CouplingMembrance

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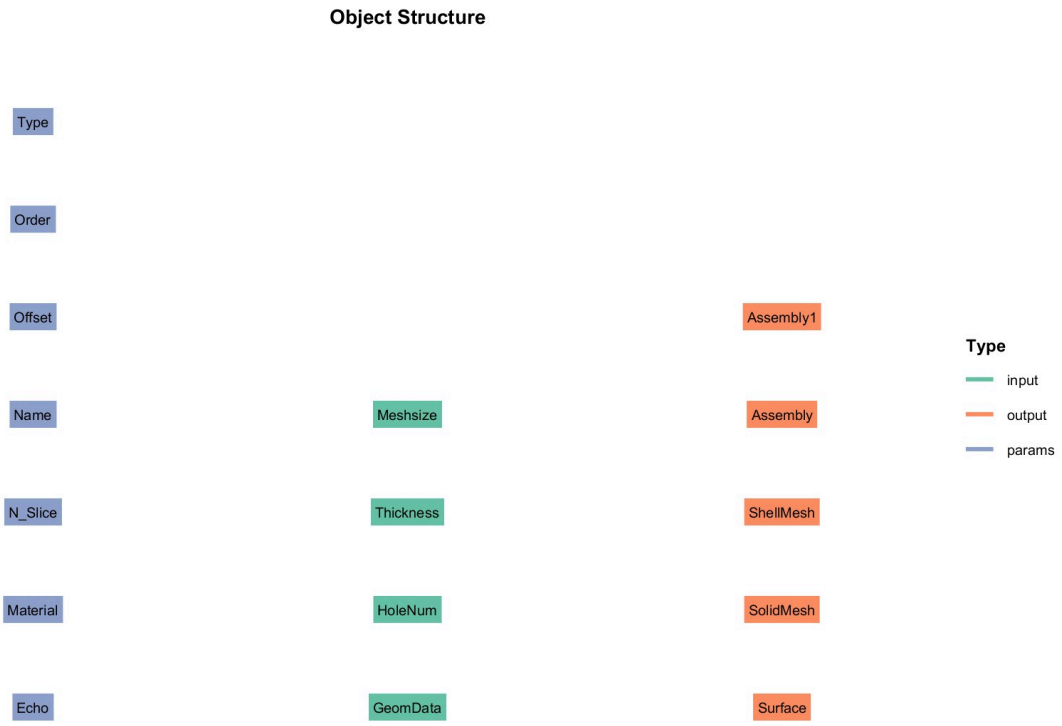
1 介绍

CouplingMembrane类时联轴器膜片类，用来生成膜片网格。

2 类结构



输入 input：

- Meshsize : 单元尺寸
- Thickness : 膜片厚度
- HoleNum : 圆孔数量
- GeomData : 几何参数

参数 params:

- Order： 单元阶数
- Type : 膜片类型
- Offset: 壳单元偏移基础面
- Name : 名称
- N_Slice: 厚度方向网格划分数量

- Material : 材料

输出 output :

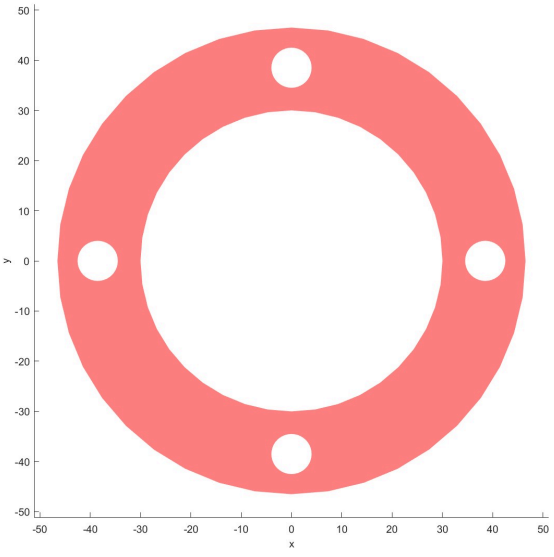
- Assembly : 实体单元装配
- SolidMesh : 实体网格
- Assembly1 : 壳单元装配
- ShellMesh : 壳网格
- Surface : 截面

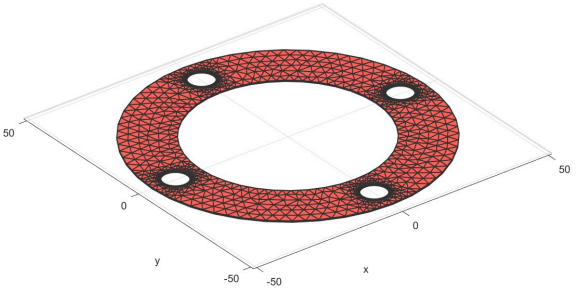
3 案例

3.1 Create CouplingMembrance Type 1 (Flag=1)

圆环式膜片。

```
inputStruct.GeomData=[60,93,77,8];
inputStruct.HoleNum=4;
inputStruct.Thickness=0.4;
inputStruct.Meshsize=5;
paramsStruct.Type=1;
obj= plate.CouplingMembrane(paramsStruct, inputStruct);
obj= obj.solve();
Plot2D(obj)
Plot3D(obj)
```

