

# REPORT ON OIL ENGINE MACHINERY.

No 13076

Received at London Office

14 JUL 1947

Date of writing Report

19

When handed in at Local Office

30.6

Port of Trieste

No. in Survey held at

Monfalcone

Date, First Survey

6/12/46

Last Survey

11/6/47

Reg. Book.

89500

on the Triple Screw vessel

Vagan

Number of Visits

16

Tons: Gross 784 Net 399

Built at Monfalcone

By whom built Cantieri Riuniti dell'Adriatico Yard No. 1728 When built 1947

Engines made at Turin

By whom made FIAT S.G.M. Engine No. 3250 When made 1947

Donkey Boilers made at -

By whom made - Boiler No. - When made -

Brake Horse Power 750

Owners Vesteraalens Dampskibsselskab Port belonging to Stokmarknes

Nom. Horse Power as per Rule 175

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended

OIL ENGINES, &c. - Type of Engines FIAT 365 solid injection 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 60 kg/cm<sup>2</sup> Mean Indicated Pressure 5.8 kg/cm<sup>2</sup> Diameter of cylinders 14 3/16" Length of stroke 25 1/16" No. of cylinders 5 No. of cranks 5

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 480 mm Is there a bearing between each crank yes

Revolutions per minute 220 Flywheel dia. 1647 mm Weight 1300 kg Means of ignition compress. Kind of fuel used diesel oil

Crank Shaft, Solid forged dia. of journals as per Rule as app. Crank pin dia. 250 mm Crank Webs Mid. length breadth 420 mm Thickness parallel to axis -

Flywheel Shaft, diameter as per Rule as app. Intermediate Shafts, diameter as per Rule as app. Thrust Shaft, diameter at collar as per Rule as app.

Tube Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule as app. Is the tube screw shaft fitted with a continuous liner no liner

Bronze Liners, thickness in way of bushes as per Rule - Thickness between bushes as per Rule - 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 projected between the liners - Is an approved Oil Gland or other appliance fitted at the after end of the shaft yes

Propeller, dia. 2300 mm Pitch 2050 mm No. of blades 3 Material bronze whether Moveable no Total Developed Surface 1.74 sq. m

Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when detached yes Means of lubrication forced

Thickness of cylinder liners 35 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged

Cooling Water Pumps, No. 3 @ 40 T each Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes 2 low & 1 high suction

Bilge Pumps worked from the Main Engines, No. 1 Diameter 100 mm Stroke 120 mm Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line No. and Size 2 @ 40 T each How driven one by ME one independent

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 @ 40 T Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 @ 20 one @ 19 T/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 5 @ 50 mm, 1 from Tunnel @ 75 mm one from ER Coff. @ 50 mm In Pump Room -

In Holds, &c. No. 1 Hold 2 @ 60 mm No. 2 Hold 2 @ 60 mm ? No. 3 Hold 2 @ 50 mm

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two - 1 @ 110 mm 1 @ 80 mm

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions 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 steel plate suet. casing 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 at w.l.

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 none

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 top of Cylind.

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 127x57 mm Stroke 90 mm Driven by Diesel Motors

Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

What provision is made for first Charging the Air Receivers Aux Compressor

Scavenging Air Pumps, No. 1 Double acting Diameter 710 mm Stroke 650 mm Driven by Main Eng

Auxiliary Engines crank shafts, diameter as per Rule as fitted 75 mm Position in ER

Have the Auxiliary Engines been constructed under special survey Inspected in Genoa 9.9.46 Is a report sent herewith no



Lloyd's Register Foundation

AIR RECEIVERS: - Have they been made under survey *yes* ✓

State No. of Report or Certificate *Sec Genoa Rpt. 16925*

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, lap welded or riveted longitudinal joint *—* Material *—* Range of tensile strength *—* Working pressure by Rules *—* Actual *—*

Starting Air Receivers, No. *3* Total cubic capacity *3000 Litr.* Internal diameter *600 mm* thickness *15 mm*  
Seamless, lap welded or riveted longitudinal joint *Fusion W* Material *steel* Range of tensile strength *36-44 kg/cm<sup>2</sup>* Working pressure by Rules *30 kg/cm<sup>2</sup>* Actual *30 "*

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *—*

Is the donkey boiler intended to be used for domestic purposes only *—*

PLANS. Are approved plans forwarded herewith for Shafting *3.3.46 & 1.5.46* Receivers *26.4.46* Separate Fuel Tanks *23.3.46*  
(If not, state date of approval)

Donkey Boilers *—* General Pumping Arrangements *11.1.46 & 28.5.47* Pumping Arrangements in Machinery Space *11.1.46 & 28.5.47*  
Oil Fuel Burning Arrangements *—*

SPARE GEAR.

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

State the principal additional spare gear supplied *Set of spares for each pump, purifiers, winlass & steering gear*

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - *See Genoa Report 16425*  
During erection on board vessel - - *1946 Dec 6, 1947 Jan 15, Mar 7, 21, Apr 17, 24, 28, May 6, 12, 14, 23, 26, 27, 30 June 9, 11*  
Total No. of visits *16*

See also Genoa Rpt. 16425  
Dates of Examination of principal parts - Cylinders *28.4.47* Covers *28.4.47* Pistons *28.4.47* Rods *—* Connecting rods *17.4.47*  
Crank shaft *17.4.47* Flywheel shaft *17.4.47* Thrust shaft *17.4.47* Intermediate shafts *24.4.47* Tube shaft *—*  
Screw shaft *15.1.46* Propeller *17.6.47* Stern tube *15.1.46* Engine seatings *21.3.47* Engines holding down bolts *24.4.47*  
Completion of fitting sea connections *15.1.46* Completion of pumping arrangements *12.5.47* Engines tried under working conditions *27.5.47*

Crank shaft, Material *steel* Identification Mark *LLOYD'S 105-106 AG* Flywheel shaft, Material *steel* Identification Mark *as Crank*  
Thrust shaft, Material *steel* Identification Mark *as Crank* Intermediate shafts, Material *steel* Identification Marks *LLOYD'S-0920-0921*  
Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *steel* Identification Mark *0996 AG*

Identification Marks on Air Receivers. *No 27 28 29*  
*LLOYD'S TEST*  
*48.5 Kg*  
*WP 30 Kg.*  
*AG 6.3.47*

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 *—*

Description of fire extinguishing apparatus fitted *13 CO2 bottles 30kg each for Holds. 3 Foam & 1 CO2 portable for ER. 1 Foam & 2 CO2 portable for accommodation*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *no* 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 *no* ✓

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. *This engine has been made in Turin, under special survey, of tested material and fitted on board at Monfalcone in accordance with the approved plans and Secretary letters. The engines have been tried under working condition and found in order. The torsional vibration characteristic have been approved and the torsion graph record is herewith enclosed. It is submitted the machinery is eligible to have in the Society's R. B. the notation of + LMC 6-47 as recommended in Genoa Rpt No 16425 photostat of which is returned herewith as requested in Sec Lett D.O. 20.6.47*

Torsionals approved in Sec Lett of 4/9/46 for a series of 7 220 hp

The amount of Entry Fee .. £ : :  
*1/3 Special* ... .. £ *26: 250:* When applied for, *1/7/47*  
Donkey Boiler Fee ... .. £ : : When received,  
Travelling Expenses (if any) £ : : *19*

*R. P. Paganini*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *15 AUG 1947*

Assigned *+ LMC 6.47 Oil Eng.*  
*C.L.*



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