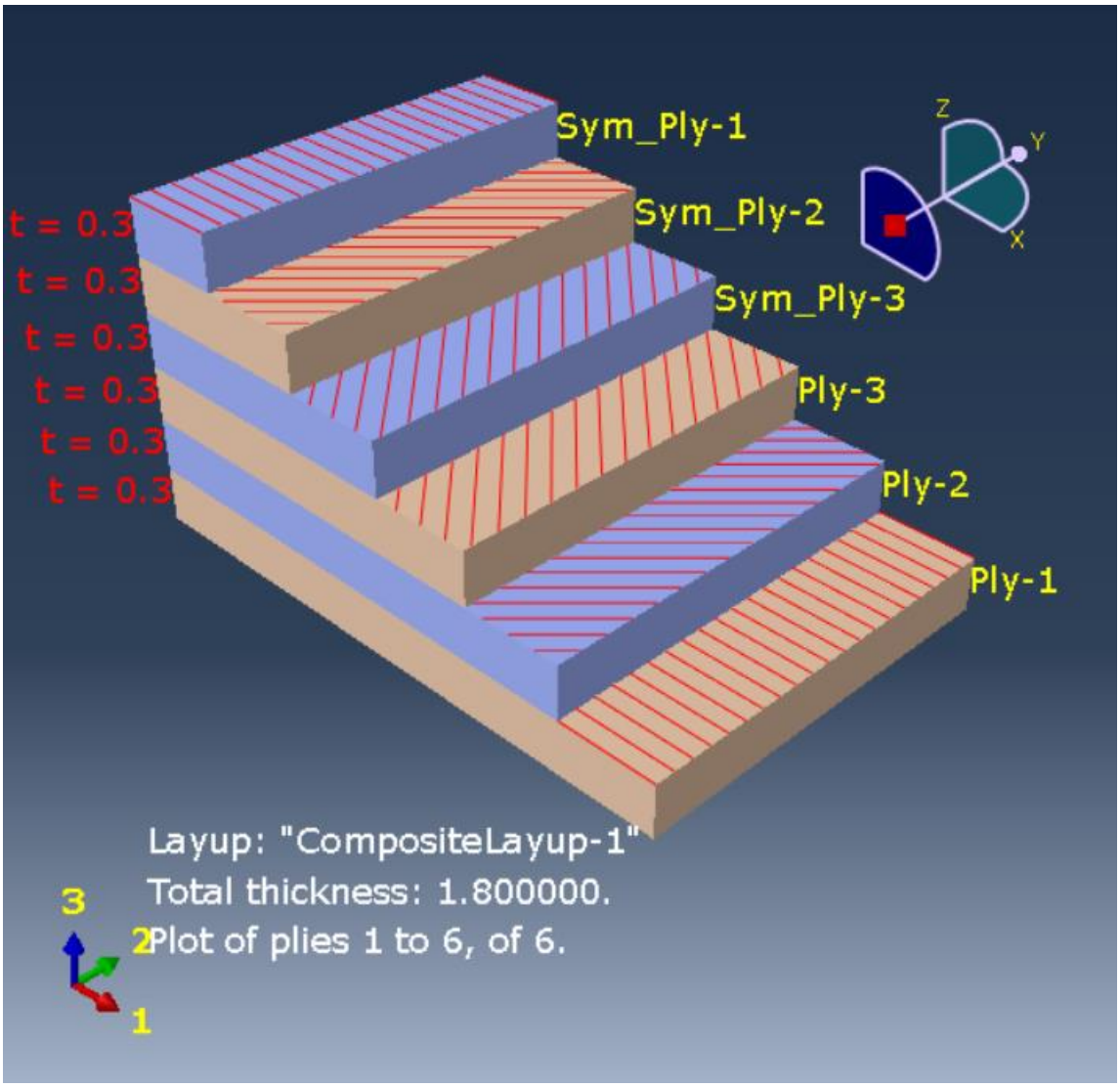
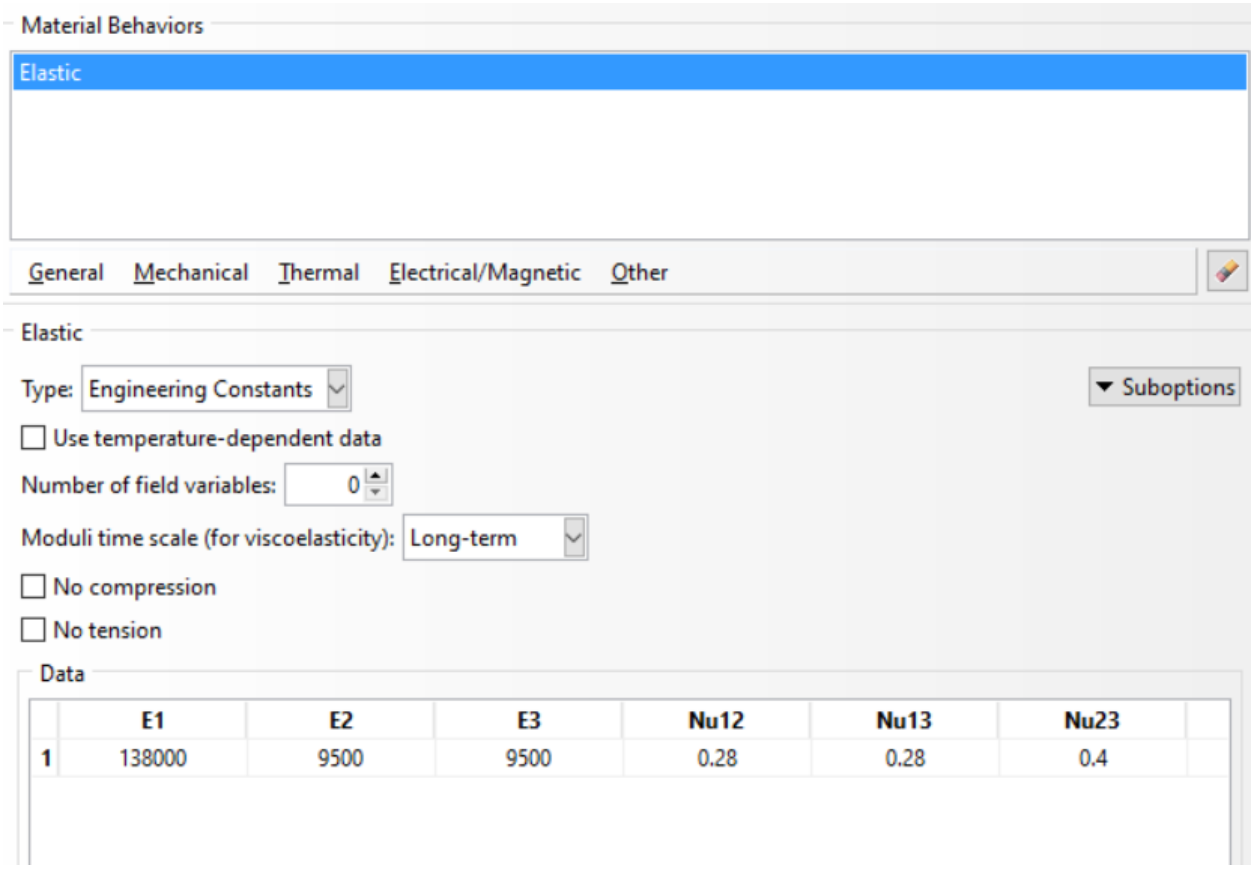
Project 22: Project 22_ABAQUS Static Structural: Composite Layup

