C.			
B.			
A.	Základní dokument	Ing.Rada	30.12.2012
Revize	Obsah	provedl	datum

STATICKÁ A PROJEKČNÍ KANCELÁŘ – ING. STANISLAV RADA
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Akce : **Stavebně-statický posudek přitížení střešní konstrukce haly vozovny tramvají Poruba zařízením zabraňujícím pádu pracovníků ze střech tramvají a zařízením odklopné troleje.**	*Zak.č.:* 12-065	*Kopie:*
	F.	
Místo : DP Ostrava a.s.-Provozovna Tramvaje Poruba		1
Část : Stavební objekty *SO/PS :* **Stavebně-statický posudek přitížení střešní konstrukce haly**	**1.**	
Profese: Statika – ocelové konstrukce	30-00	
Obsah : **STATICKÝ VÝPOČET ČSN 730035**	30-02.1	*Rev.* A.

OBSAH STATICKÉHO VÝPOČTU

1. Boční zábrana a vaznice v prostoru její uchycení . . . . . 2.
2. Návrh úprav s posouzením . . . . . .43.
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STATICKÝ VÝPOČET BOČNÍ ZÁBRANY A VAZNIC

Předpoklady statického výpočtu :

1. Statický výpočet je zpracován na základě podkladů objednavatele.

Konstrukce byla navržena a staticky posouzena dle platných ČSN v době realizace nosné konstrukce haly, především :

ČSN 73 0035 Zatížení stavebních konstrukcí
ČSN 73 1401 Navrhování ocelových konstrukcí

2. Statický výpočet

Statický výpočet byl proveden podle teorie 1. řádu. Jako zatížení bylo kromě vlastní tíhy ocelové konstrukce, zatížení střešním pláštěm a světlíkem, zatížení boční zábranou a třmenem, uvažováno se zatížením klimatickými sněhem a větrem. Součásti statického výpočtu je i posouzení průřezů boční zábrany, která byla navržena firmou DPO. Konstrukce byla posouzena dle mezních stavů únosnosti a použitelnosti.
Výpočet konstrukce a její posouzení bylo provedeno programem IDA PRIMA.
Schéma konstrukce a zatížení je **patrné z grafického výpisu programu IDA.**

ZATÍŽENÍ

1. Zatěžovací stav
   Zatížení stálé střešním pláštěm $\gamma = 1,1$
   Hydroisolace . . . . . 3 x 0,05 = 0,15 kN/m
   Sklotkanina . . . . . .18,5 x 0,006 x 3,0 = 0,33 kN/m
   Bednění . . . . . .0,25 x 3,0 = 0,75 kN/m
   Dřevěné fošny . . 8,0 x 0,14 x 0,04 x 3,0 x 6 /5,23 = 0,15 kN/m
   Hlinikový podhled . . . . . .27,0 x 0,001 x 3,0 = 0,12 kN/m
   g_{z1} = 1,5 kN/m
   Zatížení světlíkem
   P6 . . . . . 0,48 x 0,5 = 0,24 kN/m
   Fošny . . . . . 8,0 x 0,055 x 0,5 = 0,22 kN/m
   Sklo s drátěnou vložkou . . 27,0 x 0,5 x 3,0 x 0,,8 = 0,32 kN/m
   Nosná ok světlíku . . . . . 0,12 kN/m
   g = 0,9 kN/m
   $P_{z1} = 0,9 \times 3,0 = 2,7$ kN
   $P_{z2} = (0,32 + 0,12) \times 3,0 = 1,32$ kN
2. Zatěžovací stav
   Zatížení stálé sněhem $\gamma = 1,4$
   $s_o = 0,5$ kN/m2
   užitné rovnoměrné $p_o = 0,75$ kN/m2
   $p_o > s_o$
   $\mu_s = 1,0$
   $g_{z1} = 1,0 \times 0,75 \times 3,0 = 2,25$ kN/m
   pro $\alpha = 25°$ $\mu_s = 1,0$
   pro $\alpha = 60°$ $\mu_s = 0,0$
   pro $\alpha = 45°$ $\mu_1 = 0,571$
   $P_{z1} = 0,571 \times 0,75 \times 3,0 \times 0,5 \times 3,0 = 1,93$ kN
3. Zatěžovací stav
   Zatížení stálé větrem $\gamma = 1,2$
   $w_o = 0,45$ kN/m2
   $C_e = 0,5$
   $g_{z1} = 0,45 \times 0,5 \times 3,0 = 0,675$ kN/m
   $P_{z1} = 0,45 \times 0,5 \times 0,707 \times 3,0 \times 0,5 \times 3,0 = 0,72$ kN

P_{x1} = 0,45 x 0,5 x 0,707 x 3,0 x 0,5 x 3,0 = 0,72 kN
P_{x2} = 0,72 + 0,45 x 0,5 x 0,5 x 0,8 x 3,0 = 0,99 kN
P_{x2} = 0,72 + 0,45 x 0,5 x 0,5 x 0,6 x 3,0 = 0,92 kN

4. Zatěžovací stav
Zatížení stálé větrem γ = 1,2
w_o = 0,45 kN/m2
C_{e1} = 0,15
g_{z1} = 0,45 x 0,15 x 3,0 = 0,203 kN/m
P_{z1} = 0,45 x 0,15 x 0,707 x 3,0 x 0,5 x 3,0 = 0,215 kN
P_{x1} = 0,45 x 0,15 x 0,707 x 3,0 x 0,5 x 3,0 = 0,215 kN
P_{x2} = 0,215 + 0,45 x 0,15 x 0,5 x 3,0 = 0,316 kN

5. Zatěžovací stav
Zatížení stálé větrem γ = 1,2
w_o = 0,45 kN/m2
C_{e1} = 0,4
g_{z1} = 0,45 x 0,4 x 3,0 = 0,54 kN/m
P_{z1} = 0,45 x 0,4 x 0,707 x 3,0 x 0,5 x 3,0 = 0,573 kN
P_{x1} = 0,45 x 0,4 x 0,707 x 3,0 x 0,5 x 3,0 = 0,573 kN
P_{x2} = 0,573 + 0,45 x 0,4 x 0,5 x 3,0 = 0,843 kN

6. Zatěžovací stav
Vlastní tíha ok γ = 1,1

7. Zatěžovací stav
Zatížení třmenem γ = 1,1
dle podkladu DPO
G = 106,7 kg
P_{z1} = 0,5 x 1,067 x 1,05 = 0,56 kN

8. Zatěžovací stav
Zatížení svislé na horní madlo zábrany γ = 1,2
g_{z1} = 0,3 kN/m
g_{y1} = 0,3 kN/m

9. Zatěžovací stav
Zatížení svislé na horní madlo zábrany γ = 1,2
g_{z1} = 0,3 kN/m
g_{y1} = 0,3 kN/m

10. Zatěžovací stav
Zatížení břemenem na horní madlo zábrany γ = 1,2
P_{z1} = 0,5 kN
P_{y1} = 0,5 kN

11. Zatěžovací stav
Zatížení břemenem na horní madlo zábrany γ = 1,2
P_{z1} = 0,5 kN
P_{y1} = 0,5 kN

12. Zatěžovací stav
Zatížení břemenem na dolní tyč zábrany γ = 1,2
P_{z1} = 0,3 kN
P_{y1} = 0,3 kN

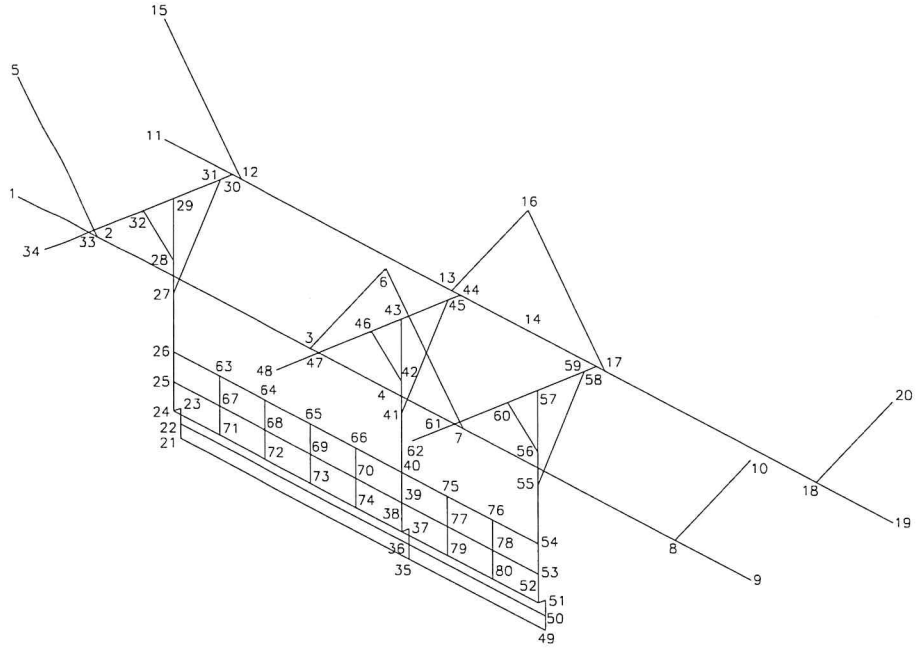
13. Zatěžovací stav
Zatížení břemenem na výplň zábrany γ = 1,2
P_{y1} = 0,3 kN

14. Zatěžovací stav
Zatížení břemenem na výplň zábrany γ = 1,2
P_{z1} = 0,1 kN
P_{y1} = 0,1 kN

TVAR KONSTRUKCE

U Z L Y uzel	X[m]	Y[m]	Z[m]	typ
1	0.0000	0.0000	0.0000	
2	1.8850	0.0000	0.0000	
3	7.1150	0.0000	0.0000	
4	9.0000	0.0000	0.0000	
5	0.0000	0.0000	2.1500	
6	9.0000	0.0000	2.1500	
7	10.8850	0.0000	0.0000	
8	16.1150	0.0000	0.0000	
9	18.0000	0.0000	0.0000	
10	18.0000	0.0000	2.1500	
11	0.0000	3.0000	0.0660	
12	1.8850	3.0000	0.0660	
13	7.1150	3.0000	0.0660	
14	9.0000	3.0000	0.0660	
15	0.0000	3.0000	2.2160	
16	9.0000	3.0000	2.2160	
17	10.8850	3.0000	0.0660	
18	16.1150	3.0000	0.0660	
19	18.0000	3.0000	0.0660	
20	18.0000	3.0000	2.2160	
21	1.6750	1.9000	-4.3020	
22	1.6750	1.9000	-4.0420	
23	1.6750	1.9000	-3.7620	
24	1.6750	1.7500	-3.7620	
25	1.6750	1.7500	-3.2420	
26	1.6750	1.7500	-2.7020	
27	1.6750	1.7500	-1.6620	
28	1.6750	1.7500	-1.0620	
29	1.6750	1.7500	0.0380	
30	1.6750	3.0000	0.0660	
31	1.6750	2.7440	0.0600	
32	1.6750	1.1230	0.0240	
33	1.6750	0.0000	0.0000	
34	1.6750	-0.9000	-0.0200	
35	7.3250	1.9000	-4.3020	
36	7.3250	1.9000	-4.0420	
37	7.3250	1.9000	-3.7620	
38	7.3250	1.7500	-3.7620	
39	7.3250	1.7500	-3.2420	
40	7.3250	1.7500	-2.7020	
41	7.3250	1.7500	-1.6620	
42	7.3250	1.7500	-1.0620	
43	7.3250	1.7500	0.0380	
44	7.3250	3.0000	0.0660	
45	7.3250	2.7440	0.0600	
46	7.3250	1.1230	0.0240	
47	7.3250	0.0000	0.0000	
48	7.3250	-0.9000	-0.0200	
49	10.6750	1.9000	-4.3020	
50	10.6750	1.9000	-4.0420	
51	10.6750	1.9000	-3.7620	
52	10.6750	1.7500	-3.7620	
53	10.6750	1.7500	-3.2420	
54	10.6750	1.7500	-2.7020	
55	10.6750	1.7500	-1.6620	
56	10.6750	1.7500	-1.0620	

57	10.6750	1.7500	0.0380
58	10.6750	3.0000	0.0660
59	10.6750	2.7440	0.0600
60	10.6750	1.1230	0.0240
61	10.6750	0.0000	0.0000
62	10.6750	-0.9000	-0.0200
63	2.8050	1.7500	-2.7020
64	3.9350	1.7500	-2.7020
65	5.0650	1.7500	-2.7020
66	6.1950	1.7500	-2.7020
67	2.8050	1.7500	-3.2420
68	3.9350	1.7500	-3.2420
69	5.0650	1.7500	-3.2420
70	6.1950	1.7500	-3.2420
71	2.8050	1.7500	-3.7620
72	3.9350	1.7500	-3.7620
73	5.0650	1.7500	-3.7620
74	6.1950	1.7500	-3.7620
75	8.4417	1.7500	-2.7020
76	9.5583	1.7500	-2.7020
77	8.4417	1.7500	-3.2420
78	9.5583	1.7500	-3.2420
79	8.4417	1.7500	-3.7620
80	9.5583	1.7500	-3.7620

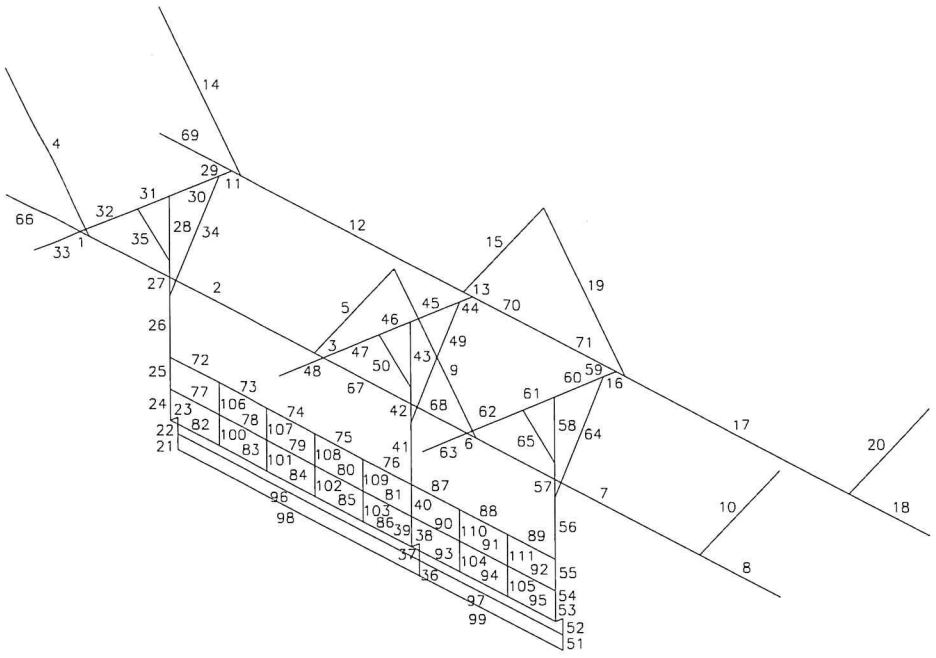


P R U T Y

prut	zac	konec	delka[m]	prurez	typ
1	33	2	0.2100	1	
2	2	3	5.2300	1	
3	3	47	0.2100	1	
4	2	5	2.8593	2	
5	3	6	2.8593	2	
6	61	7	0.2100	1	
7	7	8	5.2300	1	
8	8	9	1.8850	1	
9	7	6	2.8593	2	
10	8	10	2.8593	2	
11	30	12	0.2100	1	

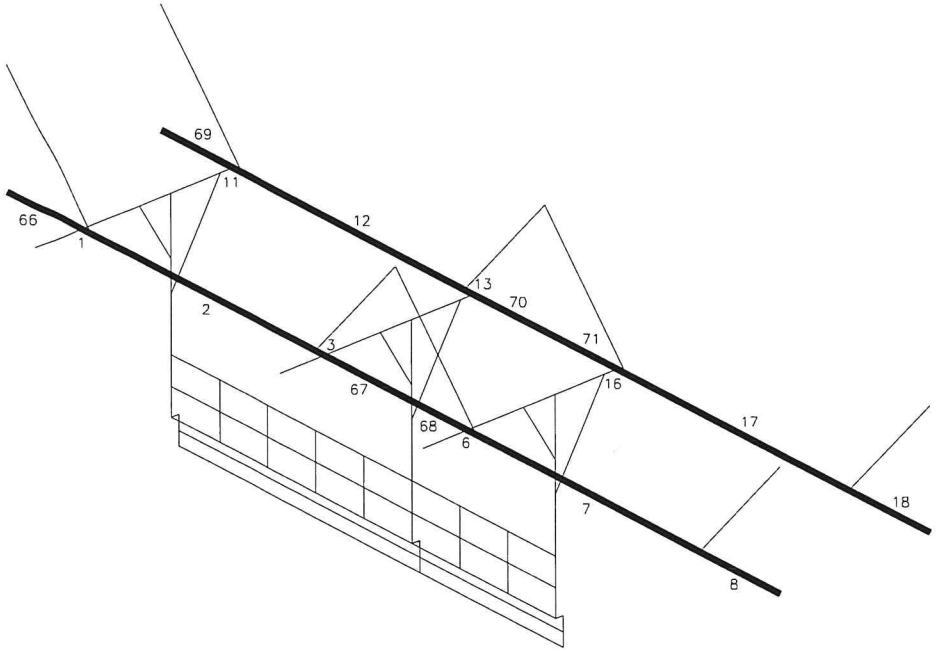
12	12	13	5.2300	1
13	13	44	0.2100	1
14	12	15	2.8593	2
15	13	16	2.8593	2
16	58	17	0.2100	1
17	17	18	5.2300	1
18	18	19	1.8850	1
19	17	16	2.8593	2
20	18	20	2.8593	2
21	21	22	0.2600	4
22	22	23	0.2800	4
23	23	24	0.1500	10
24	24	25	0.5200	4
25	25	26	0.5400	4
26	26	27	1.0400	4
27	27	28	0.6000	4
28	28	29	1.1000	4
29	30	31	0.2561	3
30	31	29	0.9942	3
31	29	32	0.6272	3
32	32	33	1.1233	3
33	33	34	0.9002	3
34	27	31	1.9883	6
35	28	32	1.2540	6
36	35	36	0.2600	4
37	36	37	0.2800	4
38	37	38	0.1500	10
39	38	39	0.5200	4
40	39	40	0.5400	4
41	40	41	1.0400	4
42	41	42	0.6000	4
43	42	43	1.1000	4
44	44	45	0.2561	3
45	45	43	0.9942	3
46	43	46	0.6272	3
47	46	47	1.1233	3
48	47	48	0.9002	3
49	41	45	1.9883	6
50	42	46	1.2540	6
51	49	50	0.2600	4
52	50	51	0.2800	4
53	51	52	0.1500	10
54	52	53	0.5200	4
55	53	54	0.5400	4
56	54	55	1.0400	4
57	55	56	0.6000	4
58	56	57	1.1000	4
59	58	59	0.2561	3
60	59	57	0.9942	3
61	57	60	0.6272	3
62	60	61	1.1233	3
63	61	62	0.9002	3
64	55	59	1.9883	6
65	56	60	1.2540	6
66	1	33	1.6750	1
67	47	4	1.6750	1
68	4	61	1.6750	1
69	11	30	1.6750	1
70	44	14	1.6750	1
71	14	58	1.6750	1
72	26	63	1.1300	5

73	63	64	1.1300	5
74	64	65	1.1300	5
75	65	66	1.1300	5
76	66	40	1.1300	5
77	25	67	1.1300	7
78	67	68	1.1300	7
79	68	69	1.1300	7
80	69	70	1.1300	7
81	70	39	1.1300	7
82	24	71	1.1300	5
83	71	72	1.1300	5
84	72	73	1.1300	5
85	73	74	1.1300	5
86	74	38	1.1300	5
87	40	75	1.1167	5
88	75	76	1.1167	5
89	76	54	1.1167	5
90	39	77	1.1167	7
91	77	78	1.1167	7
92	78	53	1.1167	7
93	38	79	1.1167	5
94	79	80	1.1167	5
95	80	52	1.1167	5
96	22	36	5.6500	9
97	36	50	3.3500	9
98	21	35	5.6500	5
99	35	49	3.3500	5
100	71	67	0.5200	8
101	72	68	0.5200	8
102	73	69	0.5200	8
103	74	70	0.5200	8
104	79	77	0.5200	8
105	80	78	0.5200	8
106	67	63	0.5400	8
107	68	64	0.5400	8
108	69	65	0.5400	8
109	70	66	0.5400	8
110	77	75	0.5400	8
111	78	76	0.5400	8

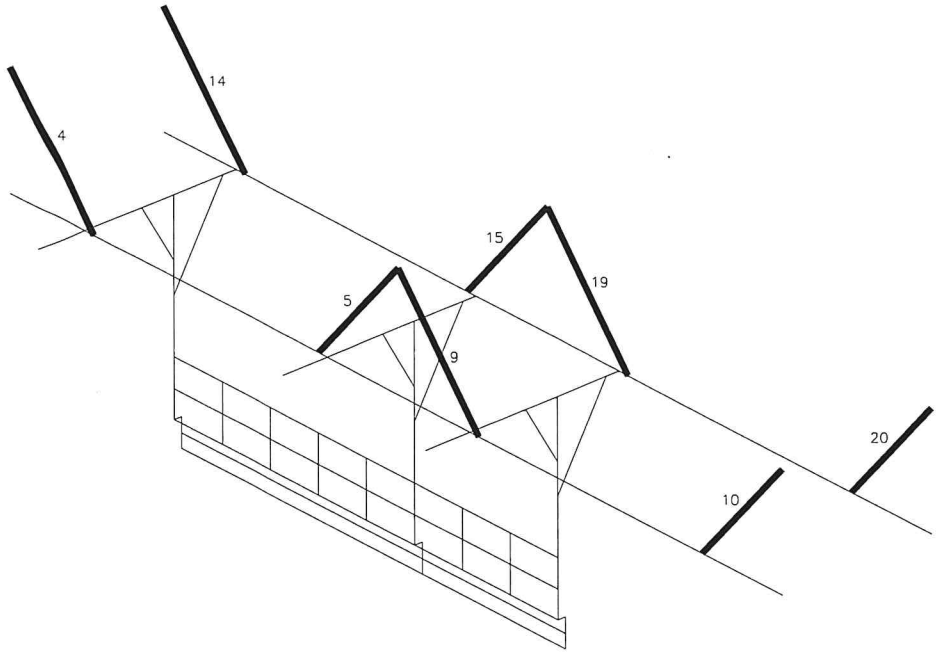


P R U R E Z Y - charakteristiky

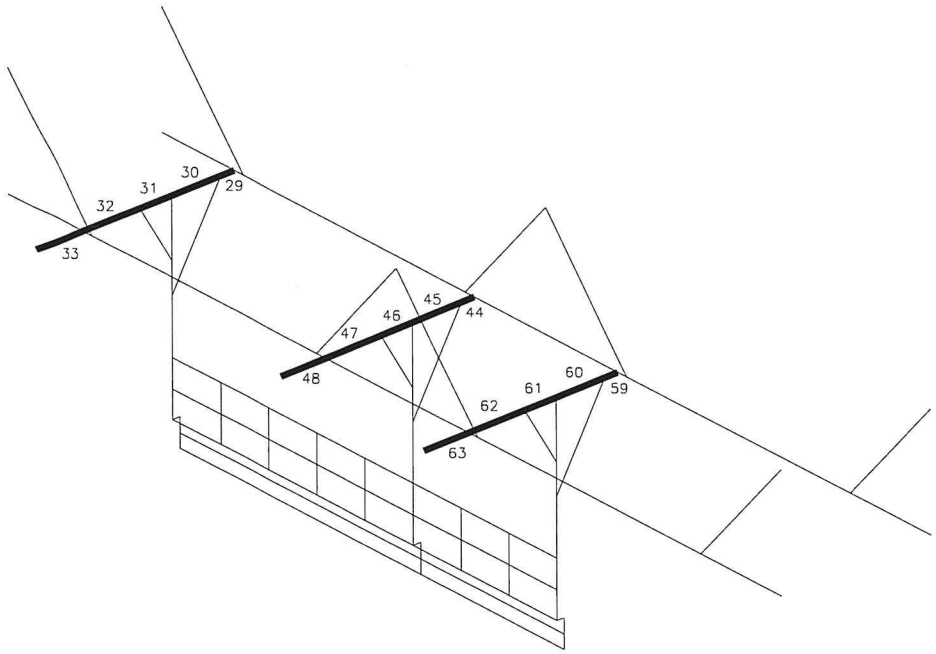
PRUREZ c. 1 (I) rotace prurezu Rx[st] = 0.00
plocha A[m2] = 1.82472E-03 mom.setr. Ix[m4] = 4.33000E-08
mom.setr. Iy[m4] = 5.72529E-06 mom.setr. Iz[m4] = 3.50218E-07
mom.setr. Iw[m8] = 1.46114E-09
Prvek 1 I 140 ocel 37
poloha teziste Y = 33.00 Z = -70.00



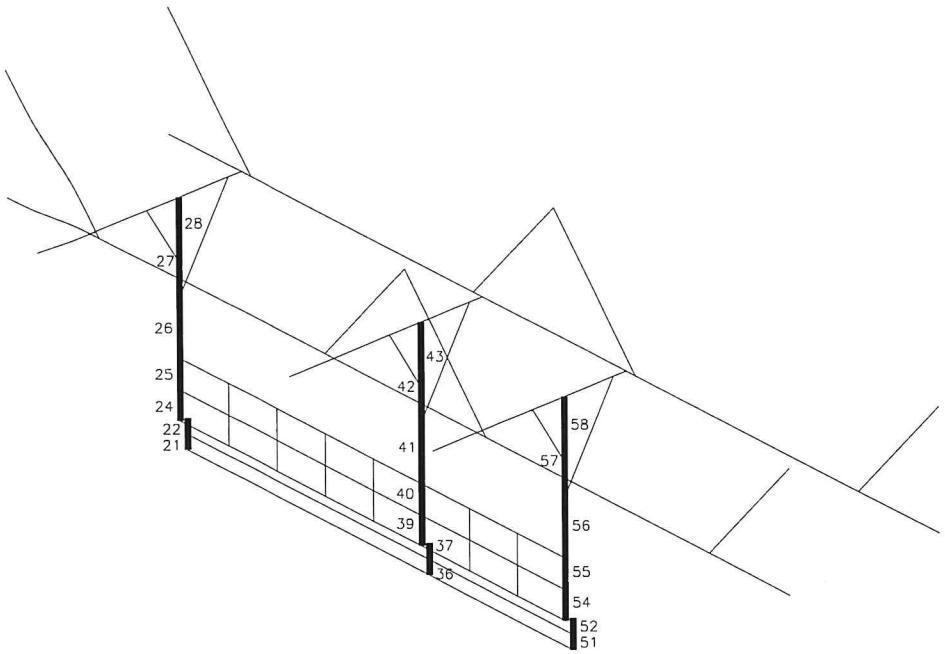
PRUREZ c. 2 (2Lrov /1) rotace prurezu Rx[st] = 0.00
plocha A[m2] = 1.38203E-03 mom.setr. Ix[m4] = 1.68600E-08
mom.setr. Iy[m4] = 1.05390E-06 mom.setr. Iz[m4] = 4.53883E-07
mom.setr. Iw[m8] = 0.00000E+00
Prvek 1 L 60.6 ocel 37
Prvek 2 L 60.6 ocel 37
poloha teziste Y = 43.16 Z = -64.00



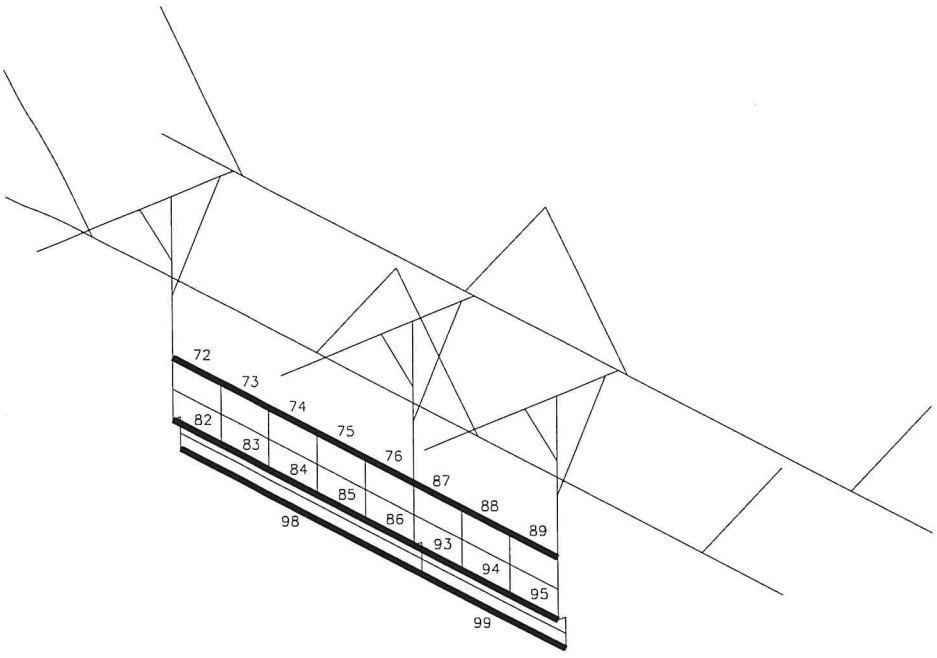

```
PRUREZ c.  3 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 6.84000E-04    mom.setr. Ix[m4] = 4.27200E-07
mom.setr. Iy[m4] = 1.84292E-07    mom.setr. Iz[m4] = 5.58532E-07
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=80/3 b=40/3                 ocel 37
 poloha teziste   Y =    40.00    Z =   -20.00
```



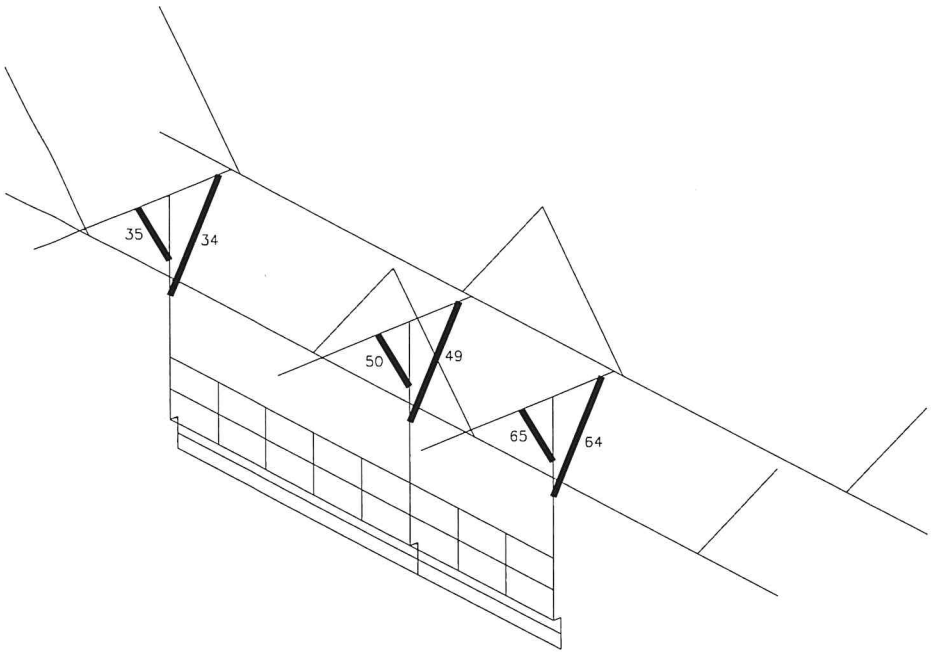

```
PRUREZ c.  4 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 6.84000E-04    mom.setr. Ix[m4] = 4.27200E-07
mom.setr. Iy[m4] = 5.58532E-07    mom.setr. Iz[m4] = 1.84292E-07
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=40/3 b=80/3                 ocel 37
 poloha teziste   Y =    20.00    Z =   -40.00
```



