



Logiciel ICAB

Le 7 avril 2015

ETG – Passerelles CSG-22GW

CALCUL DES EFFORTS PAR ELEMENTS FINIS



DESCRIPTION ETUDE :

- Pieds Tube serrurier 100x100x4mm Lg 9760 mm
- Cadres Passerelles UPN100
- Supports Plat 100x15
- Matière : Acier 24.
- Charge caillebotis : 250Kg/M2
- Charge potence : 150KG

Note de calcul ICAB

Projet 1-Dessin/0000-ETG Guyane/3-CSG-22GW-18-08-14/Passerelles/Calcul 2/EDF
 Projet créé le 03-04-2015 14:20:24
 Ecriture de la note 07-04-2015 15:02:36
 Version icab 4.208

La structure modélisée par la méthode des Eléments finis comprend 78 noeuds, 135 éléments. sorties sur 78 NOEUDS et 135 ELEMENTS:

Ce document contient la liste des données et des résultats dans l'ordre suivant :

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COUT TOTAL: 2071.36

DECOMPOSITION DES PRIX PAR SECTION

LIBELLE	NOMBRE	QUANTITE (m)	COUT VARIABLE	TOTAL
RE100_4X R100x100 4 - section rectangulaire creuse	43	84.4237	11.95	1008.87
UPN100	76	89.06	10.60	944.04
PL100_15	13	8	11.78	94.20
OB79	3	2.76619	8.77	24.25

Liste des noeuds

Noeud	X	Y	Z	Couche
	mm	mm	mm	
1	2.000E3	1730.000	0	
2	0	1730.000	0	
3	0	-1730.000	0	
4	1.000E3	-1730.000	0	
5	1.000E3	-3680.000	0	
6	5.120E3	-2680.000	0	
7	9.350E3	-2180.000	0	
8	13.450E3	-2180.000	0	
9	13.450E3	2180.000	0	
10	9.350E3	2180.000	0	
11	5.120E3	2180.000	0	
12	2.000E3	1730.000	6960.000	

13	0	1730.000	6960.000
14	0	-1730.000	9160.000
15	1.000E3	-1730.000	9160.000
16	1.000E3	-3680.000	4760.000
17	5.120E3	-2680.000	4760.000
18	9.350E3	-2180.000	4760.000
19	13.450E3	-2180.000	4760.000
20	13.450E3	2180.000	4760.000
21	9.350E3	2180.000	4760.000
22	5.120E3	2180.000	4760.000
23	0	-1730.000	6960.000
24	1.000E3	-1730.000	6960.000
25	1.000E3	1730.000	6960.000
26	1.000E3	-1730.000	4760.000
27	0	-1730.000	4760.000
28	0	-3680.000	4760.000
29	1.000E3	-3680.000	3760.000
30	4.640E3	2680.000	4760.000
31	4.640E3	1680.000	4760.000
32	5.120E3	2680.000	4760.000
33	5.120E3	1680.000	4760.000
34	9.350E3	2680.000	4760.000
35	9.350E3	1680.000	4760.000
36	13.450E3	2680.000	4760.000
37	13.450E3	1680.000	4760.000
38	13.450E3	-2680.000	4760.000
39	13.450E3	-1680.000	4760.000
40	9.350E3	-2680.000	4760.000
41	9.350E3	-1680.000	4760.000
42	5.120E3	-3680.000	4760.000
43	5.120E3	-1680.000	4760.000
44	5.120E3	2180.000	4260.000
45	9.350E3	2180.000	4260.000
46	13.450E3	2180.000	4260.000
47	13.450E3	-2180.000	4260.000
48	9.350E3	-2180.000	4260.000
49	5.120E3	-2680.000	3760.000
50	13.950E3	2680.000	4760.000
51	13.950E3	1680.000	4760.000
52	1.000E3	-2680.000	4760.000
53	5.620E3	-3680.000	4760.000
54	5.620E3	-2680.000	4760.000
55	4.620E3	-1680.000	4760.000
56	4.620E3	-2680.000	4760.000
57	13.950E3	-2680.000	4760.000
58	13.950E3	-1680.000	4760.000
59	12.950E3	1680.000	4760.000
60	12.950E3	-1680.000	4760.000
61	0	0	6960.000
62	1.000E3	0	6960.000
63	3.060E3	-3680.000	4760.000
64	3.060E3	-2680.000	4760.000
65	7.235E3	-1680.000	4760.000
66	7.235E3	-2680.000	4760.000
67	7.235E3	2680.000	4760.000
68	7.235E3	1680.000	4760.000
69	11.400E3	1680.000	4760.000
70	11.400E3	2680.000	4760.000
71	11.400E3	-2680.000	4760.000
72	11.400E3	-1680.000	4760.000
73	12.950E3	0	4760.000
74	13.950E3	0	4760.000
75	4.640E3	2180.000	4760.000
76	0	-1730.000	9760.000
77	1.000E3	-1730.000	9760.000
78	-1.000E3	-1730.000	9760.000

Liste des éléments

```
ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=RE100_4X)
1;      1,12 ; // 6960 mm
2;      2,13 ; // 6960 mm
3;      3,27 ; // 4760 mm
4;      4,26 ; // 4760 mm
```

```
5;          5,29 ; // 3760 mm
6;          6,49 ; // 3760 mm
7;          7,48 ; // 4260 mm
8;          8,47 ; // 4260 mm
9;          9,46 ; // 4260 mm
10;         10,45 ; // 4260 mm
11;         11,44 ; // 4260 mm
12;         12,25 ; // 1000 mm
13;         15,14 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=UPN100)
14;         24,62 ; // 1730 mm
15;         13,61 ; // 1730 mm
16;         23,24 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=RE100_4X)
17;         16,52 ; // 1000 mm
18;         27,26 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=UPN100)
19;         25,13 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=RE100_4X)
20;         28,29 ; // 1414.21 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=PL100_15)
21;         28,16 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=UPN100)
22;         27,28 ; // 1950 mm
23;         28,16 ; // 1000 mm
24;         16,52 ; // 1000 mm
25;         26,27 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=PL100_15)
26;         33, 22,31 ; // 500 mm
27;         34, 21,31 ; // 500 mm
28;         36, 20,35 ; // 500 mm
29;         39, 19,40 ; // 500 mm
30;         41, 18,43 ; // 500 mm
31;         43, 17,40 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=RE100_4X)
32;         33,44 ; // 707.107 mm
33;         32,44 ; // 707.107 mm
34;         45,34 ; // 707.107 mm
35;         45,35 ; // 707.107 mm
36;         46,36 ; // 707.107 mm
37;         46,37 ; // 707.107 mm
38;         39,47 ; // 707.107 mm
39;         47,38 ; // 707.107 mm
40;         41,48 ; // 707.107 mm
41;         40,48 ; // 707.107 mm
42;         43,49 ; // 1414.21 mm
43;         42,49 ; // 1414.21 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=UPN100)
44;         50,36 ; // 500 mm
45;         30,75 ; // 500 mm
46;         31,33 ; // 480 mm
47;         51,50 ; // 1000 mm
48;         33,22 ; // 500 mm
49;         35,21 ; // 500 mm
50;         36,20 ; // 500 mm
51;         52,16 ; // 1000 mm
52;         52,16 ; // 1000 mm
53;         16,63 ; // 2060 mm
54;         53,54 ; // 1000 mm
55;         54,17 ; // 500 mm
56;         42,17 ; // 1000 mm
57;         55,56 ; // 1000 mm
58;         56,17 ; // 500 mm
59;         57,58 ; // 1000 mm
60;         58,39 ; // 500 mm
61;         59,73 ; // 1680 mm
62;         60,39 ; // 500 mm
63;         58,74 ; // 1680 mm
```

```
64;          51,37 ; // 500 mm
65;          61,62 ; // 1000 mm
66;          63,64 ; // 1000 mm
67;          68,67 ; // 1000 mm
68;          69,70 ; // 1000 mm
69;          66,65 ; // 1000 mm
70;          71,72 ; // 1000 mm
71;          73,74 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=RE100_4X)
72;          76,77 ; // 1000 mm
73;          77,15 ; // 600 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=OB79)
74;          76,14 ; // 600 mm
75;          78,76 ; // 1000 mm
76;          78,14 ; // 1166.19 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=RE100_4X)
77;          27,23 ; // 2200 mm
78;          23,14 ; // 2200 mm
79;          26,24 ; // 2200 mm
80;          24,15 ; // 2200 mm
81;          29,16 ; // 1000 mm
82;          49,17 ; // 1000 mm
83;          48,18 ; // 500 mm
84;          47,19 ; // 500 mm
85;          46,20 ; // 500 mm
86;          45,21 ; // 500 mm
87;          44,22 ; // 500 mm
88;          25,13 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=UPN100)
89;          62,25 ; // 1730 mm
90;          61,23 ; // 1730 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=RE100_4X)
91;          52,26 ; // 950 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=UPN100)
92;          52,26 ; // 950 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=PL100_15)
93;          22, 32,31 ; // 500 mm
94;          21, 35,31 ; // 500 mm
95;          20, 37,35 ; // 500 mm
96;          19, 38,40 ; // 500 mm
97;          18, 40,43 ; // 500 mm
98;          17, 42,40 ; // 1000 mm

ELEMENT(TYPE=BEAM_LINEAR, MAT=ACIER_24, PROP=UPN100)
99;          36,70 ; // 2050 mm
100;         70,34 ; // 2050 mm
101;         34,67 ; // 2115 mm
102;         67,32 ; // 2115 mm
103;         32,30 ; // 480 mm
104;         75,31 ; // 500 mm
105;         33,68 ; // 2115 mm
106;         68,35 ; // 2115 mm
107;         35,69 ; // 2050 mm
108;         69,59 ; // 1550 mm
109;         59,37 ; // 500 mm
110;         37,51 ; // 500 mm
111;         22,32 ; // 500 mm
112;         21,34 ; // 500 mm
113;         20,37 ; // 500 mm
114;         63,42 ; // 2060 mm
115;         42,53 ; // 500 mm
116;         17,56 ; // 500 mm
117;         56,64 ; // 1560 mm
118;         64,52 ; // 2060 mm
119;         17,43 ; // 1000 mm
120;         17,54 ; // 500 mm
121;         54,66 ; // 1615 mm
122;         66,40 ; // 2115 mm
123;         40,71 ; // 2050 mm
124;         71,38 ; // 2050 mm
```

```

125;      38,57 ; // 500 mm
126;      39,60 ; // 500 mm
127;      60,72 ; // 1550 mm
128;      72,41 ; // 2050 mm
129;      41,65 ; // 2115 mm
130;      65,43 ; // 2115 mm
131;      43,55 ; // 500 mm
132;      73,60 ; // 1680 mm
133;      39,58 ; // 500 mm
134;      74,51 ; // 1680 mm
135;      37,59 ; // 500 mm

```

Propriétés physiques et matériaux

PROPERTY(TYPE=ISO)

```

1,ACIER_24;      // ISO  materiau isotrope [ACIER_24]
  comment="acier 24",
  RL=5 // "CM66 Construction Métallique",
  E=      21E3, // daN/mm2  module d'Young
  NU=    0.296296, // ::      coefficient de Poisson
  A=      11E-6, // K-1      dilatation thermique
  YS=      24, // daN/mm2    limite d'élasticité
  XT=      36, // daN/mm2    contrainte de traction limite
  DEN=    0.785E-9; // daT.mm-3  densité massique

```

PROPERTY(TYPE=BEAM_LINEAR)

```

2,  OA60;      // BEAM_LINEAR poutre droite [OA60]
  SECTION=4, // CHS60.3x2.9 tube circulaire creux (CHS)
  AR=      522.95, // mm2      aire de la section (A)
  IYY=    215.92E3, // mm4      moment d'inertie Y
  IZZ=    215.92E3, // mm4      moment d'inertie Z
  TC=      431.85E3, // mm4      constante de torsion J
  IVY=    7161.7, // mm3      module de flexion élastique (I/vy=Wel.y)
  IVZ=    7161.7, // mm3      module de flexion élastique (I/vz=Wel.z)
  ITC=    14.323E3, // mm3      module de torsion pour Mx (J/r)
  SP=      4781.5, // mm3      moment statique Y (Wpl.y/2)
  SPZ=    4781.5, // mm3      moment statique Z (Wpl.z/2)
  SRY=    1.9915, // ::      facteur de cisaillement Ty
  SRZ=    1.9915, // ::      facteur de cisaillement Tz
  ARY=    261.92, // mm2      aire de cisaillement (Av.y)
  ARZ=    261.92, // mm2      aire de cisaillement (Av.z)
  TKY=    60.3, // mm        dimension Y (largeur b)
  TKZ=    60.3, // mm        dimension Z (hauteur h)
  EA=      2.9, // mm        Epaisseur de l'âme (tw)
  CVA=    4.1052E-3; // mm-1   coût variable

```

PROPERTY(TYPE=BEAM_LINEAR)

```

3,RE100_4X;      // BEAM_LINEAR poutre droite [RE100_4X]
  comment="R100x100 4 - section rectangulaire creuse",
  SECTION=2, // RHS100x100x4 r4 section rectangulaire creuse (RHS)
  AR=      1522.3, // mm2      aire de la section (A)
  IYY=    2.3303E6, // mm4      moment d'inertie Y
  IZZ=    2.3303E6, // mm4      moment d'inertie Z
  TC=      3.2888E6, // mm4      constante de torsion J
  IVY=    46.605E3, // mm3      module de flexion élastique (I/vy=Wel.y)
  IVZ=    46.605E3, // mm3      module de flexion élastique (I/vz=Wel.z)
  ITC=    70.757E3, // mm3      module de torsion pour Mx (J/r)
  SP=      27.327E3, // mm3      moment statique Y (Wpl.y/2)
  SPZ=    27.327E3, // mm3      moment statique Z (Wpl.z/2)
  SRY=    2.4, // ::      facteur de cisaillement Ty
  SRZ=    2.4, // ::      facteur de cisaillement Tz
  ARY=    682.19, // mm2      aire de cisaillement (Av.y)
  ARZ=    682.19, // mm2      aire de cisaillement (Av.z)
  TKY=    100, // mm        dimension Y (largeur b)
  TKZ=    100, // mm        dimension Z (hauteur h)
  EA=      4, // mm        Epaisseur de l'âme (tw)
  TF=      4, // mm        Epaisseur des semelles (tf)
  RE=      4, // mm        Rayon de raccordement externe (r1)
  LKY=    9160, // mm        longueur minimale de flambement pour moment Myy
  LDY=    9160, // mm        longueur minimale de déversement pour moment Myy
  CVA=    0; // mm-1      coût variable

```

PROPERTY(TYPE=BEAM_LINEAR)

```

4, UPN100; // BEAM_LINEAR poutre droite [UPN100]
  AR= 1350, // mm2 aire de la section (A)
  IYY= 2.06E6, // mm4 moment d'inertie Y
  IZZ= 293E3, // mm4 moment d'inertie Z
  TC= 28.1E3, // mm4 constante de torsion J
  IVY= 41.2E3, // mm3 module de flexion élastique (I/vy=Wel.y)
  IVZ= 8500, // mm3 module de flexion élastique (I/vz=Wel.z)
  ITC= 1899.9, // mm3 module de torsion pour Mx (J/r)
  SP= 24.5E3, // mm3 moment statique Y (Wpl.y/2)
  SPZ= 8100, // mm3 moment statique Z (Wpl.z/2)
  SRY= 2.2, // :: facteur de cisaillement Ty
  SRZ= 2.1, // :: facteur de cisaillement Tz
  ARY= 615, // mm2 aire de cisaillement (Av.y)
  ARZ= 646, // mm2 aire de cisaillement (Av.z)
  TKY= 50, // mm dimension Y (largeur b)
  TKZ= 100, // mm dimension Z (hauteur h)
  EA= 6, // mm Epaisseur de l'âme (tw)
  TF= 8.5, // mm Epaisseur des semelles (tf)
  LKY= 9330, // mm longueur minimale de flambement pour moment Myy
  LDY= 9330, // mm longueur minimale de déversement pour moment Myy
  CVA= 10.6E-3; // mm-1 coût variable

```

PROPERTY(TYPE=BEAM_LINEAR)

```

5, UPN80; // BEAM_LINEAR poutre droite [UPN80]
  AR= 1100, // mm2 aire de la section (A)
  IYY= 1.06E6, // mm4 moment d'inertie Y
  IZZ= 194E3, // mm4 moment d'inertie Z
  TC= 21.6E3, // mm4 constante de torsion J
  IVY= 26.5E3, // mm3 module de flexion élastique (I/vy=Wel.y)
  IVZ= 6400, // mm3 module de flexion élastique (I/vz=Wel.z)
  ITC= 1551.7, // mm3 module de torsion pour Mx (J/r)
  SP= 15.9E3, // mm3 moment statique Y (Wpl.y/2)
  SPZ= 6050, // mm3 moment statique Z (Wpl.z/2)
  SRY= 2.1, // :: facteur de cisaillement Ty
  SRZ= 2.2, // :: facteur de cisaillement Tz
  ARY= 513, // mm2 aire de cisaillement (Av.y)
  ARZ= 510, // mm2 aire de cisaillement (Av.z)
  TKY= 45, // mm dimension Y (largeur b)
  TKZ= 80, // mm dimension Z (hauteur h)
  EA= 6, // mm Epaisseur de l'âme (tw)
  TF= 8, // mm Epaisseur des semelles (tf)
  CVA= 8.7E-3; // mm-1 coût variable

```

PROPERTY(TYPE=BEAM_LINEAR)

```

6, PL100_15; // BEAM_LINEAR poutre droite [PL100_15]
  SECTION=1, // P100x15 section rectangulaire pleine
  AR= 1500, // mm2 aire de la section (A)
  IYY= 1.25E6, // mm4 moment d'inertie Y
  IZZ= 28.125E3, // mm4 moment d'inertie Z
  TC= 101.87E3, // mm4 constante de torsion J
  IVY= 25E3, // mm3 module de flexion élastique (I/vy=Wel.y)
  IVZ= 3750, // mm3 module de flexion élastique (I/vz=Wel.z)
  ITC= 6781.7, // mm3 module de torsion pour Mx (J/r)
  SP= 18.75E3, // mm3 moment statique Y (Wpl.y/2)
  SPZ= 2812.5, // mm3 moment statique Z (Wpl.z/2)
  SRY= 1.2, // :: facteur de cisaillement Ty
  SRZ= 1.2, // :: facteur de cisaillement Tz
  ARY= 1000, // mm2 aire de cisaillement (Av.y)
  ARZ= 1000, // mm2 aire de cisaillement (Av.z)
  TKY= 15, // mm dimension Y (largeur b)
  TKZ= 100, // mm dimension Z (hauteur h)
  EA= 15, // mm Epaisseur de l'âme (tw)
  LKY= 2000, // mm longueur minimale de flambement pour moment Myy
  LDY= 2000, // mm longueur minimale de déversement pour moment Myy
  CVA= 11.775E-3; // mm-1 coût variable

```

PROPERTY(TYPE=BEAM_LINEAR)

```

7, OB79; // BEAM_LINEAR poutre droite [OB79]
  SECTION=4, // CHS76.1x5 tube circulaire creux (CHS)
  AR= 1116.8, // mm2 aire de la section (A)
  IYY= 709.22E3, // mm4 moment d'inertie Y
  IZZ= 709.22E3, // mm4 moment d'inertie Z
  TC= 1.4184E6, // mm4 constante de torsion J
  IVY= 18.639E3, // mm3 module de flexion élastique (I/vy=Wel.y)

```


IVZ= 18.639E3, // mm3	module de flexion élastique (I/vz=WeI.z)
ITC= 37.278E3, // mm3	module de torsion pour Mx (J/r)
SP= 12.659E3, // mm3	moment statique Y (Wpl.y/2)
SPZ= 12.659E3, // mm3	moment statique Z (Wpl.z/2)
SRY= 1.9837, // ::	facteur de cisaillement Ty
SRZ= 1.9837, // ::	facteur de cisaillement Tz
ARY= 560.26, // mm2	aire de cisaillement (Av.y)
ARZ= 560.26, // mm2	aire de cisaillement (Av.z)
TKY= 76.1, // mm	dimension Y (largeur b)
TKZ= 76.1, // mm	dimension Z (hauteur h)
EA= 5, // mm	Epaisseur de l'âme (tw)
CVA= 8.7672E-3; // mm-1	coût variable

Conditions climatiques

Conditions limites

déplacement imposé

Noeud	Chargement	X mm	Y mm	Z mm	RX rad	RY rad	RZ rad
1		0	0	0	0	0	0
2		0	0	0	0	0	0
3		0	0	0	0	0	0
4		0	0	0	0	0	0
5		0	0	0	0	0	0
6		0	0	0	0	0	0
7		0	0	0	0	0	0
8		0	0	0	0	0	0
9		0	0	0	0	0	0
10		0	0	0	0	0	0
11		0	0	0	0	0	0
75		0	0	0	0	0	0

force imposée

Noeud	Chargement	Fx daN	Fy daN	Fz daN	Mx daN.mm	My daN.mm	Mz daN.mm
78		0	0	-150.0000	0	0	0

charge répartie linéique

L repère local (charge)

GP repère global projeté (charge)

G repère global sans projection (charge)

Elément	Chargement	fx daN/mm	fx2 daN/mm	fy daN/mm	fy2 daN/mm	fz daN/mm	fz2 daN/mm	
15						-0.125000		L repère
14						-0.125000		L repère
22						-0.125000		L repère
24						-0.125000		L repère
53						-0.125000		L repère
55						-0.125000		L repère
58						-0.125000		L repère
60						-0.125000		L repère
63						-0.125000		L repère
61						-0.125000		L repère
46						-0.125000		L repère
44						-0.125000		L repère
89						-0.125000		L repère
90						-0.125000		L repère
92						-0.125000		L repère
99						-0.125000		L repère
100						-0.125000		L repère
101						-0.125000		L repère
102						-0.125000		L repère
103						-0.125000		L repère
105						-0.125000		L repère
106						-0.125000		L repère
107						-0.125000		L repère

108						-0.125000	L repère
109						-0.125000	L repère
110						-0.125000	L repère
114						-0.125000	L repère
115						-0.125000	L repère
116						-0.125000	L repère
117						-0.125000	L repère
118						-0.125000	L repère
120						-0.125000	L repère
121						-0.125000	L repère
122						-0.125000	L repère
123						-0.125000	L repère
124						-0.125000	L repère
125						-0.125000	L repère
126						-0.125000	L repère
127						-0.125000	L repère
128						-0.125000	L repère
129						-0.125000	L repère
130						-0.125000	L repère
131						-0.125000	L repère
132						-0.125000	L repère
134						-0.125000	L repère

Calculs: combinaisons des charges

Calcul 1, 'calcul 0'
Calcul 2, 'calcul 0'

Réactions non pondérées

Passerelles 22GW EDF
calcul 1 'calcul 0'

REACTIONS (FORCES ET MOMENTS)

Fx force en translation X
Fy force en translation Y
Fz force en translation Z
Mx moment autour de l'axe X
My moment autour de l'axe Y
Mz moment autour de l'axe Z

Noeud	Fx daN	Fy daN	Fz daN	Mx daN.mm	My daN.mm	Mz daN.mm
n1-----						
1	-3.317	-8.461	103.533	20.93E3	-7.16E3	0.83E3
n2-----						
2	3.472	-16.046	319.486	39.12E3	8.57E3	0.32E3
n3-----						
3	1.720	6.396	590.708	-15.84E3	4.97E3	-0.75E3
n4-----						
4	4.076	1.349	371.819	-7.21E3	8.69E3	-0.79E3
n5-----						
5	20.534	15.639	606.442	-29.06E3	32.06E3	-1.69E3
n6-----						
6	-3.399	-1.393	1302.877	1.91E3	-3.70E3	-6.26E3
n7-----						
7	7.163	7.591	1128.466	-7.88E3	12.90E3	-0.15E3
n8-----						
8	-34.030	65.486	985.501	-100.48E3	-51.54E3	-0.71E3
n9-----						
9	-33.525	-68.345	979.488	107.93E3	-52.48E3	0.22E3
n10-----						
10	-2.072	-3.228	1194.418	5.27E3	-3.27E3	-0.05E3
n11-----						
11	39.359	0.099	574.762	-0.04E3	61.53E3	-0.39E3
n75-----						
75	0.018	0.910	0	0.81E3	-2.45E3	0

Plus grande valeur négative

Fx -34.030 daN Noeud 8, Fx force en translation X
Fy -68.345 daN Noeud 9, Fy force en translation Y
Mx -100.48E3 daN.mm Noeud 8, Mx moment autour de l'axe X
My -52.48E3 daN.mm Noeud 9, My moment autour de l'axe Y
Mz -6.26E3 daN.mm Noeud 6, Mz moment autour de l'axe Z

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Plus grande valeur positive
Fx      39.359 daN      Noeud 11, Fx force en translation X
Fy      65.486 daN      Noeud 8, Fy force en translation Y
Fz     1302.877 daN      Noeud 6, Fz force en translation Z
Mx     107.93E3 daN.mm   Noeud 9, Mx moment autour de l'axe X
My     61.53E3 daN.mm   Noeud 11, My moment autour de l'axe Y
Mz       0.83E3 daN.mm   Noeud 1, Mz moment autour de l'axe Z
Somme des réactions des forces F et moments M calculés à l'origine
Fx,y,z -68.07E-12, -4.794E-12,      8157.5,
Mx,y,z -5.26199E6, -58.9387E6, -0.5313E-6,
-----
    
