

19400 ton
 Port *Sunderland* *October 1877*
Antonio 1213.99 tons

Details of Main Boilers of the Steam Ship

Diameter 12.5 Length 10.6

Thickness of shell plates $\frac{15}{16}$

Description of riveting of longitudinal joints *double & double butt* of circumferential joints *double*

Pitch of rivets ditto $4\frac{1}{2}$ ditto $3\frac{1}{2}$

Diameter of rivets ditto $1\frac{1}{8}$ ditto $1\frac{1}{8}$

Lap of plating ditto $10\frac{3}{8}$ straps ditto $5\frac{1}{2}$

Size of manholes in circular shell 16×13

How compensated for *by a ring 7' broad \times $\frac{7}{8}$ thick.*

Number of furnaces in boiler 3

Diameter of furnaces 3.0 Length of furnaces 7.6

Thickness of furnace plates $\frac{1}{2}$

Description of joint of furnaces *double butt straps, and single riveted.*

Whether strengthened with rings *None.* Greatest length between rings

Thickness of combustion chamber plating $\frac{7}{16}$

Diameter of screw stays to ditto $1\frac{1}{8}$ at bottom of thread pitch of stays $7\frac{3}{4} \times 7\frac{3}{4}$

End plates, thickness $\frac{4}{16}$ & washers.

Diameter of longitudinal stays to end plates 2 pitch of ditto 14×14

How stays are secured *they are bolts extending through both ends.*

Diameter of tubes $3\frac{3}{4}$ external pitch of tubes $5\frac{1}{4} \times 5$

Thickness of tube plates $\frac{5}{8}$

Stayed by *stay tubes* pitch of stays $10\frac{1}{2} \times 10$

Description of steam receiver *Horizontal dome*

Diameter of ditto 3.6 length of ditto 10.6

Thickness of plating of ditto $\frac{3}{8}$ ends $\frac{3}{8}$

Ends, how stayed *no stays, the ends are spherical.*

$$\text{Shells} = \frac{51520 \times 17\frac{1}{8} \times 729}{147 \times 6.5} = 74\frac{3}{4} \text{ lbs working pressure.}$$

$$\text{Furnaces} = \frac{89600 \times 1\frac{1}{2}^2}{7\frac{1}{2} \times 36} = 82 \text{ " " " "}$$

Longitudinal stays = 4900 lbs Screwed stays 4166 lbs

Flat surface 74 lbs Flat surface 81 " working pressure

William Allison.

Engineer Surveyor to Lloyd's Register of Shipping.

Foundation

IRON474-0173

BPM

Sunderland No. 1000 on Hull of Vessel. Report (if any) on