



# ANSYS WORKBENCH分析应用基础

## LESSON14 对称问题：水杯

课程制作 张 晔

QQ交流群：205237137



ANSYS WORKBENCH分析应用基础

本套视频全部免费分享，如学习者通过各渠道获得，收益均和课程制作者无涉。

LESSON14 对称问题：水杯

视频将在左下角的微信公众号同步更新。



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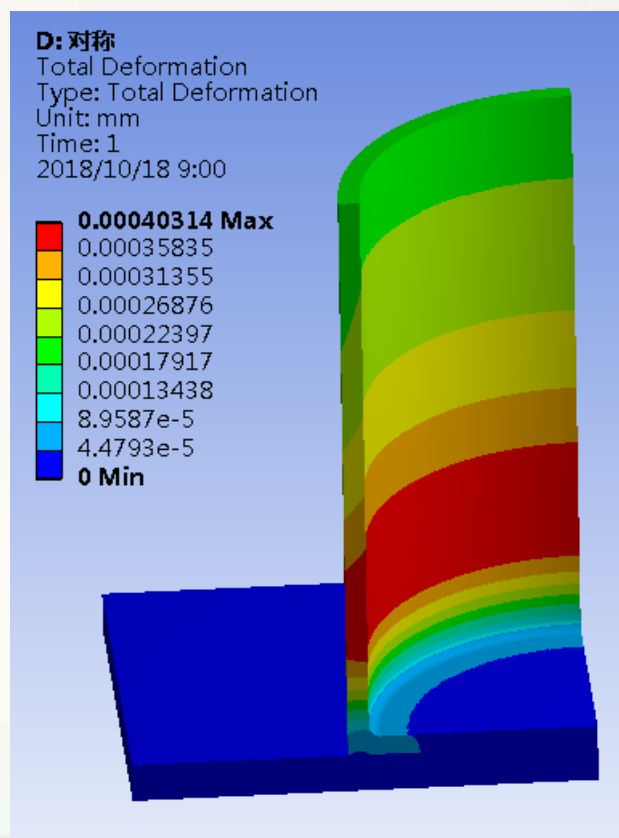
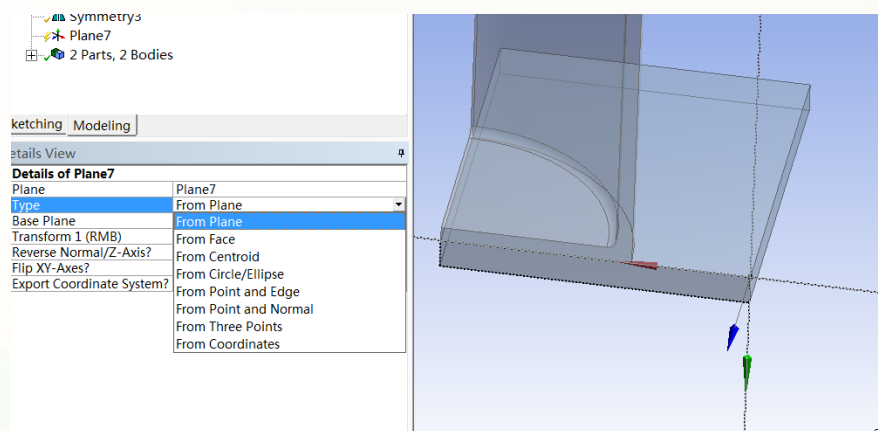
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机械人读书笔记

