

Design Analysis Prostredni stojan

Created by

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Created Date: 17.5.2014

Analysis Parameters Information

Load Case Multipliers

Static Stress with Linear Material Models may have multiple load cases. This allows a model to be analyzed with multiple loads while solving the equations a single time. The following is a list of load case multipliers that were analyzed with this model.

Load Case	Description	Pressure/Surface Forces	Gravity/Acceleration	Angular Velocity (Omega)	Angular Acceleration (Alpha)	Displacement	Thermal	Electrical
1	Load Case Description	1	1	0	0	1	0	0

Gravity Information

The following lists the values used if acceleration or gravity was included in the analysis. The Acceleration/Gravity direction multiplier is multiplied by the Acceleration Due To Body Force which is then multiplied by the Acceleration/Gravity load case multiplier.

Acceleration Due To Body Force = 9814 mm/s²

Acceleration/Gravity X Multiplier	Acceleration/Gravity Y Multiplier	Acceleration/Gravity Z Multiplier
0	-1	0

Centrifugal Information

Angular Velocity (Omega) Magnitude = 0 (RPM)

	X	Y	Z
Rotation Center Point (mm)	0	0	0
Rotation Axis	0	0	0

Angular Acceleration (Alpha) Magnitude = 0 (RPM/s)

	X	Y	Z
Rotation Center Point (mm)	0	0	0
Rotation Axis	0	0	0

Multiphysics Information

Default Nodal Temperature	0 °C
Source of Initial Nodal Temperatures	Loads from FEA Editor
Time step from Heat Transfer Analysis	Last
Default nodal voltage	0 V
Source of nodal voltages	Model file

Processor Information

Type of Solver	Automatic
Disable Calculation and Output of Strains	No
Calculate Reaction Forces	Yes
Invoke Banded Solver	Yes
Avoid Bandwidth Minimization	No
Stop After Stiffness Calculations	No
Displacement Data in Output File	No
Stress Data in Output File	No
Equation Numbers Data in Output File	No
Element Input Data in Output File	No
Nodal Input Data in Output File	No
Centrifugal Load Data in Output File	No

Part Information

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Part ID	Part Name	Element Type	Material Name
1	Stojna:1	Brick	Steel - User Defined
2	tycka: 1	Brick	Steel - User Defined
3	ulozeni_tycky:1	Brick	Steel - User Defined
4	tycka: 2	Brick	Steel - User Defined
5	ulozeni_tycky:2	Brick	Steel - User Defined
6	celistleva: 1	Brick	Steel - User Defined
7	celistleva: 2	Brick	Steel - User Defined
8	Součást1: 1	Brick	Steel - User Defined
9	Součást1: 2	Brick	Steel - User Defined
22	Part 22	Beam	Steel (AISI 5150) Annealed

Element Information

Element Properties used for:

- Stojna: 1
- tycka: 1
- ulozeni_tycky: 1
- tycka: 2
- ulozeni_tycky: 2
- celistleva: 1
- celistleva: 2
- Součást1: 1
- Součást1: 2

Element Type	Brick
Compatibility	Not Enforced
Integration Order	2nd Order
Stress Free Reference Temperature	0 °C

Element Properties used for:

- Part 22

Element Type	Beam
Stress Free Reference Temperature	0 °C
Layer 1 - Area	201
Layer 1 - SA2	178
Layer 1 - SA3	178
Layer 1 - J1	6433
Layer 1 - I2	3216
Layer 1 - I3	3216
Layer 1 - S2	6433
Layer 1 - S3	6433

Material Information

Steel -Brick

Material Model	Standard
Material Source	Autodesk Simulation Material Library
Material Source File	C:\Program Files\Autodesk\Simulation 2014\matlibs\alformat.mlb
Date Last Updated	2012/07/12-16:52:57
Material Description	None
Mass Density	7 N·s ² /mm ³
Modulus of Elasticity	204774 N/mm ²
Poisson's Ratio	0.28
Thermal Coefficient of Expansion	1 1/°C
Yield Strength	375 N/mm ²
Ultimate Strength	615 N/mm ²

Steel (AISI 5150) Annealed -Beam

Material Model	Standard
Material Source	Autodesk Simulation Material Library
Material Source File	C:\Program Files\Autodesk\Simulation 2014\matlibs\alformat.mlb
Date Last Updated	2012/07/12-16:54:45
Material Description	None
Mass Density	7 N·s ² /mm ³
Modulus of Elasticity	204774 N/mm ²
Poisson's Ratio	0.29
Thermal Coefficient of Expansion	1 1/°C
Yield Strength	357 N/mm ²
Ultimate Strength	675 N/mm ²

Loads

FEA Object Group 2: Surface Forces

Surface Force

ID	Description	Part Number	Surface Number	Magnitude (N)	Vx	Vy	Vz
1	Unnamed	1	54	-1251,000000	0,000000	1,000000	0,000000
2	Unnamed	1	42	-1251,000000	0,000000	1,000000	0,000000
3	Unnamed	1	36	-1251,000000	0,000000	1,000000	0,000000
4	Unnamed	1	33	-1251,000000	0,000000	1,000000	0,000000
5	Unnamed	1	51	-1251,000000	0,000000	1,000000	0,000000
6	Unnamed	1	48	-1251,000000	0,000000	1,000000	0,000000
7	Unnamed	1	45	-1251,000000	0,000000	1,000000	0,000000

8	Unnamed	1	39	-1251,000000	0,000000	1,000000	0,000000
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FEA Object Group 57: Beam Preloads

Beam Preload

ID	Description	Line ID	Element ID	Magnitude (N)
182	Unnamed	2298	2	5400,000000
183	Unnamed	2297	1	5400,000000
184	Unnamed	2299	3	5400,000000

FEA Object Group 58: Beam Preloads

Beam Preload

ID	Description	Line ID	Element ID	Magnitude (N)
186	Unnamed	2377	81	5400,000000
187	Unnamed	2376	80	5400,000000
188	Unnamed	2375	79	5400,000000

FEA Object Group 59: Beam Preloads

Beam Preload

ID	Description	Line ID	Element ID	Magnitude (N)
190	Unnamed	2453	157	5400,000000
191	Unnamed	2454	158	5400,000000
192	Unnamed	2455	159	5400,000000

FEA Object Group 60: Beam Preloads

Beam Preload

ID	Description	Line ID	Element ID	Magnitude (N)
194	Unnamed	2531	235	5400,000000
195	Unnamed	2532	236	5400,000000
196	Unnamed	2530	234	5400,000000

FEA Object Group 61: Nodal Forces

Nodal Force

ID	Description	Vertex Number	Node Number	Magnitude (N)	Vx	Vy	Vz	Load Case / Load
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								Curve
1	Unnamed	43998	42001	-50,000000	0,000000	0,000000	1,000000	1
2	Unnamed	44000	42003	-50,000000	0,000000	0,000000	1,000000	1
3	Unnamed	44002	42005	-50,000000	0,000000	0,000000	1,000000	1
4	Unnamed	44004	42007	-50,000000	0,000000	0,000000	1,000000	1
5	Unnamed	44006	42009	-50,000000	0,000000	0,000000	1,000000	1
6	Unnamed	44088	42091	-50,000000	0,000000	0,000000	1,000000	1
7	Unnamed	44090	42093	-50,000000	0,000000	0,000000	1,000000	1
8	Unnamed	44092	42095	-50,000000	0,000000	0,000000	1,000000	1
9	Unnamed	44094	42097	-50,000000	0,000000	0,000000	1,000000	1
10	Unnamed	44096	42099	-50,000000	0,000000	0,000000	1,000000	1
11	Unnamed	44102	42105	-50,000000	0,000000	0,000000	1,000000	1
12	Unnamed	44104	42107	-50,000000	0,000000	0,000000	1,000000	1
13	Unnamed	44115	42118	-50,000000	0,000000	0,000000	1,000000	1
14	Unnamed	44117	42120	-50,000000	0,000000	0,000000	1,000000	1
15	Unnamed	44148	42151	-50,000000	0,000000	0,000000	1,000000	1
16	Unnamed	44150	42153	-50,000000	0,000000	0,000000	1,000000	1
17	Unnamed	44152	42155	-50,000000	0,000000	0,000000	1,000000	1
18	Unnamed	44156	42159	-50,000000	0,000000	0,000000	1,000000	1
19	Unnamed	44163	42166	-50,000000	0,000000	0,000000	1,000000	1
20	Unnamed	44176	42179	-50,000000	0,000000	0,000000	1,000000	1

