

# REPORT ON MACHINERY.

No. 27844

Received at London Office

Date of writing Report 6<sup>th</sup> Aug. 1914 When handed in at Local Office 6-8 1914 Port of Hull  
 No. in Survey held at Hull Date, First Survey Feb 16<sup>th</sup> Last Survey 30. 7. 1914  
 Reg. Book. 508. on the steel sk "THE BANYERS." (Number of Visits 25 26)  
 Master Beverley Built at Beverley By whom built Brook, W. & Co. Ltd. Tons Gross 448  
 Engines made at Hull By whom made C. H. Holmes & Co. Ltd. when made 1914 Net 281  
 Boilers made at Hull By whom made C. H. Holmes & Co. Ltd. when made 1914  
 Registered Horse Power 89 Owners A. D. Black Port belonging to Grimsby  
 Nom. Horse Power as per Section 28 89 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

**ENGINES, &c.**—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 13" 23" 37" Length of Stroke 26 Revs. per minute 8.03 Dia. of Screw shaft 8 1/2 Material of screw shaft S.  
 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 ✓ 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 4'-0" 40"  
 Dia. of Tunnel shaft 7.04 Dia. of Crank shaft journals 7.39 Dia. of Crank pin 7 3/4 Size of Crank web 5x14 3/4 Dia. of thrust shaft under collars 7 3/4 Dia. of screw 10'-0 Pitch of Screw 11'-3 No. of Blades 4 State whether moveable no Total surface 36 1/2 sq  
 No. of Feed pumps 1 Diameter of ditto 3" Stroke 14 3/4 Can one be overhauled while the other is at work ✓  
 No. of Bilge pumps 1 Diameter of ditto 3" Stroke 14 3/4 Can one be overhauled while the other is at work ✓  
 No. of Donkey Engines Two Sizes of Pumps 6x4x6 5x2 3/4x5 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 2-2" On forward one aft In Holds, &c. 6-2" Fore castle, spare fish room  
 Main fish room For slush well, After slush well, Midslush well, 3" ejector  
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump a separate Donkey Suction fitted in Engine room of size 3" 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 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 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 9.4.14 of Stern Tube 9.4.14 Screw shaft and Propeller 9.4.14  
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

**BOILERS, &c.**—(Letter for record S. Manufacturers of Steel Moss's Phoenix Co of Harde  
 Total Heating Surface of Boilers 1500 sq Is Forced Draft fitted no No. and Description of Boilers One single-ended  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 26.5.14 No. of Certificate 2090  
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 43 sq No. and Description of Safety Valves to each boiler Two Spring Area of each valve 4.9 sq Pressure to which they are adjusted 205 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 6" INT Mean dia. of boilers 14-0 Length 10-6 Material of shell plates S.  
 Thickness 1 1/2 Range of tensile strength 29 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams D.R.L.  
 long. seams DBSJR Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 8 1/6 Lap of plates or width of butt straps 17 1/2  
 Percentages of strength of longitudinal joint 99 Working pressure of shell by rules 202 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 S. Outside diameter 40"  
 Length of plain part 6.3 Thickness of plates 5 1/4 Description of longitudinal joint welded No. of strengthening rings 3 1/2 x 3 1/2 x 3 1/4  
 Working pressure of furnace by the rules 201 Combustion chamber plates: Material S. Thickness: Sides 3/4" Back 2 3/32" Top 1 1/16" Bottom 3/4"  
 Pitch of stays to ditto: Sides 9 3/4 x 8 1/2 Back 8 1/2 x 9 1/8 Top 9 1/4 x 8 1/2 Bottom 11 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 211  
 Material of stays S. Diameter at smallest part 2.07 Area supported by each stay 83.9 sq Working pressure by rules 222 End plates in steam space: Material S. Thickness 1 1/4 Pitch of stays 19 x 19 How are stays secured DN&W's Working pressure by rules 205 Material of stays S.  
 Diameter at smallest part 7.5 sq Area supported by each stay 361 sq Working pressure by rules 216 Material of Front plates at bottom S.  
 Thickness 1" Material of Lower back plate S. Thickness 1" Greatest pitch of stays 14 x 9 7/8 Working pressure of plate by rules 243  
 Diameter of tubes 3 1/2 Pitch of tubes 5 1/8 x 5 Material of tube plates S. Thickness: Front 1" Back 7/8" Mean pitch of stays 10-125  
 Pitch across wide water spaces 14 1/2 Working pressures by rules 176 x dof stays Boilers to Chamber tops: Material S. Depth and thickness of girder at centre 5 10 1/2 x 1 3/4 Length as per rule 3-1 9/32 Distance apart 9 1/4 Number and pitch of stays in each 3 at 8 1/2  
 Working pressure by rules 206 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

1910-925M

If net, state whether, and when, one will be sent



IS A DONKEY BOILER FITTED? *No.* If so, is a report now forwarded? *FRI. AUG. 21. 1914*

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 of coupling bolts & nuts, one set each feed & bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc.*

The foregoing is a correct description,  
*p. pro* CHARLES D. HOLMES & Co. LTD.

*Harold Sheard* DIRECTOR. Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1914: Feb 16 Mar 26. 31 Apr 6. 9. 18. 24. 27 May 4. 6. 8. 13. 14. 20. 25. 26 Jun 5. 27 Jul 1.  
{ During erection on board vessel -- } Jul 4. 6. 7. 17. 21. 20. 30  
Total No. of visits *25 26*

Is the approved plan of main boiler forwarded ~~has~~ with *Rpt No. 27681*

Dates of Examination of principal parts—Cylinders *4.5.14*. Slides *4.5.14*. Covers *8.5.14*. Pistons *25.5.14*. Rods *8.5.14*. Connecting rods *8.5.14*. Crank shaft *6.5.14*. Thrust shaft *20.5.14*. Tunnel shafts *8.9.14*. Screw shaft *6.4.14*. Propeller *6.4.14*. Stern tube *6.4.14*. Steam pipes tested *6.7.14*. Engine and boiler seatings *9.4.14*. Engines holding down bolts *1.7.14*. Completion of pumping arrangements *30.7.14*. Boilers fixed *1.7.14*. Engines tried under steam *21.7.14*. Main boiler safety valves adjusted *21.7.14*. Thickness of adjusting washers *PV 3/8 SV 3/8*.

Material of Crank shaft *S.* Identification Mark on Do. *1124*. Material of Thrust shaft *S.* Identification Mark on Do. *1124*. Material of Tunnel shafts *S.* Identification Marks on Do. *1124*. Material of Screw shafts *S.* Identification Marks on Do. *1124*.

Material of Steam Pipes *Copper solid drawn*. Test pressure *400lbs. hyd. pres.*

Is an installation fitted for burning oil fuel  Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case *yes*. If so, state name of vessel *S.S. "Ilustra"*.

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 sound and good. The Boiler tested by hydraulic pressure and with the engines secured on board and tested under steam they are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of +LMC 7.14 in the Register book.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.14

*J.S.*  
*21.8.14*  
*J.P.R.*

The amount of Entry Fee ... £ *21* : :  
Special ... £ *13* : *7* :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : *2* :

When applied for, *20/8/14*  
When received, *31.9.14*  
*J.S. Macillop*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *TUE. AUG. 25. 1914*

Assigned *+ LMC 7.14*

MACHINERY CERTIFICATE WRITTEN.



Vertical text on the left margin: Certificate (if required) to be sent to...