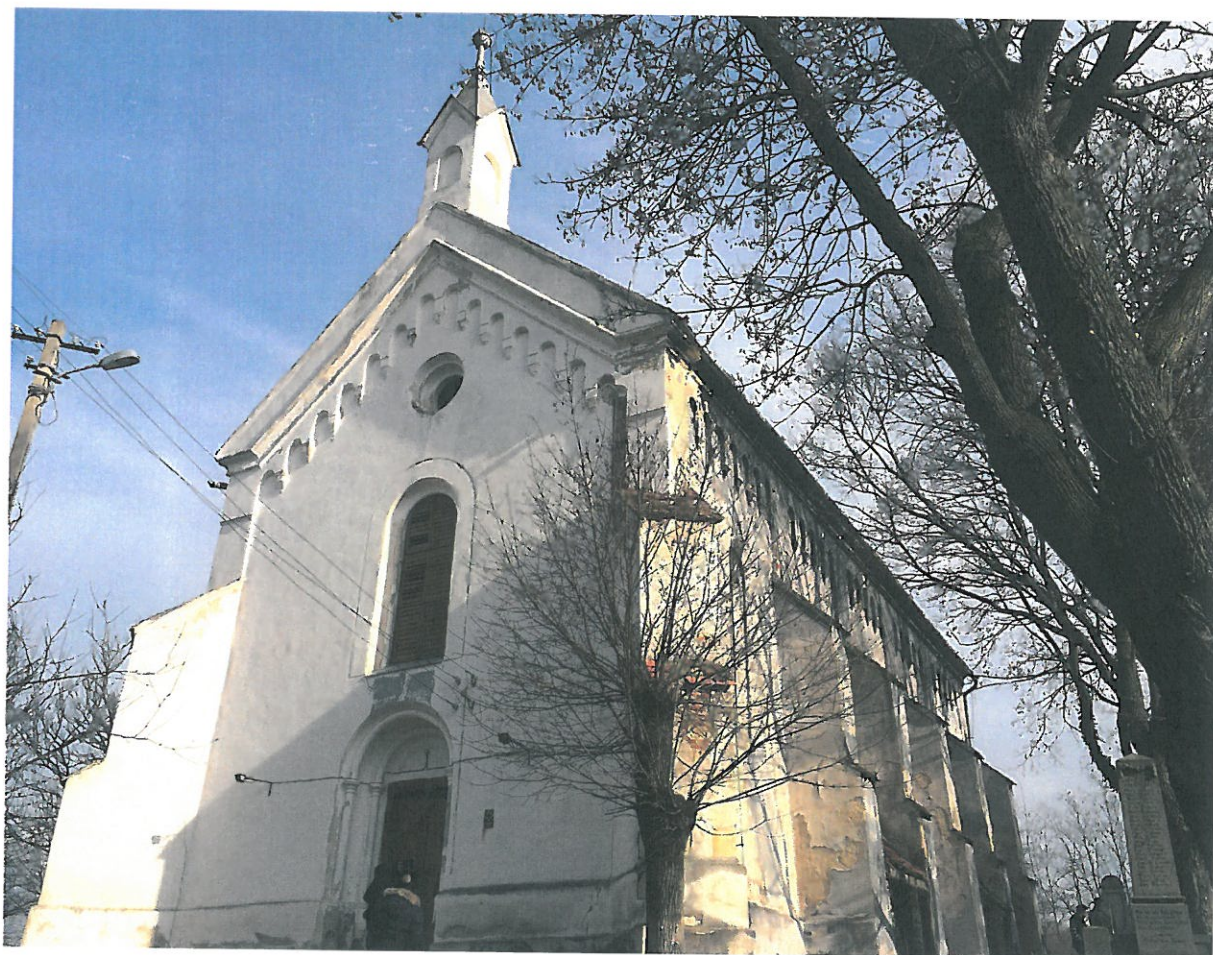


**CONSERVAREA, REABILITAREA SI PROMOVAREA
BISERICII EVANGHELICE DIN CALNIC(JUD. ALBA)
COMPONENTA A ANSAMBLULUI PROTEJAT UNESCO**



