

ANALISIS_SOPORTE2_SINPAL

MESH:

Entity	Size
Nodes	5981
Elements	14329

ELEMENT TYPE:

Connectivity	Statistics
TE4	11932 (83,27%)
BAR	603 (4,21%)
SPIDER	1794 (12,52%)

ELEMENT QUALITY:

Criterion	Good	Poor	Bad	Worst	Average
Stretch	10592 (88,77%)	1340 (11,23%)	0 (0,00%)	0,118	0,518
Aspect Ratio	11323 (90,33%)	467 (3,73%)	745 (5,94%)	1000000,000	7821,223

Materials.1

Material	F-0222
Young's modulus	2,05e+011N_m2
Poisson's ratio	0,3
Density	7830kg_m3
Yield strength	2,5e+008N_m2
Coefficient of thermal expansion	1,17e-005_Kdeg

Static Case

Boundary Conditions

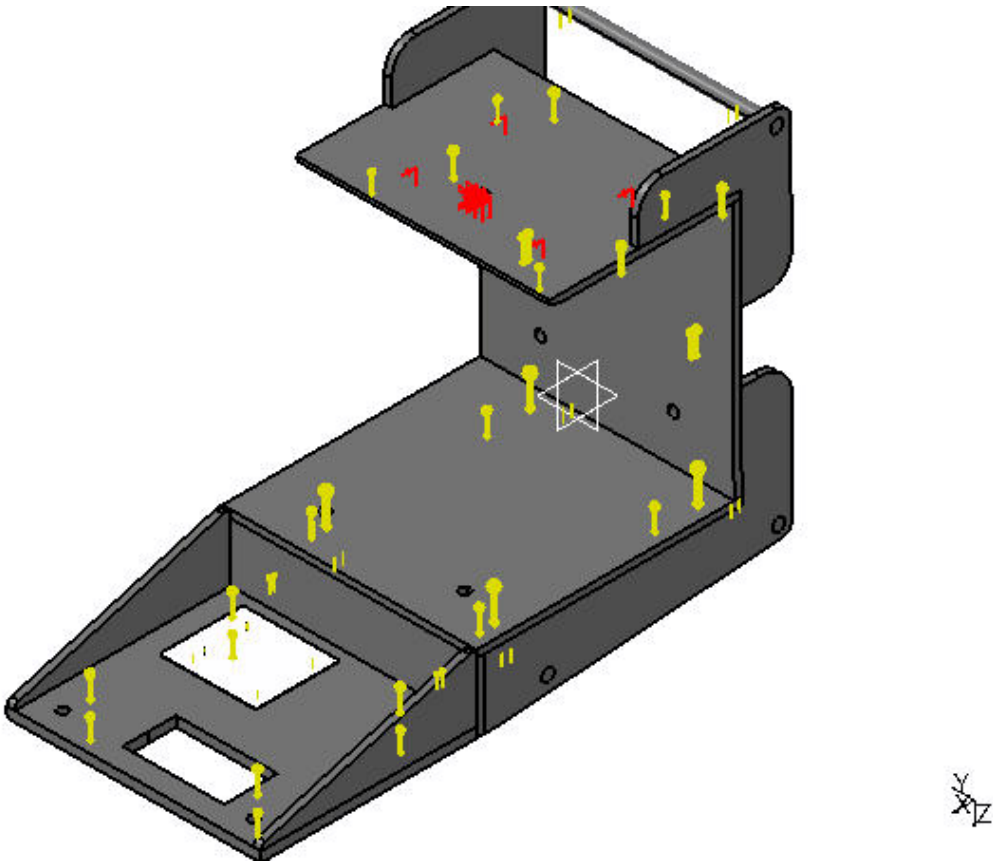


Figure 1

STRUCTURE Computation

Number of nodes	:	5981
Number of elements	:	14329
Number of D.O.F.	:	21561
Number of Contact relations	:	588
Number of coefficients	:	2131
Number of Kinematic relations	:	11364
Number of coefficients	:	43812

Linear tetrahedron	:	11932
Solid to shell fastened join	:	1206
Rigid spider	:	603
Contact join	:	333
Solid to solid fitting join	:	255

RESTRAINT Computation

Name: Restraints.1

Number of S.P.C : 278

LOAD Computation

Name: Loads.1

Applied load resultant :

Fx	=	0	.	000e+000	N
Fy	=	0	.	000e+000	N
Fz	=	1	.	126e+003	N
Mx	=	2	.	448e+001	Nxm
My	=	-2	.	492e+002	Nxm
Mz	=	0	.	000e+000	Nxm

STRUCTURAL MASS Computation

Name: StructuralMassSet.1

Number of lines	:	21561	
Number of coefficients	:	261768	
Number of blocks	:	1	
Maximum number of coefficients per bloc	:	261768	
Total matrix size	:	3	. 08 Mb

Structural mass : 1.041e+001 kg

Inertia center coordinates

Xg	:	9	.	733e+001	mm
Yg	:	-1	.	157e+001	mm
Zg	:	-1	.	305e+001	mm

Inertia tensor at origin: kgxm2

1.611e-001	1.099e-002	-6.160e-002
1.099e-002	3.463e-001	-1.942e-003
-6.160e-002	-1.942e-003	2.889e-001

STIFFNESS Computation

Number of lines : 21561
 Number of coefficients : 261768
 Number of blocks : 1
 Maximum number of coefficients per bloc : 261768
 Total matrix size : 3 . 08 Mb

SINGULARITY Computation

Restraint: Restraints.1

Number of local singularities : 0
 Number of singularities in translation : 0
 Number of singularities in rotation : 0
 Generated constraint type : MPC

CONSTRAINT Computation

Restraint: Restraints.1

Number of constraints : 11642
 Number of coefficients : 0
 Number of factorized constraints : 9889
 Number of coefficients : 1375788
 Number of deferred constraints : 0

FACTORIZED Computation

Method : SPARSE
 Number of factorized degrees : 11672
 Number of supernodes : 2347
 Number of overhead indices : 188128
 Number of coefficients : 1869711
 Maximum front width : 903
 Maximum front size : 408156
 Size of the factorized matrix (Mb) : 14 . 2648
 Number of blocks : 2
 Number of Mflops for factorization : 7 . 330e+002
 Number of Mflops for solve : 7 . 537e+000
 Minimum relative pivot : 3 . 559e-009

