BODY, 4-1/16"-15K , MODEL -"SCVM"

Description: Stress Calculations at hub Dia:

D/N : SCVM 4015M-1 Material : AISI 4130 (SES-4.6.7) Yield strength, Sy■75000 · psi Distortion energy theory (or) Von Mises Law: Se = Sy [As per API 6A 21st edition, section 5.1.3.3] Se , Allowable combined stress <= Sy Yield strength (minimum) at room temperature When we consider high temperature X=350 degree F Derating factor, Yr■0.85 (As per API 6A 21st Edition,Annex G Table G.3) The elevated temperature yield strength, Se■Yr· Sy So, Se=63750 psi

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Equation: S1=p1*(b1^2/(a1^2-b1^2))
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Input: S1=p1*(b1^2/(a1^2-b1^2))
Result: **Result:** 9275.799225173003