

18081 *Im**Rec 26/3/77*Port *of North Shields* *14th March 1877*

Details of Main Boilers of the Steam Ship

*"Mercury"**555*

tons

Diameter

10' 7"

Length

9' 10"

Thickness of shell plates

 *$\frac{31}{32}$ inch*Description of riveting of longitudinal joints *Zip Zag double rivetted* of circumferential joints *double rivetted Zip Zag*
Butt Straps

Pitch of rivets

ditto

 $3\frac{1}{2}$ "

ditto

 $3\frac{1}{2}$ "

Diameter of rivets

ditto

1"

ditto

1"

Lap of plating

ditto

 $10\frac{1}{2}$ "

ditto

 $4\frac{3}{4}$ "

Size of manholes in circular shell

 10×14 " below dome

How compensated for

by angle iron & dome flange

N

rnaces in boiler

2

Length of

 $3' 0"$

Length of furnaces

 $6' 9"$

Furnace plates

 $\frac{1}{2}$ " top, $\frac{9}{16}$ " bottom,

Point of furnaces

single rivetted lap $\frac{3}{4}$ rivets 2" pitch

Furnaces strengthened with rings

None

Greatest length between rings

Combustion chamber plating

 $\frac{1}{2}$ "

Stays to ditto

 $1\frac{1}{4}$ "

pitch of stays

 $8\frac{1}{8} \times 8"$

Stays

 $1\frac{3}{16}"$

Stays to end plates

 $2\frac{1}{8}"$

pitch of ditto

 $16 \times 14"$ *double nuts & outside washer* *$3\frac{1}{4}"$*

pitch of tubes

 $4\frac{1}{2} \times 4\frac{1}{2}"$

Tubes

 $\frac{3}{4}"$

pitch of stays

 $13\frac{1}{2} \times 13\frac{1}{2}"$

Steam

Receiver

Dome

Diameter of ditto

 $2' 0"$

length of ditto

 $4' - 10"$

Thickness of plating of ditto

 $\frac{9}{16}"$

ends

 $\frac{11}{16}"$

Ends, how stayed

*None**Working pressure Cylindrical Shell*

$$\frac{57520 \times 1.92 \times 11}{124 \times 6.5} = 84.2 \text{ lbs.}$$

*Ditto**fore & aft stays steam space*

$$\frac{16 \times 14 \times 80}{3.5} = 5720 \text{ lbs.}$$

*Do**furnace flue*

$$\frac{84600 \times .25}{6.75 \times 36} = 92.3 \text{ lbs.}$$

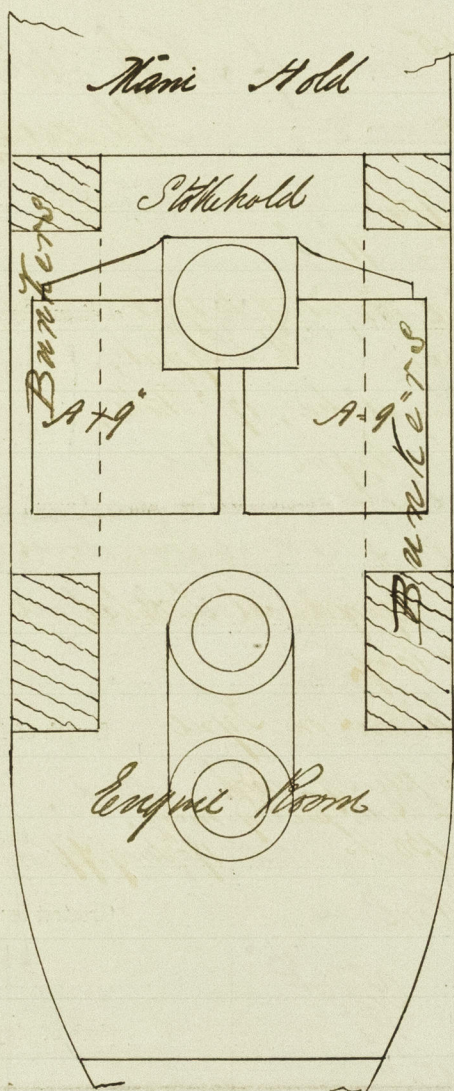
*Do**flat plates main stays*

$$\frac{120 \times 169}{256} = 79.2 \text{ lbs.}$$

*Do**flat plates combustion chamber,*

$$\frac{120 \times 64}{90} = 85.3 \text{ lbs.}$$

Arrangement of
"Bunkers"
Smallest space between
Bunkers & Boilers at
top of Boiler where
marked $A = 9"$



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