## 本课重点内容

1. 初步了解有限元分析的对称问题
2. 坐标系建立和对称面设置
3. 对称分析的注意事项



本期视频将主要以功能操作为主，对称的分类和判断将在下次课说明。

## 对称问题

C: 接触

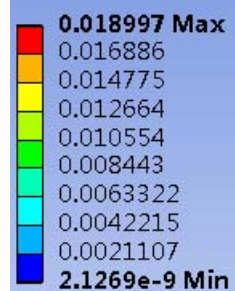
Equivalent Stress

Type: Equivalent (von-Mises) Stress

Unit: MPa

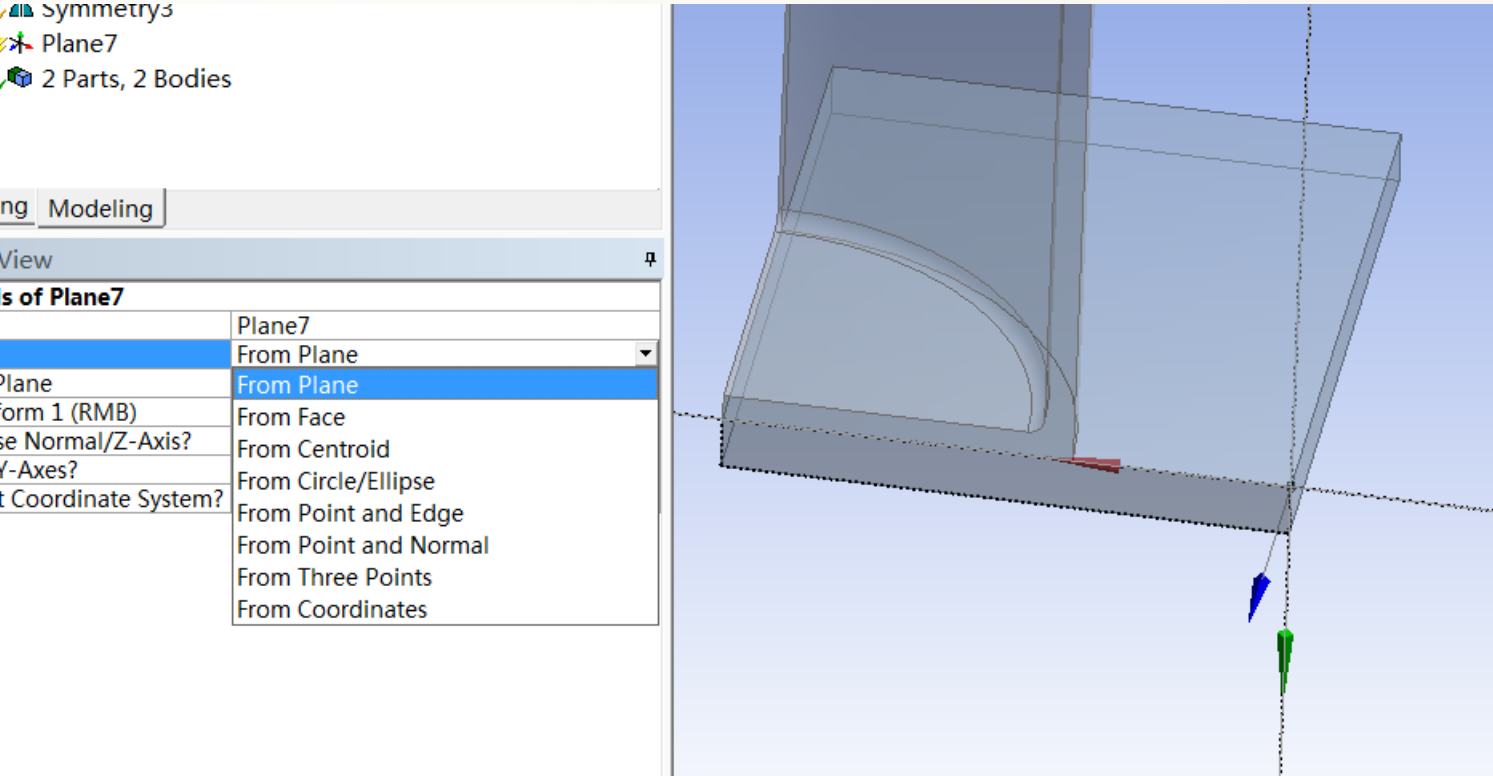
Time: 1

2018/10/18 8:58



这个模型有什么特点？

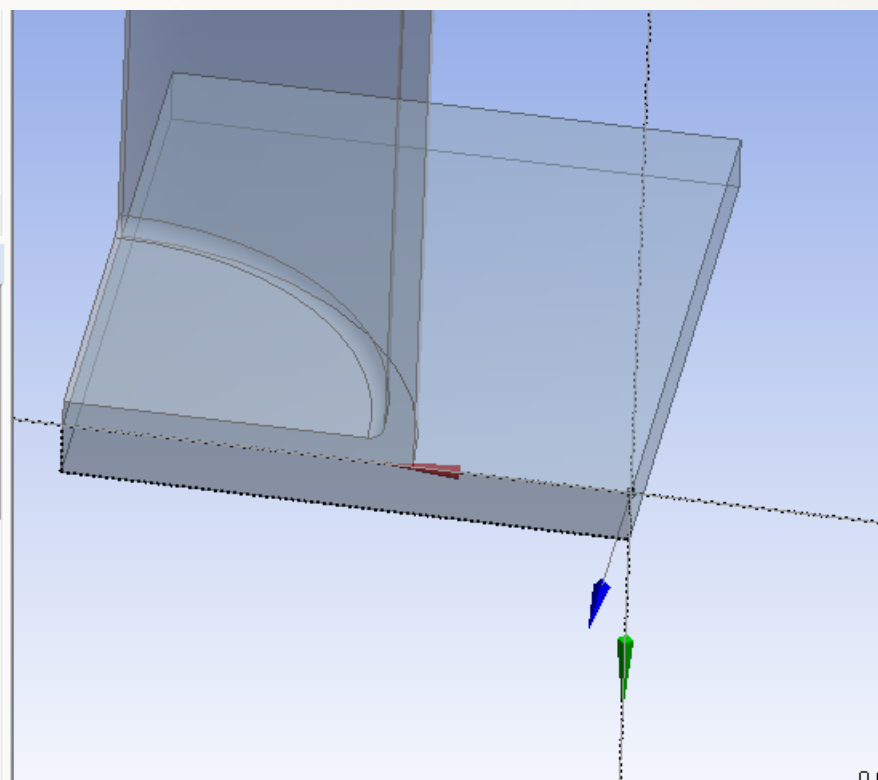
# 坐标系建立



The screenshot displays the 'Details of Plane7' dialog box in a CAD application. The 'Type' dropdown is set to 'From Plane', and the 'Base Plane' is also 'From Plane'. The 