ME 354 Homework #5

Due: February 22th, 2008 before class.

- 1) Dowling, Problem 8.3 (a) only.
- 2) Dowling, Problem 8.8. *Hint*: For part (b), $X_0 = \sigma_0 / S_g = P_0 / P$ where P_0 is from Figure A.16 and P is from part (a)

Suggested problems:

Problems: 8.12	$X_0 = 2.82, X_K = 2.21, b = 53.24 \text{ mm}$
8.15	<i>Note</i> : pressured pipe example in class (Feb 15^{th}) had an error: let $2a = 10$
	mm, not 100 mm as given in lecture. $X_0 = 3.56$, $X_K = 1.65$
8.31	(a) $S_{gc} = 46.6$, $S_{gc} = 113.91$ MPa (b) 179.24, 82.84 MPa
8.32	$(650^{\circ} \text{ C}) \text{ M}_{\text{c}} = 12.86, \text{ M}_{\text{o}} = 13.21 \text{ kN m}$
	(300° C) 5.50, 21.49 kN m