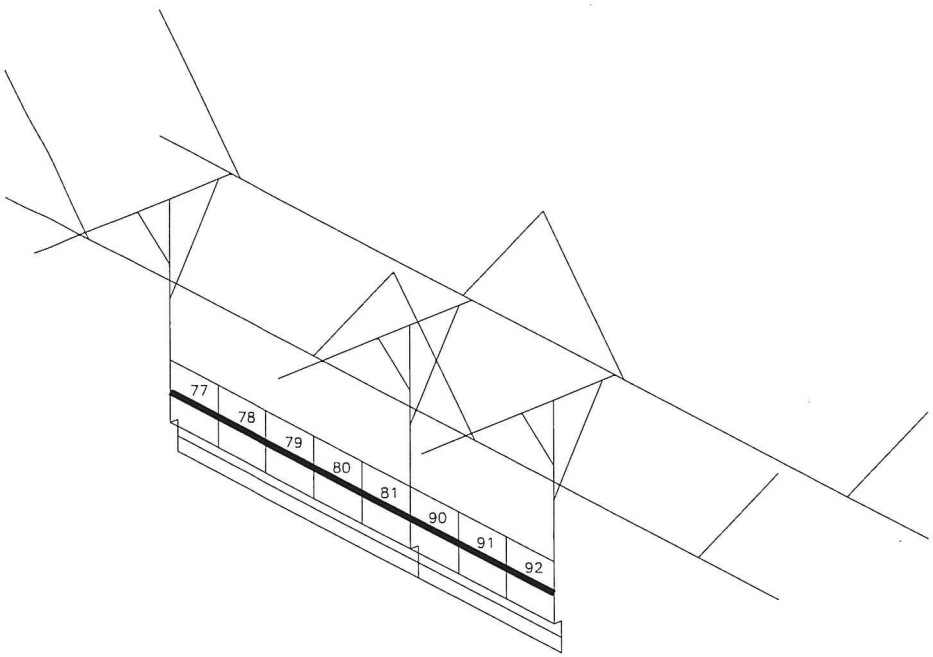

```
PRUREZ c.  5 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 6.84000E-04    mom.setr. Ix[m4] = 4.27200E-07
mom.setr. Iy[m4] = 1.84292E-07    mom.setr. Iz[m4] = 5.58532E-07
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=80/3 b=40/3                 ocel 37
 poloha teziste   Y =    40.00    Z =   -20.00
```



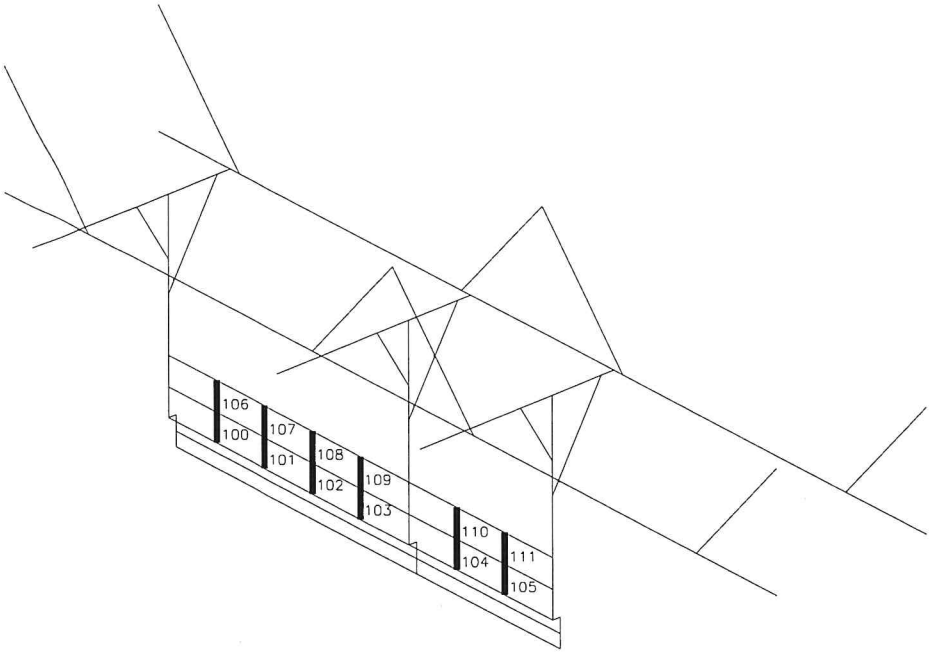

```
PRUREZ c.  6 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 4.44000E-04    mom.setr. Ix[m4] = 1.51959E-07
mom.setr. Iy[m4] = 1.01972E-07    mom.setr. Iz[m4] = 1.01972E-07
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=40/3 b=40/3                 ocel 37
 poloha teziste   Y =    20.00    Z =   -20.00
```



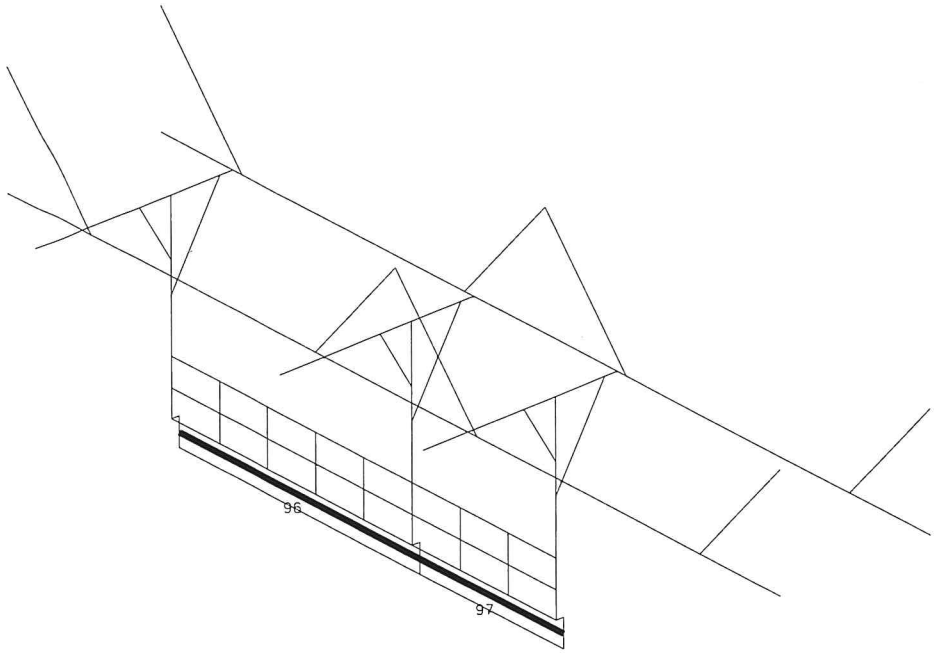

```
PRUREZ c.  7 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 4.44000E-04    mom.setr. Ix[m4] = 1.51959E-07
mom.setr. Iy[m4] = 1.01972E-07    mom.setr. Iz[m4] = 1.01972E-07
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=40/3 b=40/3                 ocel 37
 poloha teziste   Y =    20.00    Z =   -20.00
```



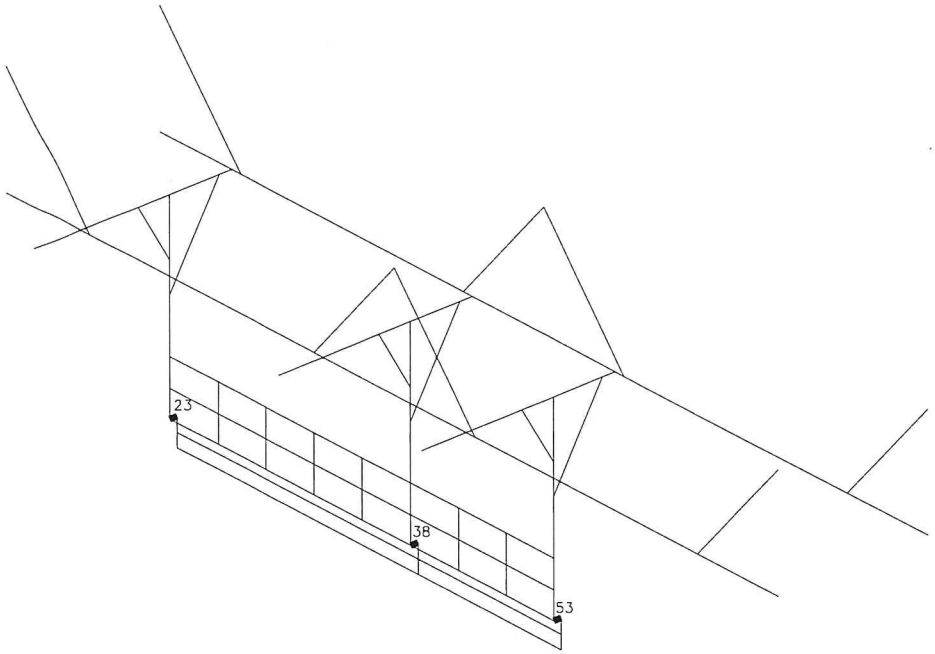

```
PRUREZ c.  8 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 4.44000E-04    mom.setr. Ix[m4] = 1.30570E-07
mom.setr. Iy[m4] = 1.42132E-07    mom.setr. Iz[m4] = 6.18120E-08
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=30/3 b=50/3                 ocel 37
 poloha teziste   Y =    15.00    Z =   -25.00
```




```
PRUREZ c.  9 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 4.44000E-04    mom.setr. Ix[m4] = 1.51959E-07
mom.setr. Iy[m4] = 1.01972E-07    mom.setr. Iz[m4] = 1.01972E-07
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=40/3 b=40/3                 ocel 37
 poloha teziste   Y =    20.00    Z =   -20.00
```




```
PRUREZ c. 10 ( O obraz )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 6.84000E-04    mom.setr. Ix[m4] = 4.27200E-07
mom.setr. Iy[m4] = 1.84292E-07    mom.setr. Iz[m4] = 5.58532E-07
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  O obraz  a=80/3 b=40/3                 ocel 37
 poloha teziste   Y =    40.00    Z =   -20.00
```



M A T E R I A L

Material c. 1 ocel 37

---

merna hmotnost	[kg/m^3]	:	7850.000
pevnost v tahu	[MPa]	:	210.000
pevnost v tlaku	[MPa]	:	210.000
pevnost ve smyku	[MPa]	:	126.000
modul pruznosti	[MPa]	:	210000.000
Poissonuv soucinitel		:	0.300
Soucinitel tep. roztaznosti		:	1.2E-0005

Typicky uzel : XYZRxRyRz

Typicky prut : XYZMxMyMz

---

prut 4: zac kl.: MyMz
prut 5: zac kl.: MyMz
prut 9: zac kl.: MyMz kon kl.: MyMz
prut 10: zac kl.: MyMz
prut 14: zac kl.: MyMz
prut 15: zac kl.: MyMz
prut 19: zac kl.: MyMz kon kl.: MyMz
prut 20: zac kl.: MyMz
prut 29: zac kl.: MyMz
prut 34: zac kl.: MyMz kon kl.: MyMz
prut 35: zac kl.: MyMz kon kl.: MyMz
prut 44: zac kl.: MyMz
prut 49: zac kl.: MyMz kon kl.: MyMz
prut 50: zac kl.: MyMz kon kl.: MyMz
prut 59: zac kl.: MyMz

prut 64: zac kl.: MyMz kon kl.: MyMz
prut 65: zac kl.: MyMz kon kl.: MyMz
prut 68: zac kl.: MyMz
prut 71: zac kl.: MyMz

P O D P O R Y

1	1	X Y Z
2	4	Y Z
3	5	X Y Z
4	6	Y Z
5	9	Y Z
6	10	X Y Z
7	11	X Y Z
8	14	Y Z
9	15	X Y Z
10	16	Y Z
11	19	Y Z
12	20	X Y Z

Z A T E Z O V A C I S T A V Y

1.	STRECHA	stale
2.	SNIH	stale
3.	VITR	stale
4.	VITR Y	stale
5.	VITR Y	stale
6.	TIHA	stale
7.	TRMEN	stale
8.	ZATIZENI NA HORNI MA	stale
9.	ZATIZENI NA HORNI MA	stale
10.	BREMENO NA HORNI MAD	stale
11.	BREMENO NA HORNI MAD	stale
12.	ZATIZENI NA DOLNI TY	stale
13.	ZATIZENI VYPLNE	stale
14.	ZATIZENI VYPLNE	stale

ZATIZENI V UZLECH - stav 1 (STRECHA)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			-2.70				1.10
3			-2.70				1.10
5			-1.32				1.10
6			-2.64				1.10
7			-2.70				1.10
8			-2.70				1.10
10			-1.32				1.10
12			-2.70				1.10
13			-2.70				1.10
15			-1.32				1.10
16			-2.64				1.10
17			-2.70				1.10
18			-2.70				1.10
20			-1.32				1.10

ZATIZENI V UZLECH - stav 2 (SNIH)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			-1.93				1.40

3			-1.93			1.40
5			-1.93			1.40
6			-3.86			1.40
7			-1.93			1.40
8			-1.93			1.40
10			-1.93			1.40
12			-1.93			1.40
13			-1.93			1.40
15			-1.93			1.40
16			-3.86			1.40
17			-1.93			1.40
18			-1.93			1.40
20			-1.93			1.40

ZATIZENI V UZLECH - stav 3 (VITR)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			0.72				1.20
2	-0.92						1.20
3			0.72				1.20
3	0.92						1.20
5			0.72				1.20
5	0.72						1.20
6			1.44				1.20
6							1.20
7	-0.92		0.72				1.20
8	0.92		0.72				1.20
10	-0.72		0.72				1.20
12	-0.92		0.72				1.20
13	0.92		0.72				1.20
15	0.72		0.72				1.20
16			1.44				1.20
17	-0.92		0.72				1.20
18	0.92		0.72				1.20
20	-0.72		0.72				1.20

ZATIZENI V UZLECH - stav 4 (VITR Y)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2	0.32		0.22				1.20
3	-0.32		0.22				1.20
5	0.22		0.22				1.20
6			0.44				1.20
7	0.32		0.22				1.20
8	-0.32		0.22				1.20
10	-0.22		0.22				1.20
12	0.32		0.22				1.20
13	-0.32		0.22				1.20
15	0.22		0.22				1.20
16			0.44				1.20
17	0.32		0.22				1.20
18	-0.32		0.22				1.20
20	-0.22		0.22				1.20

ZATIZENI V UZLECH - stav 5 (VITR Y)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2	0.84		0.57				1.20
3	-0.84		0.57				1.20
5	0.57		0.57				1.20
6			1.14				1.20

7	0.84	0.57		1.20
8	-0.84	0.57		1.20
10	-0.57	0.57		1.20
12	0.84	0.57		1.20
13	-0.84	0.57		1.20
15	0.57	0.57		1.20
16		1.14		1.20
17	0.84	0.57		1.20
18	-0.84	0.57		1.20
20	-0.57	0.57		1.20

ZATIZENI V UZLECH - stav 7 (TRMEN)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
4			-0.56				1.10

ZATIZENI V UZLECH - stav 10 (BREMENO NA HORNI MAD)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
26		0.50	-0.50				1.20
40		0.50	-0.50				1.20

ZATIZENI V UZLECH - stav 11 (BREMENO NA HORNI MAD)

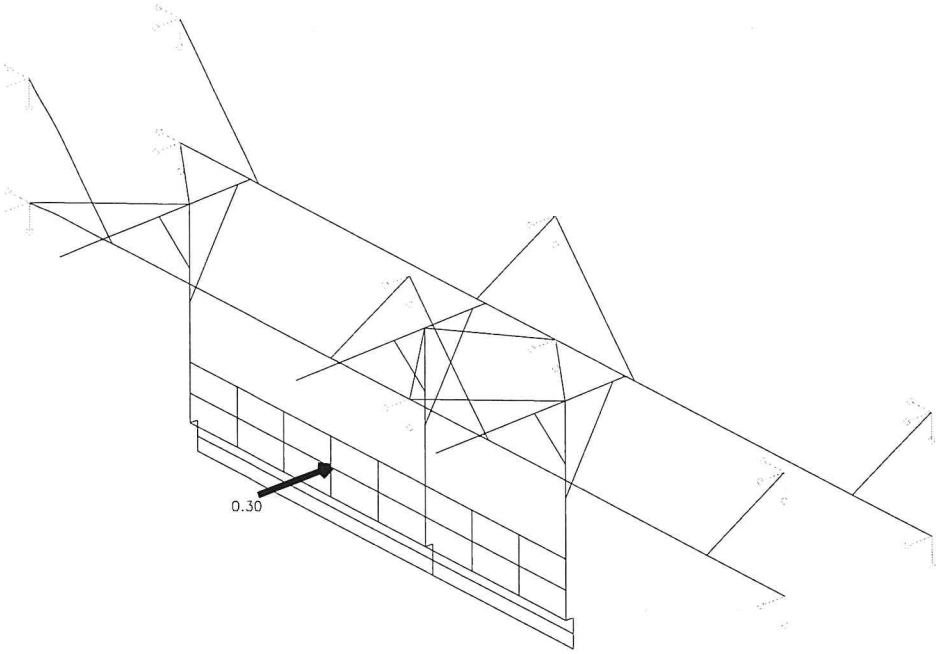
uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
26		0.50	-0.50				1.20
40		0.50	-0.50				1.20
54		0.50	-0.50				1.20

ZATIZENI V UZLECH - stav 12 (ZATIZENI NA DOLNI TY)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
24		0.30	-0.30				1.20
38		0.30	-0.30				1.20
52		0.30	-0.30				1.20

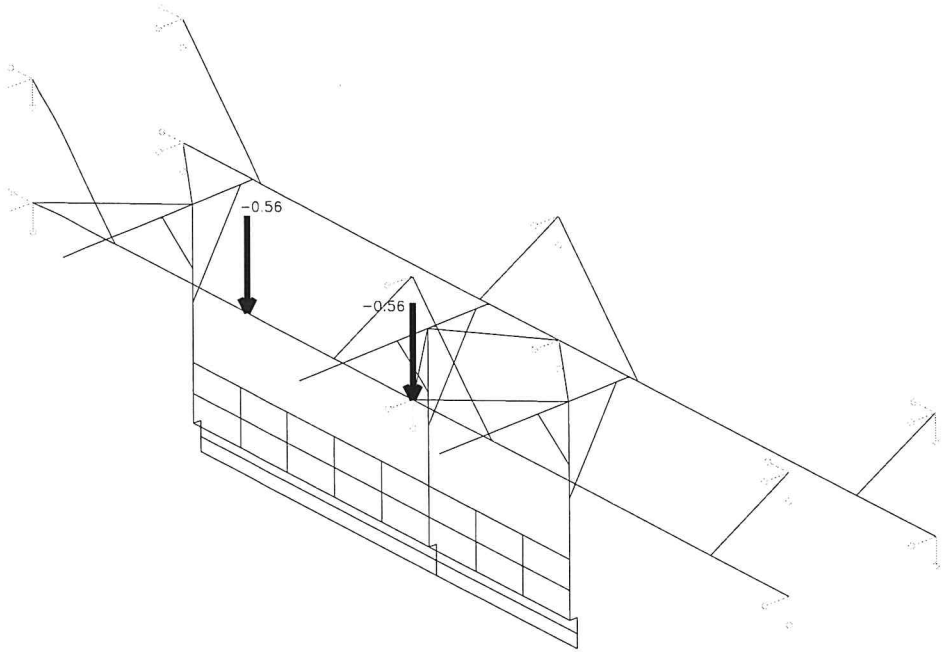
ZATIZENI V UZLECH - stav 13 (ZATIZENI VYPLNE)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
69		0.30					1.20



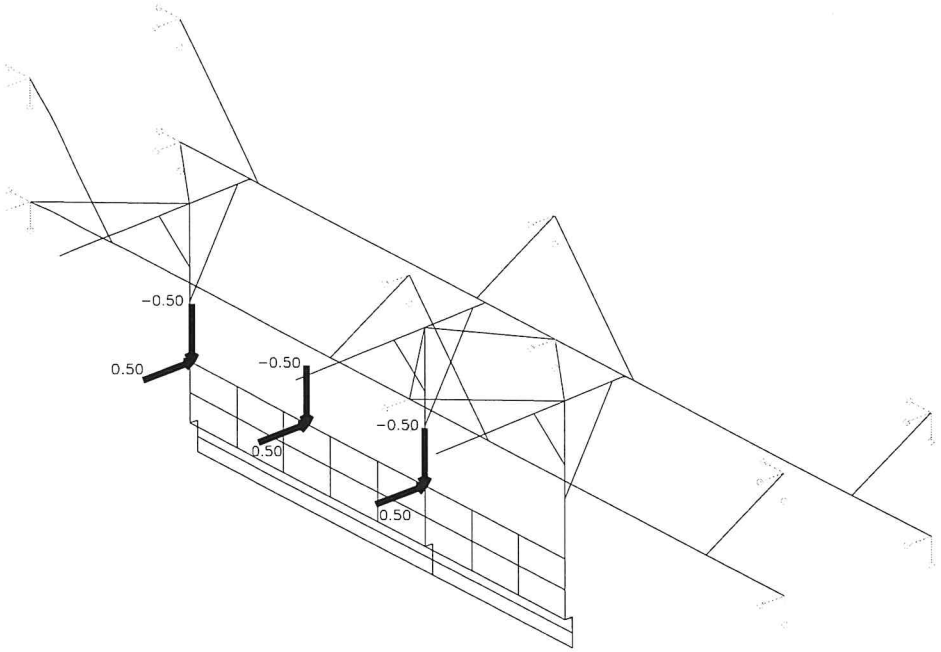
OSAMELE IMPULZY - stav 7 (TRMEN)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			-0.6 glob	3.14m			1.10



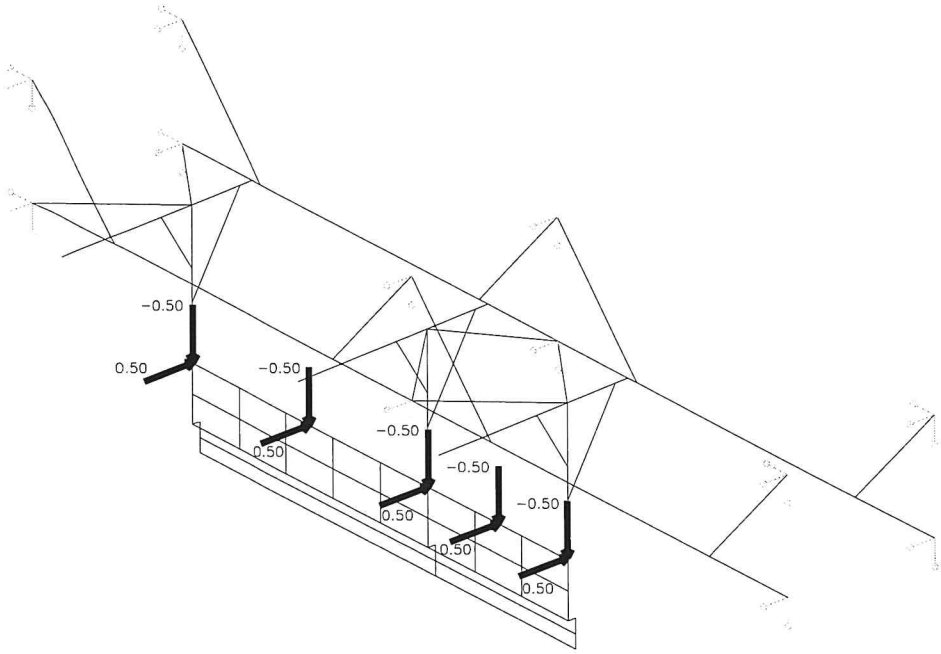
OSAMELE IMPULZY - stav 10 (BREMENO NA HORNI MAD)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
74	sil	0.5		-0.5 glob	0.50%			1.20



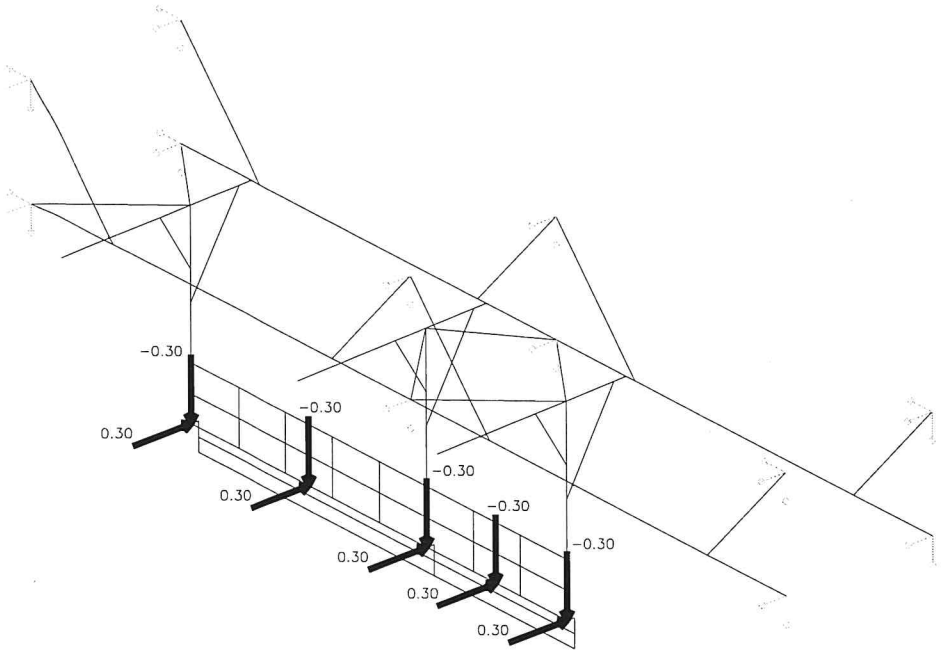
OSAMELE IMPULZY - stav 11 (BREMENO NA HORNI MAD)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
74	sil		0.5	-0.5 glob	0.50%			1.20
88	sil		0.5	-0.5 glob	0.50%			1.20



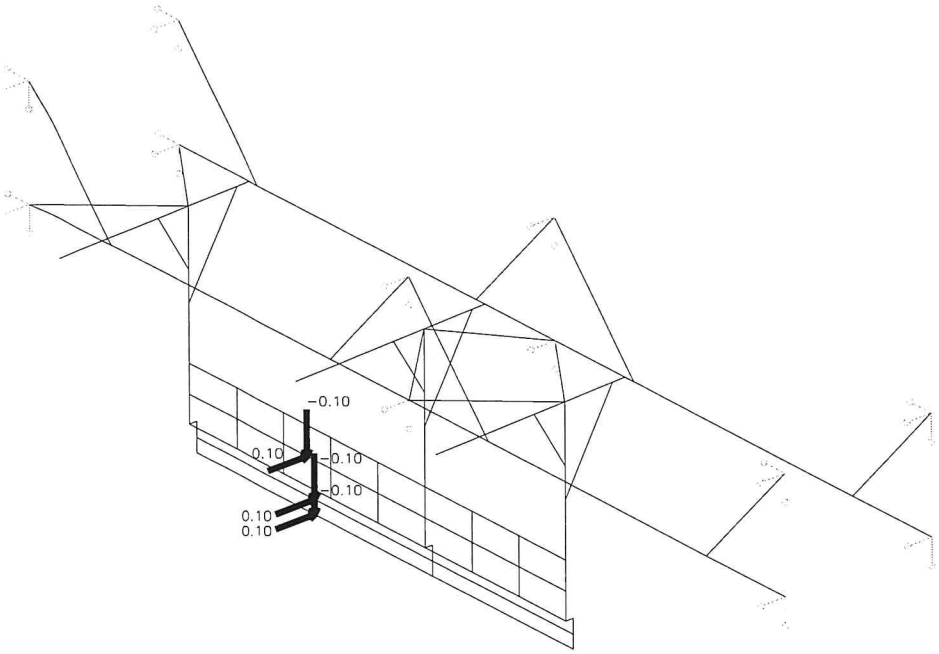
OSAMELE IMPULZY - stav 12 (ZATIZENI NA DOLNI TY)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
84	sil		0.3	-0.3 glob	0.50%			1.20
94	sil		0.3	-0.3 glob	0.50%			1.20



OSAMELE IMPULZY - stav 14 (ZATIZENI VYPLNE)

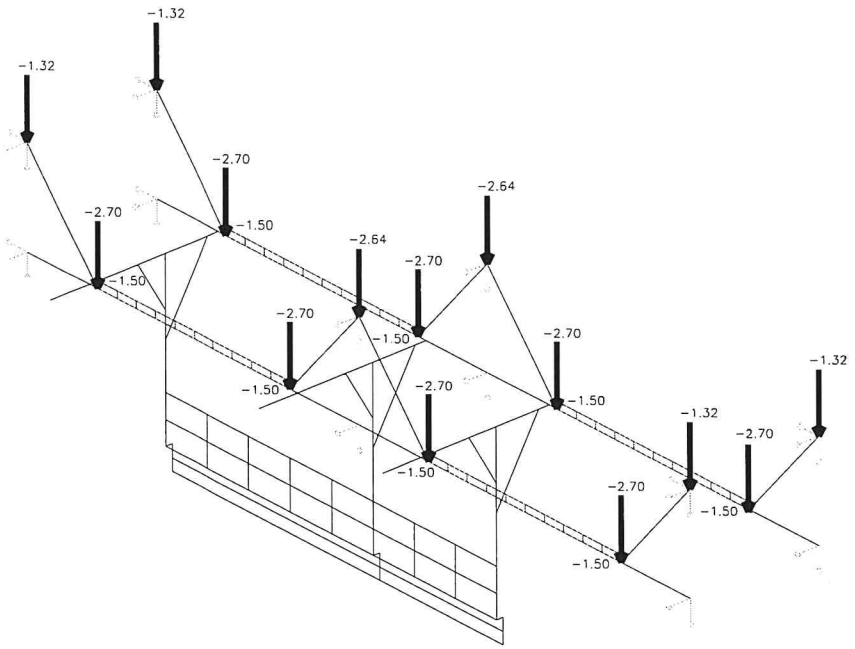
prut	typ	X	Y	Z	sourX	exY	exZ	koef
79	sil		0.1	-0.1 glob	0.50%			1.20
96	sil		0.1	-0.1 glob	0.50%			1.20
98	sil		0.1	-0.1 glob	0.50%			1.20



SPOJITE IMPULZY - stav 1 (STRECHA)

