

REPORT ON OIL ENGINE MACHINERY.

No. 16618

Received at London Office

Date of writing Report 24/12/47 When handed in at Local Office 24.12.1947 Port of GENOA
 Date, First Survey 10/4/47 Last Survey 23/10/47
 Number of Visits 25
 Survey held at GENOA
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 Number of Visits 25
 on the ☒ Single ☒ Twin ☒ Triple ☒ Quadruple Screw vessel MESSRS. FURNESS S.B. CO'S YARD N°417-422
 Tons Gross ☒ Net ☒
 Built at HAVERTON HILL - ON - TEES By whom built FURNESS S.B. CO. Yard No. 417 When built 1948
 Engines made at GENOA - SAMPIERDARENA By whom made S.A. ANSALDO - STABIL. MECCANICO Engine No. 456006 When made 1947
 Monkey Boilers made at ☒ By whom made ☒ Boiler No. ☒ When made ☒
 Brake Horse Power 1350 Owners ☒ Port belonging to ☒
 Indicated Horse Power as per Rule 329 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒
 Made for which vessel is intended ☒

Engines, &c. — Type of Engines FIAT M.S. 456 - AIRLESS INJECTION 2 or 4 stroke cycle 2 Single or double acting SINGLE
 Maximum pressure in cylinders 60 Kg/cm² Diameter of cylinders 450 mm Length of stroke 740 mm No. of cylinders 6 No. of cranks 6
 Indicated Pressure 5.8 Kg/cm² Is there a bearing between each crank YES
 Revolutions per minute 185 Flywheel dia. 1600 mm Weight 2100 Kg. Means of ignition COMPRESSION Kind of fuel used DIESEL OIL
 Crankshaft, ☒ Solid forged ☒ Semi built ☒ All built dia. of journals as per Rule as approved 310 mm Crank pin dia. 310 mm Crank webs Mid. length breadth 510 mm Thickness parallel to axis 189 mm
 Mid. length thickness 189 mm shrunk Thickness around eye hole 136.5 mm
 Flywheel Shaft, diameter as per Rule as approved 310 mm Intermediate Shafts, diameter as per Rule as approved 205 mm Thrust Shaft, diameter at collars as fitted 310 mm
 Main Shaft, diameter as per Rule as fitted 254 mm Is the ☒ tube ☒ screw shaft fitted with a continuous liner ☒ No
 Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted 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 ☒ Length of bearing in Stern Bush next to and supporting propeller 1164 mm
 Propeller, dia. 2900 mm Pitch ☒ No. of blades ☒ Material ☒ whether moveable ☒ Total developed surface ☒ sq. feet
 Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when disengaged GOVERNOR Means of
 lubrication FORCES Thickness of cylinder liners 48.5 mm Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled
 lagged with non-conducting material LAGGED 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. TWO Is the sea suction provided with an efficient strainer which can be cleared within the vessel ☒
 Bilge Pumps worked from the Main Engines, No. ONE Diameter 220 mm Stroke 110 mm Can one be overhauled while the other is at work ☒
 Pumps connected to the Main Bilge Line { No. and size ☒ How driven ☒
 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 ☒ Power Driven Lubricating Oil Pumps, driven by M.E. including spare pump, No. and size ONE-GEAR Type 44 mm³/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 ☒ In pump room ☒
 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 ☒ 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 ☒
 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 ☒
 That pipes pass through the bunkers ☒ How are they protected ☒
 That 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 ☒
 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 ☒
 On 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. ☒ No. of stages ☒ diameters ☒ stroke ☒ driven by ☒
 Small Auxiliary Air Compressors, No. ☒ No. of stages ☒ diameters ☒ stroke ☒ driven by ☒
 That provision is made for first charging the air receivers ☒
 Scavenging Air Pumps, No. ONE - DOUBLE ACTING diameter 920 mm stroke 760 mm driven by MAIN ENGINE
 Auxiliary Engines crank shafts, diameter as per Rule as fitted Position ☒
 Have the auxiliary engines been constructed under special survey ☒ Is a report sent herewith ☒