FEA Object Group 62: Nodal Forces

Nodal Force

ID	Description	Vertex Number	Node Number	Magnitude (N)	Vx	Vy	Vz	Load Case / Load Curve
21	Unnamed	37296	36680	166,666667	0,000000	0,000000	1,000000	1
22	Unnamed	37297	36681	166,666667	0,000000	0,000000	1,000000	1
23	Unnamed	37298	36682	166,666667	0,000000	0,000000	1,000000	1
24	Unnamed	37299	36683	166,666667	0,000000	0,000000	1,000000	1
25	Unnamed	37300	36684	166,666667	0,000000	0,000000	1,000000	1
26	Unnamed	37301	36685	166,666667	0,000000	0,000000	1,000000	1
27	Unnamed	43998	42001	166,666667	0,000000	0,000000	1,000000	1
28	Unnamed	44000	42003	166,666667	0,000000	0,000000	1,000000	1
29	Unnamed	44002	42005	166,666667	0,000000	0,000000	1,000000	1
30	Unnamed	44004	42007	166,666667	0,000000	0,000000	1,000000	1
31	Unnamed	44006	42009	166,666667	0,000000	0,000000	1,000000	1
32	Unnamed	44088	42091	166,666667	0,000000	0,000000	1,000000	1
33	Unnamed	44090	42093	166,666667	0,000000	0,000000	1,000000	1

34	Unnamed	44092	42095	166,666667	0,000000	0,000000	1,000000	1
35	Unnamed	44094	42097	166,666667	0,000000	0,000000	1,000000	1
36	Unnamed	44096	42099	166,666667	0,000000	0,000000	1,000000	1
37	Unnamed	44102	42105	166,666667	0,000000	0,000000	1,000000	1
38	Unnamed	44104	42107	166,666667	0,000000	0,000000	1,000000	1
39	Unnamed	44115	42118	166,666667	0,000000	0,000000	1,000000	1
40	Unnamed	44117	42120	166,666667	0,000000	0,000000	1,000000	1
41	Unnamed	44148	42151	166,666667	0,000000	0,000000	1,000000	1
42	Unnamed	44150	42153	166,666667	0,000000	0,000000	1,000000	1
43	Unnamed	44152	42155	166,666667	0,000000	0,000000	1,000000	1
44	Unnamed	44156	42159	166,666667	0,000000	0,000000	1,000000	1
45	Unnamed	44163	42166	166,666667	0,000000	0,000000	1,000000	1
46	Unnamed	44176	42179	166,666667	0,000000	0,000000	1,000000	1

Constraints

FEA Object Group 1: Surface General Constraints

Surface General Constraint

I D	Description	Part Number	Surface Number	Tx	Ty	Tz	Rx	Ry	Rz
1	Unnamed	1	31	No	Yes	No	No	No	No

FEA Object Group 8: Surface General Constraints

Surface General Constraint

I D	Description	Part Number	Surface Number	Tx	Ty	Tz	Rx	Ry	Rz
2	Unnamed	1	56	Yes	Yes	Yes	No	No	No
3	Unnamed	1	50	Yes	Yes	Yes	No	No	No
4	Unnamed	1	44	Yes	Yes	Yes	No	No	No
5	Unnamed	1	38	Yes	Yes	Yes	No	No	No

FEA Object Group 9: Surface General Constraints

Surface General Constraint

I D	Description	Part Number	Surface Number	Tx	Ty	Tz	Rx	Ry	Rz
6	Unnamed	1	53	Yes	Yes	Yes	No	No	No
7	Unnamed	1	56	Yes	Yes	Yes	No	No	No
8	Unnamed	1	50	Yes	Yes	Yes	No	No	No
9	Unnamed	1	35	Yes	Yes	Yes	No	No	No
10	Unnamed	1	47	Yes	Yes	Yes	No	No	No
11	Unnamed	1	44	Yes	Yes	Yes	No	No	No
12	Unnamed	1	38	Yes	Yes	Yes	No	No	No

13	Unnamed	1	41	Yes	Yes	Yes	No	No	No
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FEA Object Group 13: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
4	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 14: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
6	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 15: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
8	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 16: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
10	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 17: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
12	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 18: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
14	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 19: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
16	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 20: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
18	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 21: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
20	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 22: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
22	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 23: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
24	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 24: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
26	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 25: Beam Preloads

Nodal General Constraint

		Vertex	Node						
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ID	Description	Number	Number	Tx	Ty	Tz	Rx	Ry	Rz
28	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 26: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
30	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 27: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
32	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 28: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
34	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 29: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
36	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 30: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
38	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 31: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
40	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 32: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
42	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 33: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
44	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 34: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
46	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 35: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
48	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 36: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
50	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 37: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
52	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 38: Beam Preloads

Nodal General Constraint

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ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
54	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 39: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
56	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 40: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
58	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 41: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
60	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 42: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
62	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 43: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
64	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 44: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz

66	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes
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FEA Object Group 45: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
68	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 46: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
70	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 47: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
72	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 48: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
74	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 49: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
76	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 50: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
78	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 51: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
80	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 52: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
82	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 53: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
84	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 54: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
86	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 55: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
88	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 56: Beam Preloads

Nodal General Constraint

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
90	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 57: Beam Preloads

Nodal General Constraint

		Vertex	Node						
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ID	Description	Number	Number	Tx	Ty	Tz	Rx	Ry	Rz
92	Unnamed	219828	78321	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 58: Beam Preloads**Nodal General Constraint**

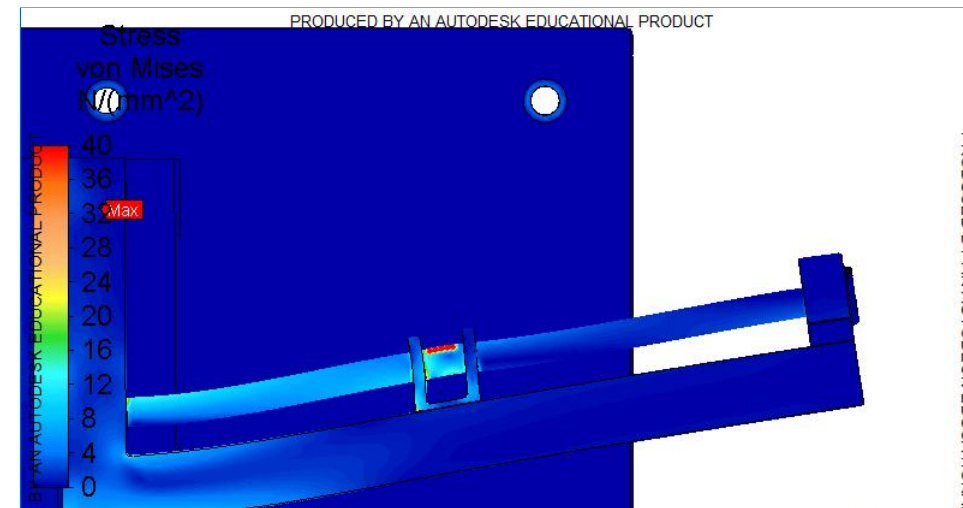
ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
94	Unnamed	219985	78327	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 59: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
96	Unnamed	220142	78333	Yes	Yes	Yes	Yes	Yes	Yes

FEA Object Group 60: Beam Preloads**Nodal General Constraint**

ID	Description	Vertex Number	Node Number	Tx	Ty	Tz	Rx	Ry	Rz
98	Unnamed	220297	78339	Yes	Yes	Yes	Yes	Yes	Yes

Results Presentation Images*Displacement*

Processor Log Files

Meshing Log

Part 1 < Stojna: 1 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	13,9534 mm
Elements created	37048

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	146669
Volume	47685315,40897 mm³
Total elements	292504

	Tetrahedra	Pyramids	Wedges	Bricks
Elements	156882	60726	6065	68831
Volume %	12,24	11,04	2,2	74,51
Max. length ratio	1966,4	77,9	18,6	25,2
Avg. length ratio	6,1	4,7	2,5	2,3
Avg. aspect ratio	1,3	1,3	1,1	1
Unconstrained aspect ratio	8,1	4,4	1,5	1,7

