外凸缸盖处理方法

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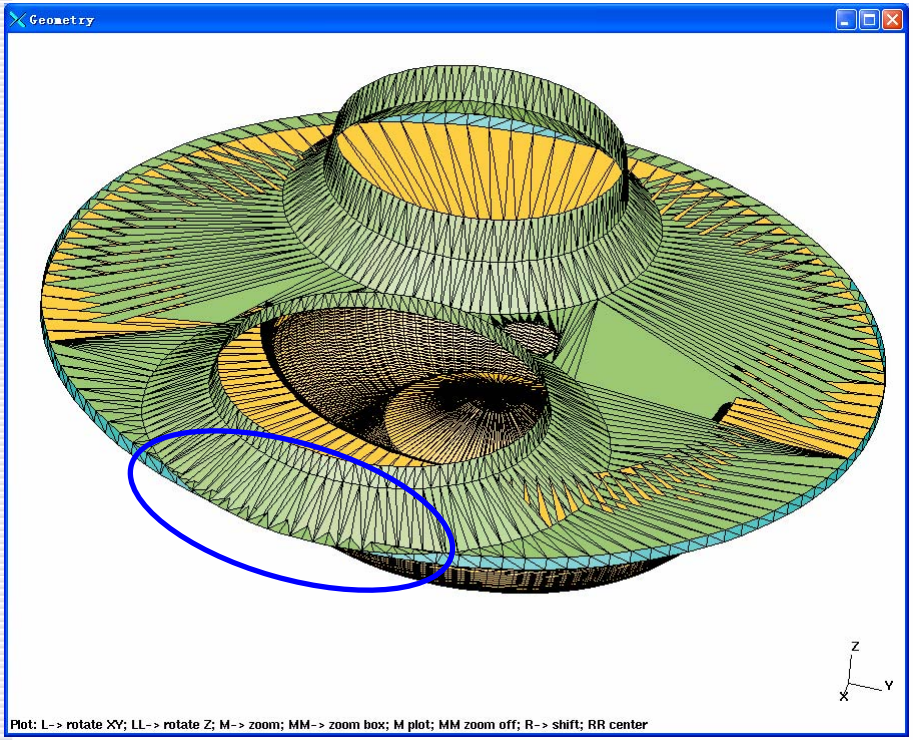
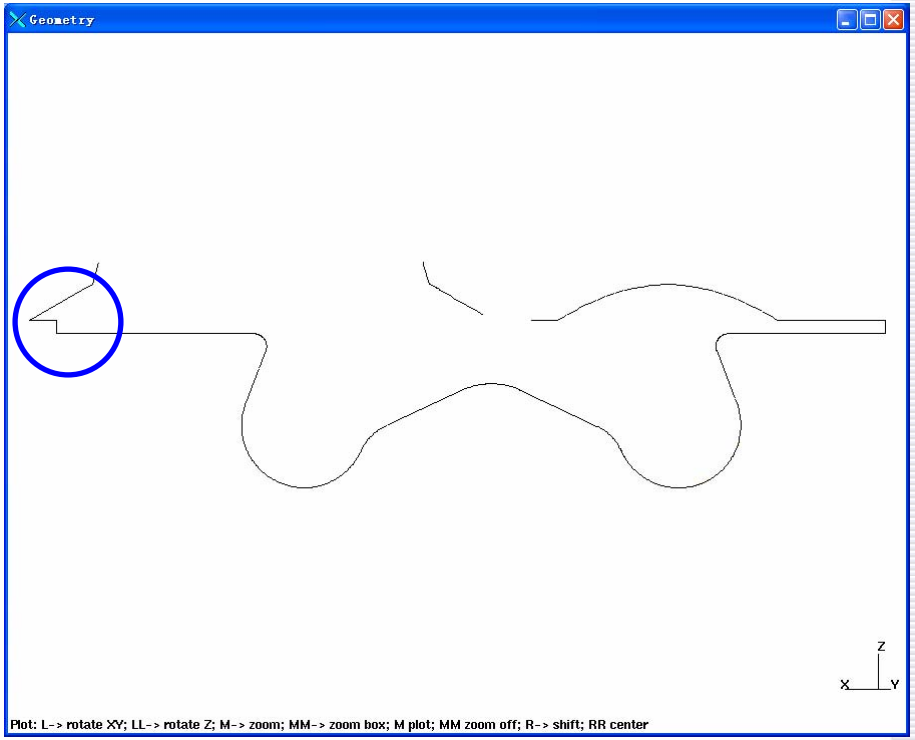
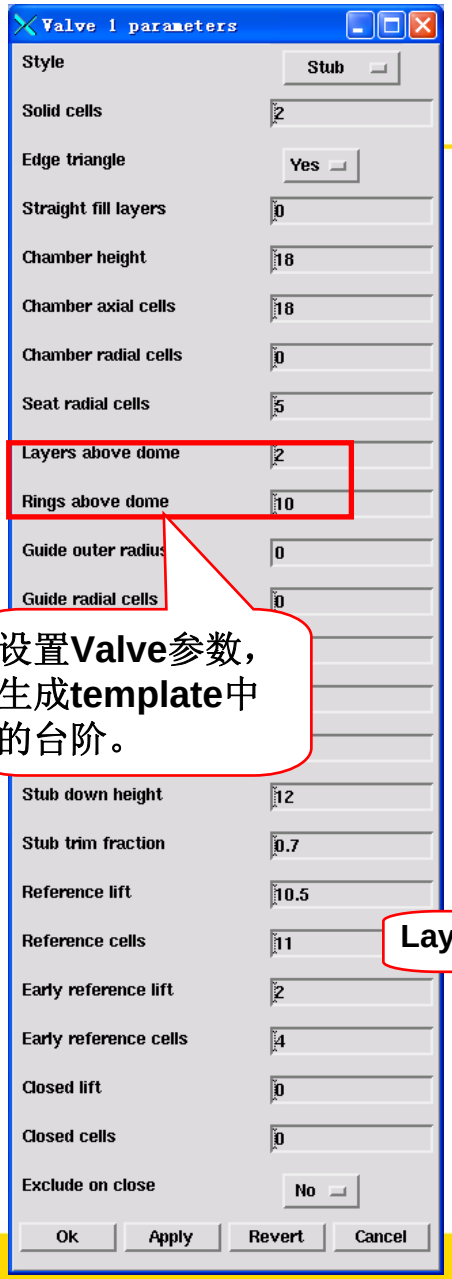
CDAJ
for digital solution