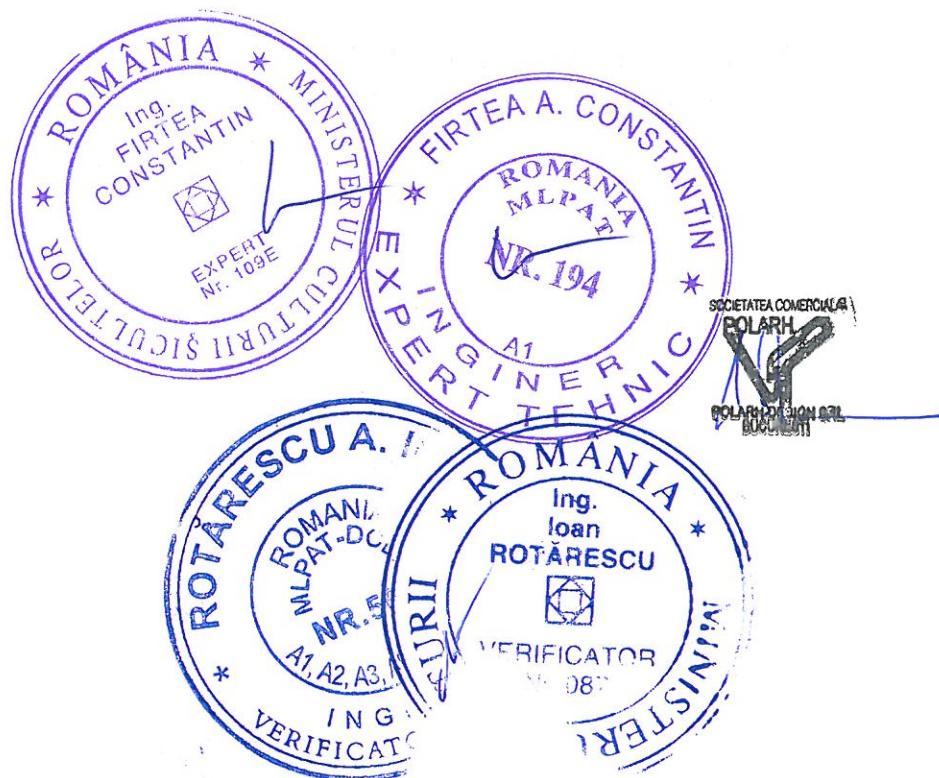
**BREVIAR DE CALCUL - REZISTENTA
FAZA PT - 2018**

BREVIAR DE CALCUL

Proiect:

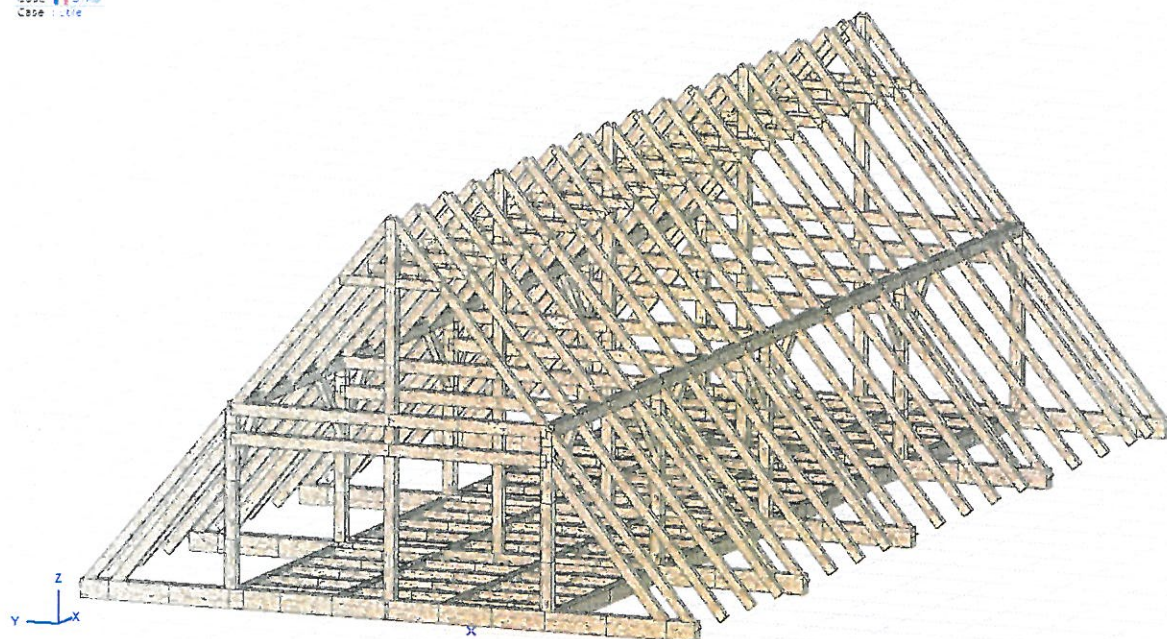
**Conservarea, reabilitarea si promovarea Bisericii
Evangelice din Calnic (jud. Alba, componenta a
ansamblului protejat UNESCO)**

