

REPORT ON OIL ENGINE MACHINERY.

Received at London Office 21 JAN 1955

Date of writing Report 13th January 1955 When handed in at Local Office 15th January 1955 Port of TRIESTE
No. in Survey held at Moulafouca - Trieste Date, First Survey 21st Febr. 1953 Last Survey 11th December 1954
Reg. Book. 95362 on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ Screw vessel. Mv. "ALDERMINE" Tons Gross 12505 Net 7406

Built at Moulafouca By whom built Cant. Riny. dell' Adriatico Yard No. 1793 When built 1954
Engines made at Trieste By whom made - do - Engine No. 5596 When made 1954
Donkey Boilers made at - do - By whom made - do - Boiler No. 1983 When made 1954
Brake Horse Power 8050 Owners 'ROMSA' - Raffineria O.P.O. Minerale S.A. Port belonging to GENOA
M.N. Power as per Rule 1610 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended Carrying Petroleum in bulk

OIL ENGINES, &c. - Type of Engines CRDA - FIAT A 7510 2 or 4 stroke cycle 2 Single or double acting S.A.

Maximum pressure in cylinders 60 kg/cm² Diameter of cylinders 750 mm Length of stroke 1320 mm No. of cylinders 10 No. of cranks 10

Mean Indicated Pressure 6.25 kg/cm² Ahead Firing Order in Cylinders 1-10-2-8-4-6-5-7-3-9 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 964 mm Is there a bearing between each crank Revolutions per minute 125

Flywheel dia. 2457 mm Weight 3920 kg Moment of inertia of flywheel (lb.in.² or kg.cm.²) 15800 Means of ignition compr. Kind of fuel used heavy

Crank Shaft, ^{Solid forged} ~~Semi built~~ ~~41 built~~ dia. of journals as per Rule as app. as fitted 550 mm Crank pin dia. 550 mm Crank webs Mid. length breadth 900 mm Thickness parallel to axis - Mid. length thickness 316 mm shrunk Thickness around eye-hole 252.5 mm

Flywheel Shaft, diameter as per Rule as app. as fitted 550 mm Intermediate Shafts, diameter as per Rule as app. as fitted 387 mm Thrust Shaft, diameter at collars as per Rule as app. as fitted 550 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as app. as fitted 457 mm reduced to 425 mm at coupling Is the (screw) shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule as app. as fitted 22 mm Thickness between bushes as per Rule as app. as fitted 16.5 mm Is the after end of the liner made watertight in the 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 tube shaft If so, state type

Propeller, dia. 5250 mm Pitch H 110 mm No. of blades 4 Material bronze whether moveable fixed Total developed surface 9.42 sq. feet Length of bearing in Stern Bush next to and supporting propeller 2140 mm

Moment of inertia of propeller (lb.in.² or kg.cm.²) H 2600 Kind of damper, if fitted none

Method of reversing Engines direct Is a governor or other appliance fitted to prevent racing of the engine Means of lubrication forced Thickness of cylinder liners 60 mm Are the cylinders fitted with safety valves Are the exhaust pipes and silencers lagged with non-conducting material 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. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and size 1 of 200 T/h. - 1 of 80 T/h. How driven steam electrically

Is the cooling water led to the bilges 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 200 T/h. - 1 of 80 T/h. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 of 360 cu. mt./h.

Are two independent means arranged for circulating water through the Oil Cooler 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 (from D.B. space) - 2 at 50 mm from each In pump rooms 1 at 125 mm - 2 at 50 mm In holds, &c. 2 at 65 mm from hold - 2 at 65 mm from fwd. p. room - 2 at 65 mm from deck - 1 at 65 mm from chain Pce. - 1 at 50 mm from each C/D with eject

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 at 125 mm stbd. - 1 at 100 mm port - 1 at 275 mm cu. port

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction 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

Are all Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed 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 below

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

What pipes pass through the bunkers. none How are they protected

What 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 yes as practicable

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

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. No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 220 m³/h. stroke capacity each driven by elect. motor steam eng.

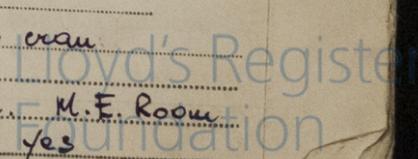
Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 220 m³/h. stroke capacity driven by H.C.S.A. oil pump

What provision is made for first charging the air receivers. hand compressor

Scavenging Air Pumps, No. 2 opposed pistons diameter 1600 mm stroke 1050 mm driven by crank

Auxiliary Engines crank shafts, diameter as per Rule as app. as fitted Journals 200 mm - Pins 185 mm No. 3 Position 2 port - 1 stbd. M.F. Room

Have the auxiliary engines been constructed under special survey Is a report sent herewith



AIR RECEIVERS:—Have they been made under survey... *yes* ✓ State No. of ~~report~~ certificate... *Tri. No. 2900*
 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* ✓
 Injection Air Receivers, No. *✓* Cubic capacity of each... *✓* Internal diameter... *✓* thickness... *✓*
 Seamless, welded or riveted longitudinal joint... *✓* Material... *✓* Range of tensile strength... *✓* Working pressure... *by Rules... ✓*
 Starting Air Receivers, No. *2* ✓ Total cubic capacity... *22 cu. wts.* Internal diameter... *1640/1578* ⁱⁿ thickness... *32/31* ⁱⁿ
 Seamless, welded or riveted longitudinal joint... *welded* Material... *S.M.S.V.* Range of tensile strength... *11 kg/cm²* Working pressure... *Actual 30 kg/cm²*

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... *22.10.52* for *✓* Separate fuel tanks... *Nos. 1771/1772*
 (If not, state date of approval)
 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... *3.7.53*

SPARE GEAR.

