FAPESP

MEMORIAL DE CÁLCULO

PROJETO EXECUTIVO

ESTRUTURA

FEVEREIRO / 2022

ARQUIVO: FAPESP-EST-MEM-101-R00

ENGENHEIRO CIVIL: DANIEL MADEIRA MENDONÇA

CREA: 5069433717/SP

ÍNDICE

A - GENERALIDADES 4

A.1 INTRODUÇÃO 4
A.2 OBJETIVO 4
A.3 INSTITUIÇÕES E NORMAS 4
A.3.1 INSTITUIÇÕES 4
A.3.2 NORMAS 4

B – IDENTIFICAÇÃO DAS COBERTURAS 6

B.1 IDENTIFIcAÇÃO DAS COBERTURAS EXISTENTES E NOVAS COBERTURAS 6
B.2 CARGAS CONSIDERADAS 6

C – ANÁLISE DAS COBERTURAS EXISTENTES – 7

COBERTURA 01 7

C.1 – DESLOCAMENTOS DOS ELEMENTOS ESTRUTURAIS 8
C.2 – TAXA DE TRABALHO 9
C.3 – REFORÇO ESTRUTURAL 10

D – ANÁLISE DAS COBERTURAS EXISTENTES – 12

COBERTURA 02 12

D.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS 13
D.2 – TAXA DE TRABALHO 14

E – ANÁLISE DAS COBERTURAS EXISTENTES – 16

COBERTURA 03 16

E.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS 17
E.2 – TAXA DE TRABALHO 18

F – ANÁLISE DAS COBERTURAS EXISTENTES – 20

COBERTURA 04 20

F.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS 21
F.2 – TAXA DE TRABALHO 22

G – NOVAS COBERTURAS 24

G.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS 24
G.2 – TAXA DE TRABALHO 25

H – ANEXOS 26

H.1 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 01 26
H.2 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 02 36
H.3 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 03 37
H.4 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 04 38
H.5 – DIMENSIONAMENTO DAS BARRAS DAS NOVAS COBERTURAS 39

A - GENERALIDADES

A.1 INTRODUÇÃO

O presente memorial refere-se a análise técnica das coberturas existentes e ao cálculo de uma nova cobertura em um imóvel pertencente à Fundação de Amparo à Pesquisa do Estado de São Paulo, localizada a Rua Pio XI, 1500 – Alto da Lapa – São Paulo – SP.

A.2 OBJETIVO

Este documento tem por objetivo complementar as informações constantes dos desenhos de projeto, apresentando os cálculos realizados para a elaboração do projeto executivo estrutural da cobertura bem como a análise das coberturas existentes.

A.3 INSTITUIÇÕES E NORMAS

A.3.1 INSTITUIÇÕES

Para a realização dos cálculos, foram utilizadas as normas vigentes da ABNT – Associação Brasileira de Normas Técnicas.

A.3.2 NORMAS

Foram utilizadas as seguintes normas das instituições citadas no item A.3.1 deste documento, conforme relacionadas abaixo:

- NBR 5008 – Chapas grossas de aço de carbono para uso estrutural
- NBR 5628 – Componentes construtivos estruturais
- NBR 5920 – Chapa fina a frio de aço de baixa liga, alta resistência mecânica e resistente à corrosão atmosférica, para usos estruturais
- NBR 5921 – Bobinas e chapas finas laminadas a quente, de aços de baixa liga e alta resistência, resistentes à corrosão atmosférica, para uso estrutural –

Requisitos e ensaios

- NBR 6323 – Produtos de aço ou ferro fundido revestido de zinco por imersão a quente
- NBR 6355/5884 – Perfis estruturais
- NBR 6649 – Bobinas e chapas finas a frio de aço carbono para uso estrutural – Especificação
- NBR 6657 – Perfil de estruturas soldadas de aço
- Aços para perfis laminados para uso estrutural
- NBR 7398 – Produto de aço ou ferro fundido revestido de zinco por imersão a quente – Verificação da aderência do revestimento
- NBR 7399 – Produto de aço ou ferro fundido revestido de zinco por imersão a quente – Verificação da espessura do revestimento por processo não-destrutivo
- NBR 7400 – Produto de aço ou ferro fundido revestido de zinco por imersão a quente – Verificação da uniformidade do revestimento
- NBR 7808 – Símbolos gráficos para projetos de estruturas – Simbologia
- NBR-8800 – Projeto de estruturas metálica – procedimento
- NBR 8681 – Ações e segurança nas estruturas

- Devendo ser completadas pelas normas, padrões e recomendações das seguintes entidades e associações técnicas, nas formas mais recentes:
- A.I.S.C. – American Institute of Steel Construction
- A.W.S. – American Welding Society
- A.N.S.I. – American National Stander Institute
- S.S.P.C. – Steel Structures Paiting Council Munsell Color Notation
- A.S.T.M. – American Society for Testing Materials
- ISO 8501-1 – Preparation of steel substrates before application of paints and related products – Visual assessment of surface cleanliness – Part 1

B – IDENTIFICAÇÃO DAS COBERTURAS

B.1 IDENTIFICAÇÃO DAS COBERTURAS EXISTENTES E NOVAS COBERTURAS

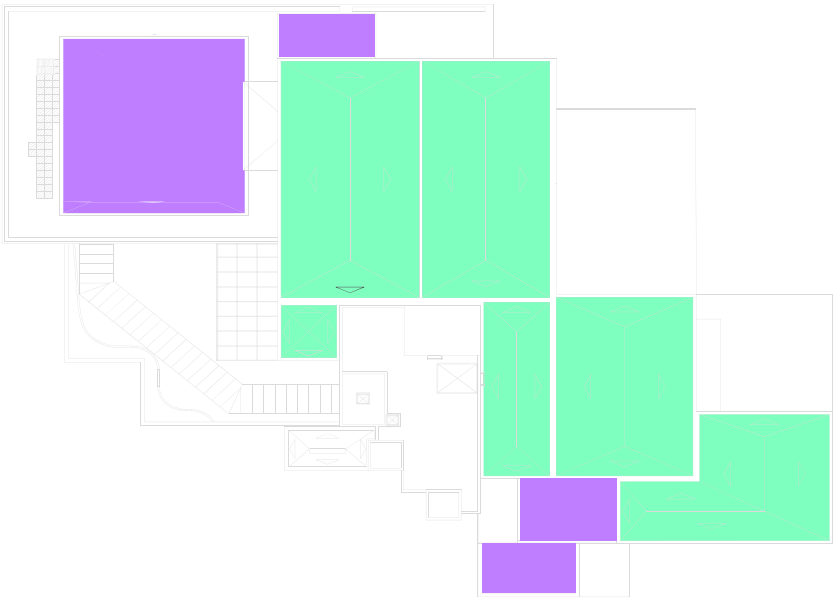


Figura 1 - Identificação das coberturas - Em roxo são as coberturas existentes e em verde as novas coberturas.

B.2 CARGAS CONSIDERADAS

- Coberturas existentes:
  - Peso próprio das peças conforme geometria;
  - Cargas permanentes: 35 kgf/m²;
  - Placa solar (onde se aplica): 20 kgf/m²;
  - Linha de vida (onde se aplica): 2200 kgf aplicadas de forma pontual;
  - Carga acidental: 25 kgf/m²;
  - Vento conforme norma.

- Novas coberturas:
    - Peso próprio das peças conforme geometria;
    - Cargas permanentes: 25 kgf/m²;
    - Placa solar (onde se aplica): 20 kgf/m²;
    - Linha de vida (onde se aplica): 2200 kgf aplicadas de forma pontual;
    - Carga acidental: 25 kgf/m²;
    - Vento conforme norma.

C – ANÁLISE DAS COBERTURAS EXISTENTES –

COBERTURA 01

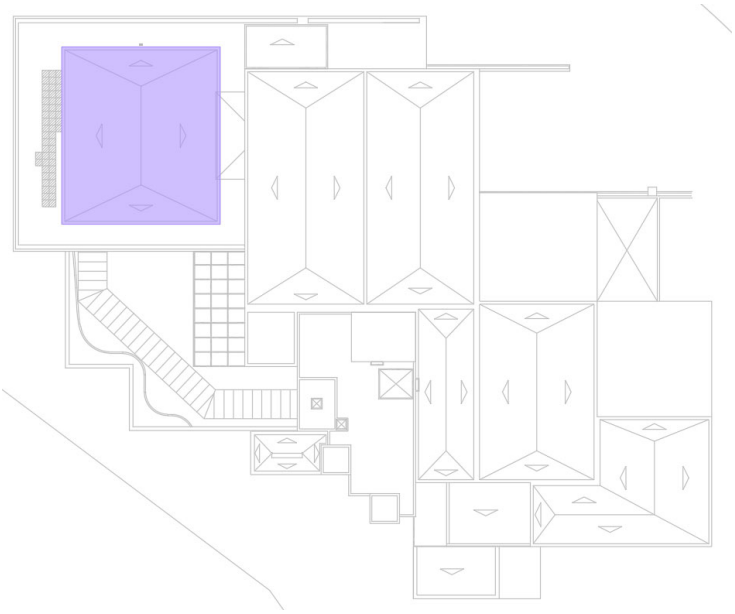


Figura 2 - Identificação da posição da cobertura 01

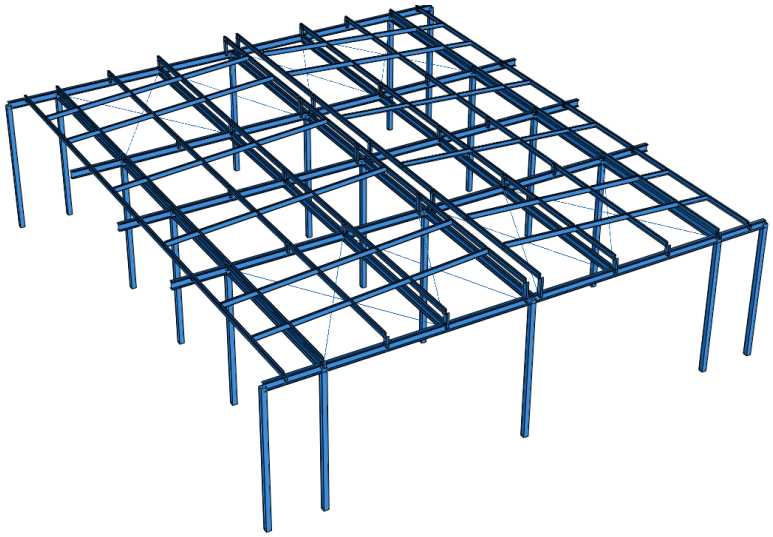


Figura 3 -Modelo de cálculo reenderizado da cobertura 01

C.1 – DESLOCAMENTOS DOS ELEMENTOS ESTRUTURAIS

Neste item serão apresentados os deslocamentos máximos apresentados pela estrutura.

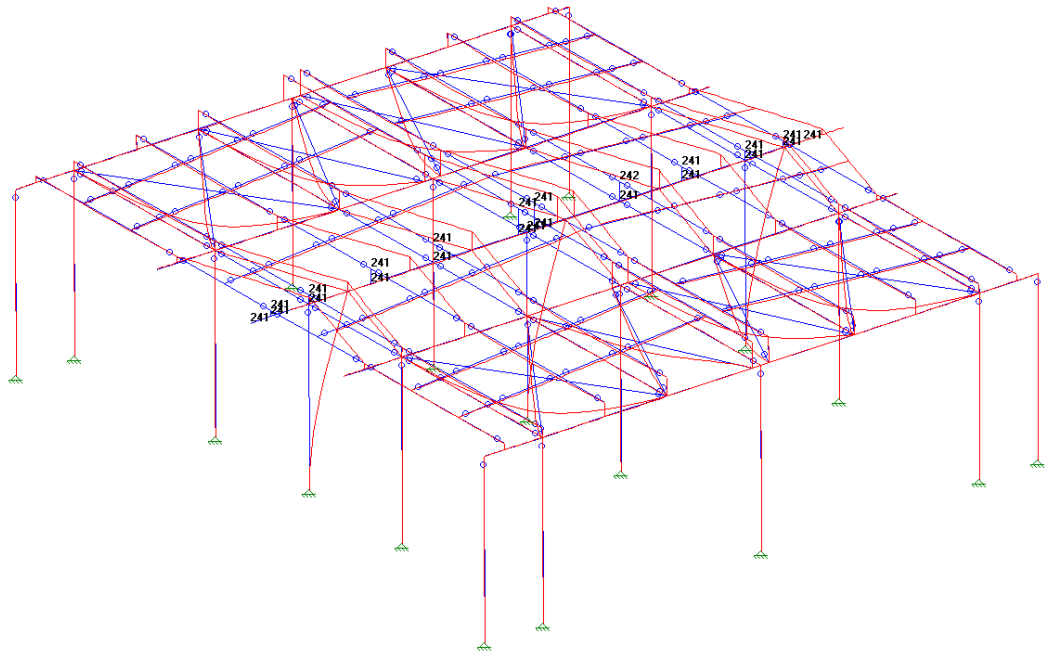


*Figura 4 - Deformação da estrutura (valores*10¹)*

Como é possível se observar na figura acima a maior deformação ocorreu na “cabeça” dos pilares, onde a demormação observada foi de 2,41 cm, acima da deformação limite de 0,75 cm (L/400).

C.2 – TAXA DE TRABALHO

Neste item será apresentado o percentual de utilização das peças em função das solicitações as quais as mesmas serão submetidas. Na Figura abaixo será exibido o máximo resultado obtido em função das solicitações de momento, força cortante, força axial, deformação e esbelte.

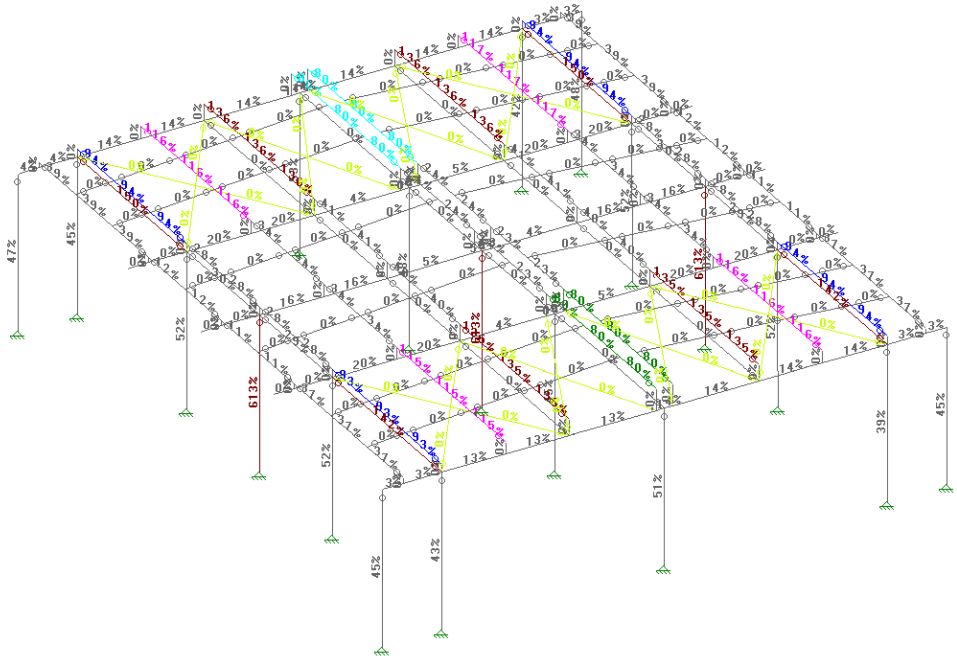


Figura 5 - Taxa de trabalho das peças

Como é possível se observar na Figura acima, algumas peças apresentam taxa de trabalho superior a 100%, indicando que as mesmas estão sujeitas a esforços superiores aos quais conseguem suportar, esse valor excedente tem como principal motivo o deslocamento acima do permitido. Isso ocorre, principalmente, pelo fato da estrutura não ter sido inicialmente projetada para servir de suporte a linha de vida, com a inclusão dela as peças passam a ser mais solicitadas, fazendo com que devam ser reforçadas para serem capazes de resistir a essas novas solicitações.

C.3 – REFORÇO ESTRUTURAL

Uma possível solução viável para a implantação de linha de vida na cobertura 01 é a execução de reforço estrutural. Conforme analizado nos cálculos supracitados, existem pilares na região central e terças que podem exceder sua capacidade máxima de trabalho, portanto foram previstos perfis metálicos (Tubos 150x100#4,75 nos pilares e

U# 100x40#4,25 nas novas terças) a serem acrescentados na estrutura de maneira a aumentar a rigidez e resistência dos pontos onde se observa maiores esforços solicitantes, conforme imagens do projeto de reforço a seguir:

