

REPORT ON OIL ENGINE MACHINERY.

No. 7818

Date of writing Report 12th Jan. 1928 When handed in at Local Office 12th Jan. 1928 Port of Trieste Received at London Office 16 JAN 1928
 No. in Survey held at 8265 Reg. Book. 8265 on the Single Twin Triple Quadruple Screw vessel "VIRGILIO"
 Date, First Survey 7th Dec. 1926 Last Survey 9th Jan 1928 Number of Visits 174

Built at Baia By whom built Antiere ed Officine Meridionale Yard No. 15 When built 1928
 Engines made at Trieste By whom made Stabilimento Tecnico Triestino Engine No. 5106/7 When made 1928
 Donkey Boilers made at Hamburg By whom made Deutsche Werft A. G. Boiler No. — When made on order
 Brake Horse Power — Owners Navigazione Generale Italiana Port belonging to Genoa
 Nom. Horse Power as per Rule 1312 Is Refrigerating Machinery fitted for cargo purposes — Is Electric Light fitted yes
 Trade for which vessel is intended —

IL ENGINES, &c.—Type of Engines Burmeister Wain Diesel 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 35 Kgo/cm² Diameter of cylinders 740 mm Length of stroke 1300 mm No. of cylinders 16 No. of cranks 16
 Span 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 App² 487 mm Crank pin dia. 487 mm Crank Webs Mid. length breadth 928 mm Thickness parallel to axis 310 mm
 as fitted 487 mm Mid. length thickness 310 mm Thickness around eye-hole 217 mm
 Flywheel Shaft, diameter as per Rule App² 343 mm Intermediate Shafts, diameter as per Rule App² 325 mm Thrust Shaft, diameter at collars as per Rule App² 343 mm
 as fitted 343 mm as fitted — as fitted 343 mm
 Tube Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule App² 375 mm Is the tube shaft fitted with a continuous liner —
 as fitted — as fitted —
 Bronze Liners, thickness in way of bushes as per Rule App² 19 mm Thickness between bushes as per rule 14.25 mm 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 —
 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 —
 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 —
 Propeller, dia. 4540 mm Pitch 4170 mm No. of blades 3 Material Bronze whether Moveable yes Total Developed Surface 5.90 sq. feet
 Method of reversing Engines Comp. Air Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched yes Means of lubrication
forced 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
 non-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
 cooling Water 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. Two Diameter 160 mm Stroke 270 mm Can one be overhauled while the other is at work yes
 Pumps connected to the Main Bilge Line No. and Size Two duplex 300 x 300 mm
How driven Electric Motor
 Ballast Pumps, No. and size Two duplex 300 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 —
 in Holds, &c. —
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size —
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes —
 and from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges —
 Are they fitted with Valves or Cocks —
 Are all Sea Connections fitted direct on the skin of the ship —
 Are they sized sufficiently high on the ship's side to be seen without lifting the platform plates —
 Are the Overboard Discharges above or below the deep water line —
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel —
 Are the Blow Off Cocks fitted with a spigot and brass covering plate —
 How are they protected —
 That pipes pass through the bunkers —
 Have they been tested as per Rule —
 That pipes pass through the deep tanks —
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times —
 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 — Is the Shaft Tunnel watertight — Is it fitted with a watertight door — worked from —

DUAL CLASS

LR & RI

For 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. One Each Engine No. of stages three Diameters 150, 675, 750 mm Stroke 560 mm Driven by Main Eng. C. P.
 Auxiliary Air Compressors, No. Three No. of stages three Diameters 70, 270, 320 mm Stroke 370 mm Driven by Aux. Diesel Engine
 Small Auxiliary Air Compressors, No. One No. of stages two Diameters 34, 106 mm Stroke 80 mm Driven by Steam
 Scavenging Air Pumps, No. None Diameter — Stroke — Driven by —
 Auxiliary Engines crank shafts, diameter as per Rule App² 204 mm
 as fitted 204 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
 High Pressure Air Receivers, No. 4 Main & 3 Aux. Cubic capacity of each 2 @ 500 litres Internal diameter 480 mm thickness 24 mm
3 @ 250 " Internal diameter 360 mm thickness 19 mm
 Seamless, lap welded or riveted longitudinal joint Welded Material Steel Range of tensile strength 36/47 Kgo/cm² Working pressure by Rules 65 Kgo/cm²
Seamless Internal diameter 41/47 mm thickness 26.5 mm
 Starting Air Receivers, No. Two Total cubic capacity 22 m³ Internal diameter 1953 mm Working pressure by Rules 25 Kgo/cm²
 Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 44/50.5 Kgo/cm² Working pressure by Rules 25 Kgo/cm²

IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded? No - to be fitted at Genoa.

