

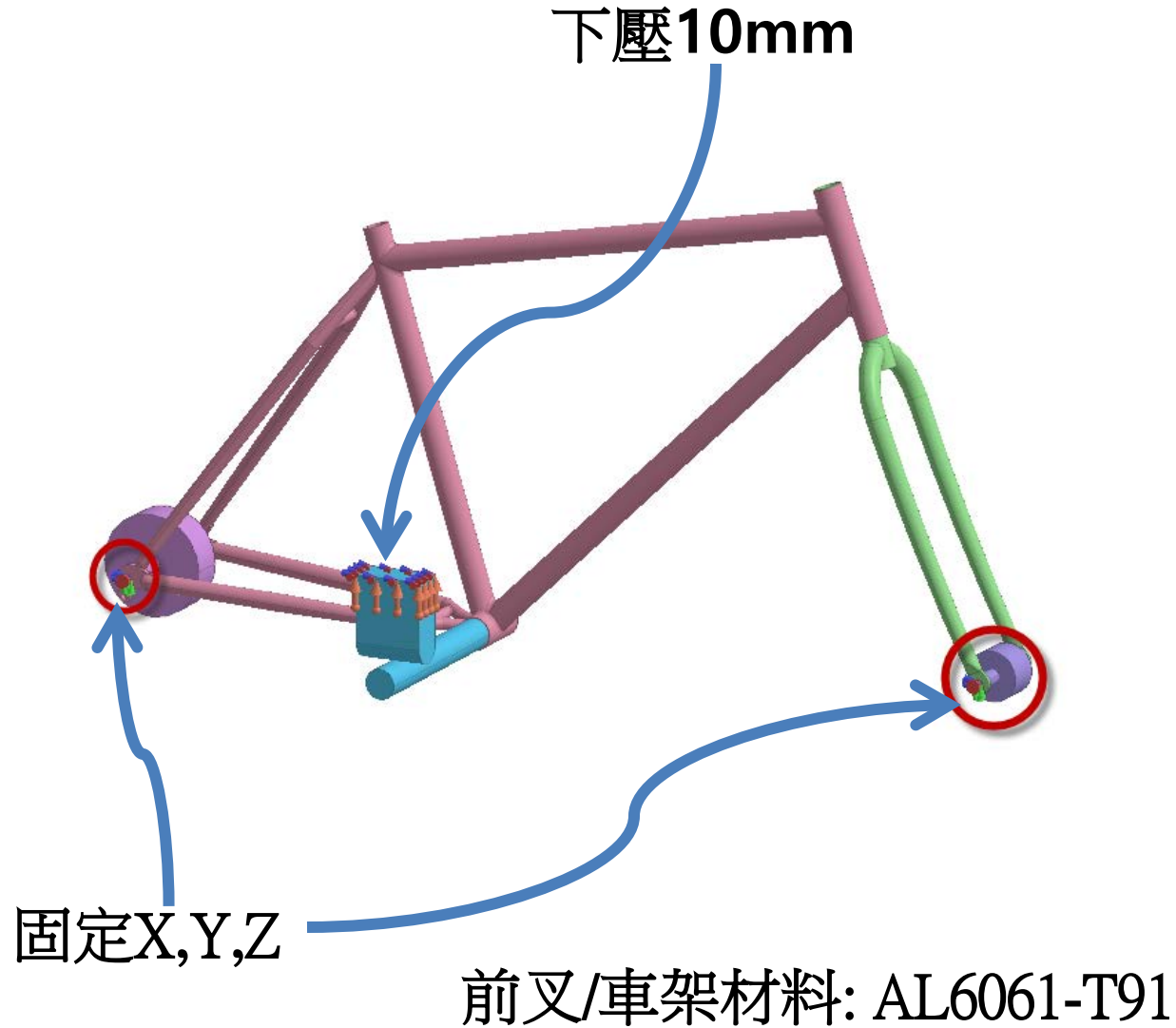


MIDAS

MESH FREE

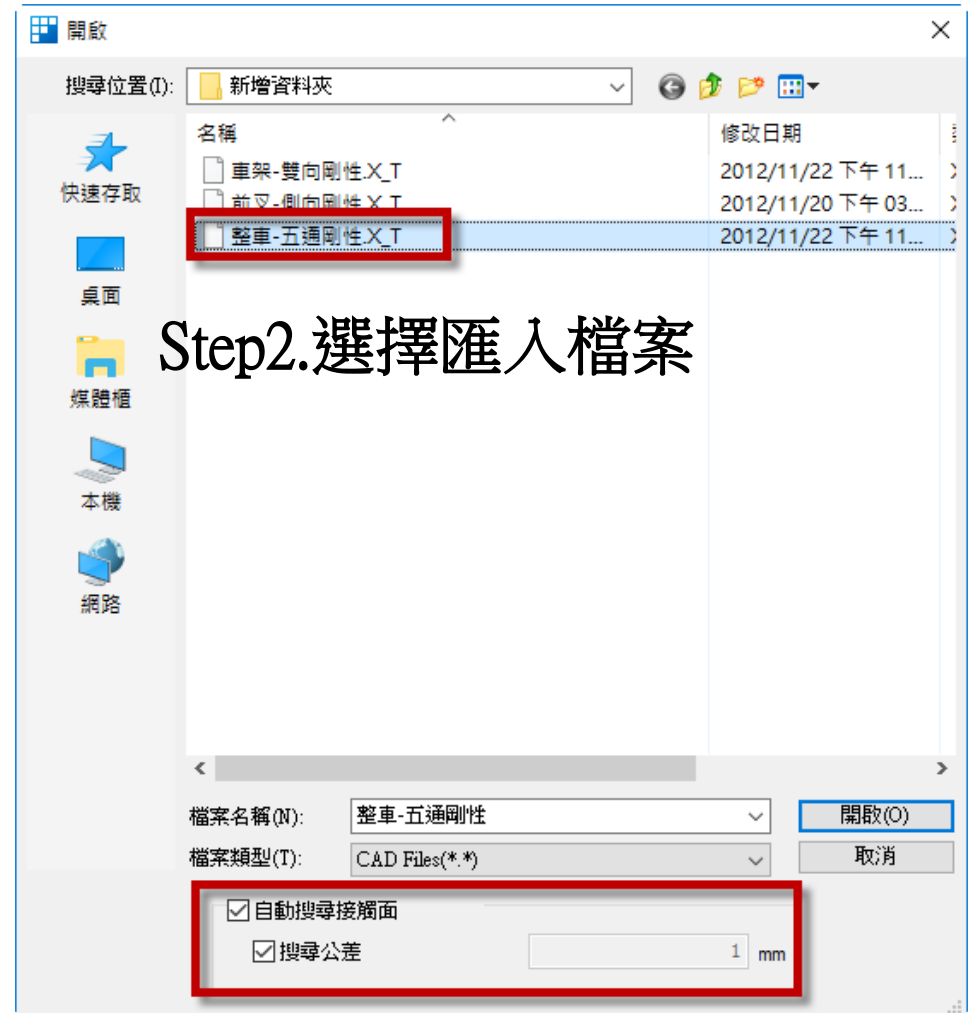
整車_五通剛性
(材料非線性/疲勞強度)

Simple, but Everything.