Minimum and maximum pivot

Value	Dof	Node	x (mm)	y (mm)	z (mm)
3.0439e+001	Ty	5867	2.1254e+002	-8.3424e+001	8.8652e+001

6.6481e+010	Tx	5732	2.1665e+002	-4.8669e+001	9.2000e+001
4.8322e+004	Ry	5976	2.0865e+002	-1.0595e+002	8.4000e+001
1.0510e+010	Rx	4361	-1.7350e+001	-1.1105e+002	-4.2000e+001

Minimum pivot

Value	Dof	Node	x (mm)	y (mm)	z (mm)
6.5301e+001	Tx	5867	2.1254e+002	-8.3424e+001	8.8652e+001
1.2861e+002	Tz	5866	2.0863e+002	-8.3499e+001	8.7442e+001
3.3197e+004	Tx	3357	-1.7350e+001	-6.0646e+001	-1.8175e+001
3.5151e+004	Tz	3356	-1.7350e+001	-7.4906e+001	-2.9733e+001
7.8202e+004	Tx	478	5.7162e+001	6.1771e+001	-1.7600e+002
9.1241e+004	Ty	477	6.9912e+001	5.0362e+001	-1.7600e+002
9.5844e+004	Ty	419	8.2569e+001	-3.4975e+001	-1.7600e+002
1.1302e+005	Tz	3293	-1.7350e+001	-8.7320e+001	-1.4478e+002
1.5474e+005	Tz	3031	-1.1350e+001	-7.3294e+001	-1.5713e+002

Value	Dof	Node	x (mm)	y (mm)	z (mm)
5.9722e+004	Rx	5926	2.4265e+002	8.2050e+001	8.4000e+001
6.2349e+004	Ry	5942	3.5315e+002	-1.0595e+002	8.4000e+001
7.0561e+004	Rz	5941	3.6165e+002	-1.0595e+002	8.4000e+001
7.3437e+004	Ry	5945	3.4465e+002	-1.0595e+002	8.4000e+001
8.4956e+004	Rz	5978	2.0015e+002	-1.0595e+002	8.4000e+001
1.0192e+005	Rx	5943	3.5315e+002	-1.0595e+002	8.4000e+001
1.2243e+005	Rz	5927	2.4265e+002	8.2050e+001	8.4000e+001
1.3895e+005	Rz	5933	2.1715e+002	8.2050e+001	8.4000e+001
1.6489e+005	Rz	5944	3.4465e+002	-1.0595e+002	8.4000e+001

Translational pivot distribution

Value	Percentage
10.E1 --> 10.E2	1.7413e-002
10.E2 --> 10.E3	8.7063e-003

10.E3 --> 10.E4	0.0000e+000
10.E4 --> 10.E5	4.3531e-002
10.E5 --> 10.E6	7.3133e-001
10.E6 --> 10.E7	5.2238e-001
10.E7 --> 10.E8	5.3108e-001
10.E8 --> 10.E9	1.3643e+001
10.E9 --> 10.E10	8.2683e+001
10.E10 --> 10.E11	1.8196e+000

Rotational pivot distribution

Value	Percentage
10.E4 --> 10.E5	3.2258e+000
10.E5 --> 10.E6	1.1290e+001
10.E6 --> 10.E7	3.7634e+000
10.E7 --> 10.E8	2.6882e+000
10.E8 --> 10.E9	1.0215e+001
10.E9 --> 10.E10	6.8280e+001
10.E10 --> 10.E11	5.3763e-001

DIRECT METHOD Computation

Name: Static Case Solution.1

Restraint: Restraints.1

Structural mass is taken into account

Load: Loads.1

Strain Energy : 6.132e-001 J

Contact analysis

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Contact join

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Contact Element	Contact Force N	Initial Clearance mm	Final Clearance mm
4801	1.1845e-010	0.0000e+000	0.0000e+000
4802	No Contact	0.0000e+000	0.0000e+000
4803	4.2514e+001	0.0000e+000	0.0000e+000
4804	No Contact	0.0000e+000	0.0000e+000
4805	No Contact	0.0000e+000	0.0000e+000
4806	3.2164e+001	0.0000e+000	0.0000e+000
4807	No Contact	0.0000e+000	2.8837e-009
4808	8.8899e+001	0.0000e+000	0.0000e+000
4809	No Contact	0.0000e+000	0.0000e+000
4810	No Contact	0.0000e+000	1.5835e-009
4811	No Contact	0.0000e+000	0.0000e+000
4812	9.9221e+000	0.0000e+000	0.0000e+000
4813	No Contact	0.0000e+000	0.0000e+000
4814	No Contact	0.0000e+000	0.0000e+000
4815	5.5708e+000	0.0000e+000	0.0000e+000
4816	No Contact	0.0000e+000	0.0000e+000
4817	1.0855e+001	0.0000e+000	0.0000e+000
4818	No Contact	0.0000e+000	0.0000e+000
4819	4.8484e+001	0.0000e+000	0.0000e+000
4820	3.6494e+001	0.0000e+000	0.0000e+000
4821	No Contact	0.0000e+000	0.0000e+000
4822	No Contact	0.0000e+000	0.0000e+000
4823	No Contact	0.0000e+000	0.0000e+000
4824	No Contact	0.0000e+000	0.0000e+000
4825	No Contact	0.0000e+000	0.0000e+000
4826	No Contact	0.0000e+000	0.0000e+000
4827	No Contact	0.0000e+000	0.0000e+000

