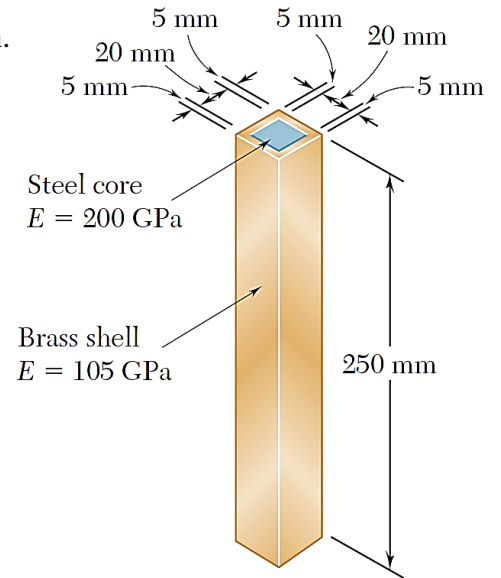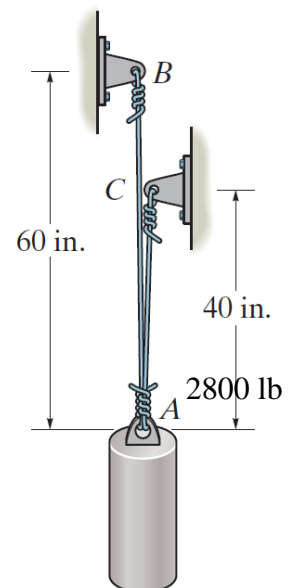**1)** GIVEN: A centric axial force of 60 kN is applied to the assembly shown.
REQ'D: (a) Normal stress in the brass shell.
(b) Deformation of the assembly. (B9.25)

5 mm   5 mm   20 mm
20 mm
5 mm   5 mm

Steel core
$E = 200$ GPa

Brass shell
$E = 105$ GPa

250 mm

2) GIVEN: A load is supported by two essentially vertical 12 gauge nichrome wires.
Originally wire AB is 60 *in* long and wire AC is 40 *in* long.
REQ'D: Determine the force developed in each wire after the load is suspended.

B

C

60 in.

40 in.

2800 lb
A

3) GIVEN: Steel wall brace constructed as shown.

   $a = 12\ in$ $\mathbf{P} = 10\ kips$ $d = 4\ in.$

REQ'D: Reactions at A and C.