```

Réactions ELS

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Passerelles 22GW EDF
calcul 2 'calcul 0'
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REACTIONS (FORCES ET MOMENTS)
Plus grande valeur négative
Fx      -34.030 daN      Noeud 8, Fx force en translation X
Fy     -68.345 daN      Noeud 9, Fy force en translation Y
Mx    -100.48E3 daN.mm   Noeud 8, Mx moment autour de l'axe X
My    -52.48E3 daN.mm   Noeud 9, My moment autour de l'axe Y
Mz     -6.26E3 daN.mm   Noeud 6, Mz moment autour de l'axe Z
Plus grande valeur positive
Fx      39.359 daN      Noeud 11, Fx force en translation X
Fy      65.486 daN      Noeud 8, Fy force en translation Y
Fz     1302.877 daN      Noeud 6, Fz force en translation Z
Mx     107.93E3 daN.mm   Noeud 9, Mx moment autour de l'axe X
My     61.53E3 daN.mm   Noeud 11, My moment autour de l'axe Y
Mz       0.83E3 daN.mm   Noeud 1, Mz moment autour de l'axe Z
Somme des réactions des forces F et moments M calculés à l'origine
Fx,y,z -68.07E-12, -4.794E-12,      8157.5,
Mx,y,z -5.26199E6, -58.9387E6, -0.5313E-6,
-----
    
```

Réactions ELU

Enveloppe des résultats extrêmes sur tous les calculs

REACTIONS (FORCES ET MOMENTS)

Fx force en translation X
 Fy force en translation Y
 Fz force en translation Z
 Mx moment autour de l'axe X
 My moment autour de l'axe Y
 Mz moment autour de l'axe Z

Noeud		Fx daN	Fy daN	Fz daN	Mx daN.mm	My daN.mm	Mz daN.mm
1	min	-3.317	-8.461	103.533	20.93E3	-7.16E3	0.83E3
	max	-3.317	-8.461	103.533	20.93E3	-7.16E3	0.83E3
2	min	3.472	-16.046	319.486	39.12E3	8.57E3	0.32E3
	max	3.472	-16.046	319.486	39.12E3	8.57E3	0.32E3
3	min	1.720	6.396	590.708	-15.84E3	4.97E3	-0.75E3
	max	1.720	6.396	590.708	-15.84E3	4.97E3	-0.75E3
4	min	4.076	1.349	371.819	-7.21E3	8.69E3	-0.79E3
	max	4.076	1.349	371.819	-7.21E3	8.69E3	-0.79E3
5	min	20.534	15.639	606.442	-29.06E3	32.06E3	-1.69E3
	max	20.534	15.639	606.442	-29.06E3	32.06E3	-1.69E3

	max	20.534	15.639	606.442	-29.06E3	32.06E3	-1.69E3
6	min	-3.399	-1.393	1302.877	1.91E3	-3.70E3	-6.26E3
6	max	-3.399	-1.393	1302.877	1.91E3	-3.70E3	-6.26E3
7	min	7.163	7.591	1128.466	-7.88E3	12.90E3	-0.15E3
7	max	7.163	7.591	1128.466	-7.88E3	12.90E3	-0.15E3
8	min	-34.030	65.486	985.501	-100.48E3	-51.54E3	-0.71E3
8	max	-34.030	65.486	985.501	-100.48E3	-51.54E3	-0.71E3
9	min	-33.525	-68.345	979.488	107.93E3	-52.48E3	0.22E3
9	max	-33.525	-68.345	979.488	107.93E3	-52.48E3	0.22E3
10	min	-2.072	-3.228	1194.418	5.27E3	-3.27E3	-0.05E3
10	max	-2.072	-3.228	1194.418	5.27E3	-3.27E3	-0.05E3
11	min	39.359	0.099	574.762	-0.04E3	61.53E3	-0.39E3
11	max	39.359	0.099	574.762	-0.04E3	61.53E3	-0.39E3
75	min	0.018	0.910	0	0.81E3	-2.45E3	0
75	max	0.018	0.910	0	0.81E3	-2.45E3	0

Plus grande valeur négative

Fx	-34.030 daN	Calcul 1	Noeud 8, Fx force en translation X
Fy	-68.345 daN	Calcul 1	Noeud 9, Fy force en translation Y
Mx	-100.48E3 daN.mm	Calcul 1	Noeud 8, Mx moment autour de l'axe X
My	-52.48E3 daN.mm	Calcul 1	Noeud 9, My moment autour de l'axe Y
Mz	-6.26E3 daN.mm	Calcul 1	Noeud 6, Mz moment autour de l'axe Z

Plus grande valeur positive

Fx	39.359 daN	Calcul 1	Noeud 11, Fx force en translation X
Fy	65.486 daN	Calcul 1	Noeud 8, Fy force en translation Y
Fz	1302.877 daN	Calcul 1	Noeud 6, Fz force en translation Z
Mx	107.93E3 daN.mm	Calcul 1	Noeud 9, Mx moment autour de l'axe X
My	61.53E3 daN.mm	Calcul 1	Noeud 11, My moment autour de l'axe Y
Mz	0.83E3 daN.mm	Calcul 1	Noeud 1, Mz moment autour de l'axe Z

Déplacements ELS

Passerelles 22GW EDF
calcul 2 'calcul 0'

DEPLACEMENT (TRANSLATIONS ET ROTATIONS)

X déplacement en translation X
Y déplacement en translation Y
Z déplacement en translation Z
RX rotation autour de l'axe X
RY rotation autour de l'axe Y
RZ rotation autour de l'axe Z
D déplacement total (x,y,z)
R rotation totale (rx,ry,rz)

Noeud	X	Y	Z	RX	RY	RZ	D	R
	mm	mm	mm	rad	rad	rad	mm	rad
n12								
12	-0.262060	0.655050	-0.022541	1.211E-3	-0.624E-3	-0.218E-3	0.705885	1.379E-3
n13								
13	-0.261905	0.957440	-0.069557	2.378E-3	0.499E-3	-0.084E-3	0.995050	2.432E-3
n14								
14	-0.906588	6.176775	-0.143408	-2.388E-3	-0.198E-3	-0.018E-3	6.244599	2.397E-3
n15								

15	-0.910981	6.159162	-0.050971	-2.394E-3	-0.249E-3	-0.018E-3	6.226376	2.407E-3
n16	-----	-----	-----	-----	-----	-----	-----	-----
16	-0.162955	-1.174624	-0.091012	-0.397E-3	1.292E-3	0.204E-3	1.189361	1.367E-3
n17	-----	-----	-----	-----	-----	-----	-----	-----
17	-0.370338	-0.037799	-0.174983	0.064E-3	-0.426E-3	0.085E-3	0.411337	0.439E-3
n18	-----	-----	-----	-----	-----	-----	-----	-----
18	-0.390162	0.911162	-0.150408	-0.771E-3	0.260E-3	0.036E-3	1.002530	0.814E-3
n19	-----	-----	-----	-----	-----	-----	-----	-----
19	-0.391532	0.388113	-0.131352	-3.749E-3	-2.108E-3	0.015E-3	0.566730	4.301E-3
n20	-----	-----	-----	-----	-----	-----	-----	-----
20	0.005550	0.310581	-0.131448	3.557E-3	-1.929E-3	0.079E-3	0.337298	4.047E-3
n21	-----	-----	-----	-----	-----	-----	-----	-----
21	0.005456	0.053767	-0.160326	0.153E-3	-0.117E-3	0.068E-3	0.169190	0.204E-3
n22	-----	-----	-----	-----	-----	-----	-----	-----
22	0.013192	0.027114	-0.077152	-0.016E-3	2.275E-3	0.058E-3	0.082835	2.275E-3
n23	-----	-----	-----	-----	-----	-----	-----	-----
23	-0.586736	0.958506	-0.123236	-2.346E-3	-0.058E-3	-0.043E-3	1.130566	2.347E-3
n24	-----	-----	-----	-----	-----	-----	-----	-----
24	-0.586495	0.855819	-0.060821	-2.437E-3	-0.081E-3	-0.042E-3	1.039279	2.438E-3
n25	-----	-----	-----	-----	-----	-----	-----	-----
25	-0.261956	0.853893	-0.476584	2.636E-3	0.109E-3	-0.148E-3	1.012367	2.642E-3
n26	-----	-----	-----	-----	-----	-----	-----	-----
26	-0.519225	-1.175023	-0.055363	0.389E-3	0.098E-3	0.142E-3	1.285823	0.426E-3
n27	-----	-----	-----	-----	-----	-----	-----	-----
27	-0.519138	-1.322880	-0.087955	0.060E-3	-0.085E-3	0.134E-3	1.423816	0.169E-3
n28	-----	-----	-----	-----	-----	-----	-----	-----
28	-0.163757	-1.322863	0.691995	-0.790E-3	0.658E-3	0.358E-3	1.501878	1.089E-3
n29	-----	-----	-----	-----	-----	-----	-----	-----
29	-0.928246	-1.377231	-0.071328	-0.027E-3	0.503E-3	0.239E-3	1.662375	0.557E-3
n30	-----	-----	-----	-----	-----	-----	-----	-----
30	-0.020664	-0.000171	1.204578	-0.003E-3	2.701E-3	0.022E-3	1.204755	2.701E-3
n31	-----	-----	-----	-----	-----	-----	-----	-----
31	0.037747	0.000155	1.206302	-0.002E-3	2.671E-3	0.091E-3	1.206893	2.673E-3
n32	-----	-----	-----	-----	-----	-----	-----	-----
32	-0.020667	0.029425	-0.098663	-0.047E-3	2.766E-3	0.166E-3	0.105011	2.771E-3
n33	-----	-----	-----	-----	-----	-----	-----	-----
33	0.037749	0.024806	-0.082912	0.015E-3	2.740E-3	-0.046E-3	0.094418	2.740E-3
n34	-----	-----	-----	-----	-----	-----	-----	-----
34	-0.024061	0.058387	-0.112356	0.091E-3	-0.283E-3	0.021E-3	0.128887	0.298E-3
n35	-----	-----	-----	-----	-----	-----	-----	-----
35	0.035268	0.049079	-0.264705	0.218E-3	-0.002E-3	0.031E-3	0.271517	0.221E-3
n36	-----	-----	-----	-----	-----	-----	-----	-----
36	-0.026965	0.313536	1.617311	3.535E-3	-2.601E-3	-0.074E-3	1.647643	4.389E-3
n37	-----	-----	-----	-----	-----	-----	-----	-----
37	0.032943	0.306168	-1.926381	3.642E-3	-2.065E-3	0.053E-3	1.950837	4.187E-3
n38	-----	-----	-----	-----	-----	-----	-----	-----
38	-0.381565	0.381803	1.678494	-3.730E-3	-2.784E-3	0.161E-3	1.763153	4.658E-3
n39	-----	-----	-----	-----	-----	-----	-----	-----
39	-0.406831	0.396693	-1.998998	-3.838E-3	-2.298E-3	-0.006E-3	2.078189	4.474E-3
n40	-----	-----	-----	-----	-----	-----	-----	-----
40	-0.375896	0.902637	0.196722	-0.716E-3	0.368E-3	-0.005E-3	0.997372	0.805E-3
n41	-----	-----	-----	-----	-----	-----	-----	-----
41	-0.408058	0.920001	-0.563961	-0.837E-3	0.319E-3	0.046E-3	1.153675	0.897E-3
n42	-----	-----	-----	-----	-----	-----	-----	-----
42	-0.165281	-0.043249	-0.248106	0.083E-3	-2.186E-3	0.606E-3	0.301238	2.270E-3
n43	-----	-----	-----	-----	-----	-----	-----	-----
43	-0.410478	-0.032546	-0.122537	0.045E-3	1.729E-3	0.469E-3	0.429612	1.792E-3
n44	-----	-----	-----	-----	-----	-----	-----	-----
44	-1.078779	0.019257	-0.076591	-0.015E-3	1.942E-3	0.062E-3	1.081666	1.943E-3
n45	-----	-----	-----	-----	-----	-----	-----	-----
45	0.061738	0.129517	-0.159165	0.140E-3	-0.100E-3	0.008E-3	0.214289	0.172E-3
n46	-----	-----	-----	-----	-----	-----	-----	-----
46	0.931667	2.073263	-0.130524	3.277E-3	-1.648E-3	-0.035E-3	2.276721	3.668E-3
n47	-----	-----	-----	-----	-----	-----	-----	-----
47	0.624246	-1.442480	-0.131325	-3.396E-3	-1.823E-3	0.113E-3	1.577238	3.856E-3
n48	-----	-----	-----	-----	-----	-----	-----	-----
48	-0.512591	0.531902	-0.150376	-0.722E-3	0.205E-3	0.024E-3	0.753845	0.751E-3
n49	-----	-----	-----	-----	-----	-----	-----	-----
49	-0.079083	0.024690	-0.153240	0.054E-3	-0.207E-3	0.883E-3	0.174201	0.908E-3
n50	-----	-----	-----	-----	-----	-----	-----	-----
50	-0.027014	0.355378	2.906240	3.879E-3	-2.578E-3	0.123E-3	2.928012	4.659E-3
n51	-----	-----	-----	-----	-----	-----	-----	-----
51	0.032939	0.355959	-1.025504	4.043E-3	-1.711E-3	0.074E-3	1.086025	4.391E-3
n52	-----	-----	-----	-----	-----	-----	-----	-----
52	-0.368848	-1.174763	-0.386808	-0.045E-3	2.086E-3	0.189E-3	1.290635	2.095E-3
n53	-----	-----	-----	-----	-----	-----	-----	-----
53	-0.165254	0.092269	0.816050	-1.063E-3	-2.115E-3	0.122E-3	0.837711	2.370E-3

n54	54	-0.370672	0.091353	-0.248215	-1.059E-3	0.535E-3	0.331E-3	0.455361	1.232E-3
n55	55	-0.410576	-0.128280	0.712521	1.409E-3	1.655E-3	0.024E-3	0.832295	2.174E-3
n56	56	-0.370206	-0.127740	-0.696101	1.401E-3	-1.459E-3	0.210E-3	0.798703	2.033E-3
n57	57	-0.381688	0.361485	3.055574	-3.995E-3	-2.752E-3	-0.065E-3	3.100466	4.851E-3
n58	58	-0.406761	0.360612	-0.978745	-4.118E-3	-1.952E-3	-0.076E-3	1.119570	4.558E-3
n59	59	0.033100	0.362723	-3.107804	4.575E-3	-2.400E-3	-0.165E-3	3.129074	5.169E-3
n60	60	-0.406851	0.366433	-3.296704	-4.467E-3	-2.630E-3	0.035E-3	3.341864	5.184E-3
n61	61	-0.456023	0.957971	-3.254505	0.015E-3	0.322E-3	-0.108E-3	3.423079	0.340E-3
n62	62	-0.456037	0.854858	-3.576410	-0.227E-3	0.321E-3	-0.097E-3	3.705329	0.405E-3
n63	63	-0.164034	-0.661048	-4.178122	0.785E-3	0.275E-3	0.187E-3	4.233272	0.853E-3
n64	64	-0.369693	-0.660956	-3.391278	0.788E-3	-0.650E-3	0.288E-3	3.474810	1.061E-3
n65	65	-0.409491	0.601928	-3.546376	-1.894E-3	-0.347E-3	0.094E-3	3.620329	1.928E-3
n66	66	-0.372740	0.601892	-1.650662	-1.895E-3	0.039E-3	0.145E-3	1.796077	1.901E-3
n67	67	-0.022289	0.058250	-4.179647	-0.093E-3	-0.606E-3	0.015E-3	4.180113	0.613E-3
n68	68	0.036434	0.058216	-4.087025	-0.092E-3	-0.609E-3	0.047E-3	4.087602	0.618E-3
n69	69	0.034100	0.301394	-4.439423	1.831E-3	1.154E-3	0.107E-3	4.449773	2.167E-3
n70	70	-0.025590	0.301354	-2.610416	1.828E-3	0.080E-3	0.071E-3	2.627878	1.831E-3
n71	71	-0.379016	0.552714	-2.852577	-2.057E-3	0.056E-3	-0.070E-3	2.930245	2.059E-3
n72	72	-0.407125	0.552711	-4.910137	-2.059E-3	1.051E-3	-0.091E-3	4.957891	2.313E-3
n73	73	-0.197440	0.364744	-7.991992	0.057E-3	-2.569E-3	-0.073E-3	8.002747	2.570E-3
n74	74	-0.197360	0.358119	-5.423859	-0.002E-3	-2.567E-3	-0.095E-3	5.439251	2.568E-3
n75	75	0	0	1.205482	0	0	0.059E-3	1.205482	0.059E-3
n76	76	-1.137176	7.610997	-0.145550	-2.392E-3	-0.205E-3	-0.016E-3	7.696859	2.400E-3
n77	77	-1.132847	7.595293	-0.049583	-2.393E-3	-0.267E-3	-0.016E-3	7.679471	2.408E-3
n78	78	-1.146557	7.627646	-0.568565	-2.390E-3	-0.527E-3	-0.017E-3	7.734264	2.447E-3

Plus grande valeur négative

X	-1.146557 mm	Noeud 78, X déplacement en translation X
Y	-1.442480 mm	Noeud 47, Y déplacement en translation Y
Z	-7.991992 mm	Noeud 73, Z déplacement en translation Z
RX	-4.467E-3 rad	Noeud 60, RX rotation autour de l'axe X
RY	-2.784E-3 rad	Noeud 38, RY rotation autour de l'axe Y
RZ	-0.218E-3 rad	Noeud 12, RZ rotation autour de l'axe Z

Plus grande valeur positive

X	0.931667 mm	Noeud 46, X déplacement en translation X
Y	7.627646 mm	Noeud 78, Y déplacement en translation Y
Z	3.055574 mm	Noeud 57, Z déplacement en translation Z
RX	4.575E-3 rad	Noeud 59, RX rotation autour de l'axe X
RY	2.766E-3 rad	Noeud 32, RY rotation autour de l'axe Y
RZ	0.883E-3 rad	Noeud 49, RZ rotation autour de l'axe Z
D	8.002747 mm	Noeud 73, D déplacement total (x,y,z)
R	5.184E-3 rad	Noeud 60, R rotation totale (rx,ry,rz)

Flèches ELS

Propriété 3 RE100_4X R100x100 4 - section rectangulaire creuse
 Passerelles 22GW EDF
 calcul 2 'calcul 0'

 FLÈCHES - DÉPLACEMENTS NORMAUX À LA FIBRE NEUTRE

W flèche, déplacement perpendiculaire à l'âme
 Wy déplacement (y) perpendiculaire à l'âme
 Wz déplacement (z) perpendiculaire à l'âme
 Thy rotation (y) de la fibre neutre
 Thz rotation (z) de la fibre neutre

Elément	W mm	Wy mm	Wz mm	Thy rad	Thz rad
e1	0	1.736841	0	0	0
1	0	1.736841	0	0	0
e2	0	3.133603	0	0	0
2	0	3.133603	0	0	0
e3	0	-1.322880	0	0	0
3	0	-1.322880	0	0	0
e4	0	-1.175023	0	0	0
4	0	-1.175023	0	0	0
e5	0	-1.377231	0	0	0
5	0	-1.377231	0	0	0
e6	0	0.049533	0	0	0
6	0	0.049533	0	0	0
e7	0	0.531902	0	0	0
7	0	0.531902	0	0	0
e8	0	-3.246277	0	0	0
8	0	-3.246277	0	0	0
e9	0	3.707376	0	0	0
9	0	3.707376	0	0	0
e10	0	0.192871	0	0	0
10	0	0.192871	0	0	0
e11	0	0.019257	0	0	0
11	0	0.019257	0	0	0
e12	0.655437	-0.853893	-0.022541	0.624E-3	-0.218E-3
12	0.655437	-0.853893	-0.022541	0.624E-3	-0.218E-3
e13	6.159373	-6.176775	-0.050971	0.249E-3	-0.018E-3
13	6.159373	-6.176775	-0.050971	0.249E-3	-0.018E-3
e17	0.186648	0.368848	-0.091012	0.397E-3	0.204E-3
17	0.186648	0.368848	-0.091012	0.397E-3	0.204E-3
e18	1.325801	-1.322880	-0.087955	-0.085E-3	0.134E-3
18	1.325801	-1.322880	-0.087955	-0.085E-3	0.134E-3
e20	1.374585	-1.430511	0.373521	0.658E-3	-0.305E-3
20	1.374585	-1.430511	0.373521	0.658E-3	-0.305E-3
e32	0.055796	1.078779	-0.041088	-0.015E-3	1.905E-3
32	0.055796	1.078779	-0.041088	-0.015E-3	1.905E-3
e33	0.092899	-1.078779	-0.090572	-0.047E-3	-1.839E-3
33	0.092899	-1.078779	-0.090572	-0.047E-3	-1.839E-3
e34	0.213261	-0.061738	-0.204129	-0.140E-3	0.077E-3
34	0.213261	-0.061738	-0.204129	-0.140E-3	0.077E-3
e35	0.065201	0.061738	-0.020964	0.140E-3	-0.065E-3
35	0.065201	0.061738	-0.020964	0.140E-3	-0.065E-3
e36	1.815583	-0.931667	-1.558313	-3.277E-3	1.140E-3
36	1.815583	-0.931667	-1.558313	-3.277E-3	1.140E-3
e37	1.659856	0.931667	1.373724	3.277E-3	-1.190E-3
37	1.659856	0.931667	1.373724	3.277E-3	-1.190E-3
e38	1.742177	0.624246	-1.694009	-3.838E-3	1.620E-3
38	1.742177	0.624246	-1.694009	-3.838E-3	1.620E-3
e39	1.275976	0.624246	-1.112848	-3.396E-3	-1.209E-3
39	1.275976	0.624246	-1.112848	-3.396E-3	-1.209E-3
e40	1.125870	-0.512591	-1.049320	-0.837E-3	-0.193E-3
40	1.125870	-0.512591	-1.049320	-0.837E-3	-0.193E-3
e41	0.863477	0.512591	0.777364	0.716E-3	0.257E-3
41	0.863477	0.512591	0.777364	0.716E-3	0.257E-3
e42	0.415381	-0.584959	-0.063633	0.045E-3	-0.891E-3
42	0.415381	-0.584959	-0.063633	0.045E-3	-0.891E-3
e43	0.264124	0.165281	-0.206019	-0.083E-3	-1.117E-3
43	0.264124	0.165281	-0.206019	-0.083E-3	-1.117E-3
e72	7.612389	7.610997	-0.145550	-0.205E-3	-0.016E-3
72	7.612389	7.610997	-0.145550	-0.205E-3	-0.016E-3
e73	7.679311	7.595293	-1.132847	-0.267E-3	-2.393E-3
73	7.679311	7.595293	-1.132847	-0.267E-3	-2.393E-3
e77	1.421097	-1.322880	0.519138	-0.085E-3	-0.060E-3
77	1.421097	-1.322880	0.519138	-0.085E-3	-0.060E-3
e78	1.123829	6.176775	0.586736	-0.058E-3	2.346E-3
78	1.123829	6.176775	0.586736	-0.058E-3	2.346E-3
e79	1.284630	-1.229847	0.519225	0.098E-3	-0.389E-3
79	1.284630	-1.229847	0.519225	0.098E-3	-0.389E-3
e80	1.037498	6.159162	0.586495	-0.081E-3	2.437E-3
80	1.037498	6.159162	0.586495	-0.081E-3	2.437E-3
e81					

81	1.660844	-1.377231	0.928246	0.503E-3	0.027E-3
e82	-----+	-----+	-----+	-----+	-----+
82	0.082847	-0.037799	0.079083	-0.207E-3	-0.054E-3
e83	-----+	-----+	-----+	-----+	-----+
83	0.738695	0.911162	0.512591	0.205E-3	0.722E-3
e84	-----+	-----+	-----+	-----+	-----+
84	1.571761	-1.442480	-0.624246	-1.823E-3	3.396E-3
e85	-----+	-----+	-----+	-----+	-----+
85	2.272977	2.073263	-0.931667	-1.648E-3	-3.277E-3
e86	-----+	-----+	-----+	-----+	-----+
86	0.143479	0.129517	-0.061738	-0.100E-3	-0.140E-3
e87	-----+	-----+	-----+	-----+	-----+
87	1.078951	0.027114	1.078779	1.942E-3	0.015E-3
e88	-----+	-----+	-----+	-----+	-----+
88	0.977889	-0.957440	-0.476584	-0.109E-3	-0.148E-3
e91	-----+	-----+	-----+	-----+	-----+
91	0.534480	0.519225	-0.386808	0.045E-3	0.189E-3

Plus grande valeur négative

Wy	-6.176775 mm	Elément 13, Wy déplacement (y) perpendiculaire à l'âme
Wz	-1.770573 mm	Elément 9, Wz déplacement (z) perpendiculaire à l'âme
Thy	-3.838E-3 rad	Elément 38, Thy rotation (y) de la fibre neutre
Thz	-3.571E-3 rad	Elément 85, Thz rotation (z) de la fibre neutre

Plus grande valeur positive

W	7.679311 mm	Elément 73, W flèche, déplacement perpendiculaire à l'âme
Wy	7.610997 mm	Elément 72, Wy déplacement (y) perpendiculaire à l'âme
Wz	2.070260 mm	Elément 11, Wz déplacement (z) perpendiculaire à l'âme
Thy	3.645E-3 rad	Elément 37, Thy rotation (y) de la fibre neutre
Thz	3.749E-3 rad	Elément 84, Thz rotation (z) de la fibre neutre

Propriété 4 UPN100
Passerelles 22GW EDF
calcul 2 'calcul 0'

FLÈCHES - DÉPLACEMENTS NORMAUX À LA FIBRE NEUTRE

W flèche, déplacement perpendiculaire à l'âme
Wy déplacement (y) perpendiculaire à l'âme
Wz déplacement (z) perpendiculaire à l'âme
Thy rotation (y) de la fibre neutre
Thz rotation (z) de la fibre neutre

