



Simulation of 111402

Date: 21 Mayıs 2012 Pazartesi

Designer: Solidworks

Study name: Study 1

Analysis type: Static

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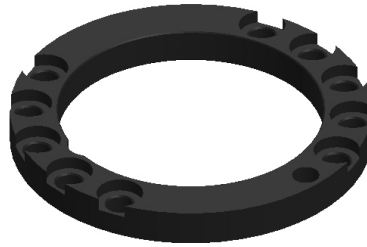
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Description

No Data


Assumptions

Model Information



Model name: 111402
Current Configuration: Default

Solid Bodies

Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
Cut-Extrude2 	Solid Body	Mass:2.13284 kg Volume:0.000294185 m ³ Density:7250 kg/m ³ Weight:20.9018 N	C:\Users\barisyilmaz\Desktop\CAD-CAE\torqueplate\111402.SLDPRT Feb 01 15:50:15 2012

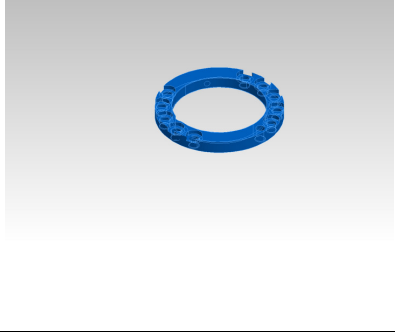
Study Properties

Study name	Study 1
Analysis type	Static
Mesh type	Solid Mesh
Thermal Effect:	On
Thermal option	Include temperature loads
Zero strain temperature	298 Kelvin
Include fluid pressure effects from SolidWorks Flow Simulation	Off
Solver type	FFEPlus
Inplane Effect:	Off
Soft Spring:	Off
Inertial Relief:	Off
Incompatible bonding options	Automatic
Large displacement	Off
Compute free body forces	On
Friction	Off
Use Adaptive Method:	Off
Result folder	SolidWorks document (C:\Users\barisyilmaz\Desktop\CAD-CAE\torqueplate)


Units

Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m ²

Material Properties

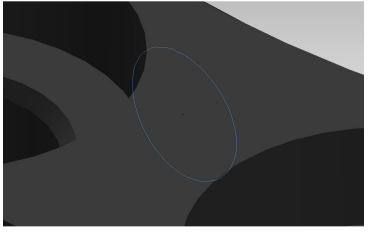
Model Reference	Properties	Components
	<p> Name: 0.8040 (EN-GJMW-400-5) Model type: Linear Elastic Isotropic Default failure criterion: Max von Mises Stress Yield strength: 2.25e+008 N/m² Tensile strength: 3.5e+008 N/m² Elastic modulus: 1.2e+011 N/m² Poisson's ratio: 0.26 Mass density: 7250 kg/m³ Shear modulus: 6.5e+009 N/m² Thermal expansion coefficient: 1.15e-005 /Kelvin </p>	SolidBody 1(Cut-Extrude2)(111402)
Curve Data:N/A		

Loads and Fixtures

Fixture name	Fixture Image	Fixture Details
Roller/Slider-1		Entities: 1 face(s) Type: Roller/Slider

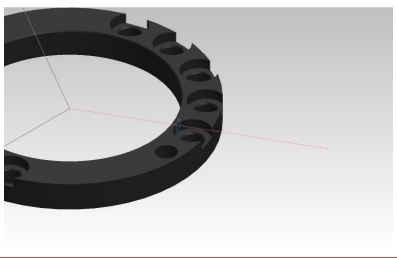
Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	0.66309	2335.9	-0.265532	2335.9
Reaction Moment(N-m)	0	0	0	0

Fixed-1		Entities: 1 face(s) Type: Fixed Geometry
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Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	-0.0149536	-2335.84	9486.75	9770.08
Reaction Moment(N-m)	0	0	0	0

Load name	Load Image	Load Details
Force-1		Entities: 1 face(s) Type: Apply force Values: ---, ---, -9486.67 N



Force-3		<p>Entities: 1 face(s) Type: Apply force Values: ---, ---, -9486.67 N</p>
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Connector Definitions

