22440	20832	985	3789	25274	1587	1587	
184	241.5	13569	6459	14362	22431	20820	986	3983	25274	1630	1630	
184	244	14595	6749	15000	23418	21749	1119	4279	26594	1795	1795	
185	244	14427	6749	14995	23413	21744	1119	4371	26594	1816	1816	
185	246.5	15438	7065	15688	24488	22753	1254	4699	28040	1989	1989	
186	246.5	15020	7065	15673	24476	22738	1255	4945	28040	2045	2045	
186	249	15985	7406	16421	25637	23827	1391	5325	29616	2231	2231	
187	249	15785	7406	16413	25630	23819	1392	5454	29616	2260	2260	
187	251.1	17615	7712	17437	27220	25149	0	0	31041	0	0	
188	251.1	17066	7712	17437	27220	25149	0	0	31041	0	0	
188	253.2	17946	8036	18169	28363	26205	0	0	32561	0	0	
189	253.2	17836	8036	18169	28363	26205	0	0	32561	0	0	
189	255.3	18714	8378	18942	29569	27320	0	0	34176	0	0	
190	255.3	18531	8378	18942	29569	27320	0	0	34176	0	0	
190	257.4	19403	8737	19755	30838	28492	0	0	35888	0	0	
191	257.4	19257	8737	19755	30838	28492	0	0	35888	0	0	
191	259.5	20132	9115	20608	32170	29723	0	0	37697	0	0	
192	259.5	19896	9115	20608	32170	29723	0	0	37697	0	0	
192	261.6	20771	9510	21501	33565	31011	0	0	39604	0	0	
193	261.6	20610	9510	21501	33565	31011	0	0	39604	0	0	
193	263.45	21390	9873	22322	34846	32195	0	0	41367	0	0	
194	263.45	21140	9873	22322	34846	32195	0	0	41367	0	0	
194	265.3	21923	10250	23174	36175	33423	0	0	43206	0	0	
195	265.3	21754	10250	23174	36175	33423	0	0	43206	0	0	
195	267.15	22551	10640	24057	37554	34697	0	0	45124	0	0	
196	267.15	22262	10640	24057	37554	34697	0	0	45124	0	0	
196	269	23068	11045	24971	38981	36016	0	0	47119	0	0	
197	272	17940	11730	26520	41400	38250	0	0	50522	0	0	PILAR P8
197	275	17000	11045	24971	38981	36016	0	0	47119	0	0	
198	275	17270	11045	24971	38981	36016	0	0	47119	0	0	
198	276.85	16712	10640	24057	37554	34697	0	0	45124	0	0	
199	276.85	16902	10640	24057	37554	34697	0	0	45124	0	0	
199	278.7	16359	10250	23174	36175	33423	0	0	43206	0	0	
200	278.7	16431	10250	23174	36175	33423	0	0	43206	0	0	
200	280.55	15906	9873	22322	34846	32195	0	0	41367	0	0	
201	280.55	16068	9873	22322	34846	32195	0	0	41367	0	0	
201	282.4	15556	9510	21501	33565	31011	0	0	39604	0	0	
202	282.4	15630	9510	21501	33565	31011	0	0	39604	0	0	
202	284.5	15066	9115	20608	32170	29723	0	0	37697	0	0	
203	284.5	15213	9115	20608	32170	29723	0	0	37697	0	0	
203	286.6	14660	8737	19755	30838	28492	0	0	35888	0	0	
204	286.6	14721	8737	19755	30838	28492	0	0	35888	0	0	
204	288.7	14181	8378	18942	29569	27320	0	0	34176	0	0	
205	288.7	14287	8378	18942	29569	27320	0	0	34176	0	0	
205	290.8	13750	8036	18169	28363	26205	0	0	32561	0	0	

206	290.8	13787	8036	18169	28363	26205	0	0	32561	0	0
206	292.9	13257	7712	17437	27220	25149	0	0	31041	0	0
207	292.9	13721	7712	17437	27220	25149	0	0	31041	0	0
207	295	13130	7406	16745	26140	24151	0	0	29616	0	0
208	295	13198	7406	16745	26140	24151	0	0	29616	0	0
208	297.5	12491	7065	15974	24936	23039	0	0	28040	0	0
209	297.5	12952	7065	15974	24936	23039	0	0	28040	0	0
209	300	12262	6749	15239	23794	21988	61	337	26594	118	118
210	300	11938	6749	15234	23789	21983	71	417	26594	141	141
210	302.5	11113	6459	14560	22744	21018	113	707	25274	231	231
211	302.5	11556	6459	14563	22746	21022	113	646	25274	222	222
211	305	10633	6193	13942	21786	20136	159	999	24080	326	326
212	305	10698	6193	13943	21787	20137	159	984	24080	324	324
212	307.5	9845	5953	13460	21012	19413	0	0	23008	0	0
213	307.5	10255	5953	13460	21012	19413	0	0	23008	0	0
213	310	9160	5739	12974	20254	18713	0	0	22057	0	0
214	310	9225	5739	12974	20254	18713	0	0	22057	0	0
214	312.5	8080	5549	12546	19585	18095	0	0	21223	0	0
215	312.5	8451	5549	12546	19585	18095	0	0	21223	0	0
215	315	7191	5385	12175	19005	17559	0	0	20505	0	0
216	315	7253	5385	12175	19005	17559	0	0	20505	0	0
216	317.5	5946	5246	11860	18515	17106	0	0	19901	0	0
217	317.5	6255	5246	11860	18515	17106	0	0	19901	0	0
217	320	4829	5132	11603	18113	16735	0	0	19410	0	0
218	320	4903	5132	7426	18113	12558	0	0	19410	0	0
218	322.5	3436	5044	7298	17801	12342	0	0	19029	0	0
219	322.5	3597	5044	7298	17801	12342	0	0	19029	0	0
219	325	2060	2490	7207	17578	9697	0	0	18758	0	0
220	325	2137	2490	7207	17578	9697	0	0	18758	0	0
220	327.5	571	2471	7152	17445	9623	0	0	18595	0	0
221	327.5	642	2471	7152	17445	9623	0	0	18595	0	0
221	330	939	2465	7134	17400	9599	0	0	18541	0	0
222	330	907	2465	4566	17400	7031	0	0	18541	0	0
222	332	2032	2465	4566	17400	7031	0	0	18541	0	0
223	332	2032	2465	4566	17400	7031	0	0	18541	0	0 ½ VÃO
223	334	3292	4930	4566	17400	9496	0	0	18541	0	0
224	334	3272	4930	7134	17400	12064	0	0	18541	0	0
224	336.5	5036	4943	7152	17445	12095	0	0	18595	0	0
225	336.5	4973	4943	7152	17445	12095	0	0	18595	0	0
225	339	6738	4981	7207	17578	12187	0	0	18758	0	0
226	339	6666	4981	7207	17578	12187	0	0	18758	0	0
226	341.5	8414	5044	7298	17801	12342	0	0	19029	0	0
227	341.5	8254	5044	7298	17801	12342	0	0	19029	0	0
227	344	9936	5132	7426	18113	12558	0	0	19410	0	0
228	344	9874	5132	11603	18113	16735	0	0	19410	0	0
228	346.5	11509	5246	11860	18515	17106	0	0	19901	0	0
229	346.5	11212	5246	11860	18515	17106	0	0	19901	0	0
229	349	12730	5385	12175	19005	17559	0	0	20505	0	0
230	349	12671	5385	12175	19005	17559	0	0	20505	0	0
230	351.5	14158	5549	12546	19585	18095	0	0	21223	0	0
231	351.5	13777	5549	12546	19585	18095	0	0	21223	0	0
231	354	15144	5739	12974	20254	18713	0	0	22057	0	0
232	354	15063	5739	12974	20254	18713	0	0	22057	0	0
232	356.5	16381	5953	13460	21012	19413	0	0	23008	0	0
233	356.5	15945	5953	13460	21012	19413	0	0	23008	0	0
233	359	17145	6193	14003	21859	20196	0	0	24080	0	0
234	359	17053	6193	14003	21859	20196	0	0	24080	0	0
234	361.5	18214	6459	14603	22795	21061	0	0	25274	0	0
235	361.5	17734	6459	14603	22795	21061	0	0	25274	0	0
235	364	18788	6749	15259	23821	22009	0	0	26594	0	0
236	364	18661	6749	15259	23821	22009	0	0	26594	0	0
236	366.5	19687	7065	15974	24936	23039	0	0	28040	0	0
237	366.5	19149	7065	15974	24936	23039	0	0	28040	0	0
237	369	20082	7406	16745	26140	24151	0	0	29616	0	0
238	369	19932	7406	16745	26140	24151	0	0	29616	0	0
238	371.1	20705	7712	17437	27220	25149	0	0	31041	0	0
239	371.1	20156	7712	17437	27220	25149	0	0	31041	0	0
239	373.2	20865	8036	18169	28363	26205	0	0	32561	0	0
240	373.2	20735	8036	18169	28363	26205	0	0	32561	0	0
240	375.3	21445	8378	18942	29569	27320	0	0	34176	0	0
241	375.3	21237	8378	18942	29569	27320	0	0	34176	0	0
241	377.4	21949	8737	19755	30838	28492	0	0	35888	0	0
242	377.4	21776	8737	19755	30838	28492	0	0	35888	0	0
242	379.5	22500	9115	20608	32170	29723	0	0	37697	0	0
243	379.5	22235	9115	20608	32170	29723	0	0	37697	0	0
243	381.6	22968	9510	21501	33565	31011	0	0	39604	0	0

244	381.6	22778	9510	21501	33565	31011	0	0	39604	0	0	
244	383.45	23440	9873	22322	34846	32195	0	0	41367	0	0	
245	383.45	23162	9873	22322	34846	32195	0	0	41367	0	0	
245	385.3	23836	10250	23174	36175	33423	0	0	43206	0	0	
246	385.3	23639	10250	23174	36175	33423	0	0	43206	0	0	
246	387.15	24333	10640	24057	37554	34697	0	0	45124	0	0	
247	387.15	24016	10640	24057	37554	34697	0	0	45124	0	0	
247	389	24728	11045	24971	38981	36016	0	0	47119	0	0	
248	389	24286	11045	24971	38981	36016	0	0	47119	0	0	
248	392	25480	11730	26520	41400	38250	0	0	50522	0	0	Pilar P9
249	392	16855	11730	26520	41400	38250	0	0	50522	0	0	
249	395	15855	11045	24971	38981	36016	0	0	47119	0	0	
250	395	16129	11045	24971	38981	36016	0	0	47119	0	0	
250	396.85	15532	10640	24057	37554	34697	0	0	45124	0	0	
251	396.85	15727	10640	24057	37554	34697	0	0	45124	0	0	
251	398.7	15144	10250	23174	36175	33423	0	0	43206	0	0	
252	398.7	15223	10250	23174	36175	33423	0	0	43206	0	0	
252	400.55	14659	9873	22322	34846	32195	0	0	41367	0	0	
253	400.55	14828	9873	22322	34846	32195	0	0	41367	0	0	
253	402.4	14274	9510	21501	33565	31011	0	0	39604	0	0	
254	402.4	14358	9510	21501	33565	31011	0	0	39604	0	0	
254	404.5	13700	9115	20542	32106	29657	119	1066	37697	279	279	
255	404.5	13860	9115	20545	32108	29660	117	1013	37697	271	271	
255	406.6	13249	8737	19678	30763	28416	142	1239	35888	330	330	
256	406.6	13325	8737	19680	30764	28418	141	1210	35888	326	326	
256	408.7	12724	8378	18853	29481	27231	167	1449	34176	387	387	
257	408.7	12845	8378	18856	29483	27234	166	1401	34176	381	381	
257	410.8	12251	8036	18104	28299	26141	123	1057	32561	284	284	
258	410.8	12304	8036	18103	28297	26139	127	1077	32561	292	292	
258	412.9	11712	7712	17375	27158	25087	117	1017	31041	271	271	
259	412.9	12193	7712	17379	27159	25092	121	939	31041	270	270	
259	415	11523	7406	16693	26087	24100	104	843	29616	235	235	
260	415	11609	7406	16693	26085	24099	108	858	29616	243	243	
260	417.5	10801	7065	15933	24895	22998	79	674	28040	182	182	
261	417.5	11093	7065	15934	24894	22999	83	657	28040	186	186	
261	420	10233	6749	15237	23799	21986	42	367	26594	98	98	
262	420	10291	6749	15235	23797	21984	47	404	26594	109	109	
262	422.5	9370	6459	14603	22795	21061	0	0	25274	0	0	
263	422.5	9357	6459	14603	22795	21061	0	0	25274	0	0	
263	425	8316	6193	14003	21859	20196	0	0	24080	0	0	
264	425	8320	6193	14003	21859	20196	0	0	24080	0	0	
264	427.5	7240	5953	13460	21012	19413	0	0	23008	0	0	
265	427.5	7428	5953	13460	21012	19413	0	0	23008	0	0	
265	430	6267	5739	12974	20254	18713	0	0	22057	0	0	
266	430	6263	5739	12974	20254	18713	0	0	22057	0	0	
266	432.5	5058	5549	12546	19585	18095	0	0	21223	0	0	
267	432.5	5209	5549	12546	19585	18095	0	0	21223	0	0	
267	435	3925	5385	12175	19005	17559	0	0	20505	0	0	
268	435	3922	5385	12175	19005	17559	0	0	20505	0	0	
268	437.5	2602	2623	11860	18515	14483	0	0	19901	0	0	
269	437.5	2613	2623	11860	18515	14483	0	0	19901	0	0	
269	440	1264	2566	11603	18113	14169	0	0	19410	0	0	
270	440	1249	2566	7426	18113	9992	0	0	19410	0	0	
270	442.5	188	2522	7298	17801	9820	0	0	19029	0	0	
271	442.5	166	2522	7298	17801	9820	0	0	19029	0	0	
271	445	1577	2490	7207	17578	9697	0	0	18758	0	0	
272	445	1558	2490	7207	17578	9697	0	0	18758	0	0	
272	447.5	2976	4943	7152	17445	12095	0	0	18595	0	0	
273	447.5	2950	4943	7152	17445	12095	0	0	18595	0	0	
273	450	4367	4930	7134	17400	12064	0	0	18541	0	0	
274	450	4348	4930	4566	17400	9496	0	0	18541	0	0	
274	452	5455	4930	4566	17400	9496	0	0	18541	0	0	
275	452	5455	4930	4566	17400	9496	0	0	18541	0	0	
275	454	6565	4930	4566	17400	9496	0	0	18541	0	0	
276	454	7320	4930	5136	17400	10066	0	0	18541	0	0	
276	457	8961	7642	5136	26970	12778	0	0	18541	0	0	
277	457	8961	7642	5136	26970	12778	0	0	18541	0	0	
277	460	10689	10353	5136	36540	15489	0	0	18541	0	0	Pilar P10
278	460	1228	5177	5136	36540	10313	0	0	18541	0	0	

ESTADO LIMITE ÚLTIMO PARA MOMENTO TORSOR MÁXIMO E ESFORÇO TRANSVERSO ASSOCIADO

Mín Mx

ELE	DIST	Vsd'	Vcd	Vwd	Vrd,max	Vrd	Tsd	Tcd+Ttd	Tld	Trd,max	Trd	
169	204	5618	10353	3836	23770	14189	5428	21831	18541	22966	18541	PILAR P7
169	207	4353	7642	3601	18285	11242	5038	25772	18541	21162	18541	
170	207	4353	7642	3602	18291	11243	5033	25754	18541	21148	18541	
170	210	3192	4930	3188	12551	8118	4658	32700	18541	18315	18315	
171	210	2438	4930	2830	11542	7760	4673	29125	18541	22124	18541	
171	212	1654	4930	2887	10179	7817	4432	28175	18541	27274	18541	
172	212	1654	4930	2887	10179	7817	4432	28175	18541	27274	18541	
172	214	651	908	4566	6411	5474	4214	5879	18541	41502	5879	
173	214	673	928	7134	6547	6547	4213	5807	18541	40989	5807	
173	216.5	549	837	7152	5911	5911	4066	6204	18595	43796	6204	
174	216.5	507	794	7152	5605	5605	4064	6369	18595	44961	6369	
174	219	1725	4981	4766	11041	9747	3941	40942	18758	25228	18758	
175	219	1683	4981	4767	10942	9748	3939	40928	18758	25608	18758	
175	221.5	2889	5044	4889	13331	9933	3838	40387	19029	17708	17708	
176	221.5	2837	5044	4890	13272	9934	3836	40373	19029	17944	17944	
176	224	4027	5132	5036	14759	10169	3757	40024	19410	13768	13768	
177	224	3983	5132	7871	14730	13003	3755	62516	19410	13887	13887	
177	226.5	5153	5246	8139	15861	13384	3697	62264	19901	11380	11380	
178	226.5	5078	5246	8140	15829	13386	3695	62241	19901	11518	11518	
178	229	6223	5385	8447	16814	13832	3657	62274	20505	9882	9882	
179	229	6159	5385	8448	16795	13833	3655	62250	20505	9967	9967	
179	231.5	7274	5549	10015	17628	15564	3636	42220	21223	8812	8812	
180	231.5	7052	5549	9726	17574	15275	3634	47028	21223	9056	9056	
180	234	8099	5739	10950	18417	16689	3631	33695	22057	8257	8257	
181	234	8032	5739	10902	18404	16641	3629	34502	22057	8315	8315	
181	236.5	9531	5953	11930	19292	17883	3811	25420	23008	7714	7714	
182	236.5	9286	5953	11832	19251	17785	3811	27057	23008	7900	7900	
182	239	10249	6193	12503	20092	18696	4034	24873	24080	7909	7909	
183	239	10196	6193	12485	20084	18678	4035	25169	24080	7948	7948	
183	241.5	11136	6459	13160	21005	19619	4240	23860	25274	7998	7998	
184	241.5	10851	6459	13076	20961	19535	4241	25250	25274	8192	8192	
184	244	11671	6749	13728	21912	20477	4532	25284	26594	8509	8509	
185	244	11655	6749	13604	21758	20354	4926	27319	26594	9196	9196	
185	246.5	12558	7065	14302	22779	21367	5287	27529	28040	9590	9590	
186	246.5	12235	7065	14204	22721	21269	5302	29135	28040	9846	9846	
186	249	13091	7406	14933	23816	22339	5665	29760	29616	10306	10306	
187	249	12984	7406	14900	23796	22306	5671	30297	29616	10393	10393	
187	251.1	13699	7712	15543	24777	23255	5977	31034	31041	10810	10810	
188	251.1	13183	7712	15385	24689	23097	5980	33632	31041	11199	11199	
188	253.2	13837	8036	16043	25717	24079	6286	34769	32561	11683	11683	
189	253.2	13768	8036	16017	25701	24053	6297	35192	32561	11754	11754	
189	255.3	14426	8378	16706	26786	25084	6604	36482	34176	12262	12262	
190	255.3	14288	8378	16657	26758	25035	6612	37271	34176	12383	12383	
190	257.4	14949	8737	17377	27900	26114	6918	38706	35888	12912	12912	
191	257.4	14854	8737	17342	27881	26080	6925	39269	35888	12998	12998	
191	259.5	15525	9115	18094	29081	27209	7231	40823	37697	13545	13545	
192	259.5	15346	9115	18029	29046	27144	7237	41880	37697	13698	13698	
192	261.6	16024	9510	18812	30304	28323	7542	43564	39604	14263	14263	
193	261.6	15922	9510	18774	30284	28284	7547	44191	39604	14354	14354	
193	263.45	16534	9873	19493	31441	29366	7815	45739	41367	14861	14861	
194	263.45	16344	9873	19419	31404	29292	7819	46927	41367	15024	15024	
194	265.3	16962	10250	20162	32606	30412	8087	48580	43206	15545	15545	
195	265.3	16859	10250	20120	32585	30370	8091	49264	43206	15639	15639	
195	267.15	17494	10640	20891	33835	31532	8358	50954	45124	16165	16165	
196	267.15	19777	10640	21601	34225	32241	8362	39536	45124	14470	14470	
196	269	20540	11045	22433	35539	33478	8628	40768	47119	14928	14928	
197	272	19676	11730	22960	37098	34690	9858	56967	50522	18586	18586	Pilar P8
197	275	18690	11045	21628	34895	32673	9491	53697	47119	17720	17720	
198	275	19025	11045	21749	34958	32794	9494	51751	47119	17445	17445	
198	276.85	18438	10640	20961	33661	31601	9268	49830	45124	16920	16920	
199	276.85	18675	10640	21040	33704	31681	9271	48553	45124	16732	16732	
199	278.7	18101	10250	20278	32453	30528	9044	46714	43206	16214	16214	
200	278.7	18220	10250	20315	32474	30565	9046	46112	43206	16123	16123	
200	280.55	17666	9873	19580	31269	29453	8820	44323	41367	15612	15612	
201	280.55	17872	9873	19642	31306	29515	8822	43326	41367	15453	15453	
201	282.4	17328	9510	18932	30146	28442	8596	41632	39604	14955	14955	
202	282.4	17448	9510	18965	30167	28475	8598	41086	39604	14866	14866	
202	284.5	16848	9115	18191	28906	27306	8341	39242	37697	14311	14311	

