

Port

Glasgow 19th May 1876

Details of Main Boilers of the Steam Ship

"Andalusia"

tons

Diameter

8' 3"

height 11' 6"

Length

10' 0"

Per 25/5/76

Thickness of shell plates

7/16"

Description of riveting of longitudinal joints

double riveted

of circumferential joints

single riveted

Pitch of rivets

ditto

3"

ditto

2"

Diameter of rivets

ditto

3/4"

ditto

3/4"

Lap of plating

ditto

4 1/4"

ditto

2 1/2"

Size of manholes in circular shell

12" x 16"

How compensated for

flat ring 2 3/4" broad x 1 1/6"

Number of furnaces in boiler

Two

Diameter of furnaces

3' 2"

Length of furnaces

4' 0"

Thickness of furnace plates

7/16"

Description of joint of furnaces

lap jointed single riveted

Whether strengthened with rings

Greatest length between rings

Thickness of combustion chamber plating

7/16"

Diameter of screw stays to ditto

1"

pitch of stays

9" x 9"

End plates, thickness

7/16"

Diameter of longitudinal stays to end plates

1 3/4"

pitch of ditto

2' 4" x 1' 3 1/2"

How stays are secured

to double angle iron 3" x 3" x 1/2"

Diameter of tubes

3 1/2"

pitch of tubes

4 1/2"

Thickness of tube plates

1/6"

Stayed by

tubes screwed & fitted with double nuts

pitch of stays

13 1/2" x 13 1/2"

Description of steam receiver

Dome

Diameter of ditto

2' 6" & 2' 0" flat sided

height

4' 0"

Thickness of plating of ditto

7/16" & 7/16" on top

ends

Ends, how stayed

by two stays 1 1/2" dia flat sides have plate stay fitted across

Cross stays to flat sides of shell are flat and round bar. the flat stays are 1 1/2" x 7/8" attached by palm to angles 3 1/2" x 3" x 1/2" & pitched 10' x 19 1/2". Six round stays 1 1/2" dia fitted with double nuts have been fitted

Donkey boiler 4' 0" dia x 4' 3" high plating 7/16" & 7/16" single riveted

P.T.O

James Morrison

Engineer Surveyor to Lloyd's Register of Shipping

Lloyd's Register Foundation

Formula $\frac{51520 \times 1 \times 68.6\% \text{ of } \text{inches}}{101 \times 6.5} = 46 \text{ lbs}$

Formula for flat plates $\frac{100 \times 49}{81} = 60 \text{ lbs}$

Formula for Gues $\frac{89.600 \times 49}{38" \times 4'} = 67 \text{ lbs}$

Longitudinal & Cross Stays = about 3800 lbs per in.

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