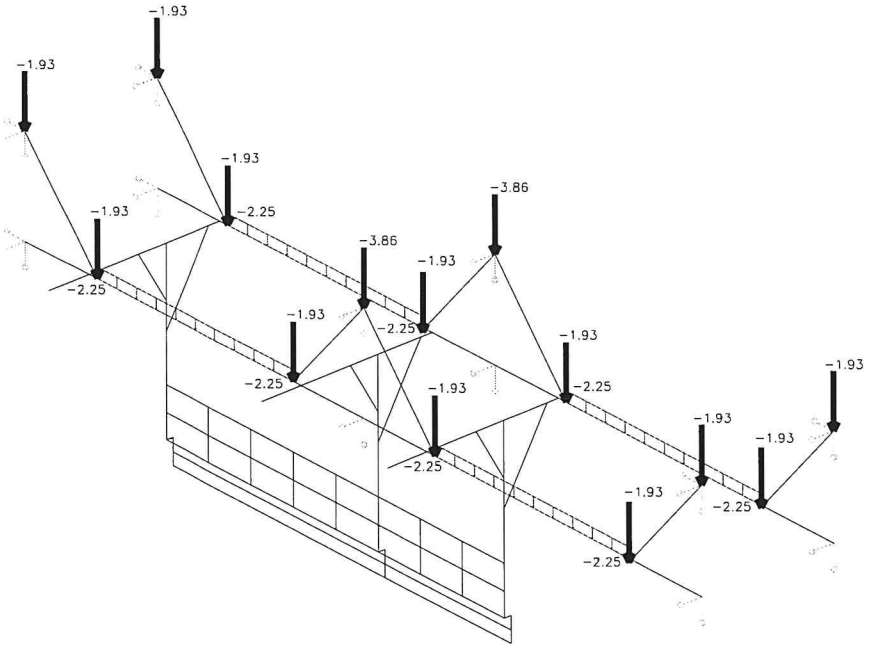
prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			-1.50 glob	0.00%			1.10
				-1.50 prum	1.00%			
7	sil			-1.50 glob	0.00%			1.10
				-1.50 prum	1.00%			
12	sil			-1.50 glob	0.00%			1.10
				-1.50 prum	1.00%			

17	sil	-1.50	glob	0.00%	1.10
		-1.50	prum	1.00%	



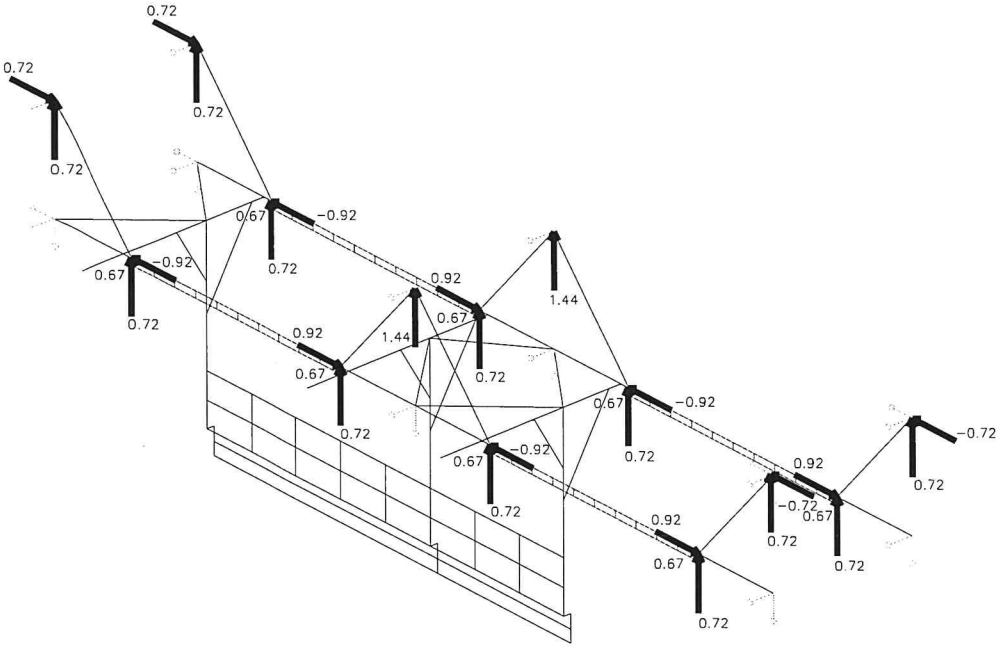
SPOJITE IMPULZY - stav 2 (SNIH)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil		-2.25	glob	0.00%			1.40
			-2.25	prum	1.00%			
7	sil		-2.25	glob	0.00%			1.40
			-2.25	prum	1.00%			
12	sil		-2.25	glob	0.00%			1.40
			-2.25	prum	1.00%			
17	sil		-2.25	glob	0.00%			1.40
			-2.25	prum	1.00%			



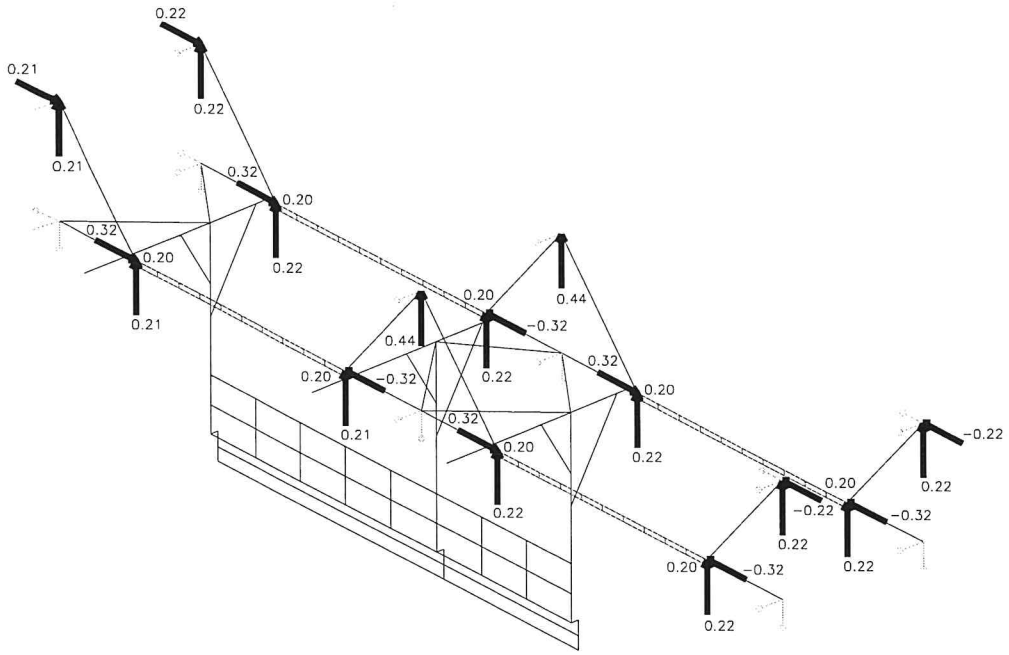
SPOJITE IMPULZY - stav 3 (VITR)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			0.67 glob	0.00%			1.20
				0.67 prum	1.00%			
7	sil			0.67 glob	0.00%			1.20
				0.67 prum	1.00%			
12	sil			0.67 glob	0.00%			1.20
				0.67 prum	1.00%			
17	sil			0.67 glob	0.00%			1.20
				0.67 prum	1.00%			



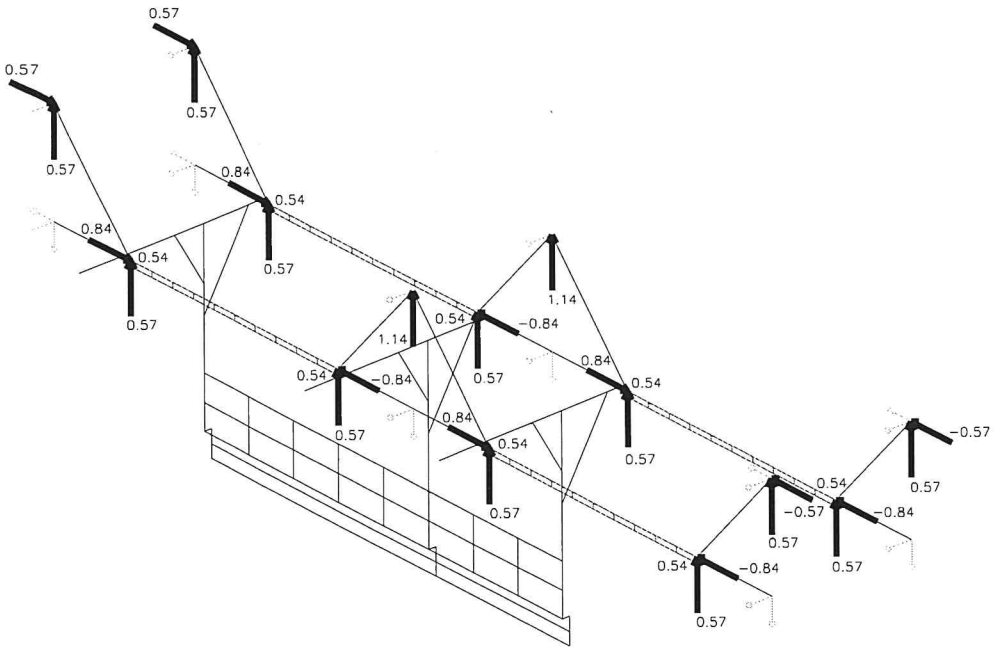
SPOJITE IMPULZY - stav 4 (VITR Y)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			0.20 glob	0.00%			1.20
				0.20 prum	1.00%			
7	sil			0.20 glob	0.00%			1.20
				0.20 prum	1.00%			
12	sil			0.20 glob	0.00%			1.20
				0.20 prum	1.00%			
17	sil			0.20 glob	0.00%			1.20
				0.20 prum	1.00%			



SPOJITE IMPULZY - stav 5 (VITR Y)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			0.54 glob	0.00%			1.20
				0.54 prum	1.00%			
7	sil			0.54 glob	0.00%			1.20
				0.54 prum	1.00%			
12	sil			0.54 glob	0.00%			1.20
				0.54 prum	1.00%			
17	sil			0.54 glob	0.00%			1.20
				0.54 prum	1.00%			



SPOJITE IMPULZY - stav 6 (TIHA)

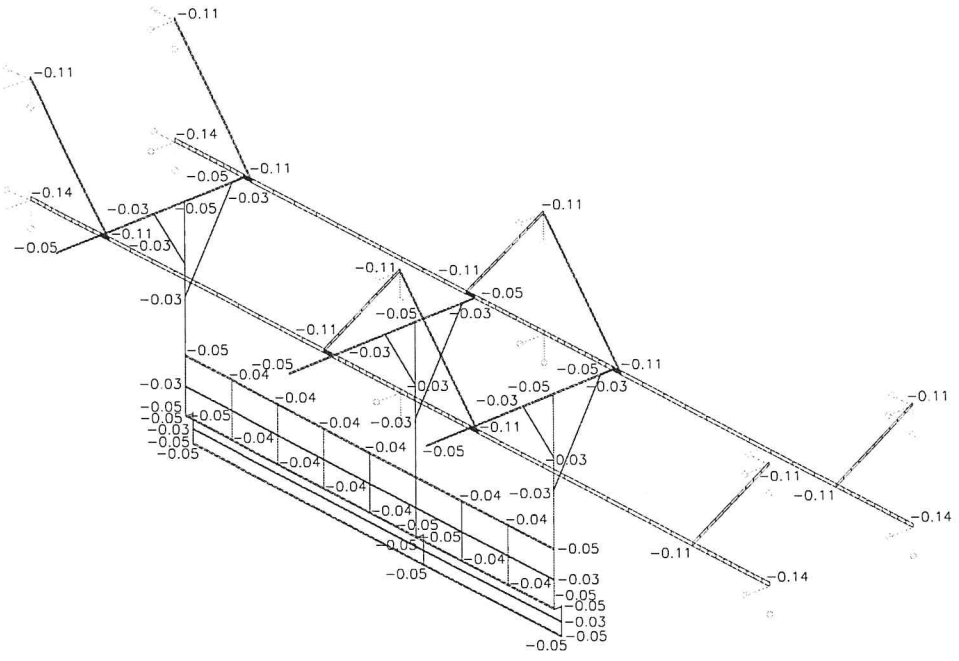
prut	typ	X	Y	Z	sourX	exY	exZ	koef
1	sil			-0.14 glob	0.00%			1.10

		-0.14 prum	1.00%	
2	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
3	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
4	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
5	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
6	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
7	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
8	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
9	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
10	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
11	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
12	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
13	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
14	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
15	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
16	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
17	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
18	sil	-0.14 glob	0.00%	1.10
		-0.14 prum	1.00%	
19	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
20	sil	-0.11 glob	0.00%	1.10
		-0.11 del	1.00%	
21	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
22	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
24	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
25	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
26	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
27	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
28	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
29	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
30	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
31	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	
32	sil	-0.05 glob	0.00%	1.10
		-0.05 del	1.00%	

33 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
34 sil	-0.03 glob	0.00%	1.10
	-0.03 del	1.00%	
35 sil	-0.03 glob	0.00%	1.10
	-0.03 del	1.00%	
36 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
37 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
39 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
40 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
41 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
42 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
43 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
44 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
45 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
46 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
47 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
48 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
49 sil	-0.03 glob	0.00%	1.10
	-0.03 del	1.00%	
50 sil	-0.03 glob	0.00%	1.10
	-0.03 del	1.00%	
51 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
52 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
54 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
55 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
56 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
57 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
58 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
59 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
60 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
61 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
62 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
63 sil	-0.05 glob	0.00%	1.10
	-0.05 del	1.00%	
64 sil	-0.03 glob	0.00%	1.10
	-0.03 del	1.00%	
65 sil	-0.03 glob	0.00%	1.10

	-0.03 del	1.00%	
66 sil	-0.14 glob	0.00%	1.10
	-0.14 prum	1.00%	
67 sil	-0.14 glob	0.00%	1.10
	-0.14 prum	1.00%	
68 sil	-0.14 glob	0.00%	1.10
	-0.14 prum	1.00%	
69 sil	-0.14 glob	0.00%	1.10
	-0.14 prum	1.00%	
70 sil	-0.14 glob	0.00%	1.10
	-0.14 prum	1.00%	
71 sil	-0.14 glob	0.00%	1.10
	-0.14 prum	1.00%	
72 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
73 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
74 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
75 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
76 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
77 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
78 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
79 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
80 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
81 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
82 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
83 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
84 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
85 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
86 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
87 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
88 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
89 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
90 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
91 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
92 sil	-0.03 glob	0.00%	1.10
	-0.03 prum	1.00%	
93 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
94 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	
95 sil	-0.05 glob	0.00%	1.10
	-0.05 prum	1.00%	

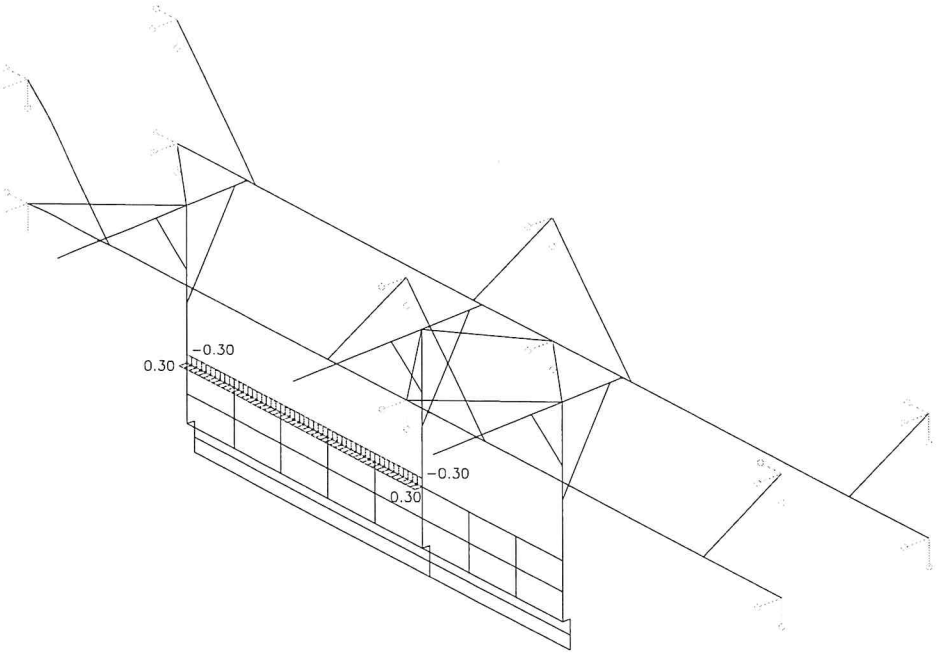
96	sil	-0.03	glob	0.00%	1.10
		-0.03	prum	1.00%	
97	sil	-0.03	glob	0.00%	1.10
		-0.03	prum	1.00%	
98	sil	-0.05	glob	0.00%	1.10
		-0.05	prum	1.00%	
99	sil	-0.05	glob	0.00%	1.10
		-0.05	prum	1.00%	
100	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
101	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
102	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
103	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
104	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
105	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
106	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
107	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
108	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
109	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
110	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	
111	sil	-0.04	glob	0.00%	1.10
		-0.04	del	1.00%	



SPOJITE IMPULZY - stav 8 (ZATIZENI NA HORNI MA)

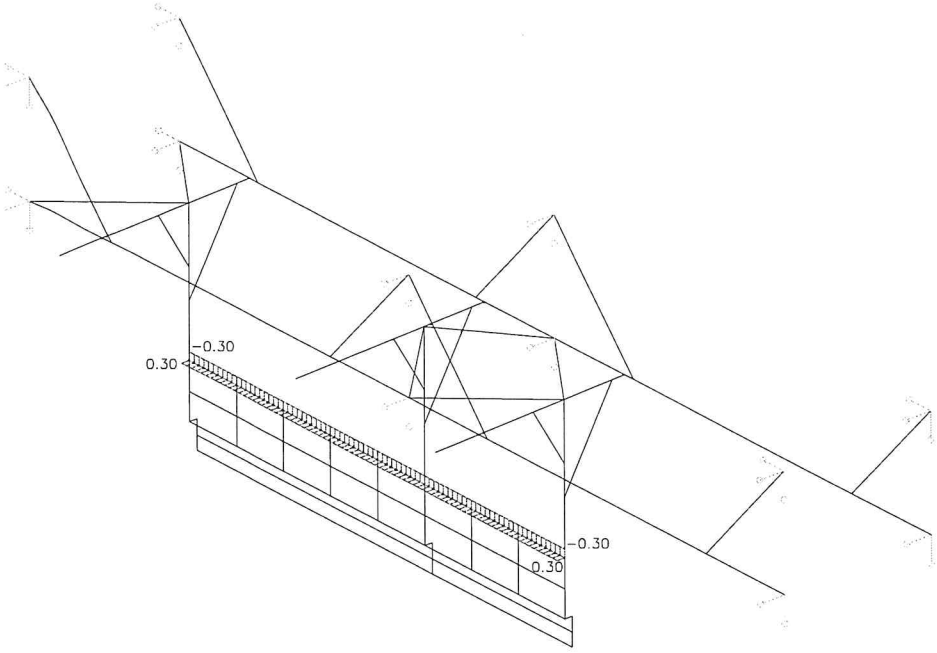
prut	typ	X	Y	Z	sourX	exY	exZ	koef
72	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
73	sil	0.30	-0.30	glob	0.00%			1.20

		0.30	-0.30	prum	1.00%	
74	sil	0.30	-0.30	glob	0.00%	1.20
		0.30	-0.30	prum	1.00%	
75	sil	0.30	-0.30	glob	0.00%	1.20
		0.30	-0.30	prum	1.00%	
76	sil	0.30	-0.30	glob	0.00%	1.20
		0.30	-0.30	prum	1.00%	



SPOJITE IMPULZY - stav 9 (ZATIZENI NA HORNI MA)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
72	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
73	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
74	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
75	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
76	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
87	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
88	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			
89	sil	0.30	-0.30	glob	0.00%			1.20
		0.30	-0.30	prum	1.00%			



K O M B I N A C E Z A T. S T A V U -
Kombinace c. 1

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 2

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 3

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 4

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 5

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0

```
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   6
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     8   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   7
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   8
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :    10   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   9
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :    11   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  10
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     8   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  11
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0
```

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 12

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0
zat. stav :	10	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 13

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0
zat. stav :	11	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 14

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0
zat. stav :	8	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 15

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0
zat. stav :	9	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 16

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0
zat. stav :	10	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 17

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0
zat. stav :	6	stale	koef :	1.00	vyber :	0
zat. stav :	7	stale	koef :	1.00	vyber :	0
zat. stav :	11	stale	koef :	1.00	vyber :	0

```
 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  18
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     8   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  19
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  20
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :    10   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  21
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :    11   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  22
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     8   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  23
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  24
-------------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
```

zat. stav : 10 stale koef : 1.00 vyber : 0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 25

zat. stav : 1 stale koef : 1.00 vyber : 0
zat. stav : 4 stale koef : 1.00 vyber : 0
zat. stav : 6 stale koef : 1.00 vyber : 0
zat. stav : 7 stale koef : 1.00 vyber : 0
zat. stav : 11 stale koef : 1.00 vyber : 0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 26

zat. stav : 6 stale koef : 1.00 vyber : 0
zat. stav : 12 stale koef : 1.00 vyber : 0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 27

zat. stav : 6 stale koef : 1.00 vyber : 0
zat. stav : 13 stale koef : 1.00 vyber : 0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 28

zat. stav : 6 stale koef : 1.00 vyber : 0
zat. stav : 14 stale koef : 1.00 vyber : 0

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
1	0.000	6	-3.2	0.0	-7.0	-8.2	0.0	-0.3
12	0.000	6	21.0	0.0	12.9	-9.0	0.0	-0.4
moment X								
6	0.000	19	-2.2	0.0	-3.0	-1.8	0.0	-0.3
3	0.000	9	-2.4	0.0	6.8	-9.2	0.0	-0.2
sila Z								
2	5.230	1	20.5	0.0	-13.3	-9.1	0.0	0.0
2	0.000	6	19.9	0.0	13.4	-9.7	0.0	-0.3
moment Y								
7	0.000	6	20.4	0.0	13.2	-9.8	0.0	0.0
2	2.615	6	19.9	0.0	0.4	8.3	0.0	-0.2
sila Y								
66	0.000	19	-2.5	0.0	-0.9	0.0	-0.9	0.0
67	0.000	7	-2.1	0.0	4.6	-7.5	1.0	-1.6
moment Z								
67	0.000	7	-2.1	0.0	4.6	-7.5	1.0	-1.6
67	0.000	4	-1.0	0.0	1.0	-1.5	0.0	0.0

Vyhledano pro
Prurez : 1
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
20	0.000	28	0.9	0.0	0.1	0.0	0.0	0.0

4	2.859	7	35.2	0.0	-0.1	0.0	0.0	0.0
moment X								
5	0.000	19	10.7	0.0	0.1	0.0	0.0	0.0
9	0.000	19	10.7	0.0	0.1	0.0	0.0	0.0
sila Z								
9	2.859	18	10.0	0.0	-0.1	0.0	0.0	0.0
19	0.000	7	32.0	0.0	0.1	0.0	0.0	0.0
moment Y								
4	2.859	6	35.1	0.0	-0.1	0.0	0.0	0.0
20	2.859	7	31.5	0.0	-0.1	0.0	0.0	0.0
sila Y								
15	0.000	12	27.3	0.0	0.1	0.0	0.0	0.0
5	0.000	19	10.7	0.0	0.1	0.0	0.0	0.0
moment Z								
15	2.859	12	27.5	0.0	-0.1	0.0	0.0	0.0
5	2.859	19	10.9	0.0	-0.1	0.0	0.0	0.0

Vyhledano pro
Prurez : 2
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
31	0.627	19	-2.9	0.0	4.7	2.4	0.5	0.7
47	0.000	15	0.9	-0.1	-2.1	2.4	-0.6	-0.7
moment X								
30	0.000	6	-0.4	-0.1	0.4	0.1	0.3	0.0
45	0.000	7	-0.2	0.1	0.5	0.1	-0.3	0.0
sila Z								
47	1.123	7	0.9	-0.1	-2.2	0.0	-0.6	-1.3
46	0.000	7	-2.8	-0.1	4.8	-0.6	-0.6	-0.3
moment Y								
46	0.000	7	-2.8	-0.1	4.8	-0.6	-0.6	-0.3
47	0.000	7	0.9	-0.1	-2.1	2.4	-0.6	-0.
sila Y								
47	0.000	7	0.9	-0.1	-2.1	2.4	-0.6	-0.7
31	0.000	7	-2.9	0.0	4.7	-0.6	0.5	0.3
moment Z								
47	1.123	7	0.9	-0.1	-2.2	0.0	-0.6	-1.3
32	1.123	19	0.8	0.0	-2.1	0.0	0.5	1.3

Vyhledano pro
Prurez : 3
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
43	0.000	7	-4.3	0.0	0.2	0.0	-2.7	1.8
42	0.600	11	2.4	-0.1	0.2	0.0	1.2	1.8
moment X								
24	0.000	6	0.9	-0.3	-0.4	0.0	0.3	-0.3
26	0.000	19	2.2	0.1	-0.1	0.3	1.1	0.0
sila Z								
22	0.000	7	0.3	0.0	-3.5	0.6	0.0	0.0
52	0.000	23	0.2	0.0	2.0	-0.4	0.0	0.0
moment Y								
41	0.000	7	2.1	-0.1	0.2	-0.4	1.3	-0.3

22	0.000	7	0.3	0.0	-3.5	0.6	0.0	0.0
sila Y								
28	0.000	19	-4.3	0.0	-0.1	0.0	-2.7	1.8
41	0.000	19	2.1	-0.1	0.2	-0.3	1.3	-0.3
moment Z								
28	1.100	19	-4.3	0.0	-0.1	-0.1	-2.7	-1.2
28	0.000	19	-4.3	0.0	-0.1	0.0	-2.7	1.8

Vyhledano pro
Prurez : 4
Sled kombinaci : 1..2

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
82	0.000	7	-3.1	0.1	0.6	-0.4	-0.3	0.3
98	0.000	4	0.8	0.0	0.2	-0.2	0.0	0.0
moment X								
76	0.000	7	-1.1	0.0	-0.1	0.1	0.4	-0.3
72	0.000	22	-0.3	0.2	0.7	-0.4	-0.8	0.3
sila Z								
76	1.130	6	-0.9	0.0	-0.6	-0.3	0.7	0.3
72	0.000	19	-0.3	0.2	0.7	-0.4	-0.7	0.3
moment Y								
82	0.000	19	-3.1	0.1	0.6	-0.4	-0.3	0.3
82	1.130	19	-3.1	0.1	0.6	0.3	-0.3	0.0
sila Y								
72	0.000	18	-0.3	0.2	0.7	-0.4	-0.8	0.3
76	1.130	19	-1.2	0.0	-0.6	-0.3	0.8	0.4
moment Z								
74	0.565	6	-1.7	0.0	0.0	0.0	0.0	-0.6
76	1.130	19	-1.2	0.0	-0.6	-0.3	0.8	0.4

Vyhledano pro
Prurez : 5
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
64	0.000	26	-0.4	0.0	0.0	0.0	0.0	0.0
50	1.254	7	7.8	0.0	0.0	0.0	0.0	0.0
moment X								
49	0.000	18	0.4	0.0	0.0	0.0	0.0	0.0
34	0.000	19	0.0	0.0	0.0	0.0	0.0	0.0
sila Z								
34	1.988	1	1.2	0.0	0.0	0.0	0.0	0.0
34	0.000	7	0.0	0.0	0.0	0.0	0.0	0.0
moment Y								
34	0.000	1	1.1	0.0	0.0	0.0	0.0	0.0
50	1.254	7	7.8	0.0	0.0	0.0	0.0	0.0
sila Y								
50	0.000	7	7.8	0.0	0.0	0.0	0.0	0.0
35	0.000	18	7.2	0.0	0.0	0.0	0.0	0.0
moment Z								
50	1.254	7	7.8	0.0	0.0	0.0	0.0	0.0
35	1.254	18	7.3	0.0	0.0	0.0	0.0	0.0

Vyhledano pro
Prurez : 6

Sled kombinaci : 1..28
Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
81	0.000	7	-0.4	0.0	-0.2	0.1	0.0	0.0
92	0.000	7	0.4	0.0	-0.3	0.2	0.0	0.0
moment X								
92	0.000	19	0.4	0.0	-0.3	0.2	0.0	0.0
77	0.000	6	0.0	0.0	0.4	-0.2	0.0	0.0
sila Z								
92	1.117	23	0.4	0.0	-0.3	-0.2	0.0	0.0
77	0.000	19	0.0	0.0	0.5	-0.3	0.0	0.0
moment Y								
77	0.000	19	0.0	0.0	0.5	-0.3	0.0	0.0
77	1.130	19	0.0	0.0	0.4	0.2	0.0	0.0
sila Y								
79	0.000	28	-0.1	0.0	0.1	0.0	0.0	0.0
79	0.565	28	-0.1	0.0	0.0	0.0	0.0	0.0
moment Z								
79	1.130	6	-0.3	0.0	0.0	0.0	0.0	0.0
77	0.000	26	0.0	0.0	0.2	-0.1	0.0	0.0

Vyhledano pro
Prurez : 7
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
110	0.000	7	-0.3	0.0	0.2	0.0	0.0	0.0
101	0.520	26	0.2	0.0	-0.4	0.0	0.0	0.0
moment X								
106	0.000	18	-0.3	0.0	-1.0	0.2	-0.1	0.0
109	0.000	7	-0.2	0.0	0.6	-0.1	0.0	0.0
sila Z								
100	0.000	19	-0.2	0.0	-1.3	0.4	-0.1	0.0
105	0.000	23	-0.2	0.0	0.8	-0.3	0.0	0.0
moment Y								
106	0.540	19	-0.2	0.0	-1.0	-0.4	-0.1	0.0
100	0.000	19	-0.2	0.0	-1.3	0.4	-0.1	0.0
sila Y								
107	0.000	6	-0.3	0.0	-0.5	0.1	-0.2	0.0
108	0.000	27	0.0	0.0	0.0	0.0	0.1	0.0
moment Z								
107	0.540	6	-0.3	0.0	-0.5	-0.2	-0.2	0.0
111	0.540	26	0.0	0.0	0.3	0.1	0.0	0.0

Vyhledano pro
Prurez : 8
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
96	0.000	4	-0.4	0.0	0.1	-0.1	0.0	0.0
96	0.000	7	4.4	0.0	0.1	-0.1	0.0	0.0

moment X								
97	0.000	7	2.6	0.0	0.0	0.0	0.0	0.0
96	0.000	18	4.1	0.0	0.1	-0.1	0.0	0.0
sila Z								
96	5.650	28	0.5	0.0	-0.2	-0.2	0.0	0.0
96	0.000	28	0.5	0.0	0.2	-0.2	0.0	0.0
moment Y								
96	0.000	28	0.5	0.0	0.2	-0.2	0.0	0.0
96	2.825	28	0.5	0.0	0.0	0.1	0.0	0.0
sila Y								
96	0.000	28	0.5	0.0	0.2	-0.2	0.0	0.0
96	2.825	28	0.5	0.0	0.0	0.1	0.0	0.0
moment Z								
96	2.825	28	0.5	0.0	0.0	0.1	0.0	0.0
96	0.000	28	0.5	0.0	0.2	-0.2	0.0	0.0