Analysis by ARHING SRL



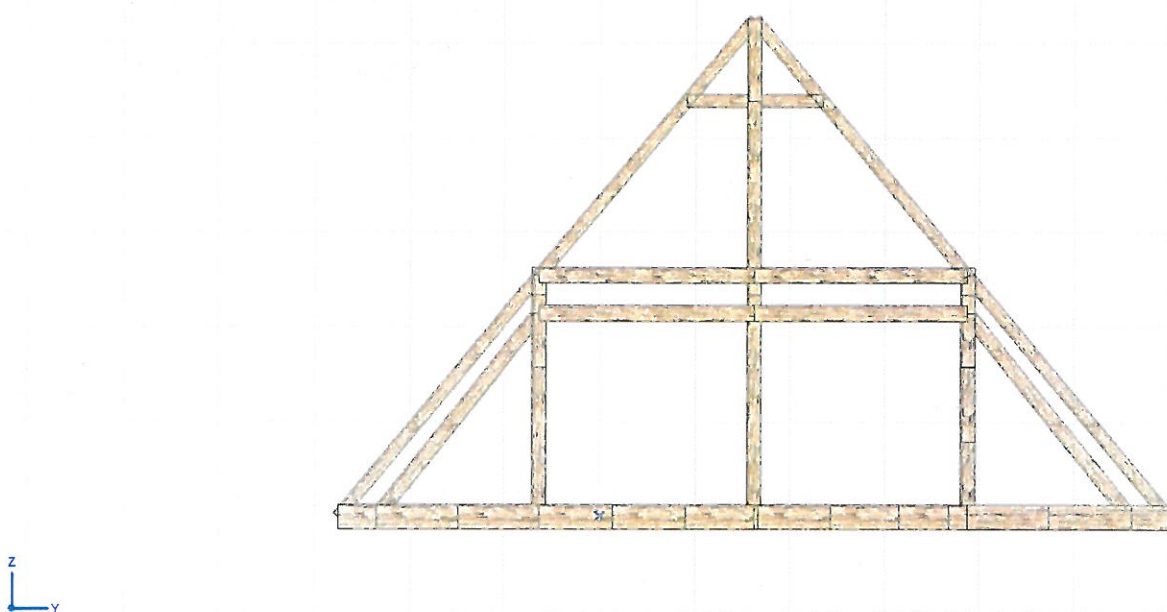
000266

Code: STAS
Case: 1.1.1.1



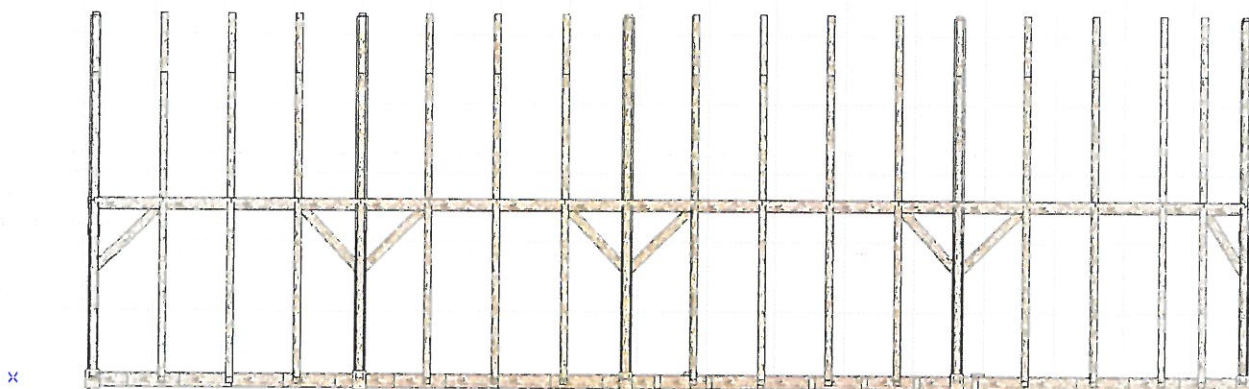
Ansamblu acoperis

Code: STAS
Case: 1.1.1.1



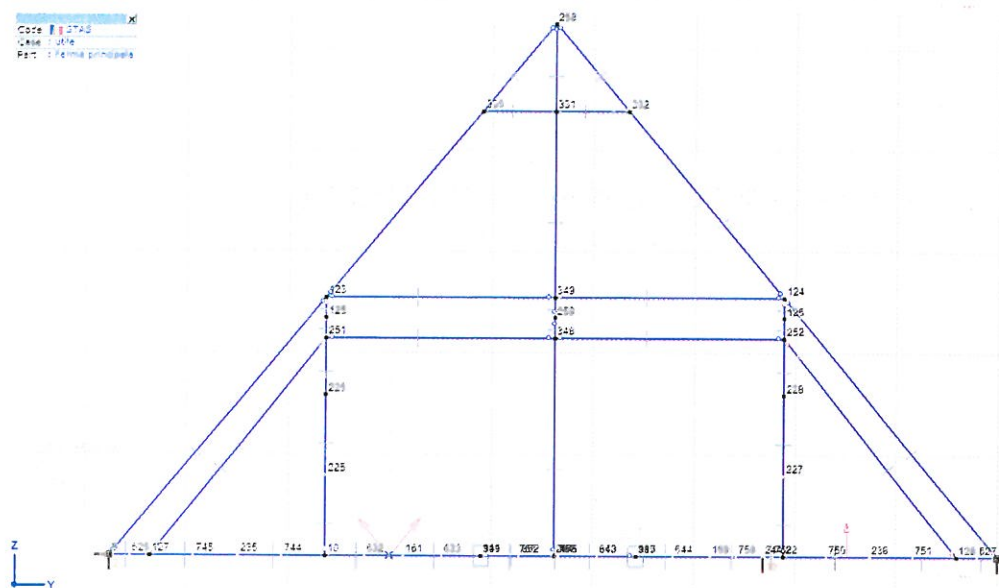
Ferma principala

Care: STAS
Case: 1.000



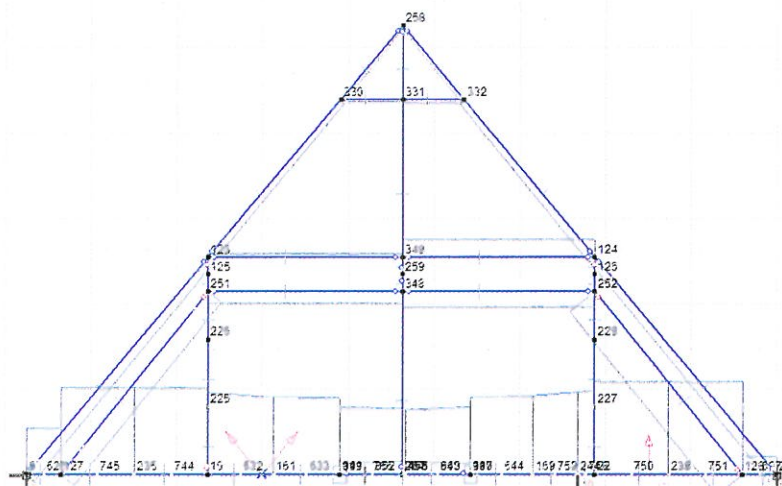
Ferme principale si ferma secundare

Care: STAS
