

17205 Iron

Port

Glasgow November 13th 1876
"Benarty" 1119 tons
Rev 16/11/75

Details of Main Boilers of the Steam Ship

Diameter 11' 0"

Length 13' 3"

Thickness of shell plates $\frac{12}{16}$ "

Description of riveting of longitudinal joints

Double riveted

of circumferential joints

Double

Pitch of rivets

ditto

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

ditto

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

Diameter of rivets

ditto

1

ditto

1"

Lap of plating

ditto

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

ditto

5 $\frac{1}{2}$ "

No. Size of manholes in circular shell

16" x 11 $\frac{1}{2}$ "

How compensated for

By flat ring

Number of furnaces in boiler

Four (two in each end)

Diameter of furnaces

3' 1"

Length of furnaces

5' 4 $\frac{1}{2}$ "

Thickness of furnace plates

 $\frac{9}{16}$ "

Description of joint of furnaces

Lapped & single riveted

Whether strengthened with rings

None

Greatest length between rings

—

Thickness of combustion chamber plating

 $\frac{9}{16}$ "

Diameter of screw stays to ditto

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

pitch of stays

9" x 9"

End plates, thickness

 $\frac{12}{16}$ "

Diameter of longitudinal stays to end plates

2"

pitch of ditto

14" x 1 $\frac{1}{2}$ "

How stays are secured

By double nuts

Diameter of tubes

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

pitch of tubes

4 $\frac{9}{8}$ "

Thickness of tube plates

 $\frac{12}{16}$ "

Stayed by

Tubes

pitch of stays

9" x 10 $\frac{1}{2}$ "

Description of steam

Superheater Annular (with single flue)

Diameter of ditto

8' 2 $\frac{1}{2}$ "

Diameter of ditto

height of ditto

5' 9"

Thickness of plating of ditto

 $\frac{10}{16}$ "

ends

 $\frac{10}{16}$ "

Ends, how stayed

attached to angle iron round shell & flue

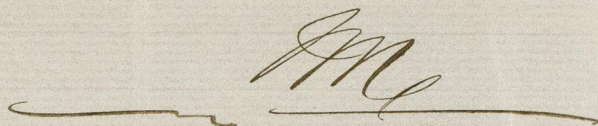
Donkey Boiler dia. 3' 11 $\frac{1}{4}$ " height 8' 8 $\frac{1}{2}$ " length 6' 5"
Shell plating $\frac{9}{16}$ "

17005 Iron
Formulae for Shell $\frac{57520 \times 1.5 \times 41\% \text{ rivets}}{131.5 \times 6.5} = 63 \text{ lbs}$

Formula for flat plates $\frac{100 \times 64}{81} = 79 \text{ lbs}$

Formula for Stues $\frac{89600 \times .25}{5.3 \times 34} = 114 \text{ lbs}$

Longitudinal Stays 2" dia. 14" x 1 1/2" pitch = 4804 lbs





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