Show that \( T_{xy} = T_{yx} \) - the axis to which the stress is parallel.

The plane on which the stress acts.

State of stresses at point \( O \).

For each of the elements, we write

\[ T_{ZM} = 0 \]

\[ d\sigma (T_{xy} dy) - d\tau (T_{yx} dx) = 0 \]

\[ T_{xy} dy - T_{yx} dx = 0 \]

\[ T_{xy} = T_{yx} \quad \text{Q.E.D.} \]

\[ q = \frac{VQ}{I} \]

\[ T = \frac{q}{k} \]

\[ T = \frac{VQ}{I_k} \]

Average shearing stress.

\[ Q = I A \]

\[ 6.21 \]

Use POM1 & POM2 to find \( \bar{y} = 6.5 \text{ m} \)

Near PAT to find \( I = 5.813 \times 10^{-6} \text{ m}^4 \)

\[ T_a = \frac{VQ}{I_k} \]

Define \( T_a \):

\[ A_2 = 3.8 \text{ m} \]

\[ V = 900 \text{ m} \]

\[ T = 40 \text{ m} \]

\[ I = 5.813 \times 10^{-6} \text{ m}^4 \]

\[ Q = 0.025 \text{ m}^2 \]

\[ T_a = \frac{VQ}{I_k} \text{ Pa} \]

Define \( T_e \):

\[ V, I \text{ same as above} \]

\[ T = 20 \text{ m} \]

\[ Q = 0.025 \text{ m}^2 \]

\[ T_e = \frac{VQ}{I_k} \text{ Pa} \]