'Transform 1 (RMB)' is 'From Face', and the 'Reverse Normal/Z-Axis?' is checked. The 'Flip XY-Axes?' is unchecked, and the 'Export Coordinate System?' is checked. The 3D model on the right shows a part with a coordinate system (blue arrow for X, green arrow for Y, and a red arrow for Z) and a plane (Plane7) defined by a face.

坐标系建立

注意Face和Plane的区别



## 注意Face和Plane的区别

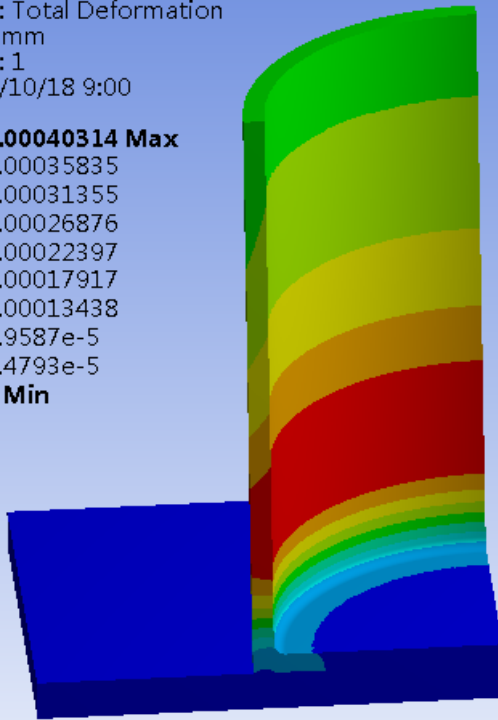


## 对称结果和全模型对比

**D: 对称**

Total Deformation  
Type: Total Deformation  
Unit: mm  
Time: 1  
2018/10/18 9:00

