

# STATICKÁ A PROJEKČNÍ KANCELÁŘ – ING. STANISLAV RADA



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A.	Základní dokument		
Revize	Obsah		
		Ing. Rada	30.12.2012
		provedl	datum
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Objednatel : DP Ostrava a.s., Poděbradova 494/2, 701 71 O.-Mor. Ostrava		Dat. : 12/2012	
Akce : Stavebně-statický posudek přetížení střešní konstrukce haly vozovny tramvají Poruba zařízením zabraňujícím pádu pracovníků ze střech tramvají a zařízením odklopné troleje.		Form :	
Místo : DP Ostrava a.s.-Provozovna Tramvaje Poruba		Zak.č.: 12-065	Kopie:
Část : Stavební objekty		F.	<b>1</b>
SO/PS : Stavebně-statický posudek přetížení střešní konstrukce haly		1.	
Profese: Statika – ocelové konstrukce		30-00	
Obsah : <b>STATICKÝ VÝPOČET ČSN-EN</b>		30-02.2	Rev. A.

Tato dokumentace je majetkem zhotovitele a její využití je určeno výhradně k plnění podle smlouvy.  
 Jakékoliv další využití, rozšiřování, kopírování nebo poskytnutí třetím osobám je možné pouze se souhlasem zhotovitele.

## OBSAH STATICKÉHO VÝPOČTU

1. Boční zábrana a vaznice v prostoru její uchycení . . . . . 2.
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3. Statické posouzení příčné vazby haly . . . . . 58.

## STATICKÝ VÝPOČET BOČNÍ ZÁBRANY A VAZNIC

### **Předpoklady statického výpočtu :**

Statický výpočet je zpracován na základě podkladů objednavatele.

Konstrukce byla navržena a staticky posouzena dle platných ČSN, především :

ČSN EN 1991-1-1                      Eurokód 1: Zatížení konstrukcí - Část 1-1 :  
Obecná zatížení - Objemové tíhy, vlastní tíha a užitné zatížení pozemních  
staveb

ČSN EN 1991-1-3                      Eurokód 1: Zatížení konstrukcí - Část 1-3 :  
Obecná zatížení - Zatížení sněhem

ČSN EN 1991-1-4                      Eurokód 1: Zatížení konstrukcí - Část 1-4 :  
Obecná zatížení - Zatížení větrem

ČSN EN 1993-1-1                      Eurokód 3: Navrhování ocelových konstrukcí - Část  
1-1 : Obecná zatížení pravidla a pravidla pro pozemní stavby

ČSN 73 2601                      Provádění ocelových konstrukcí

### Materiál

Konstrukce je posouzena na jakosti S235 dle ČSN EN 10025+A1, jakostního  
stupně JR G2

Třída provedení OK dle ČSN EN 1090-2 EXC2, EXC1.

### **1. 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. Součástí 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  $\gamma = 1,35$

Hydroisolace . . . . .	$3 \times 0,05 = 0,15$ kN/m
Sklotkanina . . . . .	$18,5 \times 0,006 \times 3,0 = 0,33$ kN/m
Bednění . . . . .	$0,25 \times 3,0 = 0,75$ kN/m
Dřevěné fošny . . . . .	$8,0 \times 0,14 \times 0,04 \times 3,0 \times 6 / 5,23 = 0,15$ kN/m
Hliníkový podhled . . . . .	$27,0 \times 0,001 \times 3,0 = 0,12$ kN/m
	$g_{z1} = 1,5$ kN/m

Zatížení světlíkem

P6 . . . . .	$0,48 \times 0,5 = 0,24$ kN/m
Fošny . . . . .	$8,0 \times 0,055 \times 0,5 = 0,22$ kN/m
Sklo s drátěnou vložkou . . . . .	$27,0 \times 0,5 \times 3,0 \times 0,8 = 0,32$ 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 sněhem  $\gamma = 1,5$

$$s_k = 1,0 \text{ kN/m}^2$$

$$\mu_1 = 0,8$$

$$g_{z1} = 1,0 \times 0,8 \times 3,0 = 2,4 \text{ kN/m}$$

$$\mu_2 = 1,6$$

$$g_{z2} = 1,0 \times 1,6 \times 3,0 = 4,8 \text{ kN/m}$$

pro  $\alpha = 45^\circ$

$$\mu_1 = 0,8(60 - 45)/30 = 0,4$$

$$P_{z1} = 1,0 \times 0,4 \times 3,0 \times 0,5 \times 3,0/0,707 = 2,55 \text{ kN}$$

3. Zatěžovací stav

Zatížení větrem  $\gamma = 1,5$

$$v_b = 25 \text{ m/sec}$$

kategorie terénu III.

$$z_0 = 0,3; z_{\min} = 5; z_e = 5,6 \text{ m}$$

$$k_r = 0,19(z_0/z_{0,II})^{0,07} = 0,19(0,3/0,05)^{0,07} = 0,215$$

$$c_r(z) = k_r \ln(z/z_0) = 0,215 \ln(5,6/0,3) = 0,629$$

$$J_v = k/c_0(z) \ln(z/z_0) = 0,342$$

$$v_m = 1,0 \times 0,629 \times 25 = 15,73$$

$$q_p = [1 + 7 J_v(z)] 0,5 \rho v_m^2(z) = [1 + 7 \times 0,342] 0,5 \times 1,25 \times 15,73^2 = 525 \text{ N/mm}^2$$

$$C_e = 0,6$$

$$g_{z1} = 0,525 \times 0,6 \times 3,0 = 0,945 \text{ kN/m}$$

$$P_{z1} = 0,525 \times 0,7 \times 0,707 \times 3,0 = 1,169 \text{ kN}$$

$$P_{x1} = 0,525 \times 0,7 \times 0,707 \times 3,0 = 1,169 \text{ kN}$$

$$P_{x2} = 1,169 + 0,525 \times 0,7 \times 0,5 \times 3,0 = 1,72 \text{ kN}$$

$$C_e = 0,3$$

$$g_{z1} = 0,525 \times 0,3 \times 3,0 = 0,473 \text{ kN/m}$$

$$P_{z1} = 0,525 \times 0,3 \times 0,707 \times 3,0 = 0,709 \text{ kN}$$

$$P_{x1} = 0,525 \times 0,3 \times 0,707 \times 3,0 = 0,709 \text{ kN}$$

$$P_{x2} = 0,709 + 0,473 \times 0,3 \times 0,5 \times 3,0 = 0,922 \text{ kN}$$

4. Zatěžovací stav

Zatížení větrem  $\gamma = 1,5$

$$C_{e1} = 0,6$$

$$g_{z1} = 0,525 \times 0,6 \times 3,0 = 0,945 \text{ kN/m}$$

$$P_{z1} = 0,525 \times 0,6 \times 0,707 \times 3,0 \times 0,5 \times 3,0 = 1,002 \text{ kN}$$

$$P_{x1} = 0,525 \times 0,6 \times 0,707 \times 3,0 \times 0,5 \times 3,0 = 1,002 \text{ kN}$$

$$P_{x2} = 1,002 + 0,525 \times 0,6 \times 0,5 \times 3,0 = 1,475 \text{ kN}$$

5. Zatěžovací stav

Vlastní tíha ok  $\gamma = 1,35$

6. Zatěžovací stav

Zatížení třmenem  $\gamma = 1,35$

dle podkladu DPO

$$G = 106,7 \text{ kg}$$

$$P_{z1} = 0,5 \times 1,067 \times 1,05 = 0,56 \text{ kN}$$

7. Zatěžovací stav

Zatížení na horní madlo  $\gamma = 1,5$

$$g_{y1} = 0,5 \text{ kN/m}$$

8. Zatěžovací stav

Zatížení na horní madlo  $\gamma = 1,5$

$$g_{y1} = 0,5 \text{ kN/m}$$

9. Zatěžovací stav

Břemeno na závěs  $\gamma = 1,5$

$$P_{y1} = 0,5 \text{ kN}$$

10. Zatěžovací stav

Břemeno na dolní tyč  $\gamma = 1,5$

$$P_{y1} = 0,5 \text{ kN}$$

11. Zatěžovací stav

Zatížení výplně  $\gamma = 1,5$

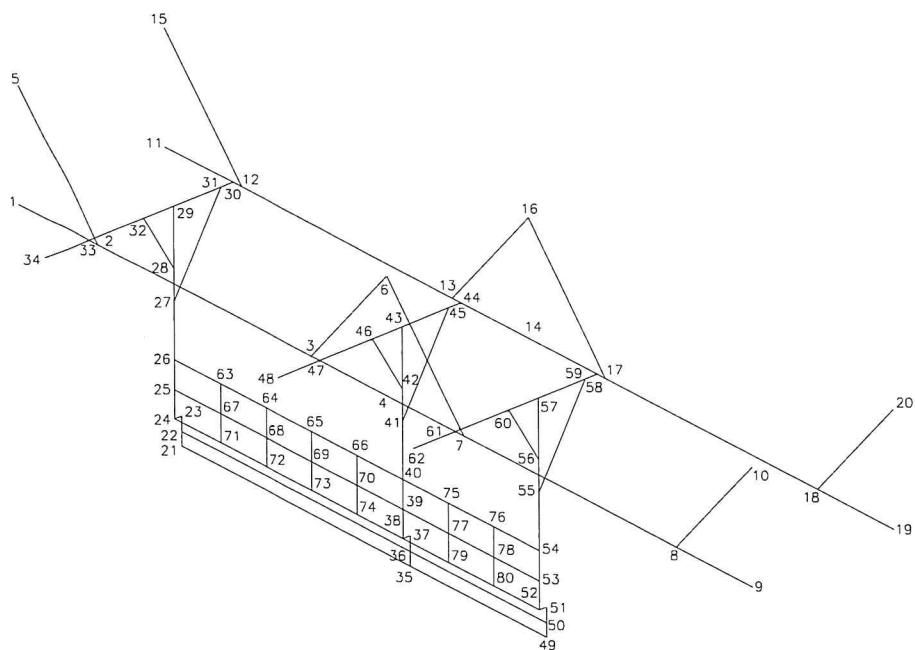


- Py1 = 0,5 kN  
 12. Zatěžovací stav  
 Zatížení výplně  $\gamma = 1,5$   
 Py1 = 0,5 kN  
 13. Zatěžovací stav  
 Zatížení výplně  $\gamma = 1,5$   
 Py1 = 0,5 kN

#### 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	

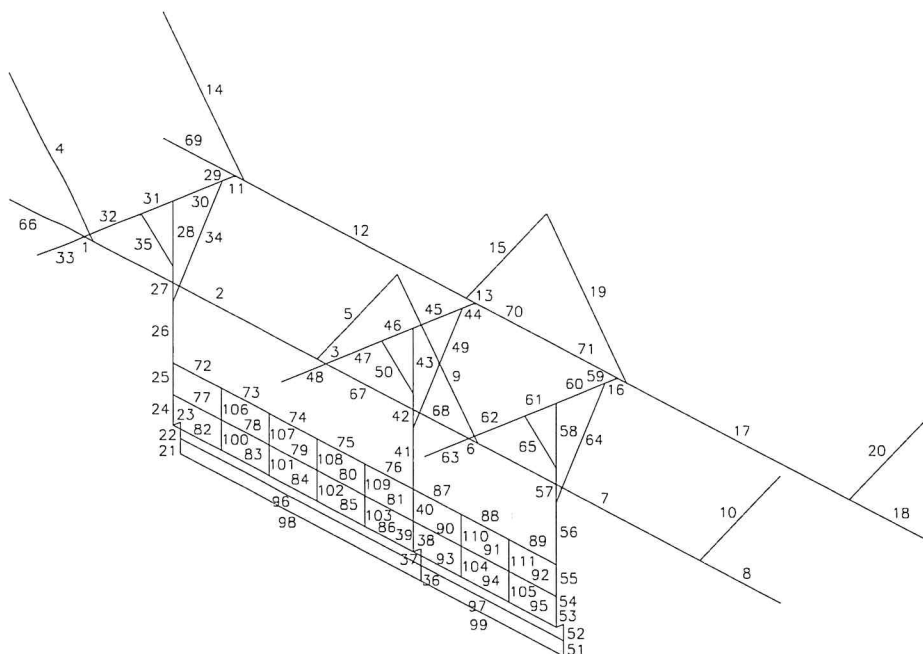
49	10.6750	1.9000	-4.3020
50	10.6750	1.9000	-4.0420
51	10.6750	1.9000	-3.7620
52	10.6750	1.7500	-3.7620
53	10.6750	1.7500	-3.2420
54	10.6750	1.7500	-2.7020
55	10.6750	1.7500	-1.6620
56	10.6750	1.7500	-1.0620
57	10.6750	1.7500	0.0380
58	10.6750	3.0000	0.0660
59	10.6750	2.7440	0.0600
60	10.6750	1.1230	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

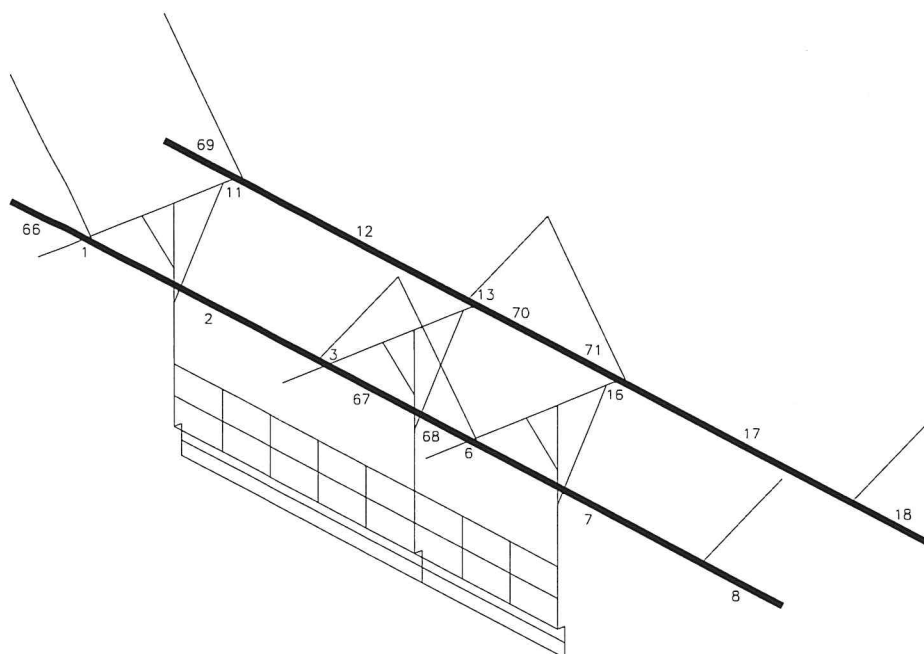
65	56	60	1.2540	6
66	1	33	1.6750	1
67	47	4	1.6750	1
68	4	61	1.6750	1
69	11	30	1.6750	1
70	44	14	1.6750	1
71	14	58	1.6750	1
72	26	63	1.1300	5
73	63	64	1.1300	5
74	64	65	1.1300	5
75	65	66	1.1300	5
76	66	40	1.1300	5
77	25	67	1.1300	7
78	67	68	1.1300	7
79	68	69	1.1300	7
80	69	70	1.1300	7
81	70	39	1.1300	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



# PRUREZ Y - charakteristiky

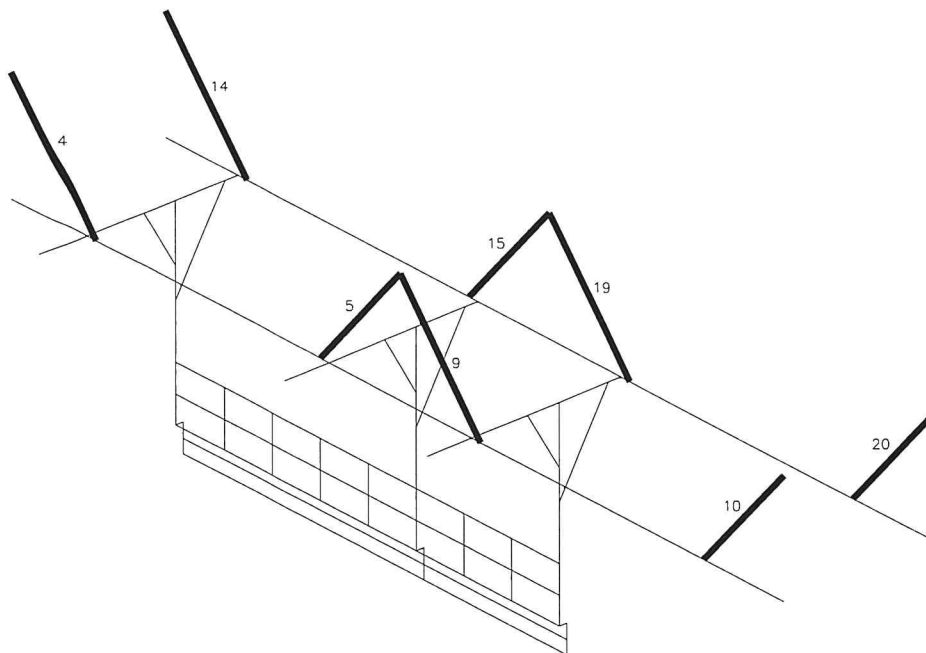
---

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 )

plocha A[m2] = 6.84000E-04

mom.setr. Iy[m4] = 1.84292E-07

mom.setr. Iw[m8] = 0.00000E+00

Prvek 1 O obraz a=80/3 b=40/3

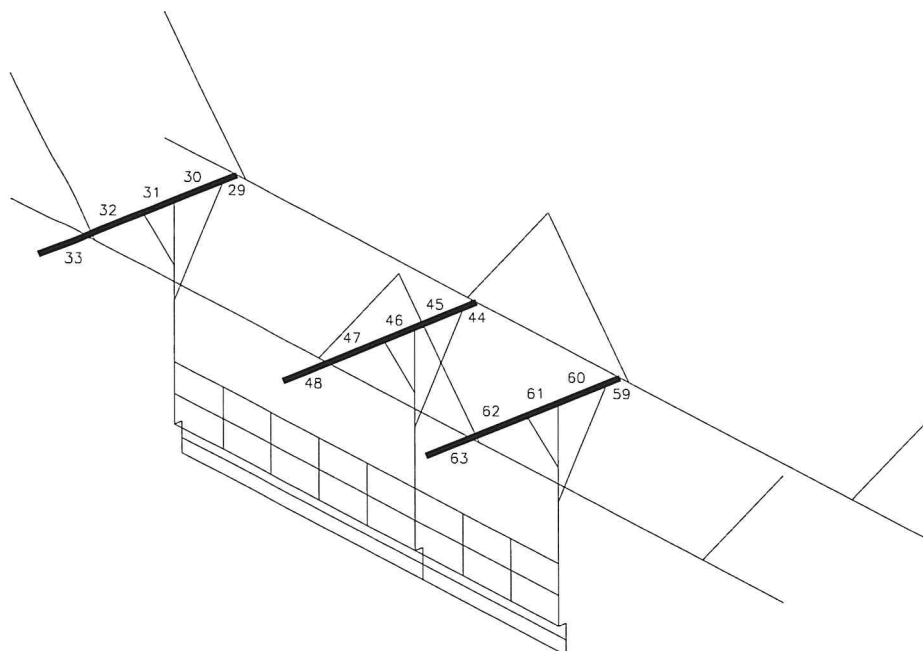
poloha teziste Y = 40.00 Z = -20.00

rotace prurezu Rx[st] = 0.00

mom.setr. Ix[m4] = 4.27200E-07

mom.setr. Iz[m4] = 5.58532E-07

ocel 37



PRUREZ c. 4 ( O obraz )

plocha A[m2] = 6.84000E-04

mom.setr. Iy[m4] = 1.84292E-07

mom.setr. Iw[m8] = 0.00000E+00

Prvek 1 O obraz a=40/3 b=80/3

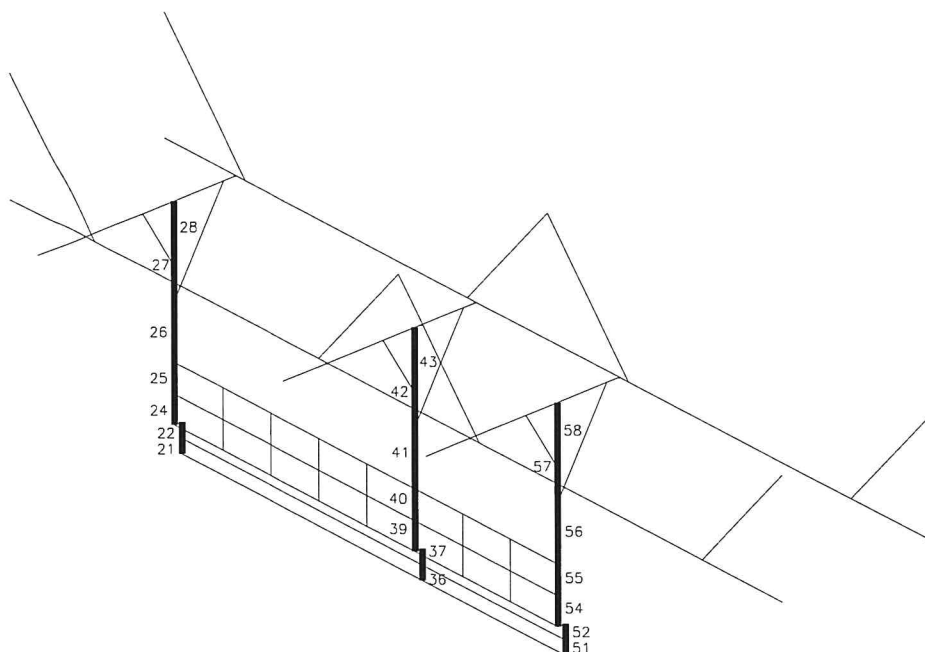
poloha teziste Y = 40.00 Z = -20.00

rotace prurezu Rx[st] = 90.00

mom.setr. Ix[m4] = 4.27200E-07

mom.setr. Iz[m4] = 5.58532E-07

ocel 37



PRUREZ c. 5 ( O obraz )

plocha A[m2] = 6.84000E-04

mom.setr. Iy[m4] = 1.84292E-07

mom.setr. Iw[m8] = 0.00000E+00

Prvek 1 O obraz a=80/3 b=40/3

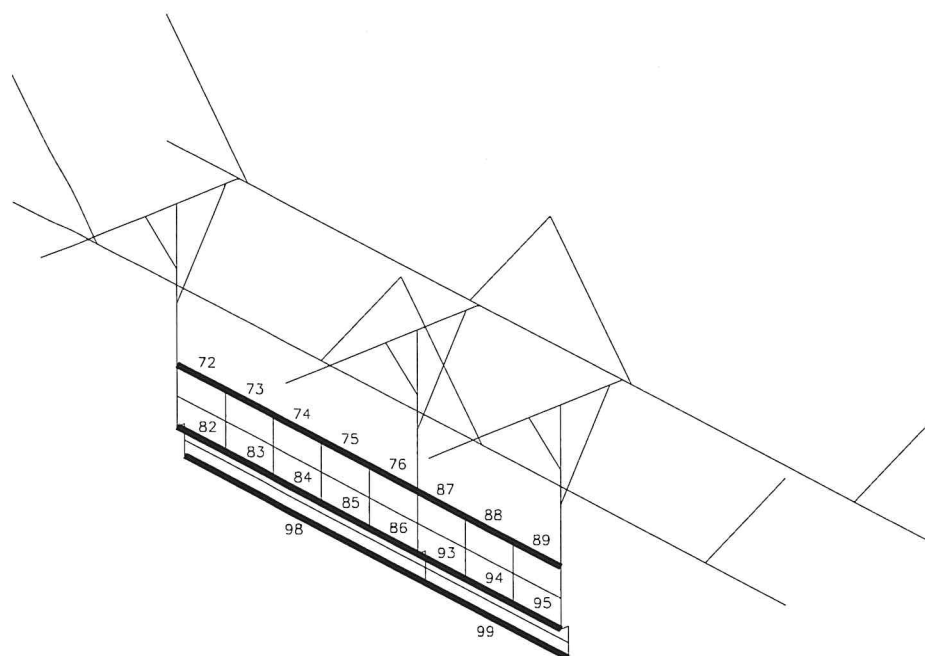
poloha teziste Y = 40.00 Z = -20.00

rotace prurezu Rx[st] = 0.00

mom.setr. Ix[m4] = 4.27200E-07

mom.setr. Iz[m4] = 5.58532E-07

ocel 37



PRUREZ c. 6 ( O obraz )

