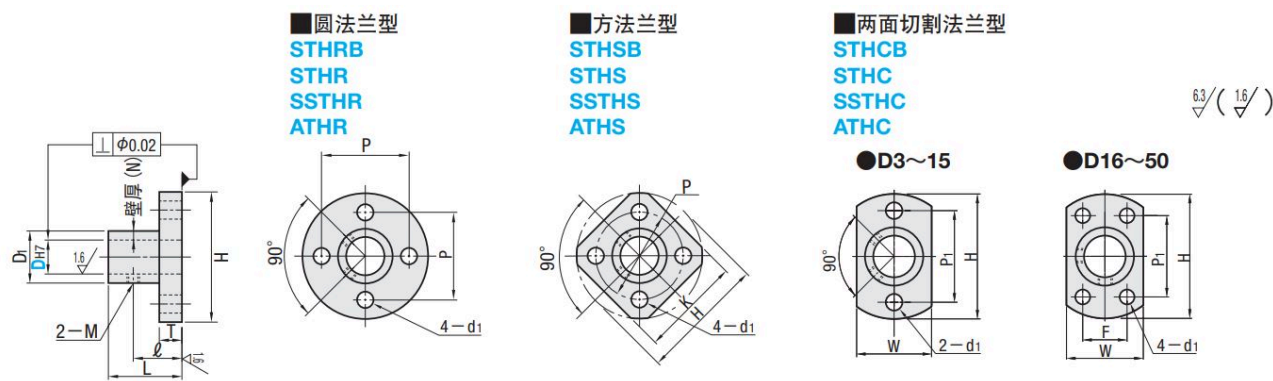


ShaftSupport

Xie Yu

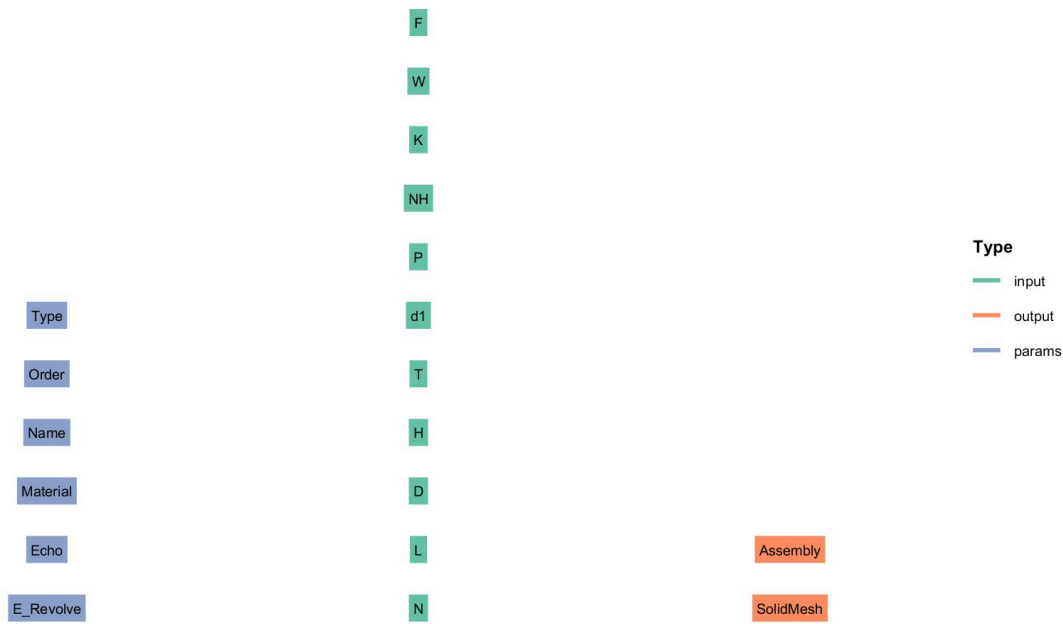
1 介绍

ShaftSupport类为导向轴支座类，这几个导向轴支座来自于米思米^[1]、怡合达^[2]的选型手册里。



2 类结构

Object Structure



输入 input:

- F: 尺寸参数
- W: 尺寸参数
- K: 尺寸参数

输出 output:

- P: 尺寸参数
- d1 : 尺寸参数
- T: 尺寸参数
- H: 尺寸参数
- D: 尺寸参数
- L: 尺寸参数
- N: 尺寸参数

参数 params:

- Order : 单元阶数
- Type : 导向轴支座类型
- Name : 名称
- E_Revolve: 实体单元旋转方向网格划分数量
- Material : 导向轴支座材料

输出 output :

- Assembly : 实体网格装配
- SolidMesh : 实体网格

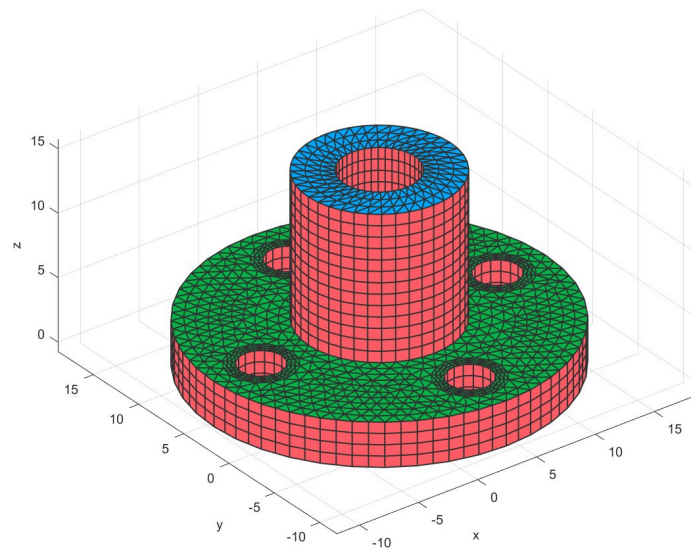
3 案例

3.1 Create ShaftSupport Type 1 (Flag=1)

```

1  inputShaftSupport.N= 3;
2  inputShaftSupport.L = 15;
3  inputShaftSupport.D=6;
4  inputShaftSupport.H=28;
5  inputShaftSupport.T=3.5;
6  inputShaftSupport.d1=3.5;
7  inputShaftSupport.P=20;
8  inputShaftSupport.NH=4;
9  paramsShaftSupport = struct();
10 obj1=shaft.ShaftSupport(paramsShaftSupport, inputShaftSupport);
11 obj1=obj1.solve();
12 Plot3D(obj1);
13 ANSYS_Output(obj1.output.Assembly);

```

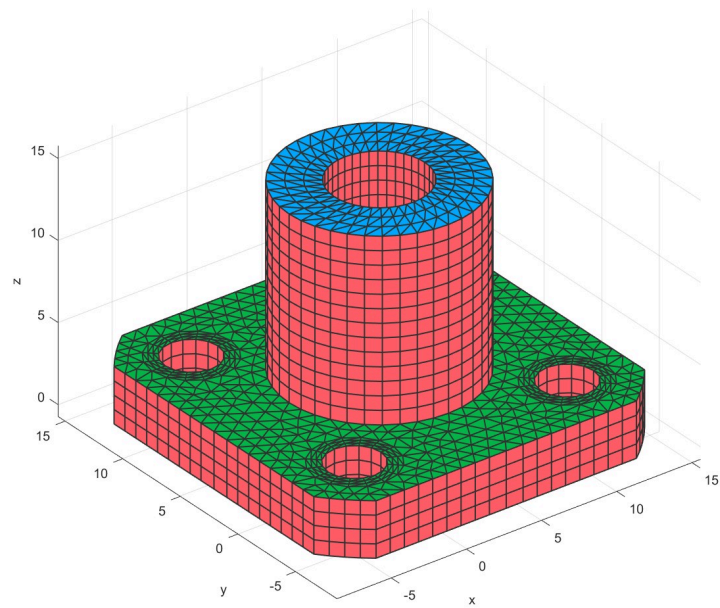


3.2 Create ShaftSupport Type 2 (Flag=2)

```

1  inputShaftSupport.N= 3;
2  inputShaftSupport.L = 15;
3  inputShaftSupport.D=6;
4  inputShaftSupport.H=28;
5  inputShaftSupport.T=3.5;
6  inputShaftSupport.d1=3.5;
7  inputShaftSupport.P=20;
8  inputShaftSupport.NH=4;
9  inputShaftSupport.K=22;
10 paramsShaftSupport.Type = 2;
11 obj1=shaft.ShaftSupport(paramsShaftSupport, inputShaftSupport);
12 obj1=obj1.solve();
13 Plot3D(obj1);
14 ANSYS_Output(obj1.output.Assembly);

