

pt. 4.

# REPORT ON MACHINERY.

No. 23649

MAY 1911

Received at London Office

Date of writing Report 19 When handed in at Local Office 4<sup>th</sup> May 19 Port of Hull  
 No. in Survey held at Selby, Hull Date, First Survey Dec 20/10 Last Survey 28<sup>th</sup> Apr 1911  
 Reg. Book. (Number of Visits 36)  
 Supp. on the Steel S. K. Persimon Tons Gross 255 Net 107  
 Master Built at Selby By whom built Messrs Cochrane Sons When built 1911  
 Engines made at } By whom made } Messrs when made 1911  
 Boilers made at } Hull By whom made } Charles D. Holmes & Co when made 1911  
 Registered Horse Power 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 1/4" - 22" - 35" Length of Stroke 24" Revs. per minute 115 Dia. of Screw shaft as per rule 7 1/2" Material of screw shaft 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 Turret shaft as per rule 6.6" Dia. of Crank shaft journals as per rule 6.93" Dia. of Crank pin 7 1/4" Size of Crank webs 14" x 4 1/2" Dia. of thrust shaft under  
 collars 7 1/2" Dia. of screw 8" - 7" Pitch of Screw 11" - 0" No. of Blades 4 State whether moveable No Total surface 29 1/2 sq ft  
 No. of Feed pumps 1 Diameter of ditto 2 3/8" Stroke 14 1/4" Can one be overhauled while the other is at work —  
 No. of Bilge pumps 1 Diameter of ditto 2 3/8" Stroke 14 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 condensers, and an Ejector to bilges & Is a separate Donkey Suction fitted in Engine room & size 2 1/2" Ejector  
 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 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 sized 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. 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 1/2" Int. Mean dia. of boilers 13' - 3 1/2" Length 10' - 3" Material of shell plates Steel  
 Thickness 1 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. S. L. R. Diameter of rivet holes in long. seams 15 1/32" Pitch of rivets 4 1/16" Lap of plates or width of butt straps 16 5/8"  
 Per centages of strength of longitudinal joint rivets 87.8 plate 84.95 Working pressure of shell by rules 200 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 3 plain Material Steel Outside diameter 38"  
 Length of plain part top 6' - 2 1/2" Thickness of plates crown 49" Description of longitudinal joint Welded No. of strengthening rings angle bars  
 bottom 5' - 11" bottom 64" Working pressure of furnace by the rules 202 lbs Combustion chamber plates: Material S Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"  
 Pitch of stays to ditto: Sides 8" x 10" Back 7 1/2" x 11" Top 7 1/2" x 10 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 219 lbs  
 Material of stays S Area wing margin } 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 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 1/2" x 10" Working pressure of plate by rules 211 lbs  
 Diameter of tubes 3 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 1/2" x 2" Length as per rule 2' - 9 1/2" Distance apart 10 1/2" Number and pitch of stays in each three 7 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

8800-018M

Lloyd's Register Foundation

**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 \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety \_\_\_\_\_  
 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 \_\_\_\_\_  
 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.

*Charles D. Holmes* Manufacturer.

**DIRECTOR**  
 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 1, 7, 9, 11, 17, 24, 28, 30, 31, Apr 8, 10, 11, 13, 19, 20, 25, 26, 28  
 Total No. of visits 36

Is the approved plan of main boiler forwarded herewith *No it was sent on 17th 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
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 *L.M.C. 11* in the Register Book

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 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, .. 3/5/11

Donkey Boiler Fee .. £ : : ..

Travelling Expenses (if any) £ : 8 : 2 .. 3/5/11

Committee's Minute  
 Assigned  
 9 MAY 1911  
 Home 4 11  
 MACHINERY CERTIFICATE  
 WRITTEN