Log file

Length units used in the log file are modeling units: mm

GENERATING SOLID MESH FOR ANOTHER PART

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:
C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=8 -cancel_pipe=9 -za=1 -zg=1:9 -m=1 -Td=1 -Tl=13.9534 -Tg=1.2 -Tq=100

TYPE OF OPERATION:
Meshing only surface defined by part 1
Generating bricks, wedges, pyramids and tetrahedra elements
Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:
Elements built (4,5,6,8 noded): 292504 (156882, 60726, 6065, 68831)
Volume (4,5,6,8 noded %): 47685315.408970 (12.24, 11.04, 2.20, 74.51)
Number of nodes: 146669
Length ratios (avg) 6.1, 4.7, 2.5, 2.3
Length ratios (max) 1966.4, 77.9, 18.6, 25.2
Aspect ratio: unconstrained (8.1, 4.4, 1.5, 1.7)
Average aspect ratios: (1.3, 1.3, 1.1, 1.0)
Number of restarts: 0
Elapsed time: 12 minutes 6 seconds

Part 2 < tycka:1 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	10,4889 mm
Elements created	508

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	918
Volume	159059,406861 mm³
Total elements	1745

	Tetrahedra	Pyramids
Elements	1303	442
Volume %	59,71	40,29

Max. length ratio	49,2	9,6
Avg. length ratio	4,6	2,6
Avg. aspect ratio	1,2	1,2
Unconstrained aspect ratio	2,8	1,7

Log file

Length units used in the log file are modeling units: mm

GENERATING SOLID MESH FOR ANOTHER PART

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM
Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=8 -cancel_pipe=9 -za=1 -zg=1:9 -m=2 -Td=1 -Tl=10.4889 -Tg=1.2 -Tq=100

TYPE OF OPERATION:

Meshing only surface defined by part 2
Generating bricks, wedges, pyramids and tetrahedra elements
Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 1745 (1303, 442, 0, 0)
Volume (4,5,6,8 noded %): 159059.406861 (59.71, 40.29, 0.00, 0.00)
Number of nodes: 918
Length ratios (avg) 4.6, 2.6, 0.0, 0.0
Length ratios (max) 49.2, 9.6, 0.0, 0.0
Aspect ratio: unconstrained (2.8, 1.7, 0.0, 0.0)
Average aspect ratios: (1.2, 1.2, 0.0, 0.0)
Number of restarts: 0
Elapsed time: 0 minutes 3 seconds

Part 3 < ulozeni_tycky:1 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	11,5274 mm
Elements created	696

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	1309
Volume	110468,25204 mm³
Total elements	3437

	Tetrahedra	Pyramids	Wedges	Bricks
Elements	2590	609	69	169
Volume %	36,68	25,01	7,09	31,28
Max. length ratio	161,8	22,8	9,7	6,9
Avg. length ratio	6,6	5,1	3,4	4,1
Avg. aspect ratio	1,3	1,4	1,1	1,1
Unconstrained aspect ratio	3,8	3	1,4	1,2

Log file

Length units used in the log file are modeling units: mm

GENERATING SOLID MESH FOR ANOTHER PART

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM
Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=8 -cancel_pipe=9 -za=1 -zg=1:9 -m=3 -Td=1 -Tl=11.5274 -Tg=1.2 -Tq=100

TYPE OF OPERATION:

- Meshing only surface defined by part 3
- Generating bricks, wedges, pyramids and tetrahedra elements
- Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 3437 (2590, 609, 69, 169)

Volume (4,5,6,8 noded %): 110468.252040 (36.68, 25.01, 7.09, 31.28)

Number of nodes: 1309

Length ratios (avg) 6.6, 5.1, 3.4, 4.1

Length ratios (max) 161.8, 22.8, 9.7, 6.9

Aspect ratio: unconstrained (3.8, 3.0, 1.4, 1.2)

Average aspect ratios: (1.3, 1.4, 1.1, 1.1)

Number of restarts: 0

Elapsed time: 0 minutes 6 seconds

Part 4 < tycka:2 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	1,96667 mm
Elements created	9351

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	50038
Volume	176464,790407 mm³
Total elements	76507

	Tetrahedra	Pyramids	Wedges	Bricks
Elements	40189	13811	545	21962
Volume %	18,14	11,45	0,44	69,97
Max. length ratio	115,7	31,9	6	3,8
Avg. length ratio	3,2	3,1	2,6	1,9
Avg. aspect ratio	1,2	1,3	1,1	1,1
Unconstrained aspect ratio	3,6	2,3	1,4	1,5

Log file

Length units used in the log file are modeling units: mm

GENERATING SOLID MESH FOR ANOTHER PART

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=4 -cancel_pipe=5 -za=1 -zg=1:9 -m=4 -Td=1 -Tl=1.96667 -Tg=1.2 -Tq=100

TYPE OF OPERATION:

Meshing only surface defined by part 4

Generating bricks, wedges, pyramids and tetrahedra elements

Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 76507 (40189, 13811, 545, 21962)

Volume (4,5,6,8 noded %): 176464.790407 (18.14, 11.45, 0.44, 69.97)

Number of nodes: 50038

Length ratios (avg) 3.2, 3.1, 2.6, 1.9

Length ratios (max) 115.7, 31.9, 6.0, 3.8

Aspect ratio: unconstrained (3.6, 2.3, 1.4, 1.5)

Average aspect ratios: (1.2, 1.3, 1.1, 1.1)

Number of restarts: 0

Elapsed time: 2 minutes 19 seconds

Part 5 < ulozeni_tycky:2 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	11,4312 mm
Elements created	1326

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
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Watertight	Yes
Mesh has microholes	No
Total nodes	3803
Volume	110706,174975 mm³
Total elements	8597

	Tetrahedra	Pyramids	Wedges	Bricks
Elements	5509	1333	259	1496
Volume %	36,17	18,23	3,55	42,02
Max. length ratio	186,2	20	8	7,8
Avg. length ratio	5,6	4,3	2,2	1,8
Avg. aspect ratio	1,3	1,3	1,1	1
Unconstrained aspect ratio	3,7	2,4	1,3	1,2

Log file

Length units used in the log file are modeling units: mm

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GENERATING SOLID MESH FOR ANOTHER PART

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PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM
Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=8 -cancel_pipe=9 -za=1 -zg=1:9 -m=5 -Td=1 -Tl=11.4312 -Tg=1.2 -Tq=100

TYPE OF OPERATION:

Meshing only surface defined by part 5
Generating bricks, wedges, pyramids and tetrahedra elements
Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 8597 (5509, 1333, 259, 1496)
Volume (4,5,6,8 noded %): 110706.174975 (36.17, 18.23, 3.55, 42.02)
Number of nodes: 3803
Length ratios (avg) 5.6, 4.3, 2.2, 1.8

Length ratios (max) 186.2, 20.0, 8.0, 7.8

Aspect ratio: unconstrained (3.7, 2.4, 1.3, 1.2)

Average aspect ratios: (1.3, 1.3, 1.1, 1.0)

Number of restarts: 0

Elapsed time: 0 minutes 20 seconds

Part 6 < celistleva:1 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	9,1915 mm
Elements created	11477

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	47209
Volume	3959482,694929 mm³
Total elements	82315

	Tetrahedra	Pyramids	Wedges	Bricks
Elements	39957	12913	2201	27244
Volume %	7,41	5,27	1,31	86,01
Max. length ratio	7651,1	54	10,4	13,1
Avg. length ratio	5,9	4,2	2,5	2,1
Avg. aspect ratio	1,3	1,3	1,1	1
Unconstrained aspect ratio	13,5	3,6	1,4	1,4

Log file

Length units used in the log file are modeling units: mm

SOLID MESH GENERATION BEFORE ANALYSIS

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=16 -cancel_pipe=17 -za=-1 -zg=1:9 -m=6 -Td=1 -Tl=9.1915 -Tg=1.2 -Tq=10

TYPE OF OPERATION:

Meshing only surface defined by part 6

Generating bricks, wedges, pyramids and tetrahedra elements

Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 82315 (39957, 12913, 2201, 27244)

