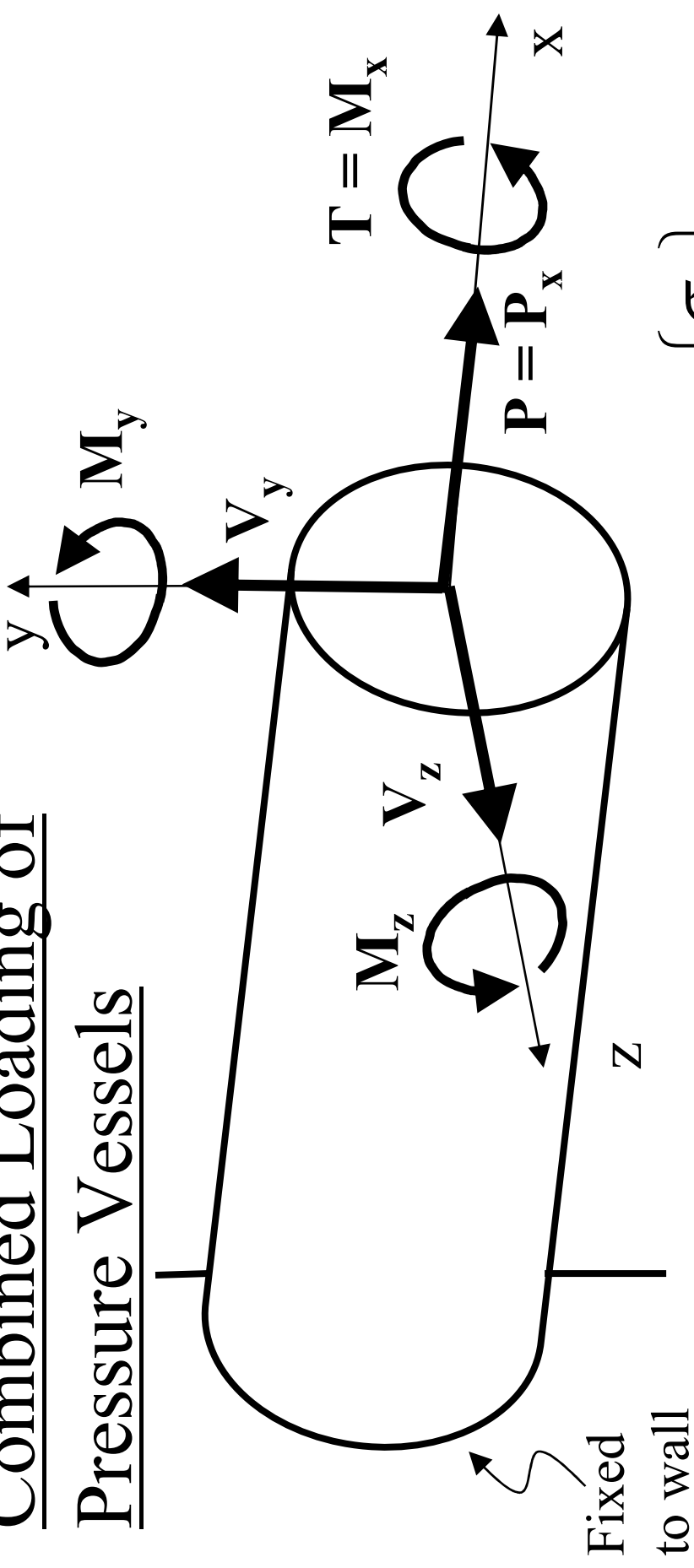


Combined Loadings of

Pressure Vessels



$$\left. \begin{array}{l} \sigma_y \\ \text{or} \\ \sigma_z \end{array} \right\} = \frac{pr}{t}$$

$$\sigma_x = +\frac{pr}{2t} + \frac{M_z y}{I_z} + \frac{M_y z}{I_y};$$

$$\tau_{xy} = \tau_{xz} = \frac{Tc}{J}; \quad \tau_{xy} = \frac{V_y Q}{I_z t}; \quad \tau_{xz} = \frac{V_z Q}{I_y t}$$