4828	No Contact	0.0000e+000	4.3532e-005
4829	No Contact	0.0000e+000	0.0000e+000
4830	No Contact	0.0000e+000	0.0000e+000
4831	9.0782e+001	0.0000e+000	0.0000e+000
4832	No Contact	0.0000e+000	4.8986e-005
4833	No Contact	0.0000e+000	0.0000e+000
4834	No Contact	0.0000e+000	0.0000e+000
4835	2.7522e+001	0.0000e+000	0.0000e+000
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6065	No Contact	0.0000e+000	0.0000e+000
6066	No Contact	0.0000e+000	0.0000e+000
6067	No Contact	0.0000e+000	0.0000e+000
6068	No Contact	0.0000e+000	0.0000e+000
6069	No Contact	0.0000e+000	0.0000e+000
6070	No Contact	0.0000e+000	0.0000e+000
6071	No Contact	0.0000e+000	0.0000e+000
6072	No Contact	0.0000e+000	0.0000e+000
6073	No Contact	0.0000e+000	0.0000e+000
6074	No Contact	0.0000e+000	0.0000e+000
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6078	No Contact	0.0000e+000	0.0000e+000
6079	No Contact	0.0000e+000	3.2157e-006
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6082	No Contact	0.0000e+000	0.0000e+000
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6090	No Contact	0.0000e+000	0.0000e+000
6091	No Contact	0.0000e+000	0.0000e+000
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6096	No Contact	0.0000e+000	0.0000e+000
6097	No Contact	0.0000e+000	4.9325e-005
6098	No Contact	0.0000e+000	0.0000e+000
6099	No Contact	0.0000e+000	0.0000e+000
6100	No Contact	0.0000e+000	2.4427e-005
6101	No Contact	0.0000e+000	0.0000e+000
6102	2.1146e+001	0.0000e+000	0.0000e+000
10592	No Contact	0.0000e+000	0.0000e+000
10593	No Contact	0.0000e+000	5.6749e-006
10594	No Contact	0.0000e+000	0.0000e+000
10595	No Contact	0.0000e+000	0.0000e+000
10596	1.3152e-015	0.0000e+000	0.0000e+000
10597	No Contact	0.0000e+000	0.0000e+000
10598	No Contact	0.0000e+000	0.0000e+000
10599	No Contact	0.0000e+000	3.6213e-006
10600	No Contact	0.0000e+000	0.0000e+000
10601	1.2834e-015	0.0000e+000	0.0000e+000
10602	No Contact	0.0000e+000	0.0000e+000
10603	2.1577e+000	0.0000e+000	0.0000e+000
10604	No Contact	0.0000e+000	1.3229e-018
10605	7.3132e-001	0.0000e+000	0.0000e+000
10606	No Contact	0.0000e+000	2.2489e-007
10607	No Contact	0.0000e+000	0.0000e+000
10608	No Contact	0.0000e+000	6.2028e-007

10609	No Contact	0.0000e+000	1.4143e-006
10610	No Contact	0.0000e+000	0.0000e+000
10611	No Contact	0.0000e+000	0.0000e+000
10612	No Contact	0.0000e+000	1.4338e-006
10613	No Contact	0.0000e+000	0.0000e+000
10614	No Contact	0.0000e+000	7.9458e-007
10615	No Contact	0.0000e+000	8.8120e-007
10616	No Contact	0.0000e+000	0.0000e+000
10617	4.2106e-017	0.0000e+000	0.0000e+000
10618	No Contact	0.0000e+000	0.0000e+000
10619	No Contact	0.0000e+000	0.0000e+000
10620	2.2487e+001	0.0000e+000	0.0000e+000
10621	No Contact	0.0000e+000	0.0000e+000
10622	1.5380e+001	0.0000e+000	0.0000e+000
10623	No Contact	0.0000e+000	0.0000e+000
10624	No Contact	0.0000e+000	2.4704e-005
10625	No Contact	0.0000e+000	0.0000e+000
10626	3.5816e-012	0.0000e+000	0.0000e+000
10627	2.6780e+001	0.0000e+000	0.0000e+000
10628	1.3142e-012	0.0000e+000	0.0000e+000
10629	No Contact	0.0000e+000	0.0000e+000
10630	No Contact	0.0000e+000	3.1713e-012
10631	No Contact	0.0000e+000	7.7778e-009
10632	3.0764e-012	0.0000e+000	0.0000e+000
10633	4.6657e+001	0.0000e+000	0.0000e+000
10634	4.5693e-015	0.0000e+000	0.0000e+000
10635	No Contact	0.0000e+000	5.6219e-005
10636	No Contact	0.0000e+000	0.0000e+000
10637	5.4576e-015	0.0000e+000	0.0000e+000
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10640	2.3042e+001	0.0000e+000	0.0000e+000

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10652	No Contact	0.0000e+000	0.0000e+000
10653	No Contact	0.0000e+000	6.7513e-005
10654	No Contact	0.0000e+000	0.0000e+000
10655	2.1575e+003	0.0000e+000	0.0000e+000
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10658	No Contact	0.0000e+000	0.0000e+000
10659	No Contact	0.0000e+000	0.0000e+000
10660	No Contact	0.0000e+000	0.0000e+000
10661	No Contact	0.0000e+000	9.4138e-005
10662	No Contact	0.0000e+000	0.0000e+000
10663	No Contact	0.0000e+000	1.3522e-004
10664	No Contact	0.0000e+000	0.0000e+000
10665	No Contact	0.0000e+000	0.0000e+000
10666	No Contact	0.0000e+000	6.1090e-005
10667	No Contact	0.0000e+000	0.0000e+000
10668	No Contact	0.0000e+000	0.0000e+000
10669	No Contact	0.0000e+000	0.0000e+000
10670	No Contact	0.0000e+000	0.0000e+000
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10672	5.6082e-001	0.0000e+000	0.0000e+000

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10675	No Contact	0.0000e+000	0.0000e+000
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10680	No Contact	0.0000e+000	0.0000e+000
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10688	No Contact	0.0000e+000	0.0000e+000
10689	No Contact	0.0000e+000	0.0000e+000
10690	No Contact	0.0000e+000	0.0000e+000
10691	1.8461e+003	0.0000e+000	0.0000e+000
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10693	No Contact	0.0000e+000	0.0000e+000
10694	No Contact	0.0000e+000	0.0000e+000
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10697	No Contact	0.0000e+000	7.0419e-005
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10699	No Contact	0.0000e+000	0.0000e+000
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10701	6.6606e+003	0.0000e+000	0.0000e+000
10702	No Contact	0.0000e+000	0.0000e+000
10703	No Contact	0.0000e+000	0.0000e+000
10704	No Contact	0.0000e+000	0.0000e+000