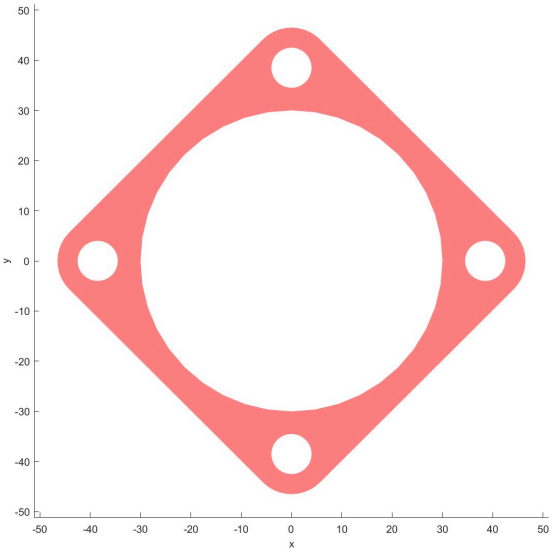


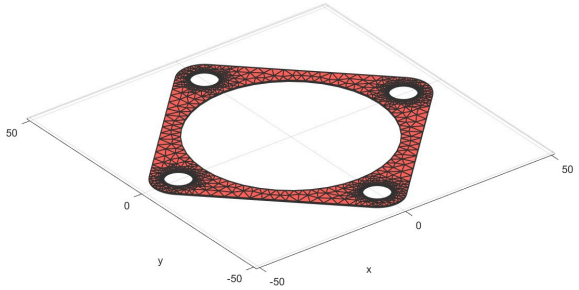


3.2 Create CouplingMembrance Type 2 (Flag=2)

多边形式膜片。

```
inputStruct.GeomData=[60,93,77,8,8];
inputStruct.HoleNum=4;
inputStruct.Thickness=0.4;
inputStruct.Meshsize=5;
paramsStruct.Type=2;
obj= plate.CouplingMembrane(paramsStruct, inputStruct);
obj= obj.solve();
Plot2D(obj)
Plot3D(obj)
```

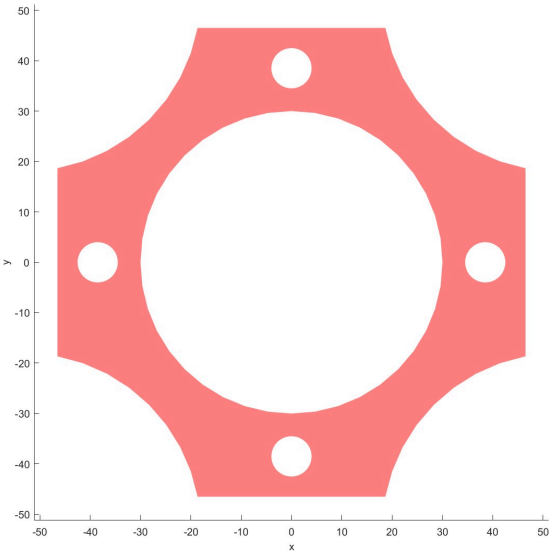


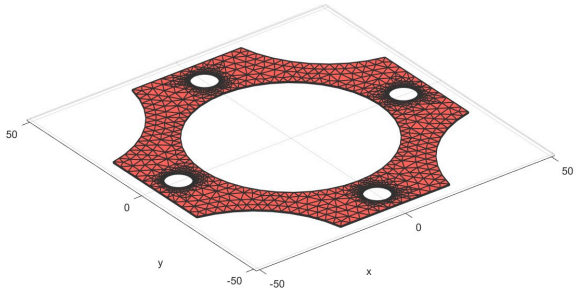


3.3 Create CouplingMembrance Type 3 (Flage=3)

关节式膜片。

```
inputStruct.GeomData=[60,93,77,8,150,70];
inputStruct.HoleNum=4;
inputStruct.Thickness=0.4;
inputStruct.Meshsize=5;
paramsStruct.Type=3;
obj= plate.CouplingMembrane(paramsStruct, inputStruct);
obj= obj.solve();
Plot2D(obj)
Plot3D(obj)
```

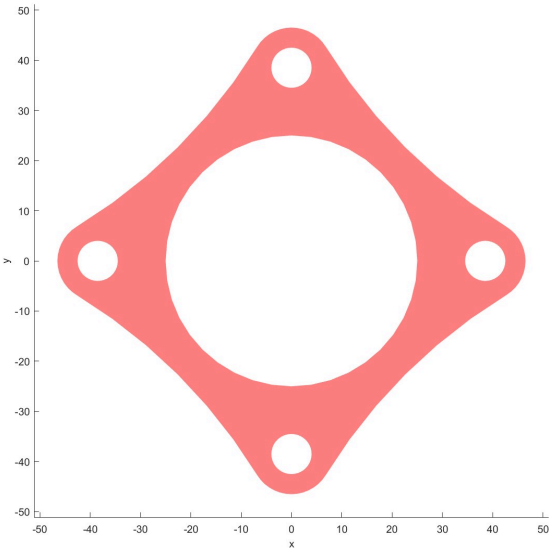


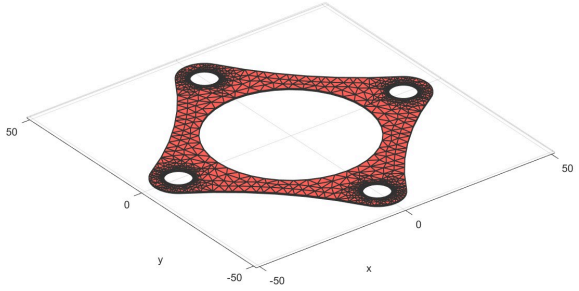


3.4 Create CouplingMembrance Type 4 (Flag=4)

梅花式膜片。

```
inputStruct.GeomData=[50,93,77,8,280];
inputStruct.HoleNum=4;
inputStruct.Thickness=0.4;
inputStruct.Meshsize=5;
paramsStruct.Type=4;
obj= plate.CouplingMembrane(paramsStruct, inputStruct);
obj= obj.solve();
Plot2D(obj)
Plot3D(obj)
```





4 参考文献