



Simulation of new blade

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

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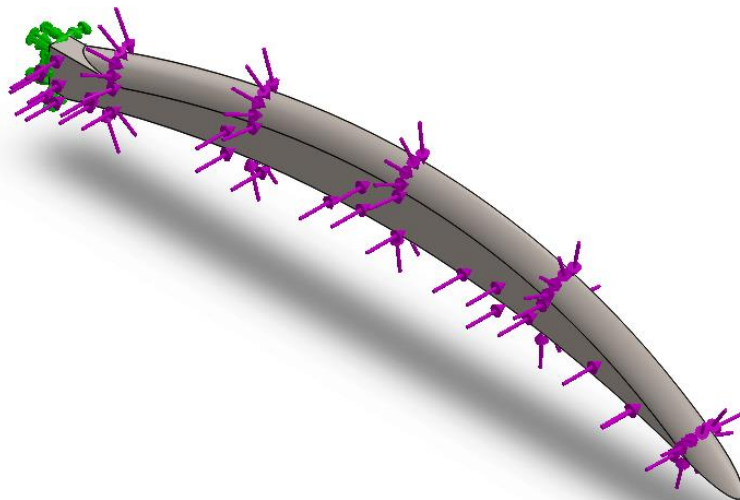
Description

ex06 advance solid modeling 2



Assumptions

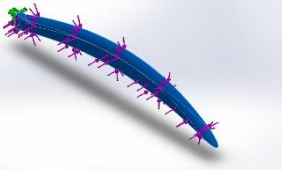
Model Information



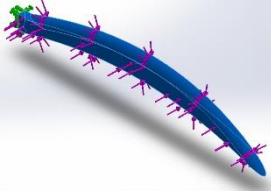
Model name: new blade
Current Configuration: Default

Solid Bodies

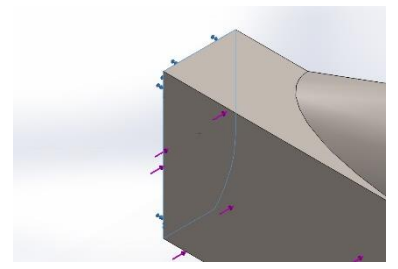
Document Name and Reference	Treated As	Volumetric Properties	Document Path/Date Modified
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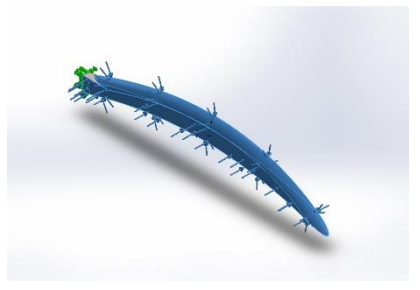
<p>Fillet2</p> 	<p>Solid Body</p>	<p>Mass:1.20135 kg Volume:0.000154022 m³ Density:7799.86 kg/m³ Weight:11.7732 N</p>	<p>F:\new blade.SLDPRT Jun 08 17:57:58 2018</p>
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Material Properties

Model Reference	Properties	Components
	<p>Name: Stainless Steel (ferritic) Model type: Linear Elastic Isotropic Default failure criterion: Max von Mises Stress Yield strength: 1.72339e+008 N/m² Tensile strength: 5.13613e+008 N/m²</p>	<p>SolidBody 1(Fillet2)(new blade)</p>

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

Mesh information

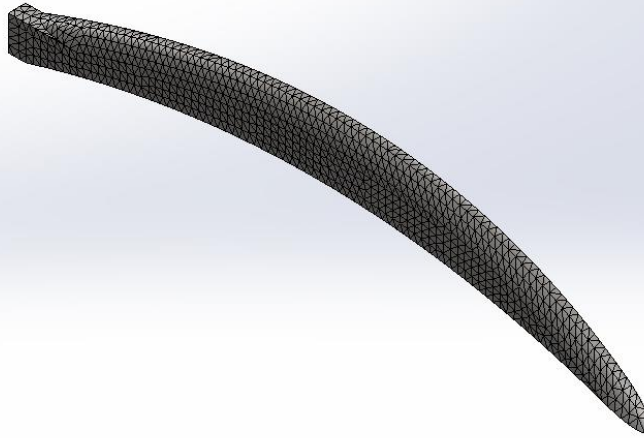
Mesh type	Solid Mesh
Mesher Used:	Standard mesh
Automatic Transition:	Off
Include Mesh Auto Loops:	Off
Jacobian points	4 Points
Element Size	0.211099 in
Tolerance	0.0105549 in
Mesh Quality Plot	High