Step1.匯入3D 模型



Step2.選擇匯入檔案

MeshFree支援各類CAD 格式

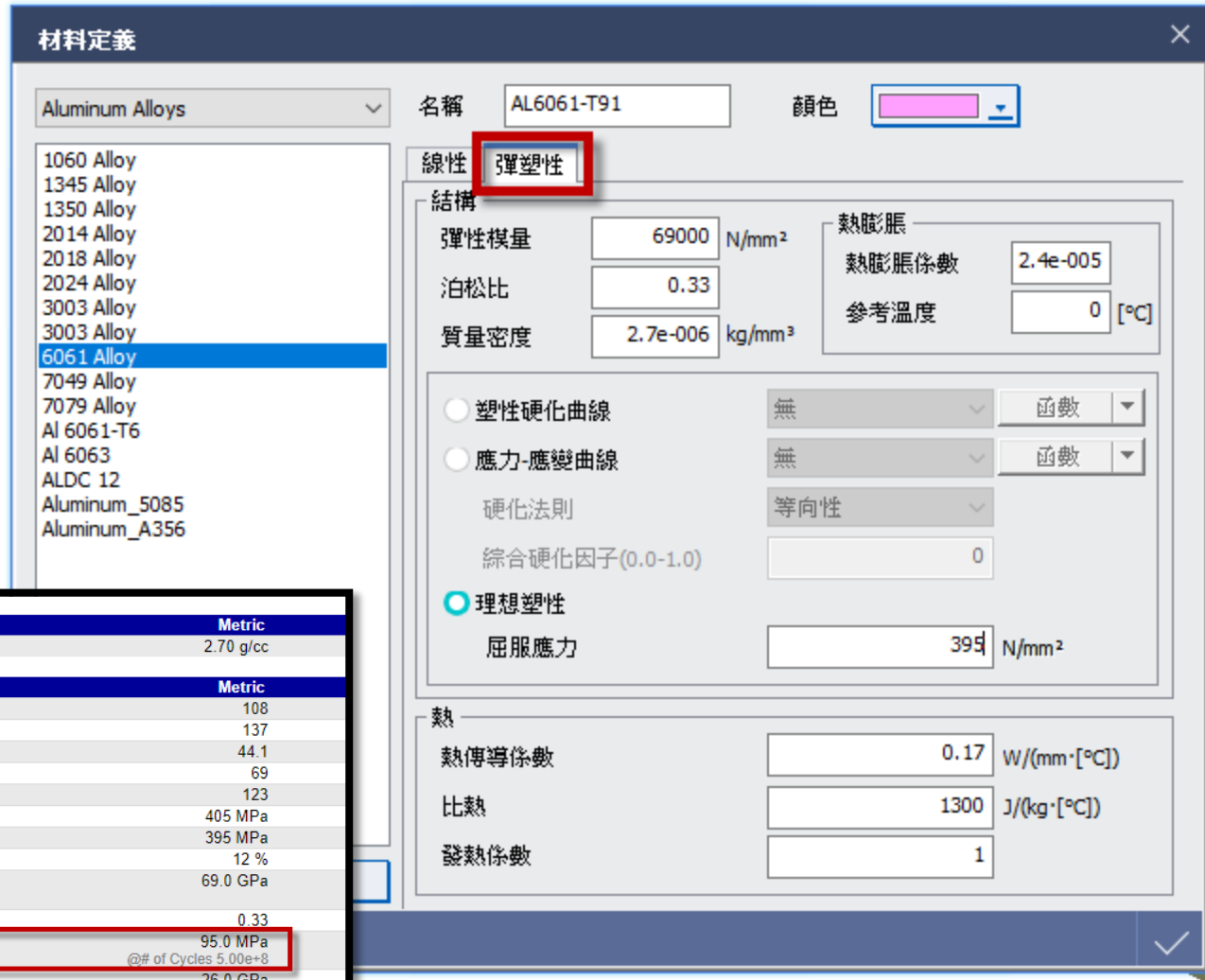
Parasolid (9 - 29) Files (*.x_t;*.xmt_txt;*.x_b;*.xmt_bin)
 ACIS (R1 - 2017 1.0) Files (*.sat;*.sab;*.asat;*.asab)
 STEP (AP203, AP214, AP242) Files (*.stp;*.step)
 IGES (Up to 5.3) Files (*.igs;*.iges)
 Pro-E (16 - Cren 3.0) Files (*.prt;*.prt.*;*.asm;*.asm.*)
 CATIA V4 (CATIA 4.1.9 - 4.2.4) Files (*.model;*.exp;*.session)
 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.自動搜尋接觸面

註:預設接觸類型為焊接接觸

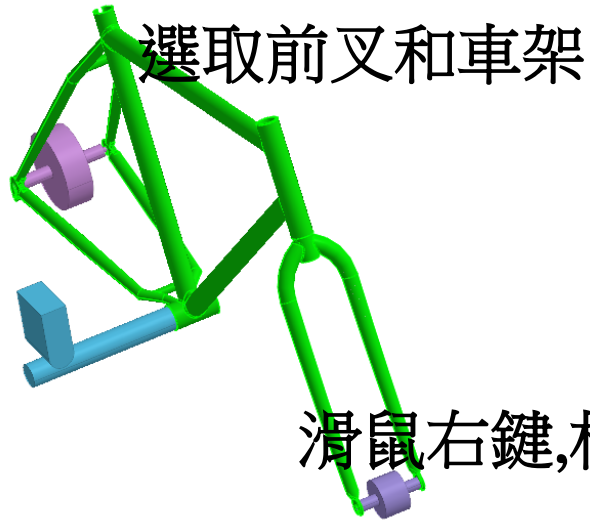


新增材料(AL6061-T91)



Physical Properties	Metric
Density	2.70 g/cc
Mechanical Properties	Metric
Hardness, Brinell	108
Hardness, Knoop	137
Hardness, Rockwell A	44.1
Hardness, Rockwell B	69
Hardness, Vickers	123
Tensile Strength, Ultimate	405 MPa
Tensile Strength, Yield	395 MPa
Elongation at Break	12 %
Modulus of Elasticity	69.0 GPa
Poissons Ratio	0.33
Fatigue Strength	95.0 MPa @# of Cycles 5.00e+8
Shear Modulus	26.0 GPa
Shear Strength	230 MPa

