

17919 En

Port

Sunderland

1876  
17919 tons

## Details of Main Boilers of the Steam Ship

"Daybreak"

Diameter 11' 9" Length 9' 9"

Thickness of shell plates  $\frac{1}{8}$ "

Description of riveting of longitudinal joints double &amp; double butt, of circumferential joints double,

Pitch of rivets ditto  $4\frac{1}{2}$ " ditto  $3\frac{1}{8}$ "Diameter of rivets ditto  $1\frac{1}{8}$ " ditto  $1\frac{1}{8}$ "Lap of plating ditto  $8\frac{3}{4}$ " ditto  $5\frac{1}{2}$ "Size of manholes in circular shell in end  $16 \times 12$ How compensated for by a rectangular plate  $2' 0 \times 2' 0 \times \frac{1}{8}$ 

Number of furnaces in boiler 2

Diameter of furnaces  $3' 3$ " Length of furnaces  $6' 9$ "Thickness of furnace plates  $\frac{1}{2}$ "

Description of joint of furnaces lapped and double riveted.

Whether strengthened with rings none. Greatest length between rings n

Thickness of combustion chamber plating  $\frac{1}{2}$ "Diameter of screw stays to ditto  $1\frac{5}{16}$  over threads pitch of stays  $7 \times 7\frac{3}{4}$ End plates, thickness  $\frac{3}{4}$ "Diameter of longitudinal stays to end plates 2" pitch of ditto  $15 \times 14$ 

How stays are secured they are bolts with nuts on each side of end plates.

Diameter of tubes  $3\frac{1}{4}$ " pitch of tubes  $4\frac{1}{2} \times 4\frac{1}{2}$ Thickness of tube plates  $\frac{1}{16}$ "Stayed by stay tubes pitch of stays  $9 \times 13\frac{1}{2}$ 

Description of steam receiver dome with contracted neck.

Diameter of ditto  $3' 0$ " length of ditto  $5' 6$ "Thickness of plating of ditto  $\frac{3}{16}$ " ends  $\frac{1}{2}$ "

Ends, how stayed none (the end is spherical)

$$\text{Shell} = \frac{51520 \times 1\frac{3}{4} \times 7.5}{139\frac{1}{4} \times 6.5} = 74 \text{ lbs working pressure}$$

$$\text{Furnaces} = \frac{89600 \times 1\frac{1}{2}}{39 \times 6\frac{3}{4}} = 85 \text{ " " "}$$