203	284.5	17061	9115	18226	28911	27340	8434	38687	37697	14292	14292
203	286.6	16471	8737	17484	27709	26222	8174	36960	35888	13751	13751
204	286.6	16576	8737	17510	27726	26248	8178	36535	35888	13679	13679
204	288.7	15997	8378	16801	26582	25179	7919	34923	34176	13159	13159
205	288.7	16145	8378	16837	26606	25215	7922	34346	34176	13055	13055
205	290.8	15570	8036	16159	25518	24195	7663	32874	32561	12560	12560
206	290.8	15645	8036	16176	25530	24212	7666	32593	32561	12509	12509
206	292.9	15073	7712	15530	24499	23242	7408	31257	31041	12040	12040
207	292.9	15574	7712	15638	24577	23350	7410	29479	31041	11694	11694
207	295	14941	7406	15010	23593	22416	7153	28497	29616	11295	11295
208	295	15045	7406	15031	23608	22437	7155	28156	29616	11227	11227
208	297.5	14286	7065	14323	22508	21388	6850	27177	28040	10793	10793
209	297.5	14782	7065	14419	22581	21484	6852	25604	28040	10467	10467
209	300	13937	6749	13743	21549	20492	6548	25038	26594	10124	10124
210	300	14033	6749	13760	21563	20509	6550	24749	26594	10065	10065
210	302.5	13170	6459	13125	20607	19584	6248	24438	25274	9776	9776
211	302.5	13610	6459	13222	20693	19680	6178	22845	25274	9393	9393
211	305	12650	6193	12617	19803	18810	5881	22982	24080	9206	9206
212	305	12729	6193	12631	19814	18825	5883	22739	24080	9157	9157
212	307.5	11743	5953	12059	18996	18012	5589	23283	23008	9041	9041
213	307.5	12175	5953	12146	19061	18100	5590	21826	23008	8752	8752
213	310	10455	5739	11415	18179	17153	5364	25965	22057	9327	9327
214	310	10543	5739	11439	18193	17178	5367	25559	22057	9262	9262
214	312.5	9435	5549	10820	17461	16369	5169	28785	21223	9566	9566
215	312.5	9833	5549	10959	17537	16508	5172	26464	21223	9224	9224
215	315	8615	5385	10277	16845	15661	4983	31707	20505	9743	9743
216	315	8711	5385	10322	16865	15707	4985	30944	20505	9652	9652
216	317.5	7457	5246	9414	16095	14660	4807	40927	19901	10375	10375
217	317.5	7802	5246	9682	16188	14928	4809	36437	19901	9978	9978
217	320	6438	5132	8147	15407	13279	4642	57898	19410	11108	11108
218	320	6549	5132	5338	15446	10470	4643	34979	19410	10950	10950
218	322.5	5157	5044	4630	14594	9674	4489	44733	19029	12704	12704
219	322.5	5356	5044	4630	14693	9674	4489	44733	19029	12315	12315
219	325	3903	4981	4605	13640	9586	4348	43644	18758	15197	15197
220	325	4019	4981	4605	13729	9586	4348	43644	18758	14853	14853
220	327.5	2548	4943	4607	12147	9550	4220	42705	18595	20117	18595
221	327.5	2658	4943	4607	12301	9550	4220	42705	18595	19532	18595
221	330	1180	1283	7134	9055	8416	4107	4465	18541	31517	4465
222	330	1232	1309	4566	9242	5875	4107	4365	18541	30810	4365
222	332	196	383	4566	2702	2702	4027	7864	18541	55512	7864 ½ VÃO
223	332	196	383	4566	2702	2702	4027	7864	18541	55512	7864
223	334	839	1096	4566	7739	5662	3956	5169	18541	36489	5169
224	334	787	1058	7134	7466	7466	3955	5315	18541	37519	5315
224	336.5	2263	4943	4743	12017	9686	3881	40429	18595	20612	18595
225	336.5	2152	4943	4744	11829	9686	3879	40416	18595	21324	18595
225	339	3617	4981	4817	13802	9797	3819	40095	18758	14573	14573
226	339	3500	4981	4818	13705	9798	3817	40081	18758	14947	14947
226	341.5	5849	5044	4856	15227	9899	3918	40947	19029	10200	10200
227	341.5	5651	5044	4856	15150	9899	3918	40947	19029	10503	10503
227	344	7059	5132	5898	15830	11031	4179	25587	19410	9372	9372
228	344	6952	5132	9106	15800	14239	4179	41819	19410	9497	9497
228	346.5	8334	5246	10118	16466	15364	4448	29150	19901	8788	8788
229	346.5	7997	5246	9939	16389	15185	4447	32137	19901	9114	9114
229	349	9270	5385	10628	17076	16013	4723	25841	20505	8701	8701
230	349	9177	5385	10595	17059	15980	4722	26384	20505	8777	8777
230	351.5	10417	5549	11169	17697	16718	5003	22959	21223	8500	8500
231	351.5	10022	5549	11063	17631	16612	5002	24740	21223	8799	8799
231	354	11153	5739	11612	18321	17351	5288	22682	22057	8687	8687
232	354	11068	5739	11593	18309	17332	5286	22997	22057	8744	8744
232	356.5	12160	5953	12147	19063	18100	5576	21824	23008	8742	8742
233	356.5	11729	5953	12059	18999	18013	5574	23275	23008	9029	9029
233	359	12716	6193	12632	19816	18825	5868	22728	24080	9144	9144
234	359	12639	6193	12618	19806	18811	5865	22963	24080	9191	9191
234	361.5	13598	6459	13223	20696	19682	6162	22825	25274	9378	9378
235	361.5	13141	6459	13139	20631	19597	6159	24219	25274	9669	9669
235	364	14003	6749	13774	21587	20523	6458	24524	26594	9955	9955
236	364	13908	6749	13757	21574	20506	6455	24807	26594	10013	10013
236	366.5	14753	7065	14433	22607	21498	6756	25366	28040	10353	10353
237	366.5	14257	7065	14339	22535	21404	6752	26922	28040	10672	10672
237	369	15017	7406	15046	23636	22453	7055	27896	29616	11104	11104
238	369	14914	7406	15026	23621	22433	7051	28226	29616	11168	11168
238	371.1	15546	7712	15655	24607	23367	7306	29202	31041	11564	11564
239	371.1	15046	7712	15548	24530	23260	7302	30962	31041	11905	11905
239	373.2	15618	8036	16195	25561	24231	7558	32289	32561	12370	12370
240	373.2	15542	8036	16178	25551	24214	7554	32562	32561	12418	12418
240	375.3	16118	8378	16857	26639	25234	7811	34021	34176	12909	12909

241	375.3	15972	8378	16822	26616	25200	7807	34588	34176	13010	13010	
241	377.4	16551	8737	17532	27761	26269	8063	36185	35888	13524	13524	
242	377.4	16445	8737	17506	27745	26243	8059	36609	35888	13597	13597	
242	379.5	17035	9115	18248	28947	27363	8316	38322	37697	14131	14131	
243	379.5	16842	9115	18197	28916	27312	8312	39148	37697	14271	14271	
243	381.6	17442	9510	18971	30176	28481	8569	40990	39604	14825	14825	
244	381.6	17325	9510	18939	30157	28449	8565	41511	39604	14908	14908	
244	383.45	17870	9873	19650	31316	29523	8791	43202	41367	15406	15406	
245	383.45	17664	9873	19589	31281	29462	8787	44185	41367	15561	15561	
245	385.3	18218	10250	20324	32485	30573	9014	45979	43206	16073	16073	
246	385.3	18097	10250	20286	32465	30536	9010	46582	43206	16163	16163	
246	387.15	18671	10640	21049	33716	31689	9236	48415	45124	16678	16678	
247	387.15	18433	10640	20970	33673	31610	9232	49687	45124	16865	16865	
247	389	19022	11045	21758	34971	32803	9459	51600	47119	17390	17390	
248	389	18687	11045	21638	34909	32683	9453	53530	47119	17659	17659	
248	392	19676	11730	22972	37113	34702	9820	56779	50522	18522	18522	Pilar P9
249	392	18682	11730	22807	37224	34537	9055	59414	50522	18042	18042	
249	395	17605	11045	21458	35024	32503	8626	56426	47119	17161	17161	
250	395	20524	11045	22431	35539	33476	8621	40799	47119	14928	14928	
250	396.85	19762	10640	21599	34225	32239	8355	39566	45124	14469	14469	
251	396.85	20041	10640	21665	34268	32305	8352	38497	45124	14281	14281	
251	398.7	19292	10250	20861	33000	31111	8085	37306	43206	13830	13830	
252	398.7	16933	10250	20153	32603	30402	8081	48734	43206	15559	15559	
252	400.55	16314	9873	19409	31400	29282	7814	47094	41367	15040	15040	
253	400.55	18963	9873	20177	31841	30050	7810	34672	41367	13114	13114	
253	402.4	18243	9510	19430	30667	28940	7541	33556	39604	12677	12677	
254	402.4	15985	9510	18800	30299	28310	7537	43765	39604	14286	14286	
254	404.5	15306	9115	18016	29041	27131	7232	42088	37697	13721	13721	
255	404.5	17835	9115	18699	29449	27814	7227	30995	37697	11933	11933	
255	406.6	17044	8737	17920	28230	26658	6921	29862	35888	11463	11463	
256	406.6	17188	8737	17950	28252	26687	6915	29376	35888	11366	11366	
256	408.7	16409	8378	17206	27092	25584	6609	28320	34176	10912	10912	
257	408.7	14366	8378	16687	26776	25065	6601	36789	34176	12303	12303	
257	410.8	13706	8036	15997	25691	24033	6295	35524	32561	11800	11800	
258	410.8	15927	8036	16556	26036	24593	6285	26373	32561	10274	10274	
258	412.9	14636	7712	15763	24904	23476	6023	27425	31041	10248	10248	
259	412.9	15185	7712	15876	24982	23589	6019	25576	31041	9902	9902	
259	415	14380	7406	15209	23967	22616	5782	25219	29616	9636	9636	
260	415	12523	7406	14721	23676	22127	5778	33246	29616	10924	10924	
260	417.5	11698	7065	13961	22551	21026	5500	33147	28040	10603	10603	
261	417.5	12021	7065	14079	22613	21144	5490	31195	28040	10328	10328	
261	420	11148	6749	13341	21556	20091	5219	31661	26594	10092	10092	
262	420	11233	6749	13383	21584	20132	5189	30973	26594	9970	9970	
262	422.5	10348	6459	12663	20600	19122	4926	32082	25274	9807	9807	
263	422.5	10597	6459	12868	20770	19326	4615	28702	25274	9046	9046	
263	425	9658	6193	12151	19849	18344	4378	30710	24080	8998	8998	
264	425	9717	6193	12178	19861	18372	4376	30248	24080	8944	8944	
264	427.5	8757	5953	11425	19005	17378	4149	33816	23008	9004	9004	
265	427.5	9004	5953	11566	19054	17519	4151	31472	23008	8784	8784	
265	430	7984	5739	10717	18252	16456	3936	37578	22057	8998	8998	
266	430	8039	5739	10761	18263	16500	3939	36846	22057	8948	8948	
266	432.5	6992	5549	9572	17507	15121	3737	49596	21223	9357	9357	
267	432.5	7204	5549	9870	17560	15419	3741	44632	21223	9119	9119	
267	435	6094	5385	8520	16829	13905	3554	61046	20505	9815	9815	
268	435	7180	5385	9839	17123	15224	3559	39022	20505	8488	8488	
268	437.5	5886	5246	8357	16323	13603	3389	58609	19901	9399	9399	
269	437.5	5090	5246	8354	16024	13600	3393	58658	19901	10682	10682	
269	440	3938	5132	8233	15088	13365	3242	56456	19410	12420	12420	
270	440	4688	5132	5267	15498	10399	3247	36171	19410	10735	10735	
270	442.5	3115	5044	5063	13923	10107	3438	37467	19029	15364	15364	
271	442.5	3168	5044	5064	13974	10107	3437	37459	19029	15162	15162	
271	445	1786	4981	4876	11461	9856	3680	39108	18758	23608	18758	
272	445	1826	4981	4876	11548	9856	3680	39108	18758	23272	18758	
272	447.5	431	725	7152	5119	5119	3939	6631	18595	46805	6631	
273	447.5	278	522	7152	3683	3683	3939	7403	18595	52256	7403	
273	450	952	1135	7134	8011	8011	4214	5023	18541	35460	5023	
274	450	931	1121	4566	7915	5687	4214	5075	18541	35824	5075	
274	452	1771	4930	2884	10453	7814	4445	28227	18541	26237	18541	
275	452	1893	4930	2884	10729	7814	4445	28227	18541	25194	18541	
275	454	2860	4930	2827	12135	7757	4686	29175	18541	19883	18541	
276	454	3354	4930	3184	12710	8114	4674	32770	18541	17712	17712	
276	457	4559	7642	3599	18542	11240	5049	25811	18541	20535	18541	
277	457	4559	7642	3598	18538	11239	5053	25826	18541	20546	18541	
277	460	5840	10353	3833	24068	14186	5443	21876	18541	22432	18541	
278	460	4912	10353	3858	22830	14211	5305	21459	18541	24657	18541	Pilar P10

Max Mx

ELE	DIST	Vsd'	Vcd	Vwd	Vrd,max	Vrd	Tsd	Tcd+Ttd	Tld	Trd,max	Trd	
169	204	6346	10353	3836	24763	14189	5428	21831	18541	21181	18541	Pilar P7
169	207	4835	7642	3601	18891	11242	5038	25772	18541	19685	18541	
170	207	4835	7642	3602	18897	11243	5033	25754	18541	19671	18541	
170	210	3448	4930	3188	12816	8118	4658	32700	18541	17313	17313	
171	210	2694	4930	2830	11924	7760	4673	29125	18541	20683	18541	
171	212	1771	4930	2887	10466	7817	4432	28175	18541	26190	18541	
172	212	1771	4930	2887	10466	7817	4432	28175	18541	26190	18541	
172	214	849	1067	4566	7532	5633	4201	5280	18541	37270	5280	
173	214	869	1081	7134	7631	7631	4202	5227	18541	36894	5227	
173	216.5	558	866	7152	6116	6116	3926	6094	18595	43019	6094	
174	216.5	519	825	7152	5827	5827	3927	6250	18595	44116	6250	
174	219	1936	4981	4881	11791	9861	3668	39021	18758	22335	18758	
175	219	1896	4981	4880	11707	9861	3669	39028	18758	22657	18758	
175	221.5	3296	5044	5069	14101	10112	3426	37376	19029	14658	14658	
176	221.5	3242	5044	5068	14052	10112	3427	37384	19029	14853	14853	
176	224	4822	5132	5268	15564	10401	3243	36140	19410	10467	10467	
177	224	4777	5132	8235	15545	13367	3239	56419	19410	10541	10541	
177	226.5	6108	5246	8356	16393	13602	3390	58621	19901	9098	9098	
178	226.5	6031	5246	8360	16372	13606	3385	58560	19901	9189	9189	
178	229	7338	5385	9996	17161	15381	3556	36398	20505	8317	8317	
179	229	7269	5385	9933	17148	15318	3552	37446	20505	8379	8379	
179	231.5	8548	5549	10914	17851	16463	3739	27215	21223	7808	7808	
180	231.5	8319	5549	10800	17809	16349	3735	29126	21223	7996	7996	
180	234	9529	5739	11535	18549	17274	3937	23962	22057	7664	7664	
181	234	9452	5739	11510	18537	17248	3934	24386	22057	7715	7715	
181	236.5	10628	5953	12161	19329	18114	4150	21590	23008	7548	7548	
182	236.5	10351	5953	12087	19288	18041	4149	22809	23008	7732	7732	
182	239	11459	6193	12727	20141	18920	4376	21155	24080	7692	7692	
183	239	11369	6193	12706	20128	18900	4377	21493	24080	7749	7749	
183	241.5	12451	6459	13359	21049	19818	4615	20575	25274	7802	7802	
184	241.5	12124	6459	13291	21002	19750	4624	21697	25274	8010	8010	
184	244	13146	6749	13971	21992	20720	4871	21276	26594	8149	8149	
185	244	13055	6749	13869	21860	20618	5219	22957	26594	8739	8739	
185	246.5	14064	7065	14584	22923	21649	5491	22883	28040	8950	8950	
186	246.5	13686	7065	14509	22868	21574	5503	24118	28040	9195	9195	
186	249	14645	7406	15261	24003	22667	5781	24376	29616	9475	9475	
187	249	14482	7406	15228	23979	22635	5786	24906	29616	9581	9581	
187	251.1	15283	7712	15894	24994	23606	6023	25289	31041	9850	9850	
188	251.1	14711	7712	15779	24914	23491	6025	27168	31041	10204	10204	
188	253.2	15997	8036	16569	26045	24605	6286	26166	32561	10234	10234	
189	253.2	15880	8036	16545	26026	24581	6297	26565	32561	10320	10320	
189	255.3	16654	8378	17254	27127	25632	6604	27535	34176	10757	10757	
190	255.3	16465	8378	17216	27099	25594	6612	28153	34176	10883	10883	
190	257.4	17242	8737	17960	28258	26697	6918	29219	35888	11338	11338	
191	257.4	17092	8737	17929	28235	26666	6925	29723	35888	11440	11440	
191	259.5	17881	9115	18707	29454	27822	7231	30862	37697	11911	11911	
192	259.5	17642	9115	18658	29418	27773	7237	31668	37697	12067	12067	
192	261.6	18441	9510	19472	30695	28982	7542	32885	39604	12553	12553	
193	261.6	18280	9510	19437	30670	28947	7547	33452	39604	12662	12662	
193	263.45	18999	9873	20184	31845	30057	7815	34567	41367	13099	13099	
194	263.45	18749	9873	20128	31807	30001	7819	35461	41367	13264	13264	
194	265.3	19479	10250	20903	33027	31153	8087	36631	43206	13712	13712	
195	265.3	19313	10250	20864	33001	31114	8091	37253	43206	13826	13826	
195	267.15	20061	10640	21668	34269	32309	8358	38446	45124	14277	14277	
196	267.15	17275	10640	20800	33791	31440	8362	52427	45124	16356	16356	
196	269	17923	11045	21597	35086	32642	8628	54184	47119	16890	16890	
197	272	19676	11730	22960	37098	34690	9858	56967	50522	18586	18586	Pilar P8
197	275	18690	11045	21628	34895	32673	9491	53697	47119	17720	17720	
198	275	19025	11045	21749	34958	32794	9494	51751	47119	17445	17445	
198	276.85	18438	10640	20961	33661	31601	9268	49830	45124	16920	16920	
199	276.85	18675	10640	21040	33704	31681	9271	48553	45124	16732	16732	
199	278.7	18101	10250	20278	32453	30528	9044	46714	43206	16214	16214	
200	278.7	18220	10250	20315	32474	30565	9046	46112	43206	16123	16123	
200	280.55	17666	9873	19580	31269	29453	8820	44323	41367	15612	15612	
201	280.55	17872	9873	19642	31306	29515	8822	43326	41367	15453	15453	
201	282.4	17328	9510	18932	30146	28442	8596	41632	39604	14955	14955	
202	282.4	17448	9510	18965	30167	28475	8598	41086	39604	14866	14866	
202	284.5	16848	9115	18191	28906	27306	8341	39242	37697	14311	14311	
203	284.5	17061	9115	18226	28911	27340	8434	38687	37697	14292	14292	
203	286.6	16471	8737	17484	27709	26222	8174	36960	35888	13751	13751	
204	286.6	16576	8737	17510	27726	26248	8178	36535	35888	13679	13679	
204	288.7	15997	8378	16801	26582	25179	7919	34923	34176	13159	13159	
205	288.7	16145	8378	16837	26606	25215	7922	34346	34176	13055	13055	
205	290.8	15570	8036	16159	25518	24195	7663	32874	32561	12560	12560	
206	290.8	15645	8036	16176	25530	24212	7666	32593	32561	12509	12509	

