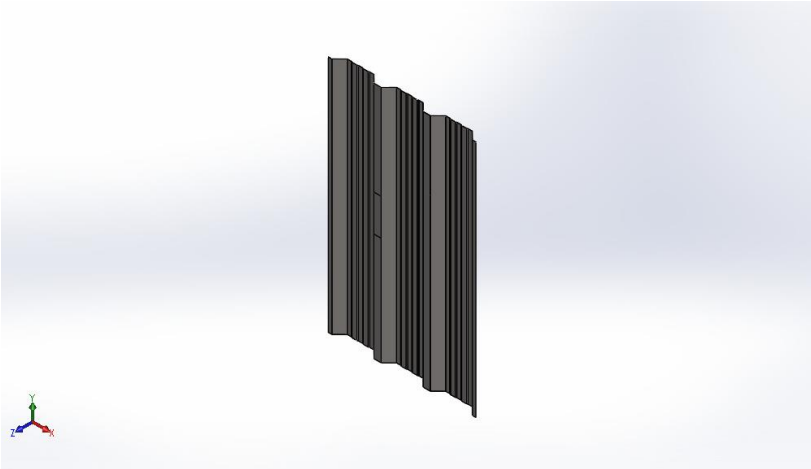


Simulation of Sheet v1[1].step

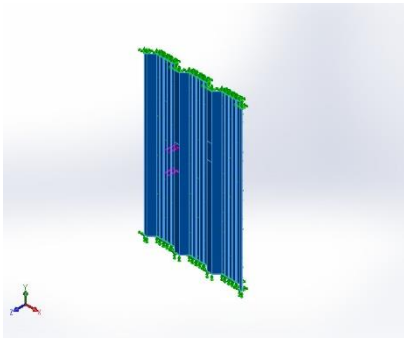
Date: Monday, January 1, 2024
Designer: Solidworks
Study name: Static 2
Analysis type: Static

Table of Contents

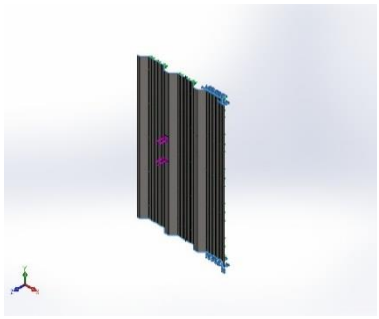
Units

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

Material Properties

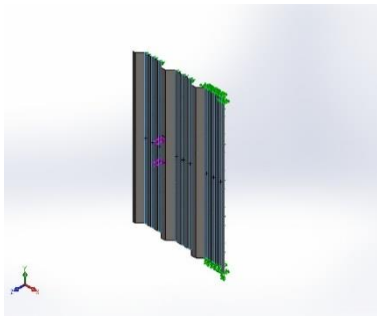
Model Reference	Properties		Components
	**Name:**	Plain Carbon Steel	SolidBody 1(Split Line2)(Sheet v1[1].step)
	Model type:	Linear Elastic Isotropic	
	Default failure criterion:	Max von Mises Stress	
	Yield strength:	2.20594e+08 N/m^2	
	Tensile strength:	3.99826e+08 N/m^2	
	Elastic modulus:	2.1e+11 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	
Curve Data:N/A			

Loads and Fixtures

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

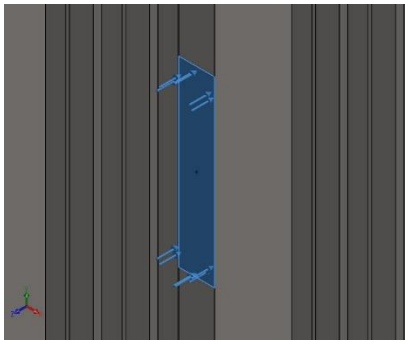
Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	4.29153e-05	0.000384331	-0.334005	0.334006
Reaction Moment(N.m)	0	0	0	0

Roller/Slider-2		**Entities:** 9 face(s) **Type:** Roller/Slider

Resultant Forces

Components	X	Y	Z	Resultant
Reaction force(N)	16.3693	-12.5554	1,023.87	1,024.08
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:** 1,000 N