No Data

Contact Information

No Data

Mesh Information

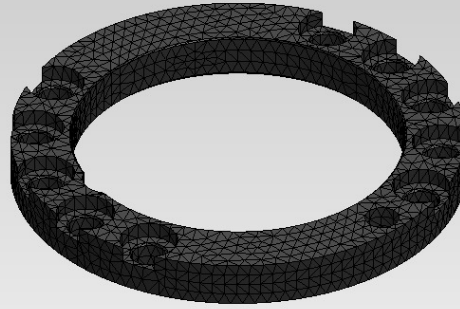
Mesh type	Solid Mesh
Mesher Used:	Standard mesh
Automatic Transition:	Off
Include Mesh Auto Loops:	Off
Jacobian points	4 Points
Element Size	6 mm
Tolerance	0.3 mm
Mesh Quality	High

Mesh Information - Details

Total Nodes	22197
Total Elements	12852
Maximum Aspect Ratio	11.546
% of elements with Aspect Ratio < 3	90.5
% of elements with Aspect Ratio > 10	0.0467
% of distorted elements(Jacobian)	0
Time to complete mesh(hh:mm:ss):	00:00:07
Computer name:	BARISY



Model name: 111402
Study name: Study 1
Mesh type: Solid mesh



Sensor Details

No Data

Resultant Forces

Reaction Forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	0.648138	0.0502014	9486.47	9486.47

Reaction Moments

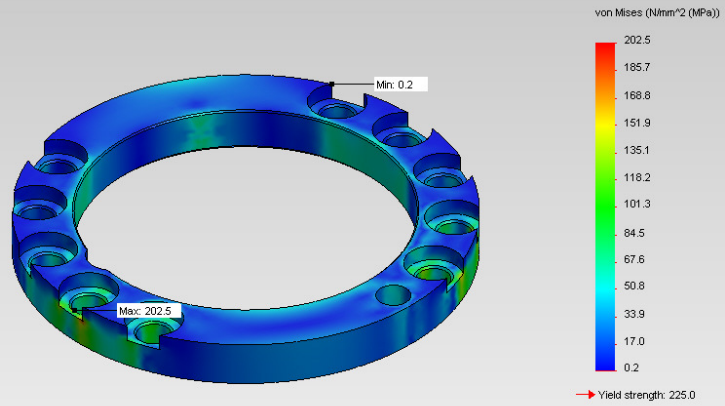
Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N-m	0	0	0	0

Beams
No Data

Study Results

Name	Type	Min	Max
Stress1	VON: von Mises Stress	0.177231 N/mm ² (MPa) Node: 56	202.522 N/mm ² (MPa) Node: 1996

Model name: 111402
Study name: Study 1
Plot type: Static nodal stress Stress1
Deformation scale: 1

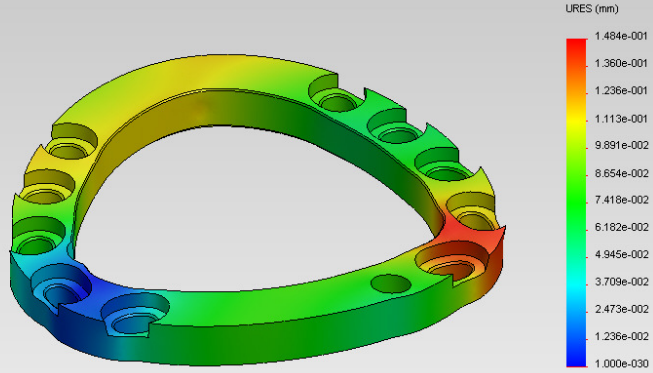


111402-Study 1-Stress-Stress1

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0 mm Node: 1820	0.148362 mm Node: 11265



Model name: 111402
Study name: Study 1
Plot type: Static displacement Displacement1
Deformation scale: 187.694

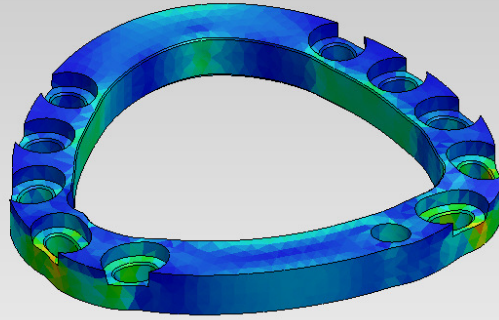


111402-Study 1-Displacement-Displacement1

Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	3.43065e-007 Element: 12481	0.0010877 Element: 7262



Model name: 111402
Study name: Study 1
Plot type: Static strain Strain
Deformation scale: 187.694



111402-Study 1-Strain-Strain1

Name	Type		
<SR_Name/>	<SR_Type/>	<SR_Min/>	<SR_Max/>
<Image_StudyResult/> <ImageCaption_StudyResult/>			

Conclusion