



熱應力_底座熱變形分析

Simple, but Everything.





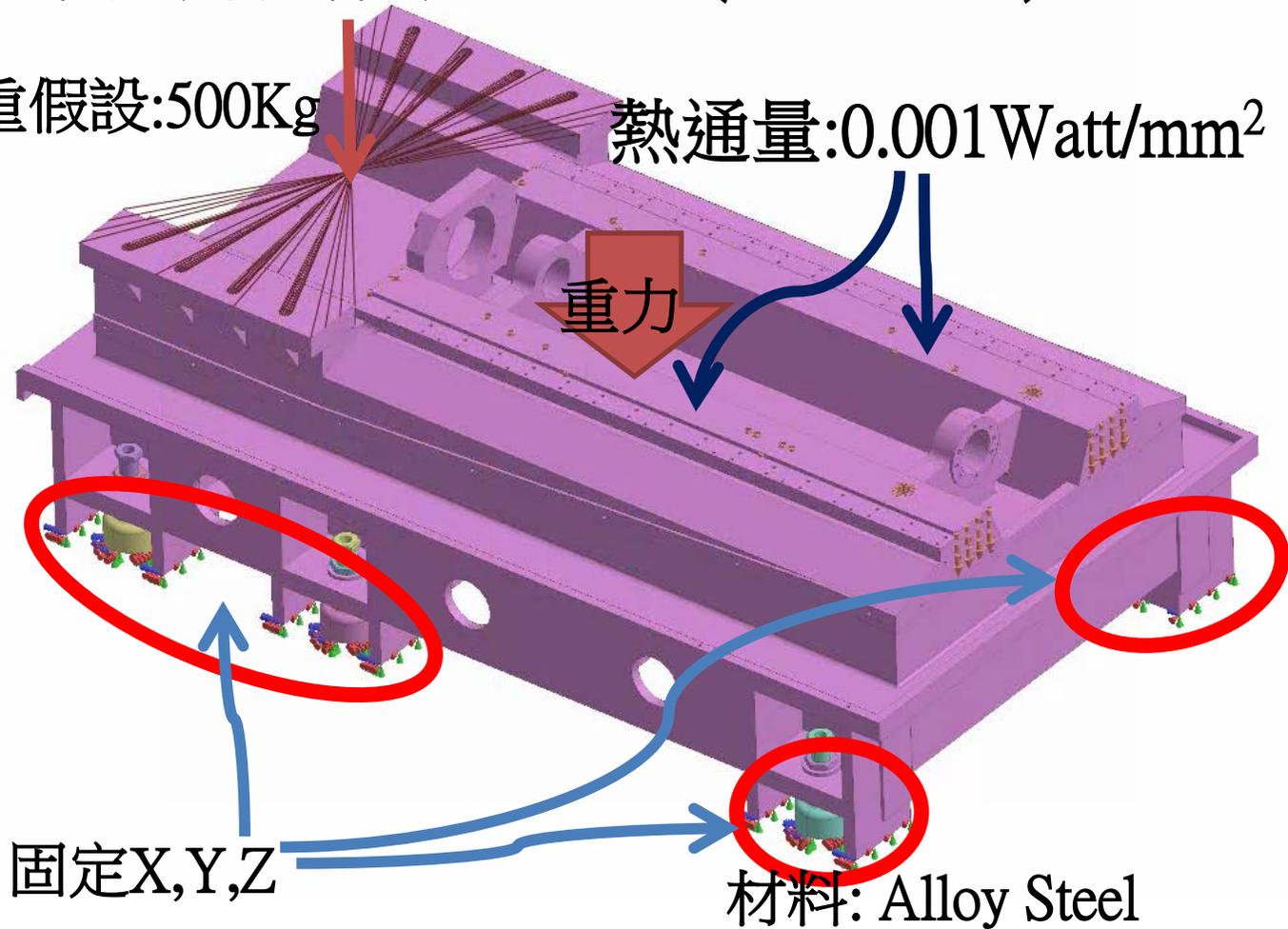
初始溫度:25 °C

環境(工作)溫度:28°C

空氣熱對流係數: 1×10^{-5} (W/mm² °C)