plocha A[m2] = 4.44000E-04

mom.setr. Iy[m4] = 1.01972E-07

mom.setr. Iw[m8] = 0.00000E+00

Prvek 1 O obraz a=40/3 b=40/3

poloha teziste Y = 20.00 Z = -20.00

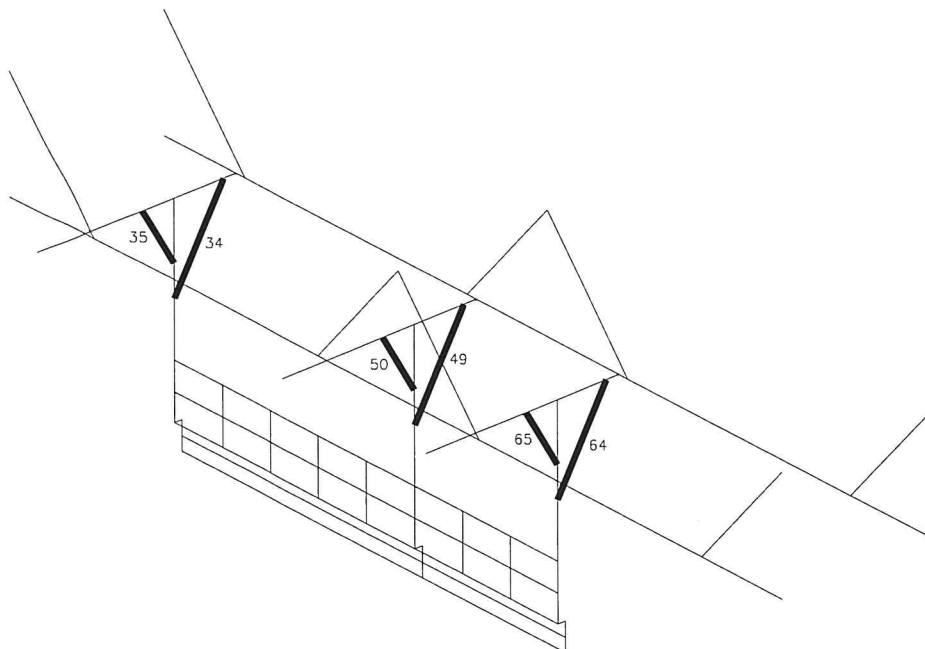
rotace prurezu Rx[st] = 0.00

mom.setr. Ix[m4] = 1.51959E-07

mom.setr. Iz[m4] = 1.01972E-07

ocel 37





PRUREZ c. 7 ( O obraz )

plocha A[m2] = 4.44000E-04

mom.setr. Iy[m4] = 1.01972E-07

mom.setr. Iw[m8] = 0.00000E+00

Prvek 1 O obraz a=40/3 b=40/3

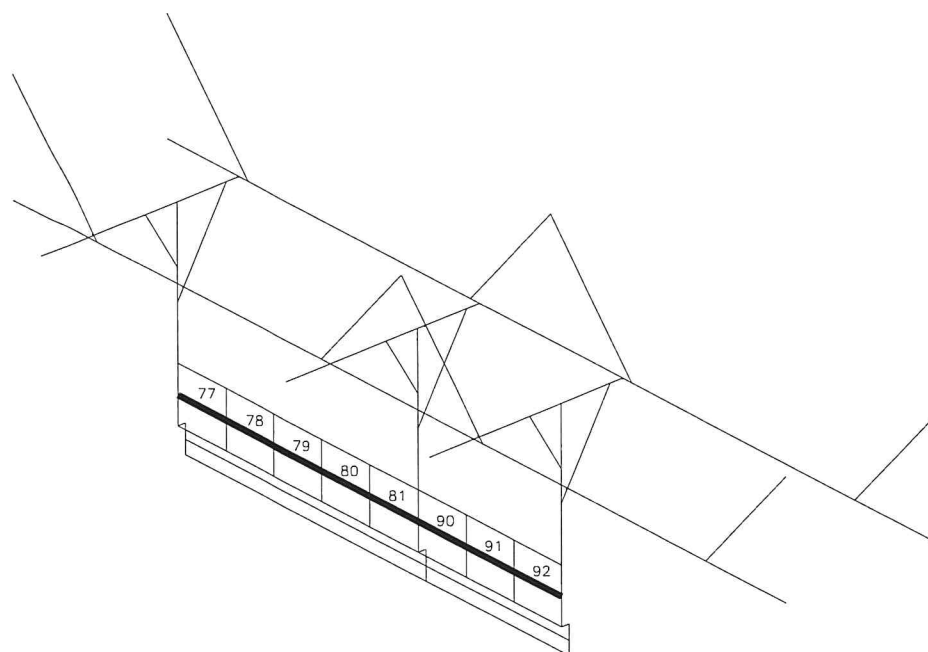
poloha teziste Y = 20.00 Z = -20.00

rotace prurezu Rx[st] = 0.00

mom.setr. Ix[m4] = 1.51959E-07

mom.setr. Iz[m4] = 1.01972E-07

ocel 37



PRUREZ c. 8 ( O obraz )

plocha A[m2] = 4.44000E-04

mom.setr. Iy[m4] = 1.42132E-07

mom.setr. Iw[m8] = 0.00000E+00

Prvek 1 O obraz a=30/3 b=50/3

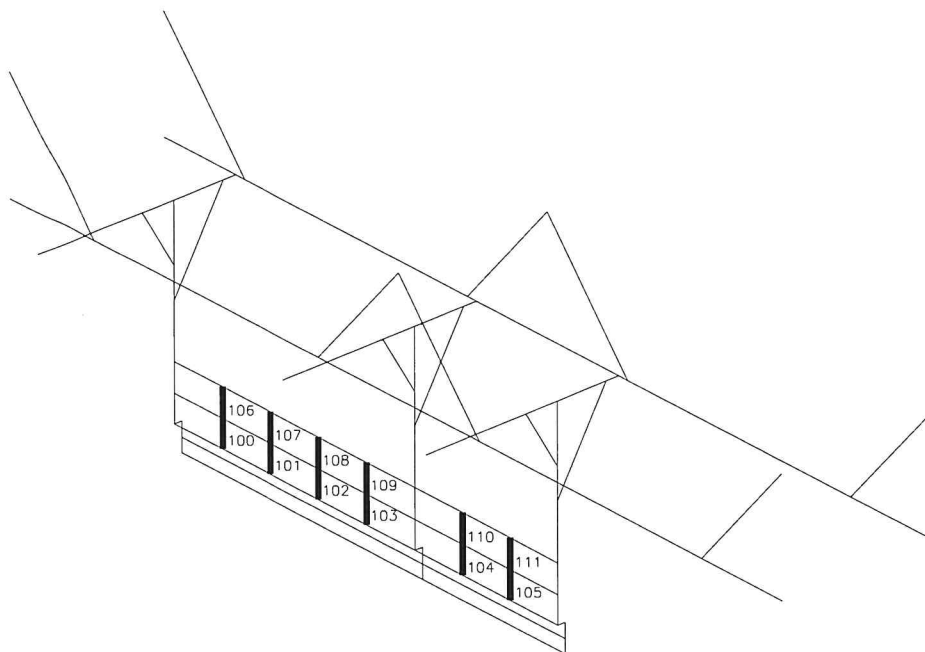
poloha teziste Y = 15.00 Z = -25.00

rotace prurezu Rx[st] = 0.00

mom.setr. Ix[m4] = 1.30570E-07

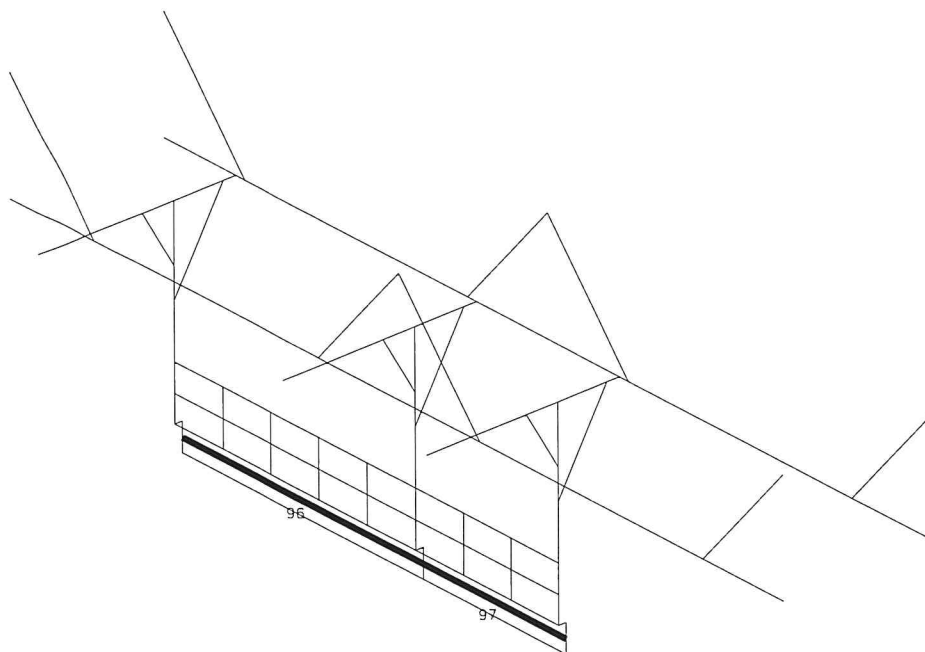
mom.setr. Iz[m4] = 6.18120E-08

ocel 37



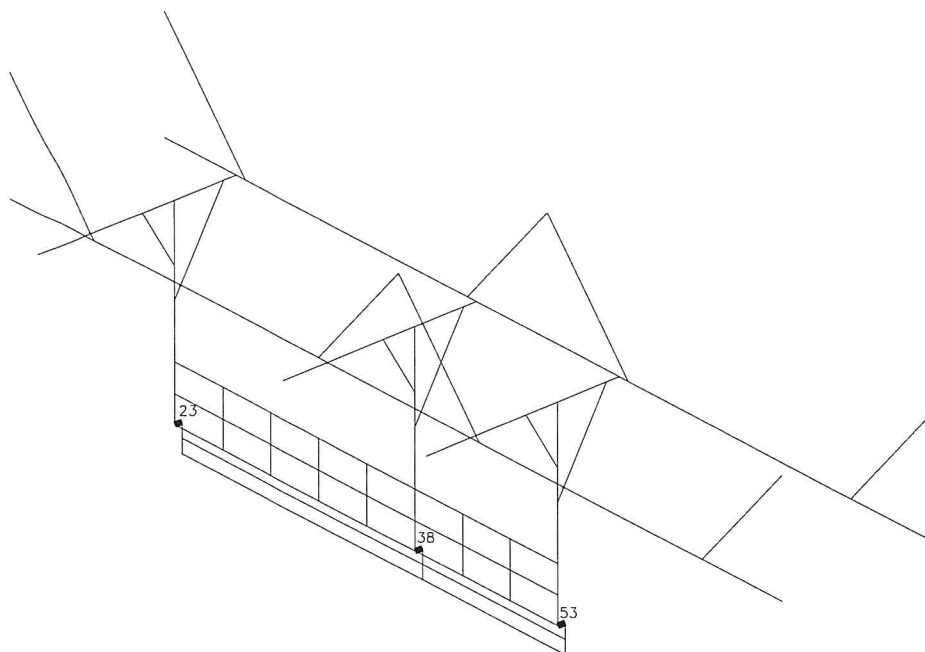
PRUREZ c. 9 ( O obraz )  
 plocha A[m2] = 4.44000E-04  
 mom.setr. Iy[m4] = 1.01972E-07  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 O obraz a=40/3 b=40/3  
 poloha teziste Y = 20.00 Z = -20.00

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.51959E-07  
 mom.setr. Iz[m4] = 1.01972E-07  
 ocel 37



PRUREZ c. 10 ( O obraz )  
 plocha A[m2] = 6.84000E-04  
 mom.setr. Iy[m4] = 5.58532E-07  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 O obraz a=40/3 b=80/3  
 poloha teziste Y = 20.00 Z = -40.00

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 4.27200E-07  
 mom.setr. Iz[m4] = 1.84292E-07  
 ocel 37



# M A T E R I A L

Material c. 1 ocel 37

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merna hmotnost	[kg/m <sup>3</sup> ]	: 7850.000
pevnost v tahu	[MPa]	: 210.000
pevnost v tlaku	[MPa]	: 210.000
pevnost ve smyku	[MPa]	: 126.000
modul pružnosti	[MPa]	: 210000.000
Poissonuv součinitel	:	: 0.300
Součinitel tep. roztažnosti	:	: 1.2E-0005

Typický uzel : XYZRxRyRz

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Typický prut : XYZMxMyMz

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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 X	stale
4.	VITR Y	stale
5.	TIHA	stale
6.	TRMEN	stale
7.	ZATIZENI NA HORNÍ MA	stale
8.	ZATIZENI NA HORNÍ MA	stale
9.	BREMENO NA ZAVES	stale
10.	BREMENO NA DOLNÍ TYC	stale
11.	ZATIZENI VYPLNE	stale
12.	ZATIZENI VYPLNE	stale
13.	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				1.35
3			-2.70				1.35
5			-1.32				1.35
6			-2.64				1.35
7			-2.70				1.35
8			-2.70				1.35
10			-1.32				1.35
12			-2.70				1.35
13			-2.70				1.35
15			-1.32				1.35
16			-2.64				1.35
17			-2.70				1.35
18			-2.70				1.35
20			-1.32				1.35

## ZATIZENI V UZLECH - stav 2 (SNIH)

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

2			-2.55				1.50
3			-2.55				1.50

5	-2.55	1.50
6	-5.10	1.50
7	-2.55	1.50
8	-2.55	1.50
10	-2.55	1.50
12	-2.55	1.50
13	-2.55	1.50
15	-2.55	1.50
16	-5.10	1.50
17	-2.55	1.50
18	-2.55	1.50
20	-2.55	1.50

ZATIZENI V UZLECH - stav 3 (VITR X)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2	0.93		0.71				1.50
3	1.72		-1.17				1.50
5	0.71		0.71				1.50
6	1.88		-0.46				1.50
7	0.93		0.71				1.50
8	1.72		-1.17				1.50
10	1.17		-1.17				1.50
12	0.93		0.71				1.50
13	1.72		-1.17				1.50
15	0.71		0.71				1.50
16	1.88		-0.46				1.50
17	0.93		0.71				1.50
18	1.72		-1.17				1.50
20	1.17		-1.17				1.50

ZATIZENI V UZLECH - stav 4 (VITR Y)

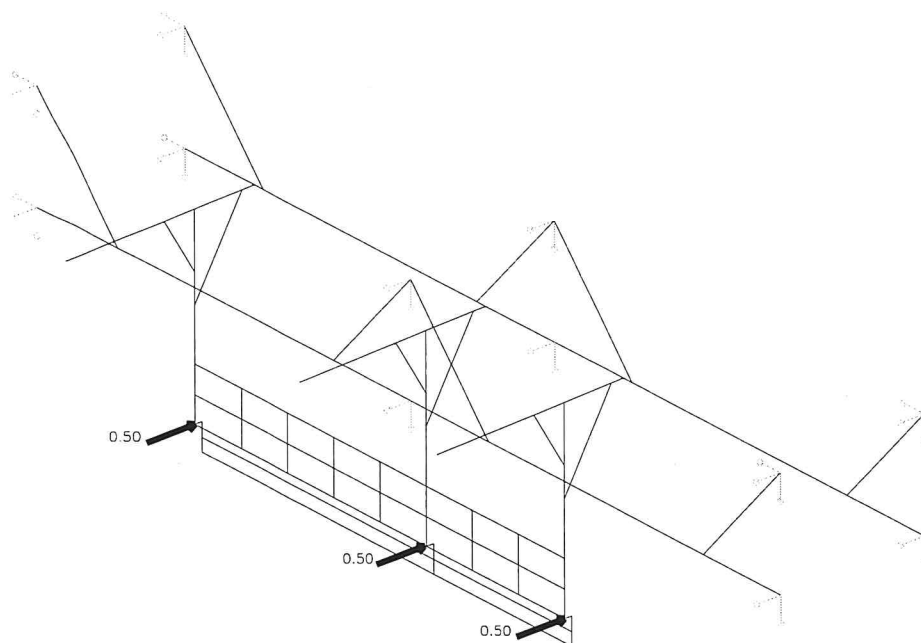
uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2	1.47		1.00				1.50
3	-1.47		1.00				1.50
5	1.00		1.00				1.50
6			2.00				1.50
7	1.47		1.00				1.50
8	-1.47		1.00				1.50
10	-1.00		1.00				1.50
12	1.47		1.00				1.50
13	-1.47		1.00				1.50
15	1.00		1.00				1.50
16			2.00				1.50
17	1.47		1.00				1.50
18	-1.47		1.00				1.50
20	-1.00		1.00				1.50

ZATIZENI V UZLECH - stav 6 (TRMEN)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
4			-0.56				1.35

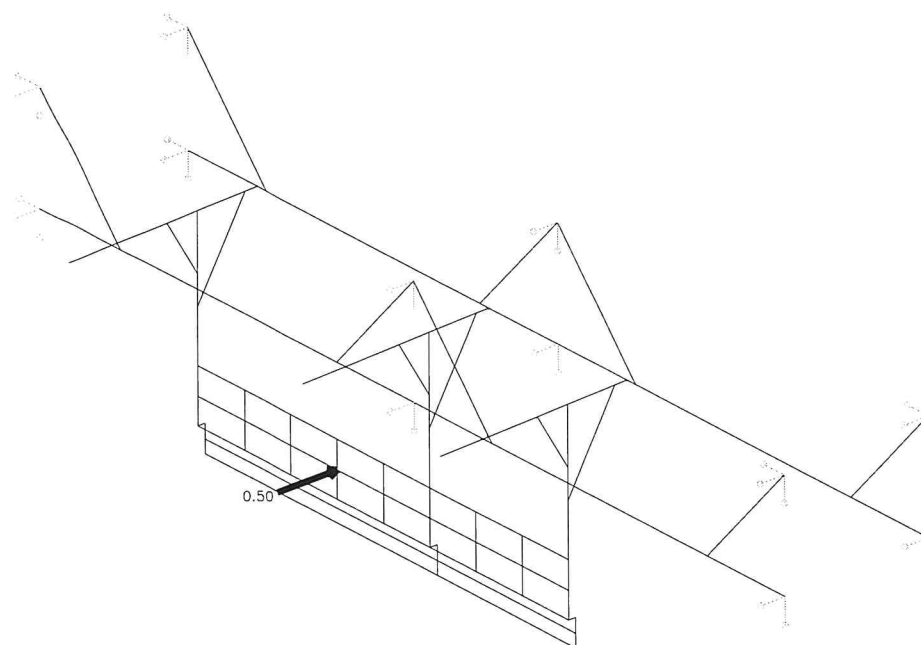
ZATIZENI V UZLECH - stav 9 (BREMENO NA ZAVES)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
24		0.50					1.50
38		0.50					1.50
52		0.50					1.50



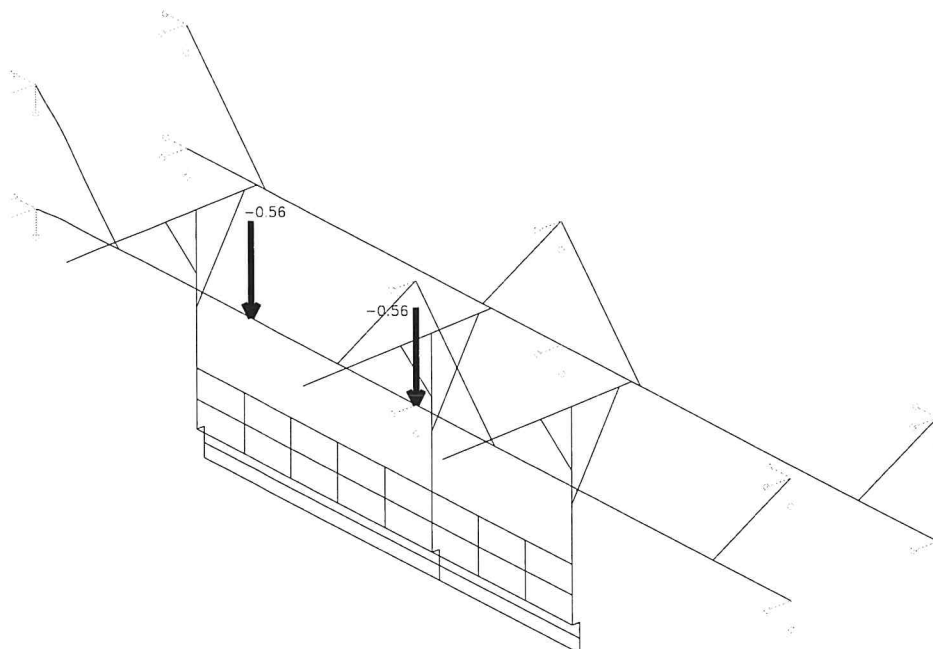
ZATIZENI V UZLECH - stav 12 (ZATIZENI VYPLNE)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
69		0.50					1.50



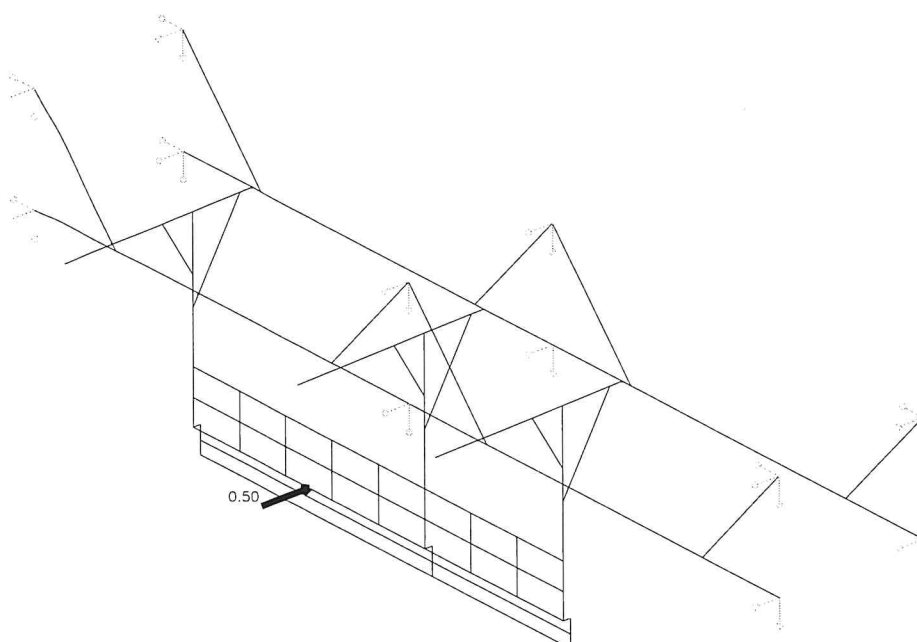
OSAMELE IMPULZY - stav 6 (TRMEN)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			-0.6 glob	3.14m			1.35



OSAMELE IMPULZY - stav 10 (BREMENO NA DOLNI TYC)

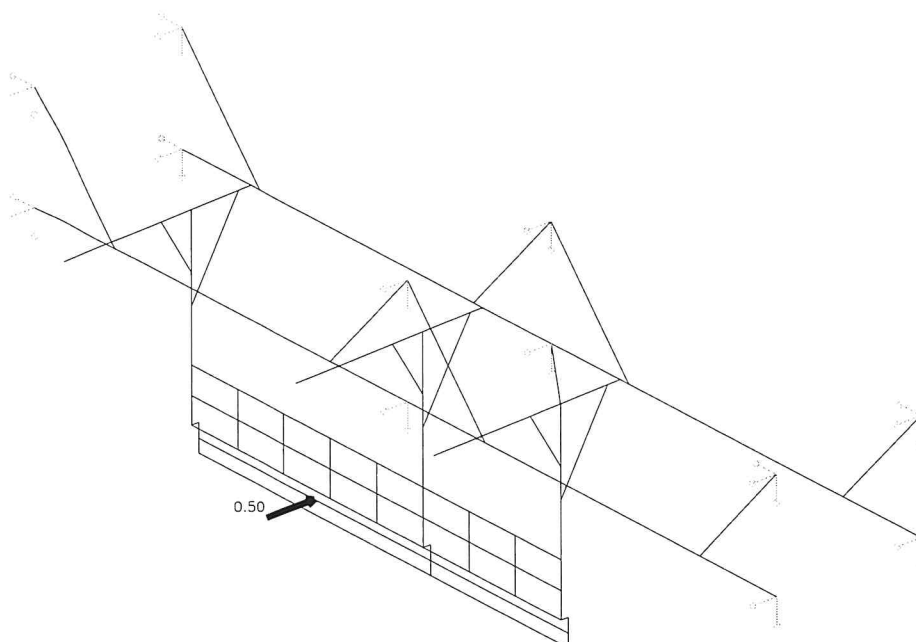
prut	typ	X	Y	Z	sourX	exY	exZ	koef
84	sil			0.5 glob	0.50%			1.50



OSAMELE IMPULZY - stav 11 (ZATIZENI VYPLNE)

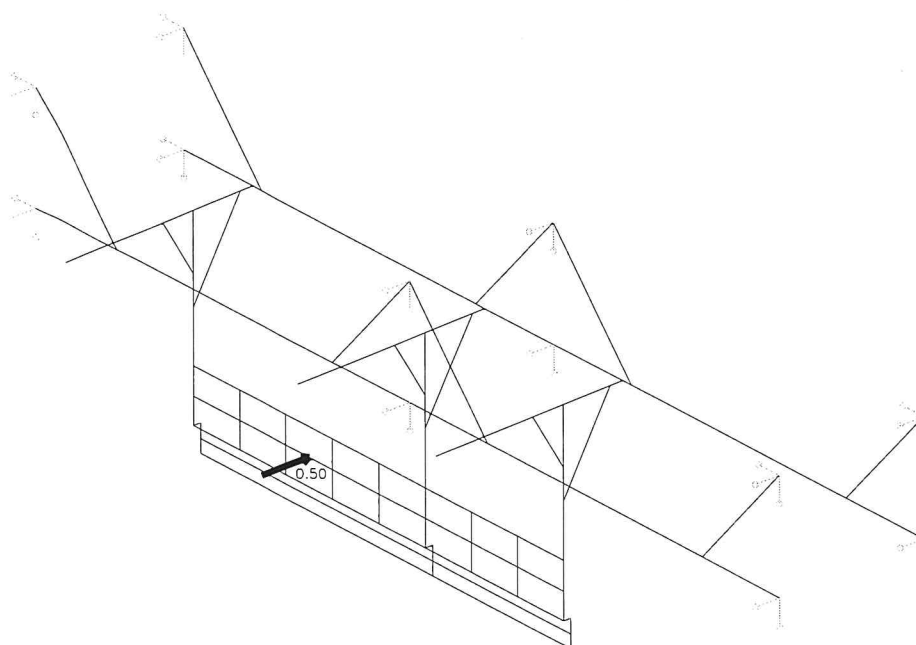
prut	typ	X	Y	Z	sourX	exY	exZ	koef
96	sil		0.5	glob	0.50%			1.50