Elément	W mm	Wy mm	Wz mm	Thy rad	Thz rad
e14	-----+	-----+	-----+	-----+	-----+
14	0.589640	0.586495	-0.060821	2.437E-3	-0.042E-3
e15	-----+	-----+	-----+	-----+	-----+
15	0.270985	-0.456023	-0.069557	2.378E-3	-0.084E-3
e16	-----+	-----+	-----+	-----+	-----+
16	0.966396	0.958506	-0.123236	-0.058E-3	-0.043E-3
e19	-----+	-----+	-----+	-----+	-----+
19	0.977889	-0.957440	-0.476584	-0.109E-3	-0.148E-3
e22	-----+	-----+	-----+	-----+	-----+
22	0.526536	-0.519138	-0.087955	0.060E-3	0.134E-3
e23	-----+	-----+	-----+	-----+	-----+
23	1.492924	-1.322863	0.691995	0.658E-3	0.358E-3
e24	-----+	-----+	-----+	-----+	-----+
24	0.186648	0.368848	-0.091012	0.397E-3	0.204E-3
e25	-----+	-----+	-----+	-----+	-----+
25	1.176327	1.322880	-0.055363	-0.098E-3	0.142E-3
e44	-----+	-----+	-----+	-----+	-----+
44	2.927888	-0.355378	2.906240	2.578E-3	0.123E-3
e45	-----+	-----+	-----+	-----+	-----+
45	1.204755	-0.020664	1.204578	-0.003E-3	0.022E-3
e46	-----+	-----+	-----+	-----+	-----+
46	1.206302	0.026052	1.206302	2.671E-3	0.091E-3
e47	-----+	-----+	-----+	-----+	-----+
47	1.026033	-0.032939	-1.025504	-4.043E-3	0.074E-3
e48	-----+	-----+	-----+	-----+	-----+
48	0.091101	-0.038434	-0.082912	-0.015E-3	-0.046E-3
e49	-----+	-----+	-----+	-----+	-----+
49	0.267044	-0.035268	-0.264705	-0.218E-3	0.031E-3
e50	-----+	-----+	-----+	-----+	-----+
50	1.617536	-0.028758	1.617311	3.535E-3	-0.074E-3
e51	-----+	-----+	-----+	-----+	-----+
51	0.534480	-0.368848	-0.386808	-0.045E-3	0.189E-3
e52	-----+	-----+	-----+	-----+	-----+

52	0.534480	-0.368848	-0.386808	-0.045E-3	0.189E-3
e53	-----+	-----+	-----+	-----+	-----+
53	1.178145	-1.174624	-0.091012	1.292E-3	0.204E-3
e54	-----+	-----+	-----+	-----+	-----+
54	0.832614	0.370672	0.816050	1.063E-3	0.122E-3
e55	-----+	-----+	-----+	-----+	-----+
55	0.264492	-0.091353	-0.248215	-0.535E-3	0.331E-3
e56	-----+	-----+	-----+	-----+	-----+
56	0.298118	0.370338	-0.248106	-0.083E-3	0.606E-3
e57	-----+	-----+	-----+	-----+	-----+
57	0.822350	-0.413645	0.712521	1.409E-3	0.024E-3
e58	-----+	-----+	-----+	-----+	-----+
58	0.707724	-0.127740	-0.696101	-1.459E-3	0.210E-3
e59	-----+	-----+	-----+	-----+	-----+
59	3.079321	0.410347	3.055574	3.995E-3	-0.065E-3
e60	-----+	-----+	-----+	-----+	-----+
60	1.043064	-0.396693	-0.978745	1.952E-3	-0.076E-3
e61	-----+	-----+	-----+	-----+	-----+
61	3.107980	-0.197440	-3.107804	4.575E-3	-0.165E-3
e62	-----+	-----+	-----+	-----+	-----+
62	3.317006	0.396693	-3.296704	-2.630E-3	0.035E-3
e63	-----+	-----+	-----+	-----+	-----+
63	1.059903	0.406761	-0.978745	4.118E-3	-0.076E-3
e64	-----+	-----+	-----+	-----+	-----+
64	1.085525	-0.355959	-1.025504	1.711E-3	0.074E-3
e65	-----+	-----+	-----+	-----+	-----+
65	3.392567	0.957971	-3.254505	0.322E-3	-0.108E-3
e66	-----+	-----+	-----+	-----+	-----+
66	4.181340	0.369693	-4.178122	-0.785E-3	0.187E-3
e67	-----+	-----+	-----+	-----+	-----+
67	4.087188	-0.036434	-4.087025	0.092E-3	0.047E-3
e68	-----+	-----+	-----+	-----+	-----+
68	4.439554	-0.034100	-4.439423	-1.831E-3	0.107E-3
e69	-----+	-----+	-----+	-----+	-----+
69	1.692223	0.409491	-1.650662	1.895E-3	0.145E-3
e70	-----+	-----+	-----+	-----+	-----+
70	2.877646	0.412120	-2.852577	2.057E-3	-0.070E-3
e71	-----+	-----+	-----+	-----+	-----+
71	8.000311	0.368983	-7.991992	-2.569E-3	-0.073E-3
e89	-----+	-----+	-----+	-----+	-----+
89	3.605368	0.456037	-3.576410	0.227E-3	-0.097E-3
e90	-----+	-----+	-----+	-----+	-----+
90	3.286299	-0.586736	-3.254505	0.015E-3	-0.108E-3
e92	-----+	-----+	-----+	-----+	-----+
92	0.534480	0.519225	-0.386808	0.045E-3	0.189E-3
e99	-----+	-----+	-----+	-----+	-----+
99	1.647422	-0.344534	1.617311	2.601E-3	-0.074E-3
e100	-----+	-----+	-----+	-----+	-----+
100	2.627753	-0.301354	-2.610416	-0.080E-3	0.071E-3
e101	-----+	-----+	-----+	-----+	-----+
101	0.126622	-0.060765	-0.112356	0.283E-3	0.021E-3
e102	-----+	-----+	-----+	-----+	-----+
102	4.180053	-0.083558	-4.179647	0.606E-3	0.015E-3
e103	-----+	-----+	-----+	-----+	-----+
103	0.102957	-0.029425	-0.098663	-2.766E-3	0.166E-3
e104	-----+	-----+	-----+	-----+	-----+
104	1.205482	0.037747	1.205482	0	0.059E-3
e105	-----+	-----+	-----+	-----+	-----+
105	0.086543	0.058216	-0.082912	2.740E-3	-0.046E-3
e106	-----+	-----+	-----+	-----+	-----+
106	4.087440	0.067697	-4.087025	-0.609E-3	0.047E-3
e107	-----+	-----+	-----+	-----+	-----+
107	0.269217	0.301394	-0.264705	-0.002E-3	0.031E-3
e108	-----+	-----+	-----+	-----+	-----+
108	4.449642	0.396765	-4.439423	1.154E-3	0.107E-3
e109	-----+	-----+	-----+	-----+	-----+
109	3.128899	0.362723	-3.107804	-2.400E-3	-0.165E-3
e110	-----+	-----+	-----+	-----+	-----+
110	1.950559	0.355959	-1.926381	-2.065E-3	0.053E-3
e111	-----+	-----+	-----+	-----+	-----+
111	0.078272	0.020667	-0.077152	0.016E-3	0.058E-3
e112	-----+	-----+	-----+	-----+	-----+
112	0.160419	0.024061	-0.160326	-0.153E-3	0.068E-3
e113	-----+	-----+	-----+	-----+	-----+
113	0.131565	0.032943	-0.131448	3.557E-3	0.079E-3
e114	-----+	-----+	-----+	-----+	-----+
114	4.230093	-0.661048	-4.178122	0.275E-3	0.187E-3

e115	115	0.251847	0.092269	-0.248106	-2.186E-3	0.606E-3
e116	116	0.179019	0.127740	-0.174983	0.426E-3	0.085E-3
e117	117	0.707724	0.660956	-0.696101	1.459E-3	0.210E-3
e118	118	3.455088	1.174763	-3.391278	0.650E-3	0.288E-3
e119	119	0.409596	0.410478	-0.174983	-0.064E-3	0.085E-3
e120	120	0.179019	0.091353	-0.174983	-0.426E-3	0.085E-3
e121	121	0.264492	0.601892	-0.248215	0.535E-3	0.331E-3
e122	122	1.756974	0.902637	-1.650662	0.039E-3	0.145E-3
e123	123	0.923826	0.902637	0.196722	0.368E-3	-0.005E-3
e124	124	2.905630	0.552714	-2.852577	0.056E-3	-0.070E-3
e125	125	1.721371	0.391255	1.678494	-2.784E-3	0.161E-3
e126	126	2.037979	-0.396693	-1.998998	2.298E-3	-0.006E-3
e127	127	3.317006	-0.552711	-3.296704	2.630E-3	0.035E-3
e128	128	4.941147	-0.920001	-4.910137	-1.051E-3	-0.091E-3
e129	129	1.079099	-0.920001	-0.563961	-0.319E-3	0.046E-3
e130	130	3.597096	-0.601928	-3.546376	0.347E-3	0.094E-3
e131	131	0.126785	0.128280	-0.122537	-1.729E-3	0.469E-3
e132	132	7.994430	-0.406851	-7.991992	0.057E-3	-0.073E-3
e133	133	2.037979	0.396693	-1.998998	-2.298E-3	-0.006E-3
e134	134	5.427449	0.197360	-5.423859	0.002E-3	-0.095E-3
e135	135	1.950559	-0.362723	-1.926381	2.065E-3	0.053E-3

Plus grande valeur négative

Wy	-1.322863 mm	Elément 23, Wy déplacement (y) perpendiculaire à l'âme
Wz	-7.991992 mm	Elément 61, Wz déplacement (z) perpendiculaire à l'âme
Thy	-4.467E-3 rad	Elément 132, Thy rotation (y) de la fibre neutre
Thz	-0.257E-3 rad	Elément 128, Thz rotation (z) de la fibre neutre

Plus grande valeur positive

W	8.000311 mm	Elément 71, W flèche, déplacement perpendiculaire à l'âme
Wy	1.322880 mm	Elément 25, Wy déplacement (y) perpendiculaire à l'âme
Wz	3.055574 mm	Elément 125, Wz déplacement (z) perpendiculaire à l'âme
Thy	4.575E-3 rad	Elément 61, Thy rotation (y) de la fibre neutre
Thz	0.606E-3 rad	Elément 114, Thz rotation (z) de la fibre neutre

Propriété 6 PL100_15
 Passerelles 22GW EDF
 calcul 2 'calcul 0'

FLÈCHES - DÉPLACEMENTS NORMAUX À LA FIBRE NEUTRE

W flèche, déplacement perpendiculaire à l'âme
 Wy déplacement (y) perpendiculaire à l'âme
 Wz déplacement (z) perpendiculaire à l'âme
 Thy rotation (y) de la fibre neutre
 Thz rotation (z) de la fibre neutre

Elément	W	Wy	Wz	Thy	Thz	
	mm	mm	mm	rad	rad	
e21	21	1.492924	-1.322863	0.691995	0.658E-3	0.358E-3
e26	26	0.091101	0.082912	-0.037749	0.046E-3	-0.015E-3
e27	27	0.114904	-0.160326	0.024061	0.021E-3	-0.091E-3
e28	28	1.617536	1.617311	0.026965	-0.074E-3	-3.535E-3

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e29-----+-----+-----+-----+-----+-----+
29      | 2.039976|-1.998998| 0.406831|-0.006E-3| 3.838E-3|
e30-----+-----+-----+-----+-----+-----+
30      | 0.696105|-0.563961| 0.408058| 0.046E-3| 0.837E-3|
e31-----+-----+-----+-----+-----+-----+
31      | 0.428377| 0.174983|-0.410478|-0.469E-3| 0.045E-3|
e93-----+-----+-----+-----+-----+-----+
93      | 0.078272| 0.098663|-0.013192|-0.058E-3| 0.016E-3|
e94-----+-----+-----+-----+-----+-----+
94      | 0.160419|-0.264705|-0.005456| 0.068E-3|-0.153E-3|
e95-----+-----+-----+-----+-----+-----+
95      | 0.131565|-1.926381|-0.005550| 0.079E-3|-3.557E-3|
e96-----+-----+-----+-----+-----+-----+
96      | 0.412978| 1.678494| 0.391532| 0.015E-3| 3.749E-3|
e97-----+-----+-----+-----+-----+-----+
97      | 0.418149| 0.196722| 0.390162| 0.036E-3| 0.771E-3|
e98-----+-----+-----+-----+-----+-----+
98      | 0.409596| 0.248106|-0.370338|-0.085E-3| 0.064E-3|
-----+-----+-----+-----+-----+-----+

```

Plus grande valeur négative

Wy -1.998998 mm Elément 29, Wy déplacement (y) perpendiculaire à l'âme
Wz -0.410478 mm Elément 31, Wz déplacement (z) perpendiculaire à l'âme
Thy -0.606E-3 rad Elément 98, Thy rotation (y) de la fibre neutre
Thz -3.642E-3 rad Elément 95, Thz rotation (z) de la fibre neutre

Plus grande valeur positive

W 2.039976 mm Elément 29, W flèche, déplacement perpendiculaire à l'âme
Wy 1.678494 mm Elément 96, Wy déplacement (y) perpendiculaire à l'âme
Wz 0.691995 mm Elément 21, Wz déplacement (z) perpendiculaire à l'âme
Thy 1.292E-3 rad Elément 21, Thy rotation (y) de la fibre neutre
Thz 3.838E-3 rad Elément 29, Thz rotation (z) de la fibre neutre

Propriété 7 OB79
Passerelles 22GW EDF
calcul 2 'calcul 0'

FLÈCHES - DÉPLACEMENTS NORMAUX À LA FIBRE NEUTRE

W flèche, déplacement perpendiculaire à l'âme
Wy déplacement (y) perpendiculaire à l'âme
Wz déplacement (z) perpendiculaire à l'âme
Thy rotation (y) de la fibre neutre
Thz rotation (z) de la fibre neutre

