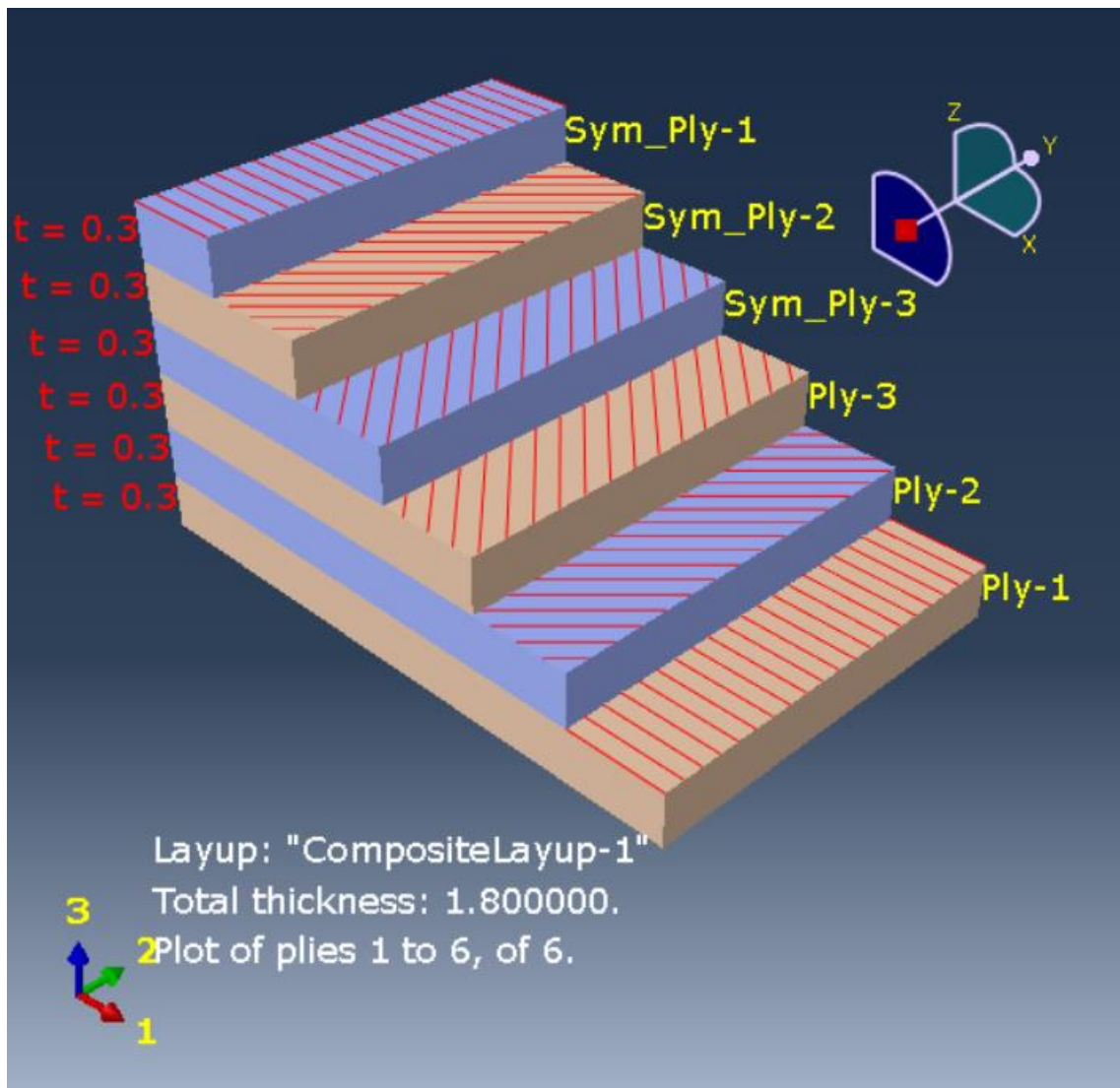


Project 22: Project 22_ABAQUS Static Structural: Composite Layup

Problem Statement: Model deformation of a composite layup.