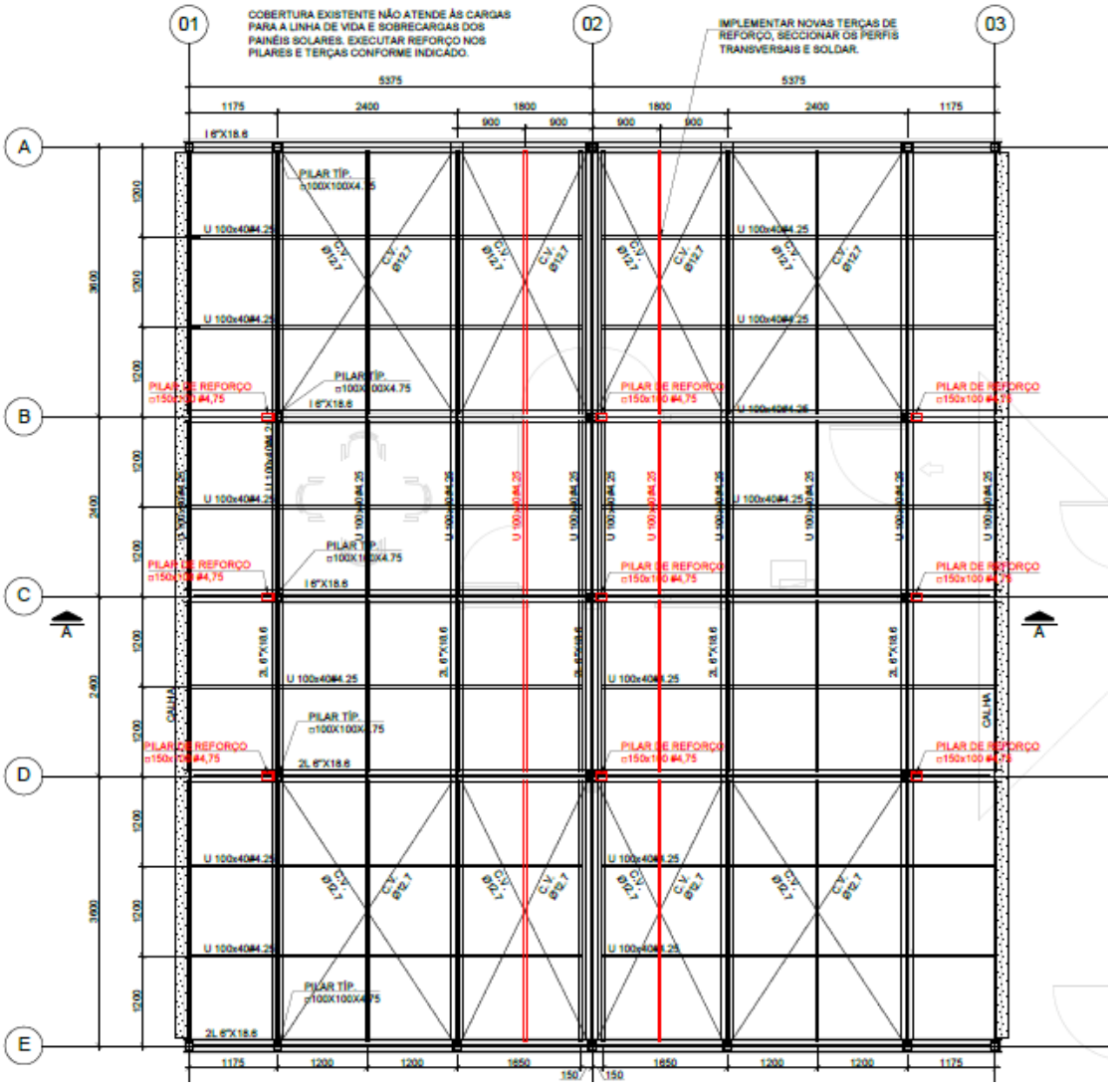


Figura 6 - PLANTA DO ANEXO 01 - REFORÇO NA COBERTURA EXISTENTE

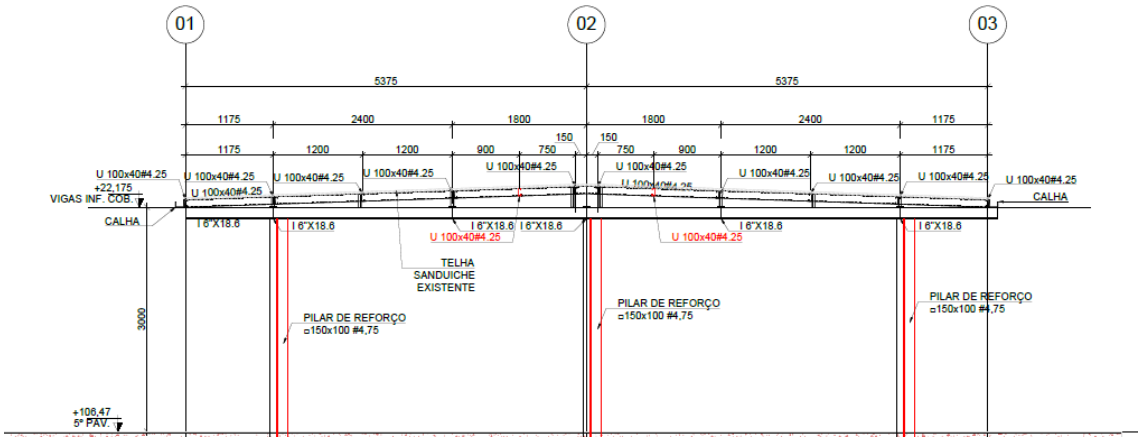


Figura 7 – ANEXO 01 - CORTE DA COBERTURA EXISTENTE

D – ANÁLISE DAS COBERTURAS EXISTENTES –

COBERTURA 02

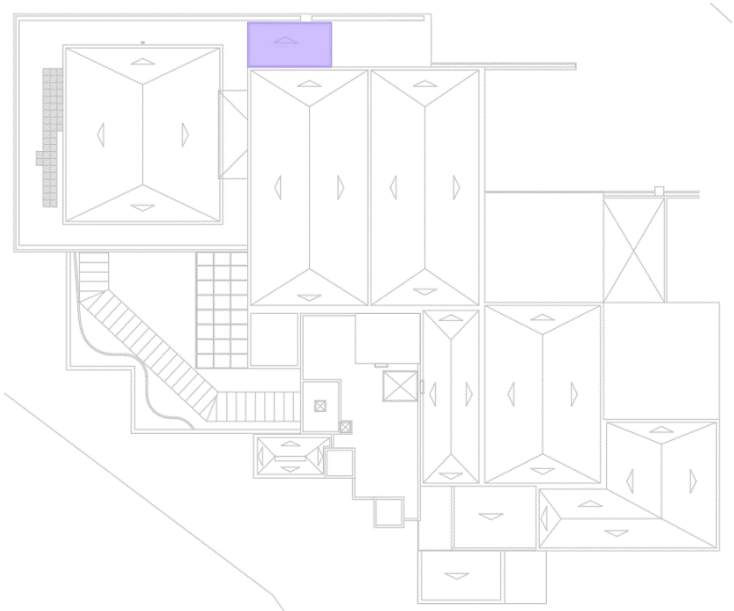


Figura 8 - Identificação da posição da cobertura 02

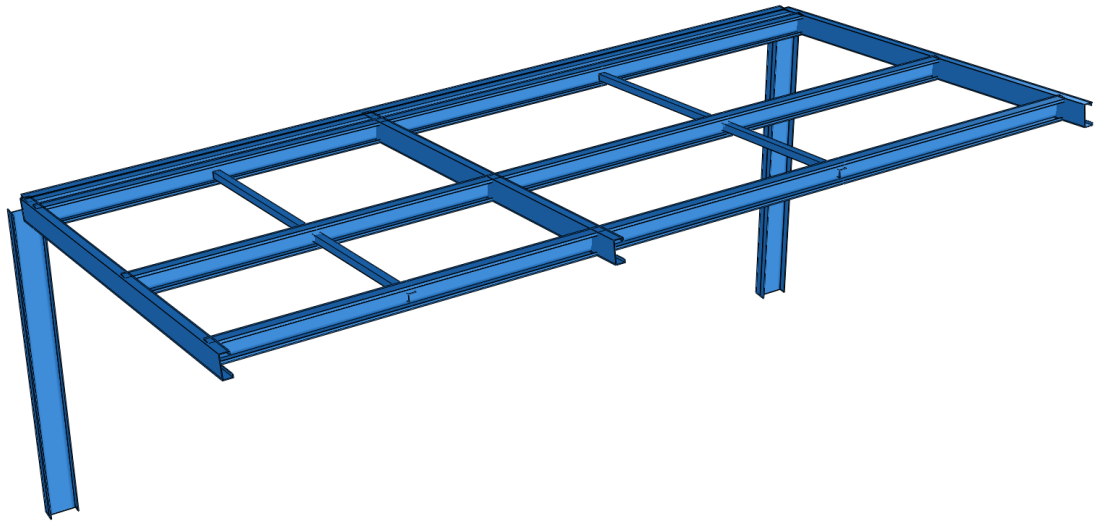


Figura 9 - Modelo de cálculo reenderizado da cobertura 02

D.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS

Neste item serão apresentados os deslocamentos máximos apresentados pela estrutura.

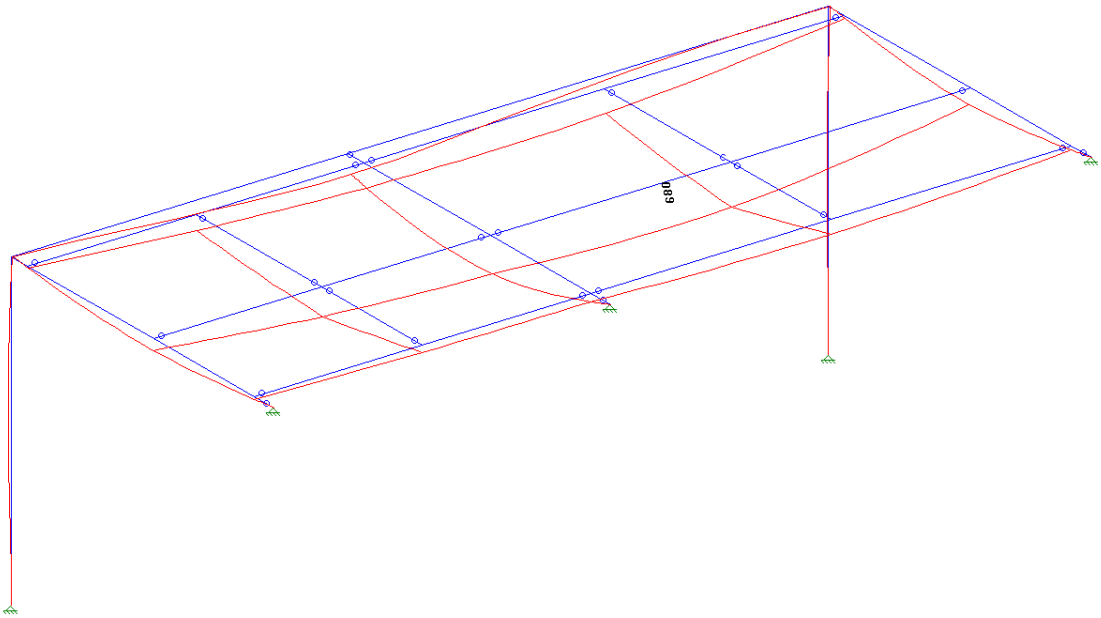


*Figura 10 - Deformação da estrutura (valores *10³)*

Como é possível se observar na figura acima a maior deformação ocorreu em uma das travessas de travamento, onde a demormação observada foi de 0,68 cm, abaixo da deformação limite de 0,89 cm (L/180).

D.2 – TAXA DE TRABALHO

Neste item será apresentado o percentual de utilização das peças em função das solicitações as quais as mesmas serão submetidas. Na Figura abaixo será exibido o máximo resultado obtido em função das solicitações de momento, força cortante, força axial, deformação e esbeltez.

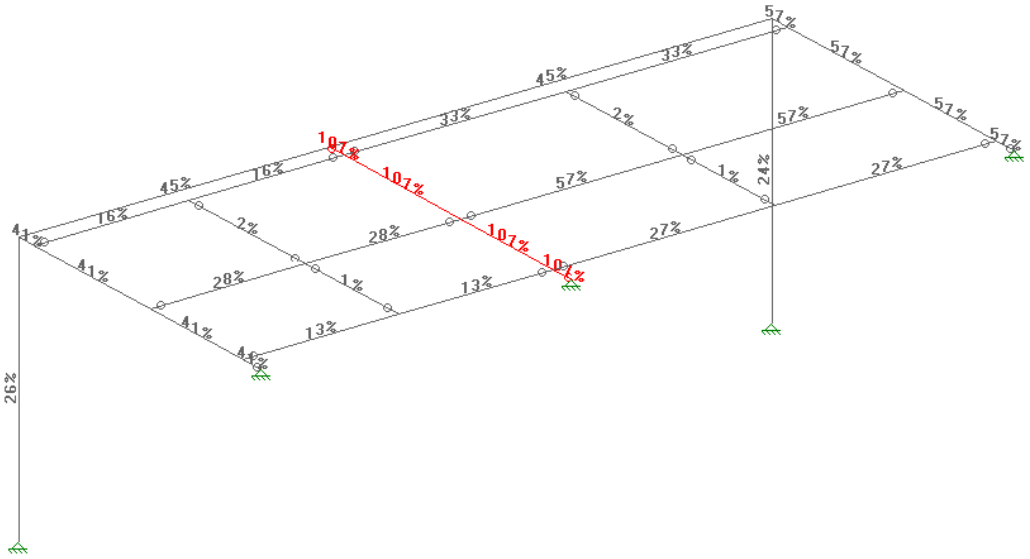


Figura 11 - Taxa de trabalho das peças

Como é possível se observar na Figura acima, um elemento apresentam taxa de trabalho superior a 100%, indicando que o mesmo está sujeito a esforços superiores aos quais consegue suportar, esse valor excedente tem como principal motivo os esforços de momento. Isso ocorre, principalmente, pelo fato da estrutura não ter sido inicialmente projetada para servir de suporte a linha de vida, com a inclusão dela a peça passa a ser mais solicitada, fazendo com que deva ser reforçada para ser capaz de resistir a essas novas solicitações.

E – ANÁLISE DAS COBERTURAS EXISTENTES –

COBERTURA 03

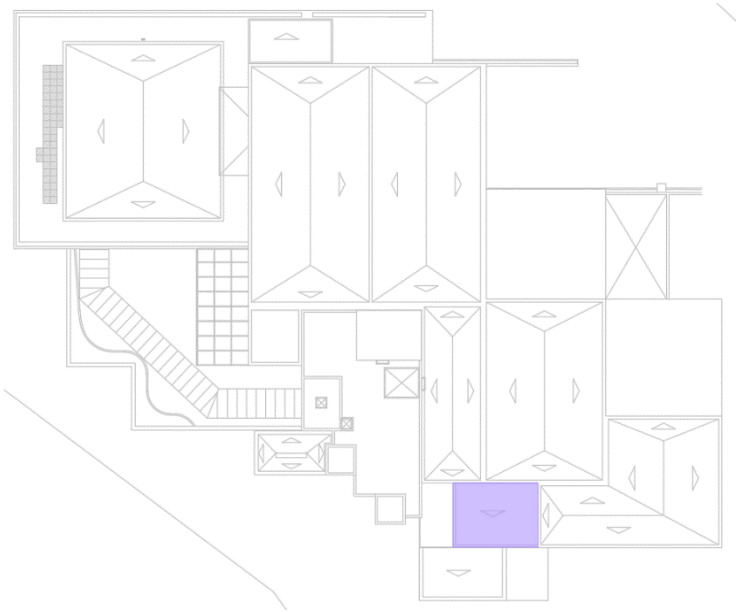


Figura 12 - Identificação da cobertura 03

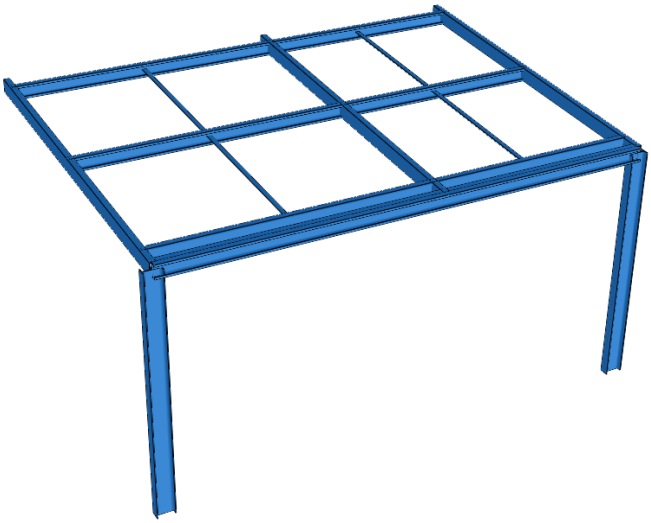


Figura 13 - Modelo de cálculo reenderizado da cobertura 03

E.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS

Neste item serão apresentados os deslocamentos máximos apresentados pela estrutura.

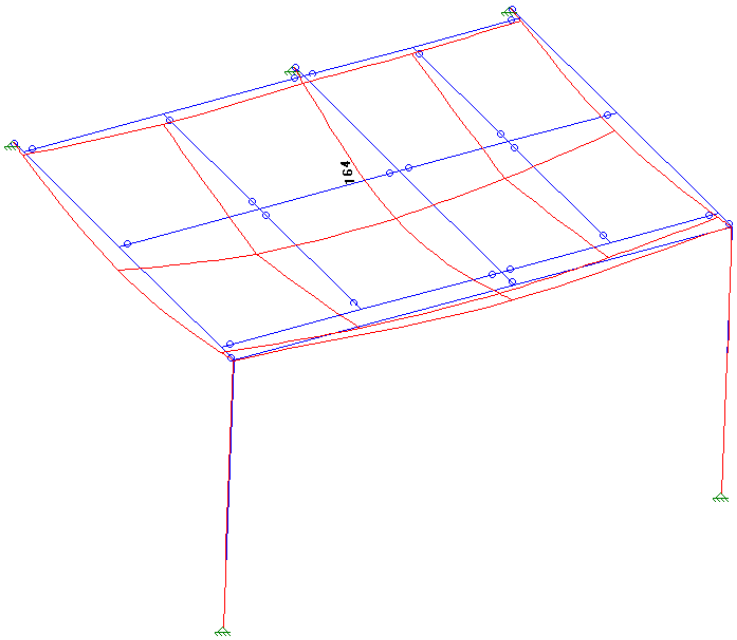


*Figura 14 - Deformação da estrutura (valores*10²)*

Como é possível se observar na figura acima a maior deformação ocorreu em uma das vigas principais, onde a demormação observada foi de 1,64 cm, abaixo da deformação limite de 1,70 cm (L/250).

E.2 – TAXA DE TRABALHO

Neste item será apresentado o percentual de utilização das peças em função das solicitações as quais as mesmas serão submetidas. Na Figura abaixo será exibido o máximo resultado obtido em função das solicitações de momento, força cortante, força axial, deformação e esbeltez.

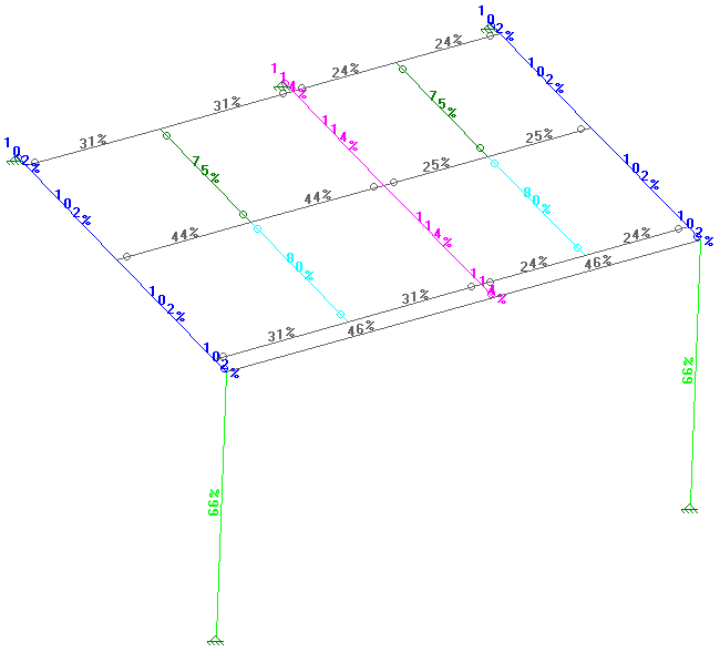


Figura 15 - Taxa de trabalho das peças

Como é possível se observar na Figura acima, algumas peças apresentam taxa de trabalho superior a 100%, indicando que as mesmas estão sujeitas a esforços superiores aos quais conseguem suportar, esse valor excedente tem como principal motivo a deformação e a esbeltez das peças. Isso ocorre, principalmente, pelo fato da estrutura não ter sido inicialmente projetada para servir de suporte a linha de vida, com a inclusão dela as peças passam a ser mais solicitadas, fazendo com que devam ser reforçadas para serem capazes de resistir a essas novas solicitações.

F – ANÁLISE DAS COBERTURAS EXISTENTES –

COBERTURA 04

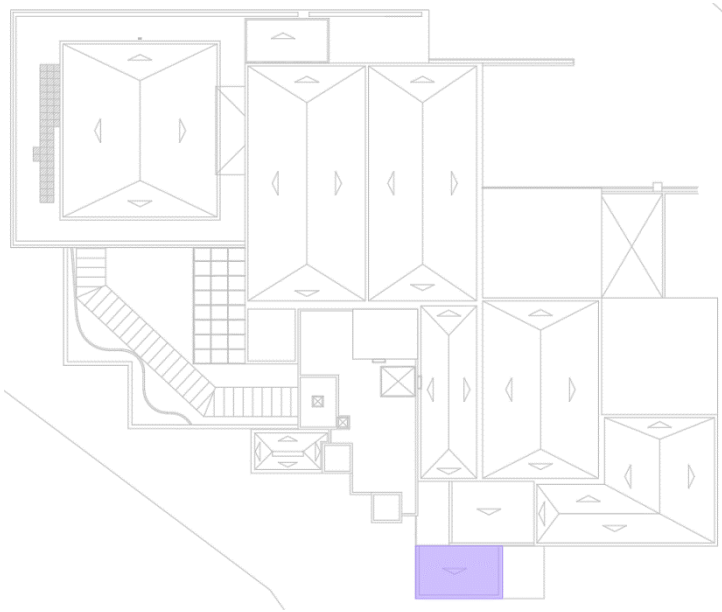


Figura 16 - Identificação da cobertura 04

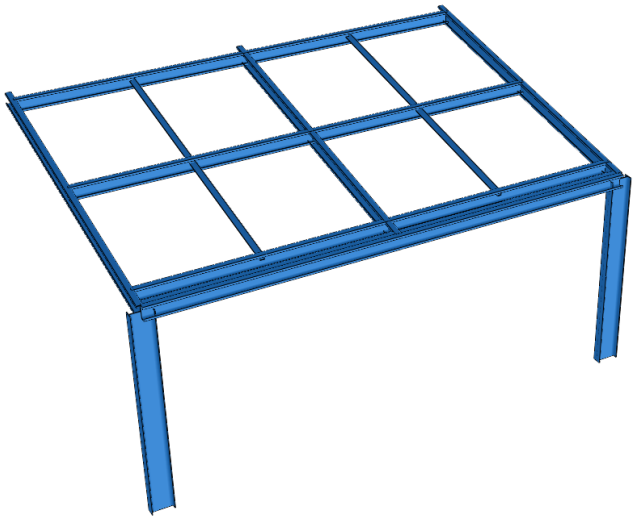


Figura 17 - Modelo de cálculo reenderizado da cobertura 04

F.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS

Neste item serão apresentados os deslocamentos máximos apresentados pela estrutura.

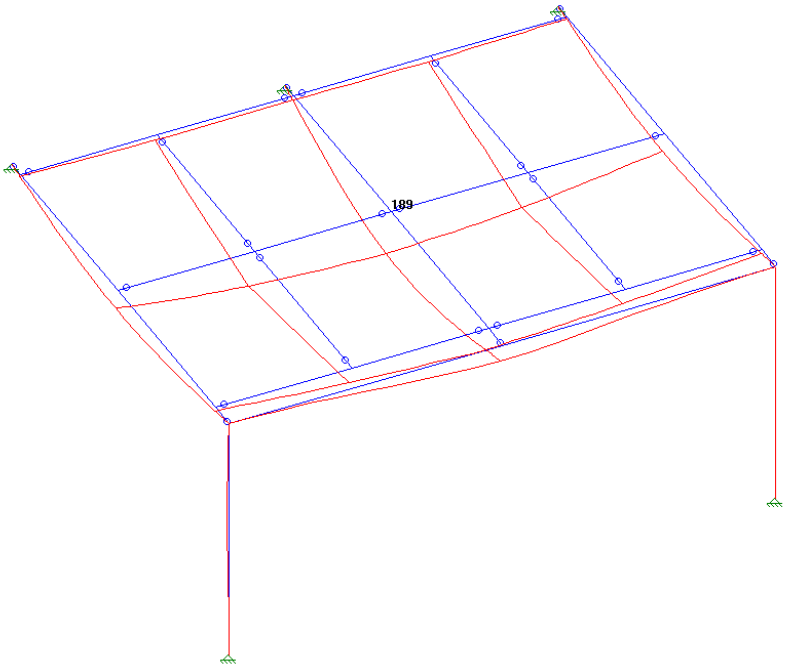


*Figura 18 - Deslocamentos da estrutura (valores*10²)*

Como é possível se observar na figura acima a maior deformação ocorreu em uma das vigas principais, onde a demormação observada foi de 1,89 cm, abaixo da deformação limite de 2,26 cm (L/250).

F.2 – TAXA DE TRABALHO

Neste item será apresentado o percentual de utilização das peças em função das solicitações as quais as mesmas serão submetidas. Na Figura abaixo será exibido o máximo resultado obtido em função das solicitações de momento, força cortante, força axial, deformação e esbeltez.

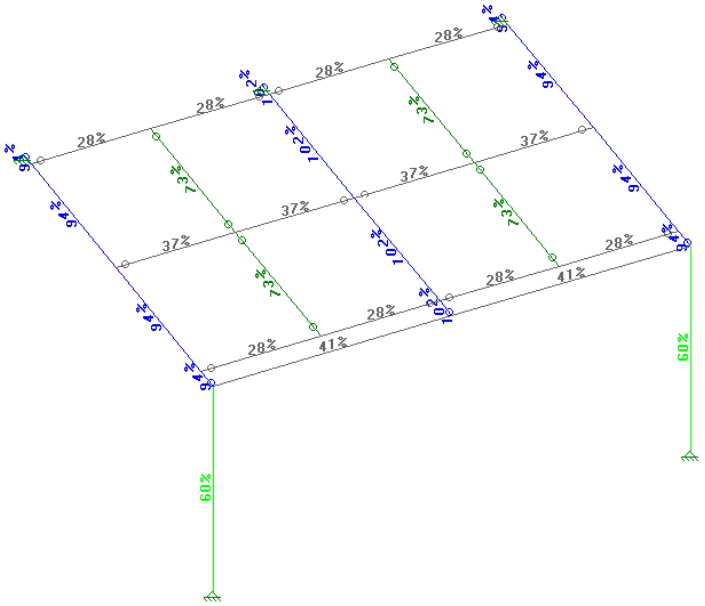


Figura 19 - Taxa de trabalho das peças

Como é possível se observar na Figura acima, algumas peças apresentam taxa de trabalho muito próximas a 100%, indicando que as mesmas são capazes de suportar os esforços aos quais são submetidas, esse valor excedente a 100% tem como principal motivo a força de momento e a esbeltez das peças. Isso ocorre, principalmente, pelo fato da estrutura não ter sido inicialmente projetada para servir de suporte a linha de vida, com a inclusão dela as peças passam a ser mais solicitadas.