Vyhledano pro
Prurez : 9
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy		1.radek = minimim		2.radek = maximum				
sila X								
38	0.000	7	-0.1	-0.1	-0.4	0.0	-1.4	0.0
38	0.000	28	0.1	0.0	-0.6	0.0	-0.7	0.0
moment X								
53	0.000	7	0.0	-0.2	-0.3	0.0	-2.0	0.0
23	0.000	23	0.0	0.4	-0.3	0.0	3.5	0.0
sila Z								
38	0.000	28	0.1	0.0	-0.6	0.0	-0.7	0.0
53	0.000	1	0.0	0.0	-0.2	0.0	-0.2	0.0
moment Y								
23	0.150	18	0.0	0.3	-0.3	-0.1	3.2	0.5
38	0.000	28	0.1	0.0	-0.6	0.0	-0.7	0.0
sila Y								
53	0.000	23	0.0	-0.2	-0.3	0.0	-2.0	0.0
23	0.000	7	0.0	0.4	-0.3	0.0	3.5	0.0
moment Z								
38	0.150	6	-0.1	-0.2	-0.4	0.0	-1.9	-0.3
23	0.150	6	0.0	0.3	-0.3	-0.1	3.2	0.5

Vyhledano pro
Prurez : 10
Sled kombinaci : 1..28

Vypoctove reakce v podporach

Uzel	ZS	Px	Py	Pz	Mx	My	Mz
		kN	kN	kN	kN.m	kN.m	kN.m
1	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0
	6	0.6	0.0	0.0	0.0	0.0	0.0
	7	0.7	0.0	-0.2	0.0	0.0	0.0
	8	1.4	-0.8	0.0	0.0	0.0	0.0
	9	1.2	-0.9	0.1	0.0	0.0	0.0
	10	1.2	-0.7	0.0	0.0	0.0	0.0
	11	0.8	-0.7	0.1	0.0	0.0	0.0
	12	0.6	-0.4	0.0	0.0	0.0	0.0

	13	0.2	-0.1	0.0	0.0	0.0	0.0
	14	0.3	-0.1	0.0	0.0	0.0	0.0
4	1	0.0	0.0	-3.2	0.0	0.0	0.0
	2	0.0	0.0	-6.1	0.0	0.0	0.0
	3	0.0	0.0	1.6	0.0	0.0	0.0
	4	0.0	0.0	0.5	0.0	0.0	0.0
	5	0.0	0.0	1.3	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.4	0.0	0.0	0.0
	8	0.0	-0.8	0.1	0.0	0.0	0.0
	9	0.0	-1.5	0.3	0.0	0.0	0.0
	10	0.0	-0.7	0.1	0.0	0.0	0.0
	11	0.0	-1.4	0.3	0.0	0.0	0.0
	12	0.0	-0.9	0.2	0.0	0.0	0.0
	13	0.0	-0.1	0.0	0.0	0.0	0.0
	14	0.0	-0.1	0.0	0.0	0.0	0.0
5	1	-7.8	0.0	10.3	0.0	0.0	0.0
	2	-12.2	0.0	16.6	0.0	0.0	0.0
	3	2.4	0.0	-4.6	0.0	0.0	0.0
	4	0.7	0.0	-1.4	0.0	0.0	0.0
	5	1.9	0.0	-3.7	0.0	0.0	0.0
	6	-1.3	0.0	1.7	0.0	0.0	0.0
	7	-0.5	0.0	0.6	0.0	0.0	0.0
	8	-1.3	0.0	1.4	0.0	0.0	0.0
	9	-1.3	0.0	1.5	0.0	0.0	0.0
	10	-1.1	0.0	1.3	0.0	0.0	0.0
	11	-1.0	0.0	1.2	0.0	0.0	0.0
	12	-0.8	0.0	0.9	0.0	0.0	0.0
	13	-0.2	0.0	0.2	0.0	0.0	0.0
	14	-0.3	0.0	0.3	0.0	0.0	0.0
6	1	0.0	0.0	20.7	0.0	0.0	0.0
	2	0.0	0.0	33.4	0.0	0.0	0.0
	3	0.0	0.0	-9.2	0.0	0.0	0.0
	4	0.0	0.0	-2.8	0.0	0.0	0.0
	5	0.0	0.0	-7.4	0.0	0.0	0.0
	6	0.0	0.0	3.2	0.0	0.0	0.0
	7	0.0	0.0	0.6	0.0	0.0	0.0
	8	0.0	0.0	1.1	0.0	0.0	0.0
	9	0.0	0.0	2.5	0.0	0.0	0.0
	10	0.0	0.0	1.0	0.0	0.0	0.0
	11	0.0	0.0	2.5	0.0	0.0	0.0
	12	0.0	0.0	1.9	0.0	0.0	0.0
	13	0.0	0.0	0.2	0.0	0.0	0.0
	14	0.0	0.0	0.3	0.0	0.0	0.0
9	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
10	1	7.7	0.0	10.3	0.0	0.0	0.0
	2	12.2	0.0	16.6	0.0	0.0	0.0
	3	-2.4	0.0	-4.6	0.0	0.0	0.0

	4	-0.7	0.0	-1.4	0.0	0.0	0.0
	5	-1.9	0.0	-3.7	0.0	0.0	0.0
	6	0.7	0.0	1.0	0.0	0.0	0.0
	7	-0.2	0.0	-0.2	0.0	0.0	0.0
	8	-0.1	0.0	-0.2	0.0	0.0	0.0
	9	0.0	0.0	-0.1	0.0	0.0	0.0
	10	-0.1	0.0	-0.1	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
11	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0
	6	0.8	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	-0.3	-0.3	0.0	0.0	0.0	0.0
	9	-0.3	-0.3	0.0	0.0	0.0	0.0
	10	-0.3	-0.2	0.0	0.0	0.0	0.0
	11	0.0	-0.2	0.0	0.0	0.0	0.0
	12	-0.2	-0.1	0.0	0.0	0.0	0.0
	13	-0.2	0.0	0.0	0.0	0.0	0.0
	14	-0.1	0.0	0.0	0.0	0.0	0.0
14	1	0.0	0.0	-3.2	0.0	0.0	0.0
	2	0.0	0.0	-6.1	0.0	0.0	0.0
	3	0.0	0.0	1.6	0.0	0.0	0.0
	4	0.0	0.0	0.5	0.0	0.0	0.0
	5	0.0	0.0	1.3	0.0	0.0	0.0
	6	0.0	0.0	0.1	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	-0.2	0.0	0.0	0.0	0.0
	9	0.0	-0.5	0.0	0.0	0.0	0.0
	10	0.0	-0.2	0.0	0.0	0.0	0.0
	11	0.0	-0.5	0.0	0.0	0.0	0.0
	12	0.0	-0.3	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
15	1	-7.8	0.0	10.3	0.0	0.0	0.0
	2	-12.2	0.0	16.6	0.0	0.0	0.0
	3	2.4	0.0	-4.6	0.0	0.0	0.0
	4	0.7	0.0	-1.4	0.0	0.0	0.0
	5	1.9	0.0	-3.7	0.0	0.0	0.0
	6	-1.5	0.0	1.9	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.3	0.0	-0.3	0.0	0.0	0.0
	9	0.3	0.0	-0.4	0.0	0.0	0.0
	10	0.2	0.0	-0.3	0.0	0.0	0.0
	11	0.3	0.0	-0.3	0.0	0.0	0.0
	12	0.3	0.0	-0.4	0.0	0.0	0.0
	13	0.2	0.0	-0.2	0.0	0.0	0.0
	14	0.0	0.0	-0.1	0.0	0.0	0.0
16	1	0.0	0.0	20.7	0.0	0.0	0.0
	2	0.0	0.0	33.4	0.0	0.0	0.0
	3	0.0	0.0	-9.2	0.0	0.0	0.0
	4	0.0	0.0	-2.8	0.0	0.0	0.0
	5	0.0	0.0	-7.4	0.0	0.0	0.0
	6	0.0	0.0	3.6	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	-0.4	0.0	0.0	0.0

	9	0.0	0.0	-0.7	0.0	0.0	0.0
	10	0.0	0.0	-0.3	0.0	0.0	0.0
	11	0.0	0.0	-0.7	0.0	0.0	0.0
	12	0.0	0.0	-0.8	0.0	0.0	0.0
	13	0.0	0.0	-0.2	0.0	0.0	0.0
	14	0.0	0.0	-0.1	0.0	0.0	0.0
19	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
20	1	7.7	0.0	10.3	0.0	0.0	0.0
	2	12.2	0.0	16.6	0.0	0.0	0.0
	3	-2.4	0.0	-4.6	0.0	0.0	0.0
	4	-0.7	0.0	-1.4	0.0	0.0	0.0
	5	-1.9	0.0	-3.7	0.0	0.0	0.0
	6	0.7	0.0	1.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0

Normove deformace v uzlech

Uzel	Kombi	X	Y	Z	Rx	Ry	Rz
		mm	mm	mm	rad	rad	rad
extremy		1.radek = minimim		2.radek = maximum			
posuv X							
48	19	-7.4	30.2	26.5	-0.0304	-0.0010	-0.0083
34	19	7.4	28.9	27.8	-0.0308	0.0007	0.0082
posuv Y							
48	1	0.5	-0.8	6.9	-0.0079	-0.0030	0.0002
21	19	1.6	178.7	-12.2	0.0470	-0.0012	0.0002
posuv Z							
46	19	4.5	31.3	-24.4	-0.0015	0.0006	-0.0004
34	7	7.3	28.8	28.0	-0.0307	0.0027	0.0081
rot X							
1	19	0.0	0.0	0.0	-0.0310	-0.0004	0.0224
52	26	-0.2	133.9	-14.3	0.0566	-0.0001	-0.0014
rot Y							
3	6	0.2	22.1	-1.5	-0.0213	-0.0042	-0.0055
2	1	0.0	-0.3	-0.4	-0.0081	0.0040	-0.0002
rot Z							
6	19	-1.1	0.0	0.0	-0.0058	-0.0009	-0.0236
5	19	0.0	0.0	0.0	-0.0090	0.0004	0.0269

Vyhledano pro
Sled uzlu : 1..80
Sled kombinaci : 1..28

POSOUZENÍ PRŮŘEZŮ

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min prut :			67	prurez :	1	rez :	0.00 [m]	
1	10.00	7	-246.0*		0.0		246.0*	
sigma max prut :			67	prurez :	1	rez :	0.00 [m]	
1	20.00	7	240.3*		0.0		240.3*	
tau prut :			2	prurez :	1	rez :	0.00 [m]	
1	5.50	6	8.7		20.3		20.3	
sigma sr. prut :			67	prurez :	1	rez :	0.00 [m]	
1	10.00	7	-246.0*		0.0		246.0*	

vyuziti prurezu : 117.2 % **I 140 NEVYHOVI !!!**

Vyhledano pro
Prurez : 1
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min prut :			5	prurez :	2	rez :	2.86 [m]	
1	1.00	26	0.1		1.3		1.3	
sigma max prut :			5	prurez :	2	rez :	2.86 [m]	
1	2.00	7	26.8		0.0		26.8	
tau prut :			9	prurez :	2	rez :	2.86 [m]	
1	1.00	19	7.9		-14.0		14.0	
sigma sr. prut :			5	prurez :	2	rez :	2.86 [m]	
1	2.00	7	26.8		0.0		26.8	

vyuziti prurezu : 12.7 % **2L 60x6** VYHOVI !

Vyhledano pro
Prurez : 2
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min prut :			46	prurez :	3	rez :	0.63 [m]	
1	2.00	19	-312.7*		0.0		312.7*	
sigma max prut :			47	prurez :	3	rez :	0.00 [m]	
1	4.00	19	306.1*		0.0		306.1*	
tau prut :			63	prurez :	3	rez :	0.90 [m]	
1	4.00	28	0.0		0.0		0.0	
sigma sr. prut :			46	prurez :	3	rez :	0.63 [m]	
1	2.00	19	-312.7*		0.0		312.7*	

vyuziti prurezu : 148.9 % **TPR 80x40x3 NEVYHOVI !!!**

Vyhledano pro
Prurez : 3
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min prut :			28	prurez :	4	rez :	0.00 [m]	

```
   1  4.00     7    -208.0                0.0              208.0
sigma max prut  :     27   prurez  :     4   rez  :    0.60 [m]
   1  2.00     7     202.2                0.0              202.2
tau       prut  :     58   prurez  :     4   rez  :    1.10 [m]
   1  4.00    28      24.8                0.0               24.8
sigma sr. prut  :     28   prurez  :     4   rez  :    0.00 [m]
   1  4.00     7    -208.0                0.0              208.0

  vyuziti prurezu :   99.1 %    TPR 80x40x3 VYHOVI !
Vyhledano pro
Prurez : 4
Sled kombinaci : 1..28
Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa               Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     82   prurez  :     5   rez  :    0.00 [m]
   1  4.00    19     -90.9                0.0               90.9
sigma max prut  :     72   prurez  :     5   rez  :    0.00 [m]
   1  2.00     7      62.3                0.0               62.3
tau       prut  :     99   prurez  :     5   rez  :    3.35 [m]
   1  4.00    28      -8.4                0.0                8.4
sigma sr. prut  :     82   prurez  :     5   rez  :    0.00 [m]
   1  4.00    19     -90.9                0.0               90.9

  vyuziti prurezu :   43.3 %    TPR 80x40x3 VYHOVI !
Vyhledano pro
Prurez : 5
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa               Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     64   prurez  :     6   rez  :    0.00 [m]
   1  1.00    26      -2.3                0.0                2.3
sigma max prut  :     50   prurez  :     6   rez  :    1.25 [m]
   1  4.00     7      17.6                0.0               17.6
tau       prut  :     65   prurez  :     6   rez  :    1.25 [m]
   1  4.00    28       4.7                0.0                4.7
sigma sr. prut  :     50   prurez  :     6   rez  :    1.25 [m]
   1  4.00     7      17.6                0.0               17.6

  vyuziti prurezu :    8.4 %    TPR 40x3 VYHOVI !
Vyhledano pro
Prurez : 6
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa               Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     77   prurez  :     7   rez  :    0.00 [m]
   1  4.00    19     -55.0                0.0               55.0
sigma max prut  :     77   prurez  :     7   rez  :    0.00 [m]
   1  2.00    19      55.2                0.0               55.2
tau       prut  :     92   prurez  :     7   rez  :    1.12 [m]
   1  4.00    28     -15.8                0.0               15.8
sigma sr. prut  :     77   prurez  :     7   rez  :    0.00 [m]
   1  2.00    19      55.2                0.0               55.2
```

```
  vyuziti prurezu :   26.3 %     TPR 40x3 VYHOVI !
Vyhledano pro
Prurez : 7
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :   100   prurez  :    8   rez  :   0.00 [m]
   1  1.00   19     -81.6               0.0             81.6
sigma max prut  :   100   prurez  :    8   rez  :   0.00 [m]
   1  3.00   19      80.1               0.0             80.1
tau       prut  :   111   prurez  :    8   rez  :   0.54 [m]
   1  4.00   28      14.2               0.0             14.2
sigma sr. prut  :   100   prurez  :    8   rez  :   0.00 [m]
   1  1.00   19     -81.6               0.0             81.6

  vyuziti prurezu :   38.9 %     TPR 50x30x3 VYHOVI !
Vyhledano pro
Prurez : 8
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :    96   prurez  :    9   rez  :   0.00 [m]
   1  4.00   28     -52.5               0.0             52.5
sigma max prut  :    96   prurez  :    9   rez  :   0.00 [m]
   1  2.00   28      54.7               0.0             54.7
tau       prut  :    97   prurez  :    9   rez  :   3.35 [m]
   1  4.00   28      -9.3               0.0              9.3
sigma sr. prut  :    96   prurez  :    9   rez  :   0.00 [m]
   1  2.00   28      54.7               0.0             54.7

  vyuziti prurezu :   26.0 %     TPR 40x3 VYHOVI !
Vyhledano pro
Prurez : 9
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :    23   prurez  :   10   rez  :   0.15 [m]
   1  4.00    6     -51.2               0.0             51.2
sigma max prut  :    23   prurez  :   10   rez  :   0.15 [m]
   1  2.00    6      51.3               0.0             51.3
tau       prut  :    53   prurez  :   10   rez  :   0.15 [m]
   1  4.00   28       3.1               0.0              3.1
sigma sr. prut  :    23   prurez  :   10   rez  :   0.15 [m]
   1  2.00    6      51.3               0.0             51.3

  vyuziti prurezu :   24.4 %     TPR 80x40x3 VYHOVI !
Vyhledano pro
Prurez : 10
Sled kombinaci : 1..28
```

ZÁVĚR

Ve statickém výpočtu bylo zjištěno, že průřez 1 - vaznice a průřez 3 - tenkostěnný profil obdélníkového průřezu, na kterém je závěs zábrany, na přitížení boční zábranou a třmenem nevyhoví. Byla navržena úprava - doplnění příhradovým ztužidlem mezi vaznicemi v prostoru úchytů boční zábrany a otočení průřezu 3 z polohy ležaté na stojitou. Těmito úpravami se docílí, že stávající profily vaznic I140 a profily navržené konstrukce boční zábrany vyhoví.

NÁVRH ÚPRAV OK

ZATÍŽENÍ

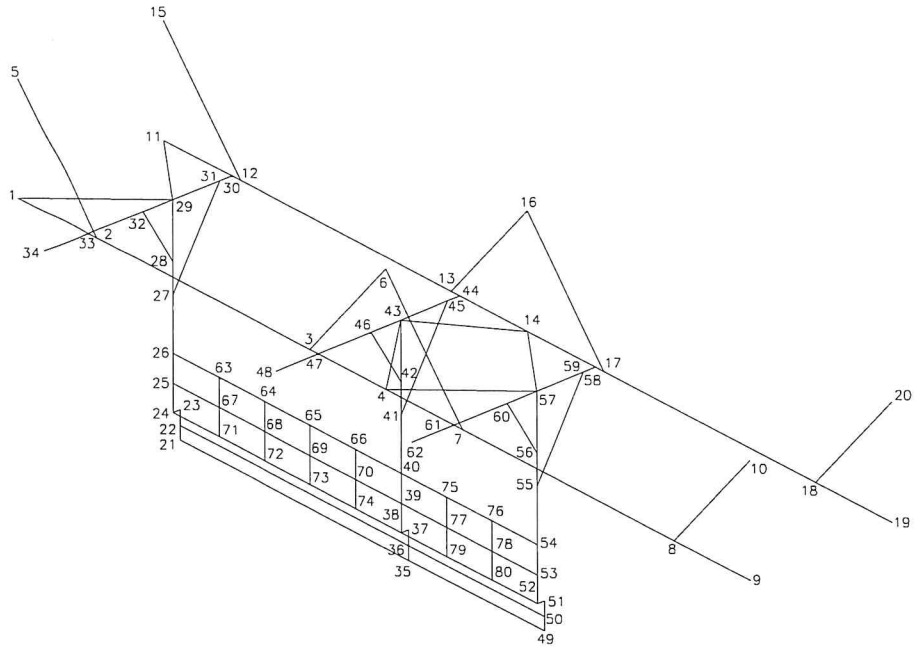
viz. statický výpočet boční zábrany a vaznic.

TVAR KONSTRUKCE

U Z L Y

uzel	X[m]	Y[m]	Z[m]	typ
1	0.0000	0.0000	0.0000	
2	1.8850	0.0000	0.0000	
3	7.1150	0.0000	0.0000	
4	9.0000	0.0000	0.0000	
5	0.0000	0.0000	2.1500	
6	9.0000	0.0000	2.1500	
7	10.8850	0.0000	0.0000	
8	16.1150	0.0000	0.0000	
9	18.0000	0.0000	0.0000	
10	18.0000	0.0000	2.1500	
11	0.0000	3.0000	0.0660	
12	1.8850	3.0000	0.0660	
13	7.1150	3.0000	0.0660	
14	9.0000	3.0000	0.0660	
15	0.0000	3.0000	2.2160	
16	9.0000	3.0000	2.2160	
17	10.8850	3.0000	0.0660	
18	16.1150	3.0000	0.0660	
19	18.0000	3.0000	0.0660	
20	18.0000	3.0000	2.2160	
21	1.6750	1.9000	-4.3020	
22	1.6750	1.9000	-4.0420	
23	1.6750	1.9000	-3.7620	
24	1.6750	1.7500	-3.7620	
25	1.6750	1.7500	-3.2420	
26	1.6750	1.7500	-2.7020	
27	1.6750	1.7500	-1.6620	
28	1.6750	1.7500	-1.0620	
29	1.6750	1.7500	0.0380	
30	1.6750	3.0000	0.0660	
31	1.6750	2.7440	0.0600	
32	1.6750	1.1230	0.0240	
33	1.6750	0.0000	0.0000	
34	1.6750	-0.9000	-0.0200	
35	7.3250	1.9000	-4.3020	
36	7.3250	1.9000	-4.0420	
37	7.3250	1.9000	-3.7620	
38	7.3250	1.7500	-3.7620	

39	7.3250	1.7500	-3.2420
40	7.3250	1.7500	-2.7020
41	7.3250	1.7500	-1.6620
42	7.3250	1.7500	-1.0620
43	7.3250	1.7500	0.0380
44	7.3250	3.0000	0.0660
45	7.3250	2.7440	0.0600
46	7.3250	1.1230	0.0240
47	7.3250	0.0000	0.0000
48	7.3250	-0.9000	-0.0200
49	10.6750	1.9000	-4.3020
50	10.6750	1.9000	-4.0420
51	10.6750	1.9000	-3.7620
52	10.6750	1.7500	-3.7620
53	10.6750	1.7500	-3.2420
54	10.6750	1.7500	-2.7020
55	10.6750	1.7500	-1.6620
56	10.6750	1.7500	-1.0620
57	10.6750	1.7500	0.0380
58	10.6750	3.0000	0.0660
59	10.6750	2.7440	0.0600
60	10.6750	1.1230	0.0240
61	10.6750	0.0000	0.0000
62	10.6750	-0.9000	-0.0200
63	2.8050	1.7500	-2.7020
64	3.9350	1.7500	-2.7020
65	5.0650	1.7500	-2.7020
66	6.1950	1.7500	-2.7020
67	2.8050	1.7500	-3.2420
68	3.9350	1.7500	-3.2420
69	5.0650	1.7500	-3.2420
70	6.1950	1.7500	-3.2420
71	2.8050	1.7500	-3.7620
72	3.9350	1.7500	-3.7620
73	5.0650	1.7500	-3.7620
74	6.1950	1.7500	-3.7620
75	8.4417	1.7500	-2.7020
76	9.5583	1.7500	-2.7020
77	8.4417	1.7500	-3.2420
78	9.5583	1.7500	-3.2420
79	8.4417	1.7500	-3.7620
80	9.5583	1.7500	-3.7620

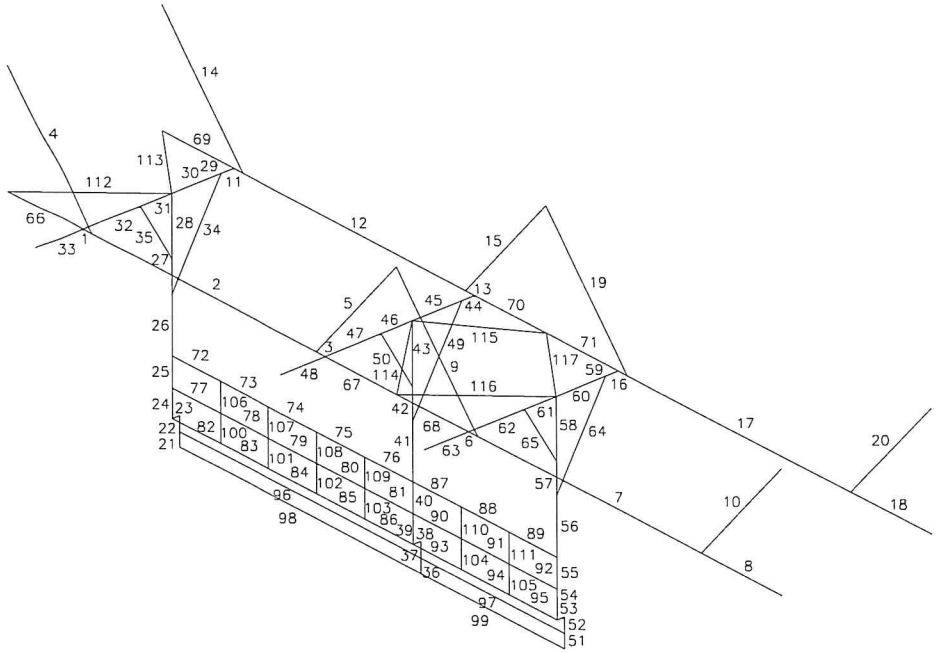


P R U T Y

prut	zac	konec	delka[m]	prurez	typ
1	33	2	0.2100	1	
2	2	3	5.2300	1	
3	3	47	0.2100	1	
4	2	5	2.8593	2	
5	3	6	2.8593	2	
6	61	7	0.2100	1	
7	7	8	5.2300	1	
8	8	9	1.8850	1	
9	7	6	2.8593	2	
10	8	10	2.8593	2	
11	30	12	0.2100	1	
12	12	13	5.2300	1	
13	13	44	0.2100	1	
14	12	15	2.8593	2	
15	13	16	2.8593	2	
16	58	17	0.2100	1	
17	17	18	5.2300	1	
18	18	19	1.8850	1	
19	17	16	2.8593	2	
20	18	20	2.8593	2	
21	21	22	0.2600	4	
22	22	23	0.2800	4	
23	23	24	0.1500	10	
24	24	25	0.5200	4	
25	25	26	0.5400	4	
26	26	27	1.0400	4	
27	27	28	0.6000	4	
28	28	29	1.1000	4	
29	30	31	0.2561	3	
30	31	29	0.9942	3	
31	29	32	0.6272	3	
32	32	33	1.1233	3	
33	33	34	0.9002	3	
34	27	31	1.9883	6	
35	28	32	1.2540	6	
36	35	36	0.2600	4	

37	36	37	0.2800	4
38	37	38	0.1500	10
39	38	39	0.5200	4
40	39	40	0.5400	4
41	40	41	1.0400	4
42	41	42	0.6000	4
43	42	43	1.1000	4
44	44	45	0.2561	3
45	45	43	0.9942	3
46	43	46	0.6272	3
47	46	47	1.1233	3
48	47	48	0.9002	3
49	41	45	1.9883	6
50	42	46	1.2540	6
51	49	50	0.2600	4
52	50	51	0.2800	4
53	51	52	0.1500	10
54	52	53	0.5200	4
55	53	54	0.5400	4
56	54	55	1.0400	4
57	55	56	0.6000	4
58	56	57	1.1000	4
59	58	59	0.2561	3
60	59	57	0.9942	3
61	57	60	0.6272	3
62	60	61	1.1233	3
63	61	62	0.9002	3
64	55	59	1.9883	6
65	56	60	1.2540	6
66	1	33	1.6750	1
67	47	4	1.6750	1
68	4	61	1.6750	1
69	11	30	1.6750	1
70	44	14	1.6750	1
71	14	58	1.6750	1
72	26	63	1.1300	5
73	63	64	1.1300	5
74	64	65	1.1300	5
75	65	66	1.1300	5
76	66	40	1.1300	5
77	25	67	1.1300	7
78	67	68	1.1300	7
79	68	69	1.1300	7
80	69	70	1.1300	7
81	70	39	1.1300	7
82	24	71	1.1300	5
83	71	72	1.1300	5
84	72	73	1.1300	5
85	73	74	1.1300	5
86	74	38	1.1300	5
87	40	75	1.1167	5
88	75	76	1.1167	5
89	76	54	1.1167	5
90	39	77	1.1167	7
91	77	78	1.1167	7
92	78	53	1.1167	7
93	38	79	1.1167	5
94	79	80	1.1167	5
95	80	52	1.1167	5
96	22	36	5.6500	9
97	36	50	3.3500	9

98	21	35	5.6500	5
99	35	49	3.3500	5
100	71	67	0.5200	8
101	72	68	0.5200	8
102	73	69	0.5200	8
103	74	70	0.5200	8
104	79	77	0.5200	8
105	80	78	0.5200	8
106	67	63	0.5400	8
107	68	64	0.5400	8
108	69	65	0.5400	8
109	70	66	0.5400	8
110	77	75	0.5400	8
111	78	76	0.5400	8
112	1	29	2.4227	11
113	29	11	2.0902	11
114	4	43	2.4227	11
115	43	14	2.0902	11
116	4	57	2.4227	11
117	57	14	2.0902	11



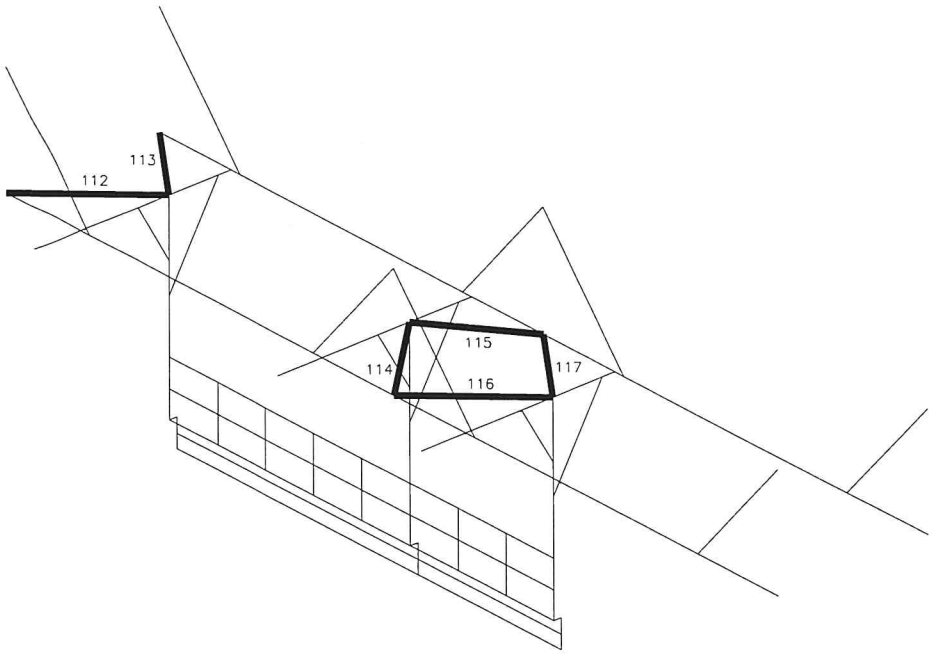
P R U R E Z Y - charakteristiky

průřez 1 - 10 viz. statický výpočet boční zábrany a vaznic.

