

REPORT ON OIL ENGINE MACHINERY.

No. 10081

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Date of writing Report 26/10/27 When handed in at Local Office GENOA Port of GENOA
 No. in Survey held at GENOA Date, First Survey APRIL 26/1927 Last Survey OCT. 32. 1927
 Reg. Book. 1006 on the Twin Single Screw vessel "ORAZIO" Number of Visits 53

Built at BAIA By whom built CANTIERE ED OFFICINE MERIDIONALE Yard No. 14 When built 1927
 Engines made at TRIESTE By whom made STABILIMENTO TECNICO TRIESTINO Engine Nos. 510 1/2 When made 1927
 Donkey Boilers made at HAMBURG By whom made DEUTSCHE WERT. A. G. Boilers No. 236 When made 1926
 Brake Horse Power 1312 Owners NAVIGAZIONE GENERALE ITALIANA Port belonging to GENOA
 Nom. Horse Power as per Rule 1312 Is Refrigerating Machinery fitted for cargo purposes YES Is Electric Light fitted YES
 Trade for which vessel is intended SOUTH AMERICAN (WEST COAST) PASSENGER & GENERAL CARGO.

L ENGINES, &c.—Type of Engines BURMEISTER WAIN DIESEL 2 or 4 stroke cycle 4 Single or double acting SINGLE
 Maximum pressure in cylinders 35 Kg/cm² Diameter of cylinders 740 mm Length of stroke 1300 mm No. of cylinders 16 No. of cranks 16
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 1004 mm Is there a bearing between each crank YES
 Revolutions per minute 125 Flywheel dia. 2150 mm Weight 5600 Kilos Means of ignition COMPRESSION Kind of fuel used DIESEL OIL
 Crank Shaft, dia. of journals as per Rule APP. 487 mm as fitted 487 mm Crank pin dia. 487 mm Crank Webs Mid. length breadth 928 mm Thickness parallel to axis 310 mm
 Flywheel Shaft, diameter as per Rule APP. 343 mm as fitted 343 mm Intermediate Shafts, diameter as per Rule APP. 325 mm as fitted 325 mm Thrust Shaft, diameter at collars as per Rule APP. 343 mm as fitted 343 mm
 Propeller Shaft, diameter as per Rule APP. 375 mm as fitted 383 mm Is the screw shaft fitted with a continuous liner YES

Propeller Liners, thickness in way of bushes as per Rule 17.5 mm as fitted 21 mm + 23.5 mm Thickness between bushes as per Rule 17.5 mm as fitted 17.5 mm Is the after end of the liner made watertight in the propeller boss YES
 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 NO
 Length of Bearing in Stern Bush next to and supporting propeller 2530 mm
 Propeller, dia. 4540 mm Pitch A170 mm No. of blades 3 Material BRONZE whether Moveable YES Total Developed Surface 5.90 sq. m.
 Method of reversing Engines COMP. AIR Is a governor or other arrangement fitted to prevent racing of the engine YES Means of lubrication LED
 Thickness of cylinder liners 58.5 to 41 mm Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with conducting material BOTH If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine LED TO FUNNEL

Number of Bilge Pumps, No. TWO CENTRIFUGAL Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES
 Bilge Pumps worked from the Main Engines, No. 4 Diameter 160 mm Stroke 270 mm Can one be overhauled while the other is at work YES
 Bilge Pumps connected to the Main Bilge Line No. and Size SIX FOUR 160 mm x 270 mm TWO 300 mm x 300 mm
 How driven MAIN ENGINES ELECTRIC MOTORS
 Bilge Pumps, No. and size TWO 300 mm x 300 mm Lubricating Oil Pumps, including Spare Pump, No. and size TWO 65 TONS PER HOUR
 Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces SIX—100.5 mm DIA. 3.94 FOUR 83 mm DIA. 3.27 (COFFERDAMS)
 Holds, &c. FORWARD FIVE 110 mm DIA. THREE 69 mm DIA. ONE 100.5 mm DIA. AFT. SIX 110 mm DIA. FIVE 69 mm DIA. TWO 100.5 mm DIA.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size TWO 100.5 mm DIA. 3.94
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES Are the Bilge Suctions in the Machinery Spaces 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 VALVES
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates YES Are the Overboard Discharges 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
 Are pipes pass through the bunkers: How are they protected YES
 Are pipes pass through the deep tanks HEATING PIPES 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 ABOVE MAIN DECK
 If the vessel is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork YES

Air Compressors, No. ONE EACH ENGINE No. of stages THREE Diameters 150, 675, 750 mm Stroke 560 mm Driven by MAIN ENGINES
 Auxiliary Air Compressors, No. THREE No. of stages THREE Diameters 70, 270, 320 mm Stroke 370 mm Driven by AUX. DIESEL ENGINE
 Auxiliary Air Compressors, No. ONE No. of stages TWO Diameters 34, 106 mm Stroke 80 mm Driven by STEAM ENGINE
 Ventilating Air Pumps, No. NONE Diameter — Stroke — Driven by —
 Auxiliary Engines crank shafts, diameter as per Rule APPROVED. 204 mm as fitted 204 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES
 Are the internal surfaces of the receivers be examined YES What means are provided for cleaning their inner surfaces ACCESSIBLE FOR CLEANING
 Are there a drain arrangement fitted at the lowest part of each receiver YES
 Pressure Air Receivers, No. 4 MAIN, 3 AUX. Cubic capacity of each 2.0 500 LITRES Internal diameter 480 mm thickness 19 mm
 Are they less, lap welded or riveted longitudinal joint WELDED SEAMLESS Material STEEL Range of tensile strength 36/47 WELDED Working pressure by Rules 65 Kg/cm²
 Ventilating Air Receivers, No. TWO Total cubic capacity 22 m³ Internal diameter 1053 mm thickness 26.5 mm
 Are they less, lap welded or riveted longitudinal joint RIVETED Material STEEL Range of tensile strength 41/50.5 Kg/cm² Working pressure by Rules 25 Kg/cm²