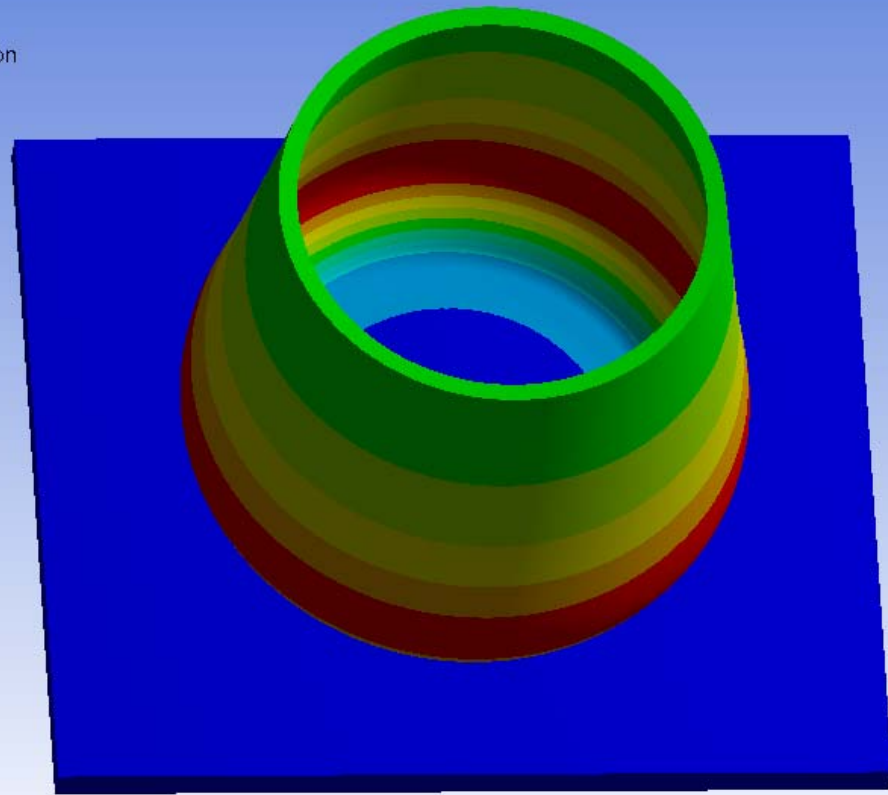
**0.00040314 Max**  
0.00035835  
0.00031355  
0.00026876  
0.00022397  
0.00017917  
0.00013438  
8.9587e-5  
4.4793e-5  
**0 Min**