PRUREZ c. 11 (Lrov)
plocha A[m2] = 6.91017E-04
mom.setr. Iy[m4] = 9.40808E-08
mom.setr. Iw[m8] = 0.00000E+00
Prvek 1 L 60.6
poloha teziste Y = 42.43

rotace prurezu Rx[st] = 45.00
mom.setr. Ix[m4] = 8.43000E-09
mom.setr. Iz[m4] = 3.59802E-07

ocel 37
Z = -21.07



Typicky prut : XYZMxMyMz

```
prut     4: zac kl.: MyMz
prut     5: zac kl.: MyMz
prut     9: zac kl.: MyMz kon kl.: MyMz
prut    10: zac kl.: MyMz
prut    14: zac kl.: MyMz
prut    15: zac kl.: MyMz
prut    19: zac kl.: MyMz kon kl.: MyMz
prut    20: zac kl.: MyMz
prut    29: zac kl.: MyMz
prut    34: zac kl.: MyMz kon kl.: MyMz
prut    35: zac kl.: MyMz kon kl.: MyMz
prut    44: zac kl.: MyMz
prut    49: zac kl.: MyMz kon kl.: MyMz
prut    50: zac kl.: MyMz kon kl.: MyMz
prut    59: zac kl.: MyMz
prut    64: zac kl.: MyMz kon kl.: MyMz
prut    65: zac kl.: MyMz kon kl.: MyMz
prut    68: zac kl.: MyMz
prut    71: zac kl.: MyMz
prut   112: zac kl.: MyMz kon kl.: MyMz
prut   113: zac kl.: MyMz kon kl.: MyMz
prut   114: zac kl.: MyMz kon kl.: MyMz
prut   115: zac kl.: MyMz kon kl.: MyMz
prut   116: zac kl.: MyMz kon kl.: MyMz
prut   117: zac kl.: MyMz kon kl.: MyMz
```

P O D P O R Y

1	1	X Y Z
2	4	Y Z
3	5	X Y Z
4	6	Y Z
5	9	Y Z
6	10	X Y Z

7	11	X Y Z
8	14	Y Z
9	15	X Y Z
10	16	Y Z
11	19	Y Z
12	20	X Y Z

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
1	0.000	6	-3.4	0.0	-7.1	-8.3	0.0	0.0
12	0.000	6	21.2	0.0	12.9	-9.0	0.0	0.0
moment X								
67	0.000	10	-2.3	0.0	3.8	-6.1	0.0	0.0
66	0.000	7	-3.3	0.0	-4.7	0.0	0.0	0.0
sila Z								
2	5.230	1	20.5	0.0	-13.3	-9.1	0.0	0.0
2	0.000	6	19.7	0.0	13.4	-9.8	0.0	0.0
moment Y								
7	0.000	6	20.3	0.0	13.2	-9.9	0.0	0.0
2	2.615	6	19.7	0.0	0.4	8.3	0.0	0.0
sila Y								
66	0.000	19	-3.2	0.0	-0.9	0.0	0.0	0.0
67	0.000	18	-2.2	0.0	0.7	-0.9	0.0	0.0
moment Z								
67	0.000	18	-2.2	0.0	0.7	-0.9	0.0	0.0
68	1.675	7	-2.4	0.0	-5.1	-8.4	0.0	0.0

Vyhledano pro
Prurez : 1
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
10	0.000	28	0.9	0.0	0.1	0.0	0.0	0.0
4	2.859	7	35.3	0.0	-0.1	0.0	0.0	0.0
moment X								
19	0.000	19	8.4	0.0	0.1	0.0	0.0	0.0
9	0.000	25	14.2	0.0	0.1	0.0	0.0	0.0
sila Z								
9	2.859	18	10.0	0.0	-0.1	0.0	0.0	0.0
10	0.000	1	30.9	0.0	0.1	0.0	0.0	0.0
moment Y								
4	2.859	6	35.2	0.0	-0.1	0.0	0.0	0.0
19	2.859	7	32.3	0.0	-0.1	0.0	0.0	0.0
sila Y								
15	0.000	19	8.4	0.0	0.1	0.0	0.0	0.0
5	0.000	25	14.2	0.0	0.1	0.0	0.0	0.0
moment Z								
15	2.859	19	8.6	0.0	-0.1	0.0	0.0	0.0
5	2.859	25	14.4	0.0	-0.1	0.0	0.0	0.0

Vyhledano pro
Prurez : 2
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
46	0.627	7	-3.1	0.0	3.3	2.5	0.0	0.0
45	0.000	19	0.8	0.0	1.5	0.0	0.0	0.0
moment X								
59	0.000	6	0.0	0.0	0.7	0.0	0.0	0.0
44	0.000	1	0.0	0.0	0.9	0.0	0.0	0.0
sila Z								
47	1.123	7	0.0	0.0	-2.3	0.0	0.0	0.0
46	0.000	7	-3.1	0.0	3.4	0.5	0.0	0.0
moment Y								
46	0.000	1	-0.9	0.0	1.1	0.0	0.0	0.0
47	0.000	7	0.0	0.0	-2.3	2.5	0.0	0.0
sila Y								
44	0.000	18	0.0	0.0	0.5	0.0	0.0	0.0
29	0.000	19	0.0	0.0	0.6	0.0	0.0	0.0
moment Z								
45	0.994	6	0.3	0.0	0.8	1.0	0.0	0.0
30	0.994	7	0.5	0.0	1.3	1.4	0.0	0.0

Vyhledano pro
Prurez : 3
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
28	0.000	18	-1.9	0.0	0.0	0.0	-2.0	1.3
42	0.600	11	3.6	0.0	0.0	0.0	0.7	1.6
moment X								
24	0.000	6	0.9	-0.2	-0.4	0.0	0.3	-0.2
26	0.000	19	2.2	0.1	0.0	0.0	1.1	0.0
sila Z								
22	0.000	7	0.3	0.0	-3.0	0.5	0.0	0.0
37	0.000	6	0.4	0.0	1.9	-0.4	0.0	0.0
moment Y								
37	0.000	6	0.4	0.0	1.9	-0.4	0.0	0.0
22	0.000	7	0.3	0.0	-3.0	0.5	0.0	0.0
sila Y								
43	0.000	11	-1.9	0.0	0.0	0.0	-2.5	1.6
41	0.000	19	2.1	0.0	0.0	0.0	1.5	-0.4
moment Z								
43	1.100	11	-1.8	0.0	0.0	0.1	-2.5	-1.1
43	0.000	11	-1.9	0.0	0.0	0.0	-2.5	1.6

Vyhledano pro
Prurez : 4
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
82	0.000	7	-2.7	0.1	0.6	-0.4	-0.3	0.3
98	0.000	28	0.8	0.0	0.2	-0.2	0.0	0.0
moment X								
76	0.000	7	-1.5	-0.1	-0.1	0.1	0.4	-0.2

72	0.000	6	-0.6	0.2	0.7	-0.3	-0.7	0.3
sila Z								
76	1.130	6	-1.4	0.0	-0.6	-0.3	0.8	0.4
72	0.000	19	-0.7	0.1	0.7	-0.4	-0.7	0.3
moment Y								
82	0.000	19	-2.6	0.1	0.6	-0.4	-0.3	0.3
82	1.130	19	-2.6	0.1	0.6	0.3	-0.3	0.0
sila Y								
72	0.000	18	-0.7	0.2	0.7	-0.3	-0.7	0.3
76	1.130	19	-1.7	-0.1	-0.6	-0.3	0.8	0.5
moment Z								
74	0.565	6	-2.1	0.0	0.0	0.0	0.0	-0.6
76	1.130	19	-1.7	-0.1	-0.6	-0.3	0.8	0.5

Vyhledano pro
Prurez : 5
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
49	0.000	19	-1.6	0.0	0.0	0.0	0.0	0.0
50	1.254	7	6.4	0.0	0.0	0.0	0.0	0.0
moment X								
50	0.000	6	4.5	0.0	0.0	0.0	0.0	0.0
35	0.000	7	5.7	0.0	0.0	0.0	0.0	0.0
sila Z								
64	1.988	1	0.8	0.0	0.0	0.0	0.0	0.0
49	0.000	7	-1.5	0.0	0.0	0.0	0.0	0.0
moment Y								
65	1.254	6	2.1	0.0	0.0	0.0	0.0	0.0
49	1.988	7	-1.5	0.0	0.0	0.0	0.0	0.0
sila Y								
65	0.000	1	1.4	0.0	0.0	0.0	0.0	0.0
35	0.000	18	5.5	0.0	0.0	0.0	0.0	0.0
moment Z								
65	1.254	1	1.4	0.0	0.0	0.0	0.0	0.0
64	1.988	9	-0.9	0.0	0.0	0.0	0.0	0.0

Vyhledano pro
Prurez : 6
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
80	0.000	9	-0.2	0.0	-0.1	0.0	0.0	0.0
77	0.000	19	0.3	0.0	0.5	-0.3	0.0	0.0
moment X								
81	0.000	7	-0.1	0.0	-0.3	0.1	0.0	0.0
77	0.000	6	0.3	0.0	0.5	-0.3	0.0	0.0
sila Z								
92	1.117	23	0.1	0.0	-0.3	-0.2	0.0	0.0
77	0.000	19	0.3	0.0	0.5	-0.3	0.0	0.0
moment Y								
77	0.000	19	0.3	0.0	0.5	-0.3	0.0	0.0
77	1.130	19	0.3	0.0	0.4	0.2	0.0	0.0
sila Y								
79	0.000	28	0.0	0.0	0.1	0.0	0.0	0.0

79	0.565	28	0.0	0.0	0.0	0.0	0.0	0.0
moment Z								
79	1.130	6	0.0	0.0	0.0	0.0	0.0	0.0
77	0.000	26	0.0	0.0	0.2	-0.1	0.0	0.0

Vyhledano pro
Prurez : 7
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
108	0.000	7	-0.3	0.0	0.0	0.0	-0.2	0.0
101	0.520	26	0.2	0.0	-0.4	0.0	0.0	0.0
moment X								
106	0.000	6	-0.3	0.0	-1.0	0.2	-0.1	0.0
109	0.000	15	-0.2	0.0	0.6	-0.1	0.0	0.0
sila Z								
100	0.000	19	-0.2	0.0	-1.3	0.4	-0.1	0.0
105	0.000	23	-0.2	0.0	0.8	-0.3	0.0	0.0
moment Y								
106	0.540	19	-0.3	0.0	-1.0	-0.4	-0.1	0.0
100	0.000	19	-0.2	0.0	-1.3	0.4	-0.1	0.0
sila Y								
107	0.000	6	-0.3	0.0	-0.5	0.1	-0.2	0.0
108	0.000	27	0.0	0.0	0.0	0.0	0.1	0.0
moment Z								
107	0.540	6	-0.3	0.0	-0.5	-0.2	-0.2	0.0
111	0.540	26	0.0	0.0	0.3	0.1	0.0	0.0

Vyhledano pro
Prurez : 8
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
96	0.000	4	-0.4	0.0	0.1	-0.1	0.0	0.0
96	0.000	7	3.8	0.0	0.1	-0.1	0.0	0.0
moment X								
97	0.000	7	2.0	0.0	0.0	0.0	0.0	0.0
96	0.000	6	3.4	0.0	0.1	-0.1	0.0	0.0
sila Z								
96	5.650	28	0.4	0.0	-0.2	-0.2	0.0	0.0
96	0.000	28	0.4	0.0	0.2	-0.2	0.0	0.0
moment Y								
96	0.000	28	0.4	0.0	0.2	-0.2	0.0	0.0
96	2.825	28	0.4	0.0	0.0	0.1	0.0	0.0
sila Y								
96	0.000	28	0.4	0.0	0.2	-0.2	0.0	0.0
96	2.825	28	0.4	0.0	0.0	0.1	0.0	0.0
moment Z								
96	2.825	28	0.4	0.0	0.0	0.1	0.0	0.0
96	0.000	28	0.4	0.0	0.2	-0.2	0.0	0.0

Vyhledano pro
Prurez : 9
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
38	0.000	7	-0.1	-0.1	-0.4	0.0	-1.4	0.0
38	0.000	28	0.1	0.0	-0.6	0.0	-0.7	0.0
moment X								
38	0.000	18	0.0	-0.2	-0.4	0.0	-1.9	0.0
23	0.000	23	0.0	0.3	-0.3	0.0	3.0	0.0
sila Z								
38	0.000	28	0.1	0.0	-0.6	0.0	-0.7	0.0
53	0.000	1	0.0	0.0	-0.2	0.0	-0.2	0.0
moment Y								
23	0.150	18	0.0	0.3	-0.3	-0.1	2.8	0.5
53	0.000	18	0.0	0.0	-0.2	0.0	-0.9	0.0
sila Y								
38	0.000	6	0.0	-0.2	-0.4	0.0	-1.9	0.0
23	0.000	7	0.0	0.3	-0.3	0.0	3.0	0.0
moment Z								
38	0.150	6	0.0	-0.2	-0.4	0.0	-1.9	-0.3
23	0.150	6	0.0	0.3	-0.3	-0.1	2.8	0.5

Vyhledano pro
Prurez : 10
Sled kombinaci : 1..28

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
115	0.000	19	-1.0	0.0	0.0	0.0	0.0	0.0
114	0.000	7	1.2	0.0	0.0	0.0	0.0	0.0
moment X								
112	0.000	7	0.9	0.0	0.0	0.0	0.0	0.0
114	0.000	7	1.2	0.0	0.0	0.0	0.0	0.0
sila Z								
113	0.000	19	-0.7	0.0	0.0	0.0	0.0	0.0
115	0.000	19	-1.0	0.0	0.0	0.0	0.0	0.0
moment Y								
113	2.090	19	-0.7	0.0	0.0	0.0	0.0	0.0
115	2.090	19	-1.0	0.0	0.0	0.0	0.0	0.0
sila Y								
115	0.000	19	-1.0	0.0	0.0	0.0	0.0	0.0
114	0.000	19	1.2	0.0	0.0	0.0	0.0	0.0
moment Z								
115	2.090	19	-1.0	0.0	0.0	0.0	0.0	0.0
114	2.423	19	1.2	0.0	0.0	0.0	0.0	0.0

Vyhledano pro
Prurez : 11
Sled kombinaci : 1..28

Vypoctove reakce v podporach

Uzel	ZS	Px	Py	Pz	Mx	My	Mz
		kN	kN	kN	kN.m	kN.m	kN.m
1	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0

	6	0.6	0.0	0.0	0.0	0.0	0.0
	7	0.7	0.0	-0.2	0.0	0.0	0.0
	8	1.5	-0.6	0.0	0.0	0.0	0.0
	9	1.4	-0.6	0.0	0.0	0.0	0.0
	10	1.2	-0.6	0.0	0.0	0.0	0.0
	11	0.7	-0.5	0.0	0.0	0.0	0.0
	12	0.5	-0.3	0.0	0.0	0.0	0.0
	13	0.2	0.0	0.0	0.0	0.0	0.0
	14	0.3	-0.1	0.0	0.0	0.0	0.0
4	1	0.0	0.0	-3.2	0.0	0.0	0.0
	2	0.0	0.0	-6.1	0.0	0.0	0.0
	3	0.0	0.0	1.6	0.0	0.0	0.0
	4	0.0	0.0	0.5	0.0	0.0	0.0
	5	0.0	0.0	1.3	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.4	0.0	0.0	0.0
	8	0.0	-0.6	0.1	0.0	0.0	0.0
	9	0.0	-1.3	0.2	0.0	0.0	0.0
	10	0.0	-0.5	0.1	0.0	0.0	0.0
	11	0.0	-1.2	0.2	0.0	0.0	0.0
	12	0.0	-0.7	0.2	0.0	0.0	0.0
	13	0.0	-0.1	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
5	1	-7.8	0.0	10.3	0.0	0.0	0.0
	2	-12.2	0.0	16.6	0.0	0.0	0.0
	3	2.4	0.0	-4.6	0.0	0.0	0.0
	4	0.7	0.0	-1.4	0.0	0.0	0.0
	5	1.9	0.0	-3.7	0.0	0.0	0.0
	6	-1.3	0.0	1.7	0.0	0.0	0.0
	7	-0.5	0.0	0.6	0.0	0.0	0.0
	8	-1.3	0.0	1.5	0.0	0.0	0.0
	9	-1.4	0.0	1.5	0.0	0.0	0.0
	10	-1.2	0.0	1.3	0.0	0.0	0.0
	11	-1.0	0.0	1.2	0.0	0.0	0.0
	12	-0.8	0.0	0.9	0.0	0.0	0.0
	13	-0.2	0.0	0.2	0.0	0.0	0.0
	14	-0.3	0.0	0.3	0.0	0.0	0.0
6	1	0.0	0.0	20.7	0.0	0.0	0.0
	2	0.0	0.0	33.4	0.0	0.0	0.0
	3	0.0	0.0	-9.2	0.0	0.0	0.0
	4	0.0	0.0	-2.8	0.0	0.0	0.0
	5	0.0	0.0	-7.4	0.0	0.0	0.0
	6	0.0	0.0	3.2	0.0	0.0	0.0
	7	0.0	0.0	0.6	0.0	0.0	0.0
	8	0.0	0.0	1.2	0.0	0.0	0.0
	9	0.0	0.0	2.6	0.0	0.0	0.0
	10	0.0	0.0	1.0	0.0	0.0	0.0
	11	0.0	0.0	2.5	0.0	0.0	0.0
	12	0.0	0.0	1.9	0.0	0.0	0.0
	13	0.0	0.0	0.2	0.0	0.0	0.0
	14	0.0	0.0	0.3	0.0	0.0	0.0
9	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.1	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0

	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
10	1	7.7	0.0	10.3	0.0	0.0	0.0
	2	12.2	0.0	16.6	0.0	0.0	0.0
	3	-2.4	0.0	-4.6	0.0	0.0	0.0
	4	-0.7	0.0	-1.4	0.0	0.0	0.0
	5	-1.9	0.0	-3.7	0.0	0.0	0.0
	6	0.7	0.0	1.0	0.0	0.0	0.0
	7	-0.2	0.0	-0.2	0.0	0.0	0.0
	8	-0.2	0.0	-0.2	0.0	0.0	0.0
	9	-0.2	0.0	-0.2	0.0	0.0	0.0
	10	-0.2	0.0	-0.2	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
11	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0
	6	0.8	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	-0.4	-0.4	0.0	0.0	0.0	0.0
	9	-0.4	-0.4	0.0	0.0	0.0	0.0
	10	-0.2	-0.4	0.0	0.0	0.0	0.0
	11	0.0	-0.4	0.0	0.0	0.0	0.0
	12	0.0	-0.2	0.0	0.0	0.0	0.0
	13	-0.2	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
14	1	0.0	0.0	-3.2	0.0	0.0	0.0
	2	0.0	0.0	-6.1	0.0	0.0	0.0
	3	0.0	0.0	1.6	0.0	0.0	0.0
	4	0.0	0.0	0.5	0.0	0.0	0.0
	5	0.0	0.0	1.3	0.0	0.0	0.0
	6	0.0	0.0	0.1	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	-0.4	0.0	0.0	0.0	0.0
	9	0.0	-0.9	0.0	0.0	0.0	0.0
	10	0.0	-0.4	0.0	0.0	0.0	0.0
	11	0.0	-0.9	0.0	0.0	0.0	0.0
	12	0.0	-0.5	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
15	1	-7.8	0.0	10.3	0.0	0.0	0.0
	2	-12.2	0.0	16.6	0.0	0.0	0.0
	3	2.4	0.0	-4.6	0.0	0.0	0.0
	4	0.7	0.0	-1.4	0.0	0.0	0.0
	5	1.9	0.0	-3.7	0.0	0.0	0.0
	6	-1.5	0.0	1.9	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.3	0.0	-0.3	0.0	0.0	0.0
	9	0.3	0.0	-0.4	0.0	0.0	0.0
	10	0.2	0.0	-0.3	0.0	0.0	0.0
	11	0.3	0.0	-0.3	0.0	0.0	0.0
	12	0.3	0.0	-0.4	0.0	0.0	0.0
	13	0.2	0.0	-0.2	0.0	0.0	0.0
	14	0.0	0.0	-0.1	0.0	0.0	0.0
16	1	0.0	0.0	20.7	0.0	0.0	0.0

	2	0.0	0.0	33.4	0.0	0.0	0.0
	3	0.0	0.0	-9.2	0.0	0.0	0.0
	4	0.0	0.0	-2.8	0.0	0.0	0.0
	5	0.0	0.0	-7.4	0.0	0.0	0.0
	6	0.0	0.0	3.6	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	-0.4	0.0	0.0	0.0
	9	0.0	0.0	-0.7	0.0	0.0	0.0
	10	0.0	0.0	-0.3	0.0	0.0	0.0
	11	0.0	0.0	-0.6	0.0	0.0	0.0
	12	0.0	0.0	-0.8	0.0	0.0	0.0
	13	0.0	0.0	-0.2	0.0	0.0	0.0
	14	0.0	0.0	-0.1	0.0	0.0	0.0
19	1	0.0	0.0	-1.6	0.0	0.0	0.0
	2	0.0	0.0	-3.0	0.0	0.0	0.0
	3	0.0	0.0	0.8	0.0	0.0	0.0
	4	0.0	0.0	0.2	0.0	0.0	0.0
	5	0.0	0.0	0.6	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0
20	1	7.7	0.0	10.3	0.0	0.0	0.0
	2	12.2	0.0	16.6	0.0	0.0	0.0
	3	-2.4	0.0	-4.6	0.0	0.0	0.0
	4	-0.7	0.0	-1.4	0.0	0.0	0.0
	5	-1.9	0.0	-3.7	0.0	0.0	0.0
	6	0.7	0.0	1.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.1	0.0	0.1	0.0	0.0	0.0
	9	0.1	0.0	0.2	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.0	0.0	0.0	0.0	0.0	0.0
	13	0.0	0.0	0.0	0.0	0.0	0.0
	14	0.0	0.0	0.0	0.0	0.0	0.0

Normove deformace v uzlech

Uzel	Kombi	X	Y	Z	Rx	Ry	Rz
		mm	mm	mm	rad	rad	rad
extremy		1.radek = minimim		2.radek = maximum			
posuv X							
6	22	-1.6	0.0	0.0	-0.0034	-0.0011	-0.0039
21	18	2.9	87.5	-4.5	0.0271	-0.0010	-0.0019
posuv Y							
62	7	0.2	-0.2	10.2	-0.0098	0.0022	0.0000
35	26	0.3	123.4	-1.2	0.0479	-0.0002	-0.0002
posuv Z							
65	19	0.6	60.5	-13.2	0.0323	-0.0003	-0.0016
34	7	-0.1	-0.2	11.1	-0.0120	0.0028	0.0000
rot X							
47	11	0.2	0.0	-0.9	-0.0127	-0.0026	0.0000
52	26	0.2	94.8	-7.2	0.0485	-0.0001	-0.0010
rot Y							
3	6	0.2	0.0	-1.7	-0.0087	-0.0043	0.0000
2	6	0.0	0.0	-0.4	-0.0111	0.0040	0.0000

```
rot Z
  66   22 |       1.1     41.7     -9.5 |    0.0212 -0.0014 -0.0069
  26    7 |       0.1     47.5     -9.0 |    0.0380  0.0001  0.0064
Vyhledano pro
Sled uzlu : 1..80
Sled kombinaci : 1..28
```

POSOUZENÍ PRŮŘEZŮ

```
Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |       MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :      6   prurez  :    1   rez  :   0.21 [m]
   1 10.00     6    -127.8                0.0            127.8
sigma max prut  :      7   prurez  :    1   rez  :   0.00 [m]
   1 20.00     6     132.4                0.0            132.4
tau       prut  :      2   prurez  :    1   rez  :   0.00 [m]
   1  5.50     6      10.8               19.8             19.8
sigma sr. prut  :      7   prurez  :    1   rez  :   0.00 [m]
   1 20.00     6     132.4                0.0            132.4

  vyuziti prurezu :   63.0 %    I 140 VYHOVI !
Vyhledano pro
Prurez : 1
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |       MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     10   prurez  :    2   rez  :   0.00 [m]
   1  1.00    28       0.2                0.0              0.2
sigma max prut  :      4   prurez  :    2   rez  :   2.86 [m]
   2 10.75     7      25.5               -0.2             25.5
tau       prut  :      9   prurez  :    2   rez  :   2.86 [m]
   1  1.00    25      10.4               -3.3             10.4
sigma sr. prut  :      4   prurez  :    2   rez  :   2.86 [m]
   2 10.75     7      25.5               -0.2             25.5

  vyuziti prurezu :   12.1 %    2L 60x6 VYHOVI !
Vyhledano pro
Prurez : 2
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |       MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     46   prurez  :    3   rez  :   0.63 [m]
   1  1.00     7    -190.9                0.0            190.9
sigma max prut  :     47   prurez  :    3   rez  :   0.00 [m]
   1  3.00     7     184.7                0.0            184.7
tau       prut  :     63   prurez  :    3   rez  :   0.90 [m]
   1  4.00    28       0.0                0.0              0.0
sigma sr. prut  :     46   prurez  :    3   rez  :   0.63 [m]
   1  1.00     7    -190.9                0.0            190.9

  vyuziti prurezu :   90.9 %    TPR 40x80x3 VYHOVI !
Vyhledano pro
Prurez : 3
```

Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min	prut	:	43	prurez :	4	rez :	0.00	[m]
1	1.00	7	-179.3		0.0		179.3	
sigma max	prut	:	42	prurez :	4	rez :	0.60	[m]
1	3.00	7	181.0		0.0		181.0	
tau	prut	:	58	prurez :	4	rez :	1.10	[m]
1	4.00	28	21.2		0.0		21.2	
sigma sr.	prut	:	42	prurez :	4	rez :	0.60	[m]
1	3.00	7	181.0		0.0		181.0	

vyuziti prurezu : 86.2 % **TPR 80x40x3** VYHOVI !

Vyhledano pro

Prurez : 4

Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min	prut	:	82	prurez :	5	rez :	0.00	[m]
1	4.00	19	-84.6		0.0		84.6	
sigma max	prut	:	72	prurez :	5	rez :	0.00	[m]
1	2.00	7	53.2		0.0		53.2	
tau	prut	:	99	prurez :	5	rez :	3.35	[m]
1	4.00	28	-8.0		0.0		8.0	
sigma sr.	prut	:	82	prurez :	5	rez :	0.00	[m]
1	4.00	19	-84.6		0.0		84.6	

vyuziti prurezu : 40.3 % **TPR 80x40x3** VYHOVI !

Vyhledano pro

Prurez : 5

Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min	prut	:	49	prurez :	6	rez :	0.00	[m]
1	1.00	19	-9.0		0.0		9.0	
sigma max	prut	:	50	prurez :	6	rez :	1.25	[m]
1	3.00	7	14.3		0.0		14.3	
tau	prut	:	65	prurez :	6	rez :	1.25	[m]
1	4.00	28	3.5		0.0		3.5	
sigma sr.	prut	:	50	prurez :	6	rez :	1.25	[m]
1	3.00	7	14.3		0.0		14.3	

vyuziti prurezu : 6.8 % **TPR 40x3** VYHOVI !

Vyhledano pro

Prurez : 6

Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min	prut	:	77	prurez :	7	rez :	0.00	[m]

```
   1  4.00    19      -55.6                0.0              55.6
sigma max prut  :     77   prurez  :     7   rez  :    0.00 [m]
   1  2.00    19       57.1                0.0              57.1
tau       prut  :     92   prurez  :     7   rez  :    1.12 [m]
   1  4.00    28      -14.7                0.0              14.7
sigma sr. prut  :     77   prurez  :     7   rez  :    0.00 [m]
   1  2.00    19       57.1                0.0              57.1

  vyuziti prurezu :   27.2 %    TPR 40x3 VYHOVI !
Vyhledano pro
Prurez : 7
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |       MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :    100   prurez  :     8   rez  :    0.00 [m]
   1  1.00    19      -82.9                0.0              82.9
sigma max prut  :    100   prurez  :     8   rez  :    0.00 [m]
   1  3.00    19       81.3                0.0              81.3
tau       prut  :    111   prurez  :     8   rez  :    0.54 [m]
   1  4.00    28       12.9                0.0              12.9
sigma sr. prut  :    100   prurez  :     8   rez  :    0.00 [m]
   1  1.00    19      -82.9                0.0              82.9

  vyuziti prurezu :   39.5 %    TPR 50x30x3 VYHOVI !
Vyhledano pro
Prurez : 8
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |       MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     96   prurez  :     9   rez  :    0.00 [m]
   1  4.00    28      -52.4                0.0              52.4
sigma max prut  :     96   prurez  :     9   rez  :    0.00 [m]
   1  2.00    28       54.2                0.0              54.2
tau       prut  :     97   prurez  :     9   rez  :    3.35 [m]
   1  4.00    28      -9.0                 0.0               9.0
sigma sr. prut  :     96   prurez  :     9   rez  :    0.00 [m]
   1  2.00    28       54.2                0.0              54.2

  vyuziti prurezu :   25.8 %    TPR 40x3 VYHOVI !
Vyhledano pro
Prurez : 9
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |       MPa              Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     23   prurez  :    10   rez  :    0.15 [m]
   1  4.00     6     -45.1                0.0              45.1
sigma max prut  :     23   prurez  :    10   rez  :    0.15 [m]
   1  2.00     6      45.1                0.0              45.1
tau       prut  :     53   prurez  :    10   rez  :    0.15 [m]
   1  4.00    28       2.6                0.0               2.6
sigma sr. prut  :     23   prurez  :    10   rez  :    0.15 [m]
   1  2.00     6      45.1                0.0              45.1
```

vyuziti prurezu : 21.5 % **TPR 80x40x3** VYHOVI !
Vyhledano pro
Prurez : 10
Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut :	115 prurez :	11 rez :	2.09 [m]
1 9.00 19	-7.1	0.0	7.1
sigma max prut :	114 prurez :	11 rez :	2.42 [m]
1 1.00 7	1.8	5.5	5.5
tau prut :	112 prurez :	11 rez :	2.42 [m]
1 1.00 7	1.3	5.7	5.7
sigma sr. prut :	115 prurez :	11 rez :	2.09 [m]
1 9.00 19	-7.1	0.0	7.1

vyuziti prurezu : 4.5 % **L 60x6** VYHOVI !
Vyhledano pro
Prurez : 11
Sled kombinaci : 1..28

STATICKÉ POSOUZENÍ PRÍČNÉ VAZBY HALY

ZATÍŽENÍ

1. Zatěžovací stav
   Vlastní tíha $\gamma = 1,1$
   Generována počítačem
2. Zatěžovací stav
   Zatížení stálé střešním pláštěm $\gamma = 1,1$
   Reakce vaznic
   $P_{z1} = 2 \times 1,5 = 3,0$ kN
   $P_{z2} = 2 \times 10,4 = 20,8$ kN
   $P_{z3} = 2,9$ kN
   $P_{z4} = 2,8$ kN
   $P_{z5} = 21,7$ kN
   $P_{z6} = 22,0$ kN
3. Zatěžovací stav
   Zatížení sněhem $\gamma = 1,4$
   Reakce vaznic
   $P_{z1} = 2 \times 2,2 = 4,4$ kN
   $P_{z2} = 2 \times 11,9 = 23,8$ kN
   $P_{z3} = 4,4$ kN
   $P_{z4} = 4,3$ kN
   $P_{z5} = 23,9$ kN
4. Zatěžovací stav
   Zatížení větrem x $\gamma = 1,2$
   Reakce vaznic
   $P_{z1} = 2 \times 0,7 = 1,4$ kN
   $P_{z2} = 2 \times 3,9 = 7,8$ kN
   $P_{z3} = 1,3$ kN
   $P_{z4} = 7,7$ kN
   $P_{x1} = 0,45 \times 0,8 \times 0,5 \times 9 \times 24,0 = 38,88$ kN
5. Zatěžovací stav
   Zatížení větrem y $\gamma = 1,2$

Reakce vaznic
P_{z1} = 2 x 0,2 = 0,4 kN
P_{z2} = 2 x 1,2 = 2,4 kN
P_{z3} = 2 x 0,5 = 1,0 kN
P_{z4} = 2 x 3,1 = 6,2 kN
P_{z5} =2,3 kN
P_{y1} = 0,45 x 0,8 x 0,5 x 7 x 24,0 = 30,24 kN
P_{y2} = 0,45 x 0,6 x 0,5 x 7 x 24,0 = 22,68 kN

