

DOT REPAIR REQUIREMENTS (.40 SMYS) PER ANSI B 31.8

Equation 4 from A 842.2.2

$$SH = (P_t - P_e) ((D - t) / 2t)$$

$$SH = .40 (60,000) = 24,000$$

$$24,000 = (P_t - P_e) ((18 - 0.875) / 2 (0.875))$$

$$24,000 = (P_t - P_e) (17.125 / 1.75)$$

$$24,000 = (P_t - P_e) (9.78)$$

$$P_e = 64 P / CF (2000 / 144) = 889 \text{ PSI} > \text{External water pressure at 2000 ft}$$

$$24,000 = (P_t - 889) (9.78)$$

$$24,000 / 9.78 = (P_t - 889)$$

$$2453 = P_t - 889$$

$$3,352 = P_t$$

$$MAOP = 3,352 \text{ psi at .40}$$