G – NOVAS COBERTURAS

Figura 20 - Identificação das novas coberturas

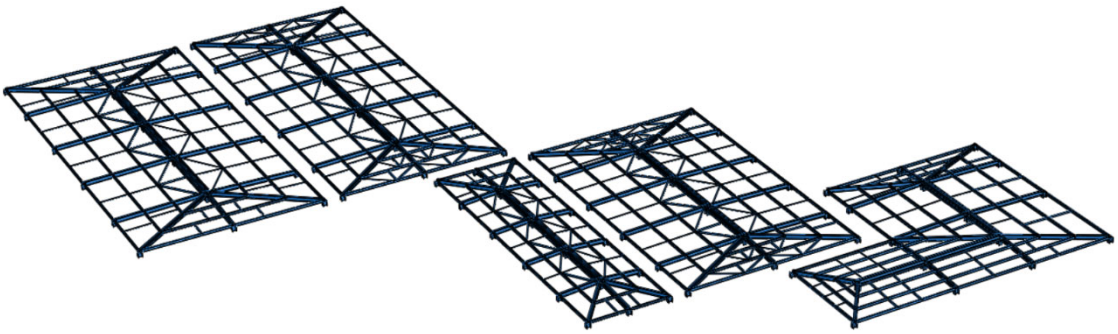


Figura 21 - Modelo de cálculo reenderizado das novas coberturas

G.1 – DESLOCAMENTO DOS ELEMENTOS ESTRUTURAIS

Neste item serão apresentados os deslocamentos máximos apresentados pela estrutura.

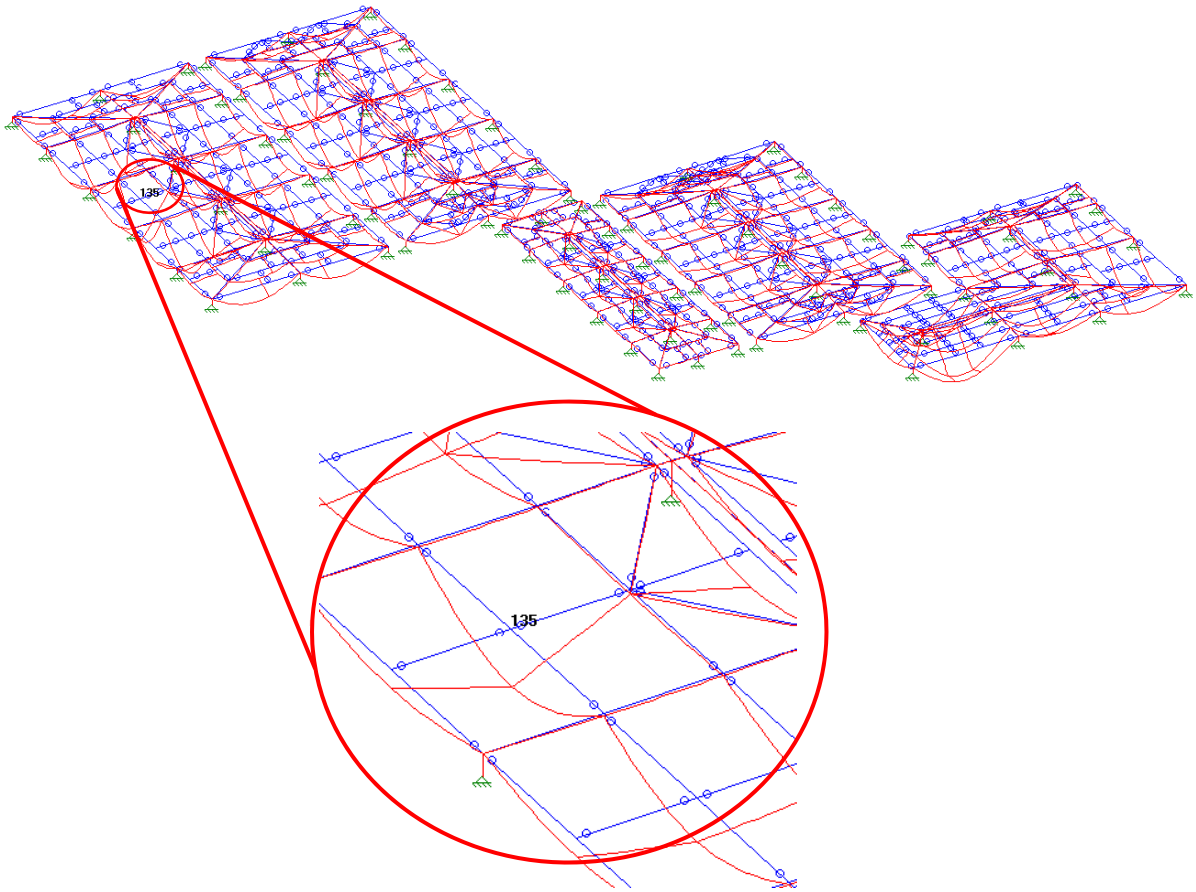


*Figura 227 - Deslocamentos da estrutura (valores*10²)*

Como é possível se observar na figura acima a maior deformação ocorreu em uma terça de cobertura, onde a demormação observada foi de 1,35 cm, abaixo da deformação limite de 1,39 cm (L/180).

G.2 – TAXA DE TRABALHO

Neste item será apresentado o percentual de utilização das peças em função das solicitações as quais as mesmas serão submetidas. Na Figura abaixo será exibido o máximo resultado obtido em função das solicitações de momento, força cortante, força axial, deformação e esbeltez.

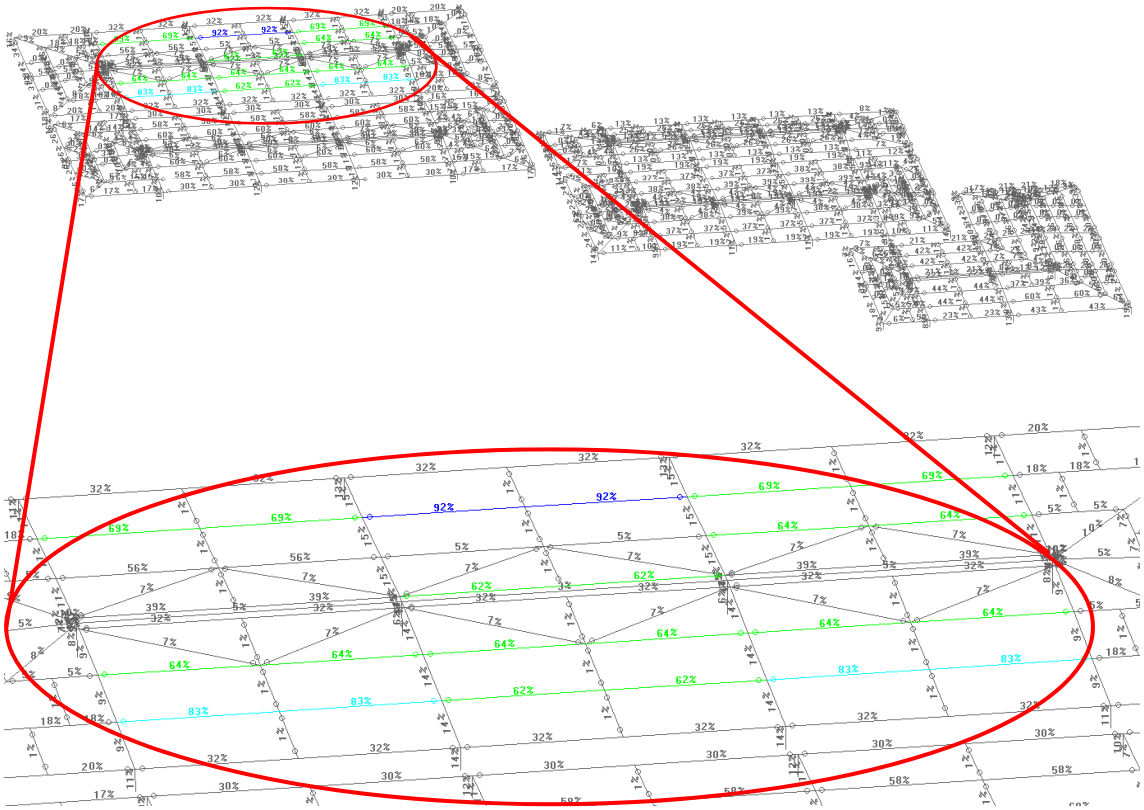


Figura 238 - Taxa de trabalho das peças

Como é possível se observar na Figura acima, algumas peças apresentam taxa de trabalho inferior a 100%, indicando que as mesmas são capazes de suportar os esforços aos quais são submetidas.

H – ANEXOS

H.1 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 01

Resultados Gerais											
					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1	[]10x10x0.47	4	833	77	-0.01	MI MJ	0.01 0.01	0.19 0.18	0.00 0.18	0.23	

2	[]10x10x0.47	4	877	77	-0.06	MI	0.02	0.23	0.00	0.42	
						MJ	0.03	0.27	0.27		
3	[]10x10x0.47	4	744	77	-0.07	MI	0.01	0.19	0.00	0.40	
						MJ	0.04	0.32	0.32		
4	[]10x10x0.47	9	938	77	-0.06	MI	0.02	0.26	0.00	0.42	
						MJ	0.03	0.27	0.27		
5	[]10x10x0.47	9	832	77	-0.01	MI	0.01	0.19	0.00	0.23	
						MJ	0.01	0.18	0.18		
6	[]10x10x0.47	6	759	77	-0.07	MI	0.04	0.26	0.00	0.40	
						MJ	0.01	0.17	0.17		
7	[]10x10x0.47	9	824	77	-0.12	MI	0.01	0.19	0.00	0.26	
						MJ	0.01	0.17	0.17		
8	[]10x10x0.47	7	758	77	-0.07	MI	0.04	0.31	0.00	0.40	
						MJ	0.01	0.17	0.17		
9	[]10x10x0.47	11	65	77	-0.05	MI	0.17	4.19	0.00	4.27	***
						MJ	0.01	0.17	0.17		
10	[]10x10x0.47	11	65	77	-0.10	MI	0.17	4.19	0.00	4.34	***
						MJ	0.01	0.17	0.17		
11	[]10x10x0.47	11	65	77	-0.05	MI	0.17	4.19	0.00	4.27	***
						MJ	0.01	0.17	0.17		
12	[]10x10x0.47	6	759	77	-0.07	MI	0.04	0.25	0.00	0.40	
						MJ	0.01	0.17	0.17		
13	[]10x10x0.47	9	880	77	-0.12	MI	0.01	0.18	0.00	0.25	
						MJ	0.01	0.17	0.17		
14	[]10x10x0.47	7	759	77	-0.07	MI	0.04	0.30	0.00	0.40	
						MJ	0.01	0.17	0.17		
15	[]10x10x0.47	4	886	77	-0.01	MI	0.01	0.17	0.00	0.21	
						MJ	0.01	0.18	0.18		
16	[]10x10x0.47	4	929	77	-0.06	MI	0.02	0.22	0.00	0.42	
						MJ	0.03	0.27	0.27		
17	[]10x10x0.47	4	781	77	-0.07	MI	0.01	0.17	0.00	0.39	
						MJ	0.04	0.32	0.32		
18	[]10x10x0.47	1	1002	77	-0.06	MI	0.02	0.24	0.00	0.42	
						MJ	0.03	0.27	0.27		
19	[]10x10x0.47	9	886	77	-0.01	MI	0.01	0.17	0.00	0.22	
						MJ	0.01	0.18	0.18		
21	U# 100x40#3.00	1	9999	35	-0.03	MI	0.00	0.01	0.01	0.05	
22	U# 100x40#3.00	4	9999	26	-0.05	MI	0.00	0.01	0.01	0.06	
23	U# 100x40#3.00	2	9999	19	-0.05	MI	0.00	0.01	0.00	0.06	
						MJ	0.00	0.01	0.01		
24	U# 100x40#3.00	1	9999	12	-0.04	MI	0.00	0.01	0.01	0.05	
						MJ	0.01	0.01	0.00		
25	U# 100x40#3.00	1	9999	8	-0.01	MJ	0.01	0.01	0.01	0.02	
26	U# 100x40#3.00	1	9999	8	-0.01	MJ	0.01	0.01	0.01	0.02	
27	I 6"x18.6	1	9999	63	0.00	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.02	0.00		
28	U# 100x40#3.00	4	9999	35	-0.06	MI	0.00	0.02	0.01	0.06	
29	U# 100x40#3.00	4	9999	26	-0.09	MI	0.00	0.04	0.02	0.11	
30	U# 100x40#3.00	1	9999	19	-0.08	MI	0.00	0.01	0.01	0.09	
31	U# 100x40#3.00	1	9999	12	-0.06	MI	0.00	0.02	0.02	0.08	
32	U# 100x40#3.00	1	9999	8	-0.02	MI	0.00	0.01	0.01	0.04	

Resultados Gerais											
					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
33	U# 100x40#3.00	1	9999	8	-0.02	MI	0.00	0.01	0.00	0.03	
34	I 6"x18.6	2	9999	63	0.00	MJ	0.02	0.06	0.06	0.08	
						MI	0.00	0.02	0.00		
35	U# 100x40#3.00	4	9999	35	-0.04	MI	0.00	0.02	0.01	0.05	
36	U# 100x40#3.00	1	9999	26	-0.07	MI	0.00	0.05	0.02	0.09	
37	U# 100x40#3.00	2	9999	19	-0.06	MJ	0.00	0.00	0.00	0.07	
38	U# 100x40#3.00	2	9999	12	-0.05	MI	0.00	0.01	0.01	0.06	
39	U# 100x40#3.00	2	9999	8	-0.02	MI	0.00	0.01	0.01	0.03	
40	U# 100x40#3.00	1	9999	8	-0.02	MI	0.00	0.01	0.00	0.03	
41	I 6"x18.6	2	9999	63	0.00	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.02	0.00		
42	U# 100x40#3.00	4	9999	35	-0.06	MI	0.00	0.01	0.00	0.06	
43	U# 100x40#3.00	2	9999	26	-0.09	MI	0.00	0.04	0.01	0.11	
44	U# 100x40#3.00	2	9999	19	-0.08	MJ	0.00	0.00	0.00	0.08	
45	U# 100x40#3.00	2	9999	12	-0.06	MI	0.00	0.01	0.01	0.07	
46	U# 100x40#3.00	2	9999	8	-0.02	MI	0.00	0.01	0.01	0.04	
47	U# 100x40#3.00	2	9999	8	-0.02	MI	0.00	0.01	0.00	0.03	
49	U# 100x40#3.00	2	9999	35	-0.03	MJ	0.00	0.00	0.00	0.04	
50	U# 100x40#3.00	3	9999	26	-0.05	MI	0.00	0.01	0.00	0.06	
51	U# 100x40#3.00	3	9999	19	-0.05	MJ	0.00	0.01	0.01	0.05	
52	U# 100x40#3.00	3	9999	12	-0.04	MI	0.00	0.00	0.01	0.04	
						MJ	0.01	0.01	0.00		
53	U# 100x40#3.00	2	9999	8	-0.01	MJ	0.01	0.01	0.01	0.02	
54	U# 100x40#3.00	2	9999	8	-0.01	MJ	0.01	0.01	0.01	0.02	
55	U# 100x40#4.25	1	456	101	0.00	MJ	0.03	0.28	0.30	0.36	
						MI	0.00	0.06	0.00		
56	U# 100x40#4.25	1	1501	100	0.00	MJ	0.02	0.12	0.13	0.17	
						MI	0.00	0.04	0.00		
57	U# 100x40#4.25	2	1516	100	0.00	MJ	0.02	0.12	0.13	0.17	
						MI	0.00	0.04	0.00		
58	U# 100x40#4.25	4	476	100	0.00	MJ	0.03	0.27	0.30	0.34	
						MI	0.00	0.04	0.00		
59	U# 100x40#4.25	1	189	101	0.00	MJ	0.08	0.70	0.77	0.80	
						MI	0.00	0.03	0.00		
60	U# 100x40#4.25	4	633	100	0.00	MJ	0.06	0.31	0.32	0.36	
						MI	0.00	0.03	0.00		
61	U# 100x40#4.25	4	638	100	0.00	MJ	0.06	0.31	0.32	0.36	
						MI	0.00	0.03	0.00		
62	U# 100x40#4.25	4	190	100	0.00	MJ	0.08	0.70	0.76	0.78	
						MI	0.00	0.02	0.00		
63	U# 100x40#4.25	1	153	101	0.00	MJ	0.10	0.86	0.00	0.97	***
						MI	0.00	0.02	0.94		
64	U# 100x40#4.25	2	517	100	0.00	MJ	0.07	0.39	0.00	0.41	
						MI	0.00	0.01	0.40		
65	U# 100x40#4.25	1	521	100	0.00	MJ	0.07	0.38	0.40	0.41	
						MI	0.00	0.01	0.00		
66	U# 100x40#4.25	4	154	100	0.00	MJ	0.10	0.86	0.94	0.94	***
67	U# 100x40#4.25	4	131	101	0.00	MJ	0.12	1.01	0.00	1.13	***
						MI	0.00	0.06	1.11		
68	U# 100x40#4.25	4	436	100	0.00	MJ	0.08	0.45	0.00	0.51	
						MI	0.00	0.06	0.47		

69	U# 100x40#4.25	4	439	100	0.00	MJ MI	0.08 0.00	0.45 0.06	0.00 0.47	0.51	

Resultados Gerais												
					CAPACIDADES							
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
70	U# 100x40#4.25	4	132	100	0.00	MJ	0.12	1.01	0.00	1.12	***
						MI	0.00	0.05	1.10		
71	U# 100x40#4.25	1	222	101	0.00	MJ	0.07	0.59	0.65	0.68	
						MI	0.00	0.02	0.00		
72	U# 100x40#4.25	4	747	100	0.00	MJ	0.05	0.27	0.00	0.28	
						MI	0.00	0.02	0.28		
73	U# 100x40#4.25	4	753	100	0.00	MJ	0.05	0.26	0.00	0.28	
						MI	0.00	0.02	0.27		
74	U# 100x40#4.25	2	224	100	0.00	MJ	0.07	0.59	0.00	0.65	
						MI	0.00	0.01	0.65		
75	U# 100x40#4.25	1	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
76	U# 100x40#4.25	4	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
77	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
78	U# 100x40#4.25	4	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
79	U# 100x40#4.25	7	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
80	U# 100x40#4.25	9	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
81	U# 100x40#4.25	9	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
82	U# 100x40#4.25	9	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
83	U# 100x40#3.00	4	9999	35	-0.03	MJ	0.00	0.00	0.00	0.04	
84	U# 100x40#3.00	4	9999	35	-0.06	MI	0.00	0.01	0.01	0.07	
85	U# 100x40#3.00	4	9999	35	-0.04	MI	0.00	0.02	0.02	0.06	
86	U# 100x40#3.00	4	9999	35	-0.06	MI	0.00	0.02	0.01	0.07	
87	U# 100x40#3.00	1	9999	35	-0.03	MI	0.00	0.01	0.00	0.04	
88	U# 100x40#4.25	1	222	101	0.00	MJ	0.07	0.59	0.00	0.66	
						MI	0.00	0.02	0.65		
89	U# 100x40#4.25	4	748	100	0.00	MJ	0.05	0.27	0.00	0.29	
						MI	0.00	0.02	0.28		
90	U# 100x40#4.25	4	753	100	0.00	MJ	0.05	0.26	0.00	0.29	
						MI	0.00	0.02	0.27		
91	U# 100x40#4.25	2	224	100	0.00	MJ	0.07	0.59	0.00	0.66	
						MI	0.00	0.01	0.65		
92	U# 100x40#4.25	1	456	101	0.00	MJ	0.03	0.28	0.00	0.33	
						MI	0.00	0.06	0.30		
93	U# 100x40#4.25	2	1483	100	0.00	MJ	0.02	0.12	0.00	0.17	
						MI	0.00	0.05	0.13		
94	U# 100x40#4.25	4	1517	100	0.00	MJ	0.02	0.12	0.13	0.16	
						MI	0.00	0.04	0.00		
95	U# 100x40#4.25	4	476	100	0.00	MJ	0.03	0.27	0.30	0.32	
						MI	0.00	0.04	0.00		
96	U# 100x40#3.00	4	9999	26	-0.05	MI	0.00	0.01	0.01	0.07	
97	U# 100x40#3.00	4	9999	19	-0.05	MJ	0.00	0.01	0.01	0.05	
98	U# 100x40#3.00	4	9999	12	-0.04	MJ	0.01	0.01	0.01	0.04	
99	U# 100x40#3.00	2	9999	26	-0.09	MI	0.00	0.04	0.04	0.13	
						MJ	0.00	0.01	0.00		
100	U# 100x40#3.00	1	9999	19	-0.08	MJ	0.00	0.00	0.00	0.08	
101	U# 100x40#3.00	1	9999	12	-0.06	MI	0.00	0.01	0.00	0.07	
102	U# 100x40#3.00	1	9999	26	-0.07	MI	0.00	0.04	0.04	0.12	
103	U# 100x40#3.00	2	9999	19	-0.06	MJ	0.00	0.00	0.00	0.06	
104	U# 100x40#3.00	1	9999	12	-0.05	MI	0.00	0.01	0.00	0.05	
105	U# 100x40#3.00	4	9999	26	-0.09	MI	0.00	0.04	0.04	0.13	
106	U# 100x40#3.00	2	9999	19	-0.08	MI	0.00	0.01	0.00	0.08	