Volume (4,5,6,8 noded %): 3959482.694929 (7.41, 5.27, 1.31, 86.01)

Number of nodes: 47209

Length ratios (avg) 5.9, 4.2, 2.5, 2.1

Length ratios (max) 7651.1, 54.0, 10.4, 13.1

Aspect ratio: unconstrained (13.5, 3.6, 1.4, 1.4)

Average aspect ratios: (1.3, 1.3, 1.1, 1.0)

Number of restarts: 0

Elapsed time: 2 minutes 17 seconds

Part 7 < celistleva:2 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	22,0596 mm
Elements created	3743

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	15973
Volume	3970922.230008 mm³
Total elements	34197

	Tetrahedra	Pyramids	Wedges	Bricks

Elements	19219	6800	477	7701
Volume %	21,51	17,4	3,37	57,73
Max. length ratio	1347,3	109,2	45,7	60,9
Avg. length ratio	8,9	9,8	4,1	4,5
Avg. aspect ratio	1,4	1,5	1,1	1,1
Unconstrained aspect ratio	7,9	4,1	1,7	2,1

Log file

Length units used in the log file are modeling units: mm

SOLID MESH GENERATION BEFORE ANALYSIS

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM
Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=12 -cancel_pipe=13 -za=-1 -zg=1:9 -m=7 -Td=1 -Tl=22.0596 -Tg=1.2 -Tq=1

TYPE OF OPERATION:

Meshing only surface defined by part 7
Generating bricks, wedges, pyramids and tetrahedra elements
Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 34197 (19219, 6800, 477, 7701)
Volume (4,5,6,8 noded %): 3970922.230008 (21.51, 17.40, 3.37, 57.73)
Number of nodes: 15973
Length ratios (avg) 8.9, 9.8, 4.1, 4.5
Length ratios (max) 1347.3, 109.2, 45.7, 60.9
Aspect ratio: unconstrained (7.9, 4.1, 1.7, 2.1)
Average aspect ratios: (1.4, 1.5, 1.1, 1.1)
Number of restarts: 0
Elapsed time: 0 minutes 56 seconds

Part 8 < Součást1:1 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	7,65146 mm
Elements created	1050

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	2079
Volume	30325,960932 mm ³
Total elements	4349

	Tetrahedra	Pyramids	Wedges	Bricks
Elements	2727	987	98	537
Volume %	29,83	31,37	8,11	30,71
Max. length ratio	153,5	49,6	10,9	11,2
Avg. length ratio	7,2	5,7	3	2,9
Avg. aspect ratio	1,4	1,4	1,1	1,1
Unconstrained aspect ratio	4	2,7	1,2	1,3

Log file

Length units used in the log file are modeling units: mm

SOLID MESH GENERATION BEFORE ANALYSIS

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM
Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=8 -cancel_pipe=9 -za=-1 -zg=1:9 -m=8 -Td=1 -Tl=7.65146 -Tg=1.2 -Tq=100

TYPE OF OPERATION:

Meshing only surface defined by part 8

Generating bricks, wedges, pyramids and tetrahedra elements

Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 4349 (2727, 987, 98, 537)

Volume (4,5,6,8 noded %): 30325.960932 (29.83, 31.37, 8.11, 30.71)

Number of nodes: 2079

Length ratios (avg) 7.2, 5.7, 3.0, 2.9

Length ratios (max) 153.5, 49.6, 10.9, 11.2

Aspect ratio: unconstrained (4.0, 2.7, 1.2, 1.3)

Average aspect ratios: (1.4, 1.4, 1.1, 1.1)

Number of restarts: 0

Elapsed time: 0 minutes 6 seconds

Part 9 < Součást1:2 >

Status: the part successfully meshed.

Surface Mesh Statistics

Mesh operation	Solid mesh
Final mesh size	7,52569 mm
Elements created	1560

Solid Mesh Statistics

Mesh type	Mix of bricks, wedges, pyramids and tetrahedra
Watertight	Yes
Mesh has microholes	No
Total nodes	3456
Volume	30017,502486 mm³
Total elements	8206

	Tetrahedra	Pyramids	Wedges	Bricks
Elements	5755	1775	191	485
Volume %	31,16	27,44	5,17	36,24
Max. length ratio	4314,1	37,1	11,9	8
Avg. length ratio	8,4	5	3	2,1
Avg. aspect ratio	1,4	1,4	1,2	1
Unconstrained aspect ratio	10,7	3,2	1,4	1,2

Log file

Length units used in the log file are modeling units: mm

SOLID MESH GENERATION BEFORE ANALYSIS

PROGRAM WILL USE THE FOLLOWING FILES:

Input: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

Output: C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5..FEM

COMMAND LINE:

C:\Program Files\Autodesk\Simulation 2014\SOLIDX.exe -b=0 -o=1 -zw=2 C:\School\Diplomka\inventor\ASM2014simulace\Sestava_stojna_nova_17.5. -ds=1 -d=0 -u=13 -c=2 -t=1 -progress_pipe=4 -cancel_pipe=5 -za=-1 -zg=1:9 -m=9 -Td=1 -Tl=7.52569 -Tg=1.2 -Tq=100

TYPE OF OPERATION:

Meshing only surface defined by part 9

Generating bricks, wedges, pyramids and tetrahedra elements

Automatically minimizing aspect ratio of solid elements

FINAL STATISTICS:

Elements built (4,5,6,8 noded): 8206 (5755, 1775, 191, 485)

Volume (4,5,6,8 noded %): 30017.502486 (31.16, 27.44, 5.17, 36.24)

Number of nodes: 3456

Length ratios (avg) 8.4, 5.0, 3.0, 2.1

Length ratios (max) 4314.1, 37.1, 11.9, 8.0

Aspect ratio: unconstrained (10.7, 3.2, 1.4, 1.2)

Average aspect ratios: (1.4, 1.4, 1.2, 1.0)

Number of restarts: 0

Elapsed time: 0 minutes 15 seconds

Part 10 < DIN 912 - nahrazený DIN EN ISO 4762 M12 x 25:1 >

Status: this part was not meshed.

Part 11 < DIN 912 - nahrazený DIN EN ISO 4762 M12 x 25:2 >

Status: this part was not meshed.

Part 12 < DIN 912 - nahrazený DIN EN ISO 4762 M12 x 25:3 >

Status: this part was not meshed.

Part 13 < DIN 912 - nahrazený DIN EN ISO 4762 M12 x 25:4 >

Status: this part was not meshed.

Part 14 < ISO 4762 M16 x 50:1 >

Status: this part was not meshed.

Part 15 < ISO 4762 M16 x 50:2 >

Status: this part was not meshed.

Part 16 < ISO 4762 M16 x 50:3 >

Status: this part was not meshed.

Part 17 < ISO 4762 M16 x 50:4 >

Status: this part was not meshed.

Part 18 < ISO 4762 M16 x 50:1 >

Status: this part was not meshed.

Part 19 < ISO 4762 M16 x 50:2 >

Status: this part was not meshed.

