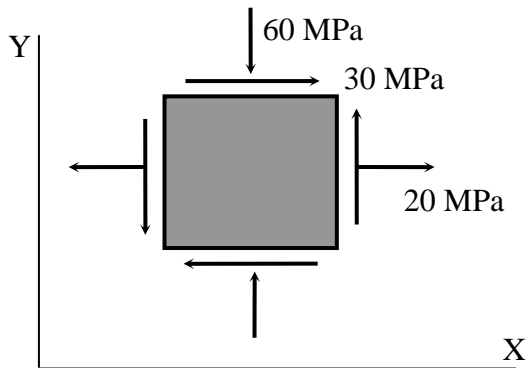


TOPIC

Strength of Materials

QUESTION

The maximum tensile principal stress in MPa for the two dimensional stress state given is



- (A) 20
- (B) 30
- (C) 40
- (D) 60

HINT

$$\sigma_x = 20 \text{ MPa}$$

$$\sigma_y = -60 \text{ MPa}$$

$$\tau_{xy} = 30 \text{ MPa}$$

$$\sigma_{M,m} = \frac{\sigma_x + \sigma_y}{2} \pm \sqrt{\left(\frac{\sigma_x - \sigma_y}{2}\right)^2 + \tau_{xy}^2}$$

ACKNOWLEDGEMENT

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