

# ANSYS - Thermal Stresses in a Bar

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## Problem Specification

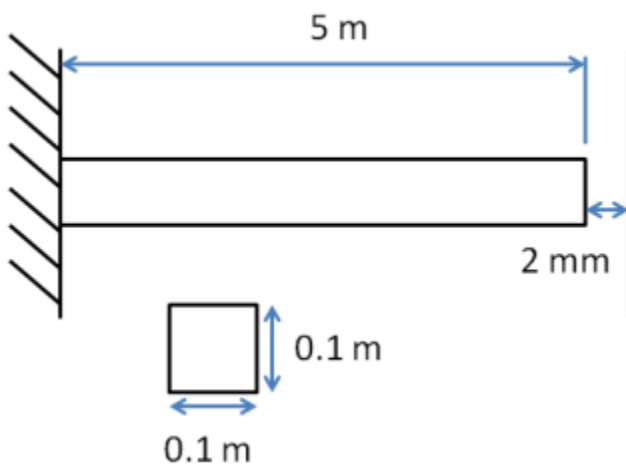
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## Thermal Stresses in a Bar

Created using ANSYS 13.0

### Problem Specification

A steel bar ( $E = 2.0 \times 10^{10}$  Pa,  $\nu = 0.3$ ,  $\alpha = 1.2 \times 10^{-5}$ ) with the dimensions shown below is placed between two walls. On one side, the bar is rigidly fixed to the wall and on the other, there is a 2 mm gap between the wall and the bar. What is the stress in the bar after the temperature increases  $100^\circ\text{C}$ ?



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