Case: 1.000
Part: 1. Ferma principala



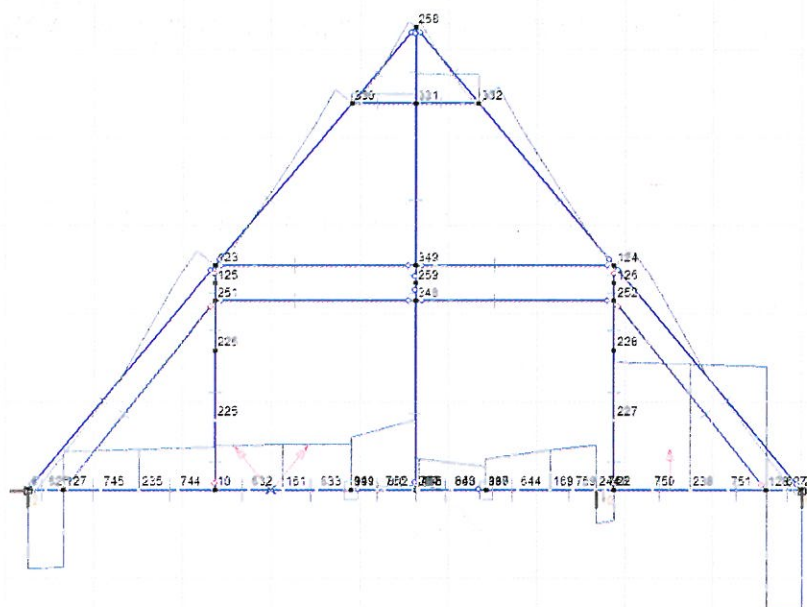
Nodurile fermei principala

Linear analysis
Code : STAS
Case : Critical Max.
Type : (ULS)
E (W) : 2.10E+6
E (P) : 2.10E+6
E (Ed) : 1.15E+5
Comp. : Nx (dak)
Part : Ferma principala



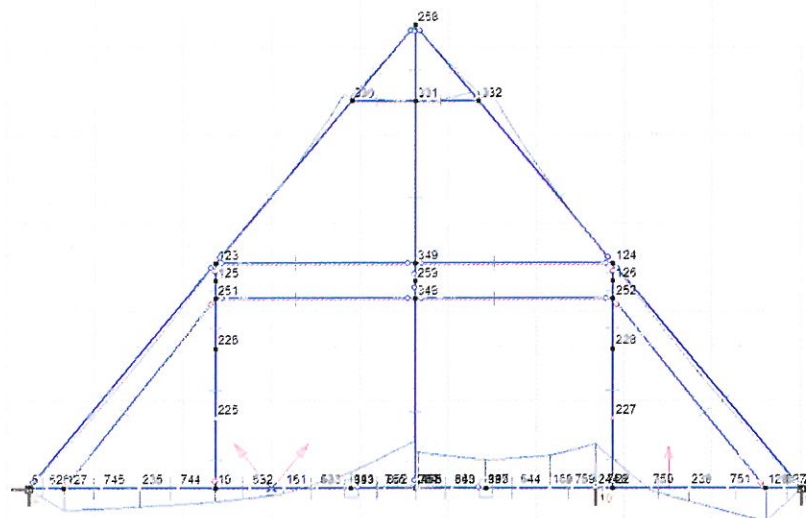
Ferma principala - Forte axiale

Linear analysis
Code : STAS
