

REPORT ON MACHINERY.

No. 17705

Port of *Hull*

FRI. 20 MAR 1906

Received at London Office

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No. in Survey held at *Selby + Hull* Date, first Survey *Nov 2/05* Last Survey *20th Mar 1906*
 Reg. Book. *110544* on the *Steel S. K. Clifton* (Number of Visits *28*)
 Master *Selby* Built at *Selby* By whom built *Messrs Lockhart Sons* When built *1906*
 Engines made at *Hull* By whom made *Messrs Charles D. Holmes & Co* when made *1906*
 Boilers made at *Hull* By whom made *Charles D. Holmes & Co* when made *1906*
 Registered Horse Power *68.72* Owners *J. G. & F. Moss* Port belonging to *Grimby*
 Nom. Horse Power as per Section 28 *68.72* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines *Triple Expansion*No. of Cylinders *3* No. of Cranks *3*

Dia. of Cylinders *12 1/4" ~ 22" 35"* Length of Stroke *24"* Revs. per minute *110* Dia. of Screw shaft *7 1/2"* Material of screw shaft *Steel*
 as per rule *7 1/2"* as fitted *7 3/8"*

Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes* Is the after end of the liner made water tight in the propeller boss *Yes* If the liner is in more than one length are the joints burned *burned* If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *If two*

liners are fitted, is the shaft lapped or protected between the liners *plain* Length of stern bush *30 1/2"*
 Dia. of Thrust shaft *6 3/8"* as per rule *6 3/8"* as fitted *6 3/8"* Dia. of Crank shaft journals *6 7/8"* as per rule *6 7/8"* as fitted *7"* Dia. of Crank pin *7"* Size of Crank webs *13 3/4" x 4 1/2"* Dia. of thrust shaft under collars *7"* Dia. of screw *8" ~ 7 1/2"* Pitch of screw *11" ~ 0"* No. of blades *4* State whether moveable *No* Total surface *28 sq ft*

No. of Feed pumps *1* Diameter of ditto *2 1/8"* Stroke *24"* Can one be overhauled while the other is at work
 No. of Bilge pumps *1* Diameter of ditto *2 1/8"* Stroke *24"* Can one be overhauled while the other is at work
 No. of Donkey Engines *One* Sizes of Pumps *2 3/4" x 5"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Two 2"* In Holds, &c. *One 2" to each slush well, +*

injector suction from engine room bilge, slush wells, with discharge on deck
 No. of bilge injections *1* sizes *3"* Connected to condenser, or to circulating pump *pump* Is a separate donkey suction fitted in Engine room & size *Yes 2"*
 Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *0*
 Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *both*
 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*
 What pipes are carried through the bunkers *slush well, suction* How are they protected *wood casing*
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *Yes*
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *before launching* Is the screw shaft tunnel watertight *None*
 Is it fitted with a watertight door *worked from*

BOILERS, &c.—

(Letter for record *8*)Total Heating Surface of Boilers *1090 sq ft* Is forced draft fitted *No*No. and Description of Boilers *One cyl. Multi* Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs*Date of test *23. 2. 06* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *32.8 sq ft* No. and Description of safety valves to each boiler *Two Spring* Area of each valve *3.98 sq in* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *Yes*Smallest distance between boilers or uptakes and bunkers or woodwork *7"* Mean dia. of boilers *12' ~ 6'* Length *10' ~ 0'* Material of shell plates *Steel*

