

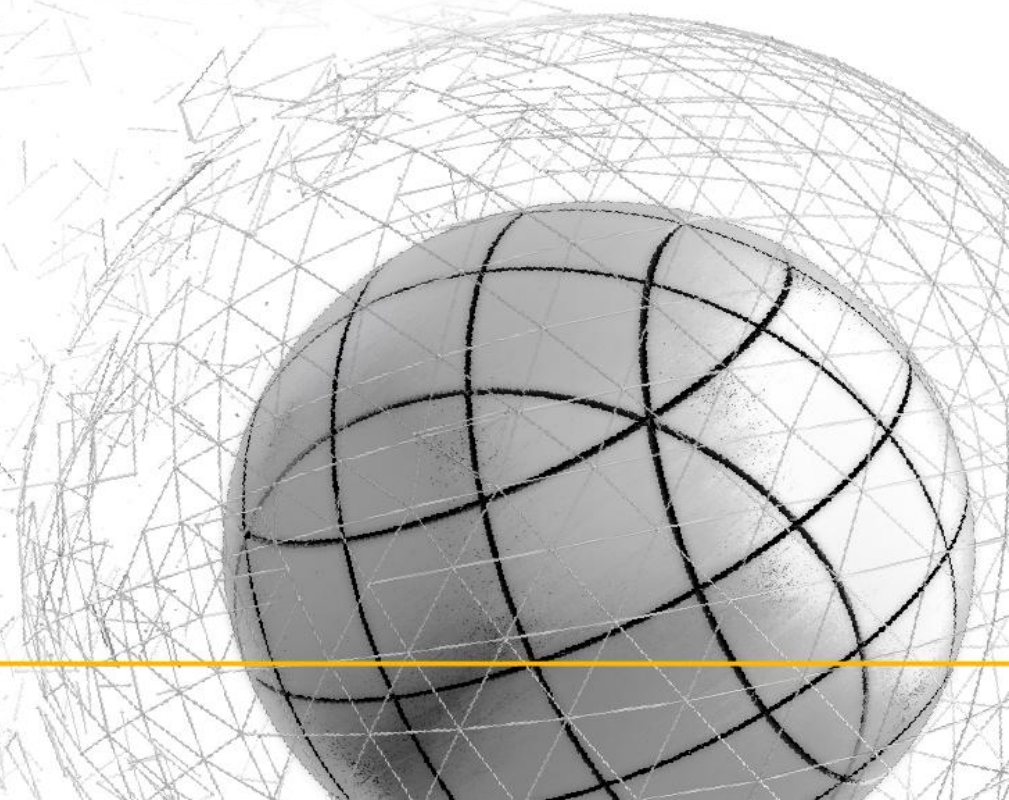
The logo for MIDAS MESH FREE is positioned on the left side of the slide. It features a blue icon composed of six squares arranged in a 3x2 grid to the left of the text "MIDAS MESH FREE". The word "MIDAS" is in a smaller, blue, sans-serif font, while "MESH FREE" is in a larger, bold, black, sans-serif font.

MIDAS MESH FREE

沈約翰

support@midasuser.com.tw

Simple, but Everything.



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- GUI/Start Page
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- Language(中/英切換)

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MeshFree Environment

- Installation
- GUI/Start Page
- License
- Language(中/英切换)

資源下載

MeshFree

NFX

CFD

FEA NX

GTS NX

MESHFREE

下載主程式與Patch時，請注意版本差異

MIDAS軟體下載

檔案下載

MIDAS軟體下載

MeshFree-MESHFREE2025R2主程式

檔案下載

MIDAS軟體下載

MeshFree-MeshFree 2025R2更新檔_20251024

Name	Date modified	Type	Size
ISetupPrerequisites	5/28/2025 9:36 AM	File folder	
Language	5/28/2025 9:36 AM	File folder	
0x0409	5/28/2025 9:35 AM	Configuration sett...	22 KB
data1	5/28/2025 9:35 AM	Cabinet File	3,750 KB
data1.hdr	5/28/2025 9:35 AM	HDR File	1,686 KB
data2	5/28/2025 9:36 AM	Cabinet File	2,257,668 KB
ISetup.dll	5/28/2025 9:36 AM	Application extens...	568 KB
layout.bin	5/28/2025 9:36 AM	BIN File	10 KB
setup	5/28/2025 9:36 AM	BMP File	616 KB
setup	5/28/2025 9:36 AM	Application	788 KB
setup	5/28/2025 9:36 AM	Configuration sett...	5 KB
setup.inx	5/28/2025 9:36 AM	INX File	250 KB
setup.isn	5/28/2025 9:36 AM	ISN File	83 KB

MeshFree資訊



midas MeshFree (V450, Release No. 1) 64bit (May 28 2024)

Easy-Fast Solution for True Analysis-driven Design

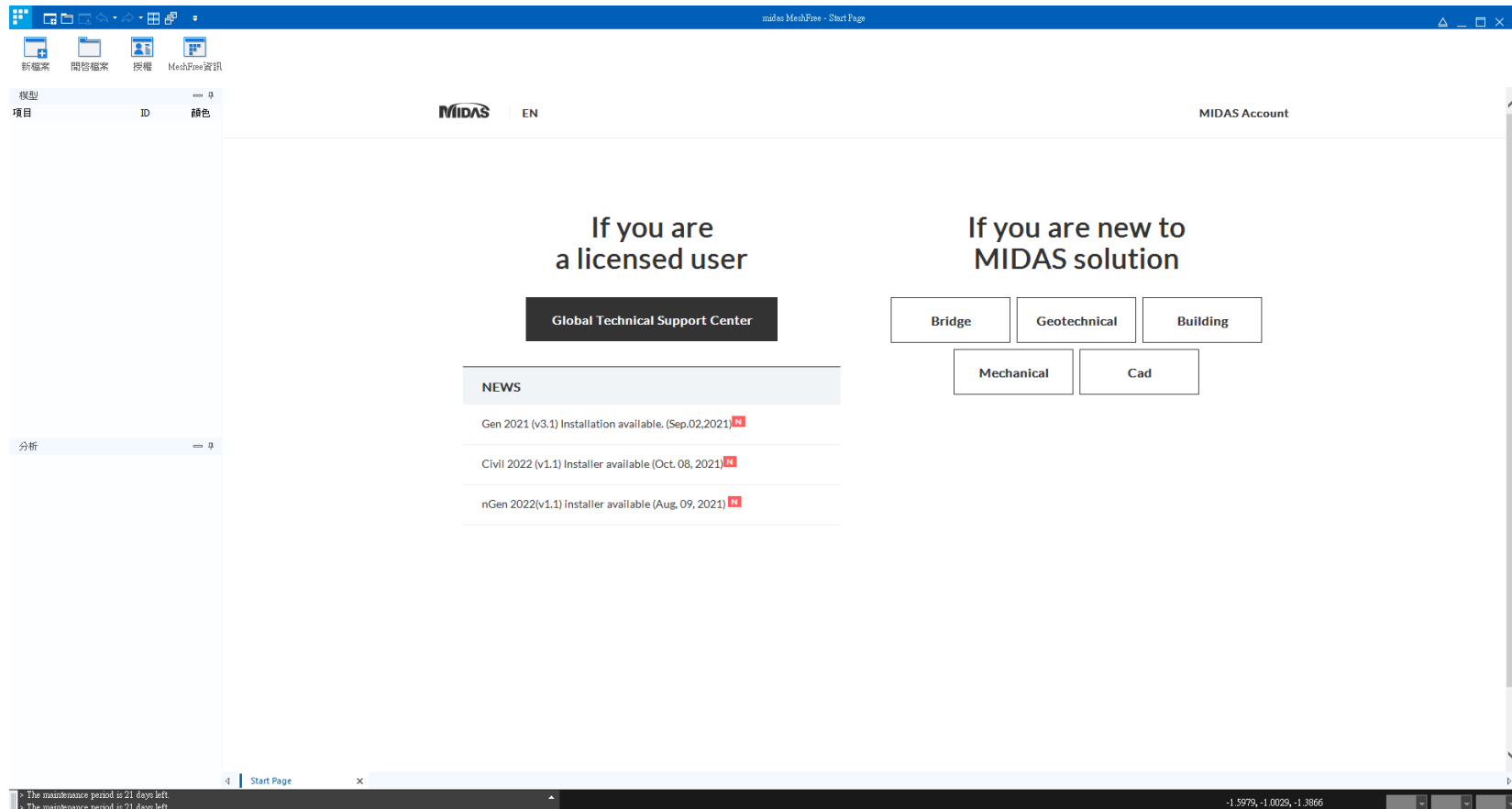
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License

<http://www.MidasUser.com/>

OK

Link:
<https://www.midasuser.com.tw/SolidSimulation/download>



midas MeshFree - Start Page

新檔案 開啓檔案 授權 meshFree資訊

模型 項目 ID 顏色

MIDAS EN MIDAS Account

許可證註冊

☒ web認證

☐ 硬體鎖

☐ Network (FlexNet Manager)

許可認證

ID

密碼

金鑰號

註冊

新增新帳戶

☐ 使用代理伺服器

Lock Option

You can select your desired program options.

(0/3)TWENMEC

Option

CAD Interface

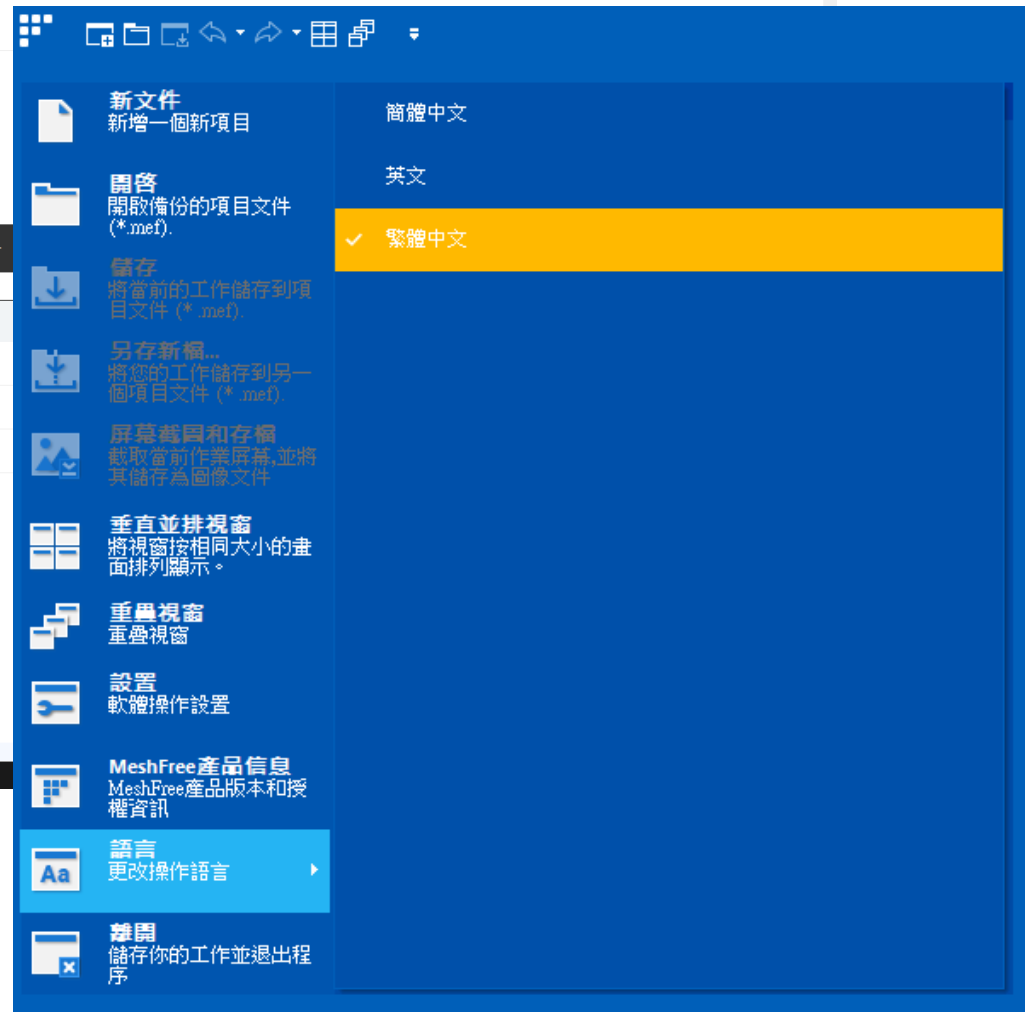
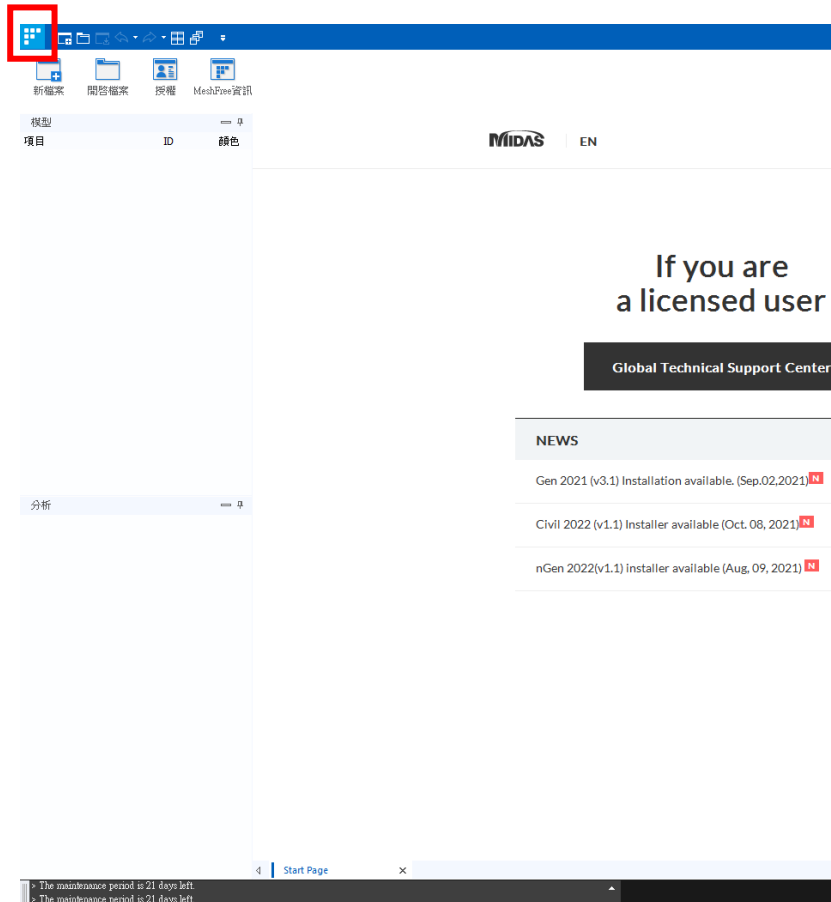
0/3 ☒ IGES	0/3 ☒ STEP
0/3 ☒ SolidEdge	0/3 ☒ UG/NX
0/3 ☒ Pro/E	0/3 ☒ SolidWorks
0/3 ☒ Inventor	0/3 ☒ CATIA v4,5

Analysis

0/3 ☒ Linear Static	0/3 ☒ Modal
0/3 ☒ Heat Transfer	0/3 ☒ Nonlinear Static
0/3 ☒ Linear Dynamic	0/3 ☒ Fatigue
0/3 ☒ Topology Optimazation	

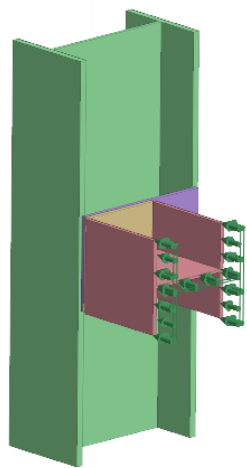
Start Page

The maintenance period is 21 days left.
The maintenance period is 21 days left.