107	U# 100x40#3.00	2	9999	12	-0.06	MI	0.00	0.02	0.01	0.07		
108	U# 100x40#3.00	4	9999	26	-0.05	MI	0.00	0.01	0.00	0.06		

Resultados Gerais											
					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
109	U# 100x40#3.00	3	9999	19	-0.05	MI	0.00	0.01	0.00	0.05	
						MJ	0.00	0.01	0.01		
110	U# 100x40#3.00	3	9999	12	-0.04	MI	0.00	0.01	0.00	0.05	
						MJ	0.01	0.01	0.01		
111	U# 100x40#4.25	4	131	101	0.00	MJ	0.12	1.01	0.00	1.15	***
						MI	0.00	0.04	1.11		
112	U# 100x40#4.25	4	437	100	0.00	MJ	0.08	0.45	0.00	0.53	
						MI	0.00	0.06	0.47		
113	U# 100x40#4.25	4	439	100	0.00	MJ	0.08	0.45	0.00	0.53	
						MI	0.00	0.06	0.47		
114	U# 100x40#4.25	4	132	100	0.00	MJ	0.12	1.01	0.00	1.15	***
						MI	0.00	0.05	1.10		
115	U# 100x40#4.25	1	154	101	0.00	MJ	0.10	0.86	0.00	0.95	***
						MI	0.00	0.02	0.94		
116	U# 100x40#4.25	2	519	100	0.00	MJ	0.07	0.38	0.00	0.40	
						MI	0.00	0.01	0.40		
117	U# 100x40#4.25	1	523	100	0.00	MJ	0.07	0.38	0.40	0.40	
						MI	0.00	0.01	0.00		
118	U# 100x40#4.25	4	155	100	0.00	MJ	0.10	0.86	0.94	0.94	***
119	U# 100x40#4.25	1	190	101	0.00	MJ	0.08	0.69	0.76	0.77	
						MI	0.00	0.03	0.00		
120	U# 100x40#4.25	4	635	100	0.00	MJ	0.06	0.31	0.00	0.34	
						MI	0.00	0.03	0.32		
121	U# 100x40#4.25	4	641	100	0.00	MJ	0.06	0.31	0.00	0.34	
						MI	0.00	0.03	0.32		
122	U# 100x40#4.25	4	191	100	0.00	MJ	0.08	0.69	0.00	0.77	
						MI	0.00	0.02	0.76		
123	U# 100x40#4.25	15	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
124	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
125	U# 100x40#4.25	4	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
126	U# 100x40#4.25	1	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
127	U# 100x40#4.25	1	9999	138	0.00	MJ	0.00	0.00	0.01	0.01	
128	U# 100x40#4.25	1	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
129	U# 100x40#4.25	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
130	U# 100x40#4.25	7	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
131	U# 100x40#4.25	4	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
132	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
133	U# 100x40#4.25	4	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
134	U# 100x40#4.25	1	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
135	U# 100x40#4.25	4	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
136	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
137	U# 100x40#4.25	4	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
138	U# 100x40#4.25	1	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
139	U# 100x40#4.25	4	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
140	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
141	U# 100x40#4.25	4	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
142	U# 100x40#4.25	4	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
143	U# 100x40#4.25	4	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
144	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
145	U# 100x40#4.25	4	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
146	U# 100x40#4.25	4	9999	61	0.00	MI	0.00	0.00	0.00	0.00	

147	U# 100x40#4.25	12	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
148	U# 100x40#4.25	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
149	U# 100x40#4.25	1	9999	100	0.00	MI	0.00	0.00	0.00	0.00	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
150	U# 100x40#4.25	1	9999	138	0.00	MJ	0.00	0.00	0.01	0.01	
151	U# 100x40#4.25	4	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
152	U# 100x40#4.25	4	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
153	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
154	U# 100x40#4.25	12	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
155	U# 100x40#4.25	1	9999	138	0.00	MJ	0.00	0.00	0.01	0.01	
156	U# 100x40#4.25	1	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
157	U# 100x40#4.25	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
158	U# 100x40#4.25	17	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
159	U# 100x40#4.25	17	9999	138	0.00	MI	0.00	0.00	0.01	0.01	
160	U# 100x40#4.25	4	9999	100	0.00	MI	0.00	0.00	0.00	0.00	
161	U# 100x40#4.25	4	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
162	U# 100x40#4.25	4	9999	61	0.00	MI	0.00	0.00	0.00	0.00	
179	I 6"x18.6	4	5622	63	0.00	MJ	0.04	0.15	0.15	0.20	
						MI	0.00	0.05	0.00		
180	I 6"x18.6	14	1706	237	-0.46	MJ	0.08	0.22	0.22	0.57	***
						MI	0.01	0.06	0.00		
182	I 6"x18.6	1	9999	41	0.00	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.02	0.00		
183	I 6"x18.6	1	9999	9	0.01	MJ	0.15	0.44	0.44	0.45	
						MI	0.00	0.01	0.00		
184	I 6"x18.6	1	1218	136	0.06	MJ	0.07	0.27	0.27	0.28	
						MI	0.00	0.01	0.00		
185	I 6"x18.6	1	9999	41	0.00	MJ	0.02	0.06	0.06	0.08	
						MI	0.00	0.02	0.00		
186	I 6"x18.6	1	4436	102	-0.10	MJ	0.12	0.36	0.36	0.36	
187	I 6"x18.6	2	1513	136	0.02	MJ	0.06	0.21	0.22	0.23	
						MI	0.00	0.01	0.00		
188	I 6"x18.6	2	9999	63	0.00	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.02	0.00		
189	I 6"x18.6	1	9999	9	0.01	MJ	0.15	0.44	0.44	0.45	
						MI	0.00	0.01	0.00		
190	I 6"x18.6	2	1220	136	-0.15	MJ	0.07	0.27	0.27	0.28	
						MI	0.00	0.01	0.00		
194	I 6"x18.6	4	5568	63	0.00	MJ	0.04	0.15	0.15	0.20	
						MI	0.00	0.05	0.00		
195	I 6"x18.6	19	1700	237	-0.46	MJ	0.08	0.22	0.22	0.57	***
						MI	0.01	0.07	0.00		
200	I 6"x18.6	4	9999	8	0.01	MJ	0.15	0.44	0.44	0.45	
						MI	0.00	0.01	0.00		
201	I 6"x18.6	4	5028	93	0.06	MJ	0.10	0.36	0.36	0.37	
						MI	0.00	0.01	0.00		
203	I 6"x18.6	1	9999	22	0.00	MI	0.00	0.00	0.00	0.00	
205	I 6"x18.6	4	9999	8	0.08	MJ	0.12	0.36	0.36	0.36	
206	I 6"x18.6	2	6304	93	0.02	MJ	0.08	0.29	0.29	0.29	
208	I 6"x18.6	1	9999	22	0.00	MI	0.00	0.00	0.00	0.00	
210	I 6"x18.6	4	9999	8	0.01	MJ	0.15	0.44	0.44	0.45	

						Mi	0.00	0.01	0.00		
211	I 6"x18.6	4	5029	93	-0.09	MJ	0.10	0.36	0.36	0.37	
						Mi	0.00	0.01	0.00		
214	I 6"x18.6	3	5599	63	0.00	MJ	0.04	0.15	0.15	0.20	
						Mi	0.00	0.05	0.00		
215	I 6"x18.6	13	1701	237	-0.46	MJ	0.08	0.22	0.22	0.57	***
						Mi	0.01	0.06	0.00		

Resultados Gerais											
					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
218	I 6"x18.6	4	5582	63	0.00	MJ	0.04	0.15	0.15	0.20	
						Mi	0.00	0.05	0.00		
250	I 6"x18.6	4	5251	93	-0.09	MJ	0.10	0.35	0.35	0.36	
						Mi	0.00	0.01	0.00		
252	I 6"x18.6	4	5245	93	-0.09	MJ	0.10	0.35	0.35	0.36	
						Mi	0.00	0.01	0.00		
267	I 6"x18.6	18	1710	237	-0.46	MJ	0.08	0.22	0.22	0.58	***
						Mi	0.01	0.06	0.00		
268	I 6"x18.6	2	1226	135	-0.15	MJ	0.07	0.26	0.27	0.28	
						Mi	0.00	0.01	0.00		
270	I 6"x18.6	1	1521	135	-0.15	MJ	0.06	0.21	0.22	0.23	
						Mi	0.00	0.01	0.00		
272	I 6"x18.6	1	1225	135	-0.15	MJ	0.07	0.26	0.27	0.28	
						Mi	0.00	0.01	0.00		
310	I 6"x18.6	1	166	202	-0.01	MJ	0.00	0.01	0.02	0.35	***
						Mi	0.01	0.33	0.00		
311	I 6"x18.6	1	823	135	0.00	MJ	0.00	0.01	0.01	0.11	
						Mi	0.00	0.10	0.00		
312	I 6"x18.6	1	847	134	0.00	MJ	0.00	0.01	0.01	0.11	
						Mi	0.00	0.10	0.00		
313	I 6"x18.6	1	175	202	-0.01	MJ	0.00	0.01	0.01	0.34	***
						Mi	0.01	0.31	0.00		
314	I 6"x18.6	2	9999	202	-0.01	MJ	0.00	0.01	0.02	0.02	
315	I 6"x18.6	1	9999	135	0.00	MJ	0.00	0.01	0.01	0.01	
316	I 6"x18.6	2	9999	134	0.00	MJ	0.00	0.01	0.01	0.01	
317	I 6"x18.6	1	9999	202	-0.01	MJ	0.00	0.01	0.01	0.02	
318	I 6"x18.6	2	9999	202	-0.01	MJ	0.00	0.01	0.02	0.02	
319	I 6"x18.6	2	9999	135	0.00	MJ	0.00	0.01	0.01	0.01	
320	I 6"x18.6	1	9999	134	0.00	MJ	0.00	0.01	0.01	0.01	
321	I 6"x18.6	1	9999	202	-0.01	MJ	0.00	0.01	0.01	0.02	
322	I 6"x18.6	2	9999	202	-0.01	MJ	0.00	0.01	0.02	0.02	
323	I 6"x18.6	1	9999	135	0.00	MJ	0.00	0.01	0.01	0.01	
324	I 6"x18.6	2	9999	134	0.00	MJ	0.00	0.01	0.01	0.01	
325	I 6"x18.6	1	9999	202	-0.01	MJ	0.00	0.01	0.01	0.02	
326	I 6"x18.6	1	166	202	-0.01	MJ	0.00	0.01	0.02	0.35	***
						Mi	0.01	0.33	0.00		
327	I 6"x18.6	1	823	135	0.01	MJ	0.00	0.01	0.01	0.11	
						Mi	0.00	0.10	0.00		
328	I 6"x18.6	1	847	134	0.01	MJ	0.00	0.01	0.01	0.11	
						Mi	0.00	0.10	0.00		
329	I 6"x18.6	1	175	202	-0.01	MJ	0.00	0.01	0.01	0.34	***
						Mi	0.01	0.31	0.00		

H.2 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 02

Resultados Gerais											
					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1	W 200x19.3	1	1985	111	-0.06	MJ	0.04	0.26	0.26	0.50	
						MI	0.02	0.20	0.00		
2	W 200x19.3	1	1659	111	-0.06	MJ	0.04	0.22	0.22	0.51	
						MI	0.02	0.24	0.00		
3	2Uec#150x60x20#5.00	1	1002	123	-0.02	MJ	0.06	0.33	0.00	0.57	
						MI	0.04	0.23	0.34		
4	Ue# 150x60x20#5.00	1	817	161	-0.02	MJ	0.11	0.43	0.41	0.50	
						MI	0.06	0.23	0.00		
5	Ue# 150x60x20#5.00	1	425	161	0.03	MJ	0.17	0.79	0.78	0.82	
						MI	0.01	0.04	0.00		
6	Ue# 150x60x20#5.00	1	1111	161	-0.02	MJ	0.08	0.31	0.30	0.36	
						MI	0.05	0.11	0.00		
7	Ue# 150x60x20#5.00	1	3940	59	0.00	MJ	0.03	0.10	0.10	0.10	
						MI	0.00	0.01	0.00		
8	Ue# 150x60x20#5.00	1	1384	84	0.00	MJ	0.05	0.20	0.20	0.22	
						MI	0.00	0.01	0.00		
9	Ue# 150x60x20#5.00	4	1856	59	-0.13	MJ	0.07	0.22	0.00	0.24	
						MI	0.00	0.01	0.20		
10	Ue# 150x60x20#5.00	3	651	84	-0.21	MJ	0.10	0.43	0.00	0.45	
						MI	0.00	0.02	0.43		
11	Ue# 150x60x20#5.00	1	3222	59	-0.01	MJ	0.04	0.12	0.12	0.13	
12	Ue# 150x60x20#5.00	1	1128	84	-0.02	MJ	0.06	0.25	0.25	0.27	
						MI	0.00	0.01	0.00		
13	L 2"x1/8"	1	6648	160	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
14	L 2"x1/8"	1	9999	133	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		
15	L 2"x1/8"	1	6648	160	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
16	L 2"x1/8"	1	9999	133	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		

H.3 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 03

Resultados Gerais											
					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1	W 200x19.3	1	1736	132	-0.07	MJ	0.03	0.21	0.21	0.38	
						MI	0.01	0.16	0.00		
2	W 200x19.3	1	1803	132	-0.06	MJ	0.03	0.19	0.19	0.36	
						MI	0.01	0.16	0.00		
3	Ue# 150x60x20#5.00	1	482	204	-0.02	MJ	0.06	0.37	0.00	0.41	***
						MI	0.00	0.01	0.38		
4	Ue# 150x60x20#5.00	1	218	94	-0.03	MJ	0.14	0.83	0.00	0.88	***
						MI	0.00	0.00	0.85		
5	Ue# 150x60x20#5.00	1	379	204	-0.04	MJ	0.08	0.48	0.49	0.53	***
						MI	0.00	0.01	0.00		
7	Ue# 150x60x20#5.00	1	1312	76	0.00	MJ	0.04	0.16	0.00	0.22	
						MI	0.00	0.00	0.22		
8	Ue# 150x60x20#5.00	1	2783	59	0.00	MJ	0.03	0.10	0.00	0.11	
						MI	0.00	0.00	0.11		
9	Ue# 150x60x20#5.00	1	658	76	-0.14	MJ	0.08	0.31	0.43	0.44	
10	Ue# 150x60x20#5.00	3	1395	59	-0.12	MJ	0.06	0.19	0.00	0.23	
						MI	0.00	0.00	0.22		
11	L 2"x1/8"	1	3626	194	0.00	MJ	0.00	0.01	0.02	0.03	
						MI	0.00	0.02	0.00		
12	L 2"x1/8"	1	4383	182	0.00	MJ	0.00	0.01	0.02	0.03	
						MI	0.00	0.02	0.00		
15	L 2"x1/8"	1	3626	194	0.00	MJ	0.00	0.01	0.02	0.03	
						MI	0.00	0.02	0.00		
16	L 2"x1/8"	1	4383	182	0.00	MJ	0.00	0.01	0.02	0.03	
						MI	0.00	0.02	0.00		
19	2Uec#150x60x20#5.00	1	755	112	-0.01	MJ	0.05	0.29	0.00	0.39	
						MI	0.03	0.12	0.29		
23	Ue# 150x60x20#5.00	1	2621	59	0.00	MJ	0.03	0.10	0.12	0.12	
30	Ue# 150x60x20#5.00	1	1236	76	0.00	MJ	0.04	0.17	0.23	0.23	

H.4 – DIMENSIONAMENTO DAS BARRAS DA COBERTURA EXISTENTE 04

Resultados Gerais											
					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1	W 250x17.9	1	2572	121	-0.06	MJ	0.03	0.19	0.19	0.33	
						MI	0.01	0.13	0.00		
3	W 250x17.9	1	2572	121	-0.06	MJ	0.03	0.19	0.19	0.33	
						MI	0.01	0.13	0.00		
5	2Uec#150x60x20#5.00	1	787	100	-0.01	MJ	0.04	0.28	0.00	0.36	
						MI	0.02	0.10	0.28		
7	Ue# 150x60x20#5.00	1	1491	68	0.00	MJ	0.03	0.12	0.15	0.22	
						MI	0.01	0.07	0.00		
8	Ue# 150x60x20#5.00	1	1491	68	0.00	MJ	0.03	0.12	0.15	0.22	
						MI	0.01	0.07	0.00		
9	Ue# 150x60x20#5.00	1	874	68	-0.13	MJ	0.06	0.24	0.30	0.37	
						MI	0.01	0.07	0.00		
10	Ue# 150x60x20#5.00	1	874	68	-0.13	MJ	0.06	0.24	0.30	0.37	
						MI	0.01	0.07	0.00		
11	Ue# 150x60x20#5.00	1	1466	68	0.00	MJ	0.03	0.12	0.15	0.22	
						MI	0.01	0.07	0.00		
12	Ue# 150x60x20#5.00	1	1466	68	0.00	MJ	0.03	0.12	0.15	0.22	
						MI	0.01	0.07	0.00		
13	L 2"x1/8"	1	4926	176	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
14	L 2"x1/8"	1	4927	176	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
15	L 2"x1/8"	1	4926	176	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
16	L 2"x1/8"	1	4927	176	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
17	Ue# 150x60x20#4.75	1	502	189	-0.04	MJ	0.07	0.39	0.00	0.44	
						MI	0.00	0.01	0.39		
20	Ue# 150x60x20#4.75	1	502	189	-0.04	MJ	0.07	0.39	0.39	0.43	
						MI	0.00	0.01	0.00		
24	Ue# 150x60x20#4.75	1	258	189	-0.12	MJ	0.14	0.76	0.77	0.88	

H.5 – DIMENSIONAMENTO DAS BARRAS DAS NOVAS COBERTURAS

Resultados Gerais											
					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1	W 150x22.5	1	9999	9	-0.03	MJ	0.06	0.06	0.06	0.08	
2	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.09	0.09	0.11	
						MI	0.00	0.01	0.00		
3	W 150x24.0	2	4763	153	-0.02	MJ	0.03	0.08	0.08	0.09	
						MI	0.00	0.03	0.00		
4	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.09	0.09	0.11	
						MI	0.00	0.01	0.00		
5	W 150x24.0	2	5004	153	-0.02	MJ	0.03	0.08	0.08	0.11	
						MI	0.02	0.04	0.00		
6	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.07	0.07	0.18	
						MI	0.01	0.10	0.00		
7	W 150x24.0	6	4579	185	-0.05	MJ	0.02	0.05	0.05	0.08	
						MI	0.00	0.02	0.00		
8	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.16	
						MI	0.01	0.10	0.00		
9	W 150x24.0	2	4824	185	-0.05	MJ	0.02	0.05	0.05	0.09	
						MI	0.01	0.03	0.00		
10	W 150x22.5	1	9999	6	-0.01	MI	0.02	0.08	0.00	0.09	
11	W 150x24.0	7	8067	104	-0.01	MJ	0.02	0.03	0.03	0.05	
						MI	0.00	0.03	0.00		
12	Ue# 100x50x17#3.00	1	1172	90	-0.02	MJ	0.04	0.16	0.00	0.19	
						MI	0.00	0.01	0.17		
13	W 150x22.5	1	9999	9	-0.03	MJ	0.06	0.07	0.07	0.08	
14	W 150x18.0	2	9999	137	-0.05	MJ	0.00	0.02	0.02	0.05	
						MI	0.00	0.01	0.00		
15	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.17	
						MI	0.01	0.10	0.00		
16	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.17	
						MI	0.01	0.10	0.00		
17	W 150x22.5	1	9999	6	-0.01	MI	0.02	0.08	0.00	0.09	
18	W 150x24.0	3	4597	185	-0.06	MJ	0.02	0.05	0.05	0.10	
						MI	0.01	0.03	0.00		
19	W 150x24.0	8	4613	185	-0.05	MJ	0.02	0.05	0.05	0.08	
						MI	0.00	0.02	0.00		
20	W 150x24.0	3	9999	4	0.00	MJ	0.02	0.01	0.01	0.04	
						MI	0.00	0.03	0.00		
21	W 150x22.5	1	9999	6	-0.02	MJ	0.05	0.13	0.13	0.14	
22	W 150x24.0	2	3390	153	-0.03	MJ	0.06	0.11	0.11	0.14	
						MI	0.01	0.05	0.00		
23	W 150x22.5	1	9999	6	-0.02	MJ	0.03	0.12	0.12	0.13	
24	W 150x24.0	2	4519	153	-0.02	MJ	0.06	0.09	0.09	0.15	
						MI	0.03	0.07	0.00		
25	W 150x22.5	1	9999	6	-0.02	MJ	0.05	0.13	0.13	0.14	
26	W 150x24.0	3	3399	153	-0.03	MJ	0.06	0.11	0.11	0.14	
						MI	0.01	0.05	0.00		
27	W 150x22.5	1	9999	6	-0.02	MJ	0.03	0.12	0.12	0.13	

28	W 150x24.0	3	4431	153	-0.02	MJ MI	0.06 0.03	0.09 0.07	0.09 0.00	0.15	
29	W 150x22.5	2	9999	9	-0.02	MI MJ	0.01 0.03	0.04 0.02	0.00 0.02	0.06	
30	W 150x22.5	3	9999	9	-0.02	MI MJ	0.01 0.03	0.04 0.02	0.00 0.02	0.06	

