

Mult<sup>l</sup> Steel Donkey Boiler N<sup>o</sup> 254 by Rankine  
 Blackmore for Russell 168 N<sup>o</sup> 54 Vessel

100 lbs working pressure.

$$\text{plate } \% \frac{4.25 - 1}{4.25} \times 100 = 76.4$$

$$\text{Rivet } \% \frac{3 \times 7854 \times 85}{4.25 \times 593} = 79.$$

$$\text{Shell } \frac{79}{24} \cdot \frac{19.5 \times 764 (95-2)}{120} = 100 \text{ lbs.}$$

$$\text{Furnace } \frac{1045200 \times .5^2}{69 \times 36} = 108 \text{ lbs}$$

$$\text{Crown Cur } \frac{135 \times 9.5^2}{110} = 111 \text{ lbs.}$$

$$\text{" " Stays } \frac{1.5 \times 8000}{100} = 120 \text{ lbs.}$$

$$\text{" " Back } \frac{120 \times 8^2}{40.3} = 109 \text{ lbs.}$$

$$\text{" " Stays } \frac{1.01 \times 8000}{70} = 116 \text{ lbs.}$$

$$\text{" " Stays } \frac{120 \times 4.5^2}{64} = 105 \text{ lbs}$$

$$\text{Girders } \frac{9900 \times 4^2 \times 1.25}{(25.84-8) 125 \times 25.84} = 105 \text{ lbs.}$$

$$\text{Rivet top } \frac{145 \times 14^2}{339} = 101 \text{ lbs.}$$

$$\text{" Stays } \frac{3.43 \times 10000}{19.25 \times 14.5} = 102 \text{ lbs.}$$

$$\text{Front tube } \frac{140 \times 11^2}{132} = 101 \text{ lbs.}$$

$$\text{Back } \frac{140 \times 10^2}{10.4^2} = 121 \text{ lbs.}$$

$$\text{Boiler Back } \frac{135 \times 10^2}{91} = 148 \text{ lbs.}$$

$$\text{" Stays } \frac{1.49 \times 9000}{14 \times 10.25} = 111 \text{ lbs.}$$

W. L. R.  
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