

CAEplex tutorial #1

See <https://www.caeplex.com/help/tutorials.php>

Compression in a linking rod

Quick tutorial (≈ 1 min)

Step #1: Problem

1. Click the purple button “Add displacement condition”
2. Pick the three internal faces of the big-end cylinder (123, 132 & 133)
3. Click the green button “Add external load condition”
4. Pick the two internal faces of the small-end cylinder in the rod direction (125 & 126)
5. Write 20 (MPa) in the pressure field
6. Click the green button “Next step \rightarrow Mesh”

Step #2: Mesh

1. Write 3 (mm) in the Global element size ℓ_c field.
2. Click the blue button “Refresh”
3. After the mesh is re-generated, click the green button “Next step \rightarrow Results”

Step #3: Results

1. Drag the slider in the “Displacements & stresses” box to warp the results.
2. Open the “Layers & Legend” box
3. Select “Principal 3” to see the compression principal stress.