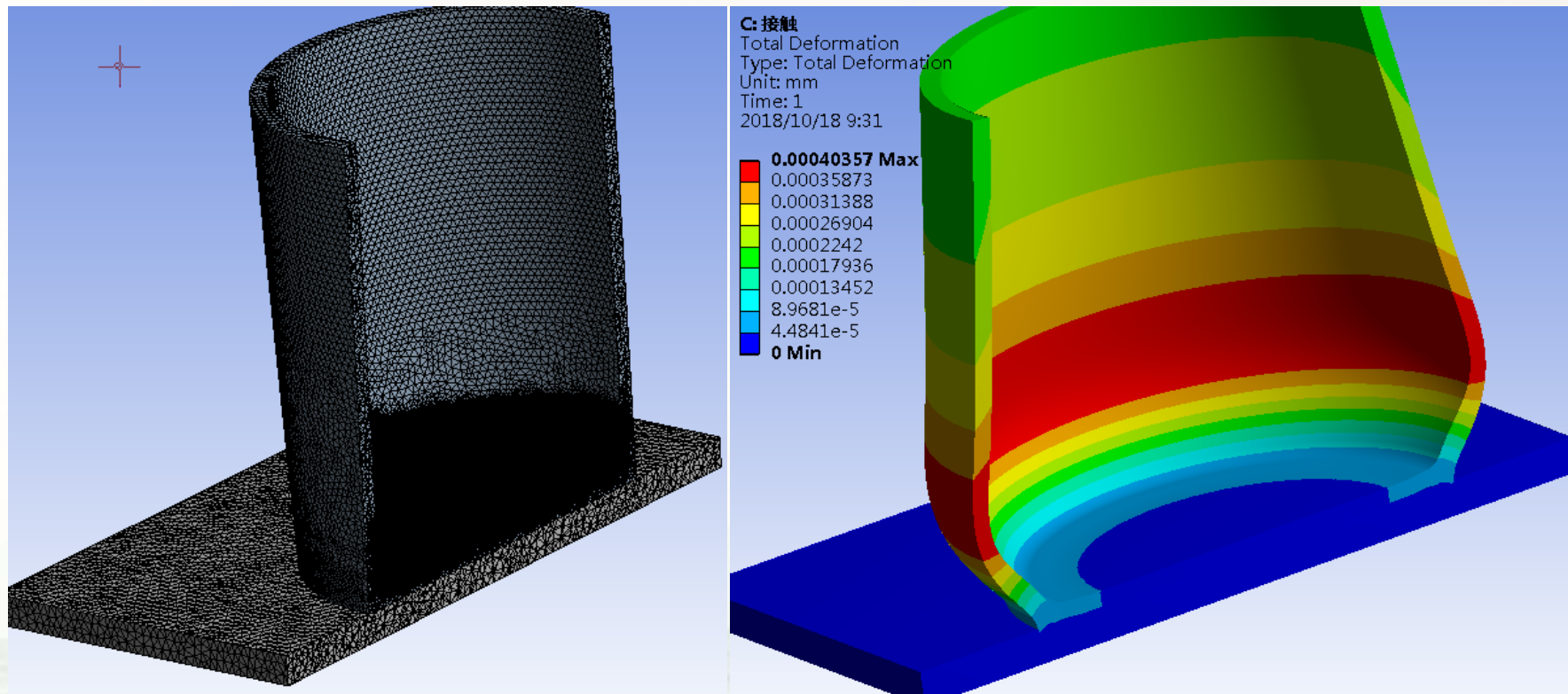
**C: 接触**

Total Deformation  
Type: Total Deformation  
Unit: mm  
Time: 1  
2018/10/18 9:01