问题：如下图所示的超出缸径的缸盖凸出部分在es-ice中该如何处理？

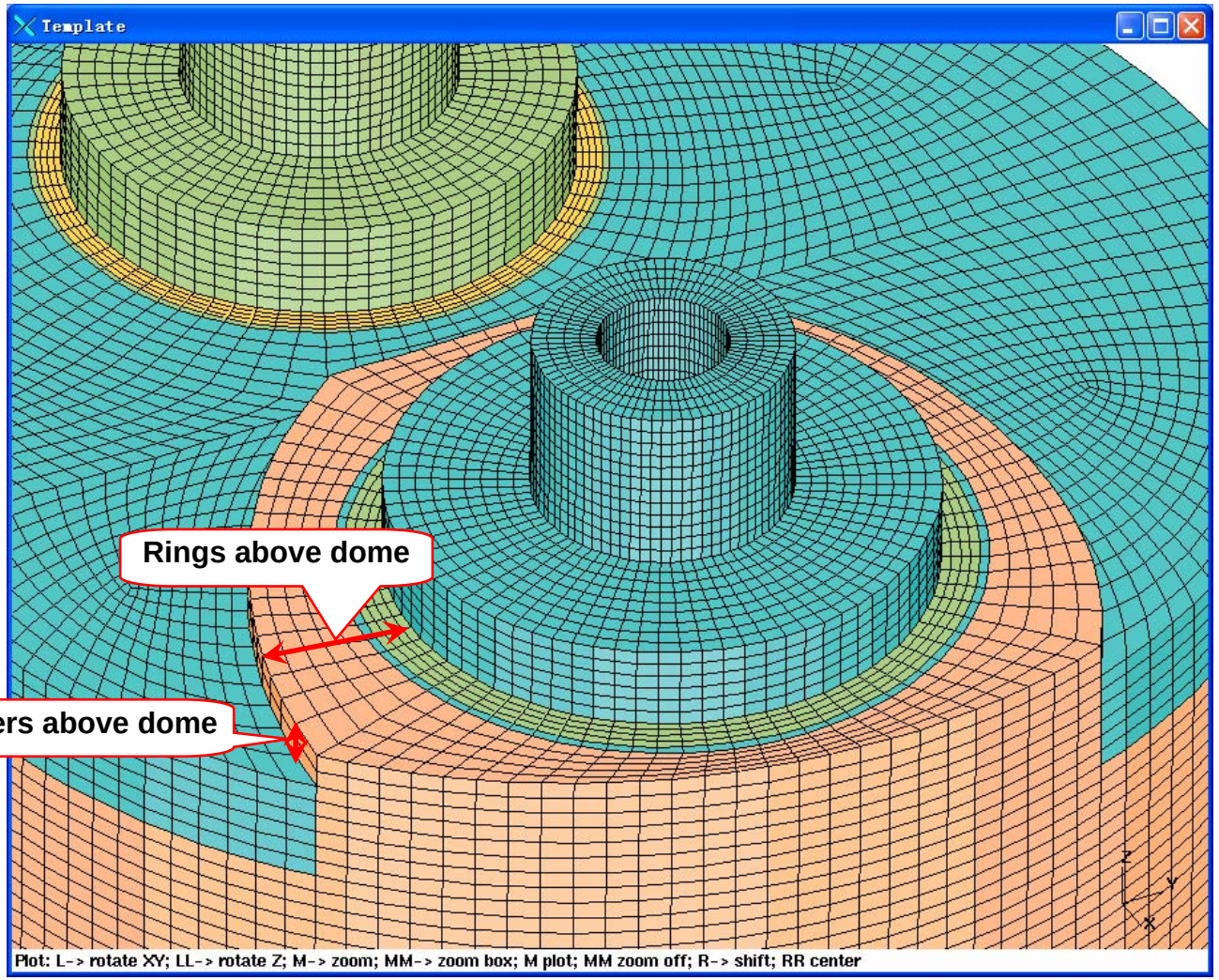




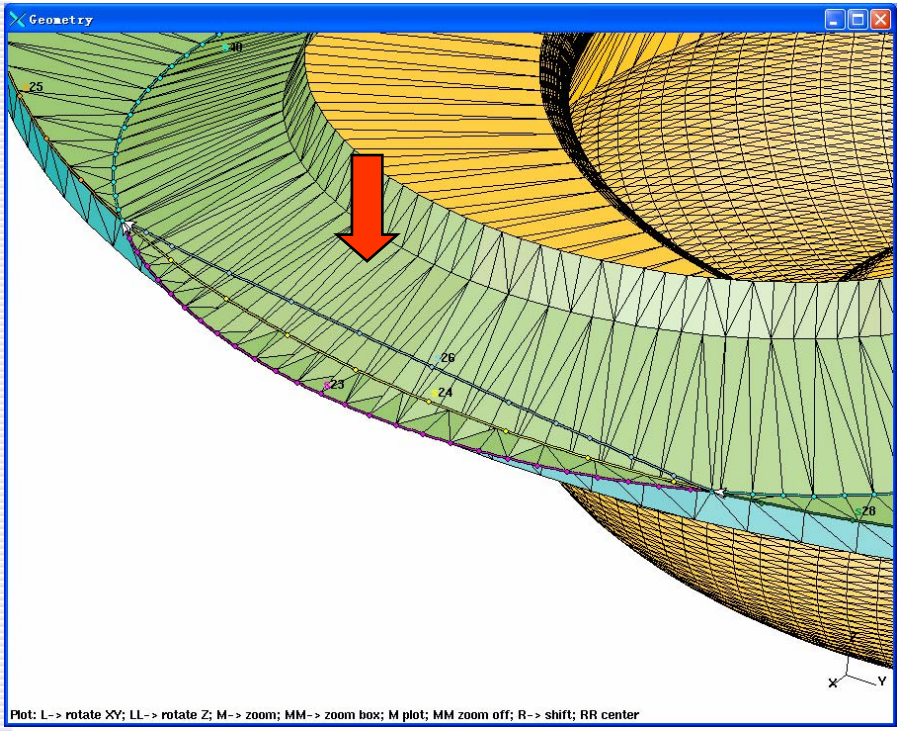
Step1 创建带台阶的template



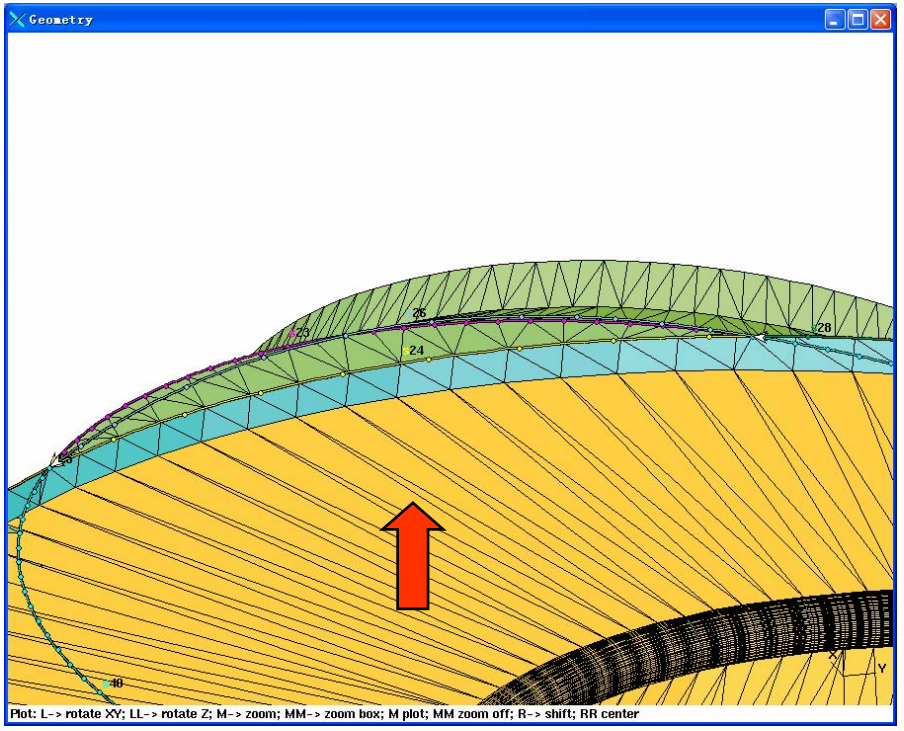
设置Valve参数，生成template中的台阶。