Thickness *1 1/2"* Range of tensile strength *29.32* Are they welded or flanged *Yes* Descrip. of riveting: cir. seams *L. D.* long. seams *O. B. S. J. R.*
 Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *7"* Lap of plates or width of butt straps *15"*
 Per centages of strength of longitudinal joint *86%* Working pressure of shell by rules *185 lbs* Size of manhole in shell *16" x 12"*
 Size of compensating ring *7" x 1 1/2"* No. and Description of Furnaces in each boiler *2. plain* Material *Steel* Outside diameter *43"*
 Length of plain part *5' ~ 10'* Thickness of plates *1 1/2"* Description of longitudinal joint *Welded* No. of strengthening rings *0*
 Working pressure of furnace by the rules *185 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *13/16"* Back *11/16"* Top *13/16"* Bottom *13/16"*
 Pitch of stays to ditto: Sides *9" x 10"* Back *9" x 8 1/4"* Top *9" x 8 1/2"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *219 lbs*
 Material of stays *Steel* Diameter at smallest part *1 3/4"* Area supported by each stay *117 sq in* Working pressure by rules *184 lbs* End plates in steam space: *Area* *Steel* Thickness *1 1/2"* Pitch of stays *16" x 18 3/4"* How are stays secured *screwed into both end plates* Working pressure by rules *186 lbs* Material of stays *Steel*
 Diameter at smallest part *6.33* Area supported by each stay *300 sq in* Working pressure by rules *211 lbs* Material of Front plates at bottom *Steel*
 Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *17 3/4"* Working pressure of plate by rules *180 lbs*
 Diameter of tubes *3 1/4"* Pitch of tubes *4 3/4" x 4 5/8"* Material of tube plates *Steel* Thickness: Front *29/32"* Back *7/8"* Mean pitch of stays *9 3/8"*
 Pitch across wide water spaces *16"* Working pressures by rules *180 lbs* Girders to Chamber tops: Material *Iron* Depth and thickness of girder at centre *9" x 1 3/4"* Length as per rule *2' 8"* Distance apart *9"* Number and pitch of Stays in each *3 ~ 8 1/2"*
 Working pressure by rules *193 lbs* Superheater or Steam chest; how connected to boiler *Can the superheater be shut off and the boiler worked separately*
 Diameter *Length* Thickness of shell plates *Material* Description of longitudinal joint *Diam. of rivet*
 holes *Pitch of rivets* Working pressure of shell by rules *Diameter of flue* Material of flue plates *Thickness*
 If stiffened with rings *Distance between rings* Working pressure by rules *End plates: Thickness* How stayed *Working pressure of end plates* Area of safety valves to superheater *Are they fitted with easing gear*

DONKEY BOILER—

No.

Description

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

No. of Certificate

Fire grate area

Description of safety valves

No. of safety valves

Area of each

Pressure to which they are adjusted

If fitted with easing gear

If steam from main boilers can

enter the donkey boiler

Dia. of donkey boiler

Length

Material of shell plates

Thickness

Range of tensile

strength

Descrip. of riveting long. seams

Dia. of rivet holes

Whether punched or drilled

Pitch of rivets

Lap of plating

Per centage of strength of joint

Rivets
Plates

Thickness of shell crown plates

Radius of do.

No. of Stays to do.

Dia. of stays.

Diameter of furnace Top

Bottom

Length of furnace

Thickness of furnace plates

Description of

joint

Thickness of furnace crown plates

Stayed by

Working pressure of shell by rules

Working pressure of furnace by rules

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

SPARE GEAR.

State the articles supplied:—

Two each top and bottom connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air, circulating, feed, and bilge pump valves, and a quantity of assorted bolts nuts etc.

The foregoing is a correct description,

Charles D. Holmes Manufacturer.

Dates
of Survey
while
buildingDuring progress of
work in shops—During erection on
board vessel—

Total No. of visits

1905—Nov. 2, 14, 22, 29 Dec. 6, 13, 20. 1906—Jan. 2, 9, 11, 15, 19, 22, 26, 30, 31. Feb. 7, 15, 21, 23. Mar. 5, 6.

Mar. 9, 12, 13, 15, 17, 20.

Is the approved plan of main boiler forwarded herewith

Yes

General Remarks

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

The machinery and boiler of this vessel have been inspected throughout construction in accordance with the Society's Rules. The material and workmanship are good. The boiler tested by hydraulic pressure, and with the engines placed on board and tested under steam, they are now in good order, a safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of *L.M.C. 3.06 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD L.M.C. 3.06.

30.3.06

30.3.06

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Committee's Minute

TUES. 3 APR 1906

Assigned

+ LMC 3.06

James Barclay
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
22.3.06



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Lloyd's Register
FoundationMACHINERY CERTIFICATE
WRITTEN