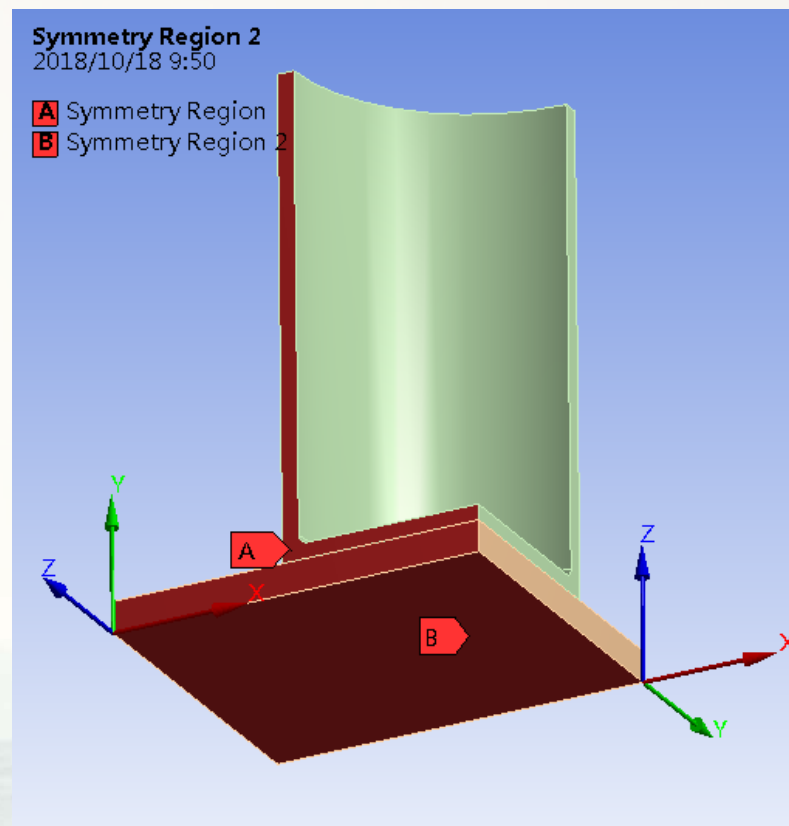
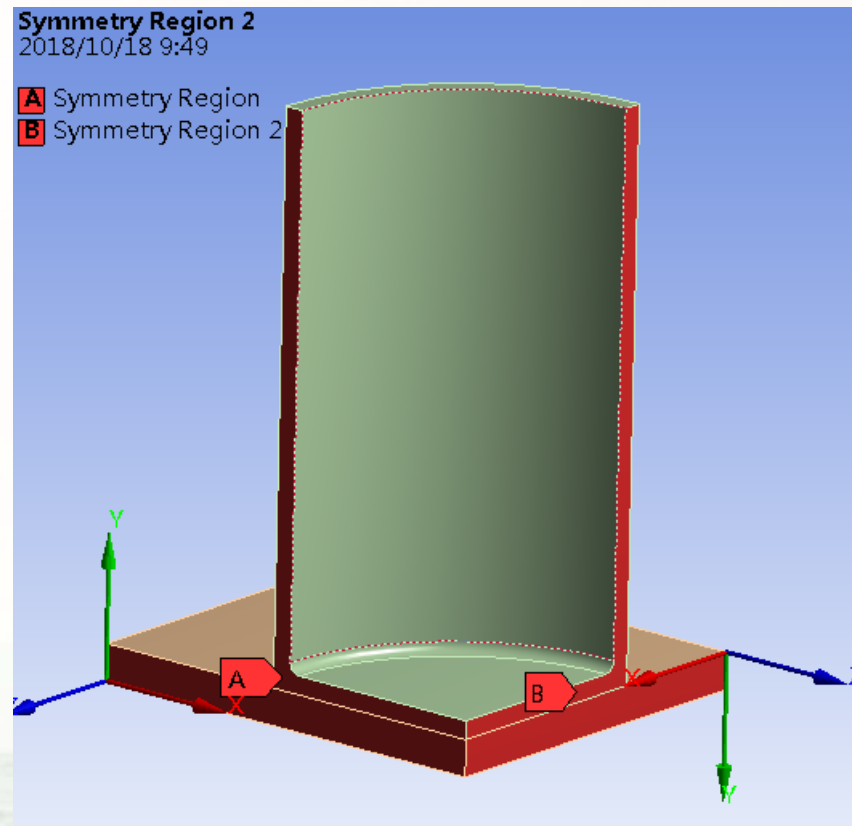
**0.00040357 Max**  
0.00035873  
0.00031388  
0.00026904  
0.0002242  
0.00017936  
0.00013452  
8.9681e-5  
4.4841e-5  
**0 Min**