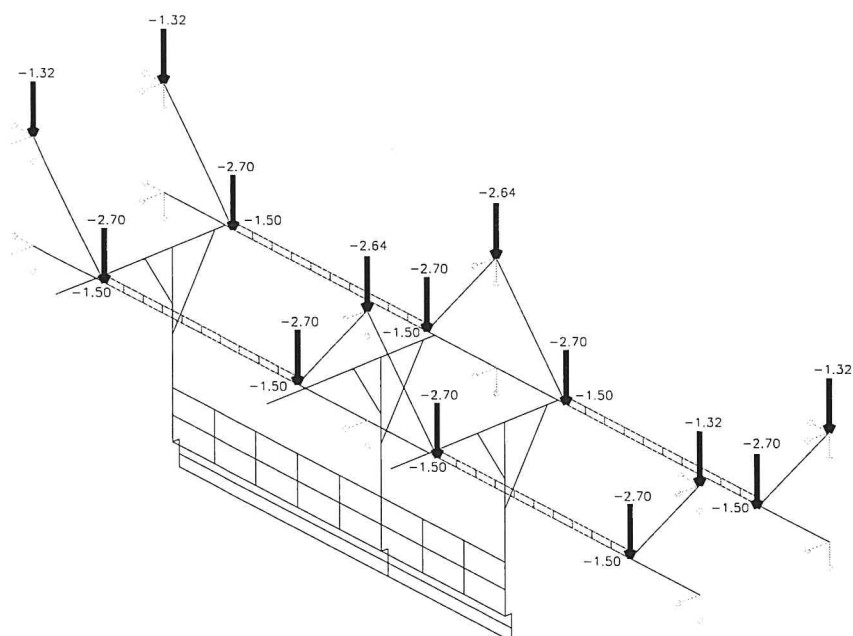
OSAMELE IMPULZY - stav 13 (ZATIZENI VYPLNE)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
79	sil		0.5	glob	0.50%			1.50

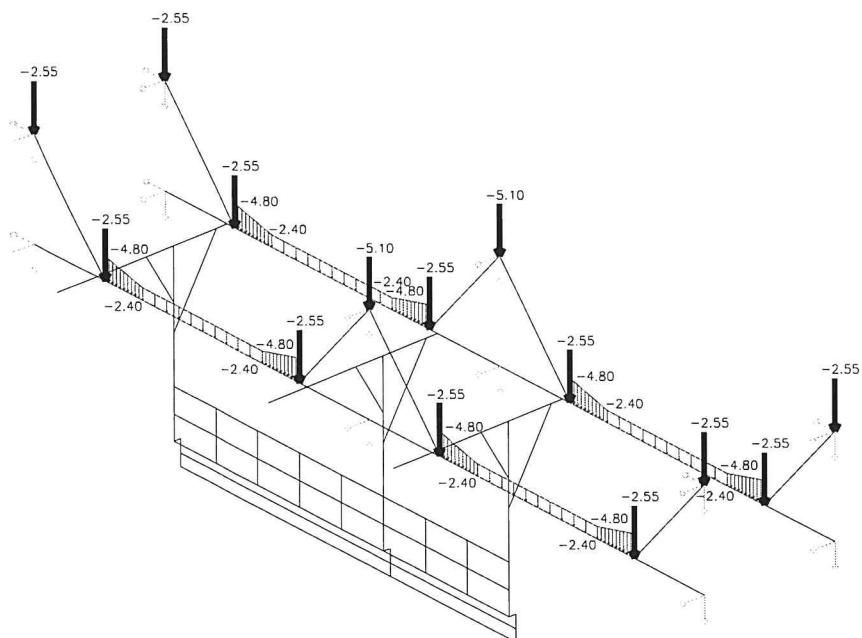


SPOJITE IMPULZY - stav 1 (STRECHA)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			-1.50 glob	0.00%			1.35
				-1.50 prum	1.00%			
7	sil			-1.50 glob	0.00%			1.35
				-1.50 prum	1.00%			
12	sil			-1.50 glob	0.00%			1.35
				-1.50 prum	1.00%			
17	sil			-1.50 glob	0.00%			1.35
				-1.50 prum	1.00%			

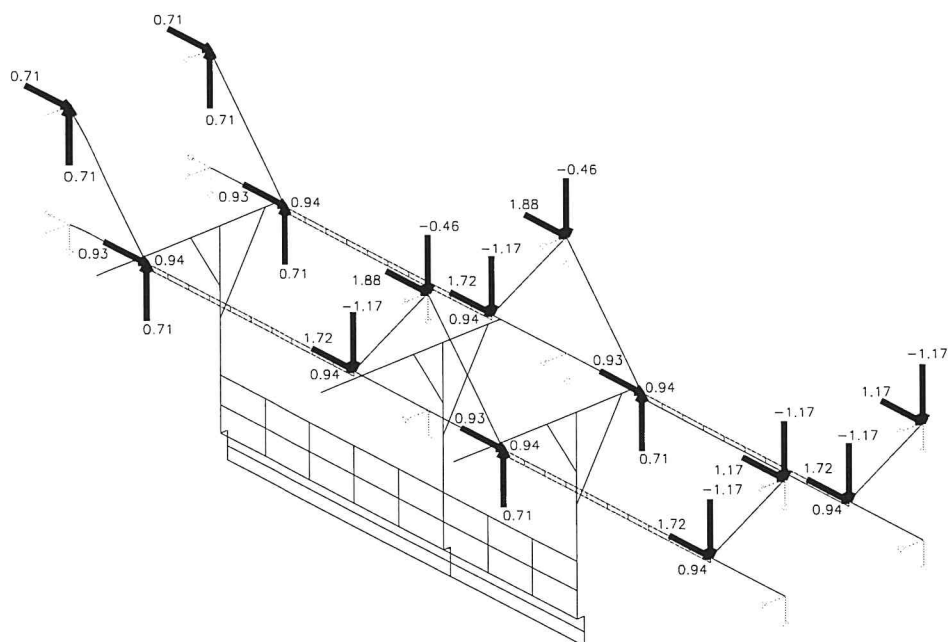


SPOJITE IMPULZY - stav 2 (SNIH)									
prut	typ	X	Y	Z	sourX	exY	exZ	koef	
2	sil			-4.80	glob	0.00m		1.50	
				-2.40	prum	1.00m			
	sil			-2.40	glob	1.00m		1.50	
				-2.40	prum	4.23m			
				-2.40	glob	4.23m		1.50	
7	sil			-4.80	prum	5.23m			
				-4.80	glob	0.00m		1.50	
	sil			-2.40	prum	1.00m		1.50	
				-2.40	glob	1.00m			
				-2.40	prum	4.23m		1.50	
12	sil			-2.40	glob	4.23m		1.50	
				-4.80	prum	5.23m			
	sil			-4.80	glob	0.00m		1.50	
				-2.40	prum	1.00m		1.50	
				-2.40	glob	1.00m			
17	sil			-2.40	prum	4.23m		1.50	
				-4.80	glob	4.23m			
	sil			-4.80	prum	5.23m		1.50	
				-2.40	glob	0.00m		1.50	
				-2.40	prum	1.00m			



SPOJITE IMPULZY - stav 3 (VITR X)

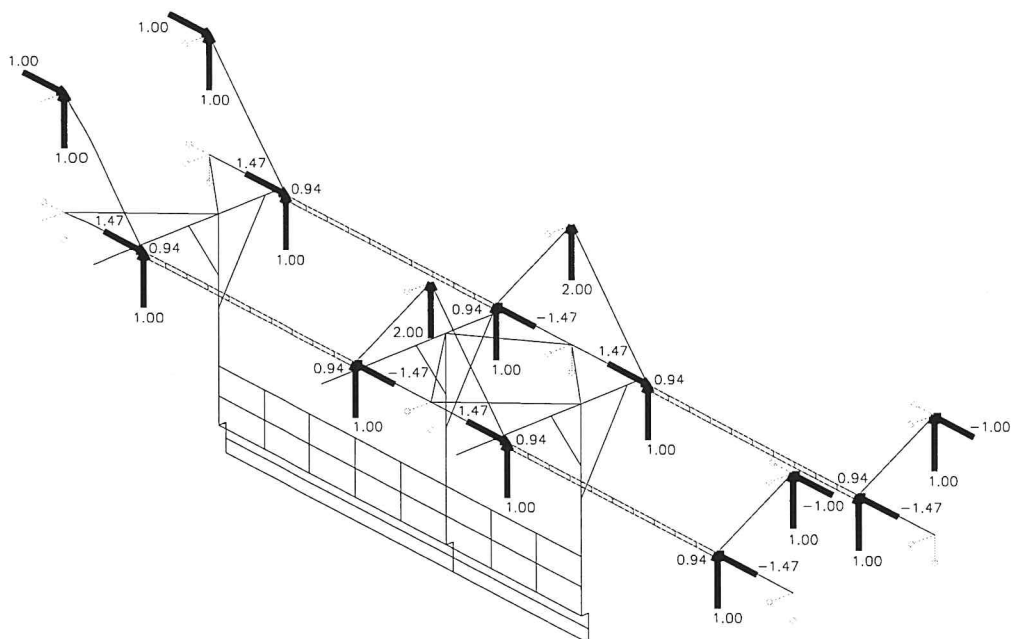
prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			0.94 glob	0.00%			1.50
				0.94 prum	1.00%			
7	sil			0.94 glob	0.00%			1.50
				0.94 prum	1.00%			
12	sil			0.94 glob	0.00%			1.50
				0.94 prum	1.00%			
17	sil			0.94 glob	0.00%			1.50
				0.94 prum	1.00%			



SPOJITE IMPULZY - stav 4 (VITR Y)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
2	sil			0.94 glob	0.00%			1.50
				0.94 prum	1.00%			

7 sil	0.94 glob	0.00%	1.50
	0.94 prum	1.00%	
12 sil	0.94 glob	0.00%	1.50
	0.94 prum	1.00%	
17 sil	0.94 glob	0.00%	1.50
	0.94 prum	1.00%	



SPOJITE IMPULZY - stav 5 (TIHA)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
<hr/>								
1	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
2	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
3	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
4	sil		-0.11	glob	0.00%			1.35
			-0.11	del	1.00%			
5	sil		-0.11	glob	0.00%			1.35
			-0.11	del	1.00%			
6	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
7	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
8	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
9	sil		-0.11	glob	0.00%			1.35
			-0.11	del	1.00%			
10	sil		-0.11	glob	0.00%			1.35
			-0.11	del	1.00%			
11	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
12	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
13	sil		-0.14	glob	0.00%			1.35
			-0.14	prum	1.00%			
14	sil		-0.11	glob	0.00%			1.35
			-0.11	del	1.00%			
15	sil		-0.11	glob	0.00%			1.35

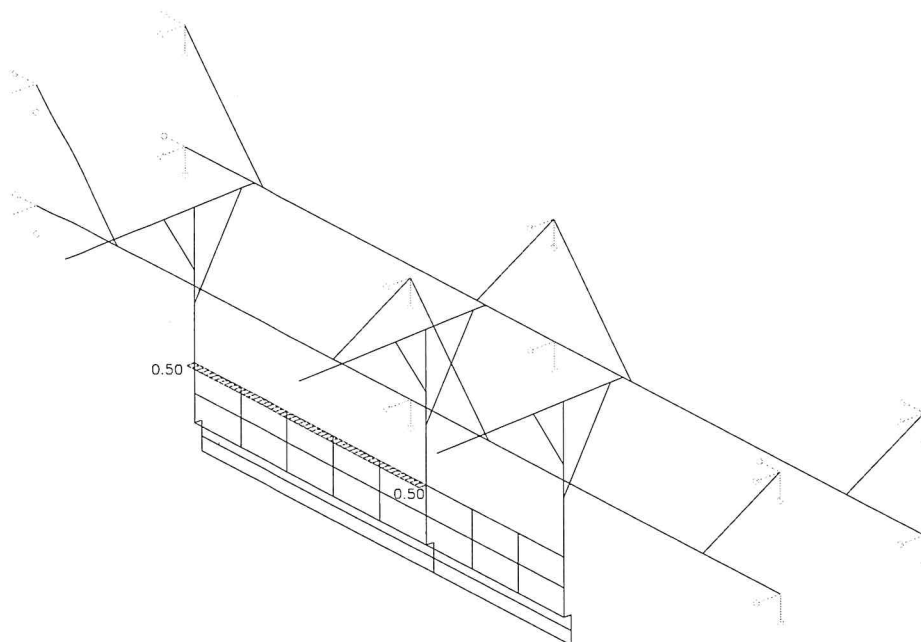
	-0.11 del	1.00%	
16 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
17 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
18 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
19 sil	-0.11 glob	0.00%	1.35
	-0.11 del	1.00%	
20 sil	-0.11 glob	0.00%	1.35
	-0.11 del	1.00%	
21 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
22 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
23 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
24 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
25 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
26 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
27 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
28 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
29 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
30 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
31 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
32 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
33 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
34 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
35 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
36 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
37 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
38 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
39 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
40 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
41 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
42 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
43 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
44 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
45 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	

46 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
47 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
48 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
49 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
50 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
51 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
52 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
53 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
54 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
55 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
56 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
57 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
58 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
59 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
60 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
61 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
62 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
63 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
64 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
65 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
66 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
67 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
68 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
69 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
70 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
71 sil	-0.14 glob	0.00%	1.35
	-0.14 prum	1.00%	
72 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
73 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
74 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
75 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
76 sil	-0.05 glob	0.00%	1.35

	-0.05 del	1.00%	
77 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
78 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
79 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
80 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
81 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
82 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
83 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
84 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
85 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
86 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
87 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
88 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
89 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
90 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
91 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
92 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
93 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
94 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
95 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
96 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
97 sil	-0.03 glob	0.00%	1.35
	-0.03 del	1.00%	
98 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
99 sil	-0.05 glob	0.00%	1.35
	-0.05 del	1.00%	
100 sil	-0.04 glob	0.00%	1.35
	-0.04 del	1.00%	
101 sil	-0.04 glob	0.00%	1.35
	-0.04 del	1.00%	
102 sil	-0.04 glob	0.00%	1.35
	-0.04 del	1.00%	
103 sil	-0.04 glob	0.00%	1.35
	-0.04 del	1.00%	
104 sil	-0.04 glob	0.00%	1.35
	-0.04 del	1.00%	
105 sil	-0.04 glob	0.00%	1.35
	-0.04 del	1.00%	
106 sil	-0.04 glob	0.00%	1.35
	-0.04 del	1.00%	

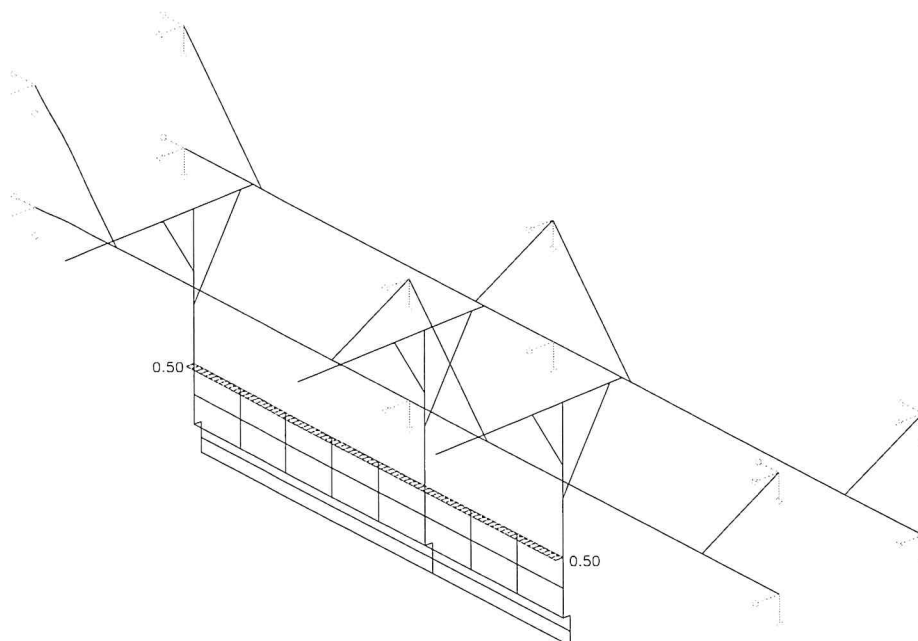


SPOJITE IMPULZY - stav 7 (ZATIZENI NA HORNI MA)								
prut	typ	X	Y	Z	sourX	exY	exZ	koef
72	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
73	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
74	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
75	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
76	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			



SPOJITE IMPULZY - stav 8 (ZATIZENI NA HORNÍ MA)

prut	typ	X	Y	Z	sourX	exY	exZ	koef
72	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
73	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
74	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
75	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
76	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
87	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
88	sil		0.50	glob	0.00%			1.50
			0.50	prum	1.00%			
89	sil		0.50	glob	0.00%			1.50
			0.50	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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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 :	5	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.    7

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 :	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.    8

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.    9

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 :	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.    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 :	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.    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 :	6	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. 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 :	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. 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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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. 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 :	5	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. 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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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. 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 :	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. 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 :	5	stale	koef :	1.00	vyber :	0
zat. stav :	6	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. 18

zat. stav :	1	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 :	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. 19

zat. stav :	1	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 :	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. 20

zat. stav :	1	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. 21

zat. stav :	1	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 :	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. 22

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	4	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 :	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. 23

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	4	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 :	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. 24

zat. stav :	1	stale	koef :	1.00	vyber :	0
zat. stav :	4	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. 25

zat. stav : 1 stale koef : 1.00 vyber : 0  
zat. stav : 4 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 : 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. 26

zat. stav : 5 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. 27

zat. stav : 5 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. 28

zat. stav : 5 stale koef : 1.00 vyber : 0  
zat. stav : 13 stale koef : 1.00 vyber : 0

#### Vypoctove vnitřní síly na prutech

Prut [m]	Kombi	N kN	Mx kN.m	Tz kN	My kN.m	Ty kN	Mz kN.m
extremy	1.radek = minimim	2.radek = maximum					
síla X							
3 0.000	7	-4.3	0.0	9.9	-13.2	0.0	-0.7
2 0.000	13	34.2	0.0	13.0	-7.6	0.0	0.0
moment X							
6 0.000	23	-2.8	0.0	-3.5	-1.5	0.0	-0.5
3 0.000	11	2.3	0.0	8.7	-10.8	0.0	-0.7
síla Z							
2 5.230	9	27.7	0.0	-18.0	-13.3	0.0	0.0
17 0.000	8	26.6	0.0	17.2	-11.4	0.0	-0.3
moment Y							
2 5.230	8	27.6	0.0	-18.0	-13.3	0.0	-0.1
7 2.615	9	27.7	0.0	-0.5	9.9	0.0	0.0
síla Y							
66 0.000	19	10.2	0.0	-0.6	0.0	-1.9	0.0
67 0.000	7	-3.2	0.0	6.7	-11.0	2.1	-3.4
moment Z							
67 0.000	7	-3.2	0.0	6.7	-11.0	2.1	-3.4
67 0.000	4	5.4	0.0	1.0	-1.4	0.0	0.0

Vyhledano pro

Prurez : 1

Sled kombinaci : 1..28

#### Vypoctove vnitřní síly na prutech

Prut [m]	Kombi	N kN	Mx kN.m	Tz kN	My kN.m	Ty kN	Mz kN.m
extremy	1.radek = minimim	2.radek = maximum					
síla X							
10 0.000	26	1.2	0.0	0.1	0.0	0.0	0.0



5	2.859	7	47.4	0.0	-0.1	0.0	0.0	0.0
moment X								
5	0.000	23	10.8	0.0	0.1	0.0	0.0	0.0
9	0.000	23	10.8	0.0	0.1	0.0	0.0	0.0
sila Z								
9	2.859	22	9.8	0.0	-0.1	0.0	0.0	0.0
9	0.000	1	44.7	0.0	0.1	0.0	0.0	0.0
moment Y								
5	2.859	12	42.1	0.0	-0.1	0.0	0.0	0.0
9	2.859	13	36.6	0.0	-0.1	0.0	0.0	0.0
sila Y								
15	0.000	19	10.4	0.0	0.1	0.0	0.0	0.0
5	0.000	23	10.8	0.0	0.1	0.0	0.0	0.0
moment Z								
15	2.859	19	10.7	0.0	-0.1	0.0	0.0	0.0
5	2.859	23	11.1	0.0	-0.1	0.0	0.0	0.0

Vyhledano pro

Prurez : 2

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	11	-3.8	0.0	7.6	3.4	-1.1
47	0.000	15	2.0	-0.1	-3.0	3.4	-1.1
moment X							
30	0.000	7	0.8	-0.1	0.9	-0.3	0.9
45	0.000	7	0.7	0.2	1.0	-0.4	-0.9
sila Z							
47	1.123	11	2.0	0.0	-3.1	0.0	-1.1
46	0.000	11	-3.8	0.0	7.6	-1.4	-1.1
moment Y							
46	0.000	11	-3.8	0.0	7.6	-1.4	-1.1
47	0.000	11	2.0	0.0	-3.0	3.4	-1.1
sila Y							
46	0.000	7	-3.7	-0.1	7.6	-1.4	-1.1
32	0.000	7	1.8	0.0	-2.8	3.2	1.0
moment Z							
47	1.123	7	2.0	-0.1	-3.1	0.0	-1.1
32	1.123	15	1.8	0.0	-2.9	0.0	1.0

Vyhledano pro

Prurez : 3

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	-6.7	-0.2	0.2	0.0	-4.6
42	0.600	11	3.7	-0.2	0.2	0.0	1.4
moment X							
24	0.000	22	0.8	-0.4	0.5	-0.3	0.6
22	0.000	26	0.3	0.3	-1.8	0.3	0.4
sila Z							
22	0.000	19	0.4	0.0	-5.4	0.9	0.1
52	0.000	19	0.3	-0.1	3.3	-0.5	0.2
moment Y							
22	0.280	23	0.4	0.0	-5.4	-0.6	0.1

22	0.000	19	0.4	0.0	-5.4	0.9	0.1	0.0
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sila Y

28	0.000	23	-6.5	0.2	-0.1	0.0	-4.6	3.2
41	0.000	15	1.1	-0.3	0.2	-0.3	2.8	-0.7

moment Z

43	1.100	11	-6.6	-0.2	0.2	0.3	-4.6	-2.0
27	0.600	23	3.5	0.2	-0.1	0.0	1.1	3.2

Vyhledano pro

Prurez : 4

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	19	-6.0	0.3	0.5	-0.3	-0.6	0.5
98	0.000	5	0.9	0.0	0.2	-0.2	0.0	0.0

moment X

76	0.000	11	0.0	-0.2	-0.1	0.0	0.9	-0.6
72	0.000	22	0.0	0.3	0.2	-0.1	-1.6	0.6

sila Z

95	1.117	23	-3.5	0.0	-0.4	-0.3	0.3	0.3
82	0.000	23	-5.9	0.3	0.5	-0.3	-0.6	0.5

moment Y

82	0.000	23	-5.9	0.3	0.5	-0.3	-0.6	0.5
82	1.130	23	-5.9	0.3	0.4	0.2	-0.6	-0.2

sila Y

72	0.000	18	0.0	0.3	0.2	-0.1	-1.6	0.6
76	1.130	15	-0.1	-0.2	-0.2	-0.1	1.7	0.9

moment Z

74	0.565	18	-0.4	0.0	0.0	0.0	0.0	-1.3
76	1.130	15	-0.1	-0.2	-0.2	-0.1	1.7	0.9

Vyhledano pro

Prurez : 5

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	23	-3.1	0.0	0.0	0.0	0.0	0.0
50	1.254	11	12.1	0.0	0.0	0.0	0.0	0.0

moment X

49	0.000	18	-0.9	0.0	0.0	0.0	0.0	0.0
34	0.000	19	-2.4	0.0	0.0	0.0	0.0	0.0

sila Z

49	1.988	9	1.5	0.0	0.0	0.0	0.0	0.0
34	0.000	7	-2.5	0.0	0.0	0.0	0.0	0.0

moment Y

34	0.000	1	1.3	0.0	0.0	0.0	0.0	0.0
50	1.254	19	11.5	0.0	0.0	0.0	0.0	0.0

sila Y

50	0.000	11	12.1	0.0	0.0	0.0	0.0	0.0
35	0.000	23	11.5	0.0	0.0	0.0	0.0	0.0

moment Z

50	1.254	11	12.1	0.0	0.0	0.0	0.0	0.0
35	1.254	23	11.5	0.0	0.0	0.0	0.0	0.0

Vyhledano pro

Prurez : 6

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	8	-0.1	0.0	-0.1	0.0	0.0	0.0
92	0.000	7	0.6	0.0	-0.1	0.0	0.0	0.0
moment X								
81	0.000	7	0.0	0.0	0.0	0.0	0.0	0.0
77	0.000	22	0.5	0.1	0.1	0.0	-0.1	0.0
sila Z								
92	1.117	23	0.6	0.0	-0.2	-0.1	0.0	0.0
78	0.000	23	0.2	0.0	0.2	-0.1	0.0	0.0
moment Y								
78	0.000	23	0.2	0.0	0.2	-0.1	0.0	0.0
78	1.130	23	0.2	0.0	0.2	0.1	0.0	-0.2
sila Y								
79	0.000	28	0.0	0.0	0.0	0.0	-0.4	0.0
79	0.565	28	0.0	0.0	0.0	0.0	0.4	-0.2
moment Z								
79	0.565	28	0.0	0.0	0.0	0.0	-0.4	-0.2
77	0.000	19	0.6	0.1	0.1	0.0	-0.1	0.0

