

REPORT ON MACHINERY.

No. 26457
SAT. JUL. 12. 1913

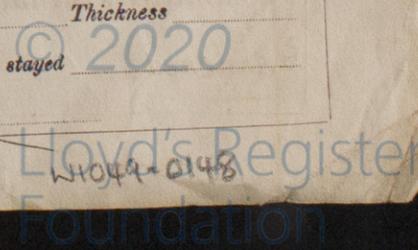
Received at London Office

Date of writing Report 20th June 1913 When handed in at Local Office 11. 7. 13, Port of Hull.
 No. in Survey held at Hull. Date, First Survey Apr 16th Last Survey July 2nd 1913.
 Reg. Book 834 on the Steel S.S. "Lord Landsdowne". (Number of Vials 12) Tons Gross 289 Net 116
 Master Built at Sully By whom built Cochran & Sons Ltd. When built 1913
 Engines made at } By whom made } when made 1913
 Boilers made at Hull. By whom made Charles D. Holmes & Co. Ltd. when made 1913.
 Registered Horse Power Owners Scottish Steam Towing Co. Ltd. Port belonging to Hull.
 Nom. Horse Power as per Section 28 79. Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

ENGINES, &c.—Description of Engines Inverted Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13"-22"-36" Length of Stroke 74" Revs. per minute 750 Dia. of Screw shaft 7 1/4" 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. Is the liner 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 liners are fitted, is the shaft lapped or protected between the liners no. Length of stern bush 3'-0"
 Dia. of Tunnel shaft 6.78" Dia. of Crank shaft journals 7.11" Dia. of Crank pin 7 1/4" Size of Crank webs 14x4 1/2" Dia. of thrust shaft under collars 7 1/4" Dia. of screw 9'-3" Pitch of Screw 10' 8" No. of Blades 4 State whether moveable no Total surface 30 1/2'
 No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 14 1/4" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 14 1/4" Can one be overhauled while the other is at work yes
 No. of Donkey Engines One Sizes of Pumps 6" x 4 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two. One 2" forward, one 2" aft. In Holds, &c. One 2" to flush well, One 2" to fore peak. One 2 1/2" to petals from all cutwaters to discharge on deck.
 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" injector.
 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 Bilge 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 22.4.13. of Stern Tube 22.4.13. Screw shaft and Propeller 22.4.13.

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 Messrs. Phoenix & Co. Ltd. Harrogate
 Total Heating Surface of Boilers 1295 Is Forced Draft fitted no No. and Description of Boilers One. Cyl. Single-ended
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 10.6.13 No. of Certificate 1990.
 Can each boiler be worked separately yes Area of fire grate in each boiler 46 No. and Description of Safety Valves to each boiler Two. spring Area of each valve 4.9 Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork 7" Mean dia. of boilers 13' 6" Length 10'-6" Material of shell plates Steel
 Thickness 1 1/16" Range of tensile strength 29 tons Are the shell plates welded or flanged no. Descrip. of riveting: air. seams S.P.R. long. seams S.P.R. Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8" Lap of plates or width of butt straps 16 1/8"
 Per centages of strength of longitudinal joint 85% Working pressure of shell by rules 203 Size of manhole in shell 16" x 12"
 Size of compensating ring 7" x 1 3/16" No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 38"
 Length of plain part 6' 5 1/2" Thickness of plates 1 1/16" Description of longitudinal joint Welded No. of strengthening rings 0
 Working pressure of furnace by the rules 212. Combustion chamber plates: Material S Thickness: Sides 23/32" Back 23/32" Top 1/4" Bottom 23/32"
 Pitch of stays to ditto: Sides 10 x 8" Back 10 x 8 1/2" Top 11 x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 212.
 Material of stays S Diameter at smallest part 2.4 Area supported by each stay 101.62 Working pressure by rules 213. End plates in steam space: Material S Thickness 1 3/16" Pitch of stays 18 x 18 How are stays secured ON TWs Working pressure by rules 206. Material of stays S Diameter at smallest part 6.33 Area supported by each stay 324 Working pressure by rules 203. Material of Front plates at bottom S Thickness 1 1/16" Material of Lower back plate S Thickness 29/32" Greatest pitch of stays 14 1/2" x 8 1/4" Working pressure of plate by rules 204
 Diameter of tubes 3 1/2" Pitch of tubes 5 1/2" x 5" Material of tube plates S Thickness: Front 15/16" Back 7/8" Mean pitch of stays 10"
 Pitch across wide water spaces 14 1/4" Working pressures by rules 315. 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 3-5 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

1m.212. T.



VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description			
Made at	By whom made	When made	Where fixed	
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 each top & bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each feed & bilge pump valves, iron of different sizes. quantity of assorted bolts & nuts.

The foregoing is a correct description,
p. pro **CHARLES D. HOLMES & CO. Manufacturers.**

J. Arthur Holmes DIRECTOR. 1913. Apr 16. 22. 25. May 7. 23. 29. Jun 4. 5. 10. 23. 26 July 2
 Dates of Survey while building: During progress of work in shops --- During erection on board vessel --- Total No. of visits 12

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

Dates of Examination of principal parts—Cylinders 10.6.13. Slides 10.6.13. Covers 10.6.13. Pistons 10.6.13. Rods 10.6.13.
 Connecting rods 10.6.13. Crank shaft 4.6.13. Thrust shaft 11.4.13. Tunnel shafts --- Screw shaft 16.4.13. Propeller 16.4.13.
 Stern tube 16.4.13. Steam pipes tested 23.6.13. Engine and boiler seatings 22.4.13. Engines holding down bolts 26.6.13.
 Completion of pumping arrangements 26.6.13. Boilers fixed 26.6.13. Engines tried under steam 26.6.13.
 Main boiler safety valves adjusted 26.6.13. Thickness of adjusting washers F 7/16" A 3/8"

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 and workmanship are sound and good. The boiler tested by hydraulic pressure, and with the engines secured on board & tested under steam, they are now in good order & safe-working condition, and respectfully submitted as being eligible in my opinion to be classed, with the notation of + LMC 7.13. in the Register book.

It is submitted that this vessel is eligible for **THE RECORD. + LMC 7.13.**

J.S.
12.7.13. *J.M.*

The amount of Entry Fee .. £ 1 : : When applied for.
 Special .. £ 11 17 6 : : 11.7.13.
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : 4 : : 31.7.13

A. J. Mackintosh
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
Assigned

TUE. JUL. 15. 1913

Holmes 7.13

EXAMINED CERTIFICATE WRITTEN



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