Mesh information - Details

Total Nodes	13262
Total Elements	7799
Maximum Aspect Ratio	14.339
% of elements with Aspect Ratio < 3	99.8
% of elements with Aspect Ratio > 10	0.0385
% of distorted elements(Jacobian)	0
Time to complete mesh(hh:mm:ss):	00:00:01
Computer name:	V511A-07



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

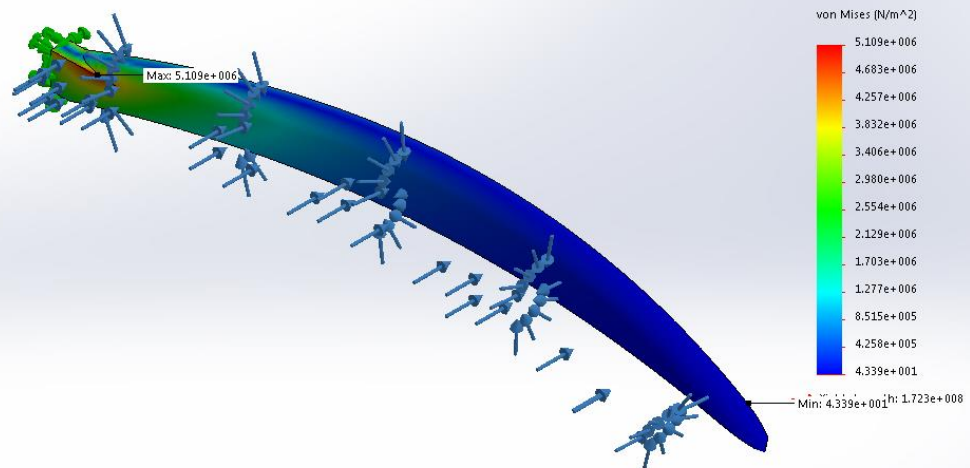


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Study Results

Name	Type	Min	Max
Stress	VON: von Mises Stress	4.339e+001N/m ² Node: 841	5.109e+006N/m ² Node: 13198

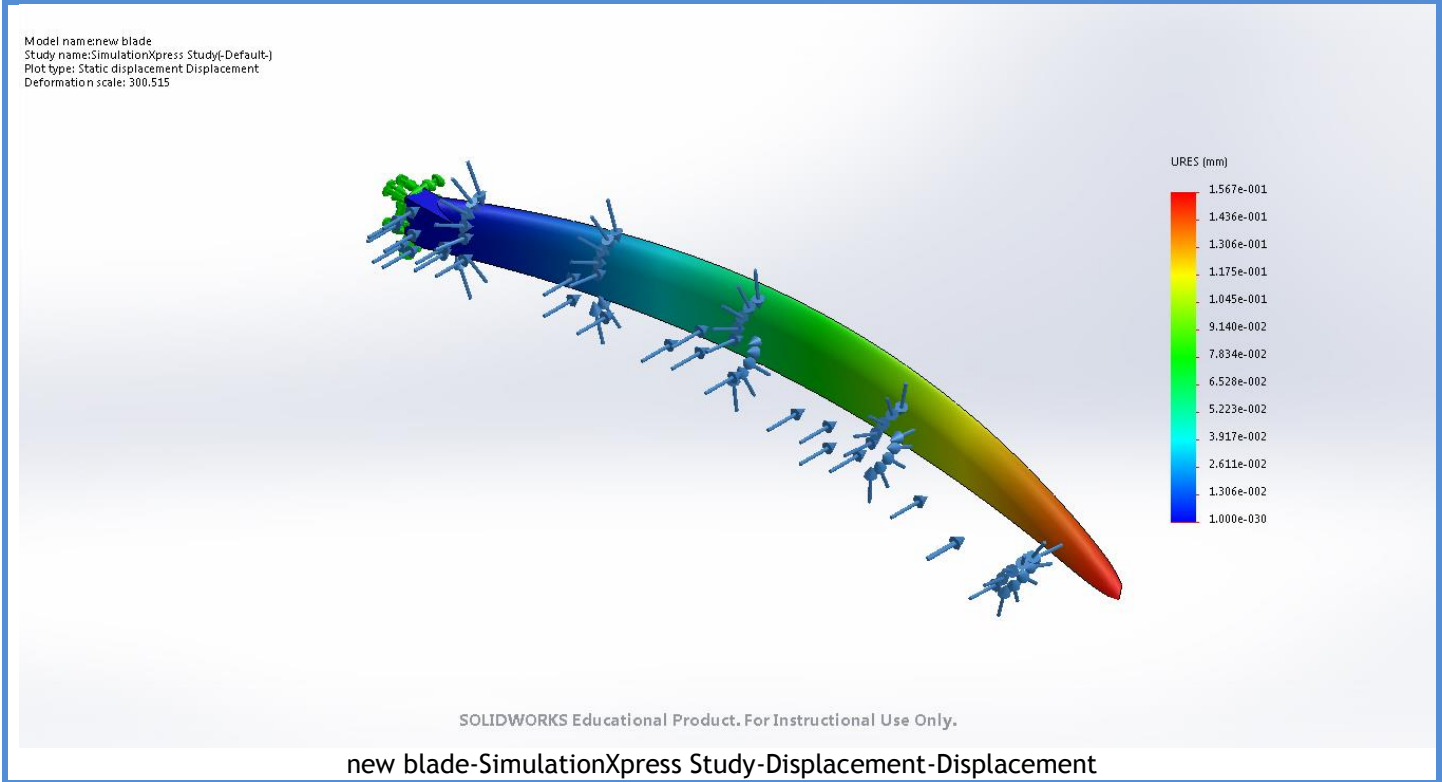
Model name: new blade
Study name: SimulationXpress Study(-Default-)
Plot type: Static nodal stress Stress
Deformation scale: 300.515