10705	No Contact	0.0000e+000	0.0000e+000
10706	No Contact	0.0000e+000	1.6893e-005
10707	No Contact	0.0000e+000	9.1538e-005
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10710	No Contact	0.0000e+000	0.0000e+000
10711	No Contact	0.0000e+000	0.0000e+000
10712	No Contact	0.0000e+000	0.0000e+000
10713	No Contact	0.0000e+000	0.0000e+000
10714	No Contact	0.0000e+000	5.6246e-005
10715	No Contact	0.0000e+000	0.0000e+000
10716	No Contact	0.0000e+000	0.0000e+000
10717	No Contact	0.0000e+000	0.0000e+000
10718	No Contact	0.0000e+000	3.0574e-005
10719	No Contact	0.0000e+000	0.0000e+000
10720	No Contact	0.0000e+000	2.4535e-006
10721	No Contact	0.0000e+000	4.4261e-006
10722	No Contact	0.0000e+000	3.6568e-005
10723	No Contact	0.0000e+000	0.0000e+000
10724	No Contact	0.0000e+000	1.6341e-007
10725	No Contact	0.0000e+000	0.0000e+000
10726	No Contact	0.0000e+000	1.2063e-006
10727	4.0695e+002	0.0000e+000	0.0000e+000
10728	No Contact	0.0000e+000	0.0000e+000
10729	No Contact	0.0000e+000	6.6098e-005
10730	No Contact	0.0000e+000	3.4300e-005
10731	No Contact	0.0000e+000	0.0000e+000
10732	2.0801e-011	0.0000e+000	0.0000e+000
10733	No Contact	0.0000e+000	3.4086e-005
10734	No Contact	0.0000e+000	4.7276e-005
10735	No Contact	0.0000e+000	9.2738e-006

10736	No Contact	0.0000e+000	0.0000e+000
10737	5.5361e+000	0.0000e+000	0.0000e+000
10738	No Contact	0.0000e+000	0.0000e+000
10739	No Contact	0.0000e+000	0.0000e+000
10740	No Contact	0.0000e+000	0.0000e+000
10741	No Contact	0.0000e+000	4.6133e-005
10742	9.7850e+002	0.0000e+000	0.0000e+000
10743	No Contact	0.0000e+000	2.7961e-005
10744	No Contact	0.0000e+000	1.1339e-006
10745	No Contact	0.0000e+000	0.0000e+000
10746	No Contact	0.0000e+000	0.0000e+000
10747	No Contact	0.0000e+000	0.0000e+000
10748	No Contact	0.0000e+000	0.0000e+000
10749	No Contact	0.0000e+000	0.0000e+000
10750	No Contact	0.0000e+000	0.0000e+000
10751	No Contact	0.0000e+000	0.0000e+000
10752	No Contact	0.0000e+000	9.1173e-006
14232	No Contact	0.0000e+000	3.4264e-006
14233	1.4833e+001	0.0000e+000	0.0000e+000
14234	No Contact	0.0000e+000	0.0000e+000
14235	No Contact	0.0000e+000	0.0000e+000
14236	No Contact	0.0000e+000	0.0000e+000
14237	No Contact	0.0000e+000	0.0000e+000
14238	No Contact	0.0000e+000	0.0000e+000
14239	No Contact	0.0000e+000	1.4260e-005
14240	No Contact	0.0000e+000	9.1548e-006
14241	7.1320e+002	0.0000e+000	0.0000e+000
14242	No Contact	0.0000e+000	1.0591e-005
14243	No Contact	0.0000e+000	2.0597e-006
14244	No Contact	0.0000e+000	0.0000e+000
14245	No Contact	0.0000e+000	3.5682e-007

14246	No Contact	0.0000e+000	3.8182e-006
14247	5.5325e+004	0.0000e+000	0.0000e+000
14248	4.1261e+001	0.0000e+000	0.0000e+000
14249	No Contact	0.0000e+000	1.6732e-005
14250	No Contact	0.0000e+000	0.0000e+000
14251	3.2693e+001	0.0000e+000	0.0000e+000
14252	3.3948e+003	0.0000e+000	0.0000e+000
14253	No Contact	0.0000e+000	8.7098e-006
14254	No Contact	0.0000e+000	0.0000e+000
14255	No Contact	0.0000e+000	5.7727e-006
14256	2.7907e+002	0.0000e+000	0.0000e+000
14257	2.9584e+002	0.0000e+000	0.0000e+000
14258	1.3180e+001	0.0000e+000	0.0000e+000
14259	No Contact	0.0000e+000	2.3423e-005
14260	No Contact	0.0000e+000	0.0000e+000
14261	3.3903e+000	0.0000e+000	0.0000e+000
14262	No Contact	0.0000e+000	1.7720e-006
14263	No Contact	0.0000e+000	1.6570e-005
14264	No Contact	0.0000e+000	0.0000e+000
14265	No Contact	0.0000e+000	1.0797e-006
14266	No Contact	0.0000e+000	0.0000e+000
14267	No Contact	0.0000e+000	0.0000e+000
14268	No Contact	0.0000e+000	0.0000e+000
14269	No Contact	0.0000e+000	0.0000e+000
14270	3.5349e+003	0.0000e+000	0.0000e+000
14271	No Contact	0.0000e+000	0.0000e+000
14272	No Contact	0.0000e+000	0.0000e+000
14273	No Contact	0.0000e+000	0.0000e+000
14274	3.4003e+000	0.0000e+000	0.0000e+000
14275	3.4881e+001	0.0000e+000	0.0000e+000
14276	No Contact	0.0000e+000	0.0000e+000

14277	No Contact	0.0000e+000	0.0000e+000
14278	No Contact	0.0000e+000	3.8557e-006
14279	No Contact	0.0000e+000	0.0000e+000
14280	No Contact	0.0000e+000	0.0000e+000
14281	No Contact	0.0000e+000	0.0000e+000
14282	No Contact	0.0000e+000	0.0000e+000
14283	No Contact	0.0000e+000	0.0000e+000
14284	No Contact	0.0000e+000	0.0000e+000
14285	No Contact	0.0000e+000	0.0000e+000
14286	No Contact	0.0000e+000	0.0000e+000
14287	No Contact	0.0000e+000	0.0000e+000
14288	No Contact	0.0000e+000	0.0000e+000
14289	No Contact	0.0000e+000	0.0000e+000
14290	5.9555e+002	0.0000e+000	0.0000e+000
14291	No Contact	0.0000e+000	0.0000e+000
14292	No Contact	0.0000e+000	0.0000e+000
14293	No Contact	0.0000e+000	0.0000e+000
14294	No Contact	0.0000e+000	0.0000e+000
14295	No Contact	0.0000e+000	0.0000e+000
14296	4.7822e+002	0.0000e+000	0.0000e+000
14297	No Contact	0.0000e+000	2.7926e-005
14298	No Contact	0.0000e+000	1.1316e-006
14299	No Contact	0.0000e+000	1.2978e-004
14300	3.1679e+001	0.0000e+000	0.0000e+000
14301	No Contact	0.0000e+000	1.6109e-006
14302	No Contact	0.0000e+000	1.4724e-004
14303	No Contact	0.0000e+000	3.9013e-004
14304	No Contact	0.0000e+000	5.1308e-004
14305	No Contact	0.0000e+000	6.3497e-004
14306	No Contact	0.0000e+000	8.2487e-004
14307	No Contact	0.0000e+000	9.2168e-004
14308	No Contact	0.0000e+000	9.8065e-004