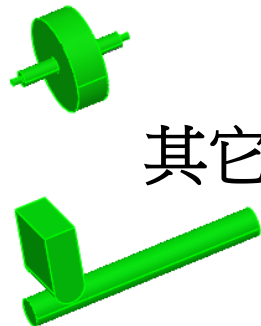
AL6061-T91材料係數_參考 www.matweb.com



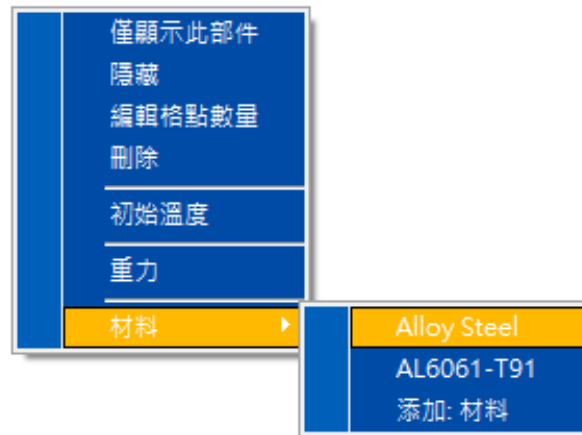
選取前叉和車架



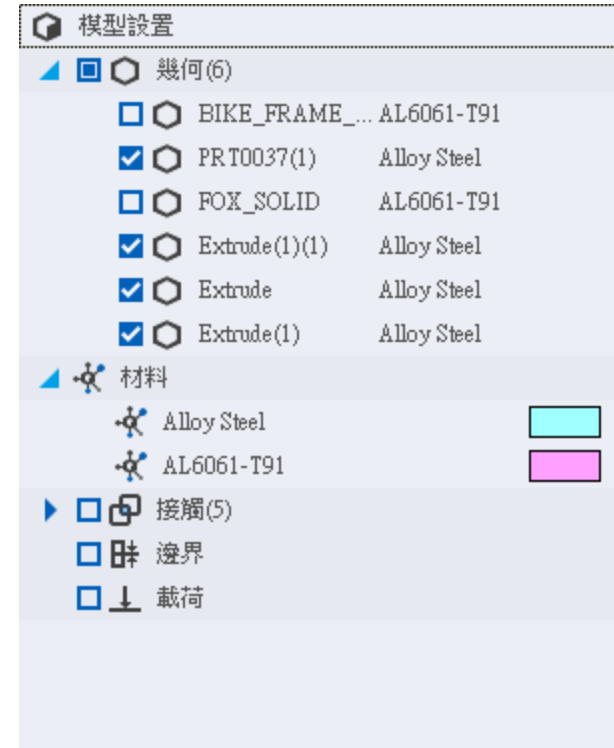
滑鼠右鍵,材料定義



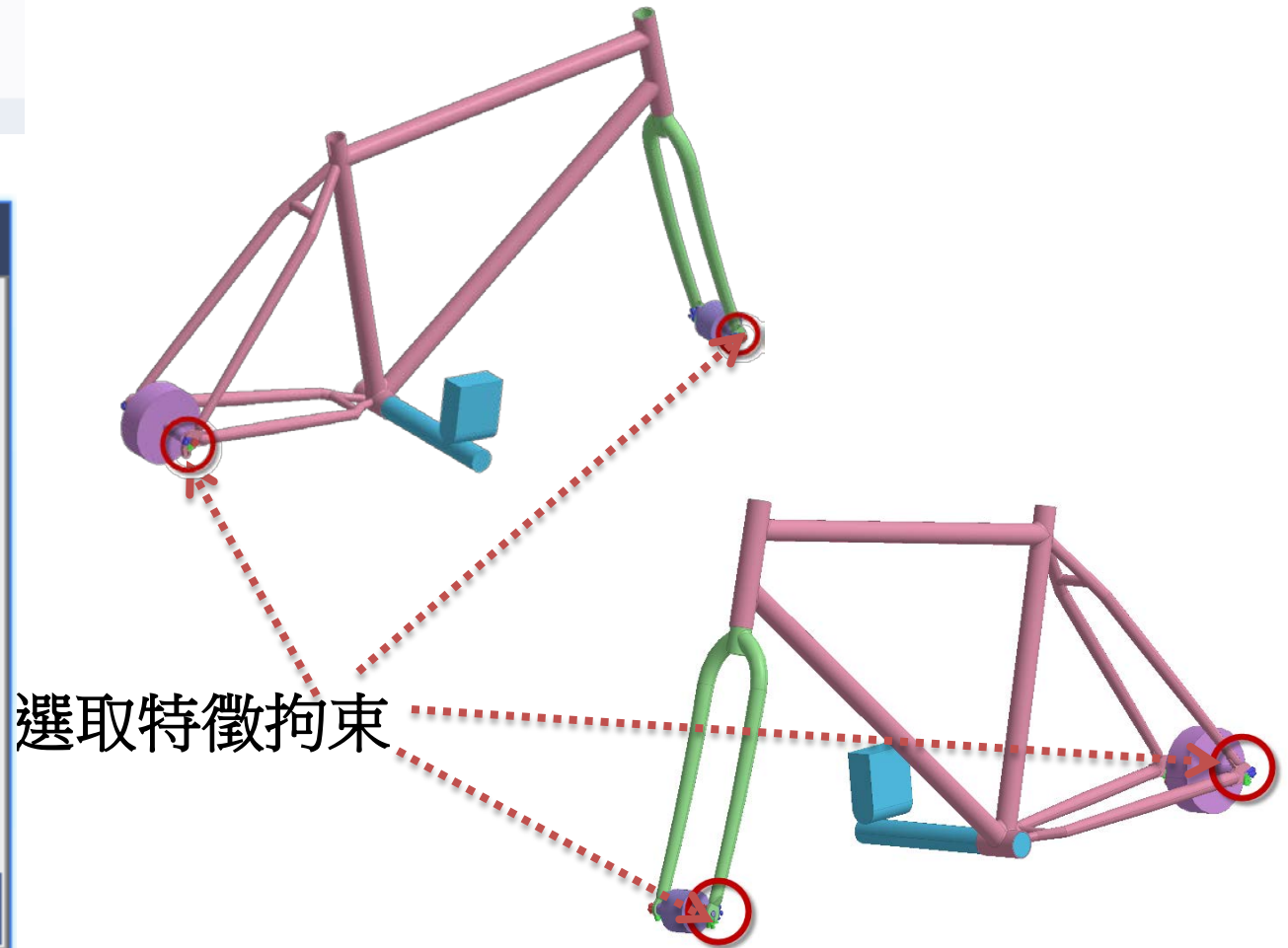
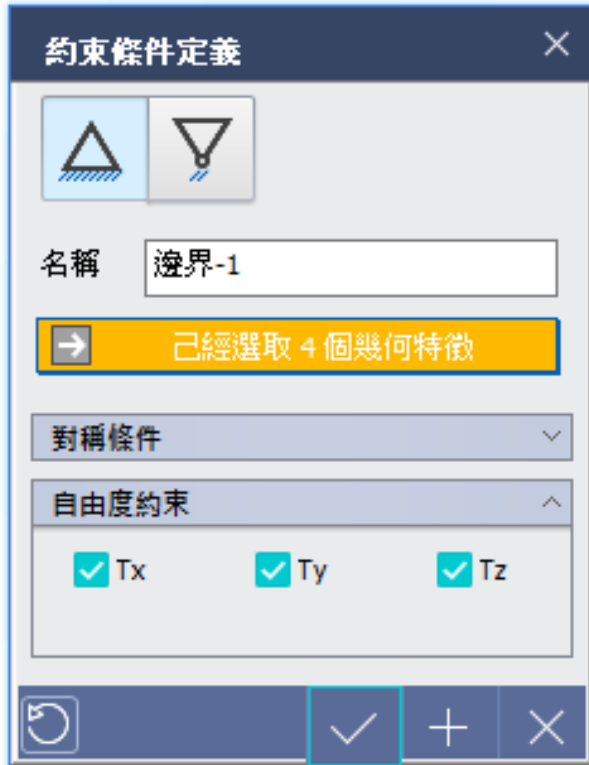
其它部件

