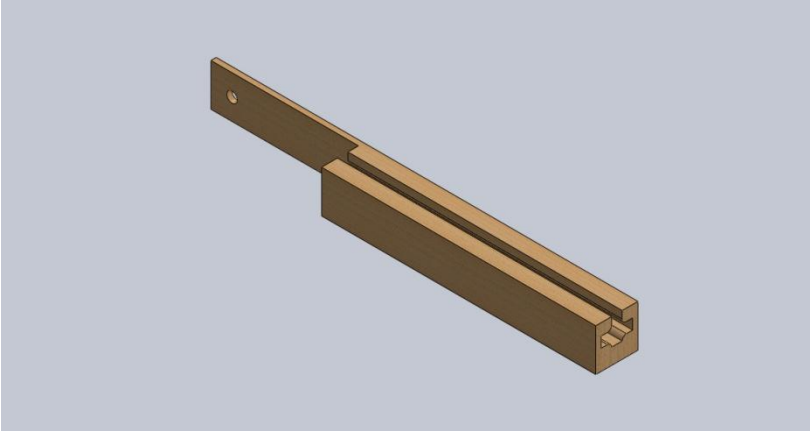


Simulation of slidingcompartment

Date: 29 March 2015
Designer: Solidworks
Study name: SimulationXpress Study
Analysis type: Static

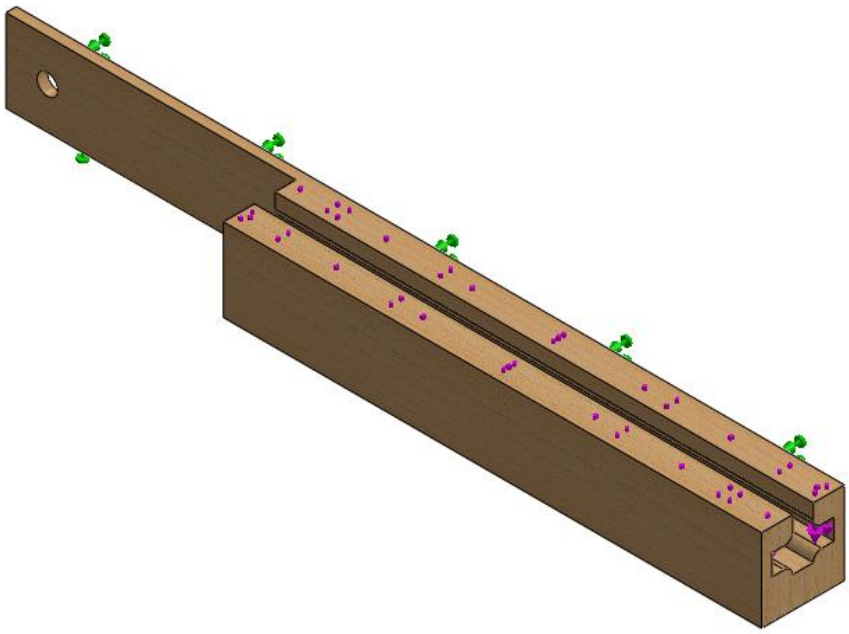
Table of Contents

Description

No Data

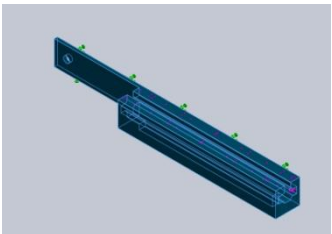
Assumptions

Model Information



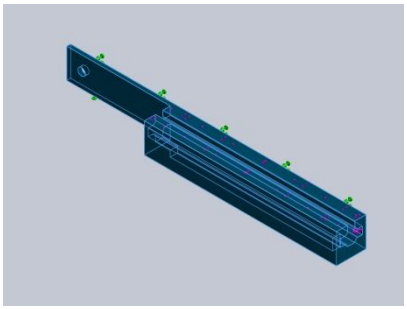
Model name: slidingcompartment
Current Configuration: Default