Problem Statement: Model deformation of a composite layup.

Geometry:

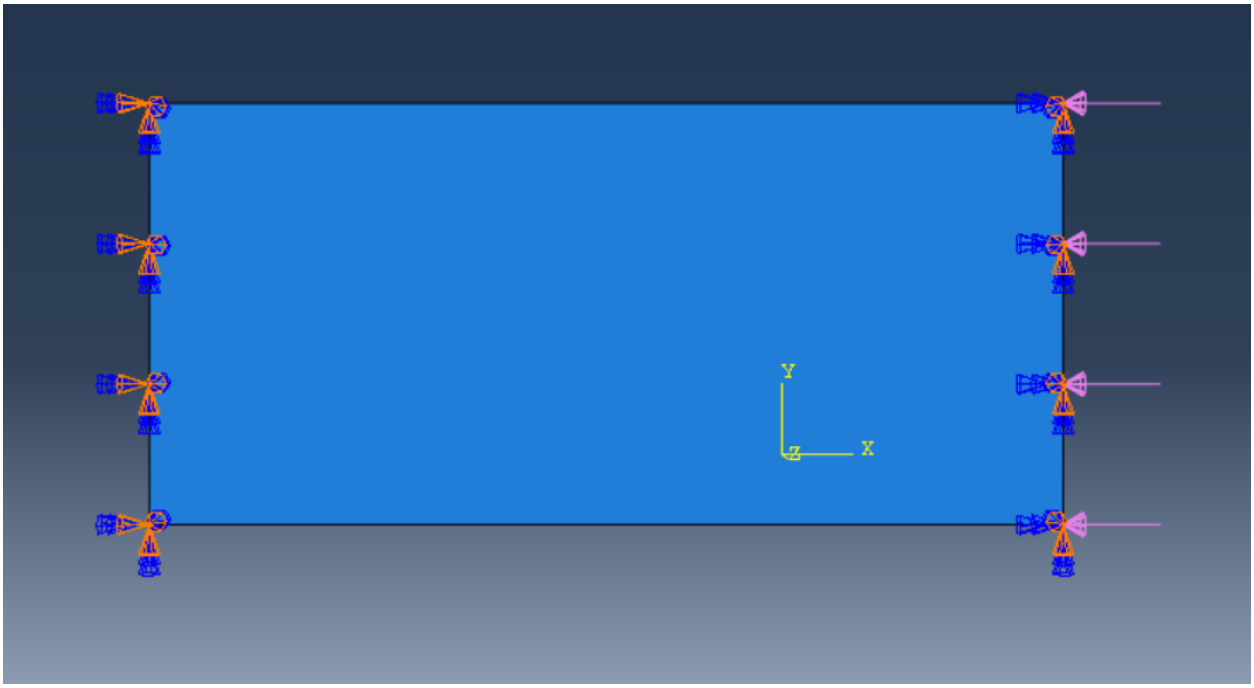


Material Properties:

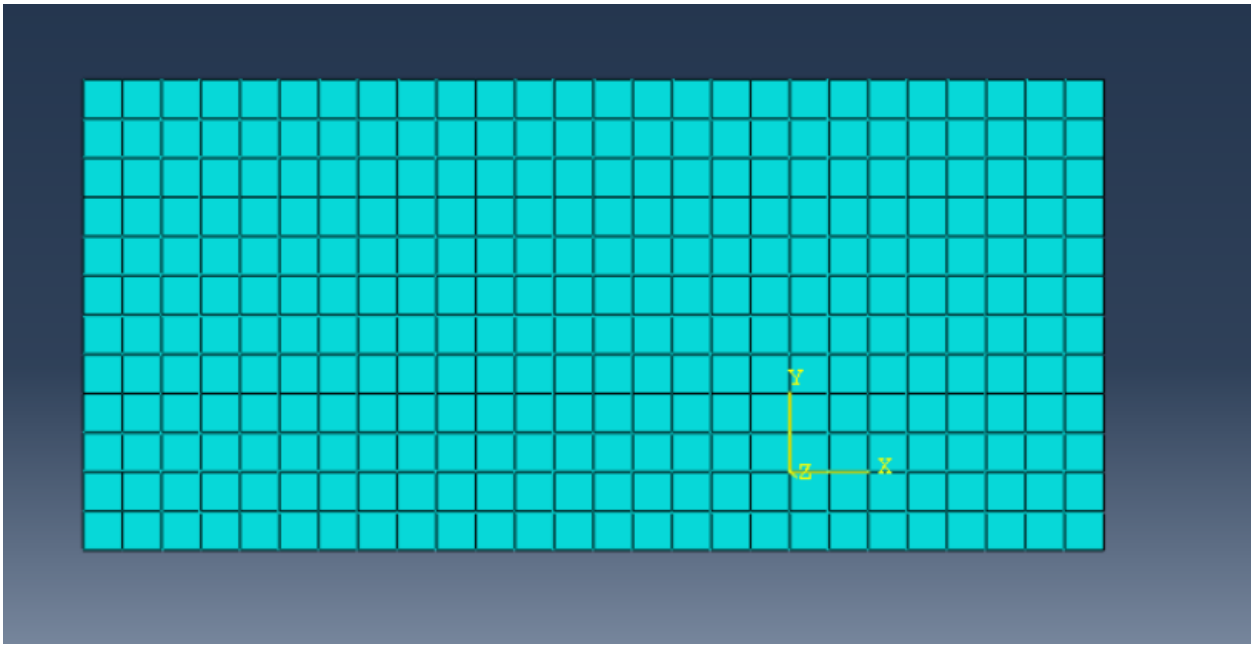


Loading and boundary conditions:

1) Left edge is fixed.
2) Right edge has U2=U3=UR1=UR2=UR3=0.
3) Right edge has ramped load of 100N applied.

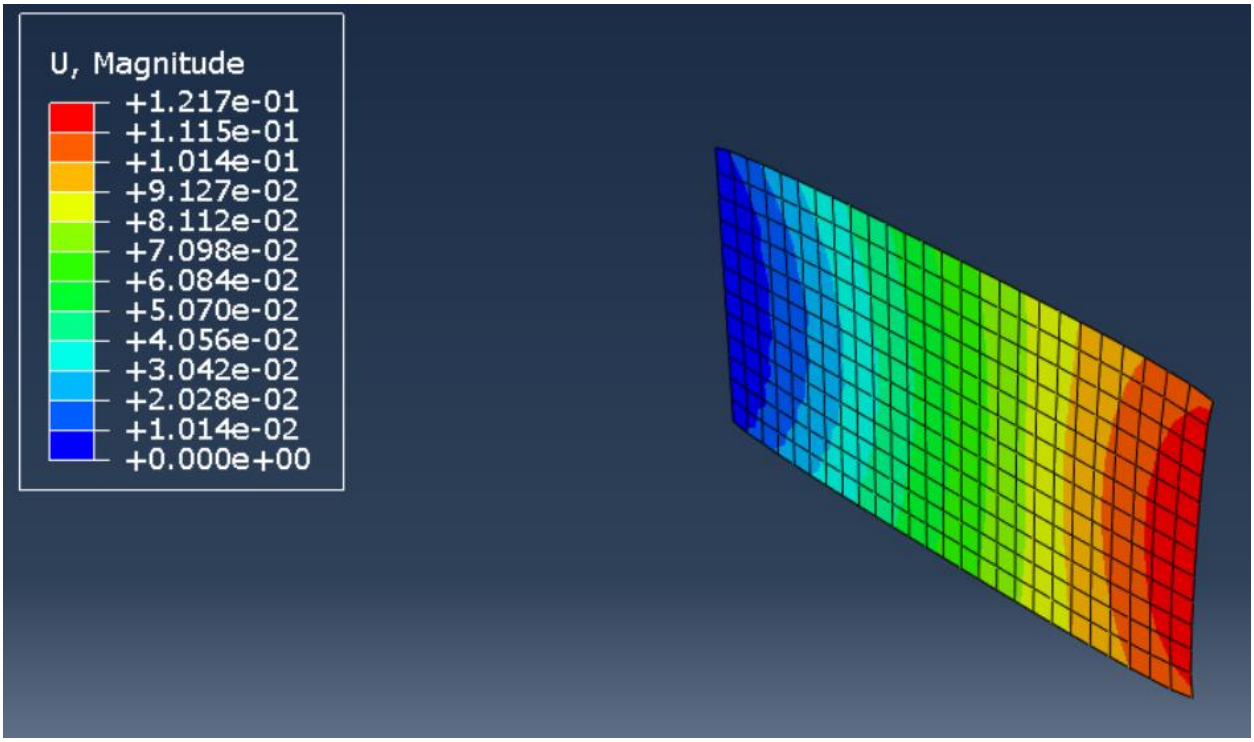

Y
X

Mesh: (coarse due to limitation of 1000 nodes in ABAQUS educational version).



Results:

Deformation:



Mises stress: