

1800 2 Iron

Port of Newcastle July 27th 1877
"Tanfield" 482 78⁷/₁₆ tons

Tails of Main Boilers of the Steam Ship

Diameter 10' 0"

Length 9' 6"

Thickness of shell plates $\frac{3}{4}$ "

Description of riveting of longitudinal joints

double lap 24 3/4

of circumferential joints

double lap 24 3/4

Pitch of rivets

ditto

14 1/8"

ditto

3"

Diameter of rivets

ditto

1"

ditto

1"

Lap of plating

ditto

8 1/2"

ditto

5"

Size of manholes in circular shell

12" x 16"

How compensated for

wrought iron Ring 3/4" x 6"

Number of furnaces in boiler

(2)

Diameter of furnaces

2' 10"

Length of furnaces

7' 1"

Thickness of furnace plates

1/2"

Description of joint of furnaces

single Butt strap 3/4" with 2 1/2" pitch.

Whether strengthened with rings

None

Greatest length between rings

—

Thickness of combustion chamber plating

1/16"

Diameter of screw stays to ditto

1 1/8"

pitch of stays

8 3/4" x 1 1/4" x 8 x 13" with 1/16" ends & washers

End plates, thickness

1/16"

Steam Space

9"

furnace jump

+ end shell at bottom

Diameter of longitudinal stays to end plates

2"

pitch of ditto

15" x 13 1/2" (mean 13 3/4")

How stays are secured

double nut & washers

6" dia

Diameter of tubes

3 1/2"

pitch of tubes

4 3/4" x 4 3/4"

Thickness of tube plates

1/16"

Stayed by

Tube Stays

pitch of stays

14 1/4" x 9 1/2"

Description of steam receiver

Dome with contracted neck

Diameter of ditto

3' 0"

length of ditto

5' 7"

Thickness of plating of ditto

1/2"

ends

1/16"

Ends, how stayed

3 Stay

2" dia

Working pressure

Cylindrical Shell

$$\frac{51320 \times 1.5 \times 75}{120 \times 6.5} = 73 \text{ lb}$$

Ditto

Furnace Flue

$$\frac{89600 \times .25}{6.8 \times 34} = 97 \text{ lb}$$

Ditto

Main Long Stay

$$\frac{13.5 \times 15.0 \times 75}{3.1} = 4899 \text{ lb}$$

Ditto

Combustion Chamber Stay

$$\frac{8 \times 12 \times 75}{.99} = 6000 \text{ lb}$$

Ditto

Flat Plates Main Stay

$$\frac{120 \times 121}{789} = 16 \text{ lb}$$

Ditto

Combustion Chamber Stay

$$\frac{120 \times 49}{64} = 91 \text{ lb}$$

George W. Mammul

Engineer Surveyor to Lloyd's Register of Shipping.

North Shields