```

Elément |      W |      Wy |      Wz |      Thy |      Thz |
         |      mm |      mm |      mm |      rad |      rad |
-----+-----+-----+-----+-----+-----+
e74-----+-----+-----+-----+-----+-----+
74      | 7.695483| 7.610997|-1.137176|-0.205E-3|-2.392E-3|
e75-----+-----+-----+-----+-----+-----+
75      | 7.648807| 7.627646|-0.568565|-0.527E-3|-0.017E-3|
e76-----+-----+-----+-----+-----+-----+
76      | 7.703367| 7.627646|-1.077439|-0.527E-3|-1.244E-3|
-----+-----+-----+-----+-----+-----+

```

Plus grande valeur négative

Wz -1.137176 mm Elément 74, Wz déplacement (z) perpendiculaire à l'âme
Thy -0.527E-3 rad Elément 75, Thy rotation (y) de la fibre neutre
Thz -2.392E-3 rad Elément 74, Thz rotation (z) de la fibre neutre

Plus grande valeur positive

W 7.703367 mm Elément 76, W flèche, déplacement perpendiculaire à l'âme
Wy 7.627646 mm Elément 75, Wy déplacement (y) perpendiculaire à l'âme

Efforts résultants

Propriété 3 RE100_4X R100x100 4 - section rectangulaire creuse
Passerelles 22GW EDF
calcul 1 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]

Nx effort axial de traction ou compression
Ty effort tranchant
Tz effort tranchant
Mx moment de torsion
My moment fléchissant
Mz moment fléchissant
W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm
e1							
1	-103.533	8.461	-3.317	-0.83E3	-15.93E3	-37.96E3	0
e2							
2	-319.486	16.046	3.472	-0.32E3	15.59E3	-72.56E3	0
e3							
3	-590.708	-6.396	1.720	0.75E3	-4.97E3	-15.84E3	0
e4							
4	-371.819	-1.349	4.076	0.79E3	10.71E3	-7.21E3	0
e5							
5	-606.442	-15.639	20.534	1.69E3	45.15E3	29.75E3	0
e6							
6	-1302.877	1.393	-3.399	6.26E3	-9.08E3	-3.33E3	0
e7							
7	-1128.466	-7.591	7.163	0.15E3	17.61E3	24.46E3	0
e8							
8	-985.501	-65.486	-34.030	0.71E3	-93.43E3	178.49E3	0
e9							
9	-979.488	68.345	-33.525	-0.22E3	-90.34E3	-183.22E3	0
e10							
10	-1194.418	3.228	-2.072	0.05E3	-5.56E3	-8.48E3	0
e11							
11	-574.762	-0.099	39.359	0.39E3	106.14E3	0.39E3	0
e12							
12	-3.317	-8.461	-103.533	-37.96E3	-87.61E3	7.63E3	0.655437
e13							
13	-140.424	0.406	69.146	-0.16E3	-37.03E3	-0.21E3	6.159373
e17							
17	-4.458	4.896	-39.379	21.15E3	-36.88E3	-3.19E3	0.186648
e18							
18	-2.805	5.199	20.667	8.77E3	19.27E3	2.98E3	1.325801
e20							
20	-18.646	10.869	-50.962	11.76E3	-41.40E3	23.44E3	1.374585
e32							
32	-379.467	-78.174	0.840	-24.17E3	2.39E3	-61.38E3	0.055796
e33							
33	-380.539	83.511	1.251	24.71E3	2.62E3	64.83E3	0.092899
e34							
34	-777.509	-23.103	2.366	-4.54E3	4.23E3	17.72E3	0.213261
e35							
35	-802.498	-14.635	-6.492	-2.00E3	7.73E3	11.08E3	0.065201
e36							
36	-380.205	-103.194	96.880	-26.42E3	-52.08E3	81.23E3	1.815583
e37							
37	-919.452	33.530	-98.881	13.46E3	60.17E3	-27.94E3	1.659856
e38							
38	-911.067	-35.086	85.783	-15.82E3	60.97E3	-29.77E3	1.742177
e39							
39	-462.385	104.773	67.985	26.88E3	-47.18E3	-81.71E3	1.275976
e40							
40	-814.734	12.062	21.491	3.63E3	15.53E3	8.80E3	1.125870
e41							
41	-755.657	-15.438	1.106	-5.12E3	0.79E3	-12.03E3	0.863477
e42							
42	-424.111	81.852	1.578	20.28E3	1.45E3	115.39E3	0.415381
e43							
43	-430.401	71.822	3.456	22.68E3	3.45E3	105.97E3	0.264124
e72							
72	138.386	0.175	-73.984	-0.04E3	-40.01E3	-0.10E3	7.612389
e73							
73	73.984	0.175	138.386	0.10E3	43.02E3	-0.15E3	7.679311
e77							
77	-512.664	-12.568	-4.808	-2.14E3	5.89E3	67.33E3	1.421097
e78							
78	-293.131	0.581	2.039	0.29E3	-5.37E3	1.58E3	1.123829
e79							
79	-79.317	-11.939	4.653	-2.23E3	-9.09E3	75.99E3	1.284630
e80							
80	143.131	-0.581	-2.039	0.29E3	-5.98E3	-1.58E3	1.037498
e81							
81	-629.293	-4.771	69.754	-0.92E3	73.51E3	20.50E3	1.660844
e82							
82	-695.087	-1.727	-13.430	-21.26E3	-17.45E3	-1.33E3	0.082847
e83							
83	-2.053	19.768	-20.337	0.61E3	10.45E3	9.72E3	0.738695
e84							

84	-1.738	143.049	105.830	-5.23E3	-54.34E3	70.35E3	1.571761
e85	-59.077	-174.536	103.200	6.09E3	-53.30E3	-70.98E3	2.272977
e86	-74.267	-8.179	6.396	3.18E3	-3.30E3	-3.31E3	0.143479
e87	-35.878	0.369	-122.326	-0.22E3	63.18E3	0.15E3	1.078951
e88	-1.625	6.456	54.433	6.86E3	-46.32E3	6.39E3	0.977889
e91	-8.748	-4.139	102.246	-55.75E3	-70.95E3	-4.39E3	0.534480

Plus grande valeur négative

Nx	-1302.877 daN	Elément 6, Nx effort axial de traction ou compression
Ty	-174.536 daN	Elément 85, Ty effort tranchant
Tz	-122.326 daN	Elément 87, Tz effort tranchant
Mx	-55.75E3 daN.mm	Elément 91, Mx moment de torsion
My	-93.43E3 daN.mm	Elément 8, My moment fléchissant
Mz	-183.22E3 daN.mm	Elément 9, Mz moment fléchissant

Plus grande valeur positive

Nx	143.131 daN	Elément 80, Nx effort axial de traction ou compression
Ty	143.049 daN	Elément 84, Ty effort tranchant
Tz	138.386 daN	Elément 73, Tz effort tranchant
Mx	26.88E3 daN.mm	Elément 39, Mx moment de torsion
My	106.14E3 daN.mm	Elément 11, My moment fléchissant
Mz	178.49E3 daN.mm	Elément 8, Mz moment fléchissant
W	7.679311 mm	Elément 73, W flèche, déplacement perpendiculaire à l'âme

Propriété 4 UPN100
 Passerelles 22GW EDF
 calcul 1 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]

Nx effort axial de traction ou compression
 Ty effort tranchant
 Tz effort tranchant
 Mx moment de torsion
 My moment fléchissant
 Mz moment fléchissant
 W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm
e14	-15.746	-0.147	-225.668	0.05E3	-125.76E3	-0.32E3	0.589640
e15	-8.699	-0.405	-216.295	0.02E3	-121.49E3	-0.44E3	0.270985
e16	6.839	-4.388	-3.221	-0.02E3	-2.59E3	2.20E3	0.966396
e19	-1.441	0.891	48.758	0.06E3	-41.26E3	0.84E3	0.977889
e22	-0.255	-1.236	126.527	-0.09E3	-38.65E3	1.91E3	0.526536
e23	22.729	-9.673	90.688	0.09E3	72.79E3	-5.78E3	1.492924
e24	-3.953	0.676	-97.774	0.18E3	-25.32E3	-0.43E3	0.186648
e25	-2.488	0.718	-18.512	0.07E3	17.16E3	-0.41E3	1.176327
e44	-2.801	16.471	48.611	0.16E3	8.88E3	-6.54E3	2.927888
e45	-9.711	0.149	0.797	1.23E3	0.42E3	0.49E3	1.204755
e46	0.131	8.800	60.797	0.01E3	16.00E3	-3.87E3	1.206302
e47	-16.471	-2.801	-13.889	-0.20E3	14.05E3	1.70E3	1.026033
e48	130.867	12.036	17.695	-0.21E3	7.08E3	4.30E3	0.091101
e49	265.832	2.810	34.292	-0.05E3	14.24E3	1.16E3	0.267044
e50	167.540	17.328	71.823	-0.31E3	19.84E3	6.21E3	1.617536
e51	-3.953	0.676	35.274	0.18E3	-32.84E3	0.43E3	0.534480
e52							

52	-3.953	0.676	35.274	0.18E3	-32.84E3	0.43E3	0.534480
e53							
53	-14.847	0.932	-272.215	0.13E3	170.61E3	-1.01E3	1.178145
e54							
54	-25.944	-1.525	-1.427	0.60E3	-0.90E3	2.05E3	0.832614
e55							
55	-18.917	14.074	167.961	-0.51E3	119.98E3	-6.55E3	0.264492
e56							
56	154.498	-10.221	-0.278	0.40E3	0.98E3	-8.32E3	0.298118
e57							
57	-15.313	-5.579	-1.927	0.71E3	-1.31E3	3.93E3	0.822350
e58							
58	-7.452	9.056	179.255	-0.61E3	128.91E3	-3.81E3	0.707724
e59							
59	-24.757	6.948	10.438	0.18E3	10.56E3	-3.54E3	3.079321
e60							
60	3.985	-8.655	156.614	-0.13E3	63.85E3	3.02E3	1.043064
e61							
61	-34.102	-0.483	-209.995	0.02E3	-175.14E3	0.74E3	3.107980
e62							
62	1.122	12.839	194.999	0.29E3	77.52E3	-3.72E3	3.317006
e63							
63	-42.068	-1.022	-209.040	-0.08E3	-163.97E3	-0.93E3	1.059903
e64							
64	-0.248	9.995	128.156	0.18E3	62.62E3	-2.75E3	1.085525
e65							
65	-0.397	-0.061	-0.108	-0.06E3	-0.08E3	0.10E3	3.392567
e66							
66	2.609	-2.312	0.211	-0.21E3	-0.21E3	1.78E3	4.181340
e67							
67	0.968	2.001	-0.070	0.00E3	0.04E3	-1.20E3	4.087188
e68							
68	-1.145	-2.133	-0.221	-0.24E3	0.22E3	-1.29E3	4.439554
e69							
69	1.016	-5.994	-0.567	-0.09E3	-0.32E3	-3.31E3	1.692223
e70							
70	-0.075	7.901	0.255	0.23E3	0.22E3	-4.08E3	2.877646
e71							
71	2.275	5.606	0.214	-0.01E3	0.20E3	-2.94E3	8.000311
e89							
89	-15.808	0.250	206.724	-0.03E3	-125.70E3	-0.40E3	3.605368
e90							
90	-8.760	-0.008	216.313	0.05E3	-121.44E3	0.24E3	3.286299
e92							
92	-7.758	-0.577	151.078	-0.48E3	-53.94E3	-0.58E3	0.534480
e99							
99	-19.015	0.126	-224.920	0.19E3	-112.02E3	0.56E3	1.647422
e100							
100	-21.148	1.271	287.359	0.19E3	214.65E3	-1.45E3	2.627753
e101							
101	-23.749	-0.295	-300.072	0.02E3	230.74E3	-0.33E3	0.126622
e102							
102	-21.748	-1.264	228.609	-0.00E3	-125.77E3	1.77E3	4.180053
e103							
103	-0.149	-9.711	-59.203	-0.02E3	15.25E3	-4.17E3	0.102957
e104							
104	-8.800	0.131	0.797	-1.22E3	-0.39E3	0.42E3	1.205482
e105							
105	-17.629	0.255	-226.153	-0.01E3	-124.01E3	0.54E3	0.086543
e106							
106	-15.628	-0.714	302.666	0.03E3	239.29E3	-0.80E3	4.087440
e107							
107	-16.157	0.947	-304.321	0.18E3	248.78E3	1.20E3	0.269217
e108							
108	-18.290	2.093	145.900	0.40E3	-121.33E3	-2.70E3	4.449642
e109							
109	-8.904	-16.005	224.822	-0.43E3	80.01E3	6.69E3	3.128899
e110							
110	-0.248	9.995	-159.406	0.18E3	65.22E3	2.75E3	1.950559
e111							
111	131.042	-12.334	-17.512	0.22E3	7.05E3	4.40E3	0.078272
e112							
112	261.957	4.084	-38.587	-0.08E3	15.00E3	-1.60E3	0.160419
e113							
113	250.215	-3.231	13.850	0.06E3	10.80E3	-1.13E3	0.131565
e114							
114	-17.159	-1.678	242.574	-0.08E3	-124.72E3	2.98E3	4.230093

e115	1.525	-25.944	-63.927	-0.52E3	16.94E3	-12.45E3	0.251847
e116	-7.452	9.056	-179.255	-0.61E3	128.91E3	3.81E3	0.179019
e117	-9.326	2.799	-235.438	0.09E3	110.53E3	2.49E3	0.707724
e118	-11.639	0.190	217.273	0.09E3	-108.58E3	-0.49E3	3.455088
e119	148.926	-17.214	-0.923	0.49E3	1.29E3	10.97E3	0.409596
e120	-18.917	14.074	-167.961	-0.51E3	119.98E3	6.55E3	0.179019
e121	-36.309	2.205	-212.349	-0.12E3	103.85E3	-2.49E3	0.264492
e122	-42.303	1.188	254.469	0.13E3	182.63E3	-1.69E3	1.756974
e123	-43.153	-2.335	-282.032	-0.15E3	194.94E3	-2.59E3	0.923826
e124	-35.252	-2.260	230.213	-0.19E3	-120.80E3	3.01E3	2.905630
e125	-6.948	-24.757	-52.062	-0.12E3	10.59E3	-8.97E3	1.721371
e126	1.122	12.839	-226.249	0.29E3	80.13E3	3.72E3	2.037979
e127	5.003	-2.818	-148.956	-0.35E3	-126.04E3	-2.69E3	3.317006
e128	12.904	-2.742	301.299	-0.14E3	236.71E3	3.22E3	4.941147
e129	19.216	1.326	-290.666	0.11E3	227.82E3	1.54E3	1.079099
e130	13.222	0.310	237.516	-0.21E3	115.50E3	1.42E3	3.597096
e131	5.579	-15.313	-64.427	-0.62E3	17.30E3	-9.30E3	0.126785
e132	-28.495	-2.758	209.792	0.01E3	-175.12E3	2.71E3	7.994430
e133	3.985	-8.655	-125.364	-0.13E3	61.25E3	-3.02E3	2.037979
e134	-36.462	-3.297	211.174	0.12E3	-163.96E3	3.39E3	5.427449
e135	-8.904	-16.005	-193.572	-0.43E3	77.40E3	-6.69E3	1.950559

Plus grande valeur négative

Nx	-43.153 daN	Elément 123, Nx effort axial de traction ou compression
Ty	-25.944 daN	Elément 115, Ty effort tranchant
Tz	-304.321 daN	Elément 107, Tz effort tranchant
Mx	-1.22E3 daN.mm	Elément 104, Mx moment de torsion
My	-175.14E3 daN.mm	Elément 61, My moment fléchissant
Mz	-12.45E3 daN.mm	Elément 115, Mz moment fléchissant

Plus grande valeur positive

Nx	265.832 daN	Elément 49, Nx effort axial de traction ou compression
Ty	17.328 daN	Elément 50, Ty effort tranchant
Tz	302.666 daN	Elément 106, Tz effort tranchant
Mx	1.23E3 daN.mm	Elément 45, Mx moment de torsion
My	248.78E3 daN.mm	Elément 107, My moment fléchissant
Mz	10.97E3 daN.mm	Elément 119, Mz moment fléchissant
W	8.000311 mm	Elément 71, W flèche, déplacement perpendiculaire à l'âme

Propriété 6 PL100_15
Passerelles 22GW EDF
calcul 1 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]

Nx effort axial de traction ou compression
Ty effort tranchant
Tz effort tranchant
Mx moment de torsion
My moment fléchissant
Mz moment fléchissant
W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm
e21	25.255	-0.942	58.690	0.32E3	46.00E3	-0.56E3	1.492924

e26	26	145.408	-0.337	48.378	-0.77E3	-17.60E3	0.12E3	0.091101
e27	27	291.064	0.735	-16.418	-0.27E3	6.59E3	-0.26E3	0.114904
e28	28	186.156	1.368	-69.651	-1.11E3	25.44E3	-0.37E3	1.617536
e29	29	540.575	-1.654	-29.361	-0.31E3	8.46E3	-0.52E3	2.039976
e30	30	556.840	0.665	5.750	0.10E3	-1.97E3	-0.24E3	0.696105
e31	31	165.473	-0.014	-72.282	1.78E3	46.22E3	0.02E3	0.428377
e93	93	145.602	0.334	-49.578	0.81E3	-18.02E3	0.12E3	0.078272
e94	94	295.368	-0.653	-11.295	-0.19E3	-4.77E3	-0.24E3	0.160419
e95	95	278.017	0.264	12.989	0.22E3	-4.61E3	-0.17E3	0.131565
e96	96	397.526	-3.392	76.469	1.12E3	26.79E3	-0.87E3	0.412978
e97	97	537.071	-1.389	-14.587	-0.18E3	-5.78E3	-0.41E3	0.418149
e98	98	171.664	-0.004	-42.917	1.45E3	-35.15E3	0.01E3	0.409596

Plus grande valeur négative

Ty	-3.392 daN	Elément 96, Ty effort tranchant
Tz	-72.282 daN	Elément 31, Tz effort tranchant
Mx	-1.11E3 daN.mm	Elément 28, Mx moment de torsion
My	-35.15E3 daN.mm	Elément 98, My moment fléchissant
Mz	-0.87E3 daN.mm	Elément 96, Mz moment fléchissant

Plus grande valeur positive

Nx	556.840 daN	Elément 30, Nx effort axial de traction ou compression
Ty	1.368 daN	Elément 28, Ty effort tranchant
Tz	76.469 daN	Elément 96, Tz effort tranchant
Mx	1.78E3 daN.mm	Elément 31, Mx moment de torsion
My	46.22E3 daN.mm	Elément 31, My moment fléchissant
Mz	0.83E3 daN.mm	Elément 96, Mz moment fléchissant
W	2.039976 mm	Elément 29, W flèche, déplacement perpendiculaire à l'âme

Propriété 7 OB79
Passerelles 22GW EDF
calcul 1 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]

Nx effort axial de traction ou compression
Ty effort tranchant
Tz effort tranchant
Mx moment de torsion
My moment fléchissant
Mz moment fléchissant
W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm	
e74	74	-83.709	-0.204	81.626	0.05E3	24.66E3	0.14E3	7.695483
e75	75	220.012	-0.029	9.724	-0.02E3	9.66E3	0.03E3	7.648807
e76	76	-260.830	0.029	7.090	0.02E3	8.34E3	-0.02E3	7.703367

Plus grande valeur négative

Nx	-260.830 daN	Elément 76, Nx effort axial de traction ou compression
Ty	-0.204 daN	Elément 74, Ty effort tranchant
Mx	-0.02E3 daN.mm	Elément 75, Mx moment de torsion
My	-24.31E3 daN.mm	Elément 74, My moment fléchissant
Mz	-0.02E3 daN.mm	Elément 76, Mz moment fléchissant

Plus grande valeur positive

Nx	220.012 daN	Elément 75, Nx effort axial de traction ou compression
Ty	0.029 daN	Elément 76, Ty effort tranchant
Tz	81.626 daN	Elément 74, Tz effort tranchant
Mx	0.05E3 daN.mm	Elément 74, Mx moment de torsion
My	24.66E3 daN.mm	Elément 74, My moment fléchissant
Mz	0.14E3 daN.mm	Elément 74, Mz moment fléchissant
W	7.703367 mm	Elément 76, W flèche, déplacement perpendiculaire à l'âme

 Propriété 3 RE100_4X R100x100 4 - section rectangulaire creuse
 Passerelles 22GW EDF
 calcul 2 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]
 Nx effort axial de traction ou compression
 Ty effort tranchant
 Tz effort tranchant
 Mx moment de torsion
 My moment fléchissant
 Mz moment fléchissant
 W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm
e1							
1	-103.533	8.461	-3.317	-0.83E3	-15.93E3	-37.96E3	0
e2							
2	-319.486	16.046	3.472	-0.32E3	15.59E3	-72.56E3	0
e3							
3	-590.708	-6.396	1.720	0.75E3	-4.97E3	-15.84E3	0
e4							
4	-371.819	-1.349	4.076	0.79E3	10.71E3	-7.21E3	0
e5							
5	-606.442	-15.639	20.534	1.69E3	45.15E3	29.75E3	0
e6							
6	-1302.877	1.393	-3.399	6.26E3	-9.08E3	-3.33E3	0
e7							
7	-1128.466	-7.591	7.163	0.15E3	17.61E3	24.46E3	0
e8							
8	-985.501	-65.486	-34.030	0.71E3	-93.43E3	178.49E3	0
e9							
9	-979.488	68.345	-33.525	-0.22E3	-90.34E3	-183.22E3	0
e10							
10	-1194.418	3.228	-2.072	0.05E3	-5.56E3	-8.48E3	0
e11							
11	-574.762	-0.099	39.359	0.39E3	106.14E3	0.39E3	0
e12							
12	-3.317	-8.461	-103.533	-37.96E3	-87.61E3	7.63E3	0.655437
e13							
13	-140.424	0.406	69.146	-0.16E3	-37.03E3	-0.21E3	6.159373
e17							
17	-4.458	4.896	-39.379	21.15E3	-36.88E3	-3.19E3	0.186648
e18							
18	-2.805	5.199	20.667	8.77E3	19.27E3	2.98E3	1.325801
e20							
20	-18.646	10.869	-50.962	11.76E3	-41.40E3	23.44E3	1.374585
e32							
32	-379.467	-78.174	0.840	-24.17E3	2.39E3	-61.38E3	0.055796
e33							
33	-380.539	83.511	1.251	24.71E3	2.62E3	64.83E3	0.092899
e34							
34	-777.509	-23.103	2.366	-4.54E3	4.23E3	17.72E3	0.213261
e35							
35	-802.498	-14.635	-6.492	-2.00E3	7.73E3	11.08E3	0.065201
e36							
36	-380.205	-103.194	96.880	-26.42E3	-52.08E3	81.23E3	1.815583
e37							
37	-919.452	33.530	-98.881	13.46E3	60.17E3	-27.94E3	1.659856
e38							
38	-911.067	-35.086	85.783	-15.82E3	60.97E3	-29.77E3	1.742177
e39							
39	-462.385	104.773	67.985	26.88E3	-47.18E3	-81.71E3	1.275976
e40							
40	-814.734	12.062	21.491	3.63E3	15.53E3	8.80E3	1.125870
e41							
41	-755.657	-15.438	1.106	-5.12E3	0.79E3	-12.03E3	0.863477
e42							
42	-424.111	81.852	1.578	20.28E3	1.45E3	115.39E3	0.415381
e43							
43	-430.401	71.822	3.456	22.68E3	3.45E3	105.97E3	0.264124
e72							
72	138.386	0.175	-73.984	-0.04E3	-40.01E3	-0.10E3	7.612389
e73							
73	73.984	0.175	138.386	0.10E3	43.02E3	-0.15E3	7.679311

e77							
77	-512.664	-12.568	-4.808	-2.14E3	5.89E3	67.33E3	1.421097
e78							
78	-293.131	0.581	2.039	0.29E3	-5.37E3	1.58E3	1.123829
e79							
79	-79.317	-11.939	4.653	-2.23E3	-9.09E3	75.99E3	1.284630
e80							
80	143.131	-0.581	-2.039	0.29E3	-5.98E3	-1.58E3	1.037498
e81							
81	-629.293	-4.771	69.754	-0.92E3	73.51E3	20.50E3	1.660844
e82							
82	-695.087	-1.727	-13.430	-21.26E3	-17.45E3	-1.33E3	0.082847
e83							
83	-2.053	19.768	-20.337	0.61E3	10.45E3	9.72E3	0.738695
e84							
84	-1.738	143.049	105.830	-5.23E3	-54.34E3	70.35E3	1.571761
e85							
85	-59.077	-174.536	103.200	6.09E3	-53.30E3	-70.98E3	2.272977
e86							
86	-74.267	-8.179	6.396	3.18E3	-3.30E3	-3.31E3	0.143479
e87							
87	-35.878	0.369	-122.326	-0.22E3	63.18E3	0.15E3	1.078951
e88							
88	-1.625	6.456	54.433	6.86E3	-46.32E3	6.39E3	0.977889
e91							
91	-8.748	-4.139	102.246	-55.75E3	-70.95E3	-4.39E3	0.534480

Plus grande valeur négative

Nx	-1302.877 daN	Elément 6, Nx effort axial de traction ou compression
Ty	-174.536 daN	Elément 85, Ty effort tranchant
Tz	-122.326 daN	Elément 87, Tz effort tranchant
Mx	-55.75E3 daN.mm	Elément 91, Mx moment de torsion
My	-93.43E3 daN.mm	Elément 8, My moment fléchissant
Mz	-183.22E3 daN.mm	Elément 9, Mz moment fléchissant

Plus grande valeur positive

Nx	143.131 daN	Elément 80, Nx effort axial de traction ou compression
Ty	143.049 daN	Elément 84, Ty effort tranchant
Tz	138.386 daN	Elément 73, Tz effort tranchant
Mx	26.88E3 daN.mm	Elément 39, Mx moment de torsion
My	106.14E3 daN.mm	Elément 11, My moment fléchissant
Mz	178.49E3 daN.mm	Elément 8, Mz moment fléchissant
W	7.679311 mm	Elément 73, W flèche, déplacement perpendiculaire à l'âme

Propriété 4 UPN100
 Passerelles 22GW EDF
 calcul 2 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]

Nx effort axial de traction ou compression
 Ty effort tranchant
 Tz effort tranchant
 Mx moment de torsion
 My moment fléchissant
 Mz moment fléchissant
 W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm
e14							
14	-15.746	-0.147	-225.668	0.05E3	-125.76E3	-0.32E3	0.589640
e15							
15	-8.699	-0.405	-216.295	0.02E3	-121.49E3	-0.44E3	0.270985
e16							
16	6.839	-4.388	-3.221	-0.02E3	-2.59E3	2.20E3	0.966396
e19							
19	-1.441	0.891	48.758	0.06E3	-41.26E3	0.84E3	0.977889
e22							
22	-0.255	-1.236	126.527	-0.09E3	-38.65E3	1.91E3	0.526536
e23							
23	22.729	-9.673	90.688	0.09E3	72.79E3	-5.78E3	1.492924
e24							
24	-3.953	0.676	-97.774	0.18E3	-25.32E3	-0.43E3	0.186648
e25							
25	-2.488	0.718	-18.512	0.07E3	17.16E3	-0.41E3	1.176327
e44							
44	-2.801	16.471	48.611	0.16E3	8.88E3	-6.54E3	2.927888

e45	45	-9.711	0.149	0.797	1.23E3	0.42E3	0.49E3	1.204755
e46	46	0.131	8.800	60.797	0.01E3	16.00E3	-3.87E3	1.206302
e47	47	-16.471	-2.801	-13.889	-0.20E3	14.05E3	1.70E3	1.026033
e48	48	130.867	12.036	17.695	-0.21E3	7.08E3	4.30E3	0.091101
e49	49	265.832	2.810	34.292	-0.05E3	14.24E3	1.16E3	0.267044
e50	50	167.540	17.328	71.823	-0.31E3	19.84E3	6.21E3	1.617536
e51	51	-3.953	0.676	35.274	0.18E3	-32.84E3	0.43E3	0.534480
e52	52	-3.953	0.676	35.274	0.18E3	-32.84E3	0.43E3	0.534480
e53	53	-14.847	0.932	-272.215	0.13E3	170.61E3	-1.01E3	1.178145
e54	54	-25.944	-1.525	-1.427	0.60E3	-0.90E3	2.05E3	0.832614
e55	55	-18.917	14.074	167.961	-0.51E3	119.98E3	-6.55E3	0.264492
e56	56	154.498	-10.221	-0.278	0.40E3	0.98E3	-8.32E3	0.298118
e57	57	-15.313	-5.579	-1.927	0.71E3	-1.31E3	3.93E3	0.822350
e58	58	-7.452	9.056	179.255	-0.61E3	128.91E3	-3.81E3	0.707724
e59	59	-24.757	6.948	10.438	0.18E3	10.56E3	-3.54E3	3.079321
e60	60	3.985	-8.655	156.614	-0.13E3	63.85E3	3.02E3	1.043064
e61	61	-34.102	-0.483	-209.995	0.02E3	-175.14E3	0.74E3	3.107980
e62	62	1.122	12.839	194.999	0.29E3	77.52E3	-3.72E3	3.317006
e63	63	-42.068	-1.022	-209.040	-0.08E3	-163.97E3	-0.93E3	1.059903
e64	64	-0.248	9.995	128.156	0.18E3	62.62E3	-2.75E3	1.085525
e65	65	-0.397	-0.061	-0.108	-0.06E3	-0.08E3	0.10E3	3.392567
e66	66	2.609	-2.312	0.211	-0.21E3	-0.21E3	1.78E3	4.181340
e67	67	0.968	2.001	-0.070	0.00E3	0.04E3	-1.20E3	4.087188
e68	68	-1.145	-2.133	-0.221	-0.24E3	0.22E3	-1.29E3	4.439554
e69	69	1.016	-5.994	-0.567	-0.09E3	-0.32E3	-3.31E3	1.692223
e70	70	-0.075	7.901	0.255	0.23E3	0.22E3	-4.08E3	2.877646
e71	71	2.275	5.606	0.214	-0.01E3	0.20E3	-2.94E3	8.000311
e89	89	-15.808	0.250	206.724	-0.03E3	-125.70E3	-0.40E3	3.605368
e90	90	-8.760	-0.008	216.313	0.05E3	-121.44E3	0.24E3	3.286299
e92	92	-7.758	-0.577	151.078	-0.48E3	-53.94E3	-0.58E3	0.534480
e99	99	-19.015	0.126	-224.920	0.19E3	-112.02E3	0.56E3	1.647422
e100	100	-21.148	1.271	287.359	0.19E3	214.65E3	-1.45E3	2.627753
e101	101	-23.749	-0.295	-300.072	0.02E3	230.74E3	-0.33E3	0.126622
e102	102	-21.748	-1.264	228.609	-0.00E3	-125.77E3	1.77E3	4.180053
e103	103	-0.149	-9.711	-59.203	-0.02E3	15.25E3	-4.17E3	0.102957
e104	104	-8.800	0.131	0.797	-1.22E3	-0.39E3	0.42E3	1.205482
e105	105	-17.629	0.255	-226.153	-0.01E3	-124.01E3	0.54E3	0.086543
e106	106	-15.628	-0.714	302.666	0.03E3	239.29E3	-0.80E3	4.087440
e107								

107	-16.157	0.947	-304.321	0.18E3	248.78E3	1.20E3	0.269217
e108							
108	-18.290	2.093	145.900	0.40E3	-121.33E3	-2.70E3	4.449642
e109							
109	-8.904	-16.005	224.822	-0.43E3	80.01E3	6.69E3	3.128899
e110							
110	-0.248	9.995	-159.406	0.18E3	65.22E3	2.75E3	1.950559
e111							
111	131.042	-12.334	-17.512	0.22E3	7.05E3	4.40E3	0.078272
e112							
112	261.957	4.084	-38.587	-0.08E3	15.00E3	-1.60E3	0.160419
e113							
113	250.215	-3.231	13.850	0.06E3	10.80E3	-1.13E3	0.131565
e114							
114	-17.159	-1.678	242.574	-0.08E3	-124.72E3	2.98E3	4.230093
e115							
115	1.525	-25.944	-63.927	-0.52E3	16.94E3	-12.45E3	0.251847
e116							
116	-7.452	9.056	-179.255	-0.61E3	128.91E3	3.81E3	0.179019
e117							
117	-9.326	2.799	-235.438	0.09E3	110.53E3	2.49E3	0.707724
e118							
118	-11.639	0.190	217.273	0.09E3	-108.58E3	-0.49E3	3.455088
e119							
119	148.926	-17.214	-0.923	0.49E3	1.29E3	10.97E3	0.409596
e120							
120	-18.917	14.074	-167.961	-0.51E3	119.98E3	6.55E3	0.179019
e121							
121	-36.309	2.205	-212.349	-0.12E3	103.85E3	-2.49E3	0.264492
e122							
122	-42.303	1.188	254.469	0.13E3	182.63E3	-1.69E3	1.756974
e123							
123	-43.153	-2.335	-282.032	-0.15E3	194.94E3	-2.59E3	0.923826
e124							
124	-35.252	-2.260	230.213	-0.19E3	-120.80E3	3.01E3	2.905630
e125							
125	-6.948	-24.757	-52.062	-0.12E3	10.59E3	-8.97E3	1.721371
e126							
126	1.122	12.839	-226.249	0.29E3	80.13E3	3.72E3	2.037979
e127							
127	5.003	-2.818	-148.956	-0.35E3	-126.04E3	-2.69E3	3.317006
e128							
128	12.904	-2.742	301.299	-0.14E3	236.71E3	3.22E3	4.941147
e129							
129	19.216	1.326	-290.666	0.11E3	227.82E3	1.54E3	1.079099
e130							
130	13.222	0.310	237.516	-0.21E3	115.50E3	1.42E3	3.597096
e131							
131	5.579	-15.313	-64.427	-0.62E3	17.30E3	-9.30E3	0.126785
e132							
132	-28.495	-2.758	209.792	0.01E3	-175.12E3	2.71E3	7.994430
e133							
133	3.985	-8.655	-125.364	-0.13E3	61.25E3	-3.02E3	2.037979
e134							
134	-36.462	-3.297	211.174	0.12E3	-163.96E3	3.39E3	5.427449
e135							
135	-8.904	-16.005	-193.572	-0.43E3	77.40E3	-6.69E3	1.950559

Plus grande valeur négative

Nx	-43.153 daN	Elément 123, Nx effort axial de traction ou compression
Ty	-25.944 daN	Elément 115, Ty effort tranchant
Tz	-304.321 daN	Elément 107, Tz effort tranchant
Mx	-1.22E3 daN.mm	Elément 104, Mx moment de torsion
My	-175.14E3 daN.mm	Elément 61, My moment fléchissant
Mz	-12.45E3 daN.mm	Elément 115, Mz moment fléchissant

Plus grande valeur positive

Nx	265.832 daN	Elément 49, Nx effort axial de traction ou compression
Ty	17.328 daN	Elément 50, Ty effort tranchant
Tz	302.666 daN	Elément 106, Tz effort tranchant
Mx	1.23E3 daN.mm	Elément 45, Mx moment de torsion
My	248.78E3 daN.mm	Elément 107, My moment fléchissant
Mz	10.97E3 daN.mm	Elément 119, Mz moment fléchissant
W	8.000311 mm	Elément 71, W flèche, déplacement perpendiculaire à l'âme

calcul 2 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]

Nx effort axial de traction ou compression
Ty effort tranchant
Tz effort tranchant
Mx moment de torsion
My moment fléchissant
Mz moment fléchissant
W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm
e21							
21	25.255	-0.942	58.690	0.32E3	46.00E3	-0.56E3	1.492924
e26							
26	145.408	-0.337	48.378	-0.77E3	-17.60E3	0.12E3	0.091101
e27							
27	291.064	0.735	-16.418	-0.27E3	6.59E3	-0.26E3	0.114904
e28							
28	186.156	1.368	-69.651	-1.11E3	25.44E3	-0.37E3	1.617536
e29							
29	540.575	-1.654	-29.361	-0.31E3	8.46E3	-0.52E3	2.039976
e30							
30	556.840	0.665	5.750	0.10E3	-1.97E3	-0.24E3	0.696105
e31							
31	165.473	-0.014	-72.282	1.78E3	46.22E3	0.02E3	0.428377
e93							
93	145.602	0.334	-49.578	0.81E3	-18.02E3	0.12E3	0.078272
e94							
94	295.368	-0.653	-11.295	-0.19E3	-4.77E3	-0.24E3	0.160419
e95							
95	278.017	0.264	12.989	0.22E3	-4.61E3	-0.17E3	0.131565
e96							
96	397.526	-3.392	76.469	1.12E3	26.79E3	-0.87E3	0.412978
e97							
97	537.071	-1.389	-14.587	-0.18E3	-5.78E3	-0.41E3	0.418149
e98							
98	171.664	-0.004	-42.917	1.45E3	-35.15E3	0.01E3	0.409596

Plus grande valeur négative

Ty -3.392 daN Elément 96, Ty effort tranchant
Tz -72.282 daN Elément 31, Tz effort tranchant
Mx -1.11E3 daN.mm Elément 28, Mx moment de torsion
My -35.15E3 daN.mm Elément 98, My moment fléchissant
Mz -0.87E3 daN.mm Elément 96, Mz moment fléchissant

Plus grande valeur positive

Nx 556.840 daN Elément 30, Nx effort axial de traction ou compression
Ty 1.368 daN Elément 28, Ty effort tranchant
Tz 76.469 daN Elément 96, Tz effort tranchant
Mx 1.78E3 daN.mm Elément 31, Mx moment de torsion
My 46.22E3 daN.mm Elément 31, My moment fléchissant
Mz 0.83E3 daN.mm Elément 96, Mz moment fléchissant
W 2.039976 mm Elément 29, W flèche, déplacement perpendiculaire à l'âme

Propriété 7 OB79
Passerelles 22GW EDF
calcul 2 'calcul 0'

EFFORTS RESULTANTS [BEAM poutre]

Nx effort axial de traction ou compression
Ty effort tranchant
Tz effort tranchant
Mx moment de torsion
My moment fléchissant
Mz moment fléchissant
W flèche, déplacement perpendiculaire à l'âme

Elément	Nx daN	Ty daN	Tz daN	Mx daN.mm	My daN.mm	Mz daN.mm	W mm
e74							
74	-83.709	-0.204	81.626	0.05E3	24.66E3	0.14E3	7.695483
e75							
75	220.012	-0.029	9.724	-0.02E3	9.66E3	0.03E3	7.648807
e76							
76	-260.830	0.029	7.090	0.02E3	8.34E3	-0.02E3	7.703367

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Plus grande valeur négative
Nx      -260.830 daN      Elément 76, Nx effort axial de traction ou compression
Ty      -0.204 daN       Elément 74, Ty effort tranchant
Mx      -0.02E3 daN.mm   Elément 75, Mx moment de torsion
My      -24.31E3 daN.mm  Elément 74, My moment fléchissant
Mz      -0.02E3 daN.mm   Elément 76, Mz moment fléchissant
Plus grande valeur positive
Nx      220.012 daN      Elément 75, Nx effort axial de traction ou compression
Ty      0.029 daN       Elément 76, Ty effort tranchant
Tz      81.626 daN      Elément 74, Tz effort tranchant
Mx      0.05E3 daN.mm   Elément 74, Mx moment de torsion
My      24.66E3 daN.mm  Elément 74, My moment fléchissant
Mz      0.14E3 daN.mm   Elément 74, Mz moment fléchissant
W       7.703367 mm     Elément 76, W flèche, déplacement perpendiculaire à l'âme
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Contraintes

Propriété 3 RE100_4X R100x100 4 - section rectangulaire creuse
 Passerelles 22GW EDF
 calcul 1 'calcul 0'

 CONTRAINTES [BEAM poutre]

Sx contrainte d'effort axial Nx
 Sty contrainte d'effort tranchant Ty
 Stz contrainte d'effort tranchant Tz
 Stx contrainte du moment de torsion Mx
 Sfy contrainte du moment fléchissant My
 Sfz contrainte du moment fléchissant Mz
 Sm contrainte de Mises (poutre)
 Stt contrainte de membrane (pression interne)

Elément	Sx daN/mm2	Sty daN/mm2	Stz daN/mm2	Stx daN/mm2	Sfy daN/mm2	Sfz daN/mm2	Sm daN/mm2	Stt daN/mm2
e1								
1	-0.068011	0.012403	-0.004862	-0.011766	-0.341753	-0.814464	1.224972	0
e2								
2	-0.209870	0.023521	0.005089	-0.004518	0.334505	-1.556930	2.101885	0
e3								
3	-0.388037	-0.009376	0.002522	0.010606	-0.106537	-0.339827	0.835129	0
e4								
4	-0.244248	-0.001977	0.005975	0.011223	0.229755	-0.154719	0.586274	0
e5								
5	-0.398372	-0.022925	0.030100	0.023901	0.968778	0.638297	2.008020	0
e6								
6	-0.855861	0.002041	-0.004983	0.088403	-0.194934	-0.071385	1.133782	0
e7								
7	-0.741290	-0.011128	0.010500	0.002145	0.377860	0.524874	1.644285	0
e8								
8	-0.647376	-0.095994	-0.049883	0.010004	-2.004721	3.829931	6.485204	0
e9								
9	-0.643427	0.100184	-0.049143	-0.003090	-1.938332	-3.931400	6.516170	0
e10								
10	-0.784614	0.004732	-0.003037	0.000733	-0.119321	-0.182021	1.086010	0
e11								
11	-0.377562	-0.000145	0.057696	0.005521	2.277409	0.008265	2.665485	0
e12								
12	-0.002179	-0.012403	-0.151766	-0.536457	-1.879754	0.163681	2.367689	0
e13								
13	-0.092245	0.000595	0.101359	-0.002254	-0.794647	-0.004568	0.908933	0
e17								
17	-0.002928	0.007176	-0.057724	0.298848	-0.791435	-0.068428	1.061128	0
e18								
18	-0.001843	0.007621	0.030295	0.123989	0.413516	0.063959	0.534705	0
e20								
20	-0.012249	0.015932	-0.074703	0.166165	-0.888249	0.502862	1.245557	0
e32								
32	-0.249272	-0.114593	0.001232	-0.341585	0.051177	-1.316939	1.788620	0
e33								
33	-0.249976	0.122416	0.001834	0.349237	0.056234	1.391025	1.866526	0
e34								
34	-0.510746	-0.033866	0.003468	-0.064140	0.090687	0.380205	0.996225	0
e35								
