

REPORT ON OIL ENGINE MACHINERY.

No. 13997

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Date of writing Report 18th June 1954 When handed in at Local Office 26 July 1954 Port of TRIESTE
 Survey held at Monfalcone & Trieste Date, First Survey 25th Aug. 1952 Last Survey 28th May 1954
 Number of Visits 125
 Single Screw vessel "FIACCOLA"
 Tons Gross 12.460 Net 7.487
 Built at Monfalcone By whom built Cant. Riva dell' Adriatico Yard No. 1787 When built 1954
 Engines made at Trieste By whom made " " Engine No. 5590 When made 1954
 Key Boilers made at " " By whom made " " Boiler No. 1971 When made 1954
 Brake Horse Power 7000 Owners "CITMAR" Cia. Ital. Trasporti Marittimi Port belonging to VENICE
 V. Power as per Rule 1400 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Use for which vessel is intended Petroleum in bulk

ENGINES, &c. — Type of Engines DIESEL-SULZER 10 SD72 2 or 4 stroke cycle 2 Single or double acting S.F. ✓
 Maximum pressure in cylinders 55 kg/cm² ✓ Diameter of cylinders 720 mm ✓ Length of stroke 1250 mm ✓ No. of cylinders 10 ✓ No. of cranks 10 ✓
 Mean Indicated Pressure 5.97 kg/cm² ✓ Ahead Firing Order in Cylinders 10-5-2-9-6-1-8-7-4-3 Span of bearings, adjacent to the crank, measured
 from inner edge to inner edge 930 mm ✓ Is there a bearing between each crank yes ✓ Revolutions per minute 125 ✓
 Flywheel dia. 2424 mm ✓ Weight 1340 kg ✓ Moment of inertia of flywheel (kg.m²) PD² = kg.m² ✓ Means of ignition compr. Kind of fuel used heavy
 Crank pin dia. 490 mm ✓ Crank webs Mid. length breadth 860 mm ✓ Thickness parallel to axis 243 mm ✓
 Mid. length thickness 295 mm ✓ Thickness around eye-hole 490 mm ✓
 Main Shaft, diameter as per Rule 225 mm ✓ Intermediate Shafts, diameter as per Rule 225 mm ✓ Thrust Shaft, diameter at collars as per Rule 225 mm ✓
 Propeller Shaft, diameter as per Rule 225 mm ✓ Screw Shaft, diameter as per Rule 225 mm ✓ Is the (tube) shaft fitted with a continuous liner yes ✓
 Bronze Liners, thickness in way of bushes as per Rule 225 mm ✓ Thickness between bushes as per Rule 18 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 ✓
 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 tube shaft ✓ If so, state type ✓ Length of bearing in Stern Bush next to and supporting propeller 2100 mm ✓
 Propeller, dia. 5100 mm ✓ Pitch 4150 mm ✓ No. of blades 4 Material bronze whether moveable fixed Total developed surface 8.33 sq. ft. ✓
 Moment of inertia of propeller (kg.m²) PD² = kg.m² 31840 Kind of damper, if fitted none ✓
 Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged yes ✓ Means of
 lubrication forced Thickness of cylinder liners 44 mm ✓ Are the cylinders fitted with safety valves yes ✓ Are the exhaust pipes and silencers water-cooled
 lagged with non-conducting material yes ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
 back to the engine ✓ Cooling Water Pumps, No. 3 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. 1 ✓ Diameter 150 mm ✓ Stroke 150 mm ✓ Can one be overhauled while the other is at work ✓
 Pumps connected to the Main Bilge Line No. and size 1 of 150 Tons ✓ 2 of 40 Tons ✓ 1 of 60 Tons ✓ How driven Steam ✓ Steam ✓ Steam ✓
 Is the cooling water led to the bilges no ✓ If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 arrangements ✓
 Ballast Pumps, No. and size 1 of 150 & 1 of 40 Tons ✓ Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 of 275 cumt. ✓
 Are there 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 1 at 100 mm ✓ 2 at 80 mm ✓ 2 at 50 mm (boiler space) ✓ 1 at 50 mm c.p. ✓ In pump rooms 1 at 100 mm ✓ 2 at 100 mm ✓
 Holds, etc. 2 at 70 mm ✓ 2 at 70 from fwd. pump room ✓ 1 at 70 mm from fwd. c.p. ✓
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 at 125 std. ✓ 1 at 100 mm port ✓ 1 at 2 1/2 mm emerg. port ✓
 Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes ✓ Are the bilge suction pipes in the machinery spaces 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 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 ✓
 Do the pipes pass through the bunkers none ✓ How are they protected ✓
 Do the pipes pass through the deep tanks none ✓ 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 ✓

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 ✓ Is it fitted with a watertight door ✓ worked from ✓
 (Cert.) Good vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓
 Main Air Compressors, No. 1 ✓ No. of stages 1 ✓ diameters 220 mm ✓ stroke 150 mm ✓ driven by 4-cyl. a/c eng. ✓
 Auxiliary Air Compressors, No. 2 ✓ No. of stages 2 ✓ diameters 220 mm ✓ stroke capacity each driven by 4-cyl. a/c eng. ✓
 Small Auxiliary Air Compressors, No. 1 ✓ No. of stages 1 ✓ diameters 360 mm ✓ stroke capacity driven by hand ✓
 What provision is made for first charging the air receivers hand compressor ✓
 Scavenging Air Pumps, No. 10 (1 each cyl.) ✓ diameter 950 mm ✓ stroke 520 mm ✓ driven by engine conn. rod ✓
 Auxiliary Engines crank shafts, diameter as per Rule 225 mm ✓ journals 185 mm ✓ plus Position M. E. room 2 port & 1 std. ✓
 Have the auxiliary engines been constructed under special survey yes ✓ Is a report sent herewith yes ✓

