



MIDAS

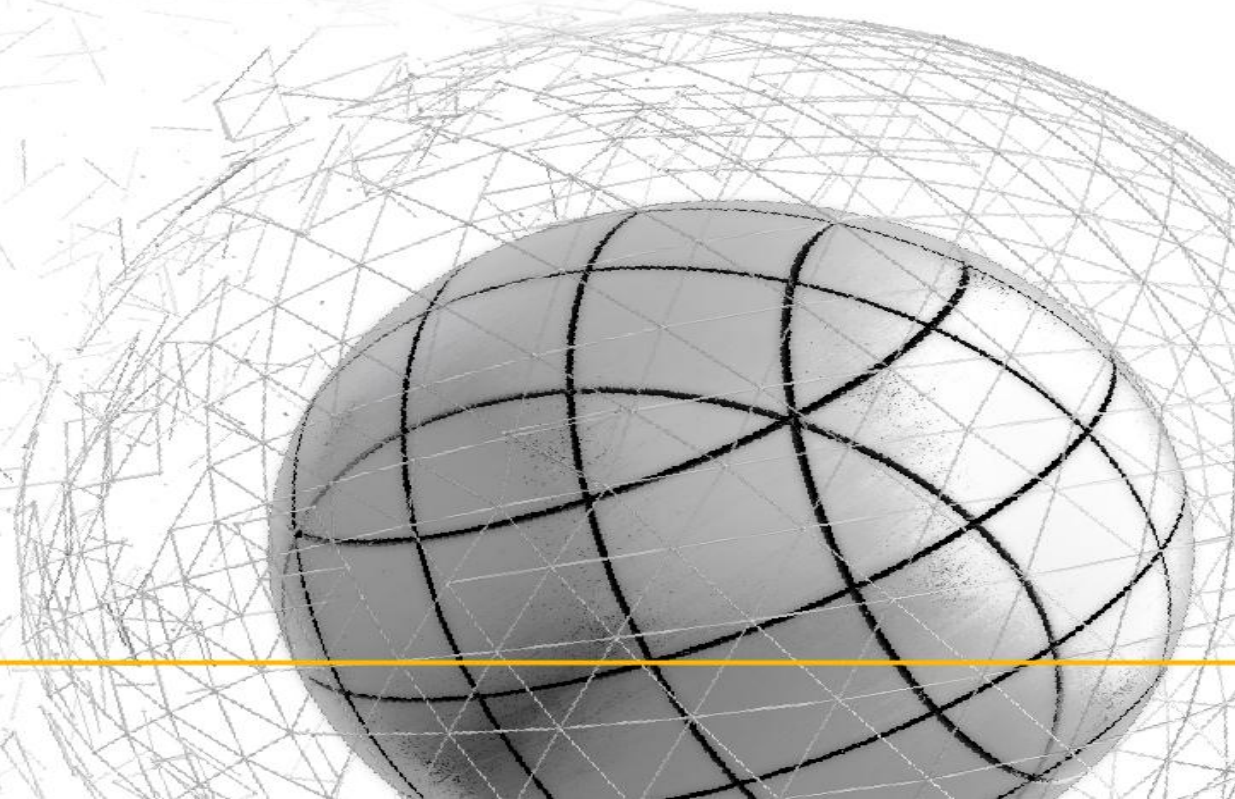
MESH FREE

沈約翰

[support@midasuser.com.tw](mailto:support@midasuser.com.tw)

Simple, but Everything.

