

PROBLEMS

- 13.25** The built-up timber beam is subjected to a 6-kN vertical shear. Knowing that the longitudinal spacing of the nails is $s = 60$ mm and that each nail is 90 mm long, determine the shearing force in each nail.

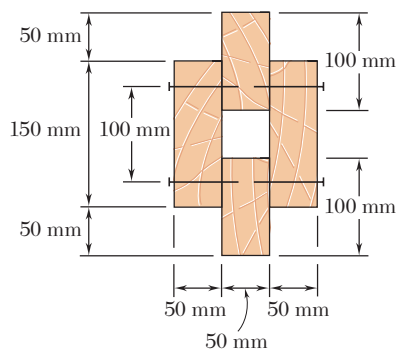


Fig. P13.25

- 13.26** The built-up timber beam is subjected to a vertical shear of 1200 lb. Knowing that the allowable shearing force in the nails is 75 lb, determine the largest permissible spacing s of the nails.

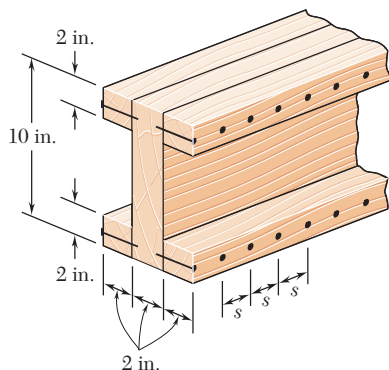
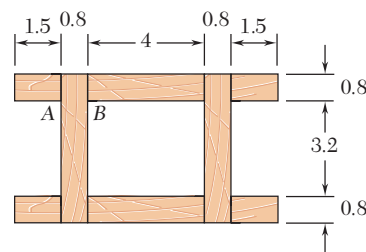


Fig. P13.26



Dimensions in inches

Fig. P13.27

- 13.27** The built-up beam was made by gluing together several wooden planks. Knowing that the beam is subjected to a 1200-lb vertical shear, determine the average shearing stress in the glued joint (a) at A, (b) at B.

- 13.28** Knowing that a W360 \times 122 rolled-steel beam is subjected to a 250-kN vertical shear, determine the shearing stress (a) at point a, (b) at the centroid C of the section.

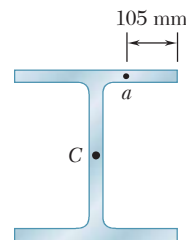


Fig. P13.28