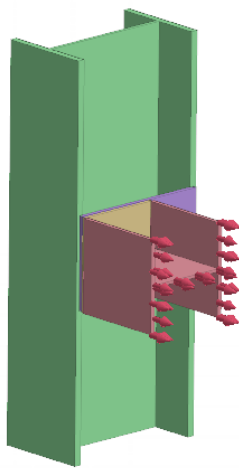




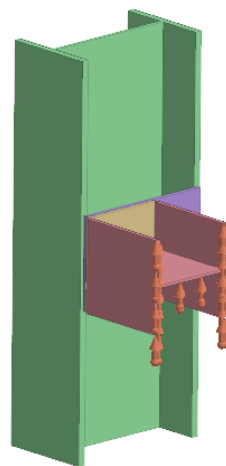
CASE 1: 格點尺寸和載荷類型



Pressure



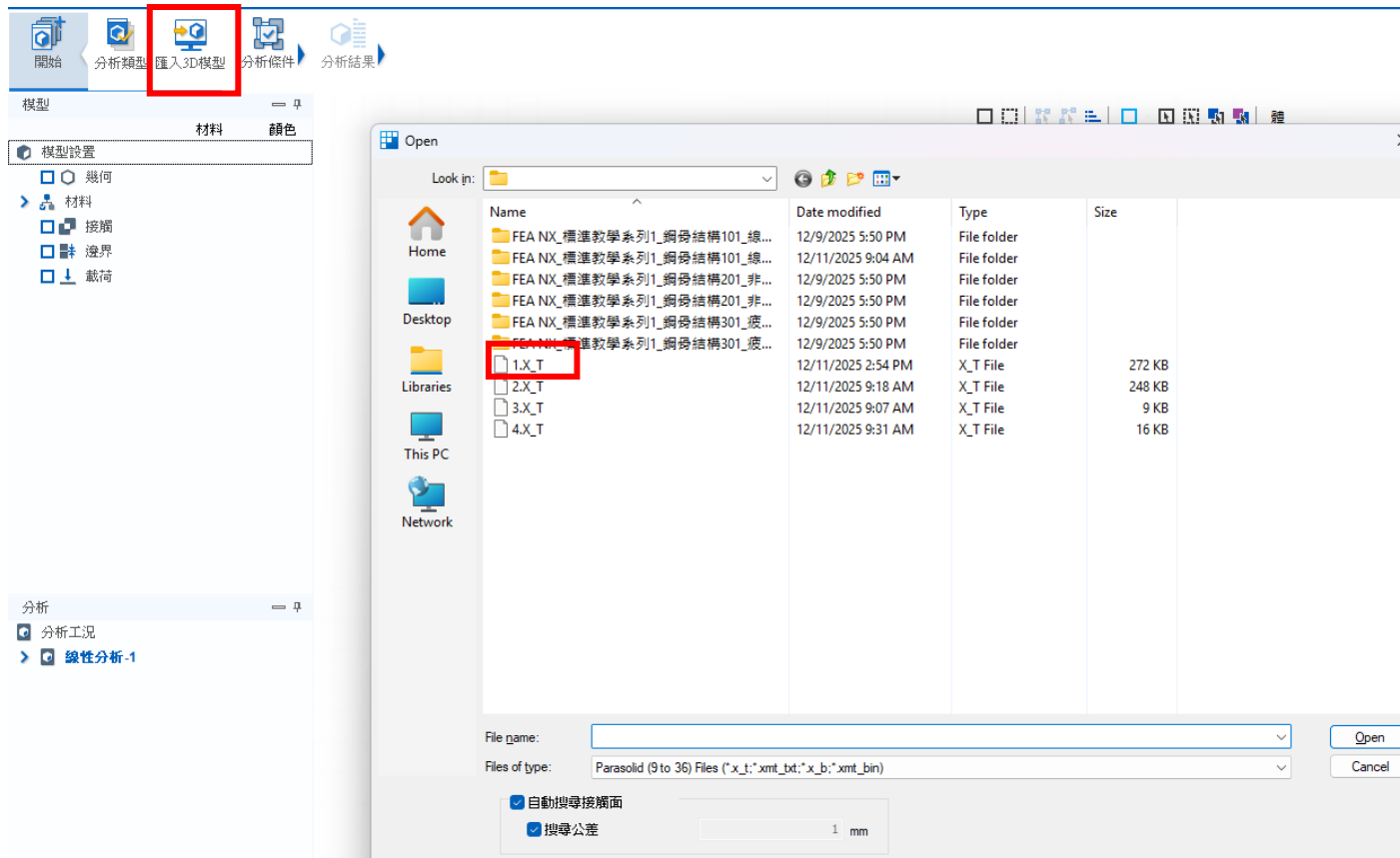
Force

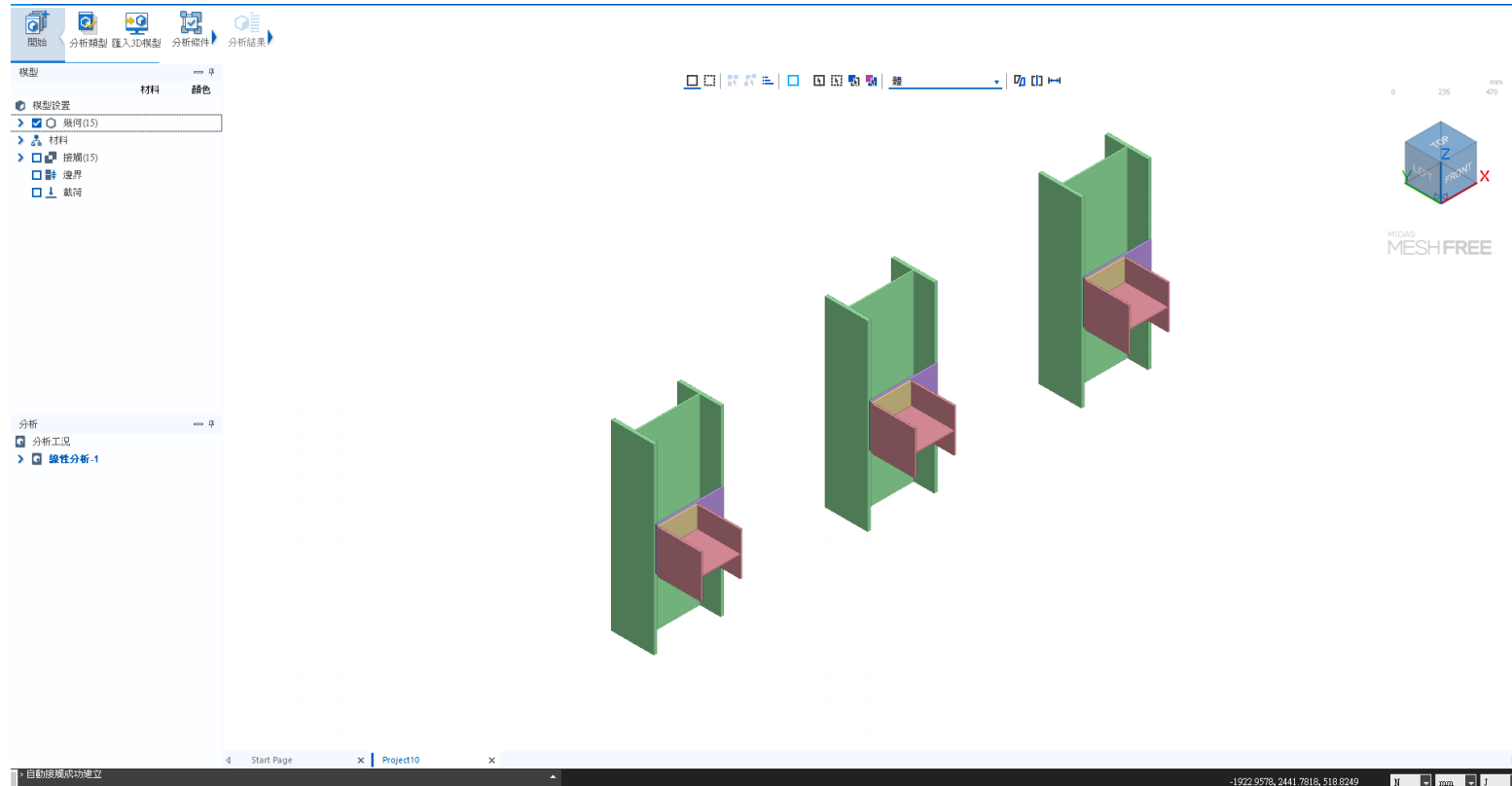


Displacement

CASE OVERVIEW/HIGHLIGHTS

1. Material
2. Boundary Conditions
3. Load Type
4. Weld Contact
5. Grid Size





模型設置

- 幾何
- 材料
- 接觸(20)
- 邊界(1)
- 載荷(2)

名稱: CNS(S)_SS490 顏色: 藍色 座標系: 無

彈塑性 熱

結構

彈性模量: 205940 N/mm²

泊松比: 0.3

質量密度: 7.85e-006 kg/mm³

熱膨脹係數: 1.1e-005

參考溫度: 0 [°C]

計算安全係數

失效理論: 無

拉伸: 0 N/mm² 壓縮: 0 N/mm²

彈塑性

硬化硬化曲線: 無 函數

應力-應變曲線: 無 函數

硬化法則: 等向性

綜合硬化因子(0.0-1.0): 0

理想塑性

屈服應力: 0 N/mm²

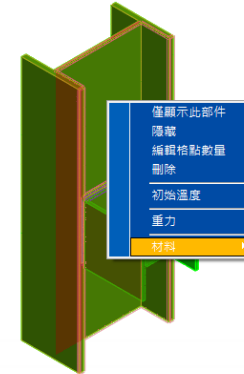
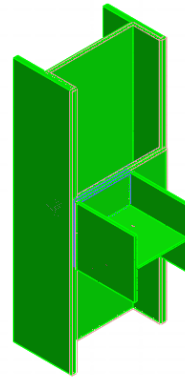
一般

質量比例阻尼: 0 1/sec

剛度比例阻尼: 0 sec

結構阻尼係數: 0

載入 編輯



模型設置

- 幾何

僅顯示此部件

隱藏

編輯粘貼數量

刪除

初始溫度

重力

材料

Alloy Steel

CNS(S)_SS490

添加: 材料(彈塑性)

添加: 材料(超彈性)

模型設置

- 幾何

Ae CNS(S)_SS490

Ae(1) CNS(S)_SS490

Ae(2) CNS(S)_SS490

Ae(3) CNS(S)_SS490

Ae(4) CNS(S)_SS490

Ae(5) CNS(S)_SS490

Ae(6) CNS(S)_SS490

Ae(7) CNS(S)_SS490

Ae(8) CNS(S)_SS490

Ae(9) CNS(S)_SS490

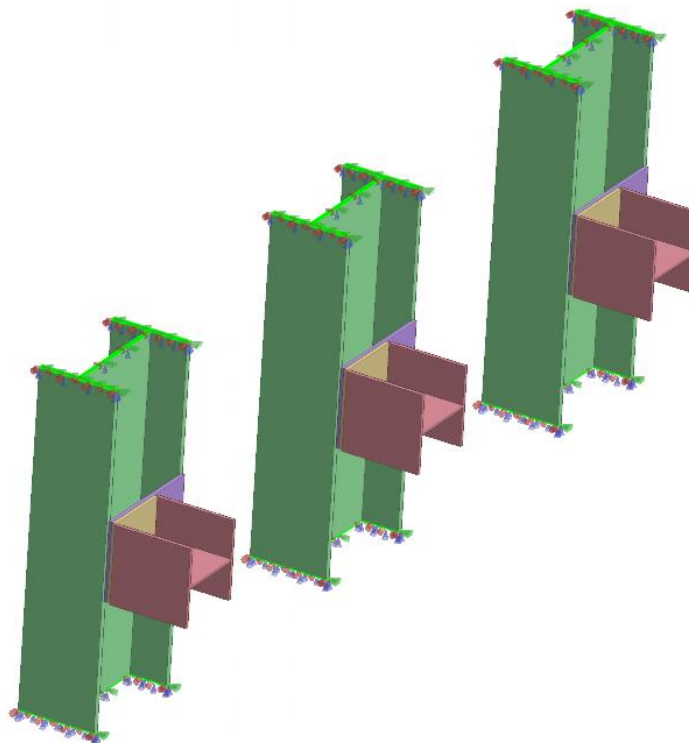
Ae(10) CNS(S)_SS490

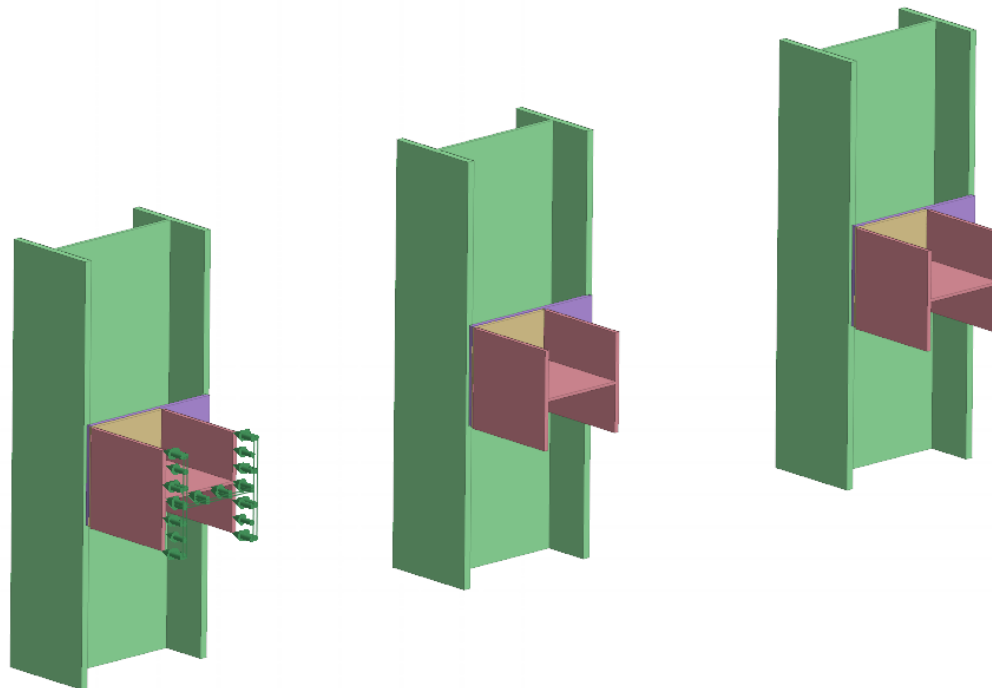
Ae(11) CNS(S)_SS490

Ae(12) CNS(S)_SS490

Ae(13) CNS(S)_SS490

Ae(14) CNS(S)_SS490







力

名稱 力-1

負載

類型 集中載荷

☒ 合計
 ☐ 個別

?

已經選取 1 個幾何特徵

方向

X 0 N

Y -50000 N

Z 0 N

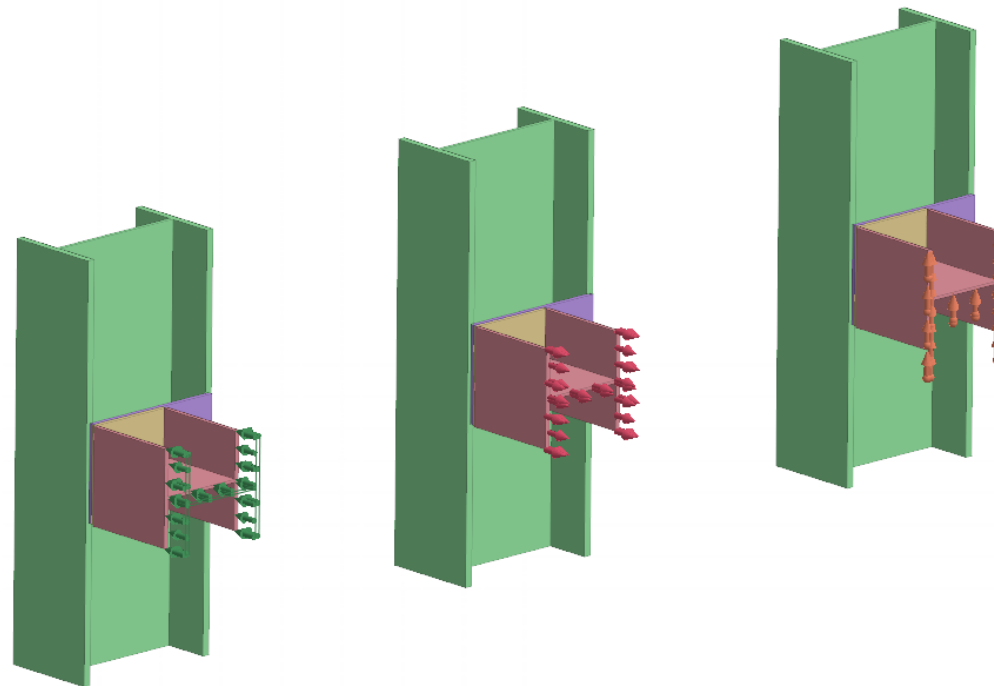
✓

+

×

MIDAS

www.midasuser.com.tw



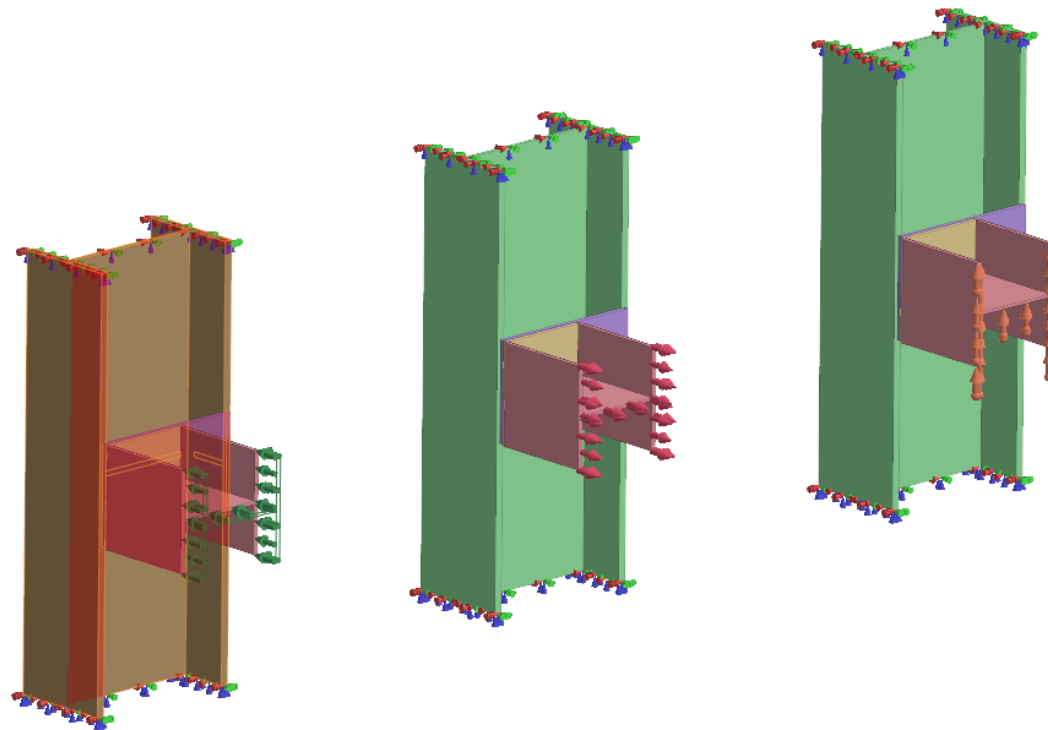


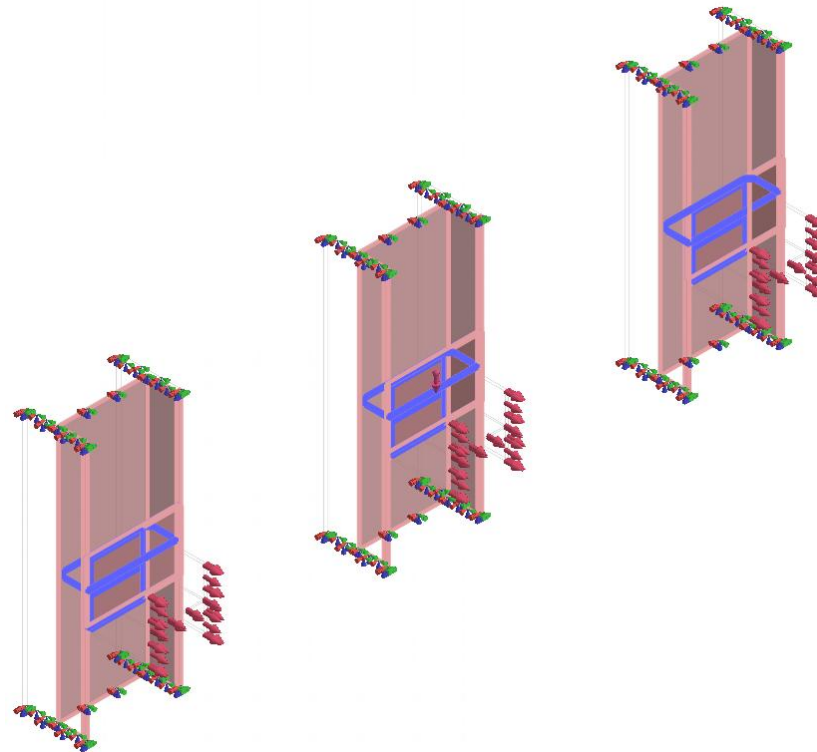
重力

名稱 重力-1

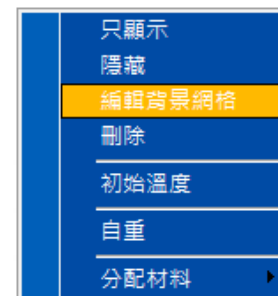
比例因子

Gx	0	mm/sec ²
Gy	0	mm/sec ²
Gz	-9806	mm/sec ²



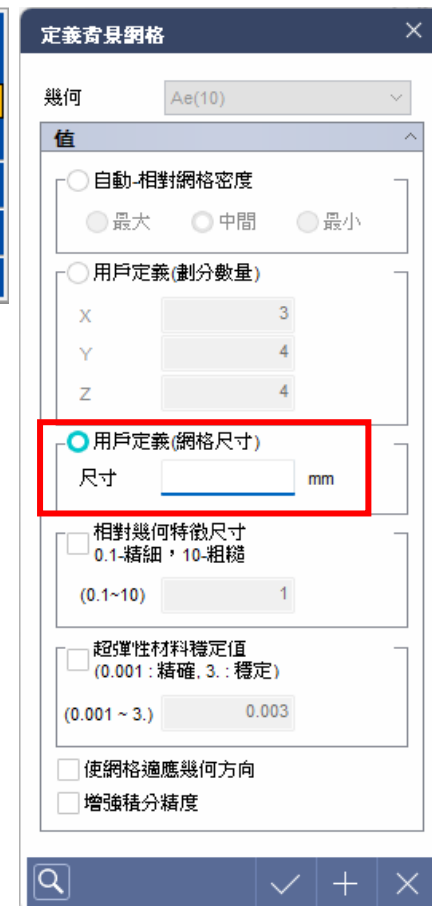


尺寸: 20 mm



尺寸: 50 mm

尺寸: 100 mm

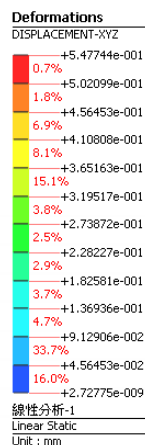
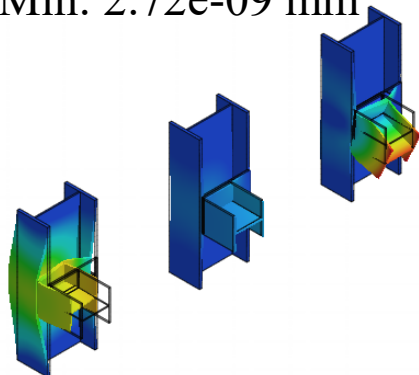




Grid Size: 20mm

Max: 0.5477 mm

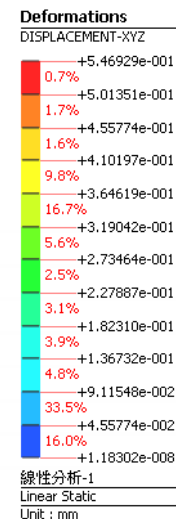
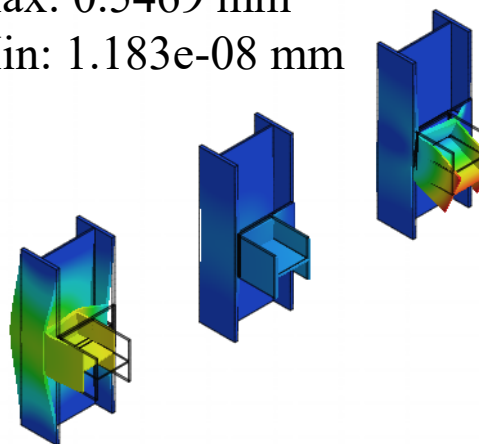
Min: 2.72e-09 mm



Grid Size: 50mm

Max: 0.5469 mm

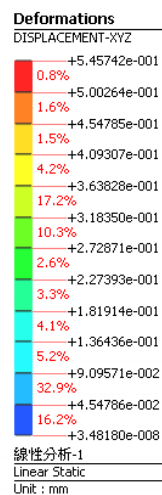
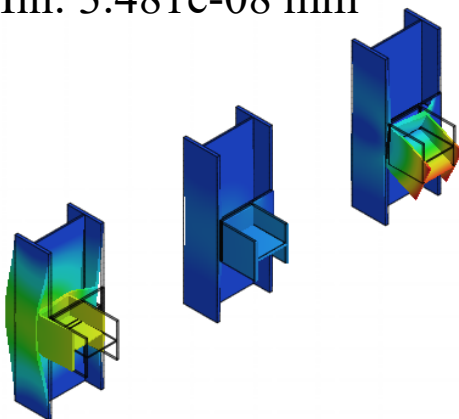
Min: 1.183e-08 mm



Grid Size: 100mm

Max: 0.5457 mm

Min: 3.481e-08 mm

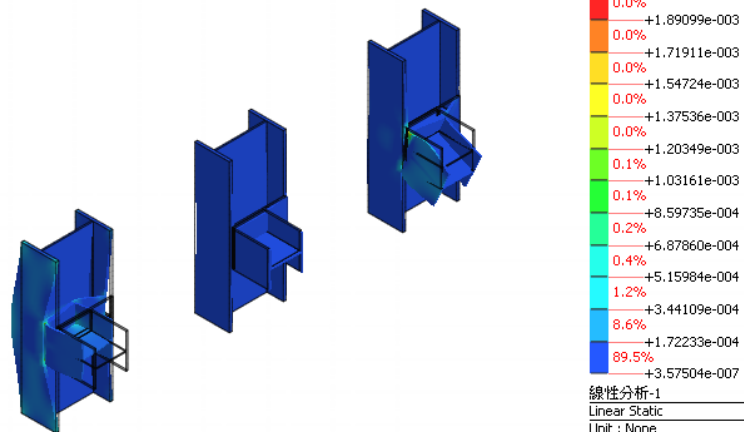


DEFORMATION

Grid Size: 20mm

Max: 0.00206

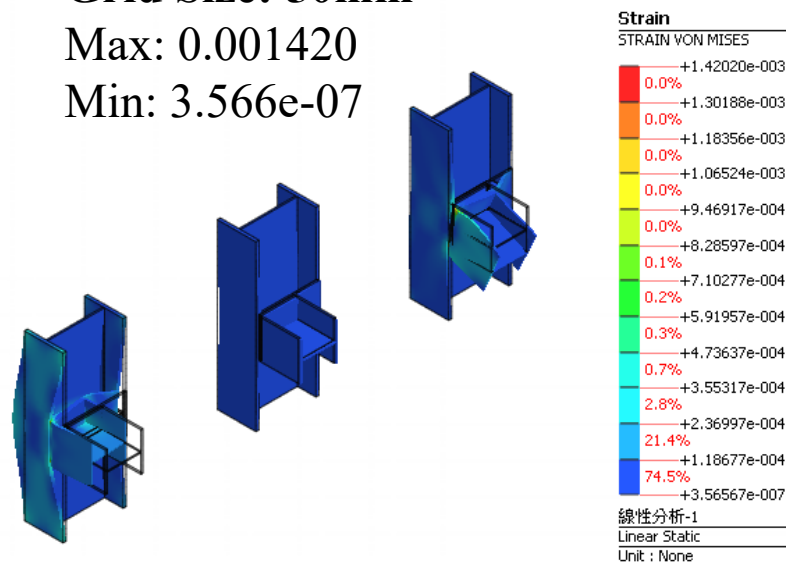
Min: 3.575e-07



Grid Size: 50mm

Max: 0.001420

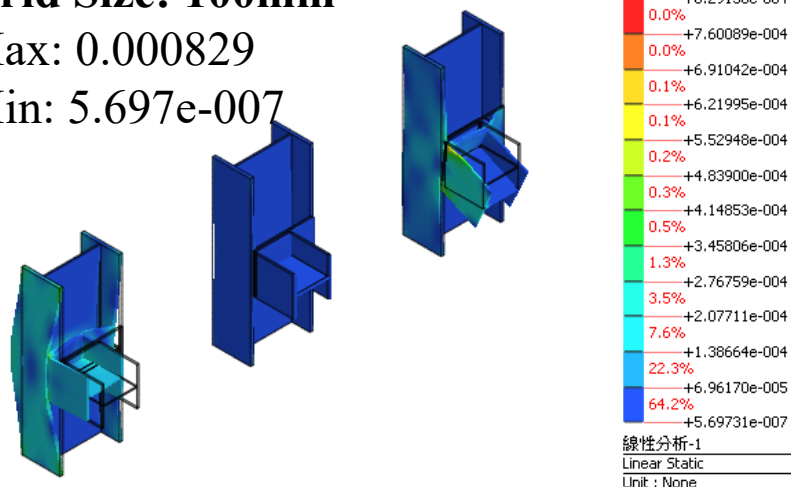
Min: 3.566e-07



Grid Size: 100mm

Max: 0.000829

Min: 5.697e-007

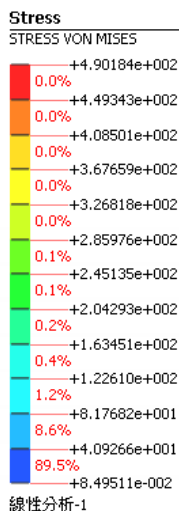
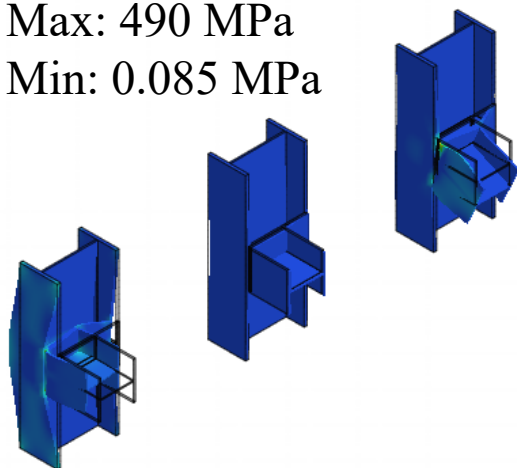


STRAIN

Grid Size: 20mm

Max: 490 MPa

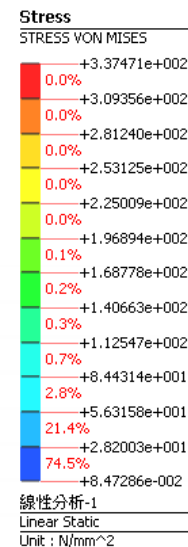
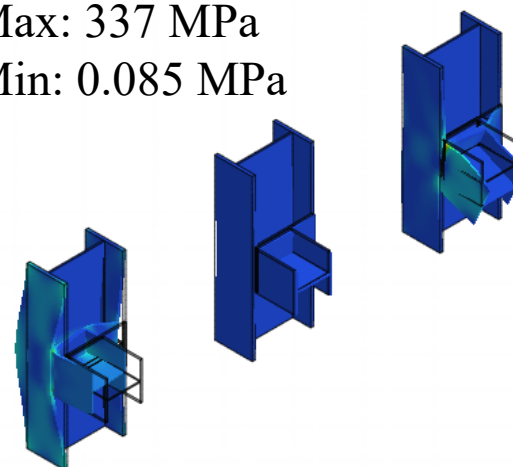
Min: 0.085 MPa



Grid Size: 50mm

Max: 337 MPa

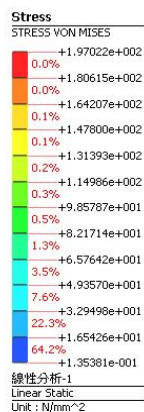
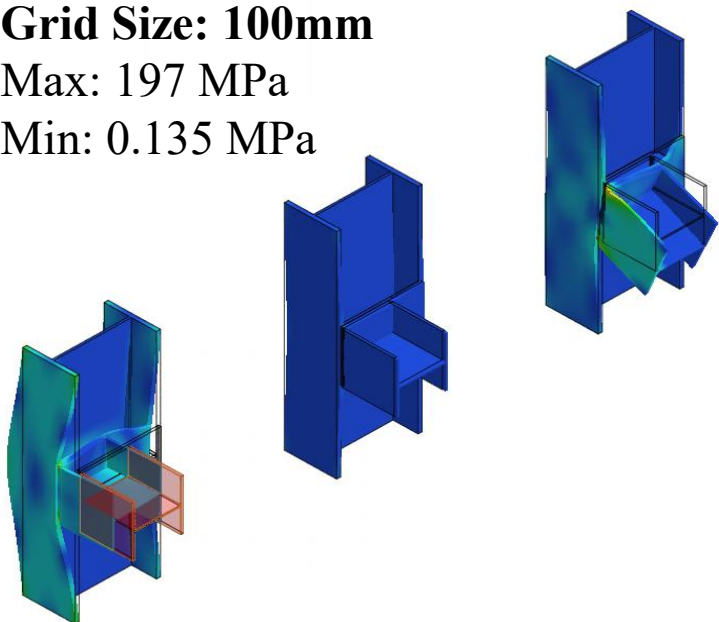
Min: 0.085 MPa



Grid Size: 100mm

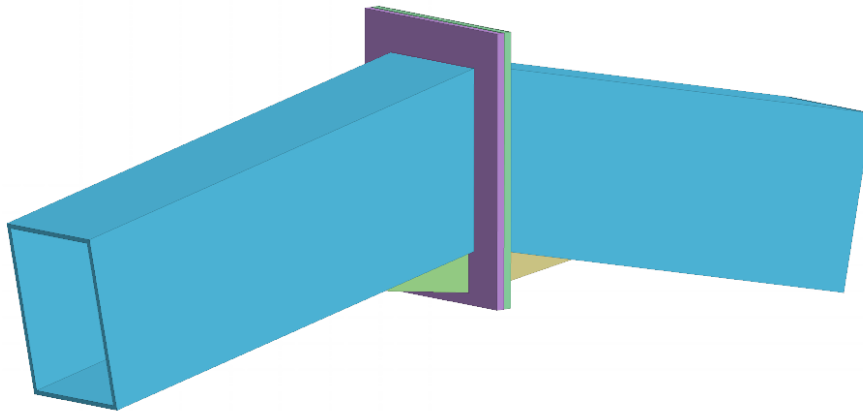
Max: 197 MPa

Min: 0.135 MPa



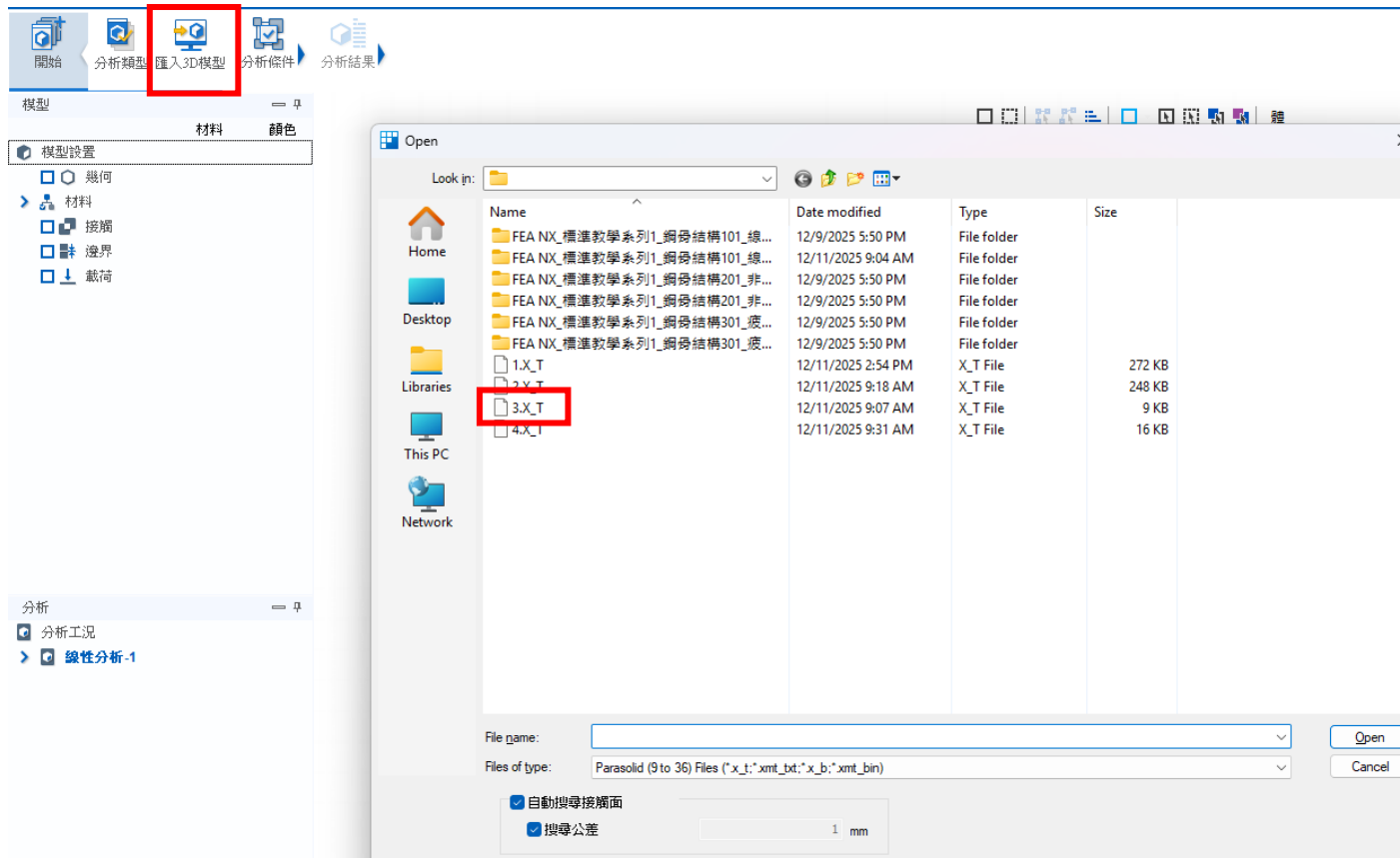
STRESS

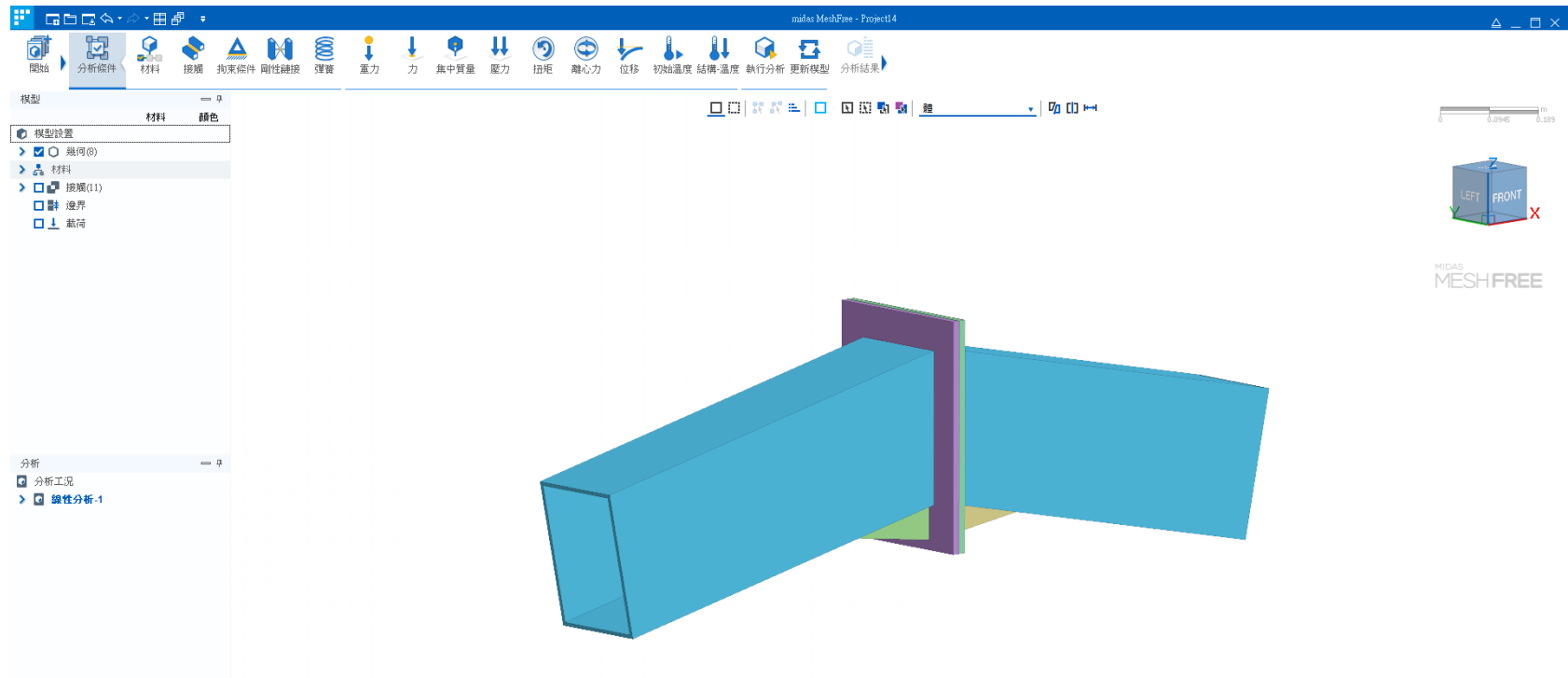
CASE 2: 剛性連接和局部座標



CASE OVERVIEW/HIGHLIGHTS

1. Local Coordinate System
2. Rigid Body





模型設置

- 幾何
- 材料
- 接觸(20)
- 邊界(1)
- 載荷(2)

