

Port

17316 Iron
 Sunderland Dec 27 1876
 "Whickham" 1124.07 tons

Details of Main Boilers of the Steam Ship

Diameter 12' 0" outside Length 10' 0"

Thickness of shell plates $\frac{3}{16}$

Description of riveting of longitudinal joints Double Zig Zag of circumferential joints Chain

Pitch of rivets ditto 4" ditto $\frac{3}{8}$

Diameter of rivets ditto 1" ditto 1"

Lap of plating ditto Double Butt straps 10" broad ditto $\frac{5}{16}$

Size of manholes in circular shell 15" x 12"

How compensated for Ring round holes 6" x $\frac{3}{4}$ "

Number of furnaces in boiler 3

Diameter of furnaces 3' 0" Length of furnaces 4' 0"

Thickness of furnace plates $\frac{7}{16}$

Description of joint of furnaces Single Butt straps Double chain

Whether strengthened with rings No Greatest length between rings

Thickness of combustion chamber plating $\frac{7}{16}$ Diameter of screw stays to ditto $1\frac{3}{8}$ " over thread pitch of stays 9" x 9"End plates, thickness $\frac{1}{4}$ "Diameter of longitudinal stays to end plates $2\frac{1}{8}$ " effective pitch of ditto 10" x $13\frac{1}{4}$ "

How stays are secured Nuts inside & out

Diameter of tubes $3\frac{3}{8}$ " outside pitch of tubes $4\frac{3}{4}$ " x $4\frac{3}{4}$ "Thickness of tube plates $\frac{1}{16}$ "

Stayed by Stay tubes pitch of stays 14" x 9"

Description of steam receiver Horizontal Cylindrical

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

Thickness of plating of ditto $\frac{3}{8}$ ends $\frac{9}{16}$

Stays, how stayed 3 stays in previous $1\frac{1}{4}$ " dia effective. Double
 riveted longitudinally. Single riveted in the circumference

Shell $\frac{57520 \times 1\frac{1}{8} \times \frac{1}{8}}{144 \times 6.8} = 67 \text{ lbs Working Pressure}$
 Stays in shell of boiler drilled in their place
 Furnaces $\frac{89600 \times \frac{7}{16}^2}{9 \times 36} = 68 \text{ lbs Working Pressure}$

Combustion Chamber $\frac{100 \times \frac{1}{2}^2}{9 \times 6} = 60 \text{ lbs}$ 2019

James I. B. Amis

Engineer Surveyor to Lloyd's Register of Shipping.