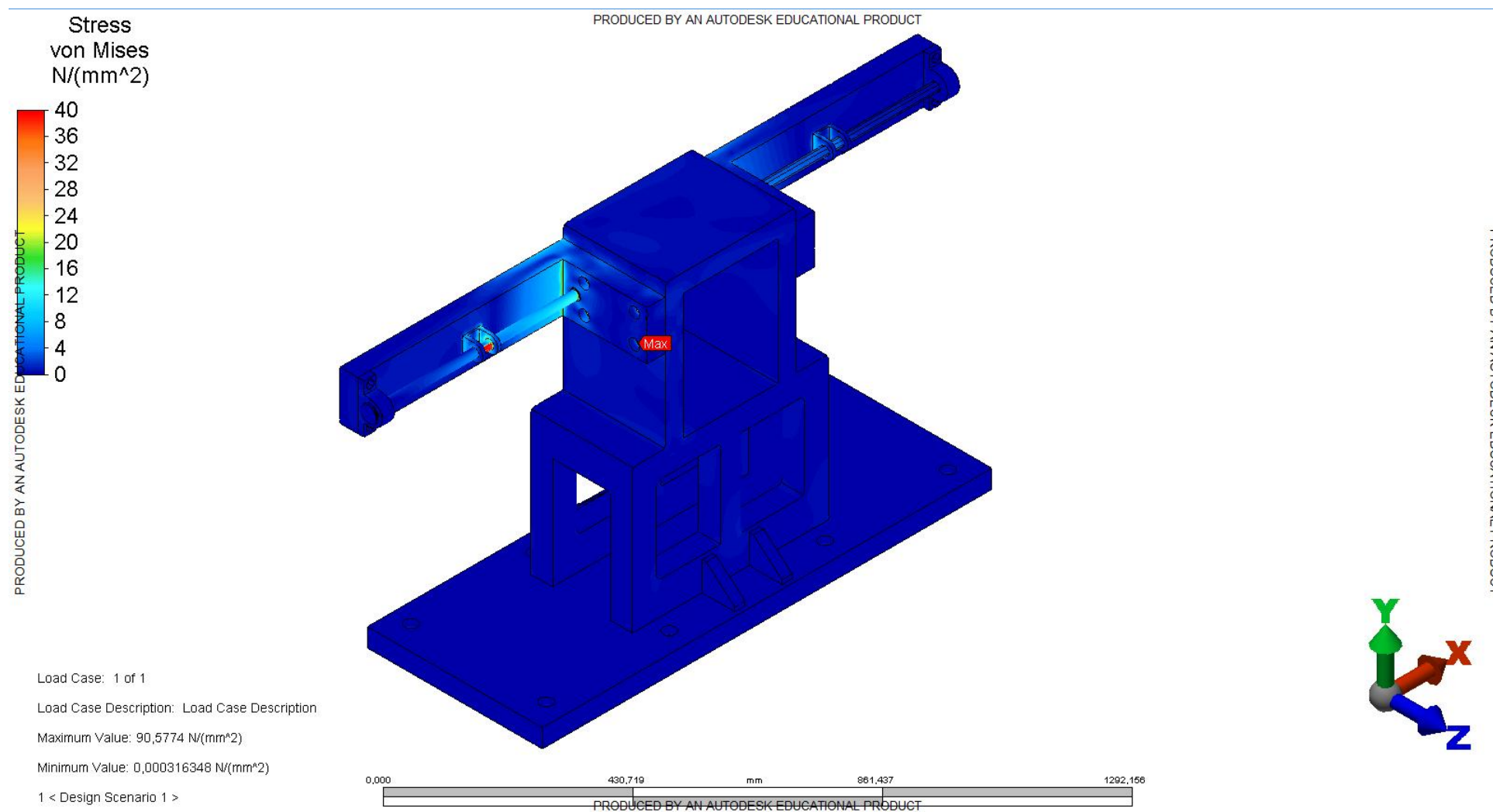
Part 20 < ISO 4762 M16 x 50:3 >

Status: this part was not meshed.

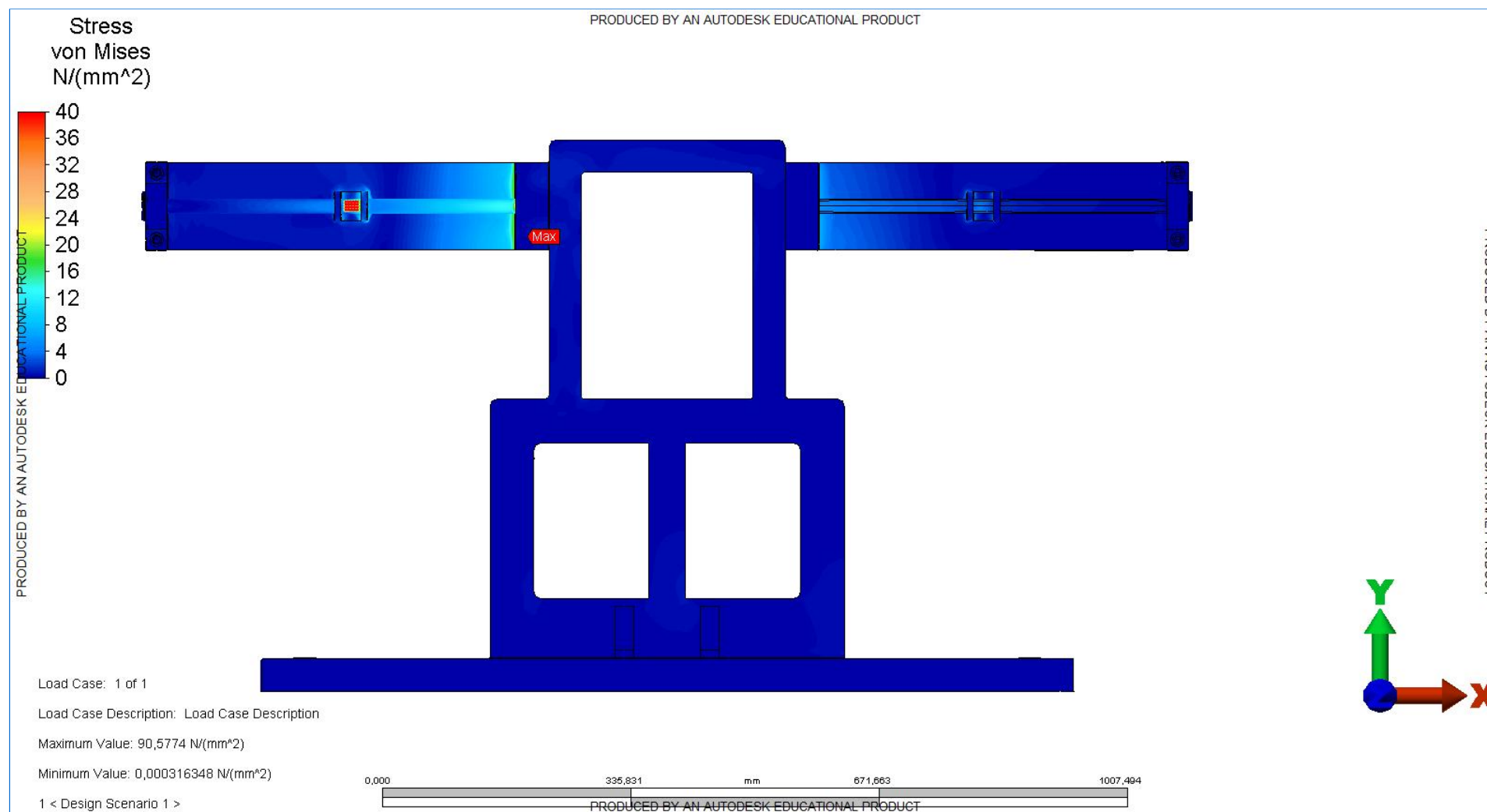
Part 21 < ISO 4762 M16 x 50:4 >

Status: this part was not meshed.

