

Mfr. E. M. H. 46⁰⁰ No 61

17571 Iron

Port *Sunderland* Dept. *18th 6.*
"Kaifur" *See 4/1/99*
 803.48 tons

Details of Main Boilers of the Steam Ship

Diameter *13' 9"* Length *10' 3"*

Thickness of shell plates *$\frac{15}{16}$ "*

Description of riveting of longitudinal joints *double x double butt* of circumferential joints *double.*

Pitch of rivets ditto *$4\frac{1}{4}$ "* ditto *$3\frac{1}{4}$ "*

Diameter of rivets ditto *$1\frac{1}{8}$ "* ditto *$1\frac{1}{8}$ "*

Lap of plating ditto *9"* ditto *6"*

No. Size of manholes *in end* *16" x 12"*

How compensated for *by a plate 2' 0" x 2' 0" x $\frac{1}{8}$ "*

Number of furnaces in boiler *3,*

Diameter of furnaces *3' 4"* Length of furnaces *7' 3"*

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

Thickness of combustion chamber plating *$\frac{7}{16}$ "*

Diameter of screw stays to ditto *$1\frac{3}{16}$ " at bottom of thread* pitch of stays *$8" \times 7\frac{1}{2}$ "*

End plates, thickness *$\frac{13}{16}$ "*

Diameter of longitudinal stays to end plates *$2\frac{1}{8}$ "* pitch of ditto *$16" \times 16"$*

How stays are secured *they are bolts extending through both ends.*

Diameter of tubes *$3\frac{1}{4}$ " external diameter* pitch of tubes *$4\frac{3}{8}" \times 4\frac{1}{2}"$*

Thickness of tube plates *$\frac{1}{16}$ "*

Stayed by *stay tubes.* pitch of stays *$13\frac{1}{2}" \times 9"$*

Description of steam receiver *Dome with a contracted neck.*

Diameter of ditto *3' 0"* length of ditto *6' 6"*

Thickness of plating of ditto *$\frac{7}{16}$ "* ends *$\frac{7}{16}$ "*

Ends, how stayed *No stays the ends is spherical.*

$$\text{Shells} = \frac{51520 \times 1\frac{1}{8} \times 73}{163 \times 6.5} = 66 \text{ lbs working pressure.}$$

$$\text{Furnaces} = \frac{89600 \times \frac{1}{2}^2}{40 \times 7\frac{1}{4}} = 77 \text{ " " "}$$