

17770 Iron Re 12/2/77  
1877.

Port

Sunderland

Jan 7

1877.

## Details of Main Boilers of the Steam Ship

"Evelyn"

tons

Diameter

13' 9"

Length

10' 3"

Thickness of shell plates

 $\frac{15}{16}$ "

Description of riveting of longitudinal joints

double &amp; double butt

of circumferential joints

double.

Pitch of rivets

ditto

4 1/4"

ditto

3 1/4"

Diameter of rivets

ditto

1 1/8"

ditto

1 1/8"

Lap of plating

ditto

9" straps.

ditto

6"

Size of manholes in circular shell

end

16" x 12"

How compensated for

by a plate 2' 0" x 2' 0" x 1/8" thick.

Number of furnaces in boiler

3.

Diameter of furnaces

3' 4"

Length of furnaces

7' 3"

Thickness of furnace plates

1/2"

Description of joint of furnaces

lapped and double riveted.

Whether strengthened with rings

none

Greatest length between rings

Thickness of combustion chamber plating

3/16"

Diameter of screw stays to ditto

1 3/16" at bottom of threads

pitch of stays

8" x 7 1/2"

End plates, thickness

13/16"

Diameter of longitudinal stays to end plates

2 1/8"

pitch of ditto

16" x 16"

How stays are secured

they are bolts extending through both ends.

Diameter of tubes

3 3/4" external dia.

pitch of tubes

4 1/8" x 4 1/2"

Thickness of tube plates

11/16"

Stayed by

stay tubes

pitch of stays

13 1/8" x 9"

Description of steam receiver

Dome with a contracted neck.

Diameter of ditto

3' 0"

length of ditto

6' 6"

Thickness of plating of ditto

3/16"

ends

3/16"

ends, how stayed

no stays. ends are spherical.

$$\text{Shell} = \frac{51520 \times 1 \frac{1}{8} \times 73}{163 \times 6.5} = 66 \text{ lbs working pressure.}$$

$$\text{Furnaces} = \frac{89600 \times 1 \frac{1}{2}^2}{7 \frac{1}{4} \times 40} = 77 \text{ " " "}$$

William Allison,

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