Solid Bodies

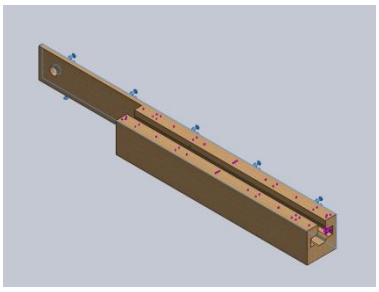
<L_MdInf_SldBd_Nm/>	Treated As	Volumetric Properties	Document Path/Date Modified
Boss-Extrude3 	Solid Body	**Mass:0.721545 kg** **Volume:0.00450994 m^3** **Density:159.99 kg/m^3** **Weight:7.07114 N**	**C:\Users\Sensei\Documents\Projects\SolidWorks\homeautomation\curtainopeningmechanism\slidingcompartment.SLDPRT** Mar 29 16:11:05 2015
<L_MdInf_ShlBd_Nm/>	**<L_MdIn_ShlBd_Fr/>**	**<L_MdInf_ShlBd_VolProp/>**	**<L_MdIn_ShlBd_DtMd/>**

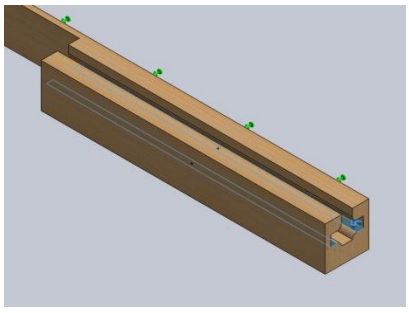
<L_MdInf_CpBd_Nm/>	<L_MdInf_CompBd_Props/>		
<L_MdInf_BmBd_Nm/>	<L_MdIn_BmBd_Fr/>	<L_MdInf_BmBd_VolProp/>	<L_MdIn_BmBd_DtMd/>

Material Properties

Model Reference	Properties	Components
	**Name:** Balsa **Model type:** Linear Elastic Isotropic **Default failure criterion:** Unknown **Yield strength:** 20 N/mm^2	SolidBody 1(Boss-Extrude3)(slidingcompartment)

Loads and Fixtures

Fixture name	Fixture Image	Fixture Details
Fixed-2		**Entities:** 1 face(s) **Type:** Fixed Geometry

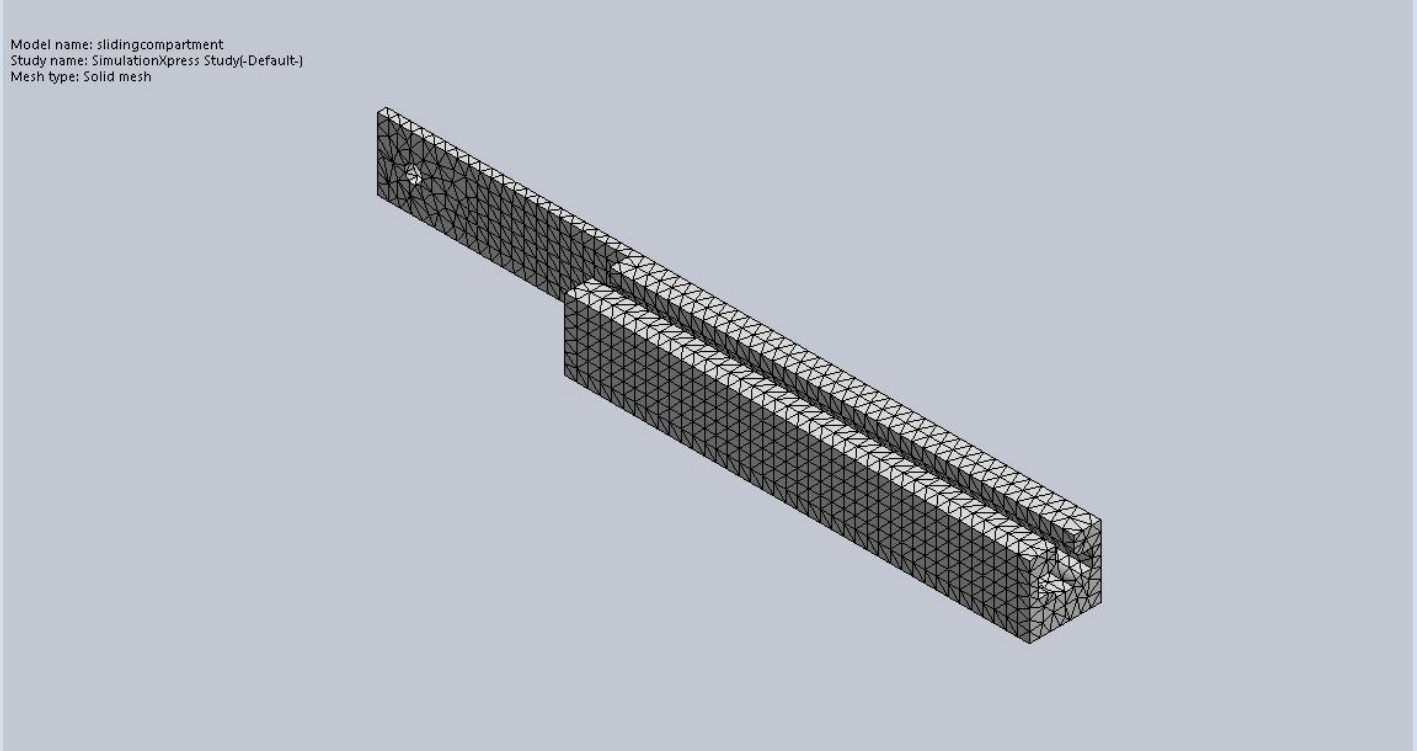
Load name	Load Image	Load Details
Force-2		**Entities:** 2 face(s) **Type:** Apply normal force **Value:** 60 N **Phase Angle:** 0 **Units:** deg

