2.2-1 $b = 0.91''$
$c = 1.526''$
$\sigma_1 = 6.37 \text{ ksi}$

2.2-3 $y_k = 0.827''$
$Z_x = 1.327''$
$\sigma = 5.54 \text{ ksi}$

2.25 $\sigma_1 = 35.4 \text{ MPa}$
$\sigma_2 = 25.5 \text{ MPa}$

2.2-7 $\sigma_1 = 1.768 \text{ ksi (C)}$
$\sigma_2 = 1.959 \text{ ksi (C)}$
$P_{MAX} = 766 \text{ kN}$

2.2-9 81.5 MPa
63.7 MPa
$x = 1.171 \text{ m}$
74.5 MPa

2.2-11 34.6 in
12.80 ksi

2.2-13 34.0 MPa
38.2 MPa (C)

2.2-15 140 MPa

2.2-17 0.312 in^2
0.600 in^2

2.3-1 1.760
1.160

2.3-3 156.2 μ

2.3-5 153.2 mm

2.3-7 $\epsilon_1 = 2.50 \times 10^{-4}$
$\epsilon_2 = -0.00015$

2.3-9 $\theta = 0.00306°$
177.8 μ
−142.2 μ

2.3-11 $\frac{L' - L}{L}$

$$\epsilon \approx -\left(\frac{u_a}{L}\right)\cos\theta + \left(\frac{v_a}{L}\right)\sin\theta$$

2.3-13 25.8 μ
−26.5 μ

2.3-15 $y_B = 34 \text{ in} - (16 \text{ in})(1 + \alpha\Delta T)^2$

$\alpha\Delta T = 8(10^{-6})(T° - 70°F)$

2.3-17 $\theta = \tan^{-1}\left[\left(\frac{70}{3} \times 10^{-6}\right)(\Delta T_2 - \Delta T_1)\right]$ rad

$\theta_{max} = 2.30°$

2.4-5 $E = 70.1\ GPa$

$\sigma_{YS} \approx 105\ MPa$

2.6-5 $\sigma_{ULT} \approx 218\ MPa$

13.46 kN

0.765 mm

2.7-1 45.3 ksi

2.7-3 65.4 MPa

2.7-5 8.99 kips