

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 23rd March 1928 When handed in at Local Office 23rd March 1928 Port of Glasgow Received at London Office 28 MAR 1928

No. in Survey held at Glasgow Date, First Survey 9. 11. 27 Last Survey 23rd March 1928
 Reg. Book. T. S. S. "SAN MATEAS" HOOIBERG (Number of Visits 13)

Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 834 Tons 1928
 Engines made at Glasgow By whom made do. Engine No. 834 when made 1928
 Boilers made at Belfast By whom made do. Boiler No. 834 when made 1928

Registered Horse Power 196 Owners Lago Shipping Co. Ltd. Port belonging to do.
 Nom. Horse Power as per Rule 196 Is Refrigerating Machinery fitted for cargo purposes do. Is Electric Light fitted do.
 Trade for which Vessel is intended Carrying Petroleum in Bulk

ENGINES, &c.—Description of Engines Twin vertical reciprocating triple expansion Revs. per minute do.
 Dia. of Cylinders 13 1/2, 23 1/2 + 36 ins. Length of Stroke 27 ins. No. of Cylinders 6 No. of Cranks 6
 Crank shaft, dia. of journals as per Rule 7 1/4 Crank pin dia. 7 3/8 Crank webs Mid. length breadth 14 1/2 Thickness parallel to axis 4 7/8
 as fitted 7 3/8 Mid. length thickness 4 7/8 shrunk Thickness around eye-hole 3 7/8
 Intermediate Shafts, diameter as per Rule 6 1/8 Thrust shaft, diameter at collars as per Rule 7 1/4
 as fitted 7 1/4 as fitted 7 3/8
 Tube Shafts, diameter as per Rule do. Screw Shaft, diameter as per Rule 7 1/4 Is the tube shaft fitted with a continuous liner yes
 as fitted do. as fitted 7 3/4 as fitted 7 3/8
 Bronze Liners, thickness in way of bushes as per Rule 0 5/8 Thickness between bushes as per Rule 0 4/10 Is the after end of the liner made watertight in the propeller boss yes
 as fitted 5/8 as fitted 7/16
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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 Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft yes
 Length of Bearing in Stern Bush next to and supporting propeller 340
 Propeller, dia. 94 1/2 Pitch 9 1/2 No. of Blades 4 Material Bronze whether Moveable no Total Developed Surface 28 (sq. ft.)
 Feed Pumps worked from the Main Engines, No. (None) Diameter 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 1 (do.) Diameter 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work yes
 Feed Pumps { No. and size do. Pumps connected to the Main Bilge Line { No. and size do.
 { How driven do. { How driven do.
 Ballast Pumps, No. and size do. Lubricating Oil Pumps, including Spare Pump, No. and size do.
 Are two independent means arranged for circulating water through the Oil Cooler do. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room do.
 In Holds, &c. do.

Main Water Circulating Pump Direct Bilge Suctions, No. and size do. **Independent Power Pump Direct Suctions to the Engine Room Bilges,** do.
 No. and size do. Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes do.
 Are the 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 do.
 Are all Sea Connections fitted direct on the skin of the ship do. Are they fitted with Valves or Cocks do.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates do. Are the Overboard Discharges above or below the deep water line do.
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel do. Are the Blow Off Cocks fitted with a spigot and brass covering plate do.
 What Pipes pass through the bunkers do. How are they protected do.
 What pipes pass through the deep tanks do. Have they been tested as per Rule do.
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times do.
 Is the 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 do. Is the Shaft Tunnel watertight do. Is it fitted with a watertight door do. worked from do.

MAIN BOILERS, &c.—(Letter for record do.) Total Heating Surface of Boilers 3702 sq. ft.
 Is Forced Draft fitted no No. and Description of Boilers do. Working Pressure 180 lbs. per sq. in.
IS A REPORT ON MAIN BOILERS NOW FORWARDED? No. Belfast Office Report.
IS A DONKEY BOILER FITTED? do. If so, is a report now forwarded? do.
PLANS. Are approved plans forwarded herewith for Shafting do. Main Boilers do. Auxiliary Boilers do. Donkey Boilers do.
 (If not state date of approval) Superheaters do. General Pumping Arrangements do. Oil fuel Burning Piping Arrangements do.

SPARE GEAR. State the articles supplied:— As per attached list.

The foregoing is a correct description,
 For HARLAND & WOLFF, LTD.
 J. C. Green,
 MANAGER FINNIESTON WORKS

Manufacturer.



1927 Nov. 9 Dec 28 (1928) Feb. 1-10-13-14-16-27 Mar 6-13-14-19-23

Dates of Survey while building

Total No. of visits 13

Dates of Examination of principal parts—Cylinders { 13-2-28 / 27-2-28 Slides 13-3-28 Covers { 13-2-28 / 27-2-28
 Pistons 13-3-28 Piston Rods 13-3-28 Connecting rods 13-3-28
 Crank shafts 6-3-28 Thrust shafts 19-3-28 Intermediate shafts ✓
 Tube shaft ✓ Screw shafts 13-3-28 Propeller ✓
 Stern tubes 14-3-28 Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections
 Completion of pumping arrangements Boilers fixed Engines tried under steam
 Main boiler safety valves adjusted Thickness of adjusting washers

Crank shaft material Steel Identification Mark 440705 2853 J.D.B. Thrust shaft material steel Identification Mark 635-634 440705 721 J.D.B. 721 J.D.B.
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark J.D.B.

Screw shaft material steel Identification Mark 440705 2853 J.D.B. Steam Pipes, material Test pressure Date of Test
 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 the Rules for the use of oil as fuel been complied with
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel T.S.S. "TIA JUANA"

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines, including the thrust & propeller shafts, have been built under special survey in accordance with the Society's Rules. The material & workmanship are good. They have been shipped to Belfast & fitted in the vessel.*

On completion of fitting out this machinery will be eligible, in my opinion, to be classed in the Register Book with notation, L.M.C. (with date); C.L.

The amount of Entry Fee ... £ 3 : - : - : When applied for, 2/3 Special ... £ 19 : 12/ : 24/3/28.
 Donkey Boiler Fee ... £ - : - : - : When received, 22-5-28
 Travelling Expenses (if any) £ - : - : - :

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

FRI 4 MAY 1928

Committee's Minute GLASGOW 27 MAR 1928

Assigned Deferred

Certificate to be sent to