

AOE 3024, Thin Walled Structures

Homework # 4, Due October 3, 2001

NAME

Pledge

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

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

Determine the factor of safety using Tresca (Maximum Shear stress) and Von-Mises failure criteria. Assume the yield stress to be 250 MPa.

Your solution should clearly indicate the given state of stress in the σ_a - σ_b failure diagram.