Resultados Gerais

					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
31	Ue# 100x50x17#3.00	1	573	87	-0.01	MJ MI	0.05 0.00	0.26 0.01	0.26 0.00	0.27	
32	Ue# 100x50x17#3.00	3	571	87	0.01	MJ MI	0.05 0.00	0.26 0.01	0.26 0.00	0.26	
33	Ue# 100x50x17#3.00	2	9999	5	0.06	MJ MI	0.04 0.02	0.05 0.02	0.00 0.03	0.10	
34	Ue# 100x50x17#3.00	3	297	87	0.03	MJ MI	0.09 0.00	0.49 0.01	0.00 0.50	0.52	
35	Ue# 100x50x17#3.00	3	468	87	-0.15	MJ MI	0.07 0.00	0.31 0.01	0.00 0.32	0.39	
36	Ue# 100x50x17#3.00	2	9999	8	0.03	MJ MI	0.02 0.04	0.06 0.08	0.00 0.07	0.12	
37	Ue# 100x50x17#3.00	2	9999	8	0.02	MJ MI	0.02 0.01	0.06 0.02	0.00 0.05	0.07	
38	Ue# 100x50x17#3.00	3	9999	8	0.03	MJ MI	0.02 0.04	0.06 0.08	0.00 0.06	0.15	
39	Ue# 100x50x17#3.00	3	9999	8	0.02	MJ MI	0.02 0.01	0.06 0.02	0.00 0.06	0.09	
40	Ue# 100x50x17#3.00	2	571	87	0.00	MJ MI	0.05 0.00	0.26 0.01	0.26 0.00	0.27	
41	Ue# 100x50x17#3.00	1	571	87	0.00	MJ	0.05	0.26	0.26	0.27	
42	Ue# 100x50x17#3.00	3	569	87	0.00	MJ MI	0.05 0.00	0.26 0.01	0.26 0.00	0.27	
43	Ue# 100x50x17#3.00	1	1183	90	-0.02	MJ MI	0.04 0.00	0.16 0.01	0.16 0.00	0.18	
44	W 150x22.5	1	9999	6	-0.01	MJ MI	0.03 0.00	0.09 0.01	0.09 0.00	0.11	
45	W 150x24.0	3	4806	153	-0.02	MJ MI	0.03 0.00	0.08 0.03	0.08 0.00	0.09	
46	W 150x22.5	1	9999	6	-0.01	MJ MI	0.03 0.00	0.10 0.01	0.10 0.00	0.12	
47	W 150x24.0	3	4850	153	-0.02	MJ MI	0.03 0.02	0.08 0.04	0.08 0.00	0.11	
48	Ue# 100x50x17#3.00	1	9999	25	-0.01	MJ MI	0.03 0.00	0.05 0.01	0.00 0.04	0.05	
49	Ue# 100x50x17#3.00	2	289	87	-0.03	MJ MI	0.09 0.00	0.51 0.01	0.52 0.00	0.54	
50	Ue# 100x50x17#3.00	1	289	87	-0.01	MJ MI	0.09 0.00	0.51 0.01	0.52 0.00	0.53	
51	Ue# 100x50x17#3.00	5	288	87	-0.03	MJ MI	0.09 0.00	0.51 0.01	0.52 0.00	0.54	
52	Ue# 100x50x17#3.00	1	9999	25	-0.01	MJ MI	0.03 0.00	0.05 0.01	0.00 0.04	0.05	
53	Ue# 100x50x17#3.00	1	1879	46	0.02	MJ MI	0.05 0.00	0.15 0.01	0.14 0.00	0.15	
54	Ue# 100x50x17#3.00	4	295	87	-0.38	MJ	0.09	0.50	0.00	0.83	

						MI	0.00	0.01	0.51		
55	Ue# 100x50x17#3.00	1	295	87	-0.01	MJ	0.09	0.50	0.51	0.52	
						MI	0.00	0.01	0.00		
56	Ue# 100x50x17#3.00	5	294	87	-0.38	MJ	0.09	0.50	0.00	0.83	
						MI	0.00	0.01	0.51		
57	Ue# 100x50x17#3.00	1	1898	46	0.02	MJ	0.05	0.15	0.14	0.15	
						MI	0.00	0.01	0.00		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
58	Ue# 100x50x17#3.00	5	575	132	-0.01	MJ	0.04	0.22	0.27	0.28	
						MI	0.00	0.01	0.00		
59	Ue# 100x50x17#3.00	7	576	133	-0.01	MJ	0.04	0.22	0.28	0.29	
						MI	0.00	0.01	0.00		
60	Ue# 100x50x17#3.00	1	6793	36	-0.02	MJ	0.02	0.05	0.00	0.07	
						MI	0.00	0.02	0.04		
61	Ue# 100x50x17#3.00	4	575	132	-0.01	MJ	0.04	0.22	0.00	0.29	
						MI	0.00	0.01	0.27		
62	Ue# 100x50x17#3.00	9	516	133	-0.01	MJ	0.04	0.24	0.00	0.32	
						MI	0.00	0.01	0.31		
63	Ue# 100x50x17#3.00	6	951	68	-0.27	MJ	0.05	0.20	0.00	0.44	
						MI	0.00	0.01	0.19		
64	Ue# 100x50x17#3.00	1	5439	36	-0.02	MJ	0.03	0.06	0.00	0.09	
						MI	0.00	0.02	0.06		
65	Ue# 100x50x17#3.00	7	847	68	-0.27	MJ	0.05	0.22	0.00	0.46	
						MI	0.00	0.02	0.21		
66	Ue# 100x50x17#3.00	1	9999	25	-0.02	MJ	0.03	0.05	0.00	0.05	
						MI	0.00	0.01	0.04		
67	Ue# 100x50x17#3.00	3	357	87	-0.04	MJ	0.09	0.45	0.00	0.48	
						MI	0.00	0.01	0.46		
68	Ue# 100x50x17#3.00	2	9999	86	-0.02	MJ	0.00	0.03	0.03	0.05	
69	Ue# 100x50x17#3.00	2	318	87	-0.04	MJ	0.09	0.51	0.00	0.54	
						MI	0.00	0.01	0.52		
70	Ue# 100x50x17#3.00	1	9999	25	-0.02	MJ	0.03	0.05	0.00	0.05	
						MI	0.00	0.01	0.04		
71	Ue# 100x50x17#3.00	1	1933	46	0.02	MJ	0.05	0.15	0.14	0.15	
						MI	0.00	0.01	0.00		
72	Ue# 100x50x17#3.00	3	265	87	-0.01	MJ	0.12	0.55	0.00	0.59	
						MI	0.00	0.01	0.56		
73	Ue# 100x50x17#3.00	2	200	87	-0.01	MJ	0.14	0.73	0.00	0.78	
						MI	0.00	0.02	0.75		
74	Ue# 100x50x17#3.00	2	264	87	-0.01	MJ	0.12	0.55	0.00	0.59	
						MI	0.00	0.01	0.57		
75	Ue# 100x50x17#3.00	1	1889	46	0.02	MJ	0.05	0.15	0.00	0.15	
						MI	0.00	0.01	0.14		
76	Ue# 100x50x17#3.00	1	6867	36	-0.02	MJ	0.02	0.05	0.00	0.07	
						MI	0.00	0.02	0.04		
77	Ue# 100x50x17#3.00	1	6763	36	-0.02	MJ	0.02	0.05	0.00	0.07	
						MI	0.00	0.02	0.04		
78	Ue# 100x50x17#3.00	9	951	68	-0.27	MJ	0.05	0.20	0.00	0.44	
						MI	0.00	0.01	0.19		
79	Ue# 100x50x17#3.00	8	943	68	-0.27	MJ	0.05	0.20	0.00	0.45	
						MI	0.00	0.01	0.19		
80	Ue# 100x50x17#3.00	1	1178	90	-0.02	MJ	0.04	0.16	0.00	0.18	
						MI	0.00	0.01	0.16		

81	Ue# 100x50x17#3.00	3	571	87	0.00	MJ MI	0.05 0.00	0.26 0.01	0.00 0.26	0.27	
82	Ue# 100x50x17#3.00	2	571	87	0.00	MJ MI	0.05 0.00	0.26 0.01	0.00 0.26	0.27	
83	Ue# 100x50x17#3.00	2	569	87	0.00	MJ MI	0.05 0.00	0.26 0.01	0.00 0.26	0.27	
84	Ue# 100x50x17#3.00	1	1175	90	-0.02	MJ MI	0.04 0.00	0.16 0.01	0.00 0.17	0.19	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
85	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
86	L 2"x1/8"	1	9999	127	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
87	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
88	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
89	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
90	L 2"x1/8"	1	9999	127	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
91	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
92	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
93	L 2"x1/8"	1	9999	127	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
94	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
95	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
96	L 2"x1/8"	1	9999	127	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
97	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
98	L 2"x1/8"	1	9999	127	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
99	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
100	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
101	L 2"x1/8"	1	9999	127	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
102	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
103	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
104	L 2"x1/8"	1	9999	127	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
105	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	
106	L 2"x1/8"	1	9999	128	0.00	MJ MI	0.00 0.00	0.00 0.01	0.01 0.00	0.01	

107	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
108	L 2"x1/8"	8	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
109	L 2"x1/8"	5	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
110	L 2"x1/8"	7	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
111	L 2"x1/8"	9	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
112	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
113	L 2"x1/8"	6	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
114	L 2"x1/8"	4	9999	110	0.00	MI	0.00	0.00	0.00	0.00	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
115	L 2"x1/8"	9	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
116	L 2"x1/8"	7	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
117	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
118	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
119	W 150x22.5	1	9999	9	-0.03	MJ	0.04	0.07	0.07	0.08	
120	W 150x22.5	1	9999	9	-0.03	MJ	0.04	0.07	0.07	0.08	
121	W 150x22.5	1	9999	9	-0.02	MJ	0.00	0.00	0.00	0.02	
122	W 150x22.5	1	9999	9	-0.02	MJ	0.00	0.00	0.00	0.02	
123	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.17	
						MI	0.01	0.10	0.00		
124	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.17	
						MI	0.01	0.11	0.00		
125	W 150x22.5	1	9999	6	-0.01	MI	0.02	0.08	0.00	0.09	
126	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.16	
						MI	0.01	0.10	0.00		
127	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.17	
						MI	0.01	0.10	0.00		
128	W 150x22.5	1	9999	6	-0.01	MI	0.02	0.08	0.00	0.09	
129	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.08	0.08	0.10	
						MI	0.00	0.01	0.00		
130	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.08	0.08	0.10	
						MI	0.00	0.01	0.00		
131	W 150x22.5	1	9999	6	-0.02	MJ	0.03	0.11	0.11	0.12	
132	W 150x22.5	1	9999	6	-0.02	MJ	0.03	0.11	0.11	0.12	
133	W 150x22.5	1	9999	6	-0.02	MJ	0.03	0.11	0.11	0.12	
134	W 150x22.5	1	9999	6	-0.02	MJ	0.03	0.11	0.11	0.12	
135	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.08	0.08	0.10	
						MI	0.00	0.01	0.00		
136	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.08	0.08	0.10	
						MI	0.00	0.01	0.00		
137	W 150x24.0	1	6257	143	-0.01	MJ	0.03	0.06	0.06	0.07	
140	Ue# 100x50x17#3.00	1	675	124	-0.01	MJ	0.04	0.20	0.00	0.26	
						MI	0.00	0.01	0.24		
141	Ue# 100x50x17#3.00	1	683	124	-0.01	MJ	0.04	0.20	0.00	0.25	
						MI	0.00	0.01	0.24		
142	Ue# 100x50x17#3.00	1	1428	90	-0.01	MJ	0.03	0.13	0.14	0.15	
143	Ue# 100x50x17#3.00	1	610	87	0.00	MJ	0.04	0.24	0.24	0.25	
						MI	0.00	0.01	0.00		
144	Ue# 100x50x17#3.00	1	608	87	0.00	MJ	0.04	0.24	0.25	0.25	

						MI	0.00	0.01	0.00		
145	Ue# 100x50x17#3.00	1	610	87	0.00	MJ	0.04	0.24	0.24	0.25	
						MI	0.00	0.01	0.00		
146	Ue# 100x50x17#3.00	1	1429	90	-0.02	MJ	0.03	0.13	0.14	0.15	
147	W 150x24.0	1	4339	143	-0.02	MJ	0.05	0.10	0.10	0.11	
149	W 150x24.0	1	4339	143	-0.02	MJ	0.05	0.10	0.10	0.11	
150	W 150x24.0	1	4403	143	-0.02	MJ	0.05	0.10	0.10	0.11	
151	W 150x24.0	1	6254	143	-0.01	MJ	0.03	0.06	0.06	0.07	
154	W 150x24.0	1	9999	8	0.00	MJ	0.02	0.05	0.05	0.05	
155	W 150x24.0	1	9999	8	0.00	MJ	0.02	0.05	0.05	0.05	
156	W 150x24.0	1	5466	177	-0.03	MJ	0.02	0.05	0.05	0.06	
158	Ue# 100x50x17#3.00	1	1427	90	-0.01	MJ	0.03	0.13	0.00	0.16	
						MI	0.00	0.00	0.14		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
159	Ue# 100x50x17#3.00	1	612	87	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.24		
160	Ue# 100x50x17#3.00	1	611	87	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.24		
161	Ue# 100x50x17#3.00	1	613	89	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.25		
162	Ue# 100x50x17#3.00	1	1433	90	-0.02	MJ	0.03	0.13	0.00	0.16	
						MI	0.00	0.00	0.14		
163	Ue# 100x50x17#3.00	1	675	124	-0.01	MJ	0.04	0.20	0.24	0.25	
						MI	0.00	0.01	0.00		
164	Ue# 100x50x17#3.00	1	684	124	-0.01	MJ	0.04	0.20	0.24	0.25	
						MI	0.00	0.01	0.00		
165	W 150x18.0	1	9999	137	0.00	MJ	0.00	0.02	0.02	0.02	
166	W 150x18.0	1	9999	137	0.00	MI	0.00	0.00	0.00	0.00	
167	W 150x18.0	1	9999	137	0.00	MJ	0.00	0.02	0.02	0.02	
168	Ue# 100x50x17#3.00	1	9999	6	0.00	MJ	0.03	0.03	0.02	0.02	
169	Ue# 100x50x17#3.00	1	9999	6	0.00	MJ	0.03	0.04	0.00	0.02	
						MI	0.00	0.00	0.02		
170	Ue# 100x50x17#3.00	1	1453	86	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.24		
171	Ue# 100x50x17#3.00	1	608	87	0.00	MJ	0.04	0.24	0.25	0.25	
						MI	0.00	0.01	0.00		
172	Ue# 100x50x17#3.00	1	610	87	0.00	MJ	0.04	0.24	0.24	0.25	
						MI	0.00	0.01	0.00		
173	Ue# 100x50x17#3.00	1	1449	86	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.24		
174	Ue# 100x50x17#3.00	1	1378	89	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.25		
175	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.03	0.06	0.00	0.06	
						MI	0.00	0.00	0.05		
176	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.03	0.06	0.00	0.06	
						MI	0.00	0.00	0.05		
177	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.02	0.05	0.05	0.05	
178	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.02	0.05	0.05	0.05	
179	Ue# 100x50x17#3.00	1	9999	25	-0.01	MJ	0.02	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
180	Ue# 100x50x17#3.00	1	307	87	-0.01	MJ	0.09	0.48	0.49	0.51	
						MI	0.00	0.01	0.00		

181	Ue# 100x50x17#3.00	1	307	87	-0.01	MJ	0.09	0.48	0.49	0.50	
						MI	0.00	0.01	0.00		
182	Ue# 100x50x17#3.00	1	307	87	-0.02	MJ	0.09	0.48	0.49	0.51	
						MI	0.00	0.01	0.00		
183	Ue# 100x50x17#3.00	1	9999	25	-0.01	MJ	0.02	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
184	Ue# 100x50x17#3.00	1	2304	46	-0.01	MJ	0.04	0.12	0.11	0.13	
						MI	0.00	0.01	0.00		
185	Ue# 100x50x17#3.00	1	315	87	-0.01	MJ	0.09	0.47	0.48	0.49	
						MI	0.00	0.01	0.00		
186	Ue# 100x50x17#3.00	1	314	87	-0.01	MJ	0.09	0.47	0.48	0.49	
						MI	0.00	0.01	0.00		
187	Ue# 100x50x17#3.00	1	315	87	-0.01	MJ	0.09	0.47	0.47	0.49	
						MI	0.00	0.01	0.00		
188	Ue# 100x50x17#3.00	1	2299	47	-0.01	MJ	0.04	0.12	0.11	0.13	
						MI	0.00	0.01	0.00		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
189	Ue# 100x50x17#3.00	1	8646	34	-0.01	MJ	0.02	0.05	0.00	0.05	
						MI	0.00	0.00	0.04		
190	Ue# 100x50x17#3.00	1	1128	64	-0.01	MJ	0.05	0.18	0.17	0.18	
						MI	0.00	0.01	0.00		
191	Ue# 100x50x17#3.00	1	8768	34	-0.01	MJ	0.02	0.04	0.04	0.05	
192	Ue# 100x50x17#3.00	1	1143	64	-0.01	MJ	0.05	0.18	0.00	0.18	
						MI	0.00	0.01	0.17		
193	Ue# 100x50x17#3.00	1	9999	25	-0.01	MJ	0.02	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
194	Ue# 100x50x17#3.00	1	309	90	-0.02	MJ	0.09	0.48	0.49	0.51	
						MI	0.00	0.01	0.00		
195	Ue# 100x50x17#3.00	1	308	87	-0.01	MJ	0.09	0.48	0.49	0.50	
						MI	0.00	0.01	0.00		
196	Ue# 100x50x17#3.00	1	309	87	-0.01	MJ	0.09	0.48	0.49	0.50	
						MI	0.00	0.01	0.00		
197	Ue# 100x50x17#3.00	1	9999	25	-0.01	MJ	0.02	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
198	Ue# 100x50x17#3.00	1	2308	46	-0.01	MJ	0.04	0.12	0.11	0.12	
						MI	0.00	0.01	0.00		
199	Ue# 100x50x17#3.00	1	317	90	-0.01	MJ	0.09	0.46	0.48	0.50	
						MI	0.00	0.01	0.00		
200	Ue# 100x50x17#3.00	1	316	87	-0.01	MJ	0.09	0.46	0.47	0.49	
						MI	0.00	0.01	0.00		
201	Ue# 100x50x17#3.00	1	316	87	-0.01	MJ	0.09	0.46	0.47	0.49	
						MI	0.00	0.01	0.00		
202	Ue# 100x50x17#3.00	1	2362	47	-0.01	MJ	0.04	0.12	0.11	0.12	
						MI	0.00	0.01	0.00		
203	Ue# 100x50x17#3.00	1	6155	64	-0.01	MJ	0.03	0.08	0.00	0.09	
						MI	0.00	0.00	0.08		
205	Ue# 100x50x17#3.00	1	1149	64	-0.01	MJ	0.05	0.17	0.00	0.18	
						MI	0.00	0.01	0.17		
206	Ue# 100x50x17#3.00	1	1163	64	-0.01	MJ	0.05	0.17	0.00	0.18	
						MI	0.00	0.00	0.17		
207	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
208	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	

						MI	0.00	0.01	0.00		
209	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
210	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
211	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
212	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
213	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
214	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
215	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
216	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
217	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
218	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
219	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
220	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
221	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
222	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
223	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
224	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
225	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
226	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
227	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
228	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
229	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
230	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
231	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
232	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
233	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
234	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
235	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
236	L 2"x1/8"	1	9999	110	0.00	MI	0.00	0.00	0.00	0.00	
237	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		

238	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
239	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
240	L 2"x1/8"	1	9999	124	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
241	L 2"x3/16"	1	3714	193	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
242	L 2"x3/16"	1	3714	193	-0.02	MJ	0.00	0.01	0.01	0.04	
						MI	0.00	0.02	0.00		
243	L 2"x3/16"	1	3710	193	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
244	L 2"x3/16"	1	3710	193	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
245	L 2"x3/16"	1	3718	193	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
246	L 2"x3/16"	1	3714	193	-0.03	MJ	0.00	0.01	0.01	0.04	
						MI	0.00	0.02	0.00		
247	L 2"x3/16"	1	3731	193	-0.02	MJ	0.00	0.01	0.01	0.04	
						MI	0.00	0.02	0.00		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
248	L 2"x3/16"	1	3731	193	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
249	L 2"x3/16"	1	3726	193	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
250	L 2"x3/16"	1	3726	193	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
251	L 2"x3/16"	1	3999	189	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
252	L 2"x3/16"	1	3481	197	-0.03	MJ	0.00	0.01	0.01	0.04	
						MI	0.00	0.02	0.00		
253	L 2"x3/16"	1	9999	121	-0.01	MI	0.00	0.01	0.00	0.01	
254	L 2"x3/16"	1	9999	121	0.00	MI	0.00	0.01	0.00	0.01	
255	L 2"x3/16"	1	9312	145	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
256	L 2"x3/16"	1	9328	145	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
257	L 2"x3/16"	1	9410	145	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
258	L 2"x3/16"	1	9394	145	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
259	L 2"x3/16"	1	9999	120	0.00	MI	0.00	0.01	0.00	0.01	
260	L 2"x3/16"	1	9999	120	-0.01	MI	0.00	0.01	0.00	0.01	
261	L 2"x3/16"	1	9317	145	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
262	L 2"x3/16"	1	9317	145	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
263	L 2"x3/16"	1	9399	145	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
264	L 2"x3/16"	1	9410	145	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
265	L 2"x3/16"	1	3476	198	-0.01	MJ	0.00	0.01	0.01	0.03	

						MI	0.00	0.02	0.00		
266	L 2"x3/16"	1	3476	198	-0.04	MJ	0.00	0.01	0.01	0.05	
						MI	0.00	0.02	0.00		
267	L 2"x3/16"	1	3481	197	-0.02	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
268	L 2"x3/16"	1	3472	198	-0.02	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
269	L 2"x3/16"	1	3476	198	-0.04	MJ	0.00	0.01	0.01	0.05	
						MI	0.00	0.02	0.00		
270	L 2"x3/16"	1	3471	198	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
271	L 2"x3/16"	1	3468	198	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
272	L 2"x3/16"	1	3475	198	-0.04	MJ	0.00	0.01	0.01	0.04	
						MI	0.00	0.02	0.00		
273	L 2"x3/16"	1	3479	198	-0.07	MJ	0.00	0.01	0.01	0.06	
						MI	0.00	0.02	0.00		
274	L 2"x3/16"	1	3484	197	-0.07	MJ	0.00	0.01	0.01	0.06	
						MI	0.00	0.02	0.00		
275	L 2"x3/16"	1	3479	198	-0.04	MJ	0.00	0.01	0.01	0.04	
						MI	0.00	0.02	0.00		
276	L 2"x3/16"	1	3479	198	-0.01	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		

Resultados Gerais

					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
277	W 150x22.5	1	9999	9	-0.02	MJ	0.03	0.04	0.04	0.06	
278	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.01	0.00		
279	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.01	0.00		
280	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.06	0.06	0.06	
281	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.06	0.06	0.06	
282	W 150x22.5	1	9999	9	-0.02	MJ	0.03	0.04	0.04	0.05	
283	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.01	0.00		
284	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.07	0.07	0.09	
						MI	0.00	0.01	0.00		
285	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.06	0.06	0.06	
286	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.06	0.06	0.06	
287	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.14	
						MI	0.01	0.07	0.00		
288	W 150x22.5	1	9999	6	-0.01	MI	0.01	0.06	0.00	0.06	
289	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.05	0.05	0.13	
						MI	0.01	0.07	0.00		
290	W 150x24.0	1	9999	3	0.00	MJ	0.02	0.01	0.01	0.01	
291	W 150x24.0	1	9999	7	0.00	MJ	0.02	0.04	0.04	0.05	
292	W 150x24.0	1	9999	7	0.00	MJ	0.02	0.04	0.04	0.04	
293	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.14	
						MI	0.01	0.07	0.00		
294	W 150x22.5	1	9999	6	-0.01	MI	0.01	0.06	0.00	0.06	
295	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.06	0.06	0.14	
						MI	0.01	0.07	0.00		
296	W 150x24.0	1	9999	3	0.00	MJ	0.02	0.01	0.01	0.01	

