



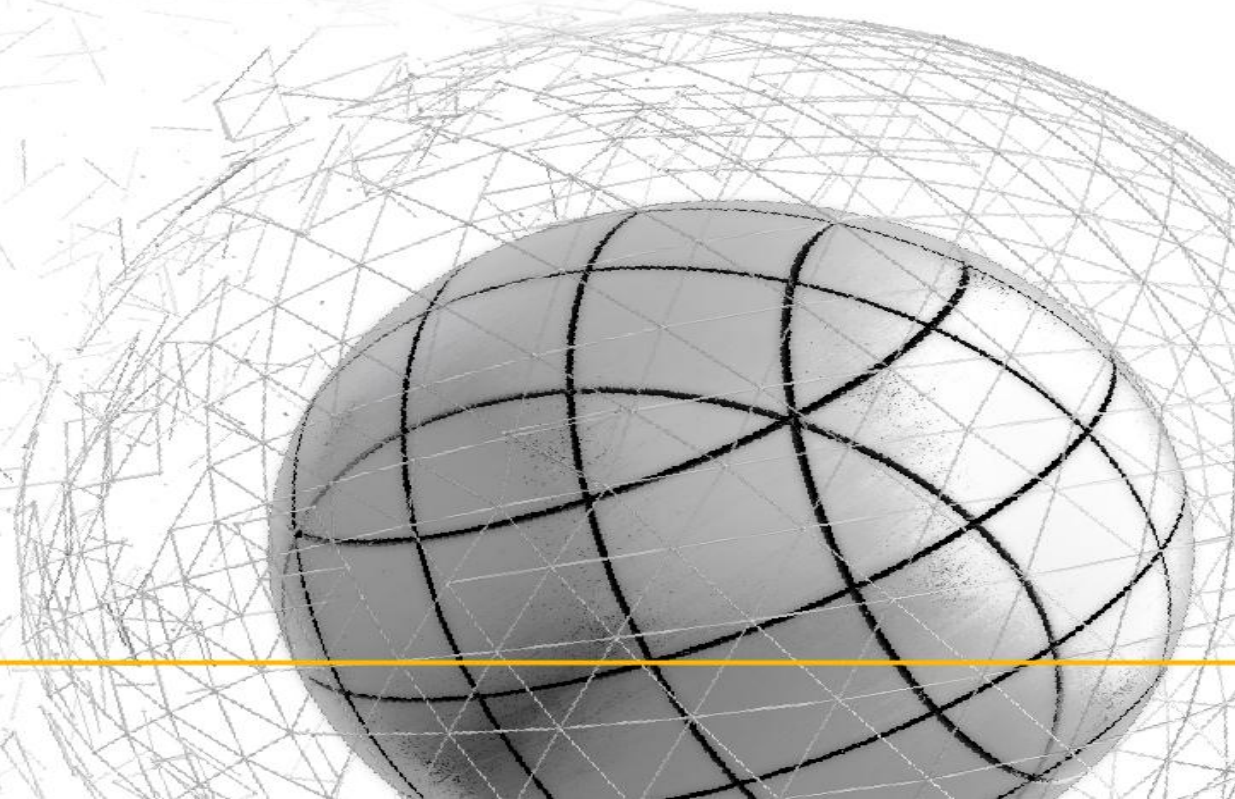
MIDAS

MESH FREE

沈約翰

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Simple, but Everything.



