

16666 Iron

Rec 14/7/91  
1896

Port

Glasgow

Details of Main Boilers of the Steam Ship

"Nemesis" 2207

tons

Diameter 13' 6"

Length 16' 10"

Thickness of shell plates 1 1/16"

Description of riveting of longitudinal joints *double riveted* of circumferential joints *double riveted*

Pitch of rivets ditto 4" x 3" (heel) ditto 4" x 3" (heel)

Diameter of rivets ditto 1 1/8" ditto 1 1/8"

Lap of plating ditto 5 1/2" ditto 5"

Size of manholes in circular shell 12 1/2" x 16 1/2" *Iron hole in Superheater has a flat*

How compensated for *No Compensation* *ring fitted 6" x 1 1/2"*

Number of furnaces in boiler *Six, Three in each end*

Diameter of furnaces 3' 3" Length of furnaces 6' 4"

Thickness of furnace plates 1 1/16"

Description of joint of furnaces *Fitted with double butt straps*

Whether strengthened with rings *No rings* Greatest length between rings

Thickness of combustion chamber plating 1 1/16"

Diameter of screw stays to ditto 1 1/4" pitch of stays 8" x 9"

End plates, thickness 1 1/2"

Diameter of longitudinal stays to end plates 2" pitch of ditto 20" x 13" & 16" x 16"

How stays are secured *By double nuts*

Diameter of tubes 3 1/2" pitch of tubes 4 1/2"

Thickness of tube plates 1/16"

Stayed by *Tubes Screwed & fitted with double nuts* pitch of stays 13 1/2" x 15 1/2"

Description of steam receiver *Vertical, Annular (Superheater) with single flue*

Diameter of ditto *about 9' 10"* height 8' 1/2"

Thickness of plating of ditto 1/16" ends 1/16"

Ends, how stayed *attached by angle iron to shell & end plate flanged to inside & rivetted to flue*

*Donkey Boiler 5' 6" dia. x 8' 1/2" high plating 1/16"*

Report (if any) on Hull of Vessel. Port Glasgow No.

James Morrison

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation



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$$\text{Formulae for Shell } \frac{57020 \times 1.45 \times 60}{160 \times 6.5} = 56.3 \text{ lbs}$$

x 5 1/2% rivets = 50 lbs  
60 lbs working pressure

$$\text{Formula for flat plate } \frac{100 \times 64}{42} = 88 \text{ lbs}$$

$$\text{Formula for Furnaces } \frac{89600 \times .25}{6.3' \times 39"} = 91 \text{ lbs}$$

$$\text{Longitudinal Stays } 2 \text{ dia. } 16" \times 16" \times 20" \times 16 = 4890 \text{ lbs}$$

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These Boilers were constructed in 1872. Since which time the Vessel has been laid up. It will be observed that according to the Formulae, the riveting is not equal to the Factor of 6.5. but 5.4 —

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