Resultant Forces

Reaction forces

Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	4.29153e-05	0.000384331	1,000	1,000

Reaction Moments

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

Free body forces

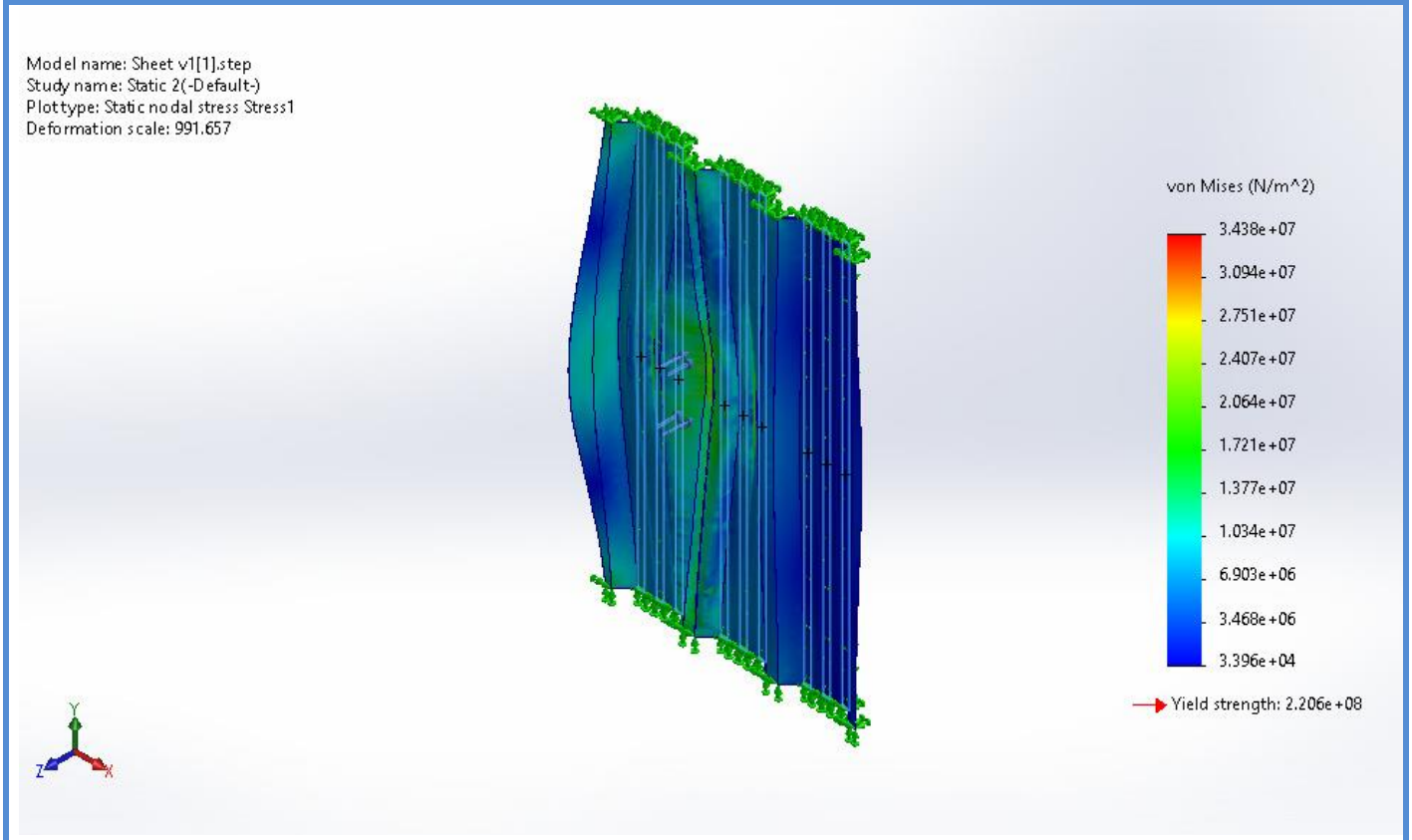
Selection set	Units	Sum X	Sum Y	Sum Z	Resultant
Entire Model	N	0.000164579	0.000279006	4.17233e-05	0.000326606