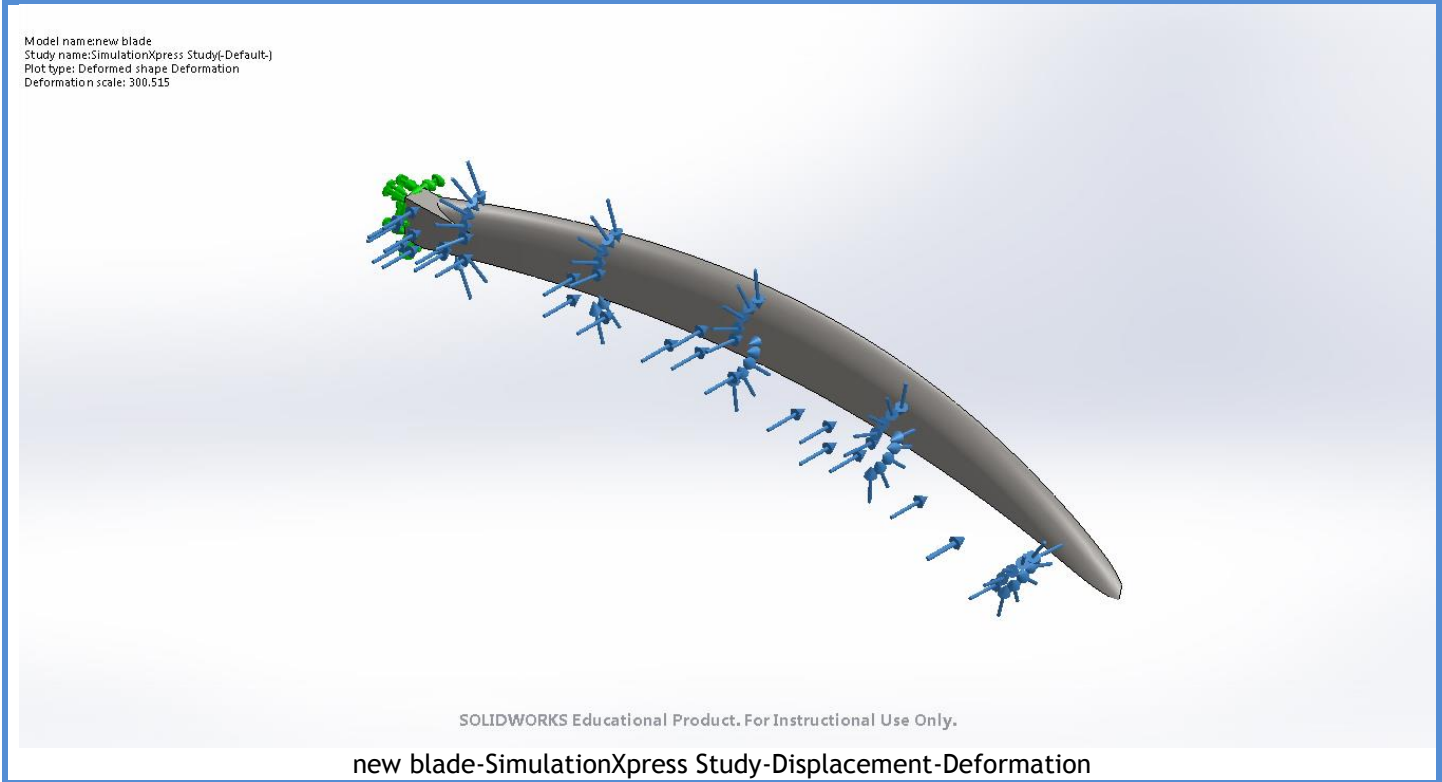
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new blade-SimulationXpress Study-Stress-Stress

