

Simulation of EX01_Wang_01

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

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Description

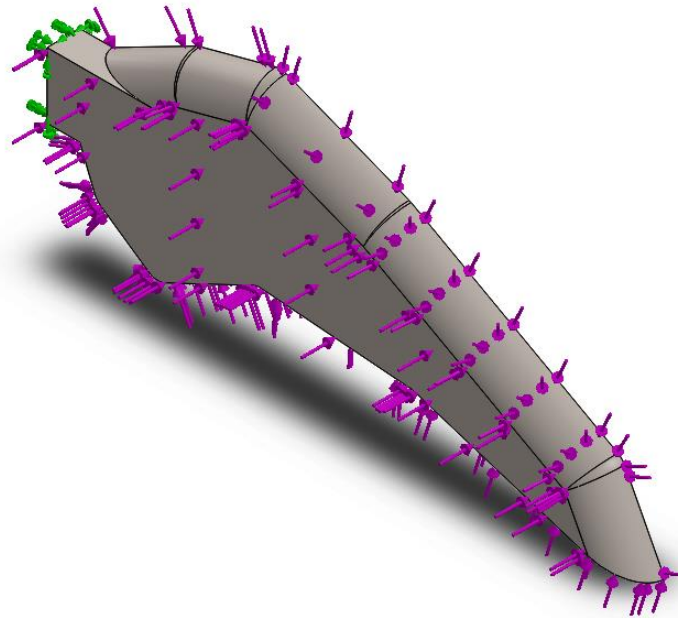
EX06_Soild Modeling II



Assumptions

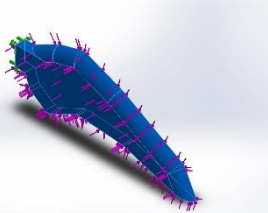


Model Information



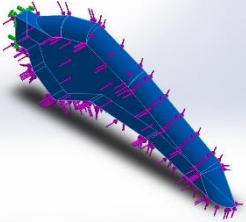
Model name: EX01_Wang_01
Current Configuration: Default

Solid Bodies

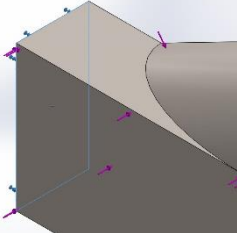
Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
Fillet1 	Solid Body	Mass:0.957145 kg Volume:0.000124302 m ³ Density:7700.16 kg/m ³ Weight:9.38002 N	F:\school\Mech\Mech 3510 Advanced Solid Modeling II\6.8\EX01_Wang_01.SLD PRT Jun 04 19:03:46 2018

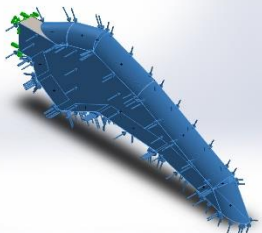


Material Properties

Model Reference	Properties	Components
	Name: Alloy Steel Model type: Linear Elastic Isotropic Default failure criterion: Max von Mises Stress Yield strength: 6.20422e+008 N/m ² Tensile strength: 7.23826e+008 N/m ²	SolidBody 1(Fillet1)(EX01_Wang_01)

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: 13 face(s) Type: Apply normal force Value: 10 N



Mesh information

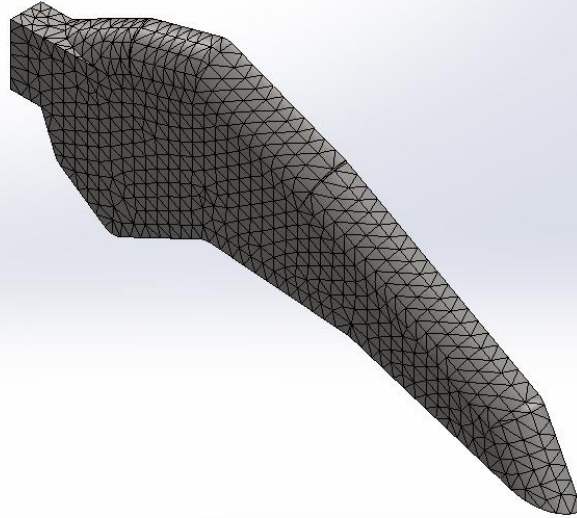
Mesh type	Solid Mesh
Mesher Used:	Standard mesh
Automatic Transition:	Off
Include Mesh Auto Loops:	Off
Jacobian points	4 Points
Element Size	0.196544 in
Tolerance	0.0098272 in
Mesh Quality Plot	High