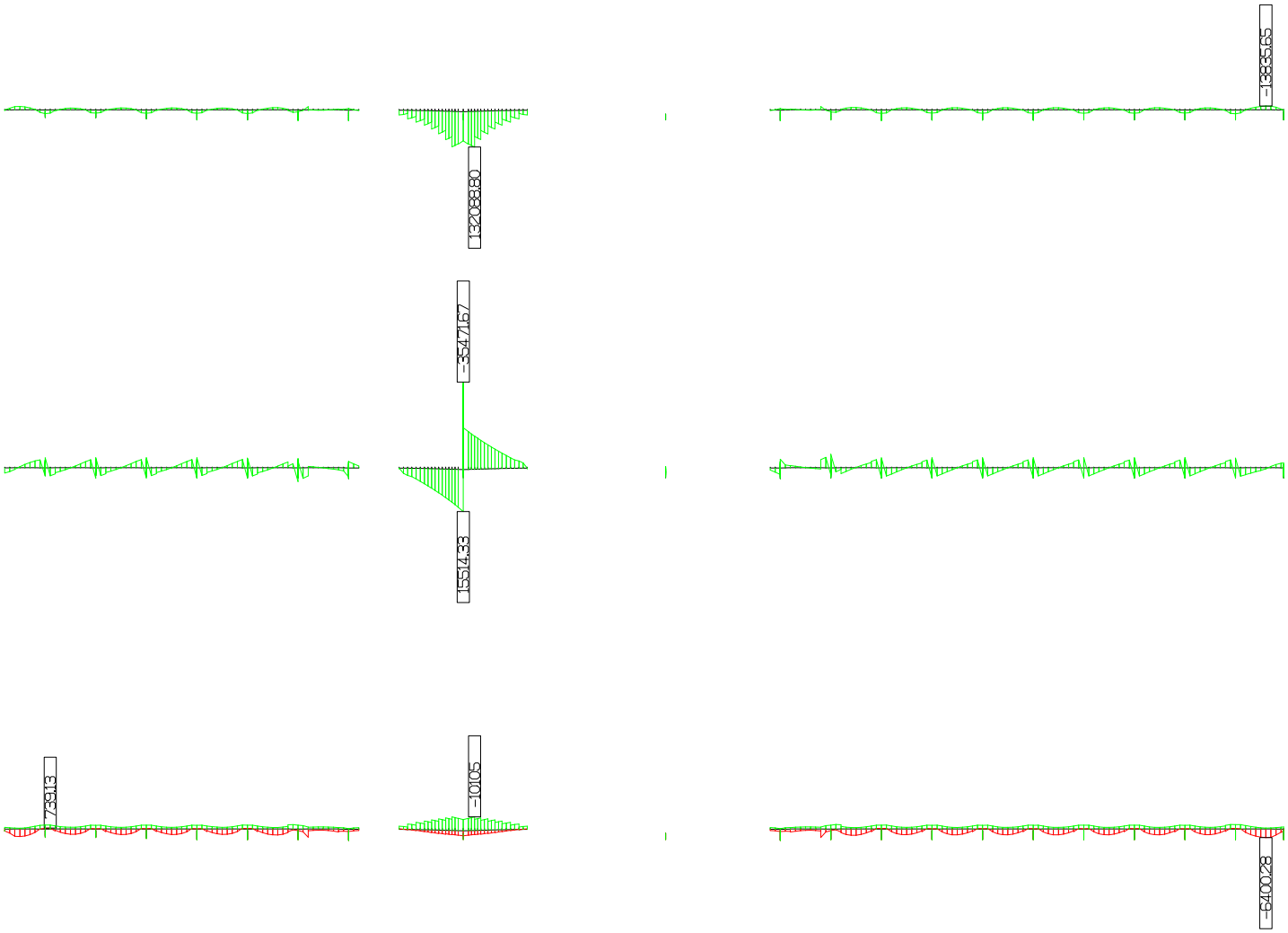
206	292.9	15073	7712	15530	24499	23242	7408	31257	31041	12040	12040
207	292.9	15574	7712	15638	24577	23350	7410	29479	31041	11694	11694
207	295	14941	7406	15010	23593	22416	7153	28497	29616	11295	11295
208	295	15045	7406	15031	23608	22437	7155	28156	29616	11227	11227
208	297.5	14286	7065	14323	22508	21388	6850	27177	28040	10793	10793
209	297.5	14782	7065	14419	22581	21484	6852	25604	28040	10467	10467
209	300	13937	6749	13743	21549	20492	6548	25038	26594	10124	10124
210	300	14033	6749	13760	21563	20509	6550	24749	26594	10065	10065
210	302.5	13170	6459	13125	20607	19584	6248	24438	25274	9776	9776
211	302.5	13610	6459	13222	20693	19680	6178	22845	25274	9393	9393
211	305	12650	6193	12617	19803	18810	5881	22982	24080	9206	9206
212	305	12729	6193	12631	19814	18825	5883	22739	24080	9157	9157
212	307.5	11743	5953	12059	18996	18012	5589	23283	23008	9041	9041
213	307.5	12175	5953	12146	19061	18100	5590	21826	23008	8752	8752
213	310	11082	5739	11593	18306	17332	5299	22993	22057	8753	8753
214	310	11168	5739	11613	18320	17351	5300	22673	22057	8694	8694
214	312.5	10038	5549	11064	17630	16613	5014	24714	21223	8806	8806
215	312.5	10433	5549	11171	17696	16720	5014	22935	21223	8504	8504
215	315	9195	5385	10598	17059	15983	4733	26331	20505	8781	8781
216	315	9288	5385	10631	17076	16016	4733	25785	20505	8702	8702
216	317.5	8015	5246	9946	16390	15192	4457	32019	19901	9114	9114
217	317.5	8356	5246	10126	16467	15372	4457	29019	19901	8783	8783
217	320	6975	5132	9127	15802	14259	4188	41482	19410	9488	9488
218	320	7083	5132	5911	15833	11043	4188	25382	19410	9362	9362
218	322.5	5673	5044	4852	15154	9896	3926	41003	19029	10487	10487
219	322.5	5869	5044	4852	15230	9896	3926	41003	19029	10188	10188
219	325	3525	4981	4818	13726	9798	3817	40081	18758	14865	14865
220	325	3642	4981	4817	13823	9798	3818	40088	18758	14492	14492
220	327.5	2175	4943	4744	11871	9687	3878	40409	18595	21163	18595
221	327.5	2286	4943	4744	12058	9686	3879	40416	18595	20456	18595
221	330	811	1076	7134	7595	7595	3954	5246	18541	37034	5246
222	330	863	1114	4566	7862	5679	3954	5103	18541	36022	5103
222	332	172	343	4566	2419	2419	4024	8016	18541	56583	8016
223	332	172	343	4566	2419	2419	4024	8016	18541	56583	8016 ½ VÃO
223	334	1208	1298	4566	9160	5863	4104	4409	18541	31120	4409
224	334	1156	1271	7134	8970	8404	4104	4511	18541	31840	4511
224	336.5	2635	4943	4609	12272	9551	4217	42685	18595	19641	18595
225	336.5	2525	4943	4609	12115	9551	4217	42685	18595	20237	18595
225	339	3995	4981	4607	13714	9587	4344	43618	18758	14912	14912
226	339	3879	4981	4607	13625	9588	4343	43612	18758	15255	15255
226	341.5	5334	5044	4632	14685	9675	4484	44701	19029	12345	12345
227	341.5	5133	5044	4632	14586	9676	4483	44695	19029	12738	12738
227	344	6524	5132	5312	15440	10444	4637	35405	19410	10975	10975
228	344	6414	5132	8104	15402	13236	4635	58608	19410	11130	11130
228	346.5	7777	5246	9667	16184	14913	4802	36688	19901	9994	9994
229	346.5	7437	5246	9399	16093	14645	4799	41179	19901	10385	10385
229	349	8690	5385	10315	16864	15700	4977	31063	20505	9658	9658
230	349	8595	5385	10270	16844	15654	4974	31824	20505	9748	9748
230	351.5	9813	5549	10956	17536	16505	5162	26525	21223	9225	9225
231	351.5	9416	5549	10816	17461	16365	5159	28858	21223	9566	9566
231	354	10524	5739	11437	18194	17175	5356	25600	22057	9259	9259
232	354	10437	5739	11412	18179	17151	5353	26005	22057	9324	9324
232	356.5	12160	5953	12147	19063	18100	5576	21824	23008	8742	8742
233	356.5	11729	5953	12059	18999	18013	5574	23275	23008	9029	9029
233	359	12716	6193	12632	19816	18825	5868	22728	24080	9144	9144
234	359	12639	6193	12618	19806	18811	5865	22963	24080	9191	9191
234	361.5	13598	6459	13223	20696	19682	6162	22825	25274	9378	9378
235	361.5	13141	6459	13139	20631	19597	6159	24219	25274	9669	9669
235	364	14003	6749	13774	21587	20523	6458	24524	26594	9955	9955
236	364	13908	6749	13757	21574	20506	6455	24807	26594	10013	10013
236	366.5	14753	7065	14433	22607	21498	6756	25366	28040	10353	10353
237	366.5	14257	7065	14339	22535	21404	6752	26922	28040	10672	10672
237	369	15017	7406	15046	23636	22453	7055	27896	29616	11104	11104
238	369	14914	7406	15026	23621	22433	7051	28226	29616	11168	11168
238	371.1	15546	7712	15655	24607	23367	7306	29202	31041	11564	11564
239	371.1	15046	7712	15548	24530	23260	7302	30962	31041	11905	11905
239	373.2	15618	8036	16195	25561	24231	7558	32289	32561	12370	12370
240	373.2	15542	8036	16178	25551	24214	7554	32562	32561	12418	12418
240	375.3	16118	8378	16857	26639	25234	7811	34021	34176	12909	12909
241	375.3	15972	8378	16822	26616	25200	7807	34588	34176	13010	13010
241	377.4	16551	8737	17532	27761	26269	8063	36185	35888	13524	13524
242	377.4	16445	8737	17506	27745	26243	8059	36609	35888	13597	13597
242	379.5	17035	9115	18248	28947	27363	8316	38322	37697	14131	14131
243	379.5	16842	9115	18197	28916	27312	8312	39148	37697	14271	14271
243	381.6	17442	9510	18971	30176	28481	8569	40990	39604	14825	14825
244	381.6	17325	9510	18939	30157	28449	8565	41511	39604	14908	14908

244	383.45	17870	9873	19650	31316	29523	8791	43202	41367	15406	15406	
245	383.45	17664	9873	19589	31281	29462	8787	44185	41367	15561	15561	
245	385.3	18218	10250	20324	32485	30573	9014	45979	43206	16073	16073	
246	385.3	18097	10250	20286	32465	30536	9010	46582	43206	16163	16163	
246	387.15	18671	10640	21049	33716	31689	9236	48415	45124	16678	16678	
247	387.15	18433	10640	20970	33673	31610	9232	49687	45124	16865	16865	
247	389	19022	11045	21758	34971	32803	9459	51600	47119	17390	17390	
248	389	18687	11045	21638	34909	32683	9453	53530	47119	17659	17659	
248	392	19676	11730	22972	37113	34702	9820	56779	50522	18522	18522	
249	392	21405	11730	23743	37708	35473	9055	44444	50522	15952	15952	Pilar P9
249	395	20134	11045	22332	35476	33377	8626	42389	47119	15199	15199	
250	395	17907	11045	21593	35086	32638	8621	54257	47119	16892	16892	
250	396.85	17259	10640	20795	33790	31436	8355	52499	45124	16357	16357	
251	396.85	17473	10640	20885	33833	31525	8352	51058	45124	16172	16172	
251	398.7	16837	10250	20113	32583	30363	8085	49372	43206	15646	15646	
252	398.7	16933	10250	20153	32603	30402	8081	48734	43206	15559	15559	
252	400.55	16314	9873	19409	31400	29282	7814	47094	41367	15040	15040	
253	400.55	16499	9873	19481	31437	29354	7810	45927	41367	14881	14881	
253	402.4	15886	9510	18762	30279	28272	7541	44378	39604	14373	14373	
254	402.4	18402	9510	19465	30691	28975	7537	32997	39604	12570	12570	
254	404.5	17603	9115	18651	29414	27766	7232	31782	37697	12085	12085	
255	404.5	15480	9115	18080	29074	27195	7227	41057	37697	13574	13574	
255	406.6	14807	8737	17327	27874	26065	6921	39513	35888	13028	13028	
256	406.6	14895	8737	17359	27892	26097	6915	38990	35888	12949	12949	
256	408.7	14233	8378	16640	26750	25017	6609	37561	34176	12421	12421	
257	408.7	14366	8378	16687	26776	25065	6601	36789	34176	12303	12303	
257	410.8	13706	8036	15997	25691	24033	6295	35524	32561	11800	11800	
258	410.8	13769	8036	16021	25706	24057	6285	35127	32561	11733	11733	
258	412.9	13112	7712	15361	24677	23074	5979	34016	31041	11252	11252	
259	412.9	13607	7712	15518	24763	23230	5973	31449	31041	10870	10870	
259	415	12888	7406	14873	23782	22279	5667	30750	29616	10457	10457	
260	415	15004	7406	15352	24090	22758	5661	22877	29616	9089	9089	
260	417.5	14006	7065	14618	22980	21683	5298	22317	28040	8693	8693	
261	417.5	12438	7065	14269	22760	21334	5285	28069	28040	9671	9671	
261	420	11531	6749	13567	21738	20316	4924	27938	26594	9282	9282	
262	420	11604	6749	13600	21763	20349	4890	27396	26594	9171	9171	
262	422.5	10685	6459	12926	20818	19385	4533	27731	25274	8832	8832	
263	422.5	10992	6459	13120	20985	19579	4237	24527	25274	8089	8089	
263	425	10052	6193	12435	20061	18629	4032	25991	24080	8047	8047	
264	425	11684	6193	12864	20295	19057	4031	18887	24080	7002	7002	
264	427.5	10574	5953	12245	19450	18198	3809	20188	23008	7006	7006	
265	427.5	9373	5953	11869	19267	17823	3808	26431	23008	7827	7827	
265	430	7867	5739	10766	18366	16505	3635	36767	22057	8486	8486	
266	430	7930	5739	10818	18379	16556	3637	35905	22057	8429	8429	
266	432.5	6891	5549	9466	17529	15015	3640	51366	21223	9260	9260	
267	432.5	8286	5549	10820	17843	16369	3642	28790	21223	7842	7842	
267	435	7022	5385	9603	17036	14987	3662	42967	20505	8885	8885	
268	435	6063	5385	8441	16759	13826	3665	62368	20505	10130	10130	
268	437.5	4933	5246	8134	15757	13380	3703	62333	19901	11828	11828	
269	437.5	5876	5246	8132	16141	13378	3706	62368	19901	10180	10180	
269	440	4554	5132	7865	15077	12997	3764	62617	19410	12462	12462	
270	440	3893	5132	5033	14658	10165	3766	40089	19410	14182	14182	
270	442.5	2720	5044	4886	13120	9930	3845	40437	19029	18545	18545	
271	442.5	2771	5044	4885	13181	9929	3848	40458	19029	18302	18302	
271	445	1584	4981	4763	10679	9744	3949	40997	18758	26623	18758	
272	445	1625	4981	4762	10784	9743	3951	41011	18758	26220	18758	
272	447.5	429	706	7152	4985	4985	4075	6703	18595	47314	6703	
273	447.5	663	943	7152	6659	6659	4077	5802	18595	40955	5802	
273	450	710	957	7134	6756	6756	4224	5695	18541	40202	5695	
274	450	689	940	4566	6632	5505	4225	5761	18541	40669	5761	
274	452	1893	4930	2884	10729	7814	4445	28227	18541	25194	18541	
275	452	1771	4930	2884	10453	7814	4445	28227	18541	26237	18541	
275	454	2599	4930	2827	11778	7757	4686	29175	18541	21235	18541	
276	454	3615	4930	3184	12962	8114	4674	32770	18541	16760	16760	
276	457	5046	7642	3599	19119	11240	5049	25811	18541	19130	18541	
277	457	4559	7642	3598	18538	11239	5053	25826	18541	20546	18541	
277	460	5840	10353	3833	24068	14186	5443	21876	18541	22432	18541	
278	460	4008	10353	3858	21049	14211	5305	21459	18541	27860	18541	Pilar P10

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Fase Numero - 30



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

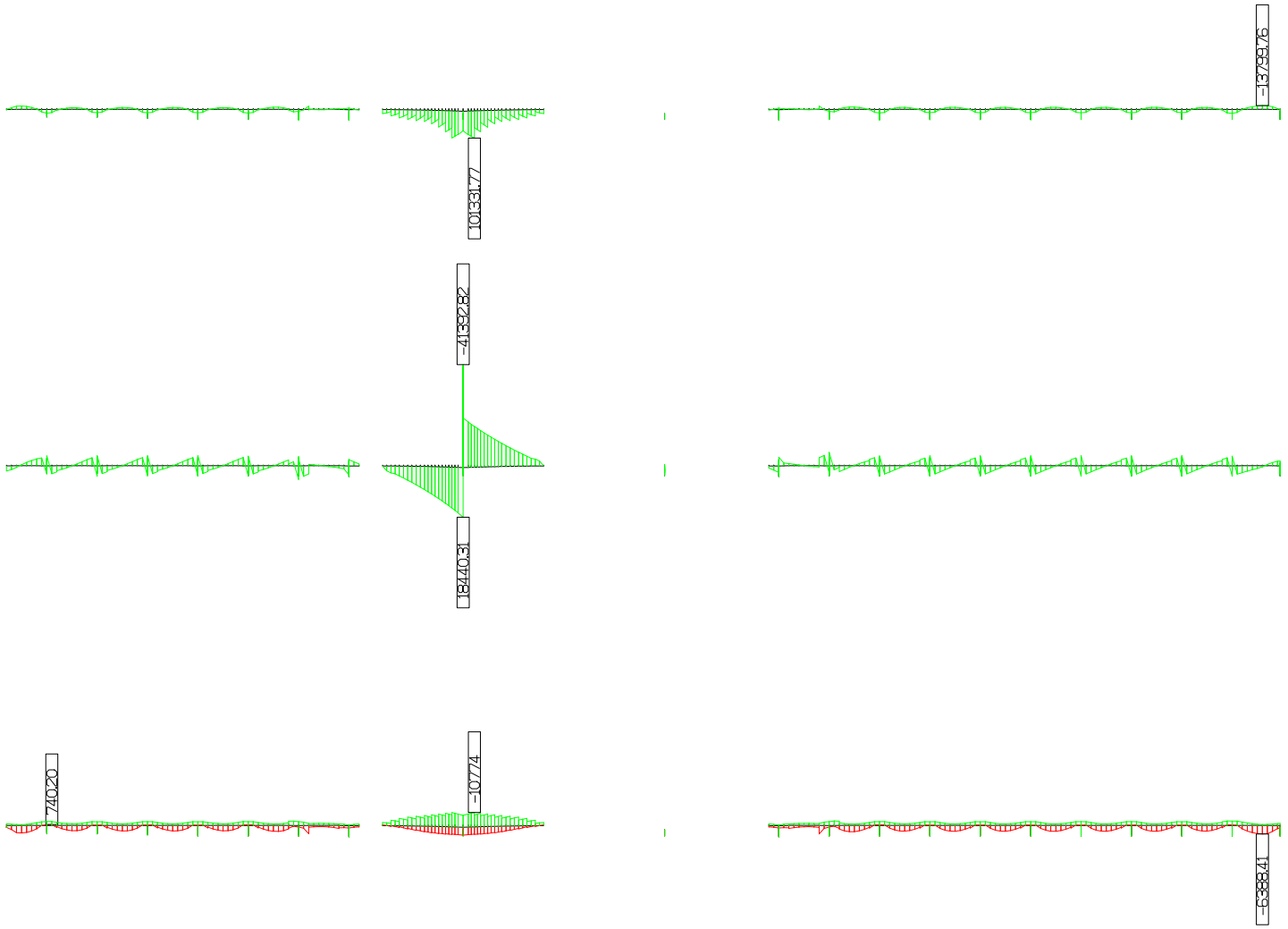
Escala Horizontal: 1 : 4000

DES. I - 31

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Fase Numero - 32



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

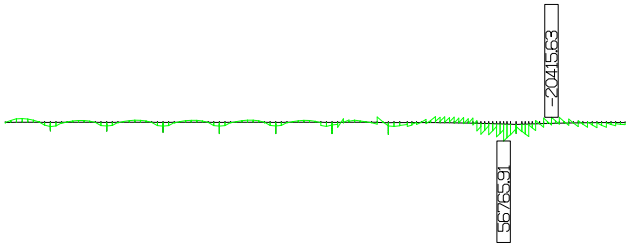
Escala Horizontal: 1 : 4000

DES. I - 33

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

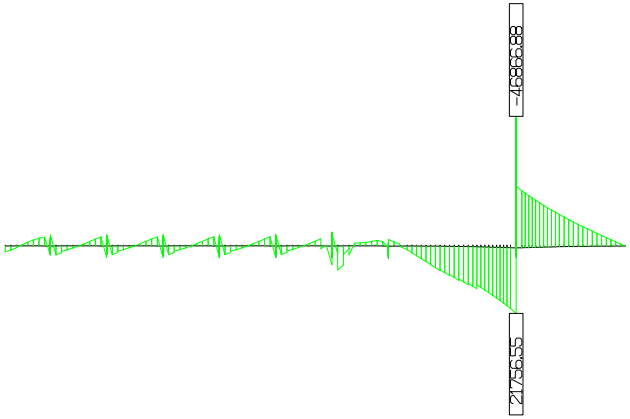
PONTE SOBRE O RIO KWANZA

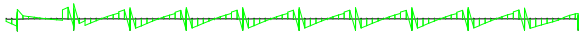
Fase Numero - 35



MOMENTOS FLECTORES

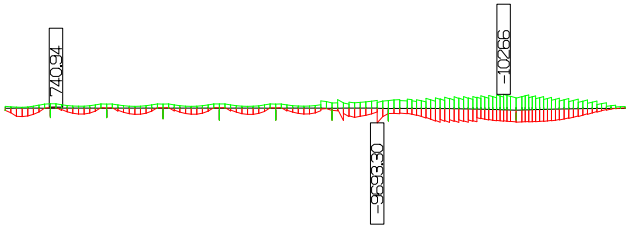
1 cm : 250000 kN.m

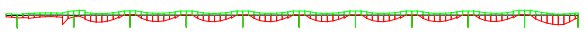




ESFORCOS TRANSVERSOS

1 cm : 25000 kN





TENSOES

1 cm : 10000 kPa

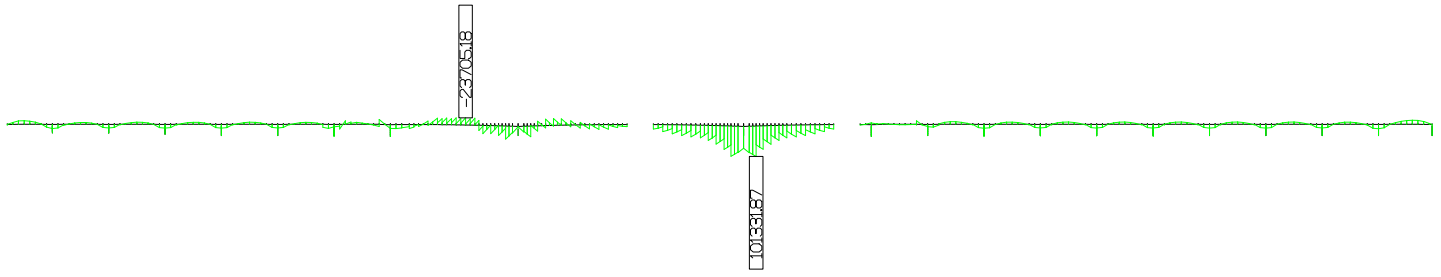
Escala Horizontal: 1 : 4000

DES. I - 36

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

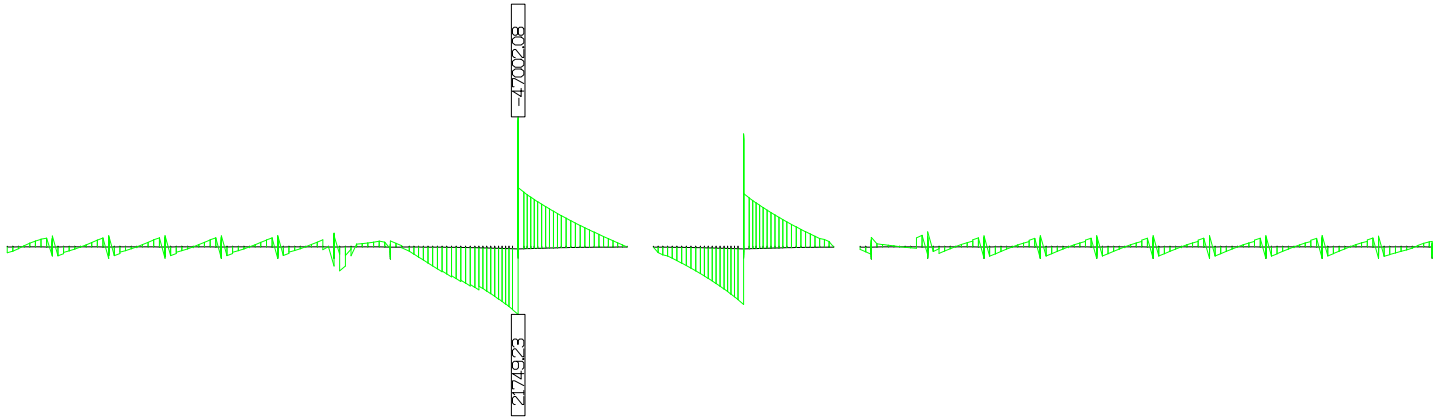
PONTE SOBRE O RIO KWANZA

Fase Numero - 47



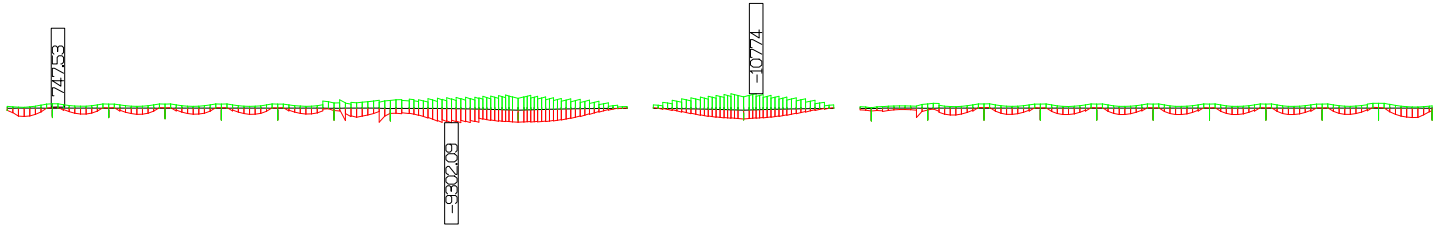
MOMENTOS FLECTORES

1 cm : 250000 kN.m



ESFORCOS TRANSVERSOS

1 cm : 25000 kN



TENSOES

1 cm : 10000 kPa

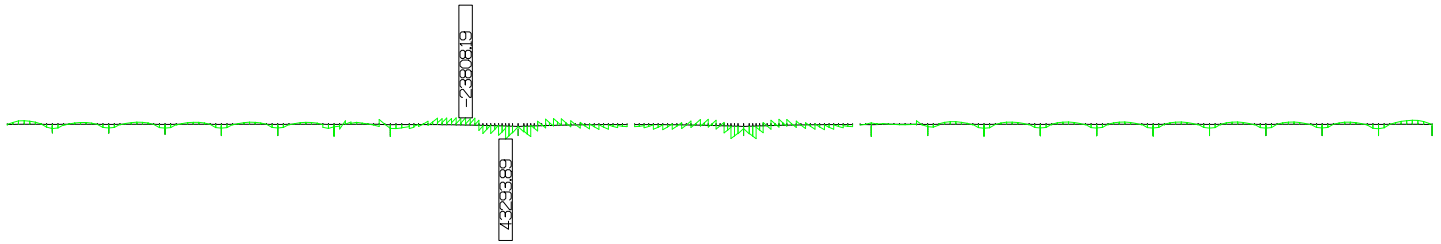
Escala Horizontal: 1 : 4000

DES. I - 48

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

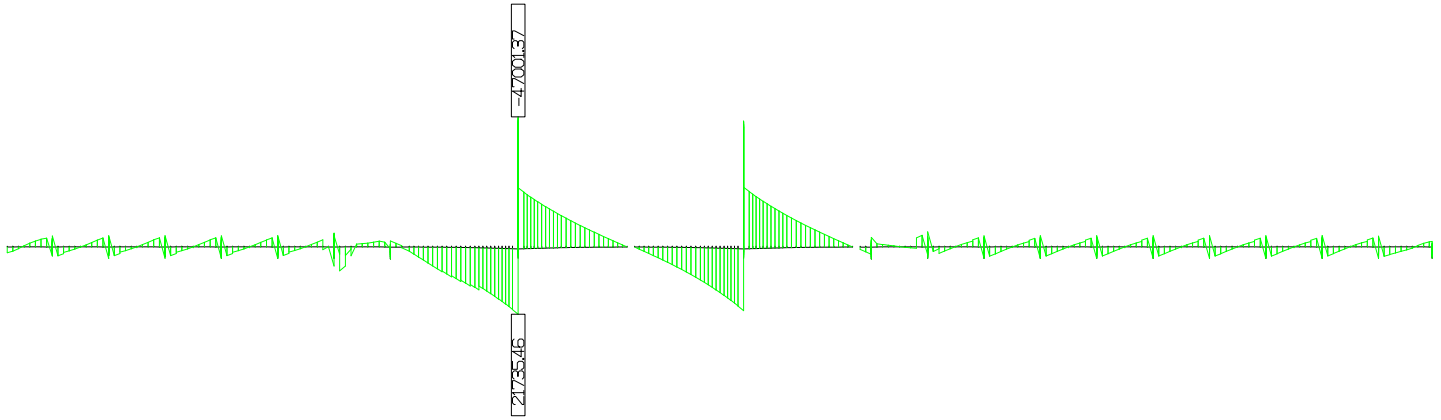
PONTE SOBRE O RIO KWANZA

Fase Numero - 49



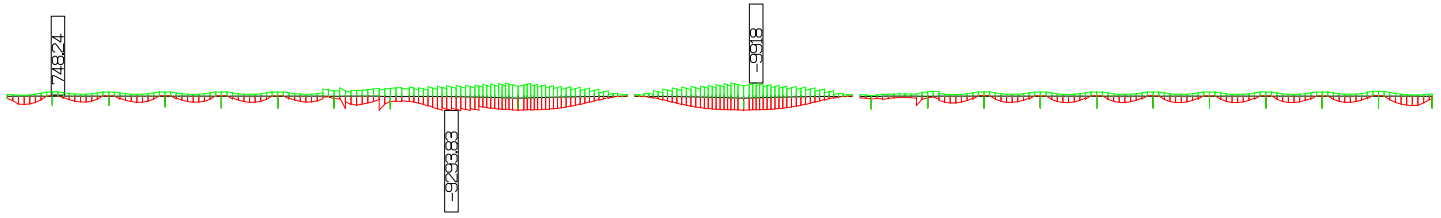
MOMENTOS FLECTORES

1 cm : 250000 kN.m



ESFORCOS TRANSVERSOS

1 cm : 25000 kN



TENSOES

1 cm : 10000 kPa

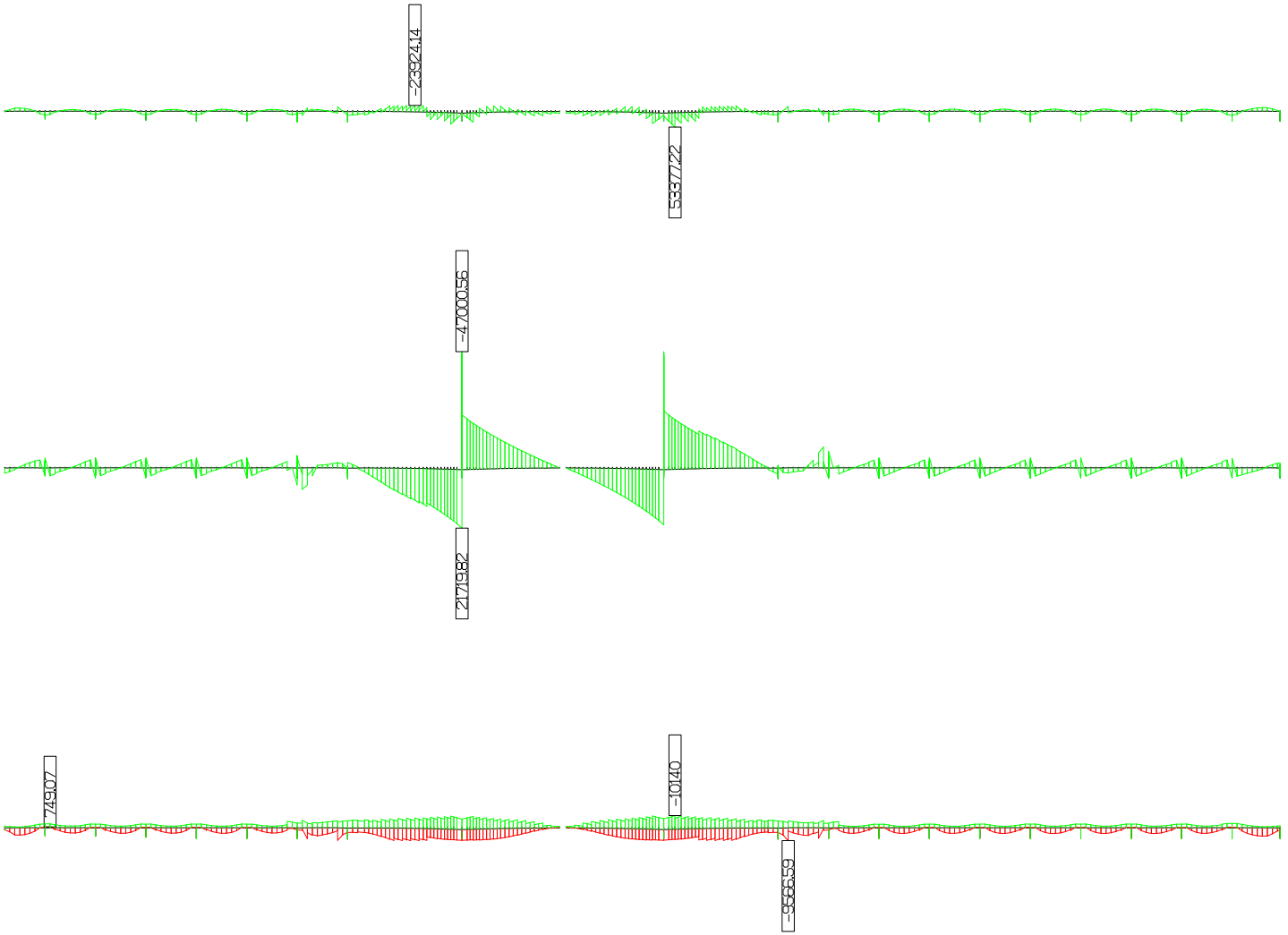
Escala Horizontal: 1 : 4000

DES. I - 50

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Fase Numero - 51



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

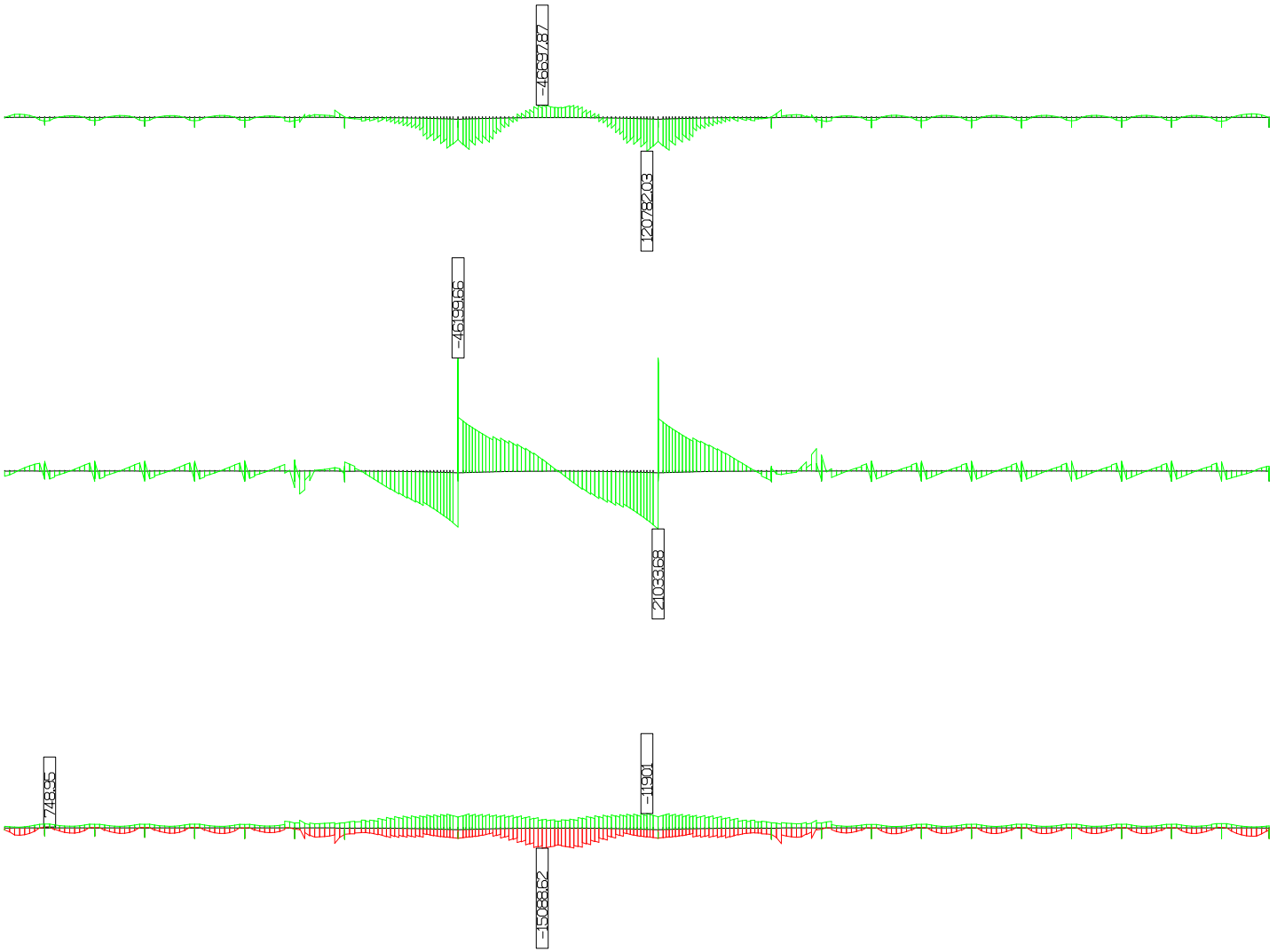
Escala Horizontal: 1 : 4000

DES. I - 52

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Fase Numero - 52



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

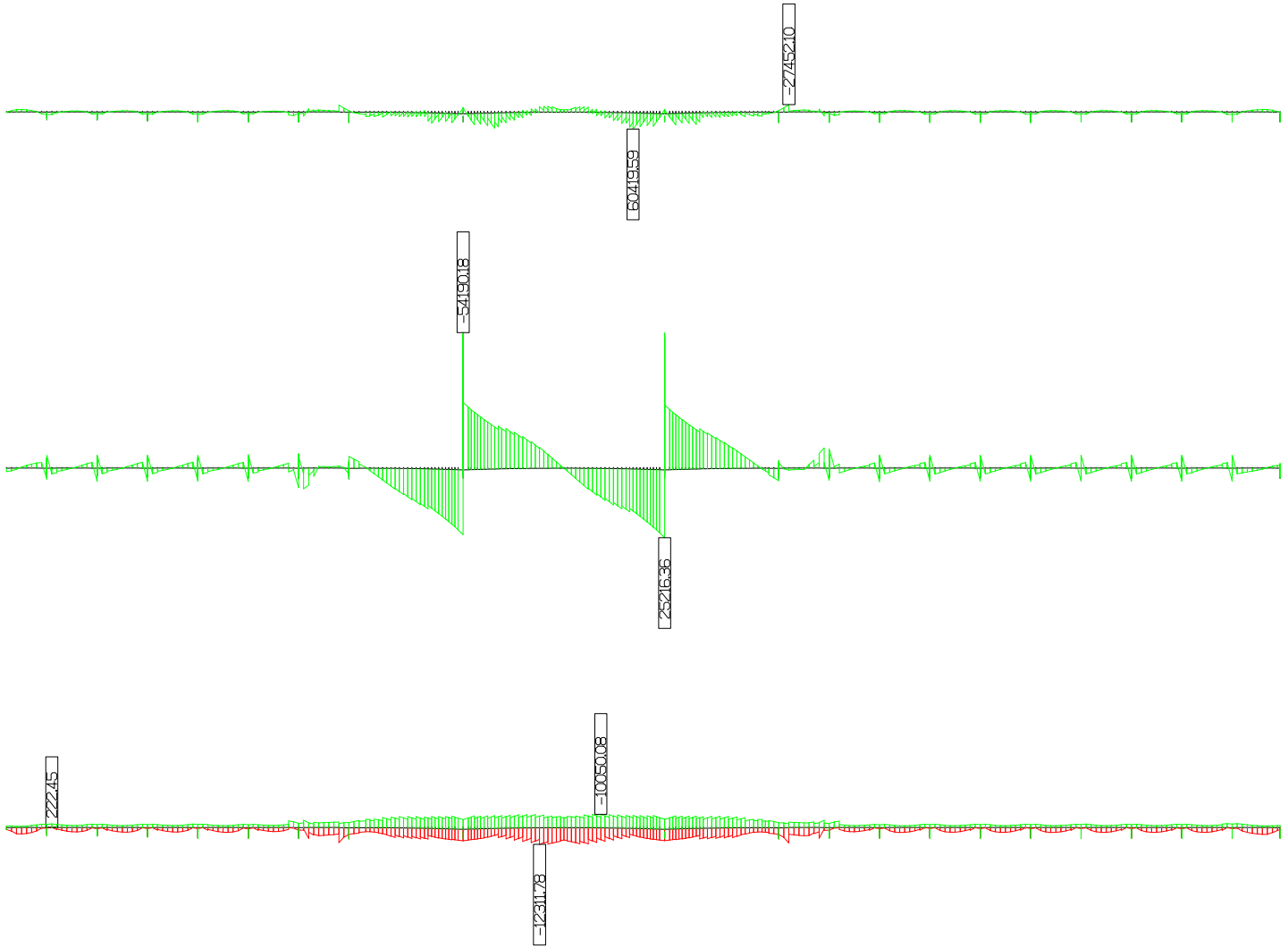
DES. I - 53

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Fase Numero - 53

Final da Fase Construtiva



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

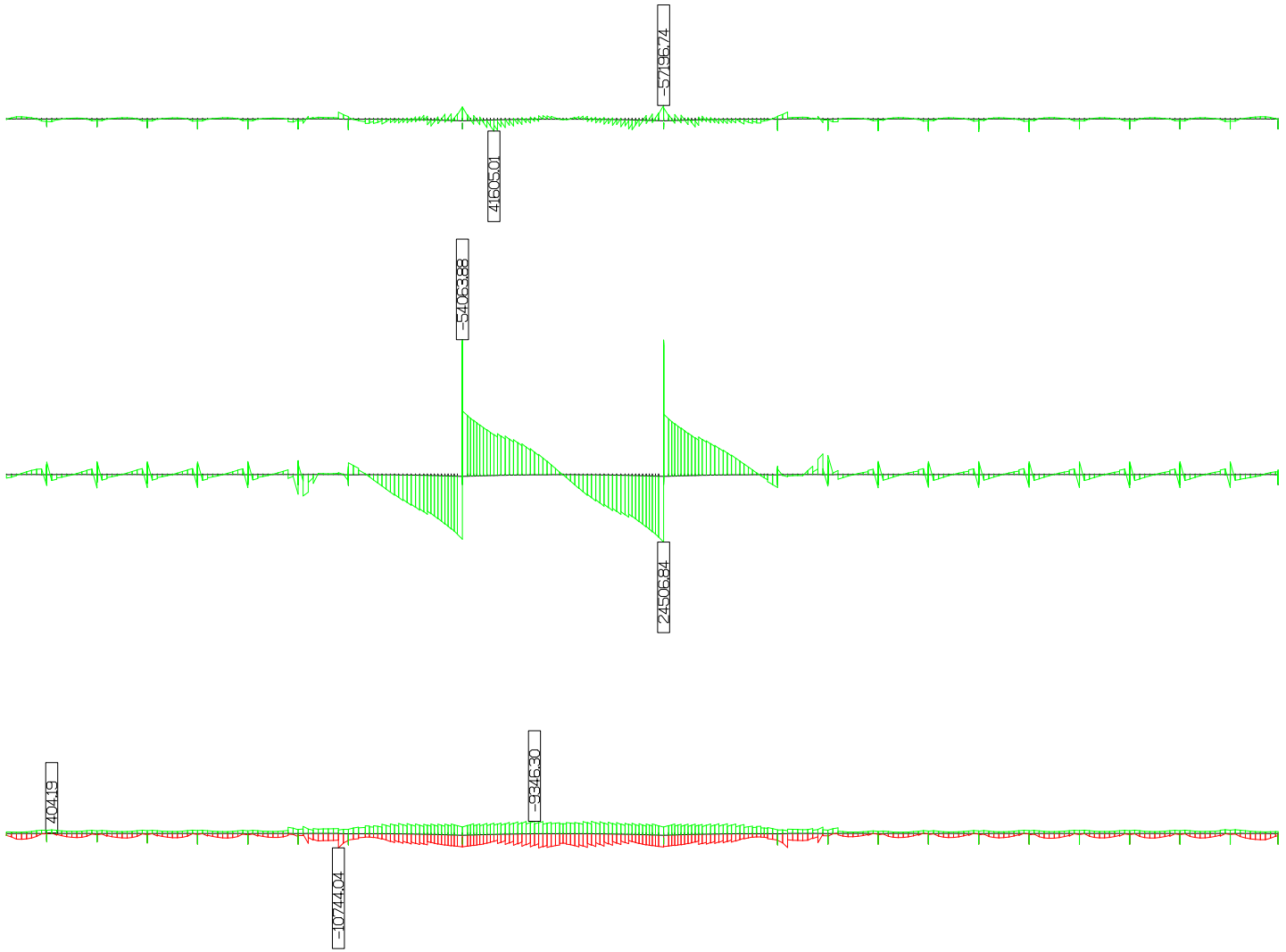
DES. I - 54

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Fase Numero - 54

Aos 8000 Dias



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

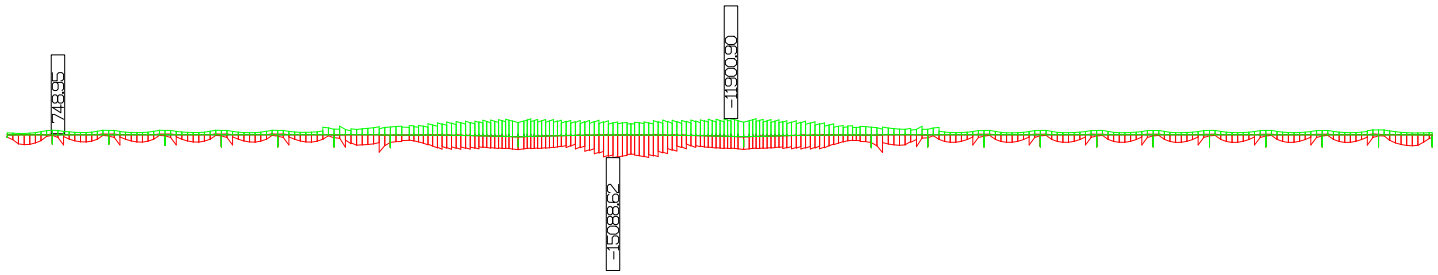
DES. I - 55

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

FASES CONSTRUTIVAS

Envolvente de Tensoes Durante a Fase Construtiva (PP + PRE + RCP)



