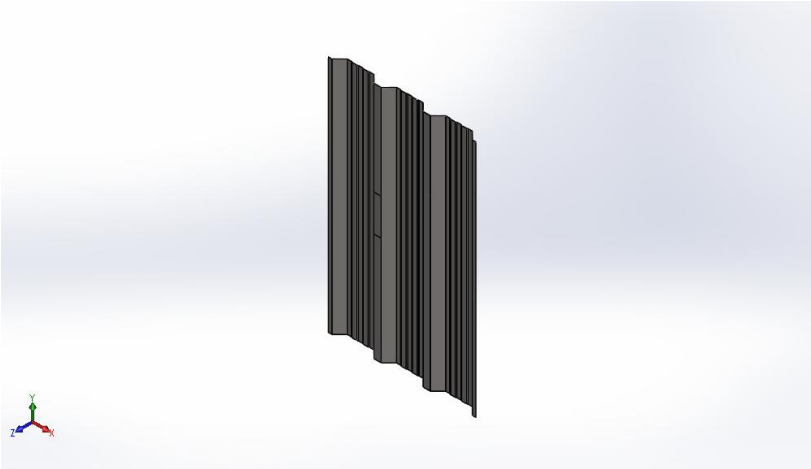


Simulation of Sheet v1[1].step

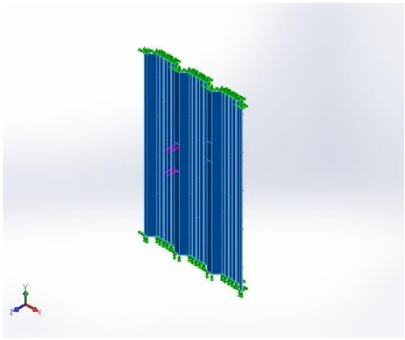
Date: Monday, January 1, 2024
Designer: Solidworks
Study name: Static 2
Analysis type: Static

Table of Contents

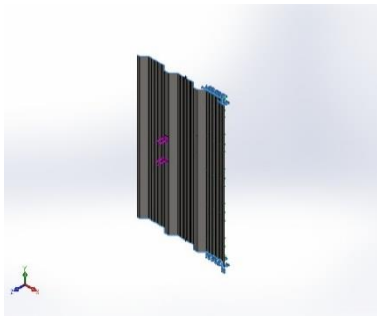
Units

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

Material Properties

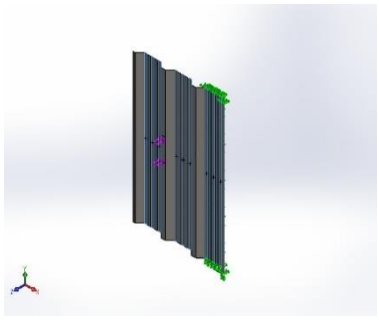
Model Reference	Properties	Components
	**Name:** Plain Carbon Steel **Model type:** Linear Elastic Isotropic **Default failure criterion:** Max von Mises Stress **Yield strength:** 2.20594e+08 N/m^2 **Tensile strength:** 3.99826e+08 N/m^2 **Elastic modulus:** 2.1e+11 N/m^2 **Poisson's ratio:** 0.28 **Mass density:** 7,800 kg/m^3 **Shear modulus:** 7.9e+10 N/m^2 **Thermal expansion coefficient:** 1.3e-05 /Kelvin	SolidBody 1(Split Line2)(Sheet v1[1].step)
Curve Data:N/A		

Loads and Fixtures

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

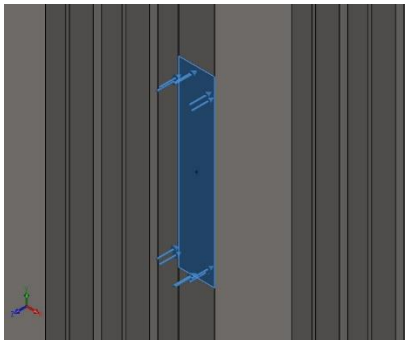
Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	5.05447e-05	0.000123978	-0.500951	0.500951
Reaction Moment(N.m)	0	0	0	0

Fixture name	Fixture Image	Fixture Details
Roller/Slider-2		**Entities:** 9 face(s) **Type:** Roller/Slider

Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	24.554	-18.8331	1,535.81	1,536.12
Reaction Moment(N.m)	0	0	0	0

Load name	Load Image	Load Details
Force-1		**Entities:** 1 face(s) **Type:** Apply normal force **Value:** 1,500 N

Resultant Forces

Reaction forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	5.05447e-05	0.000123978	1,500	1,500

Reaction Moments

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

Free body forces

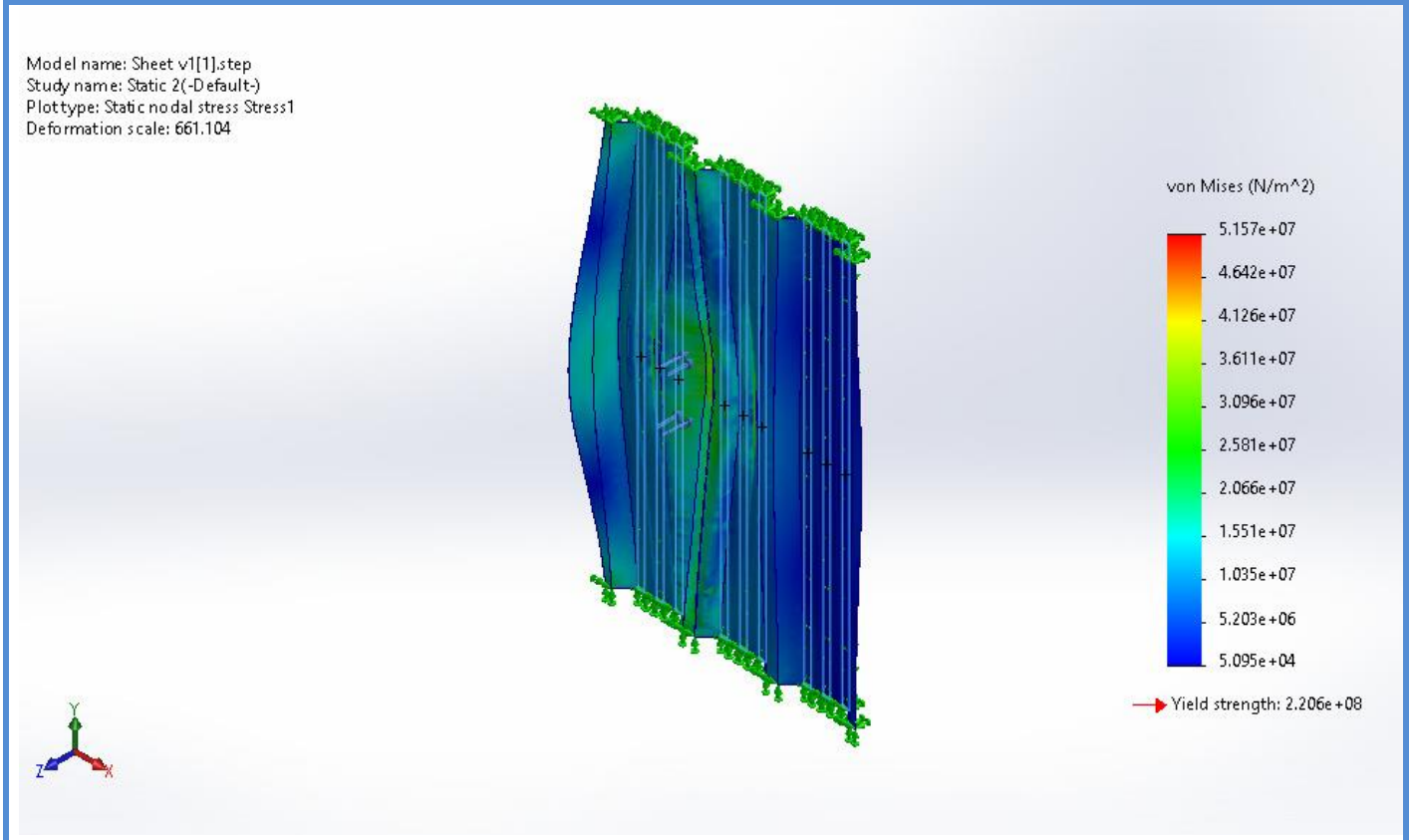
Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	-0.00016035	0.00016775	-0.000262856	0.000350636