Free body moments

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

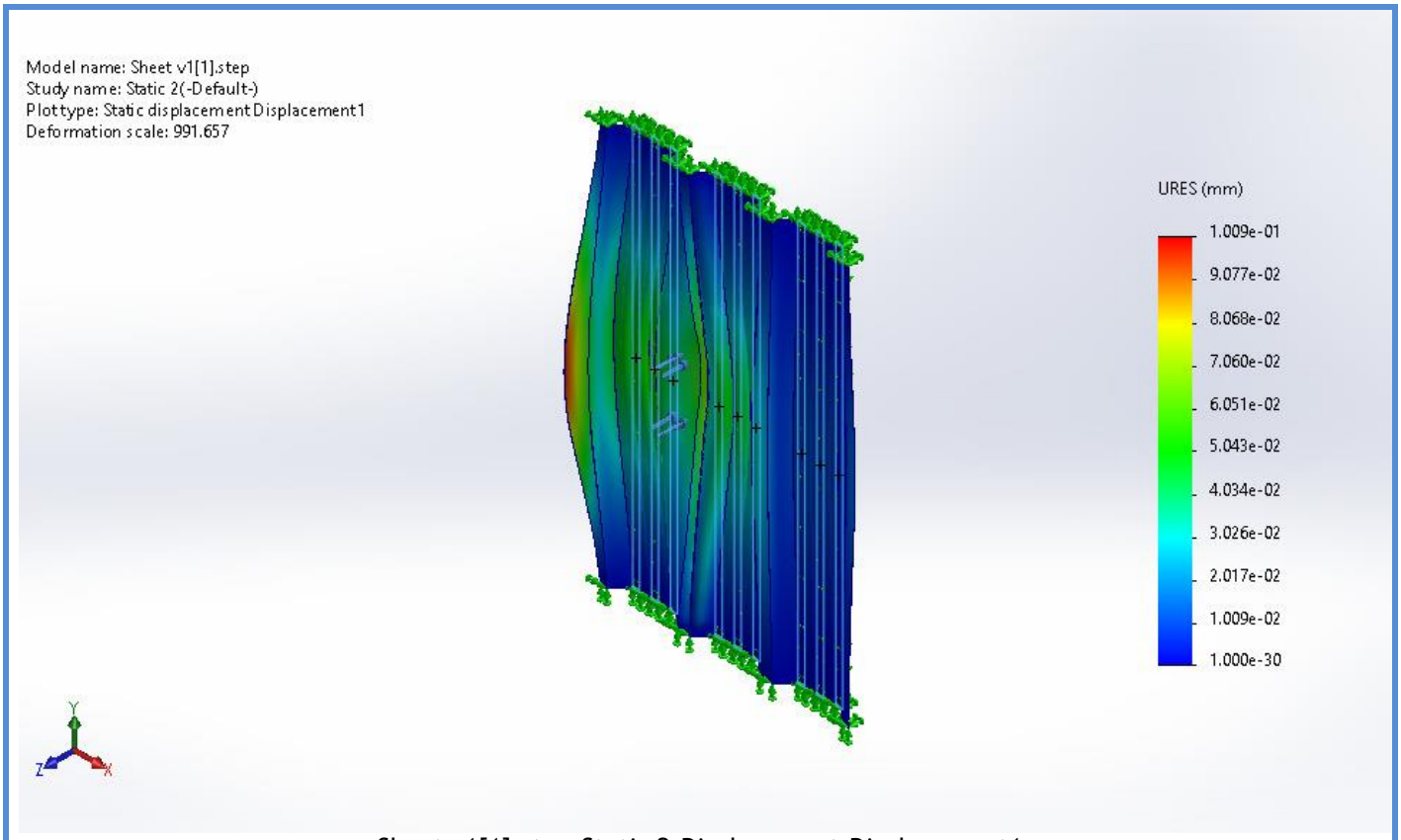
Study Results

Name	Type	Min	Max
Stress1	VON: von Mises Stress	3.396e+04N/m^2 Node: 23258	3.438e+07N/m^2 Node: 22623



