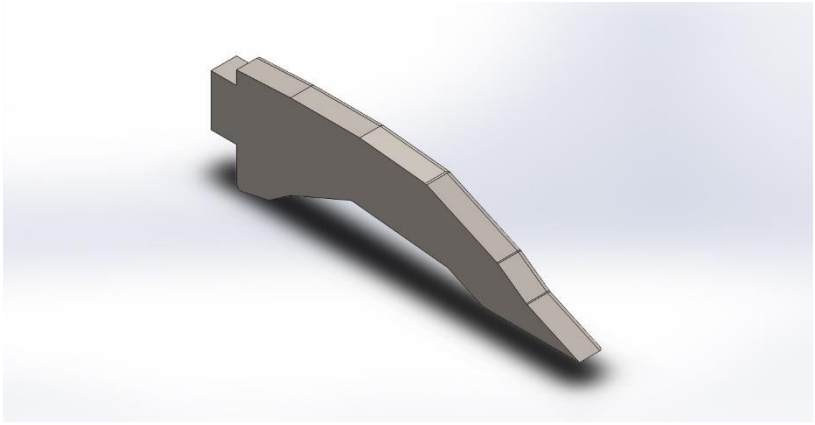
City Tech



Simulation of EX02_Hashem_02

Date: Friday, June 08, 2018
Designer: Mohamed Hashem
Study name: SimulationXpress Study
Analysis type: Static