CASE 2 : PANEL BASE

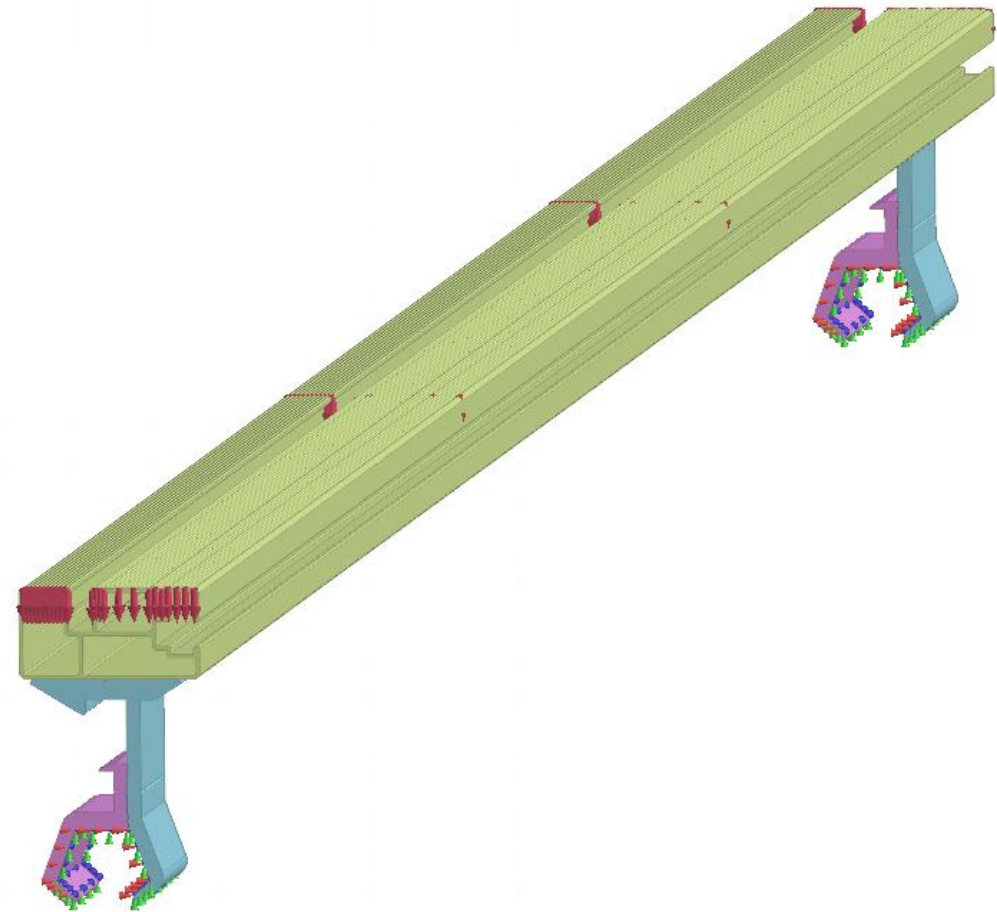
Analysis Case: Linear Static

Material: Aluminum 6063

Boundary Condition: Fixed support at the bottom

Load: 500N at the top

Contact: Weld at all contact points



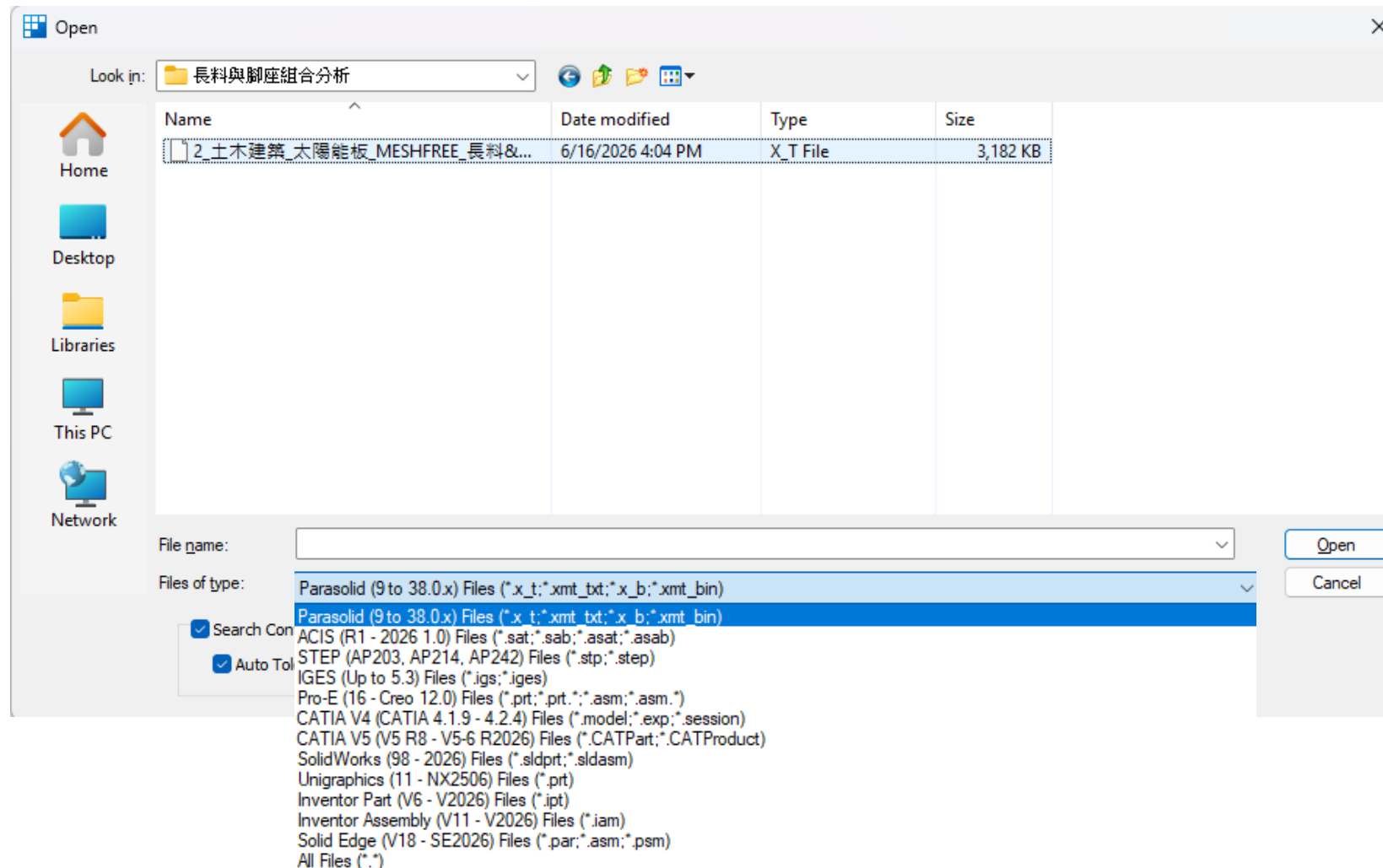
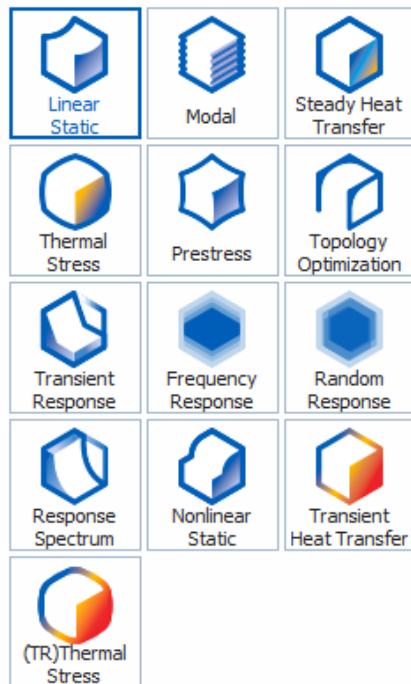
GEOMETRY - IMPORT



Analysis Case

Name Linear Analysis-2

Analysis Case



GEOMETRY - MATERIAL

Model

Material

Color

Model Setting

Body(5)

Material

Contact(4)

Connect Condition

Boundary(1)

Load(1)

Add(Isotropic-Elastoplastic)

Add(Isotropic-Hyperelastic)

Add(Orthotropic-LinearElastic)