---



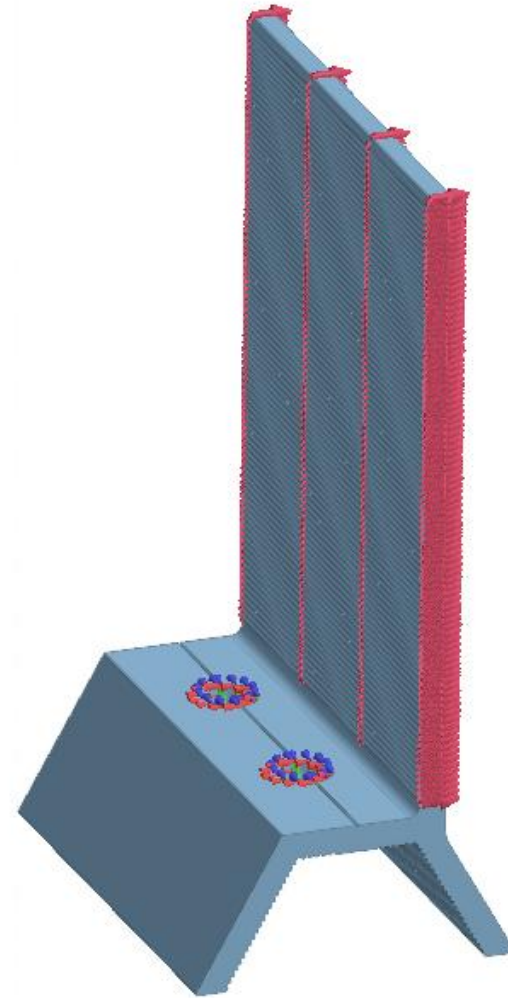
# CASE 1 : PANEL SUPPORT

Analysis Case: Linear Static

Material: Aluminum 6063

Boundary Condition: Fixed support at the hole

Load: 800N



# 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/mm<sup>2</sup>

Poisson's Ratio 0.33

Mass Density 2.69e-06 kg/mm<sup>3</sup>

Thermal Expansion

Expansion 2.35e-05

Ref. Temperature 0 [°C]

Factor of Safety Calculation

Failure Theory None

Tension 0 N/mm<sup>2</sup>

Compression 0 N/mm<sup>2</sup>

Elastoplastic

Plastic Hardening Curve None Function

Stress Strain Curve None Function

Hardening Rule Isotropic

Combined hardening factor 0

Perfect Plastic


Yield Stress 0 N/mm<sup>2</sup>

General

Mass Proportional Damping 0 1/sec

Stiffness Proportional Damping 0 sec

✓



[www.midasuser.com.tw](http://www.midasuser.com.tw)

# ANALYSIS CONDITIONS | CONSTRAINT



Define Boundary Condition

Name
Boundary-1

Select

Face
? Selected 8 Objec...