Free body moments

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N.m	0	0	0	1e-33

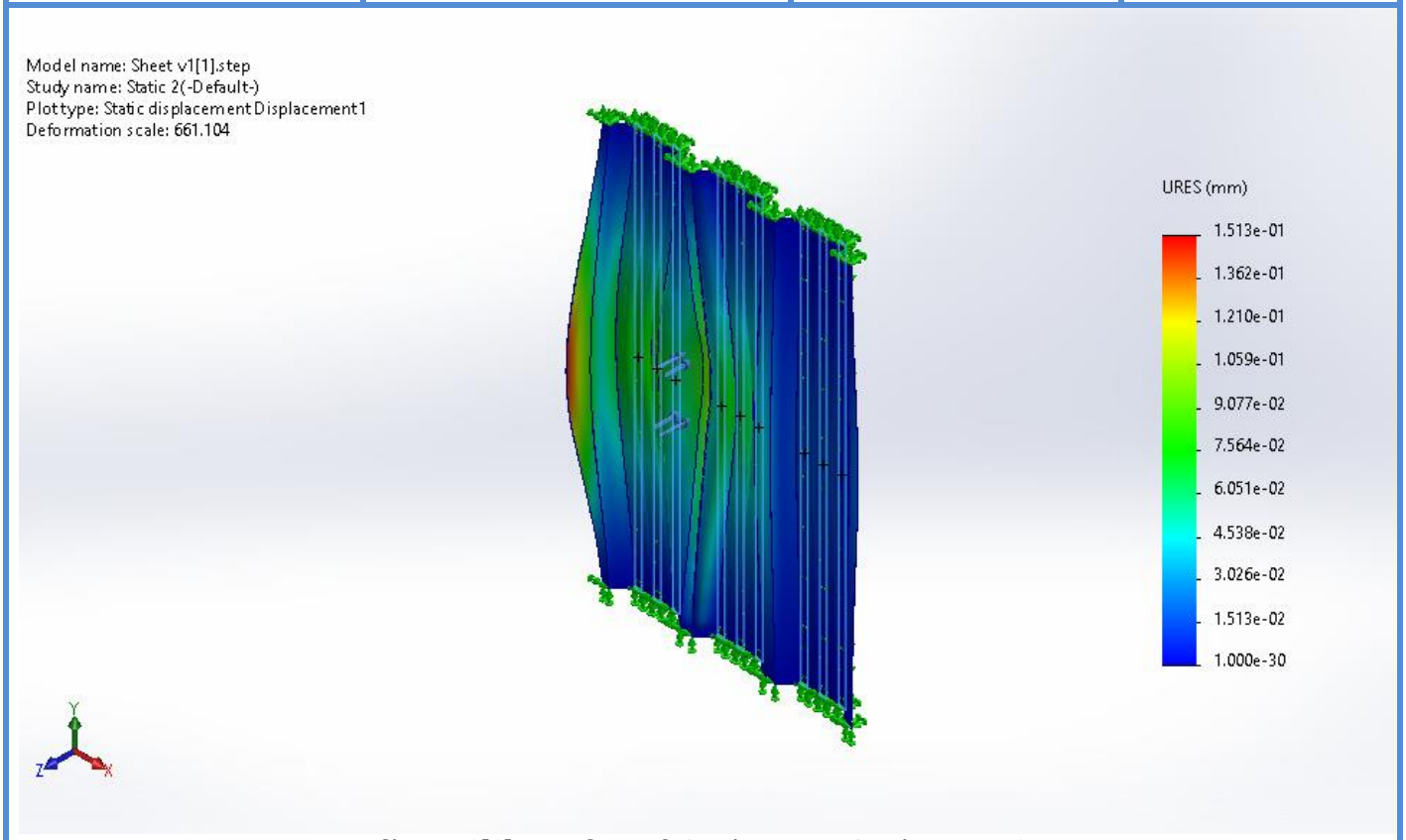
Study Results

Name	Type	Min	Max
Stress1	VON: von Mises Stress	5.095e+04N/m^2 Node: 23258	5.157e+07N/m^2 Node: 22623



