

18562 Iron

Port

Sunderland

May 1877

Recd 8/6/77

Details of Main Boilers of the Steam Ship

M.P. & L. May 1877

40085 tons

Diameter

11' 6"

Length

9' 6"

Thickness of shell plates

 $\frac{7}{8}$ "

Description of riveting of longitudinal joints

double

of circumferential joints

single

Pitch of rivets

ditto

4 $\frac{3}{8}$ "

ditto

3 $\frac{1}{2}$ "

Diameter of rivets

ditto

1 $\frac{5}{16}$ "

ditto

1 $\frac{5}{16}$ "

Lap of plating

ditto

8"

ditto

4 $\frac{1}{2}$ "

Size of manholes in circular shell

16" x 12"

How compensated for

by a ring 6" broad x $\frac{7}{8}$ " thick.

Number of furnaces in boiler

2

Diameter of furnaces

3' 2"

Length of furnaces

6' 10"

Thickness of furnace plates

 $\frac{1}{2}$ "

Description of joint of furnaces

lapped and single riveted.

Whether strengthened with rings

none.

Greatest length between rings

Thickness of combustion chamber plating

 $\frac{1}{2}$ "

Diameter of screw stays to ditto

1 $\frac{3}{8}$ " over thread

pitch of stays

9' x 9'

End plates, thickness

 $\frac{3}{4}$ "

Diameter of longitudinal stays to end plates

2"

pitch of ditto

15" x 15"

How stays are secured

they are bolts extending through both ends.

Diameter of tubes

3" external.

pitch of tubes

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

Thickness of tube plates

 $\frac{7}{8}$ "

Stayed by

stay tubes

pitch of stays

12 $\frac{3}{4}$ " x 12 $\frac{3}{4}$ "

Description of steam receiver

dome.

Diameter of ditto

3' 6"

length of ditto

4' 6"

Thickness of plating of ditto

 $\frac{7}{16}$ "

ends

 $\frac{7}{8}$ "

Ends, how stayed

dished and 4 stays 1 $\frac{7}{8}$ " diameter.

$$\text{Shell} = \frac{51520 \times 1 \frac{3}{4} \times 70}{136 \times 6.5} = 71 \text{ lbs working pressure.}$$

$$\text{Furnaces} = \frac{89600 \times \frac{1}{2}^2}{6 \frac{5}{6} \times 38} = 86 \text{ " " "}$$



© 2019

William Allison.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation

IRON 472-0200