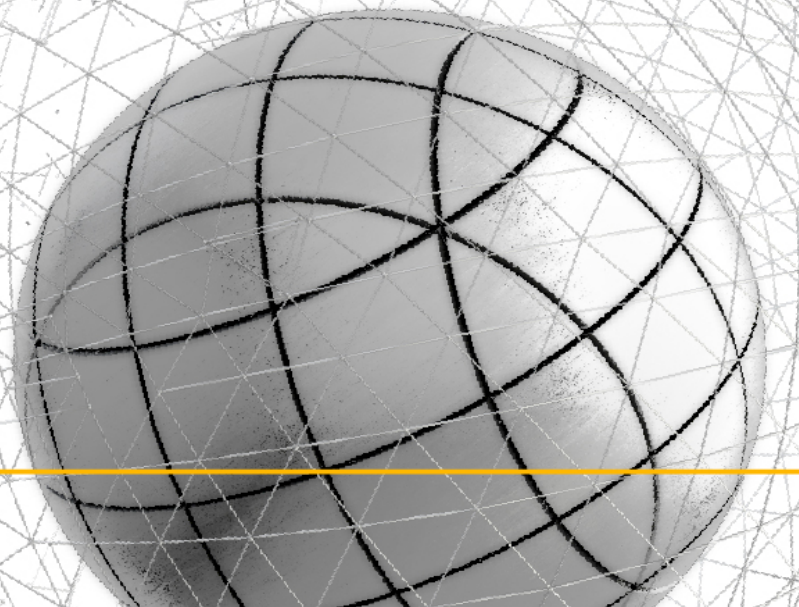
MIDAS

MIDAS MESH FREE

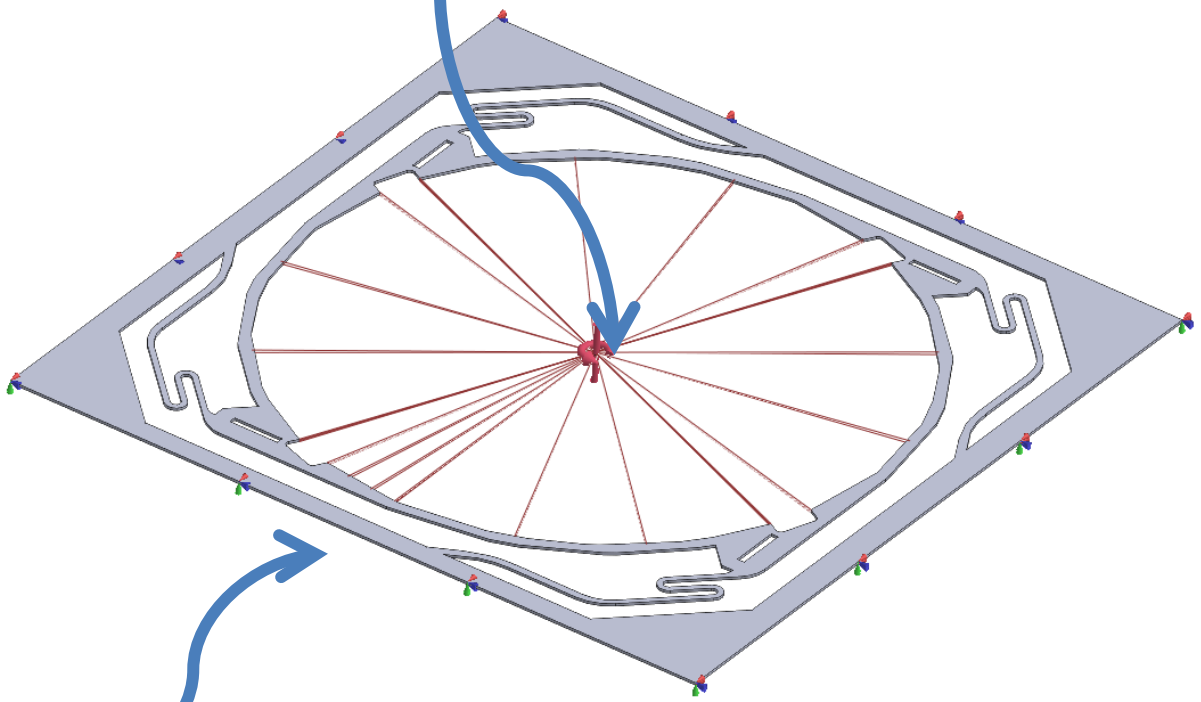
VCM彈片_預力模態分析



Simple, but Everything.

Mode1~Mode10計算

Bending Moment=0.1 N-mm

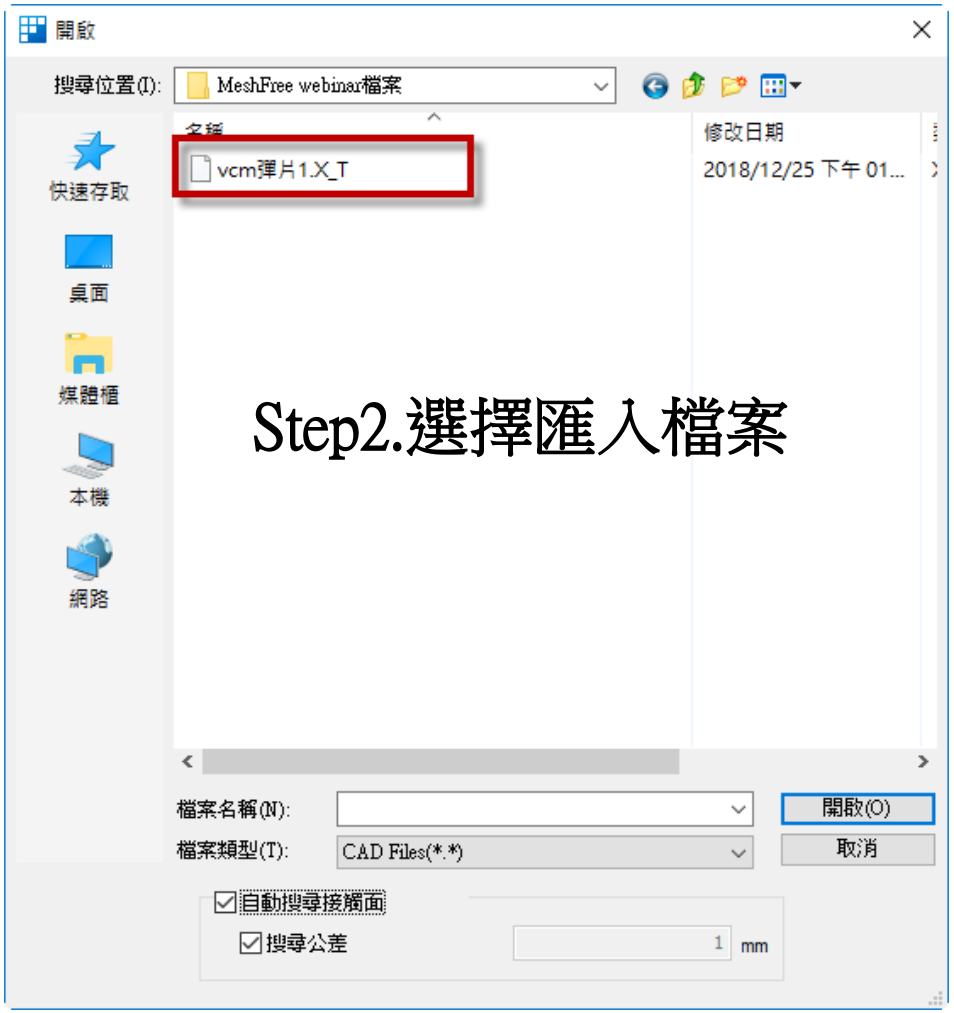


彈片周圍
固定X,Y,Z

材料: AISI 1008

註:不考慮熱變形

Step1.匯入3D 模型

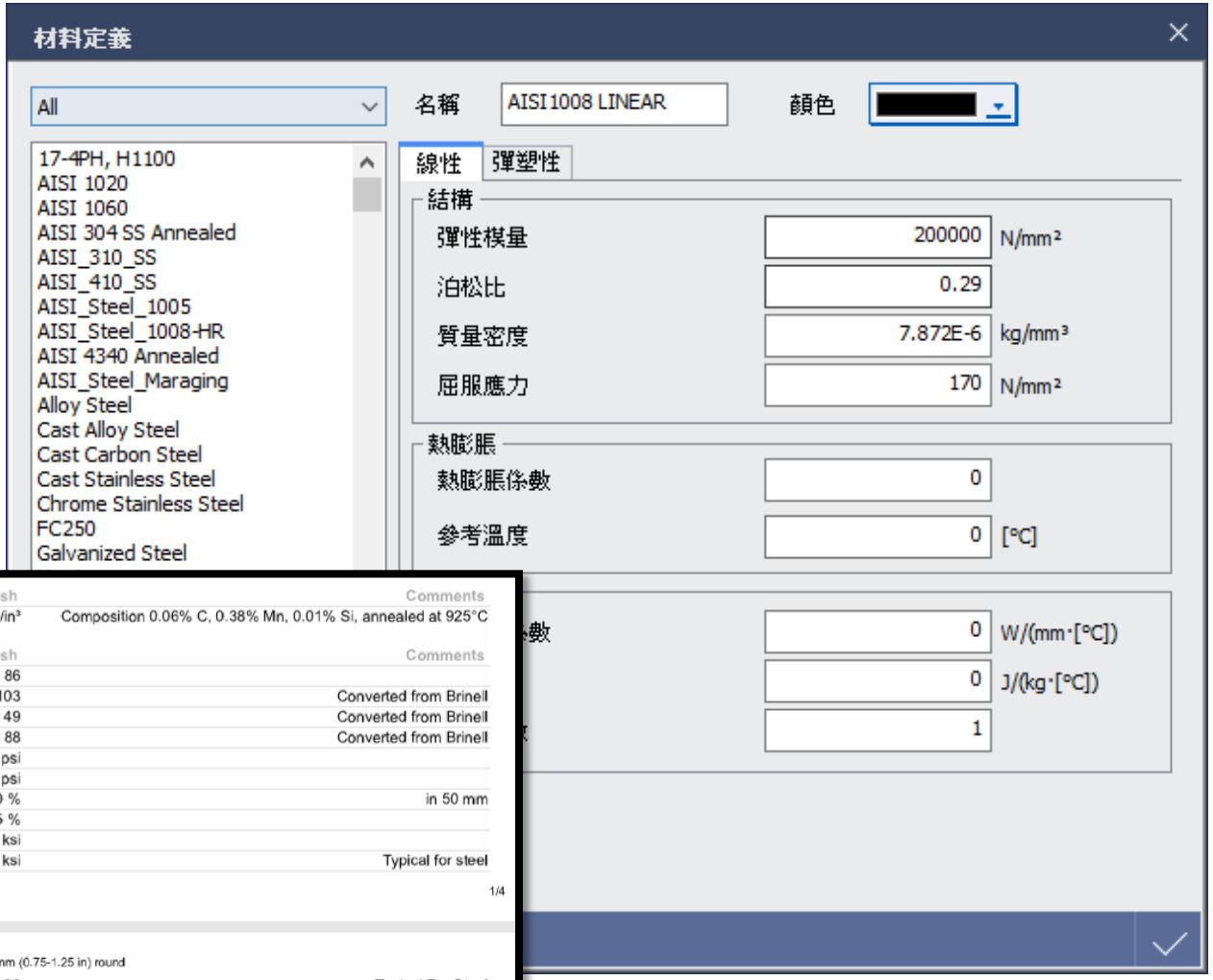


Step2.選擇匯入檔案

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)

新增材料(AISI 1008)



Physical Properties	Metric	English	Comments
Density	7.872 g/cc	0.2844 lb/in³	Composition 0.06% C, 0.38% Mn, 0.01% Si, annealed at 925°C
Mechanical Properties	**Metric**	**English**	**Comments**
Hardness, Brinell	86	86	
Hardness, Knoop	103	103	Converted from Brinell
Hardness, Rockwell B	49	49	Converted from Brinell
Hardness, Vickers	88	88	Converted from Brinell
Tensile Strength, Ultimate	305 MPa	44200 psi	
Tensile Strength, Yield	170 MPa	24700 psi	
Elongation at Break	30 %	30 %	in 50 mm
Reduction of Area	55 %	55 %	
Modulus of Elasticity	200 GPa	29000 ksi	
Bulk Modulus	160 GPa	23200 ksi	Typical for steel

http://www.matweb.com/search/DataSheet.aspx?MatGUID=b76f3b18bd814e449d3a8b4a906af771&ckck=1 1/4

2018/12/26 AISI 1008 Steel, hot rolled bar, 19-32 mm (0.75-1.25 in) round

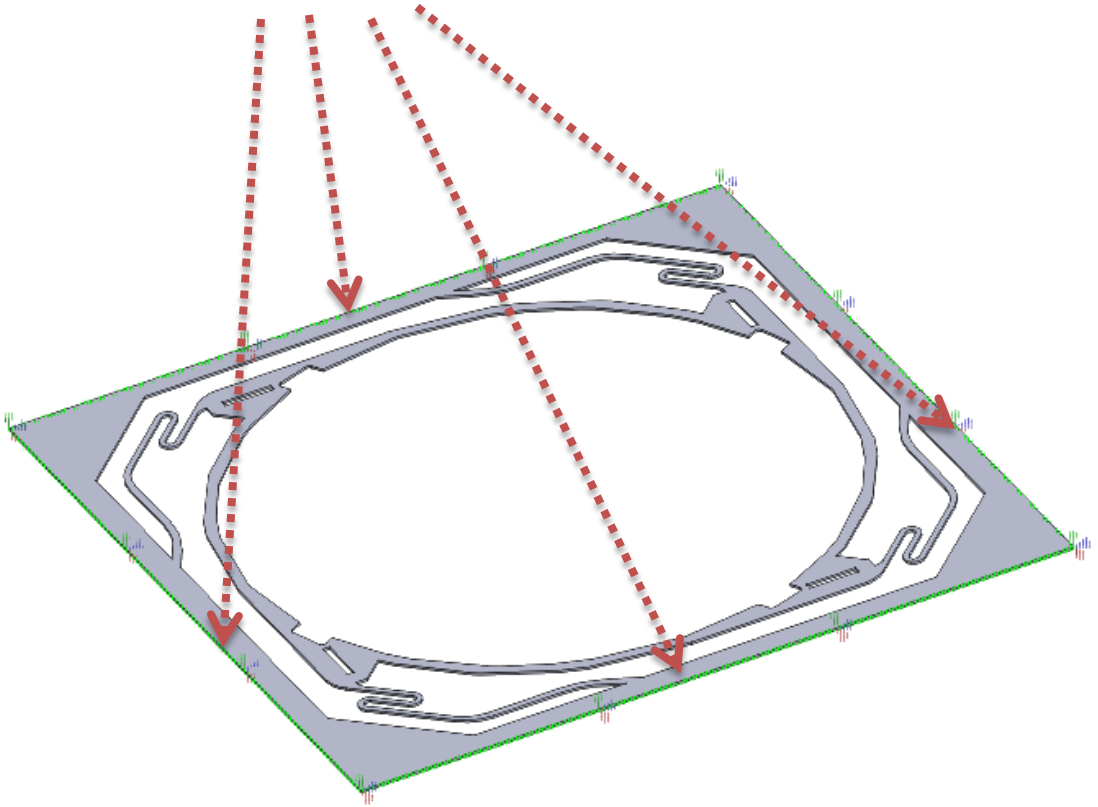
Poissons Ratio	0.29	0.29	Typical For Steel

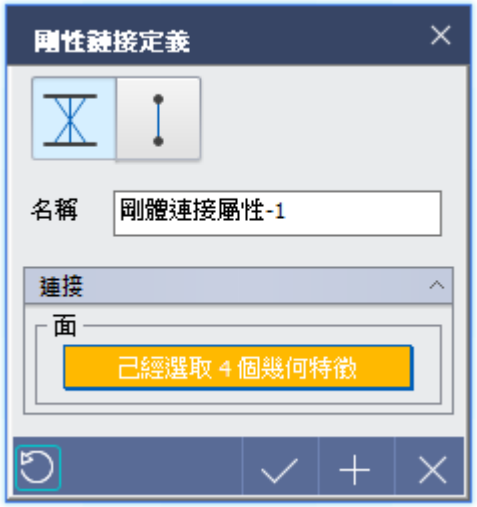
AISI 1008材料係數_參考 www.matweb.com

滑鼠右鍵,材料定義

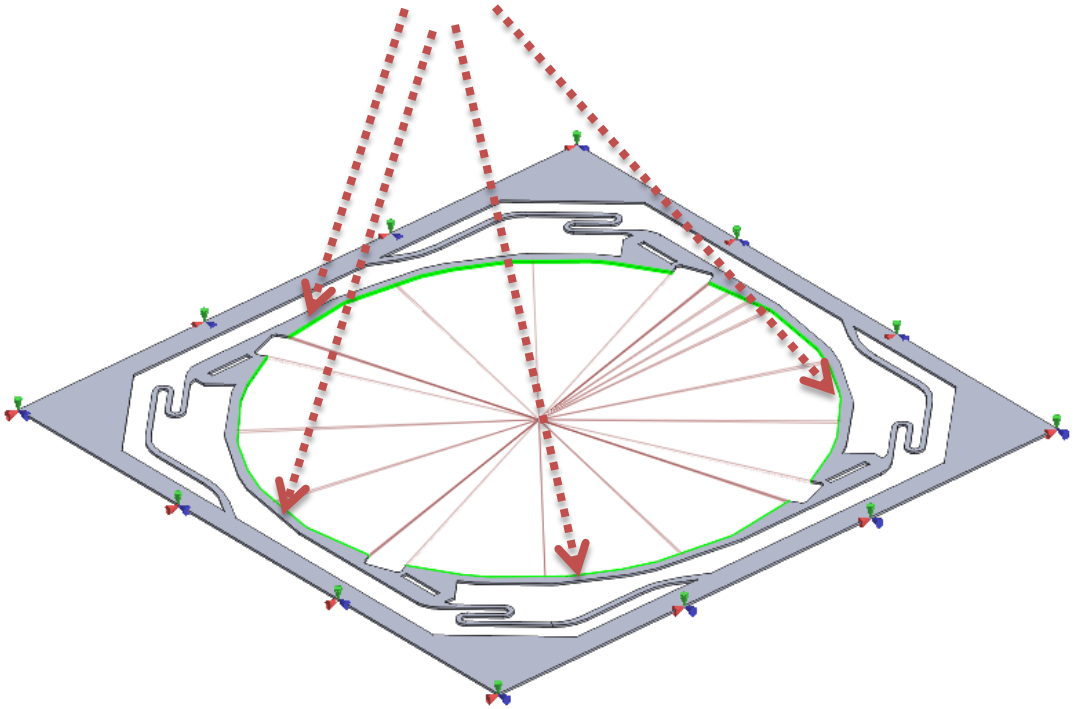
模型樹會顯示指定的材料

選取四周特徵拘束



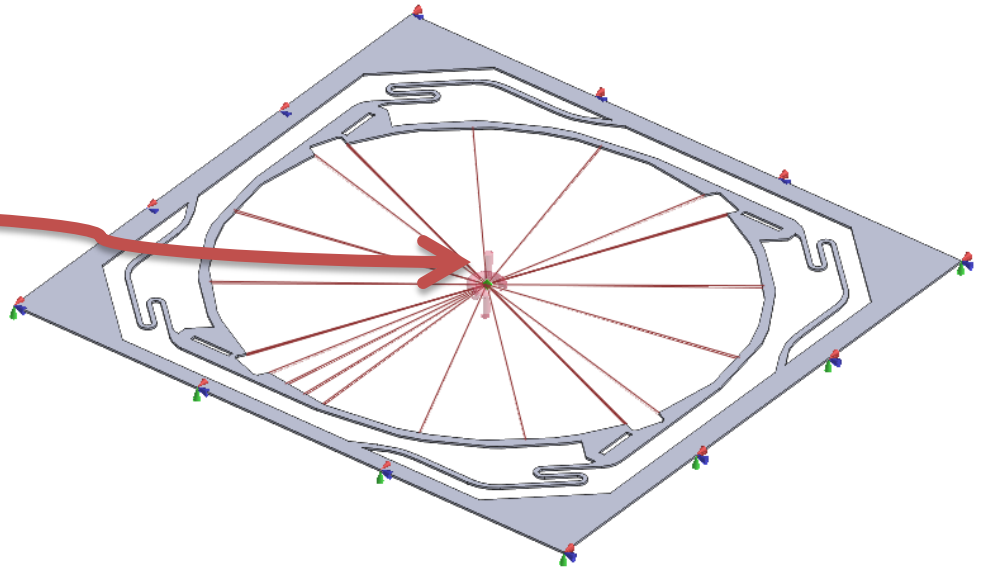


選取孔內徑特徵

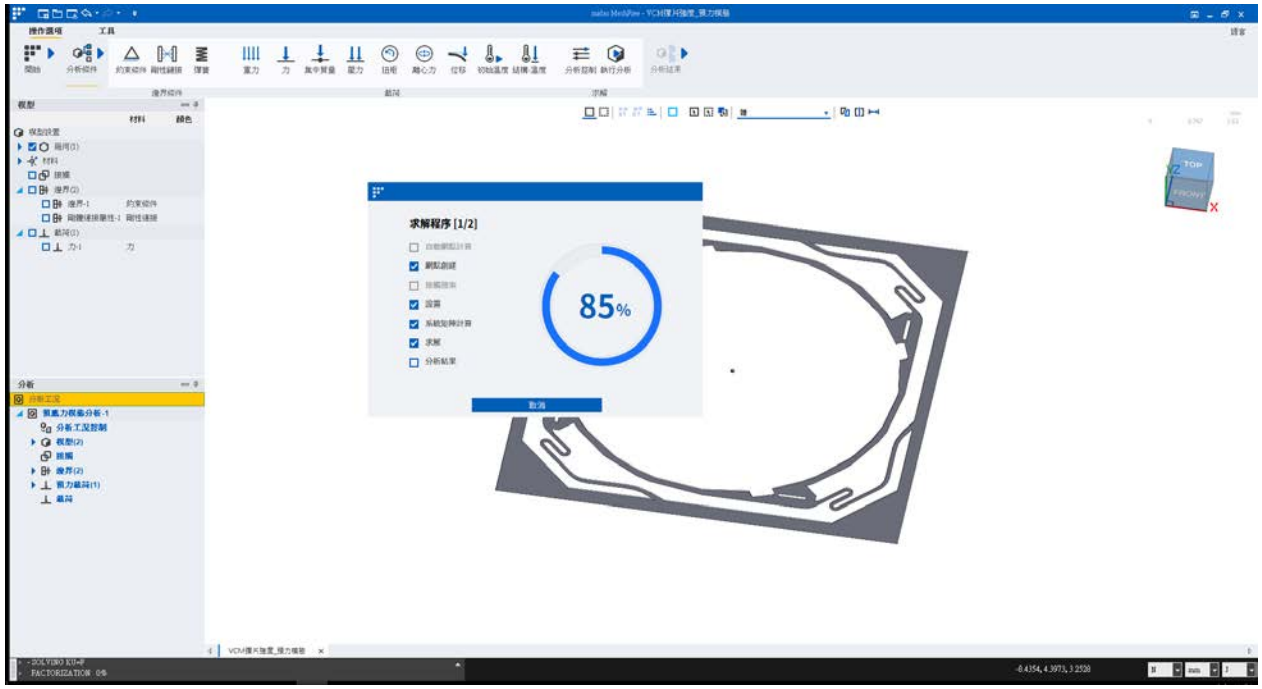


施加bending moment

