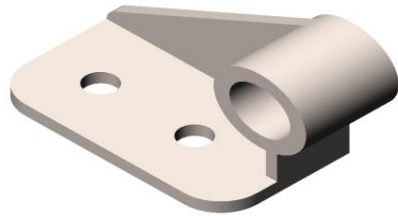


Critique of Default SW reports



Description

No Data

Do NOT report to your boss items that you cannot explain and justify. She may be a business major.

Simulation of tutor1

Date: Monday, November 25, 2019
Designer: Solidworks (trademark error)
Study name: Ready
Analysis type: Static

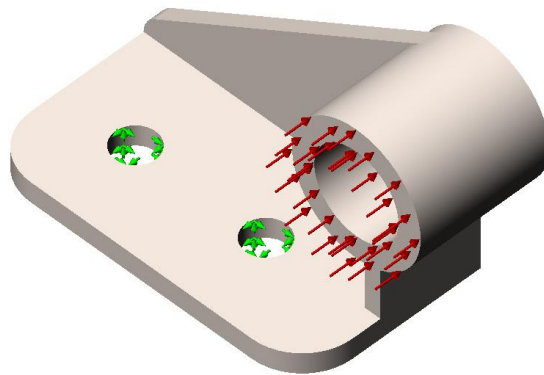
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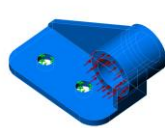
Assumptions **Important to identify and then to verify.**

Model Information



Model name: tutor1
Current Configuration: Default

Solid Bodies

Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
Split Line2 Too small 	Solid Body	Mass:2.44727 kg Volume:0.000317827 m ³ Density:7700 kg/m ³ Weight:23.9832 N Too many digits	c:\program files\solidworks corp\solidworks\simulation\Examples\tutor1.sldprt Dec 13 16:21:46 2014

Study Properties

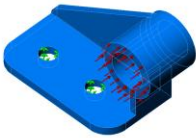
Study name	Ready
Analysis type	Static
Mesh type	Solid Mesh
Thermal Effect:	On
Thermal option	Include temperature loads
Zero strain temperature	298 Kelvin ?? in Fahrenheit ?
Include fluid pressure effects from SOLIDWORKS Flow Simulation	Off
Solver type	Automatic
Inplane Effect:	Off What is this? Why is it off?
Soft Spring:	Off
Inertial Relief:	Off What is this? Why is it off?
Incompatible bonding options	More accurate (slower)
Large displacement	Off
Compute free body forces	Off
Friction	Off
Use Adaptive Method:	Off What is this? Why is it off?
Result folder	SOLIDWORKS document (c:\users\edakin~1\appdata\local\temp)

Units

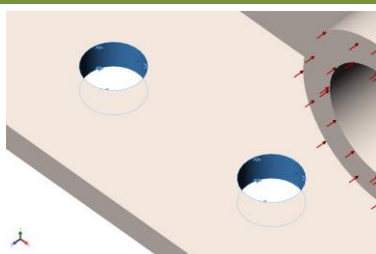
Unit system:	SI (MKS)
Length/Displacement	mm
Temperature	Kelvin
Angular velocity	Rad/sec
Pressure/Stress	N/m ²

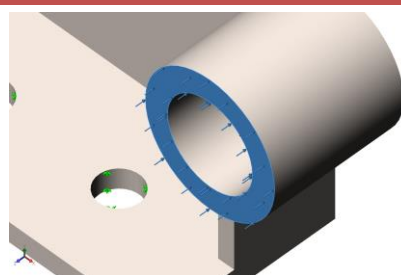


Material Properties

Model Reference	Properties	Components
	<p> Name: Alloy Steel Model type: Linear Elastic Isotropic Default failure criterion: Max von Mises Stress Yield strength: 6.20422e+008 N/m² Tensile strength: 7.23826e+008 N/m² Elastic modulus: 2.1e+011 N/m² Poisson's ratio: 0.28 Mass density: 7700 kg/m³ Shear modulus: 7.9e+010 N/m² Thermal expansion coefficient: 1.3e-005 /Kelvin </p>	<p>Body 1(Split Line2)(Tutor1)</p> <p>What is a failure criterion? When does failure occur?</p>
Curve Data:N/A		