Mesh information - Details

Total Nodes	12480
Total Elements	7589
Maximum Aspect Ratio	21.838
% of elements with Aspect Ratio < 3	99.3
% of elements with Aspect Ratio > 10	0.105
% of distorted elements(Jacobian)	0
Time to complete mesh(hh:mm:ss):	00:00:01
Computer name:	V511A-08



Model name: EX01_Wang_01
Study name: SimulationXpress Study-(Default-)
Mesh type: Solid Mesh



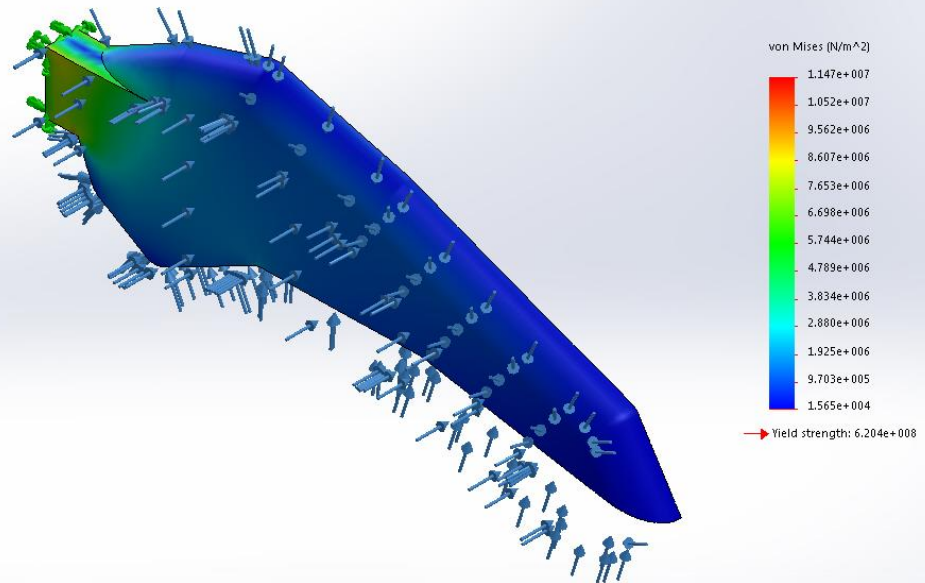
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Study Results

Name	Type	Min	Max
Stress	VON: von Mises Stress	1.565e+004N/m ² Node: 11210	1.147e+007N/m ² Node: 12164

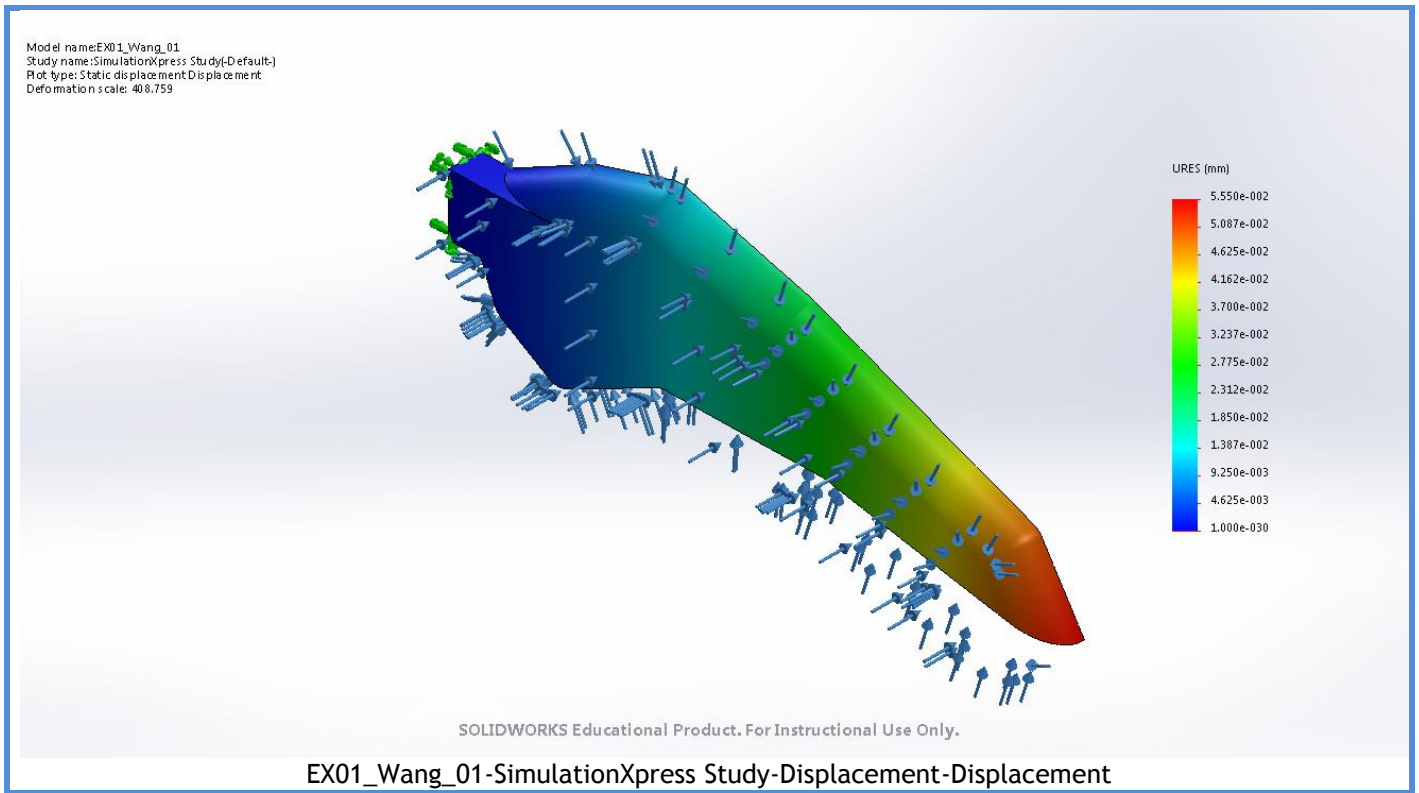
Model name: EX01_Wang_01
Study name: SimulationXpress Study-(Default-)
Plot type: Static nodal stress Stress
Deformation scale: 408.759