PLANS. Are approved plans forwarded herewith for Shifting (If not, state date of approval)

Yes.

Receivers

Yes.

Separate Tanks

Yes.

Donkey Boilers

No

General Pumping Arrangements

At Naples

Oil Fuel Burning Arrangements

No.

SPARE GEAR remains to be fitted on board at Genoa.

The foregoing is a correct description,

Stabilimento Tecnico

Fabbrica macchine S. Andrea, Trieste

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1926 Dec 7, 8, 9, 31, 1927 Jan 3, 5, 8, 10, 11, 12, 13, 15, 17, 18, 18, 24, 24, Feb 7, 8, 9, 11, 14, 15, 16, 17, 19, 25, Mar 4, 5, 7, 8, 9, 11, 12, 14, 15, 16, 17, 21, 23, 28, 30, 31, Apr 1, 4, 11, 12, 13, 29, May 4, 5, 6, 9, 10, 11, 13, 16, 18, 20, 23, 25, 26, 27, 28, 30, 31, June 2, 3, 4, 7, 8, 9, 13, 15, 17, 18, 20, 21, 22, 27, 28, July 2, 4, 12, 14, 15, 22, 26, 29, 30, Aug 1, 2, 4, 5, 6, 9, 11, 12, 17, 18, 19, 20, 23, 24, 25, 26, 29, 30, Sep 1, 2, 5, 7, 13, 17, 19, 22, 22, 24, 25, 28, Oct 1, 3, 4, 5, 7, 10, 12, 13, 17, 19, 20, 21, 25, 26, 28, 31, Nov 1, 2, 3, 5, 7, 8, 9, 10, 12, 14, 16, 17, 18, 19, 24, 26, 30, Dec 3, 5, 9, 10, 13, 13, 20, 21, 24, 31, 1928 Jan 4, 5, 7, 9, Total No. of visits One hundred and seventy four.

Dates of Examination of principal parts - Cylinders 4.5.27 to 28.10.27 Covers 17.3.27 to 24.12.27 Pistons 9.7.27 to 5.12.27 Rods 13.6.27 to 14.7.27 Connecting rods 14.7.27 to 14.7.27

Crank shaft 18.7.27 - 5.5.27 Flywheel shaft 24.2.27 - 24.2.27 Thrust shaft 24.2.27 - 24.2.27 Intermediate shafts - Tube shaft -

Screw shaft - Propeller - Stern tube - Engine seatings - Engines holding down bolts -

Completion of fitting sea connections - Completion of pumping arrangements - Engines tried under working conditions -

Crank shaft, Material S. M. 9. S. Identification Mark 454 N. G. 455 N. G. Flywheel shaft, Material S. M. 9. S. Identification Mark 382 N. G. 383 N. G.

Thrust shaft, Material S. M. 9. S. Identification Mark 382 N. G. 383 N. G. Intermediate shafts, Material - Identification Marks -

Tube shaft, Material - Identification Mark - Screw shaft, Material - Identification Mark -

Is the flash point of the oil to be used over 150° F. Yes.

Is this machinery duplicate of a previous case? Yes. If so, state name of vessel "ORAZIO". Trieste Rpt. No 7596.

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

This machinery has been constructed under Special Survey in accordance with the Rules and Approved Plans; the materials and workmanship are good. The machinery, which has been forwarded to Genoa to be installed on board the vessel at that port, is eligible, in my opinion, for classification, and to have record L.M.C. (with date) when it has been satisfactorily installed on board the vessel and examined under working conditions.

The amount of Entry Fee ... 558.- When applied for, 19. 4/5 Special ... 9877.- 2/20s. An Receiver ... 781.- Donkey Boiler Fee ... Travelling Expenses (if any) ... 270.-

Committee's Minute FRI. 18 MAY 1928

Assigned See Gen 18/11/28 No 10313

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