6. Zatěžovací stav
Zatížení jeřábem γ = 1,56
n = 1,2
δ = 1,3 dynamický součinitel
Nosnost jeřábu 500 kg
Vyložení l = 3,5 m
P_{z1} = 11,0 kN
P_{y1} = 24,0 kN
M_{y1} = 11,0 x 0,67 = 7,37 kNm
M_{z1} = 24,0 x 0,67 = 16,08 kNm

7. Zatěžovací stav
Zatížení jeřábem γ = 1,56
n = 1,2
δ = 1,3 dynamický součinitel
Nosnost jeřábu 500 kg
Vyložení l = 3,5 m
P_{z1} = 11,0 kN
P_{y1} = 24,0 kN
M_{y1} = 11,0 x 0,67 = 7,37 kNm
M_{z1} = 24,0 x 0,67 = 16,08 kNm

8. Zatěžovací stav
Zatížení jeřábem γ = 1,56
n = 1,2
δ = 1,3 dynamický součinitel
Nosnost jeřábu 500 kg
Vyložení l = 3,5 m
P_{z1} = 11,0 kN
P_{y1} = 24,0 kN
M_{y1} = 11,0 x 0,67 = 7,37 kNm

9. Zatěžovací stav
Zatížení zábranou γ = 1,2
P_{z1} = 0,4 + 0,2 = 0,6 kN
P_{z2} = 0,6 kN
P_{z3} = 0,5 + 2,1 = 2,6 kN
P_{y1} = 1,2 kN
P_{y1} = 0,4 kN

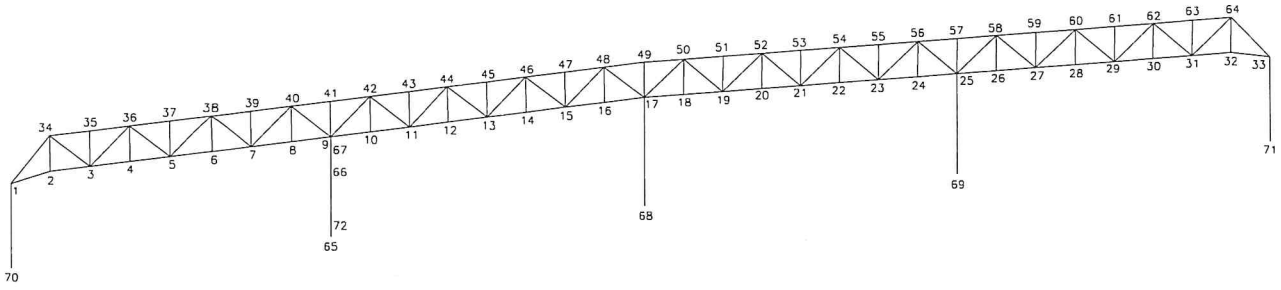
TVAR KONSTRUKCE

U Z L Y

uzel	X[m]	Y[m]	Z[m]	typ
1	0.0000	0.0000	-0.5000	
2	0.0000	3.0000	0.0650	
3	0.0000	6.0000	0.1300	
4	0.0000	9.0000	0.1950	
5	0.0000	12.0000	0.2600	
6	0.0000	15.0000	0.3250	
7	0.0000	18.0000	0.3900	
8	0.0000	21.0000	0.4550	
9	0.0000	24.0000	0.5200	
10	0.0000	27.0000	0.5850	

11	0.0000	30.0000	0.6500
12	0.0000	33.0000	0.7150
13	0.0000	36.0000	0.7800
14	0.0000	39.0000	0.8450
15	0.0000	42.0000	0.9100
16	0.0000	45.0000	0.9750
17	0.0000	48.0000	1.0400
18	0.0000	51.0000	0.9750
19	0.0000	54.0000	0.9100
20	0.0000	57.0000	0.8450
21	0.0000	60.0000	0.7800
22	0.0000	63.0000	0.7150
23	0.0000	66.0000	0.6500
24	0.0000	69.0000	0.5850
25	0.0000	72.0000	0.5200
26	0.0000	75.0000	0.4550
27	0.0000	78.0000	0.3900
28	0.0000	81.0000	0.3250
29	0.0000	84.0000	0.2600
30	0.0000	87.0000	0.1950
31	0.0000	90.0000	0.1300
32	0.0000	93.0000	0.0650
33	0.0000	96.0000	-0.5000
34	0.0000	2.9450	2.4040
35	0.0000	5.9450	2.4690
36	0.0000	8.9450	2.5340
37	0.0000	11.9450	2.5990
38	0.0000	14.9450	2.6640
39	0.0000	17.9450	2.7290
40	0.0000	20.9450	2.7940
41	0.0000	23.9450	2.8590
42	0.0000	26.9450	2.9240
43	0.0000	29.9450	2.9890
44	0.0000	32.9450	3.0540
45	0.0000	35.9450	3.1190
46	0.0000	38.9450	3.1840
47	0.0000	41.9450	3.2490
48	0.0000	44.9450	3.3140
49	0.0000	48.0000	3.3800
50	0.0000	51.0550	3.3140
51	0.0000	54.0550	3.2490
52	0.0000	57.0550	3.1840
53	0.0000	60.0550	3.1190
54	0.0000	63.0550	3.0540
55	0.0000	66.0550	2.9890
56	0.0000	69.0550	2.9240
57	0.0000	72.0550	2.8590
58	0.0000	75.0550	2.7940
59	0.0000	78.0550	2.7290
60	0.0000	81.0550	2.6640
61	0.0000	84.0550	2.5990
62	0.0000	87.0550	2.5340
63	0.0000	90.0550	2.4690
64	0.0000	93.0550	2.4040
65	0.0000	24.0000	-6.1400
66	0.0000	24.0000	-1.9340
67	0.0000	24.0000	-0.5140
68	0.0000	48.0000	-6.1400
69	0.0000	72.0000	-6.1400
70	0.0000	0.0000	-6.1400
71	0.0000	96.0000	-6.1400

72	0.0000	24.0000	-5.6000

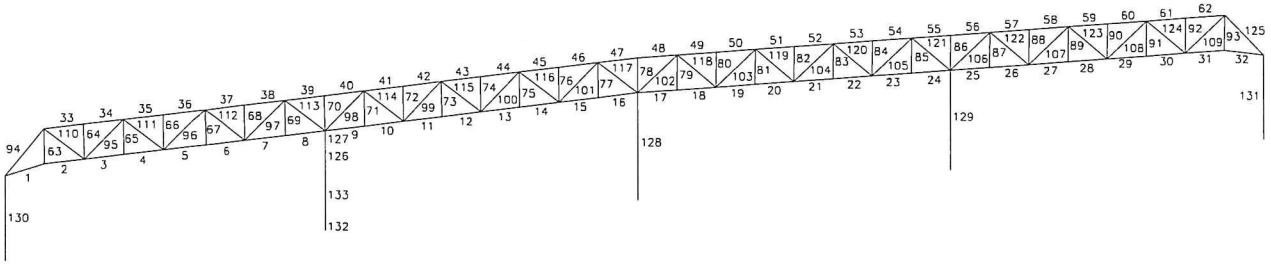


P R U T Y

prut	zac	konec	delka[m]	prurez	typ
1	1	2	3.0527	4	
2	2	3	3.0007	4	
3	3	4	3.0007	5	
4	4	5	3.0007	5	
5	5	6	3.0007	5	
6	6	7	3.0007	5	
7	7	8	3.0007	4	
8	8	9	3.0007	4	
9	9	10	3.0007	4	
10	10	11	3.0007	4	
11	11	12	3.0007	5	
12	12	13	3.0007	5	
13	13	14	3.0007	5	
14	14	15	3.0007	5	
15	15	16	3.0007	4	
16	16	17	3.0007	4	
17	17	18	3.0007	4	
18	18	19	3.0007	4	
19	19	20	3.0007	5	
20	20	21	3.0007	5	
21	21	22	3.0007	5	
22	22	23	3.0007	5	
23	23	24	3.0007	4	
24	24	25	3.0007	4	
25	25	26	3.0007	4	
26	26	27	3.0007	4	
27	27	28	3.0007	5	
28	28	29	3.0007	5	
29	29	30	3.0007	5	
30	30	31	3.0007	5	
31	31	32	3.0007	4	
32	32	33	3.0527	4	
33	34	35	3.0007	12	

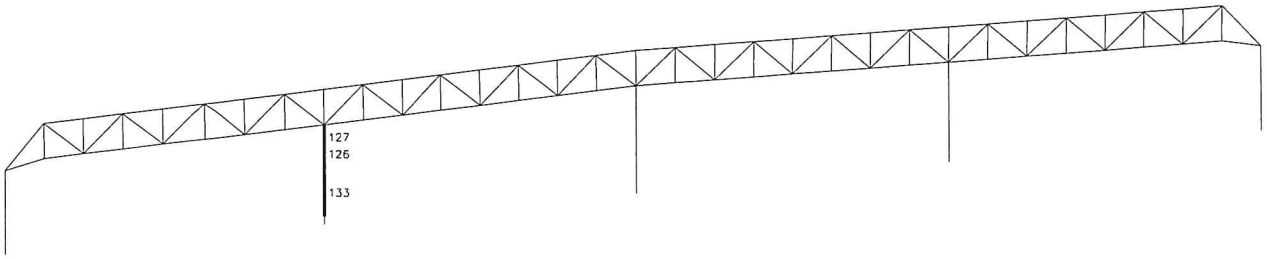
34	35	36	3.0007	12
35	36	37	3.0007	12
36	37	38	3.0007	12
37	38	39	3.0007	6
38	39	40	3.0007	6
39	40	41	3.0007	6
40	41	42	3.0007	6
41	42	43	3.0007	6
42	43	44	3.0007	6
43	44	45	3.0007	6
44	45	46	3.0007	6
45	46	47	3.0007	6
46	47	48	3.0007	6
47	48	49	3.0557	6
48	49	50	3.0557	6
49	50	51	3.0007	6
50	51	52	3.0007	6
51	52	53	3.0007	6
52	53	54	3.0007	6
53	54	55	3.0007	6
54	55	56	3.0007	6
55	56	57	3.0007	6
56	57	58	3.0007	6
57	58	59	3.0007	6
58	59	60	3.0007	6
59	60	61	3.0007	12
60	61	62	3.0007	12
61	62	63	3.0007	12
62	63	64	3.0007	12
63	2	34	2.3396	10
64	3	35	2.3396	10
65	4	36	2.3396	10
66	5	37	2.3396	10
67	6	38	2.3396	10
68	7	39	2.3396	10
69	8	40	2.3396	10
70	9	41	2.3396	10
71	10	42	2.3396	10
72	11	43	2.3396	10
73	12	44	2.3396	10
74	13	45	2.3396	10
75	14	46	2.3396	10
76	15	47	2.3396	10
77	16	48	2.3396	10
78	17	49	2.3400	10
79	18	50	2.3396	10
80	19	51	2.3396	10
81	20	52	2.3396	10
82	21	53	2.3396	10
83	22	54	2.3396	10
84	23	55	2.3396	10
85	24	56	2.3396	10
86	25	57	2.3396	10
87	26	58	2.3396	10
88	27	59	2.3396	10
89	28	60	2.3396	10
90	29	61	2.3396	10
91	30	62	2.3396	10
92	31	63	2.3396	10
93	32	64	2.3396	10
94	1	34	4.1360	7

95	3	36	3.8016	9
96	5	38	3.8016	11
97	7	40	3.8016	8
98	9	42	3.8016	7
99	11	44	3.8016	9
100	13	46	3.8016	11
101	15	48	3.8016	8
102	17	50	3.8084	7
103	19	52	3.8084	9
104	21	54	3.8084	11
105	23	56	3.8084	8
106	25	58	3.8084	7
107	27	60	3.8084	9
108	29	62	3.8084	11
109	31	64	3.8084	8
110	3	34	3.8084	8
111	5	36	3.8084	11
112	7	38	3.8084	9
113	9	40	3.8084	7
114	11	42	3.8084	8
115	13	44	3.8084	11
116	15	46	3.8084	9
117	17	48	3.8084	7
118	19	50	3.8016	8
119	21	52	3.8016	11
120	23	54	3.8016	9
121	25	56	3.8016	7
122	27	58	3.8016	8
123	29	60	3.8016	11
124	31	62	3.8016	9
125	33	64	4.1360	7
126	66	67	1.4200	1
127	67	9	1.0340	1
128	68	17	7.1800	3
129	69	25	6.6600	2
130	70	1	5.6400	13
131	71	33	5.6400	13
132	65	72	0.5400	14
133	72	66	3.6660	1

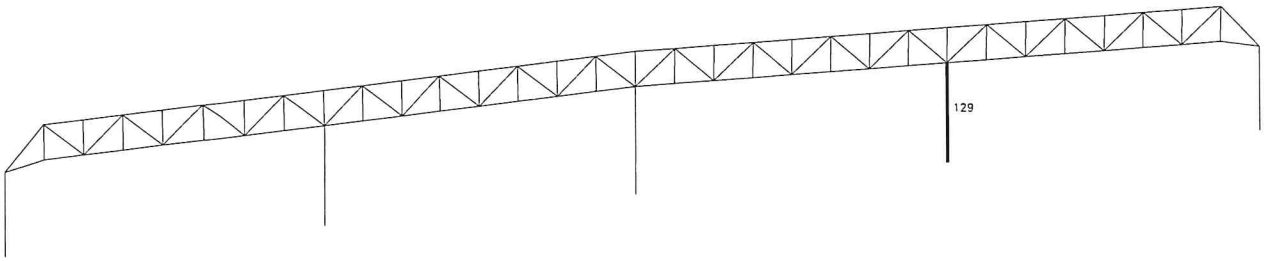


P R U R E Z Y - charakteristiky

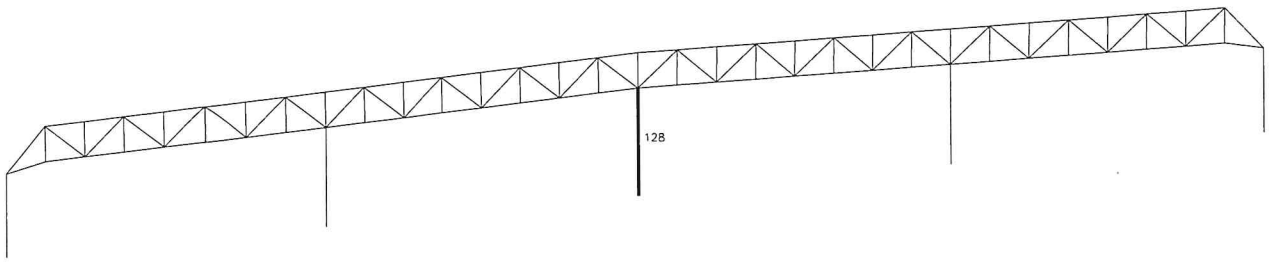
```
 PRUREZ c.  1 ( I svar )           rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 2.55400E-02     mom.setr. Ix[m4] = 9.04480E-06
 mom.setr. Iy[m4] = 2.47703E-03    mom.setr. Iz[m4] = 9.12423E-05
 mom.setr. Iw[m8] = 1.13254E-05
  Prvek  1  P 35.250                                ocel 37
  Prvek  2  P 12.670                                ocel 37
  Prvek  3  P 35.250                                ocel 37
  poloha teziste   Y =   125.00    Z =  -370.00
Náhrada za ISV 660/200/10/30 + HEA 240
```




```
 PRUREZ c.  2 ( I svar )           rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 1.80000E-02     mom.setr. Ix[m4] = 4.53511E-06
 mom.setr. Iy[m4] = 1.37160E-03    mom.setr. Iz[m4] = 4.00500E-05
 mom.setr. Iw[m8] = 3.96900E-06
  Prvek  1  P 30.200                                ocel 37
  Prvek  2  P 10.600                                ocel 37
  Prvek  3  P 30.200                                ocel 37
  poloha teziste   Y =   100.00    Z =  -330.00
```

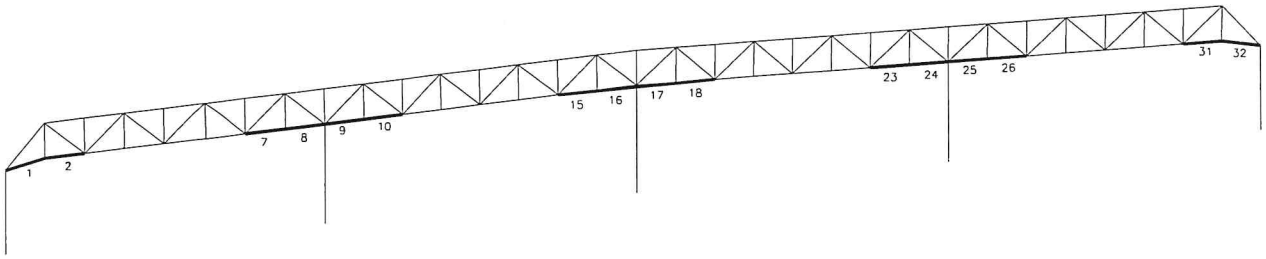



```
PRUREZ c.  3 ( Kriz sym )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 3.19000E-02     mom.setr. Ix[m4] = 6.09728E-06
mom.setr. Iy[m4] = 1.39832E-03     mom.setr. Iz[m4] = 9.89116E-04
mom.setr. Iw[m8] = 7.81300E-06
 Prvek  1  P 30.200                                ocel 37
 Prvek  2  P 10.600                                ocel 37
 Prvek  3  P 30.200                                ocel 37
 Prvek  4  P 10.295                                ocel 37
 Prvek  5  P 10.295                                ocel 37
 Prvek  6  P 20.200                                ocel 37
 Prvek  7  P 20.200                                ocel 37
 poloha teziste   Y =   320.00     Z =  -330.00
```

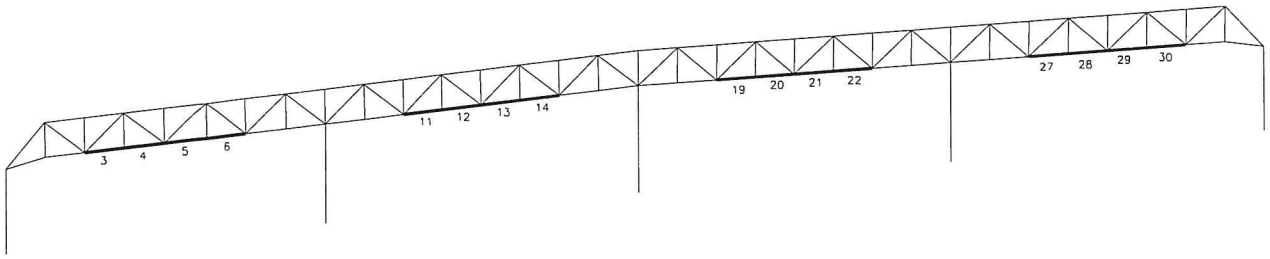



```
PRUREZ c.  4 ( 2Lrov /1 )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 3.42193E-03     mom.setr. Ix[m4] = 1.15400E-07
mom.setr. Iy[m4] = 2.53955E-06     mom.setr. Iz[m4] = 5.79033E-06
```

```
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  L 90.10                                  ocel 37
 Prvek  2  L 90.10                                  ocel 37
 poloha teziste   Y =    95.00    Z =   -64.18
```

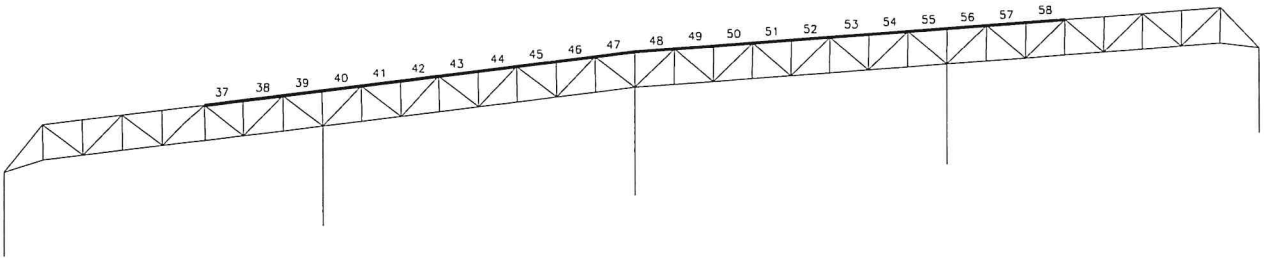



```
PRUREZ c.  5 ( 2Lrov /1 )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 1.80603E-03     mom.setr. Ix[m4] = 1.82600E-08
mom.setr. Iy[m4] = 5.81161E-07     mom.setr. Iz[m4] = 1.50860E-06
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  L 60.8                                   ocel 37
 Prvek  2  L 60.8                                   ocel 37
 poloha teziste   Y =    65.00    Z =   -42.34
```

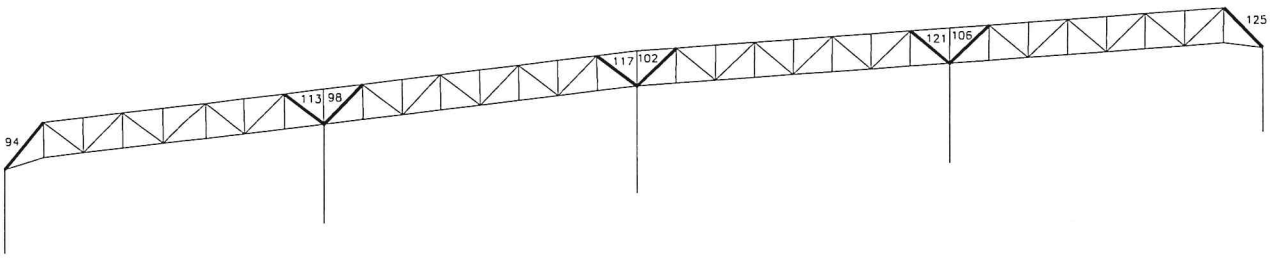



```
PRUREZ c.  6 ( 2Lrov /1 )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 3.02193E-03     mom.setr. Ix[m4] = 1.00800E-07
mom.setr. Iy[m4] = 1.74474E-06     mom.setr. Iz[m4] = 4.16919E-06
```

```
mom.setr. Iw[m8] = 0.00000E+00
 Prvek   1   L 80.10                                  ocel 37
 Prvek   2   L 80.10                                  ocel 37
 poloha teziste    Y =     85.00     Z =    -23.32
```

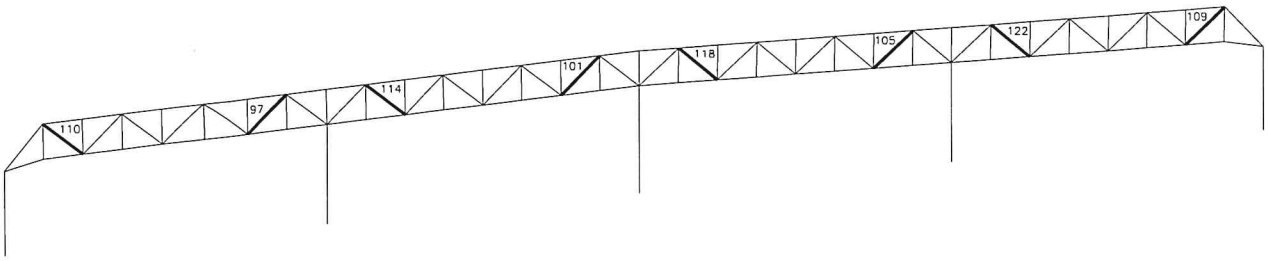



```
PRUREZ c.   7 ( 2Lrov /1 )          rotace prurezu Rx[st] =    0.00
    plocha A[m2] = 4.63706E-03      mom.setr. Ix[m4] = 1.59800E-07
mom.setr. Iy[m4] = 6.23782E-06      mom.setr. Iz[m4] = 1.29591E-05
mom.setr. Iw[m8] = 0.00000E+00
 Prvek   1   L 120.10                                 ocel 37
 Prvek   2   L 120.10                                 ocel 37
 poloha teziste    Y =    125.00     Z =    -33.07
```

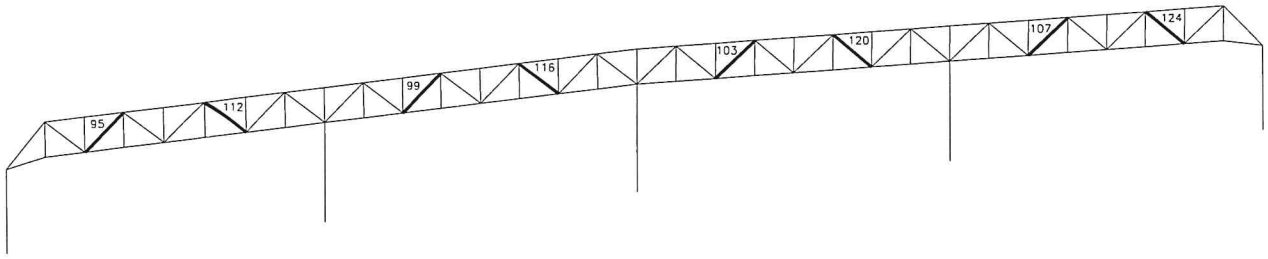



```
PRUREZ c.   8 ( 2Lrov /1 )          rotace prurezu Rx[st] =    0.00
    plocha A[m2] = 1.80603E-03      mom.setr. Ix[m4] = 1.82600E-08
mom.setr. Iy[m4] = 5.81161E-07      mom.setr. Iz[m4] = 1.50860E-06
```

```
mom.setr. Iw[m8] = 0.00000E+00
 Prvek   1   L 60.8                                  ocel 37
 Prvek   2   L 60.8                                  ocel 37
 poloha teziste    Y =     65.00     Z =    -17.66
```

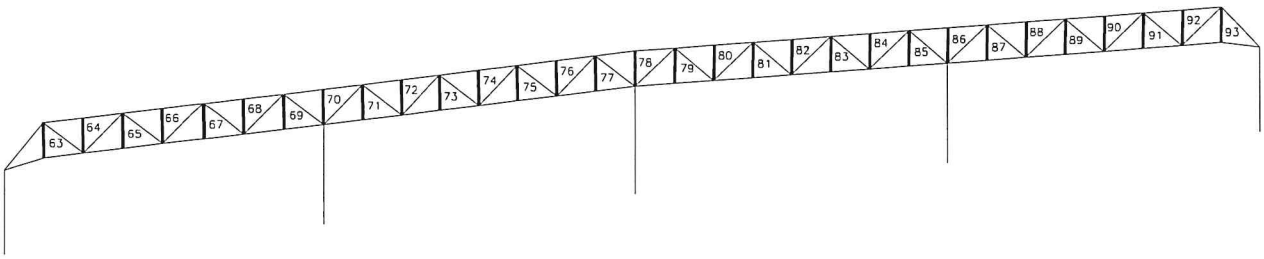



```
PRUREZ c.   9  ( 2Lrov /1 )          rotace prurezu Rx[st] =    0.00
    plocha A[m2] = 3.42193E-03       mom.setr. Ix[m4] = 1.15400E-07
mom.setr. Iy[m4] = 2.53955E-06       mom.setr. Iz[m4] = 5.79033E-06
mom.setr. Iw[m8] = 0.00000E+00
 Prvek   1   L 90.10                                  ocel 37
 Prvek   2   L 90.10                                  ocel 37
 poloha teziste    Y =     95.00     Z =    -25.82
```

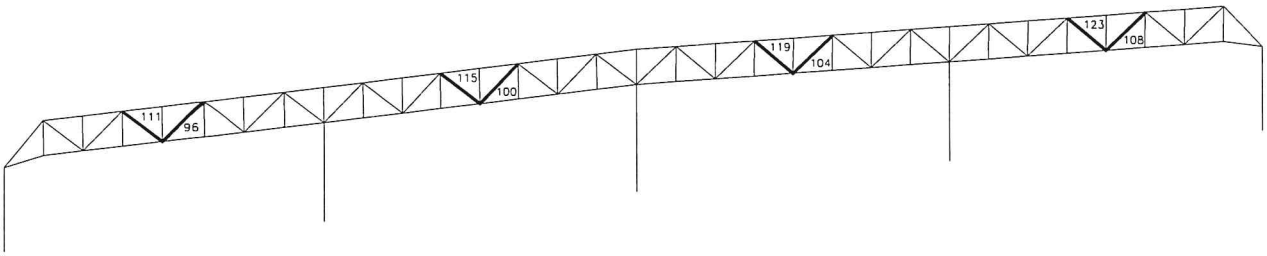



```
PRUREZ c. 10  ( 2Lrov /2 )           rotace prurezu Rx[st] = -45.00
    plocha A[m2] = 9.60744E-04       mom.setr. Ix[m4] = 8.14000E-09
mom.setr. Iy[m4] = 3.45890E-07       mom.setr. Iz[m4] = 7.84325E-07
```

```
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  L 50.5                                  ocel 37
 Prvek  2  L 50.5                                  ocel 37
 poloha teziste   Y =    44.39     Z =   -35.36
```

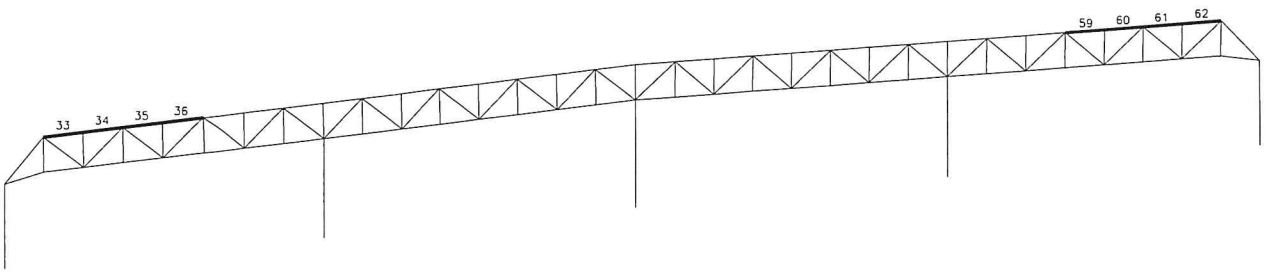



```
PRUREZ c. 11 ( 2Lrov /1 )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 1.38203E-03     mom.setr. Ix[m4] = 1.68600E-08
mom.setr. Iy[m4] = 4.53883E-07     mom.setr. Iz[m4] = 1.11287E-06
mom.setr. Iw[m8] = 0.00000E+00
 Prvek  1  L 60.6                                  ocel 37
 Prvek  2  L 60.6                                  ocel 37
 poloha teziste   Y =    65.00     Z =   -16.84
```