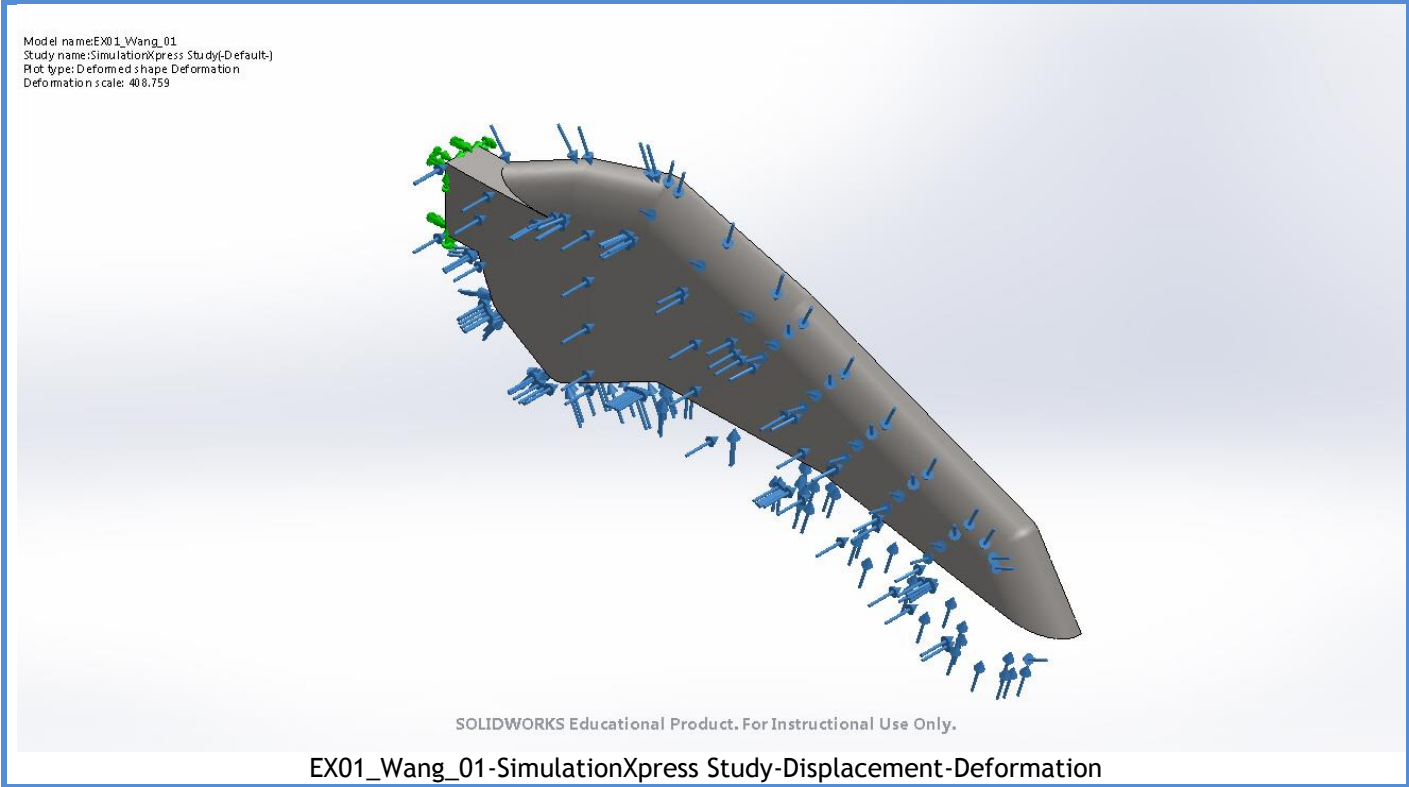
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EX01_Wang_01-SimulationXpress Study-Stress-Stress