立柱重假設:500Kg

熱通量:0.001Watt/mm²

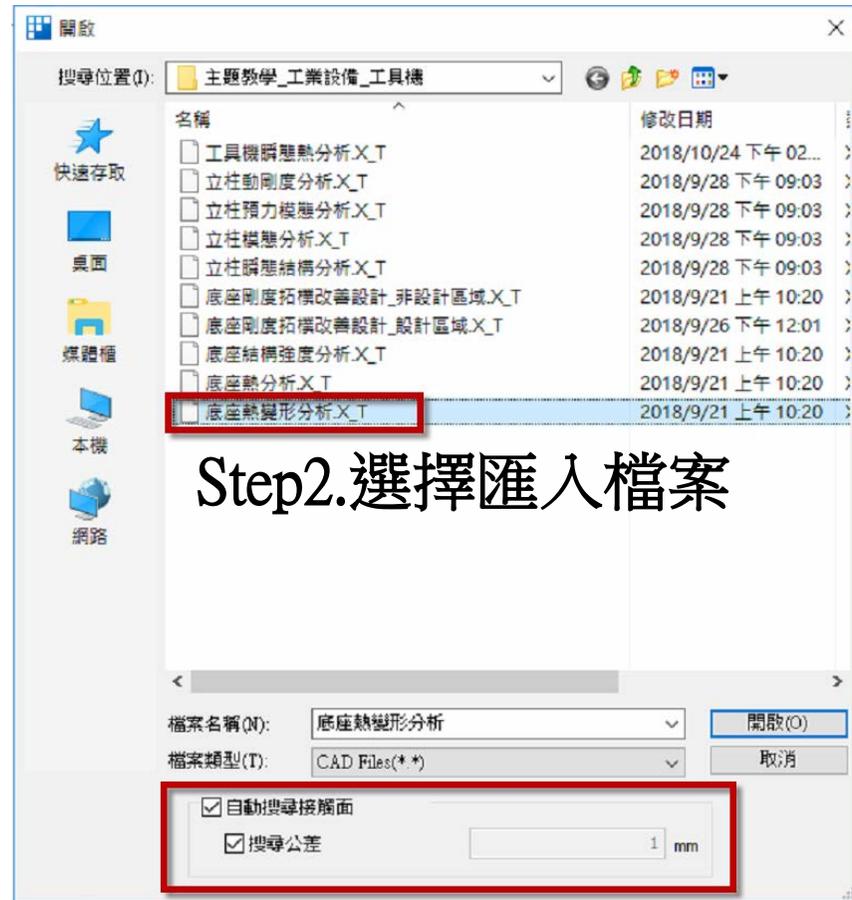


固定X,Y,Z

材料: Alloy Steel



Step1.匯入3D 模型



Step2.選擇匯入檔案

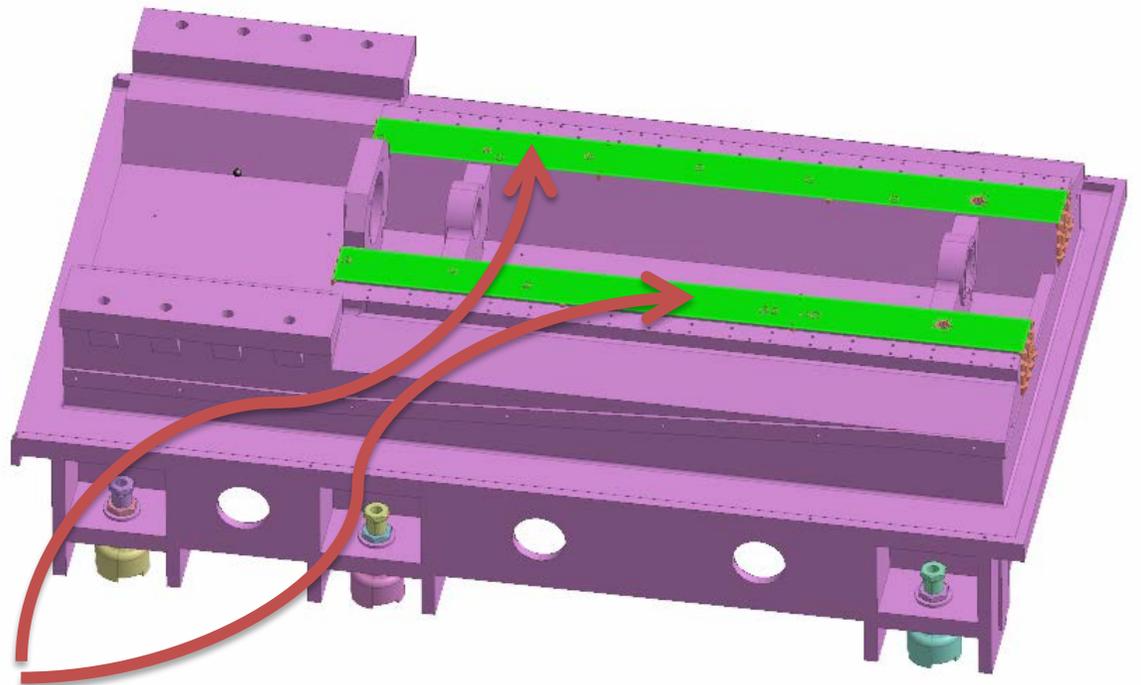
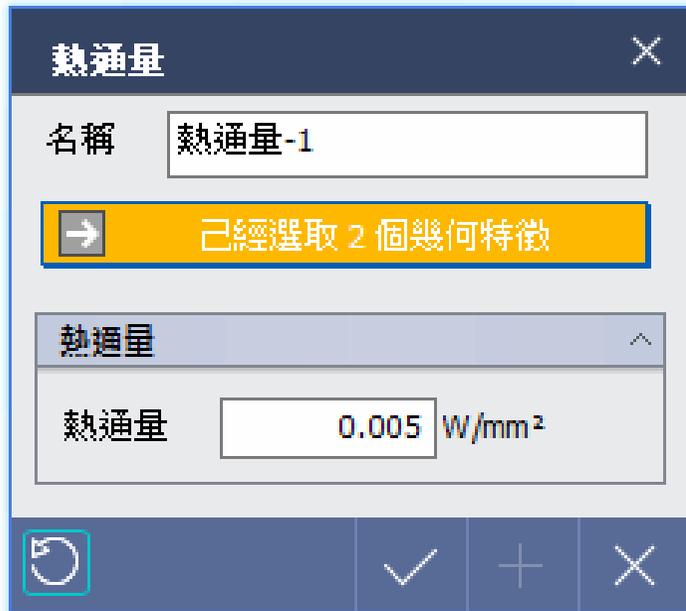
MeshFree支援各類CAD 格式

- Parasolid (9 - 29) Files (*.x_t;*.xmt_txt;*.x_b;*.xmt_bin)
- ACIS (R1 - 2017 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 3.0) Files (*.prt;*.prt.*;*.asm;*.asm.*)
- CATIA V4 (CATIA 4.1.9 - 4.2.4) Files (*.model;*.exp;*.session)
- CATIA V5 (V5R8 - V5-6R2016) Files (*.CATPart;*.CATProduct)
- Solid Works (98 - 2017) Files (*.sldprt;*.sldasm)
- Unigraphics (11 - NX11) Files (*.prt)
- Inventor Part (V6 - V2017) Files (*.ipt)
- Inventor Assembly (V11 - V2017) Files (*.iam)
- Solid Edge (V18 - ST9) Files (*.par;*.asm;*.psm)

Step3.開啓自動搜尋接觸面



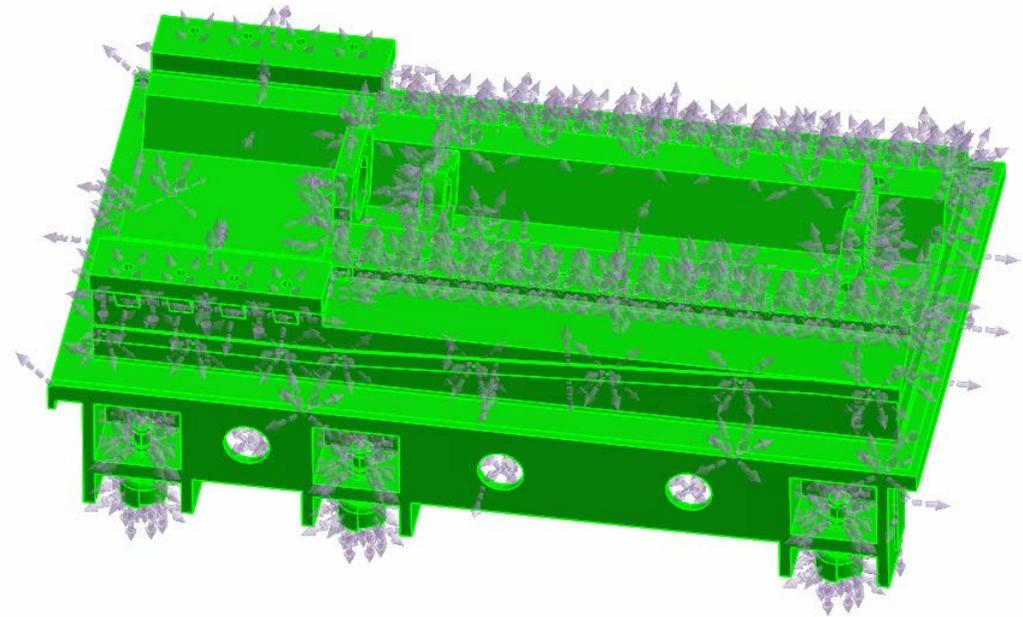
載荷

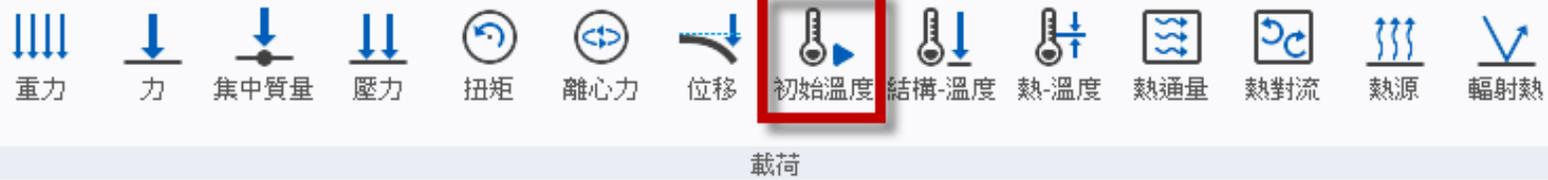


選取滑軌特徵面



框選所有特徵面





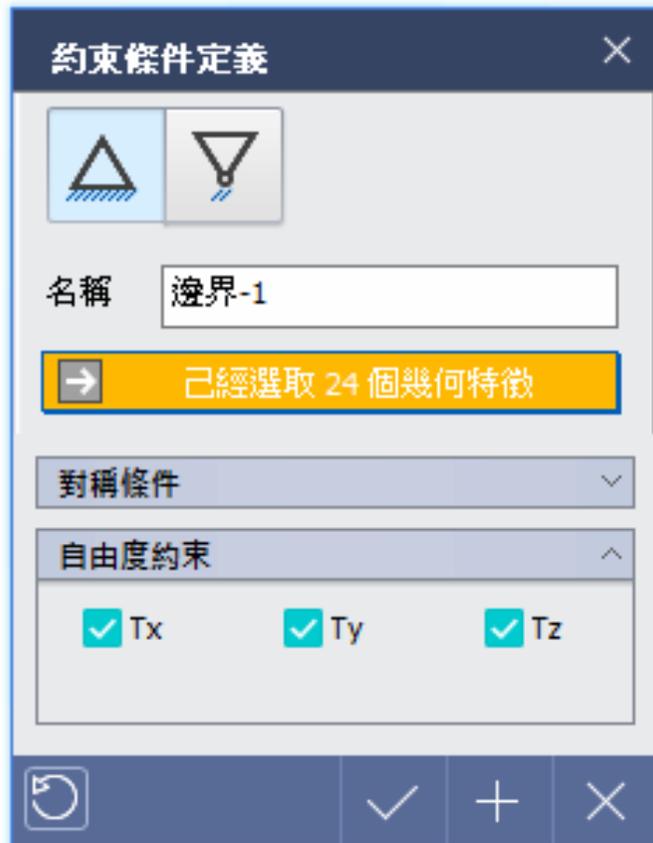
初始溫度 ✕

名稱

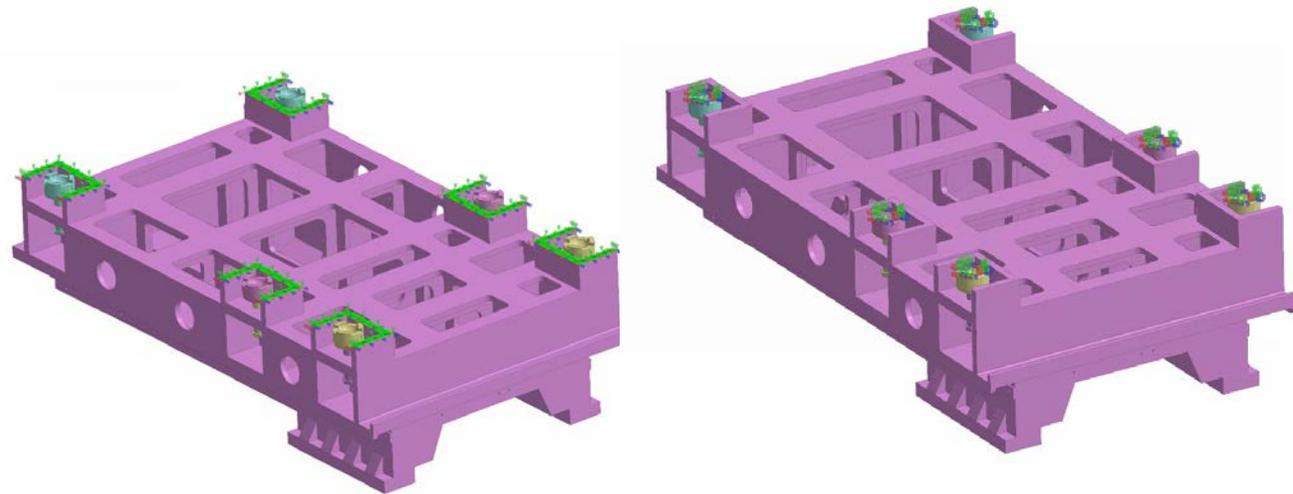
初始溫度 ^

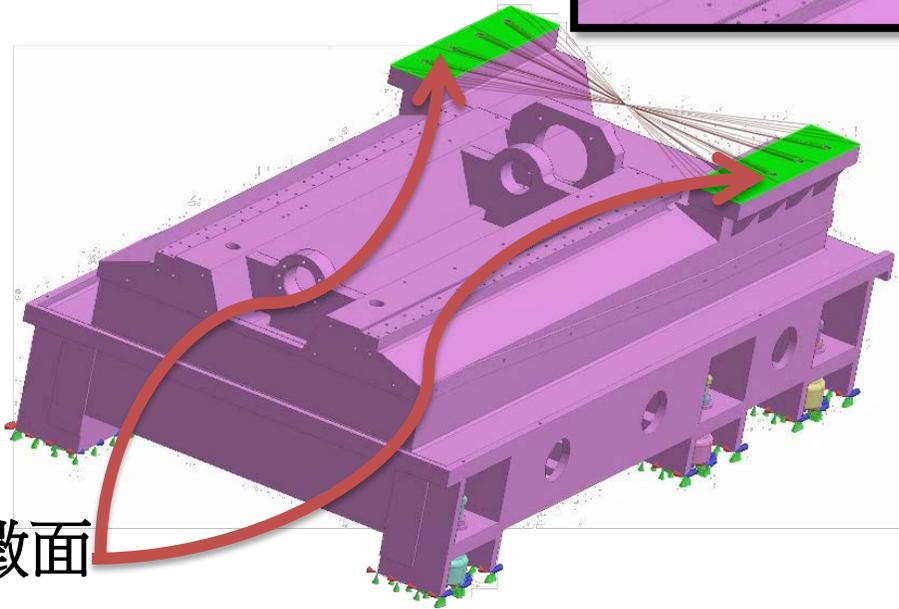
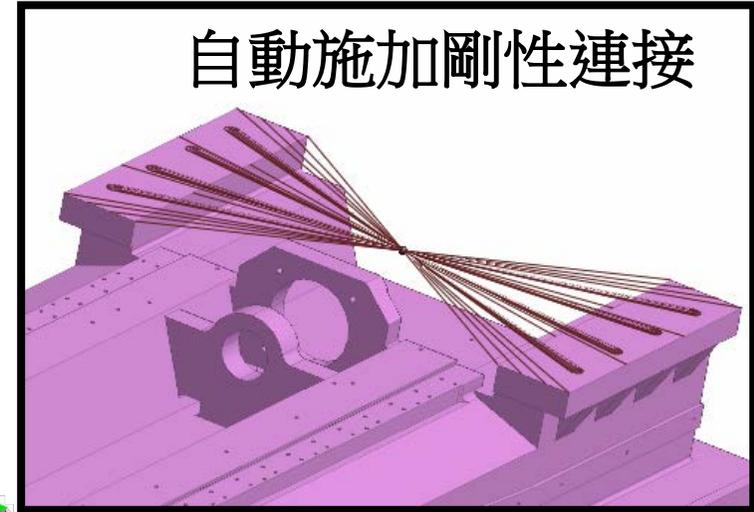
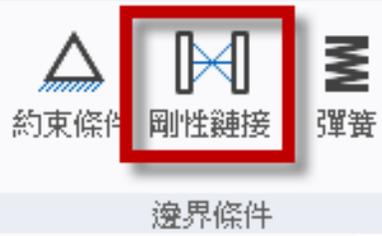
溫度 [°C]