Step2 在Geometry上创建如下图所示spline

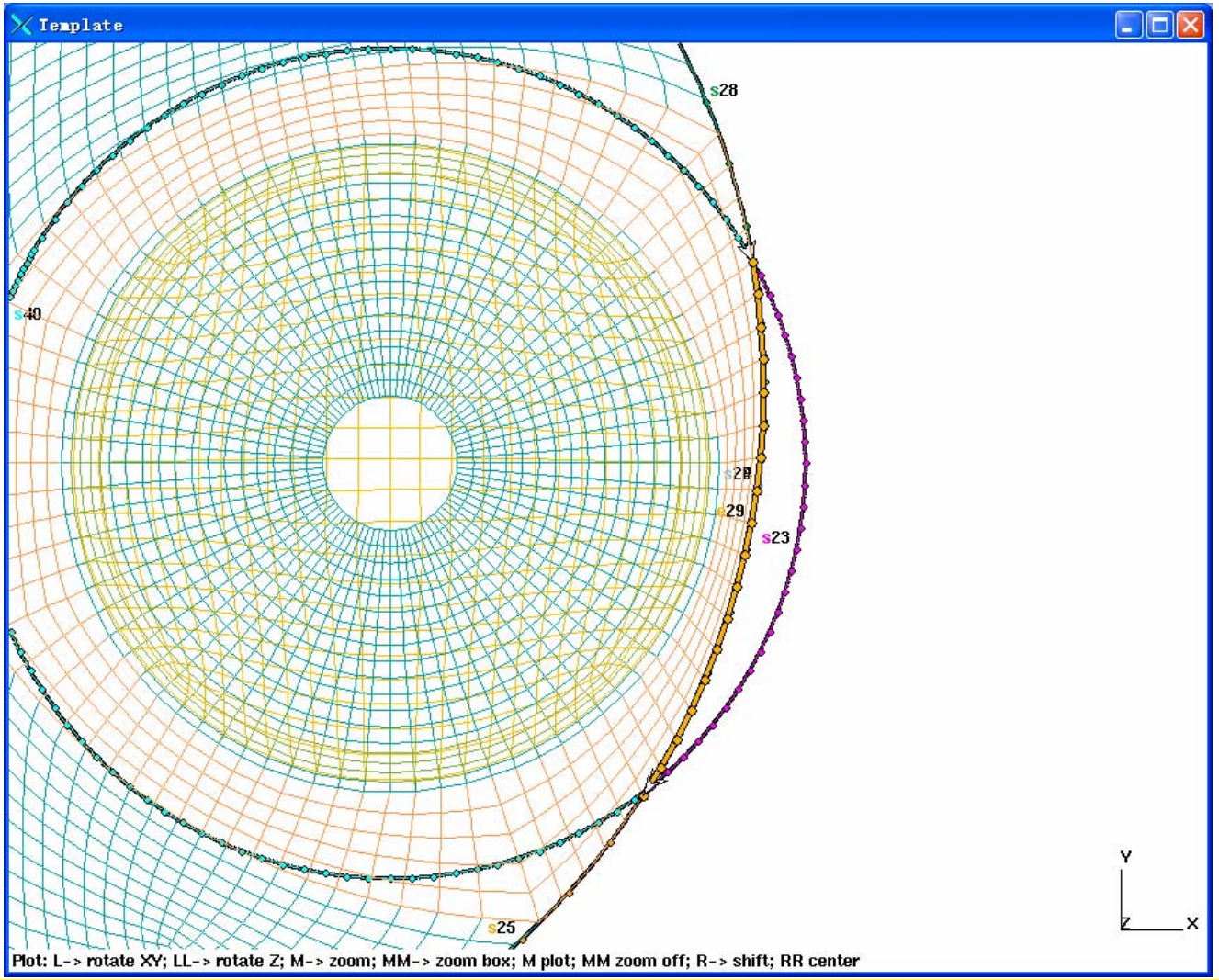


Top view

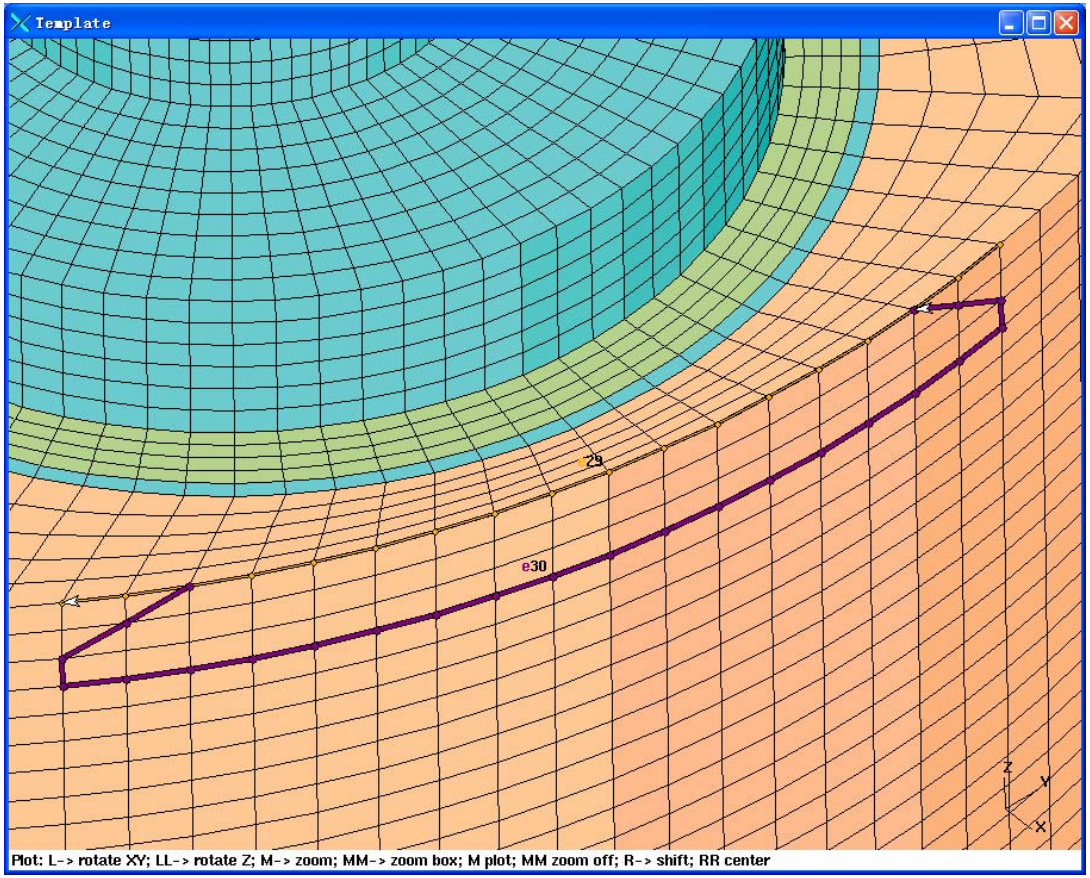


Bottom view

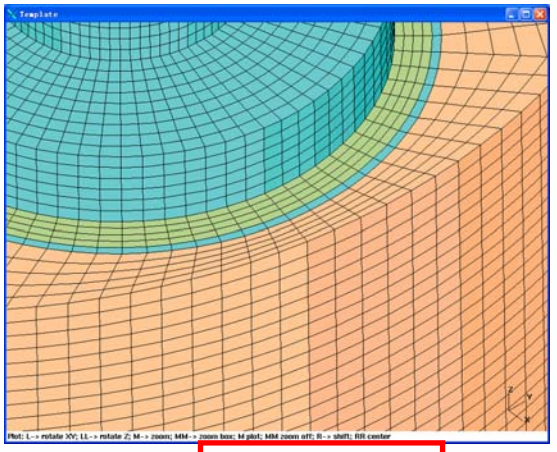
Step3 将Template与Geometry进行dplo，并根据spline位置创建如下图所示edge