Reference Object

Type
Global Coordinate System

Symmetry Condition

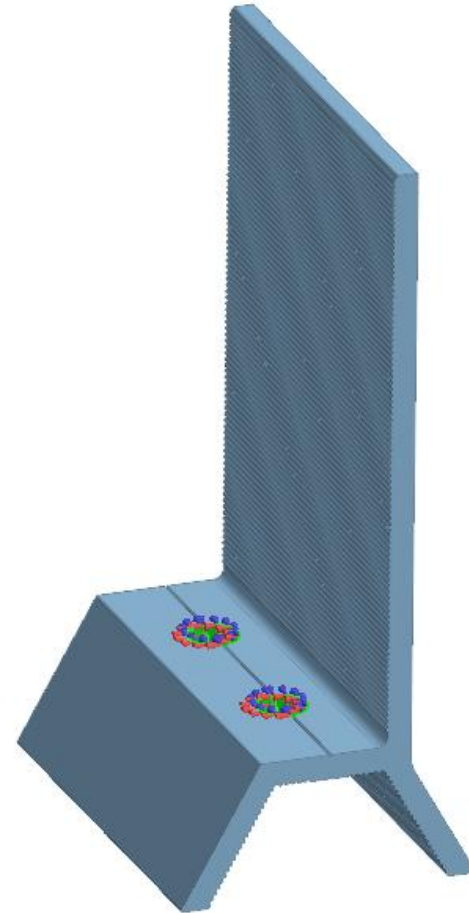
DOF

☒ Tx
☒ Ty
☒ Tz

✓

+

×



# ANALYSIS CONDITIONS | LOAD



Define Force

Name
Force-1

Load Category

Load Type
Force

☒ Total
☐ Individual

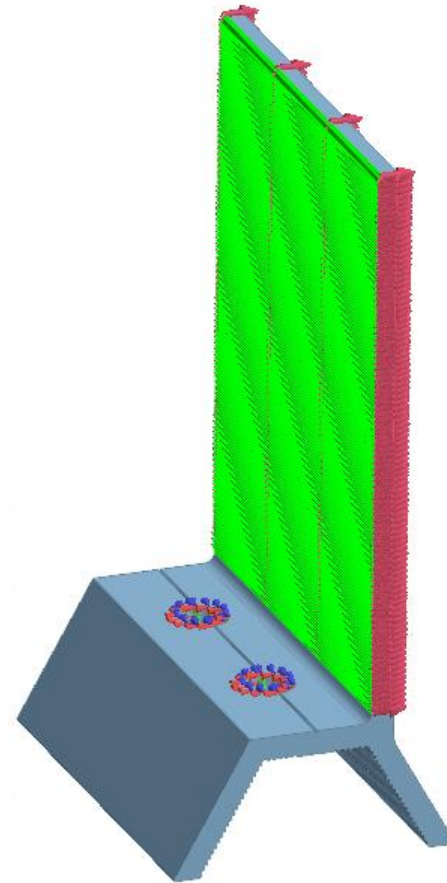
?
Selected 183 Object(s)