Define Material

Aluminum Alloys

Name Al 6063

Color

Coord. Sys. None

1060 Alloy

1345 Alloy

1350 Alloy

2014 Alloy

2018 Alloy

2024 Alloy

3003 Alloy

3003 Alloy

6061 Alloy

7049 Alloy

7079 Alloy

Al 6061-T6

Al 6063

ALDC 12

Aluminum_5085

Aluminum_A356

Load

Edit

Elastoplastic

Thermal

Structural

Elastic Modulus 71250 N/mm²

Poisson's Ratio 0.33

Mass Density 2.69e-06 kg/mm³

Thermal Expansion

Expansion 2.35e-05

Ref. Temperature 0 [°C]

Factor of Safety Calculation

Failure Theory None

Tension 0 N/mm²

Compression 0 N/mm²

Elastoplastic

Plastic Hardening Curve None Function

Stress Strain Curve None Function

Hardening Rule Isotropic

Combined hardening factor 0

Perfect Plastic


Yield Stress 0 N/mm²

General

Mass Proportional Damping 0 1/sec

Stiffness Proportional Damping 0 sec

✓



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ANALYSIS CONDITIONS | CONSTRAINT



Define Boundary Condition

Name
Boundary-1

Select

Face
? Selected 10 Obj...

Reference Object

Type
Global Coordinate System

Symmetry Condition

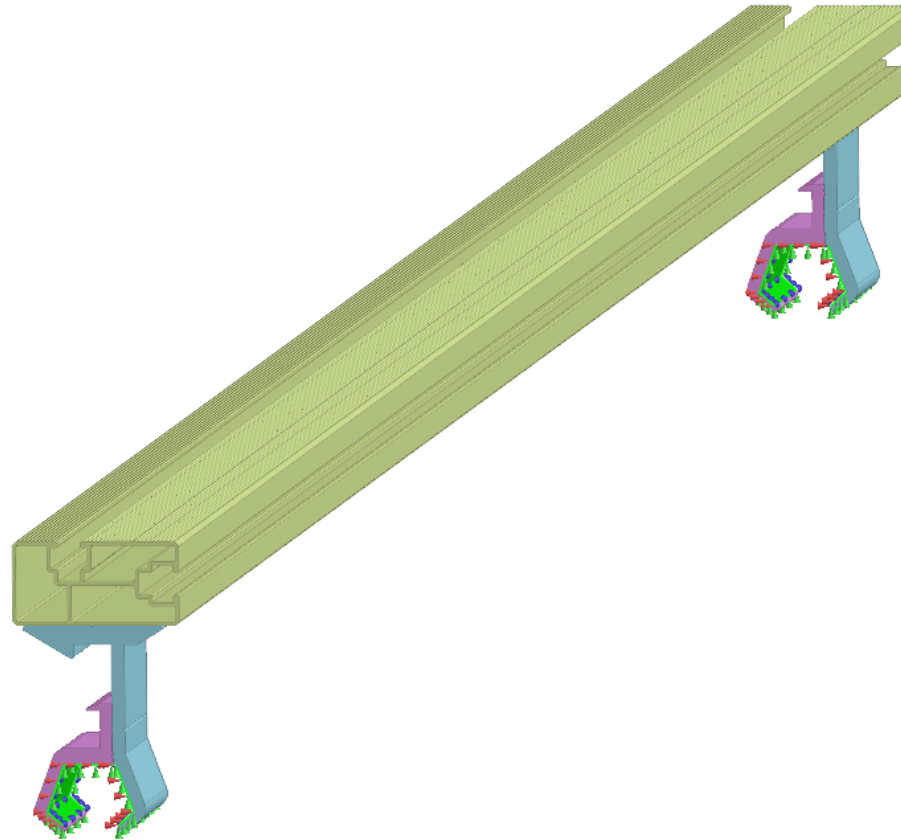
DOF

☒ Tx
☒ Ty
☒ Tz

✓

+

×



ANALYSIS CONDITIONS | LOAD



Define Force

Name
Force-1

Load Category

Load Type
Force

☒ Total
☐ Individual

?
Selected 49 Object(s)