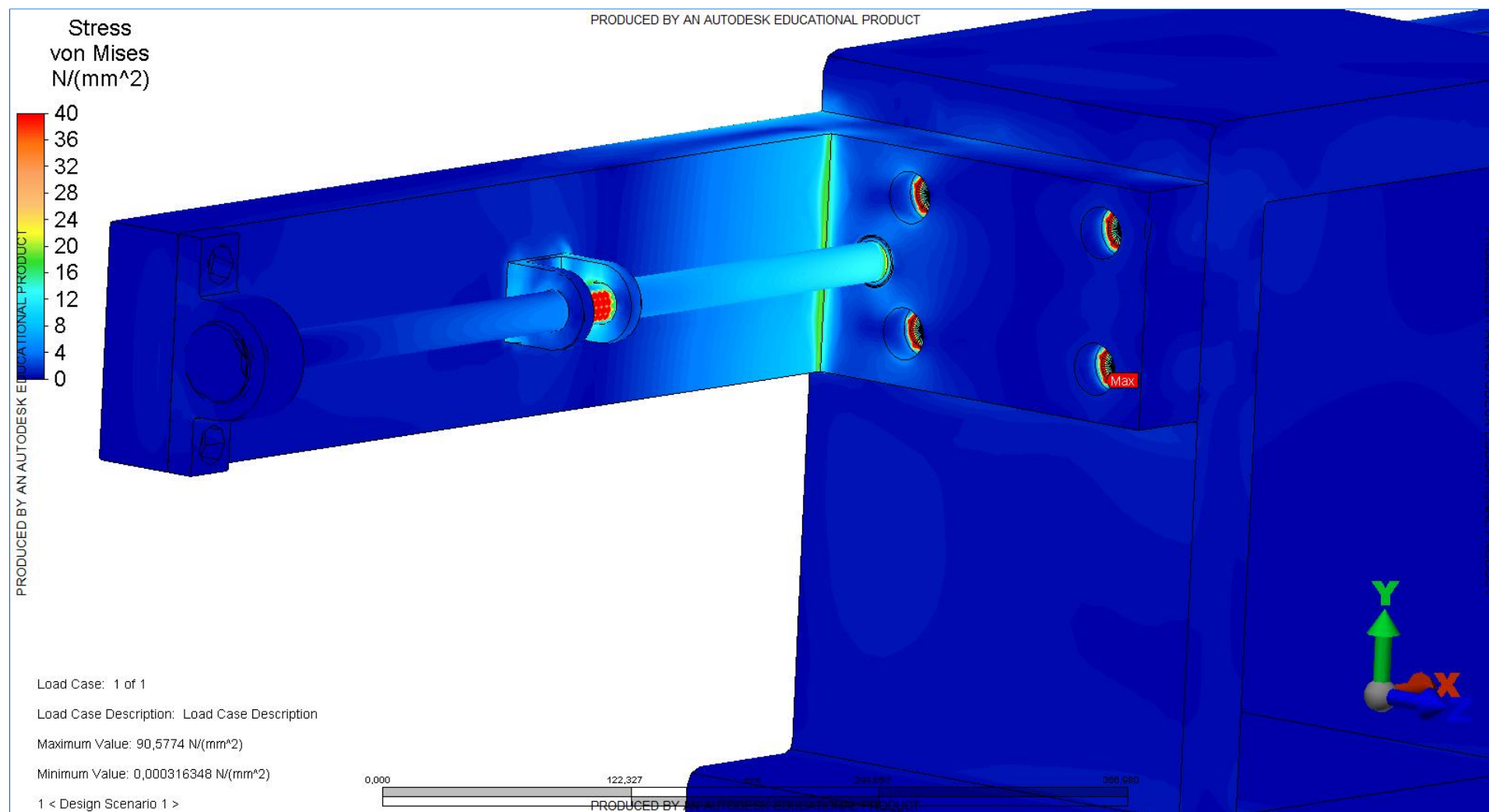
prostredni stojan1



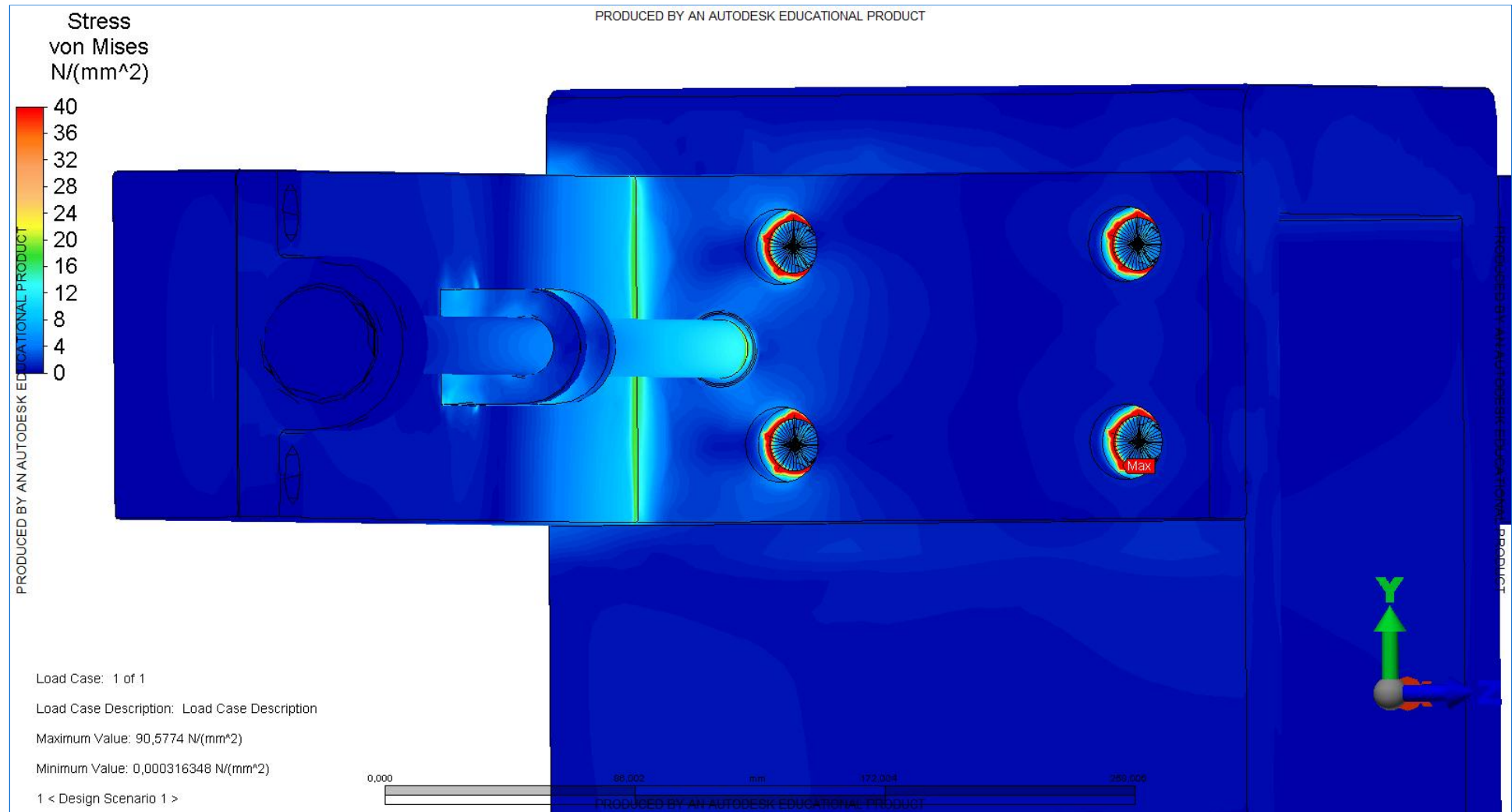
prostredni stojan2



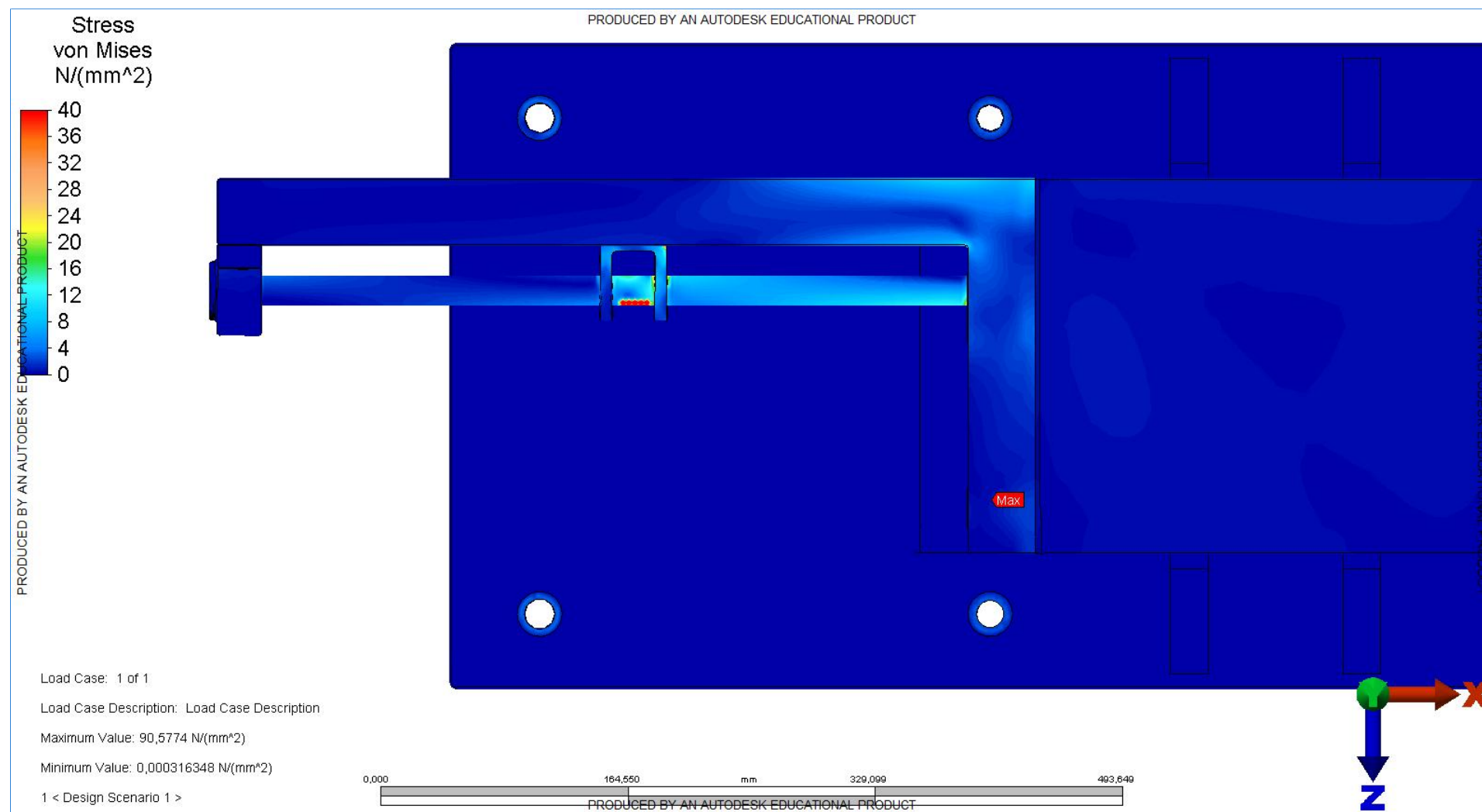