Reference Object

Type
Global Coordinate System

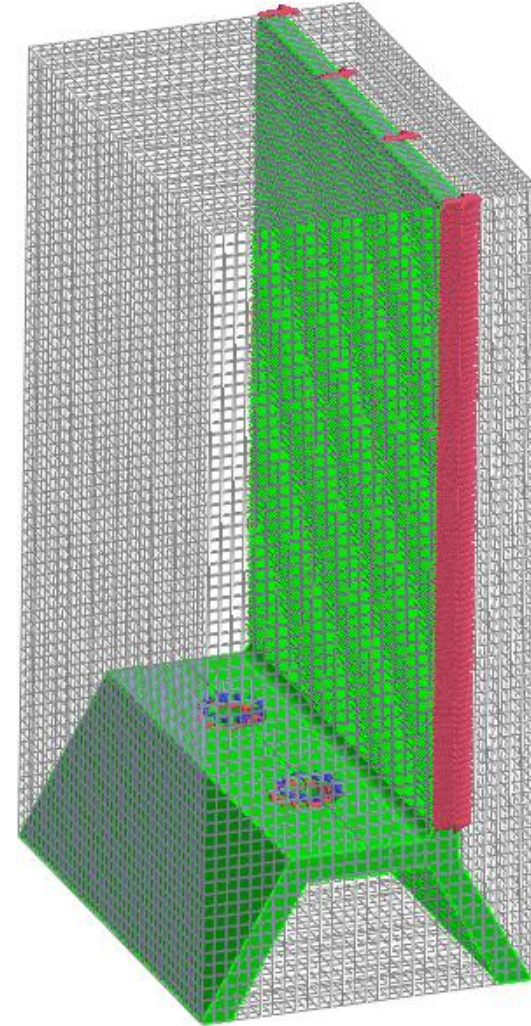
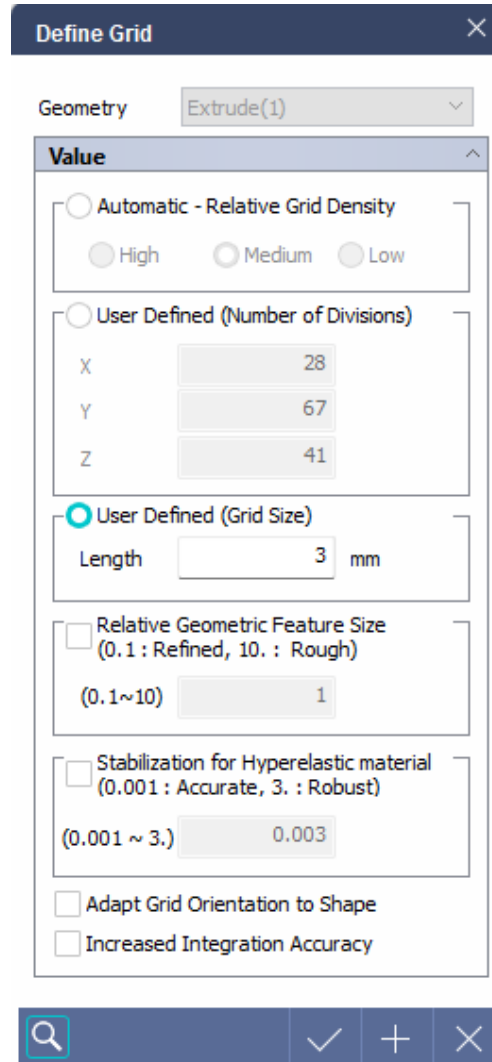
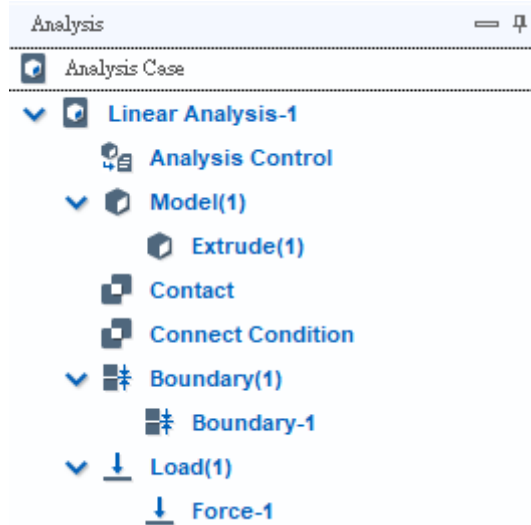
Direction