Mesh Information

Mesh type	Solid Mesh
Mesher Used:	Curvature based mesh
Jacobian points	4 Points
Maximum element size	0 cm
Minimum element size	0 cm
Mesh Quality	High

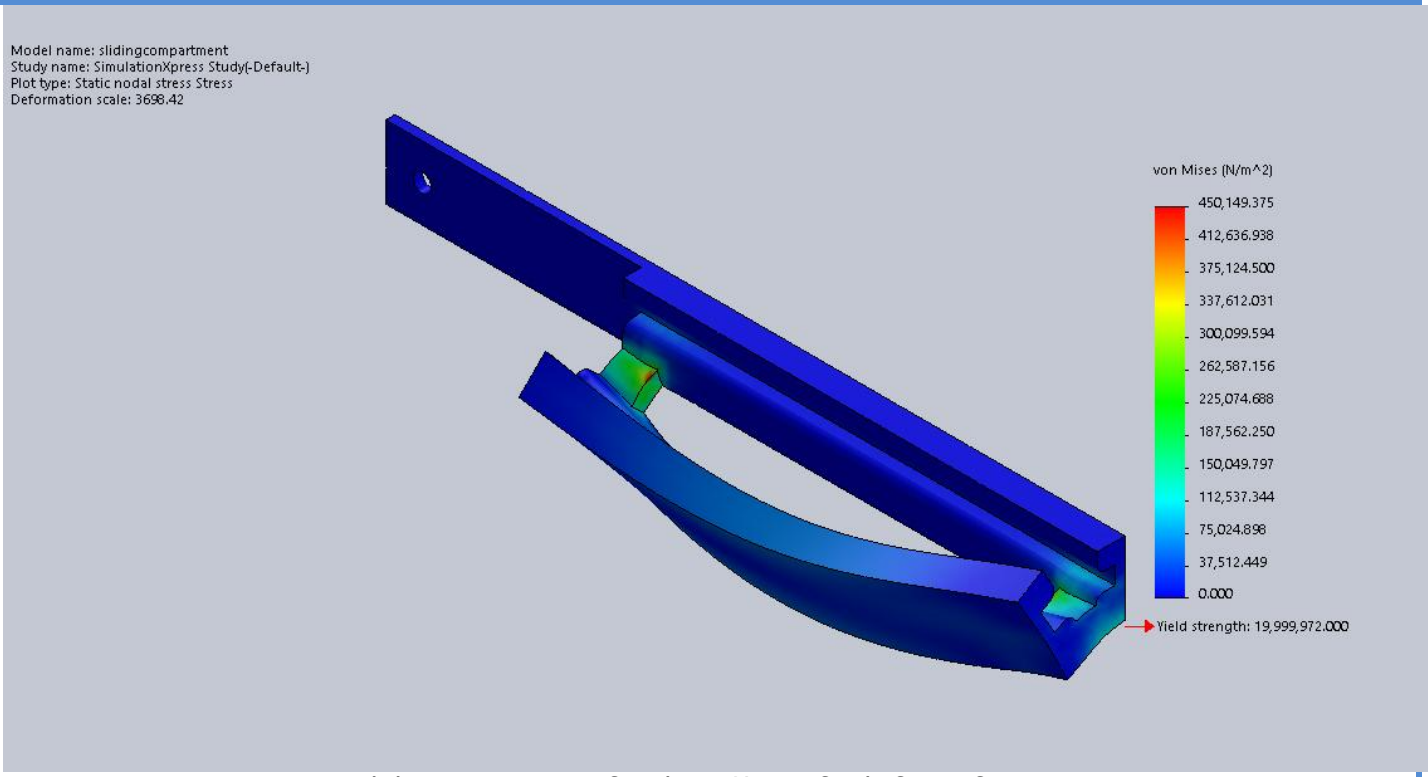
Mesh Information - Details

Total Nodes	15275
Total Elements	8400
Maximum Aspect Ratio	9.4266
% of elements with Aspect Ratio < 3	97.7
% of elements with Aspect Ratio > 10	0
% of distorted elements(Jacobian)	0
Time to complete mesh(hh;mm;ss):	00:00:01
Computer name:	LEXXY