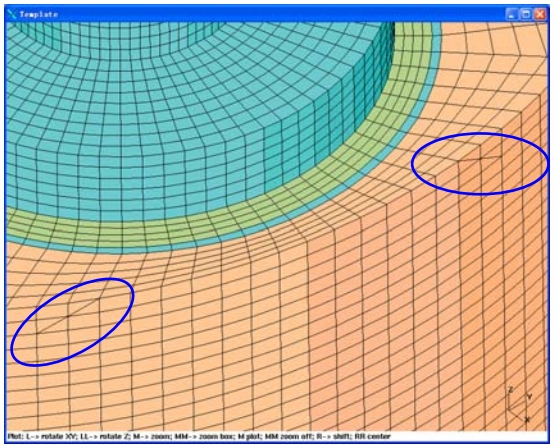
Step4 创建如下图所示edge30,并执行cuth 30



edge30

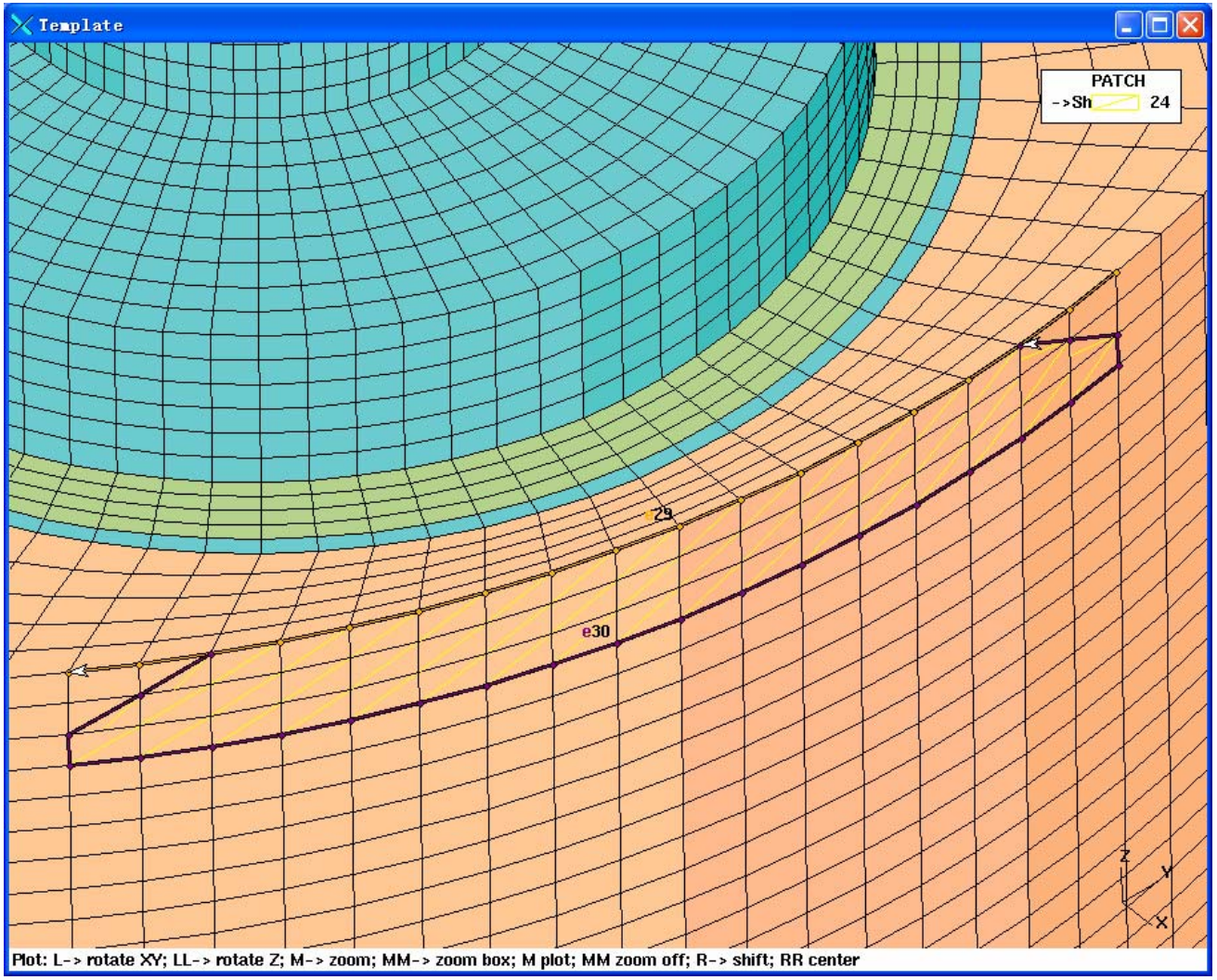


cut前

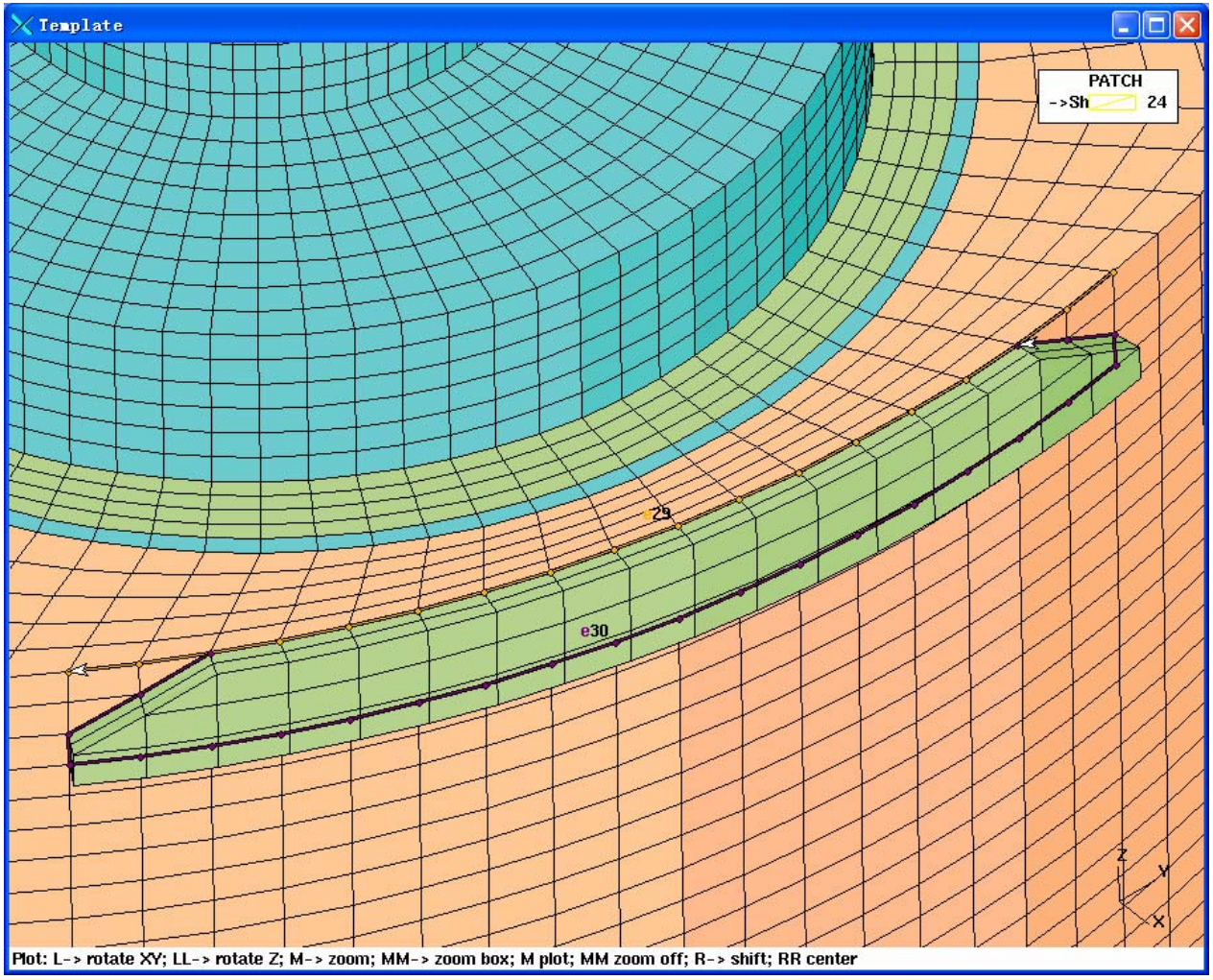


cut后

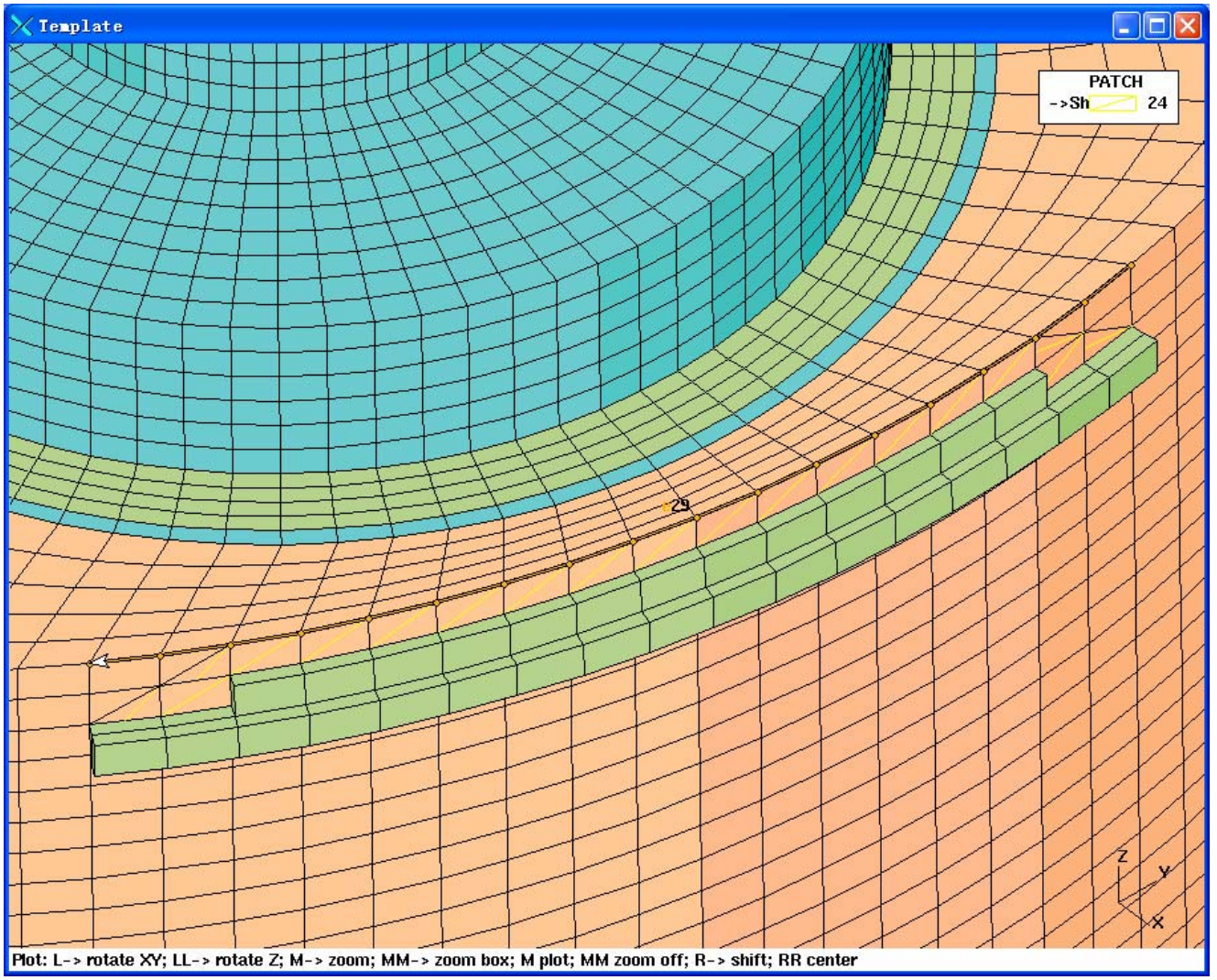