材料

名稱: CNS(S)_SS490 顏色: [Blue] 座標系: 無

彈塑性 熱

結構

彈性模量: 205940 N/mm² 熱膨脹係數: 1.1e-005

泊松比: 0.3 參考溫度: 0 [°C]

質量密度: 7.85e-006 kg/mm³

計算安全係數

失效理論: 無

拉伸: 0 N/mm² 壓縮: 0 N/mm²

彈塑性

☐ 塑性硬化曲線: 無 函數

☐ 應力-應變曲線: 無 函數

硬化法則: 等向性

綜合硬化因子(0.0-1.0): 0

☐ 理想塑性

屈服應力: 0 N/mm²

一般

質量比例阻尼: 0 1/sec

剛度比例阻尼: 0 sec

結構阻尼係數: 0

約束條件定義

名稱: 邊界-2

選取: 點 選取幾何特徵

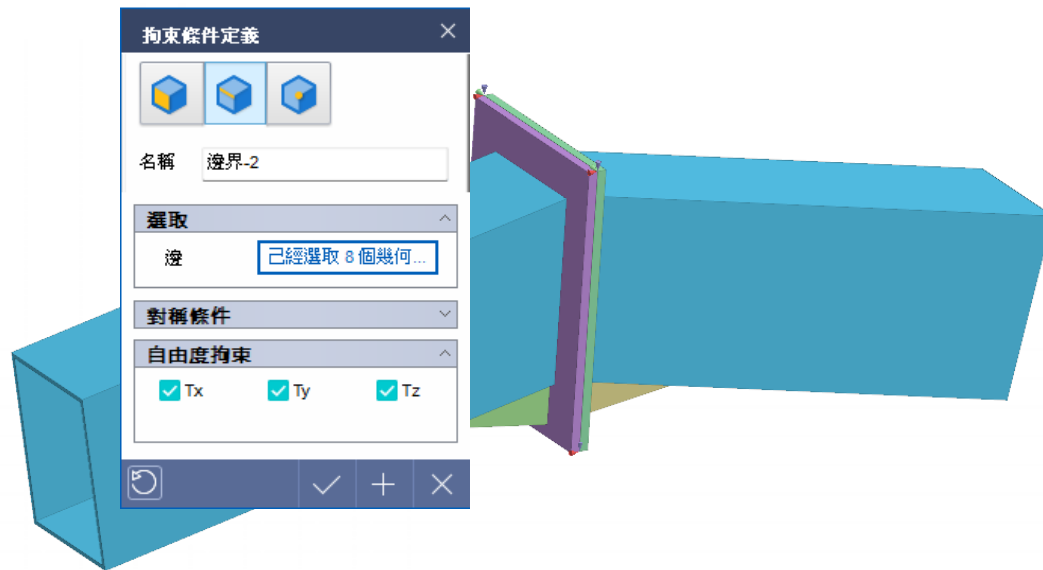
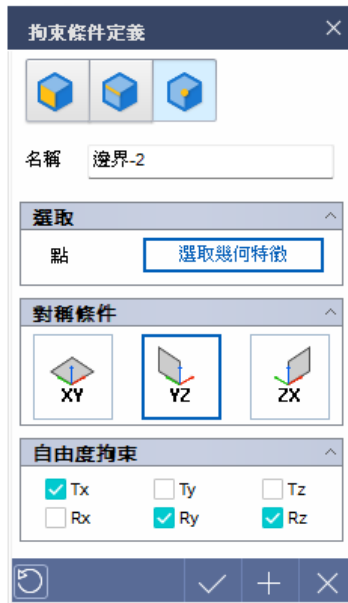
對稱條件: XY YZ ZX

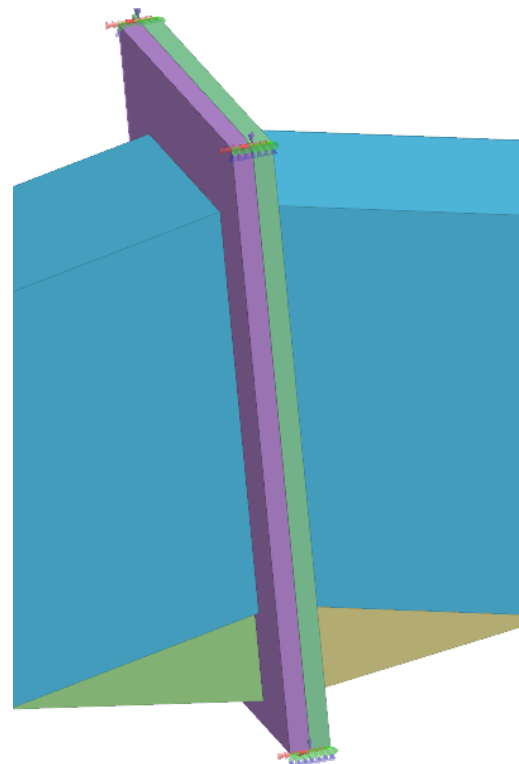
自由度約束: Tx Ty Tz Rx Ry Rz

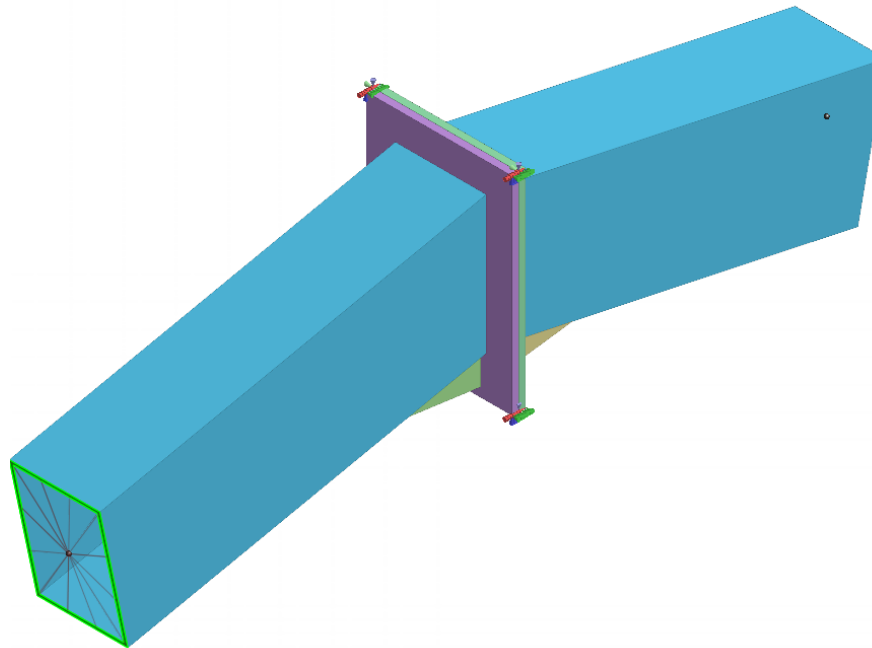
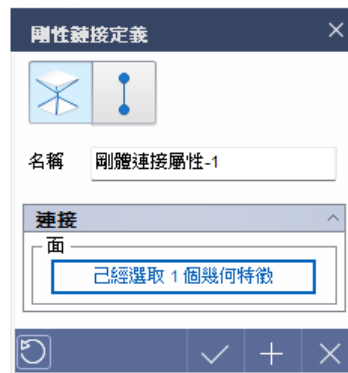
模型設置

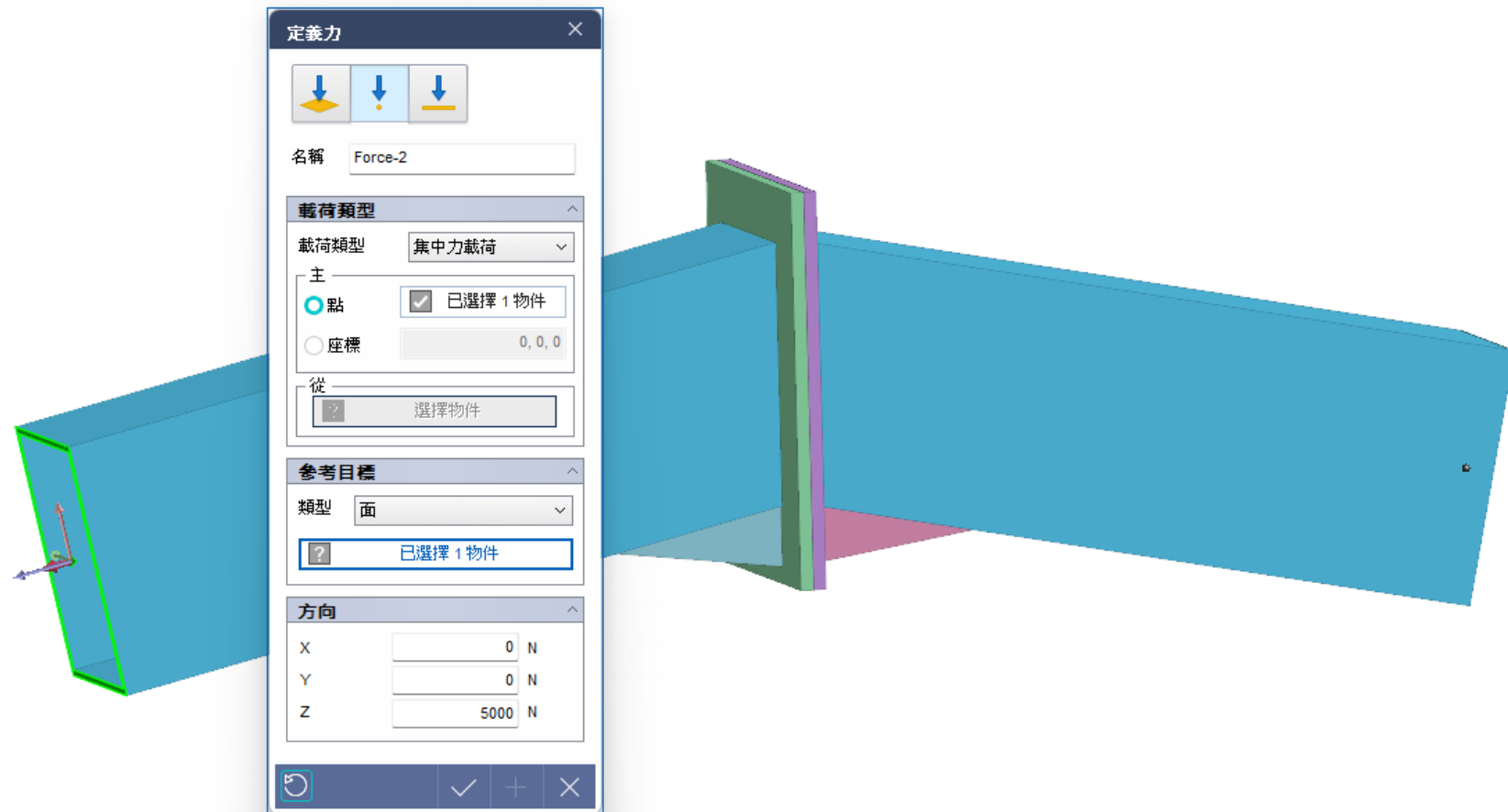
幾何(8)

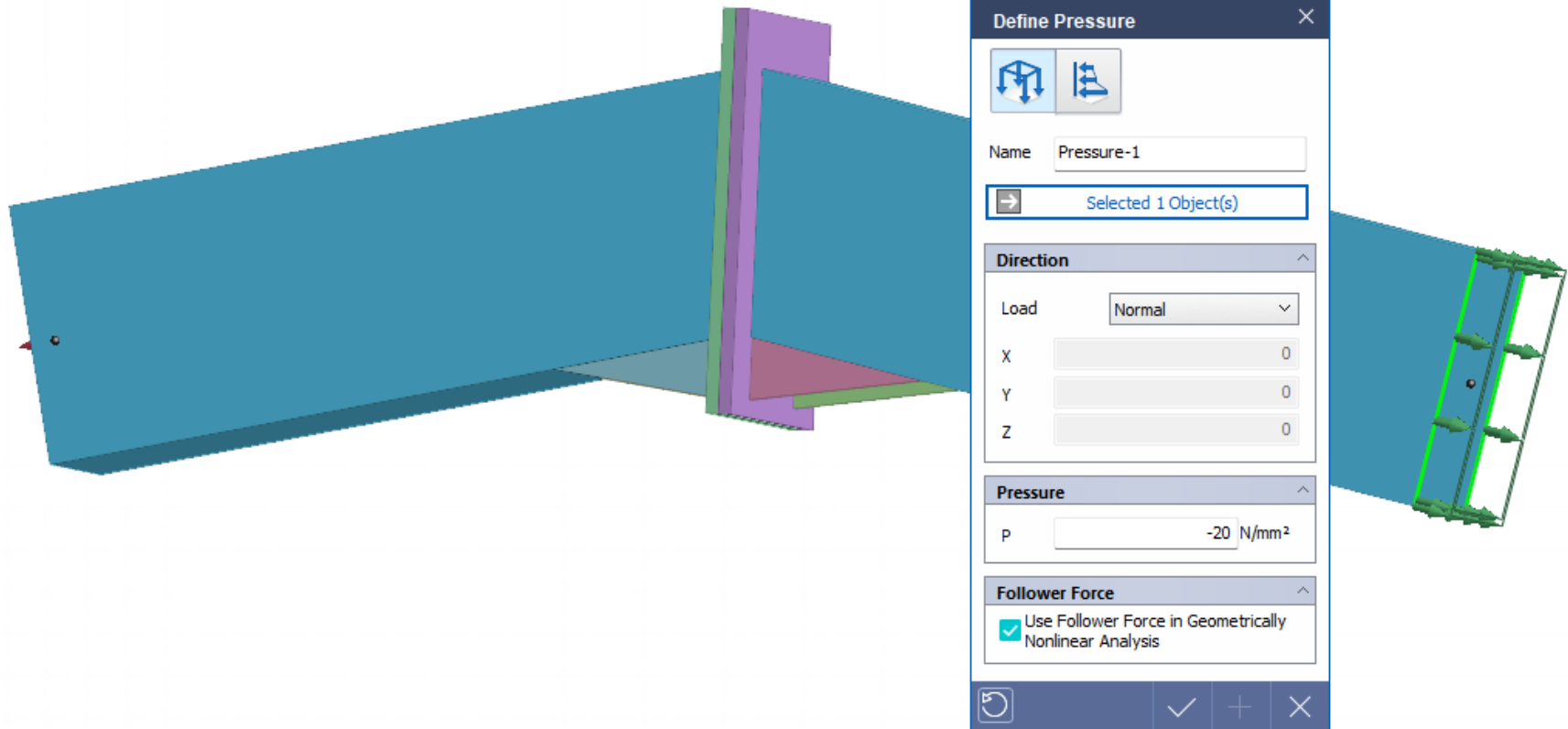
- Extrude(1) CNS(S)_SS490
- Extrude(1)(1) CNS(S)_SS490
- Body CNS(S)_SS490
- Body(2) CNS(S)_SS490
- Body(3) CNS(S)_SS490
- Body(4) CNS(S)_SS490
- Body(5) CNS(S)_SS490
- Body(6) CNS(S)_SS490