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AIR RECEIVERS:—Have they been made under survey STILL UNDER CONSTRUCTION State No. of report or certificate WILL BE FORWARDED

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

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 ☒

Starting Air Receivers, No. Two Total cubic capacity 6000 litres Internal diameter 1000 mm thickness 22 mm

Seamless, lap welded or riveted longitudinal joint Fusion welded Material STEEL Range of tensile strength 42/56 kg/mm² Working pressure 30 kg/cm²

IS A DONKEY BOILER FITTED ☒ 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 18/2/47 - 9/9/47 Receivers 3/6/47 Separate fuel tanks ☒

Donkey boilers ☒ General pumping arrangements ☒ Pumping arrangements in machinery space ☒

Oil fuel burning arrangements ☒

SPARE GEAR.

Has the spare gear required by the Rules been supplied ☒

State the principal additional spare gear supplied

TO BE SUPPLIED AT HAVERTON HILL - ON TEES.

ANSAALDO S. A.
STABILIMENTI MECCANICI

The foregoing is a correct description, and the particulars of the installation are as approved for torsional vibration characteristics
Manufacturer.

Dates of Survey while building
During progress of work in shops - From 10/4/47 To 23/10/47
During erection on board vessel - ☒
Total No. of visits 25

Dates of examination of principal parts—Cylinders 29/5/47 Covers 10/5/47 Pistons 10/4/47 Rods 31/7/47 Connecting rods 18/9/47

Crank shaft 16/6/47 Flywheel shaft 31/7/47 Thrust shaft 31/7/47 Intermediate shafts ☒ Tube shaft ☒

Screw shaft ☒ Propeller ☒ Stern tube ☒ Engine seatings ☒ Engine holding down bolts ☒

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

Crank shaft, material STEEL Identification mark AG 16/6/47 Flywheel shaft, material STEEL Identification mark ☒

Thrust shaft, material STEEL Identification mark AG 16/6/47 Intermediate shafts, material ☒ Identification marks ☒

Tube shaft, material ☒ Identification mark AG 16/6/47 Screw shaft, material ☒ Identification mark ☒

Identification marks on air receivers ☒

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 ☒

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. THIS ENGINE HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IS IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE TORSIONAL VIBRATION CHARACTERISTICS OF THE COMPLETE DYNAMIC SYSTEM HAVE BEEN APPROVED FOR A SERVICE SPEED OF 185 R.p.m. THE MATERIALS AND WORKMANSHIP ARE GOOD. THE ENGINE HAS BEEN TRIED UNDER WORKING CONDITION ON THE BENCH AND FOUND SATISFACTORY. THIS ENGINE HAS NOW BEEN DESPATCHED TO HAVERTON HILL-ON-TEES TO BE FITTED ON BOARD ONE OF THE MESSRS. FURNESS S.B. CO. YARD N° 417-422 AND WHEN THIS HAS BEEN CARRIED OUT AND THE MACHINERY TRIED UNDER WORKING CONDITION TO THE SATISFACTION OF THE SOCIETY'S SURVEYORS, THE VESSEL WILL BE ELIGIBLE TO BE CLASSED IN THE SOCIETY'S REGISTER BOOK WITH THE NOTATION: + LMC. (WITH DATE) - "OIL ENGINE".
See also 9/9/47 & 18/10/47.

The amount of Entry Fee ... £ ☒

2/3 Special ... 115 165.000

CAR EXPENSES ... 6600.

Donkey Boiler Fee ... 9900.

Travelling Expenses (if any) ... 5445.

REVENUE TAX. ... 5445.

Committee's Minute ... See F.E. mch. rpt.

Assigned ... See F.E. mch. rpt.

When applied for 18/11/47

When received 19

Engine Surveyor to Lloyd's Register of Shipping.

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