

REPORT ON MACHINERY.

Port of Hull

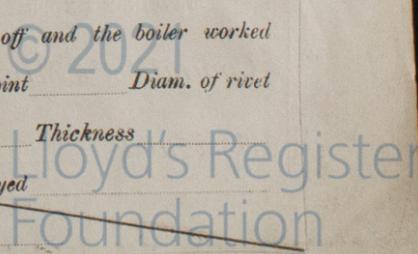
FRI. 20 MAR 1906

Received at London Office 10

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.S. Co. Clifton (Number of Visits 28)
 Master Built at Selby By whom built Messrs Lochrane Sons When built 1906
 Engines made at By whom made Messrs when made
 Boilers made at Hull By whom made Charles D. Holmes & Co when made 1906
 Registered Horse Power Owners J. G. & F. Moss Port belonging to Grimby
 Nom. Horse Power as per Section 28 68.74 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
 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 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 5) Total Heating Surface of Boilers 1090 sq ft Is forced draft fitted No
 No. and Description of Boilers One byl. Multi Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs
 Date of test 23. 2. 06 Can each boiler be worked separately 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 tons Are they welded or flanged Descrip. of riveting: cir. seams L. D. long. seams D. 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 rivets 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 crown 4 9/16" 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:
 Material Steel Thickness 1 3/32" 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
 Area 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 3 9/32" Material of Lower back plate Steel Thickness 15/16" 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 casing 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 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 J. Holmes Manufacturer.

Dates of Survey while building

During progress of work in shops -	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
	During erection on board vessel -	Mar. 9, 12, 13, 15, 17, 20					

Total No. of visits 28.

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*

J.S.
 30.3.06

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

The amount of Entry Fee,	£ 1 :	When applied for,
Special	£ 10 : 4 :	28/3/1906
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any) £ 8 : 2 :	31.3.06

Committee's Minute TUES. 3 APR 1906
 Assigned + LMC 3.06

Certificate (if required) to be sent to Hull
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

