

REPORT ON MACHINERY.

No. 35790

Received at London Office W.L. 23, L.B. 1916

Writing Report at Glasgow Port of Glasgow
 Survey held at Glasgow Date, First Survey 5/1/15 Last Survey 9th Feb 1916
 on the Machinery of Steel S.S. PORTOGRANDE (Number of Visits 61)
 Built at Glenoch By whom built G. Brown & Co. (No. 92) When built 1915
 Made at Glasgow By whom made McLerie & Baxter (No. 806) when made 1915
 Made at Glasgow By whom made A. Anderson & Sons (No. 752) when made 1915
 Horse Power 35 Owners Hull, Glynn & Co. Port belonging to St Vincent
 Horse Power as per Section 28 35 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

DETAILS, &c.—Description of Engines Compound Surface Cond. No. of Cylinders 2 No. of Cranks 2
 of Cylinders 12 & 24 Length of Stroke 18 Revs. per minute 160 Dia. of Screw shaft 5.48 Material of Steel
 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
 propeller boss Yes If the liner is in more than one length are the joints burned in Yes the liner does not fit tightly at the part
 on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two
 are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 1.10
 of Tunnel shaft 4.98 as per rule 5.23 Dia. of Crank shaft journals 5.4 as per rule 5.4 Dia. of Crank pin 5.4 Size of Crank webs 32 x 9.5 Dia. of thrust shaft under
 as fitted 5.4 Dia. of screw 6.6 Pitch of Screw 6.6 No. of Blades 4 State whether moveable No Total surface 18.7
 of Feed pumps one Diameter of ditto 2 Stroke 9 Can one be overhauled while the other is at work Yes
 of Bilge pumps one Diameter of ditto 2 Stroke 9 Can one be overhauled while the other is at work Yes
 of Donkey Engines 1 Duplex Sizes of Pumps 4 1/2" stem 2 3/4" dia 4" stroke No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 3 suction 2" bore In Holds, &c. 1" suction in cargo tank
connected to cargo pump only
 of Bilge Injections 1 size 2 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 2"
 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
 all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valve cocks
 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
 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
 pipes are carried through the bunkers None How are they protected Yes
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilge Yes
 of examination of completion of fitting of Sea Connections 18/10/15 of Stern Tube 18/10/15 Screw shaft and Propeller 18/10/15
 the Screw Shaft Tunnel watertight No tunnel Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel
 Heating Surface of Boilers 733.4 Is Forced Draft fitted No No. and Description of Boilers One Single ended
 Working Pressure 130 lb Tested by hydraulic pressure to 130 lb Date of test 18/10/15 No. of Certificate 18/10/15
 each boiler be worked separately Area of fire grate in each boiler 28.75 No. and Description of Safety Valves to
 boiler 2 Direct Spring Area of each valve 3.9 Pressure to which they are adjusted 135 lb Are they fitted with easing gear Yes
 smallest distance between boilers or uptakes and bunkers or woodwork 12 Mean dia. of boiler 36 Length 12 Material of shell plates
 thickness Range of tensile strength Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams
 seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 percentages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
 of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 length of plain part top Thickness of plates bottom Description of longitudinal joint No. of strengthening rings
 working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space
 material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 working pressure by rules 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 rivets
 thickness Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 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



IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: -

2 each of top bottom end main bearing with nuts, a set of coupling bolts nuts, valves for each pump assorted bolts & nuts, iron of various sizes.

The foregoing is a correct description,

Mekie & Baxter

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1915 Jan 5-9-11 Feb 4-26 Mar 9-22 Apr 15-26 May 10-14-20-26-31 June 3-7-11-14-18 July 5-15 Aug 12-17-25-31
{ During erection on board vessel - - - } Oct 21-27 Nov 1-3-5-6-11-15-16-18-22-24-25-26-27-29-30 Dec 1-3-4-6-8-10-12-14-16-20-21-25-29-1916 Jan 11 Feb 2-9
Total No. of visits *61* Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts - Cylinders *9/2/15* Slides *7/9/15* Covers *18/6/15* Pistons *18/6/15* Rods *3/6/15*
Connecting rods *3/6/15* Crank shaft *20/5/15* Thrust shaft *25/8/15* Tunnel shafts *none* Screw shaft *17/8/15* Propeller *1/1/15*
Stern tube *1/9/15* Steam pipes tested *25/2/15* Engine and boiler seatings *16/2/15* Engines holding down bolts *29/1/13*
Completion of pumping arrangements *2/2/15* Boilers fixed *2/2/15* Engines tried under steam *9/2/15*
Main boiler safety valves adjusted *9/2/15* Thickness of adjusting washers *Stand 4/32 Port 9/32*
Material of Crank shaft *Steel* Identification Mark on Do. *11806* Material of Thrust shaft *Steel* Identification Mark on Do. *11806*
Material of Tunnel shafts *none* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *✓*
Material of Steam Pipes *Solid drawn Copper* Test pressure *300 lbs.*
Is an installation fitted for burning oil fuel *no.* 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 *no.* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been built under special survey in accordance with the Rules. The materials & workmanship are good. The machinery has been satisfactorily fitted on board & tried under steam & the case is eligible in my opinion for the notation + LMC 2.16.*

It is submitted that this vessel is eligible for THE RECORD + LMC 2.16.

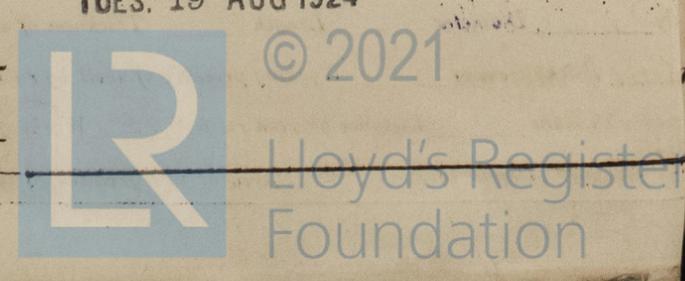
JWD
JMM 24/2/16
P. Ritchie
Engineer Surveyor to Lloyd's Register of British & Foreign Ships

TUES. 19 AUG 1924

The amount of Entry Fee ... £ 1 : 00 When applied for, ...
Special ... £ 5 18 0 14/2/16
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : : 4 3 1916

Committee's Minute **GLASGOW 22 FEB. 1916**
Assigned *+ L.M.C. 216*

MACHINERY CERTIFICATE
WRITTEN 23/2/16



Glasgow

Certificates (if required) to be sent to the Surveyors or to the office of the Registrar of Shipping (Middlesbrough).