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AIR RECEIVERS:—Have they been made under survey. yes ✓ State No. of ~~report~~ certificate. 2819 & 2820

Is each receiver, which can be isolated, fitted with a safety valve as per Rule. yes ✓

Can the internal surfaces of the receivers be examined and cleaned. yes ✓ Is a drain fitted at the lowest part of each receiver. yes ✓

Starting ~~Injection~~ Air Receivers, No. 2 Cubic capacity of each 22 cu. mt. Internal diameter 1640/1578 thickness 32/31 mm.

Seamless, welded or riveted longitudinal joint. welded ✓ Material S.M.S. Range of tensile strength 42 kg/mm² Working pressure Actual 30 by Rules 20

Starting Air Receivers, No. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓

Seamless, welded or riveted longitudinal joint. ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules Actual No. in g. Bo

IS A DONKEY BOILER FITTED yes ✓ If so, is a report now forwarded. yes ✓

Is the donkey boiler intended to be used for domestic purposes only. no

PLANS. Are approved plans forwarded herewith for shafting. yes ✓ Receivers yes ✓ Separate fuel tanks. ✓

Donkey boilers yes ✓ General pumping arrangements. yes ✓ Pumping arrangements in machinery space. yes ✓

Oil fuel burning arrangements. yes ✓

Have Torsional Vibration characteristics been approved. yes ✓ Date of approval. 21st July, 1954

SPARE GEAR.

Has the spare gear required by the Rules been supplied. yes ✓

State the principal additional spare gear supplied. 1 screw shaft - 1 cylinder liner, 1 piston, 1 cover, 1 conn. rod
other small miscellaneous items.

CANTIERI RIUNITI DELL'ADRIATICO

CANTIERE NAVALE MONFALCONE

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1952 Aug 25, Dec 9, 17, 19, 20, 22, 1953 Jan 7, 13, 15, 19, 21, 26, 28, Feb 3, Mar 3, 4, 10, 11, 23, 24
During erection on board vessel - Jan 14, 15, 19, 22, 25, Apr 5, 7, May 11, 12, 24, 29, 31, Aug 5, 8, 19, 21, 28, 31, Sept 2, 4, 5, 11, 22, 30, Oct 1, 3, 6, 9, 12, 14, 16, 17, 20, 23, 26, Nov 9, Dec 17
Total No. of visits 125

Dates of examination of principal parts—Cylinders 5/2 ÷ 2/4 Covers 5/2 ÷ 2/4 Pistons 5/2 ÷ 2/4 Rods ✓ Connecting rods 5/2 ÷

Crank shaft 5/2 ÷ 2/4 Flywheel shaft 5/2 ÷ 2/4 Thrust shaft 5/2 ÷ 2/4 Intermediate shafts 15.1.54 Tube shaft ✓

Screw shaft 2.12.53 Propeller 17.5.54 Stern tube 2.12.53 Engine seatings 5.4.54 Engine holding down bolts 16.4.54

Completion of fitting sea connections 17.5.54 Completion of pumping arrangements 18.5.54 Engines tried under working conditions 19.5.54

Crank shaft, material S.M.S. Identification mark LLOYD'S 2337 Flywheel shaft, material S.M.S. Identification mark see thrust

Thrust shaft, material S.M.S. Identification mark LLOYD'S 2324 Intermediate shafts, material S.M.S. Identification marks LLOYD'S 16

Tube shaft, material ✓ Identification mark ✓ Screw shaft, material S.M.S. Identification mark LLOYD'S 16

Identification marks on air receivers 803 and 804 LLOYD'S TEST 485 kg/cm²

W.P. 30 kg/cm² - J.W. - Tri. 24.7.53

Welded receivers, state Makers' Name Messrs. Cantieri Riuniti dell'Adriatico - F.M.S.A. - Trieste

Is the flash point of the oil to be used over 150°F yes ✓

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with yes ✓

Description of fire extinguishing apparatus fitted CO₂ led to the engine room. Steam with remote control under oil fired boilers.

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 ✓

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with ✓

Is this machinery duplicate of a previous case yes with exception of the main engine only If so, state name of vessel "FIAMMA" - C.R.D.A. Yard No. 1776

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

The machinery of this vessel has been built under special survey in accordance with Secretary's Letters and approved plans. All important forgings and castings were inspected and tested in accordance with the Rules. The workmanship and the materials are good. The machinery was installed on board the vessel in an efficient manner and found satisfactory when tried at sea under full working conditions. In my opinion, the machinery of this vessel is eligible to be classed with records of:

± LMC 5-54 Oil Engine - 2 DB 171 lbs. - screw shaft CL

DUAL CLASS
L.R. & F.I.

The amount of Entry Fee ... £ 994.500

Special Car fund ... £ 24.860

Donkey Boiler Fee (Rat. 5%) £ ✓

Travelling Expenses (if any) £ 65.275

Committee's Minute Rev Tax 3% 32.540

When applied for 26 7 1954

When received 19

Engineer Surveyor to Lloyd's Register of Shipping Stedari

Assigned ± LMC 5.54

2 DB 171 lb.

CL



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Foundation