

17157 Iron

Port Sunderland Oct 4th 1876
"Osian" 1211.37 tons
Rec 16/10/76

Details of Main Boilers of the Steam Ship

Diameter 12' 5" Length 10' 6"

Thickness of shell plates 7/8

Description of riveting of longitudinal joints Double zig zag of circumferential joints zig zag

Pitch of rivets ditto 3 3/4 ditto 3 3/8

Diameter of rivets ditto 1 1/16 ditto 1 1/16

Lap of plating ditto 6 1/4 ditto 5 1/8

Size of manholes in circular shell 15' x 12"

How compensated for Plak 31 x 28 x 1/8"



Number of furnaces in boiler 3

Diameter of furnaces 2' 11" outside Length of furnaces 8' 0"

Thickness of furnace plates 1/2"

Description of joint of furnaces Butt. Double straps

Whether strengthened with rings No Greatest length between rings 2

Thickness of combustion chamber plating 1/16

Diameter of screw stays to ditto 1 3/16 effective pitch of stays 8' x 8 1/8"

End plates, thickness 3/4"

Diameter of longitudinal stays to end plates 2" effective pitch of ditto 15' x 12"

How stays are secured Nuts inside and out

Diameter of tubes 3 1/2 pitch of tubes 14 3/4 x 14 3/4

Thickness of tube plates 5/8"

Stayed by Solid Stays 2" dia pitch of stays 14 1/4 x 9 1/2

Description of steam receiver Horizontal. Flat ended

Diameter of ditto 3' 6" inside length of ditto 7' 0"

Thickness of plating of ditto 3/8 ends 1/16

Ends, how stayed 6 Stays in receiver 1 1/2 effective diameter

Longitudinal seams of receiver double riveted. Nuts 3/4 Pitch 3"

Shell $\frac{51520 \times 1 3/4 \times 1/16}{149 \times 6.5} = 66 \text{ lbs working pressure}$

Furnaces $\frac{89600 \times 5^2}{8 \times 30} = 93 \text{ lbs}$

Combustion Chamber Plates $\frac{100 \times 1/2}{8 \times 8 1/2} = 1/5 \text{ lbs}$

R James R. Orr

Engineer Surveyor to Lloyd's Register of Shipping.

