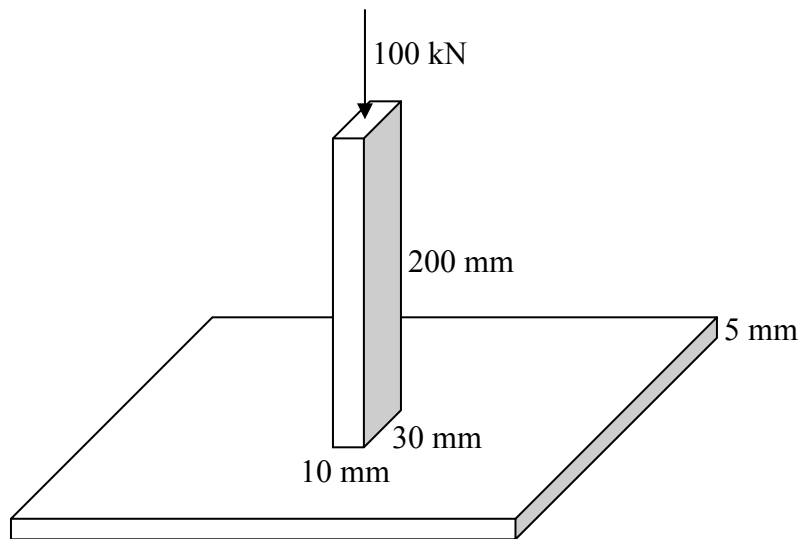


**TOPIC**

Strength of Materials – Section VIII – Question 6

**QUESTION**

An engineer determines that a 100 kN force is required to punch a rectangular hole through a 5 mm thick steel plate with Young's modulus of 200 GPa and Poisson's ratio of 0.30. If the 200 mm long hardened steel punch is to make a 10 mm by 30 mm rectangular slot, the actual cross-sectional dimensions of the punch most nearly is (assume that no friction exists between the punch and plate)



- (A) 10.0005 mm by 30.0015 mm
- (B) 9.0005 mm by 29.0015 mm
- (C) 9.995 mm by 29.985 mm
- (D) 10 mm by 30 mm

**CONTRIBUTOR**

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