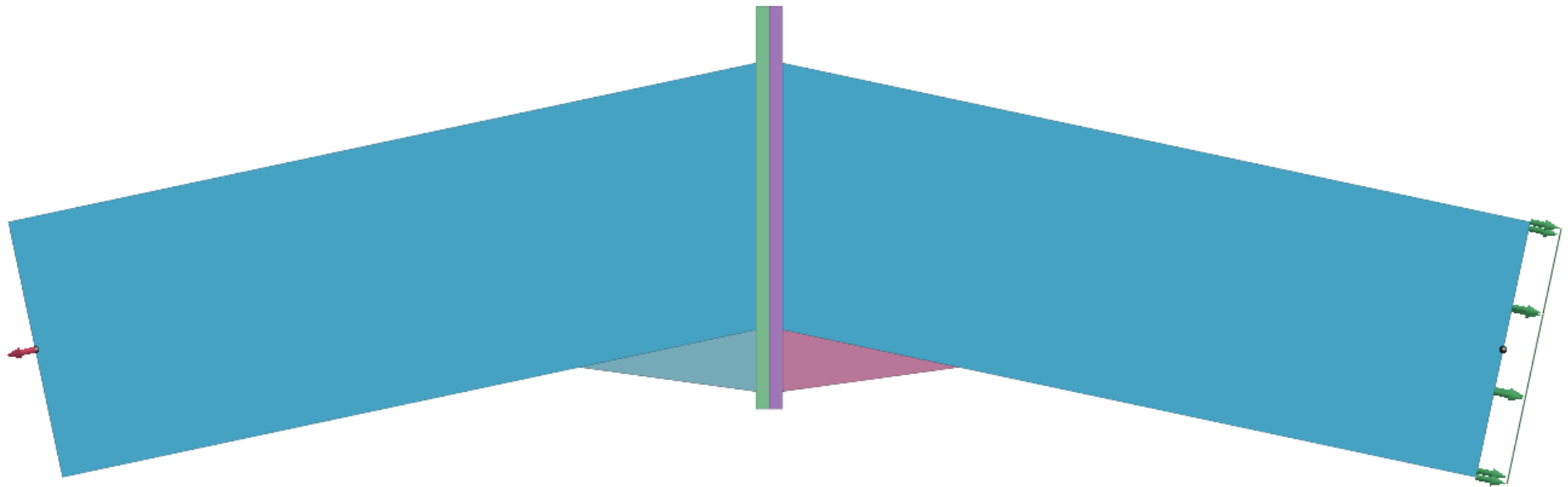












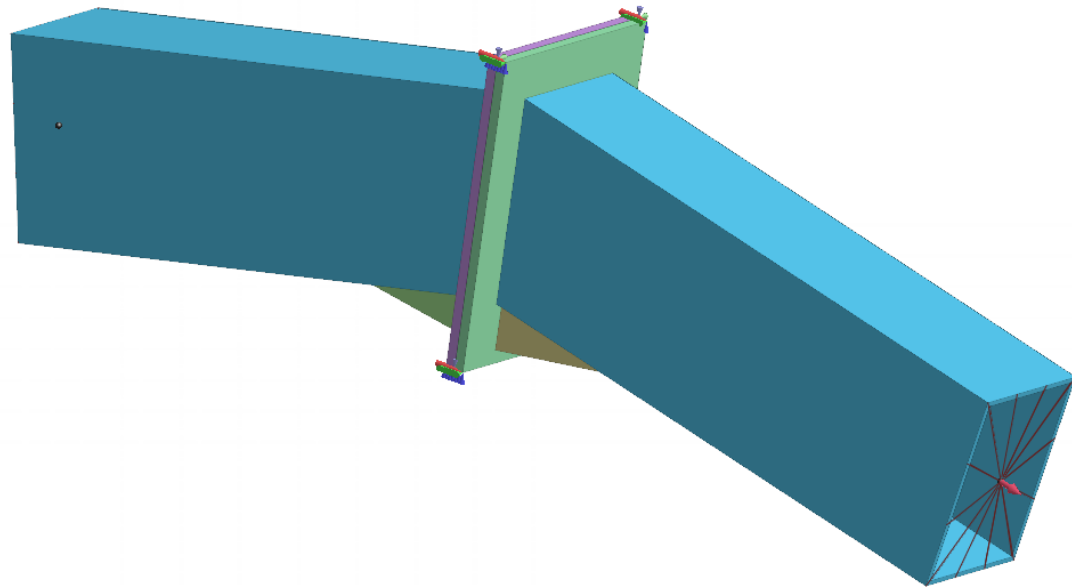


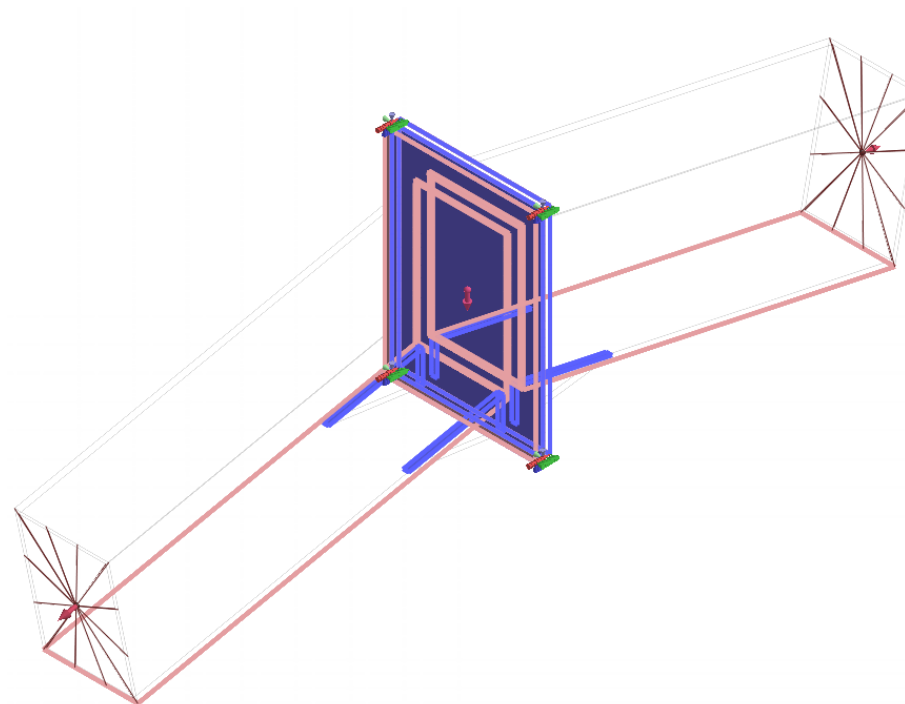
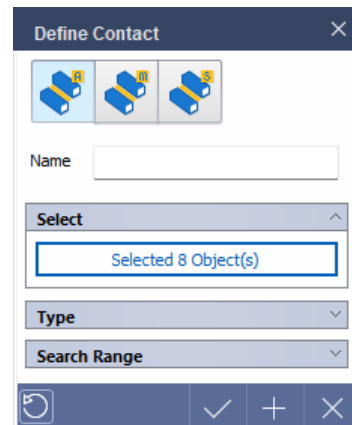
Define Gravity

Name Gravity-1

Value

Gx	0	mm/sec ²
Gy	0	mm/sec ²
Gz	-9806	mm/sec ²





接觸		
☒	Body-Body	焊接
☒	Body-Body-...	焊接
☒	Body-Body-...	焊接
☒	Body-Body-...	焊接
☒	Body-Body-...	焊接
☒	Extrude(1)-B..	焊接
☒	Extrude(1)-B..	焊接
☒	Extrude(1)-B..	焊接
☒	Extrude(1)-B..	焊接
☒	Extrude(1)-B..	焊接
☒	Extrude(1)-B..	焊接
☒	Body-Body-...	Welded
☒	Body-Body-...	Welded
☒	Body-Body-...	Welded
☒	Body-Body-...	Welded
☒	Body-Body-...	Welded
☒	Extrude(1)-B..	Welded



格點定義

幾何: Extrude(1)(1)

值

☐ 自動定義

☐ 最大 ☐ 中間 ☐ 最小

☐ 手動定義(數量)

 X: 2

 Y: 2

 Z: 2

☒ 手動定義(尺寸)

 長度: mm

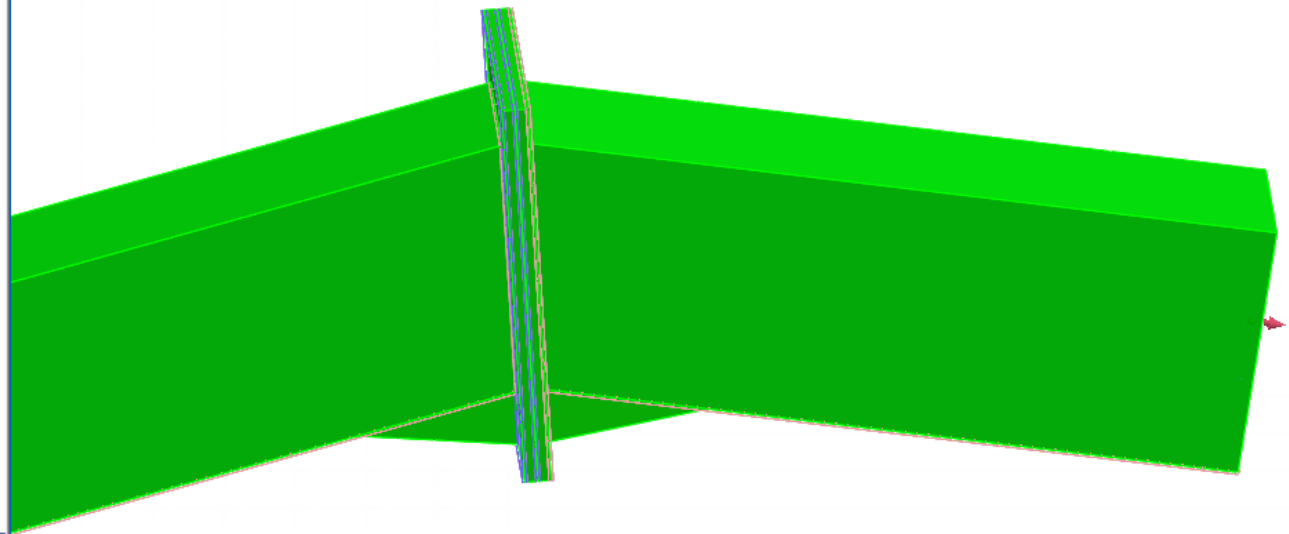
☐ 幾何特徵詳細表示
(數值越低精度越高, 計算量越大。)

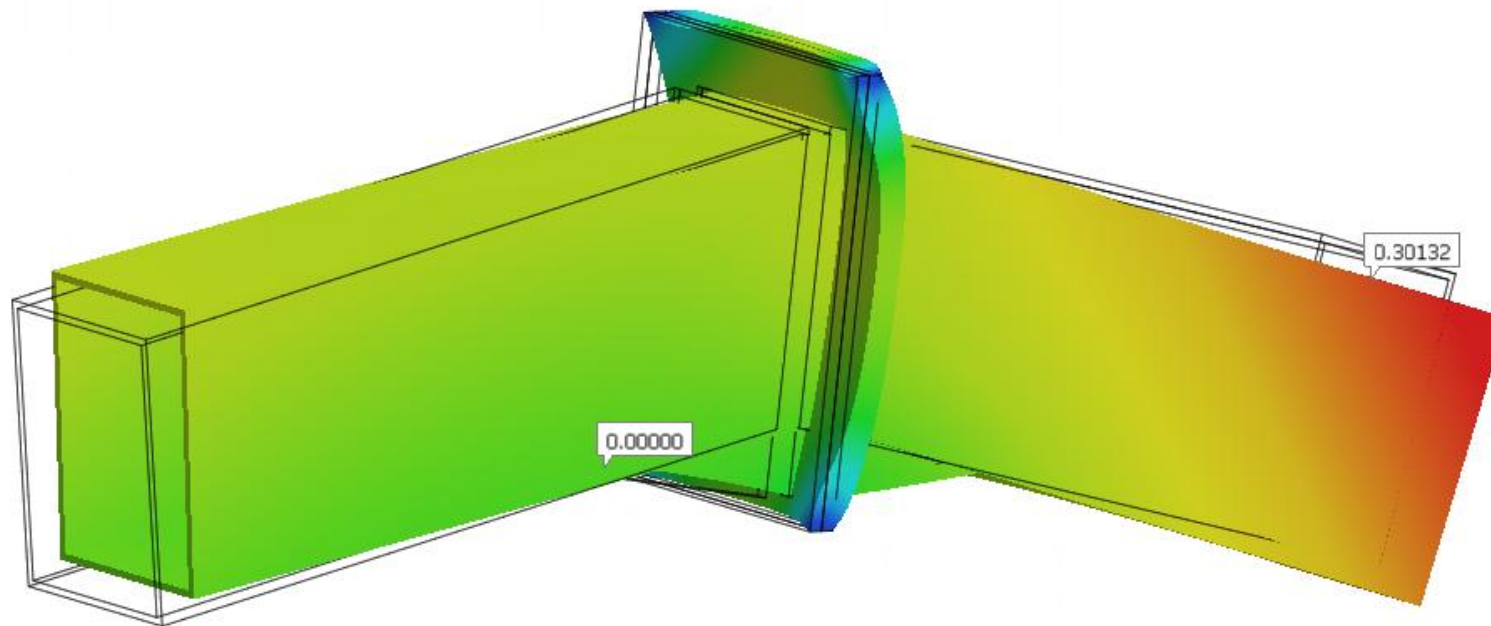
 (0.1~10):

