

REPORT ON MACHINERY.

Port of Hull
 Received at London Office MUN. 27 JUL 1908
 No. in Survey held at Hull & Goole Date, first Survey Dec 11/07 Last Survey 23rd July 1908
 Reg. Book. 252 on the Steel S.S. Jay I (Number of Visits 47)
 Master Goole Built at Goole By whom built Goole S.B. & L. Co. Ld When built 1908
 Engines made at } Hull By whom made } Messrs Charles G. Ld when made 1908
 Boilers made at } Hull By whom made } Charles G. Ld when made 1908
 Registered Horse Power 77.77 Owners C. P. Hutchinson Port belonging to Hull
 Nom. Horse Power as per Section 28 77.77 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 19" - 21" - 35" Length of Stroke 24" Revs. per minute 104 Dia. of Screw shaft 7.25" Material of screw shaft Iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the shaft made water tight
 in the propeller boss Yes If the liner is in more than one length are the joints burned Not done 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 No liners Length of stern bush 37"
 Dia. of Tunnel shaft 6.49" Dia. of Crank shaft journals 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 9"-9" Pitch of Screw 11"-0" No. of Blades 4 State whether moveable No Total surface 30 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 12" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/4" Stroke 12" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps 6" x 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2 1/2" Two 3" In Holds, &c. One 2 1/2" p. tank, one 2 1/2" from fore hold,
Two 2 1/2" from main hold, one each 2 1/2" from aft tank, from tunnel well, from A.P.T.
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 3"
 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 None
 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 hold, 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
 Dates of examination of completion of fitting of Sea Connections 30.4.08 of Stern Tube 30.4.08 Screw shaft and Propeller 30.4.08
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.—(Letter for record 3) Manufacturers of Steel Phoenix A. G. fur Bergbau- und Hutten
 Total Heating Surface of Boilers 1373 sq ft Is Forced Draft fitted No No. and Description of Boilers One Cyl. Melt
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 28.4.08 No. of Certificate 1643
 Can each boiler be worked separately — Area of fire grate in each boiler 40 1/2 sq ft No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 4.9 sq ft Pressure to which they are adjusted 195 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8" Int. diam. of boilers 12'-6" Length 10'-3" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L.D.
 long. seams D.B.S.L.C. Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 16"
 Per centages of strength of longitudinal joint 90% Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring flange inwards No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 38 1/2"
 Length of plain part 90" Thickness of plates 64" Description of longitudinal joint Welded No. of strengthening rings 0
 Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 7/16" Back 5/8" Top 5/8" Bottom 7/16"
 Pitch of stays to ditto: Sides 8 1/2" x 7 3/4" Back 9" x 7 3/4" Top 8 1/2" x 7 3/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 196 lbs
 Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 93.375 sq in Working pressure by rules 205 lbs End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 15" x 17" How are stays secured D. N. Working pressure by rules 186 lbs Material of stays Steel
 Area at smallest part 5.16 sq in Area supported by each stay 255 sq in Working pressure by rules 210 lbs Material of Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 13 1/2" x 9" Working pressure of plate by rules 206 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 189 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8" x 13 1/2" Length as per rule 2'-8" Distance apart 8 1/2" Number and pitch of stays in each Three 7 3/4"
 Working pressure by rules 181 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 —

Is a Report also sent on the Hull of the ship?

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *100* Description *Vertical Donkey Boiler*

Made at *London* By whom made *F. J. Dalrymple* When made *1907-1908* Where fixed *On board*

Working pressure *150 lbs* tested by hydraulic pressure to *200 lbs* Date of test *25-7-08* No. of Certificate *25-7-08* Fire grate area *10 sq ft* Description *Vertical Donkey Boiler*

Valves *2* No. of Safety Valves *2* Area of each *10 sq in* Pressure to which they are adjusted *150 lbs* Date of adjustment *25-7-08*

If fitted with easing gear *No* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *18 in* Length *4 ft*

Material of shell plates *Iron* Thickness *1/2 in* Range of tensile strength *30,000 lbs* Descrip. of riveting long. seams *Hand riveted*