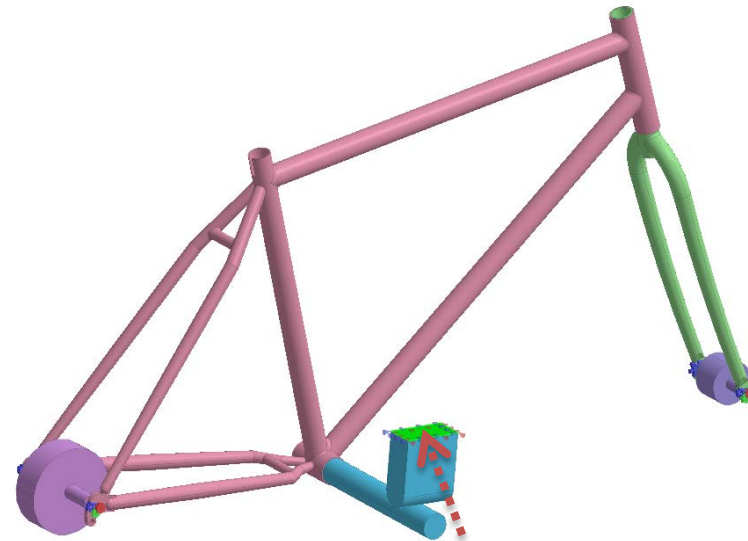


滑鼠右鍵,材料定義



模型樹會顯示指定的材料





選取特徵拘束
(只拘束 X,Z方向由由度)