TENSOES

1 cm : 10000 kPa

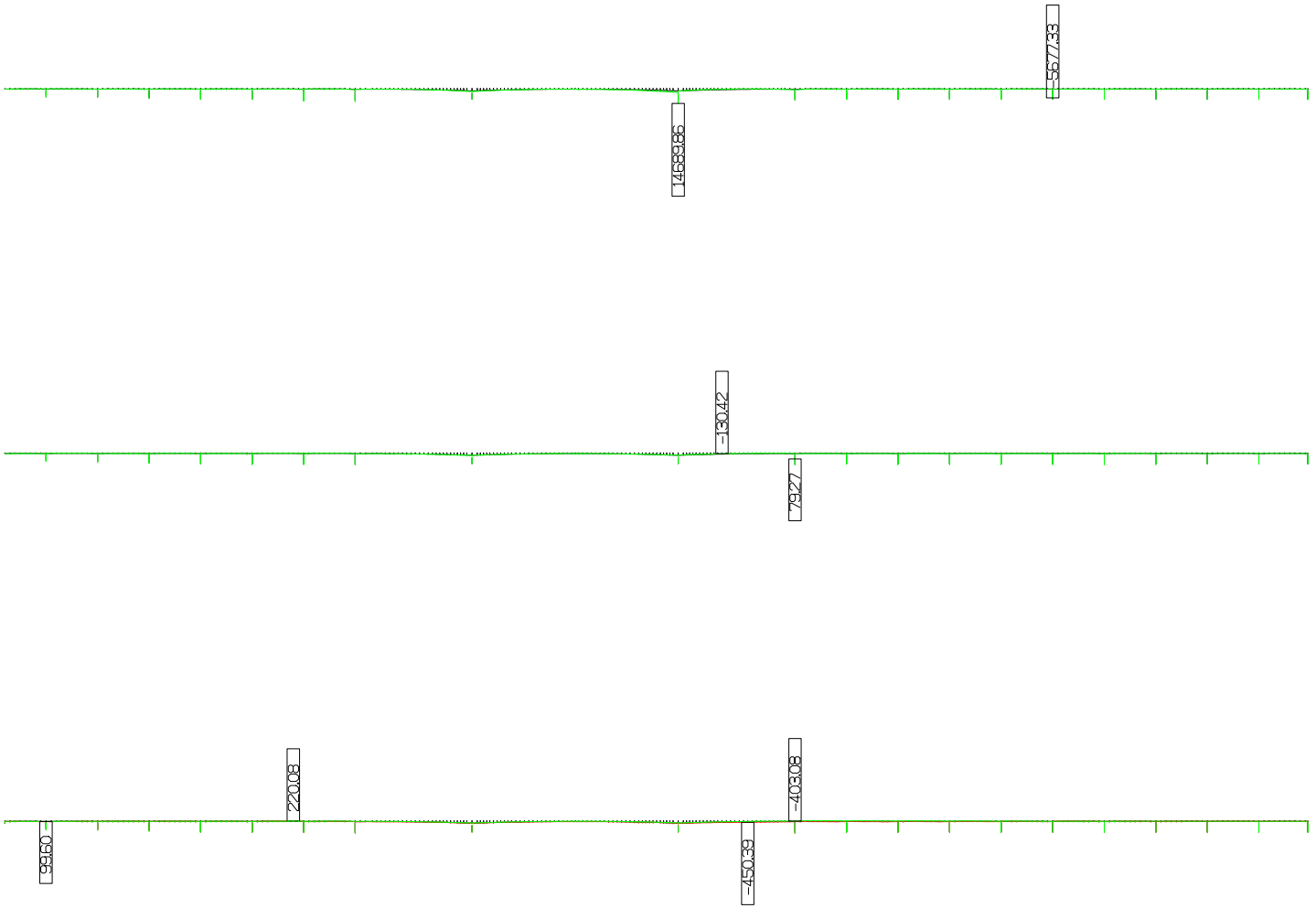
Escala Horizontal: 1 : 4000

DES. I - 56

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Variacao Uniforme de Temperatura (+20 oC)



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

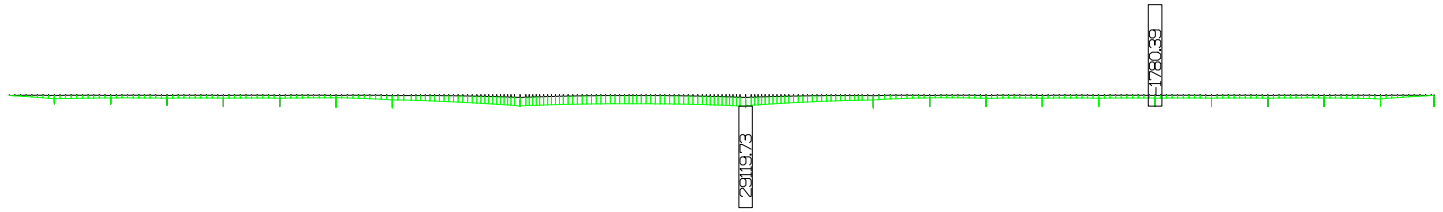
Escala Horizontal: 1 : 4000

DES. I - 57

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

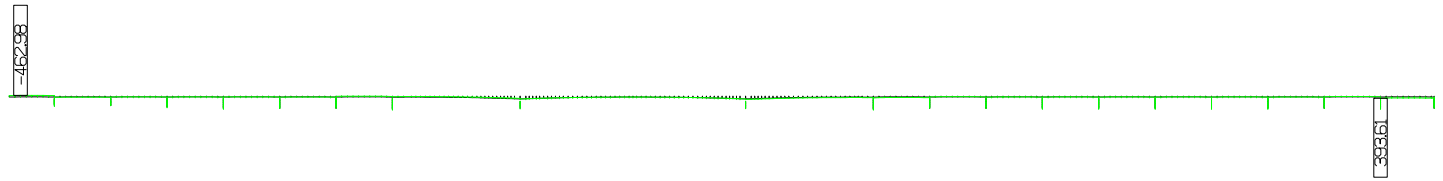
PONTE SOBRE O RIO KWANZA

Variacao Diferencial de Temperatura (+10/0 oC)



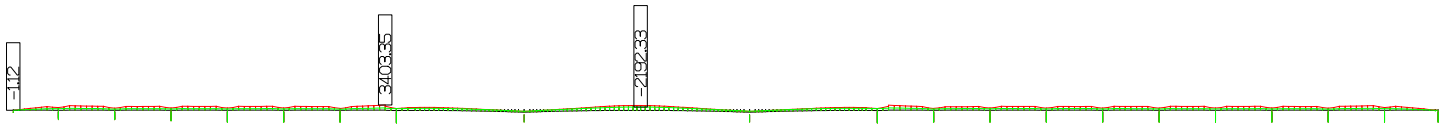
MOMENTOS FLECTORES

1 cm : 250000 kN.m



ESFORCOS TRANSVERSOS

1 cm : 25000 kN



TENSOES

1 cm : 10000 kPa

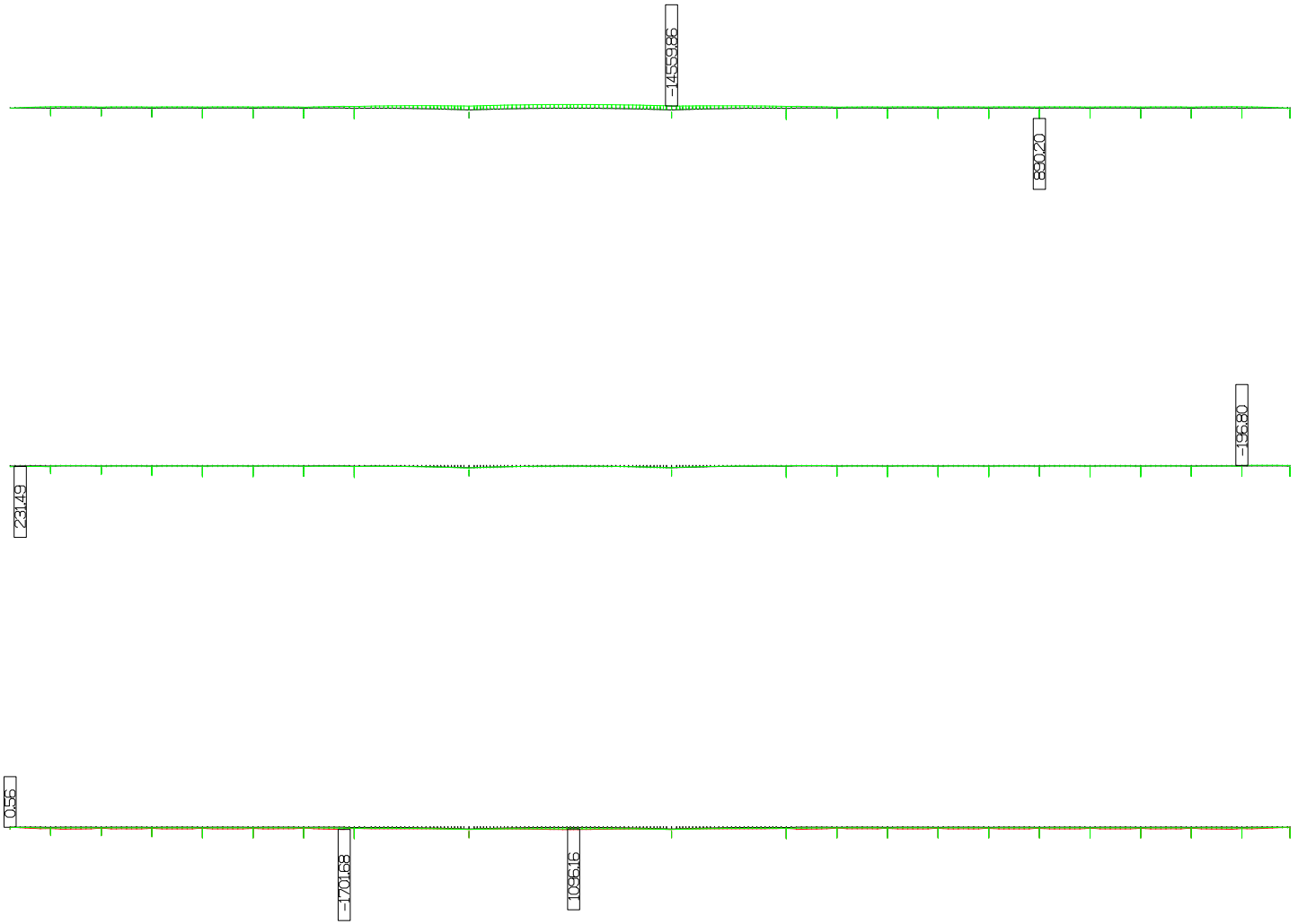
Escala Horizontal: 1 : 4000

DES. I - 58

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

Variacao Diferencial de Temperatura (-5/0 oC)



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

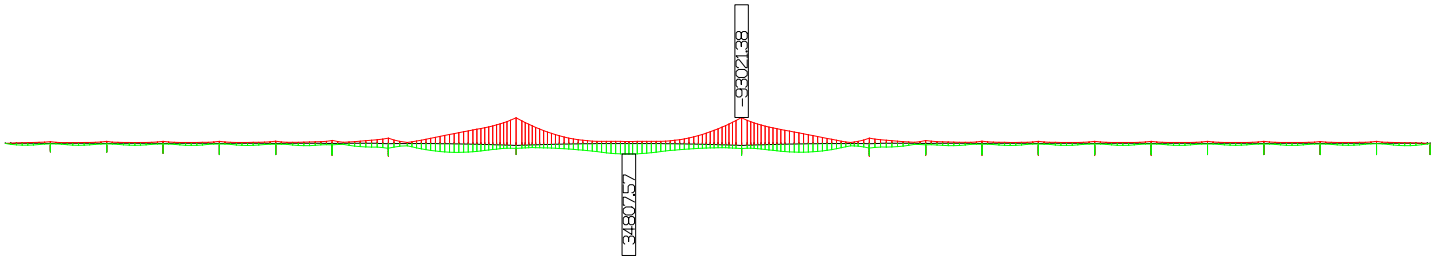
DES. I - 59

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

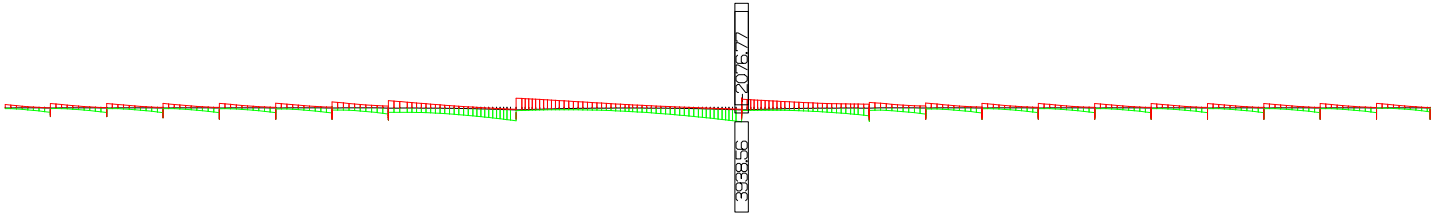
SOBRECARGAS REGULAMENTARES:

Sobrecarga TS+UDL+Qfk



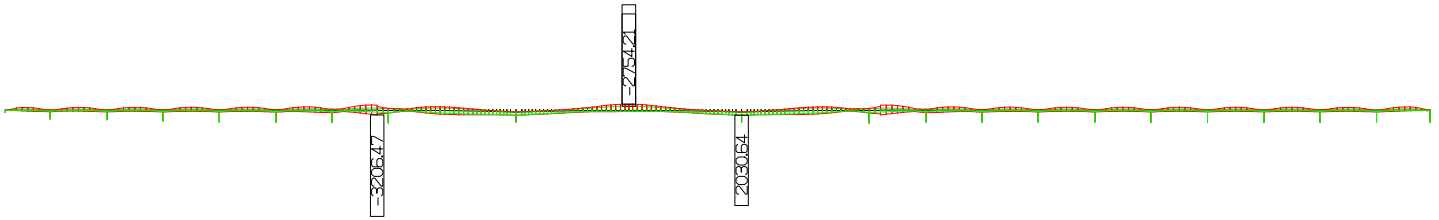
MOMENTOS FLECTORES

1 cm : 250000 kN.m



ESFORCOS TRANSVERSOS

1 cm : 25000 kN



TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

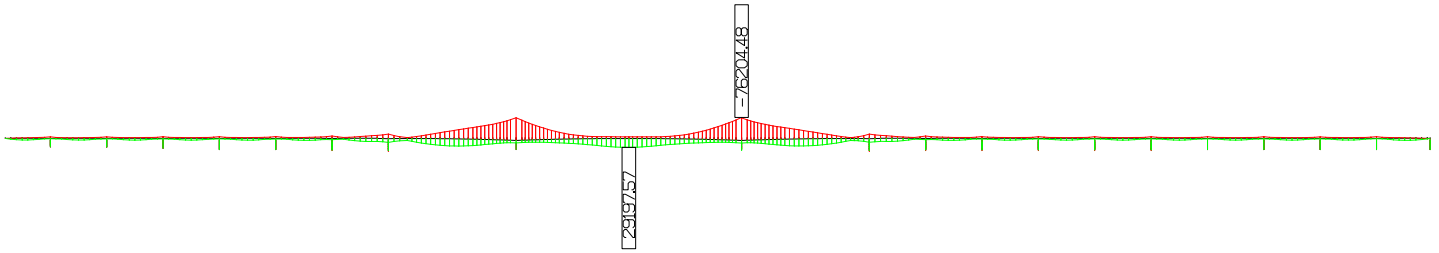
DES. I - 60

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

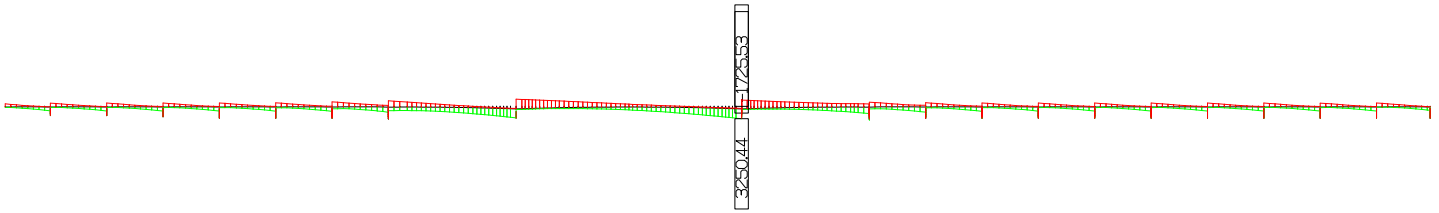
SOBRECARGAS REGULAMENTARES:

Sobrecarga TS+UDL+FREN



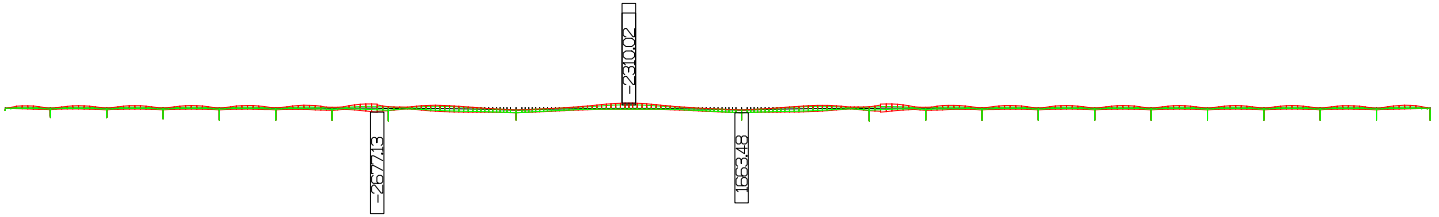
MOMENTOS FLECTORES

1 cm : 250000 kN.m



ESFORCOS TRANSVERSOS

1 cm : 25000 kN



TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

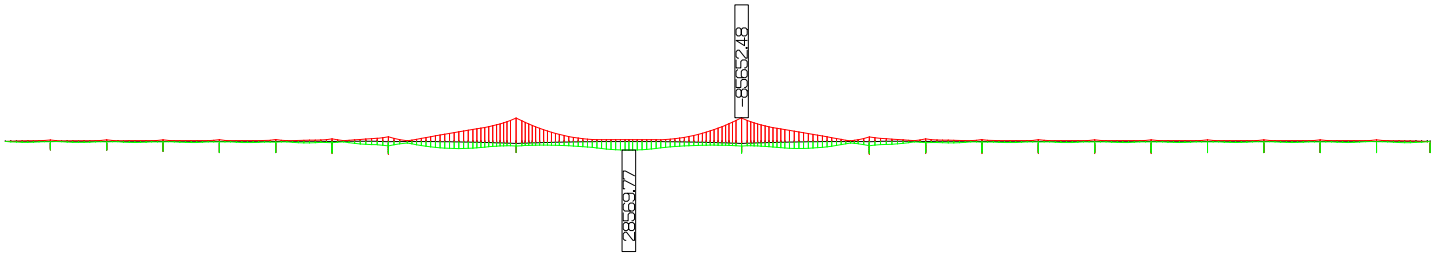
DES. I - 61

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

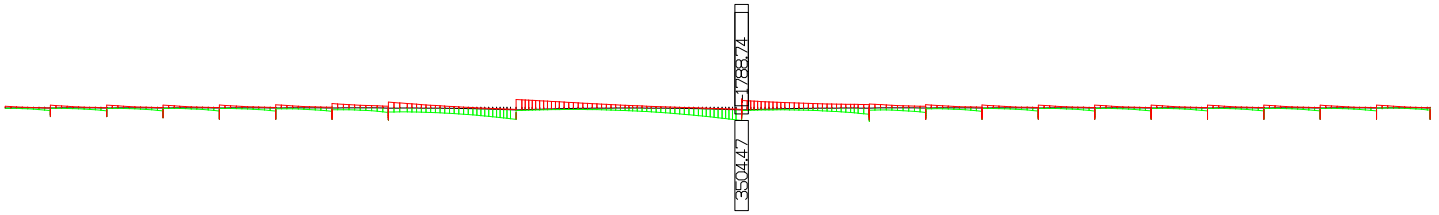
SOBRECARGAS REGULAMENTARES:

Sobrecarga CL



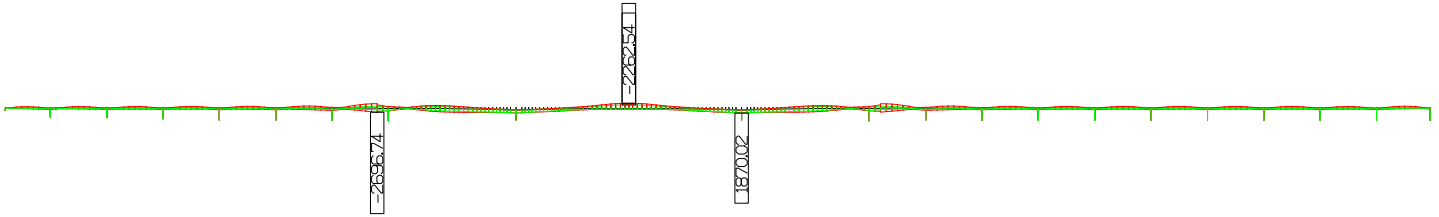
MOMENTOS FLECTORES

1 cm : 250000 kN.m



ESFORCOS TRANSVERSOS

1 cm : 25000 kN



TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

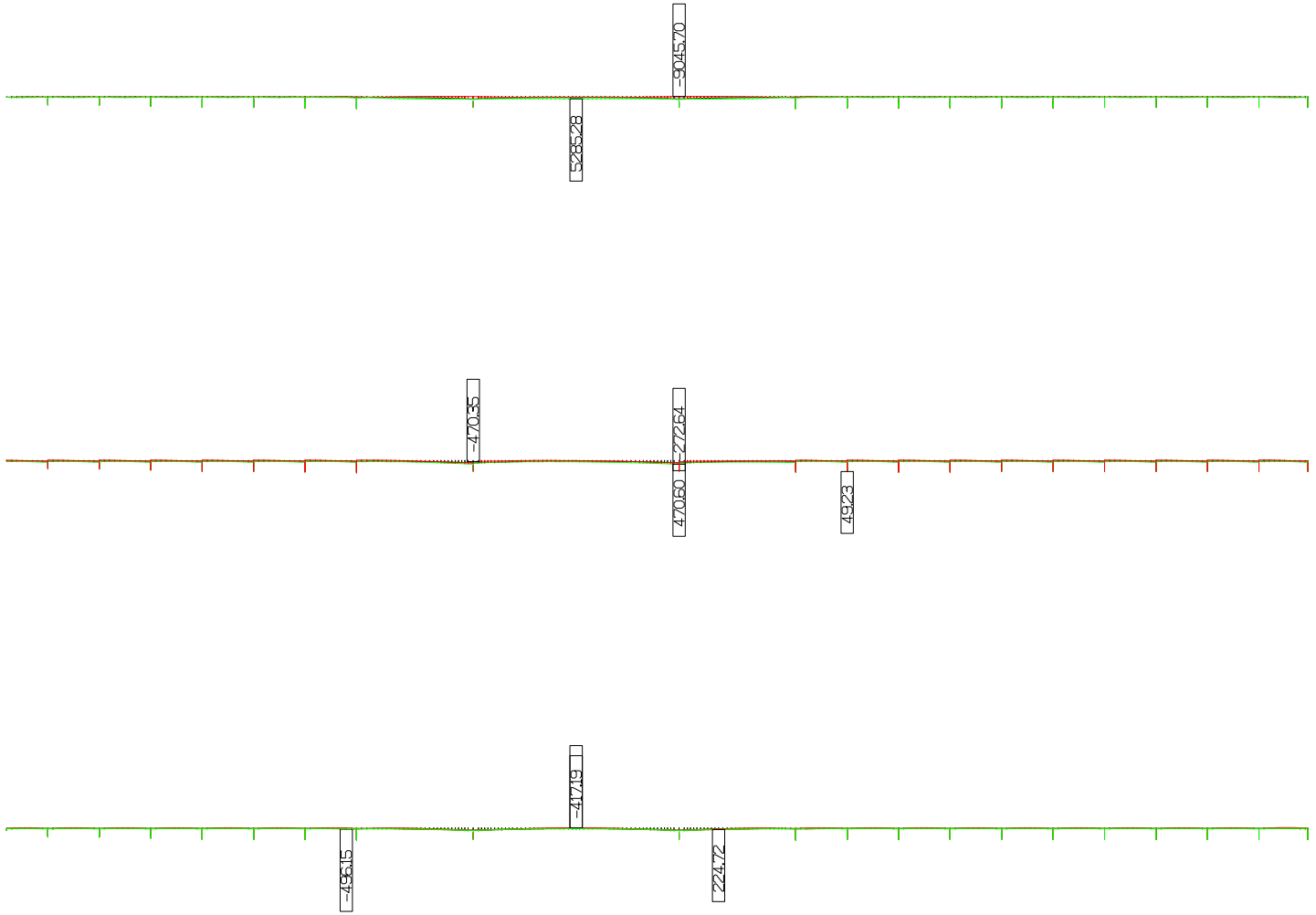
DES. I - 62

TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

SOBRECARGAS REGULAMENTARES:

Sobrecarga FLM3



MOMENTOS FLECTORES

1 cm : 250000 kN.m

ESFORCOS TRANSVERSOS

1 cm : 25000 kN

TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

DES. I - 63

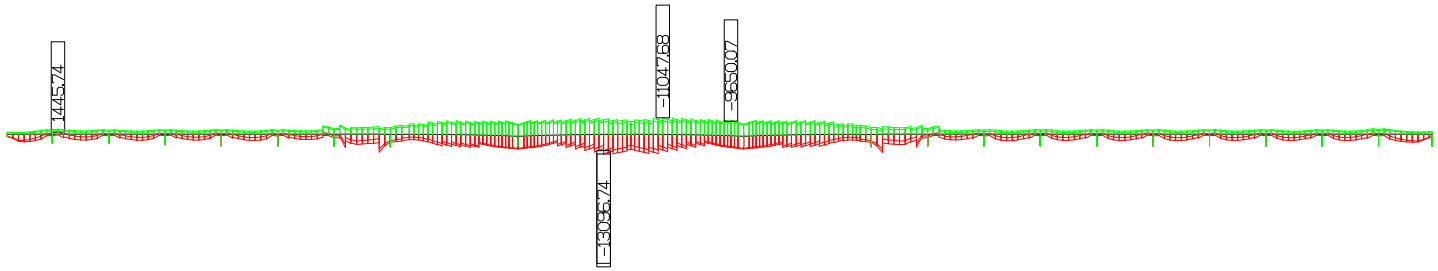
TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

ESTADOS LIMITES DE UTILIZACAO - DESCOMPRESSAO

COMBINACAO: G + 0,5 x Q1

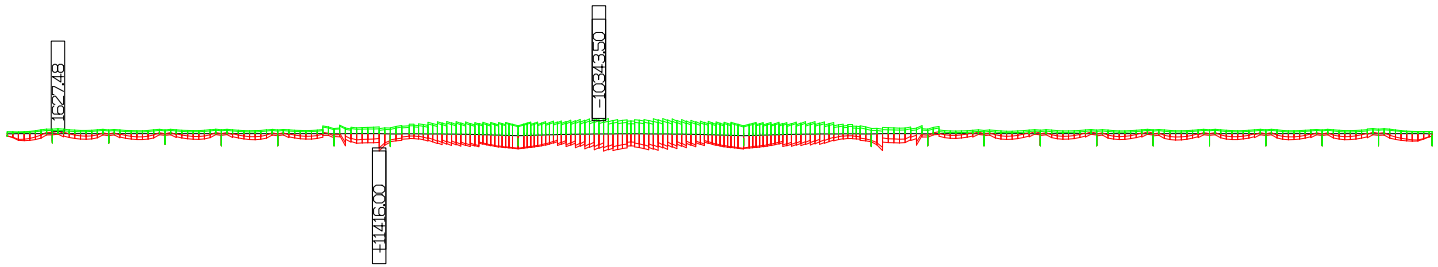
ENTRADA EM SERVICO DA OBRA



TENSOES

1 cm : 10000 kPa

AOS 8000 DIAS (TEMPO INFINITO)



TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

DES. I - 64

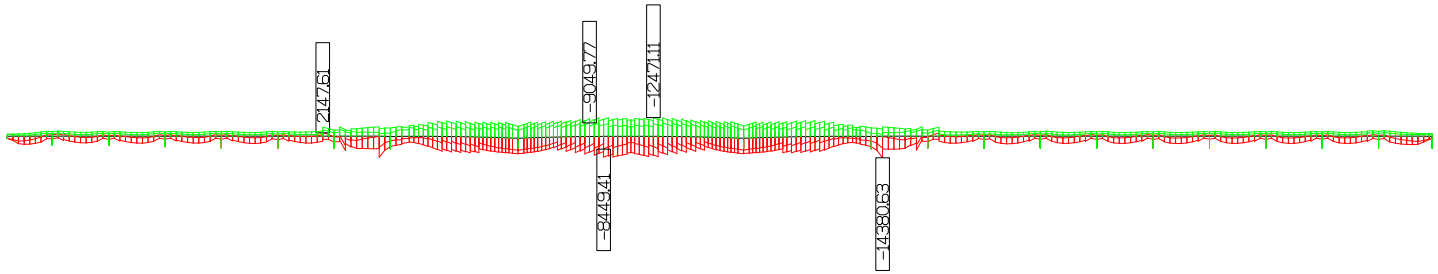
TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

ESTADOS LIMITES DE UTILIZACAO - LARGURA DE FENDAS

COMBINACAO: G + Q1 + 0,6 x VT

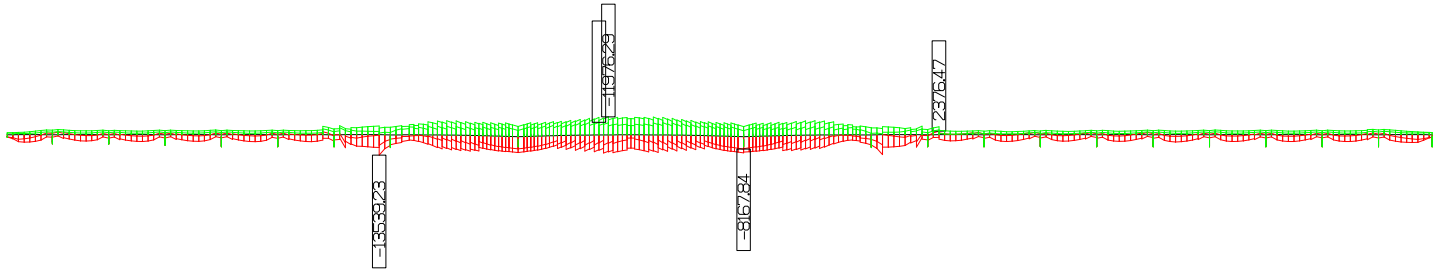
ENTRADA EM SERVICO DA OBRA



TENSOES

1 cm : 10000 kPa

AOS 8000 DIAS (TEMPO INFINITO)



TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

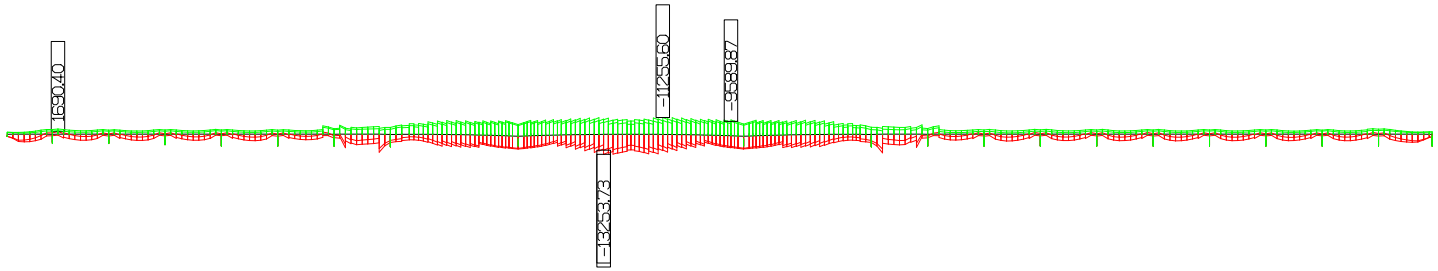
TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

ESTADOS LIMITES DE UTILIZACAO - LARGURA DE FENDAS

COMBINACAO: G + Q1 + 0,6 x VT

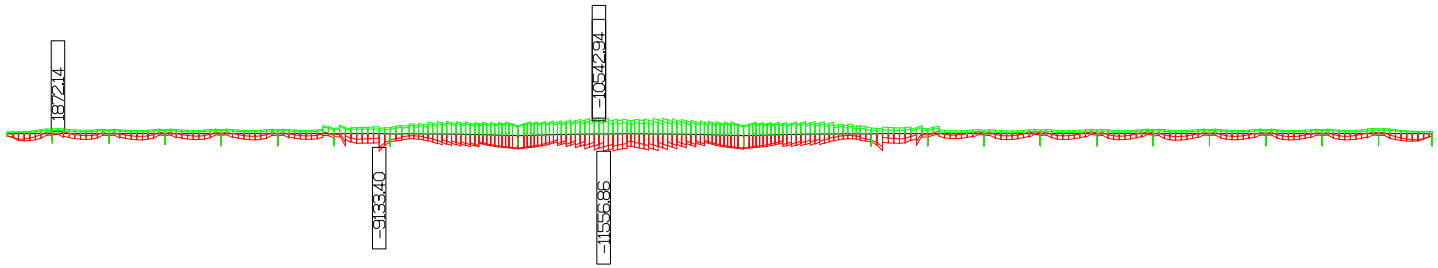
ENTRADA EM SERVICO DA OBRA



TENSOES

1 cm : 10000 kPa

AOS 8000 DIAS (TEMPO INFINITO)



TENSOES

1 cm : 10000 kPa

Escala Horizontal: 1 : 4000

DES. I - 66

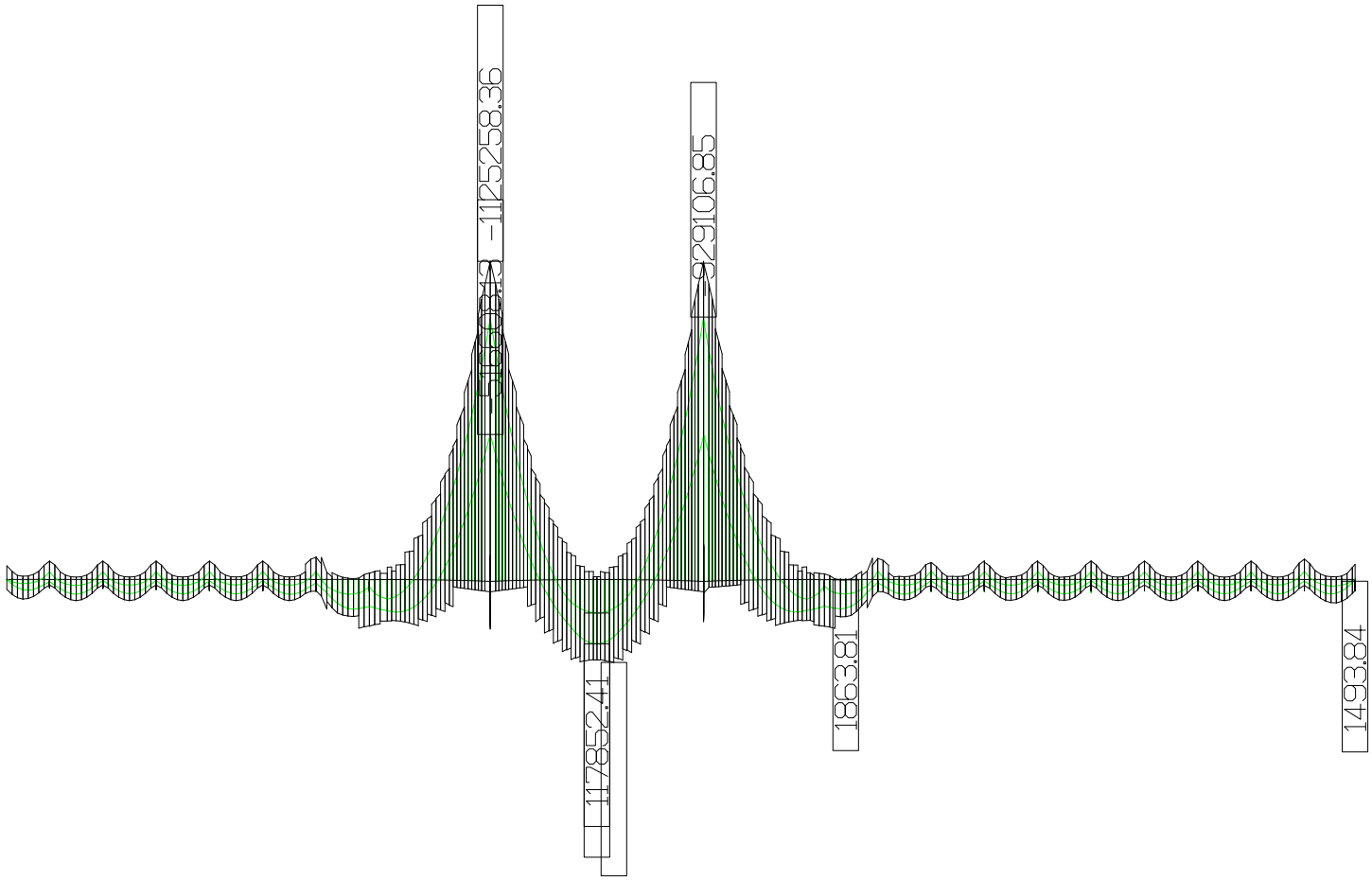
TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

ESTADO LIMITE ULTIMO - DIAGRAMA Msd/Mrd

COMBINACAO 1: (1,35 ou 1,0) x G1 + 1,0 x G2 + 1,0 x G3 + 1,35 x (GR1A ou GR2 ou

ENTRADA EM SERVICO DA OBRA



MOMENTOS FLECTORES

1 cm : 250000 kN.m

Escala Horizontal: 1 : 4000

DES. I - 67

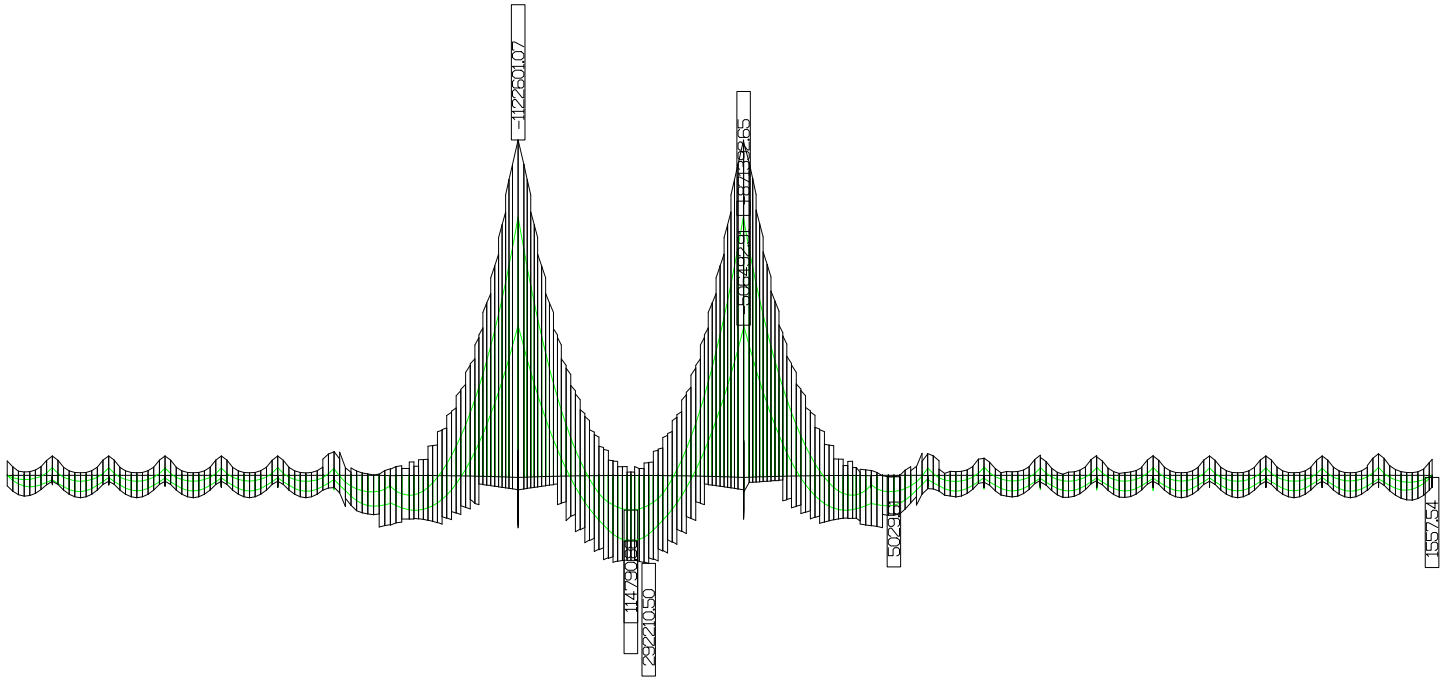
TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

