

6925 RECEIVED Rpt. 4b. MAY 1947.

REPORT ON OIL ENGINE MACHINERY.

No. 16425

Date of writing Report 5/4/47 19 When handed in at Local Office 3/5/47 19 Port of GENOA Received at London Office 8 MAY 1947

No. in Survey held at TURIN Date, First Survey 6th August 1946 Last Survey 27th March 1947 Reg. Book. Number of Visits 19

Single on the Twin Triple Quadruple Screw vessel C.R.D.A. YARD N° 1728 Tons Gross Net Built at MONFALCONE By whom built CANTIERI RIUNITI DELL'ADRIATICO Yard No. 1728 When built 1947 Engines made at TURIN By whom made FIAT STABILIMENTO GRANDI MOTORI Engine No. 3250 When made 1947 Donkey Boilers made at By whom made Boiler No. When made Brake Horse Power 750 Owners Port belonging to Nom. Horse Power as per Rule 175 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Trade for which vessel is intended

OIL ENGINES, etc. Type of Engines FIAT 365 - SOLID INJECTION 2 or 4 stroke cycle 2 Single or double acting SINGLE Maximum pressure in cylinders 60 Kcal/cm² Mean Indicated Pressure 5.8 Kcal/cm² Diameter of cylinders 360 mm Length of stroke 650 mm 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 290 Flywheel dia. 1647 mm Weight 1300 Kg. Means of ignition COMPRESSION Kind of fuel used DIESEL OIL Crank Shaft, Solid forged Semi built All built dia. of journals as per Rule as approved as fitted 250 mm Crank pin dia. 250 mm Crank webs Mid. length breadth 420 mm Thickness parallel to axis Mid. length thickness 131 mm Thrust Shaft, diameter at collars as fitted 250 mm Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as approved as fitted 180 mm Is the shaft fitted with a continuous liner No LINER 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

Propeller, dia. 2300 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 declutched YES Means of lubrication TORCED Thickness of cylinder liners 35 mm Are the cylinders fitted with safety valves YES Are the exhaust pipes silencers water cooled or 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. ONE 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 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 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, including spare pump, No. and size WORKED FROM M.E. ONE-GEAR TYPE - 25 m³/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 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 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

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 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 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. No. of stages diameters stroke driven by Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by What provision is made for first charging the air receivers Scavenging Air Pumps, No. ONE - DOUBLE ACTING diameter 710 mm stroke 650 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

EW 6/6/47



4B. 16425.

AIR RECEIVERS:—Have they been made under survey... YES State No. of report or certificate HEREWITH ATTACHED.
 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... THREE Total cubic capacity... 3000 litres Internal diameter... 600 mm thickness... 15 mm
 Seamless, lap welded or riveted longitudinal joint... YES Material... STEEL Range of tensile strength... 36-44 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... 3/3/46 - 3/5/46 Receivers... 26/4/46 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 TRIESTE

FIAT

STABILIMENTO GRANDI MOTORI

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

Shaper & Co

Manufacturer.

Dates of Survey while building
 During progress of work in shops... 1946: AUG. 6-30; SEPT. 5-13-20; OCT. 3-10-17-24-31; NOV. 7-15-21-28; DEC. 6; 1947: FEB. 28
 During erection on board vessel...
 Total No. of visits... 19.

Dates of examination of principal parts—Cylinders... 10/17, 31/10/46 Covers... 10/10/46 Pistons... 20/9-3/10/46 Rods... Connecting rods... 3/11/46
 Crank shaft... 17/10/46 Flywheel shaft... 17/10/46 Thrust shaft... 17/10/46 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 17-18-46 Flywheel shaft, material... STEEL Identification mark...
 Thrust shaft, material... STEEL Identification mark... Intermediate shafts, material... Identification marks...
 Tube shaft, material... Identification mark... Screw shaft, material... Identification mark...

Identification marks on air receivers:
 No 27 LLOYD'S TEST 48.5 Kg W.P. 30 Kg AG 6-3-47
 No 28 LLOYD'S TEST 48.5 Kg W.P. 30 Kg AG 6-3-47
 No 29 LLOYD'S TEST 48.5 Kg W.P. 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...
 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 MATERIAL AND IS IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULES REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD. THE TORSIONAL VIBRATION CHARACTERISTICS OF THE COMPLETE DYNAMIC SYSTEM HAVE BEEN DULY APPROVED. THE ENGINE HAS BEEN TRIED UNDER WORKING CONDITION ON THE BENCH AND FOUND SATISFACTORY.
THIS ENGINE HAS NOW BEEN DESPATCHED TO TRIESTE TO BE FITTED ON BOARD THE C.R.A. YARA N° 1428 AND WHEN THIS HAS BEEN CARRIED OUT AND THE MACHINERY TRIED UNDER WORKING CONDITION TO THE SATISFACTION OF THE TRIESTE'S SURVEYORS, THE MACHINERY WILL BE ELIGIBLE TO BE ENTERED IN THE SOCIETY'S REGISTER BOOK WITH THE NOTATION:
+ LMC (WITH DATE). OIL ENGINE.

The amount of Entry Fee...
 2/3 Special SURVEY... Lt. 52500- When applied for... 3/4/47
 Donkey Boiler Fee... Lt. 6300- When received... 19
 CAR EXPENSES... Lt. 6100-
 Travelling Expenses (if any)... Lt. 1947-
 REV. TAX...
 Committee's Minute... 15 AUG 1947
 Assigned... See F.E. mch. rpt.
 Engineer Surveyors to Lloyd's Register of Shipping.



Certificate (if required) to be sent to Committee's Minute.