↺
✓
+
✕



選取拘束底面特徵

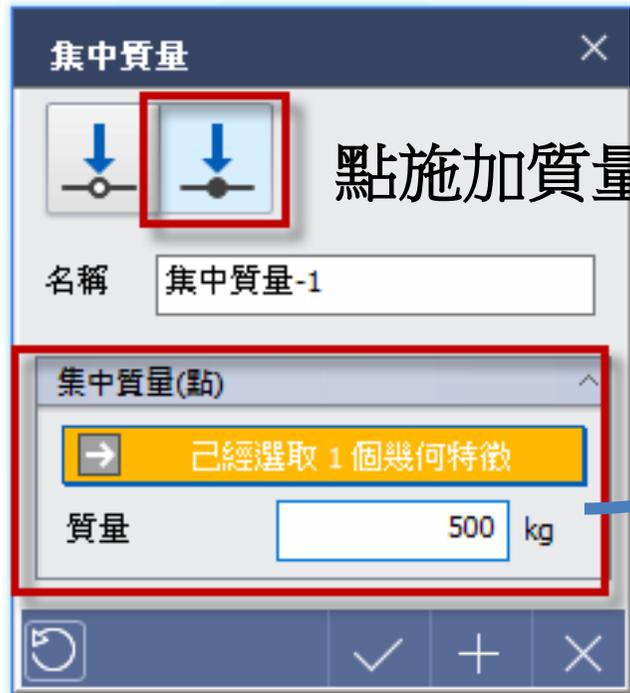




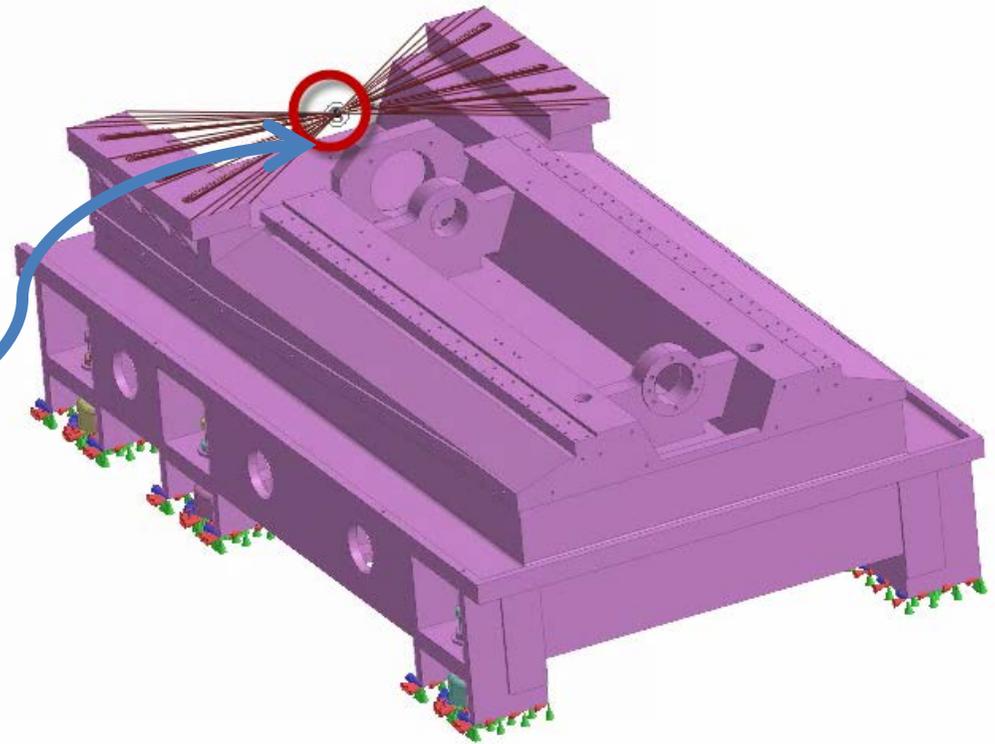
選取立柱鎖附位置特徵面



載荷



施加在剛性連接中間點

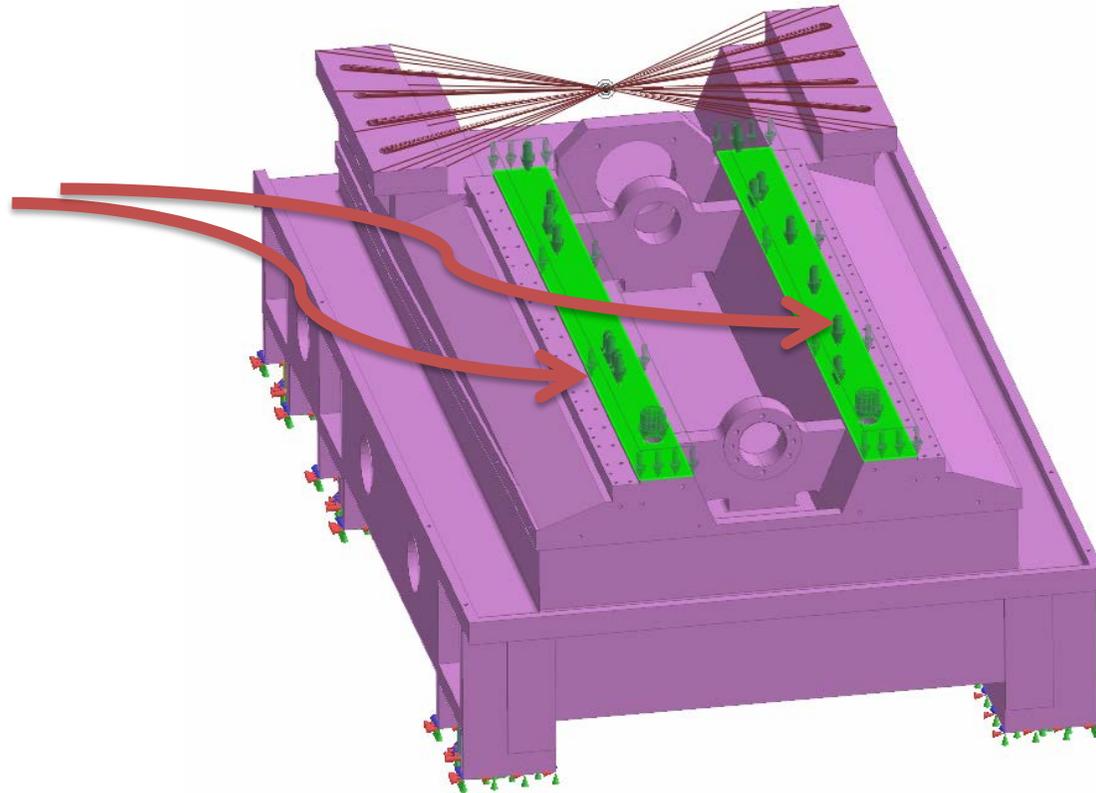




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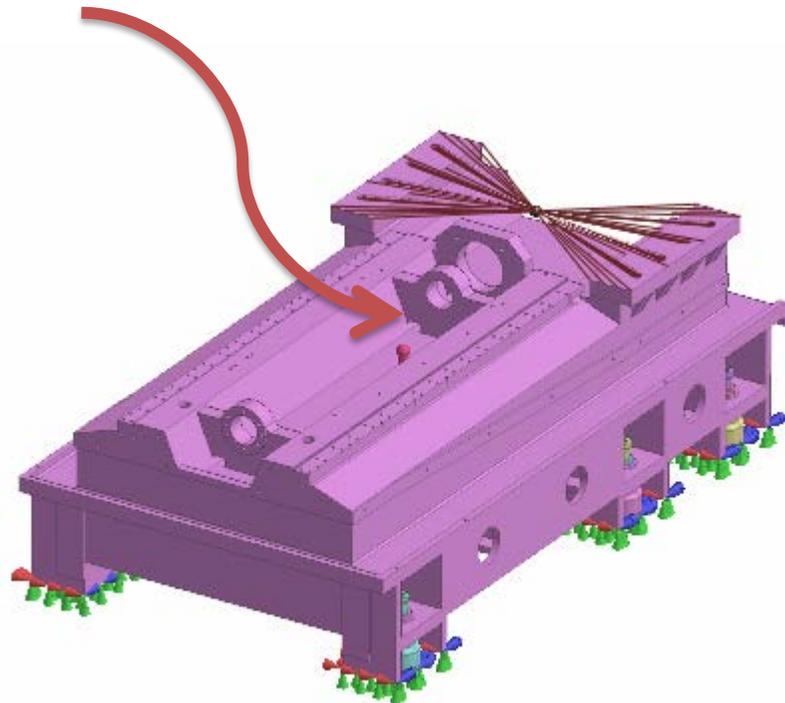