Case : Critical Max.
Type : (ULS)
E (W) : 2.10E+6
E (P) : 2.10E+6
E (Ed) : 1.15E+5
Comp. : Vz (dak)
Part : Ferma principala



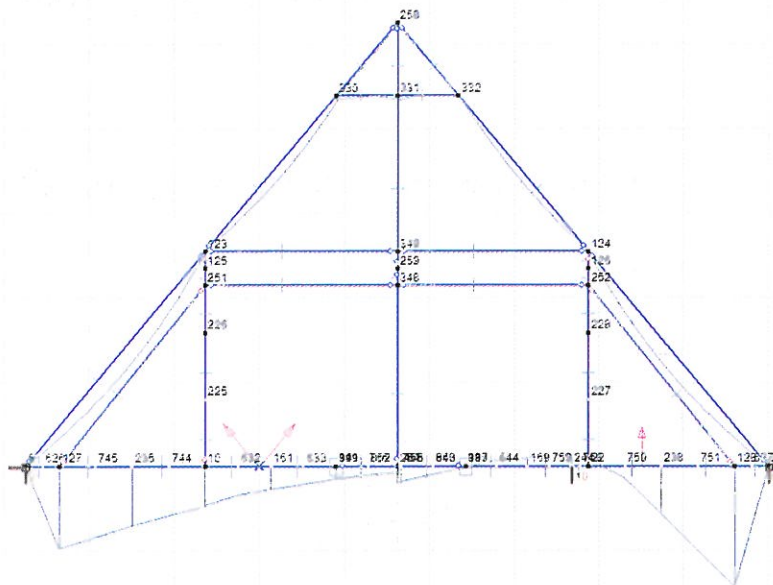
Ferma principala - forte taietoare

Linear analysis
Code : STAS
Case : Critical Max.
Type : (ULS)
E (W) : 2.10E+6
E (P) : 2.10E+6
E (Sc) : 1.15E+5
Compo : My (daNm)
Part : Ferma principala