Reference Object

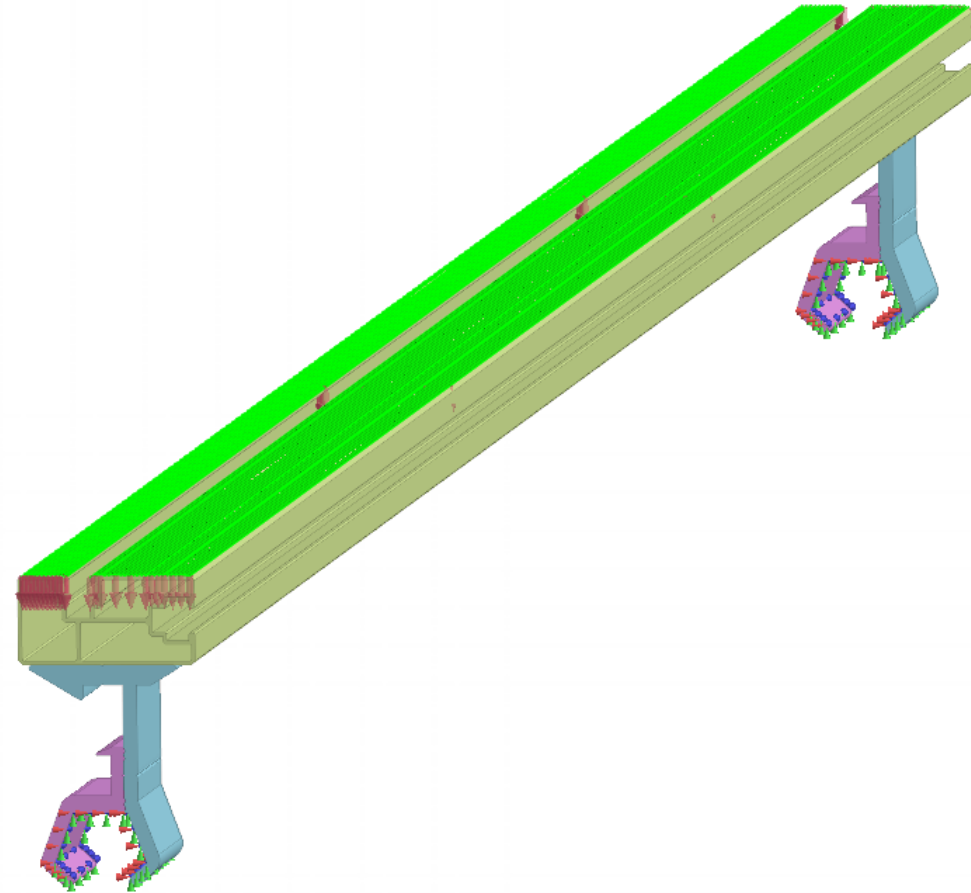
Type
Global Coordinate System

Direction

X
0
N

Y
-500
N

Z
0
N



ANALYSIS CONDITIONS | CONTACT



Define Contact

Name

Select

?
Selected 5 Object(s)

