

Lpt. 4.

REPORT ON MACHINERY.

No. 23649

Received at London Office

MAY 1911

Date of writing Report 10 When handed in at Local Office 4th May 10 Port of Hull
 No. in Survey held at Selby, Hull Date, First Survey Dec 20/10 Last Survey 28th Apr 1911
 Reg. Book. Supp. on the Steel S. K. Persimon (Number of Visits 36) Tons Gross 255 Net 107
 Master Selby Built at Selby By whom built Messrs. Buchanan Sons When built 1911
 Engines made at Hull By whom made Messrs. Charles D. Holmes & Co. Ltd when made 1911
 Boilers made at Hull By whom made Charles D. Holmes & Co. Ltd when made 1911
 Registered Horse Power 77 Owners W. J. Barrett Port belonging to Gumsby
 Nom. Horse Power as per Section 28 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 12 $\frac{1}{2}$ " - 22" - 35" Length of Stroke 24" Revs. per minute 115 Dia. of Screw shaft 7 $\frac{1}{2}$ " Material of Iron
 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 36"
 Dia. of plain shaft as per rule 6.6 Dia. of Crank shaft journals as per rule 6.93 Dia. of Crank pin 7 $\frac{1}{2}$ " Size of Crank webs 14" x 4 $\frac{1}{2}$ " Dia. of thrust shaft under
 collars 7 $\frac{1}{2}$ " Dia. of screw 8" - 7 Pitch of Screw 11" - 0" No. of Blades 4 State whether moveable No Total surface 29 $\frac{1}{2}$ sq ft
 No. of Feed pumps 1 Diameter of ditto 2 $\frac{3}{8}$ " Stroke 14 $\frac{1}{4}$ " Can one be overhauled while the other is at work —
 No. of Bilge pumps 1 Diameter of ditto 2 $\frac{3}{8}$ " Stroke 14 $\frac{1}{4}$ " Can one be overhauled while the other is at work —
 No. of Donkey Engines One Sizes of Pumps 4" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 3", Two 2" In Holds, &c. One 2" to fore hold, One 2" to slush well
 Separate Cent. circulating pump for condenser, and an Ejector to bilges Yes
 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 2 $\frac{1}{2}$ " Ejector
 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 11.3.11 of Stern Tube 11.3.11 Screw shaft and Propeller 11.3.11
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —
 BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix A. K. L. Es. Hoerder
 Total Heating Surface of Boilers 1285 sq ft Is Forced Draft fitted No No. and Description of Boilers 1 Cyl. Mult. S. Ended
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 31.3.11 No. of Certificate 1798
 Can each boiler be worked separately — Area of fire grate in each boiler 41 sq ft No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 4.9 sq in Pressure to which they are adjusted 204 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7 $\frac{1}{2}$ " Mean dia. of boilers 13' - 3 $\frac{1}{2}$ " Length 10' - 3" Material of shell plates Steel
 Thickness 1 $\frac{5}{32}$ " Range of tensile strength 29 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.
 long. seams D. B. L. R. Diameter of rivet holes in long. seams 15 $\frac{3}{32}$ " Pitch of rivets 4 $\frac{1}{16}$ " Lap of plates or width of butt straps 16 $\frac{5}{8}$ "
 Per centages of strength of longitudinal joint rivets 87.8 Working pressure of shell by rules 200 lbs Size of manhole in shell 16" x 12"
 plate 84.95 Size of compensating ring 7" x 1 $\frac{1}{8}$ " No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 38"
 Length of plain part top 6' - 2 $\frac{1}{2}$ " Thickness of plates crown 4.9 Description of longitudinal joint Welded No. of strengthening rings angle bars on bottom
 bottom 5' - 11" Working pressure of furnace by the rules 202 lbs Combustion chamber plates: Material S Thickness: Sides 3 $\frac{1}{4}$ " Back 3 $\frac{1}{4}$ " Top 3 $\frac{1}{4}$ " Bottom 3 $\frac{1}{4}$ "
 Pitch of stays to ditto: Sides 8" x 10" Back 7 $\frac{1}{2}$ " x 11" Top 7 $\frac{1}{2}$ " x 10 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 219 lbs
 Material of stays S Diameter at smallest part 2.75 Area supported by each stay 112.5 sq in Working pressure by rules 220 lbs End plates in steam space:
 Material S Thickness 1 $\frac{1}{32}$ " Pitch of stays 14" x 18" How are stays secured D. N. W. Working pressure by rules 201 lbs Material of stays S
 Diameter at smallest part 7.5 Area supported by each stay 346 sq in Working pressure by rules 225 lbs Material of Front plates at bottom S
 Thickness 15 Material of Lower back plate S Thickness 15 Greatest pitch of stays 14 $\frac{1}{2}$ " x 10" Working pressure of plate by rules 211 lbs
 Diameter of tubes 3 $\frac{1}{2}$ " Pitch of tubes 5" x 5" Material of tube plates S Thickness: Front 15 Back 14 Mean pitch of stays 10" x 10"
 Pitch across wide water spaces 14" Working pressures by rules 315 lbs Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 9 $\frac{1}{2}$ " x 2" Length as per rule 2' - 9 $\frac{3}{8}$ " Distance apart 10 $\frac{1}{2}$ " Number and pitch of stays in each Three 7 $\frac{1}{2}$ "
 Working pressure by rules 205 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 —

