

Topic

Statically Indeterminate Torsion Members

Governing Equations and Assumptions

Equilibrium

$$\phi = \frac{T L}{G I_p}$$

$$\tau = \frac{T r}{I_p}$$

Equation of Compatibility

Process

- ① Enforce Equilibrium
- ② Divide in segments if needed
- ③ Determine the internal torque for each segment
- ④ Determine the equation of compatibility
- ⑤ Solve for the unknowns