

## REPORT ON MACHINERY.

No. 26457  
SAT. JUL. 12. 1913

Received at London Office

Date of writing Report 20<sup>th</sup> June 1913 When handed in at Local Office 11. 7. 1913 Port of Hull  
 No. in Survey held at Hull Date, First Survey Apr 16<sup>th</sup> Last Survey July 2<sup>nd</sup> 1913  
 Reg. Book 834 on the Steel S.S. "Lord Landsdowne" (Number of Visits 12) Tons Gross 289 Net 116  
 Master Sully Built at Sully By whom built Cochran & Sons Ltd. When built 1913  
 Engines made at Hull By whom made Charles D. Holmes & Co. Ltd. when made 1913  
 Boilers made at Hull By whom made Charles D. Holmes & Co. Ltd. when made 1913  
 Registered Horse Power 79 Owners Yorkshire 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 75 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 yes  
 Is 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 yes If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 3'-0"  
 Dia. of Tunnel shaft 6.78" Dia. of Crank shaft journals 7 1/4" Dia. of Crank pin 7 1/4" Size of Crank webs 14x48" 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 305  
 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"x4 1/2"x6" 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" Suction from all Suctions 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 Suctions 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"x12"  
 Size of compensating ring 7'x1 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'x8" Back 10'x8 1/2" Top 11'x8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 212.  
 Material of stays S Area at smallest part 2.4 Area supported by each stay 101.062 Working pressure by rules 213. End plates in steam space: Material S Thickness 1 3/16" Pitch of stays 18x18 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"x8 1/4" Working pressure of plate by rules 204  
 Diameter of tubes 3 1/2" Pitch of tubes 5'-2"x5" Material of tube plates S Thickness: Front 15/16" Back 7/8" Mean pitch of stays 10"  
 Pitch across wide water spaces 14'-3/4" 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 3'58"  
 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



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 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  
 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. Manufacturer.

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"  
 Material of Crank shaft S. Identification Mark on Do. 1068. Material of Thrust shaft S. Identification Mark on Do. 1068.  
 Material of Tunnel shafts --- Identification Marks on Do. --- Material of Screw shafts S. Identification Marks on Do. 1068.  
 Material of Steam Pipes Copper solid drawn. Test pressure 400lbs.

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.

The amount of Entry Fee .. £ 1 : : When applied for,  
 Special .. £ 11 17 6 11.7.13.  
 Donkey Boiler Fee .. £ : : When received,  
 Travelling Expenses (if any) £ : 4 : 31.7.13 1.8.13

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

Committee's Minute

Assigned

TUE. JUL. 15. 1913

Home 7.13

EXAMINER CERTIFICATE WRITTEN



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