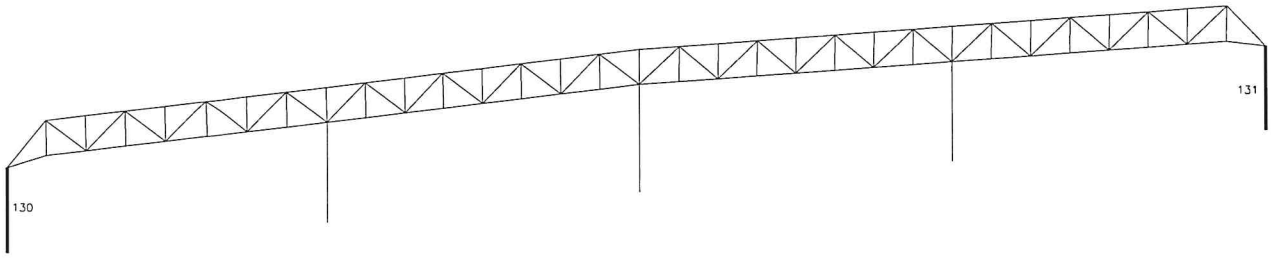



```
PRUREZ c. 12 ( 2Lrov /1 )          rotace prurezu Rx[st] =   0.00
    plocha A[m2] = 3.42193E-03     mom.setr. Ix[m4] = 1.15400E-07
mom.setr. Iy[m4] = 2.53955E-06     mom.setr. Iz[m4] = 5.79033E-06
```

```
mom.setr. Iw[m8] = 0.00000E+00
 Prvek   1   L 90.10                                  ocel 37
 Prvek   2   L 90.10                                  ocel 37
 poloha teziste    Y =     95.00     Z =    -25.82
```

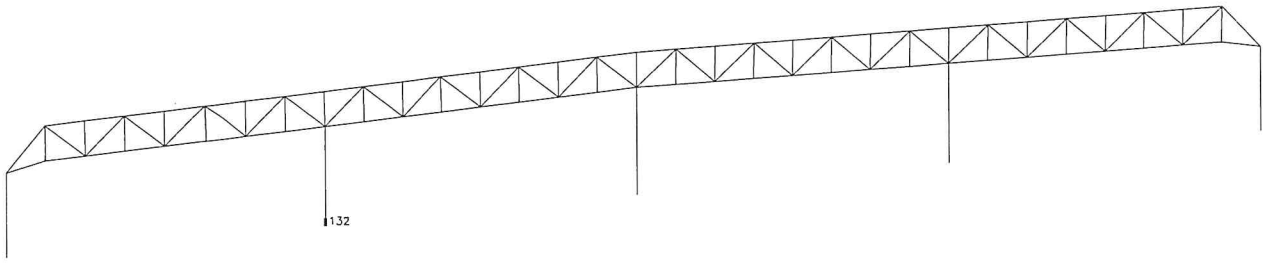



```
PRUREZ c. 13 ( IPE )                  rotace prurezu Rx[st] =    0.00
    plocha A[m2] = 7.29888E-03        mom.setr. Ix[m4] = 3.80000E-07
mom.setr. Iy[m4] = 1.63327E-04        mom.setr. Iz[m4] = 1.04382E-05
mom.setr. Iw[m8] = 3.13580E-07
 Prvek   1   IPE  360                                 ocel 37
 poloha teziste    Y =     85.00     Z =  -180.00
```




```
PRUREZ c. 14 ( I svar )               rotace prurezu Rx[st] =    0.00
    plocha A[m2] = 1.80000E-02        mom.setr. Ix[m4] = 4.53511E-06
mom.setr. Iy[m4] = 1.37160E-03        mom.setr. Iz[m4] = 4.00500E-05
mom.setr. Iw[m8] = 3.96900E-06
```

```
Prvek  1  P 30.200                                  ocel 37
Prvek  2  P 10.600                                  ocel 37
Prvek  3  P 30.200                                  ocel 37
poloha teziste   Y =   100.00    Z =  -330.00
```




```
 M A T E R I A L
Material c. 1       ocel 37
------------------------------------------------------------------------


merna hmotnost          [kg/m^3] :   7850.000
pevnost v tahu             [MPa] :    210.000
pevnost v tlaku            [MPa] :    210.000
pevnost ve smyku           [MPa] :    126.000
modul pruznosti            [MPa] : 210000.000
Poissonuv soucinitel             :      0.300
Soucinitel tep. roztaznosti      :  1.2E-0005


Typicky uzel :  XYZRxRyRz

------------------------------------------------------------------------


Typicky prut :  XYZMxMyMz

------------------------------------------------------------------------


prut    1: zac kl.: MyMz
prut   32: kon kl.: MyMz
prut   63: zac kl.: MyMz kon kl.: MyMz
prut   64: zac kl.: MyMz kon kl.: MyMz
prut   65: zac kl.: MyMz kon kl.: MyMz
prut   66: zac kl.: MyMz kon kl.: MyMz
prut   67: zac kl.: MyMz kon kl.: MyMz
prut   68: zac kl.: MyMz kon kl.: MyMz
prut   69: zac kl.: MyMz kon kl.: MyMz
```

```
prut   70: zac kl.: MyMz kon kl.: MyMz
prut   71: zac kl.: MyMz kon kl.: MyMz
prut   72: zac kl.: MyMz kon kl.: MyMz
prut   73: zac kl.: MyMz kon kl.: MyMz
prut   74: zac kl.: MyMz kon kl.: MyMz
prut   75: zac kl.: MyMz kon kl.: MyMz
prut   76: zac kl.: MyMz kon kl.: MyMz
prut   77: zac kl.: MyMz kon kl.: MyMz
prut   78: zac kl.: MyMz kon kl.: MyMz
prut   79: zac kl.: MyMz kon kl.: MyMz
prut   80: zac kl.: MyMz kon kl.: MyMz
prut   81: zac kl.: MyMz kon kl.: MyMz
prut   82: zac kl.: MyMz kon kl.: MyMz
prut   83: zac kl.: MyMz kon kl.: MyMz
prut   84: zac kl.: MyMz kon kl.: MyMz
prut   85: zac kl.: MyMz kon kl.: MyMz
prut   86: zac kl.: MyMz kon kl.: MyMz
prut   87: zac kl.: MyMz kon kl.: MyMz
prut   88: zac kl.: MyMz kon kl.: MyMz
prut   89: zac kl.: MyMz kon kl.: MyMz
prut   90: zac kl.: MyMz kon kl.: MyMz
prut   91: zac kl.: MyMz kon kl.: MyMz
prut   92: zac kl.: MyMz kon kl.: MyMz
prut   93: zac kl.: MyMz kon kl.: MyMz
prut   94: zac kl.: MyMz kon kl.: MyMz
prut   95: zac kl.: MyMz kon kl.: MyMz
prut   96: zac kl.: MyMz kon kl.: MyMz
prut   97: zac kl.: MyMz kon kl.: MyMz
prut   98: zac kl.: MyMz kon kl.: MyMz
prut   99: zac kl.: MyMz kon kl.: MyMz
prut  100: zac kl.: MyMz kon kl.: MyMz
prut  101: zac kl.: MyMz kon kl.: MyMz
prut  102: zac kl.: MyMz kon kl.: MyMz
prut  103: zac kl.: MyMz kon kl.: MyMz
prut  104: zac kl.: MyMz kon kl.: MyMz
prut  105: zac kl.: MyMz kon kl.: MyMz
prut  106: zac kl.: MyMz kon kl.: MyMz
prut  107: zac kl.: MyMz kon kl.: MyMz
prut  108: zac kl.: MyMz kon kl.: MyMz
prut  109: zac kl.: MyMz kon kl.: MyMz
prut  110: zac kl.: MyMz kon kl.: MyMz
prut  111: zac kl.: MyMz kon kl.: MyMz
prut  112: zac kl.: MyMz kon kl.: MyMz
prut  113: zac kl.: MyMz kon kl.: MyMz
prut  114: zac kl.: MyMz kon kl.: MyMz
prut  115: zac kl.: MyMz kon kl.: MyMz
prut  116: zac kl.: MyMz kon kl.: MyMz
prut  117: zac kl.: MyMz kon kl.: MyMz
prut  118: zac kl.: MyMz kon kl.: MyMz
prut  119: zac kl.: MyMz kon kl.: MyMz
prut  120: zac kl.: MyMz kon kl.: MyMz
prut  121: zac kl.: MyMz kon kl.: MyMz
prut  122: zac kl.: MyMz kon kl.: MyMz
prut  123: zac kl.: MyMz kon kl.: MyMz
prut  124: zac kl.: MyMz kon kl.: MyMz
prut  125: zac kl.: MyMz kon kl.: MyMz
prut  127: kon kl.: MxMyMz
prut  128: kon kl.: MyMz
prut  129: kon kl.: MyMz
```

P O D P O R Y

1	64	X
2	65	X Y Z Ry Rz
3	68	X Y Z Rx Ry Rz
4	69	X Y Z Rx Ry
5	70	X Y Z Rx
6	71	X Y Z Rx

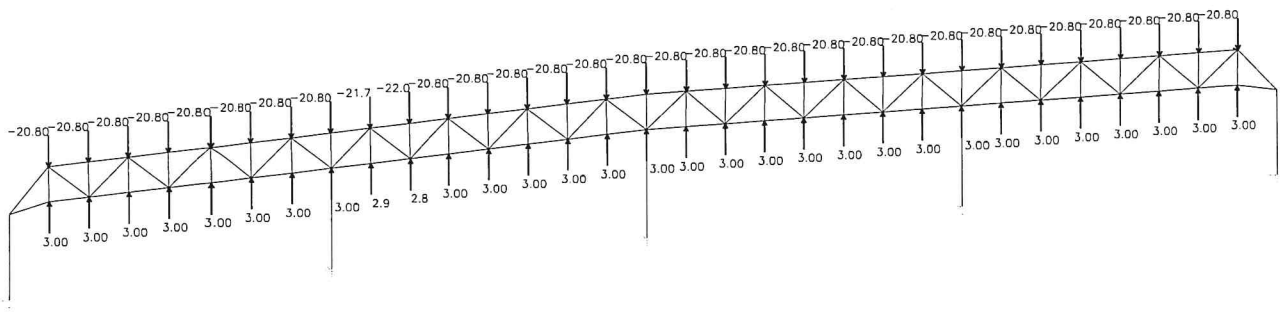
Z A T E Z O V A C I S T A V Y

1.	TIHA	/ 1.350	stale
2.	STRECHA		stale
3.	SNIH		stale
4.	VITR X		stale
5.	VITR Y		stale
6.	JERAB		stale
7.	JERAB		stale
8.	JERAB		stale
9.	ZABRANA		stale

ZATIZENI V UZLECH - stav 2 (STRECHA)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			3.00				1.10
3			3.00				1.10
4			3.00				1.10
5			3.00				1.10
6			3.00				1.10
7			3.00				1.10
8			3.00				1.10
9			3.00				1.10
10			2.90				1.10
11			2.80				1.10
12			3.00				1.10
13			3.00				1.10
14			3.00				1.10
15			3.00				1.10
16			3.00				1.10
17			3.00				1.10
18			3.00				1.10
19			3.00				1.10
20			3.00				1.10
21			3.00				1.10
22			3.00				1.10
23			3.00				1.10
24			3.00				1.10
25			3.00				1.10
26			3.00				1.10
27			3.00				1.10
28			3.00				1.10
29			3.00				1.10
30			3.00				1.10
31			3.00				1.10
32			3.00				1.10
34			-20.80				1.10
35			-20.80				1.10
36			-20.80				1.10
37			-20.80				1.10

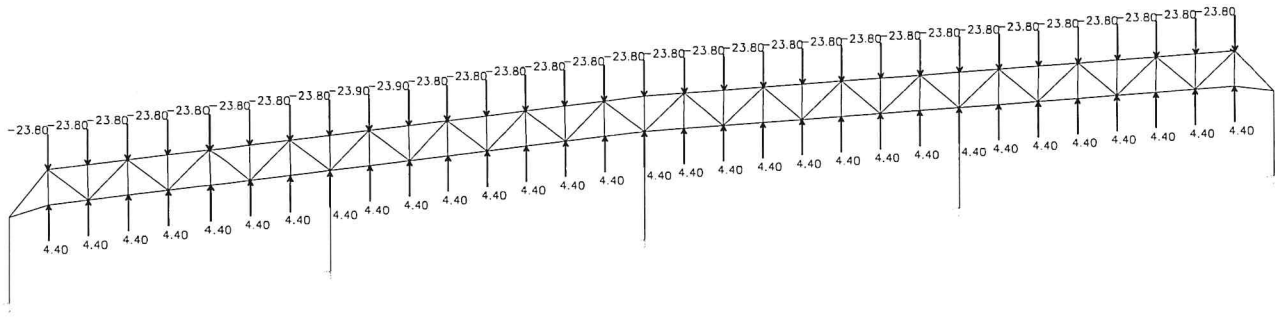
38	-20.80	1.10
39	-20.80	1.10
40	-20.80	1.10
41	-20.80	1.10
42	-21.70	1.10
43	-22.00	1.10
44	-20.80	1.10
45	-20.80	1.10
46	-20.80	1.10
47	-20.80	1.10
48	-20.80	1.10
49	-20.80	1.10
50	-20.80	1.10
51	-20.80	1.10
52	-20.80	1.10
53	-20.80	1.10
54	-20.80	1.10
55	-20.80	1.10
56	-20.80	1.10
57	-20.80	1.10
58	-20.80	1.10
59	-20.80	1.10
60	-20.80	1.10
61	-20.80	1.10
62	-20.80	1.10
63	-20.80	1.10
64	-20.80	1.10



ZATIZENI V UZLECH - stav 3 (SNIH)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			4.40				1.40
3			4.40				1.40
4			4.40				1.40
5			4.40				1.40
6			4.40				1.40
7			4.40				1.40
8			4.40				1.40
9			4.40				1.40

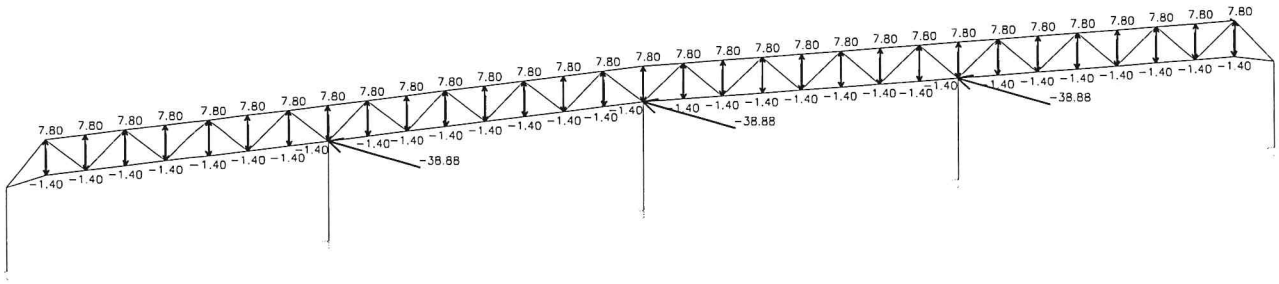
10	4.40	1.40
11	4.40	1.40
12	4.40	1.40
13	4.40	1.40
14	4.40	1.40
15	4.40	1.40
16	4.40	1.40
17	4.40	1.40
18	4.40	1.40
19	4.40	1.40
20	4.40	1.40
21	4.40	1.40
22	4.40	1.40
23	4.40	1.40
24	4.40	1.40
25	4.40	1.40
26	4.40	1.40
27	4.40	1.40
28	4.40	1.40
29	4.40	1.40
30	4.40	1.40
31	4.40	1.40
32	4.40	1.40
34	-23.80	1.40
35	-23.80	1.40
36	-23.80	1.40
37	-23.80	1.40
38	-23.80	1.40
39	-23.80	1.40
40	-23.80	1.40
41	-23.80	1.40
42	-23.90	1.40
43	-23.90	1.40
44	-23.80	1.40
45	-23.80	1.40
46	-23.80	1.40
47	-23.80	1.40
48	-23.80	1.40
49	-23.80	1.40
50	-23.80	1.40
51	-23.80	1.40
52	-23.80	1.40
53	-23.80	1.40
54	-23.80	1.40
55	-23.80	1.40
56	-23.80	1.40
57	-23.80	1.40
58	-23.80	1.40
59	-23.80	1.40
60	-23.80	1.40
61	-23.80	1.40
62	-23.80	1.40
63	-23.80	1.40
64	-23.80	1.40



ZATIZENI V UZLECH - stav 4 (VITR X)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			-1.40				1.20
3			-1.40				1.20
4			-1.40				1.20
5			-1.40				1.20
6			-1.40				1.20
7			-1.40				1.20
8			-1.40				1.20
9			-1.40				1.20
9	-38.88						1.20
10			-1.30				1.20
11			-1.30				1.20
12			-1.40				1.20
13			-1.40				1.20
14			-1.40				1.20
15			-1.40				1.20
16			-1.40				1.20
17			-1.40				1.20
17	-38.88						1.20
18			-1.40				1.20
19			-1.40				1.20
20			-1.40				1.20
21			-1.40				1.20
22			-1.40				1.20
23			-1.40				1.20
24			-1.40				1.20
25			-1.40				1.20
25	-38.88						1.20
26			-1.40				1.20
27			-1.40				1.20
28			-1.40				1.20
29			-1.40				1.20
30			-1.40				1.20
31			-1.40				1.20
32			-1.40				1.20
34			7.80				1.20
35			7.80				1.20

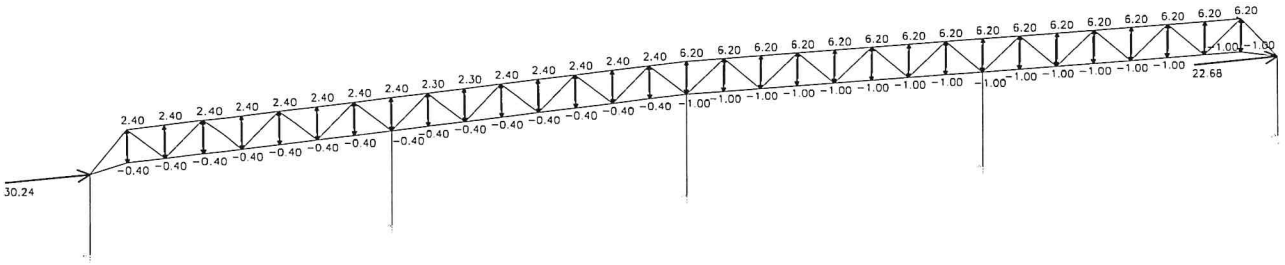
36	7.80	1.20
37	7.80	1.20
38	7.80	1.20
39	7.80	1.20
40	7.80	1.20
41	7.80	1.20
42	7.70	1.20
43	7.70	1.20
44	7.80	1.20
45	7.80	1.20
46	7.80	1.20
47	7.80	1.20
48	7.80	1.20
49	7.80	1.20
50	7.80	1.20
51	7.80	1.20
52	7.80	1.20
53	7.80	1.20
54	7.80	1.20
55	7.80	1.20
56	7.80	1.20
57	7.80	1.20
58	7.80	1.20
59	7.80	1.20
60	7.80	1.20
61	7.80	1.20
62	7.80	1.20
63	7.80	1.20
64	7.80	1.20



ZATIZENI V UZLECH - stav 5 (VITR Y)

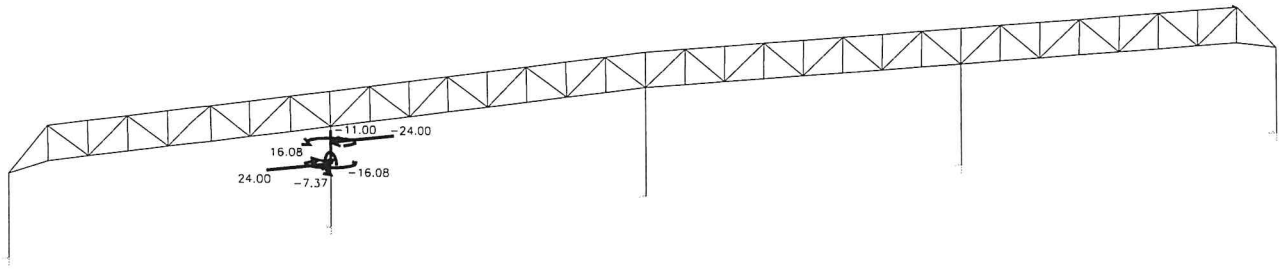
uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
1		30.24					1.20
2			-0.40				1.20
3			-0.40				1.20
4			-0.40				1.20
5			-0.40				1.20
6			-0.40				1.20

7		-0.40	1.20
8		-0.40	1.20
9		-0.40	1.20
10		-0.40	1.20
11		-0.40	1.20
12		-0.40	1.20
13		-0.40	1.20
14		-0.40	1.20
15		-0.40	1.20
16		-0.40	1.20
17		-1.00	1.20
18		-1.00	1.20
19		-1.00	1.20
20		-1.00	1.20
21		-1.00	1.20
22		-1.00	1.20
23		-1.00	1.20
24		-1.00	1.20
25		-1.00	1.20
26		-1.00	1.20
27		-1.00	1.20
28		-1.00	1.20
29		-1.00	1.20
30		-1.00	1.20
31		-1.00	1.20
32		-1.00	1.20
33	22.68		1.20
34		2.40	1.20
35		2.40	1.20
36		2.40	1.20
37		2.40	1.20
38		2.40	1.20
39		2.40	1.20
40		2.40	1.20
41		2.40	1.20
42		2.30	1.20
43		2.30	1.20
44		2.40	1.20
45		2.40	1.20
46		2.40	1.20
47		2.40	1.20
48		2.40	1.20
49		6.20	1.20
50		6.20	1.20
51		6.20	1.20
52		6.20	1.20
53		6.20	1.20
54		6.20	1.20
55		6.20	1.20
56		6.20	1.20
57		6.20	1.20
58		6.20	1.20
59		6.20	1.20
60		6.20	1.20
61		6.20	1.20
62		6.20	1.20
63		6.20	1.20
64		6.20	1.20



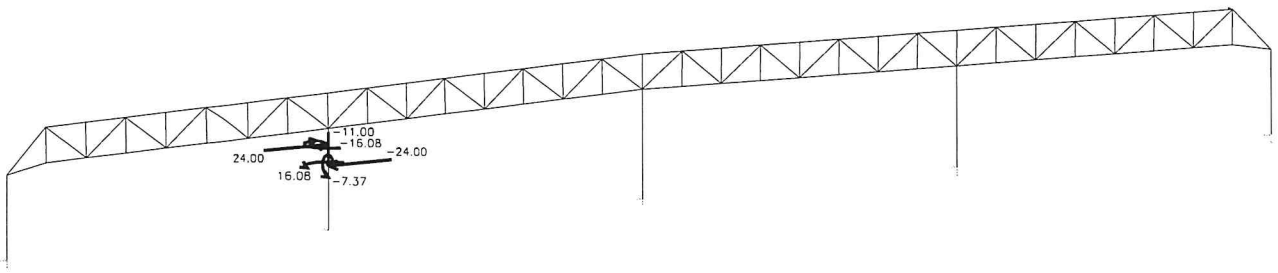
ZATIZENI V UZLECH - stav 6 (JERAB)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
66		24.00	-11.00		-7.37		1.56
66						-16.08	1.56
67		-24.00					1.56
67						16.08	1.56



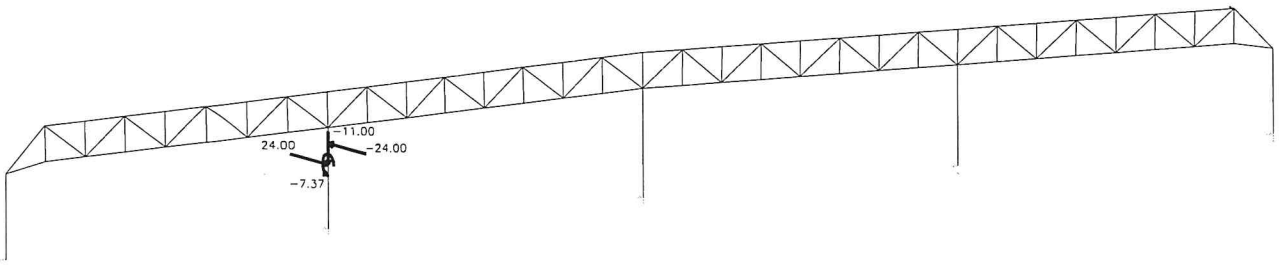
ZATIZENI V UZLECH - stav 7 (JERAB)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
66		-24.00	-11.00		-7.37		1.56
66						16.08	1.56
67		24.00					1.56
67						-16.08	1.56



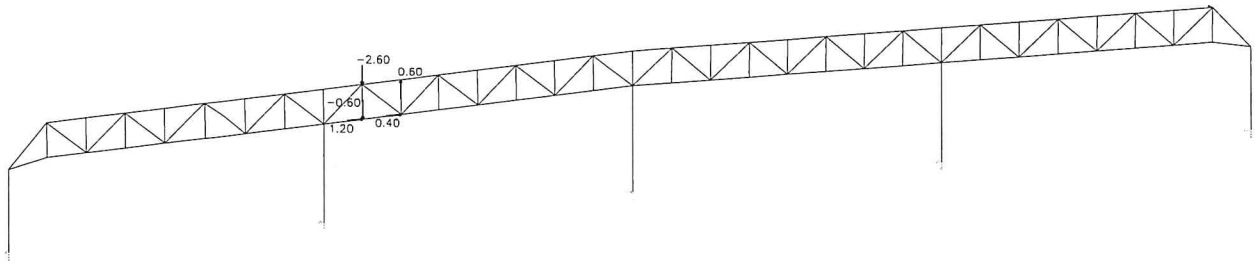
ZATIZENI V UZLECH - stav 8 (JERAB)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
66	24.00		-11.00		-7.37		1.56
67	-24.00						1.56



ZATIZENI V UZLECH - stav 9 (ZABRANA)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
10		1.20	-0.60				1.20
11		0.40					1.20
42			-2.60				1.20
43			0.60				1.20



SPOJITE IMPULZY - stav 1 (TIHA / 1.350)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
1	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
2	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
3	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
4	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
5	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
6	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
7	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
8	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
9	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
10	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
11	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
12	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
13	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
14	sil			-0.14 glob	0.00%			1.35
				-0.14 del	1.00%			
15	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
16	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
17	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			
18	sil			-0.27 glob	0.00%			1.35
				-0.27 del	1.00%			

19 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
20 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
21 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
22 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
23 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
24 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
25 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
26 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
27 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
28 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
29 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
30 sil	-0.14 glob	0.00%	1.35
	-0.14 del	1.00%	
31 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
32 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
33 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
34 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
35 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
36 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
37 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
38 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
39 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
40 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
41 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
42 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
43 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
44 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
45 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
46 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
47 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
48 sil	-0.24 glob	0.00%	1.35
	-0.24 del	1.00%	
49 sil	-0.24 glob	0.00%	1.35

		-0.24 del	1.00%	
50	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
51	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
52	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
53	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
54	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
55	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
56	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
57	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
58	sil	-0.24 glob	0.00%	1.35
		-0.24 del	1.00%	
59	sil	-0.27 glob	0.00%	1.35
		-0.27 del	1.00%	
60	sil	-0.27 glob	0.00%	1.35
		-0.27 del	1.00%	
61	sil	-0.27 glob	0.00%	1.35
		-0.27 del	1.00%	
62	sil	-0.27 glob	0.00%	1.35
		-0.27 del	1.00%	
63	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
64	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
65	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
66	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
67	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
68	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
69	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
70	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
71	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
72	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
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		-0.08 del	1.00%	
74	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	
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		-0.08 del	1.00%	
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		-0.08 del	1.00%	
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		-0.08 del	1.00%	
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		-0.08 del	1.00%	
79	sil	-0.08 glob	0.00%	1.35
		-0.08 del	1.00%	

80	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
81	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
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		-0.08	del	1.00%	
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		-0.08	del	1.00%	
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		-0.08	del	1.00%	
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		-0.08	del	1.00%	
86	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
87	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
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		-0.08	del	1.00%	
89	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
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		-0.08	del	1.00%	
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		-0.08	del	1.00%	
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		-0.08	del	1.00%	
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		-0.08	del	1.00%	
94	sil	-0.36	glob	0.00%	1.35
		-0.36	del	1.00%	
95	sil	-0.27	glob	0.00%	1.35
		-0.27	del	1.00%	
96	sil	-0.11	glob	0.00%	1.35
		-0.11	del	1.00%	
97	sil	-0.14	glob	0.00%	1.35
		-0.14	del	1.00%	
98	sil	-0.36	glob	0.00%	1.35
		-0.36	del	1.00%	
99	sil	-0.27	glob	0.00%	1.35
		-0.27	del	1.00%	
100	sil	-0.11	glob	0.00%	1.35
		-0.11	del	1.00%	
101	sil	-0.14	glob	0.00%	1.35
		-0.14	del	1.00%	
102	sil	-0.36	glob	0.00%	1.35
		-0.36	del	1.00%	
103	sil	-0.27	glob	0.00%	1.35
		-0.27	del	1.00%	
104	sil	-0.11	glob	0.00%	1.35
		-0.11	del	1.00%	
105	sil	-0.14	glob	0.00%	1.35
		-0.14	del	1.00%	
106	sil	-0.36	glob	0.00%	1.35
		-0.36	del	1.00%	
107	sil	-0.27	glob	0.00%	1.35
		-0.27	del	1.00%	
108	sil	-0.11	glob	0.00%	1.35
		-0.11	del	1.00%	
109	sil	-0.14	glob	0.00%	1.35
		-0.14	del	1.00%	
110	sil	-0.14	glob	0.00%	1.35

	-0.14	del	1.00%	
111 sil	-0.11	glob	0.00%	1.35
	-0.11	del	1.00%	
112 sil	-0.27	glob	0.00%	1.35
	-0.27	del	1.00%	
113 sil	-0.36	glob	0.00%	1.35
	-0.36	del	1.00%	
114 sil	-0.14	glob	0.00%	1.35
	-0.14	del	1.00%	
115 sil	-0.11	glob	0.00%	1.35
	-0.11	del	1.00%	
116 sil	-0.27	glob	0.00%	1.35
	-0.27	del	1.00%	
117 sil	-0.36	glob	0.00%	1.35
	-0.36	del	1.00%	
118 sil	-0.14	glob	0.00%	1.35
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119 sil	-0.11	glob	0.00%	1.35
	-0.11	del	1.00%	
120 sil	-0.27	glob	0.00%	1.35
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121 sil	-0.36	glob	0.00%	1.35
	-0.36	del	1.00%	
122 sil	-0.14	glob	0.00%	1.35
	-0.14	del	1.00%	
123 sil	-0.11	glob	0.00%	1.35
	-0.11	del	1.00%	
124 sil	-0.27	glob	0.00%	1.35
	-0.27	del	1.00%	
125 sil	-0.36	glob	0.00%	1.35
	-0.36	del	1.00%	
126 sil	-2.00	glob	0.00%	1.35
	-2.00	del	1.00%	
127 sil	-2.00	glob	0.00%	1.35
	-2.00	del	1.00%	
128 sil	-2.50	glob	0.00%	1.35
	-2.50	del	1.00%	
129 sil	-1.41	glob	0.00%	1.35
	-1.41	del	1.00%	
130 sil	-0.57	glob	0.00%	1.35
	-0.57	del	1.00%	
131 sil	-0.57	glob	0.00%	1.35
	-0.57	del	1.00%	
132 sil	-1.41	glob	0.00%	1.35
	-1.41	del	1.00%	
133 sil	-2.00	glob	0.00%	1.35
	-2.00	del	1.00%	

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 1

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	9	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 2