35	-0.527161	-0.021452	-0.009516	-0.028287	0.165764	0.237653	0.836698	0
e36								

36	-0.249757	-0.151269	0.142014	-0.373352	-1.117502	1.742942	2.526988	0
e37								
37	-0.603989	0.049151	-0.144947	0.190295	1.290970	-0.599547	2.070674	0
e38								
38	-0.598481	-0.051432	0.125747	-0.223572	1.308142	-0.638760	2.103888	0
e39								
39	-0.303741	0.153583	0.099657	0.379828	-1.012372	-1.753223	2.278923	0
e40								
40	-0.535199	0.017682	0.031503	0.051276	0.333318	0.188803	0.886514	0
e41								
41	-0.496392	-0.022630	0.001621	-0.072408	0.016932	-0.258049	0.772342	0
e42								
42	-0.278599	0.119985	0.002313	0.286580	0.031082	2.475988	2.859446	0
e43								
43	-0.282730	0.105281	0.005066	0.320467	0.073962	2.273836	2.690514	0
e72								
72	0.090906	0.000256	-0.108451	-0.000589	-0.858554	-0.002058	0.970080	0
e73								
73	0.048600	0.000256	0.202855	0.001355	0.923043	-0.003143	1.036974	0
e77								
77	-0.336769	-0.018422	-0.007048	-0.030234	0.126293	1.444756	1.884138	0
e78								
78	-0.192558	0.000851	0.002988	0.004122	-0.115230	0.033987	0.342000	0
e79								
79	-0.052103	-0.017501	0.006821	-0.031498	-0.195042	1.630512	1.709373	0
e80								
80	0.094023	-0.000851	-0.002988	0.004087	-0.128396	-0.033987	0.229318	0
e81								
81	-0.413383	-0.006993	0.102251	-0.012998	1.577243	0.439909	2.438748	0
e82								
82	-0.456603	-0.002531	-0.019686	-0.300494	-0.374431	-0.028504	1.006214	0
e83								
83	-0.001349	0.028978	-0.029812	0.008691	0.224143	0.208487	0.441932	0
e84								
84	-0.001142	0.209691	0.155132	-0.073867	-1.166029	1.509417	2.734509	0
e85								
85	-0.038808	-0.255847	0.151277	0.086092	-1.143682	-1.522927	2.781852	0
e86								
86	-0.048786	-0.011989	0.009376	0.044997	-0.070887	-0.071049	0.215362	0
e87								
87	-0.023568	0.000540	-0.179314	-0.003099	1.355594	0.003208	1.418017	0
e88								
88	-0.001068	0.009463	0.079791	0.096947	-0.993785	0.137036	1.172668	0
e91								
91	-0.005747	-0.006067	0.149878	-0.787923	-1.522301	-0.094286	2.295755	0

Plus grande valeur négative

Sx -0.855861 daN/mm2 Elément 6, Sx contrainte d'effort axial Nx
 Sty -0.255847 daN/mm2 Elément 85, Sty contrainte d'effort tranchant Ty
 Stz -0.179314 daN/mm2 Elément 87, Stz contrainte d'effort tranchant Tz
 Stx -0.787923 daN/mm2 Elément 91, Stx contrainte du moment de torsion Mx
 Sfy -2.004721 daN/mm2 Elément 8, Sfy contrainte du moment fléchissant My
 Sfz -3.931400 daN/mm2 Elément 9, Sfz contrainte du moment fléchissant Mz

Plus grande valeur positive

Sx 0.094023 daN/mm2 Elément 80, Sx contrainte d'effort axial Nx
 Sty 0.209691 daN/mm2 Elément 84, Sty contrainte d'effort tranchant Ty
 Stz 0.202855 daN/mm2 Elément 73, Stz contrainte d'effort tranchant Tz
 Stx 0.379828 daN/mm2 Elément 39, Stx contrainte du moment de torsion Mx
 Sfy 2.277409 daN/mm2 Elément 11, Sfy contrainte du moment fléchissant My
 Sfz 3.829931 daN/mm2 Elément 8, Sfz contrainte du moment fléchissant Mz
 Sm 6.516170 daN/mm2 Elément 9, Sm contrainte de Mises (poutre)

Propriété 4 UPN100
 Passerelles 22GW EDF
 calcul 1 'calcul 0'

CONTRAINTES [BEAM poutre]

Sx contrainte d'effort axial Nx
 Sty contrainte d'effort tranchant Ty
 Stz contrainte d'effort tranchant Tz
 Stx contrainte du moment de torsion Mx
 Sfy contrainte du moment fléchissant My
 Sfz contrainte du moment fléchissant Mz
 Sm contrainte de Mises (poutre)
 Stt contrainte de membrane (pression interne)

Elément	Sx daN/mm2	Sty daN/mm2	Stz daN/mm2	Stx daN/mm2	Sfy daN/mm2	Sfz daN/mm2	Sm daN/mm2	Stt daN/mm2
e14								
14	-0.011664	-0.000239	-0.349332	0.027835	-3.052310	-0.037783	3.072670	0
e15								
15	-0.006444	-0.000659	-0.334822	0.012249	-2.948823	-0.051422	2.986384	0
e16								
16	0.005066	-0.007136	-0.004986	-0.010896	-0.062934	0.258435	0.328040	0
e19								
19	-0.001068	0.001449	0.075477	0.030849	-1.001519	0.099151	1.117026	0
e22								
22	-0.000189	-0.002010	0.195863	-0.045622	-0.938129	0.224963	1.025604	0
e23								
23	0.016837	-0.015728	0.140385	0.047082	1.766773	-0.680474	2.264662	0
e24								
24	-0.002928	0.001099	-0.151352	0.095095	-0.614594	-0.050722	0.671700	0
e25								
25	-0.001843	0.001167	-0.028656	0.039454	0.416452	-0.047861	0.469926	0
e44								
44	-0.002075	0.026782	0.075250	0.082439	0.215487	-0.768854	1.024580	0
e45								
45	-0.007193	0.000242	0.001233	0.647228	0.010177	0.058055	1.125145	0
e46								
46	0.000097	0.014310	0.094113	0.004290	0.388309	-0.455374	0.861179	0
e47								
47	-0.012201	-0.004554	-0.021499	-0.103870	0.340903	0.200035	0.529217	0
e48								
48	0.096939	0.019571	0.027392	-0.111488	0.171964	0.505757	0.689678	0
e49								
49	0.196912	0.004569	0.053084	-0.027622	0.345690	0.136255	0.588546	0
e50								
50	0.124104	0.028176	0.111181	-0.161017	0.481484	0.731149	1.332553	0
e51								
51	-0.002928	0.001099	0.054603	0.095095	-0.797029	0.050722	0.889318	0
e52								
52	-0.002928	0.001099	0.054603	0.095095	-0.797029	0.050722	0.889318	0
e53								
53	-0.010998	0.001515	-0.421385	0.068739	4.141026	-0.118920	4.342648	0
e54								
54	-0.019218	-0.002480	-0.002209	0.317454	-0.021957	0.241049	0.621883	0
e55								
55	-0.014013	0.022885	0.260001	-0.269072	2.912115	-0.770366	3.808594	0
e56								
56	0.114443	-0.016619	-0.000430	0.210795	0.023838	-0.978815	1.184506	0
e57								
57	-0.011343	-0.009071	-0.002983	0.373076	-0.031707	0.462815	0.833087	0
e58								
58	-0.005520	0.014725	0.277485	-0.320256	3.128955	-0.447808	3.728979	0
e59								
59	-0.018339	0.011297	0.016158	0.095839	0.256271	-0.416659	0.718238	0
e60								
60	0.002952	-0.014074	0.242437	-0.067014	1.549792	0.355366	1.982109	0
e61								
61	-0.025261	-0.000785	-0.325069	0.012027	-4.250918	0.087486	4.363721	0
e62								
62	0.000831	0.020876	0.301856	0.150617	1.881592	-0.437756	2.449232	0
e63								
63	-0.031161	-0.001662	-0.323591	-0.043819	-3.979959	-0.109127	4.104718	0
e64								
64	-0.000184	0.016252	0.198384	0.096229	1.519887	-0.323917	1.913498	0
e65								
65	-0.000294	-0.000100	-0.000167	-0.028977	-0.001963	0.011732	0.052381	0
e66								
66	0.001933	-0.003760	0.000326	-0.110879	-0.005052	0.209056	0.289774	0
e67								
67	0.000717	0.003253	-0.000108	0.000392	0.001092	-0.140711	0.142168	0
e68								
68	-0.000848	-0.003468	-0.000342	-0.128664	0.005437	-0.151375	0.277911	0
e69								
69	0.000753	-0.009746	-0.000878	-0.046332	-0.007827	-0.389596	0.408020	0
e70								
70	-0.000056	0.012848	0.000394	0.119172	0.005288	-0.480148	0.536647	0
e71								
71	0.001686	0.009116	0.000331	-0.007136	0.004833	-0.345919	0.353560	0
e89								
89	-0.011709	0.000406	0.320006	-0.014734	-3.050974	-0.046941	3.067023	0
e90								

90	-0.006489	-0.000013	0.334849	0.026306	-2.947487	0.028146	2.980837	0
e92								
92	-0.005747	-0.000938	0.233867	-0.250721	-1.309273	-0.068153	1.478021	0
e99								
99	-0.014085	0.000205	-0.348174	0.099748	-2.718924	0.066300	2.780809	0
e100								
100	-0.015665	0.002067	0.444828	0.101521	5.210055	-0.171093	5.479151	0
e101								
101	-0.017592	-0.000480	-0.464507	0.010398	5.600511	-0.038584	5.716180	0
e102								
102	-0.016110	-0.002055	0.353883	-0.002601	-3.052732	0.208655	3.141358	0
e103								
103	-0.000110	-0.015790	-0.091646	-0.011013	0.370078	-0.490314	0.879107	0
e104								
104	-0.006519	0.000213	0.001233	-0.639980	-0.009471	0.049294	1.112531	0
e105								
105	-0.013058	0.000414	-0.350083	-0.006080	-3.009858	0.063703	3.040309	0
e106								
106	-0.011576	-0.001161	0.468524	0.017604	5.808058	-0.094324	5.962698	0
e107								
107	-0.011968	0.001541	-0.471085	0.094226	6.038393	0.141038	6.268346	0
e108								
108	-0.013548	0.003403	0.225851	0.212128	-2.944961	-0.317686	3.013208	0
e109								
109	-0.006595	-0.026024	0.348022	-0.223717	1.941899	0.786592	2.909190	0
e110								
110	-0.000184	0.016252	-0.246759	0.096229	1.583095	0.323917	1.997777	0
e111								
111	0.097068	-0.020056	-0.027109	0.117756	0.171137	0.517998	0.703633	0
e112								
112	0.194042	0.006641	-0.059732	-0.039619	0.364186	-0.188685	0.633727	0
e113								
113	0.185344	-0.005254	0.021440	0.032609	0.262225	-0.132653	0.513684	0
e114								
114	-0.012710	-0.002728	0.375502	-0.040811	-3.027108	0.350673	3.112183	0
e115								
115	0.001130	-0.042186	-0.098958	-0.274802	0.411201	-1.464507	1.986693	0
e116								
116	-0.005520	0.014725	-0.277485	-0.320256	3.128955	0.447808	3.728979	0
e117								
117	-0.006908	0.004552	-0.364455	0.047075	2.682753	0.293000	3.066659	0
e118								
118	-0.008621	0.000309	0.336336	0.048442	-2.635508	-0.057769	2.671494	0
e119								
119	0.110315	-0.027991	-0.001428	0.258276	0.031279	1.290598	1.494450	0
e120								
120	-0.014013	0.022885	-0.260001	-0.269072	2.912115	0.770366	3.808594	0
e121								
121	-0.026895	0.003585	-0.328713	-0.062009	2.520644	-0.292899	2.757839	0
e122								
122	-0.031336	0.001932	0.393914	0.066774	4.432873	-0.199019	4.731005	0
e123								
123	-0.031966	-0.003797	-0.436582	-0.078364	4.731556	-0.304543	5.145953	0
e124								
124	-0.026113	-0.003674	0.356367	-0.097778	-2.931945	0.354090	3.157987	0
e125								
125	-0.005146	-0.040256	-0.080591	-0.063378	0.256993	-1.055602	1.342939	0
e126								
126	0.000831	0.020876	-0.350231	0.150617	1.944800	0.437756	2.536609	0
e127								
127	0.003706	-0.004581	-0.230582	-0.186111	-3.059267	-0.315902	3.149984	0
e128								
128	0.009559	-0.004459	0.466407	-0.071449	5.745403	0.379109	6.204414	0
e129								
129	0.014234	0.002156	-0.449948	0.059902	5.529727	0.181205	5.792874	0
e130								
130	0.009794	0.000503	0.367673	-0.109826	2.803418	0.166927	3.018616	0
e131								
131	0.004132	-0.024899	-0.099732	-0.326737	0.419839	-1.094248	1.688927	0
e132								
132	-0.021108	-0.004485	0.324755	0.004391	-4.250589	0.319043	4.497888	0
e133								
133	0.002952	-0.014074	-0.194062	-0.067014	1.486584	-0.355366	1.899668	0
e134								
134	-0.027009	-0.005361	0.326894	0.060988	-3.979629	0.398625	4.261267	0
e135								
135	-0.006595	-0.026024	-0.299647	-0.223717	1.878691	-0.786592	2.821825	0

Plus grande valeur négative

Sx -0.031966 daN/mm2 Elément 123, Sx contrainte d'effort axial Nx
 Sty -0.042186 daN/mm2 Elément 115, Sty contrainte d'effort tranchant Ty
 Stz -0.471085 daN/mm2 Elément 107, Stz contrainte d'effort tranchant Tz
 Stx -0.639980 daN/mm2 Elément 104, Stx contrainte du moment de torsion Mx
 Sfy -4.250918 daN/mm2 Elément 61, Sfy contrainte du moment fléchissant My
 Sfz -1.464507 daN/mm2 Elément 115, Sfz contrainte du moment fléchissant Mz

Plus grande valeur positive

Sx 0.196912 daN/mm2 Elément 49, Sx contrainte d'effort axial Nx
 Sty 0.028176 daN/mm2 Elément 50, Sty contrainte d'effort tranchant Ty
 Stz 0.468524 daN/mm2 Elément 106, Stz contrainte d'effort tranchant Tz
 Stx 0.647228 daN/mm2 Elément 45, Stx contrainte du moment de torsion Mx
 Sfy 6.038393 daN/mm2 Elément 107, Sfy contrainte du moment fléchissant My
 Sfz 1.290598 daN/mm2 Elément 119, Sfz contrainte du moment fléchissant Mz
 Sm 6.268346 daN/mm2 Elément 107, Sm contrainte de Mises (poutre)

Propriété 6 PL100_15
 Passerelles 22GW EDF
 calcul 1 'calcul 0'

CONTRAINTES [BEAM poutre]

Sx contrainte d'effort axial Nx
 Sty contrainte d'effort tranchant Ty
 Stz contrainte d'effort tranchant Tz
 Stx contrainte du moment de torsion Mx
 Sfy contrainte du moment fléchissant My
 Sfz contrainte du moment fléchissant Mz
 Sm contrainte de Mises (poutre)
 Stt contrainte de membrane (pression interne)

Elément	Sx	Sty	Stz	Stx	Sfy	Sfz	Sm	Stt
	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2
e21	0.016837	-0.000942	0.058690	0.047817	1.839977	-0.149806	1.966775	0
e26	0.096939	-0.000337	0.048378	-0.113230	-0.703913	0.032154	0.860433	0
e27	0.194042	0.000735	-0.016418	-0.040238	0.263613	-0.068496	0.496926	0
e28	0.124104	0.001368	-0.069651	-0.163533	1.017790	-0.098036	1.291035	0
e29	0.360384	-0.001654	-0.029361	-0.046095	0.338543	-0.138392	0.847462	0
e30	0.371226	0.000665	0.005750	0.014514	-0.078972	-0.065068	0.475056	0
e31	0.110315	-0.000014	-0.072282	0.262310	1.848872	0.004858	2.044222	0
e93	0.097068	0.000334	-0.049578	0.119596	-0.720933	0.031965	0.880679	0
e94	0.196912	-0.000653	-0.011295	-0.028054	-0.190707	-0.064178	0.416137	0
e95	0.185344	0.000264	0.012989	0.033119	-0.184443	-0.044312	0.387254	0
e96	0.265018	-0.003392	0.076469	0.164474	1.071630	-0.232071	1.611775	0
e97	0.358048	-0.001389	-0.014587	-0.026400	-0.231123	-0.109759	0.668358	0
e98	0.114443	-0.000004	-0.042917	0.214088	-1.406034	0.003626	1.587779	0

Plus grande valeur négative

Sty -0.003392 daN/mm2 Elément 96, Sty contrainte d'effort tranchant Ty
 Stz -0.072282 daN/mm2 Elément 31, Stz contrainte d'effort tranchant Tz
 Stx -0.163533 daN/mm2 Elément 28, Stx contrainte du moment de torsion Mx
 Sfy -1.406034 daN/mm2 Elément 98, Sfy contrainte du moment fléchissant My
 Sfz -0.232071 daN/mm2 Elément 96, Sfz contrainte du moment fléchissant Mz

Plus grande valeur positive

Sx 0.371226 daN/mm2 Elément 30, Sx contrainte d'effort axial Nx
 Sty 0.001368 daN/mm2 Elément 28, Sty contrainte d'effort tranchant Ty
 Stz 0.076469 daN/mm2 Elément 96, Stz contrainte d'effort tranchant Tz
 Stx 0.262310 daN/mm2 Elément 31, Stx contrainte du moment de torsion Mx
 Sfy 1.848872 daN/mm2 Elément 31, Sfy contrainte du moment fléchissant My
 Sfz 0.220152 daN/mm2 Elément 96, Sfz contrainte du moment fléchissant Mz
 Sm 2.044222 daN/mm2 Elément 31, Sm contrainte de Mises (poutre)

Propriété 7 OB79
Passerelles 22GW EDF
calcul 1 'calcul 0'

CONTRAINTES [BEAM poutre]

Sx contrainte d'effort axial Nx
Sty contrainte d'effort tranchant Ty
Stz contrainte d'effort tranchant Tz
Stx contrainte du moment de torsion Mx
Sfy contrainte du moment fléchissant My
Sfz contrainte du moment fléchissant Mz
Sm contrainte de Mises (poutre)
Stt contrainte de membrane (pression interne)

Elément	Sx	Sty	Stz	Stx	Sfy	Sfz	Sm	Stt
	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2
e74								
74	-0.074954	-0.000363	0.145694	0.001302	1.323119	0.007632	1.421089	0
e75								
75	0.197002	-0.000052	0.017357	-0.000579	0.518123	0.001625	0.715802	0
e76								
76	-0.233551	0.000052	0.012655	0.000516	0.447207	-0.001276	0.681142	0

Plus grande valeur négative

Sx -0.233551 daN/mm2 Elément 76, Sx contrainte d'effort axial Nx
Sty -0.000363 daN/mm2 Elément 74, Sty contrainte d'effort tranchant Ty
Stx -0.000579 daN/mm2 Elément 75, Stx contrainte du moment de torsion Mx
Sfy -1.304484 daN/mm2 Elément 74, Sfy contrainte du moment fléchissant My
Sfz -0.001276 daN/mm2 Elément 76, Sfz contrainte du moment fléchissant Mz

Plus grande valeur positive

Sx 0.197002 daN/mm2 Elément 75, Sx contrainte d'effort axial Nx
Sty 0.000052 daN/mm2 Elément 76, Sty contrainte d'effort tranchant Ty
Stz 0.145694 daN/mm2 Elément 74, Stz contrainte d'effort tranchant Tz
Stx 0.001302 daN/mm2 Elément 74, Stx contrainte du moment de torsion Mx
Sfy 1.323119 daN/mm2 Elément 74, Sfy contrainte du moment fléchissant My
Sfz 0.007632 daN/mm2 Elément 74, Sfz contrainte du moment fléchissant Mz
Sm 1.421089 daN/mm2 Elément 74, Sm contrainte de Mises (poutre)

Propriété 3 RE100_4X R100x100 4 - section rectangulaire creuse
Passerelles 22GW EDF
calcul 2 'calcul 0'

CONTRAINTES [BEAM poutre]

Sx contrainte d'effort axial Nx
Sty contrainte d'effort tranchant Ty
Stz contrainte d'effort tranchant Tz
Stx contrainte du moment de torsion Mx
Sfy contrainte du moment fléchissant My
Sfz contrainte du moment fléchissant Mz
Sm contrainte de Mises (poutre)
Stt contrainte de membrane (pression interne)

Elément	Sx	Sty	Stz	Stx	Sfy	Sfz	Sm	Stt
	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2
e1								
1	-0.068011	0.012403	-0.004862	-0.011766	-0.341753	-0.814464	1.224972	0
e2								
2	-0.209870	0.023521	0.005089	-0.004518	0.334505	-1.556930	2.101885	0
e3								
3	-0.388037	-0.009376	0.002522	0.010606	-0.106537	-0.339827	0.835129	0
e4								
4	-0.244248	-0.001977	0.005975	0.011223	0.229755	-0.154719	0.586274	0
e5								
5	-0.398372	-0.022925	0.030100	0.023901	0.968778	0.638297	2.008020	0
e6								
6	-0.855861	0.002041	-0.004983	0.088403	-0.194934	-0.071385	1.133782	0
e7								
7	-0.741290	-0.011128	0.010500	0.002145	0.377860	0.524874	1.644285	0
e8								
8	-0.647376	-0.095994	-0.049883	0.010004	-2.004721	3.829931	6.485204	0
e9								
9	-0.643427	0.100184	-0.049143	-0.003090	-1.938332	-3.931400	6.516170	0
e10								
10	-0.784614	0.004732	-0.003037	0.000733	-0.119321	-0.182021	1.086010	0
e11								
11	-0.377562	-0.000145	0.057696	0.005521	2.277409	0.008265	2.665485	0

e12	12	-0.002179	-0.012403	-0.151766	-0.536457	-1.879754	0.163681	2.367689	0
e13	13	-0.092245	0.000595	0.101359	-0.002254	-0.794647	-0.004568	0.908933	0
e17	17	-0.002928	0.007176	-0.057724	0.298848	-0.791435	-0.068428	1.061128	0
e18	18	-0.001843	0.007621	0.030295	0.123989	0.413516	0.063959	0.534705	0
e20	20	-0.012249	0.015932	-0.074703	0.166165	-0.888249	0.502862	1.245557	0
e32	32	-0.249272	-0.114593	0.001232	-0.341585	0.051177	-1.316939	1.788620	0
e33	33	-0.249976	0.122416	0.001834	0.349237	0.056234	1.391025	1.866526	0
e34	34	-0.510746	-0.033866	0.003468	-0.064140	0.090687	0.380205	0.996225	0
e35	35	-0.527161	-0.021452	-0.009516	-0.028287	0.165764	0.237653	0.836698	0
e36	36	-0.249757	-0.151269	0.142014	-0.373352	-1.117502	1.742942	2.526988	0
e37	37	-0.603989	0.049151	-0.144947	0.190295	1.290970	-0.599547	2.070674	0
e38	38	-0.598481	-0.051432	0.125747	-0.223572	1.308142	-0.638760	2.103888	0
e39	39	-0.303741	0.153583	0.099657	0.379828	-1.012372	-1.753223	2.278923	0
e40	40	-0.535199	0.017682	0.031503	0.051276	0.333318	0.188803	0.886514	0
e41	41	-0.496392	-0.022630	0.001621	-0.072408	0.016932	-0.258049	0.772342	0
e42	42	-0.278599	0.119985	0.002313	0.286580	0.031082	2.475988	2.859446	0
e43	43	-0.282730	0.105281	0.005066	0.320467	0.073962	2.273836	2.690514	0
e72	72	0.090906	0.000256	-0.108451	-0.000589	-0.858554	-0.002058	0.970080	0
e73	73	0.048600	0.000256	0.202855	0.001355	0.923043	-0.003143	1.036974	0
e77	77	-0.336769	-0.018422	-0.007048	-0.030234	0.126293	1.444756	1.884138	0
e78	78	-0.192558	0.000851	0.002988	0.004122	-0.115230	0.033987	0.342000	0
e79	79	-0.052103	-0.017501	0.006821	-0.031498	-0.195042	1.630512	1.709373	0
e80	80	0.094023	-0.000851	-0.002988	0.004087	-0.128396	-0.033987	0.229318	0
e81	81	-0.413383	-0.006993	0.102251	-0.012998	1.577243	0.439909	2.438748	0
e82	82	-0.456603	-0.002531	-0.019686	-0.300494	-0.374431	-0.028504	1.006214	0
e83	83	-0.001349	0.028978	-0.029812	0.008691	0.224143	0.208487	0.441932	0
e84	84	-0.001142	0.209691	0.155132	-0.073867	-1.166029	1.509417	2.734509	0
e85	85	-0.038808	-0.255847	0.151277	0.086092	-1.143682	-1.522927	2.781852	0
e86	86	-0.048786	-0.011989	0.009376	0.044997	-0.070887	-0.071049	0.215362	0
e87	87	-0.023568	0.000540	-0.179314	-0.003099	1.355594	0.003208	1.418017	0
e88	88	-0.001068	0.009463	0.079791	0.096947	-0.993785	0.137036	1.172668	0
e91	91	-0.005747	-0.006067	0.149878	-0.787923	-1.522301	-0.094286	2.295755	0

Plus grande valeur négative

Sx	-0.855861 daN/mm2	Elément 6, Sx contrainte d'effort axial Nx
Sty	-0.255847 daN/mm2	Elément 85, Sty contrainte d'effort tranchant Ty
Stz	-0.179314 daN/mm2	Elément 87, Stz contrainte d'effort tranchant Tz
Stx	-0.787923 daN/mm2	Elément 91, Stx contrainte du moment de torsion Mx
Sfy	-2.004721 daN/mm2	Elément 8, Sfy contrainte du moment fléchissant My
Sfz	-3.931400 daN/mm2	Elément 9, Sfz contrainte du moment fléchissant Mz

Plus grande valeur positive

Sx	0.094023 daN/mm2	Elément 80, Sx contrainte d'effort axial Nx
Sty	0.209691 daN/mm2	Elément 84, Sty contrainte d'effort tranchant Ty
Stz	0.202855 daN/mm2	Elément 73, Stz contrainte d'effort tranchant Tz
Stx	0.379828 daN/mm2	Elément 39, Stx contrainte du moment de torsion Mx

Sfy 2.277409 daN/mm2 Elément 11, Sfy contrainte du moment fléchissant My
 Sfz 3.829931 daN/mm2 Elément 8, Sfz contrainte du moment fléchissant Mz
 Sm 6.516170 daN/mm2 Elément 9, Sm contrainte de Mises (poutre)

Propriété 4 UPN100
 Passerelles 22GW EDF
 calcul 2 'calcul 0'

CONTRAINTES [BEAM poutre]

Sx contrainte d'effort axial Nx
 Sty contrainte d'effort tranchant Ty
 Stz contrainte d'effort tranchant Tz
 Stx contrainte du moment de torsion Mx
 Sfy contrainte du moment fléchissant My
 Sfz contrainte du moment fléchissant Mz
 Sm contrainte de Mises (poutre)
 Stt contrainte de membrane (pression interne)

Elément	Sx daN/mm2	Sty daN/mm2	Stz daN/mm2	Stx daN/mm2	Sfy daN/mm2	Sfz daN/mm2	Sm daN/mm2	Stt daN/mm2
e14								
14	-0.011664	-0.000239	-0.349332	0.027835	-3.052310	-0.037783	3.072670	0
e15								
15	-0.006444	-0.000659	-0.334822	0.012249	-2.948823	-0.051422	2.986384	0
e16								
16	0.005066	-0.007136	-0.004986	-0.010896	-0.062934	0.258435	0.328040	0
e19								
19	-0.001068	0.001449	0.075477	0.030849	-1.001519	0.099151	1.117026	0
e22								
22	-0.000189	-0.002010	0.195863	-0.045622	-0.938129	0.224963	1.025604	0
e23								
23	0.016837	-0.015728	0.140385	0.047082	1.766773	-0.680474	2.264662	0
e24								
24	-0.002928	0.001099	-0.151352	0.095095	-0.614594	-0.050722	0.671700	0
e25								
25	-0.001843	0.001167	-0.028656	0.039454	0.416452	-0.047861	0.469926	0
e44								
44	-0.002075	0.026782	0.075250	0.082439	0.215487	-0.768854	1.024580	0
e45								
45	-0.007193	0.000242	0.001233	0.647228	0.010177	0.058055	1.125145	0
e46								
46	0.000097	0.014310	0.094113	0.004290	0.388309	-0.455374	0.861179	0
e47								
47	-0.012201	-0.004554	-0.021499	-0.103870	0.340903	0.200035	0.529217	0
e48								
48	0.096939	0.019571	0.027392	-0.111488	0.171964	0.505757	0.689678	0
e49								
49	0.196912	0.004569	0.053084	-0.027622	0.345690	0.136255	0.588546	0
e50								
50	0.124104	0.028176	0.111181	-0.161017	0.481484	0.731149	1.332553	0
e51								
51	-0.002928	0.001099	0.054603	0.095095	-0.797029	0.050722	0.889318	0
e52								
52	-0.002928	0.001099	0.054603	0.095095	-0.797029	0.050722	0.889318	0
e53								
53	-0.010998	0.001515	-0.421385	0.068739	4.141026	-0.118920	4.342648	0
e54								
54	-0.019218	-0.002480	-0.002209	0.317454	-0.021957	0.241049	0.621883	0
e55								
55	-0.014013	0.022885	0.260001	-0.269072	2.912115	-0.770366	3.808594	0
e56								
56	0.114443	-0.016619	-0.000430	0.210795	0.023838	-0.978815	1.184506	0
e57								
57	-0.011343	-0.009071	-0.002983	0.373076	-0.031707	0.462815	0.833087	0
e58								
58	-0.005520	0.014725	0.277485	-0.320256	3.128955	-0.447808	3.728979	0
e59								
59	-0.018339	0.011297	0.016158	0.095839	0.256271	-0.416659	0.718238	0
e60								
60	0.002952	-0.014074	0.242437	-0.067014	1.549792	0.355366	1.982109	0
e61								
61	-0.025261	-0.000785	-0.325069	0.012027	-4.250918	0.087486	4.363721	0
e62								
62	0.000831	0.020876	0.301856	0.150617	1.881592	-0.437756	2.449232	0
e63								
63	-0.031161	-0.001662	-0.323591	-0.043819	-3.979959	-0.109127	4.104718	0

e64	64	-0.000184	0.016252	0.198384	0.096229	1.519887	-0.323917	1.913498	0
e65	65	-0.000294	-0.000100	-0.000167	-0.028977	-0.001963	0.011732	0.052381	0
e66	66	0.001933	-0.003760	0.000326	-0.110879	-0.005052	0.209056	0.289774	0
e67	67	0.000717	0.003253	-0.000108	0.000392	0.001092	-0.140711	0.142168	0
e68	68	-0.000848	-0.003468	-0.000342	-0.128664	0.005437	-0.151375	0.277911	0
e69	69	0.000753	-0.009746	-0.000878	-0.046332	-0.007827	-0.389596	0.408020	0
e70	70	-0.000056	0.012848	0.000394	0.119172	0.005288	-0.480148	0.536647	0
e71	71	0.001686	0.009116	0.000331	-0.007136	0.004833	-0.345919	0.353560	0
e89	89	-0.011709	0.000406	0.320006	-0.014734	-3.050974	-0.046941	3.067023	0
e90	90	-0.006489	-0.000013	0.334849	0.026306	-2.947487	0.028146	2.980837	0
e92	92	-0.005747	-0.000938	0.233867	-0.250721	-1.309273	-0.068153	1.478021	0
e99	99	-0.014085	0.000205	-0.348174	0.099748	-2.718924	0.066300	2.780809	0
e100	100	-0.015665	0.002067	0.444828	0.101521	5.210055	-0.171093	5.479151	0
e101	101	-0.017592	-0.000480	-0.464507	0.010398	5.600511	-0.038584	5.716180	0
e102	102	-0.016110	-0.002055	0.353883	-0.002601	-3.052732	0.208655	3.141358	0
e103	103	-0.000110	-0.015790	-0.091646	-0.011013	0.370078	-0.490314	0.879107	0
e104	104	-0.006519	0.000213	0.001233	-0.639980	-0.009471	0.049294	1.112531	0
e105	105	-0.013058	0.000414	-0.350083	-0.006080	-3.009858	0.063703	3.040309	0
e106	106	-0.011576	-0.001161	0.468524	0.017604	5.808058	-0.094324	5.962698	0
e107	107	-0.011968	0.001541	-0.471085	0.094226	6.038393	0.141038	6.268346	0
e108	108	-0.013548	0.003403	0.225851	0.212128	-2.944961	-0.317686	3.013208	0
e109	109	-0.006595	-0.026024	0.348022	-0.223717	1.941899	0.786592	2.909190	0
e110	110	-0.000184	0.016252	-0.246759	0.096229	1.583095	0.323917	1.997777	0
e111	111	0.097068	-0.020056	-0.027109	0.117756	0.171137	0.517998	0.703633	0
e112	112	0.194042	0.006641	-0.059732	-0.039619	0.364186	-0.188685	0.633727	0
e113	113	0.185344	-0.005254	0.021440	0.032609	0.262225	-0.132653	0.513684	0
e114	114	-0.012710	-0.002728	0.375502	-0.040811	-3.027108	0.350673	3.112183	0
e115	115	0.001130	-0.042186	-0.098958	-0.274802	0.411201	-1.464507	1.986693	0
e116	116	-0.005520	0.014725	-0.277485	-0.320256	3.128955	0.447808	3.728979	0
e117	117	-0.006908	0.004552	-0.364455	0.047075	2.682753	0.293000	3.066659	0
e118	118	-0.008621	0.000309	0.336336	0.048442	-2.635508	-0.057769	2.671494	0
e119	119	0.110315	-0.027991	-0.001428	0.258276	0.031279	1.290598	1.494450	0
e120	120	-0.014013	0.022885	-0.260001	-0.269072	2.912115	0.770366	3.808594	0
e121	121	-0.026895	0.003585	-0.328713	-0.062009	2.520644	-0.292899	2.757839	0
e122	122	-0.031336	0.001932	0.393914	0.066774	4.432873	-0.199019	4.731005	0
e123	123	-0.031966	-0.003797	-0.436582	-0.078364	4.731556	-0.304543	5.145953	0
e124	124	-0.026113	-0.003674	0.356367	-0.097778	-2.931945	0.354090	3.157987	0
e125	125	-0.005146	-0.040256	-0.080591	-0.063378	0.256993	-1.055602	1.342939	0
e126									

126	0.000831	0.020876	-0.350231	0.150617	1.944800	0.437756	2.536609	0
e127	-----	-----	-----	-----	-----	-----	-----	-----
127	0.003706	-0.004581	-0.230582	-0.186111	-3.059267	-0.315902	3.149984	0
e128	-----	-----	-----	-----	-----	-----	-----	-----
128	0.009559	-0.004459	0.466407	-0.071449	5.745403	0.379109	6.204414	0
e129	-----	-----	-----	-----	-----	-----	-----	-----
129	0.014234	0.002156	-0.449948	0.059902	5.529727	0.181205	5.792874	0
e130	-----	-----	-----	-----	-----	-----	-----	-----
130	0.009794	0.000503	0.367673	-0.109826	2.803418	0.166927	3.018616	0
e131	-----	-----	-----	-----	-----	-----	-----	-----
131	0.004132	-0.024899	-0.099732	-0.326737	0.419839	-1.094248	1.688927	0
e132	-----	-----	-----	-----	-----	-----	-----	-----
132	-0.021108	-0.004485	0.324755	0.004391	-4.250589	0.319043	4.497888	0
e133	-----	-----	-----	-----	-----	-----	-----	-----
133	0.002952	-0.014074	-0.194062	-0.067014	1.486584	-0.355366	1.899668	0
e134	-----	-----	-----	-----	-----	-----	-----	-----
134	-0.027009	-0.005361	0.326894	0.060988	-3.979629	0.398625	4.261267	0
e135	-----	-----	-----	-----	-----	-----	-----	-----
135	-0.006595	-0.026024	-0.299647	-0.223717	1.878691	-0.786592	2.821825	0

Plus grande valeur négative

Sx	-0.031966 daN/mm2	Elément 123, Sx	contrainte d'effort axial Nx
Sty	-0.042186 daN/mm2	Elément 115, Sty	contrainte d'effort tranchant Ty
Stz	-0.471085 daN/mm2	Elément 107, Stz	contrainte d'effort tranchant Tz
Stx	-0.639980 daN/mm2	Elément 104, Stx	contrainte du moment de torsion Mx
Sfy	-4.250918 daN/mm2	Elément 61, Sfy	contrainte du moment fléchissant My
Sfz	-1.464507 daN/mm2	Elément 115, Sfz	contrainte du moment fléchissant Mz

Plus grande valeur positive

Sx	0.196912 daN/mm2	Elément 49, Sx	contrainte d'effort axial Nx
Sty	0.028176 daN/mm2	Elément 50, Sty	contrainte d'effort tranchant Ty
Stz	0.468524 daN/mm2	Elément 106, Stz	contrainte d'effort tranchant Tz
Stx	0.647228 daN/mm2	Elément 45, Stx	contrainte du moment de torsion Mx
Sfy	6.038393 daN/mm2	Elément 107, Sfy	contrainte du moment fléchissant My
Sfz	1.290598 daN/mm2	Elément 119, Sfz	contrainte du moment fléchissant Mz
Sm	6.268346 daN/mm2	Elément 107, Sm	contrainte de Mises (poutre)

Propriété 6 PL100_15
Passerelles 22GW EDF
calcul 2 'calcul 0'

CONTRAINTES [BEAM poutre]

Sx contrainte d'effort axial Nx
Sty contrainte d'effort tranchant Ty
Stz contrainte d'effort tranchant Tz
Stx contrainte du moment de torsion Mx
Sfy contrainte du moment fléchissant My
Sfz contrainte du moment fléchissant Mz
Sm contrainte de Mises (poutre)
Stt contrainte de membrane (pression interne)

Elément	Sx	Sty	Stz	Stx	Sfy	Sfz	Sm	Stt
	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2	daN/mm2
e21	-----	-----	-----	-----	-----	-----	-----	-----
21	0.016837	-0.000942	0.058690	0.047817	1.839977	-0.149806	1.966775	0
e26	-----	-----	-----	-----	-----	-----	-----	-----
26	0.096939	-0.000337	0.048378	-0.113230	-0.703913	0.032154	0.860433	0
e27	-----	-----	-----	-----	-----	-----	-----	-----
27	0.194042	0.000735	-0.016418	-0.040238	0.263613	-0.068496	0.496926	0
e28	-----	-----	-----	-----	-----	-----	-----	-----
28	0.124104	0.001368	-0.069651	-0.163533	1.017790	-0.098036	1.291035	0
e29	-----	-----	-----	-----	-----	-----	-----	-----
29	0.360384	-0.001654	-0.029361	-0.046095	0.338543	-0.138392	0.847462	0
e30	-----	-----	-----	-----	-----	-----	-----	-----
30	0.371226	0.000665	0.005750	0.014514	-0.078972	-0.065068	0.475056	0
e31	-----	-----	-----	-----	-----	-----	-----	-----
31	0.110315	-0.000014	-0.072282	0.262310	1.848872	0.004858	2.044222	0
e93	-----	-----	-----	-----	-----	-----	-----	-----
93	0.097068	0.000334	-0.049578	0.119596	-0.720933	0.031965	0.880679	0
e94	-----	-----	-----	-----	-----	-----	-----	-----
94	0.196912	-0.000653	-0.011295	-0.028054	-0.190707	-0.064178	0.416137	0
e95	-----	-----	-----	-----	-----	-----	-----	-----
95	0.185344	0.000264	0.012989	0.033119	-0.184443	-0.044312	0.387254	0
e96	-----	-----	-----	-----	-----	-----	-----	-----
96	0.265018	-0.003392	0.076469	0.164474	1.071630	-0.232071	1.611775	0
e97	-----	-----	-----	-----	-----	-----	-----	-----
97	0.358048	-0.001389	-0.014587	-0.026400	-0.231123	-0.109759	0.668358	0