Geometry:



Material Properties:

Material Behaviors

Elastic

General Mechanical Thermal Electrical/Magnetic Other

Elastic

Type: Engineering Constants

☐ Use temperature-dependent data

Number of field variables: 0

Moduli time scale (for viscoelasticity): Long-term

☐ No compression

☐ No tension

▼ Suboptions

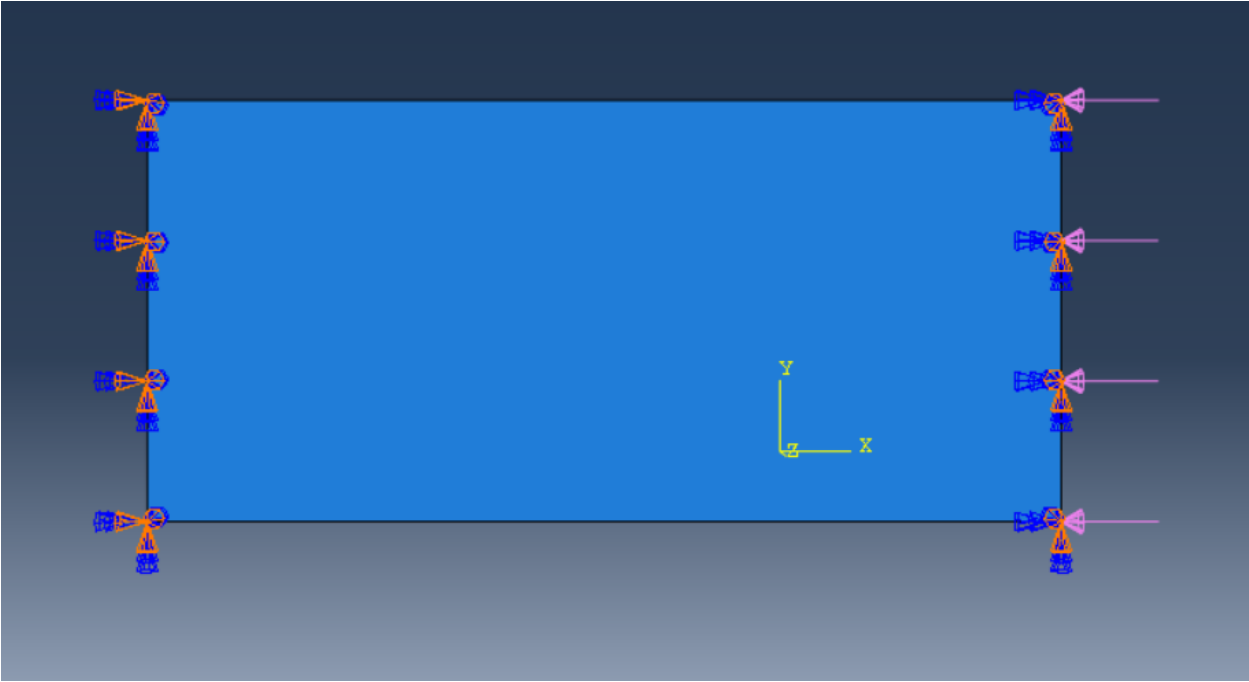
Data

	E1	E2	E3	Nu12	Nu13	Nu23
1	138000	9500	9500	0.28	0.28	0.4