Vyhledano pro

Prurez : 7

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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								
102	0.000	9	-0.3	0.0	-0.2	0.0	0.0	0.0
109	0.540	7	0.0	0.0	0.2	0.0	0.0	0.0
moment X								
106	0.000	22	0.0	-0.1	-0.3	0.0	-0.2	0.0
109	0.000	11	0.0	0.0	0.2	0.0	0.0	0.0
sila Z								
100	0.000	23	-0.2	0.0	-0.7	0.2	-0.2	0.0
105	0.000	23	-0.2	0.0	0.7	-0.2	-0.1	0.0
moment Y								
105	0.000	23	-0.2	0.0	0.7	-0.2	-0.1	0.0
100	0.000	23	-0.2	0.0	-0.7	0.2	-0.2	0.0
sila Y								
107	0.000	22	0.0	0.0	-0.2	0.0	-0.4	0.0
108	0.000	27	0.0	0.0	0.0	0.0	0.3	-0.1
moment Z								
107	0.540	22	0.0	0.0	-0.2	0.0	-0.4	-0.2
101	0.000	22	0.0	0.0	-0.4	0.1	-0.3	0.1

Vyhledano pro

Prurez : 8

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	17	-0.7	0.0	0.1	-0.1	0.0	0.0
96	0.000	19	7.2	0.0	0.1	-0.2	0.0	0.0

moment X								
97	0.000	11	4.5	0.0	0.0	0.0	0.0	-0.1
96	0.000	18	6.7	0.0	0.1	-0.2	0.0	0.0
sila Z								
96	5.650	13	-0.7	0.0	-0.1	-0.1	0.0	0.0
96	0.000	23	7.2	0.0	0.1	-0.2	0.0	0.0
moment Y								
96	0.000	23	7.2	0.0	0.1	-0.2	0.0	0.0
96	2.825	17	-0.7	0.0	0.0	0.0	0.0	0.0
sila Y								
96	0.000	26	1.7	0.0	0.1	-0.1	-0.4	0.5
96	2.825	26	1.7	0.0	0.0	0.0	0.4	-0.6
moment Z								
96	2.825	26	1.7	0.0	0.0	0.0	-0.4	-0.6
96	0.000	26	1.7	0.0	0.1	-0.1	-0.4	0.5

Vyhledano pro

Prurez : 9

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	19	-0.3	-0.2	-0.4	0.0	-2.1	0.0
38	0.000	26	0.4	-0.1	-0.5	0.0	-1.1	0.3
moment X								
53	0.000	19	0.2	-0.4	-0.3	0.0	-3.3	0.1
23	0.000	23	0.1	0.6	-0.4	0.0	5.4	0.0
sila Z								
38	0.150	13	0.0	0.0	-0.6	0.0	0.0	0.0
53	0.000	13	0.0	0.0	-0.2	0.0	-0.1	0.0
moment Y								
23	0.150	22	0.0	0.6	-0.4	-0.2	5.0	0.9
53	0.000	18	0.2	-0.3	-0.3	0.1	-2.3	0.2
sila Y								
53	0.000	19	0.2	-0.4	-0.3	0.0	-3.3	0.1
23	0.000	19	0.1	0.6	-0.4	0.0	5.4	0.0
moment Z								
38	0.150	18	-0.3	-0.3	-0.5	0.0	-2.7	-0.4
23	0.150	18	0.0	0.6	-0.4	-0.2	5.0	0.9

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	-1.9	0.0	0.0	0.0
	2	-2.3	0.0	-3.0	0.0	0.0	0.0
	3	-13.4	0.0	1.4	0.0	0.0	0.0
	4	0.0	0.0	1.3	0.0	0.0	0.0
	5	0.7	0.0	0.0	0.0	0.0	0.0
	6	0.8	0.0	-0.3	0.0	0.0	0.0
	7	2.0	-1.6	0.0	0.0	0.0	0.0
	8	1.7	-1.9	0.1	0.0	0.0	0.0
	9	0.5	-0.6	0.0	0.0	0.0	0.0
	10	-0.2	0.0	0.0	0.0	0.0	0.0
	11	0.5	-0.3	0.0	0.0	0.0	0.0
	12	0.4	-0.3	0.0	0.0	0.0	0.0

4	13	0.4	-0.3	0.0	0.0	0.0	0.0
	1	0.0	0.0	-3.9	0.0	0.0	0.0
	2	0.0	0.0	-7.4	0.0	0.0	0.0
	3	0.0	0.0	2.7	0.0	0.0	0.0
	4	0.0	0.0	2.7	0.0	0.0	0.0
	5	0.0	0.0	0.1	0.0	0.0	0.0
	6	0.0	0.0	0.5	0.0	0.0	0.0
	7	0.0	-1.6	0.2	0.0	0.0	0.0
	8	0.0	-3.1	0.4	0.0	0.0	0.0
	9	0.0	-1.0	0.2	0.0	0.0	0.0
	10	0.0	0.0	0.0	0.0	0.0	0.0
	11	0.0	-0.3	0.0	0.0	0.0	0.0
	12	0.0	-0.3	0.0	0.0	0.0	0.0
5	13	0.0	-0.3	0.0	0.0	0.0	0.0
	1	-9.5	0.0	12.6	0.0	0.0	0.0
	2	-15.2	0.0	21.2	0.0	0.0	0.0
	3	4.4	0.0	-7.3	0.0	0.0	0.0
	4	4.2	0.0	-8.0	0.0	0.0	0.0
	5	-1.6	0.0	2.0	0.0	0.0	0.0
	6	-0.6	0.0	0.7	0.0	0.0	0.0
	7	-1.8	0.0	2.0	0.0	0.0	0.0
	8	-1.8	0.0	2.1	0.0	0.0	0.0
	9	-0.7	0.0	0.8	0.0	0.0	0.0
	10	0.2	0.0	-0.2	0.0	0.0	0.0
	11	-0.5	0.0	0.5	0.0	0.0	0.0
	12	-0.3	0.0	0.4	0.0	0.0	0.0
6	13	-0.4	0.0	0.4	0.0	0.0	0.0
	1	0.0	0.0	25.4	0.0	0.0	0.0
	2	0.0	0.0	49.1	0.0	0.0	0.0
	3	0.0	0.0	-8.6	0.0	0.0	0.0
	4	0.0	0.0	-16.1	0.0	0.0	0.0
	5	0.0	0.0	3.9	0.0	0.0	0.0
	6	0.0	0.0	0.7	0.0	0.0	0.0
	7	0.0	0.0	1.6	0.0	0.0	0.0
	8	0.0	0.0	3.6	0.0	0.0	0.0
	9	0.0	0.0	1.7	0.0	0.0	0.0
	10	0.0	0.0	-0.1	0.0	0.0	0.0
	11	0.0	0.0	0.4	0.0	0.0	0.0
	12	0.0	0.0	0.4	0.0	0.0	0.0
9	13	0.0	0.0	0.4	0.0	0.0	0.0
	1	0.0	0.0	-1.9	0.0	0.0	0.0
	2	0.0	0.0	-4.3	0.0	0.0	0.0
	3	0.0	0.0	1.3	0.0	0.0	0.0
	4	0.0	0.0	1.3	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	0.0
	6	0.0	0.0	0.1	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
10	13	0.0	0.0	0.0	0.0	0.0	0.0
	1	9.5	0.0	12.6	0.0	0.0	0.0
	2	17.5	0.0	23.8	0.0	0.0	0.0
	3	-4.6	0.0	-1.5	0.0	0.0	0.0
	4	-4.2	0.0	-8.0	0.0	0.0	0.0
	5	0.9	0.0	1.2	0.0	0.0	0.0
	6	-0.2	0.0	-0.2	0.0	0.0	0.0
	7	-0.2	0.0	-0.2	0.0	0.0	0.0
	8	-0.1	0.0	-0.1	0.0	0.0	0.0

11	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
	1	0.0	0.0	-1.9	0.0	0.0	0.0
	2	0.0	0.0	-3.7	0.0	0.0	0.0
	3	-13.4	0.0	1.4	0.0	0.0	0.0
	4	0.0	0.0	1.3	0.0	0.0	0.0
	5	1.0	0.0	0.0	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	-2.2	-0.6	0.0	0.0	0.0	0.0
	8	-2.0	-0.5	0.0	0.0	0.0	0.0
14	9	-0.5	-0.2	0.0	0.0	0.0	0.0
	10	-0.3	0.0	0.0	0.0	0.0	0.0
	11	-0.5	-0.1	0.0	0.0	0.0	0.0
	12	-0.4	0.0	0.0	0.0	0.0	0.0
	13	-0.5	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	-3.9	0.0	0.0	0.0
	2	0.0	0.0	-7.4	0.0	0.0	0.0
	3	0.0	0.0	2.7	0.0	0.0	0.0
	4	0.0	0.0	2.7	0.0	0.0	0.0
	5	0.0	0.0	0.1	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	-0.5	-0.2	0.0	0.0	0.0
	8	0.0	-1.1	-0.3	0.0	0.0	0.0
15	9	0.0	-0.4	-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
	1	-9.5	0.0	12.6	0.0	0.0	0.0
	2	-16.4	0.0	22.5	0.0	0.0	0.0
	3	4.4	0.0	-7.3	0.0	0.0	0.0
	4	4.2	0.0	-8.0	0.0	0.0	0.0
	5	-1.8	0.0	2.3	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	1.9	0.0	-2.1	0.0	0.0	0.0
	8	2.0	0.0	-2.2	0.0	0.0	0.0
16	9	0.7	0.0	-0.9	0.0	0.0	0.0
	10	0.2	0.0	-0.3	0.0	0.0	0.0
	11	0.5	0.0	-0.5	0.0	0.0	0.0
	12	0.3	0.0	-0.4	0.0	0.0	0.0
	13	0.4	0.0	-0.4	0.0	0.0	0.0
	1	0.0	0.0	25.4	0.0	0.0	0.0
	2	0.0	0.0	45.3	0.0	0.0	0.0
	3	0.0	0.0	-8.6	0.0	0.0	0.0
	4	0.0	0.0	-16.1	0.0	0.0	0.0
	5	0.0	0.0	4.3	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	-1.7	0.0	0.0	0.0
	8	0.0	0.0	-3.8	0.0	0.0	0.0
19	9	0.0	0.0	-1.7	0.0	0.0	0.0
	10	0.0	0.0	-0.2	0.0	0.0	0.0
	11	0.0	0.0	-0.5	0.0	0.0	0.0
	12	0.0	0.0	-0.4	0.0	0.0	0.0
	13	0.0	0.0	-0.4	0.0	0.0	0.0
	1	0.0	0.0	-1.9	0.0	0.0	0.0
	2	0.0	0.0	-3.6	0.0	0.0	0.0
	3	0.0	0.0	1.4	0.0	0.0	0.0
	4	0.0	0.0	1.3	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	-0.2	0.0	0.0	0.0
	8	0.0	0.0	-0.2	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
20	1	9.5	0.0	12.6	0.0	0.0	0.0
	2	16.3	0.0	22.4	0.0	0.0	0.0
	3	-4.6	0.0	-1.5	0.0	0.0	0.0
	4	-4.2	0.0	-8.0	0.0	0.0	0.0
	5	0.9	0.0	1.2	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.3	0.0	0.3	0.0	0.0	0.0
	8	0.3	0.0	0.4	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.

#### 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	23	-13.2	52.8	26.1	-0.0301	-0.0008	-0.0147
34	19	12.8	49.4	28.0	-0.0310	0.0005	0.0142
posuv Y							
48	4	0.4	-0.7	6.4	-0.0074	-0.0007	0.0001
21	23	0.9	155.7	-12.2	0.0318	-0.0007	0.0022
posuv Z							
32	23	-7.8	50.6	-23.3	0.0006	-0.0006	0.0010
48	11	-12.8	53.0	32.3	-0.0329	-0.0013	-0.0147
rot X							
47	11	0.4	53.6	2.6	-0.0330	-0.0013	-0.0147
18	15	0.4	20.7	-0.6	0.0416	-0.0034	-0.0100
rot Y							
8	9	0.5	0.0	-0.8	-0.0040	-0.0047	0.0000
7	9	0.3	0.0	-3.0	-0.0040	0.0050	0.0000
rot Z							
4	15	0.2	0.0	0.0	-0.0282	0.0027	-0.0408
1	15	0.0	0.0	0.0	-0.0307	-0.0012	0.0378

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 -465.5*		0.0	465.5*
sigma max prut : 67 prurez : 1 rez : 0.00 [m]			
1 20.00 7 456.9*		0.0	456.9*
tau prut : 2 prurez : 1 rez : 5.23 [m]			
1 15.50 6 16.9		-26.9	26.9
sigma sr. prut : 67 prurez : 1 rez : 0.00 [m]			

1 10.00 7 -465.5\* 0.0 465.5\*

vyuziti prurezu : 221.6 % 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 : 10 prurez : 2 rez : 0.00 [m]			
1 1.00 26 0.2 0.0 0.2			
sigma max prut : 5 prurez : 2 rez : 2.86 [m]			
2 18.00 7 37.1 0.0 37.1			
tau prut : 9 prurez : 2 rez : 2.86 [m]			
1 1.00 23 8.0 -23.0 23.0			
sigma sr. prut : 5 prurez : 2 rez : 2.86 [m]			
2 18.00 7 37.1 0.0 37.1			

vyuziti prurezu : 18.3 % 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 11 -488.8* 0.0 488.8*			
sigma max prut : 47 prurez : 3 rez : 0.00 [m]			
1 4.00 11 480.4* 0.0 480.4*			
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 11 -488.8* 0.0 488.8*			

vyuziti prurezu : 232.8 % 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 3.00 23 -266.0* 0.0 266.0*			
sigma max prut : 27 prurez : 4 rez : 0.60 [m]			
1 1.00 7 236.2* 0.0 236.2*			
tau prut : 58 prurez : 4 rez : 1.10 [m]			
1 4.00 28 12.0 0.0 12.0			
sigma sr. prut : 28 prurez : 4 rez : 0.00 [m]			
1 3.00 23 -266.0* 0.0 266.0*			

vyuziti prurezu : 126.7 % TPR 80x40x3 NEVYHOVI !!!

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 23 -119.3	0.0	119.3	
sigma max prut : 73 prurez : 5 rez : 1.13 [m]			
1 4.00 22 89.2	0.0	89.2	
tau prut : 99 prurez : 5 rez : 3.35 [m]			
1 4.00 28 -10.5	0.0	10.5	
sigma sr. prut : 82 prurez : 5 rez : 0.00 [m]			
1 4.00 23 -119.3	0.0	119.3	

vyuziti prurezu : 56.8 % 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 23 -17.8	0.0	17.8	
sigma max prut : 50 prurez : 6 rez : 1.25 [m]			
1 4.00 11 27.3	0.0	27.3	
tau prut : 65 prurez : 6 rez : 1.25 [m]			
1 4.00 28 5.9	0.0	5.9	
sigma sr. prut : 50 prurez : 6 rez : 1.25 [m]			
1 4.00 11 27.3	0.0	27.3	

vyuziti prurezu : 13.0 % 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 : 78 prurez : 7 rez : 1.13 [m]			
1 2.00 23 -53.6	0.0	53.6	
sigma max prut : 78 prurez : 7 rez : 1.13 [m]			
1 4.00 23 54.5	0.0	54.5	
tau prut : 92 prurez : 7 rez : 1.12 [m]			
1 4.00 28 -17.0	0.0	17.0	
sigma sr. prut : 78 prurez : 7 rez : 1.13 [m]			
1 4.00 23 54.5	0.0	54.5	

vyuziti prurezu : 25.9 % TPR 40x3 VYHOVI !

Vyhledano pro

Prurez : 7

Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
-----------------	----------------	------------	------------------

sigma min prut : 100 prurez : 8 rez : 0.00 [m]			
1 1.00 23 -66.6	0.0	66.6	
sigma max prut : 100 prurez : 8 rez : 0.00 [m]			

1	3.00	23	65.3	0.0	65.3
tau		prut :	111	prurez :	8 rez : 0.54 [m]
1	4.00	28	15.4	0.0	15.4
sigma sr.		prut :	100	prurez :	8 rez : 0.00 [m]
1	1.00	23	-66.6	0.0	66.6

vyuziti prurezu : 31.7 %      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 26	-117.4		0.0	117.4
sigma max prut :	96	prurez :	9 rez :	0.00 [m]
1 2.00 26	125.3		0.0	125.3
tau prut :	97	prurez :	9 rez :	3.35 [m]
1 4.00 28	-12.7		0.0	12.7
sigma sr. prut :	96	prurez :	9 rez :	0.00 [m]
1 2.00 26	125.3		0.0	125.3

vyuziti prurezu : 59.6 %      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 18	-104.4		0.0	104.4
sigma max prut :	23	prurez :	10 rez :	0.15 [m]
1 2.00 18	104.6		0.0	104.6
tau prut :	53	prurez :	10 rez :	0.15 [m]
1 4.00 28	5.4		0.0	5.4
sigma sr. prut :	23	prurez :	10 rez :	0.15 [m]
1 2.00 18	104.6		0.0	104.6

vyuziti prurezu : 49.8 %      TPR 80x40x3 VYHOVI !  
Vyhledano pro  
Prurez : 10  
Sled kombinaci : 1..28

## ZÁVĚR

1/ Ve statickém výpočtu bylo zjištěno, že průřez 1 - vaznice a průřez 3 - tenkostěnný profil obdélníkového průřezu, na kterém je uchycen závěs zábrany, na přitížení boční zábranou a tīmenem nevyhoví. Rovněž nevyhověl navržený průřez 4 - závěs boční zábrany.

2/ Byla navržena úprava - doplnění příhradovým ztužidlem mezi vaznicemi v prostoru úchytů boční zábrany, otočení průřezu 3 z polohy ležaté na stojatou a jeho nová větší dimenze PR OBD 100x60x3. Větší dimenzi PR OBD 100x60x3 je navržena i u průřezu 4.

3/ Těmito úpravami se docílí, že stávající profily vaznic I140 a profily navržené konstrukce boční zábrany vyhoví.

## NÁVRH ÚPRAV OK

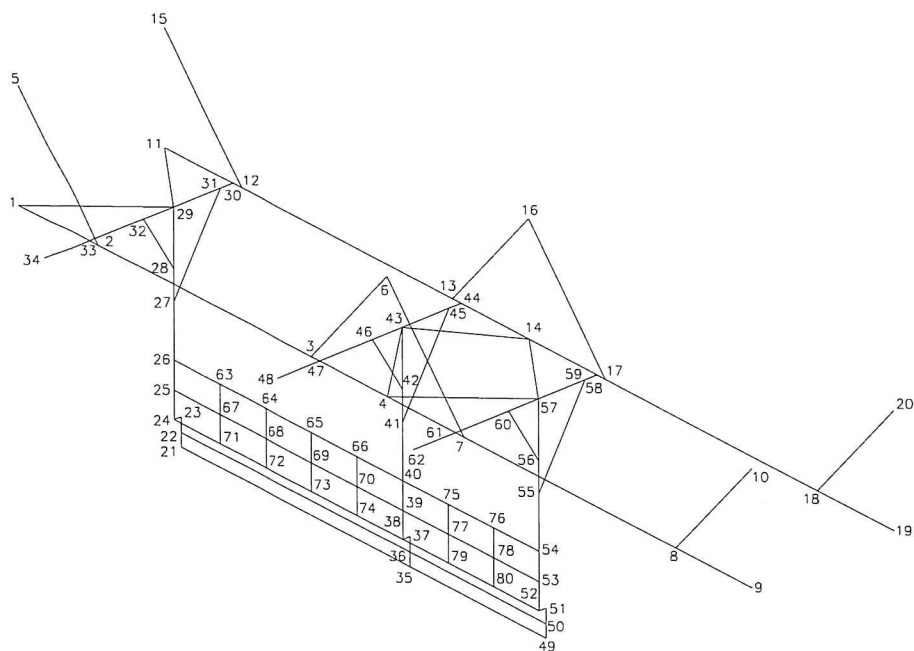
### ZATÍŽENÍ

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	

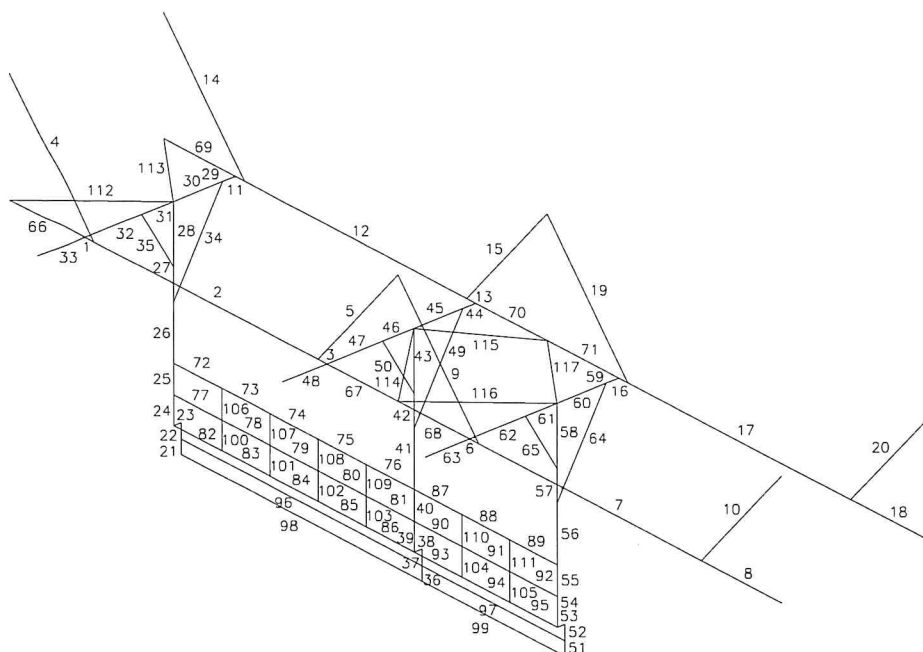
51	10.6750	1.9000	-3.7620
52	10.6750	1.7500	-3.7620
53	10.6750	1.7500	-3.2420
54	10.6750	1.7500	-2.7020
55	10.6750	1.7500	-1.6620
56	10.6750	1.7500	-1.0620
57	10.6750	1.7500	0.0380
58	10.6750	3.0000	0.0660
59	10.6750	2.7440	0.0600
60	10.6750	1.1230	0.0240
61	10.6750	0.0000	0.0000
62	10.6750	-0.9000	-0.0200
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

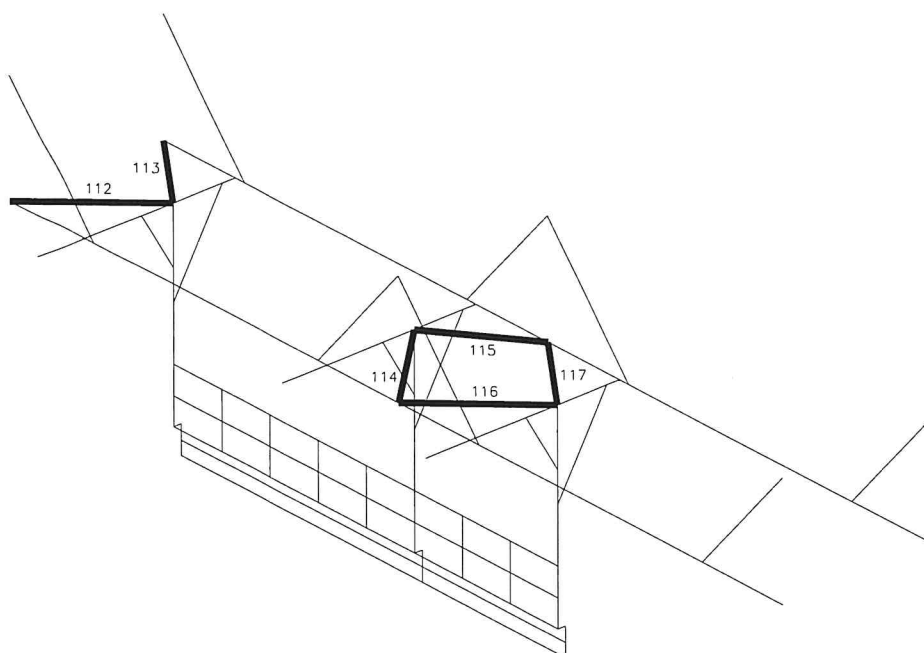
67	47	4	1.6750	1
68	4	61	1.6750	1
69	11	30	1.6750	1
70	44	14	1.6750	1
71	14	58	1.6750	1
72	26	63	1.1300	5
73	63	64	1.1300	5
74	64	65	1.1300	5
75	65	66	1.1300	5
76	66	40	1.1300	5
77	25	67	1.1300	7
78	67	68	1.1300	7
79	68	69	1.1300	7
80	69	70	1.1300	7
81	70	39	1.1300	7
82	24	71	1.1300	5
83	71	72	1.1300	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 Ř E Z Y - charakteristiky

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

PRUREZ c. 11 ( Irov )                      rotace prurezu Rx[st] = 45.00  
plocha A[m2] = 6.91017E-04              mom.setr. Ix[m4] = 8.43000E-09  
mom.setr. Iy[m4] = 9.40808E-08              mom.setr. Iz[m4] = 3.59802E-07  
mom.setr. Iw[m8] = 0.00000E+00  
Prvek 1 L 60.6                                      ocel 37  
poloha teziste    Y =    42.43    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 vnitřni síly na prutech

Prut	[m]	Kombi	N kN	Mx kN.m	Tz kN	My kN.m	Ty kN	Mz kN.m
extremy 1.radek = minimim 2.radek = maximum								
síla X								
3	0.000	7	-5.4	0.0	10.2	-12.5	0.0	0.0
12	0.000	11	35.0	0.0	13.0	-7.9	0.0	0.0
moment X								
67	0.000	11	1.2	0.0	5.0	-8.2	0.0	0.0
3	0.000	11	1.2	0.0	9.0	-10.2	0.0	0.0
síla Z								
2	5.230	8	27.4	0.0	-18.0	-13.2	0.0	0.0
17	0.000	1	26.6	0.0	17.2	-11.4	0.0	0.0
moment Y								
3	0.000	8	-2.9	0.0	9.0	-13.2	0.0	0.0
7	2.615	1	27.6	0.0	-0.4	9.8	0.0	0.0
síla Y								
66	0.000	23	-5.0	0.0	-0.8	0.0	0.0	0.0
67	0.000	22	-3.5	0.0	0.3	-0.1	0.0	0.0



moment Z								
66	1.675	23	-5.0	0.0	-1.2	-1.7	0.0	0.0
68	1.675	19	3.3	0.0	-1.3	-1.9	0.0	0.0

Vyhledano pro

Prurez : 1

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	27	1.1	0.0	0.1	0.0	0.0	0.0
5	2.859	7	47.5	0.0	-0.1	0.0	0.0	0.0

moment X

19	0.000	19	6.1	0.0	0.1	0.0	0.0	0.0
9	0.000	23	10.9	0.0	0.1	0.0	0.0	0.0

sila Z

9	2.859	22	9.9	0.0	-0.1	0.0	0.0	0.0
9	0.000	2	36.4	0.0	0.1	0.0	0.0	0.0

moment Y

9	2.859	22	9.9	0.0	-0.1	0.0	0.0	0.0
9	2.859	12	37.8	0.0	-0.1	0.0	0.0	0.0

sila Y

15	0.000	19	10.3	0.0	0.1	0.0	0.0	0.0
5	0.000	23	10.9	0.0	0.1	0.0	0.0	0.0

moment Z

15	2.859	19	10.7	0.0	-0.1	0.0	0.0	0.0
5	2.859	23	11.2	0.0	-0.1	0.0	0.0	0.0

Vyhledano pro

Prurez : 2

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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	11	-6.5	0.0	7.9	4.2	0.0	0.0
45	0.000	23	2.4	0.0	2.0	-0.5	0.0	0.0

moment X

59	0.000	7	0.0	-0.2	-0.5	0.0	0.0	0.0
44	0.000	8	0.0	0.3	0.3	0.0	0.0	0.0

sila Z

47	1.123	11	0.0	-0.1	-3.8	0.0	0.0	0.0
46	0.000	11	-6.5	0.0	7.9	-0.7	0.0	0.0

moment Y

46	0.000	11	-6.5	0.0	7.9	-0.7	0.0	0.0
47	0.000	11	0.0	-0.1	-3.8	4.2	0.0	0.0

sila Y

45	0.000	18	1.1	0.0	1.1	-0.2	-0.2	0.0
30	0.000	19	1.5	0.0	1.5	-0.3	0.2	0.0

moment Z

45	0.994	18	1.1	0.0	1.0	0.9	-0.2	-0.2
30	0.994	19	1.5	0.0	1.4	1.2	0.2	0.2

Vyhledano pro

Prurez : 3

Sled kombinaci : 1..28

# Vypoctove vnitřní síly 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	-5.9	-0.2	0.2	0.0	-5.4	3.6
42	0.600	11	5.6	-0.2	0.2	0.0	1.2	3.6
moment X								
24	0.000	22	0.8	-0.6	0.6	-0.4	0.4	-0.3
26	0.000	19	1.2	0.4	0.0	0.0	2.1	0.1
sila Z								
22	0.000	23	0.3	0.0	-5.2	0.8	0.0	0.0
37	0.000	22	0.4	0.0	3.8	-0.6	-0.2	0.0
moment Y								
22	0.280	23	0.4	0.0	-5.2	-0.7	0.0	0.0
22	0.000	19	0.3	0.0	-5.2	0.8	0.0	0.0
sila Y								
43	0.000	11	-5.9	-0.2	0.2	0.0	-5.4	3.6
41	0.000	15	1.5	-0.2	0.2	-0.2	3.4	-0.7
moment Z								
43	1.100	11	-5.8	-0.2	0.2	0.2	-5.4	-2.3
43	0.000	11	-5.9	-0.2	0.2	0.0	-5.4	3.6

Vyhledano pro

Prurez : 4

Sled kombinaci : 1..28

# Vypoctove vnitřní síly 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	19	-5.9	0.2	0.4	-0.3	-0.4	0.3
98	0.000	16	0.9	0.0	0.2	-0.2	0.0	0.0
moment X								
76	0.000	11	0.4	-0.2	-0.2	0.0	1.0	-0.2
72	0.000	22	-0.2	0.2	0.2	-0.1	-1.6	0.9
sila Z								
95	1.117	23	-2.6	0.0	-0.3	-0.2	0.2	0.2
82	0.000	23	-5.9	0.2	0.4	-0.3	-0.4	0.3
moment Y								
82	0.000	23	-5.9	0.2	0.4	-0.3	-0.4	0.3
82	1.130	23	-5.9	0.2	0.3	0.1	-0.4	-0.1
sila Y								
72	0.000	18	-0.1	0.2	0.2	0.0	-1.6	0.9
76	1.130	15	0.2	-0.2	-0.2	-0.1	1.8	1.4
moment Z								
74	0.565	18	-0.6	0.0	0.0	0.0	0.0	-1.0
76	1.130	15	0.2	-0.2	-0.2	-0.1	1.8	1.4

Vyhledano pro

Prurez : 5

Sled kombinaci : 1..28

# Vypoctove vnitřní síly 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	23	-4.6	0.0	0.0	0.0	0.0	0.0
50	1.254	11	13.3	0.0	0.0	0.0	0.0	0.0
moment X								
50	0.000	6	9.4	0.0	0.0	0.0	0.0	0.0

35	0.000	7	9.0	0.0	0.0	0.0	0.0	0.0
sila Z								
49	1.988	1	1.7	0.0	0.0	0.0	0.0	0.0
49	0.000	19	-4.5	0.0	0.0	0.0	0.0	0.0
moment Y								
65	1.254	18	2.7	0.0	0.0	0.0	0.0	0.0
50	1.254	19	12.0	0.0	0.0	0.0	0.0	0.0
sila Y								
65	0.000	1	1.1	0.0	0.0	0.0	0.0	0.0
64	0.000	7	-1.9	0.0	0.0	0.0	0.0	0.0
moment Z								
65	1.254	1	1.1	0.0	0.0	0.0	0.0	0.0
64	1.988	7	-1.8	0.0	0.0	0.0	0.0	0.0

Vyhledano pro

Prurez : 6

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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								
90	0.000	22	-0.2	0.0	0.0	0.0	0.0	0.0
77	0.000	23	0.9	0.0	0.2	0.0	-0.1	0.0
moment X								
80	0.000	11	0.2	0.0	0.0	0.0	0.0	-0.1
77	0.000	22	0.8	0.0	0.2	0.0	-0.1	0.0
sila Z								
81	1.130	2	-0.2	0.0	-0.2	-0.1	0.0	0.0
78	0.000	23	0.5	0.0	0.2	-0.1	0.0	0.0
moment Y								
78	0.000	23	0.5	0.0	0.2	-0.1	0.0	0.0
81	0.000	2	-0.2	0.0	-0.2	0.0	0.0	0.0
sila Y								
79	0.000	28	0.0	0.0	0.0	0.0	-0.4	0.0
79	0.565	28	0.0	0.0	0.0	0.0	0.4	-0.2
moment Z								
79	0.565	28	0.0	0.0	0.0	0.0	-0.4	-0.2
81	1.130	15	0.2	0.0	-0.1	0.0	0.1	0.1

Vyhledano pro

Prurez : 7

Sled kombinaci : 1..28

Vypoctove vnitřní síly 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								
100	0.000	23	-0.2	0.0	-0.7	0.2	-0.1	0.0
104	0.520	22	0.0	0.0	0.2	0.0	0.1	0.0
moment X								
106	0.000	22	0.0	0.0	-0.3	0.0	-0.2	0.0
109	0.000	11	0.0	0.0	0.4	0.0	0.0	0.0
sila Z								
100	0.000	23	-0.2	0.0	-0.7	0.2	-0.1	0.0
105	0.000	23	0.0	0.0	0.5	-0.2	0.0	0.0
moment Y								
105	0.000	23	0.0	0.0	0.5	-0.2	0.0	0.0
100	0.000	23	-0.2	0.0	-0.7	0.2	-0.1	0.0
sila Y								
107	0.000	22	0.0	0.0	-0.2	0.0	-0.3	0.0

108	0.000	27	0.0	0.0	0.0	0.0	0.3	-0.1
moment Z								
107	0.540	22	0.0	0.0	-0.2	0.0	-0.3	-0.1
101	0.000	22	0.0	0.0	-0.4	0.1	-0.3	0.1

Vyhledano pro

Prurez : 8

Sled kombinaci : 1..28

Vypoctove vnitřní síly na prutech

Prut [m]	Kombi	N kN	Mx kN.m	Tz kN	My kN.m	Ty kN	Mz kN.m	
extremy	1.radek = minimim	2.radek = maximum						
síla X								
96	0.000	16	-0.9	0.0	0.1	0.0	0.0	
96	0.000	19	6.8	0.0	0.1	-0.1	0.0	
moment X								
96	0.000	11	6.3	0.0	0.1	-0.1	0.0	
97	0.000	10	0.6	0.0	0.0	0.0	0.0	
síla Z								
96	5.650	2	-0.9	0.0	-0.1	-0.1	0.0	
96	0.000	23	6.7	0.0	0.1	-0.1	0.0	
moment Y								
96	0.000	23	6.7	0.0	0.1	-0.1	0.0	
96	2.825	16	-0.9	0.0	0.0	0.0	0.0	
síla Y								
96	0.000	26	2.0	0.0	0.1	-0.1	-0.4	
96	2.825	26	2.0	0.0	0.0	0.0	0.4	
moment Z								
96	2.825	26	2.0	0.0	0.0	0.0	-0.4	
96	0.000	26	2.0	0.0	0.1	-0.1	-0.4	

Vyhledano pro

Prurez : 9

Sled kombinaci : 1..28

Vypoctove vnitřní síly na prutech

Prut [m]	Kombi	N kN	Mx kN.m	Tz kN	My kN.m	Ty kN	Mz kN.m
extremy	1.radek = minimim	2.radek = maximum					
síla X							
38	0.000	19	-0.2	-0.3	-0.5	-0.1	-2.8
23	0.000	26	0.4	0.3	-0.3	0.0	2.0
moment X							
38	0.000	10	-0.1	-0.4	-0.5	-0.1	-3.8
23	0.000	23	0.0	0.7	-0.4	0.0	5.2
síla Z							
38	0.150	2	0.0	0.0	-0.6	0.0	-0.1
53	0.000	2	0.0	0.0	-0.2	0.0	0.1
moment Y							
38	0.150	11	-0.2	-0.3	-0.5	-0.2	-2.7
53	0.000	18	0.1	-0.2	-0.3	0.1	-1.2
síla Y							
38	0.000	22	-0.2	-0.4	-0.5	-0.1	-3.8
23	0.000	23	0.0	0.7	-0.4	0.0	5.2
moment Z							
38	0.150	22	-0.2	-0.4	-0.5	-0.2	-3.8
23	0.150	22	0.0	0.7	-0.4	0.0	5.0

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	15	-2.3	0.0	0.0	0.0	0.0	0.0
114	0.000	7	2.9	0.0	0.0	0.0	0.0	0.0
moment X								
112	0.000	7	1.8	0.0	0.0	0.0	0.0	0.0
114	0.000	7	2.9	0.0	0.0	0.0	0.0	0.0
sila Z								
113	0.000	23	-1.4	0.0	0.0	0.0	0.0	0.0
115	0.000	23	-2.2	0.0	0.0	0.0	0.0	0.0
moment Y								
113	2.090	23	-1.4	0.0	0.0	0.0	0.0	0.0
115	2.090	23	-2.2	0.0	0.0	0.0	0.0	0.0
sila Y								
115	0.000	23	-2.2	0.0	0.0	0.0	0.0	0.0
114	0.000	23	2.7	0.0	0.0	0.0	0.0	0.0
moment Z								
115	2.090	23	-2.2	0.0	0.0	0.0	0.0	0.0
114	2.423	23	2.7	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 kN	Py kN	Pz kN	Mx kN.m	My kN.m	Mz kN.m
1	1	0.0	0.0	-1.9	0.0	0.0	0.0
	2	-2.0	0.0	-3.1	0.0	0.0	0.0
	3	-13.4	0.0	1.4	0.0	0.0	0.0
	4	0.0	0.0	1.3	0.0	0.0	0.0
	5	0.7	0.0	0.0	0.0	0.0	0.0
	6	0.8	0.0	-0.3	0.0	0.0	0.0
	7	2.3	-1.3	0.0	0.0	0.0	0.0
	8	2.3	-1.3	0.0	0.0	0.0	0.0
	9	0.3	-0.4	0.0	0.0	0.0	0.0
	10	0.5	-0.2	0.0	0.0	0.0	0.0
	11	0.5	-0.2	0.0	0.0	0.0	0.0
	12	0.5	-0.2	0.0	0.0	0.0	0.0
	13	0.5	-0.2	0.0	0.0	0.0	0.0
4	1	0.0	0.0	-3.9	0.0	0.0	0.0
	2	0.0	-0.1	-7.4	0.0	0.0	0.0
	3	0.0	0.0	2.7	0.0	0.0	0.0
	4	0.0	0.0	2.7	0.0	0.0	0.0
	5	0.0	0.0	0.1	0.0	0.0	0.0
	6	0.0	0.0	0.5	0.0	0.0	0.0
	7	0.0	-1.3	0.2	0.0	0.0	0.0
	8	0.0	-2.7	0.3	0.0	0.0	0.0
	9	0.0	-0.9	0.2	0.0	0.0	0.0
	10	0.0	-0.2	0.0	0.0	0.0	0.0
	11	0.0	-0.2	0.0	0.0	0.0	0.0
	12	0.0	-0.3	0.0	0.0	0.0	0.0
	13	0.0	-0.2	0.0	0.0	0.0	0.0
5	1	-9.5	0.0	12.6	0.0	0.0	0.0
	2	-15.2	0.0	21.2	0.0	0.0	0.0
	3	4.4	0.0	-7.3	0.0	0.0	0.0
	4	4.2	0.0	-8.0	0.0	0.0	0.0
	5	-1.6	0.0	2.0	0.0	0.0	0.0

6	6	-0.6	0.0	0.7	0.0	0.0	0.0
	7	-2.0	0.0	2.2	0.0	0.0	0.0
	8	-2.0	0.0	2.3	0.0	0.0	0.0
	9	-0.8	0.0	0.9	0.0	0.0	0.0
	10	-0.5	0.0	0.5	0.0	0.0	0.0
	11	-0.5	0.0	0.6	0.0	0.0	0.0
	12	-0.4	0.0	0.4	0.0	0.0	0.0
	13	-0.4	0.0	0.5	0.0	0.0	0.0
	1	0.0	0.0	25.4	0.0	0.0	0.0
	2	0.0	0.0	49.1	0.0	0.0	0.0
	3	0.0	0.0	-8.6	0.0	0.0	0.0
	4	0.0	0.0	-16.1	0.0	0.0	0.0
	5	0.0	0.0	3.9	0.0	0.0	0.0
9	6	0.0	0.0	0.7	0.0	0.0	0.0
	7	0.0	0.0	1.7	0.0	0.0	0.0
	8	0.0	0.0	3.8	0.0	0.0	0.0
	9	0.0	0.0	1.7	0.0	0.0	0.0
	10	0.0	0.0	0.4	0.0	0.0	0.0
	11	0.0	0.0	0.5	0.0	0.0	0.0
	12	0.0	0.0	0.4	0.0	0.0	0.0
	13	0.0	0.0	0.4	0.0	0.0	0.0
	1	0.0	0.0	-1.9	0.0	0.0	0.0
	2	0.0	0.0	-4.2	0.0	0.0	0.0
	3	0.0	0.0	1.4	0.0	0.0	0.0
	4	0.0	0.0	1.3	0.0	0.0	0.0
	5	0.0	0.0	0.0	0.0	0.0	0.0
10	6	0.0	0.0	0.1	0.0	0.0	0.0
	7	0.0	0.0	0.2	0.0	0.0	0.0
	8	0.0	0.0	0.2	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
	1	9.5	0.0	12.6	0.0	0.0	0.0
	2	17.4	0.0	23.6	0.0	0.0	0.0
	3	-4.6	0.0	-1.5	0.0	0.0	0.0
	4	-4.2	0.0	-8.0	0.0	0.0	0.0
	5	0.9	0.0	1.2	0.0	0.0	0.0
11	6	-0.2	0.0	-0.2	0.0	0.0	0.0
	7	-0.4	0.0	-0.4	0.0	0.0	0.0
	8	-0.4	0.0	-0.4	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
	1	0.0	0.0	-1.9	0.0	0.0	0.0
	2	0.0	0.0	-3.7	0.0	0.0	0.0
	3	-13.4	0.0	1.4	0.0	0.0	0.0
	4	0.0	0.0	1.3	0.0	0.0	0.0
	5	1.0	0.0	0.0	0.0	0.0	0.0
14	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	-2.4	-0.9	0.0	0.0	0.0	0.0
	8	-2.5	-0.9	0.0	0.0	0.0	0.0
	9	-0.3	-0.3	0.0	0.0	0.0	0.0
	10	-0.6	-0.2	0.0	0.0	0.0	0.0
	11	-0.6	-0.2	0.0	0.0	0.0	0.0
	12	-0.5	-0.1	0.0	0.0	0.0	0.0
	13	-0.5	-0.1	0.0	0.0	0.0	0.0
	1	0.0	0.0	-3.9	0.0	0.0	0.0

15	2	0.0	0.0	-7.4	0.0	0.0	0.0
	3	0.0	0.0	2.7	0.0	0.0	0.0
	4	0.0	0.0	2.7	0.0	0.0	0.0
	5	0.0	0.0	0.1	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	-0.9	-0.2	0.0	0.0	0.0
	8	0.0	-1.9	-0.4	0.0	0.0	0.0
	9	0.0	-0.6	-0.2	0.0	0.0	0.0
	10	0.0	-0.2	0.0	0.0	0.0	0.0
	11	0.0	-0.2	0.0	0.0	0.0	0.0
	12	0.0	-0.2	0.0	0.0	0.0	0.0
	13	0.0	-0.2	0.0	0.0	0.0	0.0
	1	-9.5	0.0	12.6	0.0	0.0	0.0
16	2	-16.3	0.0	22.5	0.0	0.0	0.0
	3	4.4	0.0	-7.3	0.0	0.0	0.0
	4	4.2	0.0	-8.0	0.0	0.0	0.0
	5	-1.8	0.0	2.3	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	2.0	0.0	-2.2	0.0	0.0	0.0
	8	2.0	0.0	-2.3	0.0	0.0	0.0
	9	0.7	0.0	-0.8	0.0	0.0	0.0
	10	0.5	0.0	-0.5	0.0	0.0	0.0
	11	0.5	0.0	-0.6	0.0	0.0	0.0
	12	0.4	0.0	-0.4	0.0	0.0	0.0
	13	0.4	0.0	-0.5	0.0	0.0	0.0
	1	0.0	0.0	25.4	0.0	0.0	0.0
19	2	0.0	0.0	45.2	0.0	0.0	0.0
	3	0.0	0.0	-8.6	0.0	0.0	0.0
	4	0.0	0.0	-16.1	0.0	0.0	0.0
	5	0.0	0.0	4.3	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.0	0.0	-1.8	0.0	0.0	0.0
	8	0.0	0.0	-3.8	0.0	0.0	0.0
	9	0.0	0.0	-1.7	0.0	0.0	0.0
	10	0.0	0.0	-0.4	0.0	0.0	0.0
	11	0.0	0.0	-0.5	0.0	0.0	0.0
	12	0.0	0.0	-0.4	0.0	0.0	0.0
	13	0.0	0.0	-0.4	0.0	0.0	0.0
	1	0.0	0.0	-1.9	0.0	0.0	0.0
20	2	0.0	0.0	-3.6	0.0	0.0	0.0
	3	0.0	0.0	1.4	0.0	0.0	0.0
	4	0.0	0.0	1.3	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	-0.3	0.0	0.0	0.0
	8	0.0	0.0	-0.3	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
	1	9.5	0.0	12.6	0.0	0.0	0.0
	2	16.3	0.0	22.4	0.0	0.0	0.0
	3	-4.6	0.0	-1.5	0.0	0.0	0.0
	4	-4.2	0.0	-8.0	0.0	0.0	0.0
	5	0.8	0.0	1.2	0.0	0.0	0.0
	6	0.0	0.0	0.0	0.0	0.0	0.0
	7	0.5	0.0	0.5	0.0	0.0	0.0
	8	0.5	0.0	0.6	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.0	0.0	0.0
	10	0.1	0.0	0.1	0.0	0.0	0.0

11		0.1	0.0	0.1	0.0	0.0	0.0
12		0.1	0.0	0.1	0.0	0.0	0.0
13		0.0	0.0	0.1	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	-2.1	0.0	0.0	-0.0012	-0.0013	-0.0014
6	12	3.3	0.0	0.0	-0.0018	0.0010	-0.0020
posuv Y							
56	22	0.0	-0.6	-0.8	0.0000	0.0000	-0.0010
35	19	0.4	35.6	-2.1	0.0101	0.0000	-0.0028
posuv Z							
46	23	0.0	0.2	-5.3	0.0004	-0.0005	0.0000
48	11	0.4	0.0	7.7	-0.0067	-0.0016	0.0000
rot X							
47	11	0.3	0.0	1.7	-0.0067	-0.0016	0.0000
40	11	-1.0	17.5	-2.7	0.0117	0.0002	-0.0036
rot Y							
8	1	0.5	0.0	-0.8	0.0002	-0.0046	0.0000
7	1	0.2	0.0	-2.6	0.0002	0.0048	0.0000
rot Z							
66	22	0.3	21.5	-3.4	0.0037	-0.0005	-0.0079
63	19	0.0	23.5	-3.7	0.0062	0.0004	0.0084

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	:	3	prurez	:	1 rez	: 0.00 [m]
1 11.00 8		-169.7			0.0	169.7
sigma max prut	:	2	prurez	:	1 rez	: 5.23 [m]
1 1.00 8		176.0			0.0	176.0
tau prut	:	2	prurez	:	1 rez	: 5.23 [m]
1 5.50 8		15.0			-26.4	26.4
sigma sr. prut	:	2	prurez	:	1 rez	: 5.23 [m]
1 1.00 8		176.0			0.0	176.0

vyuziti prurezu : 83.8 % 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 27		0.2			0.0	0.2
sigma max prut	:	5	prurez	:	2 rez	: 2.86 [m]
1 2.00 7		34.6			0.0	34.6
tau prut	:	9	prurez	:	2 rez	: 2.86 [m]
1 1.00 23		8.1			-1.8	8.1
sigma sr. prut	:	5	prurez	:	2 rez	: 2.86 [m]



1 2.00 7 34.6 0.0 34.6

vyuziti prurezu : 16.5 % 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 1.00 11 -184.9	0.0	184.9	
sigma max prut : 47 prurez : 3 rez : 0.00 [m]			
1 3.00 11 170.5	0.0	170.5	
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 11 -184.9	0.0	184.9	

vyuziti prurezu : 88.0 % TPR 100x60x3 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 4.00 7 -159.6	0.0	159.6	
sigma max prut : 42 prurez : 4 rez : 0.60 [m]			
1 2.00 7 154.4	0.0	154.4	
tau prut : 58 prurez : 4 rez : 1.10 [m]			
1 4.00 28 6.4	0.0	6.4	
sigma sr. prut : 43 prurez : 4 rez : 0.00 [m]			
1 4.00 7 -159.6	0.0	159.6	

vyuziti prurezu : 76.0 % TPR 100x60x3 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 : 76 prurez : 5 rez : 1.13 [m]			
1 4.00 11 -112.3	0.0	112.3	
sigma max prut : 76 prurez : 5 rez : 1.13 [m]			
1 2.00 11 113.7	0.0	113.7	
tau prut : 99 prurez : 5 rez : 3.35 [m]			
1 4.00 28 -11.5	0.0	11.5	
sigma sr. prut : 76 prurez : 5 rez : 1.13 [m]			
1 2.00 11 113.7	0.0	113.7	

vyuziti prurezu : 54.1 % 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 23 -26.7		0.0	26.7
sigma max prut : 50 prurez : 6 rez : 1.25 [m]			
1 3.00 11 30.0		0.0	30.0
tau prut : 65 prurez : 6 rez : 1.25 [m]			
1 4.00 28 4.5		0.0	4.5
sigma sr. prut : 50 prurez : 6 rez : 1.25 [m]			
1 3.00 11 30.0		0.0	30.0

vyuziti prurezu : 14.3 % 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 : 78 prurez : 7 rez : 1.13 [m]			
1 2.00 23 -44.2		0.0	44.2
sigma max prut : 78 prurez : 7 rez : 1.13 [m]			
1 4.00 23 46.5		0.0	46.5
tau prut : 92 prurez : 7 rez : 1.12 [m]			
1 4.00 28 -14.0		0.0	14.0
sigma sr. prut : 78 prurez : 7 rez : 1.13 [m]			
1 4.00 23 46.5		0.0	46.5

vyuziti prurezu : 22.1 % TPR 40x3 VYHOVI !

Vyhledano pro

Prurez : 7

Sled kombinaci : 1..28

# Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 100 prurez : 8 rez : 0.00 [m]			
1 1.00 23 -57.4		0.0	57.4
sigma max prut : 100 prurez : 8 rez : 0.00 [m]			
1 3.00 23 56.4		0.0	56.4
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 23 -57.4		0.0	57.4

vyuziti prurezu : 27.3 % TPR 50x30x3 VYHOVI !

Vyhledano pro

Prurez : 8

Sled kombinaci : 1..28

# Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 96 prurez : 9 rez : 0.00 [m]			
1 4.00 26 -118.5		0.0	118.5
sigma max prut : 96 prurez : 9 rez : 0.00 [m]			

1	2.00	26	127.7		0.0		127.7
tau		prut :	97	prurez :	9	rez :	3.35 [m]
1	4.00	28	-11.3		0.0		11.3
sigma		sr. prut :	96	prurez :	9	rez :	0.00 [m]
1	2.00	26	127.7		0.0		127.7

vyuziti prurezu : 60.8 % 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 22	-50.5		0.0		50.5
sigma max prut :	23	prurez :	10	rez :	0.15 [m]
1 2.00 22	50.6		0.0		50.6
tau prut :	53	prurez :	10	rez :	0.15 [m]
1 4.00 28	0.0		0.0		0.0
sigma sr. prut :	23	prurez :	10	rez :	0.15 [m]
1 2.00 22	50.6		0.0		50.6

vyuziti prurezu : 24.1 % TPR 100x60x3 VYHOVI !

Vyhledano pro

Prurez : 10

Sled kombinaci : 1..28

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x	tau	sig.srov.
	MPa	Mpa	Mpa

sigma min prut :	115	prurez :	11	rez :	2.09 [m]
1 2.00 15	-16.1		0.0		16.1
sigma max prut :	114	prurez :	11	rez :	2.42 [m]
1 1.00 7	4.2		4.2		4.2
tau prut :	114	prurez :	11	rez :	2.42 [m]
1 1.00 7	0.6		4.2		4.2
sigma sr. prut :	115	prurez :	11	rez :	2.09 [m]
1 2.00 15	-16.1		0.0		16.1

vyuziti prurezu : 7.6 % L 60x6 VYHOVI !

Vyhledano pro

Prurez : 11

Sled kombinaci : 1..28

## STATICKÉ POSOUZENÍ PRÍČNÉ VAZBY HALY

### ZATÍŽENÍ

#### 1. Zatěžovací stav

Vlastní tíha  $\gamma = 1,35$

Generována počítačem

#### 2. Zatěžovací stav

Zatížení stálé střešním pláštěm  $\gamma = 1,35$

Reakce vaznic

$P_{z1} = 2 \times 1,5 = 3,0 \text{ kN}$

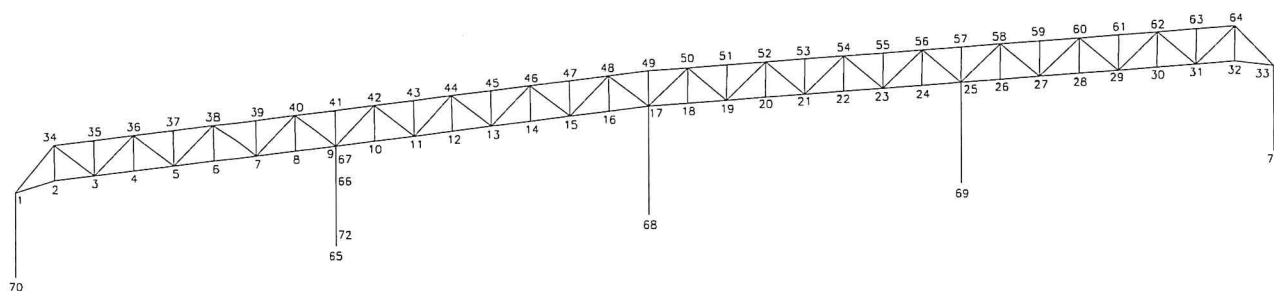
$P_{z2} = 2 \times 10,4 = 20,8 \text{ kN}$

- $P_{z3} = 2,8 \text{ kN}$   
 $P_{z4} = 2,9 \text{ kN}$   
 $P_{z5} = 21,7 \text{ kN}$   
 $P_{z6} = 22,0 \text{ kN}$
3. Zatěžovací stav  
 Zatížení sněhem  $\gamma = 1,5$   
 Reakce vaznic  
 $P_{z1} = 2 \times 2,5 = 5,0 \text{ kN}$   
 $P_{z2} = 2 \times 15,1 = 30,2 \text{ kN}$
4. Zatěžovací stav  
 Zatížení větrem  $\gamma = 1,5$   
 Reakce vaznic  
 $P_{z1} = 2 \times 0,9 = 1,8 \text{ kN}$   
 $P_{z2} = 4,8 + 1,1 = 5,9 \text{ kN}$   
 $P_{x1} = 0,525 \times 0,7 \times 0,5 \times 6 \times 24,0 + 8 \times 4,3 = 60,86 \text{ kN}$
5. Zatěžovací stav  
 Zatížení větrem  $\gamma = 1,5$   
 Reakce vaznic  
 $P_{z1} = 2 \times 0,9 = 1,8 \text{ kN}$   
 $P_{z2} = 2 \times 5,4 = 10,8 \text{ kN}$   
 $P_{y1} = 0,525 \times 0,7 \times 0,5 \times 7 \times 24,0 = 30,87 \text{ kN}$   
 $P_{y2} = 0,525 \times 0,5 \times 0,5 \times 7 \times 24,0 = 22,05 \text{ kN}$
6. Zatěžovací stav  
 Zatížení jeřábem  $\gamma = 1,95$   
 $n = 1,5$   
 $\delta = 1,3$  dynamický součinitel  
 Nosnost jeřábu 500 kg  
 Vyložení  $l = 3,5 \text{ m}$   
 $P_{z1} = 11,0 \text{ kN}$   
 $P_{y1} = 24,0 \text{ kN}$   
 $M_{y1} = 11,0 \times 0,67 = 7,37 \text{ kNm}$   
 $M_{z1} = 24,0 \times 0,67 = 16,08 \text{ kNm}$
7. Zatěžovací stav  
 Zatížení jeřábem  $\gamma = 1,95$   
 $n = 1,5$   
 $\delta = 1,3$  dynamický součinitel  
 Nosnost jeřábu 500 kg  
 Vyložení  $l = 3,5 \text{ m}$   
 $P_{z1} = 11,0 \text{ kN}$   
 $P_{y1} = 24,0 \text{ kN}$   
 $M_{y1} = 11,0 \times 0,67 = 7,37 \text{ kNm}$   
 $M_{z1} = 24,0 \times 0,67 = 16,08 \text{ kNm}$
8. Zatěžovací stav  
 Zatížení jeřábem  $\gamma = 1,95$   
 $n = 1,5$   
 $\delta = 1,3$  dynamický součinitel  
 Nosnost jeřábu 500 kg  
 Vyložení  $l = 3,5 \text{ m}$   
 $P_{z1} = 11,0 \text{ kN}$   
 $P_{y1} = 24,0 \text{ kN}$   
 $M_{y1} = 11,0 \times 0,67 = 7,37 \text{ kNm}$
9. Zatěžovací stav  
 Zatížení zábranou  $\gamma = 1,5$   
 $P_{z1} = 0,4 + 0,2 = 0,6 \text{ kN}$   
 $P_{z2} = 0,5 + 2,4 = 2,6 \text{ kN}$   
 $P_{z3} = 2,5 \text{ kN}$   
 $P_{z4} = 0,2 \text{ kN}$   
 $P_{y1} = 2,1 \text{ kN}$   
 $P_{y2} = 0,7 \text{ kN}$

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

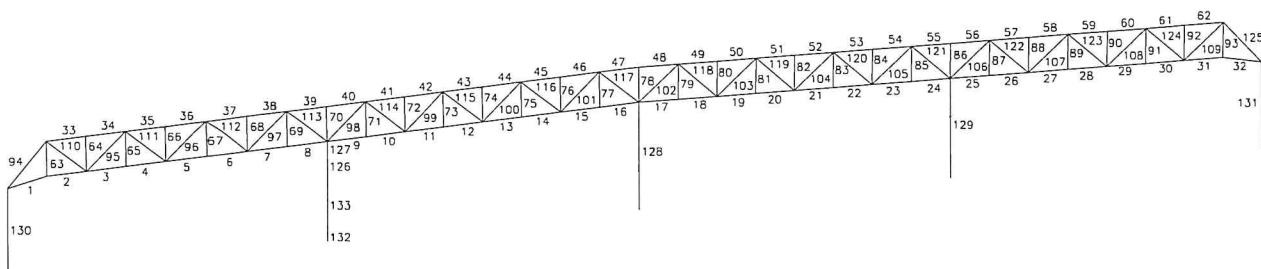


P R U T Y					
prut	zac	konec	delka[m]	prurez	typ
1	1	2	3.0527	4	
2	2	3	3.0007	4	
3	3	4	3.0007	5	
4	4	5	3.0007	5	
5	5	6	3.0007	5	
6	6	7	3.0007	5	
7	7	8	3.0007	4	
8	8	9	3.0007	4	
9	9	10	3.0007	4	
10	10	11	3.0007	4	
11	11	12	3.0007	5	
12	12	13	3.0007	5	
13	13	14	3.0007	5	
14	14	15	3.0007	5	
15	15	16	3.0007	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

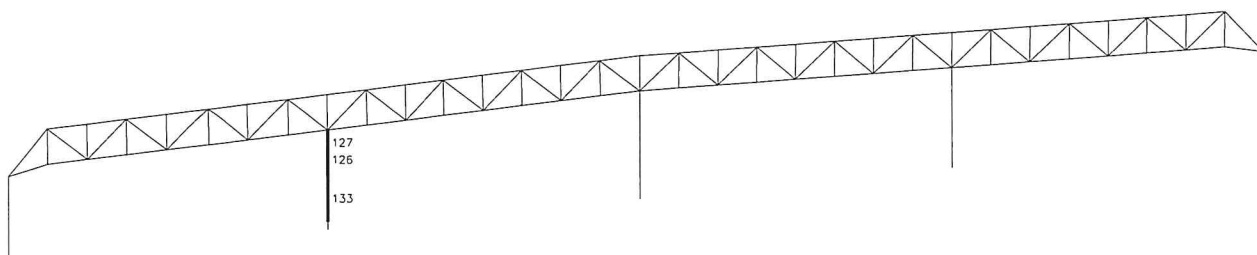




# PRUREZ Y - charakteristiky

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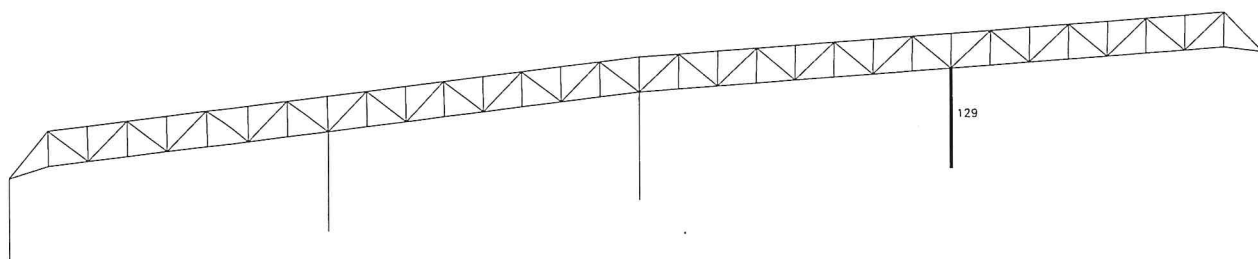
PRUREZ c. 1 ( I svar )	rotace prurezu Rx[st] = 0.00
plocha A[m2] = 2.55400E-02	mom.setr. Ix[m4] = 9.04480E-06
mom.setr. Iy[m4] = 2.47703E-03	mom.setr. Iz[m4] = 9.12423E-05
mom.setr. Iw[m8] = 1.13254E-05	
Prvek 1 P 35.250	ocel 37
Prvek 2 P 12.670	ocel 37
Prvek 3 P 35.250	ocel 37
poloha teziste Y = 125.00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



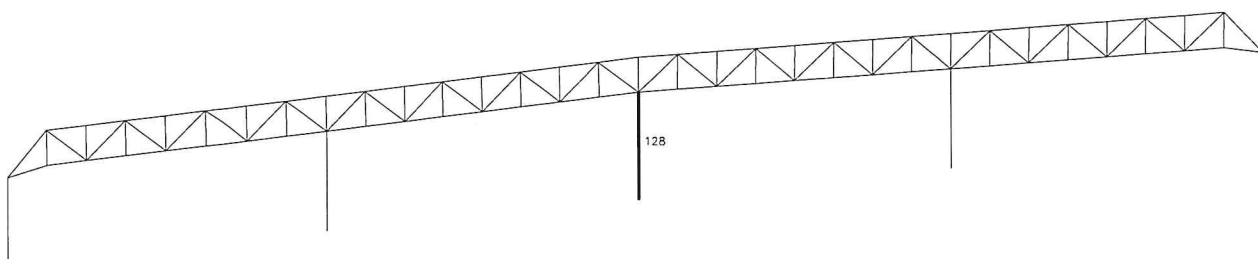

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PRUREZ c. 2 ( I svar )	rotace prurezu Rx[st] = 0.00
plocha A[m2] = 1.80000E-02	mom.setr. Ix[m4] = 4.53511E-06
mom.setr. Iy[m4] = 1.37160E-03	mom.setr. Iz[m4] = 4.00500E-05
mom.setr. Iw[m8] = 3.96900E-06	

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

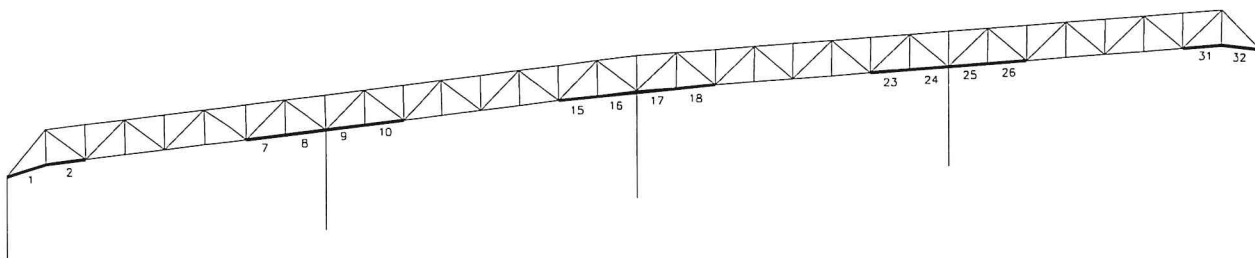


PRUREZ c. 3 ( Kriz sym )				rotace prurezu Rx[st] = 0.00	
plocha A[m2] = 3.19000E-02				mom.setr. Ix[m4] = 6.09728E-06	
mom.setr. Iy[m4] = 1.39832E-03				mom.setr. Iz[m4] = 9.89116E-04	
mom.setr. Iw[m8] = 7.81300E-06					
Prvek	1	P	30.200		ocel 37
Prvek	2	P	10.600		ocel 37
Prvek	3	P	30.200		ocel 37
Prvek	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



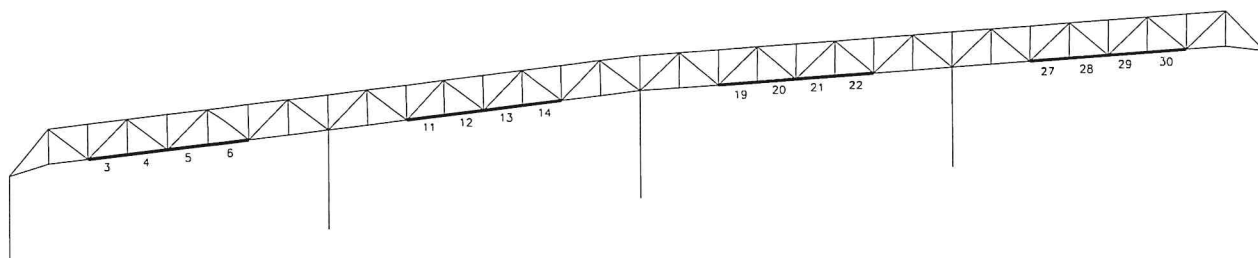
PRUREZ c. 4 ( 2Lrov /1 )  
 plocha A[m2] = 3.42193E-03  
 mom.setr. Iy[m4] = 2.53955E-06  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 90.10  
 Prvek 2 L 90.10  
 poloha teziste Y = 95.00 Z = -64.18

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.15400E-07  
 mom.setr. Iz[m4] = 5.79033E-06  
 ocel 37  
 ocel 37



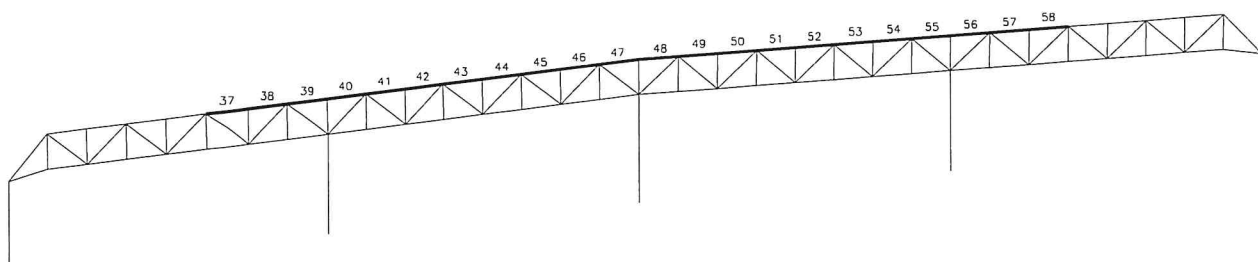
PRUREZ c. 5 ( 2Lrov /1 )  
 plocha A[m2] = 1.80603E-03  
 mom.setr. Iy[m4] = 5.81161E-07  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 60.8  
 Prvek 2 L 60.8  
 poloha teziste Y = 65.00 Z = -42.34

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.82600E-08  
 mom.setr. Iz[m4] = 1.50860E-06  
 ocel 37  
 ocel 37



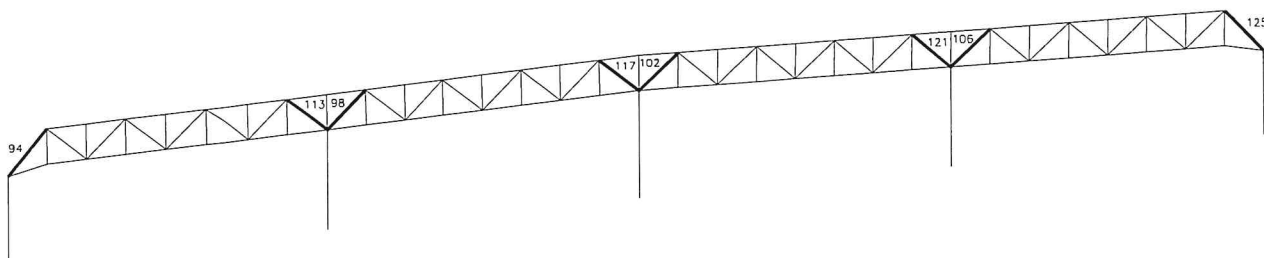
PRUREZ c. 6 ( 2Lrov /1 )  
 plocha A[m2] = 3.02193E-03  
 mom.setr. Iy[m4] = 1.74474E-06  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 80.10  
 Prvek 2 L 80.10  
 poloha teziste Y = 85.00 Z = -23.32

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.00800E-07  
 mom.setr. Iz[m4] = 4.16919E-06  
 ocel 37  
 ocel 37



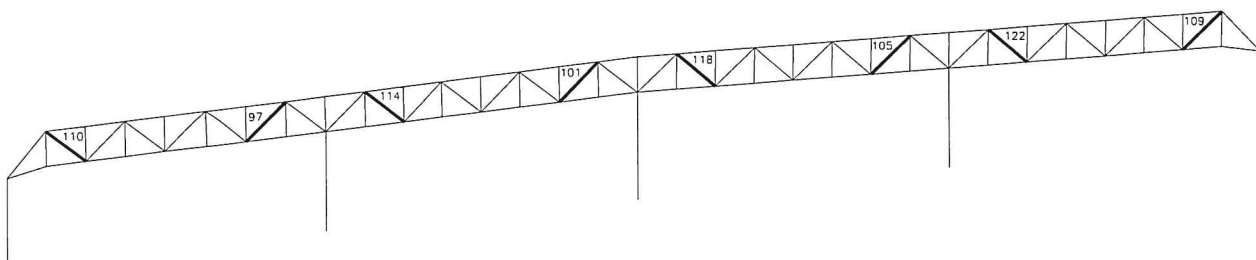
PRUREZ c. 7 ( 2Lrov /1 )  
 plocha A[m2] = 4.63706E-03  
 mom.setr. Iy[m4] = 6.23782E-06  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 120.10  
 Prvek 2 L 120.10  
 poloha teziste Y = 125.00 Z = -33.07

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.59800E-07  
 mom.setr. Iz[m4] = 1.29591E-05  
 ocel 37  
 ocel 37



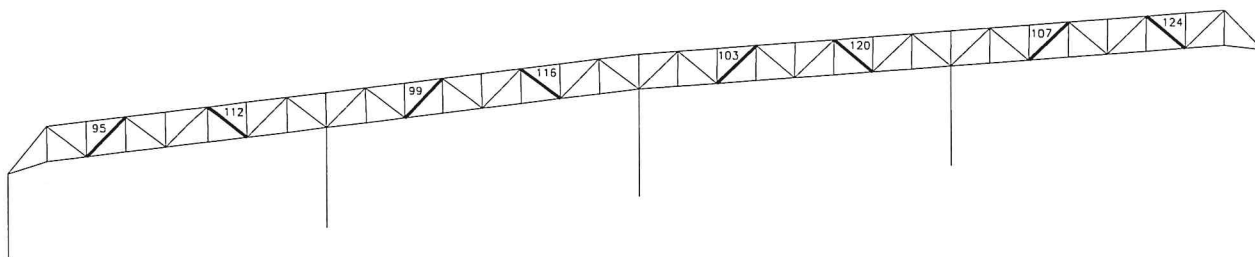
PRUREZ c. 8 ( 2Lrov /1 )  
 plocha A[m2] = 1.80603E-03  
 mom.setr. Iy[m4] = 5.81161E-07  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 60.8  
 Prvek 2 L 60.8  
 poloha teziste Y = 65.00 Z = -17.66

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.82600E-08  
 mom.setr. Iz[m4] = 1.50860E-06  
 ocel 37  
 ocel 37

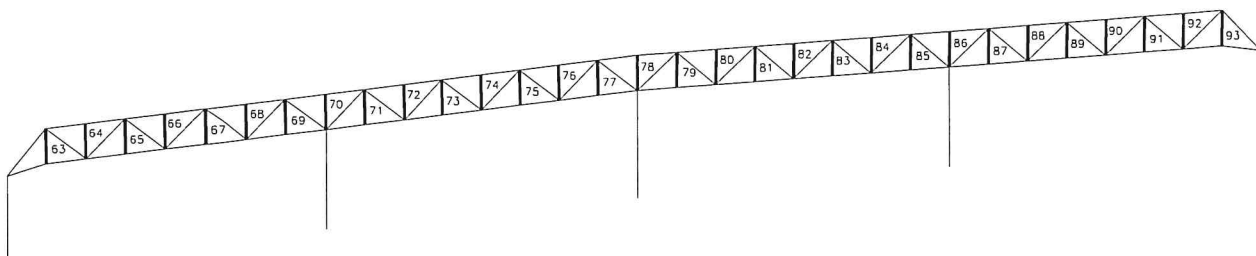


PRUREZ c. 9 ( 2Lrov /1 )  
 plocha A[m2] = 3.42193E-03  
 mom.setr. Iy[m4] = 2.53955E-06  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 90.10  
 Prvek 2 L 90.10  
 poloha teziste Y = 95.00 Z = -25.82

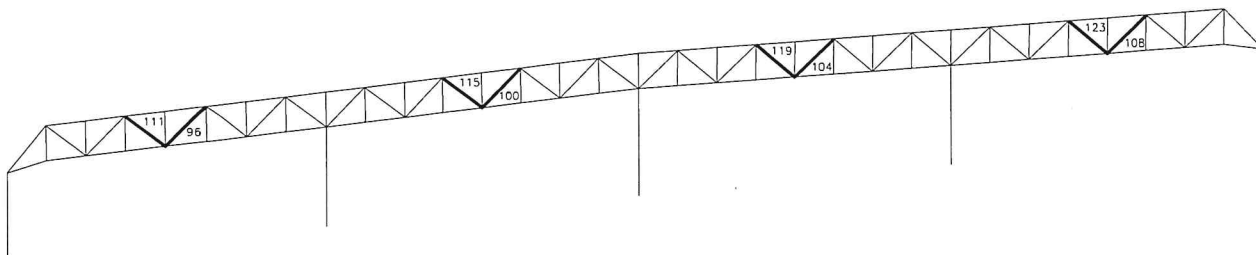
rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.15400E-07  
 mom.setr. Iz[m4] = 5.79033E-06  
 ocel 37  
 ocel 37