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0

```
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   3
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     5   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   4
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   5
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     5   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   6
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   7
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   8
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.   9
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
```

```
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  10
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     5   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  11
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     3   stale   koef :   1.00  vyber :   0
    zat. stav :     5   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  12
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  13
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     4   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  14
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     5   stale   koef :   1.00  vyber :   0
    zat. stav :     6   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0

 K O M B I N A C E    Z A T.   S T A V U  -
Kombinace c.  15
-----------------------------------------------------------------
    zat. stav :     1   stale   koef :   1.00  vyber :   0
    zat. stav :     2   stale   koef :   1.00  vyber :   0
    zat. stav :     5   stale   koef :   1.00  vyber :   0
    zat. stav :     7   stale   koef :   1.00  vyber :   0
    zat. stav :     9   stale   koef :   1.00  vyber :   0
```

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 16

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	8	stale	koef :	1.00	vyber :	0
zat. stav :	9	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 17

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0
zat. stav :	8	stale	koef :	1.00	vyber :	0
zat. stav :	9	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 18

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	3	stale	koef :	1.00	vyber :	0
zat. stav :	5	stale	koef :	1.00	vyber :	0
zat. stav :	8	stale	koef :	1.00	vyber :	0
zat. stav :	9	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 19

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	4	stale	koef :	1.00	vyber :	0
zat. stav :	8	stale	koef :	1.00	vyber :	0
zat. stav :	9	stale	koef :	1.00	vyber :	0

K O M B I N A C E Z A T. S T A V U -
Kombinace c. 20

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	2	stale	koef :	1.00	vyber :	0
zat. stav :	5	stale	koef :	1.00	vyber :	0
zat. stav :	8	stale	koef :	1.00	vyber :	0
zat. stav :	9	stale	koef :	1.00	vyber :	0

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy		1.radek = minimim		2.radek = maximum				
sila X								
133	0.000	6	-494.7	0.0	0.0	11.5	-8.0	-4.3
127	1.034	13	-142.7	0.0	-46.7	0.0	8.0	0.0
moment X								
126	0.000	6	-467.6	-25.1	0.0	0.0	29.5	-33.6
126	0.000	7	-467.5	25.1	0.0	0.0	-29.5	33.6
sila Z								
126	0.000	17	-397.5	0.0	-84.1	167.7	0.0	0.0
127	0.000	16	-463.7	0.0	0.0	0.0	0.0	0.0

moment Y

127	0.000	16	-463.7	0.0	0.0	0.0	0.0	0.0
133	0.000	17	-424.6	0.0	-46.7	350.2	0.0	0.0

sila Y

126	0.000	11	-441.4	25.1	0.0	0.0	-29.5	33.6
126	0.000	6	-467.6	-25.1	0.0	0.0	29.5	-33.6

moment Z

126	0.000	6	-467.6	-25.1	0.0	0.0	29.5	-33.6
126	0.000	15	-193.3	25.1	0.0	0.0	-29.5	33.6

Vyhledano pro
Prurez : 1
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m

extremy 1.radek = minimim 2.radek = maximum

sila X

129	0.000	7	-468.1	0.0	0.0	0.0	-0.5	3.2
129	6.660	12	-136.9	0.0	-46.7	0.0	0.3	0.0

moment X

129	0.000	1	-467.7	0.0	0.0	0.0	-0.1	0.8
129	0.000	17	-397.6	0.0	-46.7	310.7	-0.1	0.7

sila Z

129	0.000	2	-397.7	0.0	-46.7	310.7	-0.1	0.7
129	0.000	16	-467.7	0.0	0.0	0.0	-0.1	0.8

moment Y

129	0.000	16	-467.7	0.0	0.0	0.0	-0.1	0.8
129	0.000	2	-397.7	0.0	-46.7	310.7	-0.1	0.7

sila Y

129	0.000	11	-414.6	0.0	0.0	0.0	-3.5	23.0
129	0.000	12	-149.6	0.0	-46.7	310.7	0.3	-1.8

moment Z

129	0.000	12	-149.6	0.0	-46.7	310.7	0.3	-1.8
129	0.000	11	-414.6	0.0	0.0	0.0	-3.5	23.0

Vyhledano pro
Prurez : 2
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m

extremy 1.radek = minimim 2.radek = maximum

sila X

128	0.000	6	-398.0	0.0	0.0	0.0	5.6	-39.9
128	7.180	13	-112.7	0.0	-46.7	0.0	-9.0	0.0

moment X

128	0.000	2	-340.2	0.0	-46.7	335.0	-1.7	12.4
128	0.000	16	-397.5	0.0	0.0	0.0	-1.7	12.4

sila Z

128	0.000	17	-340.2	0.0	-46.7	335.0	-1.7	12.4
128	0.000	1	-397.5	0.0	0.0	0.0	-1.7	12.4

moment Y

128	0.000	1	-397.5	0.0	0.0	0.0	-1.7	12.4
128	0.000	17	-340.2	0.0	-46.7	335.0	-1.7	12.4

sila Y

128	0.000	15	-160.1	0.0	0.0	0.0	-66.9	480.6
128	0.000	6	-398.0	0.0	0.0	0.0	5.6	-39.9

moment Z

128	0.000	6	-398.0	0.0	0.0	0.0	5.6	-39.9
128	0.000	15	-160.1	0.0	0.0	0.0	-66.9	480.6

Vyhledano pro
Prurez : 3
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
10	0.000	7	-213.0	0.0	0.7	-0.5	0.0	0.0
32	0.000	10	175.8	0.0	0.6	-0.2	0.0	0.0
moment X								
31	0.000	2	139.8	0.0	0.5	0.0	0.0	0.0
2	0.000	2	139.4	0.0	0.6	-0.2	0.0	0.0
sila Z								
7	3.001	10	-171.0	0.0	-0.7	-0.5	0.0	0.0
9	0.000	6	-200.8	0.0	0.7	-1.0	0.0	0.0
moment Y								
9	0.000	6	-200.8	0.0	0.7	-1.0	0.0	0.0
32	1.526	10	175.7	0.0	0.0	0.3	0.0	0.0
sila Y								
15	0.000	2	-93.1	0.0	0.4	0.0	0.0	0.0
23	0.000	2	-177.3	0.0	0.4	0.0	0.0	0.0
moment Z								
16	3.001	2	-93.2	0.0	-0.7	-0.7	0.0	0.0
16	3.001	16	-110.2	0.0	-0.7	-0.8	0.0	0.0

Vyhledano pro
Prurez : 4
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
12	0.000	15	15.2	0.0	0.3	-0.2	0.0	0.0
30	0.000	6	311.0	0.0	0.3	0.0	0.0	0.0
moment X								
4	0.000	16	309.2	0.0	0.3	0.0	0.0	0.0
4	0.000	2	261.2	0.0	0.3	0.0	0.0	0.0
sila Z								
11	3.001	11	58.0	0.0	-0.3	-0.2	0.0	0.0
6	0.000	10	166.9	0.0	0.3	-0.1	0.0	0.0
moment Y								
11	3.001	11	58.0	0.0	-0.3	-0.2	0.0	0.0
30	1.500	6	311.0	0.0	0.0	0.2	0.0	0.0
sila Y								
12	0.000	2	66.8	0.0	0.3	-0.2	0.0	0.0
22	0.000	2	65.3	0.0	0.3	-0.2	0.0	0.0
moment Z								
14	3.001	2	93.8	0.0	-0.3	0.0	0.0	0.0
14	3.001	16	111.0	0.0	-0.3	0.0	0.0	0.0

Vyhledano pro
Prurez : 5
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								

43	0.000	11	-147.4	0.0	0.7	-0.4	0.0	0.0
40	3.001	6	450.9	0.0	-0.5	-0.5	0.0	0.0
moment X								
52	0.000	2	-107.1	0.0	0.3	0.0	0.0	0.0
43	0.000	2	-109.8	0.0	0.6	-0.4	0.0	0.0
sila Z								
38	3.001	10	-59.7	0.0	-0.7	-0.6	0.0	0.0
57	0.000	7	-48.0	0.0	0.7	-0.6	0.0	0.0
moment Y								
39	3.001	6	449.6	0.0	-0.5	-0.6	0.0	0.0
58	1.500	6	-49.9	0.0	-0.2	0.3	0.0	0.0
sila Y								
52	0.000	17	-107.1	0.0	0.3	0.0	0.0	0.0
39	0.000	8	380.8	0.0	0.5	-0.5	0.0	0.0
moment Z								
47	0.000	2	269.3	0.0	0.5	-0.5	0.0	0.0
47	0.000	16	318.6	0.0	0.5	-0.5	0.0	0.0

Vyhledano pro
Prurez : 6
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
113	0.000	6	-353.9	0.0	0.8	0.0	0.0	0.0
94	4.136	12	-68.1	0.0	-0.7	0.0	0.0	0.0
moment X								
106	0.000	2	-298.6	0.0	0.8	0.0	0.0	0.0
113	0.000	2	-299.1	0.0	0.8	0.0	0.0	0.0
sila Z								
106	3.808	1	-351.8	0.0	-0.8	0.0	0.0	0.0
106	0.000	4	-106.3	0.0	0.8	0.0	0.0	0.0
moment Y								
106	3.808	6	-351.7	0.0	-0.8	0.0	0.0	0.0
125	4.136	6	-231.4	0.0	-0.7	0.0	0.0	0.0
sila Y								
113	0.000	2	-299.1	0.0	0.8	0.0	0.0	0.0
121	0.000	2	-257.8	0.0	0.7	0.0	0.0	0.0
moment Z								
113	3.808	2	-298.0	0.0	-0.8	0.0	0.0	0.0
121	3.802	2	-256.6	0.0	-0.7	0.0	0.0	0.0

Vyhledano pro
Prurez : 7
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
110	0.000	12	38.6	0.0	0.3	0.0	0.0	0.0
97	3.802	6	270.8	0.0	-0.3	0.0	0.0	0.0
moment X								
105	0.000	2	187.8	0.0	0.3	0.0	0.0	0.0
114	0.000	2	188.5	0.0	0.3	0.0	0.0	0.0
sila Z								
109	3.808	1	133.2	0.0	-0.3	0.0	0.0	0.0
105	0.000	1	222.3	0.0	0.3	0.0	0.0	0.0

moment Y

109	3.808	13	39.8	0.0	-0.3	0.0	0.0	0.0
97	3.802	7	270.0	0.0	-0.3	0.0	0.0	0.0

sila Y

114	0.000	2	188.5	0.0	0.3	0.0	0.0	0.0
101	0.000	2	152.0	0.0	0.3	0.0	0.0	0.0

moment Z

114	3.808	2	188.9	0.0	-0.3	0.0	0.0	0.0
101	3.802	2	152.5	0.0	-0.3	0.0	0.0	0.0

Vyhledano pro
Prurez : 8
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
112	0.000	6	-191.3	0.0	0.6	0.0	0.0	0.0
124	3.802	15	-12.0	0.0	-0.5	0.0	0.0	0.0
moment X								
124	0.000	2	-44.1	0.0	0.5	0.0	0.0	0.0
95	0.000	2	-43.5	0.0	0.5	0.0	0.0	0.0
sila Z								
107	3.808	1	-189.5	0.0	-0.6	0.0	0.0	0.0
107	0.000	1	-190.3	0.0	0.6	0.0	0.0	0.0
moment Y								
107	3.808	13	-56.0	0.0	-0.6	0.0	0.0	0.0
124	3.802	6	-51.3	0.0	-0.5	0.0	0.0	0.0
sila Y								
120	0.000	2	-120.4	0.0	0.5	0.0	0.0	0.0
112	0.000	2	-161.5	0.0	0.6	0.0	0.0	0.0
moment Z								
120	3.802	2	-119.5	0.0	-0.5	0.0	0.0	0.0
112	3.808	2	-160.6	0.0	-0.6	0.0	0.0	0.0

Vyhledano pro
Prurez : 9
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
78	0.000	6	-71.3	0.0	0.0	0.0	0.0	0.0
93	2.340	10	21.9	0.0	0.0	0.0	0.0	0.0
moment X								
84	0.000	2	-47.7	0.0	0.0	0.0	0.0	0.0
72	0.000	2	-48.6	0.0	0.0	0.0	0.0	0.0
sila Z								
88	2.340	1	-56.8	0.0	0.0	0.0	0.0	0.0
93	0.000	1	19.2	0.0	0.0	0.0	0.0	0.0
moment Y								
88	2.340	6	-56.8	0.0	0.0	0.0	0.0	0.0
93	2.340	6	19.5	0.0	0.0	0.0	0.0	0.0
sila Y								
76	0.000	2	-47.8	0.0	0.0	0.0	0.0	0.0
84	0.000	2	-47.7	0.0	0.0	0.0	0.0	0.0
moment Z								
76	2.340	2	-47.5	0.0	0.0	0.0	0.0	0.0
84	2.340	2	-47.5	0.0	0.0	0.0	0.0	0.0

Vyhledano pro
Prurez : 10
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
111	0.000	6	-30.1	0.0	0.2	0.0	0.0	0.0
96	3.802	6	109.6	0.0	-0.2	0.0	0.0	0.0
moment X								
104	0.000	2	51.5	0.0	0.2	0.0	0.0	0.0
115	0.000	2	50.6	0.0	0.2	0.0	0.0	0.0
sila Z								
108	3.808	1	-28.8	0.0	-0.2	0.0	0.0	0.0
108	0.000	1	-29.2	0.0	0.2	0.0	0.0	0.0
moment Y								
119	3.802	15	3.8	0.0	-0.2	0.0	0.0	0.0
123	3.802	12	32.3	0.0	-0.2	0.0	0.0	0.0
sila Y								
100	0.000	2	15.9	0.0	0.2	0.0	0.0	0.0
119	0.000	2	15.1	0.0	0.2	0.0	0.0	0.0
moment Z								
100	3.802	2	16.3	0.0	-0.2	0.0	0.0	0.0
119	3.802	2	15.4	0.0	-0.2	0.0	0.0	0.0

Vyhledano pro
Prurez : 11
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								
60	3.001	6	-287.9	0.0	-0.6	0.0	0.0	0.0
34	3.001	12	-80.0	0.0	-0.5	-0.2	0.0	0.0
moment X								
60	0.000	2	-243.1	0.0	0.5	0.1	0.0	0.0
35	0.000	2	-241.4	0.0	0.6	0.0	0.0	0.0
sila Z								
36	3.001	10	-279.1	0.0	-0.7	-0.4	0.0	0.0
59	0.000	7	-286.1	0.0	0.7	-0.3	0.0	0.0
moment Y								
36	3.001	10	-279.1	0.0	-0.7	-0.4	0.0	0.0
60	1.500	6	-287.8	0.0	0.0	0.5	0.0	0.0
sila Y								
35	0.000	17	-241.4	0.0	0.6	0.0	0.0	0.0
36	0.000	17	-240.3	0.0	0.4	0.1	0.0	0.0
moment Z								
59	0.000	2	-242.0	0.0	0.7	-0.3	0.0	0.0
59	0.000	16	-286.3	0.0	0.7	-0.3	0.0	0.0

Vyhledano pro
Prurez : 12
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy	1.radek = minimim		2.radek = maximum					
sila X								

131	0.000	6	-137.8	0.0	0.0	0.0	-0.3	1.5
130	5.640	12	-40.6	0.0	0.0	0.0	0.2	0.0
moment X								
130	0.000	8	-116.8	0.0	0.0	0.0	0.5	-2.6
130	0.000	16	-137.4	0.0	0.0	0.0	0.4	-2.0
sila Z								
130	0.000	16	-137.4	0.0	0.0	0.0	0.4	-2.0
130	0.000	2	-117.0	0.0	0.0	0.0	0.3	-1.7
moment Y								
130	5.640	16	-133.0	0.0	0.0	0.0	0.4	0.0
130	5.640	2	-112.7	0.0	0.0	0.0	0.3	0.0
sila Y								
131	0.000	11	-118.2	0.0	0.0	0.0	-1.9	10.5
130	0.000	6	-137.1	0.0	0.0	0.0	0.5	-2.9
moment Z								
130	0.000	6	-137.1	0.0	0.0	0.0	0.5	-2.9
131	0.000	11	-118.2	0.0	0.0	0.0	-1.9	10.5

Vyhledano pro
Prurez : 13
Sled kombinaci : 1..20

Vypoctove vnitrni sily na prutech

Prut	[m]	Kombi	N	Mx	Tz	My	Ty	Mz
			kN	kN.m	kN	kN.m	kN	kN.m
extremy 1.radek = minimim 2.radek = maximum								
sila X								
132	0.000	6	-495.7	0.0	0.0	11.5	-8.0	0.0
132	0.540	4	-159.4	0.0	-46.7	285.5	0.0	0.0
moment X								
132	0.000	6	-495.7	0.0	0.0	11.5	-8.0	0.0
132	0.000	7	-495.6	0.0	0.0	11.5	8.0	0.0
sila Z								
132	0.000	2	-408.4	0.0	-46.7	310.7	0.0	0.0
132	0.000	16	-495.7	0.0	0.0	64.7	0.0	0.0
moment Y								
132	0.000	1	-478.5	0.0	0.0	0.0	0.0	0.0
132	0.000	17	-425.6	0.0	-46.7	375.4	0.0	0.0
sila Y								
132	0.000	12	-177.6	0.0	-46.7	322.2	-8.0	0.0
132	0.000	11	-469.5	0.0	0.0	11.5	8.0	0.0
moment Z								
132	0.540	6	-494.7	0.0	0.0	11.5	-8.0	-4.3
132	0.540	11	-468.4	0.0	0.0	11.5	8.0	4.3

Vyhledano pro
Prurez : 14
Sled kombinaci : 1..20

Vypoctove reakce v podporach

Uzel	ZS	Px	Py	Pz	Mx	My	Mz
		kN	kN	kN	kN.m	kN.m	kN.m
64	1	0.0	0.0	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	0.0	0.0	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0
65	1	0.0	0.0	46.4	0.0	0.0	0.0

	2	0.0	0.0	181.0	0.0	0.0	0.0
	3	0.0	0.0	248.1	0.0	0.0	0.0
	4	46.7	0.0	-70.1	0.0	310.7	0.0
	5	0.0	0.0	-26.2	0.0	0.0	0.0
	6	0.0	-8.0	17.2	0.0	11.5	0.0
	7	0.0	8.0	17.1	0.0	11.5	0.0
	8	0.0	0.0	17.1	0.0	64.7	0.0
	9	0.0	0.0	3.0	0.0	0.0	0.0
68	1	0.0	0.0	48.0	0.0	0.0	0.0
	2	0.0	0.0	146.7	0.0	0.0	0.0
	3	0.0	0.0	202.7	-0.1	0.0	0.0
	4	46.7	0.0	-57.3	0.0	335.0	0.0
	5	0.0	-57.9	-34.2	415.8	0.0	0.0
	6	0.0	7.3	0.6	-52.3	0.0	0.0
	7	0.0	-7.3	-0.5	52.3	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	-1.8	0.1	12.6	0.0	0.0
69	1	0.0	0.0	41.5	0.0	0.0	0.0
	2	0.0	0.0	178.5	0.0	0.0	0.0
	3	0.0	0.0	247.7	0.0	0.0	0.0
	4	46.7	0.0	-70.1	0.0	310.7	0.0
	5	0.0	-3.0	-53.5	19.8	0.0	0.0
	6	0.0	0.4	-0.4	-2.5	0.0	0.0
	7	0.0	-0.4	0.4	2.5	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.6	0.0	0.0
70	1	0.0	0.0	13.9	-0.1	0.0	0.0
	2	0.0	0.2	51.6	-0.9	0.0	0.0
	3	0.0	0.2	71.9	-1.2	0.0	0.0
	4	0.0	0.0	-20.3	0.3	0.0	0.0
	5	0.0	-1.4	-2.2	7.6	0.0	0.0
	6	0.0	0.2	-0.2	-0.9	0.0	0.0
	7	0.0	-0.2	0.2	0.9	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.2	0.0	0.0
71	1	0.0	0.0	13.9	0.1	0.0	0.0
	2	0.0	-0.2	51.9	0.9	0.0	0.0
	3	0.0	-0.2	71.9	1.2	0.0	0.0
	4	0.0	0.0	-20.3	-0.3	0.0	0.0
	5	0.0	-1.3	-19.5	7.1	0.0	0.0
	6	0.0	0.2	0.0	-0.9	0.0	0.0
	7	0.0	-0.2	0.0	0.9	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.2	0.0	0.0

Normove deformace v uzlech

Uzel	Kombi	X	Y	Z	Rx	Ry	Rz
		mm	mm	mm	rad	rad	rad
extremy		1.radek = minimim		2.radek = maximum			
posuv X							
18	2	-16.4	0.5	-2.6	-0.0013	-0.0019	0.0000
34	2	12.1	1.4	-9.0	-0.0034	-0.0008	0.0002
posuv Y							
1	6	-0.6	-10.5	-0.4	0.0028	-0.0001	0.0000
33	11	0.0	40.9	-0.3	-0.0109	0.0000	0.0000
posuv Z							
61	6	0.0	-0.2	-26.8	-0.0008	0.0000	0.0000
65	4	0.0	0.0	0.0	-0.0001	0.0000	0.0000
rot X							
33	11	0.0	40.9	-0.3	-0.0109	0.0000	0.0000
64	6	0.0	-2.6	-10.9	0.0040	0.0000	0.0000

```
rot Y
  67   17 |      -8.2      0.5     -0.4 |    0.0000 -0.0022  0.0000
  70    2 |       0.0      0.0      0.0 |    0.0000  0.0001 -0.0008
rot Z
  67    7 |      -0.2      1.6     -0.4 |   -0.0019  0.0000 -0.0313
  67    6 |      -0.2     -0.6     -0.4 |    0.0018  0.0000  0.0313
Vyhledano pro
Sled uzlu : 1..72
Sled kombinaci : 1..20
```

POSOUZENÍ PRŮŘEZŮ

```
Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |     MPa               Mpa              Mpa
-------------------------------------------------------------------
sigma min prut  :   133   prurez  :    1   rez  :   3.67 [m]
   1  2.00    8    -101.8              0.0             101.8
sigma max prut  :   133   prurez  :    1   rez  :   3.67 [m]
   3 11.00   13      50.9              0.0              50.9
tau       prut  :   126   prurez  :    1   rez  :   1.42 [m]
   2  6.01   13      -6.2           -100.4             174.0
sigma sr. prut  :   126   prurez  :    1   rez  :   0.00 [m]
   2  6.01    6     -41.3             99.6             177.4

  vyuziti prurezu :   79.7 %    ISV 740/250/12/35
          Náhrada za ISV 660/200/10/30 + HEA 240 VYHOVI !
Vyhledano pro
Prurez : 1
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |     MPa               Mpa              Mpa
-------------------------------------------------------------------
sigma min prut  :   129   prurez  :    2   rez  :   0.00 [m]
   1  1.00    9    -168.8              0.0             168.8
sigma max prut  :   129   prurez  :    2   rez  :   0.00 [m]
   3 11.00   13      56.0              0.0              56.0
tau       prut  :   129   prurez  :    2   rez  :   6.66 [m]
   2  7.50    4     -24.2             -8.0              24.2
sigma sr. prut  :   129   prurez  :    2   rez  :   0.00 [m]
   1  1.00    9    -168.8              0.0             168.8

  vyuziti prurezu :   80.4 %    ISV 660/200/10/30 VYHOVI !
Vyhledano pro
Prurez : 2
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |     MPa               Mpa              Mpa
-------------------------------------------------------------------
sigma min prut  :   128   prurez  :    3   rez  :   0.00 [m]
   7 28.00   11    -171.7              0.0             171.7
sigma max prut  :   128   prurez  :    3   rez  :   0.00 [m]
   6 22.00   15     148.3              0.0             148.3
tau       prut  :   128   prurez  :    3   rez  :   7.18 [m]
   5 17.99   15      -6.1             11.4              11.4
sigma sr. prut  :   128   prurez  :    3   rez  :   0.00 [m]
   7 28.00   11    -171.7              0.0             171.7
```

vyuziti prurezu : 81.8 % **KSV 660/200/10/30 + 600/200/10/20 VYHOVI !**
Vyhledano pro
Prurez : 3
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min prut :			9	prurez :	4	rez :	0.00	[m]
1	9.00	7	-139.8		0.0		139.8	
sigma max prut :			32	prurez :	4	rez :	0.00	[m]
2	18.00	10	56.1		0.0		56.1	
tau prut :			1	prurez :	4	rez :	3.05	[m]
2	18.75	4	14.3		-0.6		14.3	
sigma sr. prut :			9	prurez :	4	rez :	0.00	[m]
1	9.00	7	-139.8		0.0		139.8	

vyuziti prurezu : 66.6 % **2L 90x10** VYHOVI !
Vyhledano pro
Prurez : 4
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min prut :			12	prurez :	5	rez :	0.00	[m]
2	10.75	15	-2.8		0.0		2.8	
sigma max prut :			29	prurez :	5	rez :	0.00	[m]
2	18.00	6	177.6		0.0		177.6	
tau prut :			6	prurez :	5	rez :	0.00	[m]
2	18.75	18	92.8		0.5		92.8	
sigma sr. prut :			29	prurez :	5	rez :	0.00	[m]
2	18.00	6	177.6		0.0		177.6	

vyuziti prurezu : 84.6 % **2L 60x8** VYHOVI !
Vyhledano pro
Prurez : 5
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa		tau Mpa		sig.srov. Mpa	
sigma min prut :			43	prurez :	6	rez :	0.00	[m]
1	2.00	11	-139.1		0.0		139.1	
sigma max prut :			40	prurez :	6	rez :	0.00	[m]
2	11.00	6	157.1		0.0		157.1	
tau prut :			38	prurez :	6	rez :	3.00	[m]
2	18.75	18	-51.3		-0.7		51.3	
sigma sr. prut :			40	prurez :	6	rez :	0.00	[m]
2	11.00	6	157.1		0.0		157.1	

vyuziti prurezu : 74.8 % **2L 80x10** VYHOVI !
Vyhledano pro
Prurez : 6
Sled kombinaci : 1..20

```
Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |     MPa               Mpa               Mpa
-------------------------------------------------------------
sigma min prut  :   113   prurez  :    7   rez  :   0.00 [m]
   1  1.00    6   -146.7               0.2             146.7
sigma max prut  :    94   prurez  :    7   rez  :   4.14 [m]
   1  1.00   12    -32.0              -0.2              32.0
tau       prut  :   113   prurez  :    7   rez  :   3.81 [m]
   1  1.25    4    -43.8              -0.5              43.8
sigma sr. prut  :   113   prurez  :    7   rez  :   0.00 [m]
   1  1.00    6   -146.7               0.2             146.7

  vyuziti prurezu :   69.8 %    2L 120x10 VYHOVI !
Vyhledano pro
Prurez : 7
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |     MPa               Mpa               Mpa
-------------------------------------------------------------
sigma min prut  :   110   prurez  :    8   rez  :   0.00 [m]
   1  1.00   12     3.1               0.1               3.1
sigma max prut  :    97   prurez  :    8   rez  :   3.80 [m]
   1  1.52    6   149.9              -0.4             149.9
tau       prut  :   114   prurez  :    8   rez  :   0.00 [m]
   2 18.75    4    36.6               0.5              36.6
sigma sr. prut  :    97   prurez  :    8   rez  :   3.80 [m]
   1  1.52    6   149.9              -0.4             149.9

  vyuziti prurezu :   71.4 %    2L 60x8 VYHOVI !
Vyhledano pro
Prurez : 8
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |     MPa               Mpa               Mpa
-------------------------------------------------------------
sigma min prut  :   112   prurez  :    9   rez  :   0.00 [m]
   1  1.00    6   -174.6               0.0             174.6
sigma max prut  :   124   prurez  :    9   rez  :   3.80 [m]
   1  1.75   15    -10.9              -0.2              10.9
tau       prut  :    95   prurez  :    9   rez  :   3.80 [m]
   1  1.25    4    -12.8              -0.5              12.8
sigma sr. prut  :   112   prurez  :    9   rez  :   0.00 [m]
   1  1.00    6   -174.6               0.0             174.6

  vyuziti prurezu :   83.2 %    2L 90x10 VYHOVI !
Vyhledano pro
Prurez : 9
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |     MPa               Mpa               Mpa
-------------------------------------------------------------
sigma min prut  :    78   prurez  :   10   rez  :   0.00 [m]
   1  1.00    6   -186.7               0.0             186.7
sigma max prut  :    93   prurez  :   10   rez  :   2.34 [m]
```

```
   1  9.00    10      22.8                0.0              22.8
tau        prut  :     84   prurez  :    10   rez  :    2.34 [m]
   1  1.00     4     -37.7                -0.1              37.7
sigma sr. prut  :     78   prurez  :    10   rez  :    0.00 [m]
   1  1.00     6    -186.7                0.0             186.7

  vyuziti prurezu :   88.9 %    2L 50x5 VYHOVI !
Vyhledano pro
Prurez : 10
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa               Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :    111   prurez  :    11   rez  :    0.00 [m]
   1  1.00     6    -145.3                0.2             145.3
sigma max prut  :     96   prurez  :    11   rez  :    3.80 [m]
   1  1.00     6      79.3               -0.2              79.3
tau        prut  :    115   prurez  :    11   rez  :    3.81 [m]
   1  1.25     4      12.4               -0.5              12.4
sigma sr. prut  :    111   prurez  :    11   rez  :    0.00 [m]
   1  1.00     6    -145.3                0.2             145.3

  vyuziti prurezu :   69.2 %    2L 60x6 VYHOVI !
Vyhledano pro
Prurez : 11
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa               Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :     59   prurez  :    12   rez  :    0.00 [m]
   1  2.00     6    -183.6                0.0             183.6
sigma max prut  :     34   prurez  :    12   rez  :    0.00 [m]
   2 11.00    12     -46.9                0.0              46.9
tau        prut  :     36   prurez  :    12   rez  :    3.00 [m]
   2 18.75    18    -171.5               -0.6             171.5
sigma sr. prut  :     59   prurez  :    12   rez  :    0.00 [m]
   1  2.00     6    -183.6                0.0             183.6

  vyuziti prurezu :   87.4 %    2L 90x10 VYHOVI !
Vyhledano pro
Prurez : 12
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane
Prv. Vlak. Kom.|  sigma x              tau          sig.srov.
               |      MPa               Mpa               Mpa
-------------------------------------------------------------------
sigma min prut  :    131   prurez  :    13   rez  :    0.00 [m]
   1  9.00    11    -142.1                0.0             142.1
sigma max prut  :    131   prurez  :    13   rez  :    0.00 [m]
   1  1.00    15      53.1                0.0              53.1
tau        prut  :    131   prurez  :    13   rez  :    5.64 [m]
   1  6.50    11     -54.7               -0.4              54.7
sigma sr. prut  :    131   prurez  :    13   rez  :    0.00 [m]
   1  9.00    11    -142.1                0.0             142.1

  vyuziti prurezu :   67.6 %    IPE 360 VYHOVI !
```

Vyhledano pro
Prurez : 13
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv.	Vlak.	Kom.	sigma x MPa			tau Mpa			sig.srov. Mpa	
sigma min	prut	:	132	prurez	:	14	rez	:	0.00	[m]
1	1.00	17	-184.4			0.0			184.4	
sigma max	prut	:	132	prurez	:	14	rez	:	0.00	[m]
3	11.00	19	59.0			0.0			59.0	
tau	prut	:	132	prurez	:	14	rez	:	0.54	[m]
2	7.50	4	-28.1			-8.0			28.1	
sigma sr.	prut	:	132	prurez	:	14	rez	:	0.00	[m]
1	1.00	17	-184.4			0.0			184.4	

vyuziti prurezu : 87.8 % **ISV 660/200/10/30 VYHOVI !**
Vyhledano pro
Prurez : 14
Sled kombinaci : 1..20