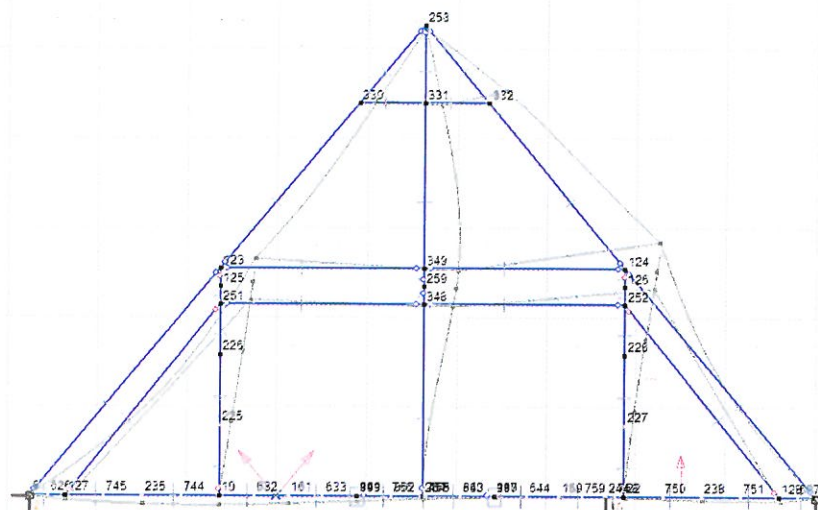
Ferma principala - moment maxim

Linear analysis
Code : STAS
Case : Critical Min.
Type : (ULS)
E (W) : 2.10E+6
E (P) : 2.10E+6
E (Sc) : 1.15E+5
Compo : My (daNm)
Part : Ferma principala



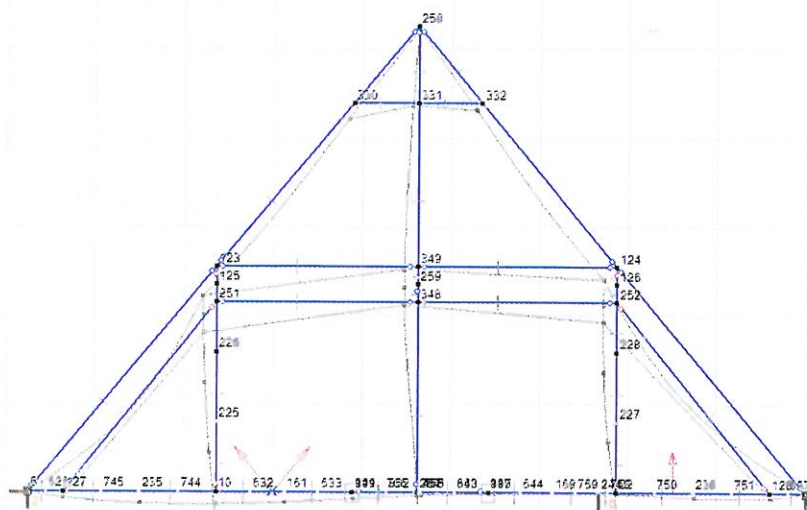
Ferma principala - Moment minim

Linear analysis
Code : STAS
Case : Critical Max.
Type : (SLS-Q)
E (W) : 2.10E-6
E (F) : 2.10E-6
E (Ed) : 1.15E-5
Comp. : e2 (mm)
Part : Ferma principala



Ferma principala - Deplasare dupa Y

Linear analysis
Code : STAS
Case : Critical Min.
Type : (SLS-Q)
E (W) : 2.10E-6
E (F) : 2.10E-6
E (Ed) : 1.15E-5
Comp. : e2 (mm)
Part : Ferma principala