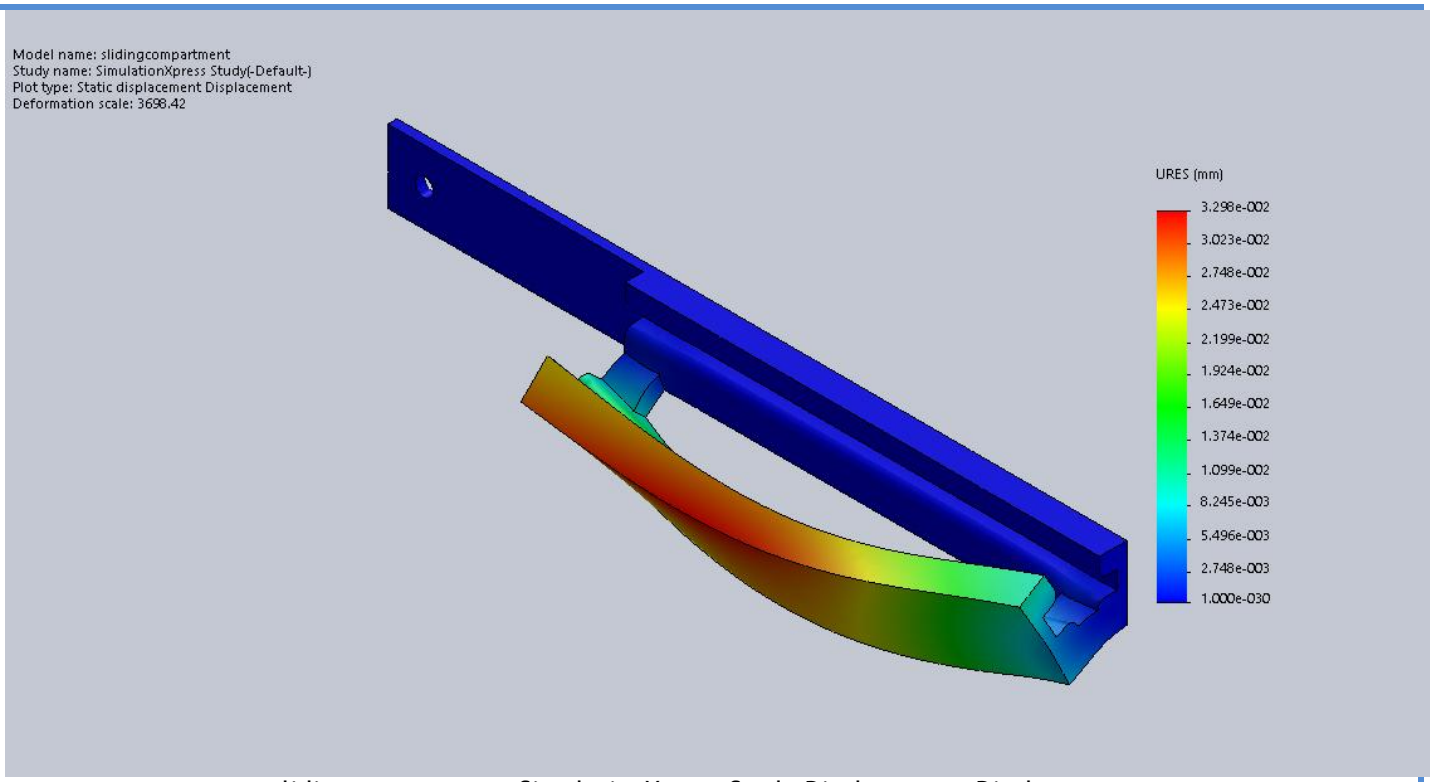
Study Results

Name	Type	Min	Max
Stress	VON: von Mises Stress	3.15749e-007 N/m^2 Node: 