Type

Welded Contact

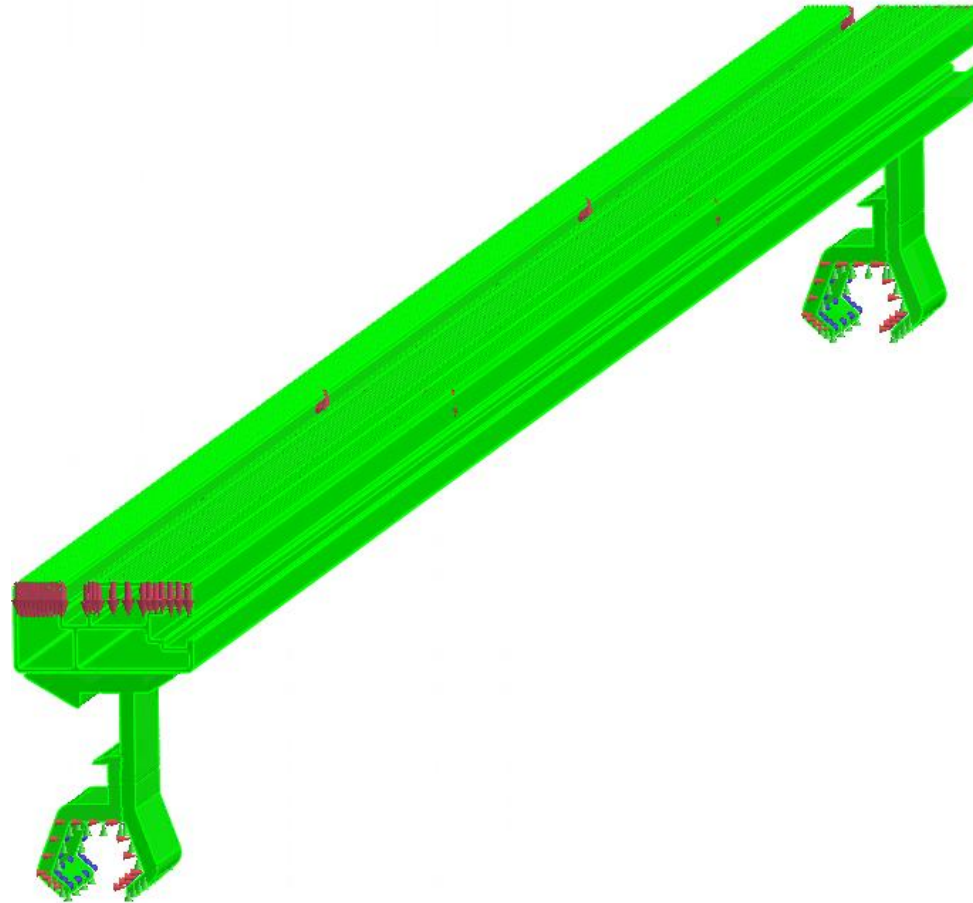
Coefficient of friction 0

Normal Stiffness factor 0.1

