

Rpt. 4.  
D.O.

No. 34639

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

4 MAR 1947

Port of Sunderland  
 Date, First Survey 22 May 46 Last Survey 27 Feb 1947  
 (Number of Visits 76)  
 Tons Gross 5381  
 Tons Net 3178  
 When built 1944  
 Engines made at Sunderland By whom made G. Clark (1938) L. Engine No. 1426 When made 1944  
 Boilers made at Sunderland By whom made G. Clark (1938) L. Boiler No. 1426 When made 1944  
 Registered Horse Power \_\_\_\_\_ Owners Hola Mercante del Bolado Port belonging to Buenos Aires  
 Nom. Horse Power as per Rule 528 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes  
 Trade for which vessel is intended NHP 475

Engines, &c. Description of Engines Triple Expansion (Poppet valves on HP & MP - vertical) Revs. per minute 69  
 of Cylinders 24" - 39" - 68" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals 13.48" Crank pin dia. 14" Mid. length breadth 24" Thickness parallel to axis 9"  
 as fitted 14" Crank webs HP 1 1/2" MP 9 1/4" shrunk 9"  
 as per Rule 13.13" Mid. length thickness MP 9 1/4" Thickness around eye-hole 4 1/2"  
 Intermediate Shafts, diameter 13 1/4" Thrust shaft, diameter at collars 14"  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_

Shafts, diameter \_\_\_\_\_ as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_  
 Screw Shaft, diameter 15" Is the tube screw shaft fitted with a continuous liner Yes  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_  
 Liners, thickness in way of bushes \_\_\_\_\_ as per Rule .44" Thickness between bushes 2 1/32" Is the after end of the liner made watertight in the  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_

Propeller boss \_\_\_\_\_ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length  
 Is 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 \_\_\_\_\_  
 Are liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Is an approved Oil Gland or other appliance fitted at the after end of the tube  
 If so, state type \_\_\_\_\_ Length of Bearing in Stern Bush next to and supporting propeller 5-0 1/2"  
 No. of Blades 4 Material Bronze whether Moveable No. Total Developed Surface 120 sq. feet

Can one be overhauled while the other is at work \_\_\_\_\_  
 Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_  
 Auxiliary Engines, No. \_\_\_\_\_ Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work Yes  
 Pumps connected to the Main Bilge Line { No. and size 1 @ 9" x 10" x 10" & 1 @ 5 1/2" x 6" x 15"  
 How driven Steam How driven Steam

Lubricating Oil Pumps, including Spare Pump, No. and size \_\_\_\_\_  
 Suctions, connected both to Main Bilge Pumps and Auxiliary \_\_\_\_\_  
 In Engine and Boiler Room 4 @ 3" 2 @ 2 1/2" (oil bilge) 1 bilge pump & 1 aux pump @ 2 1/2" from end of tunnel 1-3' length hull  
 In Holds, &c. N° 1. 3" φ 15. N° 2. 3 1/2" φ 15. N° 3 (keel bunk) 2 1/2" φ 15.

Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges,  
 and size 1 @ 5" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 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 Yes  
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with 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 Overboard Discharges above or below the deep water line Below  
 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  
 How are they protected \_\_\_\_\_

How are they protected \_\_\_\_\_ Have they been tested as per Rule Yes  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 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 Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Deck

IN BOILERS, &c. (Letter for record S.) Total Heating Surface of Boilers 6699 sq ft & 1188 sq sp. ht.  
 Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters \_\_\_\_\_  
 No. and Description of Boilers 3 SA. Working Pressure 220 lbs/sq.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded? \_\_\_\_\_  
 Can the donkey boiler be used for other than domestic purposes \_\_\_\_\_  
 Are approved plans forwarded herewith for Shafting Main Boilers Yes Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval)  
 Superheaters Yes General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

SPARE GEAR.  
 Is the spare gear required by the Rules been supplied Yes  
 Is the principal additional spare gear supplied \_\_\_\_\_

The foregoing is a correct description.

GEORGE CLARK (1938) LTD.

A. J. Schaffer  
RESIDENT MANAGER

Manufacturer.



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Lloyd's Register Foundation

Dates of Survey while building

During progress of work in shops - - { 1946 May 22, 31, June 3, 12, Aug. 8, 17, 22, 29, Sep. 2, 9, 12, 17, 16, 24, 25, 26, 27, Oct. 1, 3, 7, 11, 18, 21, 22, 23, 24, 25, 29, 30, Nov. 1, 4, 5, 6, 7, 8, 11, 13, 13, 14, 15, 18, 19, 20, 21, 22, 25, 26, 27, 29, Dec. 2, 3, 12, 16, 18, 20, 22, 24, 30, 31 } 47

During erection on board vessel - - - { Jan 2, 8, 16, 17, 30, Feb 3, 4, 5, 12, 27 }

Total No. of visits 76

Dates of Examination of principal parts - Cylinders HP 13/11/46 MP 13/11/46 L.P. 15/11/46 Slides Poppet Valve Jan 20/11/46 L.P. Slide 5/11/46 Covers 20 Cyls.

Pistons 13/9/46 Piston Rods 11/10/46 Connecting rods 13/11/46

Crank shaft 2/9/46 Thrust shaft 15/10/46 Intermediate shafts 12/11/46, 15/11/46, 19/11/46, 26/11/46

Tube shaft - Screw shaft 12/11/46 Propeller 15/5/46 (Bkn)

Stern tube 30/10/46, 8/11/46 Engine and boiler seatings 31/12/46 Engines holding down bolts 31/12/46

Completion of fitting sea connections 8/11/46

Completion of pumping arrangements 4/2/47 + 5/2/47 Boilers fixed 31/12/46 Engines tried under steam 3/2/47 + 24/2/47

Main boiler safety valves adjusted 3/2/47 Thickness of adjusting washers P. Bl. S. 3/8, 5/16, C. Bl. S. 3/8, 1/4, S. Bl. S. 3/8

Crank shaft material Ingot Steel Identification Mark 2/9/46 Thrust shaft material Ingot Steel Identification Mark 15/10

Intermediate shafts, material Ingot Steel Identification Marks N° 8359, 60/11/2/8356/418 Tube shaft, material - Identification Mark -

Screw shaft, material Ingot Steel Identification Mark 12/11/46 Steam Pipes, material S.D. Steel Test pressure 660 lbs/sq. in. Date of Test 16/1/47

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 the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with Not desired

Is this machinery duplicate of a previous case Yes. If so, state name of vessel "RIO DIAMANTE"

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under Special Survey in accordance with the approved plans & the rules of the Society. The material & workmanship all good.

It has been securely fitted on board the vessel & tried under heavy conditions with satisfactory results.

The machinery is eligible in our opinion to have notation L.M.C. 2.44 T.S (CL) 3 SB (Spt) 220 lbs/sq. in. F.D. Fitted to burn oil fuel F.P. above 150°F. 2.44.

The amount of Entry Fee ... £ - : - : When applied for, MAR - 3 1947

Special ... £ 124 : 8

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 19

J. T. Kraus & J. Grieve  
Engineer Surveyor to Lloyd's Register of Shipping

Date FRI 7 MAR 1947

Committee's Minute + L.M.C. 2.47

Fitted for oil fuel 2.47 F.P. above 150°F  
F.D. C.L.



in duplicate Certificate to be sent to SUNDERLAND.

The Surveyors are requested not to write on or below the space for Committee's Minute.