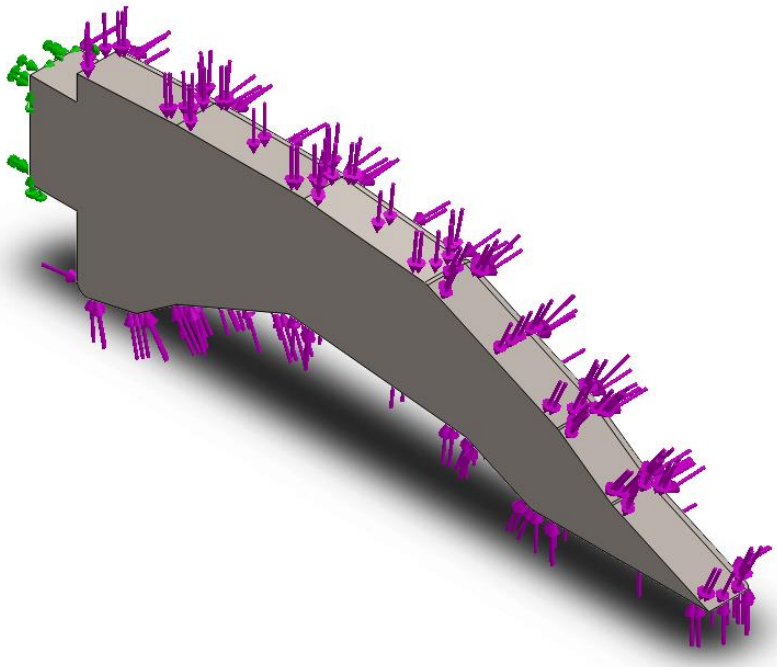
Table of Contents

Description

EX06_SolidWorks II

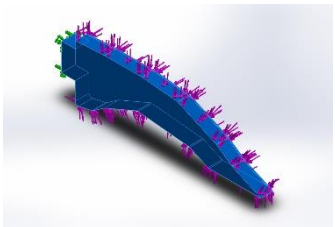
Assumptions

Model Information

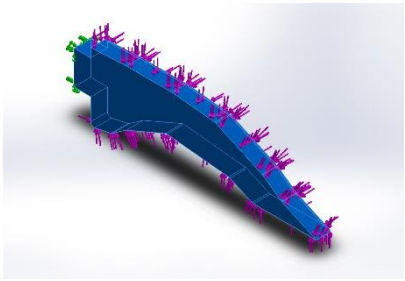


Model name: EX02_Hashem_02
Current Configuration: Default

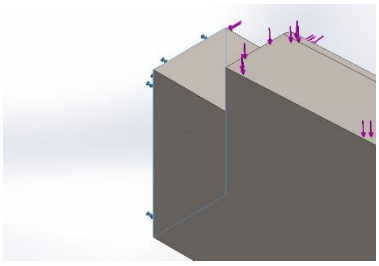
Solid Bodies

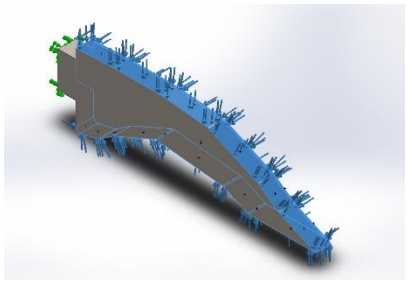
Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
Fillet1 	Solid Body	**Mass:0.50809 kg** **Volume:6.46424e-005 m^3** **Density:7860 kg/m^3** **Weight:4.97928 N**	**C:\Users\Labs.METID\Downloads\EX02_Hashem_02.SLDPRT** Jun 08 18:38:43 2018

