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MAOP

Calculate the maximum allowable operating pressure per API 1111

Calculated minimum Burst Pressure (Pb) of 18 inch x 0.875 wall API X60

Pb = 0.90*(S + U)*(t / (D-t)) (Equation 5 of API RP1111)

Pb = Specified minimum burst pressure (psi)
S = Specified minimum yield strength (psi)
U = Specified minimum ultimate strength (psi)
t = nominal wall thickness (inch)
D = Outside diameter of pipe.

Pb= 0.90*(60,000 +75,000)*(0.875”/(18”-0.875))
Pb= 0.90*(135,000)*(0.875”/(17.125))
Pb= 0.90*(135,000) * (0.051)
Pb= 6,208 psi

For Pb= 6,208 psi

MAOP(pipe with wall thickness of .875 inches) =.72 * Pb + *899 psi

(hydrostatic head at 2,000 feet)

MAOP = 5,492 psi at .72