Has the spare gear required by the Rules been supplied... *yes*
 State the principal additional spare gear supplied... *1 propeller - 1 screw shaft - 1 liner complete - 1 piston - 1 cover - 1 piston rod - 1 conn. rod - and various other small miscellaneous items.*

CANTIERI RIUNITI DELL'ADRIATICO

The foregoing is a correct description, *Monte*, Manufacturer.

Dates of Survey while building
 During progress of work in shops - - *1953 Feb. 21, 24, 25, 28. Mar 20, Apr 21, May 15, 26, 30, June 3, 9, 10, 18, 23, 26, July 1, 10, 11, 17, 21, 23, 24, 29, Aug. 3, 5, 8, 21, 28, Sep. 5, 8, 12, 16, 19, 25, Oct. 1, 3, 6, 8, 9, 12, 14, 16, 20, 23, 27, 29, Nov. 9, 11, 14, 17, 19, 23, Dec. 1, 3, 10, 11, 14, 16, 17, 14, 50, 1954 Jan. 5, 11, 15, 18, 25, 27, Feb. 1, 10, 17, 22, Mar. 1, 2, 4, 5, 13, 27, 30, Apr. 5, 7, 15, 23, May 5, 12, 14, 18, 21, 26, 28, 1953 Sep. 23, Nov. 9, 29, Dec. 4, 11, 14, 1954 Jan. 8, Feb. 1, 5, 7, Apr. 26, May 3, 7, 10, 14, 18, 21, 25, June 4, 10, 12, 15, 19, 20, 22, 30, July 2, 8, Aug. 30, Sep. 1, 3, 8, 14, 17, 22, 27, Oct. 16, 19, 20, 22, 27, 29, Nov. 3, 10, 12, 15, 16, 17, 18, 20, 22, 23, 25, 27, 29, Dec. 1, 3, 4, 6, 7, 11.*
 Total No. of visits... *168*

Dates of examination of principal parts—Cylinders... *Aug. 5H* Covers... *Aug. 5H* Pistons... *Aug. 5H* Rods... *Aug. 5H* Connecting rods... *Aug. 5H*
 Crank shaft... *Aug. 5H* Flywheel shaft... *Aug. 5H* Thrust shaft... *Aug. 5H* Intermediate shafts... *✓* Tube shaft... *✓*
 Screw shaft... *June 5H* Propeller... *June 5H* Stern tube... *June 5H* Engine seatings... *Aug. 5H* Engine holding down bolts... *Oct. 5H*
 Completion of fitting sea connections... *June 5H* Completion of pumping arrangements... *Nor. 5H* Engines tried under working conditions... *Dec. 5H*
 Crank shaft, material... *E.F.S.* Identification mark... *Lloyd's {8008} S.C.* Flywheel shaft, material... *see thrust* Identification mark... *✓*
 Thrust shaft, material... *E.F.S.* Identification mark... *Lloyd's 9016 S.C.* Intermediate shafts, material... *E.F.S.* Identification marks... *Lloyd's 2709*
 Tube shaft, material... *✓* Identification mark... *✓* Screw shaft, material... *E.F.S.* Identification mark... *Lloyd's {2692 SS} {2689 SS}*
 Identification marks on air receivers... *808 - 807*
LLOYD'S TEST HB.5 kg/cm² - W.P. 30 kg/cm² - J.T.W. 23.11.53

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 eng. 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... *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 built under special survey in accordance with Secretary's Petters and approved plans. - All important forgings and castings were made inspected and tested in accordance with the Rules. The workmanship and 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 condition. - In my opinion, the machinery of this vessel is eligible to be classed with records of: F L.M.C. 12-5H - 2 DB 171 lbs - screw shaft C.L.

DUAL CLASS
L.R. & P.I.

L. 1.264.500. less 15% for
 The amount of Entry Fee dual class... *1.074.825. =*
 Special ... Cor. fund ... £ *26.870. =*
 Donkey Boiler Fee... See Rpt. 5a... *✓*
 Travelling Expenses (if any) £ *60.210. =*
 + 2% Rev. Tax. *34,858. =*

When applied for... *15th Dec 1953*
 When received... *19*
 Engineer Surveyor to Lloyd's Register of Shipping... *Slesar*

Committee's Minute... *FRIDAY 1 FEB 1955*
 Assigned... *L.M.C. 12.5H*



This office
 26-1-55
 Certificate (if required) to be sent to
 The Surveyors are requested not to write on or below the space for Committee's Minute.