施加剛體中心點

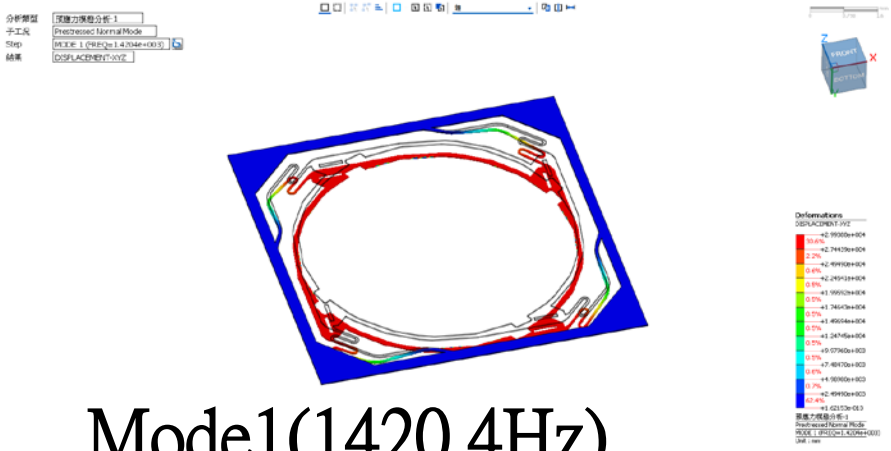


記憶體大小
1.計算速度
2.分析準確性

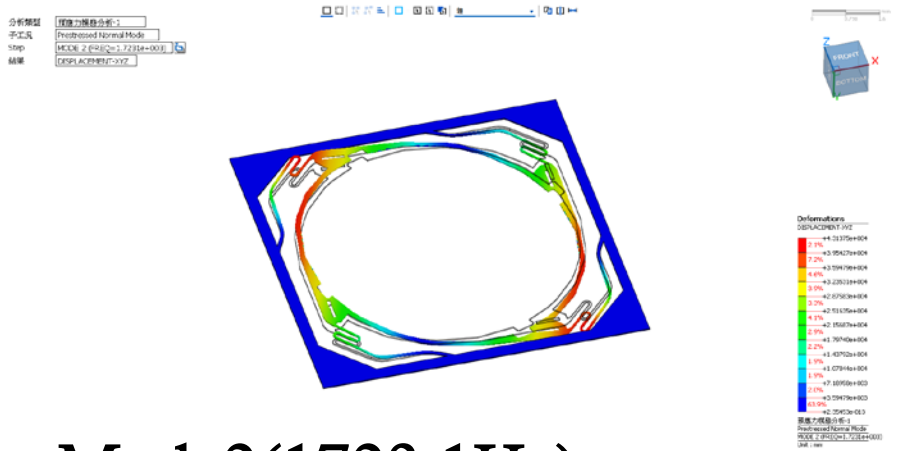


分析時間63.135sec
(採2G Ram)

```
>   COMPUTING OUTPUT DATA FOR  10th MODE(5.8493e+009)
> ANALYSIS WALL CLOCK TIME : 44.961 sec
> ANALYSIS COMPLETED
>
> [SYSTEM INFO]
> NUMBER OF THREADS    : 8
> MAXIMUM MEMORY USAGE : 3447 MB
> AVAILABLE MEMORY     : 12513 MB
> TOTAL CPU TIME       : 199.516 sec
> WALL CLOCK TIME      : 63.135 sec
> TOTAL WARNINGS : 0
>
```



Mode1(1420.4Hz)



Mode2(1723.1Hz)