

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 12987

21 JUN 1943

Date of writing Report 19... When handed in at Local Office 13.6.43 Port of Trieste

No. in Survey held at Trieste Date, First Survey 2.2.1941 Last Survey 6.5.1943

on the Single Screw vessel M/T Carnaro Tons Gross 8257 Net 4913

Built at Trieste By whom built CRDA Cantiere San Marco Yard No. 1251 When built 1943

Engines made at Turin By whom made FIAT Stab. G.M. Engine No. 2806 When made 1943

Donkey Boilers made at Trieste By whom made CRDA S. Andrea Boiler No. 1866/7 When made 1943

Indicated Brake Horse Power 4800 Owners 'SIDARMA' Soc. It. d'armamento Port belonging to

Net Horse Power as per Rule 1328 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Carrying Petroleum

TYPE OF ENGINES, &c. Type of Engines FIAT DL 646 Solid inject. 2 or 4 stroke cycle 2 Single or double acting Double

Maximum pressure in cylinders 50 kg Mean Indicated Pressure 5.4 kg/cm² Diameter of cylinders 640 mm Length of stroke 1160 mm No. of cylinders 6 No. of cranks 6

Distance between bearings, adjacent to the Crank, measured from inner edge to inner edge 933 mm Is there a bearing between each crank yes

Revolutions per minute 115 Flywheel dia. 2 x Weight 43100 kg/cm² Means of ignition compressed Kind of fuel used Boileroil

Crank Shaft, dia. of journals as per Rule 433 mm as fitted 450 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth 710 mm Thickness parallel to axis 290 mm

Flywheel Shaft, diameter as per Rule - as fitted - Intermediate Shafts, diameter as per Rule 360 mm as fitted 364 mm Thrust Shaft, diameter at collars as per Rule 378 mm as fitted 450 mm

Propeller Shaft, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule 393 mm as fitted 417 mm Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 19.6 mm as fitted 20.5 mm Thickness between bushes as per rule 14.7 mm as fitted 17.5 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 yes

Does the liner do 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

Are two liners fitted, is the shaft lapped or protected between the liners - Is an approved Oil Gland or other appliance fitted at the after end of the tube

Shaft no If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 1670 mm

Propeller, dia. 4670 mm Pitch 4000 mm No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 9.416 sq. feet

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 48 1/2 to 41 Are the cylinders fitted with safety valves yes Are the exhaust pipes and 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 in funnel

Boiling Water Pumps, No. 1 steam independ. 240 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 60 T/h Stroke - Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line No. and Size one 60 T/h one 40 T/h one 100 T/h How driven 60 T by Main Eng. 40 T and 100 T Steam independent

Is the cooling water led to the bilges overboard 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 one 100 T/h M. Eng. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 a 75 T each 150 T

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 4 a 3 3/8" + 3 a 3 3/8" in cofferdam In Pump Room main 2 a 2" Forw. 1 a 2"

Holds, &c. In each Main pump space 2 cargo P. a 210 T/h + 1 Bilge P. a 27 T/h In Forw. P. space 1 Bilge P. one O.E.P. + 1 Fire P. a 27 T/h

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 a 5" and 1 a 8 3/4"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

Can be taken 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 on steel plate suit. casing Are they fitted with Valves or Cocks valves & cocks

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

What pipes pass through the bunkers cofferdam suction How are they protected oil fuel bunker

What pipes pass through the deep tanks - Have they been tested as per Rule yes

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

Department to another yes Is the Shaft Tunnel watertight no Tunnel 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

Independent Main Air Compressors, No. 2 No. of stages 2 Diameters 310 x 278 mm Stroke 350 mm Driven by Steam Eng.

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 140 x 40 mm Stroke 100 mm Driven by Int. Comb. Eng.

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

Exhausting Air Pumps, No. 2 800 mm Diameter 3 Byl. Tandem Stroke 850 mm Driven by Main Eng.