prostredni stojan3



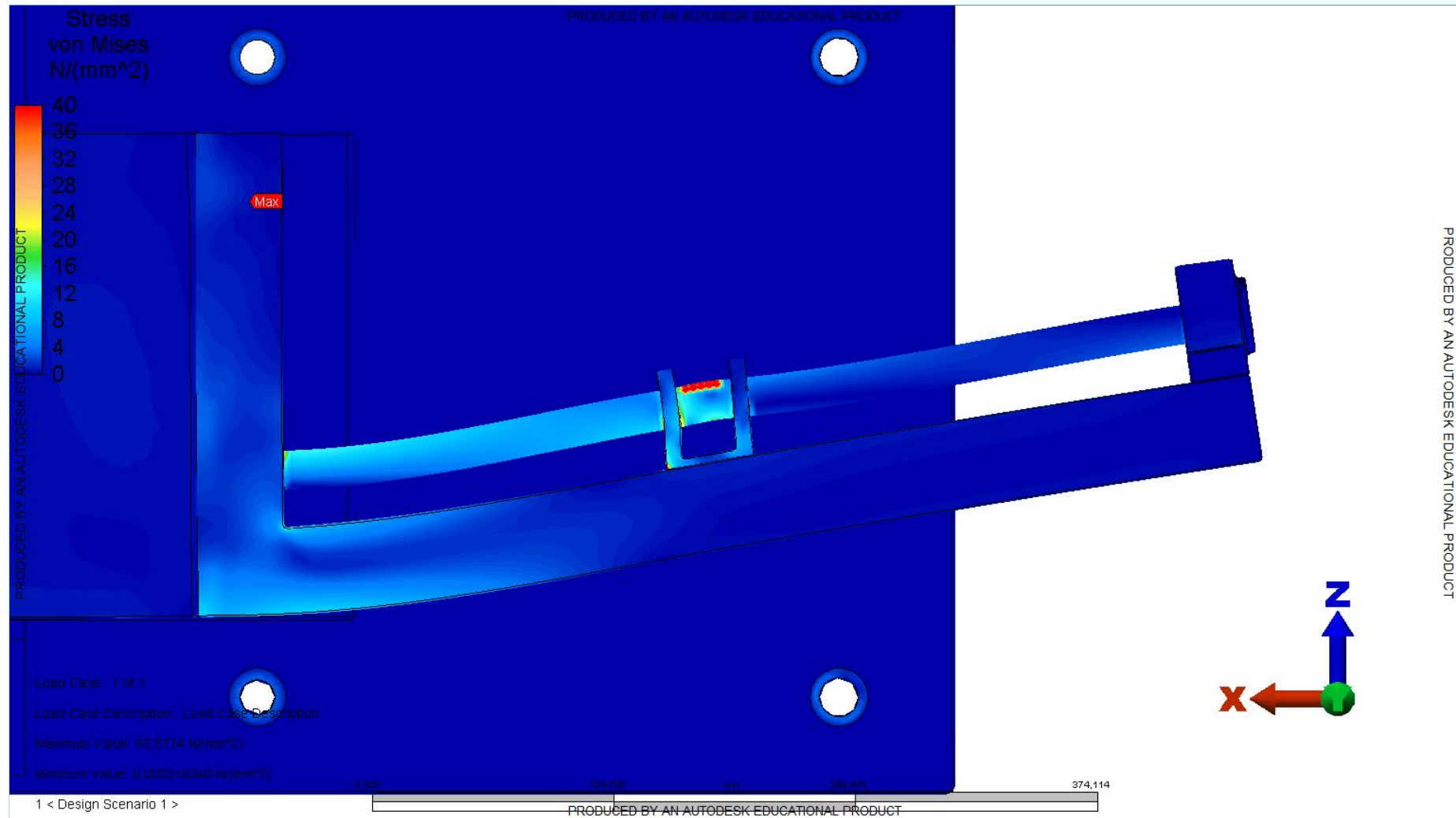
prostredni stojan4



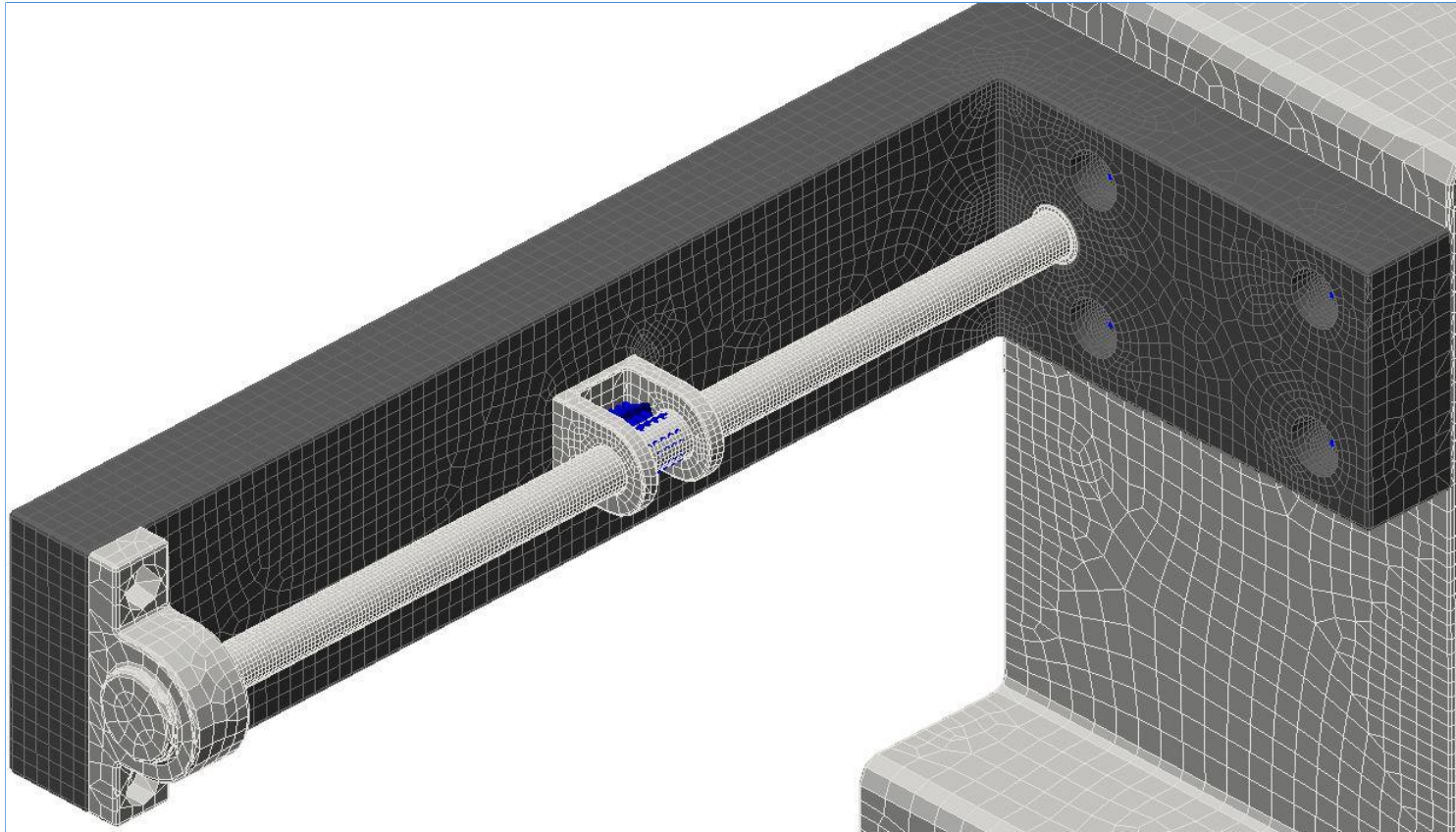
prostredni stojan5



