

# REPORT ON MACHINERY.

5994

Port of *Little*

THURS 3 OCT 1889

Received at London Office

N<sup>o</sup> 5994

Survey held at

*Little*

Date, first Survey *13 March*

Last Survey *28<sup>th</sup> Sept. 1889*

Book.

(Number of Visits *33*)

*389.78*

on the

*Steel & S. "Mabel"*

Tons *236.79*

By *J. Holmes*

Built at

*Little*

By whom built

*S. H. Morton & Co*

When built

*1889*

Made at

*Little*

By whom made

*S. H. Morton & Co*

When made

*Do*

Engines made at

*Do*

By whom made

*Do*

When made

*Do*

Registered Horse Power

*Do*

Owners

*A. Burnett & Sons*

Port belonging to

*London*

## GINES, &c.—

Kind of Engines

*Triple Expansion*

*(Triple Expansion)*

Diameter of Cylinders *14x22x36* Length of Stroke *24* No. of Rev. per minute \_\_\_\_\_ Point of Cut off, High Pressure *6* <sup>*12-6*</sup> Low Pressure *6*

Diameter of Screw shaft *7 1/2* Diam. of Tunnel shaft *6 1/2* Diam. of Crank shaft journals *7* Diam. of Crank pin *7* size of Crank webs *8 1/2 x 6 1/2*

Diameter of screw *8-6* Pitch of screw *12-6* No. of blades *four* state whether moveable *no* total surface *33 ft<sup>2</sup>*

No. of Feed pumps *two* diameter of ditto *9 1/2* Stroke *12* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *two* diameter of ditto *2 1/2* Stroke *12* Can one be overhauled while the other is at work *yes*

Where do they pump from *Bilges*

No. of Donkey Engines *one* Size of Pumps *6x4x9-2 off.* Where do they pump from *Sea, hotwell, boiler, &*

*all compartments.*

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 *yes*

No. of bilge injections *one* and sizes *3* Are they connected to condenser, or to circulating pump \_\_\_\_\_

How are the pumps worked *Power*

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

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 *above*

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*

How are the pipes carried through the bunkers *now* How are they protected \_\_\_\_\_

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

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 *while building*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Top platform*

## BOILERS, &c.—

Number of Boilers *one* Description *Cylindrical Multi.* Whether Steel or Iron *Steel (S)*

Working Pressure *160* Tested by hydraulic pressure to *320* Date of test *21/8/89 No 164*

Description of superheating apparatus or steam chest *None*

Can each boiler be worked separately  Can the superheater be shut off and the boiler worked separately

No. of square feet of fire grate surface in each boiler *42 ft<sup>2</sup>* Description of safety valves *Spring* No. to each boiler *two*

Area of each valve *7.07* Are they fitted with easing gear *yes* No. of safety valves to superheater  area of each valve

Are they fitted with easing gear  Smallest distance between boilers and bunkers or woodwork *11"* Diameter of boilers *11-10*

Length of boilers *10-1* description of riveting of shell long. seams *DBS, T.R.* circum. seams *L.D.R.* Thickness of shell plates *1/16*

Diameter of rivet holes *13/16* whether punched or drilled *D* pitch of rivets *7* Lap of plating *9*

Percentage of strength of longitudinal joint *83* working pressure of shell by rules *160* size of manholes in shell *16x12*

Size of compensating rings *McQuill's Patent* No. of Furnaces in each boiler *three*

Outside diameter *2-9* length, top *6-9* bottom *6-9* thickness of plates *7/16* description of joint *welded* if rings are fitted

Greatest length between rings \_\_\_\_\_ working pressure of furnace by the rules *212* combustion chamber plating, thickness, sides *5/8* back *5/8* top *5/8*

Pitch of stays to ditto, sides *93/16* back *73/4* top *73/4 x 71/2* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *200* Diameter of stays at smallest part *1 1/8* working pressure of ditto by rules *6400* <sup>*197 1/2*</sup> end plates in steam space, thickness *1*

Pitch of stays to ditto *15x13* how stays are secured *DRW* working pressure by rules *170* diameter of stays at smallest part *2 3/8* working pressure by rules *881* <sup>*18 1/2*</sup> Front plates at bottom, thickness *3/4* Back plates, thickness *3/4*

Greatest pitch of stays *See section* working pressure by rules  Diameter of tubes *3* pitch of tubes *4 1/4 x 4 1/8* thickness of tube plates, front *3/4* back *3/4* how stayed *stay like* pitch of stays *8 1/2 x 8 1/4* width of water spaces *5 1/2*

Diameter of Superheater or Steam chest  length  thickness of plates  description of longitudinal joint  diam. of rivet holes

Pitch of rivets  working pressure of shell by rules  diameter of flue  thickness of plates  If stiffened with rings

Distance between rings  working pressure by rules  end plates of superheater, or steam chest; thickness  how stayed

Superheater or steam chest; how connected to boiler

McQuill's Patent Description of furnaces

Lloyd's Register Foundation

LTH559-0036

**DONKEY BOILER**— Description *vertical diagonal uptake, 2 cross tubes*  
 Made at *Clark Chapman* by whom made *Gateshead* when made *18.5.89* where fixed *stokehold*  
 Working pressure *160* tested by hydraulic pressure to *320* No. of Certificate *2946* fire grate area *12.5 sq ft* description of valves *Spring*  
 No. of safety valves *One* area of each *5.3* if fitted with easing gear *yes* if steam from main boilers enter the donkey boiler *no*  
 diameter of donkey boiler *5-0* length *9-0* description of riveting *duplex riv. lap.*  
 Thickness of shell plates *7/32* diameter of rivet holes *7/8* whether punched or drilled *drilled* pitch of rivets *3 1/6* lap of plating *6 1/8*  
 per centage of strength of joint *77* thickness of crown plates *3/4* stayed by *5 stays 1 1/4 dia. uptake*  
 Diameter of furnace, top *3-5* bottom *4-3* length of furnace *4-0* thickness of plates *5/8* description of joint *single riv. lap*  
 Thickness of furnace crown plates *7/8* stayed by *as shell crown* working pressure of shell by rules *175*  
 Working pressure of furnace by rules *160* diameter of uptake *12"* thickness of plates *7/16* thickness of water tubes *7/16*

SPARE GEAR. State the articles supplied:— *As per Rule.*

The foregoing is a correct description,  
*Wm Hugh Moton & Co* Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The machinery of this vessel has been built under special survey, workmanship materials good.*  
*The approved photo tracing & forging report are sent herewith.*

*The main and donkey boilers have been seen under steam, & the safety valves adjusted to blow at 160 lbs per sq in.*

*W. Darby*

*The machinery of this vessel is now in good condition reliable, in my opinion, to be classed & marked in Reg. Book + L.M.C. 10-89*  
*It is submitted that this vessel is eligible to have + L.M.C. 9.89. recorded.*

The amount of Entry Fee .. £ 1 : : received by me,  
 Special .. £ 12 : :  
 Donkey Boiler Fee .. £ - : :  
 Certificate (if required) .. £ *gratis* : : 18/9  
 To be sent as per margin.  
 (Freighting Expenses, if any, £ *none*)

*W.D.*  
*3-10-89*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute  
 TUES 6 OCT 1889  
 + L.M.C. 9.89