Ferma principala - Deplasare dupa Z

Ferma principala – Eforturile sectionale maxime

	Sh.	C	min. max.	Loc. [m]	Node	Nx [daN]	Vy [daN]	Vz [daN]	Tx [daNm]	My [daNm]	Mz [daNm]
—	—	—	—	—	—	—	—	—	—	—	—
28	7	Nx	min	0	(128)	-7896.3	0	-9.2	0	0	0
7	5		max	2.146	(252)	6132.4	748.8	255.9	-19.4	-96.6	-178.1
39	5	Vy	min	0	(348)	523.4	-1325.4	9.9	1.8	-2.0	425.1
111	5		min	0	(259)	526.1	-1325.4	9.9	1.8	0	690.1
7	5		max	1.584	(228)	5883.0	797.4	320.2	-10.0	-299.7	117.4
33	4	Vz	min	0	(2)	-1661.6	-0.4	-293.2	-0.1	0	-0.3
34	4		min	0	(6)	-1785.9	0.5	-293.2	0.1	0	1.7
7	5		max	1.584	(228)	5887.2	795.5	322.5	-9.9	-301.9	117.7
7	5	Tx	min	1.584	(228)	4523.3	478.0	110.7	-23.0	-105.0	292.5
189	6		max	0	(348)	-3113.1	5.1	0	6.3	0	21.6
7	5	My	min	1.584	(228)	21.2	252.5	-190.6	0	-301.9	-399.9
108	4		max	2.400	(332)	-1228.5	0.6	246.4	0	238.5	1.1
200	5	Mz	min	0	(264)	494.6	-637.3	-4.4	-0.1	0	-942.5
111	5		max	0.200	(349)	528.8	-1325.4	9.9	1.8	2.0	955.2
204	5		max	0	(349)	528.8	470.0	-0.3	0.1	1.5	955.2

Ferma principala – Deplasarile nodale maxime

	C	min. max.	eX [mm]	eY [mm]	eZ [mm]	eR [mm]	fX [rad]	fY [rad]	fZ [rad]	fR [rad]
—	—	—	—	—	—	—	—	—	—	—
228	eX	min	-1.600	-2.880	-4.493	5.571	0.00027	0.00034	0.00168	0.00173
2		max	0	0.232	0	0.232	0.00112	-0.00013	-0.00003	0.00113
252	eY	min	-1.070	-3.094	-4.463	5.535	0.00001	0.00131	0.00038	0.00137
124		max	-0.594	7.810	5.997	9.865	-0.00362	-0.00011	0	0.00362
225	eZ	min	-0.867	2.623	-7.053	7.575	-0.00318	-0.00080	0.00097	0.00342
226		min	-1.098	5.092	-7.053	8.768	-0.00304	0.00035	0.00097	0.00321
124		max	-0.594	7.810	5.997	9.865	-0.00362	-0.00011	0	0.00362
6	eR	min	0	0	0	0	-0.00177	0.00003	0.00001	0.00177
123		max	-0.178	7.796	-6.717	10.292	-0.00063	0.00003	0.00018	0.00065
228	fX	min	-1.129	4.688	3.436	5.921	-0.00366	0.00009	0.00234	0.00434
331		max	-0.502	3.915	-0.525	3.981	0.00432	0	0.00013	0.00433
227	fY	min	-1.217	-1.826	-4.493	5.000	0.00218	-0.00114	0.00168	0.00298
126		max	-0.816	-3.019	-4.436	5.427	-0.00036	0.00147	0.00039	0.00156
125	fZ	min	-0.463	7.224	-6.997	10.068	-0.00268	0.00121	-0.00009	0.00294
251		min	-0.694	6.682	-6.997	9.700	-0.00275	0.00109	-0.00009	0.00296
227		max	-0.820	2.211	3.435	4.167	-0.00270	-0.00078	0.00234	0.00366
228		max	-1.129	4.688	3.436	5.921	-0.00366	0.00009	0.00234	0.00434
626	fR	min	0	0	0	0	0	0	0	0
228		max	-1.129	4.688	3.436	5.921	-0.00366	0.00009	0.00234	0.00434