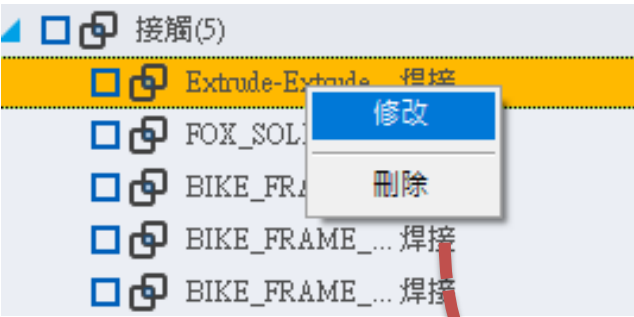


載荷

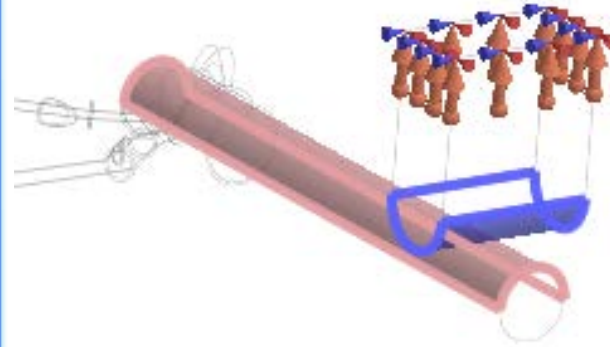


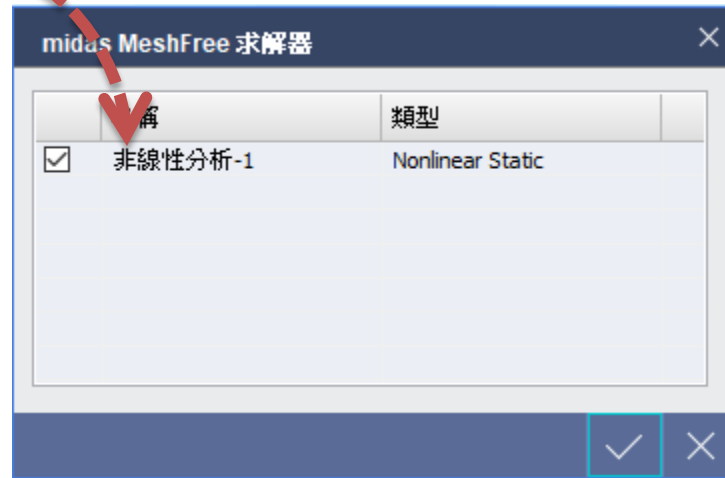
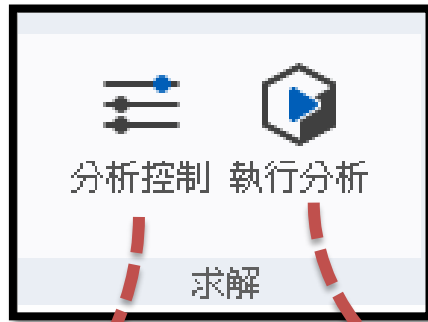
選取下壓治具特徵面
(下壓10mm)





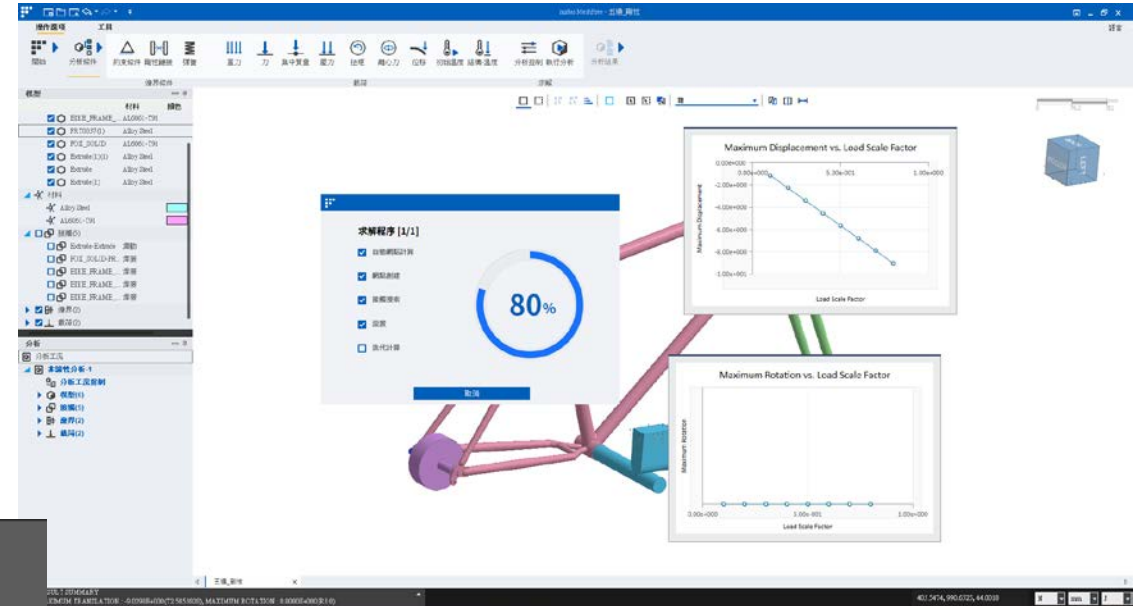
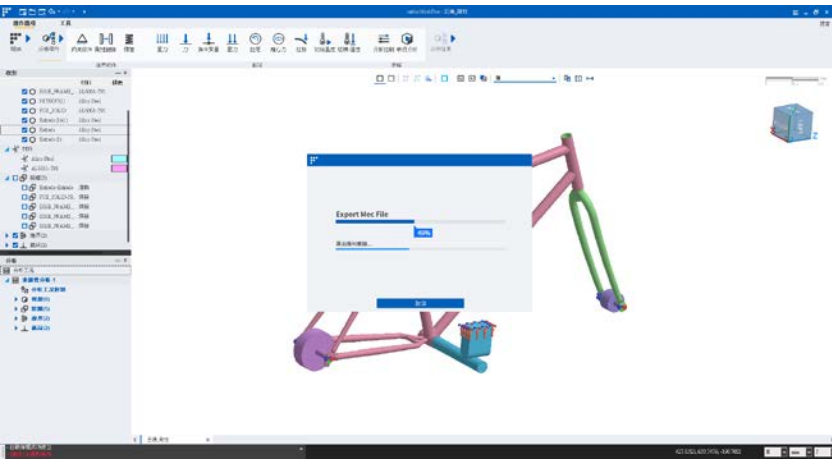
點選接觸對-接觸檢視