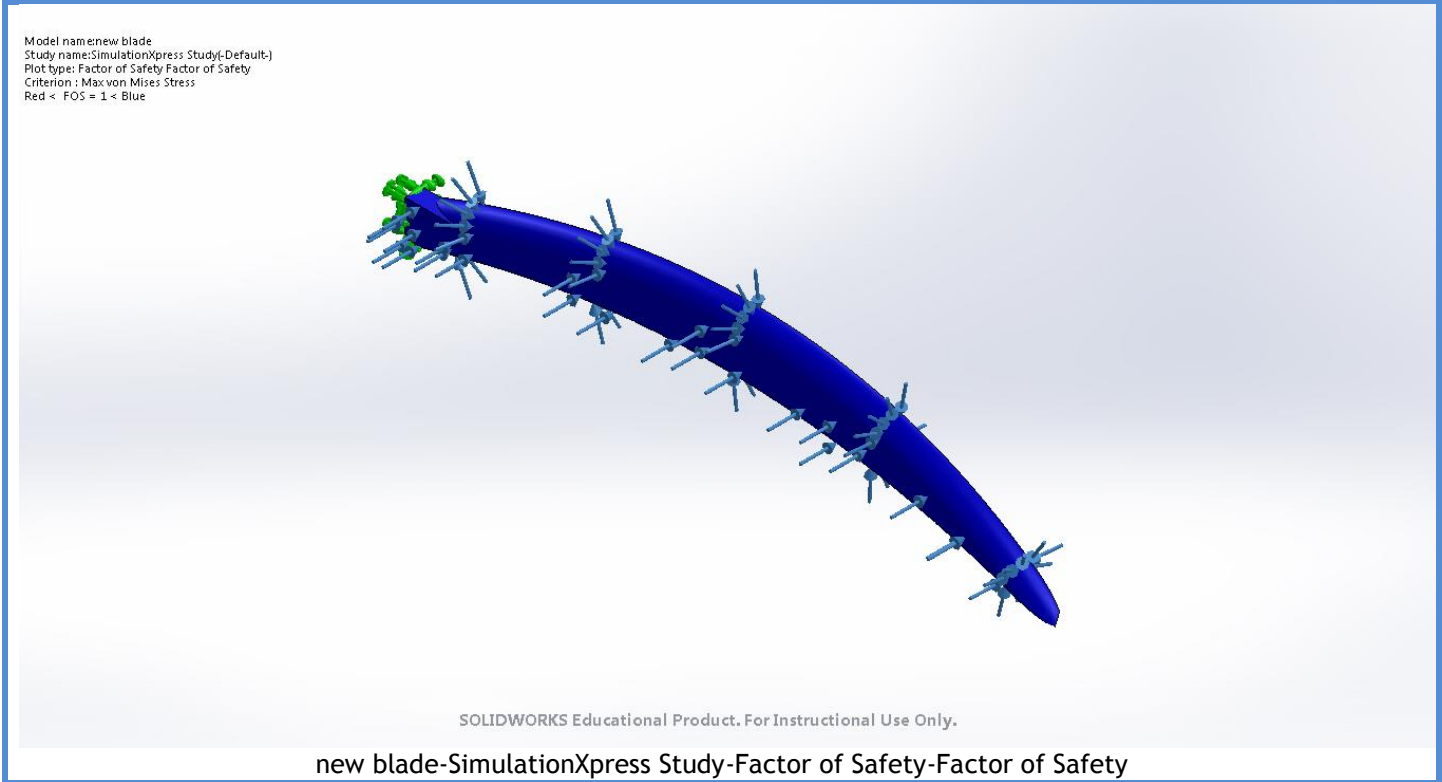
Name	Type	Min	Max
Displacement	URES: Resultant Displacement	0.000e+000mm Node: 4	1.567e-001mm Node: 836



Name	Type
Deformation	Deformed shape



Name	Type	Min	Max
Factor of Safety	Max von Mises Stress	3.373e+001 Node: 13198	3.972e+006 Node: 841



Conclusion