

14746 Iron Greenock Repat 6805

S. S. Gibernian

Size and Description of Boiler

One, Round, Horizontal, 9' 9" dia x 8' 8" long with two furnaces fired from aft. Working pressure 65 lbs

Shell plating  $\frac{1}{16}$ " (Parkhead best) There are 4 plates in the circumference and 3 widths in the length. Circumferential joints lapped 3" single riveted, holes punched for 1" rivets x  $2\frac{1}{2}$ " pitch. Longitudinal joints lapped 5" double riveted holes punched for 1" rivets x  $2\frac{1}{8}$ " pitch. End plating flanged, single riveted, holes punched for 1" rivets x  $2\frac{1}{2}$ " pitch.

Manholes have rings fitted around them.

$$\text{Formulae } \frac{51.526 \times 1.5 \times 61.9}{115.5 \times 6.5} = \frac{63.7 \text{ lbs}}{65 \text{ lbs load on safety valves}}$$

Combustion Chamber plating  $\frac{1}{16}$ " (Larnley) The top is supported by screws passing through 74 Bridge Bearers 1 5/8" dia = .9940 sect. area x 9" x 7" pitch = 63" area = 4119 lbs per inch. Bearers are 4 1/2" deep x 3/4" thick. Screw stays 1 1/4" dia = 1.22" sect. area x 9" x 9" pitch = 81" area = 4288 lbs per inch.

$$\text{Formula for flat plates } \frac{100 \times 64}{81} = 79 \text{ lbs}$$

Furnaces plating  $\frac{1}{16}$ " (Larnley) they are 6' 0" long x 33" dia flanged at mouths and riveted to front plate with 3/4" rivets x 1 1/8" pitch - No anticollapsing rings fitted.

$$\text{Formula for Stues } \frac{89,600 \times .19}{6' 0" \times 33"} = 86 \text{ lbs}$$

Longitudinal Stays 2" dia = 3.14 sect. area .14" x 12" pitch = 168" area = 34 1/4 lbs

Tube plates  $\frac{1}{16}$ " protected by 3/4" tubes in each chamber 12 of which are stay tubes screwed & fitted with nuts. Some 3' 9" high x 2' 6" dia, plating  $\frac{1}{16}$ " (Larnley)

James Morrison  
Greenock. July 2<sup>nd</sup> 1845



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