

REPORT ON MACHINERY.

No. 25511

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of writing Report 10/12 When handed in at Local Office 9. 10 10 12 Port of *Hull*
 in Survey held at *Hull* Date, First Survey *May 30th* Last Survey *Oct 2nd 1912*
 g. Book. (Number of Volls *29*) Tons { Gross *285*
 4 sup. on the *Shul S. K. "LORD LARRINGTON"* Net *114*
 ater Built at *Selly* By whom built *Cochrane & Sons* When built *1912*
 ines made at } By whom made } when made *1912*
 lers made at } *Hull* By whom made } *Messrs. Charles R. Holmes & Co. Ltd.* when made *1912*
 gistered Horse Power Owners *Pickering & Haldane S. J. Coy. Ltd.* Port belonging to *Hull*
 m. Horse Power as per Section 28 *49* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *No*

GINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*
 ia. of Cylinders *12³/₄ - 22 - 36* Length of Stroke *24* Revs. per minute *111* Dia. of Screw shaft *4¹/₂* as per rule *4¹/₂* Material of *2*
 as fitted *4¹/₂* screw shaft
 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
 the propeller boss *Yes* If the liner is in more than one length are the joints burned *Yes* 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 *Yes* If two
 ners are fitted, is the shaft lapped or protected between the liners Length of stern bush *36*
 Dia. of Tunnel shaft *6¹/₂* as per rule *6¹/₂* Dia. of Crank shaft journals *4¹/₂* as per rule *4¹/₂* Dia. of Crank pin *4¹/₂* Size of Crank webs *4¹/₂ x 14* Dia. of thrust shaft under
 as fitted *4¹/₂* collars *4¹/₂* Dia. of screw *9-0* Pitch of Screw *11-0* No. of Blades *4* State whether moveable *No* Total surface *29¹/₂*
 Vo. of Feed pumps *1* Diameter of ditto *2³/₈* Stroke *14¹/₂* Can one be overhauled while the other is at work *Yes*
 Vo. of Bilge pumps *1* Diameter of ditto *2³/₈* Stroke *14¹/₂* Can one be overhauled while the other is at work *Yes*
 Vo. of Donkey Engines *1* Sizes of Pumps *6 x 4¹/₂ x 6* No. and size of Suctions connected to both Bilge and Donkey pumps
 n Engine Room *Two 2" One forward & one aft.* In Holds, &c. *One 2" 1/2" slush well, one 2" 1/2" main*
hold, one 2" 1/2" fore-castle. & bilge suction from all bilges with discharge on deck.
 No. of Bilge Injections *3* sizes *3* Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room & size *2³/₈*
 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 *Yes*
 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 & 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*
 Dates of examination of completion of fitting of Sea Connections *12.8.12* of Stern Tube *12.8.12* Screw shaft and Propeller *12.8.12*
 Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from *Yes*

BOILERS, &c.—(Letter for record *S.*) Manufacturers of Steel *The Steel Company of Scotland Ltd.*
 Total Heating Surface of Boilers *1295¹/₂* Is Forced Draft fitted *No* No. and Description of Boilers *One up. mult. comp. ended*
 Working Pressure *200 lbs.* Tested by hydraulic pressure to *400 lbs.* Date of test *6.9.12* No. of Certificate *1924*
 Can each boiler be worked separately *Yes* Area of fire grate in each boiler *46¹/₂* No. and Description of Safety Valves to
 each boiler *Two Spring* Area of each valve *4.9¹/₂* Pressure to which they are adjusted *195 lbs.* Are they fitted with easing gear *Yes*
 Smallest distance between boilers *on uptakes and bunkers on woodwork* *6"* Ex. Mean dia. of boilers *13-6* Length *10-6* Material of shell plates *S.*
 Thickness *1¹/₂* Range of tensile strength *28 tons* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *S. 20*
 long. seams *20. D. S. L. R.* Diameter of rivet holes in long. seams *1³/₁₆* Pitch of rivets *8"* Lap of plates or width of butt straps *16⁵/₈*
 Per centages of strength of longitudinal joint rivets *85* Working pressure of shell by rules *203 lbs.* Size of manhole in shell *16 x 12*
 plate *85* Size of compensating ring *4 x 1³/₁₆* No. and Description of Furnaces in each boiler *3 plain* Material *S.* Outside diameter *38*
 Length of plain part *6-5¹/₂* Thickness of plates *31* Description of longitudinal joint *Weld* No. of strengthening rings *0*
 top *6-5¹/₂* bottom *6-4* Working pressure of furnace by the rules *212 lbs.* Combustion chamber plates: Material *S.* Thickness: Sides *23* Back *23* Top *23* Bottom *23*
 Pitch of stays to ditto: Sides *8 x 10* Back *8¹/₂ x 10* Top *8 x 11* If stays are fitted with nuts or riveted heads *No* Working pressure by rules *212 lbs.*
 Material of stays *S.* Area at smallest part *2.4* Area supported by each stay *101.06* Working pressure by rules *213 lbs.* End plates in steam space:
 Material *S.* Thickness *1³/₁₆* Pitch of stays *18 x 18* How are stays secured *R. H. & W.* Working pressure by rules *206 lbs.* Material of stays *S.*
 Area at smallest part *6.33* Area supported by each stay *324* Working pressure by rules *203 lbs.* Material of Front plates at bottom *S.*
 Thickness *1⁵/₁₆* Material of Lower back plate *S.* Thickness *29* Greatest pitch of stays *14¹/₂ x 8¹/₂* Working pressure of plate by rules *204 lbs.*
 Diameter of tubes *3¹/₂* Pitch of tubes *5¹/₂ x 5* Material of tube plates *S.* Thickness: Front *15* Back *8* Mean pitch of stays *10*
 Pitch across wide water spaces *14¹/₂* Working pressures by rules *315 lbs.* Girders to Chamber tops: Material *S.* Depth and
 thickness of girder at centre *10³/₄ - 1³/₄* Length as per rule *2-11³/₈* Distance apart *11* Number and pitch of stays in each *3-8*
 Working pressure by rules *203 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

W827-0102

Lloyd's Register
Foundation

VERTICAL DONKEY BOILER—Manufacturers of Steel

No.	Description		When made	Where fixed
Made at	By whom made			
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
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
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 connecting rod top and bottom bolts & nuts, two connecting rod bottom and bolts & nuts, two main bearing bolts, one set of coupling bolts, one set of feed & bilge pump valves, a quantity of assorted bolts & nuts, iron of various sizes etc.*

The foregoing is a correct description,

W. PRO CHARLES D. HOLMES & CO. LTD. Manufacturer.

Arthur Holmes DIRECTOR.

Dates of Survey while building: During progress of work in shops — 1912:— May 30. Jun 14. 18. 20. 26. 27 July 5. 9. 17. 24. 26. Aug 1. 3. 9. 12. 14. 16.
During erection on board vessel — Aug 22. 29. Sep 3. 6. 11. 17. 18. 19. 23. 25 Oct 1. 2.
Total No. of visits 29

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 27.6.12 Slides 3.9.12 Covers 3.9.12 Pistons 3.9.12 Rods 9.8.12
Connecting rods 29.8.12 Crank shaft 24.4.12 Thrust shaft 11.9.12 Tunnel shafts ✓ Screw shaft 3.8.12 Propeller 3.8.12
Stern tube 3.8.12 Steam pipes tested 19.9.12 Engine and boiler seatings 12.8.12 Engines holding down bolts 18.9.12
Completion of pumping arrangements 1.10.12 Boilers fixed 25.9.12 Engines tried under steam 1.10.12
Main boiler safety valves adjusted 1.10.12 Thickness of adjusting washers F. 3/32" A. 1/16"
Material of Crank shaft S. Identification Mark on Do. N° 9591.6D Material of Thrust shaft S. Identification Mark on Do. N° 9591.6D
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S Identification Marks on Do. N° 9591.6D
Material of Steam Pipes *Solid drawn copper* ✓ Test pressure 400 lbs. pressure hydraulic ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boiler tested by hydraulic pressure & with the engines secured on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in our opinion to be classed with the notation of + L.M.C. 10.12 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10.12.

JWR 11/10/12 *ARH*

The amount of Entry Fee .. £ 1 : : When applied for, 9.10.12
Special .. £ 11 14 : :
Donkey Boiler Fee .. £ : : When received, 31.10.12
Travelling Expenses (if any) £ 8/2 : :
Committee's Minute TUE. OCT. 15. 1912
Assigned *+ L.M.C. 10.12*

W. H. Roddy & John W. Fyfe
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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