Step5 创建如下图所示patch24



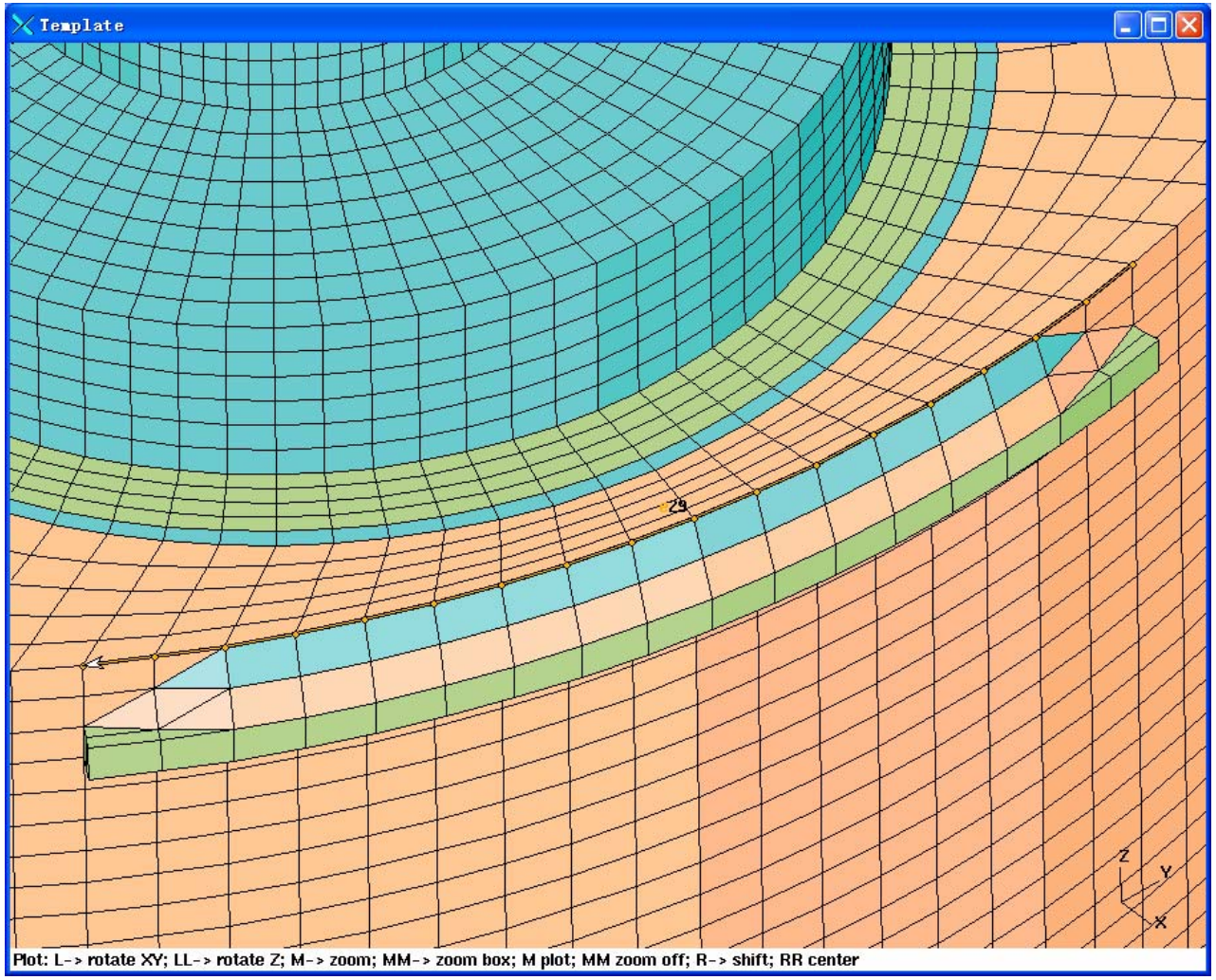
Step6 采用pext命令基于patch24沿径向拉升出两层网格



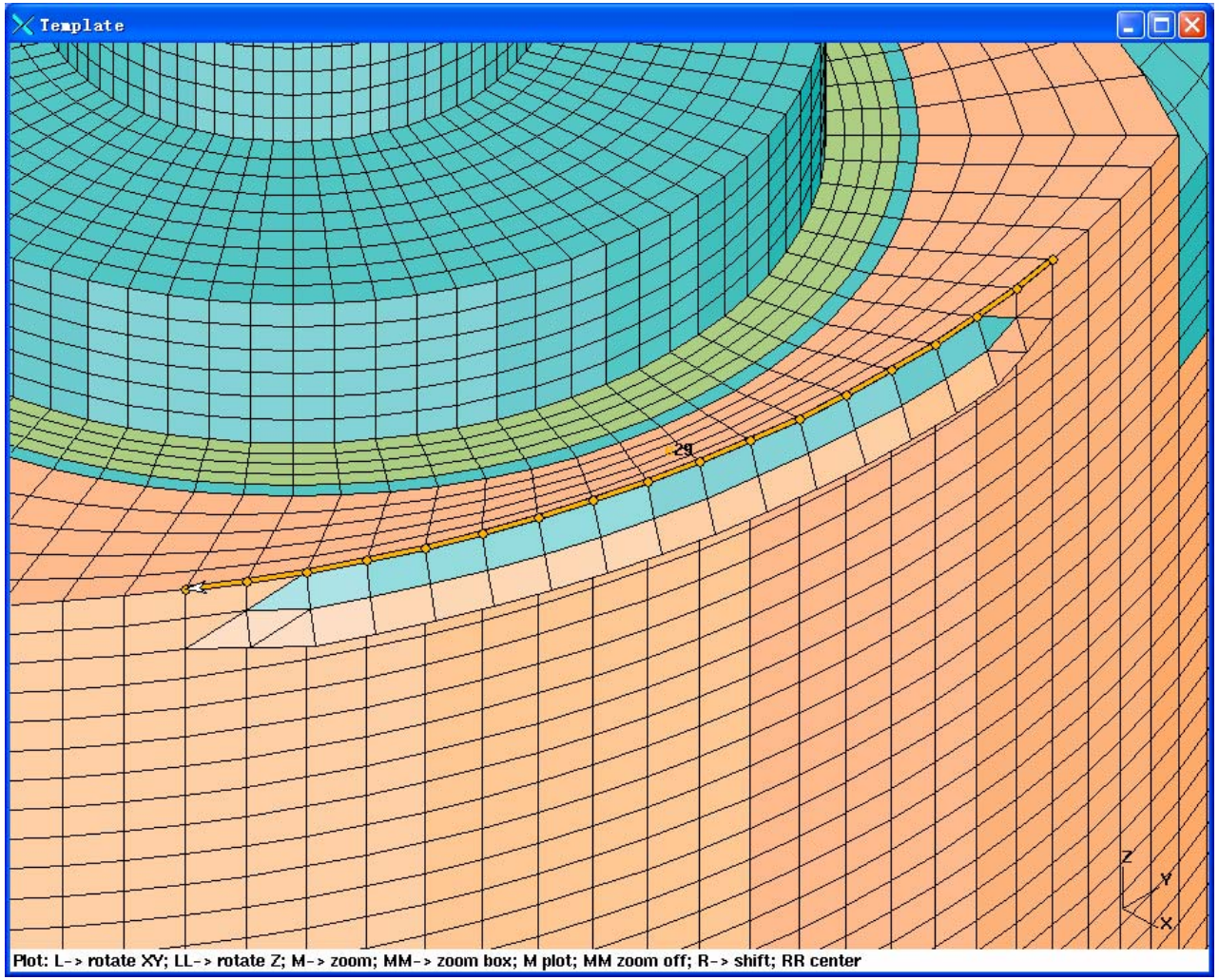
Step7 删除部分网格



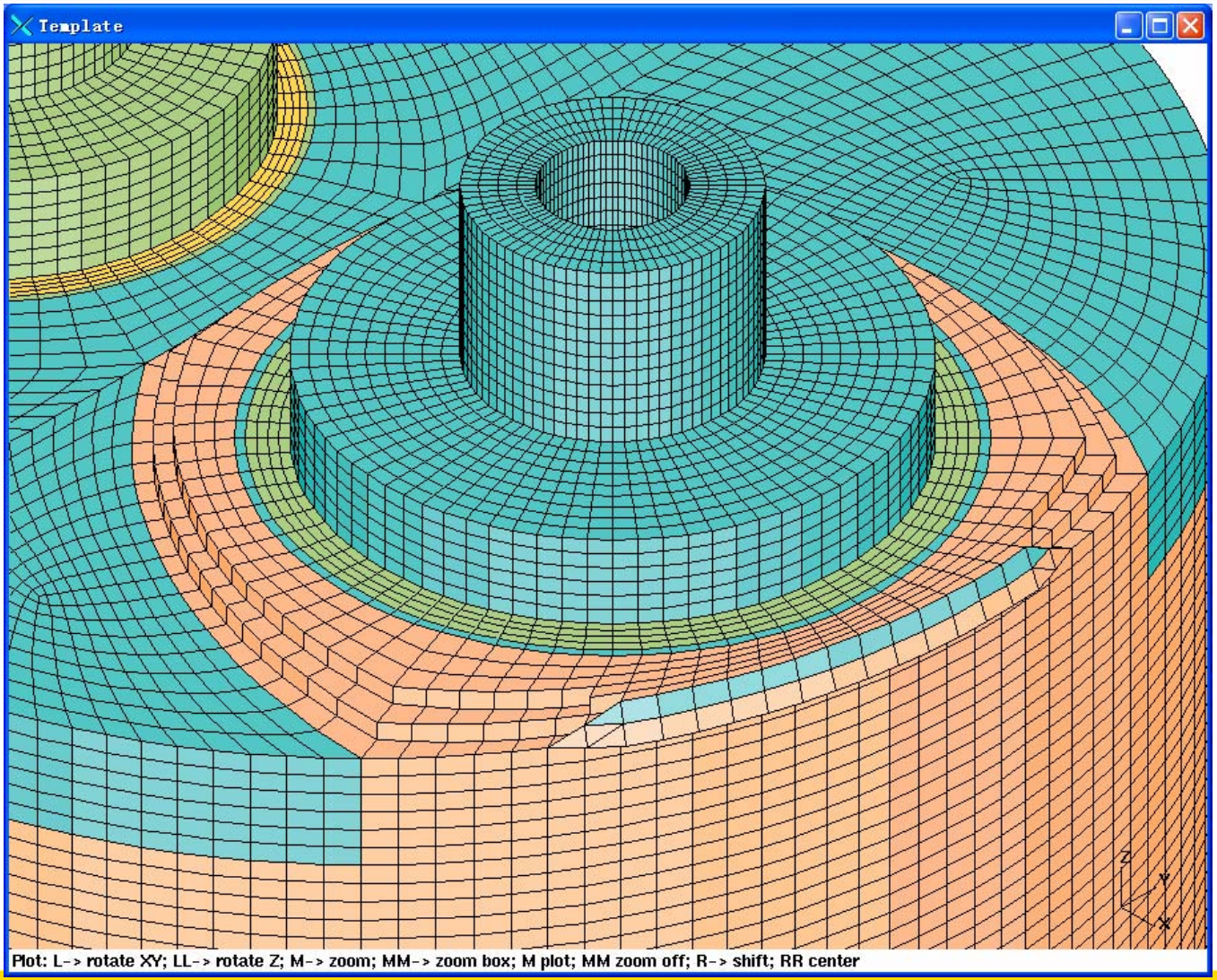
