

1913 Iron

Port Montrose

Dec 25/8/77
Aug 18/77

Details of Main Boilers of the Steam Ship

"Emile. Eloise"

232.76 tons

Diameter

9" 6" inside

Length

8" 8" outside

148.62

Thickness of shell plates

 $\frac{11}{16}$ inches

Description of riveting of longitudinal joints

Double lap

of circumferential joints

Single lap

Pitch of rivets

ditto

3"

ditto

2 $\frac{3}{4}$ "

Diameter of rivets

ditto

 $\frac{7}{8}$ "

ditto

 $\frac{7}{8}$ "

Lap of plating

ditto

5 $\frac{3}{4}$ "

ditto

3"

Size of manholes in circular shell

12 $\frac{1}{2}$ " x 16"

How compensated for

by flat ring 5" x $\frac{5}{8}$ "

Number of furnaces in boiler

Two

Diameter of furnaces

34" inches inside

Length of furnaces

Thickness of furnace plates

 $\frac{7}{16}$ "

Description of joint of furnaces

Single riveted

Whether strengthened with rings

None

Greatest length between rings

Thickness of combustion chamber plating

 $\frac{1}{2}$ " top $\frac{7}{16}$ "

Diameter of screw stays to ditto

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

pitch of stays

7 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ "

End plates, thickness

 $\frac{5}{8}$ inches

Diameter of longitudinal stays to end plates

2 inches

pitch of ditto

11 $\frac{1}{2}$ " x 17"

How stays are secured

Through end plates nuts & washers both sides of plates

Diameter of tubes

3" External dia

pitch of tubes

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

Thickness of tube plates

 $\frac{5}{8}$ inches

Stayed by

Tube stays & nuts

pitch of stays

13 $\frac{1}{8}$ " x 13 $\frac{1}{8}$ "

Description of steam receiver

Vertical Domb

Diameter of ditto

2" 4"

length of ditto

4" 0"

Thickness of plating of ditto

 $\frac{3}{8}$ inches

ends

 $\frac{7}{16}$ "

Ends, how stayed

by two bolt stays through shell of boiler and top of Domb with nuts and washers both sides of plates

Working Pressure of shell

$$\frac{515 \cdot 20 \times 71 \times 1.74}{114 \times 6.5} = 85.8 \text{ lb}$$

"

"

Furnaces

$$\frac{89600 \times 1.8}{34 \times 6} = 78. "$$

"

"

Screw stays

$$\frac{100 \times 8^2}{7.5 \times 7.5} = 114 " 3656 \text{ lb}$$

"

"

Bolt

$$\frac{100 \times 10^2}{11.5 \times 1.7} = 51 " 4046 "$$

Tested @ 130 lbs 27/6/77

John Sturrock
Engineer Surveyor to Lloyd's Register of Shipping.