記憶體大小

1. 計算速度
2. 分析準確性

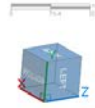


分析時間360.074ec
(採5G Ram)

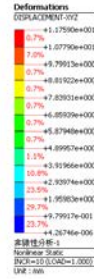
```

> ANALYSIS WALL CLOCK TIME : 320.116 sec
> ANALYSIS COMPLETED
>
> [SYSTEM INFO]
> NUMBER OF THREADS : 8
> MAXIMUM MEMORY USAGE : 1353 MB(MAIN), 3145 MB(MFSEXE.EXE)
> AVAILABLE MEMORY : 11789 MB
> TOTAL CPU TIME : 1467.14 sec(MAIN), 129.046 sec(MFSEXE.EXE)
> WALL CLOCK TIME : 360.074 sec
> TOTAL WARNINGS : 0
>
> TOTAL WARNINGS : 0
    
```

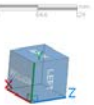
分析類型 非線性分析-1
Step [NCR=10 (LOAD=1,000)]
結果 DISPLACEMENT-XYZ



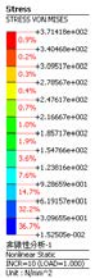
變形量(mm)

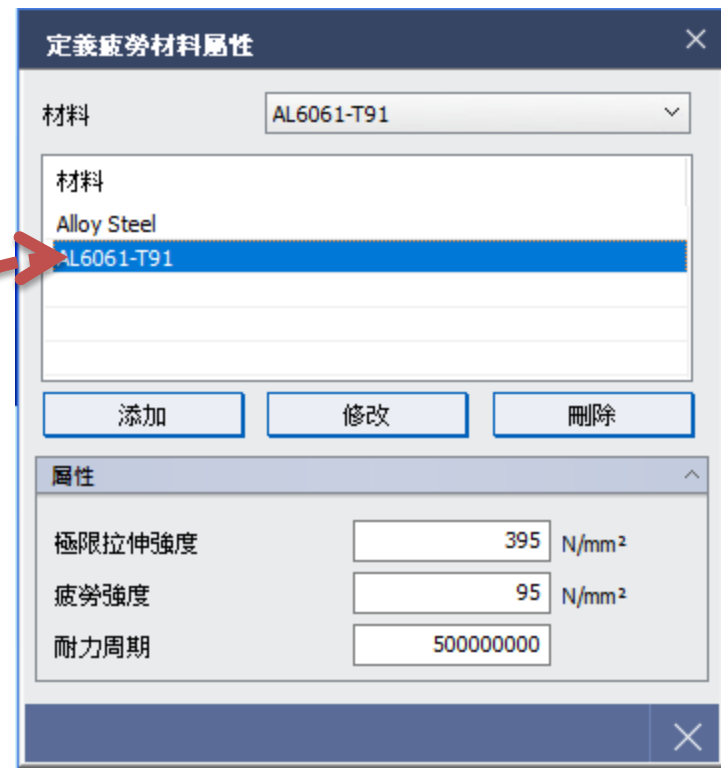
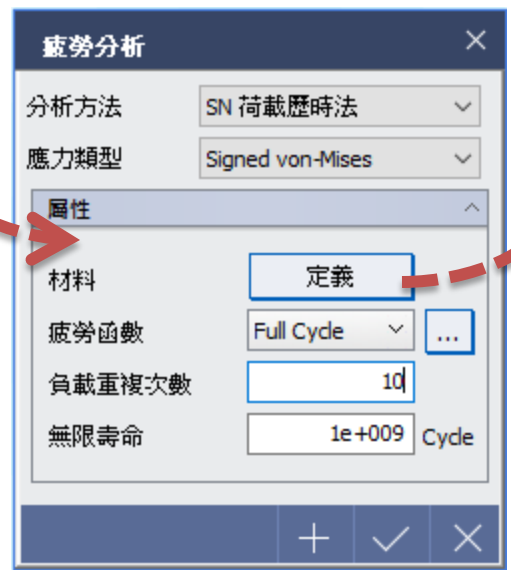
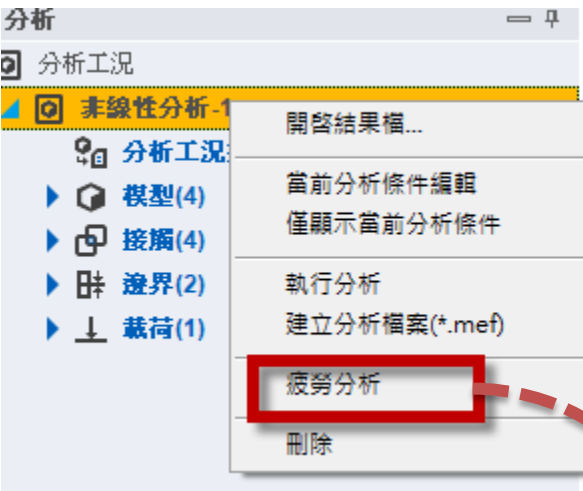