12462	450149 N/m^2 Node: 14814



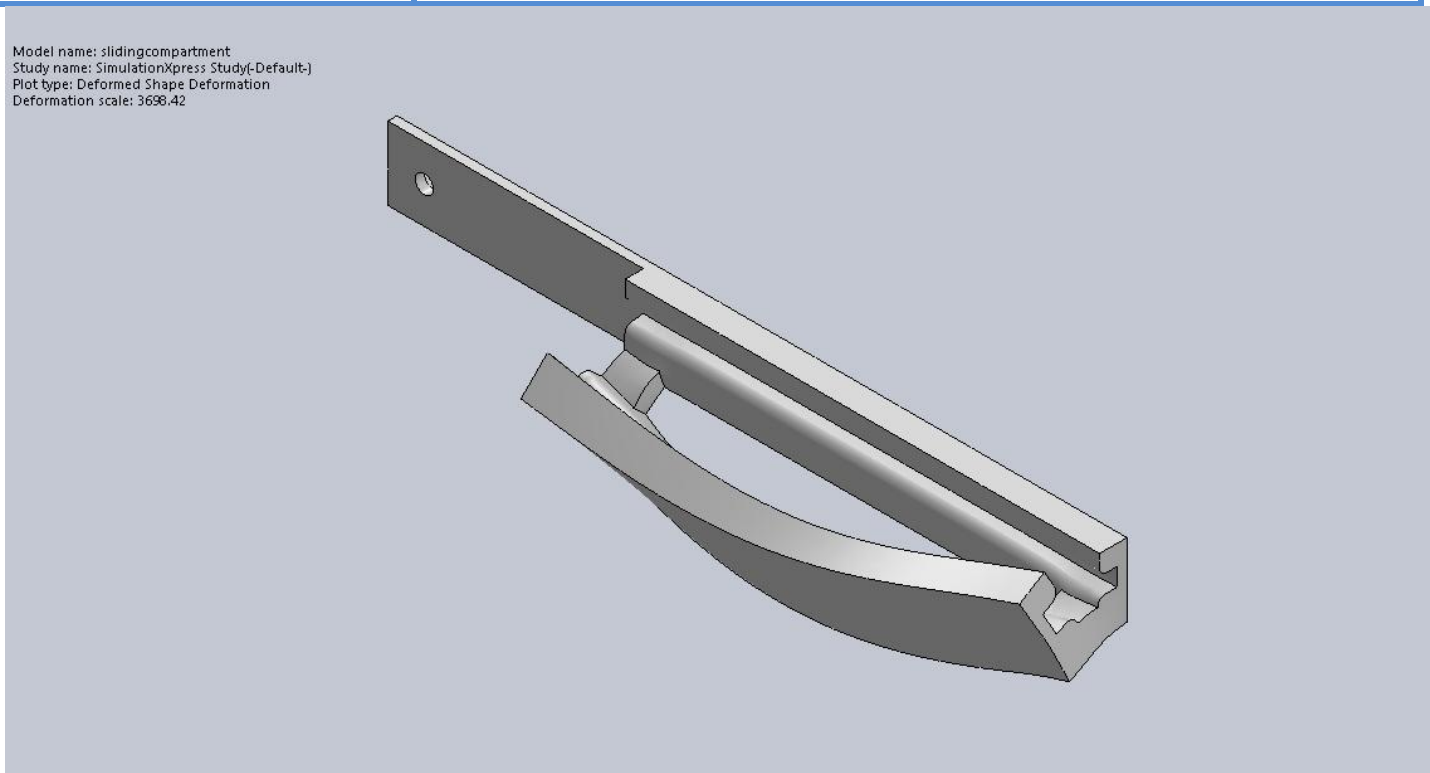
slidingcompartment-SimulationXpress Study-Stress-Stress