Step8 采用plaster方法创建如下图所示网格



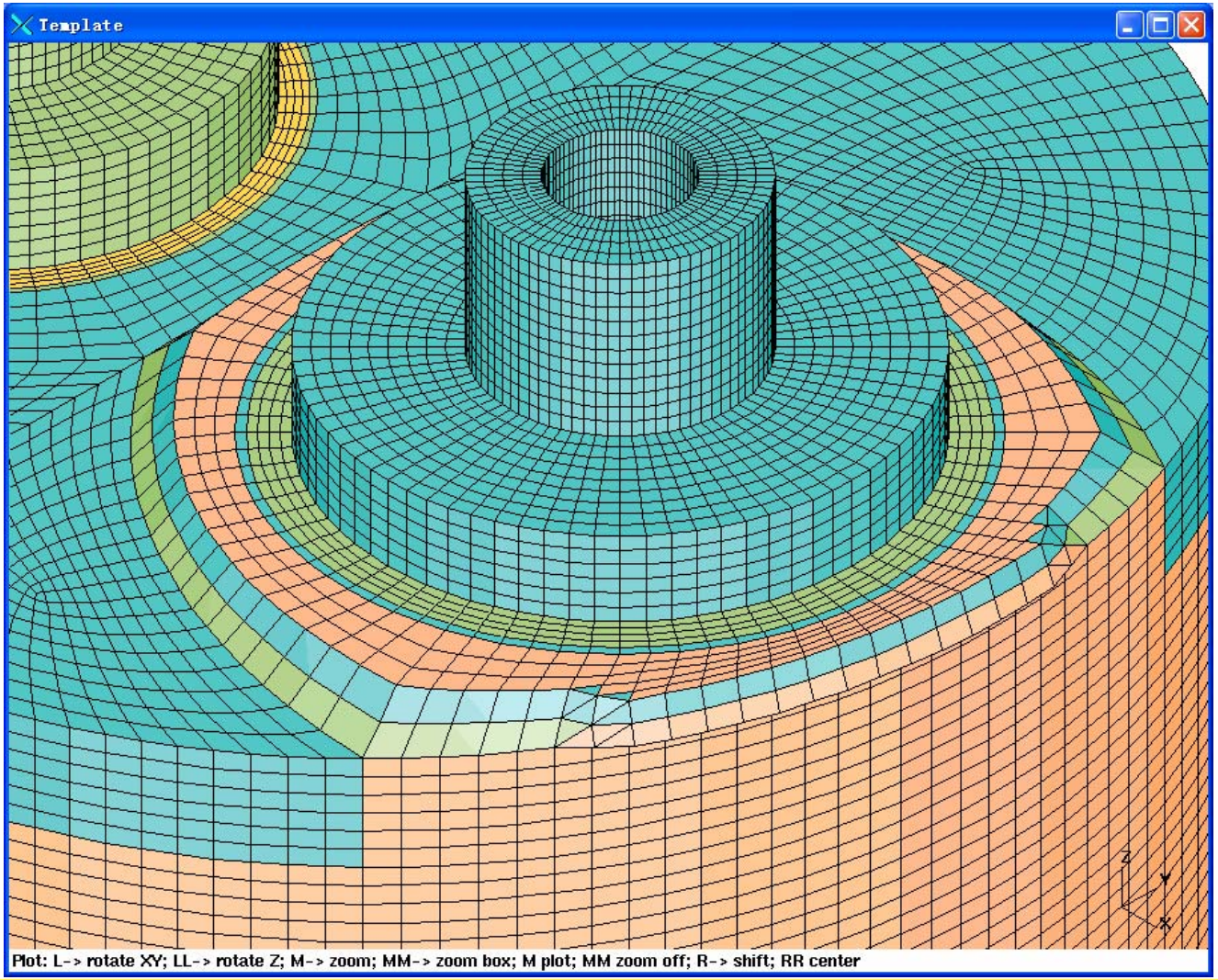
Step9 删除底层多余网格



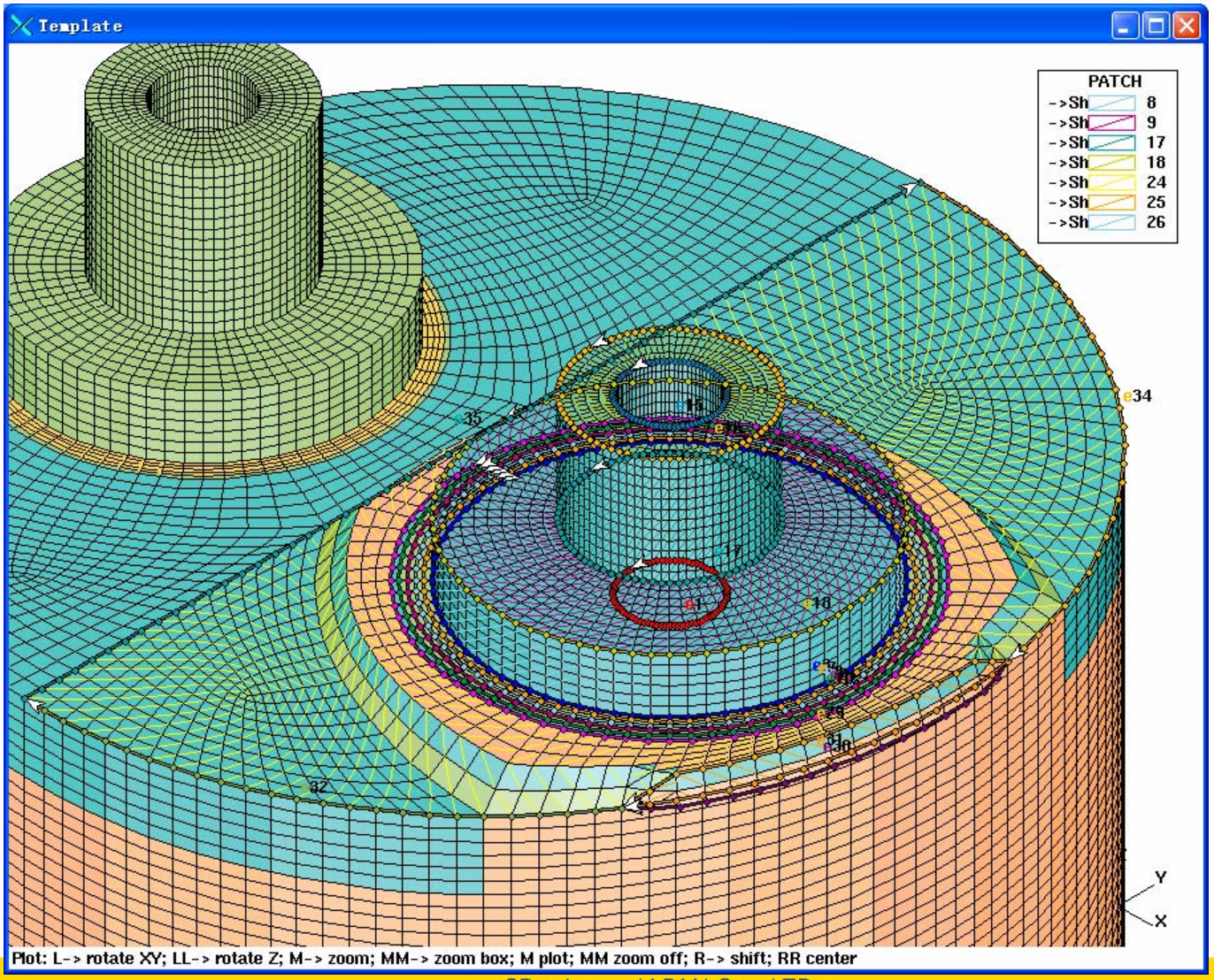
Step10 按下图删除模板网格



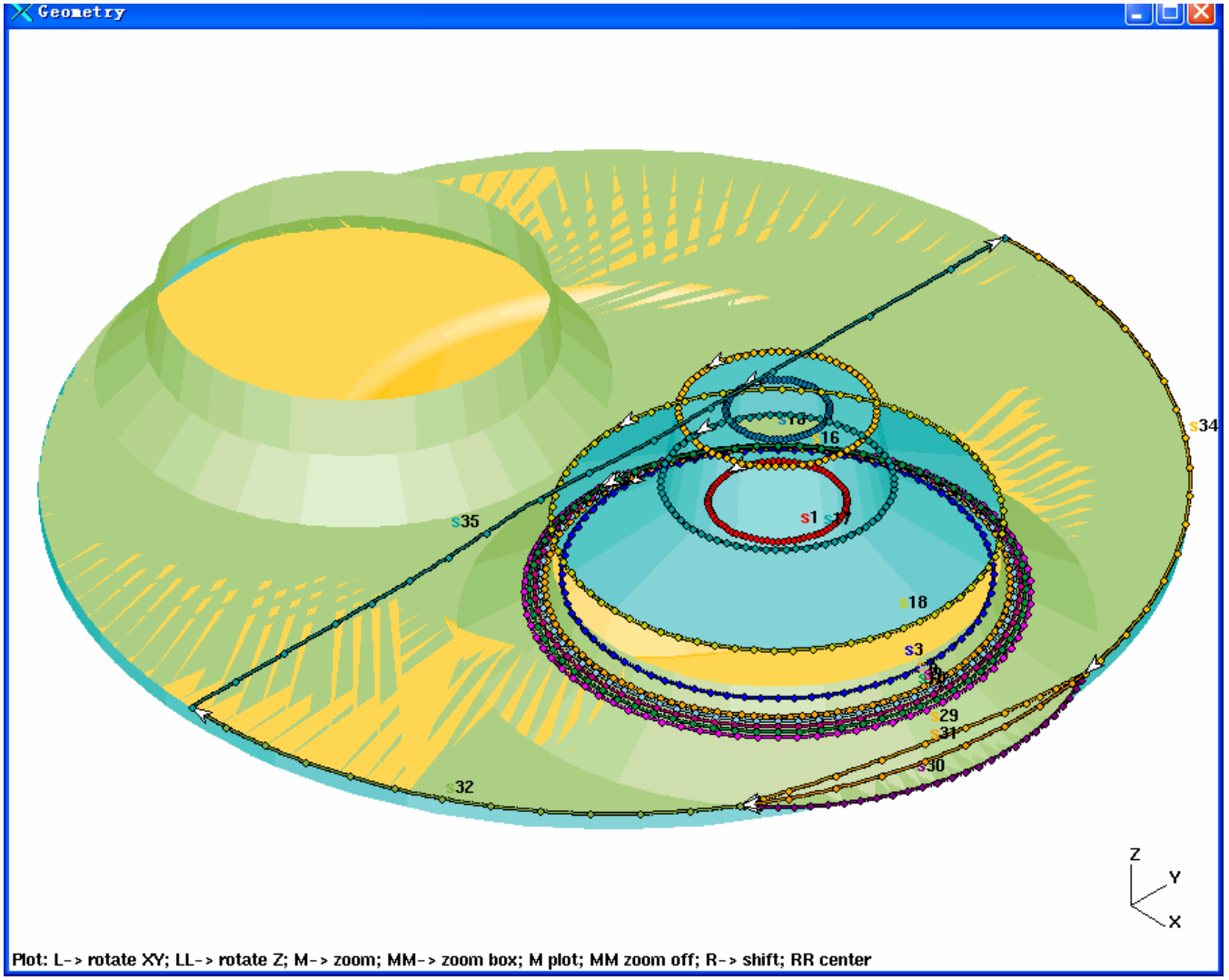
Step11 采用plaster方式填平