☐ 根據幾何形狀調整網格方向

☐ 提高計算精度

Find, OK, Cancel buttons





變形

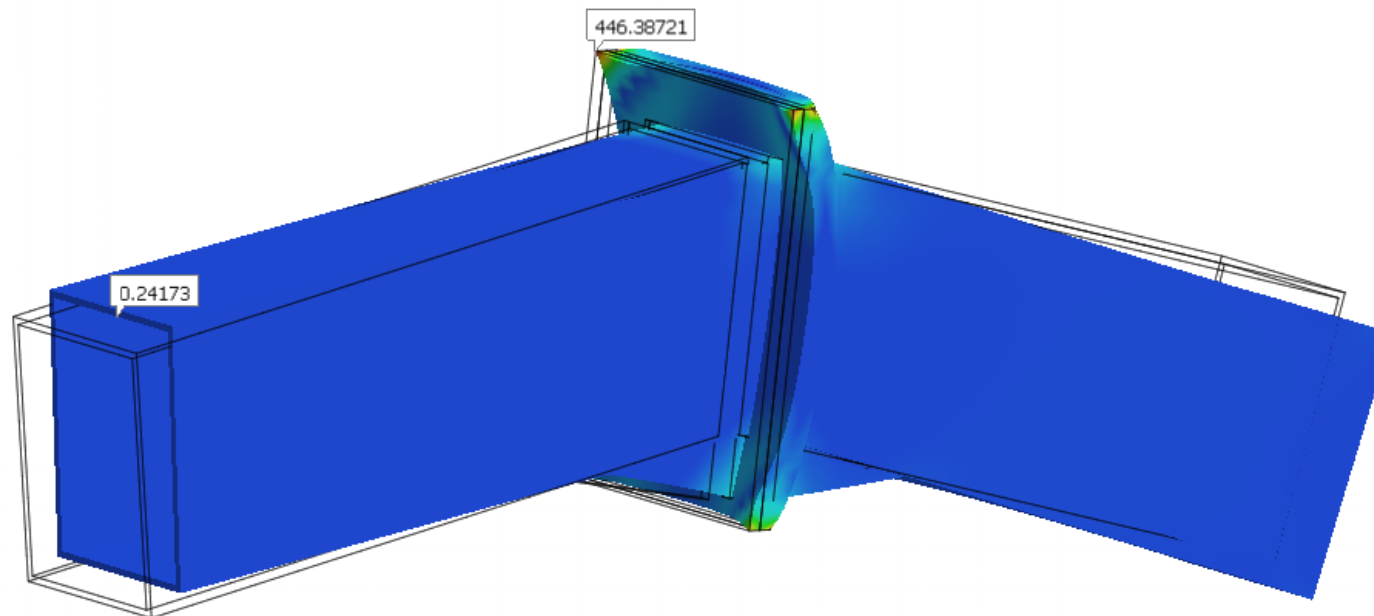
位移-XYZ



線性分析-1

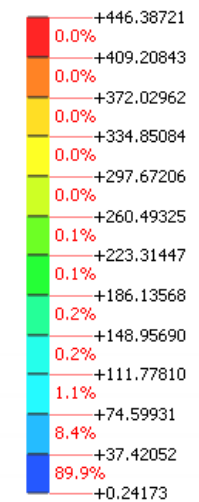
Linear Static

Unit : mm



應力

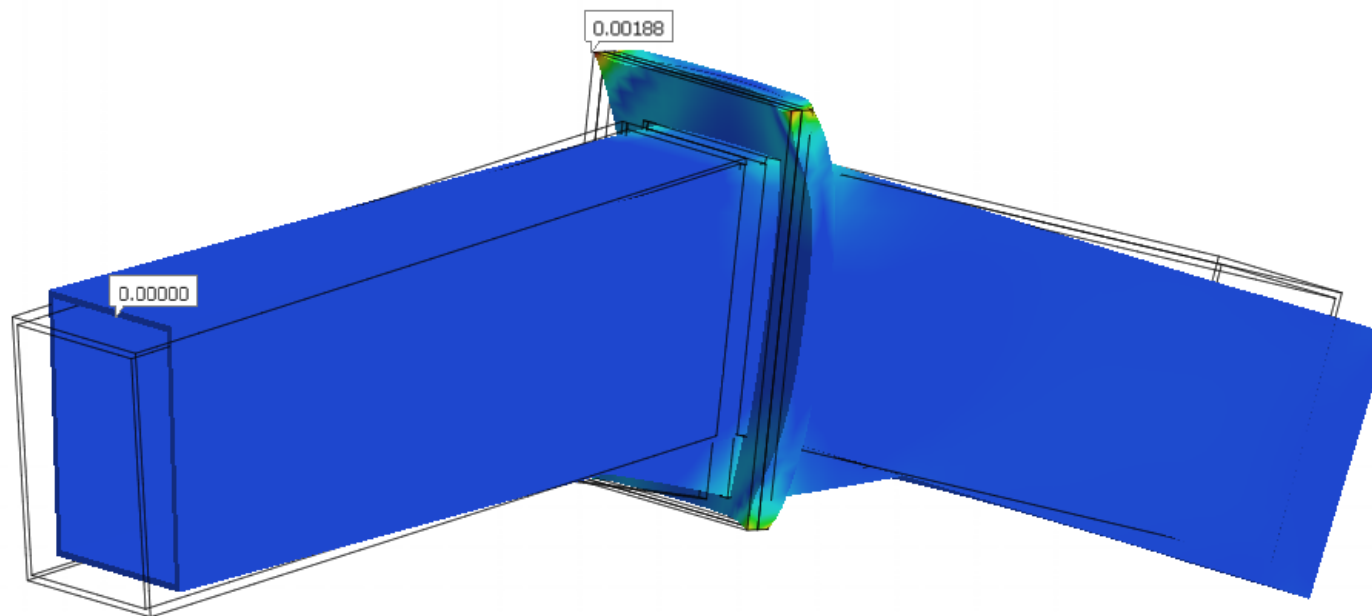
Von Mises應力



線性分析-1

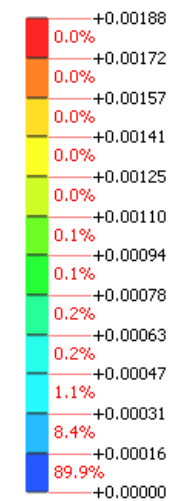
Linear Static

Unit : N/mm²



應變

Von Mises應變



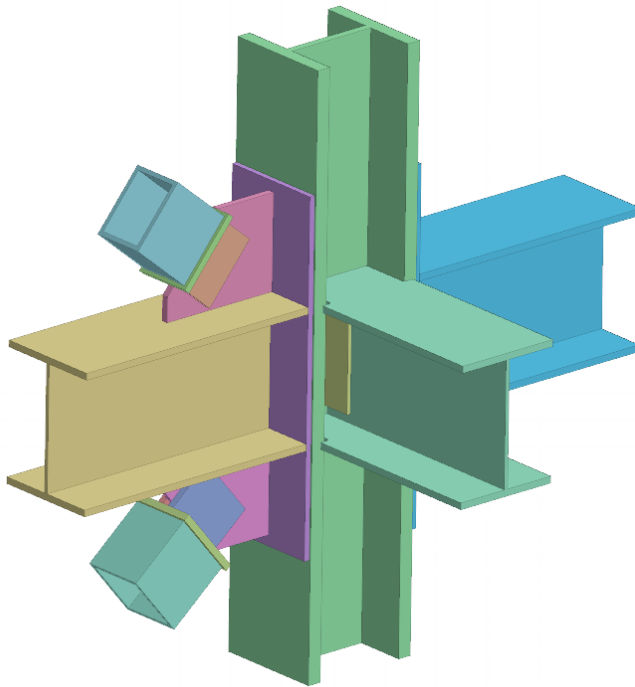
線性分析-1

Linear Static

Unit : None

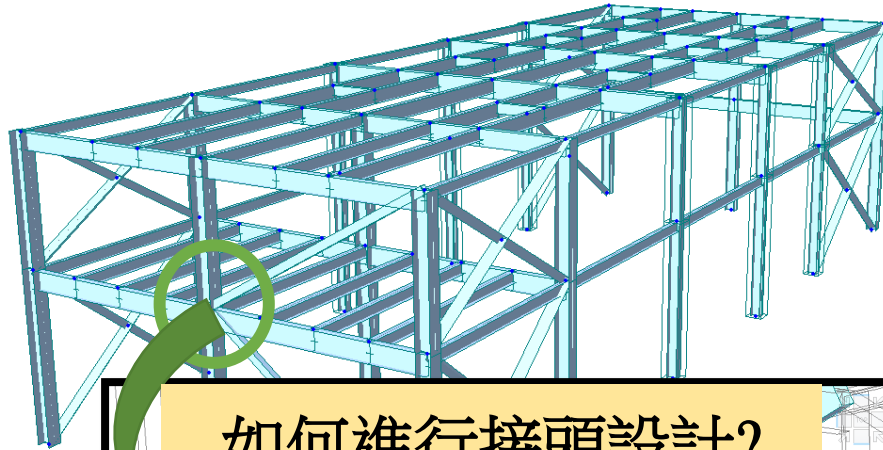
CASE 3 GEN NX and MeshFree

串接計算

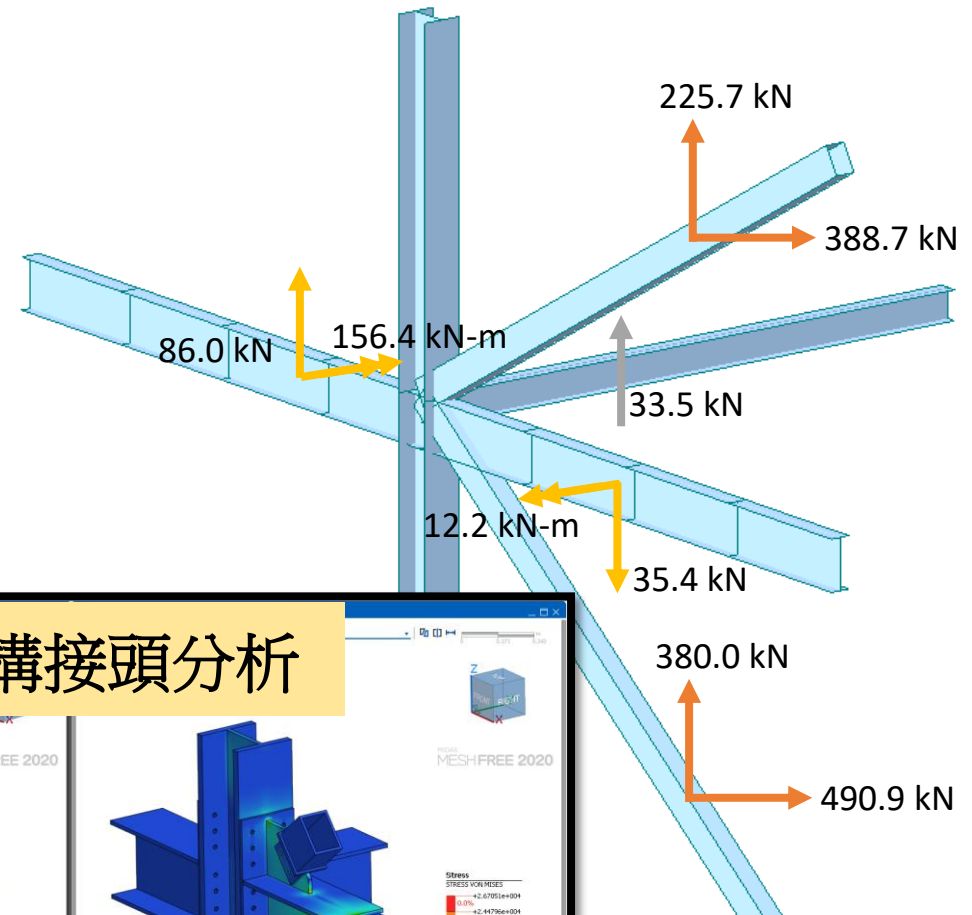


CASE OVERVIEW/HIGHLIGHTS

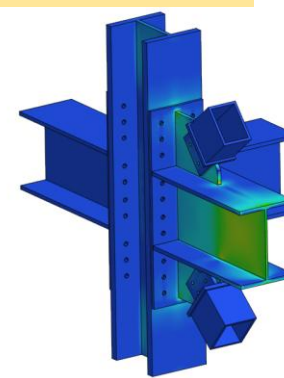
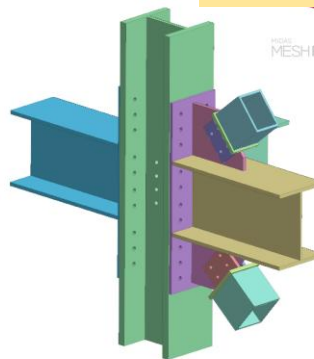
- MIDAS GEN NX –Meshfree Interaction



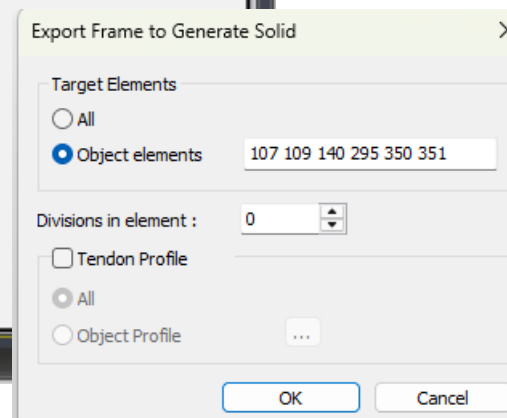
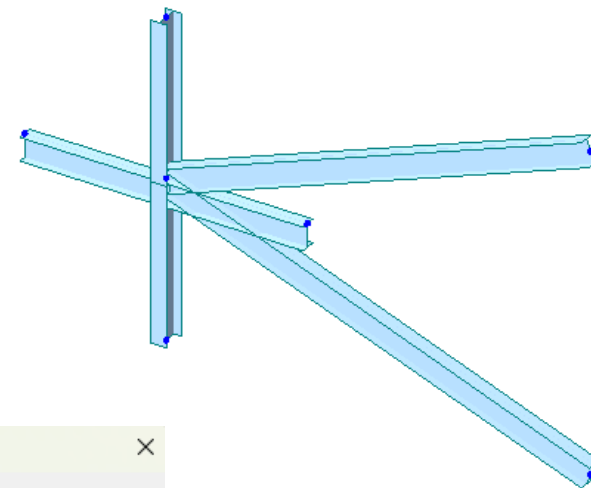
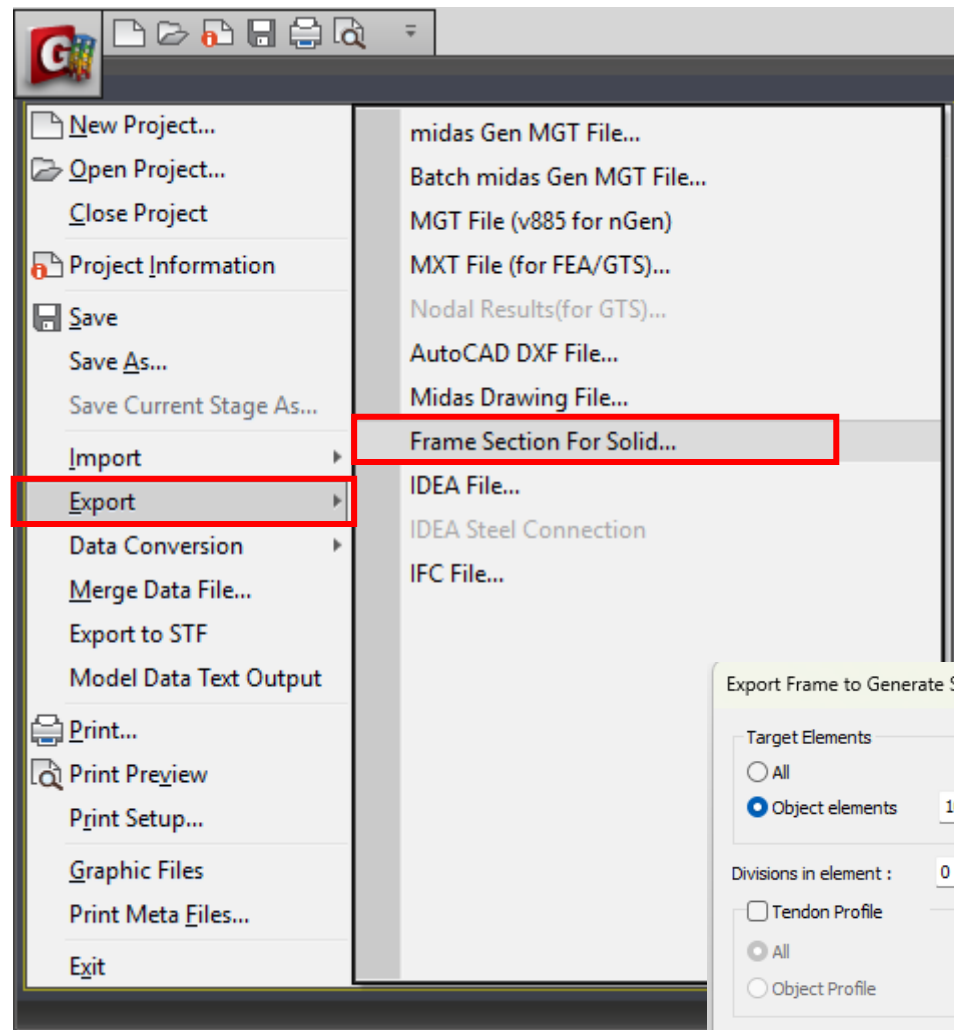
如何進行接頭設計?

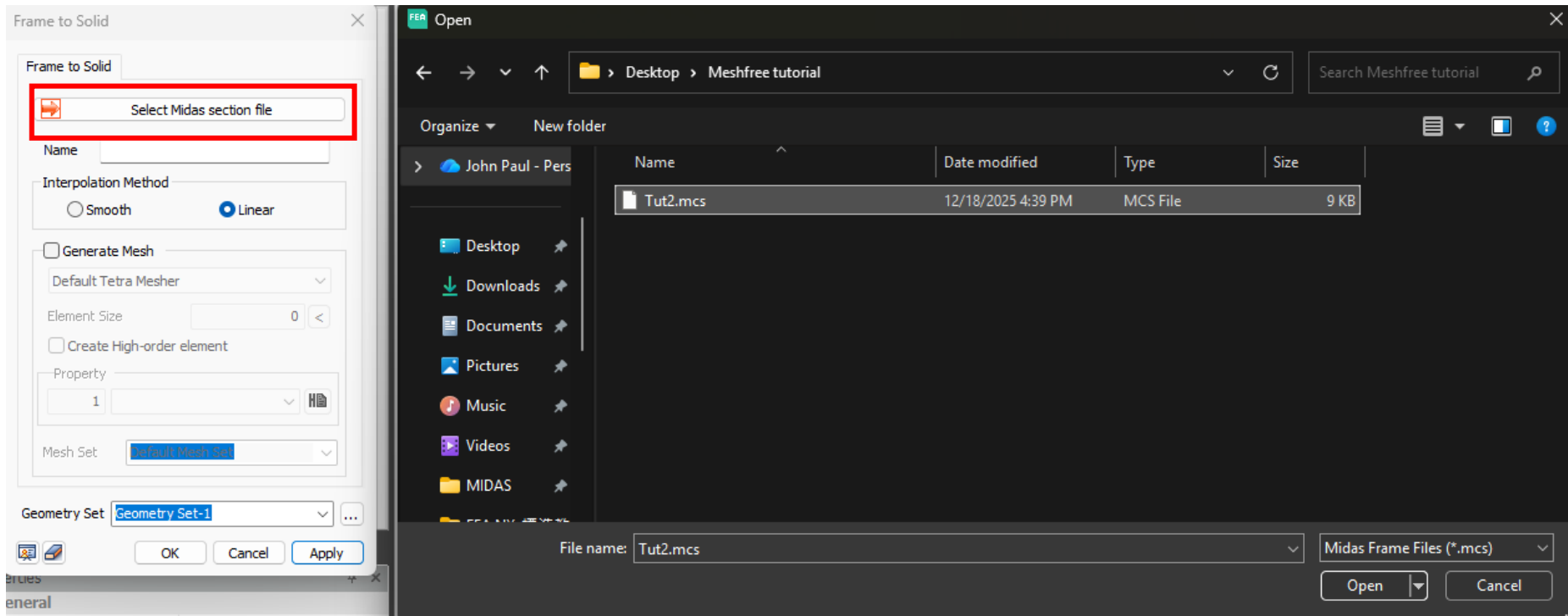
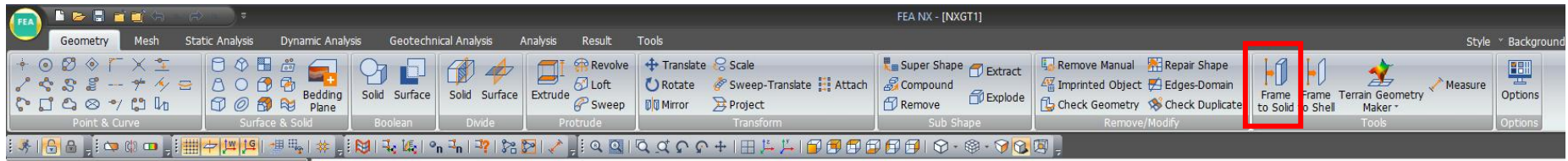


鋼構接頭分析



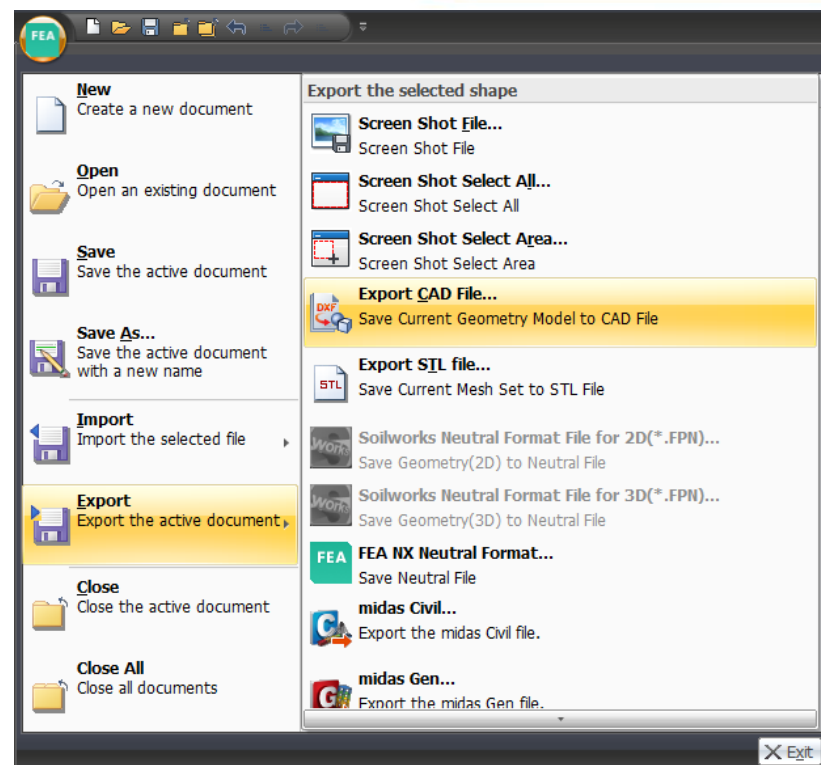
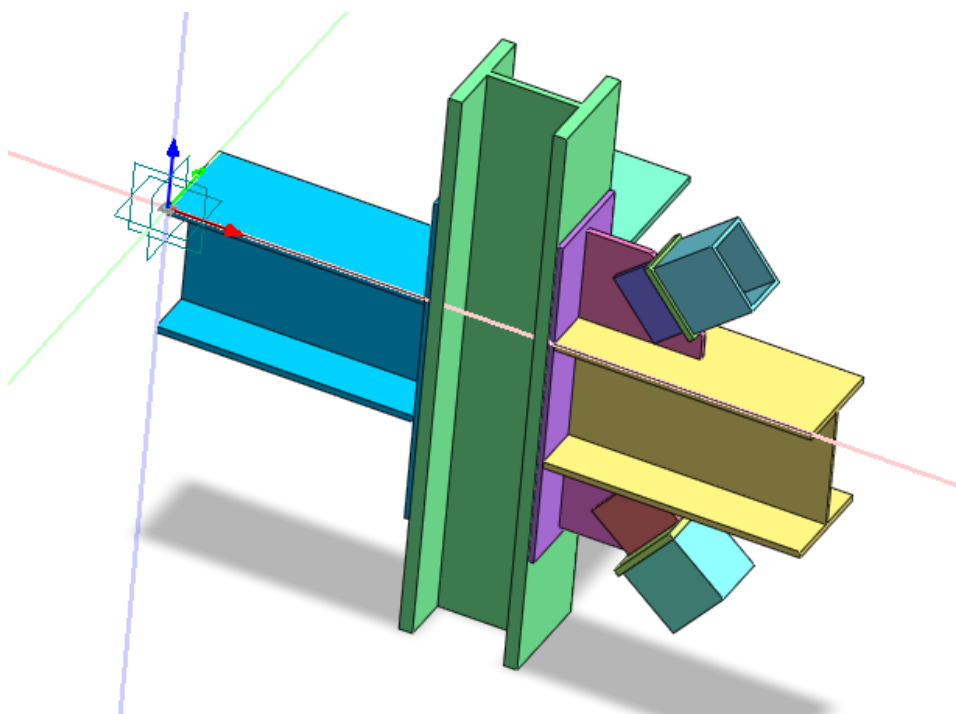
Stress
Stress VON MISES
-2.4795e+004
0.00%
-2.4479e+004
0.00%
-2.2254e+004
0.00%
-2.0028e+004
0.00%
-1.7803e+004
0.00%
-1.5577e+004
0.00%
-1.3352e+004
0.00%
-1.1127e+004
0.00%
-8.9016e+003
0.00%
-6.6762e+003
0.00%
-4.4509e+003
0.00%
-2.2254e+003
0.00%
0.00%
2.2254e+003
0.00%
4.4509e+003
0.00%
6.6762e+003
0.00%
8.9016e+003
0.00%
1.1127e+004
0.00%
1.3352e+004
0.00%
1.5577e+004
0.00%
1.7803e+004
0.00%
2.0028e+004
0.00%
2.2254e+004
0.00%
2.4479e+004
0.00%
2.4795e+004
0.00%
Unit: 1.000e+000