Material Properties

Model Reference	Properties	Components
	**Name:** 201 Annealed Stainless Steel (SS) **Model type:** Linear Elastic Isotropic **Default failure criterion:** Max von Mises Stress **Yield strength:** 2.92e+008 N/m^2 **Tensile strength:** 6.85e+008 N/m^2	SolidBody 1(Fillet1)(EX02_Hashem_02)

Loads and Fixtures

Fixture name	Fixture Image	Fixture Details
Fixed-1		**Entities:** 1 face(s) **Type:** Fixed Geometry

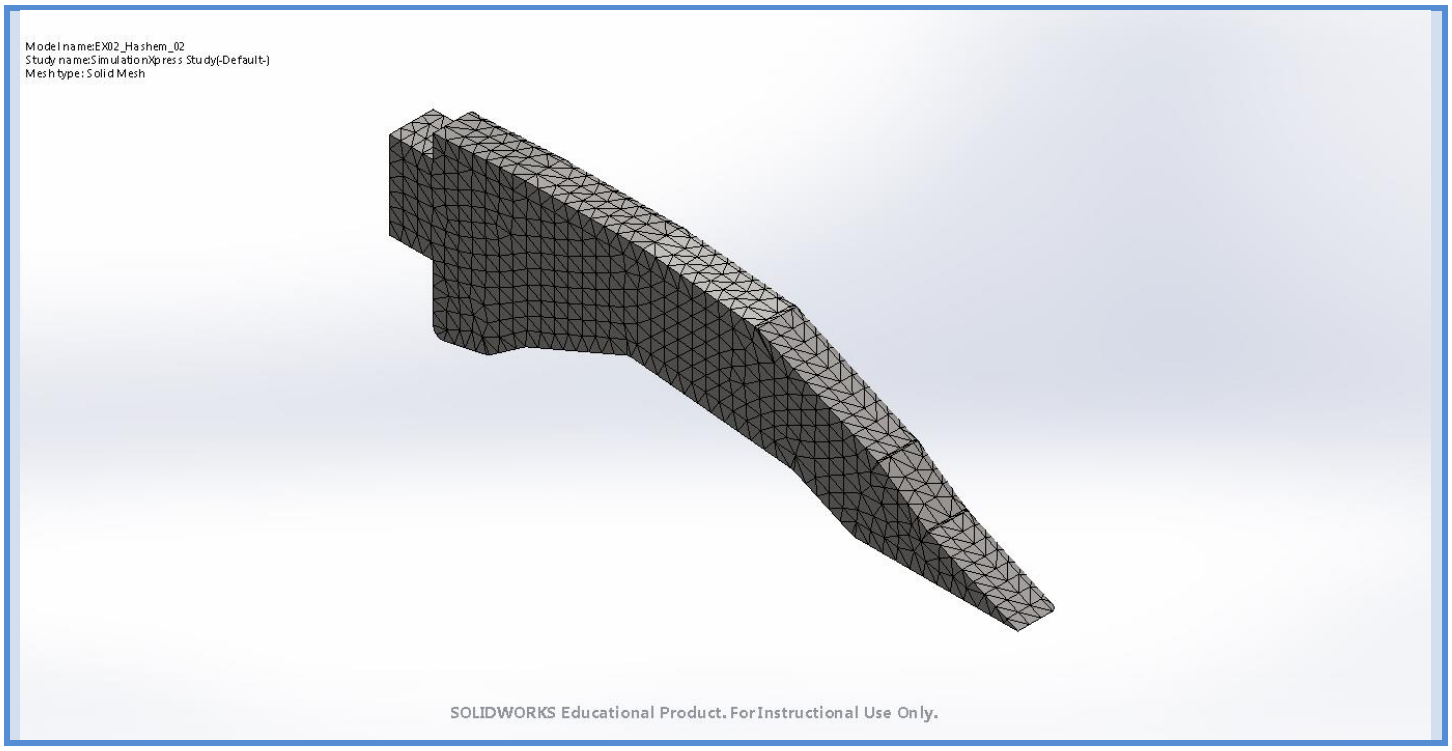
Load name	Load Image	Load Details
Force-1		**Entities:** 23 face(s) **Type:** Apply normal force **Value:** 10 N