Name	Type	Min	Max
Displacement	URES: Resultant Displacement	0.000e+000mm Node: 4	5.550e-002mm Node: 211

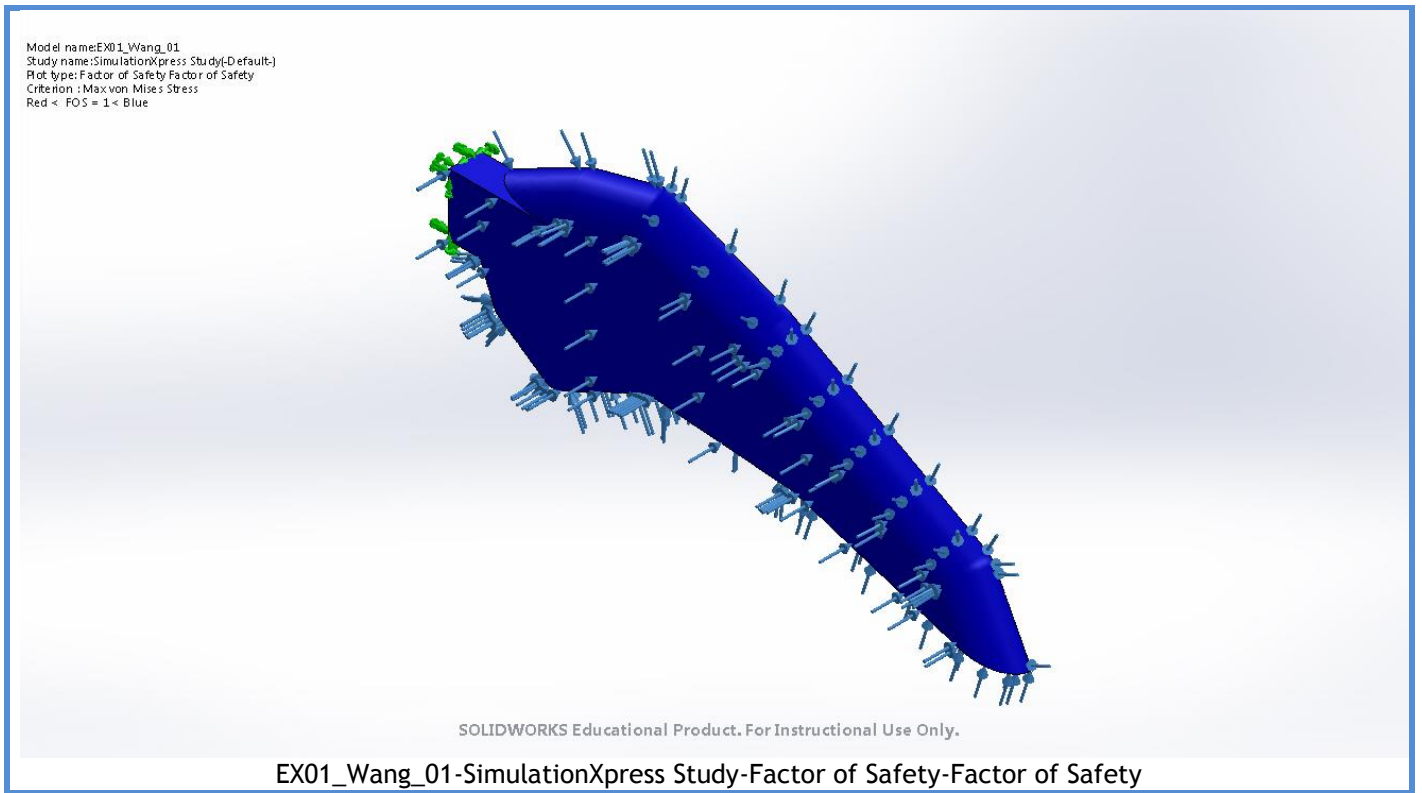


Name	Type
Deformation	Deformed shape



Name	Type	Min	Max
Factor of Safety	Max von Mises Stress	5.408e+001 Node: 12164	3.966e+004 Node: 11210





Conclusion