14309	No Contact	0.0000e+000	1.0299e-003
14310	No Contact	0.0000e+000	1.1377e-003
14311	No Contact	0.0000e+000	1.0071e-003
14312	No Contact	0.0000e+000	8.8118e-004
14313	No Contact	0.0000e+000	1.0293e-003
14314	No Contact	0.0000e+000	7.2445e-004
14315	No Contact	0.0000e+000	5.3796e-004
14316	No Contact	0.0000e+000	7.2067e-004
14317	No Contact	0.0000e+000	7.4909e-004
14318	No Contact	0.0000e+000	1.0786e-003
14319	No Contact	0.0000e+000	1.1471e-003
14320	No Contact	0.0000e+000	8.9576e-004
14321	No Contact	0.0000e+000	5.5346e-004
14322	No Contact	0.0000e+000	3.0885e-004
14323	No Contact	0.0000e+000	7.0430e-005
14324	No Contact	0.0000e+000	6.8484e-006
14325	No Contact	0.0000e+000	2.5801e-004
14326	No Contact	0.0000e+000	2.8021e-004
14327	3.6981e+000	0.0000e+000	0.0000e+000
14328	No Contact	0.0000e+000	0.0000e+000
14329	No Contact	0.0000e+000	0.0000e+000

Pressure fitting analysis

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Solid to solid fitting join

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Contact Element	Contact Force N	Initial Clearance mm	Final Clearance mm
13977	1.0835e+001	0.0000e+000	0.0000e+000

13978	3.2620e+000	0.0000e+000	0.0000e+000
13979	4.6360e+000	0.0000e+000	0.0000e+000
13980	1.0903e+001	0.0000e+000	0.0000e+000
13981	3.2969e+000	0.0000e+000	0.0000e+000
13982	No Contact	0.0000e+000	1.1105e-007
13983	2.5279e+000	0.0000e+000	0.0000e+000
13984	2.8809e+000	0.0000e+000	0.0000e+000
13985	9.2921e+000	0.0000e+000	0.0000e+000
13986	No Contact	0.0000e+000	2.4051e-006
13987	4.0607e+000	0.0000e+000	0.0000e+000
13988	1.0244e+000	0.0000e+000	0.0000e+000
13989	2.8844e+000	0.0000e+000	0.0000e+000
13990	6.3744e+000	0.0000e+000	0.0000e+000
13991	6.0112e+000	0.0000e+000	0.0000e+000
13992	3.0471e+000	0.0000e+000	0.0000e+000
13993	No Contact	0.0000e+000	2.0370e-006
13994	6.6906e-001	0.0000e+000	0.0000e+000
13995	1.5321e+000	0.0000e+000	0.0000e+000
13996	9.2597e-002	0.0000e+000	0.0000e+000
13997	4.5051e+000	0.0000e+000	0.0000e+000
13998	2.3477e+000	0.0000e+000	0.0000e+000
13999	7.0038e+000	0.0000e+000	0.0000e+000
14000	No Contact	0.0000e+000	2.5453e-005
14001	2.1231e-001	0.0000e+000	0.0000e+000
14002	9.4606e+000	0.0000e+000	0.0000e+000
14003	1.6188e+001	0.0000e+000	0.0000e+000
14004	No Contact	0.0000e+000	2.1131e-005
14005	No Contact	0.0000e+000	9.3113e-006
14006	No Contact	0.0000e+000	1.5017e-006
14007	4.7559e+000	0.0000e+000	0.0000e+000
14008	9.6501e+000	0.0000e+000	0.0000e+000
14009	3.7128e+000	0.0000e+000	0.0000e+000

14010	6.2095e+000	0.0000e+000	0.0000e+000
14011	6.0443e+000	0.0000e+000	0.0000e+000
14012	1.1070e+001	0.0000e+000	0.0000e+000
14013	6.4015e+000	0.0000e+000	0.0000e+000
14014	3.3111e+000	0.0000e+000	0.0000e+000
14015	1.0868e+001	0.0000e+000	0.0000e+000
14016	9.6522e-001	0.0000e+000	0.0000e+000
14017	1.4841e+000	0.0000e+000	0.0000e+000
14018	3.5177e+000	0.0000e+000	0.0000e+000
14019	1.0959e+001	0.0000e+000	0.0000e+000
14020	2.8498e-001	0.0000e+000	0.0000e+000
14021	7.3365e+000	0.0000e+000	0.0000e+000
14022	6.2405e+000	0.0000e+000	0.0000e+000
14023	7.6026e+000	0.0000e+000	0.0000e+000
14024	1.6778e+001	0.0000e+000	0.0000e+000
14025	2.8920e+000	0.0000e+000	0.0000e+000
14026	No Contact	0.0000e+000	5.4142e-007
14027	8.9439e+000	0.0000e+000	0.0000e+000
14028	5.0704e+000	0.0000e+000	0.0000e+000
14029	No Contact	0.0000e+000	2.3096e-006
14030	4.1710e+000	0.0000e+000	0.0000e+000
14031	5.0021e+000	0.0000e+000	0.0000e+000
14032	No Contact	0.0000e+000	7.7544e-007
14033	1.3059e+001	0.0000e+000	0.0000e+000
14034	3.5341e+000	0.0000e+000	0.0000e+000
14035	No Contact	0.0000e+000	2.1991e-007
14036	No Contact	0.0000e+000	6.8436e-006
14037	No Contact	0.0000e+000	4.6782e-005
14038	No Contact	0.0000e+000	1.5008e-005
14039	7.9266e+000	0.0000e+000	0.0000e+000
14040	6.7269e+000	0.0000e+000	0.0000e+000
14041	1.8430e+000	0.0000e+000	0.0000e+000