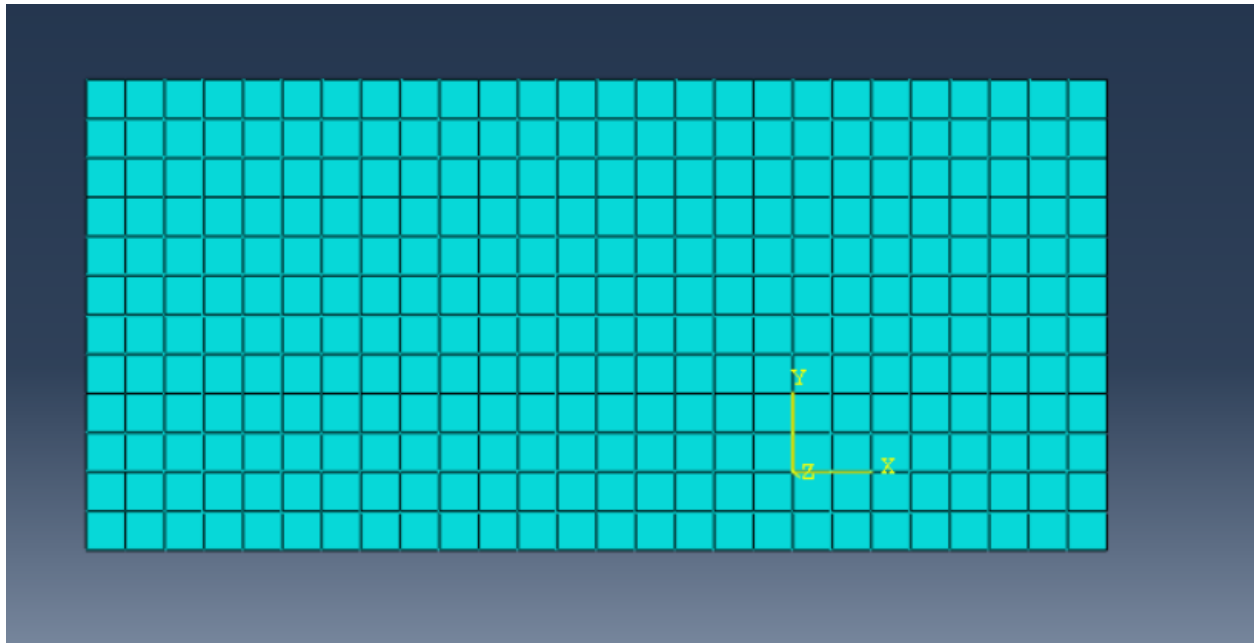
G12	G13	G23
5200	5200	1450

Loading and boundary conditions:

- 1) Left edge is fixed.
- 2) Right edge has $U_2=U_3=U_{R1}=U_{R2}=U_{R3}=0$.
- 3) Right edge has ramped load of 100N applied.

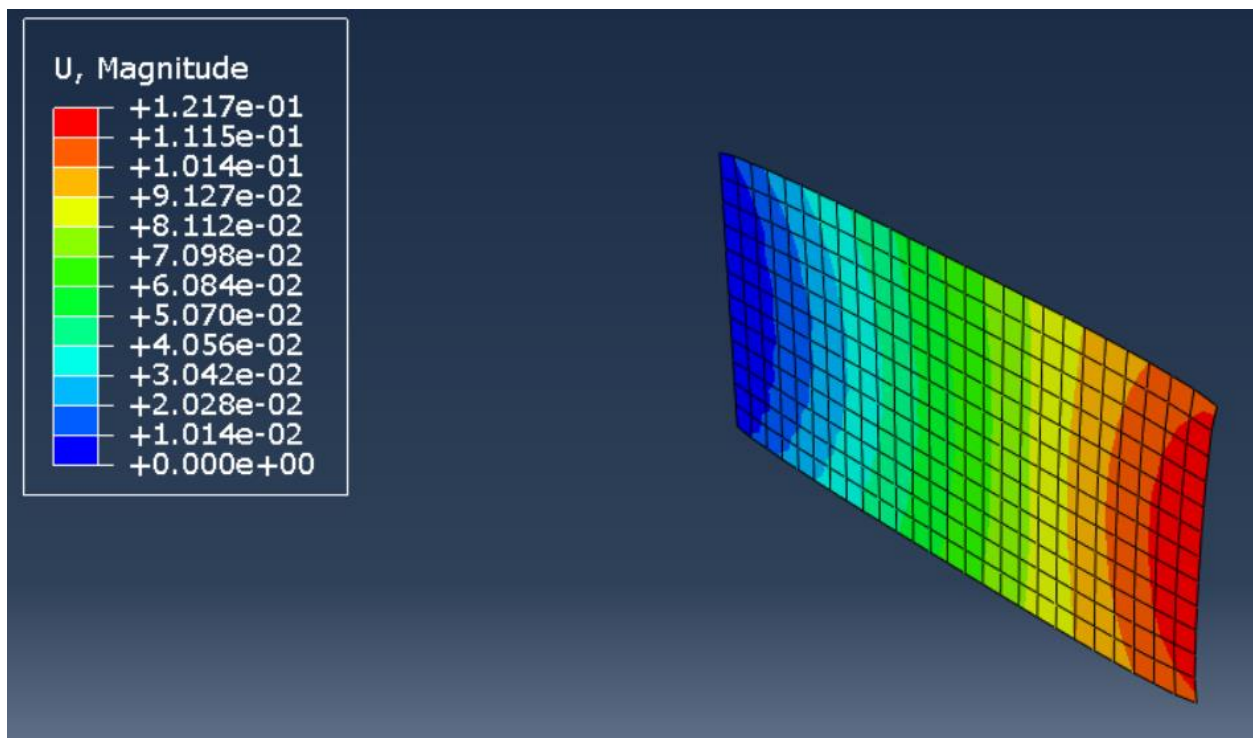


Mesh: (coarse due to limitation of 1000 nodes in ABAQUS educational version).



Results:

Deformation:



Mises stress:

