MAK 206 HW #6

*6–80. If the beam is subjected to an internal moment of $M = 100$ kN · m, determine the bending stress developed at points A, B and C. Sketch the bending stress distribution on the cross section.

6–81. If the beam is made of material having an allowable tensile and compressive stress of $(\sigma_{allow})_t = 125$ MPa and $(\sigma_{allow})_c = 150$ MPa, respectively, determine the maximum allowable internal moment M that can be applied to the beam.
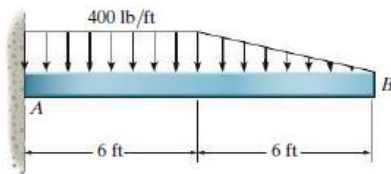
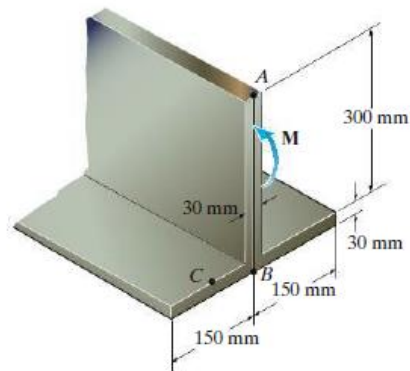6–99. If the beam has a square cross section of 6 in. on each side, determine the absolute maximum bending stress in the beam.
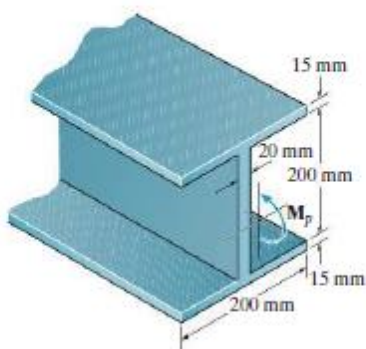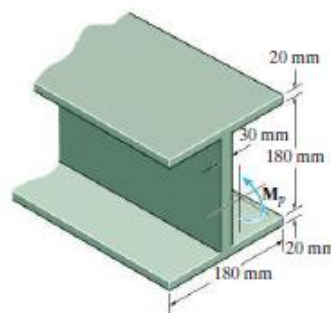

Prob. 6–99

Probs. 6–80/81

6–183. Determine the shape factor for the wide-flange beam.

*6–184. The beam is made of an elastic plastic material for which $\sigma_Y = 250$ MPa. Determine the residual stress in the beam at its top and bottom after the plastic moment M_p is applied and then released.

6–158. Determine the shape factor for the wide-flange beam.

Prob. 6–158

Probs. 6–183/184