297	W 150x24.0	1	9999	7	0.00	MJ	0.02	0.04	0.04	0.05	
298	W 150x24.0	1	9999	55	0.00	MJ	0.02	0.04	0.04	0.05	
299	Ue# 100x50x17#3.00	1	4554	72	-0.01	MJ	0.02	0.09	0.08	0.10	
300	W 150x22.5	1	9999	9	-0.02	MJ	0.00	0.00	0.00	0.02	
301	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.10	0.10	0.11	
302	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.10	0.10	0.11	
303	W 150x24.0	1	9999	6	0.00	MJ	0.04	0.09	0.09	0.09	
304	W 150x24.0	1	9999	6	0.00	MJ	0.04	0.09	0.09	0.09	
305	W 150x22.5	1	9999	9	-0.02	MJ	0.00	0.00	0.00	0.02	
306	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.10	0.10	0.11	
307	W 150x22.5	1	9999	6	-0.01	MJ	0.03	0.10	0.10	0.11	
308	W 150x24.0	1	9999	6	0.00	MJ	0.04	0.09	0.09	0.09	
309	W 150x24.0	1	9999	6	0.00	MJ	0.04	0.09	0.09	0.09	
310	Ue# 100x50x17#3.00	1	2925	67	0.00	MJ	0.04	0.15	0.15	0.16	
311	Ue# 100x50x17#3.00	1	2921	67	0.00	MJ	0.04	0.15	0.15	0.15	
312	Ue# 100x50x17#3.00	1	2768	69	0.00	MJ	0.04	0.15	0.15	0.16	
313	Ue# 100x50x17#3.00	1	9999	37	-0.01	MJ	0.03	0.08	0.08	0.09	
314	Ue# 100x50x17#3.00	1	4552	72	-0.01	MJ	0.02	0.09	0.00	0.10	
						MI	0.00	0.00	0.08		
315	Ue# 100x50x17#3.00	1	2923	67	0.00	MJ	0.04	0.15	0.00	0.16	
						MI	0.00	0.00	0.15		
316	Ue# 100x50x17#3.00	1	2917	67	0.00	MJ	0.04	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
317	Ue# 100x50x17#3.00	1	2909	67	0.00	MJ	0.04	0.16	0.00	0.16	
						MI	0.00	0.00	0.15		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
318	Ue# 100x50x17#3.00	1	9999	37	-0.01	MJ	0.03	0.09	0.00	0.10	
						MI	0.00	0.00	0.09		
319	Ue# 100x50x17#3.00	1	1106	132	0.00	MJ	0.02	0.18	0.00	0.24	
						MI	0.00	0.01	0.23		
320	Ue# 100x50x17#3.00	1	2901	68	-0.01	MJ	0.03	0.17	0.00	0.18	
						MI	0.00	0.00	0.17		
321	Ue# 100x50x17#3.00	1	1107	132	0.00	MJ	0.02	0.18	0.23	0.24	
						MI	0.00	0.01	0.00		
322	Ue# 100x50x17#3.00	1	2901	68	-0.01	MJ	0.03	0.17	0.17	0.18	
323	W 150x18.0	1	9999	106	0.00	MJ	0.00	0.02	0.02	0.02	
324	W 150x18.0	2	9999	106	0.00	MI	0.00	0.00	0.00	0.00	
325	W 150x18.0	1	9999	106	0.00	MJ	0.00	0.02	0.02	0.02	
326	Ue# 100x50x17#3.00	1	9999	4	0.00	MJ	0.02	0.01	0.01	0.01	
327	Ue# 100x50x17#3.00	1	2902	67	0.00	MJ	0.04	0.16	0.15	0.15	
328	Ue# 100x50x17#3.00	1	2768	69	0.00	MJ	0.04	0.15	0.15	0.15	
329	Ue# 100x50x17#3.00	1	9999	4	0.00	MJ	0.02	0.01	0.00	0.01	
						MI	0.00	0.00	0.01		
330	Ue# 100x50x17#3.00	1	2955	67	0.00	MJ	0.03	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
331	Ue# 100x50x17#3.00	1	2923	67	0.00	MJ	0.04	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
332	Ue# 100x50x17#3.00	1	2920	67	0.00	MJ	0.04	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
333	Ue# 100x50x17#3.00	1	9999	4	0.00	MJ	0.03	0.03	0.00	0.02	
						MI	0.00	0.00	0.02		
334	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.02	0.05	0.00	0.05	
						MI	0.00	0.00	0.04		

335	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.02	0.05	0.00	0.05	
						MI	0.00	0.00	0.05		
336	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.02	0.05	0.05	0.05	
337	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.02	0.05	0.05	0.05	
338	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.01	0.02	0.00	0.03	
						MI	0.00	0.01	0.02		
339	Ue# 100x50x17#3.00	1	1468	67	-0.01	MJ	0.07	0.31	0.30	0.31	
						MI	0.00	0.01	0.00		
340	Ue# 100x50x17#3.00	1	1463	67	0.00	MJ	0.07	0.31	0.30	0.31	
						MI	0.00	0.01	0.00		
341	Ue# 100x50x17#3.00	1	1393	69	0.00	MJ	0.07	0.31	0.30	0.31	
						MI	0.00	0.01	0.00		
342	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.02	0.02	0.00	0.03	
						MI	0.00	0.01	0.02		
343	Ue# 100x50x17#3.00	1	9999	37	-0.01	MJ	0.02	0.08	0.07	0.08	
344	Ue# 100x50x17#3.00	1	1502	67	-0.01	MJ	0.07	0.30	0.29	0.30	
						MI	0.00	0.01	0.00		
345	Ue# 100x50x17#3.00	1	1500	67	-0.01	MJ	0.07	0.30	0.29	0.30	
						MI	0.00	0.01	0.00		
346	Ue# 100x50x17#3.00	1	1426	69	-0.01	MJ	0.07	0.30	0.29	0.30	
						MI	0.00	0.01	0.00		
347	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.04	0.07	0.00	0.07	
						MI	0.00	0.00	0.06		
348	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.01	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
349	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.02	0.04	0.00	0.05	
						MI	0.00	0.00	0.04		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
350	Ue# 100x50x17#3.00	1	2901	68	-0.01	MJ	0.03	0.16	0.00	0.17	
						MI	0.00	0.01	0.16		
351	Ue# 100x50x17#3.00	1	7736	36	-0.01	MJ	0.04	0.13	0.00	0.14	
						MI	0.00	0.00	0.13		
352	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.01	0.02	0.00	0.03	
						MI	0.00	0.01	0.02		
353	Ue# 100x50x17#3.00	1	1469	67	-0.01	MJ	0.07	0.31	0.00	0.32	
						MI	0.00	0.01	0.30		
354	Ue# 100x50x17#3.00	1	1464	67	0.00	MJ	0.07	0.31	0.00	0.31	
						MI	0.00	0.01	0.30		
355	Ue# 100x50x17#3.00	1	1465	67	0.00	MJ	0.07	0.31	0.00	0.31	
						MI	0.00	0.01	0.30		
356	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.02	0.02	0.00	0.04	
						MI	0.00	0.01	0.02		
357	Ue# 100x50x17#3.00	1	9999	37	-0.01	MJ	0.02	0.08	0.00	0.08	
						MI	0.00	0.00	0.07		
358	Ue# 100x50x17#3.00	1	1499	67	-0.01	MJ	0.07	0.30	0.00	0.31	
						MI	0.00	0.01	0.29		
359	Ue# 100x50x17#3.00	1	1498	67	-0.01	MJ	0.07	0.30	0.00	0.31	
						MI	0.00	0.01	0.29		
360	Ue# 100x50x17#3.00	1	1494	67	-0.01	MJ	0.07	0.30	0.00	0.31	
						MI	0.00	0.01	0.29		
361	Ue# 100x50x17#3.00	1	9999	20	0.00	MJ	0.04	0.08	0.07	0.08	
362	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.01	0.04	0.00	0.05	

						MI	0.00	0.00	0.04		
363	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.02	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
364	Ue# 100x50x17#3.00	1	3517	68	-0.01	MJ	0.03	0.14	0.00	0.15	
						MI	0.00	0.01	0.14		
365	Ue# 100x50x17#3.00	1	7733	36	-0.01	MJ	0.04	0.13	0.00	0.14	
						MI	0.00	0.00	0.13		
366	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
367	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
368	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
369	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
370	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
371	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
372	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
373	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
374	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
375	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
376	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
377	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
378	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
379	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
380	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
381	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
382	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
383	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
384	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
385	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
386	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
387	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
388	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
390	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
391	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	

						MI	0.00	0.01	0.00		
392	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
393	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
394	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
395	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
396	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
397	L 2"x1/8"	1	9999	102	0.00	MI	0.00	0.00	0.00	0.00	
398	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
399	L 2"x1/8"	1	9999	127	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
400	L 2"x3/16"	1	5453	170	-0.02	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
401	L 2"x3/16"	1	5446	170	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.02	0.00		
402	L 2"x3/16"	1	5433	170	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.02	0.00		
403	L 2"x3/16"	1	5447	170	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.02	0.00		
404	L 2"x3/16"	1	5156	173	-0.02	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
405	L 2"x3/16"	1	5747	167	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		
406	L 2"x3/16"	1	5493	170	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		
407	L 2"x3/16"	1	5493	170	-0.02	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.01	0.00		
408	L 2"x3/16"	1	5486	170	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
409	L 2"x3/16"	1	5493	170	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		
410	L 2"x3/16"	1	5493	170	0.00	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		
411	L 2"x3/16"	1	5500	170	-0.02	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.01	0.00		
412	L 2"x3/16"	1	9999	116	-0.01	MI	0.00	0.00	0.00	0.01	
413	L 2"x3/16"	1	9999	116	0.00	MI	0.00	0.00	0.00	0.00	
414	L 2"x3/16"	1	9999	116	0.00	MI	0.00	0.00	0.00	0.00	
415	L 2"x3/16"	1	9999	116	-0.01	MI	0.00	0.00	0.00	0.01	
416	L 2"x3/16"	1	9725	144	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
417	L 2"x3/16"	1	9725	144	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
418	L 2"x3/16"	1	9725	144	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
419	L 2"x3/16"	1	9744	144	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
420	L 2"x3/16"	1	9999	116	-0.01	MI	0.00	0.00	0.00	0.01	
421	L 2"x3/16"	1	9999	116	0.00	MI	0.00	0.00	0.00	0.00	

422	L 2"x3/16"	1	9999	116	0.00	MI	0.00	0.00	0.00	0.00	
423	L 2"x3/16"	1	9999	116	-0.01	MI	0.00	0.00	0.00	0.01	
424	L 2"x3/16"	1	9734	144	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
425	L 2"x3/16"	1	9734	144	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
426	L 2"x3/16"	1	9734	144	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
427	L 2"x3/16"	1	9734	144	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
428	W 150x22.5	1	9999	9	-0.01	MJ	0.01	0.02	0.02	0.02	
429	W 150x22.5	1	9999	9	-0.01	MJ	0.01	0.02	0.02	0.02	
430	W 150x22.5	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.04	
						MI	0.00	0.03	0.00		
431	W 150x22.5	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.04	
						MI	0.01	0.03	0.00		
432	W 150x24.0	1	9999	10	0.00	MJ	0.01	0.01	0.01	0.01	
433	W 150x24.0	1	9999	10	0.00	MJ	0.01	0.01	0.01	0.01	
434	W 150x22.5	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.04	
						MI	0.01	0.03	0.00		
435	W 150x22.5	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.04	
						MI	0.01	0.03	0.00		
436	W 150x24.0	1	9999	10	0.00	MJ	0.01	0.01	0.01	0.01	
437	W 150x24.0	1	9999	10	0.00	MJ	0.01	0.01	0.01	0.01	
438	W 150x22.5	1	9999	6	0.00	MJ	0.00	0.01	0.01	0.02	
439	W 150x22.5	1	9999	6	0.00	MJ	0.00	0.01	0.01	0.02	
440	W 150x24.0	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.01	
441	W 150x24.0	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.01	
442	W 150x22.5	1	9999	6	0.00	MJ	0.00	0.01	0.01	0.02	
443	W 150x22.5	1	9999	6	0.00	MJ	0.00	0.01	0.01	0.02	
444	W 150x24.0	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.01	
446	W 150x22.5	1	9999	9	-0.01	MJ	0.00	0.00	0.00	0.01	
447	W 150x22.5	1	9999	6	-0.01	MJ	0.01	0.02	0.02	0.02	
448	W 150x22.5	1	9999	6	-0.01	MJ	0.01	0.02	0.02	0.02	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
449	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.02	0.02	0.02	
450	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.02	0.02	0.02	
451	W 150x22.5	1	9999	9	-0.01	MJ	0.00	0.00	0.00	0.01	
452	W 150x22.5	1	9999	6	-0.01	MJ	0.01	0.02	0.02	0.02	
453	W 150x22.5	1	9999	6	-0.01	MJ	0.01	0.02	0.02	0.02	
454	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.02	0.02	0.02	
455	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.02	0.02	0.02	
456	W 150x18.0	1	9999	106	0.00	MJ	0.00	0.01	0.01	0.01	
457	W 150x18.0	1	9999	106	0.00	MI	0.00	0.00	0.00	0.00	
458	W 150x18.0	1	9999	106	0.00	MJ	0.00	0.01	0.01	0.01	
459	Ue# 100x50x17#3.00	1	9999	10	0.00	MJ	0.00	0.01	0.01	0.01	
460	Ue# 100x50x17#3.00	1	4328	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
461	Ue# 100x50x17#3.00	1	4328	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
462	Ue# 100x50x17#3.00	1	9999	10	0.00	MJ	0.01	0.01	0.00	0.01	
						MI	0.00	0.00	0.01		

463	Ue# 100x50x17#3.00	1	4334	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
464	Ue# 100x50x17#3.00	1	4334	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
465	Ue# 100x50x17#3.00	1	9999	10	0.00	MI	0.00	0.00	0.00	0.01	
466	Ue# 100x50x17#3.00	1	9999	16	0.00	MI	0.00	0.00	0.00	0.01	
467	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.01	0.01	0.00	0.02	
						MI	0.00	0.00	0.01		
468	Ue# 100x50x17#3.00	1	5962	79	0.00	MJ	0.01	0.06	0.00	0.07	
						MI	0.00	0.00	0.06		
469	Ue# 100x50x17#3.00	1	4884	62	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.00	0.10		
470	Ue# 100x50x17#3.00	1	4329	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
471	Ue# 100x50x17#3.00	1	4329	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
472	Ue# 100x50x17#3.00	1	4186	109	-0.01	MJ	0.02	0.06	0.00	0.08	
						MI	0.00	0.01	0.06		
473	Ue# 100x50x17#3.00	1	5968	79	0.00	MJ	0.01	0.06	0.06	0.06	
474	Ue# 100x50x17#3.00	1	4336	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
475	Ue# 100x50x17#3.00	1	4334	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
476	Ue# 100x50x17#3.00	1	4334	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
477	Ue# 100x50x17#3.00	1	4189	109	0.00	MJ	0.02	0.06	0.00	0.07	
						MI	0.00	0.01	0.06		
478	Ue# 100x50x17#3.00	1	9275	66	0.00	MJ	0.01	0.04	0.04	0.05	
479	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.04	0.04	0.04	
480	Ue# 100x50x17#3.00	1	9999	30	0.00	MJ	0.01	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
481	Ue# 100x50x17#3.00	1	2485	62	0.00	MJ	0.05	0.20	0.00	0.21	
						MI	0.00	0.01	0.20		
482	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.00	0.21	
						MI	0.00	0.01	0.20		
483	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.00	0.21	
						MI	0.00	0.01	0.20		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
484	Ue# 100x50x17#3.00	1	9999	59	0.00	MJ	0.02	0.03	0.00	0.04	
						MI	0.00	0.00	0.03		
485	Ue# 100x50x17#3.00	1	9999	30	0.00	MJ	0.01	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
486	Ue# 100x50x17#3.00	1	2207	67	0.00	MJ	0.05	0.21	0.20	0.21	
						MI	0.00	0.01	0.00		
487	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.20	0.21	
						MI	0.00	0.01	0.00		
488	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.20	0.21	
						MI	0.00	0.01	0.00		
489	Ue# 100x50x17#3.00	1	9999	59	0.00	MJ	0.02	0.03	0.00	0.03	
						MI	0.00	0.00	0.03		
490	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.01	0.02	0.00	0.03	
						MI	0.00	0.00	0.02		
491	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.02	0.00	0.03	

						MI	0.00	0.00	0.02		
492	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.01	0.02	0.00	0.03	
						MI	0.00	0.00	0.02		
493	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.02	0.00	0.03	
						MI	0.00	0.00	0.02		
494	Ue# 100x50x17#3.00	1	9255	66	0.00	MJ	0.01	0.04	0.00	0.05	
						MI	0.00	0.00	0.04		
495	W 150x22.5	1	9999	6	0.00	MI	0.00	0.02	0.00	0.02	
496	W 150x22.5	1	9999	6	0.00	MI	0.00	0.02	0.00	0.02	
497	W 150x24.0	1	9999	8	0.00	MJ	0.01	0.00	0.00	0.00	
498	W 150x24.0	1	9999	38	0.00	MJ	0.01	0.01	0.01	0.01	
499	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
500	L 2"x1/8"	1	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
501	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
502	L 2"x1/8"	1	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
503	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
504	L 2"x1/8"	1	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
505	L 2"x1/8"	1	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
506	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
507	L 2"x1/8"	1	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
508	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
509	L 2"x1/8"	1	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
510	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
511	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
512	L 2"x1/8"	2	9999	108	0.00	MI	0.00	0.00	0.00	0.00	
513	L 2"x1/8"	2	9999	115	0.00	MJ	0.00	0.00	0.01	0.00	
514	L 2"x1/8"	2	9999	115	0.00	MJ	0.00	0.00	0.01	0.00	
515	L 2"x1/8"	2	9999	115	0.00	MJ	0.00	0.00	0.01	0.00	
516	L 2"x1/8"	2	9999	115	0.00	MJ	0.00	0.00	0.01	0.00	
517	L 2"x3/16"	1	8860	147	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
518	L 2"x3/16"	1	8860	147	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
519	L 2"x3/16"	1	8860	147	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
520	L 2"x3/16"	1	8860	147	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
521	L 2"x3/16"	1	9999	141	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
522	L 2"x3/16"	1	7591	153	-0.01	MJ	0.00	0.01	0.01	0.02	
						MI	0.00	0.01	0.00		
523	L 2"x3/16"	1	8850	147	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
524	L 2"x3/16"	1	8866	147	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
525	L 2"x3/16"	1	8850	147	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
526	L 2"x3/16"	1	8850	147	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
527	L 2"x3/16"	1	8850	147	-0.01	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		

528	L 2"x3/16"	1	8850	147	0.00	MJ	0.00	0.00	0.01	0.02	
						MI	0.00	0.01	0.00		
529	W 150x22.5	1	9999	9	-0.02	MI	0.00	0.01	0.00	0.04	
						MJ	0.01	0.02	0.02		
530	W 150x22.5	1	9999	9	-0.02	MI	0.00	0.02	0.00	0.06	
						MJ	0.02	0.02	0.02		
531	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.04	0.04	0.09	
						MI	0.01	0.04	0.00		
532	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.03	0.03	0.07	
						MI	0.00	0.04	0.00		
533	W 150x24.0	1	9999	59	0.00	MJ	0.01	0.03	0.03	0.03	
534	W 150x24.0	1	9999	56	0.00	MJ	0.01	0.03	0.03	0.03	
535	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.07	0.07	0.08	
						MI	0.00	0.01	0.00		
536	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.06	0.06	0.08	
						MI	0.00	0.01	0.00		
537	W 150x24.0	1	9999	6	0.00	MJ	0.03	0.06	0.06	0.06	
538	W 150x24.0	1	9999	6	0.00	MJ	0.03	0.05	0.05	0.06	
539	W 150x22.5	1	9999	6	-0.01	MI	0.01	0.03	0.00	0.03	
540	W 150x24.0	1	9999	23	0.00	MJ	0.01	0.01	0.01	0.01	
541	W 150x22.5	1	9999	6	-0.02	MJ	0.03	0.08	0.08	0.15	
						MI	0.01	0.06	0.00		
542	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.02	0.02	0.09	
						MI	0.01	0.06	0.00		
543	W 150x22.5	1	9999	6	-0.01	MJ	0.02	0.02	0.02	0.09	
						MI	0.01	0.06	0.00		
544	W 150x22.5	1	9999	6	-0.01	MJ	0.04	0.08	0.08	0.19	
						MI	0.01	0.10	0.00		
545	W 150x22.5	1	9999	6	-0.01	MI	0.01	0.06	0.00	0.07	
546	W 150x22.5	1	9999	9	-0.01	MI	0.00	0.01	0.00	0.02	
547	W 150x22.5	1	9999	9	-0.01	MI	0.01	0.06	0.00	0.06	
548	W 150x24.0	1	9999	8	0.00	MJ	0.02	0.03	0.03	0.03	
549	W 150x24.0	1	9999	8	0.00	MJ	0.02	0.03	0.03	0.03	
550	W 150x18.0	1	9999	125	0.00	MJ	0.00	0.02	0.02	0.02	
551	W 150x18.0	1	9999	147	0.00	MJ	0.00	0.01	0.01	0.01	
552	W 150x24.0	1	9999	6	0.00	MJ	0.03	0.03	0.03	0.04	
553	W 150x24.0	1	9999	6	0.00	MJ	0.03	0.04	0.04	0.04	
554	W 150x24.0	1	9999	7	0.00	MJ	0.02	0.06	0.06	0.06	
555	W 150x24.0	1	9999	7	0.00	MJ	0.03	0.07	0.07	0.07	
556	W 150x22.5	1	9999	9	-0.02	MI	0.01	0.05	0.00	0.06	
557	W 150x22.5	1	9999	6	-0.02	MJ	0.04	0.11	0.11	0.13	
						MI	0.00	0.01	0.00		

Resultados Gerais

					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
558	W 150x24.0	1	9999	6	0.00	MJ	0.04	0.08	0.08	0.09	
559	W 150x24.0	1	9999	6	0.00	MJ	0.03	0.07	0.07	0.07	
560	W 150x18.0	1	9999	82	0.00	MJ	0.00	0.01	0.01	0.01	
561	W 150x18.0	1	9999	116	0.00	MJ	0.00	0.01	0.01	0.01	
562	W 150x22.5	1	9999	6	-0.01	MI	0.01	0.05	0.00	0.06	
563	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.02	0.02	0.03	
564	Ue# 100x50x17#3.00	1	683	120	-0.02	MJ	0.04	0.34	0.00	0.43	
						MI	0.00	0.01	0.40		
565	Ue# 100x50x17#3.00	1	2242	73	0.00	MJ	0.04	0.18	0.00	0.20	

						MI	0.00	0.02	0.18		
566	Ue# 100x50x17#3.00	1	9999	28	-0.01	MJ	0.02	0.05	0.00	0.05	
						MI	0.00	0.00	0.04		
567	Ue# 100x50x17#3.00	1	1519	130	0.00	MJ	0.02	0.13	0.00	0.18	
						MI	0.00	0.01	0.17		
568	Ue# 100x50x17#3.00	1	4835	63	0.00	MJ	0.02	0.11	0.00	0.12	
						MI	0.00	0.01	0.11		
569	Ue# 100x50x17#3.00	1	9311	54	0.00	MJ	0.02	0.05	0.05	0.06	
570	Ue# 100x50x17#3.00	1	2374	73	0.00	MJ	0.04	0.17	0.00	0.18	
						MI	0.00	0.02	0.17		
571	Ue# 100x50x17#3.00	1	1073	130	0.00	MJ	0.03	0.18	0.23	0.24	
						MI	0.00	0.01	0.00		
572	Ue# 100x50x17#3.00	1	1962	93	0.00	MJ	0.03	0.16	0.00	0.18	
						MI	0.00	0.03	0.17		
573	Ue# 100x50x17#3.00	1	1711	82	0.00	MJ	0.04	0.24	0.24	0.27	
						MI	0.00	0.03	0.00		
574	Ue# 100x50x17#3.00	1	3789	65	-0.01	MJ	0.02	0.14	0.14	0.15	
						MI	0.00	0.01	0.00		
575	Ue# 100x50x17#3.00	1	1231	100	0.00	MJ	0.03	0.26	0.27	0.28	
						MI	0.00	0.01	0.00		
576	Ue# 100x50x17#3.00	1	5650	54	0.00	MJ	0.02	0.10	0.00	0.12	
						MI	0.00	0.02	0.09		
577	Ue# 100x50x17#3.00	1	2254	73	0.00	MJ	0.04	0.18	0.00	0.19	
						MI	0.00	0.02	0.18		
578	Ue# 100x50x17#3.00	1	6425	66	0.00	MJ	0.02	0.07	0.06	0.07	
579	Ue# 100x50x17#3.00	1	2379	73	0.00	MJ	0.04	0.17	0.17	0.18	
						MI	0.00	0.02	0.00		
580	Ue# 100x50x17#3.00	1	9999	26	0.00	MJ	0.02	0.06	0.00	0.09	
						MI	0.00	0.04	0.06		
581	Ue# 100x50x17#3.00	1	2182	93	0.00	MJ	0.02	0.14	0.00	0.17	
						MI	0.00	0.03	0.15		
582	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.06	0.06	0.09	
						MI	0.00	0.04	0.00		
583	Ue# 100x50x17#3.00	1	1306	171	0.00	MJ	0.02	0.11	0.00	0.19	
						MI	0.00	0.01	0.18		
584	Ue# 100x50x17#3.00	1	2238	54	0.00	MJ	0.06	0.29	0.00	0.31	
						MI	0.00	0.03	0.28		
585	Ue# 100x50x17#3.00	1	1163	73	0.00	MJ	0.08	0.35	0.00	0.37	
						MI	0.00	0.02	0.34		
586	Ue# 100x50x17#3.00	1	9999	15	0.00	MJ	0.01	0.01	0.00	0.01	
						MI	0.00	0.00	0.01		
587	Ue# 100x50x17#3.00	1	739	87	0.00	MJ	0.07	0.48	0.00	0.51	
						MI	0.00	0.02	0.49		
589	Ue# 100x50x17#3.00	1	9999	15	0.00	MJ	0.03	0.04	0.03	0.03	

Resultados Gerais

Barr	Seção	Co	Flec L/	Esbl	CAPACIDADES Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom
590	Ue# 100x50x17#3.00	1	9999	36	0.00	MJ	0.01	0.03	0.00	0.05
						MI	0.00	0.02	0.03	
591	Ue# 100x50x17#3.00	1	9999	33	0.00	MJ	0.01	0.02	0.00	0.04
						MI	0.00	0.01	0.02	
592	Ue# 100x50x17#3.00	1	3939	67	-0.01	MJ	0.02	0.12	0.00	0.14
						MI	0.00	0.02	0.11	
593	Ue# 100x50x17#3.00	1	9999	33	0.00	MJ	0.03	0.09	0.00	0.09
						MI	0.00	0.00	0.08	
594	Ue# 100x50x17#3.00	1	9999	15	0.00	MJ	0.01	0.01	0.00	0.02
						MI	0.00	0.01	0.01	
595	Ue# 100x50x17#3.00	1	1229	73	0.00	MJ	0.07	0.33	0.00	0.35
						MI	0.00	0.02	0.33	
596	Ue# 100x50x17#3.00	1	9999	33	0.00	MJ	0.03	0.06	0.00	0.06
						MI	0.00	0.01	0.05	
597	Ue# 100x50x17#3.00	1	9999	28	0.00	MJ	0.02	0.05	0.00	0.05
						MI	0.00	0.00	0.05	
598	Ue# 100x50x17#3.00	1	1226	73	0.00	MJ	0.07	0.33	0.00	0.35
						MI	0.00	0.02	0.33	
599	Ue# 100x50x17#3.00	1	9999	33	0.00	MJ	0.01	0.01	0.00	0.01
						MI	0.00	0.00	0.01	
600	Ue# 100x50x17#3.00	1	9999	59	0.00	MJ	0.01	0.02	0.00	0.03
						MI	0.00	0.00	0.02	
601	Ue# 100x50x17#3.00	1	1056	82	0.00	MJ	0.06	0.38	0.00	0.42
						MI	0.00	0.03	0.38	
602	Ue# 100x50x17#3.00	1	2028	119	-0.01	MJ	0.03	0.11	0.00	0.14
						MI	0.00	0.01	0.12	
603	Ue# 100x50x17#3.00	1	1330	82	0.00	MJ	0.05	0.29	0.00	0.32
						MI	0.00	0.03	0.29	
604	Ue# 100x50x17#3.00	1	9999	36	0.00	MJ	0.01	0.04	0.00	0.05
						MI	0.00	0.02	0.03	
605	Ue# 100x50x17#3.00	1	1111	93	0.00	MJ	0.05	0.29	0.30	0.32
						MI	0.00	0.03	0.00	
606	Ue# 100x50x17#3.00	1	1328	82	0.00	MJ	0.05	0.29	0.29	0.31
						MI	0.00	0.03	0.00	
607	Ue# 100x50x17#3.00	1	2734	67	-0.01	MJ	0.04	0.16	0.16	0.18
						MI	0.00	0.02	0.00	
608	Ue# 100x50x17#3.00	1	1051	93	-0.01	MJ	0.05	0.30	0.32	0.34
						MI	0.00	0.03	0.00	
609	Ue# 100x50x17#3.00	1	1056	82	-0.01	MJ	0.06	0.38	0.38	0.41
						MI	0.00	0.03	0.00	
610	Ue# 100x50x17#3.00	1	9999	37	0.00	MJ	0.02	0.04	0.04	0.04
611	Ue# 100x50x17#3.00	1	9999	32	0.00	MJ	0.03	0.10	0.10	0.11
						MI	0.00	0.01	0.00	
612	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01
						MI	0.00	0.01	0.00	
613	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01
						MI	0.00	0.01	0.00	
614	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01
						MI	0.00	0.01	0.00	
615	L 2"x1/8"	1	9999	123	0.00	MJ	0.00	0.00	0.01	0.01
						MI	0.00	0.01	0.00	
616	L 2"x1/8"	1	9999	123	0.00	MJ	0.00	0.00	0.01	0.01

						MI	0.00	0.01	0.00			

Resultados Gerais											
					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
617	L 2"x1/8"	1	9999	123	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
618	L 2"x1/8"	1	9999	123	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
619	L 2"x1/8"	1	9999	123	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
620	L 2"x1/8"	1	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
621	L 2"x1/8"	2	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
622	L 2"x1/8"	1	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
623	L 2"x1/8"	2	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
624	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
625	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
626	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
627	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
628	L 2"x1/8"	1	9999	126	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
629	L 2"x1/8"	1	9999	123	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
630	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
631	L 2"x1/8"	2	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
632	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
633	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
634	L 2"x1/8"	2	9999	97	0.00	MI	0.00	0.00	0.00	0.00	
635	Ue# 100x50x17#3.00	1	9999	8	0.00	MI	0.00	0.00	0.00	0.01	
636	L 2"x1/8"	1	9999	97	0.00	MI	0.00	0.00	0.00	0.00	
637	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
638	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
639	L 2"x1/8"	1	9999	97	0.00	MI	0.00	0.00	0.00	0.00	
640	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
641	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
642	L 2"x1/8"	1	9999	97	0.00	MI	0.00	0.00	0.00	0.00	
643	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
644	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
645	L 2"x1/8"	1	9999	97	0.00	MI	0.00	0.00	0.00	0.00	
646	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
647	L 2"x1/8"	1	9999	101	0.00	MI	0.00	0.00	0.00	0.00	
648	L 2"x1/8"	1	9999	92	0.00	MI	0.00	0.00	0.00	0.00	
649	L 2"x1/8"	1	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
650	L 2"x1/8"	1	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
651	L 2"x1/8"	1	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
652	L 2"x1/8"	1	9999	95	0.00	MI	0.00	0.00	0.00	0.00	
655	Ue# 100x50x17#3.00	2	573	87	0.01	MJ	0.05	0.26	0.26	0.26	
						MI	0.00	0.01	0.00		
657	Ue# 100x50x17#3.00	2	469	87	-0.15	MJ	0.07	0.31	0.00	0.39	
						MI	0.00	0.01	0.32		
659	Ue# 100x50x17#3.00	2	9999	5	0.01	MJ	0.04	0.04	0.00	0.05	
						MI	0.03	0.04	0.03		

663	Ue# 100x50x17#3.00	3	9999	6	0.01	MJ MI	0.03 0.03	0.04 0.04	0.00 0.03	0.05		

Resultados Gerais											
					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
664	W 150x18.0	3	9999	137	0.00	MJ	0.00	0.01	0.01	0.03	
						MI	0.00	0.02	0.00		
668	W 150x24.0	8	8167	100	-0.01	MJ	0.02	0.02	0.02	0.05	
						MI	0.00	0.03	0.00		
673	W 150x18.0	3	9999	137	-0.05	MJ	0.00	0.02	0.02	0.05	
						MI	0.00	0.01	0.00		
709	Ue# 100x50x17#3.00	3	9999	86	-0.02	MJ	0.00	0.03	0.03	0.05	
741	Ue# 100x50x17#3.00	1	610	87	0.00	MJ	0.04	0.24	0.24	0.25	
						MI	0.00	0.01	0.00		
756	Ue# 100x50x17#3.00	1	9999	6	0.00	MJ	0.03	0.03	0.02	0.02	
758	Ue# 100x50x17#3.00	1	9999	6	0.00	MJ	0.03	0.03	0.00	0.02	
						MI	0.00	0.00	0.02		
759	W 150x24.0	1	9999	5	0.00	MJ	0.02	0.01	0.01	0.01	
760	W 150x24.0	1	9999	99	-0.01	MJ	0.02	0.02	0.02	0.03	
763	W 150x24.0	1	5117	169	-0.03	MJ	0.02	0.05	0.05	0.06	
764	W 150x24.0	1	5167	169	-0.03	MJ	0.02	0.05	0.05	0.06	
773	Ue# 100x50x17#3.00	1	1451	86	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.24		
776	Ue# 100x50x17#3.00	1	1449	86	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.24		
777	Ue# 100x50x17#3.00	1	1534	83	0.00	MJ	0.04	0.24	0.00	0.25	
						MI	0.00	0.01	0.24		
810	W 150x24.0	1	6350	143	-0.01	MJ	0.03	0.06	0.06	0.07	
812	W 150x24.0	1	4401	143	-0.02	MJ	0.05	0.10	0.10	0.11	
815	W 150x24.0	1	6359	143	-0.01	MJ	0.03	0.06	0.06	0.07	
822	W 150x24.0	1	9675	104	-0.01	MJ	0.02	0.02	0.02	0.03	
827	W 150x24.0	1	9999	49	0.00	MJ	0.02	0.05	0.05	0.05	
828	Ue# 100x50x17#3.00	1	2939	67	0.00	MJ	0.03	0.15	0.15	0.15	
829	W 150x24.0	1	9999	48	0.00	MJ	0.02	0.05	0.05	0.05	
830	W 150x24.0	1	9999	49	0.00	MJ	0.02	0.05	0.05	0.05	
831	Ue# 100x50x17#3.00	1	9999	5	0.00	MJ	0.02	0.01	0.01	0.01	
832	W 150x24.0	1	9999	48	0.00	MJ	0.02	0.05	0.05	0.05	
833	W 150x24.0	1	9999	26	0.00	MJ	0.01	0.02	0.02	0.02	
834	Ue# 100x50x17#3.00	3	9999	6	0.06	MJ	0.03	0.04	0.00	0.10	
						MI	0.01	0.02	0.02		
836	W 150x24.0	1	9999	55	0.00	MJ	0.01	0.03	0.03	0.03	
837	W 150x24.0	1	9999	27	0.00	MJ	0.01	0.02	0.02	0.02	
838	W 150x24.0	1	9999	55	0.00	MJ	0.02	0.04	0.04	0.04	
839	W 150x24.0	1	9999	7	0.00	MJ	0.02	0.04	0.04	0.05	
840	W 150x24.0	1	9999	55	0.00	MJ	0.02	0.04	0.04	0.04	
841	W 150x24.0	1	9999	55	0.00	MJ	0.01	0.03	0.03	0.03	
842	Ue# 100x50x17#3.00	1	9999	37	-0.01	MJ	0.03	0.08	0.08	0.09	
843	W 150x24.0	1	9999	49	0.00	MJ	0.03	0.07	0.07	0.07	
844	W 150x24.0	1	9999	48	0.00	MJ	0.03	0.07	0.07	0.07	
845	W 150x24.0	1	9999	49	0.00	MJ	0.03	0.07	0.07	0.07	
846	W 150x24.0	1	9999	48	0.00	MJ	0.03	0.07	0.07	0.07	
847	Ue# 100x50x17#3.00	1	2921	67	0.00	MJ	0.04	0.15	0.15	0.16	
848	Ue# 100x50x17#3.00	1	4561	72	-0.01	MJ	0.02	0.09	0.08	0.10	
849	Ue# 100x50x17#3.00	1	9999	37	-0.01	MJ	0.03	0.08	0.00	0.09	
						MI	0.00	0.00	0.08		
850	Ue# 100x50x17#3.00	1	2919	67	0.00	MJ	0.04	0.15	0.00	0.16	

						MI	0.00	0.00	0.15		
851	Ue# 100x50x17#3.00	1	3696	72	-0.01	MJ	0.03	0.10	0.00	0.11	
						MI	0.00	0.00	0.10		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
852	Ue# 100x50x17#3.00	1	2901	68	-0.01	MJ	0.03	0.17	0.00	0.18	
						MI	0.00	0.00	0.17		
853	Ue# 100x50x17#3.00	1	1106	132	0.00	MJ	0.02	0.18	0.00	0.24	
						MI	0.00	0.01	0.23		
854	Ue# 100x50x17#3.00	1	2900	68	-0.01	MJ	0.03	0.17	0.17	0.18	
855	Ue# 100x50x17#3.00	1	1108	132	0.00	MJ	0.02	0.18	0.23	0.24	
						MI	0.00	0.01	0.00		
856	Ue# 100x50x17#3.00	1	2909	67	0.00	MJ	0.04	0.16	0.15	0.15	
857	Ue# 100x50x17#3.00	1	3100	65	0.00	MJ	0.03	0.15	0.15	0.15	
858	Ue# 100x50x17#3.00	1	2939	67	0.00	MJ	0.04	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
859	Ue# 100x50x17#3.00	1	2922	67	0.00	MJ	0.04	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
860	Ue# 100x50x17#3.00	1	2921	67	0.00	MJ	0.04	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
861	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.02	0.02	0.00	0.03	
						MI	0.00	0.01	0.02		
862	Ue# 100x50x17#3.00	1	1468	67	0.00	MJ	0.07	0.31	0.30	0.31	
						MI	0.00	0.01	0.00		
863	Ue# 100x50x17#3.00	1	1466	67	0.00	MJ	0.07	0.31	0.30	0.31	
						MI	0.00	0.01	0.00		
864	Ue# 100x50x17#3.00	1	1549	65	-0.01	MJ	0.07	0.31	0.30	0.31	
						MI	0.00	0.01	0.00		
866	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.01	0.02	0.00	0.03	
						MI	0.00	0.01	0.02		
867	W 150x24.0	1	9999	49	0.00	MJ	0.00	0.03	0.03	0.03	
868	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.04	0.07	0.00	0.07	
						MI	0.00	0.00	0.06		
869	Ue# 100x50x17#3.00	1	9999	17	-0.01	MJ	0.01	0.08	0.07	0.08	
870	Ue# 100x50x17#3.00	1	1504	67	-0.01	MJ	0.07	0.30	0.29	0.30	
						MI	0.00	0.01	0.00		
871	Ue# 100x50x17#3.00	1	1504	67	-0.01	MJ	0.07	0.30	0.29	0.30	
						MI	0.00	0.01	0.00		
872	Ue# 100x50x17#3.00	1	1585	65	-0.01	MJ	0.07	0.30	0.29	0.30	
						MI	0.00	0.01	0.00		
873	Ue# 100x50x17#3.00	1	9999	17	-0.01	MJ	0.01	0.07	0.07	0.08	
874	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.02	0.04	0.00	0.05	
						MI	0.00	0.00	0.04		
876	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.01	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
877	W 150x24.0	1	9999	27	0.00	MJ	0.00	0.02	0.02	0.02	
878	Ue# 100x50x17#3.00	1	7738	36	-0.01	MJ	0.04	0.13	0.00	0.14	
						MI	0.00	0.00	0.13		
879	Ue# 100x50x17#3.00	1	4357	32	0.00	MJ	0.02	0.16	0.00	0.17	
						MI	0.00	0.01	0.16		
880	Ue# 100x50x17#3.00	1	4355	32	0.00	MJ	0.02	0.16	0.00	0.17	
						MI	0.00	0.01	0.16		
881	W 150x24.0	1	9999	27	0.00	MJ	0.02	0.02	0.02	0.02	

882	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.02	0.02	0.00	0.03	
						MI	0.00	0.01	0.02		
883	Ue# 100x50x17#3.00	1	1469	67	0.00	MJ	0.07	0.31	0.00	0.31	
						MI	0.00	0.01	0.30		
884	W 150x24.0	1	9999	49	0.00	MJ	0.00	0.03	0.03	0.03	

Resultados Gerais											
					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
885	Ue# 100x50x17#3.00	1	1465	67	0.00	MJ	0.07	0.31	0.00	0.31	
						MI	0.00	0.01	0.30		
886	W 150x24.0	1	9453	49	0.00	MJ	0.00	0.04	0.04	0.05	
887	Ue# 100x50x17#3.00	1	1464	67	-0.01	MJ	0.07	0.31	0.00	0.32	
						MI	0.00	0.01	0.30		
888	L 2"x1/8"	1	9999	128	0.00	MJ	0.00	0.00	0.01	0.01	
						MI	0.00	0.01	0.00		
889	W 150x24.0	1	9451	49	0.00	MJ	0.00	0.04	0.04	0.05	
890	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.02	0.02	0.00	0.04	
						MI	0.00	0.01	0.02		
891	W 150x24.0	1	9999	49	0.00	MJ	0.00	0.03	0.03	0.04	
892	Ue# 100x50x17#3.00	1	9999	20	-0.01	MJ	0.04	0.07	0.00	0.07	
						MI	0.00	0.00	0.06		
893	Ue# 100x50x17#3.00	1	9999	17	0.00	MJ	0.01	0.08	0.00	0.08	
						MI	0.00	0.00	0.07		
894	Ue# 100x50x17#3.00	1	1498	67	-0.01	MJ	0.07	0.30	0.00	0.31	
						MI	0.00	0.01	0.29		
895	W 150x24.0	1	9999	49	0.00	MJ	0.02	0.05	0.05	0.05	
896	Ue# 100x50x17#3.00	1	1499	67	-0.01	MJ	0.07	0.30	0.00	0.31	
						MI	0.00	0.01	0.29		
897	W 150x24.0	1	9999	48	0.00	MJ	0.03	0.06	0.06	0.07	
898	Ue# 100x50x17#3.00	1	1496	67	-0.01	MJ	0.07	0.30	0.00	0.31	
						MI	0.00	0.01	0.29		
899	W 150x24.0	1	9999	48	0.00	MJ	0.03	0.06	0.06	0.07	
900	Ue# 100x50x17#3.00	1	9999	18	0.00	MJ	0.02	0.09	0.00	0.10	
						MI	0.00	0.00	0.09		
901	W 150x24.0	1	9999	48	0.00	MJ	0.02	0.05	0.05	0.05	
902	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.02	0.05	0.00	0.05	
						MI	0.00	0.00	0.04		
903	Ue# 100x50x17#3.00	1	9999	36	-0.01	MJ	0.01	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
904	W 150x24.0	1	9999	27	0.00	MJ	0.00	0.02	0.02	0.02	
905	Ue# 100x50x17#3.00	1	9663	36	-0.01	MJ	0.04	0.12	0.00	0.12	
						MI	0.00	0.00	0.11		
906	Ue# 100x50x17#3.00	1	4860	32	0.00	MJ	0.02	0.14	0.00	0.15	
						MI	0.00	0.00	0.14		
907	Ue# 100x50x17#3.00	1	4346	32	0.00	MJ	0.02	0.16	0.00	0.17	
						MI	0.00	0.01	0.16		
908	W 150x24.0	1	9999	26	0.00	MJ	0.02	0.02	0.02	0.02	
909	Ue# 100x50x17#3.00	1	2922	67	0.00	MJ	0.04	0.15	0.15	0.15	
910	Ue# 100x50x17#3.00	1	2899	68	-0.01	MJ	0.03	0.16	0.00	0.17	
						MI	0.00	0.01	0.16		
911	Ue# 100x50x17#3.00	1	9050	37	-0.01	MJ	0.04	0.10	0.00	0.10	
						MI	0.00	0.00	0.09		
912	Ue# 100x50x17#3.00	1	2895	68	-0.01	MJ	0.03	0.16	0.00	0.17	
						MI	0.00	0.01	0.16		
913	Ue# 100x50x17#3.00	1	9999	37	-0.01	MJ	0.02	0.08	0.07	0.08	
914	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	
915	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	
916	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	
917	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	