14042	1.2391e+001	0.0000e+000	0.0000e+000
14043	3.9374e+000	0.0000e+000	0.0000e+000
14044	2.2810e-001	0.0000e+000	0.0000e+000
14045	No Contact	0.0000e+000	8.6565e-008
14046	5.3842e+000	0.0000e+000	0.0000e+000
14047	5.8073e-001	0.0000e+000	0.0000e+000
14048	6.2885e+000	0.0000e+000	0.0000e+000
14049	2.1502e+000	0.0000e+000	0.0000e+000
14050	No Contact	0.0000e+000	3.7802e-006
14051	4.0282e-001	0.0000e+000	0.0000e+000
14052	No Contact	0.0000e+000	1.3544e-005
14053	6.0918e-001	0.0000e+000	0.0000e+000
14054	4.3831e-001	0.0000e+000	0.0000e+000
14055	2.3911e+000	0.0000e+000	0.0000e+000
14056	No Contact	0.0000e+000	7.6363e-006
14057	5.0463e+000	0.0000e+000	0.0000e+000
14058	4.8228e+000	0.0000e+000	0.0000e+000
14059	4.1853e+000	0.0000e+000	0.0000e+000
14060	1.3755e+000	0.0000e+000	0.0000e+000
14061	No Contact	0.0000e+000	3.9232e-006
14062	No Contact	0.0000e+000	3.3309e-006
14063	7.8409e+000	0.0000e+000	0.0000e+000
14064	6.8856e+000	0.0000e+000	0.0000e+000
14065	7.0985e+000	0.0000e+000	0.0000e+000
14066	1.3022e+000	0.0000e+000	0.0000e+000
14067	3.9220e+000	0.0000e+000	0.0000e+000
14068	4.8416e+000	0.0000e+000	0.0000e+000
14069	1.3671e+001	0.0000e+000	0.0000e+000
14070	4.0037e+000	0.0000e+000	0.0000e+000
14071	No Contact	0.0000e+000	7.0951e-006
14072	1.3110e+001	0.0000e+000	0.0000e+000

14073	No Contact	0.0000e+000	2.5917e-005
14074	5.3994e+000	0.0000e+000	0.0000e+000
14075	No Contact	0.0000e+000	2.8009e-005
14076	No Contact	0.0000e+000	1.6151e-005
14077	No Contact	0.0000e+000	4.2490e-006
14078	1.2365e+001	0.0000e+000	0.0000e+000
14079	8.5086e+000	0.0000e+000	0.0000e+000
14080	No Contact	0.0000e+000	1.6778e-006
14081	5.5579e+000	0.0000e+000	0.0000e+000
14082	4.9478e+000	0.0000e+000	0.0000e+000
14083	7.6542e+000	0.0000e+000	0.0000e+000
14084	5.5397e+000	0.0000e+000	0.0000e+000
14085	3.6366e-001	0.0000e+000	0.0000e+000
14086	4.7368e+000	0.0000e+000	0.0000e+000
14087	6.5645e+000	0.0000e+000	0.0000e+000
14088	5.6761e+000	0.0000e+000	0.0000e+000
14089	2.6042e+000	0.0000e+000	0.0000e+000
14090	5.4648e+000	0.0000e+000	0.0000e+000
14091	No Contact	0.0000e+000	2.2314e-005
14092	No Contact	0.0000e+000	1.7794e-005
14093	8.9284e+000	0.0000e+000	0.0000e+000
14094	1.2236e+001	0.0000e+000	0.0000e+000
14095	No Contact	0.0000e+000	1.0044e-005
14096	4.6336e+000	0.0000e+000	0.0000e+000
14097	1.1092e+001	0.0000e+000	0.0000e+000
14098	6.1414e+000	0.0000e+000	0.0000e+000
14099	No Contact	0.0000e+000	1.4928e-006
14100	3.2841e-001	0.0000e+000	0.0000e+000
14101	6.7106e+000	0.0000e+000	0.0000e+000
14102	8.3449e+000	0.0000e+000	0.0000e+000
14103	5.2153e+000	0.0000e+000	0.0000e+000
14104	4.0476e+000	0.0000e+000	0.0000e+000

14105	2.0666e+000	0.0000e+000	0.0000e+000
14106	5.3266e+000	0.0000e+000	0.0000e+000
14107	6.4512e+000	0.0000e+000	0.0000e+000
14108	1.1754e+000	0.0000e+000	0.0000e+000
14109	9.1810e+000	0.0000e+000	0.0000e+000
14110	No Contact	0.0000e+000	3.6089e-006
14111	9.6513e-001	0.0000e+000	0.0000e+000
14112	6.4818e+000	0.0000e+000	0.0000e+000
14113	1.0350e+000	0.0000e+000	0.0000e+000
14114	No Contact	0.0000e+000	2.4690e-005
14115	7.5533e+000	0.0000e+000	0.0000e+000
14116	No Contact	0.0000e+000	4.4584e-006
14117	No Contact	0.0000e+000	2.5959e-005
14118	4.6512e+000	0.0000e+000	0.0000e+000
14119	6.3832e+000	0.0000e+000	0.0000e+000
14120	5.6956e+000	0.0000e+000	0.0000e+000
14121	No Contact	0.0000e+000	6.5262e-006
14122	4.0915e+000	0.0000e+000	0.0000e+000
14123	3.7068e+000	0.0000e+000	0.0000e+000
14124	4.1572e+000	0.0000e+000	0.0000e+000
14125	5.7127e+000	0.0000e+000	0.0000e+000
14126	5.7042e+000	0.0000e+000	0.0000e+000
14127	7.2493e+000	0.0000e+000	0.0000e+000
14128	4.0231e+000	0.0000e+000	0.0000e+000
14129	2.9138e+000	0.0000e+000	0.0000e+000
14130	1.2113e+001	0.0000e+000	0.0000e+000
14131	6.3450e+000	0.0000e+000	0.0000e+000
14132	No Contact	0.0000e+000	3.6006e-005
14133	3.9175e+000	0.0000e+000	0.0000e+000
14134	2.8154e+000	0.0000e+000	0.0000e+000
14135	No Contact	0.0000e+000	8.0505e-007