ESTADO LIMITE ULTIMO - DIAGRAMA Msd/Mrd

COMBINACAO 2: (1,35 ou 1,0) x G1 + 1,0 x G2 + 1,0 x G3 + 1,5 x (TEMPERATURA) + 1

ENTRADA EM SERVICO DA OBRA



MOMENTOS FLECTORES

1 cm : 250000 kN.m

Escala Horizontal: 1 : 4000

DES. I - 68

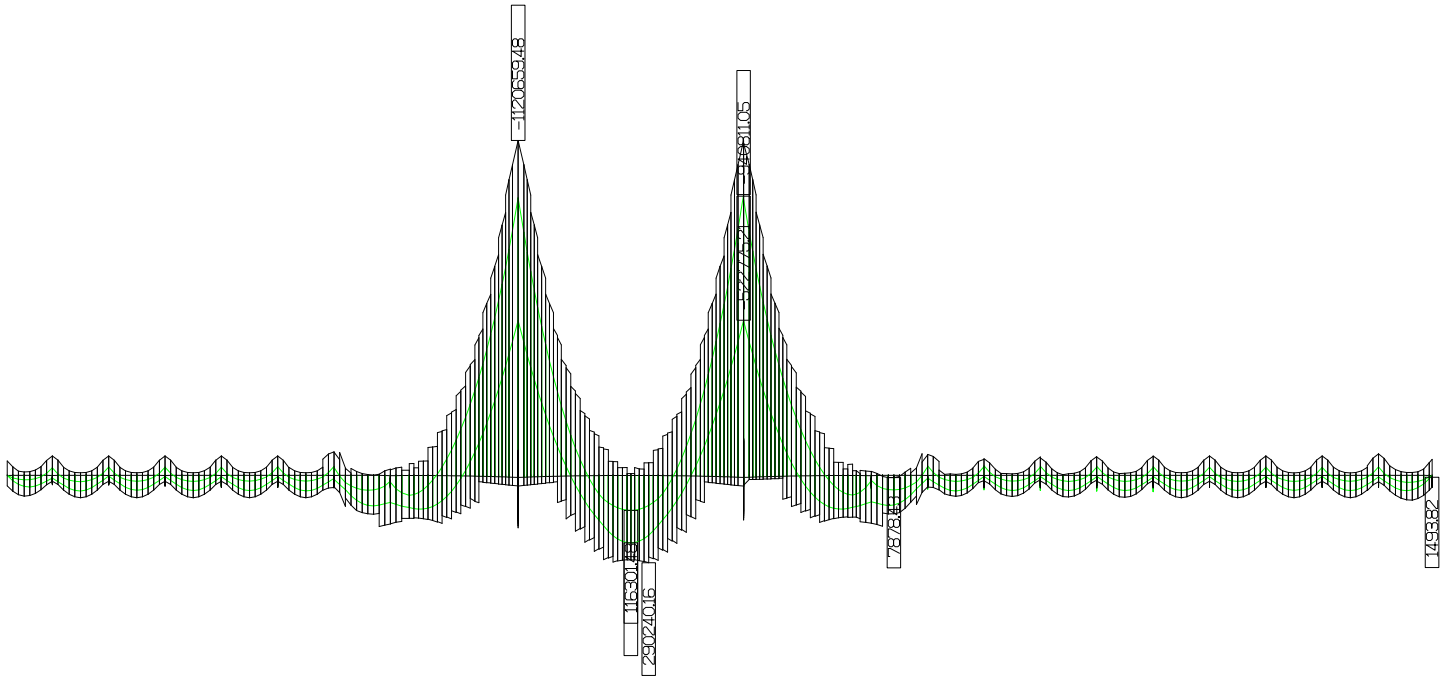
TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

ESTADO LIMITE ULTIMO - DIAGRAMA Msd/Mrd

COMBINACAO 1: (1,35 ou 1,0) x G1 + 1,0 x G2 + 1,0 x G3 + 1,35 x (GR1A ou GR2 ou

AOS 8000 DIAS (TEMPO INFINITO)



MOMENTOS FLECTORES

1 cm : 250000 kN.m

Escala Horizontal: 1 : 4000

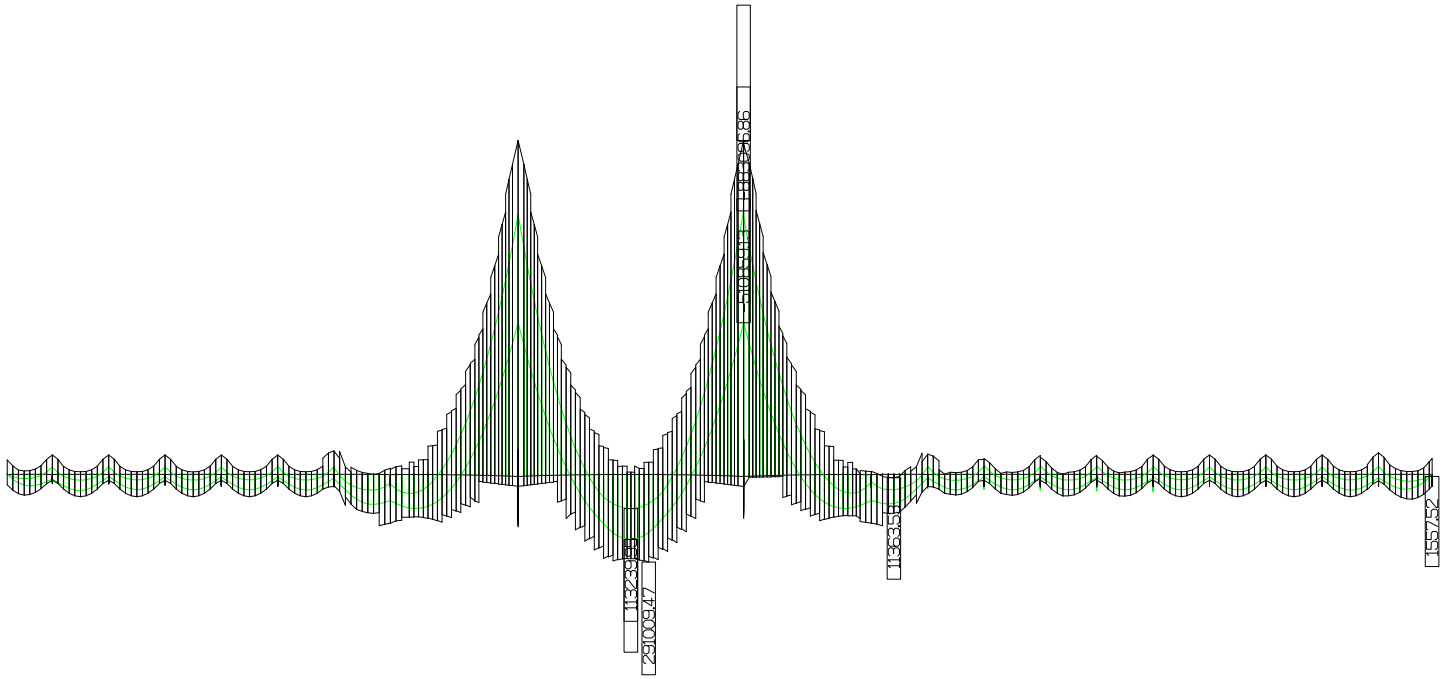
TRABALHO FINAL DE MESTRADO - ESTRUTURAS

PONTE SOBRE O RIO KWANZA

ESTADO LIMITE ULTIMO - DIAGRAMA Msd/Mrd

COMBINACAO 2: (1,35 ou 1,0) x G1 + 1,0 x G2 + 1,0 x G3 + 1,5 x (TEMPERATURA) + 1

AOS 8000 DIAS (TEMPO INFINITO)

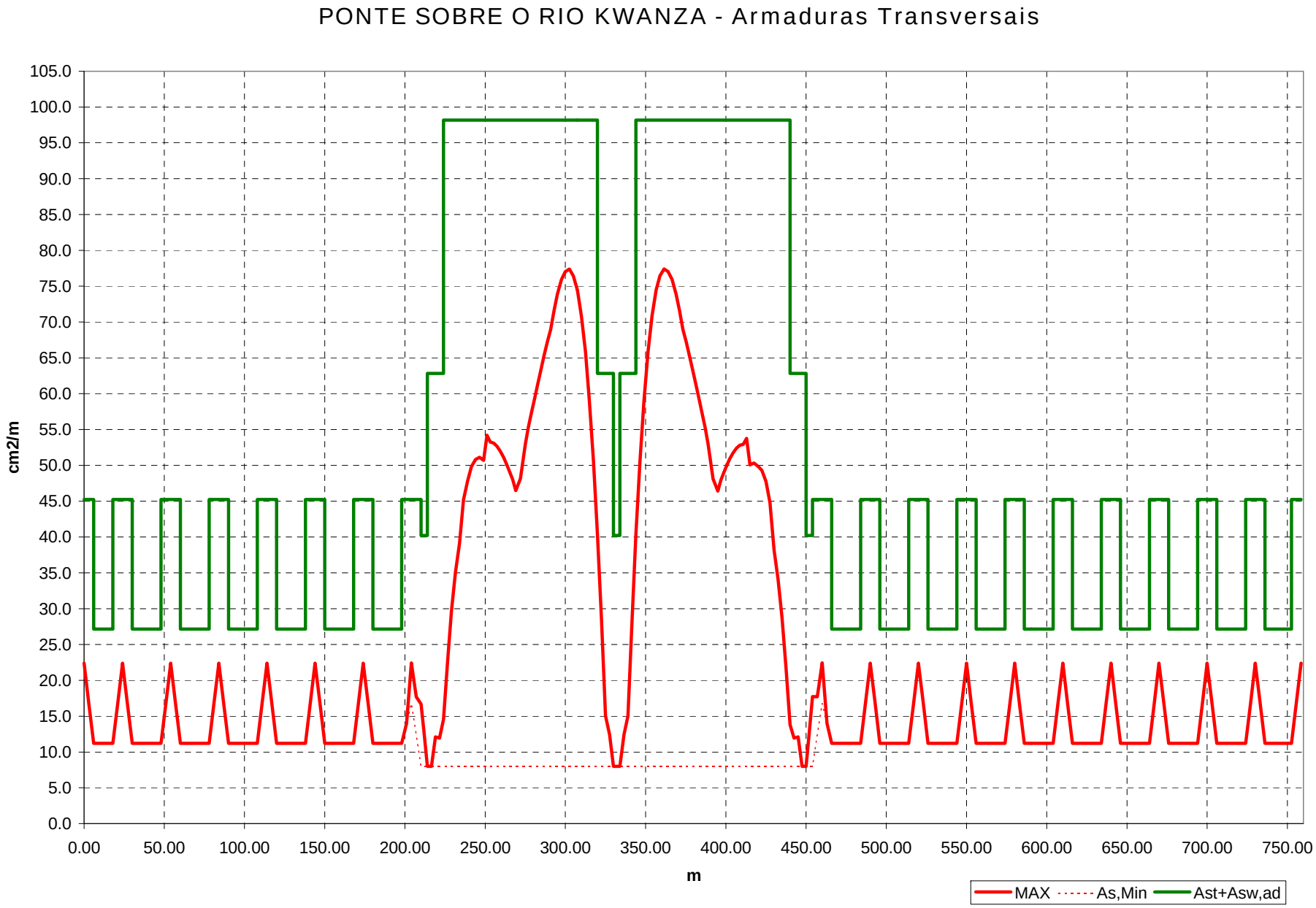


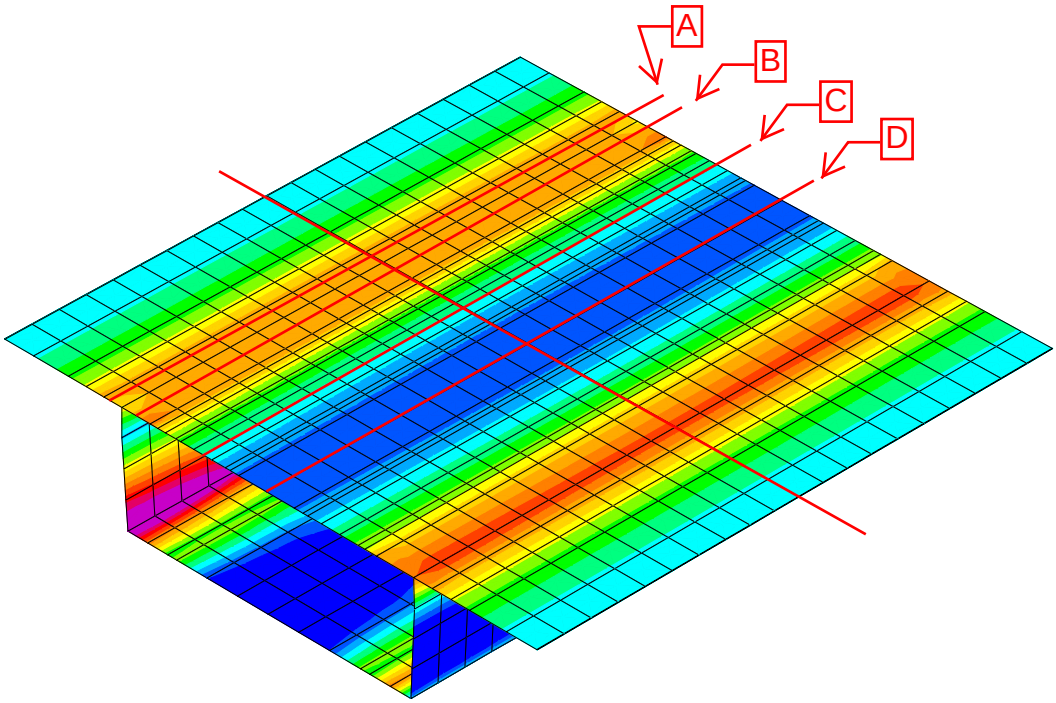
MOMENTOS FLECTORES

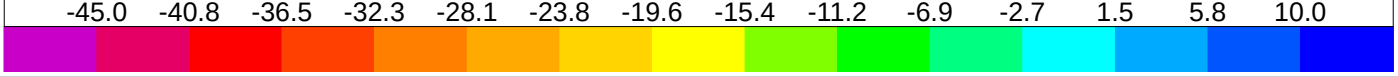
1 cm : 250000 kN.m

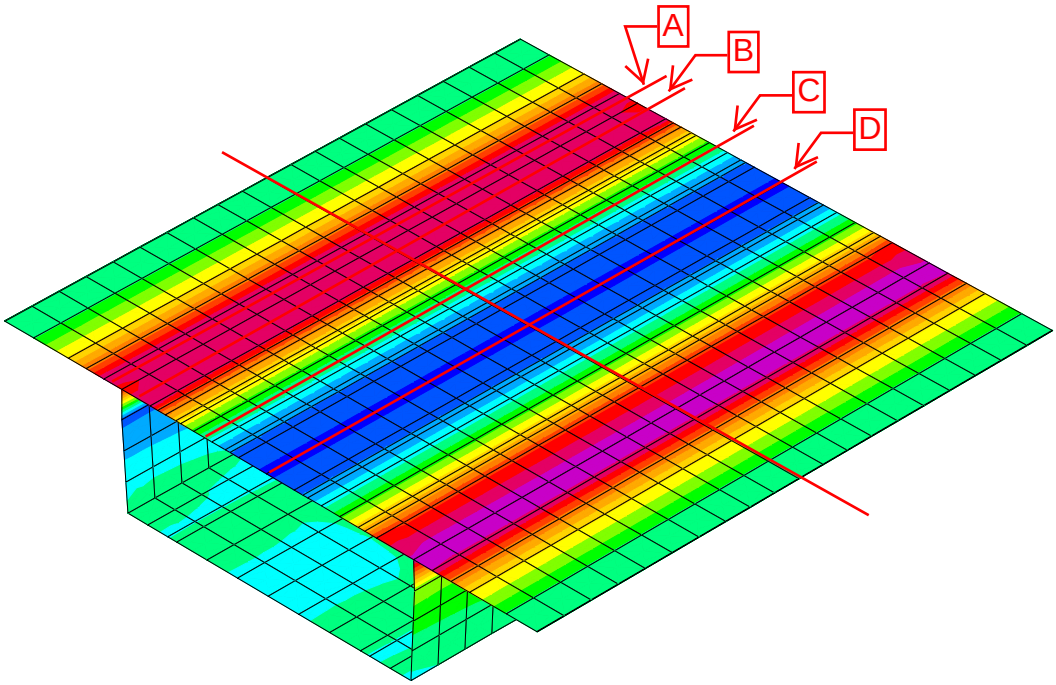
Escala Horizontal: 1 : 4000

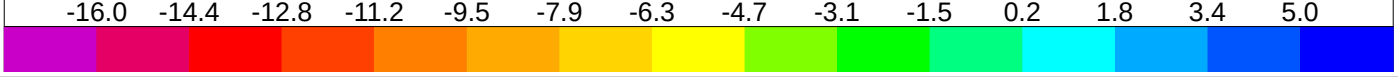
DESENHO - 1 - 70

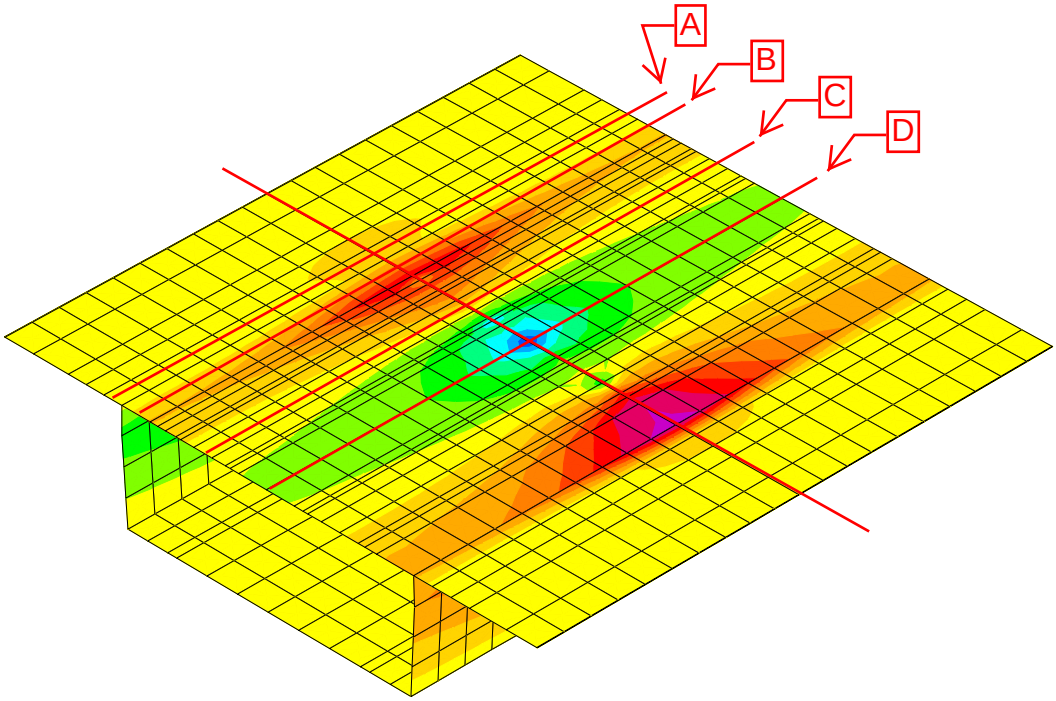

PONTE SOBRE O RIO KWANZA - Armaduras Transversais
cm2/m
105.0
100.0
95.0
90.0
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
400.00
450.00
500.00
550.00
600.00
650.00
700.00
750.00
m
MAX
As,Min
Ast+Asw,ad