```

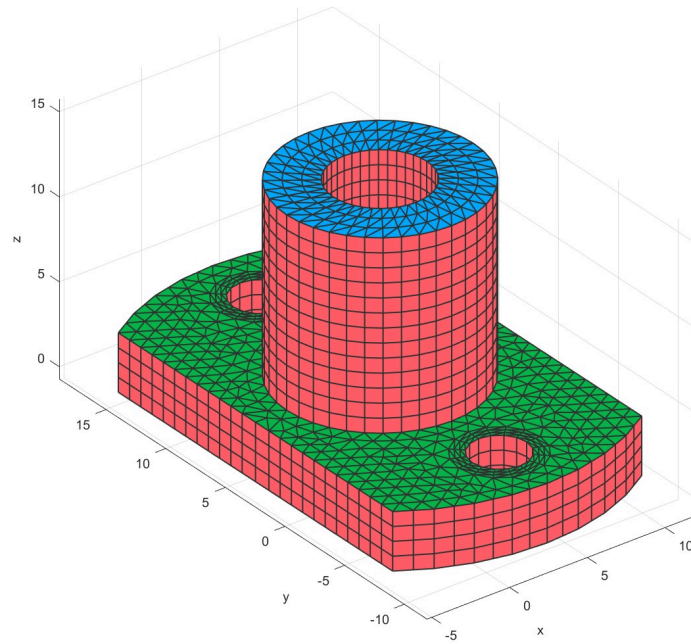


3.3 Create ShaftSupport Type 3 (Flag=3)

```

1 b=Line2D('Round Polygon');
2 b=AddRoundPolygon(b,10*sqrt(2),4,2,'sang',45);
3 inputplate1.Outline= b;
4 inputplate1.Thickness = 2;
5 paramsplate1= struct();
6 obj1=plate.Commonplate(paramsplate1, inputplate1);
7 obj1 = obj1.solve();
8 Ass=obj1.output.Assembly1;
9 Plot(Ass);

```

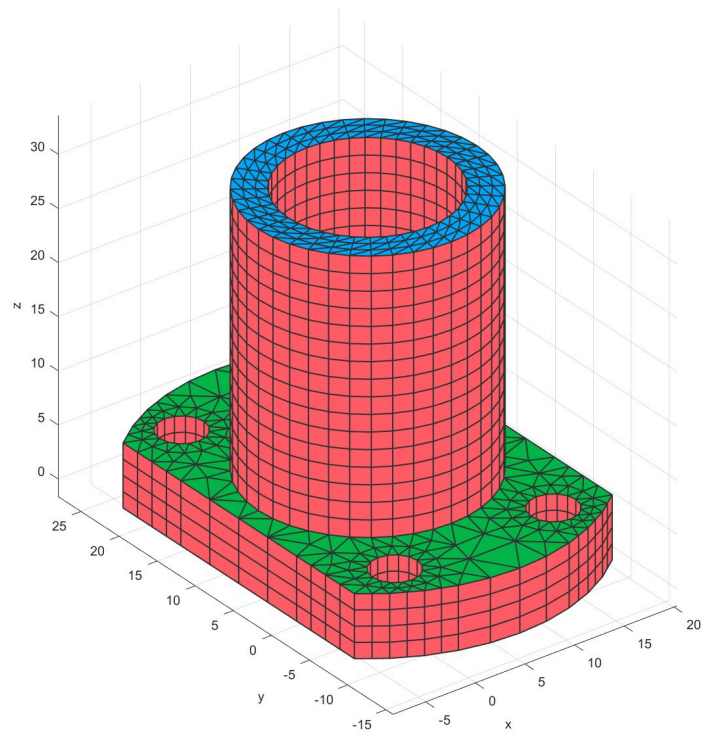


3.4 Create ShaftSupport Type 4 (Flag=4)

```

1  b=Line2D('Round Polygon');
2  b=AddRoundPolygon(b,10*sqrt(2),6,2);
3  inputplate1.Outline= b;
4  inputplate1.Thickness = 2;
5  paramsplate1= struct();
6  obj1=plate.Commonplate(paramsplate1, inputplate1);
7  obj1 = obj1.solve();
8  OutputSTL(obj1)
9  % Load stl file
10 L=Layer('test');
11 Name=strcat(obj1.params.Name, '.stl');
12 L=STLRead(L,Name);
13 Plot(L);

```



4 参考文献

- [1] <https://www.misumi.com.cn/>
- [2] <https://www.yiheda.com/>