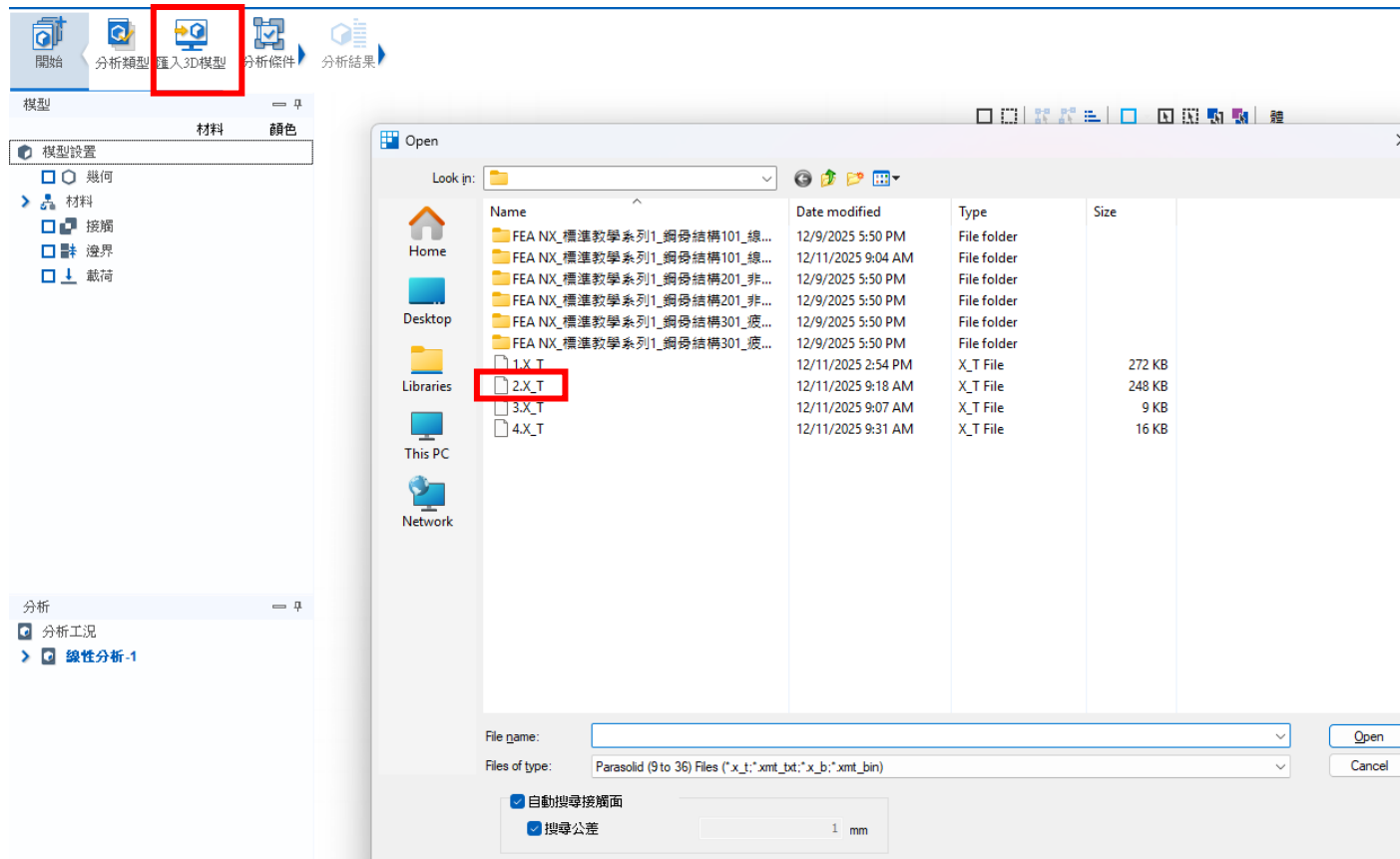
補充:接頭3D繪製

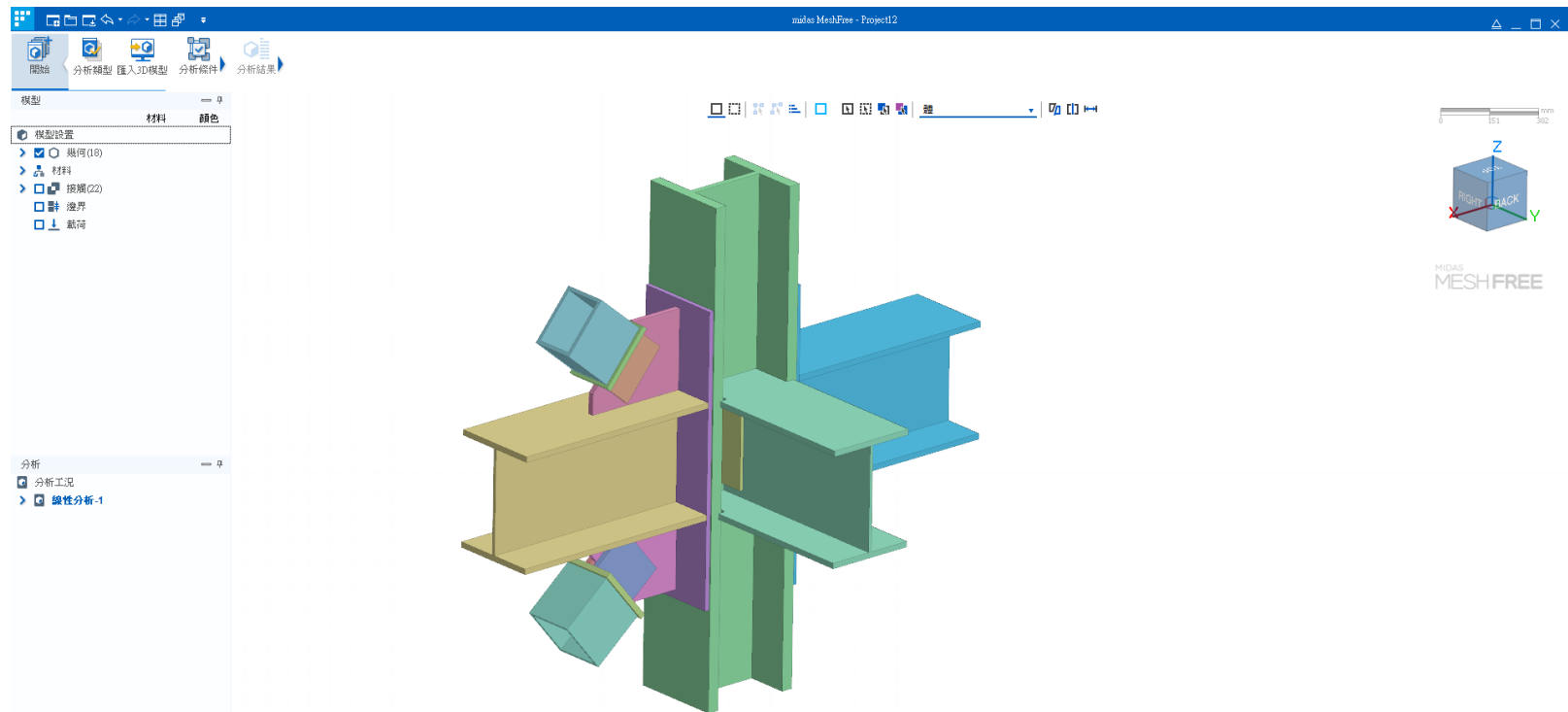
Note: Use any 3D CAD software to edit the model.

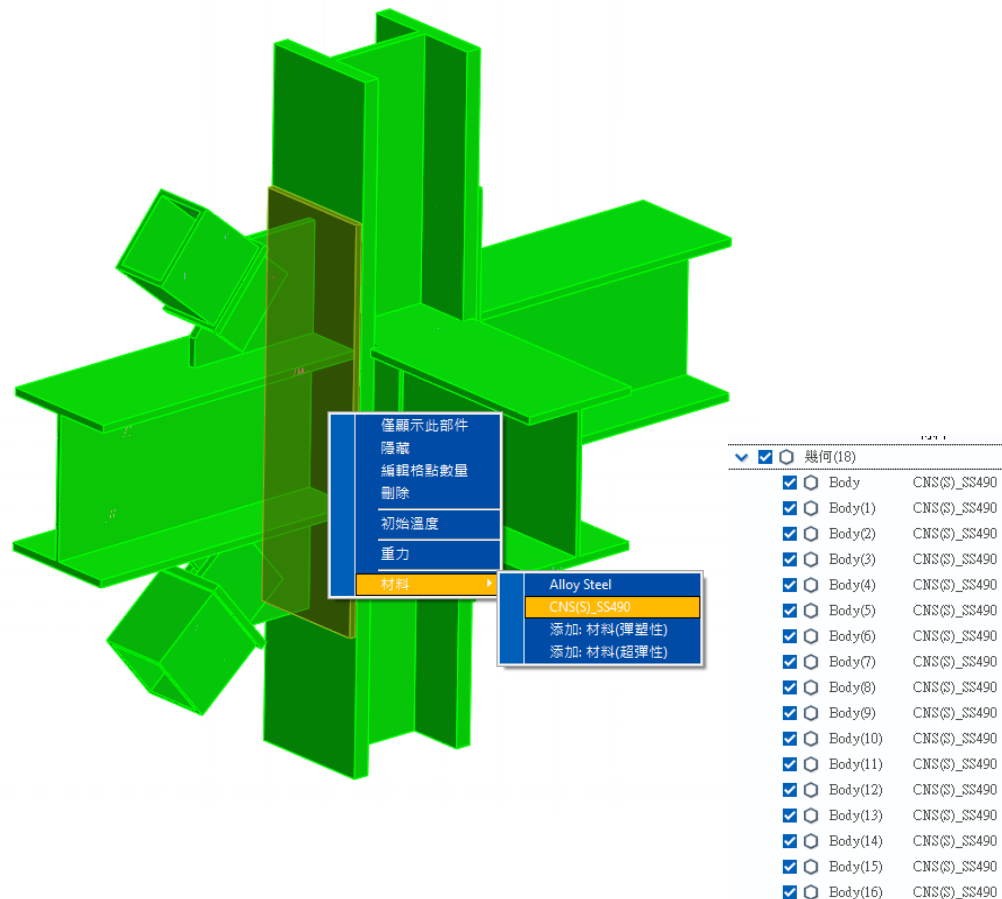
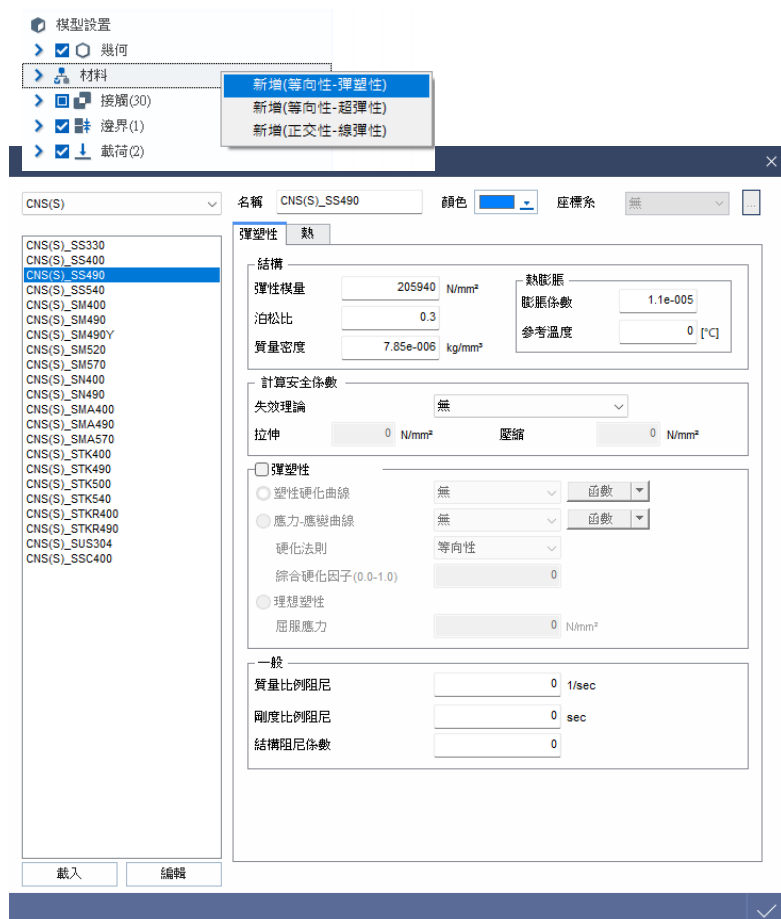


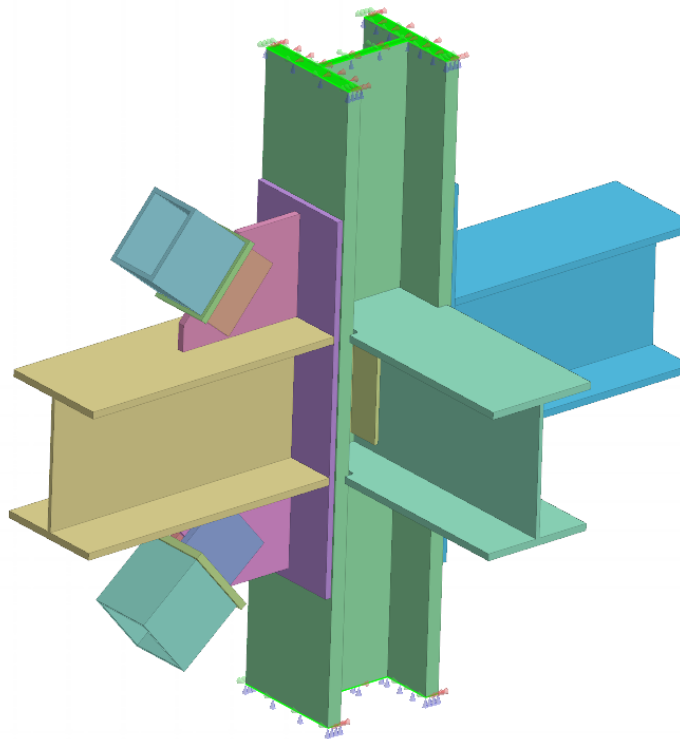
Export to any of the 3D CAD type

Parasolid (9 to 37.0.118) Files (*.x_t;*.xmt_txt;*.x_b;*.xmt_bin)
 Parasolid (9 to 37.0.118) Files (*.x_t;*.xmt_txt;*.x_b;*.xmt_bin)
 ACIS (R1 - 2024 1.0) Files (*.sat;*.sab;*.asat;*.asab)
 STEP (AP203, AP214, AP242) Files (*.stp;*.step)
 IGES (Up to 5.3) Files (*.igs;*.iges)
 Pro-E (16 - Creo 11.0) Files (*.prt;*.prt.;*.asm;*.asm.)
 CATIA V4 (CATIA 4.1.9 - 4.2.4) Files (*.model;*.exp;*.session)
 CATIA V5 (V5 R8 - V5-6 R2024) Files (*.CATPart;*.CATProduct)
 SolidWorks (98 - 2025) Files (*.sldprt;*.sldasm)
 Unigraphics (11 - NX2406) Files (*.prt)
 Inventor Part (V6 - V2025) Files (*.ipt)
 Inventor Assembly (V11 - V2025) Files (*.iam)
 Solid Edge (V18 - SE2024) Files (*.par;*.asm;*.psm)
 All Files (*.*)











定義力

名稱

力-1

載荷類型

載荷類型

集中力載荷

☒ 總力

☐ 每面 / 邊

?

已選擇 1 物件

參考目標

類型

全域坐標系

方向

X

50000

N

Y

0

N

Z

0

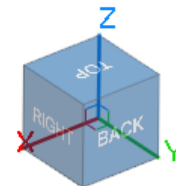
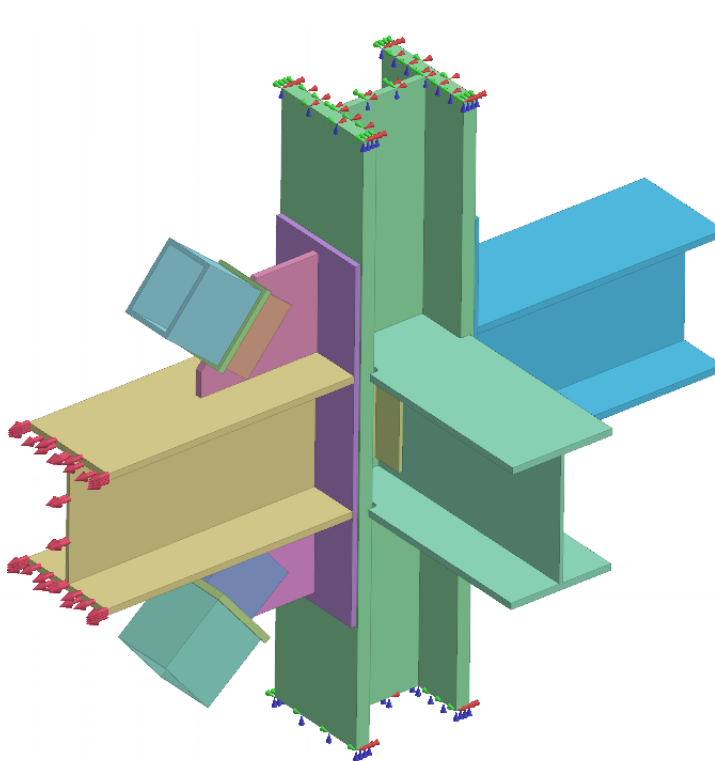
N

↺

✓

+

×





定義力

名稱

力-2

載荷類型

集中力載荷

總力

每面 / 邊

?

