Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 15644

Received at London Office FEB 10 1939

Date of writing Report 23/1/1939 When handed in at Local Office 6/2/1939 Port of GENOA

No. in Reg. Book. 8866 Survey held at TURIN S.RD. Date, First Survey 9/12/37 Last Survey 13/1/1939 Number of Visits 26

on the ~~Single~~ ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "JAMES J. MAGUIRE" Tons Gross 10525 Net 6065

Built at MONFALCONE By whom built Cantieri Riuniti dell'Adriatico Yard No. 1207 When built 1938

Engines made at TURIN By whom made FIAT Stabilimento Grandi Motori Engine No. 2567 When made 1938

Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓

Brake Horse Power 3600 Owners ✓ Port belonging to ✓

Nom. Horse Power as per Rule 1003 (1000) Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

Trade for which vessel is intended ✓

OIL ENGINES, &c.—Type of Engines FIAT 1.S 688 Solid injection 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 50 Kgs/sq.cm. Diameter of cylinders 680 m/m (26 3/4) Length of stroke 1100 m/m (43 5/16) No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 5.55 Kgs/sq.cm.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 920 m/m Is there a bearing between each crank Yes

Revolutions per minute 110 Flywheel dia. 2400 m/m Weight 7500 Kgs Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule 413.5 m/m as fitted 450 m/m Crank pin dia. 450 m/m Crank Webs Mid. length breadth ✓ Mid. length thickness ✓ shrunk Thickness parallel to axis 290 m/m Thickness around eyehole 212.5 m/m

Flywheel Shaft, diameter as per Rule ✓ as fitted ✓ **Intermediate Shafts,** diameter as per Rule ✓ as fitted ✓ **Thrust Shaft,** diameter at collars as per Rule 344 m/m as fitted 450 m/m ✓

Tube Shaft, diameter as per Rule ✓ as fitted ✓ **Screw Shaft,** diameter as per Rule ✓ as fitted ✓ Is the {tube / screw} shaft fitted with a continuous 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 the tube shaft ✓ If so, state type ✓ Length of Bearing in **Stern Bush** next to and supporting propeller ✓

Propeller, dia. ✓ 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 Forced ✓ Thickness of cylinder liners 63 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or 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. ✓ 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 ✓ / 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 ✓

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 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 ✓

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 ✓

Scavenging Air Pumps, No. One with two cylinders, double acting tandem ✓ Diameter 1380 m/m Stroke 750 m/m Driven by Main Engine

Auxiliary Engines crank shafts, diameter as per Rule ✓ as fitted ✓

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AIR RECEIVERS:—*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 ✓ *Is a drain fitted at the lowest part of each receiver* ✓

High Pressure 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.* ✓ *Total cubic capacity* ✓ *Internal diameter* ✓ *thickness* ✓

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

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* 31/12/36: 4/12/36: 22/2/37 *(If not, state date of approval) Receivers* ✓ *Separate Tanks* ✓

Donkey Boilers ✓ *General Pumping Arrangements* ✓ *Oil Fuel Burning Arrangements* ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied To be placed on board at Trieste

State the principal additional spare gear supplied

FIAT
SOCIETÀ ANONIMA
Il Direttore Centrale
(ING. GIOVANNI CHIESA)

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building — *During progress of work in shops*: 1937 Dec. 9.16: 1938 Feb. 3: Apr. 11: May 12: June 9, 17: July 21: Aug. 3, 9, 18: Sept. 1, 8, 15, 23, 29: Oct. 6, 13, 21 Dec. 15: 1939 Jan. 13

During erection on board vessel: ✓

Total No. of visits: 21

Dates of Examination of principal parts—Cylinders 13.10.38 *Covers* 13.10.38 *Pistons* 12.5.38. *Rods* 29.9.38 *Connecting rods* 6/10/38

Crank shaft 10/9/38. 30/5/38. 15/10/38 *Flywheel shaft* ✓ *Thrust shaft* 7.10.37 *Intermediate shafts* ✓ *Tube shaft* ✓

Screw shaft ✓ *Propeller* ✓ *Stern tube* ✓ *Engine seatings* ✓ *Engines holding down bolts* ✓

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

Crank shaft, Material S.M. Steel *Identification Mark* (5735. J.Q. 10.3.38 5786 J.Q. 30.5.38 12647 J.L. 18.10.37) *Flywheel shaft, Material* ✓ *Identification Mark* ✓

Thrust shaft, Material S.M. Steel *Identification Mark* 5544 J.Q. 7.10.37. *Intermediate shafts, Material* ✓ *Identification Marks* ✓

Tube shaft, Material ✓ *Identification Mark* ✓ *Screw shaft, Material* ✓ *Identification Mark* ✓

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 ✓

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 Yes *If so, state name of vessel* "Edwy R. Brown", "John A. Brown"

General Remarks (*State quality of workmanship, opinions as to class, &c.*)

The Machinery of this vessel has been constructed under Special Survey of tested materials and is in accordance with the Secretary's Letters, Approved Plans and Rule Requirements.

The materials and the workmanship are good and the engine when tried on the test bed was found to work satisfactorily.

The machinery has now been forwarded to Trieste, where it will be installed on board the "M/V "James J. Maguire" and when this has been done to the satisfaction of the Society's Surveyors at that Port, the vessel will be eligible, in our opinion, to be classed in the Society's Register Book and to have the notation "OIL ENGINE" + LMC (with date)

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

Certificate (if required) to be sent to

The amount of Entry Fee ..	£ Lit 560 = :	When applied for, 23rd Jan. 1939
4/5 Special	£ " 9258 = :	
SPECIAL FEE FOR HYDRAULIC TESTS	" 1000 =	
Donkey Boiler Fee ...	£ : :	When received, 5/4/1939
Travelling Expenses (if any)	£ " 3000 = :	

Engineer Surveyors to Lloyd's Register of Shipping.

FRI 26 MAY 1939

Committee's Minute

Assigned All Tri. FE 12516