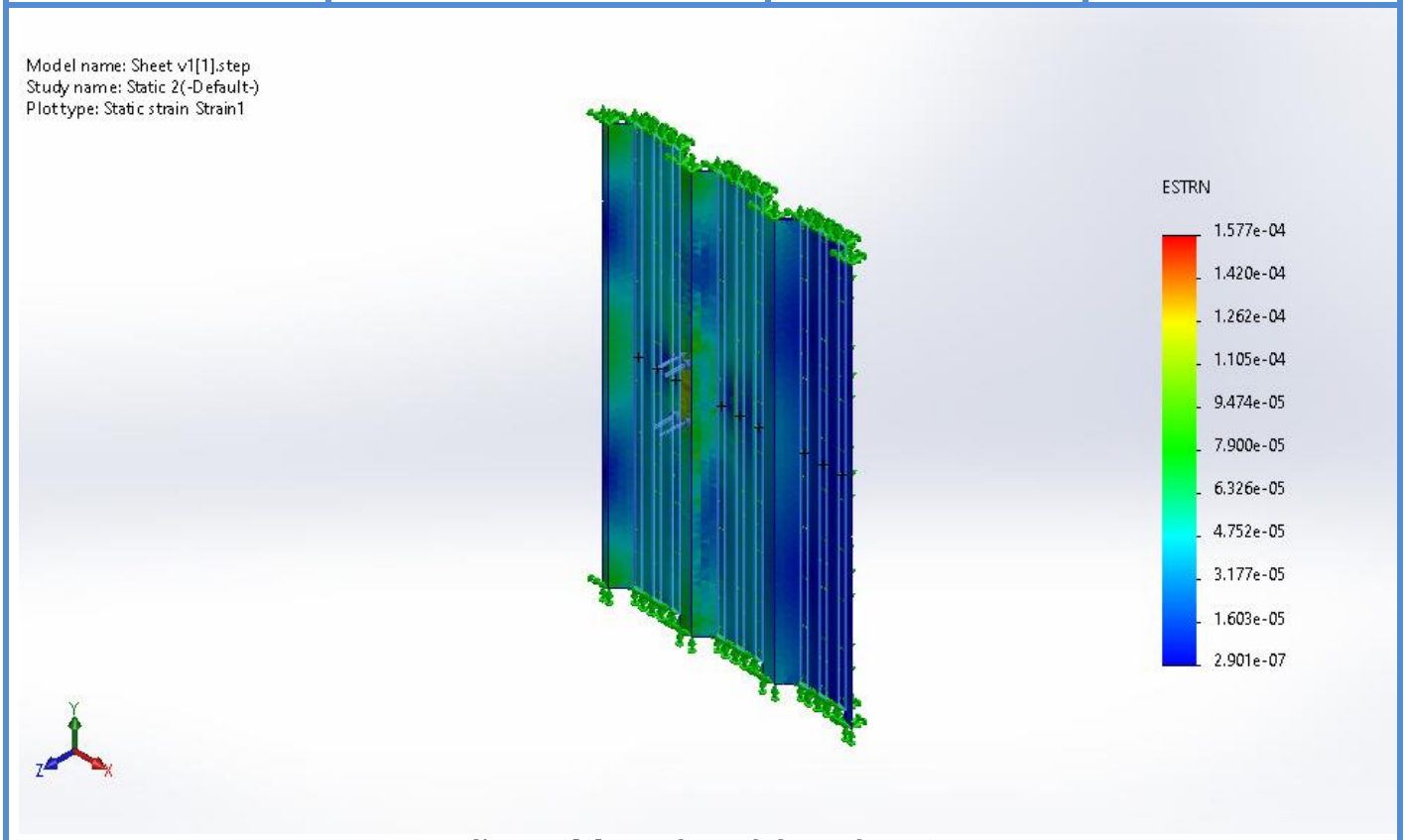
Sheet v1[1].step-Static 2-Stress-Stress1

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0.000e+00mm Node: 2	1.513e-01mm Node: 31579



Sheet v1[1].step-Static 2-Displacement-Displacement1

Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	2.901e-07 Element: 15964	1.577e-04 Element: 15772



Sheet v1[1].step-Static 2-Strain-Strain1