IS A DONKEY BOILER FITTED? YES. If so, is a report now forwarded? YES.
 PLANS. Are approved plans forwarded herewith for Shafting Receivers YES. Separate Tanks
 Donkey Boilers YES. General Pumping Arrangements YES. Oil Fuel Burning Arrangements YES.

SPARE GEAR ONE PROPELLER SHAFT. 2 PROPELLER BLADES. (RIGHT & LEFT HAND).
 ONE CYLINDER COVER COMPLETE FOR BOTH MAIN AND AUXILIARY ENGINES.
 ONE COMPLETE SET OF VALVES, SEATS, SPRINGS ETC FOR ONE MAIN AND AUXILIARY ENGINE CYLINDER.
 ONE PISTON COMPLETE FOR BOTH MAIN AND AUXILIARY ENGINES.
 ONE COMPLETE SET OF SPARE RINGS FOR ONE MAIN & AUXILIARY PISTONS.
 ONE COMPLETE SET OF SKEW WHEELS FOR ONE MAIN ENGINE.
 TWO CONNECTING ROD TOP AND BOTTOM END BOLTS AND MAIN BEARING BOLTS COMPLETE MAIN & AUX.
 ONE SET OF COUPLING BOLTS COMPLETE FOR CRANK AND INTERMEDIATE SHAFTS.
 ONE COMPLETE SET OF PISTON RINGS AND VALVES FOR MAIN AND AUXILIARY COMPRESSORS.
 ONE FUEL PUMP COMPLETE FOR MAIN AND AUXILIARY ENGINES.
 ONE COMPLETE SET OF VALVES FOR ALL AUXILIARY PUMPS, QUANTITIES OF ASSORTED BOLTS & NUTS,
 LENGTHS OF PIPES (VARIOUS DIAMETERS) AND NUMERABLE OTHER SPARE PARTS FOR ALL BRANCHES AND
 SECTIONS OF THE MACHINERY INSTALLATION ON BOARD.
 The foregoing is a correct description.

Stabilimento Tecnico Triestino
 Fabbrica macchine S. Andrea - Trieste

OFFICINE ALLESTIMENTO E RIPARAZIONI NAVI
 L. Mellini
 Manufacturer.

Dates of Survey while building: During progress of work in shops - SEE TRIESTE REPORT N° 7596. N° 141.
 During erection on board vessel - 10/27, APRIL 26, 27, 28, MAY 3, 30, 31, JUNE 1, 6, 13, 21, 30, JULY 1, 10, 14, 18, 19, 20, 28, 29, AUG 11, 13, 17, 19, 22, 24, SEPT 1, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, OCT 1, 4, 5, 6, 8, 9, 11, 12, 14, 19, 20, 22. -
 Total No. of visits 141 + 53. 194.

Dates of Examination of principal parts - Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓
 Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓
 Screw shaft ✓ Propeller 1-10-27. Stern tube ✓ Engine seatings ✓ Engines holding down bolts 9-9-27, 16-9-27
 Completion of fitting sea connections ✓ Completion of pumping arrangements 9-10-27. Engines tried under working conditions 9-11-10-27.
 Crank shaft, Material STEEL. Identification Mark 295 N.G., 296 N.G., 323 N.G., 324 N.G. Flywheel shaft, Material STEEL. Identification Mark 280 N.G., 291 N.G.
 Thrust shaft, Material STEEL. Identification Mark 280 N.G., 291 N.G. Intermediate shafts, Material STEEL. Identification Marks 282-3, 285-9, 272-9 N.G.
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material STEEL. Identification Mark 271 N.G., 281 N.G.

Is the flash point of the oil to be used over 150° F. YES.
 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 constructed under special survey at Trieste, see Trieste report no 7596.

It has now been satisfactorily fitted on board in accordance with approved plans, rule requirements and Secretary's letter, and when examined under working condition was found satisfactory.
 In our opinion the vessel is eligible for the record of
 + LLOYD'S MACHINERY CERTIFICATE (LMC) 10-27 and the Isolations OIL ENGINES, C.L. 2 DB - 100 LBS.

DUAL SURVEY
 L.R. & R.I.

The amount of Entry Fee ... £
 Special ... 1/5 ... £1,980.00
 Donkey Boilers Fee ... £100.00
 Travelling Expenses (if any) ... £650.00
 SUMOAR FEE ... £100.00
 Committee's Minute
 Assigned

J.W. Leicester & Max Lawauch
 Engineer Surveyors to Lloyd's Register of Shipping.



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LMC 10-27
 Oil Engines
 2 DB 100 lbs

Certificate (if required) to be sent to...
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)