14136	No Contact	0.0000e+000	5.7059e-006
14137	1.2600e+001	0.0000e+000	0.0000e+000
14138	No Contact	0.0000e+000	1.0079e-005
14139	7.0530e+000	0.0000e+000	0.0000e+000
14140	8.5486e+000	0.0000e+000	0.0000e+000
14141	No Contact	0.0000e+000	5.6877e-006
14142	7.7124e+000	0.0000e+000	0.0000e+000
14143	1.2341e+001	0.0000e+000	0.0000e+000
14144	1.2431e+000	0.0000e+000	0.0000e+000
14145	No Contact	0.0000e+000	6.7329e-006
14146	9.1505e+000	0.0000e+000	0.0000e+000
14147	8.4278e+000	0.0000e+000	0.0000e+000
14148	1.8547e+000	0.0000e+000	0.0000e+000
14149	1.5700e+001	0.0000e+000	0.0000e+000
14150	No Contact	0.0000e+000	4.2808e-006
14151	No Contact	0.0000e+000	4.1320e-005
14152	No Contact	0.0000e+000	1.8270e-005
14153	No Contact	0.0000e+000	7.5073e-006
14154	9.4100e+000	0.0000e+000	0.0000e+000
14155	9.2939e+000	0.0000e+000	0.0000e+000
14156	1.4969e+001	0.0000e+000	0.0000e+000
14157	6.3613e-001	0.0000e+000	0.0000e+000
14158	No Contact	0.0000e+000	6.8232e-006
14159	1.3990e+000	0.0000e+000	0.0000e+000
14160	1.4517e+000	0.0000e+000	0.0000e+000
14161	No Contact	0.0000e+000	1.4295e-005
14162	5.0402e+000	0.0000e+000	0.0000e+000
14163	1.2911e+000	0.0000e+000	0.0000e+000
14164	9.8766e+000	0.0000e+000	0.0000e+000
14165	4.6486e+000	0.0000e+000	0.0000e+000
14166	3.0592e+000	0.0000e+000	0.0000e+000
14167	2.7098e+000	0.0000e+000	0.0000e+000

14168	4.1333e+000	0.0000e+000	0.0000e+000
14169	No Contact	0.0000e+000	8.5314e-006
14170	9.3293e+000	0.0000e+000	0.0000e+000
14171	No Contact	0.0000e+000	3.9479e-006
14172	1.4898e+000	0.0000e+000	0.0000e+000
14173	1.1406e+001	0.0000e+000	0.0000e+000
14174	4.0123e+000	0.0000e+000	0.0000e+000
14175	2.7261e+000	0.0000e+000	0.0000e+000
14176	1.3486e+000	0.0000e+000	0.0000e+000
14177	1.2726e+000	0.0000e+000	0.0000e+000
14178	4.3288e+000	0.0000e+000	0.0000e+000
14179	9.1018e+000	0.0000e+000	0.0000e+000
14180	3.6603e+000	0.0000e+000	0.0000e+000
14181	5.1009e-001	0.0000e+000	0.0000e+000
14182	2.3421e+000	0.0000e+000	0.0000e+000
14183	2.7156e+000	0.0000e+000	0.0000e+000
14184	1.0642e+000	0.0000e+000	0.0000e+000
14185	3.7867e-001	0.0000e+000	0.0000e+000
14186	9.7637e-001	0.0000e+000	0.0000e+000
14187	2.4469e+000	0.0000e+000	0.0000e+000
14188	No Contact	0.0000e+000	1.3819e-005
14189	No Contact	0.0000e+000	1.1189e-005
14190	8.2167e+000	0.0000e+000	0.0000e+000
14191	4.3655e+000	0.0000e+000	0.0000e+000
14192	6.7848e+000	0.0000e+000	0.0000e+000
14193	2.7539e+000	0.0000e+000	0.0000e+000
14194	4.9152e+000	0.0000e+000	0.0000e+000
14195	1.1144e+000	0.0000e+000	0.0000e+000
14196	5.8611e+000	0.0000e+000	0.0000e+000
14197	4.9826e+000	0.0000e+000	0.0000e+000
14198	5.9889e+000	0.0000e+000	0.0000e+000
14199	1.2276e+001	0.0000e+000	0.0000e+000

14200	6.2124e+000	0.0000e+000	0.0000e+000
14201	2.1530e+000	0.0000e+000	0.0000e+000
14202	7.6056e+000	0.0000e+000	0.0000e+000
14203	4.9284e+000	0.0000e+000	0.0000e+000
14204	1.2302e+000	0.0000e+000	0.0000e+000
14205	6.8863e+000	0.0000e+000	0.0000e+000
14206	6.3481e+000	0.0000e+000	0.0000e+000
14207	1.4368e+000	0.0000e+000	0.0000e+000
14208	No Contact	0.0000e+000	7.8300e-006
14209	3.8722e+000	0.0000e+000	0.0000e+000
14210	1.1371e+001	0.0000e+000	0.0000e+000
14211	No Contact	0.0000e+000	4.0771e-006
14212	No Contact	0.0000e+000	2.5366e-006
14213	3.6042e+000	0.0000e+000	0.0000e+000
14214	No Contact	0.0000e+000	1.1277e-005
14215	No Contact	0.0000e+000	1.7345e-005
14216	No Contact	0.0000e+000	1.5131e-006
14217	1.1095e+000	0.0000e+000	0.0000e+000
14218	6.5728e+000	0.0000e+000	0.0000e+000
14219	4.7096e+000	0.0000e+000	0.0000e+000
14220	No Contact	0.0000e+000	1.5689e-005
14221	5.2865e+000	0.0000e+000	0.0000e+000
14222	1.4355e+000	0.0000e+000	0.0000e+000
14223	No Contact	0.0000e+000	5.5138e-005
14224	2.6113e-002	0.0000e+000	0.0000e+000
14225	1.2663e+000	0.0000e+000	0.0000e+000
14226	3.2886e+000	0.0000e+000	0.0000e+000
14227	7.6172e-001	0.0000e+000	0.0000e+000
14228	3.1830e+000	0.0000e+000	0.0000e+000
14229	3.8648e+000	0.0000e+000	0.0000e+000
14230	No Contact	0.0000e+000	5.0598e-005
14231	3.2935e+000	0.0000e+000	0.0000e+000

Equilibrium

Components	Applied Forces	Reactions	Residual	Relative Magnitude Error
Fx (N)	0.0000e+000	-1.6680e-004	-1.6680e-004	2.6434e-008
Fy (N)	0.0000e+000	1.3825e-003	1.3825e-003	2.1910e-007
Fz (N)	1.1261e+003	-1.1261e+003	-1.6463e-004	2.6090e-008
Mx (Nxm)	2.4479e+001	-2.4479e+001	1.1674e-004	5.1157e-008
My (Nxm)	-2.4923e+002	2.4923e+002	1.9988e-004	8.7589e-008
Mz (Nxm)	0.0000e+000	-3.0809e-005	-3.0809e-005	1.3501e-008