```
e98-----+-----+-----+-----+-----+-----+-----+-----+
98      | 0.114443|-0.000004|-0.042917| 0.214088|-1.406034| 0.003626| 1.587779|      0|
```

Plus grande valeur négative

```
Sty    -0.003392 daN/mm2  Élément 96, Sty contrainte d'effort tranchant Ty
Stz    -0.072282 daN/mm2  Élément 31, Stz contrainte d'effort tranchant Tz
Stx    -0.163533 daN/mm2  Élément 28, Stx contrainte du moment de torsion Mx
Sfy    -1.406034 daN/mm2  Élément 98, Sfy contrainte du moment fléchissant My
Sfz    -0.232071 daN/mm2  Élément 96, Sfz contrainte du moment fléchissant Mz
```

Plus grande valeur positive

```
Sx      0.371226 daN/mm2  Élément 30, Sx  contrainte d'effort axial Nx
Sty     0.001368 daN/mm2  Élément 28, Sty contrainte d'effort tranchant Ty
Stz     0.076469 daN/mm2  Élément 96, Stz contrainte d'effort tranchant Tz
Stx     0.262310 daN/mm2  Élément 31, Stx contrainte du moment de torsion Mx
Sfy     1.848872 daN/mm2  Élément 31, Sfy contrainte du moment fléchissant My
Sfz     0.220152 daN/mm2  Élément 96, Sfz contrainte du moment fléchissant Mz
Sm      2.044222 daN/mm2  Élément 31, Sm  contrainte de Mises (poutre)
```

```
Propriété 7 0B79
Passerelles 22GW EDF
calcul 2 'calcul 0'
```

CONTRAINTES [BEAM poutre]

```
Sx  contrainte d'effort axial Nx
Sty contrainte d'effort tranchant Ty
Stz contrainte d'effort tranchant Tz
Stx contrainte du moment de torsion Mx
Sfy contrainte du moment fléchissant My
Sfz contrainte du moment fléchissant Mz
Sm  contrainte de Mises (poutre)
Stt contrainte de membrane (pression interne)
```

```
Elément | Sx | Sty | Stz | Stx | Sfy | Sfz | Sm | Stt |
         | daN/mm2 | daN/mm2 | daN/mm2 | daN/mm2 | daN/mm2 | daN/mm2 | daN/mm2 | daN/mm2 |
e74-----+-----+-----+-----+-----+-----+-----+-----+
74      | -0.074954|-0.000363| 0.145694| 0.001302| 1.323119| 0.007632| 1.421089|      0|
e75-----+-----+-----+-----+-----+-----+-----+-----+
75      | 0.197002|-0.000052| 0.017357|-0.000579| 0.518123| 0.001625| 0.715802|      0|
e76-----+-----+-----+-----+-----+-----+-----+-----+
76      | -0.233551| 0.000052| 0.012655| 0.000516| 0.447207|-0.001276| 0.681142|      0|
```

Plus grande valeur négative

```
Sx    -0.233551 daN/mm2  Élément 76, Sx  contrainte d'effort axial Nx
Sty   -0.000363 daN/mm2  Élément 74, Sty contrainte d'effort tranchant Ty
Stx   -0.000579 daN/mm2  Élément 75, Stx contrainte du moment de torsion Mx
Sfy   -1.304484 daN/mm2  Élément 74, Sfy contrainte du moment fléchissant My
Sfz   -0.001276 daN/mm2  Élément 76, Sfz contrainte du moment fléchissant Mz
```

Plus grande valeur positive

```
Sx      0.197002 daN/mm2  Élément 75, Sx  contrainte d'effort axial Nx
Sty     0.000052 daN/mm2  Élément 76, Sty contrainte d'effort tranchant Ty
Stz     0.145694 daN/mm2  Élément 74, Stz contrainte d'effort tranchant Tz
Stx     0.001302 daN/mm2  Élément 74, Stx contrainte du moment de torsion Mx
Sfy     1.323119 daN/mm2  Élément 74, Sfy contrainte du moment fléchissant My
Sfz     0.007632 daN/mm2  Élément 74, Sfz contrainte du moment fléchissant Mz
Sm      1.421089 daN/mm2  Élément 74, Sm  contrainte de Mises (poutre)
```

Critères de ruine - DTU

```
Propriété 3 RE100_4X R100x100 4 - section rectangulaire creuse
Passerelles 22GW EDF
calcul 1 'calcul 0'
```

```
CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
Sc  critère de contrainte axiale (CM66, CB71)
Tc  contrainte de cisaillement/(0.65 S0), (CM66)
Mc  critère de Mises (ou Tsai-Wu)
F_cm66 flambement simple (CM66 ou CB71)
D_cm66 flambement avec déversement (CM66)
V_cm66 voile CM66 pour profil en I (CM66)
```