918	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
919	Ue# 100x50x17#3.00	1	9999	10	0.00	MI	0.00	0.00	0.00	0.01	
920	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
921	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
922	Ue# 100x50x17#3.00	1	4331	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
923	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	
924	Ue# 100x50x17#3.00	1	4888	62	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.00	0.10		
925	W 150x24.0	1	9999	6	0.00	MJ	0.01	0.01	0.01	0.01	
926	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
927	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	
928	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
929	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	
930	Ue# 100x50x17#3.00	1	4328	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
931	Ue# 100x50x17#3.00	1	4328	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
932	Ue# 100x50x17#3.00	1	4333	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
933	Ue# 100x50x17#3.00	1	4333	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
934	Ue# 100x50x17#3.00	1	9999	8	0.00	MJ	0.01	0.01	0.00	0.02	
						MI	0.00	0.00	0.01		
935	W 150x24.0	1	9999	38	0.00	MJ	0.00	0.01	0.01	0.01	
936	Ue# 100x50x17#3.00	1	9999	30	0.00	MJ	0.02	0.05	0.00	0.05	
						MI	0.00	0.00	0.05		
937	Ue# 100x50x17#3.00	1	4329	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
938	Ue# 100x50x17#3.00	1	9999	30	0.00	MJ	0.02	0.05	0.05	0.05	
939	Ue# 100x50x17#3.00	1	4341	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
940	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.04	0.04	0.04	
941	Ue# 100x50x17#3.00	1	9226	66	0.00	MJ	0.01	0.04	0.04	0.05	
942	Ue# 100x50x17#3.00	1	9999	30	0.00	MJ	0.02	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
943	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	
944	Ue# 100x50x17#3.00	1	1985	72	0.00	MJ	0.05	0.20	0.00	0.21	
						MI	0.00	0.01	0.20		
945	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
946	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.00	0.21	
						MI	0.00	0.01	0.20		
947	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
948	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.00	0.21	
						MI	0.00	0.01	0.20		
949	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
950	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	
951	W 150x24.0	1	9999	32	0.00	MJ	0.01	0.01	0.01	0.01	
952	Ue# 100x50x17#3.00	1	9999	30	0.00	MJ	0.02	0.03	0.00	0.04	
						MI	0.00	0.01	0.03		
953	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	

954	Ue# 100x50x17#3.00	1	2209	67	0.00	MJ	0.05	0.21	0.20	0.21	
						MI	0.00	0.01	0.00		
955	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	
956	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.20	0.21	
						MI	0.00	0.01	0.00		
957	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	

Resultados Gerais

					CAPACIDADES						
Barr	Seção		Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
958	Ue# 100x50x17#3.00	1	2205	67	0.00	MJ	0.05	0.21	0.20	0.21	
						MI	0.00	0.01	0.00		
959	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	
960	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.01	0.01	0.01	
961	W 150x24.0	1	9999	31	0.00	MJ	0.01	0.01	0.01	0.01	
962	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.02	0.00	0.03	
						MI	0.00	0.00	0.02		
963	W 150x24.0	1	9999	45	0.00	MJ	0.00	0.01	0.01	0.01	
964	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.01	0.02	0.00	0.03	
						MI	0.00	0.00	0.02		
965	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.02	0.00	0.03	
						MI	0.00	0.00	0.02		
966	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.01	0.02	0.00	0.03	
						MI	0.00	0.00	0.02		
967	W 150x24.0	1	9999	38	0.00	MJ	0.01	0.01	0.01	0.01	
968	Ue# 100x50x17#3.00	1	9255	66	0.00	MJ	0.01	0.04	0.00	0.05	
						MI	0.00	0.00	0.04		
969	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
970	Ue# 100x50x17#3.00	1	4336	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
971	Ue# 100x50x17#3.00	1	3896	72	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
972	W 150x24.0	1	9999	52	0.00	MJ	0.00	0.02	0.02	0.02	
973	W 150x24.0	1	9999	49	0.00	MJ	0.00	0.02	0.02	0.02	
974	W 150x24.0	1	9999	45	0.00	MJ	0.02	0.04	0.04	0.04	
975	W 150x24.0	1	9999	48	0.00	MJ	0.02	0.04	0.04	0.04	
976	W 150x24.0	1	9999	20	0.00	MJ	0.00	0.01	0.01	0.01	
977	W 150x24.0	1	9999	32	0.00	MJ	0.00	0.02	0.02	0.03	
978	W 150x24.0	1	9999	22	0.00	MJ	0.02	0.02	0.02	0.02	
979	W 150x24.0	1	9999	22	0.00	MJ	0.02	0.02	0.02	0.02	
980	W 150x24.0	1	9999	6	0.00	MJ	0.02	0.04	0.04	0.05	
981	W 150x24.0	1	9999	54	0.00	MJ	0.03	0.06	0.06	0.06	
982	W 150x24.0	1	9999	48	-0.01	MJ	0.03	0.06	0.06	0.07	
983	W 150x24.0	1	9999	45	0.00	MJ	0.02	0.05	0.05	0.05	
984	W 150x24.0	1	9999	22	0.00	MJ	0.02	0.02	0.02	0.02	
985	Ue# 100x50x17#3.00	1	1086	87	-0.01	MJ	0.05	0.34	0.00	0.37	
						MI	0.00	0.01	0.34		
986	Ue# 100x50x17#3.00	1	2239	73	0.00	MJ	0.04	0.18	0.00	0.20	
						MI	0.00	0.02	0.18		
987	Ue# 100x50x17#3.00	1	9999	54	-0.01	MJ	0.01	0.05	0.00	0.05	
						MI	0.00	0.00	0.04		
988	Ue# 100x50x17#3.00	1	4079	67	0.00	MJ	0.02	0.12	0.00	0.13	
						MI	0.00	0.01	0.12		
989	Ue# 100x50x17#3.00	1	1802	123	0.00	MJ	0.02	0.12	0.00	0.16	

						MI	0.00	0.01	0.14		
990	Ue# 100x50x17#3.00	1	9999	28	0.00	MJ	0.02	0.05	0.05	0.05	
991	Ue# 100x50x17#3.00	1	2402	73	0.00	MJ	0.03	0.17	0.00	0.18	
						MI	0.00	0.02	0.17		
992	Ue# 100x50x17#3.00	1	3121	67	0.00	MJ	0.03	0.17	0.16	0.17	
						MI	0.00	0.01	0.00		
993	Ue# 100x50x17#3.00	1	1416	56	0.00	MJ	0.01	0.26	0.26	0.29	
						MI	0.00	0.03	0.00		

Resultados Gerais											
					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
994	Ue# 100x50x17#3.00	1	3316	40	-0.01	MJ	0.01	0.16	0.16	0.17	
						MI	0.00	0.01	0.00		
995	Ue# 100x50x17#3.00	1	1713	82	0.00	MJ	0.04	0.24	0.24	0.27	
						MI	0.00	0.03	0.00		
996	Ue# 100x50x17#3.00	1	5525	54	0.00	MJ	0.03	0.10	0.00	0.12	
						MI	0.00	0.02	0.09		
997	Ue# 100x50x17#3.00	1	2272	73	0.00	MJ	0.04	0.18	0.00	0.19	
						MI	0.00	0.02	0.18		
998	Ue# 100x50x17#3.00	1	9999	33	0.00	MJ	0.02	0.06	0.06	0.06	
999	Ue# 100x50x17#3.00	1	2376	73	0.00	MJ	0.04	0.17	0.17	0.18	
						MI	0.00	0.02	0.00		
1000	Ue# 100x50x17#3.00	1	3163	82	0.00	MJ	0.02	0.11	0.00	0.13	
						MI	0.00	0.02	0.11		
1001	Ue# 100x50x17#3.00	1	3607	56	0.00	MJ	0.02	0.11	0.00	0.15	
						MI	0.00	0.04	0.11		
1002	Ue# 100x50x17#3.00	1	2182	93	0.00	MJ	0.02	0.14	0.00	0.17	
						MI	0.00	0.03	0.15		
1003	Ue# 100x50x17#3.00	1	3164	82	0.00	MJ	0.02	0.11	0.11	0.13	
						MI	0.00	0.02	0.00		
1004	Ue# 100x50x17#3.00	1	3581	57	0.00	MJ	0.02	0.11	0.11	0.15	
						MI	0.00	0.04	0.00		
1005	W 150x24.0	1	9999	46	0.00	MJ	0.02	0.03	0.03	0.04	
1006	Ue# 100x50x17#3.00	1	2094	33	0.00	MJ	0.02	0.30	0.00	0.33	
						MI	0.00	0.03	0.30		
1007	W 150x24.0	1	8990	54	-0.01	MJ	0.00	0.04	0.04	0.05	
1008	Ue# 100x50x17#3.00	1	1164	73	0.00	MJ	0.08	0.35	0.00	0.37	
						MI	0.00	0.02	0.34		
1009	W 150x24.0	1	8585	48	-0.01	MJ	0.00	0.05	0.05	0.05	
1010	Ue# 100x50x17#3.00	1	9999	15	0.00	MJ	0.01	0.01	0.00	0.01	
						MI	0.00	0.00	0.01		
1011	W 150x24.0	1	9999	48	0.00	MJ	0.00	0.03	0.03	0.03	
1012	Ue# 100x50x17#3.00	1	711	87	0.00	MJ	0.09	0.48	0.00	0.51	
						MI	0.00	0.02	0.49		
1013	W 150x24.0	1	9999	54	-0.01	MJ	0.03	0.06	0.06	0.06	
1014	Ue# 100x50x17#3.00	1	1158	74	0.00	MJ	0.08	0.35	0.00	0.37	
						MI	0.00	0.02	0.35		
1015	Ue# 100x50x17#3.00	1	1162	73	0.00	MJ	0.08	0.35	0.00	0.37	
						MI	0.00	0.02	0.35		
1016	W 150x24.0	1	9999	48	-0.01	MJ	0.03	0.07	0.07	0.08	
1017	Ue# 100x50x17#3.00	1	9999	13	0.00	MJ	0.01	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
1018	W 150x24.0	1	9999	48	0.00	MJ	0.02	0.04	0.04	0.05	
1019	Ue# 100x50x17#3.00	1	9999	35	0.00	MJ	0.01	0.03	0.00	0.05	
						MI	0.00	0.02	0.03		
1020	Ue# 100x50x17#3.00	1	9999	34	0.00	MJ	0.01	0.02	0.00	0.04	
						MI	0.00	0.01	0.02		
1021	Ue# 100x50x17#3.00	1	9999	35	0.00	MJ	0.03	0.10	0.00	0.10	
						MI	0.00	0.00	0.09		
1022	Ue# 100x50x17#3.00	1	6033	31	0.00	MJ	0.01	0.12	0.00	0.13	
						MI	0.00	0.02	0.11		
1023	W 150x24.0	1	9999	52	0.00	MJ	0.02	0.03	0.03	0.03	

1024	Ue# 100x50x17#3.00	1	7152	30	0.00	MJ	0.01	0.10	0.00	0.12	
						MI	0.00	0.01	0.10		
1025	W 150x24.0	1	9999	20	0.00	MJ	0.01	0.01	0.01	0.01	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1026	Ue# 100x50x17#3.00	1	9999	15	0.00	MJ	0.01	0.01	0.00	0.02	
						MI	0.00	0.01	0.01		
1027	Ue# 100x50x17#3.00	1	1231	73	0.00	MJ	0.07	0.33	0.00	0.35	
						MI	0.00	0.02	0.33		
1028	W 150x24.0	1	9999	45	0.00	MJ	0.00	0.03	0.03	0.03	
1029	Ue# 100x50x17#3.00	1	9999	33	0.00	MJ	0.02	0.06	0.00	0.06	
						MI	0.00	0.01	0.05		
1030	W 150x24.0	1	9999	45	0.00	MJ	0.00	0.03	0.03	0.03	
1031	Ue# 100x50x17#3.00	1	9999	15	0.00	MJ	0.03	0.05	0.04	0.04	
1032	Ue# 100x50x17#3.00	1	9999	13	0.00	MJ	0.01	0.05	0.00	0.05	
						MI	0.00	0.00	0.05		
1033	W 150x24.0	1	9999	49	0.00	MJ	0.01	0.02	0.02	0.03	
1034	Ue# 100x50x17#3.00	1	1230	73	0.00	MJ	0.07	0.33	0.00	0.35	
						MI	0.00	0.02	0.33		
1035	W 150x24.0	1	9999	45	0.00	MJ	0.02	0.04	0.04	0.04	
1036	W 150x24.0	1	9999	52	0.00	MJ	0.01	0.02	0.02	0.02	
1037	W 150x24.0	1	9999	45	0.00	MJ	0.02	0.03	0.03	0.03	
1038	W 150x24.0	1	9999	25	0.00	MJ	0.01	0.02	0.02	0.02	
1039	Ue# 100x50x17#3.00	1	932	57	0.00	MJ	0.02	0.40	0.00	0.43	
						MI	0.00	0.03	0.40		
1040	W 150x24.0	1	9999	52	0.00	MJ	0.00	0.02	0.02	0.02	
1041	Ue# 100x50x17#3.00	1	1322	57	0.00	MJ	0.02	0.29	0.00	0.32	
						MI	0.00	0.03	0.29		
1042	Ue# 100x50x17#3.00	1	9999	35	0.00	MJ	0.02	0.04	0.00	0.05	
						MI	0.00	0.02	0.03		
1043	Ue# 100x50x17#3.00	1	1112	93	0.00	MJ	0.05	0.29	0.30	0.32	
						MI	0.00	0.03	0.00		
1044	W 150x24.0	1	9999	25	0.00	MJ	0.00	0.02	0.02	0.02	
1045	Ue# 100x50x17#3.00	1	1336	56	0.00	MJ	0.02	0.29	0.29	0.32	
						MI	0.00	0.03	0.00		
1046	Ue# 100x50x17#3.00	1	8165	35	0.00	MJ	0.04	0.13	0.12	0.13	
1047	Ue# 100x50x17#3.00	1	4433	31	0.00	MJ	0.02	0.16	0.16	0.18	
						MI	0.00	0.02	0.00		
1048	Ue# 100x50x17#3.00	1	1052	93	-0.01	MJ	0.05	0.30	0.32	0.34	
						MI	0.00	0.03	0.00		
1049	W 150x24.0	1	9999	25	0.00	MJ	0.02	0.02	0.02	0.02	
1050	Ue# 100x50x17#3.00	1	943	56	0.00	MJ	0.02	0.40	0.40	0.43	
						MI	0.00	0.03	0.00		
1051	Ue# 100x50x17#3.00	1	9999	37	0.00	MJ	0.02	0.04	0.04	0.04	
1052	Ue# 100x50x17#3.00	1	4078	40	-0.01	MJ	0.02	0.14	0.14	0.15	
						MI	0.00	0.01	0.00		
1053	Ue# 100x50x17#3.00	1	4229	39	-0.01	MJ	0.02	0.14	0.14	0.15	
						MI	0.00	0.01	0.00		
1054	Ue# 100x50x17#3.00	1	4673	63	0.00	MJ	0.02	0.10	0.00	0.12	
						MI	0.00	0.01	0.10		
1055	Ue# 100x50x17#3.00	1	9999	28	0.00	MJ	0.02	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
1056	Ue# 100x50x17#3.00	1	2086	54	0.00	MJ	0.07	0.30	0.00	0.30	
						MI	0.00	0.01	0.29		

1057	Ue# 100x50x17#3.00	1	9999	8	0.00	MI	0.00	0.00	0.00	0.00	
1058	Ue# 100x50x17#3.00	1	1215	101	0.00	MJ	0.03	0.26	0.28	0.28	
						MI	0.00	0.01	0.00		
1059	Ue# 100x50x17#3.00	1	3349	48	0.00	MJ	0.05	0.23	0.00	0.24	
						MI	0.00	0.02	0.22		

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1060	Ue# 100x50x17#3.00	1	1259	74	0.00	MJ	0.06	0.37	0.00	0.38	
						MI	0.00	0.01	0.36		
1061	Ue# 100x50x17#3.00	1	3954	63	-0.01	MJ	0.02	0.14	0.14	0.15	
						MI	0.00	0.01	0.00		
1062	Ue# 100x50x17#3.00	1	9999	30	0.00	MJ	0.03	0.10	0.09	0.10	
						MI	0.00	0.01	0.00		
1065	W 150x24.0	1	9999	55	0.00	MJ	0.01	0.03	0.03	0.03	
1066	W 150x24.0	1	9999	55	0.00	MJ	0.02	0.04	0.04	0.04	
1069	Ue# 100x50x17#3.00	1	2924	67	0.00	MJ	0.04	0.15	0.15	0.15	
1070	Ue# 100x50x17#3.00	1	3082	65	0.00	MJ	0.04	0.15	0.15	0.16	
1071	Ue# 100x50x17#3.00	1	2921	67	0.00	MJ	0.04	0.15	0.00	0.15	
						MI	0.00	0.00	0.15		
1072	Ue# 100x50x17#3.00	1	2912	67	0.00	MJ	0.04	0.16	0.00	0.16	
						MI	0.00	0.00	0.15		
1073	Ue# 100x50x17#3.00	1	3892	72	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
1074	Ue# 100x50x17#3.00	1	4329	67	0.00	MJ	0.02	0.10	0.00	0.11	
						MI	0.00	0.01	0.10		
1075	Ue# 100x50x17#3.00	1	4333	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
1076	Ue# 100x50x17#3.00	1	4333	67	0.00	MJ	0.02	0.10	0.10	0.11	
						MI	0.00	0.01	0.00		
1077	W 150x24.0	1	9999	28	0.00	MJ	0.02	0.02	0.02	0.02	
1078	W 150x24.0	1	9999	32	0.00	MJ	0.00	0.02	0.02	0.02	
1079	W 150x24.0	1	9999	32	0.00	MJ	0.02	0.02	0.02	0.03	
1080	W 150x24.0	1	9999	28	0.00	MJ	0.02	0.02	0.02	0.02	
1081	Ue# 100x50x17#3.00	1	1962	93	0.00	MJ	0.03	0.16	0.00	0.18	
						MI	0.00	0.03	0.17		
1082	Ue# 100x50x17#3.00	1	3456	39	-0.01	MJ	0.01	0.16	0.16	0.17	
						MI	0.00	0.01	0.00		
1083	Ue# 100x50x17#3.00	1	1400	57	0.00	MJ	0.01	0.26	0.26	0.29	
						MI	0.00	0.03	0.00		
1104	W 150x24.0	1	9999	49	0.00	MJ	0.00	0.03	0.03	0.03	
1105	W 150x24.0	1	9999	48	0.00	MJ	0.02	0.05	0.05	0.05	
1106	W 150x24.0	1	9999	56	0.00	MJ	0.00	0.03	0.03	0.03	
1107	W 150x24.0	1	9999	55	0.00	MJ	0.02	0.04	0.04	0.04	
1108	W 150x24.0	1	9999	55	0.00	MJ	0.01	0.03	0.03	0.03	
1109	W 150x24.0	1	9999	55	0.00	MJ	0.02	0.04	0.04	0.05	
1110	W 150x24.0	1	9481	49	0.00	MJ	0.00	0.04	0.04	0.05	
1111	W 150x24.0	1	9999	48	0.00	MJ	0.03	0.06	0.06	0.07	
1112	W 150x24.0	1	9487	49	0.00	MJ	0.00	0.04	0.04	0.05	
1113	W 150x24.0	1	9999	48	0.00	MJ	0.03	0.06	0.06	0.07	
1114	W 150x24.0	1	9999	48	0.00	MJ	0.02	0.05	0.05	0.05	
1115	Ue# 100x50x17#3.00	1	9999	25	0.00	MJ	0.02	0.04	0.00	0.04	
						MI	0.00	0.00	0.04		
1116	W 150x24.0	1	9999	32	0.00	MJ	0.02	0.02	0.02	0.03	

1117	W 150x24.0	1	9999	25	0.00	MJ	0.00	0.02	0.02	0.02	
1118	W 150x24.0	1	9999	25	0.00	MJ	0.00	0.02	0.02	0.02	
1119	W 150x24.0	1	9999	25	0.00	MJ	0.02	0.02	0.02	0.02	
1120	Ue# 100x50x17#3.00	1	3261	49	0.00	MJ	0.05	0.23	0.22	0.24	
						MI	0.00	0.02	0.00		
1121	Ue# 100x50x17#3.00	1	1239	75	-0.01	MJ	0.06	0.37	0.36	0.38	
						MI	0.00	0.02	0.00		
1122	W 150x24.0	1	5526	177	-0.03	MJ	0.02	0.05	0.05	0.06	

Resultados Gerais

					CAPACIDADES						
Barr	Seção	Co	Flec L/	Esbl	Axial	Dir	Corta	Mom	FLT	Combinada Axial+Mom	
1123	W 150x24.0	1	9999	55	0.00	MJ	0.02	0.04	0.04	0.05	