Design Using FEM
Due on 1 Nov 04

**8.22** Determine the stresses in the wrench shown in Figure P8–22. Let $E = 200$ GPa and $\nu = 0.25$, and assume uniform thickness $t = 10$ mm.

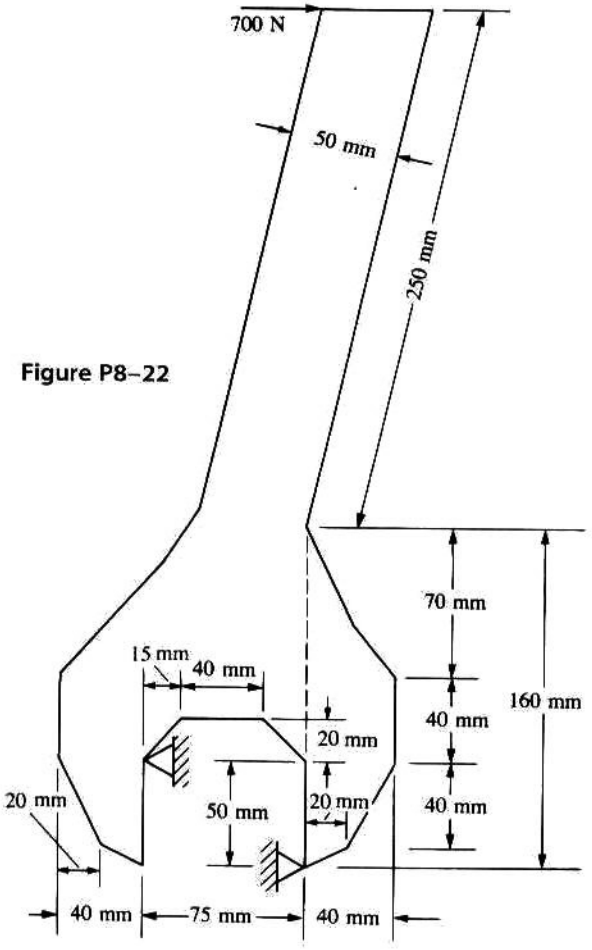


Figure P8–22

**8.28** A plate with a hole off-centered is shown in Fig. P8–28. Determine how close to the top edge the hole can be placed before yielding of the A36 steel occurs (based on the maximum distortion energy theory). The applied tensile stress is 10,000 psi, and the plate thickness is $\frac{1}{4}$ in. Now if the plate is made of 6061-T6 aluminum alloy with a yield strength of 37 ksi, does this change your answer? If the plate thickness is changed to $\frac{1}{2}$ in., how does this change the results?

**Figure P8–28** Plate with off-centered hole