X	800	N
Y	0	N
Z	0	N

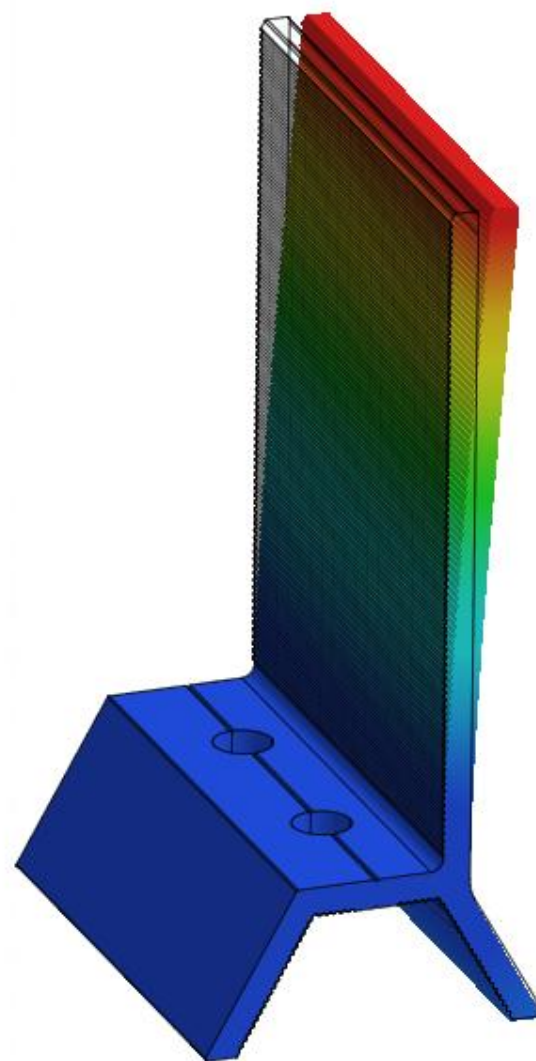




# ANALYSIS CONDITIONS

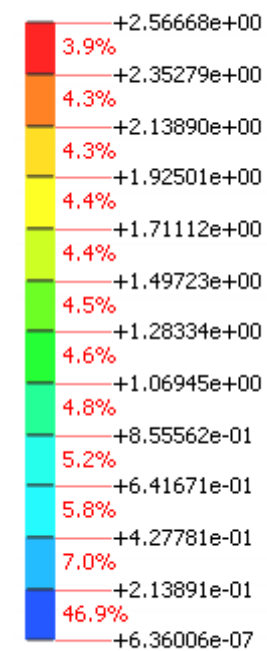


# RESULT - DEFORMATION



## Deformations

DISPLACEMENT-XYZ

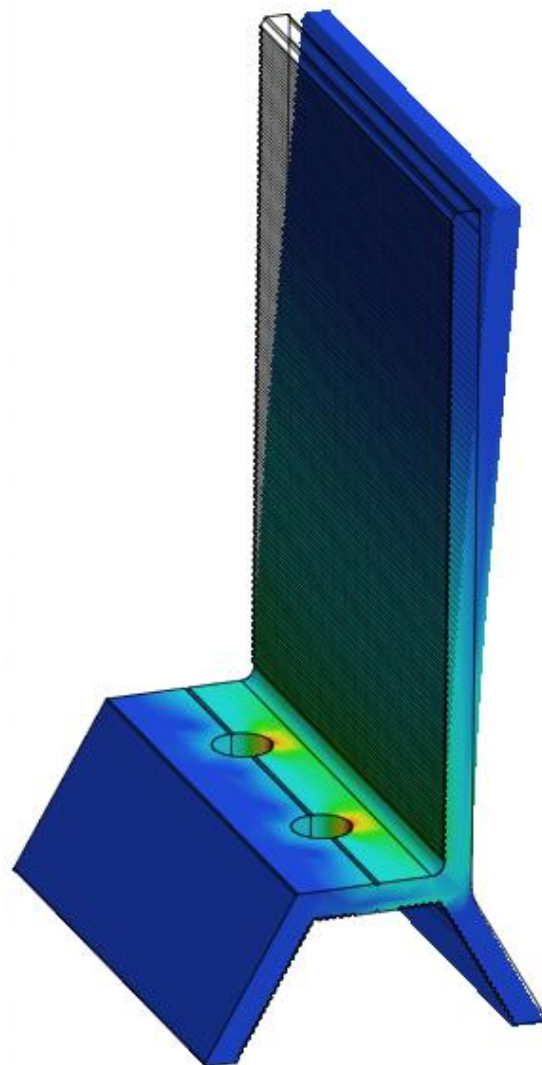


Linear Analysis-1

Linear Static

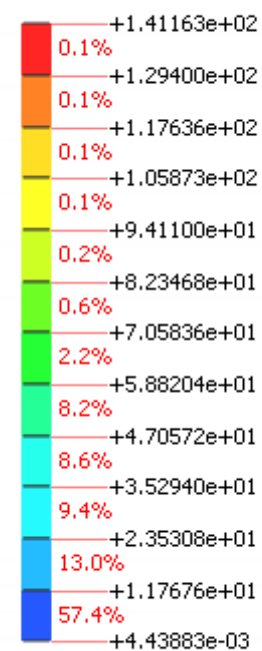
Unit : mm

# RESULT – STRESS VON MISES



## Stress

STRESS VON MISES



Linear Analysis-1

Linear Static

Unit : N/mm<sup>2</sup>