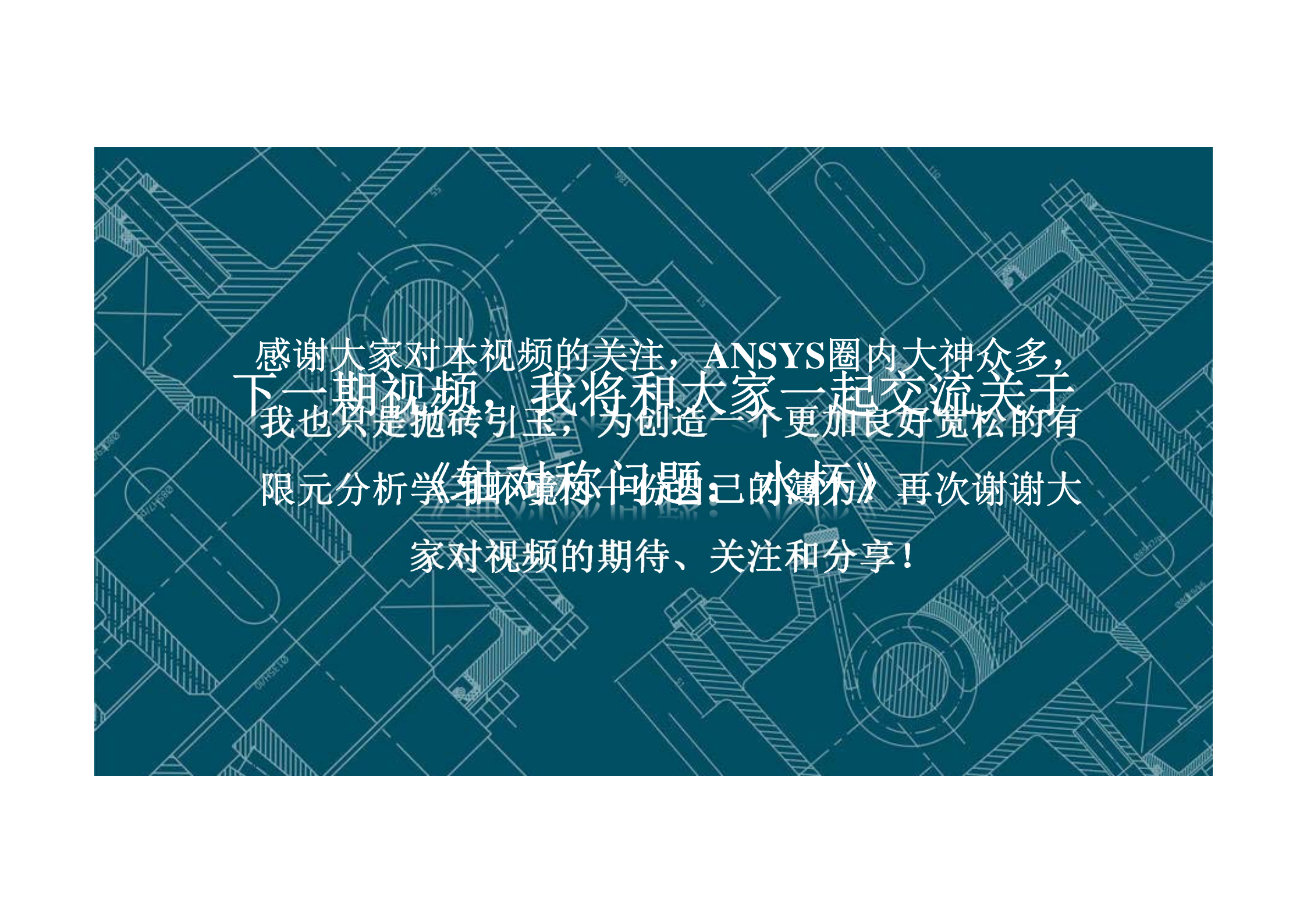
## 剖切功能



## ANSYS对对称面和坐标系的要求





The background of the slide is a dark blue technical drawing, likely a mechanical part or assembly, rendered in white lines. It features various geometric shapes, circles, and hatching patterns, typical of engineering drawings. The text is overlaid on this background.

感谢大家对本视频的关注，ANSYS圈内大神众多，  
下一期视频，我将和大家一起交流关于  
我也只是抛砖引玉，为创造一个更加良好宽松的有  
限元分析学《轴对称问题，以薄板为例》再次谢谢大  
大家对视频的期待、关注和分享！