

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

23 DEC 1931

Date of writing Report 19 When handed in at Local Office 19 Port of Liverpool  
 No. in Survey held at Saltney, Chester Date, First Survey 13/10/31 Last Survey 9/12/1931  
 Reg. Book. on the S. S. Maria (Number of Visits 5)  
 Built at Saltney By whom built Messrs. J. Crichton & Co. Ltd Yard No. 578 Tons { Gross 57.73  
 Engines made at Newbury By whom made Messrs. Plenty & Co. Ltd Engine No. 2678 when made 1931 Net 1.69  
 Boilers made at Cowes J. & W. By whom made J. Samuel White & Co. Boiler No. 5555 when made 1931  
 Registered Horse Power 57 Owners Rio de Janeiro City Improvement Co Port belonging to Rio de Janeiro  
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no  
 Trade for which Vessel is intended Travelling Services in the Bay of Rio de Janeiro

**ENGINES, &c.**—Description of Engines Vertical Reciprocating Revs. per minute 180  
 No. of Cylinders 3 No. of Cranks 3  
 Length of Stroke 16" Mid. length breadth 10" Thickness parallel to axis 3 7/8"  
 Crank pin dia. 5 3/8" Crank webs Mid. length thickness 3 7/8" Thickness around eye-hole 2 1/2"  
 Intermediate Shafts, diameter as per Rule 5 1/8" Thrust shaft, diameter at collars as per Rule 5 7/8"  
 Main Shafts, diameter as per Rule 5 9/16" Is the shaft fitted with a continuous liner Yes  
 Screw Shaft, diameter as per Rule 5 9/16" Is the screw shaft fitted with a continuous liner Yes  
 Liners, thickness in way of bushes as per Rule 15/32" Thickness between bushes as per Rule 7/16" Is the after end of the liner made watertight in the stern tube Yes  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner No length  
 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  
 Are the liners fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes  
 If so, state type Low Length of Bearing in Stern Bush next to and supporting propeller 22 3/8"  
 Propeller, dia. 6'-1" Pitch 6'-0" No. of Blades 3 Material Brass whether Moveable Yes Total Developed Surface 11 sq. feet  
 Pumps worked from the Main Engines, No. none Diameter 2" Stroke 9" Can one be overhauled while the other is at work Yes  
 Pumps worked from the Main Engines, No. none Diameter 2" Stroke 9" Can one be overhauled while the other is at work Yes  
 Pumps connected to the Main Bilge Line { No. and size one - 4 x 4 x 5'  
 How driven Steam How driven Steam  
 Lubricating Oil Pumps, including Spare Pump, No. and size one - 4 x 4 x 5'  
 Independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Pumps;—In Engine and Boiler Room three 2"  
 In holds, &c. Aft hold one 2" / Fore Cabin one 2"

**Water Circulating Pump Direct Bilge Suctions, No. and size** one 4" **Independent Power Pump Direct Suctions to the Engine Room Bilges,** one 2 1/2"  
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
**Sea Connections** fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes  
 Are they fitted sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Above  
 Are 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  
 How are they protected none required  
 Pipes pass through the bunker Forward bilge suction Have they been tested as per Rule Yes  
 Pipes pass through the deep tanks Yes  
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Yes  
 Is the Shaft Tunnel watertight No tunnel Is it fitted with a watertight door Yes worked from Yes

**BOILERS, &c.**—(Letter for record S.) Total Heating Surface of Boilers 900 sq'  
 Is a Draft fitted Yes No. and Description of Boilers one - water tube Working Pressure 200 lbs sq'  
**REPORT ON MAIN BOILERS NOW FORWARDED?** Yes  
**DONKEY BOILER FITTED?** No If so, is a report now forwarded? Yes

Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers  
 (If not state date of approval) Yes  
 General Pumping Arrangements Oil fuel Burning Piping Arrangements

**SPARE GEAR.** State the articles supplied:— Two top & two bottom end bolts & nuts, two main bearing nuts, one set of coupling bolts, one set of feed & bilge pump valves, Cylinders packing rings and other items in accordance with spare gear list attached

The foregoing is a correct description,  
 For & ORCHTON & CO., LTD.

*William Hill* Manufacturer.  
 MANAGER DIRECTOR



Dates of Survey while building  
 During progress of work in shops - -  
 During erection on board vessel - - - Oct 13. Nov 12. 23. Dec 4. 9.  
 Total No. of visits 5.

Dates of Examination of principal parts—Cylinders  
 Slides Covers  
 Pistons  
 Connecting rods  
 Crank shaft Thrust shaft Intermediate shafts  
 Tube shaft Screw shaft Propeller  
 Stern tube Engine and boiler seatings 13<sup>th</sup> Oct 1931 Engines holding down bolts 12/11/31  
 Completion of fitting sea connections 13/10/31 Boilers fixed 12/11/31 Engines tried under steam 9/12/31  
 Completion of pumping arrangements 12/11/31 Thickness of adjusting washers 1/16" 11/32"  
 Main boiler safety valves adjusted 4/12/31 Identification Mark 1114 Thrust shaft material steel Identification Mark 8992  
 Crank shaft material steel Identification Mark 8992 Tube shaft, material steel Identification Mark  
 Intermediate shafts, material steel Identification Marks 8992 Steam Pipes, material Copper Test pressure 400 lbs Date of Test 10<sup>th</sup> 6/31  
 Screw shaft, material steel Identification Mark 8992 Is the flash point of the oil to be used over 150° F. yes  
 Is an installation fitted for burning oil fuel yes  
 Have the requirements of the Rules for the use of oil as fuel been complied with yes  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo no If so, have the requirements 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.)

The Machinery of this vessel has been satisfactorily fitted on board and is in accordance with the Rules and the approved plans. It has been examined under full working conditions during River Trial and found satisfactory, and is now eligible in my opinion for Classification in Register book with record of LMC 12.31. - fitted for oil fuel 12.31 FP above 150° F.

Certificate to be sent to  
 The Surveymen are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee Charged on London Report:  
 Atting on board £35.00  
 Special ... £ ...  
 Donkey Boiler Fee ... £ ...  
 Travelling Expenses (if any) £ 01.10.00  
 Paid in Lon. 22 DEC. 1931  
 When received, 12.1.1932

J. D. Milton  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute  
 Assigned + LMC - 12.31.  
 Fitted for oil fuel 12.31  
 F.P. above 150° F.  
 F.P. Ch.

