

# REPORT ON MACHINERY.

No. in Reg. Book. *5152*

No. in Survey held at *Hull and Stockton*

Date, first Survey *13th April 1882* Last Survey *11 June 1882*

on the *iron steam ship Mosser*

Tons *1323*

Master *Longley* Built at *Stockton* When built *1882*

Engines made at *Hull* By whom made *C. D. Holmes & Co.* when made *1882*

Boilers made at *Hull* By whom made *d.* when made *1882*

Registered Horse Power *350* Owners *Shaw Busby & Co* Port belonging to *London*

## ENGINES, &c.—

Description of Engines *Vertical, inverted, Compound surface condensing*

Diameter of Cylinders *21 40' + 72'* Length of Stroke *48'* No. of Rev. per minute *60* Point of Cut off, High Pressure *.62* Low Pressure *.50*

Diameter of Screw shaft *13'* Diameter of Tunnel shaft *12 1/4'* Diameter of Crank shaft journals *13'* Diameter of Crank pin *13'* size of Crank web *15' x 9 1/2'*

Diameter of screw *17.0'* Pitch of screw *19.0'* No. of blades *4* state whether moveable *yes* total surface *65 sq. ft.*

No. of Feed pumps *2* diameter of ditto *4 1/2'* Stroke *28'* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* diameter of ditto *6'* Stroke *28'* Can one be overhauled while the other is at work *yes*

Where do they pump from *Forehold, main hold, cross bunker, engine room, after hold & after well*

No. of Donkey Engines *One of 9' Cylinder* Size of Pumps *5 1/2' dia. x 8' stroke* Where do they pump from *Sea, Hotwell, Tanks and*

*Compartments & deliver to Condenser deck, overboard & main Boiler*

Are all the bilge suction pipes fitted with roses *Yes* Are the roses always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Some fitted*

No. of bilge injections *one* and sizes *6 inches* Are they connected to condenser, or to circulating pump *to circulating pump*

How are the pumps worked *by rocking lever from piston and crosshead*

Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both valves & Cocks*

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes* Are the discharge pipes above or below the deep water line *Main abt. level*

Are they each fitted with a discharge valve always accessible on the plating of the vessel *yes* Are the blow off cocks fitted with a spigot and brass covering plate *yes*

What pipes are carried through the bunkers *Main & donkey steam pipes* How are they protected *Iron casing round steam pipes*

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes in engine room*

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *Now*

Is the screw shaft tunnel watertight *Said to be* and fitted with a sluice door *Yes* worked from *Top platform in engine room*

## BOILERS, &c.—

Number of Boilers *Two* Description *Circular, multitubular ordinary marine type*

Working Pressure *75 lbs* Tested by hydraulic pressure to *150 lb* Date of test *4th May 1882*

Description of superheating apparatus or steam chest *Circular horizontal with flanges*

Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *no superheater*

No. of square feet of fire grate surface in each boiler *91.25* Description of safety valves *Spring loaded*

No. to each boiler *Two* area of each valve *25.96* Are they fitted with easing gear *Yes*

No. of safety valves to superheater *1* area of each valve *1* are they fitted with easing gear *1*

Smallest distance between boilers and bunkers or woodwork *6 inches*

Diameter of boilers *14' 0"* Length of boilers *16' 0"* description of riveting of shell long. seams *double butt with* circum. seams *double riv laps*

Thickness of shell plates *1 1/16"* diameter of rivet holes *long 1 1/16"* whether punched or drilled *drilled* pitch of rivets *3.9 in*

Lap of plating *11 strips 5 1/2' laps* per centage of strength of longitudinal joint *64* working pressure of shell by rules *80 lb*

Size of manholes in shell *18' x 14'* size of compensating rings *4 1/2' x 4 1/2' x 3 1/2'* Angle iron

No. of Furnaces in each boiler *3* outside diameter *42'* length, top *5' 11"* bottom *15' 10"*

Thickness of plates *3/16 inch* description of joint *welded* if rings are fitted *are at greatest length between rings*

Working pressure of furnace by the rules *90 lb* (conforming furnace 80 lb)

Combustion chamber plating, thickness, sides *3/16 inch* back *(no back)* top *7/8*

Pitch of stays to ditto sides *7 1/4' x 7 1/4' + 9' x 8 1/4'* back *1* top *12' x 11*

If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules sides *95 lb* top *83 lb*