PRUREZ c. 10 ( 2Lrov /2 )  
 plocha A[m2] = 9.60744E-04  
 mom.setr. Iy[m4] = 3.45890E-07  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 50.5  
 Prvek 2 L 50.5  
 poloha teziste Y = 44.39 Z = -35.36  
 rotace prurezu Rx[st] = -45.00  
 mom.setr. Ix[m4] = 8.14000E-09  
 mom.setr. Iz[m4] = 7.84325E-07  
 ocel 37  
 ocel 37

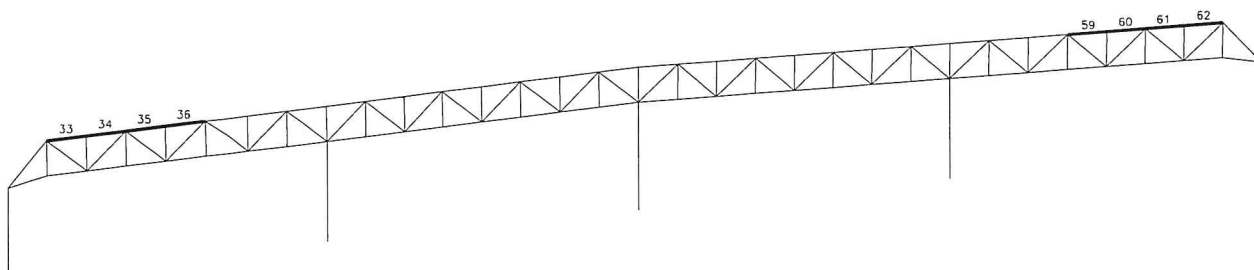


PRUREZ c. 11 ( 2Lrov /1 )  
 plocha A[m2] = 1.38203E-03  
 mom.setr. Iy[m4] = 4.53883E-07  
 mom.setr. Iw[m8] = 0.00000E+00  
 Prvek 1 L 60.6  
 Prvek 2 L 60.6  
 poloha teziste Y = 65.00 Z = -16.84  
 rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 1.68600E-08  
 mom.setr. Iz[m4] = 1.11287E-06  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



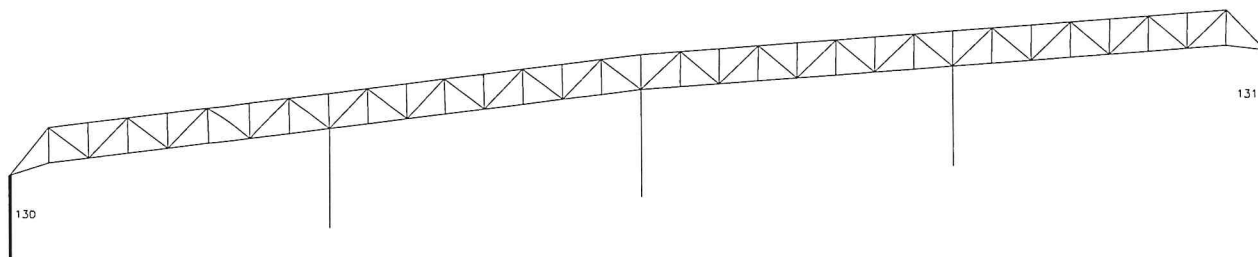
PRUREZ c. 12 ( 2Lrov /1 )  
plocha A[m2] = 3.42193E-03  
mom.setr. Iy[m4] = 2.53955E-06  
mom.setr. Iw[m8] = 0.00000E+00  
Prvek 1 L 90.10  
Prvek 2 L 90.10  
poloha teziste Y = 95.00

rotace prurezu Rx[st] = 0.00  
mom.setr. Ix[m4] = 1.15400E-07  
mom.setr. Iz[m4] = 5.79033E-06  
ocel 37  
ocel 37  
Z = -25.82



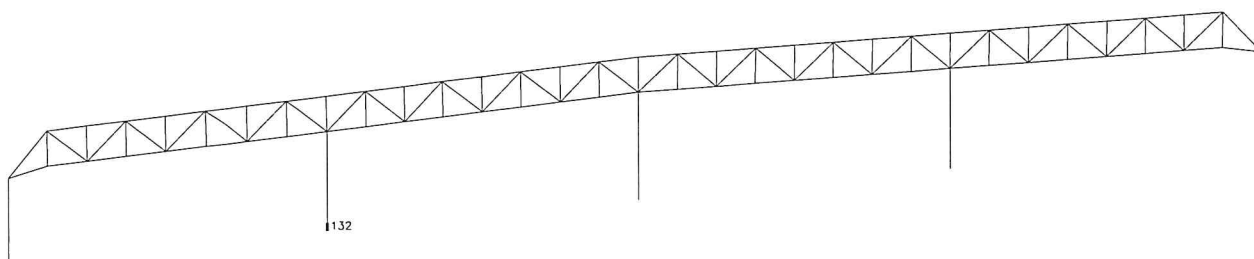
PRUREZ c. 13 ( IPE )  
plocha A[m2] = 7.29888E-03  
mom.setr. Iy[m4] = 1.63327E-04  
mom.setr. Iw[m8] = 3.13580E-07  
Prvek 1 IPE 360  
poloha teziste Y = 85.00

rotace prurezu Rx[st] = 0.00  
mom.setr. Ix[m4] = 3.80000E-07  
mom.setr. Iz[m4] = 1.04382E-05  
ocel 37  
Z = -180.00



PRUREZ c. 14 ( I svar )  
 plocha A[m2] = 1.80000E-02  
 mom.setr. Iy[m4] = 1.37160E-03  
 mom.setr. Iw[m8] = 3.96900E-06  
 Prvek 1 P 30.200  
 Prvek 2 P 10.600  
 Prvek 3 P 30.200  
 poloha teziste Y = 100.00 Z = -330.00

rotace prurezu Rx[st] = 0.00  
 mom.setr. Ix[m4] = 4.53511E-06  
 mom.setr. Iz[m4] = 4.00500E-05  
 ocel 37  
 ocel 37  
 ocel 37



# M A T E R I A L

Material c. 1 ocel 37

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merna hmotnost [kg/m<sup>3</sup>] : 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

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Typicky prut : XYZMxMyMz

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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



[illegible]

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

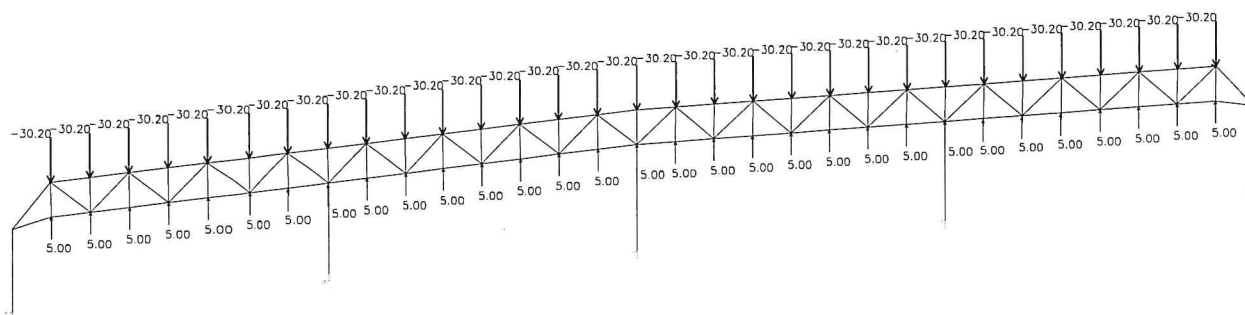
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2			3.00				1.35
3			3.00				1.35
4			3.00				1.35
5			3.00				1.35
6			3.00				1.35
7			3.00				1.35
8			3.00				1.35
9			3.00				1.35
10			2.90				1.35
11			2.80				1.35
12			3.00				1.35
13			3.00				1.35
14			3.00				1.35
15			3.00				1.35
16			3.00				1.35
17			3.00				1.35
18			3.00				1.35
19			3.00				1.35
20			3.00				1.35
21			3.00				1.35
22			3.00				1.35
23			3.00				1.35
24			3.00				1.35
25			3.00				1.35
26			3.00				1.35
27			3.00				1.35
28			3.00				1.35
29			3.00				1.35
30			3.00				1.35
31			3.00				1.35
32			3.00				1.35
34			-20.80				1.35
35			-20.80				1.35

[illegible]

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			5.00				1.50
3			5.00				1.50
4			5.00				1.50
5			5.00				1.50
6			5.00				1.50
7			5.00				1.50

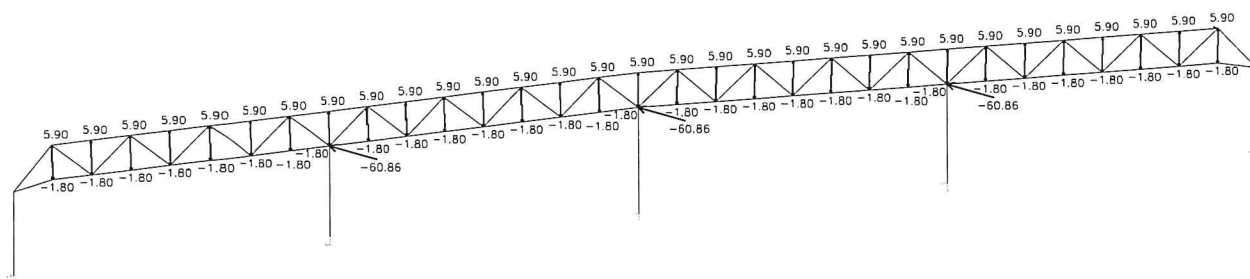
8	5.00	1.50
9	5.00	1.50
10	5.00	1.50
11	5.00	1.50
12	5.00	1.50
13	5.00	1.50
14	5.00	1.50
15	5.00	1.50
16	5.00	1.50
17	5.00	1.50
18	5.00	1.50
19	5.00	1.50
20	5.00	1.50
21	5.00	1.50
22	5.00	1.50
23	5.00	1.50
24	5.00	1.50
25	5.00	1.50
26	5.00	1.50
27	5.00	1.50
28	5.00	1.50
29	5.00	1.50
30	5.00	1.50
31	5.00	1.50
32	5.00	1.50
34	-30.20	1.50
35	-30.20	1.50
36	-30.20	1.50
37	-30.20	1.50
38	-30.20	1.50
39	-30.20	1.50
40	-30.20	1.50
41	-30.20	1.50
42	-30.20	1.50
43	-30.20	1.50
44	-30.20	1.50
45	-30.20	1.50
46	-30.20	1.50
47	-30.20	1.50
48	-30.20	1.50
49	-30.20	1.50
50	-30.20	1.50
51	-30.20	1.50
52	-30.20	1.50
53	-30.20	1.50
54	-30.20	1.50
55	-30.20	1.50
56	-30.20	1.50
57	-30.20	1.50
58	-30.20	1.50
59	-30.20	1.50
60	-30.20	1.50
61	-30.20	1.50
62	-30.20	1.50
63	-30.20	1.50
64	-30.20	1.50



# ZATIZENI V UZLECH - stav 4 (VITR X)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
2			-1.80			1.50	
3			-1.80			1.50	
4			-1.80			1.50	
5			-1.80			1.50	
6			-1.80			1.50	
7			-1.80			1.50	
8			-1.80			1.50	
9			-1.80			1.50	
9	-60.86					1.50	
10			-1.80			1.50	
11			-1.80			1.50	
12			-1.80			1.50	
13			-1.80			1.50	
14			-1.80			1.50	
15			-1.80			1.50	
16			-1.80			1.50	
17			-1.80			1.50	
17	-60.86					1.50	
18			-1.80			1.50	
19			-1.80			1.50	
20			-1.80			1.50	
21			-1.80			1.50	
22			-1.80			1.50	
23			-1.80			1.50	
24			-1.80			1.50	
25			-1.80			1.50	
25	-60.86					1.50	
26			-1.80			1.50	
27			-1.80			1.50	
28			-1.80			1.50	
29			-1.80			1.50	
30			-1.80			1.50	
31			-1.80			1.50	
32			-1.80			1.50	
34			5.90			1.50	
35			5.90			1.50	

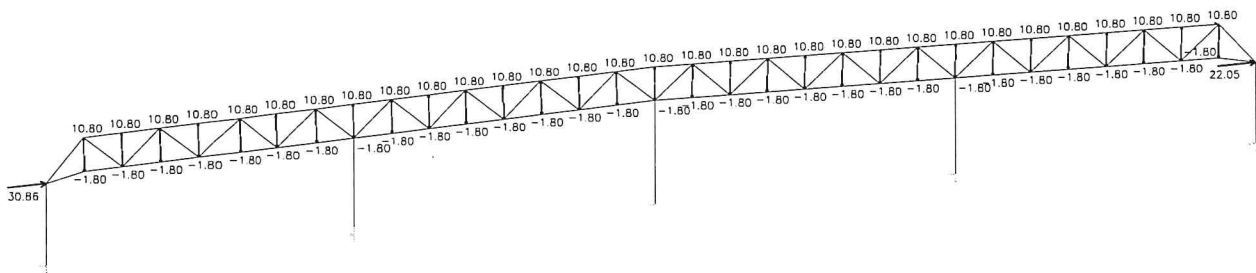
36	5.90	1.50
37	5.90	1.50
38	5.90	1.50
39	5.90	1.50
40	5.90	1.50
41	5.90	1.50
42	5.90	1.50
43	5.90	1.50
44	5.90	1.50
45	5.90	1.50
46	5.90	1.50
47	5.90	1.50
48	5.90	1.50
49	5.90	1.50
50	5.90	1.50
51	5.90	1.50
52	5.90	1.50
53	5.90	1.50
54	5.90	1.50
55	5.90	1.50
56	5.90	1.50
57	5.90	1.50
58	5.90	1.50
59	5.90	1.50
60	5.90	1.50
61	5.90	1.50
62	5.90	1.50
63	5.90	1.50
64	5.90	1.50



# ZATIZENI V UZLECH - stav 5 (VITR Y)

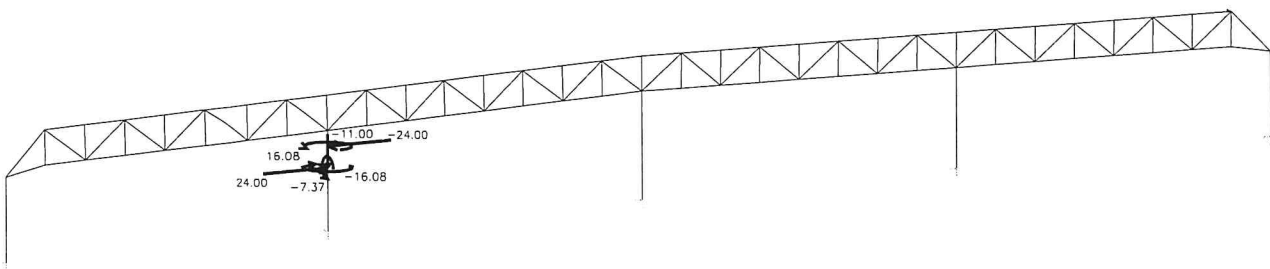
uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
-----							
1		30.87					1.50
2			-1.80				1.50
3			-1.80				1.50
4			-1.80				1.50
5			-1.80				1.50
6			-1.80				1.50

7		-1.80	1.50
8		-1.80	1.50
9		-1.80	1.50
10		-1.80	1.50
11		-1.80	1.50
12		-1.80	1.50
13		-1.80	1.50
14		-1.80	1.50
15		-1.80	1.50
16		-1.80	1.50
17		-1.80	1.50
18		-1.80	1.50
19		-1.80	1.50
20		-1.80	1.50
21		-1.80	1.50
22		-1.80	1.50
23		-1.80	1.50
24		-1.80	1.50
25		-1.80	1.50
26		-1.80	1.50
27		-1.80	1.50
28		-1.80	1.50
29		-1.80	1.50
30		-1.80	1.50
31		-1.80	1.50
32		-1.80	1.50
33	22.05		1.50
34		10.80	1.50
35		10.80	1.50
36		10.80	1.50
37		10.80	1.50
38		10.80	1.50
39		10.80	1.50
40		10.80	1.50
41		10.80	1.50
42		10.80	1.50
43		10.80	1.50
44		10.80	1.50
45		10.80	1.50
46		10.80	1.50
47		10.80	1.50
48		10.80	1.50
49		10.80	1.50
50		10.80	1.50
51		10.80	1.50
52		10.80	1.50
53		10.80	1.50
54		10.80	1.50
55		10.80	1.50
56		10.80	1.50
57		10.80	1.50
58		10.80	1.50
59		10.80	1.50
60		10.80	1.50
61		10.80	1.50
62		10.80	1.50
63		10.80	1.50
64		10.80	1.50



#### ZATIZENI V UZLECH - stav 6 (JERAB)

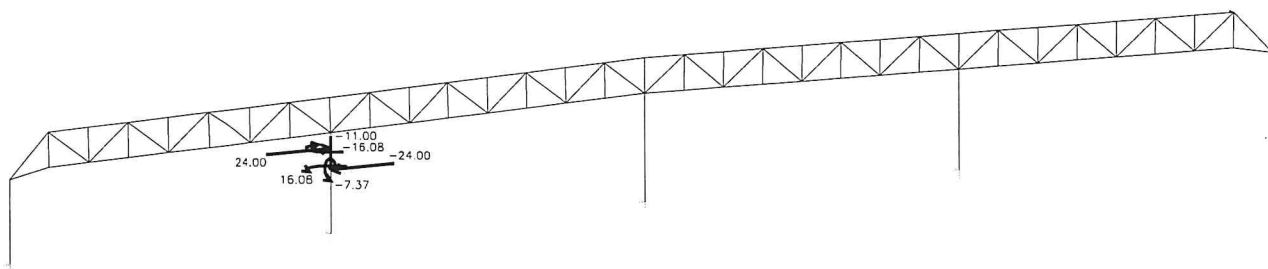
uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
66		24.00	-11.00		-7.37	-16.08	1.95
67		-24.00				16.08	1.95



#### ZATIZENI V UZLECH - stav 7 (JERAB)

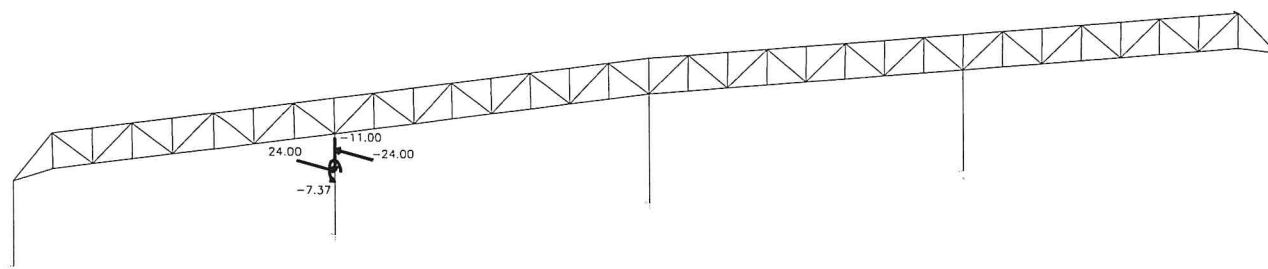
uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
66		-24.00	-11.00		-7.37	16.08	1.95
67		24.00				-16.08	1.95





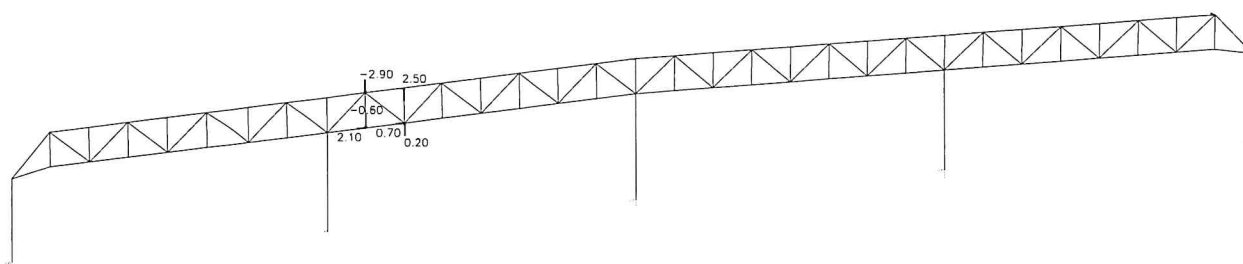
ZATIZENI V UZLECH - stav 8 (JERAB)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
66	24.00		-11.00		-7.37		1.95
67	-24.00						1.95



ZATIZENI V UZLECH - stav 9 (ZABRANA)

uzel	Px[kN]	Py[kN]	Pz[kN]	Mx[kNm]	My[kNm]	Mz[kNm]	koef
10		2.10	-0.60				1.50
11		0.70	0.20				1.50
42			-2.90				1.50
43			2.50				1.50



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%	
73 sil	-0.08 glob	0.00%	1.35
	-0.08 del	1.00%	
74 sil	-0.08 glob	0.00%	1.35
	-0.08 del	1.00%	
75 sil	-0.08 glob	0.00%	1.35
	-0.08 del	1.00%	
76 sil	-0.08 glob	0.00%	1.35
	-0.08 del	1.00%	
77 sil	-0.08 glob	0.00%	1.35
	-0.08 del	1.00%	
78 sil	-0.08 glob	0.00%	1.35
	-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%	
82	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
83	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
84	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
85	sil	-0.08	glob	0.00%	1.35
		-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%	
88	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
89	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
90	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
91	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
92	sil	-0.08	glob	0.00%	1.35
		-0.08	del	1.00%	
93	sil	-0.08	glob	0.00%	1.35
		-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

111 sil	-0.14 del	1.00%	
	-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
	-0.14 del	1.00%	
119 sil	-0.11 glob	0.00%	1.35
	-0.11 del	1.00%	
120 sil	-0.27 glob	0.00%	1.35
	-0.27 del	1.00%	
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
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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 vnitřni 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	-635.4	0.0	0.0	14.4	-10.0
127	1.034	15	-121.4	0.0	0.0	0.0	10.0
moment X							
126	0.000	6	-604.1	-31.4	0.0	0.0	36.8
126	0.000	7	-604.0	31.4	0.0	0.0	-36.8
sila Z							
126	0.000	17	-547.9	0.0	-138.1	290.5	0.0
127	0.000	16	-600.2	0.0	0.0	0.0	0.0

moment Y  
127 0.000 16 -600.2 0.0 0.0 0.0 0.0 0.0  
133 0.000 17 -579.3 0.0 -91.3 639.5 0.0 0.0  
sila Y  
126 0.000 11 -472.9 31.4 0.0 0.0 -36.8 42.0  
126 0.000 6 -604.1 -31.4 0.0 0.0 36.8 -42.0  
moment Z  
126 0.000 6 -604.1 -31.4 0.0 0.0 36.8 -42.0  
126 0.000 11 -472.9 31.4 0.0 0.0 -36.8 42.0  
Vyhledano pro  
Prurez : 1  
Sled kombinaci : 1..20

Vypoctove vnitřní síly 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 -606.1 0.0 0.0 0.0 -0.7 4.6  
129 6.660 14 -130.9 0.0 0.0 0.0 -3.5 0.0  
moment X  
129 0.000 1 -605.6 0.0 0.0 0.0 -0.2 1.5  
129 0.000 17 -549.5 0.0 -91.3 608.0 -0.2 1.5  
sila Z  
129 0.000 2 -549.5 0.0 -91.3 608.0 -0.2 1.5  
129 0.000 16 -605.6 0.0 0.0 0.0 -0.2 1.5  
moment Y  
129 0.000 16 -605.6 0.0 0.0 0.0 -0.2 1.5  
129 0.000 2 -549.5 0.0 -91.3 608.0 -0.2 1.5  
sila Y  
129 0.000 11 -489.3 0.0 0.0 0.0 -4.4 29.5  
129 0.000 12 -204.3 0.0 -91.3 608.0 0.3 -1.7  
moment Z  
129 0.000 12 -204.3 0.0 -91.3 608.0 0.3 -1.7  
129 0.000 11 -489.3 0.0 0.0 0.0 -4.4 29.5  
Vyhledano pro  
Prurez : 2  
Sled kombinaci : 1..20

Vypoctove vnitřní síly 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 -509.9 0.0 0.0 0.0 5.3 -38.1  
128 7.180 15 -101.4 0.0 0.0 0.0 -85.3 0.0  
moment X  
128 0.000 2 -463.4 0.0 -91.3 655.4 -3.8 27.3  
128 0.000 16 -509.3 0.0 0.0 0.0 -3.8 27.3  
sila Z  
128 0.000 17 -463.4 0.0 -91.3 655.4 -3.8 27.3  
128 0.000 1 -509.2 0.0 0.0 0.0 -3.8 27.3  
moment Y  
128 0.000 1 -509.2 0.0 0.0 0.0 -3.8 27.3  
128 0.000 17 -463.4 0.0 -91.3 655.4 -3.8 27.3  
sila Y  
128 0.000 15 -125.7 0.0 0.0 0.0 -85.3 612.1  
128 0.000 6 -509.9 0.0 0.0 0.0 5.3 -38.1  
moment Z  
128 0.000 6 -509.9 0.0 0.0 0.0 5.3 -38.1  
128 0.000 15 -125.7 0.0 0.0 0.0 -85.3 612.1