已選擇 1 物件

參考目標

類型

全域坐標系

方向

X

-50000

N

Y

0

N

Z

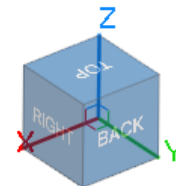
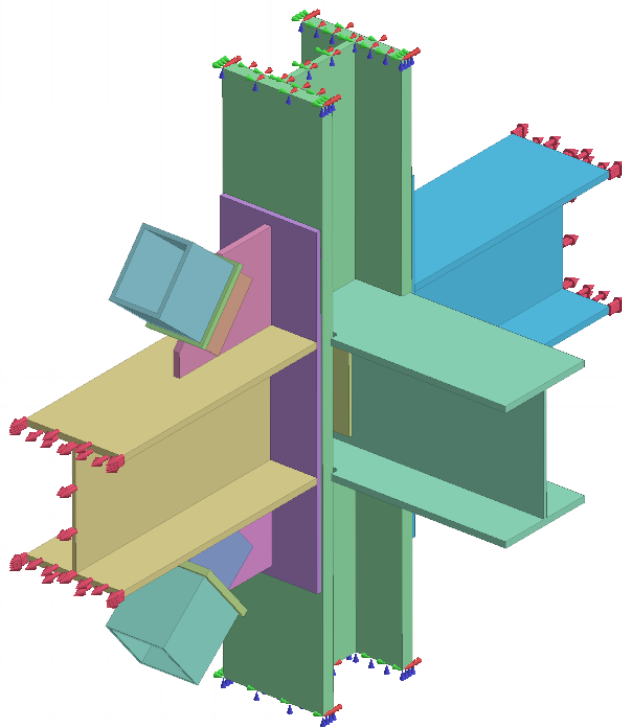
0

N

✓

+

×





定義力

力-3

載荷類型

載荷類型

集中力載荷

☒ 總力

☐ 每面 / 邊

?

已選擇 1 物件

參考目標

類型

面

?

已選擇 1 物件

方向

X

25000

N

Y

0

N

Z

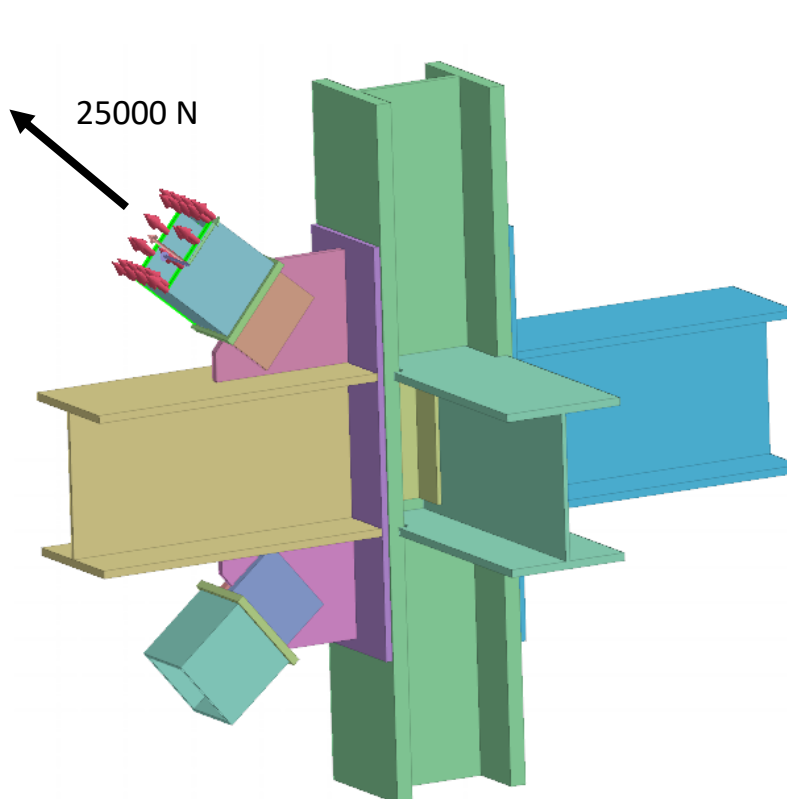
0

N

✓

+

×





×

定義力

名稱

力-4

載荷類型

集中力載荷

▼

☒ 總力
 ☐ 每面 / 邊

?

已選擇 1 物件

參考目標

類型

面

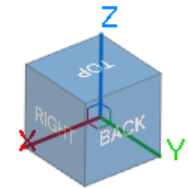
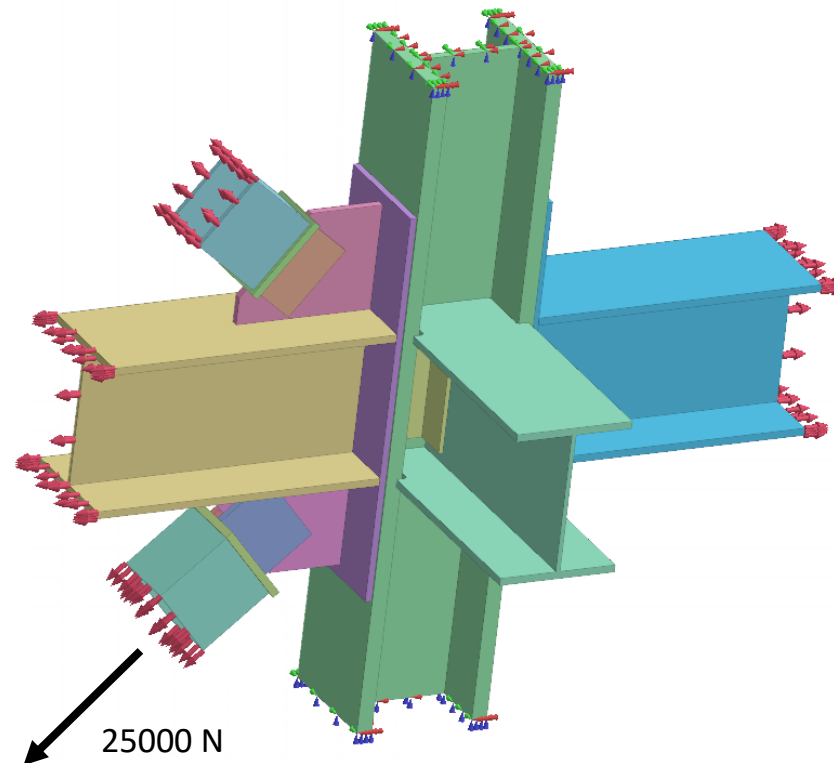
▼

?

已選擇 1 物件

方向

X	0	N
Y	0	N
Z	25000	N





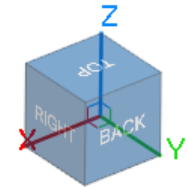
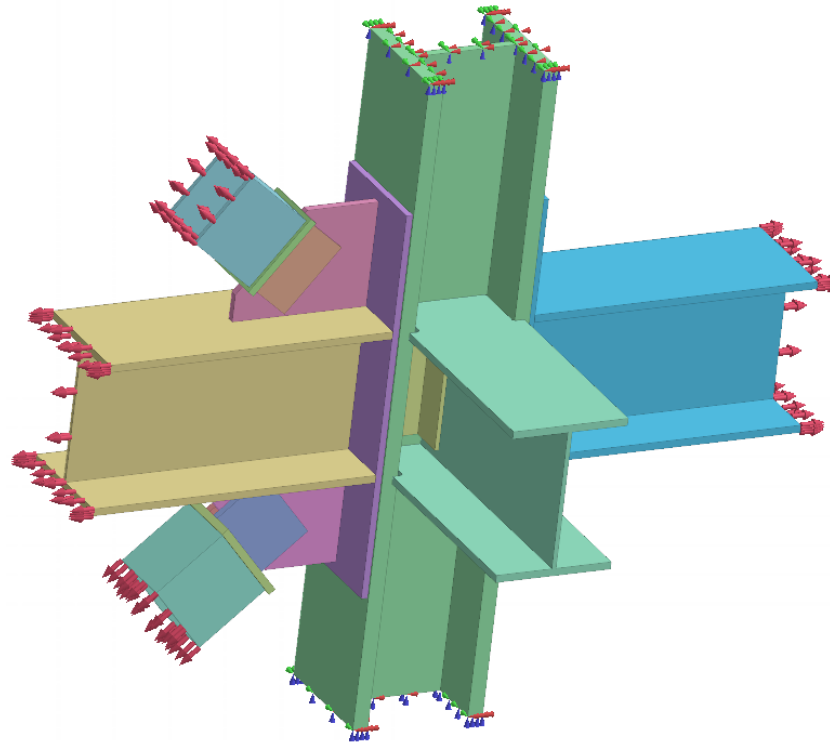
重力 [X]

名稱

比例因子 [^]

Gx	0	mm/sec ²
Gy	0	mm/sec ²
Gz	-9806	mm/sec ²

[↺] [✓] [✚] [✕]





接觸定義

名稱

選取

選取幾何特徵

類型

焊接接觸

摩擦係數

0

法向剛度係數

0.1

切線剛度係數

0.01

範圍

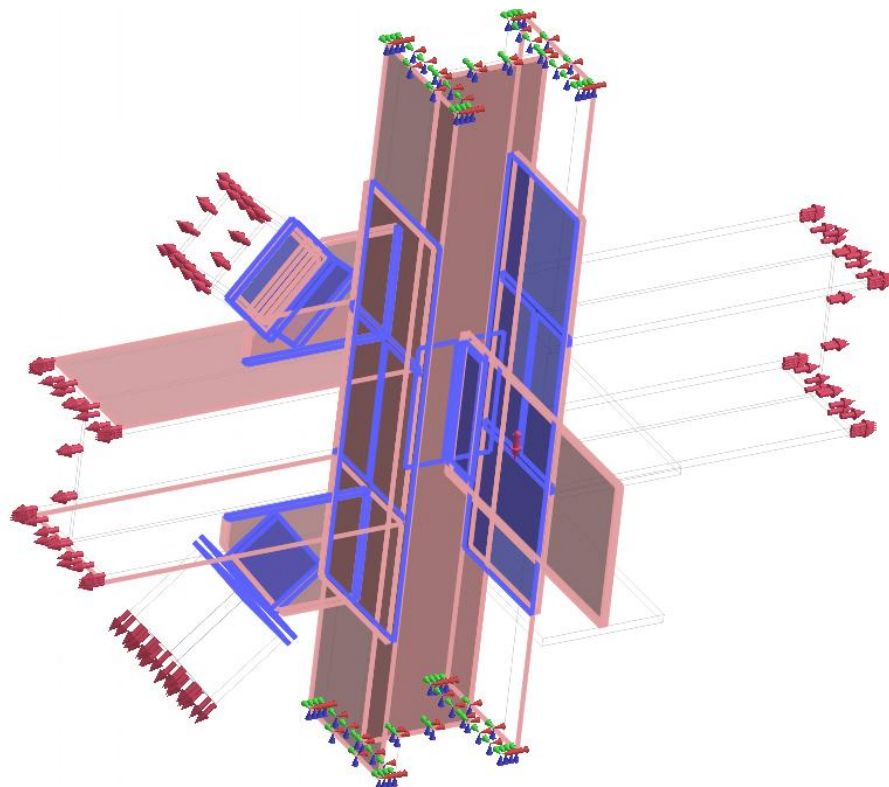
公差

0 mm

✓

+

×



- 接觸(22)

Body-Body 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

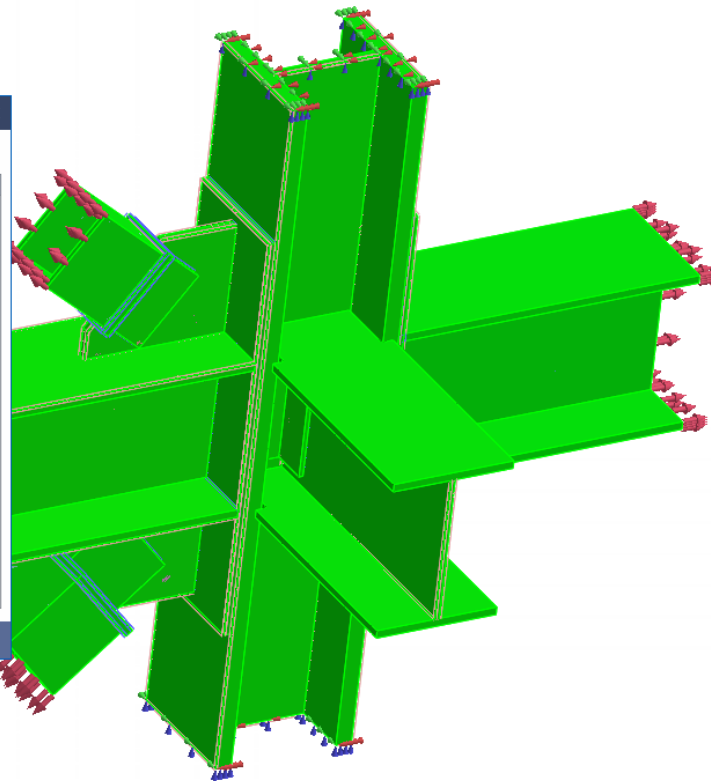
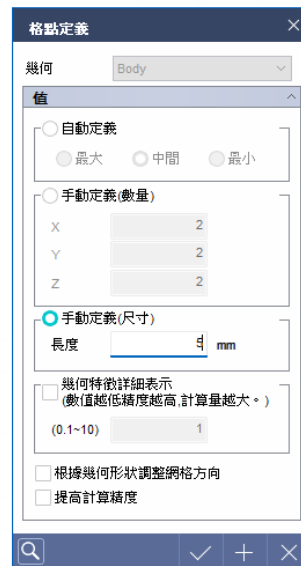
Body-Body... 焊接

Body-Body... 焊接

Body-Body... 焊接

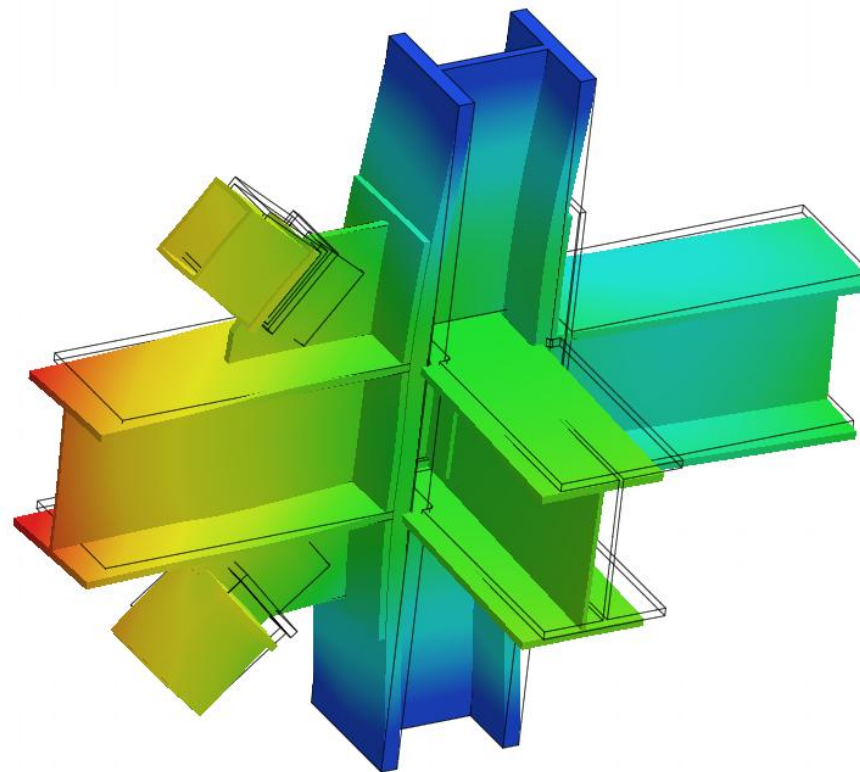
Body-Body... 焊接

Body-Body... 焊接

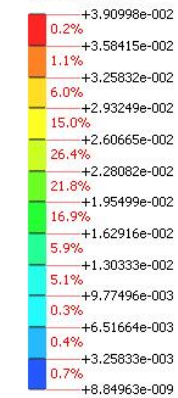




分析類型 線性分析-1
結果 TOTAL DISPLACEMENT



Deformations
DISPLACEMENT-XYZ

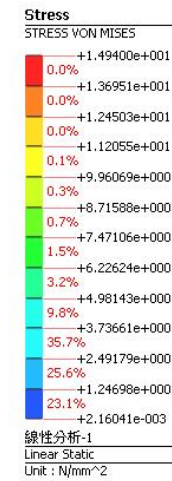
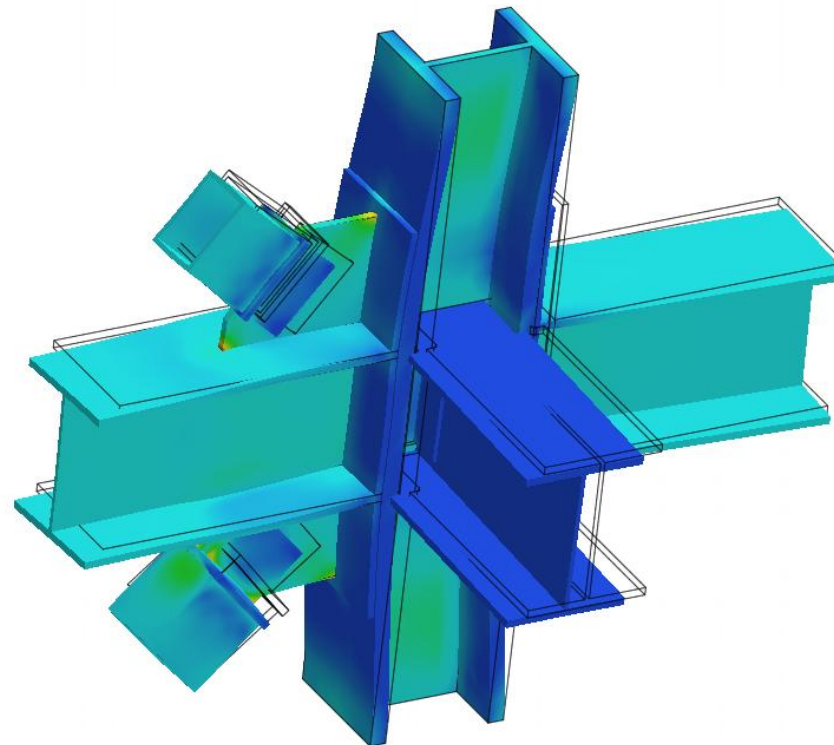


線性分析-1
Linear Static
Unit : mm



分析類型
結果

線性分析-1
STRESS VON MISES





分析類型 線性分析-1
結果 STRAIN VON MISES