Mesh information

Mesh type	Solid Mesh
Mesher Used:	Standard mesh
Automatic Transition:	Off
Include Mesh Auto Loops:	Off
Jacobian points	4 Points
Element Size	0.158056 in
Tolerance	0.00790281 in
Mesh Quality Plot	High

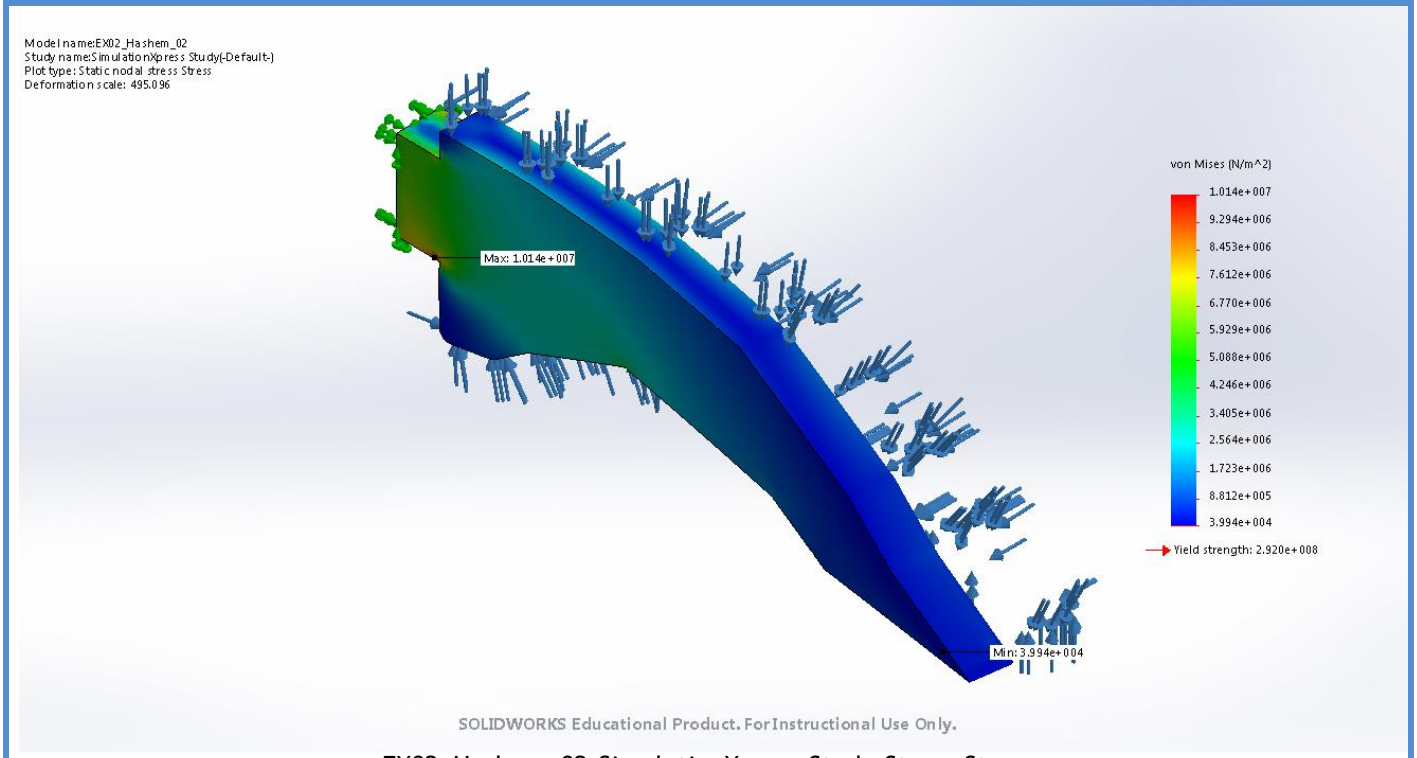
Mesh information - Details

Total Nodes	12309
Total Elements	7564
Maximum Aspect Ratio	15.8
% of elements with Aspect Ratio < 3	98.7
% of elements with Aspect Ratio > 10	0.0132
% of distorted elements(Jacobian)	0
Time to complete mesh(hh;mm;ss):	00:00:01
Computer name:	V511A-10


Model name:EX02_Hashem_02
Study name:SimulationXpress Study(-Default-)
Mesh type: Solid Mesh
SOLIDWORKS Educational Product. For Instructional Use Only.

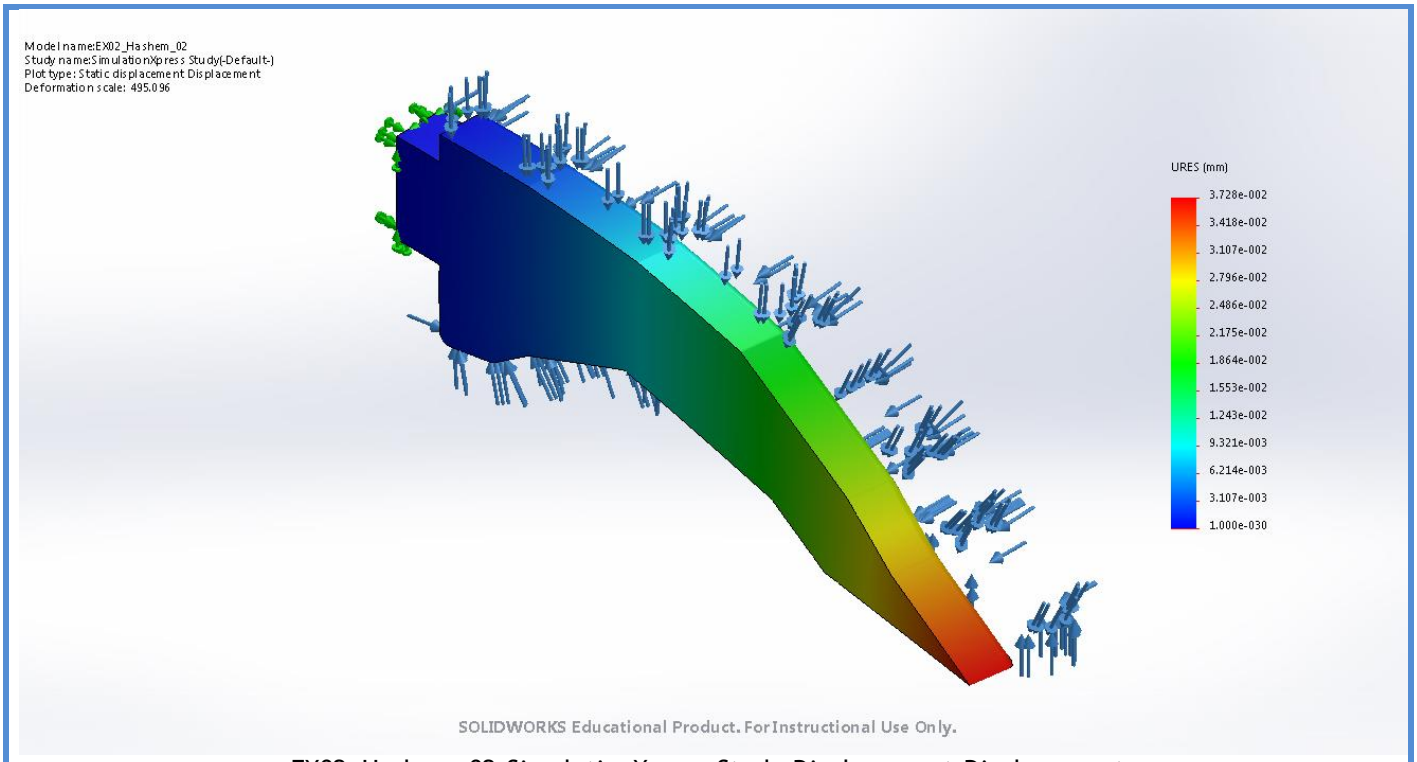
Study Results

Name	Type	Min	Max
Stress	VON: von Mises Stress	3.994e+004N/m^2 Node: 10333	1.014e+007N/m^2 Node: 11577



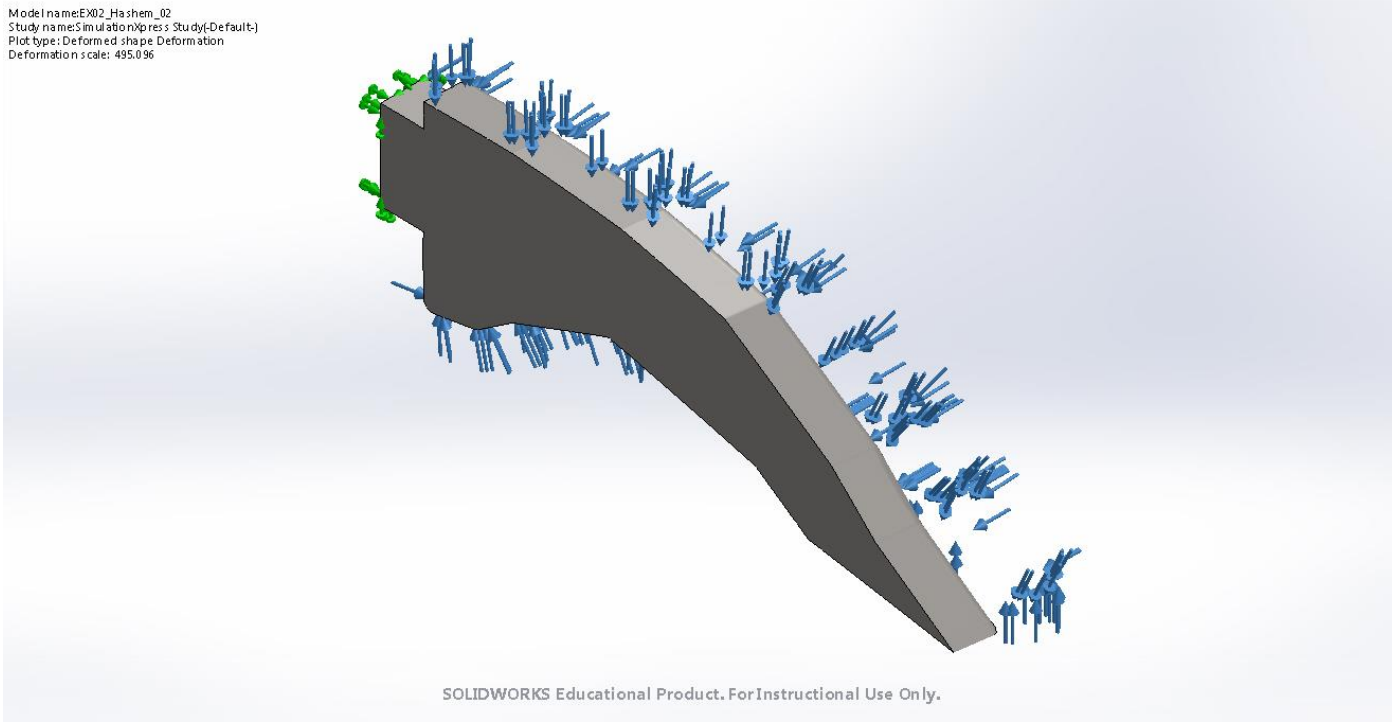
EX02_Hashem_02-SimulationXpress Study-Stress-Stress

Name	Type	Min	Max
Displacement	URES: Resultant Displacement	0.000e+000mm Node: 111	3.728e-002mm Node: 326



