

AOE 3024, Thin Walled Structures

Homework # 2, Due September 12, 2001

NAME

Pledge

The state of stress at a point in a component is given as

$$\begin{bmatrix} 40 & 40 & 0 \\ 40 & 50 & -60 \\ 0 & -60 & 40 \end{bmatrix} \text{ MPa}$$

- Determine the normal and tangential components of the stress vector acting on the face ABC. Note that $OA = 2OB = 2OC = \Delta$ meters (5 points).
- Determine the three Principal stresses and corresponding Principal planes. (20 points)