```
Elément | Sc | Tc | Mc | F_cm66 | D_cm66 | V_cm66 |
e1-----+-----+-----+-----+-----+-----+-----+
1      | 0.0510095|0.0015803|0.0510405|0.0519853|0.0732370|0.0000008|
```


e2	2	0.0875544	0.0018267	0.0875786	0.0923657	0.1578359	0.0000024
e3	3	0.0347667	0.0012911	0.0347971	0.0367868	0.1575526	0.0000004
e4	4	0.0243961	0.0011097	0.0244281	0.0256393	0.1018011	0.0000002
e5	5	0.0835603	0.0037607	0.0836675	0.0925550	0.2165193	0.0000022
e6	6	0.0467575	0.0059877	0.0472409	0.0544110	0.3186104	0.0000009
e7	7	0.0685010	0.0010848	0.0685119	0.0788803	0.3082462	0.0000014
e8	8	0.2700846	0.0075095	0.2702168	0.3100011	0.5106556	0.0000227
e9	9	0.2713816	0.0073315	0.2715071	0.3103048	0.5097490	0.0000229
e10	10	0.0452482	0.0004008	0.0452504	0.0507849	0.2933493	0.0000006
e11	11	0.1109682	0.0040523	0.1110619	0.1283985	0.2459216	0.0000039
e12	12	0.0852339	0.0441240	0.0986537	0.0853043	0.0859856	0.0000146
e13	13	0.0371266	0.0066420	0.0378722	0.0384487	0.0672649	0.0000007
e17	17	0.0359496	0.0228618	0.0442137	0.0359893	0.0369049	0.0000037
e18	18	0.0192897	0.0099020	0.0222794	0.0193027	0.0198789	0.0000007
e20	20	0.0488869	0.0154740	0.0518982	0.0490282	0.0528579	0.0000022
e32	32	0.0668599	0.0292423	0.0745259	0.0672970	0.1450205	0.0000068
e33	33	0.0699273	0.0302344	0.0777719	0.0703627	0.1483050	0.0000073
e34	34	0.0409016	0.0062864	0.0415094	0.0429270	0.2015928	0.0000008
e35	35	0.0346703	0.0032463	0.0348624	0.0365449	0.2002678	0.0000004
e36	36	0.0977124	0.0348399	0.1052912	0.0996268	0.1775010	0.0000106
e37	37	0.0827404	0.0217196	0.0862781	0.1010757	0.2884229	0.0000051
e38	38	0.0838767	0.0226337	0.0876620	0.1022098	0.2878657	0.0000054
e39	39	0.0865034	0.0347847	0.0949552	0.0870089	0.1816492	0.0000100
e40	40	0.0364295	0.0054260	0.0369381	0.0413241	0.2075222	0.0000006
e41	41	0.0314413	0.0060931	0.0321809	0.0324380	0.1866791	0.0000005
e42	42	0.1154741	0.0260623	0.1191436	0.1161277	0.2029626	0.0000084
e43	43	0.1078113	0.0272934	0.1121048	0.1085316	0.1966496	0.0000083
e72	72	0.0396465	0.0069898	0.0404200	0.0358588	0.0358588	0.0000008
e73	73	0.0406161	0.0130904	0.0432073	0.0385911	0.0385911	0.0000016
e77	77	0.0784255	0.0031515	0.0785058	0.0799871	0.1848720	0.0000019
e78	78	0.0142406	0.0004591	0.0142500	0.0147842	0.0748664	0.0000001
e79	79	0.0711343	0.0031712	0.0712239	0.0712496	0.0875333	0.0000016
e80	80	0.0095410	0.0004568	0.0095549	0.0056234	0.0056234	0.0000000
e81	81	0.1012723	0.0074013	0.1016145	0.1149536	0.2435612	0.0000035
e82	82	0.0349827	0.0205250	0.0419256	0.0392648	0.1812285	0.0000030
e83	83	0.0180825	0.0030890	0.0184138	0.0180876	0.0185094	0.0000002
e84	84	0.1115245	0.0207193	0.1139379	0.1115473	0.1119043	0.0000065
e85	85	0.1127257	0.0239684	0.1159105	0.1135021	0.1256323	0.0000075
e86							

86	0.0079467	0.0037021	0.0089734	0.0080150	0.0232626	0.0000001
e87	-----+	-----+	-----+	-----+	-----+	-----+
87	0.0575988	0.0116931	0.0590841	0.0581508	0.0655188	0.0000019
e88	-----+	-----+	-----+	-----+	-----+	-----+
88	0.0471621	0.0113456	0.0488612	0.0471802	0.0475141	0.0000015
e91	-----+	-----+	-----+	-----+	-----+	-----+
91	0.0675972	0.0601167	0.0956564	0.0677472	0.0695441	0.0000243

Plus grande valeur positive

Sc	0.2713816	Elément 9, Sc critère de contrainte axiale (CM66, CB71)
Tc	0.0601167	Elément 91, Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc	0.2715071	Elément 9, Mc critère de Mises (ou Tsai-Wu)
F_cm66	0.3103048	Elément 9, F_cm66 flambement simple (CM66 ou CB71)
D_cm66	0.5106556	Elément 8, D_cm66 flambement avec déversement (CM66)
V_cm66	0.0000243	Elément 91, V_cm66 voile CM66 pour profil en I (CM66)

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CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
Sc critère de contrainte axiale (CM66, CB71)
Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc critère de Mises (ou Tsai-Wu)
F_cm66 flambement simple (CM66 ou CB71)
D_cm66 flambement avec déversement (CM66)
V_cm66 voile CM66 pour profil en I (CM66)

Elément	Sc	Tc	Mc	F_cm66	D_cm66	V_cm66
e14	-----+	-----+	-----+	-----+	-----+	-----+
14	0.1279913	0.0241774	0.1280279	0.1286277	0.4139436	0.0000011
e15	-----+	-----+	-----+	-----+	-----+	-----+
15	0.1244292	0.0222482	0.1244327	0.1247687	0.3982322	0.0000009
e16	-----+	-----+	-----+	-----+	-----+	-----+
16	0.0136015	0.0011993	0.0136683	0.0133904	0.0191827	0.0000000
e19	-----+	-----+	-----+	-----+	-----+	-----+
19	0.0459057	0.0068164	0.0465428	0.0459249	0.1382297	0.0000002
e22	-----+	-----+	-----+	-----+	-----+	-----+
22	0.0425629	0.0154803	0.0427335	0.0425661	0.1287412	0.0000004
e23	-----+	-----+	-----+	-----+	-----+	-----+
23	0.0933791	0.0120593	0.0943609	0.0926776	0.2548412	0.0000007
e24	-----+	-----+	-----+	-----+	-----+	-----+
24	0.0270152	0.0157981	0.0279875	0.0270474	0.0844767	0.0000003
e25	-----+	-----+	-----+	-----+	-----+	-----+
25	0.0189530	0.0043667	0.0195802	0.0189668	0.0578182	0.0000000
e44	-----+	-----+	-----+	-----+	-----+	-----+
44	0.0411006	0.0102530	0.0426908	0.0411092	0.0615967	0.0000002
e45	-----+	-----+	-----+	-----+	-----+	-----+
45	0.0027777	0.0415680	0.0468810	0.0027793	0.0060669	0.0000022
e46	-----+	-----+	-----+	-----+	-----+	-----+
46	0.0351575	0.0063742	0.0358824	0.0351535	0.0707976	0.0000001
e47	-----+	-----+	-----+	-----+	-----+	-----+
47	0.0201063	0.0080418	0.0220507	0.0201834	0.0556247	0.0000001
e48	-----+	-----+	-----+	-----+	-----+	-----+
48	0.0268950	0.0089905	0.0287366	0.0228559	0.0313771	0.0000001
e49	-----+	-----+	-----+	-----+	-----+	-----+
49	0.0238187	0.0051818	0.0245227	0.0156141	0.0473380	0.0000001
e50	-----+	-----+	-----+	-----+	-----+	-----+
50	0.0518920	0.0175419	0.0555230	0.0467210	0.0825414	0.0000005
e51	-----+	-----+	-----+	-----+	-----+	-----+
51	0.0354449	0.0095963	0.0370549	0.0354867	0.1096799	0.0000002
e52	-----+	-----+	-----+	-----+	-----+	-----+
52	0.0354449	0.0095963	0.0370549	0.0354867	0.1096799	0.0000002
e53	-----+	-----+	-----+	-----+	-----+	-----+
53	0.1774526	0.0314184	0.1809437	0.1782730	0.5636932	0.0000031
e54	-----+	-----+	-----+	-----+	-----+	-----+
54	0.0117593	0.0205091	0.0259118	0.0117748	0.0200989	0.0000005
e55	-----+	-----+	-----+	-----+	-----+	-----+
55	0.1540206	0.0339467	0.1586914	0.1547541	0.4281939	0.0000029
e56	-----+	-----+	-----+	-----+	-----+	-----+
56	0.0465457	0.0145779	0.0493544	0.0417772	0.0440290	0.0000004
e57	-----+	-----+	-----+	-----+	-----+	-----+
57	0.0210777	0.0244973	0.0347120	0.0210921	0.0277514	0.0000008
e58	-----+	-----+	-----+	-----+	-----+	-----+
58	0.1492618	0.0383283	0.1553741	0.1495705	0.4392002	0.0000032

e59	59	0.0288029	0.0072157	0.0299266	0.0288991	0.0586189	0.0000001
e60	60	0.0795046	0.0198571	0.0825879	0.0793816	0.2216114	0.0000009
e61	61	0.1818194	0.0216088	0.1818217	0.1837568	0.5863609	0.0000020
e62	62	0.0966741	0.0290355	0.1020513	0.0966395	0.2693199	0.0000016
e63	63	0.1709984	0.0235522	0.1710299	0.1732430	0.5535768	0.0000018
e64	64	0.0768329	0.0189141	0.0797291	0.0768379	0.2163936	0.0000008
e65	65	0.0005829	0.0018682	0.0021825	0.0005829	0.0008599	0.0000000
e66	66	0.0087938	0.0073486	0.0120739	0.0087133	0.0087328	0.0000001
e67	67	0.0059178	0.0002338	0.0059237	0.0058879	0.0059522	0.0000000
e68	68	0.0065692	0.0084701	0.0115796	0.0065695	0.0073556	0.0000001
e69	69	0.0165120	0.0035952	0.0170008	0.0164806	0.0170511	0.0000000
e70	70	0.0202288	0.0084629	0.0223603	0.0202289	0.0207638	0.0000001
e71	71	0.0146849	0.0010420	0.0147317	0.0146147	0.0150809	0.0000000
e89	89	0.1277749	0.0214577	0.1277926	0.1284133	0.4136257	0.0000010
e90	90	0.1241869	0.0231510	0.1242016	0.1245286	0.3978885	0.0000009
e92	92	0.0576322	0.0310634	0.0615842	0.0577668	0.1800930	0.0000013
e99	99	0.1153721	0.0287130	0.1158671	0.1160600	0.3716862	0.0000015
e100	100	0.2248672	0.0350226	0.2282980	0.2263433	0.7128277	0.0000046
e101	101	0.2356953	0.0304426	0.2381742	0.2374632	0.7610487	0.0000045
e102	102	0.1308230	0.0228520	0.1308899	0.1317040	0.4172330	0.0000011
e103	103	0.0358543	0.0066581	0.0366295	0.0358550	0.0698645	0.0000001
e104	104	0.0027202	0.0411034	0.0463554	0.0027216	0.0057237	0.0000021
e105	105	0.1266297	0.0228309	0.1266795	0.1273336	0.4093580	0.0000011
e106	106	0.2459562	0.0311621	0.2484458	0.2471630	0.7866021	0.0000049
e107	107	0.2579750	0.0362380	0.2611811	0.2592759	0.8201898	0.0000057
e108	108	0.1245831	0.0280764	0.1255503	0.1252979	0.4015507	0.0000013
e109	109	0.1139619	0.0366879	0.1212162	0.1141921	0.2950717	0.0000025
e110	110	0.0794665	0.0220110	0.0832407	0.0794717	0.2248284	0.0000010
e111	111	0.0273524	0.0093748	0.0293181	0.0233079	0.0314881	0.0000002
e112	112	0.0254086	0.0063829	0.0264053	0.0173235	0.0507454	0.0000001
e113	113	0.0210416	0.0034811	0.0214035	0.0133189	0.0373842	0.0000000
e114	114	0.1289902	0.0266873	0.1296743	0.1296822	0.4131516	0.0000019
e115	115	0.0782016	0.0241111	0.0827789	0.0781545	0.1159230	0.0000011
e116	116	0.1492618	0.0383283	0.1553741	0.1495705	0.4392002	0.0000032
e117	117	0.1242775	0.0263817	0.1277775	0.1246151	0.3738280	0.0000018
e118	118	0.1111398	0.0246653	0.1113123	0.1115464	0.3571158	0.0000012
e119	119	0.0587416	0.0183506	0.0622688	0.0541451	0.0550451	0.0000006
e120	120	0.1540206	0.0339467	0.1586914	0.1547541	0.4281939	0.0000029
e121							

121	0.1113962	0.0250474	0.1149100	0.1126282	0.3554239	0.0000015
e122	-----+	-----+	-----+	-----+	-----+	-----+
122	0.1943012	0.0295316	0.1971252	0.1968420	0.6194181	0.0000034
e123	-----+	-----+	-----+	-----+	-----+	-----+
123	0.2111694	0.0330103	0.2144147	0.2139516	0.6646527	0.0000041
e124	-----+	-----+	-----+	-----+	-----+	-----+
124	0.1312046	0.0291128	0.1315828	0.1326109	0.4132652	0.0000017
e125	-----+	-----+	-----+	-----+	-----+	-----+
125	0.0549059	0.0095828	0.0559558	0.0549315	0.0802723	0.0000003
e126	-----+	-----+	-----+	-----+	-----+	-----+
126	0.0993078	0.0321335	0.1056921	0.0992732	0.2777540	0.0000019
e127	-----+	-----+	-----+	-----+	-----+	-----+
127	0.1305174	0.0267127	0.1312493	0.1303629	0.4111153	0.0000013
e128	-----+	-----+	-----+	-----+	-----+	-----+
128	0.2555863	0.0344791	0.2585173	0.2551880	0.7825151	0.0000054
e129	-----+	-----+	-----+	-----+	-----+	-----+
129	0.2385486	0.0326830	0.2413698	0.2379555	0.7454506	0.0000048
e130	-----+	-----+	-----+	-----+	-----+	-----+
130	0.1209628	0.0306089	0.1257757	0.1205547	0.3778402	0.0000021
e131	-----+	-----+	-----+	-----+	-----+	-----+
131	0.0632591	0.0273843	0.0703720	0.0630869	0.1016397	0.0000012
e132	-----+	-----+	-----+	-----+	-----+	-----+
132	0.1874109	0.0211011	0.1874120	0.1890388	0.5895739	0.0000021
e133	-----+	-----+	-----+	-----+	-----+	-----+
133	0.0768709	0.0167599	0.0791528	0.0767479	0.2131772	0.0000007
e134	-----+	-----+	-----+	-----+	-----+	-----+
134	0.1774882	0.0248666	0.1775528	0.1794477	0.5577578	0.0000019
e135	-----+	-----+	-----+	-----+	-----+	-----+
135	0.1113283	0.0335904	0.1175761	0.1115511	0.2866137	0.0000022

Plus grande valeur positive

Sc	0.2579750	Elément 107, Sc	critère de contrainte axiale (CM66, CB71)
Tc	0.0415680	Elément 45, Tc	contrainte de cisaillement/(0.65 S0), (CM66)
Mc	0.2611811	Elément 107, Mc	critère de Mises (ou Tsai-Wu)
F_cm66	0.2592759	Elément 107, F_cm66	flambement simple (CM66 ou CB71)
D_cm66	0.8201898	Elément 107, D_cm66	flambement avec déversement (CM66)
V_cm66	0.0000057	Elément 107, V_cm66	voile CM66 pour profil en I (CM66)

Propriété 6 PL100_15
Passerelles 22GW EDF
calcul 1 'calcul 0'

CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
Sc critère de contrainte axiale (CM66, CB71)
Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc critère de Mises (ou Tsai-Wu)
F_cm66 flambement simple (CM66 ou CB71)
D_cm66 flambement avec déversement (CM66)
V_cm66 voile CM66 pour profil en I (CM66)

Elément	Sc	Tc	Mc	F_cm66	D_cm66	V_cm66
e21	-----+	-----+	-----+	-----+	-----+	-----+
21	0.0815876	0.0068276	0.0819489	0.0808861	0.0808861	0.0000000
e26	-----+	-----+	-----+	-----+	-----+	-----+
26	0.0339012	0.0103595	0.0358514	0.0298621	0.0298621	0.0000000
e27	-----+	-----+	-----+	-----+	-----+	-----+
27	0.0202975	0.0036321	0.0207053	0.0122124	0.0122124	0.0000000
e28	-----+	-----+	-----+	-----+	-----+	-----+
28	0.0510930	0.0149480	0.0537931	0.0459220	0.0459220	0.0000000
e29	-----+	-----+	-----+	-----+	-----+	-----+
29	0.0348883	0.0048381	0.0353109	0.0198723	0.0198723	0.0000000
e30	-----+	-----+	-----+	-----+	-----+	-----+
30	0.0197398	0.0012997	0.0197940	0.0042721	0.0042721	0.0000000
e31	-----+	-----+	-----+	-----+	-----+	-----+
31	0.0816814	0.0214482	0.0851759	0.0770849	0.0770849	0.0000000
e93	-----+	-----+	-----+	-----+	-----+	-----+
93	0.0346043	0.0108445	0.0366949	0.0305598	0.0305598	0.0000000
e94	-----+	-----+	-----+	-----+	-----+	-----+
94	0.0171049	0.0025227	0.0173390	0.0089002	0.0089002	0.0000000
e95	-----+	-----+	-----+	-----+	-----+	-----+
95	0.0157888	0.0029557	0.0161356	0.0080661	0.0080661	0.0000000
e96	-----+	-----+	-----+	-----+	-----+	-----+
96	0.0648667	0.0154466	0.0671573	0.0538243	0.0538243	0.0000000
e97	-----+	-----+	-----+	-----+	-----+	-----+
97	0.0276905	0.0026289	0.0278483	0.0127719	0.0127719	0.0000000

```
e98-----+-----+-----+-----+-----+-----+-----+
98      |0.0635043|0.0164747|0.0661575|0.0587358|0.0587358|0.0000000|
```

Plus grande valeur positive

```
Sc      0.0816814      Elément 31, Sc critère de contrainte axiale (CM66, CB71)
Tc      0.0214482      Elément 31, Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc      0.0851759      Elément 31, Mc critère de Mises (ou Tsai-Wu)
F_cm66 0.0808861      Elément 21, F_cm66 flambement simple (CM66 ou CB71)
D_cm66 0.0808861      Elément 21, D_cm66 flambement avec déversement (CM66)
V_cm66 0.0000000      Elément 31, V_cm66 voile CM66 pour profil en I (CM66)
```

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Propriété 7 OB79
Passerelles 22GW EDF
calcul 1 'calcul 0'
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CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
Sc critère de contrainte axiale (CM66, CB71)
Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc critère de Mises (ou Tsai-Wu)
F_cm66 flambement simple (CM66 ou CB71)
D_cm66 flambement avec déversement (CM66)
V_cm66 voile CM66 pour profil en I (CM66)
```

Elément	Sc	Tc	Mc	F_cm66	D_cm66	V_cm66
e74-----						
74	0.0582540	0.0094228	0.0592120	0.0585889	0.0586682	0.0000002
e75-----						
75	0.0297970	0.0011497	0.0298251	0.0216561	0.0216561	0.0000000
e76-----						
76	0.0283650	0.0008443	0.0283809	0.0284953	0.0294238	0.0000000

Plus grande valeur positive

```
Sc      0.0582540      Elément 74, Sc critère de contrainte axiale (CM66, CB71)
Tc      0.0094228      Elément 74, Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc      0.0592120      Elément 74, Mc critère de Mises (ou Tsai-Wu)
F_cm66 0.0585889      Elément 74, F_cm66 flambement simple (CM66 ou CB71)
D_cm66 0.0586682      Elément 74, D_cm66 flambement avec déversement (CM66)
V_cm66 0.0000002      Elément 74, V_cm66 voile CM66 pour profil en I (CM66)
```

```
Propriété 3 RE100_4X R100x100 4 - section rectangulaire creuse
Passerelles 22GW EDF
calcul 2 'calcul 0'
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CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
Sc critère de contrainte axiale (CM66, CB71)
Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc critère de Mises (ou Tsai-Wu)
F_cm66 flambement simple (CM66 ou CB71)
D_cm66 flambement avec déversement (CM66)
V_cm66 voile CM66 pour profil en I (CM66)
```

Elément	Sc	Tc	Mc	F_cm66	D_cm66	V_cm66
e1-----						
1	0.0510095	0.0015803	0.0510405	0.0519853	0.0732370	0.0000008
e2-----						
2	0.0875544	0.0018267	0.0875786	0.0923657	0.1578359	0.0000024
e3-----						
3	0.0347667	0.0012911	0.0347971	0.0367868	0.1575526	0.0000004
e4-----						
4	0.0243961	0.0011097	0.0244281	0.0256393	0.1018011	0.0000002
e5-----						
5	0.0835603	0.0037607	0.0836675	0.0925550	0.2165193	0.0000022
e6-----						
6	0.0467575	0.0059877	0.0472409	0.0544110	0.3186104	0.0000009
e7-----						
7	0.0685010	0.0010848	0.0685119	0.0788803	0.3082462	0.0000014
e8-----						
8	0.2700846	0.0075095	0.2702168	0.3100011	0.5106556	0.0000227
e9-----						
9	0.2713816	0.0073315	0.2715071	0.3103048	0.5097490	0.0000229
e10-----						
10	0.0452482	0.0004008	0.0452504	0.0507849	0.2933493	0.0000006
e11-----						

11	0.1109682	0.0040523	0.1110619	0.1283985	0.2459216	0.0000039
e12	-----+	-----+	-----+	-----+	-----+	-----+
12	0.0852339	0.0441240	0.0986537	0.0853043	0.0859856	0.0000146
e13	-----+	-----+	-----+	-----+	-----+	-----+
13	0.0371266	0.0066420	0.0378722	0.0384487	0.0672649	0.0000007
e17	-----+	-----+	-----+	-----+	-----+	-----+
17	0.0359496	0.0228618	0.0442137	0.0359893	0.0369049	0.0000037
e18	-----+	-----+	-----+	-----+	-----+	-----+
18	0.0192897	0.0099020	0.0222794	0.0193027	0.0198789	0.0000007
e20	-----+	-----+	-----+	-----+	-----+	-----+
20	0.0488869	0.0154740	0.0518982	0.0490282	0.0528579	0.0000022
e32	-----+	-----+	-----+	-----+	-----+	-----+
32	0.0668599	0.0292423	0.0745259	0.0672970	0.1450205	0.0000068
e33	-----+	-----+	-----+	-----+	-----+	-----+
33	0.0699273	0.0302344	0.0777719	0.0703627	0.1483050	0.0000073
e34	-----+	-----+	-----+	-----+	-----+	-----+
34	0.0409016	0.0062864	0.0415094	0.0429270	0.2015928	0.0000008
e35	-----+	-----+	-----+	-----+	-----+	-----+
35	0.0346703	0.0032463	0.0348624	0.0365449	0.2002678	0.0000004
e36	-----+	-----+	-----+	-----+	-----+	-----+
36	0.0977124	0.0348399	0.1052912	0.0996268	0.1775010	0.0000106
e37	-----+	-----+	-----+	-----+	-----+	-----+
37	0.0827404	0.0217196	0.0862781	0.1010757	0.2884229	0.0000051
e38	-----+	-----+	-----+	-----+	-----+	-----+
38	0.0838767	0.0226337	0.0876620	0.1022098	0.2878657	0.0000054
e39	-----+	-----+	-----+	-----+	-----+	-----+
39	0.0865034	0.0347847	0.0949552	0.0870089	0.1816492	0.0000100
e40	-----+	-----+	-----+	-----+	-----+	-----+
40	0.0364295	0.0054260	0.0369381	0.0413241	0.2075222	0.0000006
e41	-----+	-----+	-----+	-----+	-----+	-----+
41	0.0314413	0.0060931	0.0321809	0.0324380	0.1866791	0.0000005
e42	-----+	-----+	-----+	-----+	-----+	-----+
42	0.1154741	0.0260623	0.1191436	0.1161277	0.2029626	0.0000084
e43	-----+	-----+	-----+	-----+	-----+	-----+
43	0.1078113	0.0272934	0.1121048	0.1085316	0.1966496	0.0000083
e72	-----+	-----+	-----+	-----+	-----+	-----+
72	0.0396465	0.0069898	0.0404200	0.0358588	0.0358588	0.0000008
e73	-----+	-----+	-----+	-----+	-----+	-----+
73	0.0406161	0.0130904	0.0432073	0.0385911	0.0385911	0.0000016
e77	-----+	-----+	-----+	-----+	-----+	-----+
77	0.0784255	0.0031515	0.0785058	0.0799871	0.1848720	0.0000019
e78	-----+	-----+	-----+	-----+	-----+	-----+
78	0.0142406	0.0004591	0.0142500	0.0147842	0.0748664	0.0000001
e79	-----+	-----+	-----+	-----+	-----+	-----+
79	0.0711343	0.0031712	0.0712239	0.0712496	0.0875333	0.0000016
e80	-----+	-----+	-----+	-----+	-----+	-----+
80	0.0095410	0.0004568	0.0095549	0.0056234	0.0056234	0.0000000
e81	-----+	-----+	-----+	-----+	-----+	-----+
81	0.1012723	0.0074013	0.1016145	0.1149536	0.2435612	0.0000035
e82	-----+	-----+	-----+	-----+	-----+	-----+
82	0.0349827	0.0205250	0.0419256	0.0392648	0.1812285	0.0000030
e83	-----+	-----+	-----+	-----+	-----+	-----+
83	0.0180825	0.0030890	0.0184138	0.0180876	0.0185094	0.0000002
e84	-----+	-----+	-----+	-----+	-----+	-----+
84	0.1115245	0.0207193	0.1139379	0.1115473	0.1119043	0.0000065
e85	-----+	-----+	-----+	-----+	-----+	-----+
85	0.1127257	0.0239684	0.1159105	0.1135021	0.1256323	0.0000075
e86	-----+	-----+	-----+	-----+	-----+	-----+
86	0.0079467	0.0037021	0.0089734	0.0080150	0.0232626	0.0000001
e87	-----+	-----+	-----+	-----+	-----+	-----+
87	0.0575988	0.0116931	0.0590841	0.0581508	0.0655188	0.0000019
e88	-----+	-----+	-----+	-----+	-----+	-----+
88	0.0471621	0.0113456	0.0488612	0.0471802	0.0475141	0.0000015
e91	-----+	-----+	-----+	-----+	-----+	-----+
91	0.0675972	0.0601167	0.0956564	0.0677472	0.0695441	0.0000243

Plus grande valeur positive

Sc	0.2713816	Elément 9, Sc critère de contrainte axiale (CM66, CB71)
Tc	0.0601167	Elément 91, Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc	0.2715071	Elément 9, Mc critère de Mises (ou Tsai-Wu)
F_cm66	0.3103048	Elément 9, F_cm66 flambement simple (CM66 ou CB71)
D_cm66	0.5106556	Elément 8, D_cm66 flambement avec déversement (CM66)
V_cm66	0.0000243	Elément 91, V_cm66 voile CM66 pour profil en I (CM66)

Propriété 4 UPN100
Passerelles 22GW EDF

calcul 2 'calcul 0'

 CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
 Sc critère de contrainte axiale (CM66, CB71)
 Tc contrainte de cisaillement/(0.65 S0), (CM66)
 Mc critère de Mises (ou Tsai-Wu)
 F_cm66 flambement simple (CM66 ou CB71)
 D_cm66 flambement avec déversement (CM66)
 V_cm66 voile CM66 pour profil en I (CM66)

Elément	Sc	Tc	Mc	F_cm66	D_cm66	V_cm66
e14						
14	0.1279913	0.0241774	0.1280279	0.1286277	0.4139436	0.0000011
e15						
15	0.1244292	0.0222482	0.1244327	0.1247687	0.3982322	0.0000009
e16						
16	0.0136015	0.0011993	0.0136683	0.0133904	0.0191827	0.0000000
e19						
19	0.0459057	0.0068164	0.0465428	0.0459249	0.1382297	0.0000002
e22						
22	0.0425629	0.0154803	0.0427335	0.0425661	0.1287412	0.0000004
e23						
23	0.0933791	0.0120593	0.0943609	0.0926776	0.2548412	0.0000007
e24						
24	0.0270152	0.0157981	0.0279875	0.0270474	0.0844767	0.0000003
e25						
25	0.0189530	0.0043667	0.0195802	0.0189668	0.0578182	0.0000000
e44						
44	0.0411006	0.0102530	0.0426908	0.0411092	0.0615967	0.0000002
e45						
45	0.0027777	0.0415680	0.0468810	0.0027793	0.0060669	0.0000022
e46						
46	0.0351575	0.0063742	0.0358824	0.0351535	0.0707976	0.0000001
e47						
47	0.0201063	0.0080418	0.0220507	0.0201834	0.0556247	0.0000001
e48						
48	0.0268950	0.0089905	0.0287366	0.0228559	0.0313771	0.0000001
e49						
49	0.0238187	0.0051818	0.0245227	0.0156141	0.0473380	0.0000001
e50						
50	0.0518920	0.0175419	0.0555230	0.0467210	0.0825414	0.0000005
e51						
51	0.0354449	0.0095963	0.0370549	0.0354867	0.1096799	0.0000002
e52						
52	0.0354449	0.0095963	0.0370549	0.0354867	0.1096799	0.0000002
e53						
53	0.1774526	0.0314184	0.1809437	0.1782730	0.5636932	0.0000031
e54						
54	0.0117593	0.0205091	0.0259118	0.0117748	0.0200989	0.0000005
e55						
55	0.1540206	0.0339467	0.1586914	0.1547541	0.4281939	0.0000029
e56						
56	0.0465457	0.0145779	0.0493544	0.0417772	0.0440290	0.0000004
e57						
57	0.0210777	0.0244973	0.0347120	0.0210921	0.0277514	0.0000008
e58						
58	0.1492618	0.0383283	0.1553741	0.1495705	0.4392002	0.0000032
e59						
59	0.0288029	0.0072157	0.0299266	0.0288991	0.0586189	0.0000001
e60						
60	0.0795046	0.0198571	0.0825879	0.0793816	0.2216114	0.0000009
e61						
61	0.1818194	0.0216088	0.1818217	0.1837568	0.5863609	0.0000020
e62						
62	0.0966741	0.0290355	0.1020513	0.0966395	0.2693199	0.0000016
e63						
63	0.1709984	0.0235522	0.1710299	0.1732430	0.5535768	0.0000018
e64						
64	0.0768329	0.0189141	0.0797291	0.0768379	0.2163936	0.0000008
e65						
65	0.0005829	0.0018682	0.0021825	0.0005829	0.0008599	0.0000000
e66						
66	0.0087938	0.0073486	0.0120739	0.0087133	0.0087328	0.0000001
e67						
67	0.0059178	0.0002338	0.0059237	0.0058879	0.0059522	0.0000000
e68						

68	0.0065692	0.0084701	0.0115796	0.0065695	0.0073556	0.0000001
e69	-----+	-----+	-----+	-----+	-----+	-----+
69	0.0165120	0.0035952	0.0170008	0.0164806	0.0170511	0.0000000
e70	-----+	-----+	-----+	-----+	-----+	-----+
70	0.0202288	0.0084629	0.0223603	0.0202289	0.0207638	0.0000001
e71	-----+	-----+	-----+	-----+	-----+	-----+
71	0.0146849	0.0010420	0.0147317	0.0146147	0.0150809	0.0000000
e89	-----+	-----+	-----+	-----+	-----+	-----+
89	0.1277749	0.0214577	0.1277926	0.1284133	0.4136257	0.0000010
e90	-----+	-----+	-----+	-----+	-----+	-----+
90	0.1241869	0.0231510	0.1242016	0.1245286	0.3978885	0.0000009
e92	-----+	-----+	-----+	-----+	-----+	-----+
92	0.0576322	0.0310634	0.0615842	0.0577668	0.1800930	0.0000013
e99	-----+	-----+	-----+	-----+	-----+	-----+
99	0.1153721	0.0287130	0.1158671	0.1160600	0.3716862	0.0000015
e100	-----+	-----+	-----+	-----+	-----+	-----+
100	0.2248672	0.0350226	0.2282980	0.2263433	0.7128277	0.0000046
e101	-----+	-----+	-----+	-----+	-----+	-----+
101	0.2356953	0.0304426	0.2381742	0.2374632	0.7610487	0.0000045
e102	-----+	-----+	-----+	-----+	-----+	-----+
102	0.1308230	0.0228520	0.1308899	0.1317040	0.4172330	0.0000011
e103	-----+	-----+	-----+	-----+	-----+	-----+
103	0.0358543	0.0066581	0.0366295	0.0358550	0.0698645	0.0000001
e104	-----+	-----+	-----+	-----+	-----+	-----+
104	0.0027202	0.0411034	0.0463554	0.0027216	0.0057237	0.0000021
e105	-----+	-----+	-----+	-----+	-----+	-----+
105	0.1266297	0.0228309	0.1266795	0.1273336	0.4093580	0.0000011
e106	-----+	-----+	-----+	-----+	-----+	-----+
106	0.2459562	0.0311621	0.2484458	0.2471630	0.7866021	0.0000049
e107	-----+	-----+	-----+	-----+	-----+	-----+
107	0.2579750	0.0362380	0.2611811	0.2592759	0.8201898	0.0000057
e108	-----+	-----+	-----+	-----+	-----+	-----+
108	0.1245831	0.0280764	0.1255503	0.1252979	0.4015507	0.0000013
e109	-----+	-----+	-----+	-----+	-----+	-----+
109	0.1139619	0.0366879	0.1212162	0.1141921	0.2950717	0.0000025
e110	-----+	-----+	-----+	-----+	-----+	-----+
110	0.0794665	0.0220110	0.0832407	0.0794717	0.2248284	0.0000010
e111	-----+	-----+	-----+	-----+	-----+	-----+
111	0.0273524	0.0093748	0.0293181	0.0233079	0.0314881	0.0000002
e112	-----+	-----+	-----+	-----+	-----+	-----+
112	0.0254086	0.0063829	0.0264053	0.0173235	0.0507454	0.0000001
e113	-----+	-----+	-----+	-----+	-----+	-----+
113	0.0210416	0.0034811	0.0214035	0.0133189	0.0373842	0.0000000
e114	-----+	-----+	-----+	-----+	-----+	-----+
114	0.1289902	0.0266873	0.1296743	0.1296822	0.4131516	0.0000019
e115	-----+	-----+	-----+	-----+	-----+	-----+
115	0.0782016	0.0241111	0.0827789	0.0781545	0.1159230	0.0000011
e116	-----+	-----+	-----+	-----+	-----+	-----+
116	0.1492618	0.0383283	0.1553741	0.1495705	0.4392002	0.0000032
e117	-----+	-----+	-----+	-----+	-----+	-----+
117	0.1242775	0.0263817	0.1277775	0.1246151	0.3738280	0.0000018
e118	-----+	-----+	-----+	-----+	-----+	-----+
118	0.1111398	0.0246653	0.1113123	0.1115464	0.3571158	0.0000012
e119	-----+	-----+	-----+	-----+	-----+	-----+
119	0.0587416	0.0183506	0.0622688	0.0541451	0.0550451	0.0000006
e120	-----+	-----+	-----+	-----+	-----+	-----+
120	0.1540206	0.0339467	0.1586914	0.1547541	0.4281939	0.0000029
e121	-----+	-----+	-----+	-----+	-----+	-----+
121	0.1113962	0.0250474	0.1149100	0.1126282	0.3554239	0.0000015
e122	-----+	-----+	-----+	-----+	-----+	-----+
122	0.1943012	0.0295316	0.1971252	0.1968420	0.6194181	0.0000034
e123	-----+	-----+	-----+	-----+	-----+	-----+
123	0.2111694	0.0330103	0.2144147	0.2139516	0.6646527	0.0000041
e124	-----+	-----+	-----+	-----+	-----+	-----+
124	0.1312046	0.0291128	0.1315828	0.1326109	0.4132652	0.0000017
e125	-----+	-----+	-----+	-----+	-----+	-----+
125	0.0549059	0.0095828	0.0559558	0.0549315	0.0802723	0.0000003
e126	-----+	-----+	-----+	-----+	-----+	-----+
126	0.0993078	0.0321335	0.1056921	0.0992732	0.2777540	0.0000019
e127	-----+	-----+	-----+	-----+	-----+	-----+
127	0.1305174	0.0267127	0.1312493	0.1303629	0.4111153	0.0000013
e128	-----+	-----+	-----+	-----+	-----+	-----+
128	0.2555863	0.0344791	0.2585173	0.2551880	0.7825151	0.0000054
e129	-----+	-----+	-----+	-----+	-----+	-----+
129	0.2385486	0.0326830	0.2413698	0.2379555	0.7454506	0.0000048
e130	-----+	-----+	-----+	-----+	-----+	-----+
130	0.1209628	0.0306089	0.1257757	0.1205547	0.3778402	0.0000021

e131	131	0.0632591	0.0273843	0.0703720	0.0630869	0.1016397	0.0000012
e132	132	0.1874109	0.0211011	0.1874120	0.1890388	0.5895739	0.0000021
e133	133	0.0768709	0.0167599	0.0791528	0.0767479	0.2131772	0.0000007
e134	134	0.1774882	0.0248666	0.1775528	0.1794477	0.5577578	0.0000019
e135	135	0.1113283	0.0335904	0.1175761	0.1115511	0.2866137	0.0000022

Plus grande valeur positive

Sc	0.2579750	Elément 107, Sc critère de contrainte axiale (CM66, CB71)
Tc	0.0415680	Elément 45, Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc	0.2611811	Elément 107, Mc critère de Mises (ou Tsai-Wu)
F_cm66	0.2592759	Elément 107, F_cm66 flambement simple (CM66 ou CB71)
D_cm66	0.8201898	Elément 107, D_cm66 flambement avec déversement (CM66)
V_cm66	0.0000057	Elément 107, V_cm66 voile CM66 pour profil en I (CM66)

Propriété 6 PL100_15
Passerelles 22GW EDF
calcul 2 'calcul 0'

CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
Sc critère de contrainte axiale (CM66, CB71)
Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc critère de Mises (ou Tsai-Wu)
F_cm66 flambement simple (CM66 ou CB71)
D_cm66 flambement avec déversement (CM66)
V_cm66 voile CM66 pour profil en I (CM66)

Elément	Sc	Tc	Mc	F_cm66	D_cm66	V_cm66	
e21	21	0.0815876	0.0068276	0.0819489	0.0808861	0.0808861	0.0000000
e26	26	0.0339012	0.0103595	0.0358514	0.0298621	0.0298621	0.0000000
e27	27	0.0202975	0.0036321	0.0207053	0.0122124	0.0122124	0.0000000
e28	28	0.0510930	0.0149480	0.0537931	0.0459220	0.0459220	0.0000000
e29	29	0.0348883	0.0048381	0.0353109	0.0198723	0.0198723	0.0000000
e30	30	0.0197398	0.0012997	0.0197940	0.0042721	0.0042721	0.0000000
e31	31	0.0816814	0.0214482	0.0851759	0.0770849	0.0770849	0.0000000
e93	93	0.0346043	0.0108445	0.0366949	0.0305598	0.0305598	0.0000000
e94	94	0.0171049	0.0025227	0.0173390	0.0089002	0.0089002	0.0000000
e95	95	0.0157888	0.0029557	0.0161356	0.0080661	0.0080661	0.0000000
e96	96	0.0648667	0.0154466	0.0671573	0.0538243	0.0538243	0.0000000
e97	97	0.0276905	0.0026289	0.0278483	0.0127719	0.0127719	0.0000000
e98	98	0.0635043	0.0164747	0.0661575	0.0587358	0.0587358	0.0000000

Plus grande valeur positive

Sc	0.0816814	Elément 31, Sc critère de contrainte axiale (CM66, CB71)
Tc	0.0214482	Elément 31, Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc	0.0851759	Elément 31, Mc critère de Mises (ou Tsai-Wu)
F_cm66	0.0808861	Elément 21, F_cm66 flambement simple (CM66 ou CB71)
D_cm66	0.0808861	Elément 21, D_cm66 flambement avec déversement (CM66)
V_cm66	0.0000000	Elément 31, V_cm66 voile CM66 pour profil en I (CM66)

Propriété 7 OB79
Passerelles 22GW EDF
calcul 2 'calcul 0'

CRITERES DE RUINE (CRITIQUES SI VALEUR > 1)
Sc critère de contrainte axiale (CM66, CB71)
Tc contrainte de cisaillement/(0.65 S0), (CM66)

Mc critère de Mises (ou Tsai-Wu)
 F_cm66 flambement simple (CM66 ou CB71)
 D_cm66 flambement avec déversement (CM66)
 V_cm66 voile CM66 pour profil en I (CM66)

Elément	Sc	Tc	Mc	F_cm66	D_cm66	V_cm66
e74						
74	0.0582540	0.0094228	0.0592120	0.0585889	0.0586682	0.0000002
e75						
75	0.0297970	0.0011497	0.0298251	0.0216561	0.0216561	0.0000000
e76						
76	0.0283650	0.0008443	0.0283809	0.0284953	0.0294238	0.0000000

Plus grande valeur positive

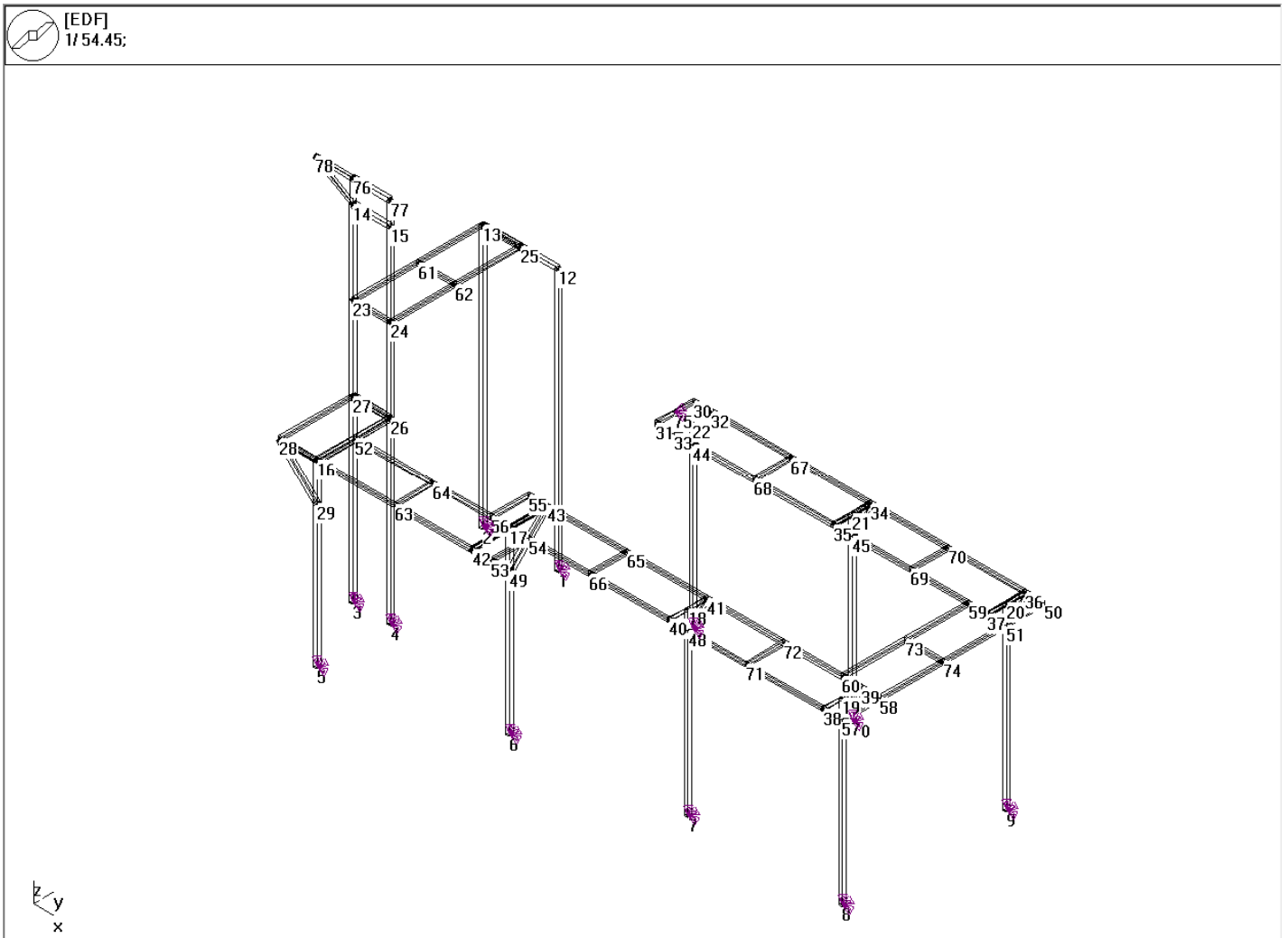
Sc	0.0582540	Elément 74, Sc critère de contrainte axiale (CM66, CB71)
Tc	0.0094228	Elément 74, Tc contrainte de cisaillement/(0.65 S0), (CM66)
Mc	0.0592120	Elément 74, Mc critère de Mises (ou Tsai-Wu)
F_cm66	0.0585889	Elément 74, F_cm66 flambement simple (CM66 ou CB71)
D_cm66	0.0586682	Elément 74, D_cm66 flambement avec déversement (CM66)
V_cm66	0.0000002	Elément 74, V_cm66 voile CM66 pour profil en I (CM66)

Critères de ruine étendus

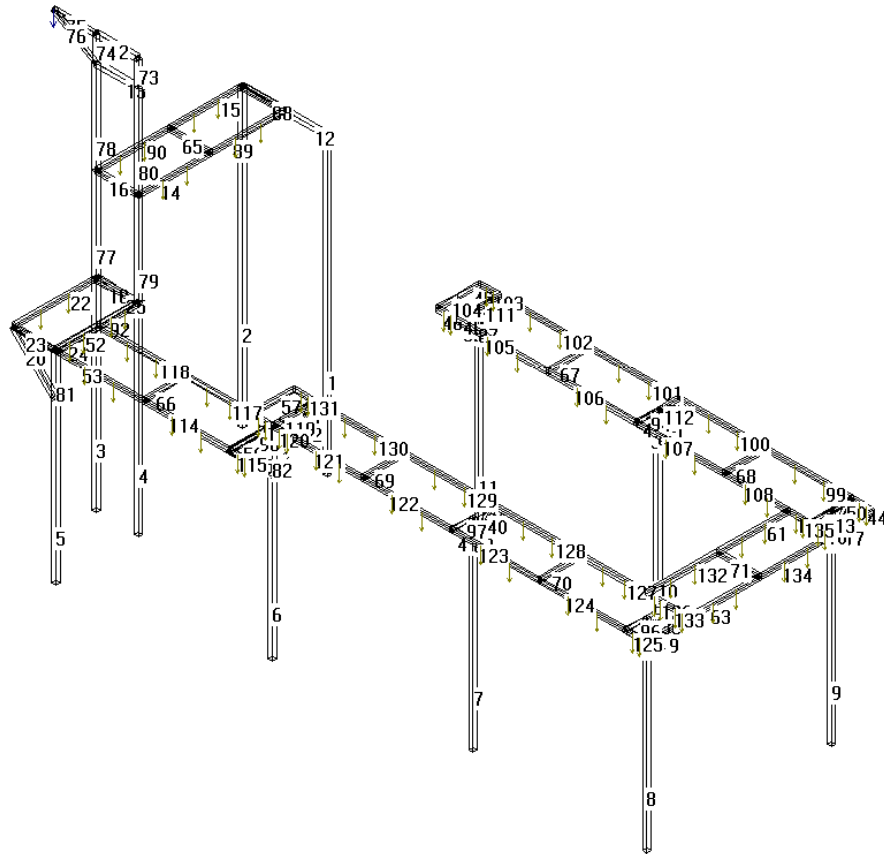
Assemblages

Modélisation de la structure et interprétation des résultats.

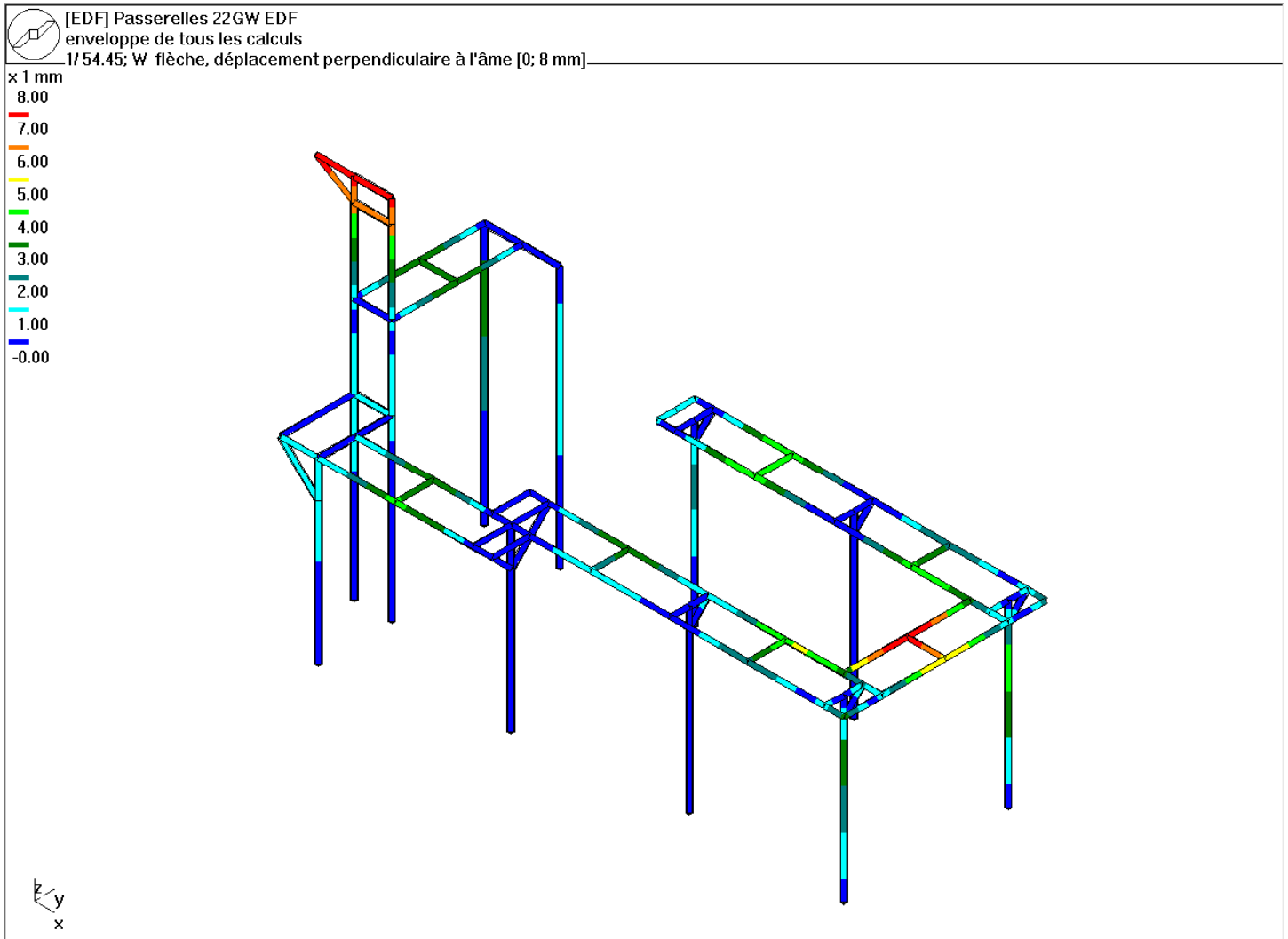
1. Nœuds, Blocages.



2. Eléments, Charges.



3. Déplacement perpendiculaire à l'âme.



4. Flambement avec déversement. (CM66)