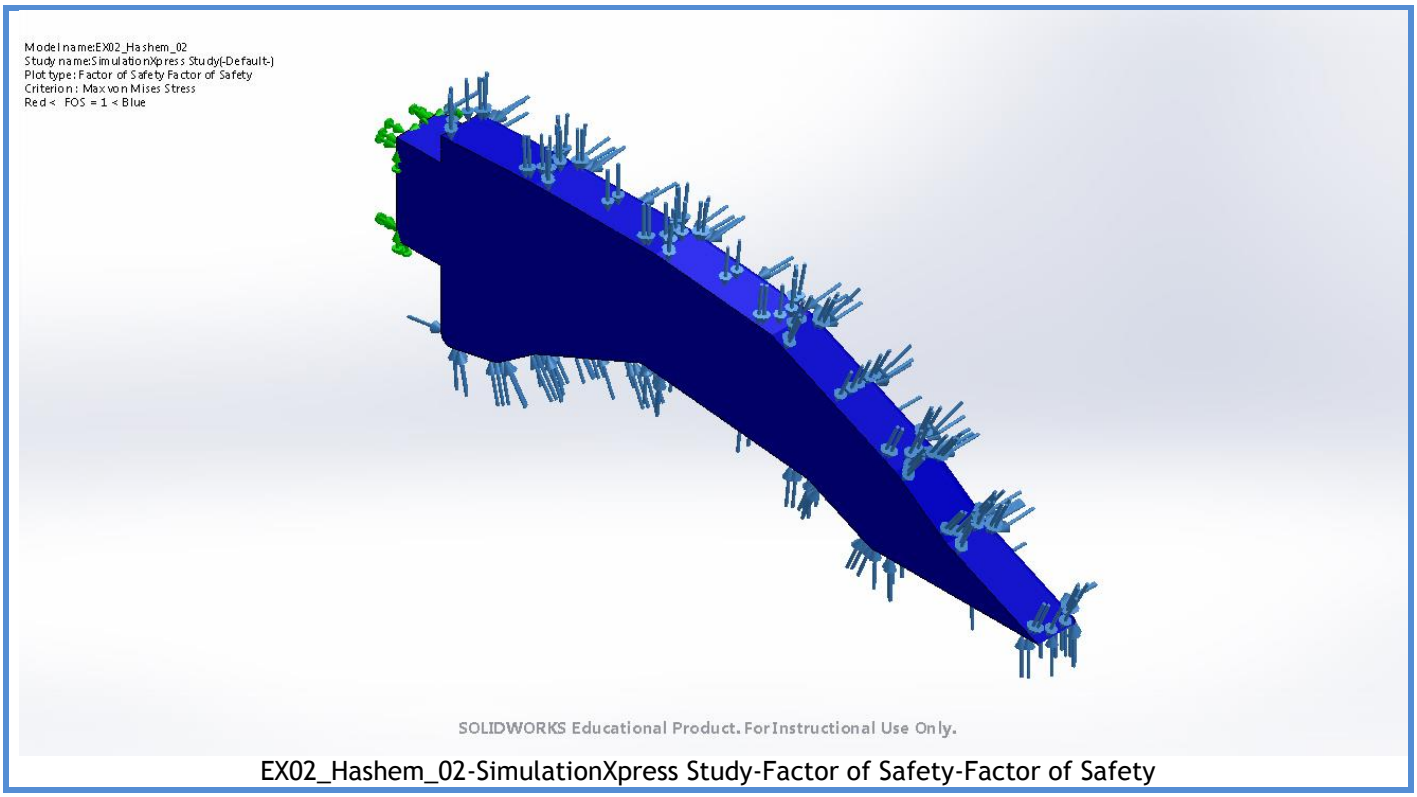
EX02_Hashem_02-SimulationXpress Study-Displacement-Displacement

Name	Type
Deformation	Deformed shape



EX02_Hashem_02-SimulationXpress Study-Displacement-Deformation

Name	Type	Min	Max
Factor of Safety	Max von Mises Stress	2.881e+001 Node: 11577	7.310e+003 Node: 10333



EX02_Hashem_02-SimulationXpress Study-Factor of Safety-Factor of Safety

Conclusion