Loads and Fixtures

Fixture name	Fixture Image	Fixture Details															
<p>Restraint-1 Do not see it.</p>		<p> Entities: 2 face(s) Type: Immovable (No translation) </p>															
<p>Resultant Forces</p> <table border="1"> <thead> <tr> <th>Components</th> <th>X</th> <th>Y</th> <th>Z</th> <th>Resultant</th> </tr> </thead> <tbody> <tr> <td>Reaction force(N)</td> <td>-2.39246</td> <td>1.97481</td> <td>12630</td> <td>12630</td> </tr> <tr> <td>Reaction Moment(N.m)</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>			Components	X	Y	Z	Resultant	Reaction force(N)	-2.39246	1.97481	12630	12630	Reaction Moment(N.m)	0	0	0	0
Components	X	Y	Z	Resultant													
Reaction force(N)	-2.39246	1.97481	12630	12630													
Reaction Moment(N.m)	0	0	0	0													

Load name	Load Image	Load Details
<p>Pressure-1</p>		<p> Entities: 1 face(s) Type: Normal to selected face Value: 1000 Units: psi </p>



Connector Definitions

No Data

What are these?

Contact Information

No Data



Mesh information

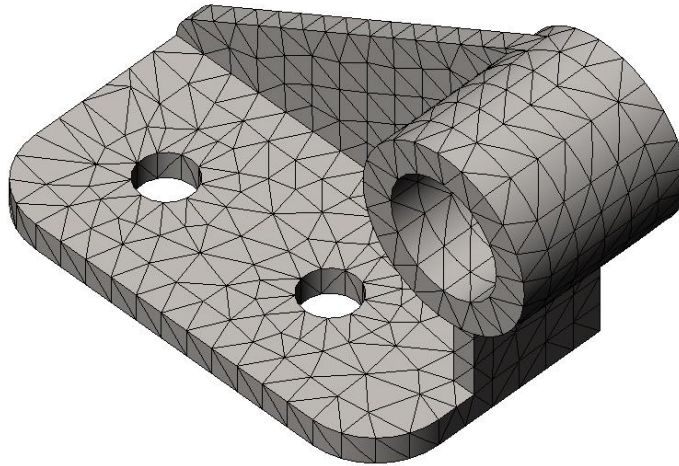
Mesh type	Solid Mesh
Mesher Used:	Standard mesh
Automatic Transition:	Off What is this? Why is it off?
Include Mesh Auto Loops:	Off What is this? Why is it off?
Jacobian points	4 Points What is a Jacobian ?
Element Size	10.9219 mm
Tolerance	0.546097 mm
Mesh Quality	High

Mesh information - Details

Total Nodes	4564
Total Elements	2349 Is this a high or low value?
Maximum Aspect Ratio	8.2482 What is an aspect ratio?
% of elements with Aspect Ratio < 3	98
% of elements with Aspect Ratio > 10	0
% of distorted elements(Jacobian)	0
Time to complete mesh(hh:mm:ss):	00:00:02
Computer name:	EDAKIN-PC



Model name:tutor1
Study name:Ready(-Default-)
Mesh type: Solid Mesh



Sensor Details **What is a sensor?**

No Data

Resultant Forces

Reaction forces **(An important item to check.)**

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	-2.39246	1.97481	12630	12630

Reaction Moments

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



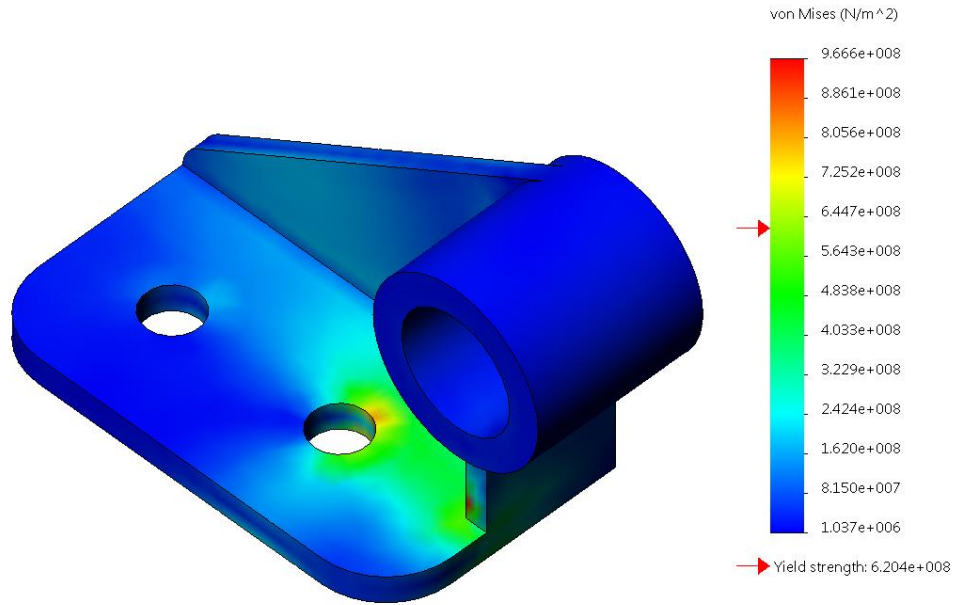
Beams
No Data



Study Results (Show me nodes 2937 and 3194. Also node 1 and 87.)

Name	Type	Min	Max
Stress1	VON: von Mises Stress	1.03699e+006 N/m ² Node: 2937	9.66558e+008 N/m ² Node: 3194

Model name:tutor1
Study name:Ready(-Default-)
Plot type: Static nodal stress Stress1

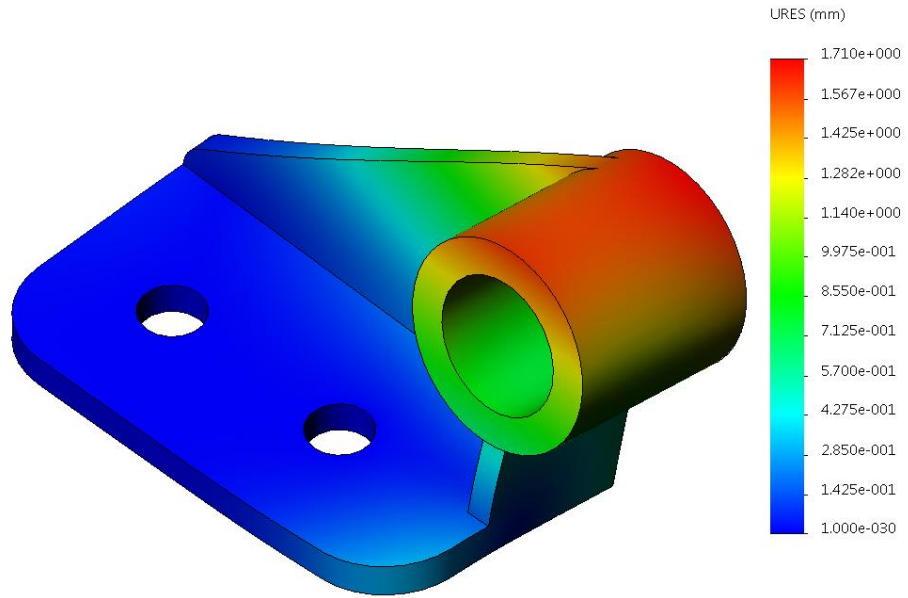


tutor1-Ready-Stress-Stress1

A dark small image.

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0 mm Node: 1	1.70993 mm Node: 87

Model name:tutor1
 Study name:Ready(-Default-)
 Plot type: Static displacement Displacement1
 Deformation scale:12.2748

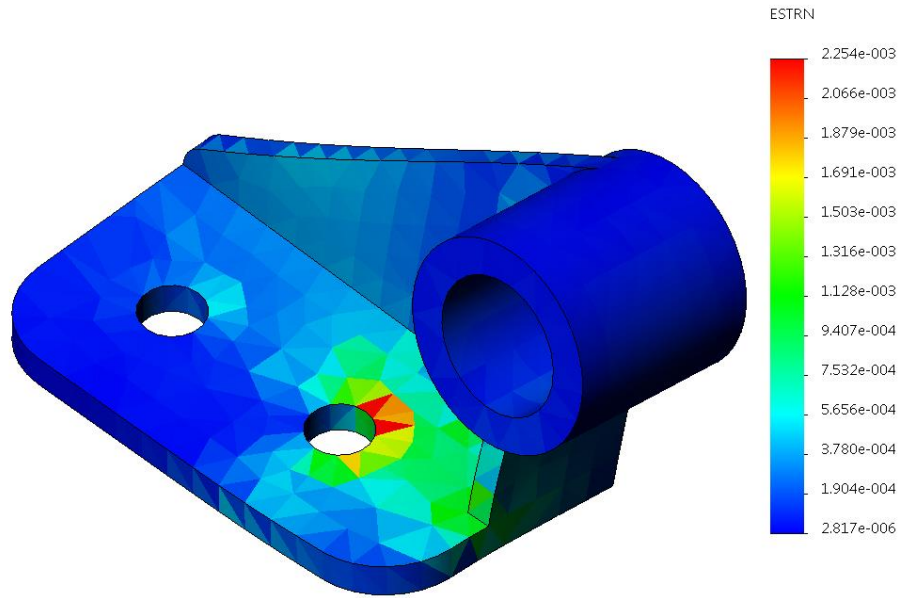


tutor1-Ready-Displacement-Displacement1

What is an equivalent strain? Why is it important (or not important) to this study? Where are elements 1255 and 585?

Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	2.81652e-006 Element: 1255	0.00225383 Element: 585

Model name:tutor1
 Study name:Ready(-Default-)
 Plot type: Static strain Strain1
 Deformation scale:12.2748

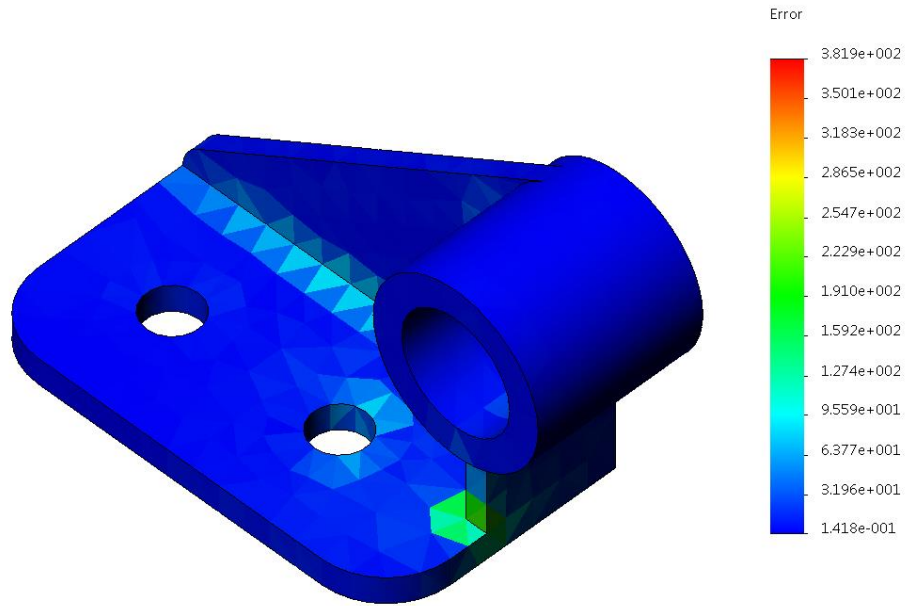


tutor1-Ready-Strain-Strain1

What are the units here? What is an acceptable error value? Where is element 1918?

Name	Type	Min	Max
Stress2	ERR: Energy Norm Error	0.141825 Element: 47	381.932 Element: 1918

Model name:tutor1
Study name:Ready(-Default-)
Plot type: Static element stress Stress2



tutor1-Ready-Stress-Stress2

Conclusion

???