

18373 Iron

Rec 17/5/11
1877

Port

Sunderland

May

1877

of Main Boilers of the Steam Ship

"Ferndale" 604 tons

Diameter

13' 7 1/2"

Length

10' 2"

Thickness of shell plates

15 1/2
16 3/2

Description of riveting of longitudinal joints

treble

of circumferential joints

double

Pitch of rivets

ditto

5"

ditto

3 3/4"

Diameter of rivets

ditto

1 1/4"

ditto

1 1/8"

Lap of plating

ditto

12"

ditto

5 3/4"

Size of manholes in circular shell

16 x 12, (inside the dome)

How compensated for

by flange of dome 4 1/2 x 9/16

Number of furnaces in boiler

3

Diameter of furnaces

3' 1"

Length of furnaces

6' 9"

Thickness of furnace plates

1/2"

Description of joint of furnaces

double butt and single riveted

Whether strengthened with rings

none

Greatest length between rings

Thickness of combustion chamber plating

1/2"

Diameter of screw stays to ditto

1 5/16 over threads

pitch of stays

7 1/2 x 7 1/2"

End plates, thickness

3/4"

Diameter of longitudinal stays to end plates

1 7/8"

pitch of ditto

16 x 11 1/2"

How stays are secured

They are bolts extending through both ends.

Diameter of tubes

3 1/2 external

pitch of tubes

4 3/4 x 4 3/4"

Thickness of tube plates

3/4"

Stayed by

stay tubes

pitch of stays

14 1/4 x 9 1/2"

Description of steam receiver

dome with a contracted neck

Diameter of ditto

4' 0"

length of ditto

9' 0"

Thickness of plating of ditto

3/8"

ends

1/2"

Ends, how stayed

no stays. (the ends are dished 3' 6" radius)

$$\text{Shells} = \frac{51520 \times 18 \frac{1}{16} \times .75}{162 \times 6.5} = 71 \text{ lbs working pressure.}$$

$$\text{Furnaces} = \frac{89600 \times \frac{1}{2}^2}{6 \frac{3}{4} \times 37} = 89 \text{ " " "}$$



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