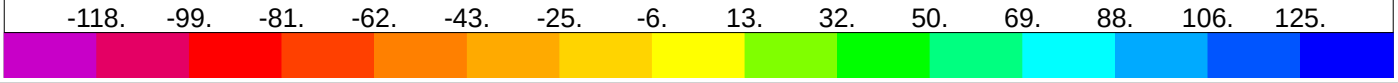

A
B
C
D

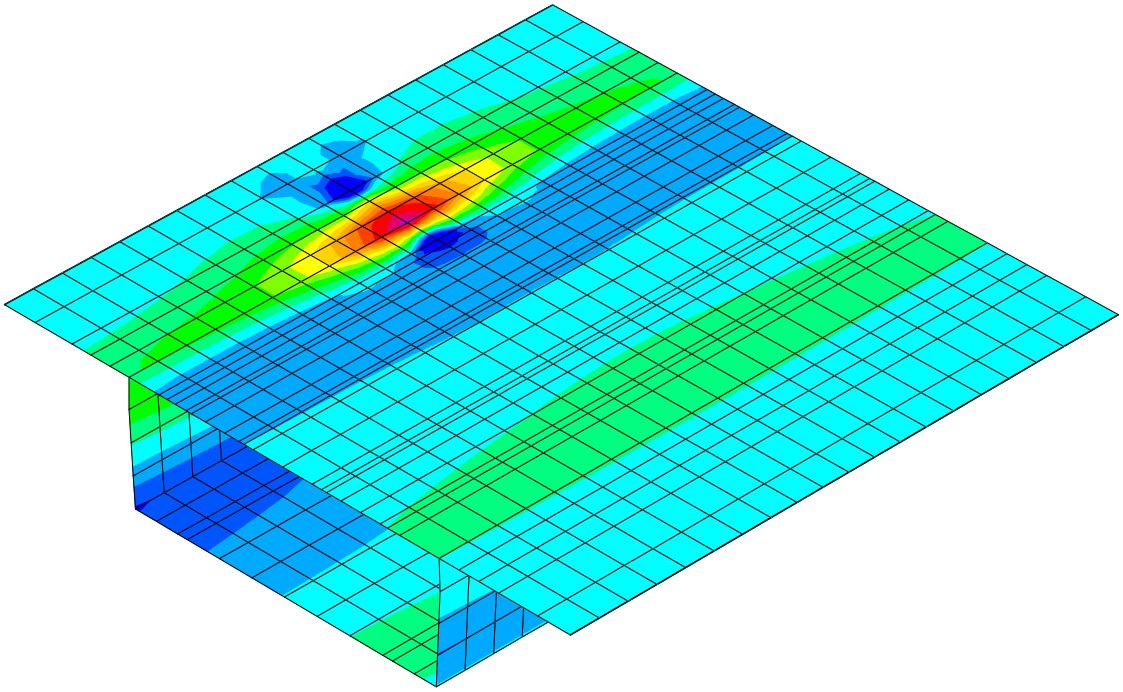

-45.0 -40.8 -36.5 -32.3 -28.1 -23.8 -19.6 -15.4 -11.2 -6.9 -2.7 1.5 5.8 10.0

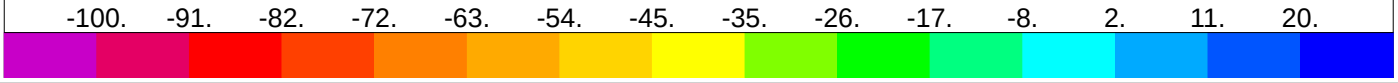

A
B
C
D

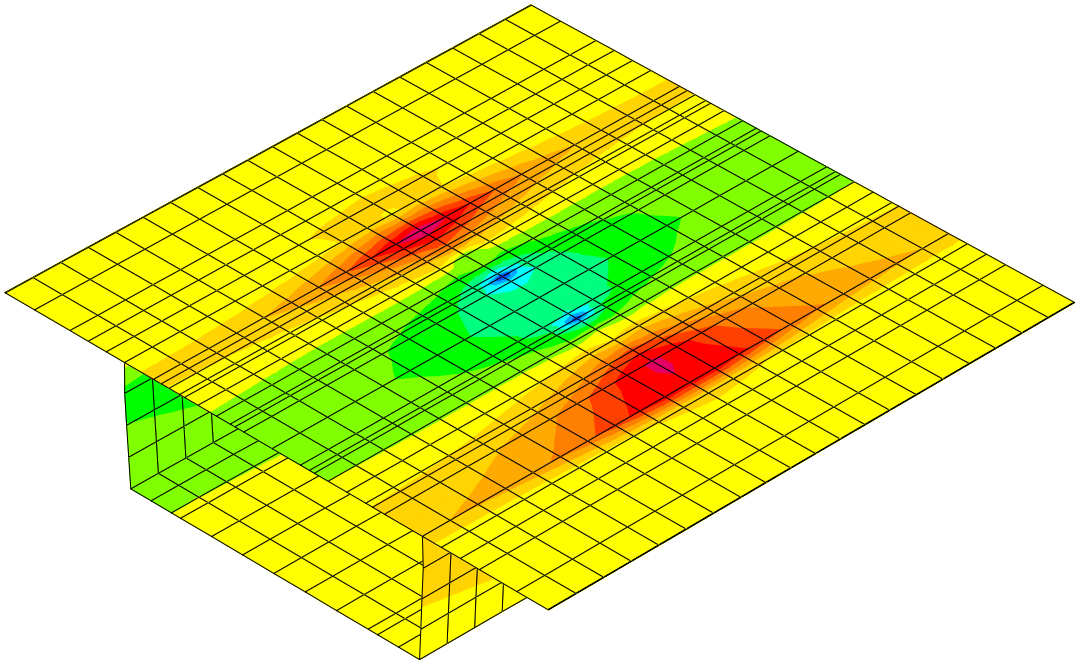

-16.0 -14.4 -12.8 -11.2 -9.5 -7.9 -6.3 -4.7 -3.1 -1.5 0.2 1.8 3.4 5.0


A
B
C
D

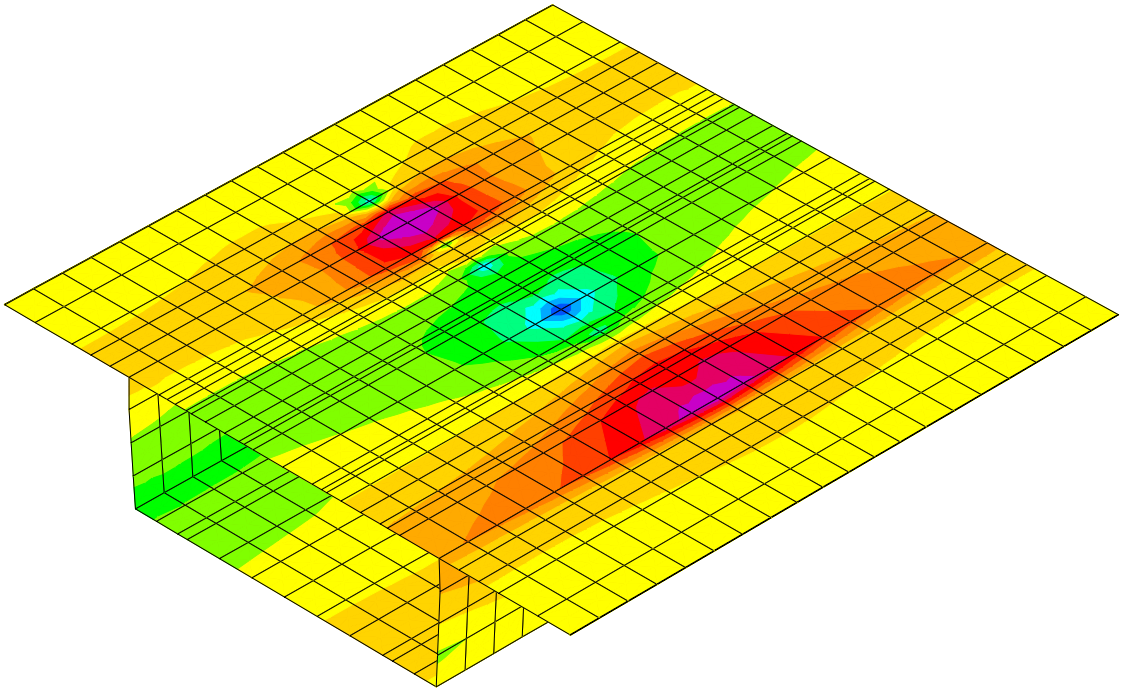

-118.
-99.
-81.
-62.
-43.
-25.
-6.
13.
32.
50.
69.
88.
106.
125.



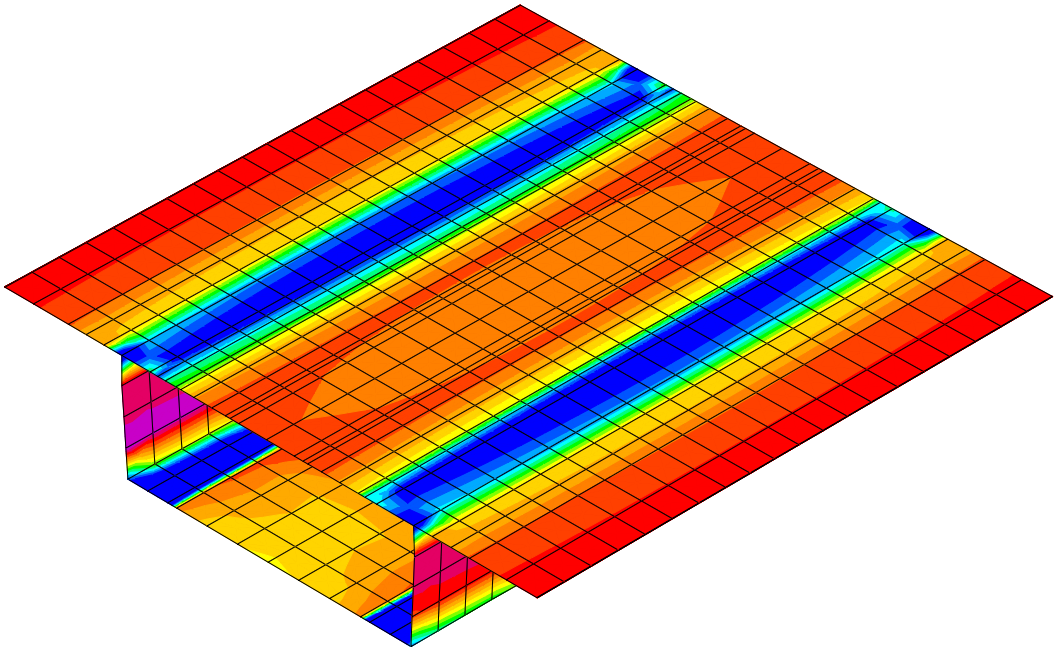

-100.
-91.
-82.
-72.
-63.
-54.
-45.
-35.
-26.
-17.
-8.
2.
11.
20.

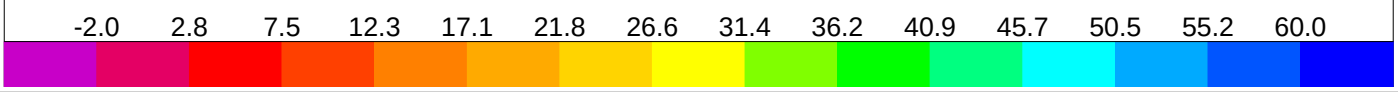


-135. -115. -96. -76. -57. -37. -17. 2. 22. 42. 61. 81. 100. 120.

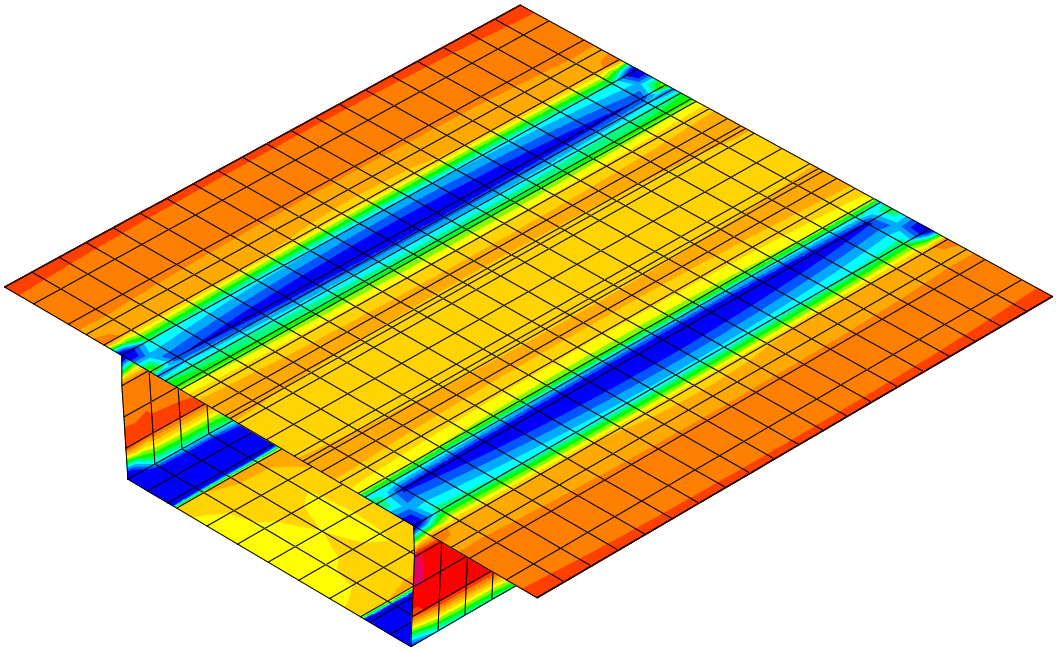


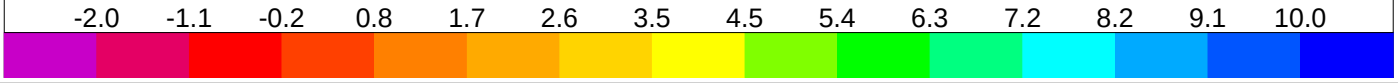
-75.0 -63.5 -51.9 -40.4 -28.8 -17.3 -5.8 5.8 17.3 28.8 40.4 51.9 63.5 75.0

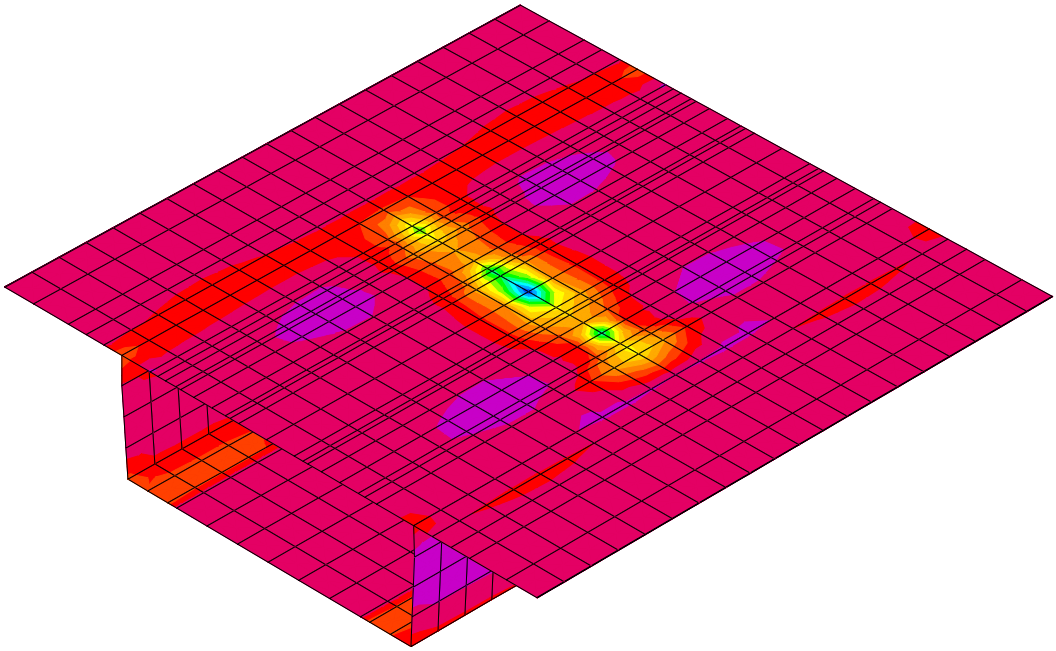




SAP2000 v15.1.0 - File:2012-07-26Grupos-apoios pilares - Resultant M11 Diagram (DEAD) - KN, m, C Units

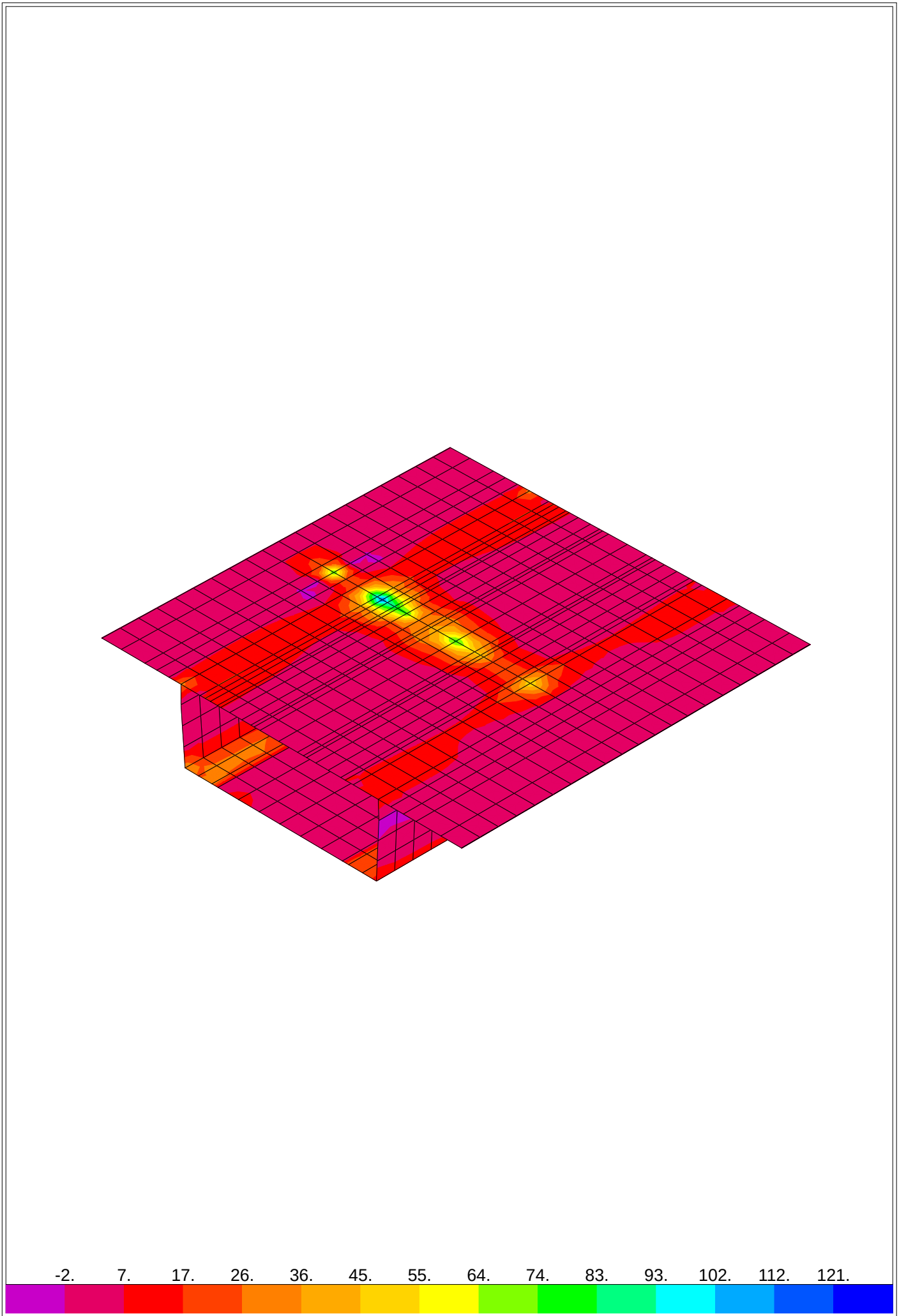



-2.0
-1.1
-0.2
0.8
1.7
2.6
3.5
4.5
5.4
6.3
7.2
8.2
9.1
10.0

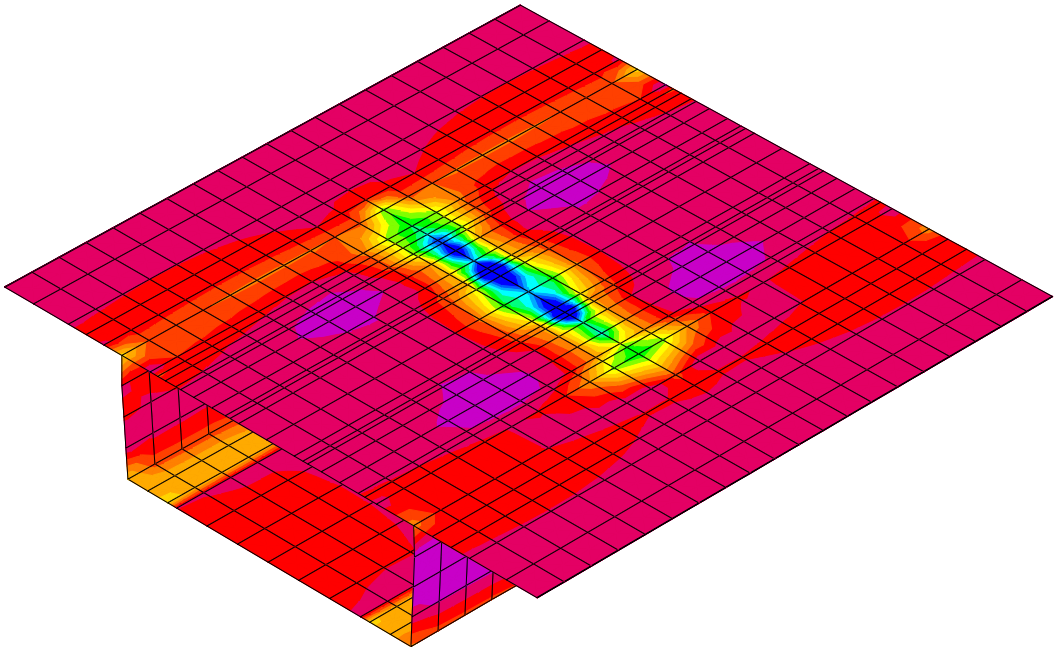


-2. 7. 16. 26. 35. 44. 53. 63. 72. 81. 90. 100. 109. 118.

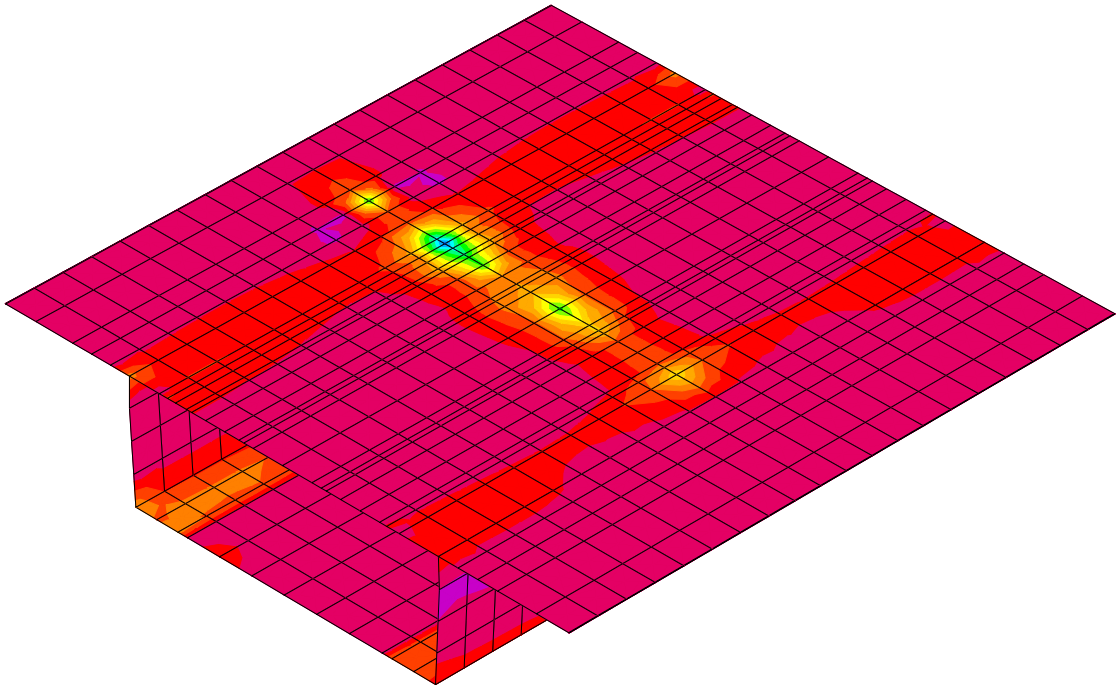
SAP2000 v15.1.0 - File:2012-07-26Grupos-apoios pilares - Resultant M11 Diagram (Gr1a_Laje_MV) - KN, m, C Units



SAP2000 v15.1.0 - File:2012-07-26Grupos-apoios pilares - Resultant M11 Diagram (Gr1a_Lanc_MV) - KN, m, C Units



-1.0 4.5 9.9 15.4 20.8 26.3 31.8 37.2 42.7 48.2 53.6 59.1 64.5 70.0



-2. 7. 17. 26. 36. 45. 55. 64. 74. 83. 93. 102. 112. 121.

SAP2000 v15.1.0 - File:2012-07-26Grupos-apoios pilares - Resultant M11 Diagram (Gr1a_Lanc_MV) - KN, m, C Units