選擇滑軌特徵面



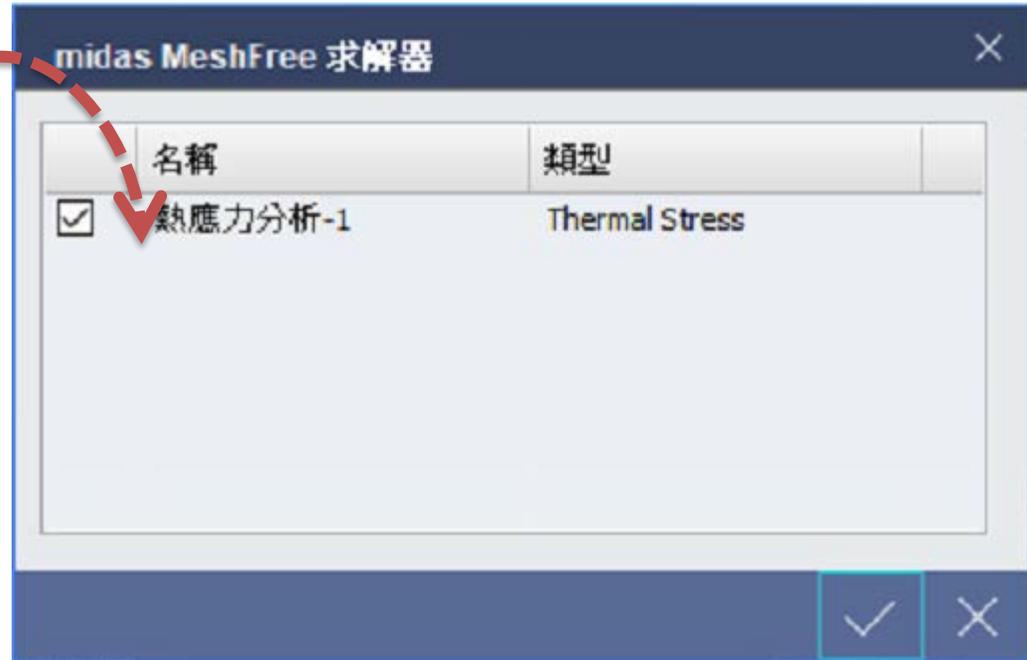
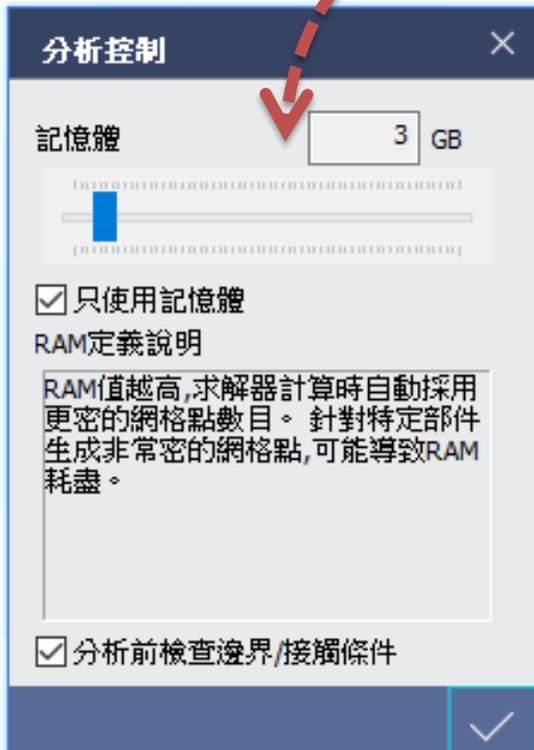


新增重力,視窗會顯示重力方向箭頭

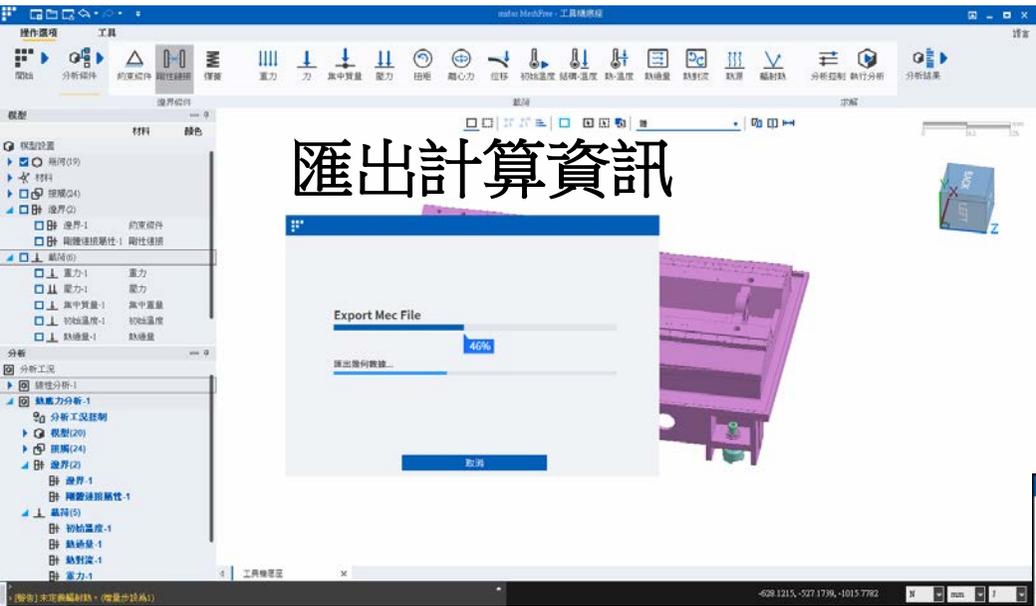




熱應力計算



記憶體大小
1.計算速度
2.分析準確性



匯出計算資訊

進行求解

分析時間34.917sec
(採2G Ram)

```
> MAXIMUM TRANSLATION : 2.3339E-001 (T3:257075), MAXIMUM ROTATION : -9.9
> ANALYSIS WALL CLOCK TIME : 15.789 sec
> ANALYSIS COMPLETED
>
> [SYSTEM INFO]
> NUMBER OF THREADS : 8
> MAXIMUM MEMORY USAGE : 2660 MB
> AVAILABLE MEMORY : 25413 MB
> TOTAL CPU TIME : 129.859 sec
> WALL CLOCK TIME : 34.917 sec
> TOTAL WARNINGS : 0
```