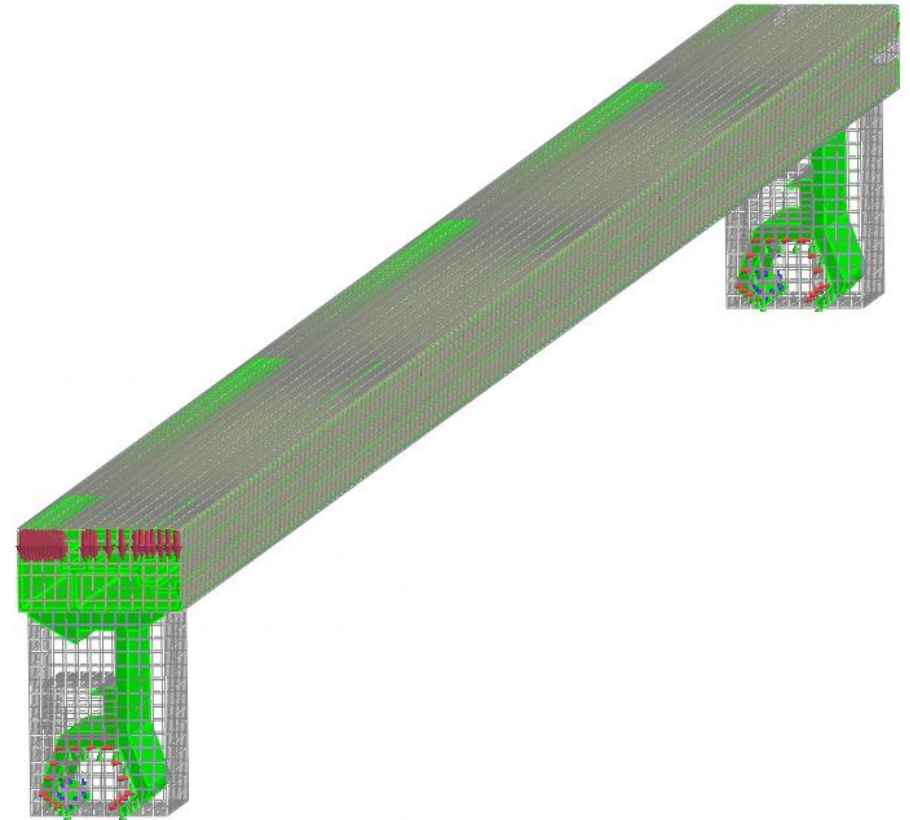
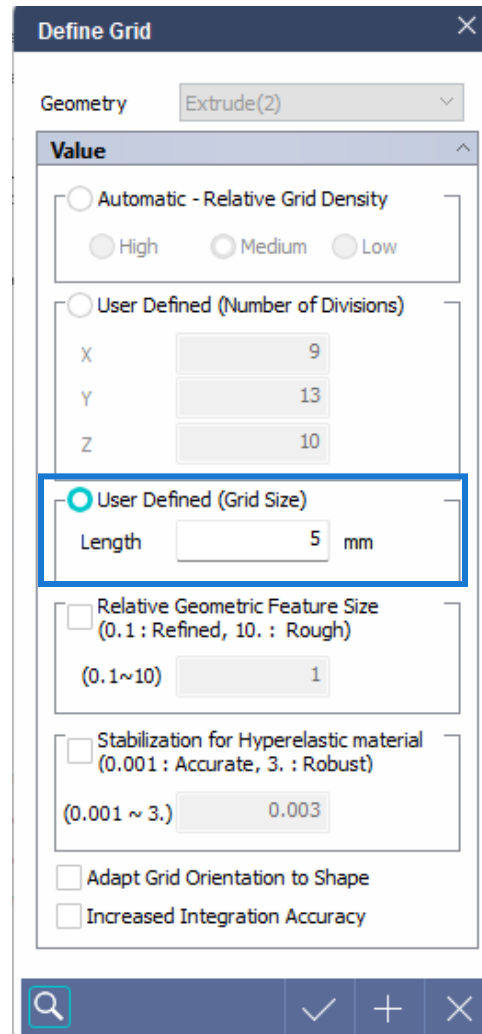
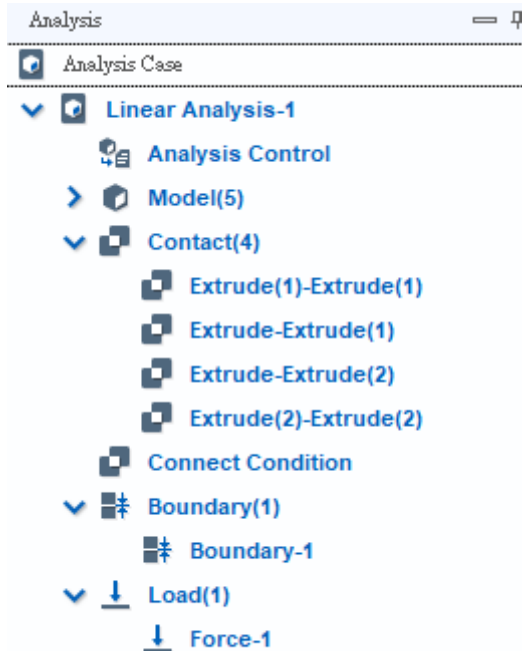
Tangential Stiffness factor 0.01