分析類型 非線性分析-1
Step [NCR=10 (LOAD=1,000)]
結果 STRESS VON MISES



應力(MPa)



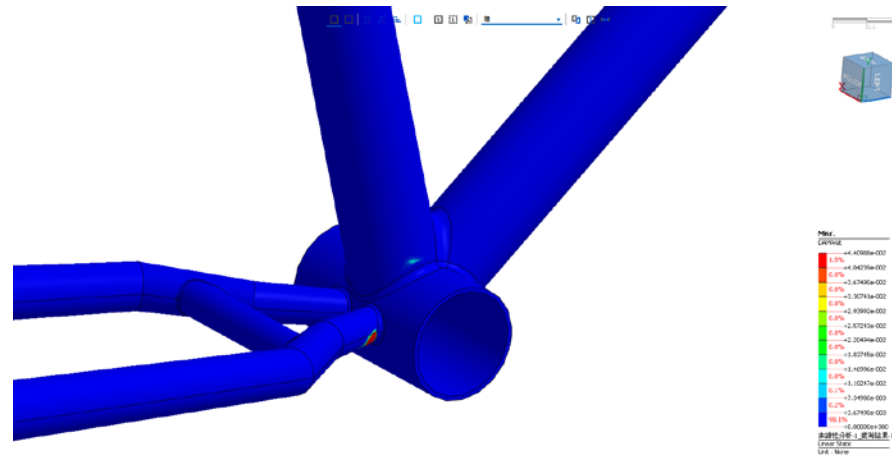


AL6061-T91

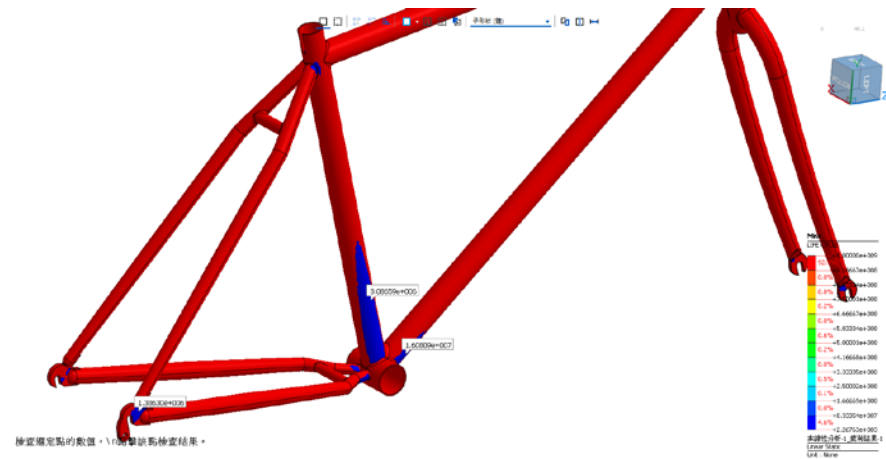
Fatigue Strength

95.0 MPa
@# of Cycles 5.00e+8

損傷(GOODMAN)



周期(GOODMAN)



☑ 分析工況

- ☑ 非線性分析-1
 - ☑ 分析工況控制
 - ▶ 模型(4)
 - ▶ 接觸(4)
 - ▶ 邊界(2)
 - ▶ 載荷(1)

▶ 非線性分析-1 結果結果 1

開啓結果檔...

執行分析

刪除