Diameter of stays at smallest part sides *1 3/16' + 1 1/16'* top *1 1/16'* working pressure of ditto by rules top *86 lb* sides *109 lb*

End plates in steam space, thickness *1/16 inch* pitch of stays to ditto *18' x 20'* how stays are secured *double nuts & washers*

Working pressure by rules *89 lb* diameter of stays at smallest part *2 1/16' to 2 5/8'* working pressure by rules *90 lb*

Front plates at bottom, thickness *1 1/16'* Back plates, thickness *no back* greatest pitch of stays *1* working pressure by rules *1*

STK905-0156



Diameter of tubes  $3\frac{1}{2}$  inches pitch of tubes  $5\frac{1}{2}$  thickness of tube plates, front  $3\frac{1}{4}$  with dog stays back  $1\frac{1}{16}$   
How stayed Stay tubes as per drawing width of water spaces  $1\frac{1}{2}$  &  $1\frac{3}{8}$   
Diameter of Superheater or Steam chest  $3\frac{1}{2}$  length  $7\frac{1}{2}$   
Thickness of plates (shell)  $\frac{1}{2}$  inch description of longitudinal joint double riveted lap diameter of rivet holes  $1\frac{1}{16}$  pitch of rivets  $3\frac{1}{4}$   
Working pressure of shell by rules  $120\frac{1}{2}$  Diameter of flue  $\frac{1}{2}$  thickness of plates  $\frac{1}{2}$   
If stiffened with rings  $\frac{1}{2}$  distance between rings  $\frac{1}{2}$  Working pressure by rules  $\frac{1}{2}$   
End plates of superheater or steam chest; thickness  $\frac{7}{8}$  How stayed  $4\frac{1}{2}$  stays with  $2\frac{1}{2}$  double nuts & 7 washers  
Superheater or steam chest; how connected to boiler 2 necks  $7\frac{1}{16}$  thick

DONKEY BOILER—

Description Horizontal Multitubular Flat Sidel  
Made at Stockton By whom made H. Potter when made 1882. Tested 5.5.82.  
Where fixed On deck working pressure  $75\frac{1}{2}$  lbs Tested by hydraulic pressure to  $150\frac{1}{2}$  lbs No. of Certificate  $716$   
Fire grate area  $11\frac{1}{2}$  sq ft Description of safety valves Direct & lever No. of safety valves One of each description of each  $1\frac{1}{2}$  &  $1\frac{1}{4}$  in  
If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No  
Diameter of donkey boiler  $5\frac{1}{2}$  length  $4\frac{1}{2}$  description of riveting Double riveted lap  
thickness of shell plates  $9\frac{1}{16}$  diameter of rivet holes  $1\frac{3}{16}$  whether punched or drilled Punched  
pitch of rivets  $3\frac{3}{4}$  lap of plating  $4\frac{1}{4}$  per centage of strength of joint  $70.4$   
thickness of crown plates stayed by  $\frac{1}{2}$   
Diameter of furnace, top  $3\frac{1}{2}$  bottom  $\frac{1}{2}$  length of furnace  $5\frac{1}{2}$   
thickness of plates  $\frac{1}{2}$  description of joint Welded  
thickness of furnace crown plates stayed by  $\frac{1}{2}$   
Working pressure of shell by rules  $99\frac{1}{2}$  lbs working pressure of furnace by rules  $125.6$  lbs  
diameter of uptake  $\frac{1}{2}$  thickness of plates  $\frac{1}{2}$  thickness of water tubes  $\frac{1}{2}$

The foregoing is a correct description,

Charles Holmes & Co. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel fitted on board in accordance with the Society's rules and Boilers made to approved design, & of good workmanship, are now, in our opinion, in safe working condition; and the case is respectfully submitted for the favourable consideration of the Committee with a view to the modification of the entry in the Register Book.

This submitted that this vessel is eligible to have the modification of the entry recorded. 14/7/82

The amount of Entry Fee .. £ 3 :

Special .. £ 37 : 10 :

Certificate (if required) .. £ :

To be sent as per margin.

(Travelling Expenses, if any, £ )

received by me,

at Hull, per

letter 7.7.82.

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£32.10 - retained at Hull. The entry fee of £2.10 and £1.00 Special received at Mr. 86 per as its portion 10/7/82 - 1882

James Ramsay & John Stevenson  
Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Friday, 14th July, 18 82.