Name	Type	Min	Max
Displacement	URES: Resultant Displacement	0 mm Node: 1	0.0329788 mm Node: 8833



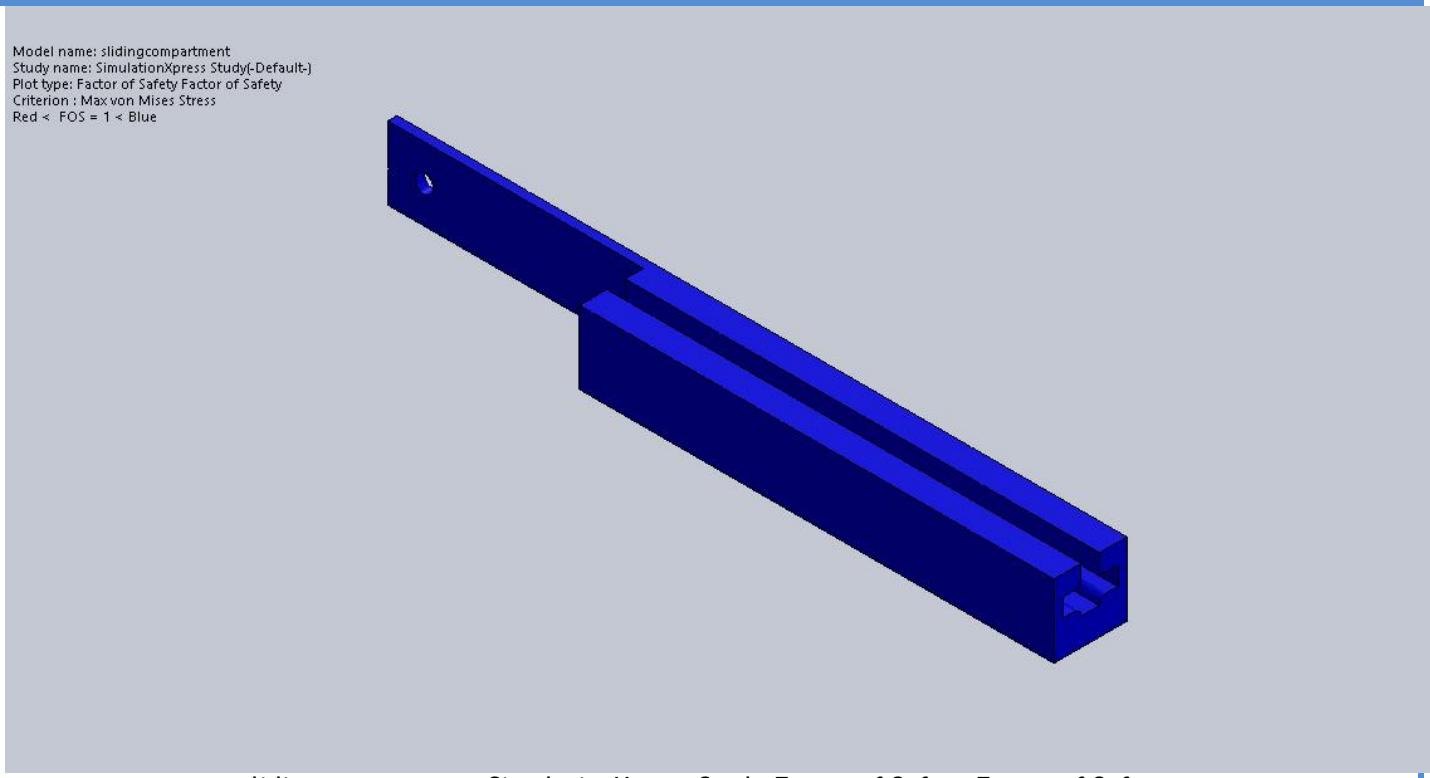
slidingcompartment-SimulationXpress Study-Displacement-Displacement

Name	Type
Deformation	Deformed Shape



slidingcompartment-SimulationXpress Study-Displacement-Deformation

Name	Type	Min	Max
Factor of Safety	Max von Mises Stress	44.4296 Node: 14814	6.33414e+013 Node: 12462



slidingcompartment-SimulationXpress Study-Factor of Safety-Factor of Safety

Conclusion