Proiect

Analysis by ARHING SRL

Ferma principala – Tensiunile sectionale maxime

	Sh.	C	min. max.	Loc. [m]	Node	Smin [daN/cm ²]	Smax [daN/cm ²]	Vmin [daN/cm ²]	Vmax [daN/cm ²]	Somin [daN/cm ²]
—	—	—	—	—	—	—	—	—	—	—
111	5	Smin	min	0.200	(349)	-167.8	2.4	0	8.8	15.5
204	5		min	0	(349)	-167.7	2.4	0	3.1	5.9
7	5		max	1.977		27.2	61.3	0	5.3	28.7
28	7	Smax	min	0	(128)	-43.9	-43.9	0	0.1	43.9
111	5		max	0.200	(349)	2.4	172.5	0	8.8	15.5
204	5		max	0	(349)	2.4	172.4	0	3.1	5.9
5	5	Vmin	min	0.792	(225)	17.2	21.1	0	0.9	1.6
7	5		max	1.584	(228)	-50.6	90.8	0	3.3	20.9
27	7	Vmax	min	1.375		-23.9	-22.0	0	0	22.0
28	7		min	1.375		-37.1	-35.3	0	0	35.3
39	5		max	0	(348)	2.3	-72.9	0	8.8	15.5
111	5		max	0	(259)	2.3	125.0	0	8.8	15.5
6	5	Somin	min	0.200	(123)	0	0	0	0.4	0
28	7		max	0	(128)	-43.9	-43.9	0	0.1	43.9
191	6	Somax	min	2.255	(124)	0.2	0.2	0	0	0.2
111	5		max	0.200	(349)	2.4	172.5	0	8.8	15.5
204	5		max	0	(349)	2.4	172.4	0	3.1	5.9
39	5	Vymean	min	0	(348)	77.5	2.3	0	8.8	15.5
111	5		min	0	(259)	-120.4	2.3	0	8.8	15.5
7	5		max	1.584	(228)	-48.0	100.3	0	5.7	28.0
33	4	Vzmean	min	0	(2)	-12.9	-12.6	0	3.4	12.9
34	4		min	0	(6)	-14.5	-12.9	0	3.4	14.5
91	4		max	0	(331)	-6.0	21.0	0	3.6	8.6

	Sh.	C	min. max.	Loc. [m]	Node	Somax [daN/cm ²]	Vymean [daN/cm ²]	Vzmean [daN/cm ²]
—	—	—	—	—	—	—	—	—
111	5	Smin	min	0.200	(349)	167.1	-7.1	0.1
204	5		min	0	(349)	167.2	2.5	0
7	5		max	1.977		61.3	4.0	1.4
28	7	Smax	min	0	(128)	43.9	0	-0.1
111	5		max	0.200	(349)	172.5	-7.1	0.1
204	5		max	0	(349)	172.4	2.5	0
5	5	Vmin	min	0.792	(225)	17.2	0.7	-0.1
7	5		max	1.584	(228)	90.8	2.5	0.6
27	7	Vmax	min	1.375		23.9	0	0
28	7		min	1.375		37.1	0	0
39	5		max	0	(348)	72.9	-7.1	0.1
111	5		max	0	(259)	125.0	-7.1	0.1
6	5	Somin	min	0.200	(123)	0.7	-0.2	0.2
28	7		max	0	(128)	43.9	0	-0.1
191	6	Somax	min	2.255	(124)	0.2	0	0
111	5		max	0.200	(349)	172.5	-7.1	0.1
204	5		max	0	(349)	172.4	2.5	0
39	5	Vymean	min	0	(348)	78.2	-7.1	0.1
111	5		min	0	(259)	120.4	-7.1	0.1
7	5		max	1.584	(228)	100.3	4.3	1.7
33	4	Vzmean	min	0	(2)	14.1	0	-2.7
34	4		min	0	(6)	14.9	0	-2.7
91	4		max	0	(331)	32.9	0	2.9

Proiect

Analysis by ARHING SRL

Reactiunile maxime

	Nod e	Type	C	min. max.	Rx [daN]	Ry [daN]	Rz [daN]	Rr [daN]
—	—	—	—	—	—	—	—	—
6	2	Global	Rx	min	-7.9		-6609.6	6609.6
2	6	Global		max	0.3	516.4	-1418.6	1509.6
2	6	Global	Ry	min	-0.2	499.9	-1452.0	1535.6
2	6	Global		max	-0.7	1858.5	-4878.8	5220.8
6	2	Global	Rz	min	-7.7		-6632.8	6632.9
10	244	Global		max			-530.4	530.4

Intocmit:

ing. Pal Judit