Static Case Solution.1 - Deformed mesh.2

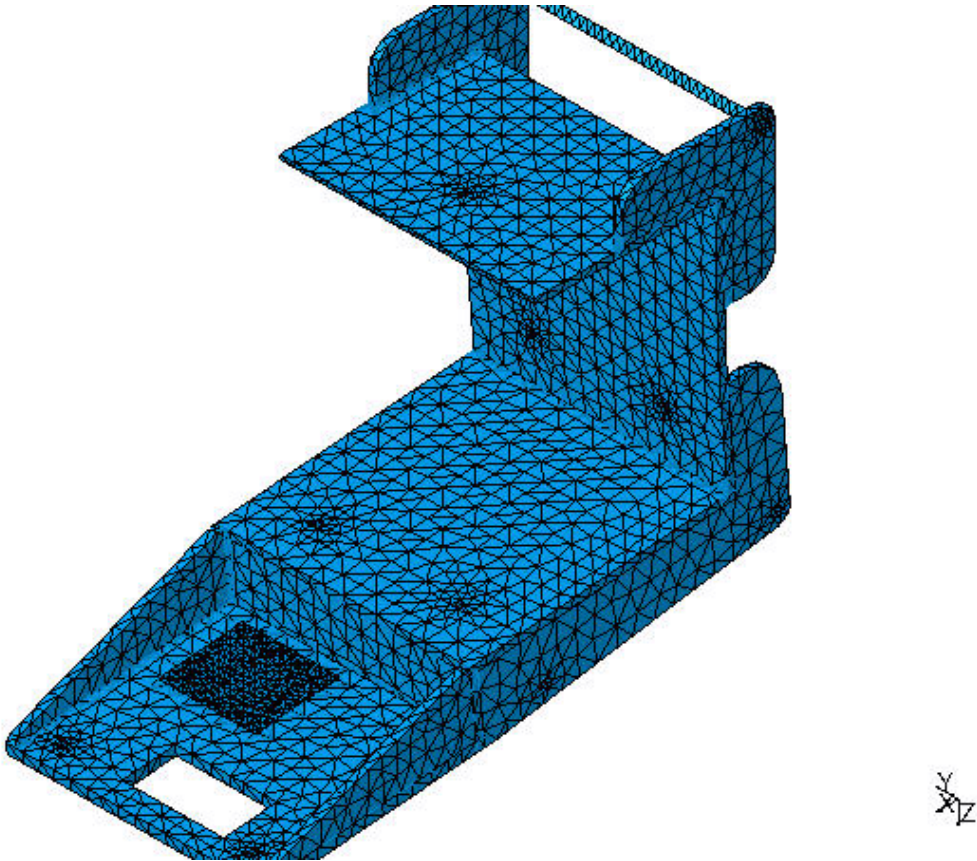


Figure 2

On deformed mesh ---- On boundary ---- Over all the model

Static Case Solution.1 - Von Mises stress (nodal values).2

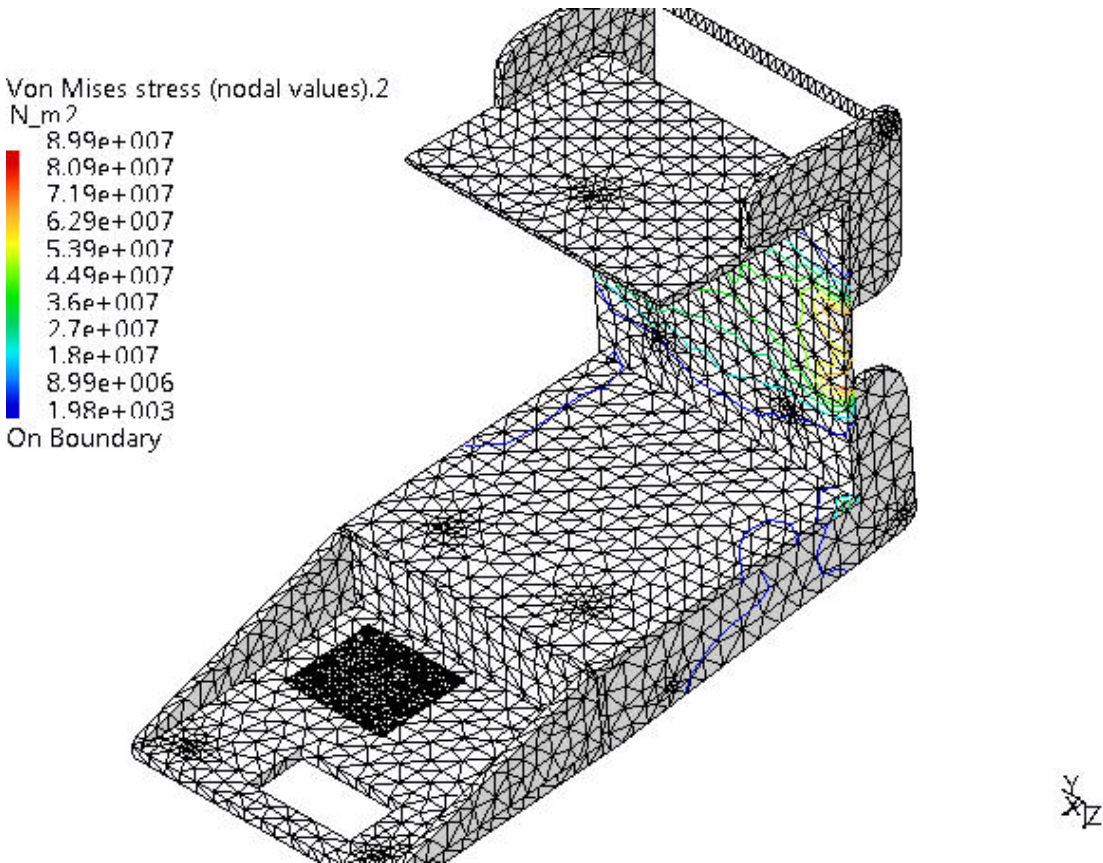


Figure 3

1D elements: : Components: : All

3D elements: : Components: : All

On deformed mesh ---- On boundary ---- Over all the model

Global Sensors

Sensor Name	Sensor Value
Energy	0,613J