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Where fixed _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

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 _____

Working pressure of shell by rules _____ 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 _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set air feed bilge pump, and check valves, 4 boiler tubes, and a quantity of assorted bolts etc

The foregoing is a correct description,

p. pro CHARLES D. HOLMES & CO. LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1910: Dec 20. 1911: Jan 2. 6. 11. 13. 19. 23. 25. 27. Feb 3. 9. 11. 14. 16. 20. 22. 23. 28. Mar 7. 9. 11. 17. 24. 28. 30. 31 Apr 8. 10. 11. 13. 19. 20. 25. 26. 28

{ During erection on board vessel --

Total No. of visits 36

Is the approved plan of main boiler forwarded herewith No if w sent on w Rpt 7. 236

Dates of Examination of principal parts—Cylinders 28 2 11 Slides 24 1 11 Covers 2 3 11 Pistons 9 2 11 Rods 2 3 11

Connecting rods 2 3 11 Crank shaft 22 2 11 Thrust shaft 2 3 11 Tunnel shafts Screw shaft 28 2 11 Propeller 28 2 11

Stern tube 28 2 11 Steam pipes tested 19 4 11 Engine and boiler seatings 8 4 11 Engines holding down bolts 25 4 11

Completion of pumping arrangements 28 4 11 Boilers fixed 25 4 11 Engines tried under steam 28 4 11

Main boiler safety valves adjusted 25 4 11 Thickness of adjusting washers 5/16" 6/16"

Material of Crank shaft 5 Identification Mark on Do. 732 B. Material of Thrust shaft 5 Identification Mark on Do. 732 B. 14

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts 1 Identification Marks on Do. 732 B. 28

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 this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines secured on board & tested under steam, and found satisfactory. They are now in good order and safe working condition and respectfully submitted as being eligible to be classed with the notation $\frac{1}{2}$ L.M.C. 4. 11 in the Register Book

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 4. 11.

J.P.R.

J.W.D. 5/5/11

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

The amount of Entry Fee .. £ 1 : : When applied for, 4.5.19.11.

Special .. £ 11 : : When received, 3.5.19.11.

Donkey Boiler Fee .. £ : : 3.5.19.11.

Travelling Expenses (if any) £ : : 3.5.19.11.

Committee's Minute

Assigned

MAY 9 1911

MACHINERY CERTIFICATE



Lloyd's Register Foundation