

Details of Main Boilers of the Steam Ship

Port

Glasgow June 29th 1876
 "Hettin" R. 3/7/76 tons

Diameter

10' 9"

Length

8' 4"

Thickness of shell plates

$\frac{12}{16}$ "

Description of riveting of longitudinal joints

triple riveted

of circumferential joints

double riveted

Pitch of rivets

ditto

$3\frac{3}{4}$ "

ditto

$3\frac{1}{4}$ "

Diameter of rivets

ditto

1"

ditto

1"

Lap of plating

ditto

$6\frac{1}{2}$ "

ditto

$4\frac{3}{4}$ "

Size of manholes in circular shell

16" x 12"

How compensated for

by a. s. rings $3\frac{1}{2}$ " x 3" x $\frac{1}{2}$ "

Number of furnaces in boiler

2

Diameter of furnaces

3' 3"

Length of furnaces

5' 6"

Thickness of furnace plates

$\frac{7}{16}$ "

Description of joint of furnaces

lapped

Whether strengthened with rings

no

Greatest length between rings

Thickness of combustion chamber plating

$\frac{7}{16}$ " on top & $\frac{6}{16}$ " at back

Diameter of screw stays to ditto

1 1/8"

pitch of stays

$\frac{3}{4}$ " x $\frac{3}{4}$ "

End plates, thickness

$\frac{7}{16}$ "

Diameter of longitudinal stays to end plates

1 1/8"

pitch of ditto

13" x 13"

How stays are secured

to double angle iron 4" x 3" x $\frac{3}{8}$ " they are placed diagonally

Diameter of tubes

3"

pitch of tubes

4' 6"

Thickness of tube plates

$\frac{12}{16}$ " & $\frac{10}{16}$ "

pitch of stays

10

Description of steam receiver

Superheater 4' 0" high x 6' 3" dia

height

length of ditto

ends

ends

ends

ends

ends

ends

ends

ends

ends

ends

ends

ends

ends

ends

ends

ends

Ends, how stayed

Drum Boilers 5 ft. dia. x 8 ft. high plating $\frac{7}{16}$ " triple riveted

James Morrison

Engineer Surveyor to Lloyd's Register of Shipping.

P.T.O.

$$\text{Formula for Shell } \frac{51520 \times 1.5 \times 69\%}{127.5 \times 6.5} = 64 \text{ lbs}$$

$$\text{Formula for flat plates } \frac{100 \times 36}{52.5} = 69 \text{ lbs}$$

$$\text{Formula for Stues } \frac{89600 \times .25}{5.5' \times 39"} = 144 \text{ lbs}$$

$$\text{Longitudinal Stays } 1\frac{1}{8}'' \text{ dia } 13'' \times 13'' \text{ plate} = 3643 \text{ lbs per inch}$$

Me

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