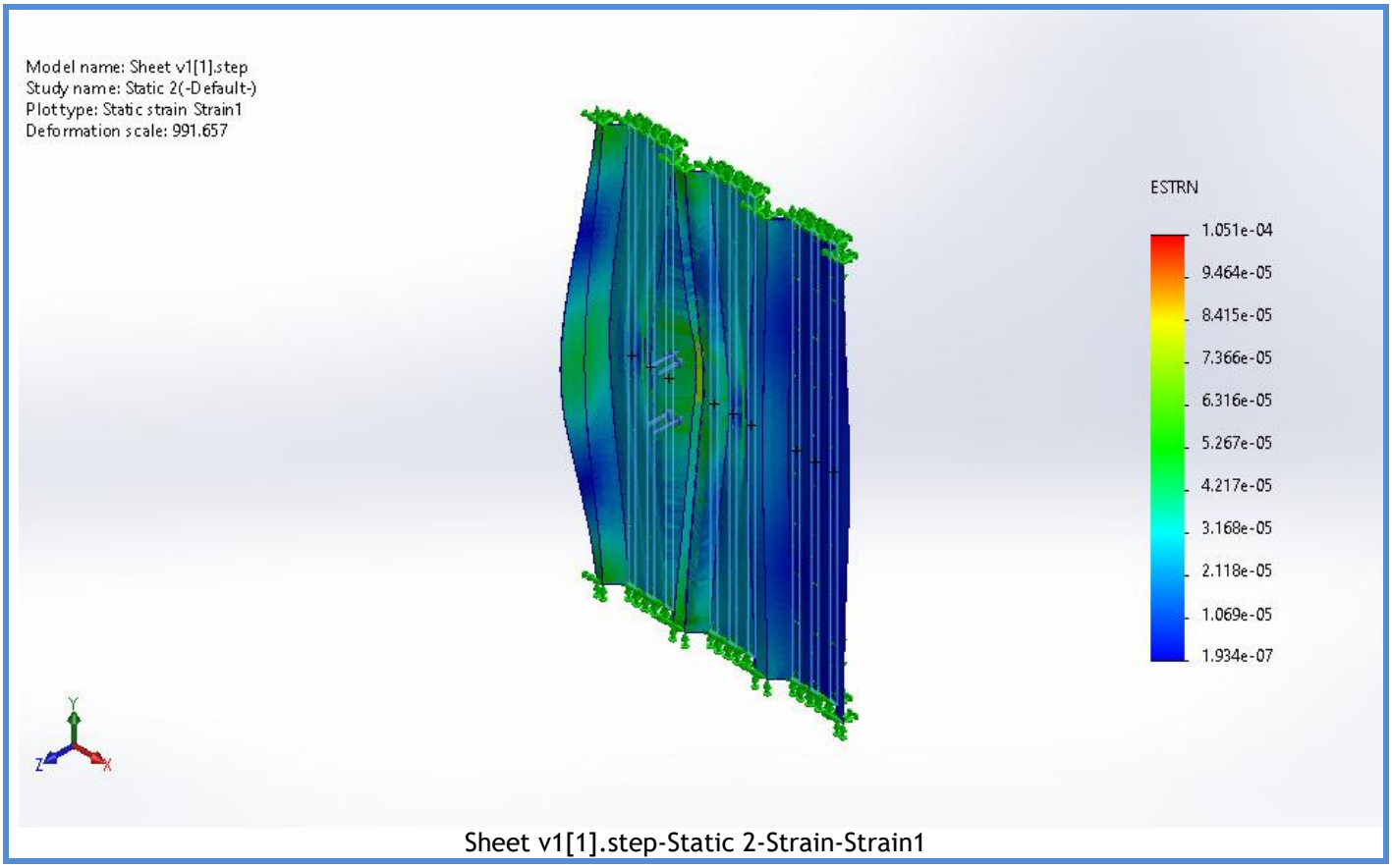
Sheet v1[1].step-Static 2-Stress-Stress1

Name	Type	Min	Max
Displacement1	URES: Resultant Displacement	0.000e+00mm Node: 2	1.009e-01mm Node: 31579



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

Name	Type	Min	Max
Strain1	ESTRN: Equivalent Strain	1.934e-07 Element: 15964	1.051e-04 Element: 15772



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