Diesel Generator Bremen Rep. No. 2266 as per Rule approved No. 1 Diesel 40 kw 1 Steam 40 kw

Auxiliary Engines crank shafts, diameter as fitted 110 mm Position E.R. Platform Port



AIR RECEIVERS:—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*
High Pressure Air Receivers, No. *1* Cubic capacity of each *150 Litre* Internal diameter *377 mm* thickness *6 1/2 mm*
 Seamless, lap welded or riveted longitudinal joint *seamless* Material *SMS* Range of tensile strength *57 kg/mm²* Working pressure *36.7 kg*
Starting Air Receivers, No. *2* Total cubic capacity *24 000 Litre* Internal diameter *1536 & 1574 mm* thickness *29 mm*
 Seamless, lap welded or riveted longitudinal joint *rivet DBS* Material *SMS* Range of tensile strength *44-55 kg/mm²* Working pressure *30 kg*

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 *Power service*

PLANS. Are approved plans forwarded herewith for Shafting *appr in Genoa* Receivers *yes* Separate Fuel Tanks *none*
 Donkey Boilers *yes* General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *yes*
 Oil Fuel Burning Arrangements *yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*
 State the principal additional spare gear supplied *1 Propeller, 1 Propeller shaft with Key & nut. Spare parts for each Pump on board. Spare armature for Generators and for Electric Motors 40 Condenser tubes. Spare parts for oil Separators*

The foregoing is a correct description,

CANTIERI RIUNITI DELL'ADRIATICO
 Fabbrica Macchine S. Andrea
Moorings

Manufacturer.

Dates of Survey while building	During progress of work in shops--	1941. Feb. 2, Mar. 24, 27-31, Apr. 1, Jun. 30, July 4, 7, 29, Aug. 14, Sept. 5, 11, 12, 18, 20, 23, 30, Nov. 24, 25, Dec. 1, 3, 10, 15, 1942. Feb. 12, 19, Mar. 5, 9, 13, 20, 22, Apr. 7, 8, 30, May 12, 16, June 1, 8, 1943. Feb. 2, 5, 9, 10, 16, 23, 25, Dec. 1, 3, 4, 8, 10, 11, 14, 16, 17, 18, 19, 23, 24, 26, 28, 29, 30, 31, 1943. Jan. 2, 5, 7, 8, 12, 22, 26, 28, 29, 30, Feb. 1, 3, 4, 5, 6, 9, 10, 11, 12, 13, 15, 16, 18, 19, 20, 24, Mar. 4, 23, May 4.
	During erection on board vessel--	
	Total No. of visits	123

Dates of Examination of principal parts—Cylinders *18.3.43* Covers *18.3.43* Pistons *2.4.43* Rods *7.4.43* Connecting rods *7.4.43*
 Crank shaft *27.3.43* Flywheel shaft — Thrust shaft *29.7.41* Intermediate shafts *18.5.43* Tube shaft —
 Screw shaft *25.2.43* Propeller *29.4.43* Stern tube *25.2.43* Engine seatings *25.3.43* Engines holding down bolts *18.5.43*
 Completion of fitting sea connections *25.2.43* Completion of pumping arrangements *22.6.43* Engines tried under working conditions *10.8.43*
 Crank shaft, Material *S.M.S* Identification Mark *RJ-GL 266 PR* Flywheel shaft, Material *see Thrust* Identification Mark —
 Thrust shaft, Material *S.M.S* Identification Mark *RJ 2386 D-GM* Intermediate shafts, Material *S.M.S* Identification Marks *LLOYD'S long. 3281 VS 29*
 Tube shaft, Material *none* Identification Mark — Screw shaft, Material *S.M.S* Identification Marks *3284 VS 29*

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*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *oil Tanker* If so, have the requirements of the Rules been complied with *yes*
 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* If so, state name of vessel *all of 'Pietro Orscolo' type*

General Remarks (State quality of workmanship, opinions as to class, &c. *This engine was made at Turin S.G.M. under special survey and in accordance with the approved plans. It has been fitted on board at Trieste under special survey and the plans for the arrangements of pipes and auxiliaries have been examined by the undersigned and found to be in accordance with the Rules (1939). The machinery has been tested under full working condition and found satisfactory and in my opinion merits the notation of + LMC 8.43*

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

The amount of Entry Fee .. £	:	:	When applied for,
Special £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

A. P. Sparacino
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 1 NOV 1946**

FRI. 29 AUG 1947

Assigned L.M.C. 5-43 Del. Cey. C.L. 2 DB. 185 lb.

See minute on Nap Rpt No. 4235

