

Port

17623 Iron
 Liverpool 6th Jan 1877
 Sicily 1083.79 tons

Details of Main Boilers of the Steam Ship

Diameter 13' 3"

Length 10' 6"

Thickness of shell plates 1"

Description of riveting of longitudinal joints *double butt straps* of circumferential joints *Lap joint double riveted*Pitch of rivets ditto $3\frac{3}{4} \times 3\frac{1}{8}$ " ditto $3\frac{1}{8} \times 2\frac{1}{2}$ "

Diameter of rivets ditto 1" ditto 1"

Breadth of butt strap ditto 12" ditto $5\frac{1}{2}$ "
Lap of plating

No. Size of manholes in circular shell $16\frac{1}{2} \times 12\frac{1}{2}$ " Through steam chest endHow compensated for *plate ring*Number of furnaces in boiler *Three*

Diameter of furnaces 3' 3" Length of furnaces 6' 10"

Thickness of furnace plates $\frac{8}{16}$ "Description of joint of furnaces *Lap joints riveted under furnace bars*Port Whether strengthened with rings *Yes* Greatest length between rings 3' 8"Thickness of combustion chamber plating $\frac{8}{16}$ "Diameter of screw stays to ditto $1\frac{3}{4}$ " pitch of stays 9" x 9"End plates, thickness $\frac{10}{16}$ "Diameter of longitudinal stays to end plates $2\frac{1}{4}$ " pitch of ditto $16\frac{1}{2} \times 18\frac{1}{2}$ "How stays are secured *double nuts and washers*Diameter of tubes $3\frac{1}{2}$ " O.D. pitch of tubes $4\frac{3}{4} \times 4\frac{3}{4}$ "Thickness of tube plates $\frac{3}{4}$ "Stayed by *Tube stays* pitch of stays $14\frac{1}{2} \times 14\frac{1}{4}$ "Description of steam receiver *Horizontal egg ended, projects into uptake*

Diameter of ditto 4' 0" length of ditto 13' 6"

Thickness of plating of ditto $\frac{9}{16}$ " ends $\frac{9}{16}$ "Ends, how stayed *egg ended*

*Malleable iron branches from steam chests to
 boilers. 21" x 18" $\frac{3}{4}$ " thick. 2 gusset plates at bottom
 of back end of boiler between furnaces.*

S.S. Sicily.

17623 Iron

Boiler scantling.

Shell plating. $\frac{51,520 \times 2 \times .73}{159 \times 6.5} \} = 72 \text{ lbs.}$

Furnace plating $\frac{89,600 \times .25}{6.833 \times 39} \} = 98 \text{ lbs.}$

Strength of plates
in joints as comp^d
with solid plating $\left\{ \frac{(3.75 - 1) \times 100}{3.75} \right\} = 73\%$

Strength of rivets as
comp^d with solid plating $\left\{ \frac{(.7854 \times 2) \times 100}{3.75 \times 1} \right\} = 42\%.$

Flat plates between
screwed stays. $\left\{ \frac{100 \times 64}{81} \right\} = 79 \text{ lbs.}$

Steam chest. $\frac{51,520 \times 1.125 \times 60\%}{48 \times 6.5} \} = 111 \text{ lbs.}$

G.H.

The screwed stays of combustion chamber are fitted
with nuts,



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