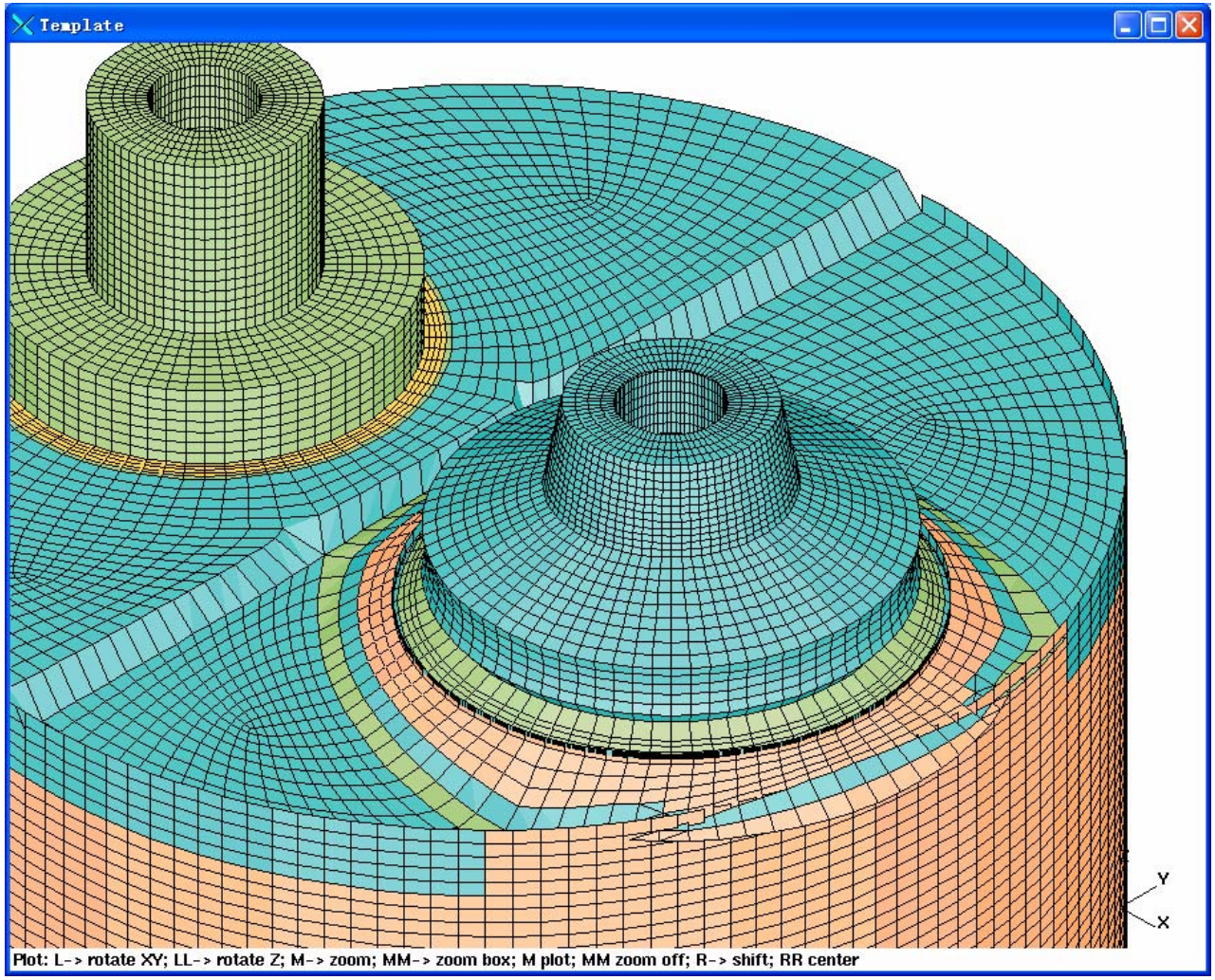
Step12 创建如下所示edge和patch



Step13 创建如下所示spline，并与edge关联

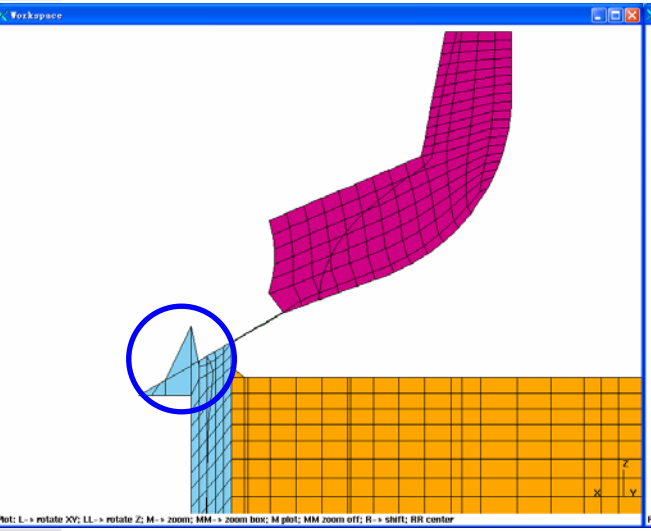


Step14 map edge 和 patch

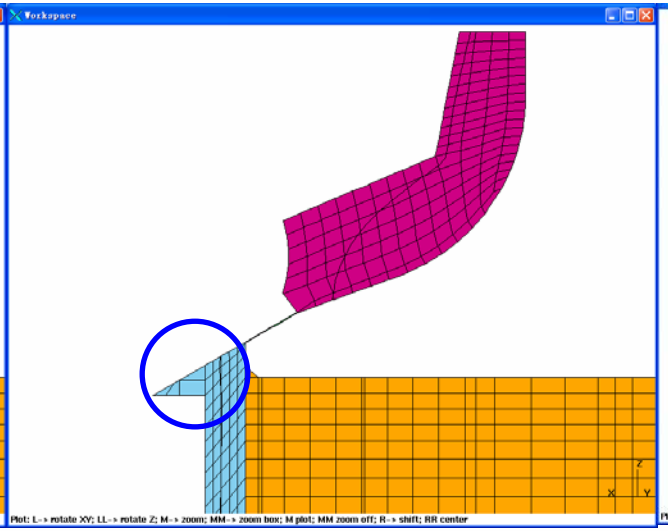


Step15 smooth增添网格内部节点

