

18369 *Iron*Port *Sunderland**Rec 10/5/77*
*May 1897.**"Elsie"*

759.6 tons

Details of Main Boilers of the Steam Ship

Diameter *11' 3"* Length *10' 2"*Thickness of shell plates *3/4"*Description of riveting of longitudinal joints *treble* of circumferential joints *double*Pitch of rivets ditto *4 3/16"* ditto *3 3/8"*Diameter of rivets ditto *1"* ditto *1"*Lap of plating ditto *6 1/2"* ditto *5 1/4"*Size of manholes in circular shell *16" x 11 1/2"*How compensated for *by a ring 6" broad x 1" thick.*Number of furnaces in boiler *2.*Diameter of furnaces *2' 10 1/2"* Length of furnaces *6' 10"*Thickness of furnace plates *1/2"*Description of joint of furnaces *double butt and single riveted.*Whether strengthened with rings *none.* Greatest length between ringsThickness of combustion chamber plating *1/2"*Diameter of screw stays to ditto *1 1/2" over the threads* pitch of stays *9" x 8"*End plates, thickness *5/8"**Size of*
Diameter of longitudinal stays to end plates *1 1/8" square.* pitch of ditto *16 1/2" x 14 1/2"*How stays are secured *to double angle irons 5 1/2" x 3 1/2" x 3/8"*Diameter of tubes *3 1/2" external dia.* pitch of tubes *5" x 4 3/4"*Thickness of tube plates *3/4"*Stayed by *stay tubes.* pitch of stays *15" x 9 1/2"*Description of steam receiver *dome with a contracted neck.*Diameter of ditto *3' 6"* length of ditto *7' 10"*Thickness of plating of ditto *7/16"* ends *5"*Ends, how stayed *by 4 stays 1 1/2" square.*

$$\text{Shell} = \frac{51520 \times 1 1/2 \times 75}{133 1/2 \times 6.5} = 66 \text{ lbs working pressure (holes drilled \& c)}$$

$$\text{Furnaces} = \frac{89600 \times 1/2^2}{6 3/8 \times 34 1/2} = 95 \text{ lbs } \& \text{ c}$$

William Allison.

Engineer Surveyor to Lloyd's Register of Shipping.

Foundation