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

Vypoctove vnitřní síly 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	-279.2	0.0	0.7	-0.6	0.0	0.0
1	3.053	7	219.1	0.0	-0.6	-0.2	0.0	0.0
moment X								
31	0.000	2	194.8	0.0	0.5	0.0	0.0	0.0
2	0.000	2	194.8	0.0	0.6	-0.2	0.0	0.0
sila Z								
8	3.001	6	-214.7	0.0	-0.8	-1.2	0.0	0.0
9	0.000	6	-262.6	0.0	0.8	-1.2	0.0	0.0
moment Y								
9	0.000	6	-262.6	0.0	0.8	-1.2	0.0	0.0
32	1.526	10	207.7	0.0	0.0	0.3	0.0	0.0
sila Y								
15	0.000	2	-130.6	0.0	0.4	0.0	0.0	0.0
17	0.000	2	-127.1	0.0	0.7	-0.9	0.0	0.0
moment Z								
16	3.001	2	-130.7	0.0	-0.7	-0.9	0.0	0.0
9	0.000	2	-243.2	0.0	0.7	-1.1	0.0	0.0

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

Vypoctove vnitřní síly 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	-7.3	0.0	0.3	-0.2	0.0	0.0
3	3.001	7	405.9	0.0	-0.3	0.0	0.0	0.0
moment X								
4	0.000	16	404.3	0.0	0.3	0.0	0.0	0.0
4	0.000	2	365.8	0.0	0.3	0.0	0.0	0.0
sila Z								
11	3.001	11	52.0	0.0	-0.3	-0.2	0.0	0.0
22	0.000	7	101.9	0.0	0.3	-0.2	0.0	0.0
moment Y								
11	3.001	11	52.0	0.0	-0.3	-0.2	0.0	0.0
3	1.500	7	405.9	0.0	0.0	0.2	0.0	0.0
sila Y								
14	0.000	2	128.7	0.0	0.3	-0.1	0.0	0.0
22	0.000	2	91.8	0.0	0.3	-0.2	0.0	0.0
moment Z								
14	3.001	2	128.7	0.0	-0.3	0.0	0.0	0.0
14	3.001	16	142.5	0.0	-0.3	0.0	0.0	0.0

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

Vypoctove vnitřní síly 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	-170.8	0.0	0.7	-0.5	0.0	0.0
40	3.001	6	584.8	0.0	-0.5	-0.6	0.0	0.0
moment X								
52	0.000	2	-150.7	0.0	0.3	0.2	0.0	0.0
43	0.000	2	-151.6	0.0	0.7	-0.4	0.0	0.0
sila Z								
38	3.001	6	-59.2	0.0	-0.8	-0.7	0.0	0.0
57	0.000	7	-62.1	0.0	0.8	-0.7	0.0	0.0
moment Y								
39	3.001	6	583.1	0.0	-0.5	-0.7	0.0	0.0
37	1.500	7	-65.6	0.0	0.2	0.3	0.0	0.0
sila Y								
37	0.000	8	-54.9	0.0	0.7	-0.3	0.0	0.0
39	0.000	8	528.1	0.0	0.5	-0.6	0.0	0.0
moment Z								
47	0.000	2	373.8	0.0	0.5	-0.6	0.0	0.0
47	0.000	16	413.2	0.0	0.5	-0.6	0.0	0.0

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

Vypoctove vnitřní síly 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	-460.5	0.0	0.8	0.0	0.0
94	4.136	14	-57.0	0.0	-0.7	0.0	0.0
moment X							
106	0.000	2	-416.3	0.0	0.8	0.0	0.0
113	0.000	2	-416.5	0.0	0.8	0.0	0.0
sila Z							
106	3.808	1	-458.7	0.0	-0.8	0.0	0.0
106	0.000	5	-102.0	0.0	0.8	0.0	0.0
moment Y							
106	3.808	6	-458.6	0.0	-0.8	0.0	0.0
125	4.136	6	-301.6	0.0	-0.7	0.0	0.0
sila Y							
113	0.000	2	-416.5	0.0	0.8	0.0	0.0
121	0.000	2	-359.8	0.0	0.7	0.0	0.0
moment Z							
113	3.808	2	-415.4	0.0	-0.8	0.0	0.0
121	3.802	2	-358.6	0.0	-0.7	0.0	0.0

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

Vypoctove vnitřní síly 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							
109	0.000	15	30.4	0.0	0.3	0.0	0.0
97	3.802	6	352.6	0.0	-0.3	0.0	0.0
moment X							
105	0.000	2	262.8	0.0	0.3	0.0	0.0
114	0.000	2	259.1	0.0	0.3	0.0	0.0
sila Z							
109	3.808	1	173.5	0.0	-0.3	0.0	0.0
105	0.000	1	290.5	0.0	0.3	0.0	0.0

moment Y

109	3.808	15	30.8	0.0	-0.3	0.0	0.0	0.0
97	3.802	7	351.6	0.0	-0.3	0.0	0.0	0.0

sila Y

114	0.000	2	259.1	0.0	0.3	0.0	0.0	0.0
101	0.000	2	211.2	0.0	0.3	0.0	0.0	0.0

moment Z

114	3.808	2	259.5	0.0	-0.3	0.0	0.0	0.0
101	3.802	2	211.7	0.0	-0.3	0.0	0.0	0.0

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

Vypoctove vnitřní síly 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	-249.0	0.0	0.6	0.0	0.0
124	3.802	15	-7.6	0.0	-0.5	0.0	0.0

moment X

124	0.000	2	-61.4	0.0	0.5	0.0	0.0
95	0.000	2	-61.2	0.0	0.5	0.0	0.0

sila Z

107	3.808	1	-247.4	0.0	-0.6	0.0	0.0
107	0.000	1	-248.3	0.0	0.6	0.0	0.0

moment Y

120	3.802	7	-186.1	0.0	-0.5	0.0	0.0
124	3.802	6	-67.2	0.0	-0.5	0.0	0.0

sila Y

120	0.000	2	-168.6	0.0	0.5	0.0	0.0
112	0.000	2	-224.9	0.0	0.6	0.0	0.0

moment Z

120	3.802	2	-167.7	0.0	-0.5	0.0	0.0
112	3.808	2	-224.1	0.0	-0.6	0.0	0.0

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

Vypoctove vnitřní síly 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	-92.6	0.0	0.0	0.0	0.0
93	2.340	10	26.6	0.0	0.0	0.0	0.0

moment X

84	0.000	2	-65.3	0.0	0.0	0.0	0.0
72	0.000	2	-63.2	0.0	0.0	0.0	0.0

sila Z

88	2.340	1	-73.8	0.0	0.0	0.0	0.0
93	0.000	1	25.4	0.0	0.0	0.0	0.0

moment Y

88	2.340	6	-73.8	0.0	0.0	0.0	0.0
93	2.340	6	25.7	0.0	0.0	0.0	0.0

sila Y

76	0.000	2	-65.3	0.0	0.0	0.0	0.0
84	0.000	2	-65.3	0.0	0.0	0.0	0.0

moment Z

76	2.340	2	-65.1	0.0	0.0	0.0	0.0
84	2.340	2	-65.0	0.0	0.0	0.0	0.0

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

Vypoctove vnitřní síly 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	-38.6	0.0	0.2	0.0	0.0	0.0
96	3.802	6	142.5	0.0	-0.2	0.0	0.0	0.0
moment X								
104	0.000	2	72.5	0.0	0.2	0.0	0.0	0.0
115	0.000	2	72.2	0.0	0.2	0.0	0.0	0.0
sila Z								
108	3.808	1	-37.6	0.0	-0.2	0.0	0.0	0.0
108	0.000	1	-37.9	0.0	0.2	0.0	0.0	0.0
moment Y								
119	3.802	15	-1.0	0.0	-0.2	0.0	0.0	0.0
123	3.802	14	34.8	0.0	-0.2	0.0	0.0	0.0
sila Y								
100	0.000	2	21.2	0.0	0.2	0.0	0.0	0.0
119	0.000	2	20.9	0.0	0.2	0.0	0.0	0.0
moment Z								
100	3.802	2	21.5	0.0	-0.2	0.0	0.0	0.0
119	3.802	2	21.3	0.0	-0.2	0.0	0.0	0.0

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

Vypoctove vnitřní síly 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								
35	0.000	7	-375.8	0.0	0.6	0.1	0.0	0.0
59	0.000	15	-67.0	0.0	0.6	-0.2	0.0	0.0
moment X								
60	0.000	2	-339.2	0.0	0.5	0.3	0.0	0.0
35	0.000	2	-338.6	0.0	0.6	0.1	0.0	0.0
sila Z								
36	3.001	6	-370.9	0.0	-0.8	-0.3	0.0	0.0
59	0.000	7	-372.9	0.0	0.8	-0.3	0.0	0.0
moment Y								
36	3.001	10	-307.3	0.0	-0.8	-0.4	0.0	0.0
35	1.500	7	-375.8	0.0	0.0	0.7	0.0	0.0
sila Y								
35	0.000	17	-338.6	0.0	0.6	0.1	0.0	0.0
36	0.000	17	-337.1	0.0	0.3	0.3	0.0	0.0
moment Z								
59	0.000	2	-337.7	0.0	0.7	-0.3	0.0	0.0
33	3.001	2	-320.8	0.0	-0.5	0.2	0.0	0.0

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

Vypoctove vnitřní síly 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								

130	0.000	7	-177.8	0.0	0.0	0.0	0.2	-1.2
131	5.640	15	-33.4	0.0	0.0	0.0	-2.0	0.0
moment X								
130	0.000	8	-160.9	0.0	0.0	0.0	0.6	-3.3
130	0.000	16	-177.5	0.0	0.0	0.0	0.4	-2.4
sila Z								
130	0.000	16	-177.5	0.0	0.0	0.0	0.4	-2.4
130	0.000	2	-161.2	0.0	0.0	0.0	0.4	-2.1
moment Y								
130	5.640	16	-173.1	0.0	0.0	0.0	0.4	0.0
130	5.640	2	-156.8	0.0	0.0	0.0	0.4	0.0
sila Y								
131	0.000	11	-137.9	0.0	0.0	0.0	-2.3	13.2
130	0.000	6	-177.2	0.0	0.0	0.0	0.6	-3.6
moment Z								
130	0.000	6	-177.2	0.0	0.0	0.0	0.6	-3.6
131	0.000	11	-137.9	0.0	0.0	0.0	-2.3	13.2

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

#### Vypoctove vnitřní síly 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	-636.5	0.0	0.0	14.4	-10.0
132	0.540	5	-138.0	0.0	0.0	0.0	0.0
moment X							
132	0.000	6	-636.5	0.0	0.0	14.4	-10.0
132	0.000	7	-636.4	0.0	0.0	14.4	10.0
sila Z							
132	0.000	2	-558.9	0.0	-91.3	608.0	0.0
132	0.000	16	-636.4	0.0	0.0	80.8	0.0
moment Y							
132	0.000	1	-615.0	0.0	0.0	0.0	0.0
132	0.000	17	-580.3	0.0	-91.3	688.8	0.0
sila Y							
132	0.000	10	-505.4	0.0	0.0	14.4	-10.0
132	0.000	7	-636.4	0.0	0.0	14.4	10.0
moment Z							
132	0.540	10	-504.4	0.0	0.0	14.4	-10.0
132	0.540	7	-635.4	0.0	0.0	14.4	10.0

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

68	2	0.0	0.0	222.1	0.0	0.0	0.0
	3	0.0	0.0	344.9	0.0	0.0	0.0
	4	91.3	0.0	-56.1	0.0	608.0	0.0
	5	0.0	0.0	-131.1	0.0	0.0	0.0
	6	0.0	-10.0	21.5	0.0	14.4	0.0
	7	0.0	10.0	21.4	0.0	14.4	0.0
	8	0.0	0.0	21.4	0.0	80.8	0.0
	9	0.0	0.0	1.6	0.0	0.0	0.0
	1	0.0	0.0	48.0	0.0	0.0	0.0
69	2	0.0	0.0	180.0	0.0	0.0	0.0
	3	0.0	0.0	282.0	-0.1	0.0	0.0
	4	91.3	0.0	-45.8	0.0	655.4	0.0
	5	0.0	-72.3	-100.9	519.3	0.0	0.0
	6	0.0	9.1	0.7	-65.4	0.0	0.0
	7	0.0	-9.1	-0.7	65.4	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	-3.8	-0.8	27.5	0.0	0.0
	1	0.0	0.0	41.5	0.0	0.0	0.0
70	2	0.0	0.0	219.0	0.0	0.0	0.0
	3	0.0	0.0	344.8	0.1	0.0	0.0
	4	91.3	0.0	-56.1	0.0	608.0	0.0
	5	0.0	-3.7	-116.7	24.8	0.0	0.0
	6	0.0	0.5	-0.5	-3.1	0.0	0.0
	7	0.0	-0.5	0.4	3.1	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	-0.2	0.3	1.3	0.0	0.0
	1	0.0	0.0	13.9	-0.1	0.0	0.0
71	2	0.0	0.2	63.4	-1.1	0.0	0.0
	3	0.0	0.3	100.0	-1.7	0.0	0.0
	4	0.0	0.0	-16.3	0.3	0.0	0.0
	5	0.0	-1.8	-30.1	10.1	0.0	0.0
	6	0.0	0.2	-0.3	-1.2	0.0	0.0
	7	0.0	-0.2	0.3	1.2	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.1	0.5	0.0	0.0
	1	0.0	0.0	13.9	0.1	0.0	0.0
	2	0.0	-0.2	63.6	1.1	0.0	0.0
	3	0.0	-0.3	100.1	1.7	0.0	0.0
	4	0.0	0.0	-16.3	-0.3	0.0	0.0
	5	0.0	-1.5	-39.7	8.7	0.0	0.0
	6	0.0	0.2	0.0	-1.1	0.0	0.0
	7	0.0	-0.2	0.0	1.1	0.0	0.0
	8	0.0	0.0	0.0	0.0	0.0	0.0
	9	0.0	0.0	0.0	0.5	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	-25.6	1.1	-3.3	-0.0016	-0.0030	0.0000
34	2	18.9	2.3	-11.3	-0.0041	-0.0012	0.0003
posuv Y							
1	6	-0.6	-11.1	-0.4	0.0029	-0.0001	0.0000
33	11	0.0	42.1	-0.4	-0.0112	0.0000	0.0000
posuv Z							
61	6	0.0	0.7	-30.7	-0.0009	0.0000	0.0000
65	5	0.0	0.0	0.0	-0.0046	0.0000	0.0000
rot X							
33	11	0.0	42.1	-0.4	-0.0112	0.0000	0.0000
64	6	0.0	-2.1	-12.4	0.0045	0.0000	0.0000



rot Y  
 67 17 | -12.0 1.1 -0.4 | -0.0002 -0.0033 0.0000  
 70 2 | 0.0 0.0 0.0 | 0.0000 0.0002 -0.0012  
 rot Z  
 67 7 | -0.2 2.2 -0.5 | -0.0020 0.0000 -0.0313  
 67 6 | -0.2 0.0 -0.5 | 0.0017 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 MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 133 prurez : 1 rez : 0.00 [m]			
1 1.00 17 -155.5		0.0	155.5
sigma max prut : 133 prurez : 1 rez : 0.00 [m]			
3 11.00 19 75.9		0.0	75.9
tau prut : 126 prurez : 1 rez : 1.42 [m]			
2 6.01 13 -4.6		-126.0*	218.3
sigma sr. prut : 126 prurez : 1 rez : 0.00 [m]			
2 8.99 8 -82.5		-119.7	223.2

vyuziti prurezu : 100.0 % ISV 740/250/12/35 NEVYHOVI !!!

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

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 129 prurez : 2 rez : 0.00 [m]			
1 1.00 9 -285.6*		0.0	285.6*
sigma max prut : 129 prurez : 2 rez : 0.00 [m]			
3 11.00 13 121.2		0.0	121.2
tau prut : 129 prurez : 2 rez : 6.66 [m]			
2 7.50 4 -33.9		-15.6	33.9
sigma sr. prut : 129 prurez : 2 rez : 0.00 [m]			
1 1.00 9 -285.6*		0.0	285.6*

vyuziti prurezu : 136.0 % ISV 660/200/10/30 NEVYHOVI !!!

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

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 128 prurez : 3 rez : 0.00 [m]			
7 28.00 11 -216.3*		0.0	216.3*
sigma max prut : 128 prurez : 3 rez : 0.00 [m]			
6 22.00 15 192.4		0.0	192.4
tau prut : 128 prurez : 3 rez : 7.18 [m]			
4 16.00 19 -7.1		-15.3	15.3
sigma sr. prut : 128 prurez : 3 rez : 0.00 [m]			
7 28.00 11 -216.3*		0.0	216.3*

vyuziti prurezu : 103.0 % KSV 660/200/10/30 + 600/200/10/20 NEVYHOVI !!!  
 Vyhledano pro  
 Prurez : 3  
 Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x	tau	sig.srov.
	MPa	Mpa	Mpa
sigma min prut : 9 prurez : 4 rez : 0.00 [m]			
1 9.00 7 -181.5		0.0	181.5
sigma max prut : 1 prurez : 4 rez : 3.05 [m]			
2 18.00 7 68.4		0.0	68.4
tau prut : 9 prurez : 4 rez : 0.00 [m]			
1 1.25 8 -146.6		0.6	146.6
sigma sr. prut : 9 prurez : 4 rez : 0.00 [m]			
1 9.00 7 -181.5		0.0	181.5

vyuziti prurezu : 86.4 % 2L 90x10 VYHOVI !  
 Vyhledano pro  
 Prurez : 4  
 Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy generovane

Prv. Vlak. Kom.	sigma x	tau	sig.srov.
	MPa	Mpa	Mpa
sigma min prut : 12 prurez : 5 rez : 1.50 [m]			
2 18.00 15 -9.8		0.0	9.8
sigma max prut : 3 prurez : 5 rez : 1.50 [m]			
2 11.00 7 230.7*		0.0	230.7*
tau prut : 4 prurez : 5 rez : 3.00 [m]			
2 18.75 2 202.3		-0.5	202.3
sigma sr. prut : 3 prurez : 5 rez : 1.50 [m]			
2 11.00 7 230.7*		0.0	230.7*

vyuziti prurezu : 109.8 % 2L 60x8 NEVYHOVI !!!  
 Vyhledano pro  
 Prurez : 5  
 Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x	tau	sig.srov.
	MPa	Mpa	Mpa
sigma min prut : 43 prurez : 6 rez : 0.00 [m]			
1 2.00 7 -160.0		0.0	160.0
sigma max prut : 40 prurez : 6 rez : 0.00 [m]			
2 11.00 6 202.8		0.0	202.8
tau prut : 38 prurez : 6 rez : 3.00 [m]			
1 1.25 2 -46.2		-0.7	46.2
sigma sr. prut : 40 prurez : 6 rez : 0.00 [m]			
2 11.00 6 202.8		0.0	202.8

vyuziti prurezu : 96.6 % 2L 80x10 VYHOVI !  
 Vyhledano pro  
 Prurez : 6  
 Sled kombinaci : 1..20

# Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 113 prurez : 7 rez : 0.00 [m]			
1 1.00 6 -190.9	0.2	190.9	
sigma max prut : 94 prurez : 7 rez : 4.14 [m]			
1 1.52 14 -26.8	-0.4	26.8	
tau prut : 113 prurez : 7 rez : 3.81 [m]			
1 1.25 4 -61.2	-0.5	61.2	
sigma sr. prut : 113 prurez : 7 rez : 0.00 [m]			
1 1.00 6 -190.9	0.2	190.9	

vyuziti prurezu : 90.9 % 2L 120x10 VYHOVI !

Vyhledano pro

Prurez : 7

Sled kombinaci : 1..20

# Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 109 prurez : 8 rez : 0.00 [m]			
1 1.00 15 2.5	0.0	2.5	
sigma max prut : 97 prurez : 8 rez : 3.80 [m]			
1 1.75 6 195.2	-0.2	195.2	
tau prut : 114 prurez : 8 rez : 0.00 [m]			
2 18.75 4 49.3	0.5	49.3	
sigma sr. prut : 97 prurez : 8 rez : 3.80 [m]			
1 1.75 6 195.2	-0.2	195.2	

vyuziti prurezu : 93.0 % 2L 60x8 VYHOVI !

Vyhledano pro

Prurez : 8

Sled kombinaci : 1..20

# Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 112 prurez : 9 rez : 0.00 [m]			
1 1.00 6 -227.3*	0.0	227.3*	
sigma max prut : 124 prurez : 9 rez : 3.80 [m]			
1 1.75 15 -6.9	-0.2	6.9	
tau prut : 95 prurez : 9 rez : 3.80 [m]			
1 1.25 4 -18.8	-0.6	18.8	
sigma sr. prut : 112 prurez : 9 rez : 0.00 [m]			
1 1.00 6 -227.3*	0.0	227.3*	

vyuziti prurezu : 108.2 % 2L 90x10 NEVYHOVI !!!

Vyhledano pro

Prurez : 9

Sled kombinaci : 1..20

# Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 78 prurez : 10 rez : 0.00 [m]			
1 1.00 6 -242.5*	0.0	242.5*	
sigma max prut : 93 prurez : 10 rez : 2.34 [m]			

1	9.00	10	27.6	0.0	27.6
tau	prut	:	84	prurez	: 10 rez : 2.34 [m]
1	1.00	4	-52.5	-0.2	52.5
sigma sr.	prut	:	78	prurez	: 10 rez : 0.00 [m]
1	1.00	6	-242.5*	0.0	242.5*

vyuziti prurezu : 115.5 %    2L 50x5 NEVYHOVI !!!  
Vyhledano pro  
Prurez : 10  
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
-----			
sigma min prut	: 111	prurez : 11	rez : 0.00 [m]
1 1.00 6	-186.3	0.2	186.3
sigma max prut	: 96	prurez : 11	rez : 3.80 [m]
1 1.00 6	103.1	-0.2	103.1
tau prut	: 115	prurez : 11	rez : 3.81 [m]
1 1.25 4	18.4	-0.5	18.4
sigma sr. prut	: 111	prurez : 11	rez : 0.00 [m]
1 1.00 6	-186.3	0.2	186.3

vyuziti prurezu : 88.7 %    2L 60x6 VYHOVI !  
Vyhledano pro  
Prurez : 11  
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
-----			
sigma min prut	: 36	prurez : 12	rez : 3.00 [m]
1 2.00 7	-237.7*	0.0	237.7*
sigma max prut	: 59	prurez : 12	rez : 0.00 [m]
2 11.00 15	-38.8	0.0	38.8
tau prut	: 36	prurez : 12	rez : 3.00 [m]
1 1.25 2	-206.3	-0.7	206.3
sigma sr. prut	: 36	prurez : 12	rez : 3.00 [m]
1 2.00 7	-237.7*	0.0	237.7*

vyuziti prurezu : 113.2 %    2L 90x10 NEVYHOVI !!!  
Vyhledano pro  
Prurez : 12  
Sled kombinaci : 1..20

Vypoctove napeti na prutech rezy zadane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
-----			
sigma min prut	: 131	prurez : 13	rez : 0.00 [m]
1 9.00 11	-173.6	0.0	173.6
sigma max prut	: 131	prurez : 13	rez : 0.00 [m]
1 1.00 15	75.4	0.0	75.4
tau prut	: 131	prurez : 13	rez : 5.64 [m]
1 6.50 11	-64.2	-0.5	64.2
sigma sr. prut	: 131	prurez : 13	rez : 0.00 [m]
1 9.00 11	-173.6	0.0	173.6

vyuziti prurezu : 82.7 %    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 -302.9*		0.0	302.9*
sigma max prut : 132 prurez : 14 rez : 0.00 [m]			
3 11.00 19 124.2		0.0	124.2
tau prut : 132 prurez : 14 rez : 0.54 [m]			
2 7.50 4 -37.6		-15.6	37.6
sigma sr. prut : 132 prurez : 14 rez : 0.00 [m]			
1 1.00 17 -302.9*		0.0	302.9*

vyuziti prurezu : 144.2 % ISV 660/200/10/30 NEVYHOVI !!!

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

### Závěr

Při posouzení příčné vazby haly v řadě 8 se sloupem, na kterém je umístěn konzolový jeřáb, podle ČSN EN 1991 několik průřezů konstrukce nevyhoví.

### POSOUZENÍ NEVYHOVUJÍCÍCH PRŮŘEZŮ PŘI SNÍŽENÉ HODNOTĚ ZATÍŽENÍ SNĚHEM

#### 3. Zatěžovací stav

Zatížení sněhem  $\gamma = 1,5 \times 0,77 = 1,155$   
 hodnota zatížení sněhem byla snížena na 77%  
 Reakce vaznic  
 $P_{z1} = 2 \times 2,5 = 5,0 \text{ kN}$   
 $P_{z2} = 2 \times 15,1 = 30,2 \text{ kN}$

Vypoctove napeti na prutech rezy generovane

Prv. Vlak. Kom.	sigma x MPa	tau Mpa	sig.srov. Mpa
sigma min prut : 12 prurez : 5 rez : 1.50 [m]			
2 18.00 15 -9.8		0.0	9.8
sigma max prut : 3 prurez : 5 rez : 1.50 [m]			
2 11.00 7 200.1		0.0	200.1
tau prut : 4 prurez : 5 rez : 3.00 [m]			
2 18.75 2 172.2		-0.5	172.2
sigma sr. prut : 3 prurez : 5 rez : 1.50 [m]			
2 11.00 7 200.1		0.0	200.1

vyuziti prurezu : 95.3 % 2L 60x8 VYHOVI !

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

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