

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

No. 8225

Received at London Office

1 JAN 1929

Date of writing Report 10/12 1928 When handed in at Local Office 28/12/28 Port of TRIESTE

No. in Survey held at TRIESTE-MONFALCONE-POLA Date, First Survey 18th Nov. 1926 Last Survey 18th Dec 1928
Reg. Book. Number of Visits 33184691 on the ^{Single} Twin ^{Triple} Screw vessel

"VULCANIA"

Tons Gross 23970
Net 14476

Built at MONFALCONE By whom built CANTIERE NAV. TRIESTINO Yard No. 161. When built 1928
Engines made at TRIESTE By whom made STABILIMENTO TECNICO T. Engine No. 5048 When made 1928
Donkey Boilers made at GLASSON By whom made BOCHMAN & CO. ANNAN LO Boiler No. 9957 When made 1928
Brake Horse Power 20000 Owners COSULICH SOCIETÀ TRIESTINA DI NAV. Port belonging to TRIESTE
Nom. Horse Power as per Rule 3379. Is Refrigerating Machinery fitted for cargo purposes YES. Is Electric Light fitted YES.
Trade for which vessel is intended N. Atlantic.

IL ENGINES, &c. Type of Engines BURMEISTER & WAIN DIESEL 2 or 4 stroke cycle 4 Single or double acting DOUBLE
Maximum pressure in cylinders 35 1/2 kg/cm² Diameter of cylinders 840 mm Length of stroke 1500 mm No. of cylinders 16 No. of cranks 16
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1150 mm Is there a bearing between each crank YES.
Revolutions per minute 125 Flywheel dia. 2800 mm Weight 9700 kgs. Means of ignition COMPRESSION Kind of fuel used DIESEL OIL
Crank Shaft, dia. of journals as per Rule APP. 570 mm. Crank pin dia. 570 mm. Crank Webs Mid. length breadth 1076 mm Thickness parallel to axis 358 mm.
as fitted 570 mm. Mid. length thickness 358 mm. Thickness around eye-hole 250.5 mm.
Flywheel Shaft, diameter as per Rule APP. 570 mm. Intermediate Shafts, diameter as per Rule APP. 456 mm. Thrust Shaft, diameter at collars as per Rule APP. 480 mm.
as fitted 570 mm. as fitted 456 mm. as fitted 480 mm.
Tube Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule APP. 508 mm. Is the shaft fitted with a continuous liner YES.
as fitted — as fitted 508 mm.
Bronze Liners, thickness in way of bushes as per Rule 24 mm. Thickness between bushes as per Rule 19 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 ONE 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 FIT WHOLE LENGTH
If two 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 shaft — Length of Bearing in Stern Bush next to and supporting propeller 2600 mm.

Propeller, dia. 5300 mm Pitch 5400 mm No. of blades 4 Material BRONZE whether Moveable NO Total Developed Surface 10.20 m²
Method of reversing Engines COMP. AIR. Is a governor or other arrangement fitted to prevent racing of the engine when disengaged YES. Means of lubrication FORCED Thickness of cylinder liners 56 mm. Are the cylinders fitted with safety valves YES. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material LAPPED. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine LEAD FUNNEL

Cooling Water Pumps, No. 4 CENTR. (SEA W.) 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. NONE Diameter — Stroke — Can one be overhauled while the other is at work —
Pumps connected to the Main Bilge Line { No. and Size Two duplex 300 x 300 (150 T) One duplex 300 x 350 (250 T) Four aux.
How driven centrifugal 400 T each. — Electric motors

Ballast Pumps, No. and size Two duplex 300 x 350 Lubricating Oil Pumps, including Spare Pump, No. and size 4 CENTR. EACH 200 TON PER H.

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 3 2 3 1/2", 4 2 4", Tunnel 3 2 3 1/2", 3 2 4"

In Holds, &c. No. 1-2 2 3 1/2", No. 2-2 2 4", No. 3-2 2 4", No. 4-2 2 3 1/2" & 2 2 4", No. 5-2 2 4", No. 6-2 2 3" Deck H-2 2 3" Valve station 2 2 3 1/2" Refrig. space 2 2 2", Fore 1 2 2", Deck at Rail 1 2 3 1/2", 4 Cofferdams 6 2 3 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 2 12 1/2", 2 2 10", 2 2 4" 3 2 3"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES. Are the Bilge Suctions in the Machinery Spaces ed 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 YES.

Are they sized 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 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.
What pipes pass through the bunkers — How are they protected —
What pipes pass through the deep tanks — Have they been tested as per Rule —

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 E.A.B. BOARD DECK BRIDGE.