Search Range

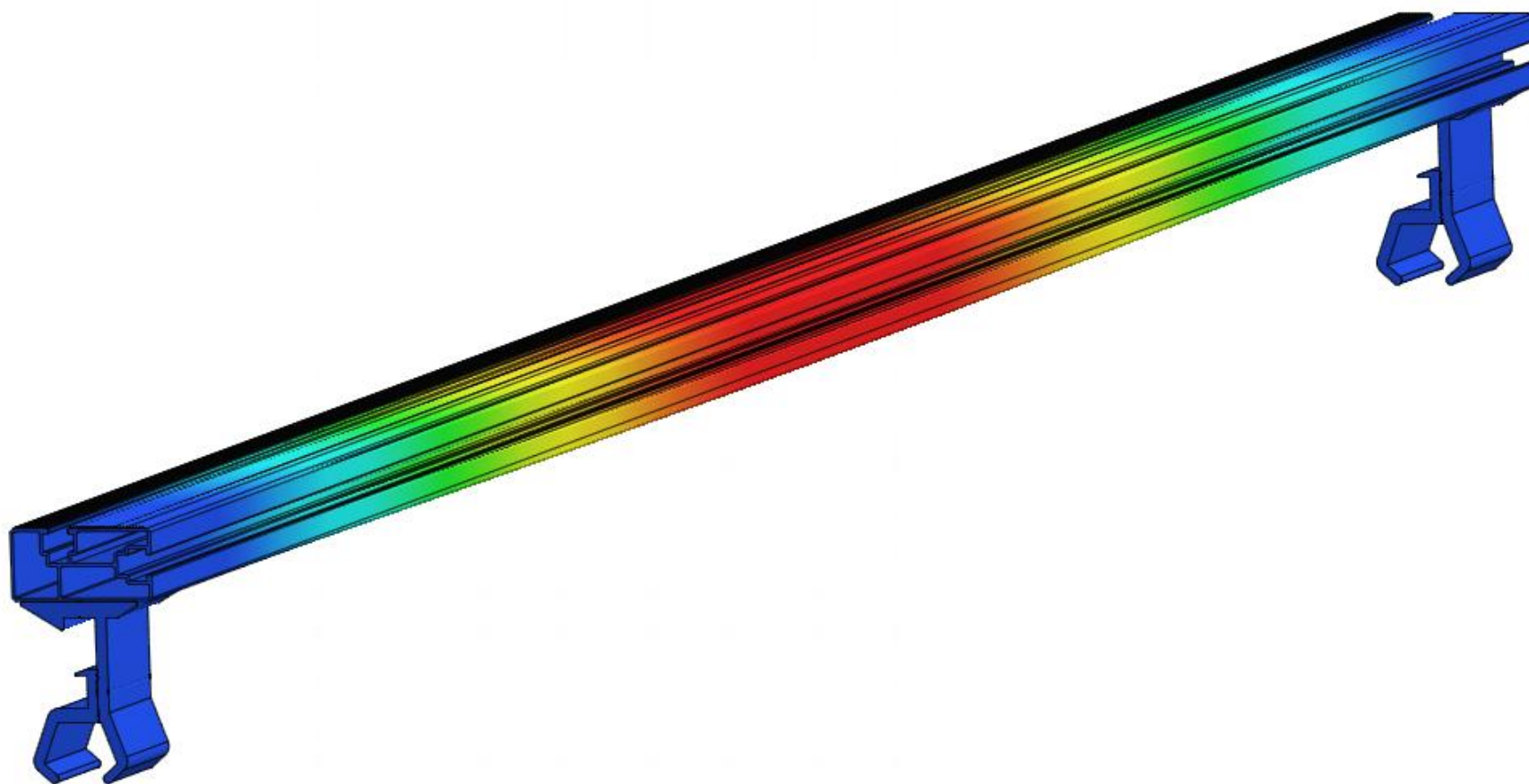
☒ Auto 2.00368 mm



ANALYSIS CONDITIONS



RESULT - DEFORMATION



Deformations

DISPLACEMENT-XYZ

	+3.70397e+00
13.5%	+3.39531e+00
4.2%	+3.08664e+00
4.2%	+2.77798e+00
4.2%	+2.46931e+00
4.2%	+2.16065e+00
4.2%	+1.85198e+00
4.2%	+1.54332e+00
4.2%	+1.23466e+00
1.9%	+9.25992e-01
4.2%	+6.17328e-01
4.2%	+3.08664e-01
47.0%	+2.15968e-12

Linear Analysis-1

Linear Static

Unit : mm

RESULT – STRESS VON MISES

