Boiler for Messrs Doyford's 2854b contracts
Tensile of shell plates 27½ tons Min.
Percentage of plate 85.41 Rivets 87.25

$$\text{Shell} = \frac{21.38 \times 18.5 \times 85.41}{186} = 181.6 \text{ lbs.}$$

$$\text{Furnace} = \frac{1259 \times (9-2)}{47.75} = 184.5 \text{ lbs}$$

$$\text{Front plate} = \frac{150 \times 15^2}{13.5^2} = 185 \text{ lbs}$$

$$\text{Comb. Cham.} = \frac{135 \times 11.5^2}{\frac{10.5^2 + 9^2}{2}} = 186.7 \text{ lbs}$$

$$\text{Back plate} = \frac{135 \times 13^2}{\frac{13^2 + 9^2}{2}} = 182.5 \text{ lbs}$$

$$\text{Front plate} = \frac{185 \times 18.5^2}{\frac{16^2 + 19^2}{2}} = 181.6 \text{ lbs}$$

$$\text{Main stays} = \frac{10000 \times 6.099}{16 \times 19} = 181 \text{ lbs} \quad 1.9" = 21"$$

$$\text{Screw Stays} = \frac{9000 \times 2.03}{9 \times 10.5} = 183 \text{ lbs}$$

$$\text{Girders} = \frac{9900 \times 144 \times 1.5}{(37.4 - 9) \times 10 \times 37.4} = 187.8 \text{ lbs}$$

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