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork —

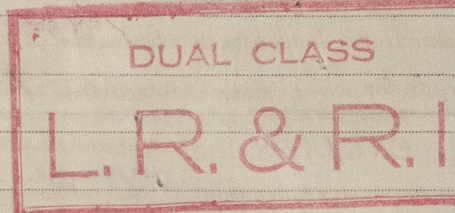
Main Air Compressors, No. THREE No. of stages THREE Diameters 112.775.860 mm Stroke 400 mm Driven by AVX DIESEL ENG.
Auxiliary Air Compressors, No. TWO No. of stages THREE Diameters 134.540.600 mm Stroke 390 mm Driven by AVX DIESEL ENG.
ONE No. of stages THREE Diameters 108.430.480 mm Stroke 310 mm Driven by AVX DIESEL ENG.
Small Auxiliary Air Compressors, No. ONE No. of stages TWO Diameters 34.106 mm Stroke 80 mm Driven by STEAM ENGINE.

scavenging Air Pumps, No. NONE Diameter — Stroke — Driven by —
Auxiliary Engines crank shafts, diameter as per Rule APP. 334 mm.
as fitted 334 mm.

AIR RECEIVERS: — Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES. ON CHARGING LINE
Can the internal surfaces of the receivers be examined YES. What means are provided for cleaning their inner surfaces ACCESSIBLE FOR CLEANING.
Is there a drain arrangement fitted at the lowest part of each receiver YES. 250 LITRES

High Pressure Air Receivers, No. 4 MAIN 3 AUX. Cubic capacity of each 530 Internal diameter 400 mm thickness 24 mm.
3 AUX. WELDED WELDED SEAMLESS Material STEEL Range of tensile strength 36/45 kg/cm² Working pressure by Rules 65 kg/cm²
Seamless, lap welded or riveted longitudinal joint 43 CM. Internal diameter 225 mm thickness 29.5 mm.
Starting Air Receivers, No. TWO MAIN FOUR AUX. Total cubic capacity 88 CM. Internal diameter 225 mm thickness 29.5 mm.
Seamless, lap welded or riveted longitudinal joint RIVETED Material STEEL Range of tensile strength 46/52 kg/cm² Working pressure by Rules 85 kg/cm²

IS A DONKEY BOILER FITTED? YES. If so, is a report now forwarded? YES GL. REP. No 46622446
PLANS. Are approved plans forwarded herewith for Shafting YES. Receivers YES. Separate Tanks YES.
(If not, state date of approval)
Donkey Boilers YES. General Pumping Arrangements YES. Oil Fuel Burning Arrangements —
SPARE GEAR SEE ATTACHED LIST.



The foregoing is a correct description,

Manx Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits 331

See attached list.

Dates of Examination of principal parts—Cylinders 18.6.27 Covers 24.3.27 Pistons 2.4.27 Rods 23.9.25 Connecting rods 19.1.27
Crank shaft 21.7.28 Flywheel shaft 21.7.28 Thrust shaft 4.11.27 Intermediate shafts 4.11.27 Tube shaft —
Screw shaft 27.11.26 Propeller 27.11.26 Stern tube 27.11.26 Engine seatings 7.10.27 Engines holding down bolts 5.10.28
Completion of fitting sea connections 31.11.28 Completion of pumping arrangements 7.12.28 Engines tried under working conditions 25.11.28
Crank shaft, Material S.M. STEEL Identification Mark 295-173-513-12.2.27 Flywheel shaft, Material S.M. STEEL Identification Mark 314-16.11.26 N.G.
Thrust shaft, Material S.M. STEEL Identification Mark 202-187-513-33.12.26 Intermediate shafts, Material S.M. STEEL Identification Marks 897, 8, 9-304, 5-313
Tube shaft, Material — Identification Mark — Screw shaft, Material S.M. STEEL Identification Mark 320, 21, 22-343-863
Is the flash point of the oil to be used over 150° F. YES. SPARE " " " S.M. STEEL " " 401, 2, 3-437, 8 N.G.
" " " " S.M. STEEL " " 233-241-N.G.
" " " " S.M. STEEL " " 313-427-N.G.

Is this machinery duplicate of a previous case YES. If so, state name of vessel M/S. SATURNIA.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under special survey in accordance with the Rules and the approved plans. The material and workmanship are good. Superchargers are fitted.

The machinery has been efficiently installed on board the vessel, Examined under full working condition and found satisfactory, and is eligible, in our opinion for classification and to have the RECORD + L.M.C. - 12.28 in the Register Book.

Free Office

The amount of Entry Fee Lsg = 600.-
Special Lsg 20,968.-
Donkey Boiler Fee See Glasgow Report.
Travelling Expenses (if any) Lsg 2,103.-
Holidays & Sunday fees Lsg 893.-
Committee's Minute 290

When applied for,

When received,

TUE. 8 JAN 1929

Assigned

L.M.C. 12.28 Oil Engines
25B 100lb



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