

17337 Iron
 Port Sunderland Nov 10th 1876
 Charles Cooper 479 tons

Details of Main Boilers of the Steam Ship

Diameter 14' 0" Length 10' 3"

Thickness of shell plates 5/8"

Description of riveting of longitudinal joints 3/4" 3/4" of circumferential joints 3/4" 3/4"

Pitch of rivets ditto 3 3/8 ditto 3 3/8

Diameter of rivets ditto 15/16 ditto 15/16

Lap of plating ditto 4 1/2 ditto 4 1/2

Size of manholes in circular shell 15 x 12

How compensated for Rings round holes 6 x 5/8

Number of furnaces in boiler 3

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

Thickness of furnace plates Crown 1/16 Bottom 1/2"

Description of joint of furnaces Single riveted Lap joint

Whether strengthened with rings No Greatest length between rings 2

Thickness of combustion chamber plating 1/2

Diameter of screw stays to ditto 1 1/4 over threads pitch of stays 10 x 10

End plates, thickness 5/8

Diameter of longitudinal stays to end plates 2" over threads pitch of ditto 15 x 20

How stays are secured Nuts inside & out

Diameter of tubes 3 1/2 outside pitch of tubes 4 3/4 x 4 3/4

Thickness of tube plates 1/16

Stayed by Stay tubes pitch of stays 9 1/2 x 14 1/2

Description of steam receiver Steam dome contracted at neck

Diameter of ditto 3' 4" outside length of ditto 5' 3"

Thickness of plating of ditto 3/8 ends 3/8

Ends, how stayed Spherical ends no stays

Shell $\frac{51520 \times 1 1/4 \times 6.54}{168 \times 6.5} = 34 \text{ lbs working pressure}$

Combustion Chamber $\frac{100 \times 8^2}{10 \times 10} = 64 \text{ lbs}$

Furnaces $\frac{89600 \times 1/16}{4.3 \times 39} = 60 \text{ lbs}$

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