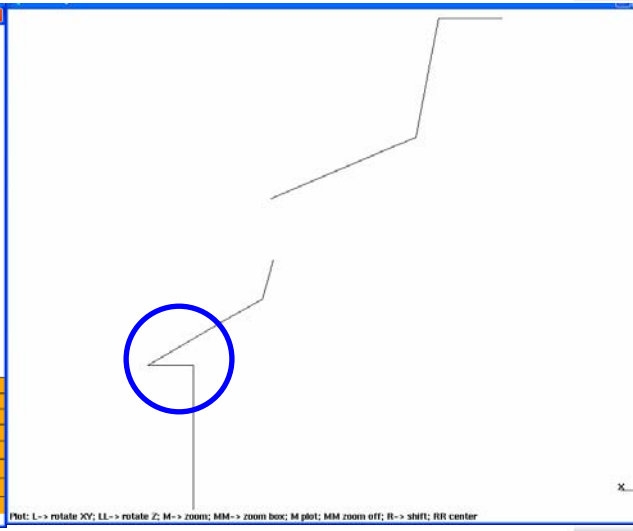
- 通过pext拉伸出来的那部分网格，在计算过程中内部不会自动光顺，因此需要在建模时就调整其网格质量，保证没有负体积及较好的正交性。
- 调整时可以使用es-ice面板中的各种工具，如smooth工具。



调整前



调整后



原始几何

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