

Mult. Steel Steam Boilers No 401 by J. S. Kincaid 16" H²
for Napier & Miller's L^{td} No 190 Vessel.

150 lbs working pressure.

Plate % $\frac{8.5 - 1.25}{8.5} \times 100 = 85.3$ Top ends $\frac{185 \times 18.75^2}{358} = 182 \text{ lbs.}$

Rivet % $\frac{5 \times 1.23 \times 1.75 \times 85}{8.5 \times 1.172} = 91.6$ Stay $\frac{6.33 \times 10400}{17.75 \times 20} = 186 \text{ lbs.}$

Shell $\frac{28.5 \times 22 \times 85.3 (18.75 - 2)}{174} = 183 \text{ lbs.}$ Front tube $\frac{140 \times 16.5^2}{14.5^2} = 181 \text{ lbs.}$

Furnace $\frac{1259 (9 - 2)}{46.25} = 191 \text{ lbs.}$ Back $\frac{140 \times 12^2}{10.4^2} = 186 \text{ lbs.}$

Comb. chs $\frac{135 \times 10^2}{73} = 186 \text{ lbs.}$ Boiler Back $\frac{135 \times 14^2}{137.5} = 193 \text{ lbs.}$

Stays $\frac{1.79 \times 9000}{9 \times 8} = 223 \text{ lbs.}$ Stay $\frac{2.1 \times 9000}{11.75 \times 8} = 202 \text{ lbs.}$

Guides $\frac{10660 \times 9.5^2 \times 1.5}{(33.5 - 8.5) 8.5 \times 33.5} = 202 \text{ lbs.}$ Stay tube $\frac{2.17 \times 7500}{11 \times 9.5 - 24.7} = 149 \text{ lbs.}$

W. H. K.
8 June 1912

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