Dia. of rivet holes *1/4 in* Whether punched or drilled *Drilled* Pitch of rivets *2 in* Lap of plating *1 in* Per centage of strength of joint *85%*

Working pressure of shell by rules *150 lbs* Thickness of shell crown plates *1/2 in* Radius of do. *18 in* No. of stays to do. *2* Dia. of stays *1 in*

Diameter of furnace *18 in* Length of furnace *4 ft* Thickness of furnace plates *1/2 in* Description of joint *Hand riveted*

Working pressure of furnace by rules *150 lbs* Thickness of furnace crown plates *1/2 in* Stayed by *25-7-08*

Diameter of uptake *18 in* Thickness of uptake plates *1/2 in* Thickness of water tubes *1/2 in* Dates of survey *1907-1908*

SPARE GEAR. State the articles supplied:— *Two each top and bottom end connect rod bolts and nuts, two main bearing bolts and nuts, coupling bolts and nuts, one set each air, circulation feed, and bilge pump valves, and a quantity of assorted nuts etc.*

The foregoing is a correct description,

F. J. Dalrymple Manufacturer.

Dates of Survey while building

During progress of work in shops	1907: - Dec 11, 13, 16, 20, 30	1908: - Jan 6, 14, 21, 27, 31	Feb 4, 6, 10, 13, 19
During erection on board vessel	Mar 9, 17, 19, 25, 31	Apr 6, 8, 10, 14, 15, 21, 22, 28, 30	May 5, 7, 15, 29
Total No. of visits	47		

Dates of Examination of principal parts

Cylinders	15-4-08	Slides	15-4-08	Covers	15-4-08	Pistons	19-2-08	Rods	15-4-08
Connecting rods	15-4-08	Crank shaft	17-3-08	Thrust shaft	31-3-08	Tunnel shafts	31-3-08	Screw shaft	31-3-08
Propeller	30-4-08	Stern tube	22-4-08	Steam pipes tested	24-6-08	Engine and boiler seatings	5-5-08	Engines holding down bolts	27-6-08
Completion of pumping arrangements	23-7-08	Boilers fixed	27-6-08	Engines tried under steam	29-6-08	Main boiler safety valves adjusted	29-6-08	Thickness of adjusting washers	2/16" 13/32"
Material of Crank shaft	Iron	Identification Mark on Do.	20164TG	Material of Thrust shaft	Iron	Identification Mark on Do.	250	Material of Tunnel shafts	Iron
Identification Marks on Do.	252 B	Material of Screw shafts	Iron	Identification Marks on Do.	250	Material of Steam Pipes	Solid drawn Copper	Test pressure	400 lbs per sq inch

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines and boiler of vessel have been built under special survey in accordance with the Rules. The materials and workmanship are good. The boiler tested by hydraulic pressure, and with the secured on board and tested under steam, they are in good order, and safe working condition and respectively submitted as being eligible in my opinion to be classed with the notation of *L. No. 6. 7. 08* in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD *L.M.C. 7.08.*

J.B. 27.7.08

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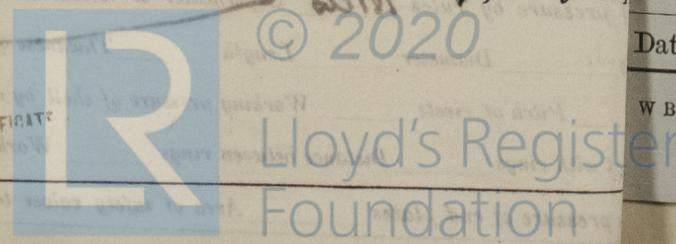
The amount of Entry Fee.

Special	£ 11.14	When applied for, 25-7-1908
Donkey Boiler Fee	£ . . .	When received, 29/8/08
Travelling Expenses (if any)	£ . . . 15.10	

James Barclay
Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Committee's Minute TUES. 28 JUL 1908

Assigned *+ L.M.C. 7.08*



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