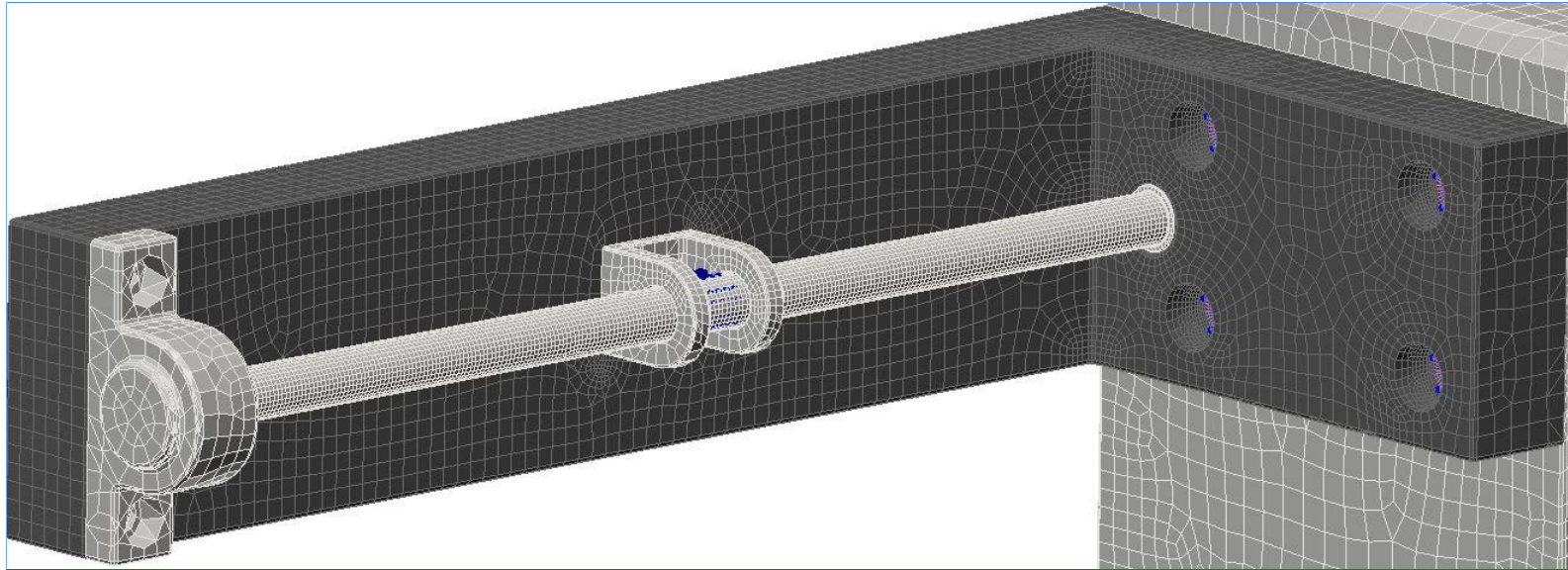
prostredni stojan6



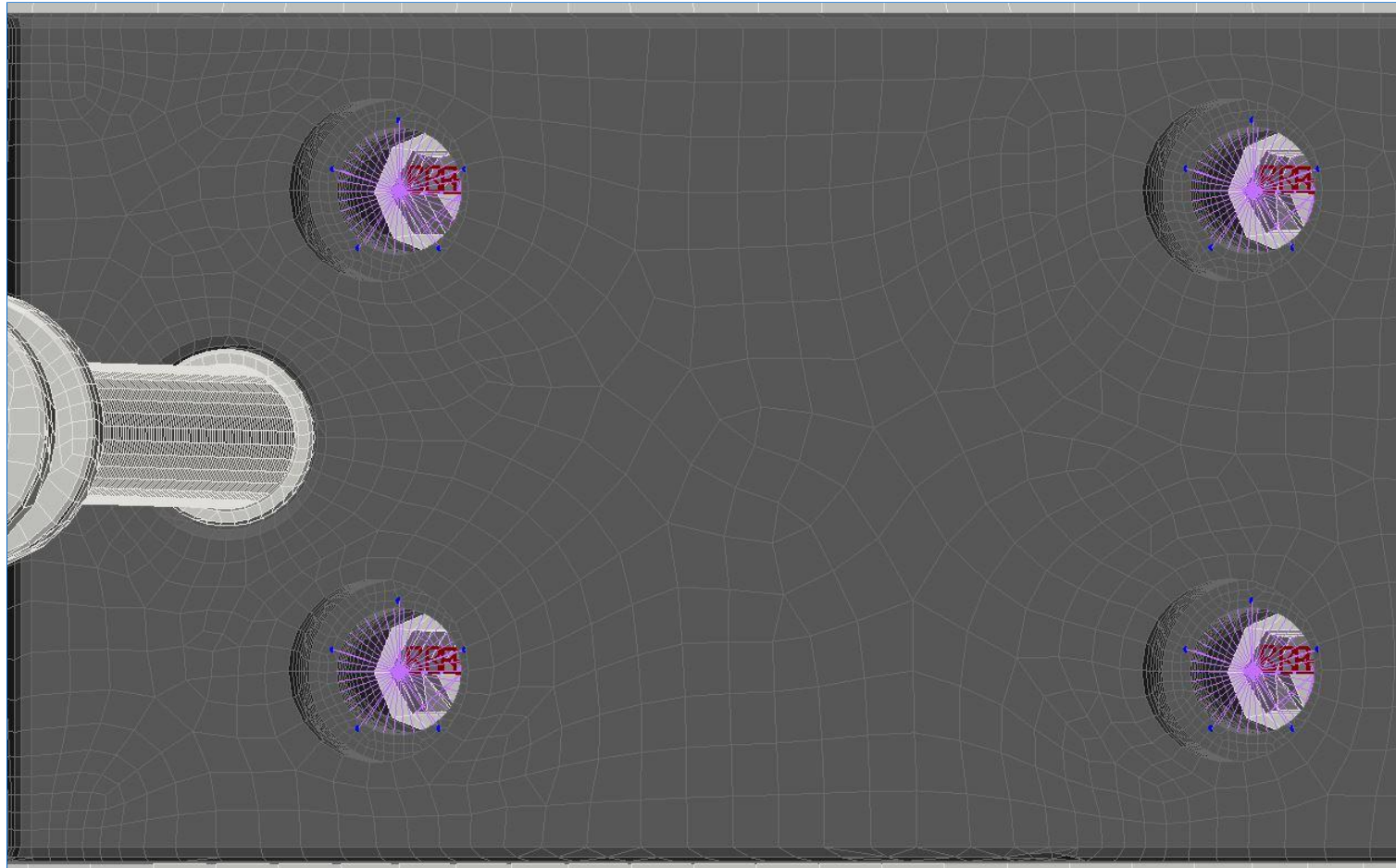
Výstřižek



Výstřížek1



Výstřížek2



Výstřizek3

