

REPORT ON MACHINERY.

No. 25511

Received at London Office THU. OCT. 10. 1912

of writing Report 1912 When handed in at Local Office 9.10.12 Port of Hull
 in Survey held at Hull Date, First Survey May 30th Last Survey Oct 2nd 1912
 g. Book. (Number of Vistas 29) Tons } Gross 285
 } Net 114
 # ship on the Steel S.K. "LORD LARRINGTON"
 ater Built at Selby By whom built Goehring & Sons When built 1912
 names 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 12 3/4 - 22 - 36 Length of Stroke 24 Revs. per minute 111 Dia. of Screw shaft 4 1/2 Material of }
 } as per rule 4 1/2 screw shaft }
 } as fitted 4 3/4 }
 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 No If two
 bers are fitted, is the shaft lapped or protected between the liners No Length of stern bush 36
 Dia. of Tunnel shaft 6 1/4 as per rule 6 1/2 Dia. of Crank shaft journals 4 1/2 as per rule 4 1/2 Dia. of Crank pin 4 1/2 Size of Crank webs 4 1/2 x 14 Dia. of thrust shaft under
 ollars 4 1/4 Dia. of screw 9-0 Pitch of Screw 11-0 No. of Blades 4 State whether moveable No Total surface 29 sq ft
 Vo. of Feed pumps 1 Diameter of ditto 2 3/8 Stroke 14 1/4 Can one be overhauled while the other is at work Yes
 Vo. of Bilge pumps 1 Diameter of ditto 2 3/8 Stroke 14 1/4 Can one be overhauled while the other is at work Yes
 Vo. of Donkey Engines 1 Sizes of Pumps 6 x 4 1/2 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" 1/8 slush well, one 2" 1/8 main
hold, one 2" 1/8 fore-castle. & join suction from all bilges with discharge on deck.
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2 Yes
 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 1295 sq ft Is Forced Draft fitted No No. and Description of Boilers One cyl. multi. simple 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 46 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 on uptakes and bunkers on woodwork 6" Mean dia. of boilers 13-6" Length 10-6" Material of shell plates S
 Thickness 1 1/4" Range of tensile strength 28 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S. 70
 long. seams D. S. T. P. Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8" Lap of plates or width of butt straps 16 5/8"
 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 1 1/2 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 38"
 Length of plain part top 6-5 1/2 Thickness of plates crown 31 Description of longitudinal joint weld No. of strengthening rings 0
 bottom 1 bottom 64
 Working pressure of furnace by the rules 212 lbs. Combustion chamber plates: Material S Thickness: Sides 13 Back 13 Top 3 Bottom 32
 Pitch of stays to ditto: Sides 8 x 10 Back 8 1/2 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 Diameter at smallest part 2.40 Area supported by each stay 101.06 sq ft Working pressure by rules 213 lbs. End plates in steam space:
 Material S Thickness 1 3/16 Pitch of stays 18 x 18 How are stays secured D. T. & W. Working pressure by rules 206 lbs. Material of stays S
 Diameter at smallest part 6.33 Area supported by each stay 324 sq ft Working pressure by rules 203 lbs. Material of Front plates at bottom S
 Thickness 1 5/16 Material of Lower back plate S Thickness 29 Greatest pitch of stays 14 1/2 x 8 1/2 Working pressure of plate by rules 204 lbs.
 Diameter of tubes 3 1/2 Pitch of tubes 5 1/2 x 5 Material of tube plates S Thickness: Front 16 Back 8 Mean pitch of stays 10"
 Pitch across wide water spaces 14 1/4 Working pressures by rules 315 lbs. Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 10 3/4 - 1 3/4 Length as per rule 2-11 3/8 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

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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	Description of Safety
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 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 connecting rod top and 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,
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* ✓
 " " " donkey " " " ✓

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° 9597.6D* Material of Thrust shaft *S.* Identification Mark on Do. *N° 9597.6D*
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *S* Identification Marks on Do. *N° 9597.6D*
 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.*

Null

It is submitted that this vessel is eligible for THE RECORD + LMC 10.12.

JWR 11/10/12
ARH

The amount of Entry Fee .. £ 1 : : When applied for.
 Special £ 11 14 : : 9.10.12
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : 8/2 : : 31.10.12

John W. Payne
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. OCT. 15. 1912
 Assigned *10.12*

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

