

REPORT ON OIL ENGINE MACHINERY.

No. 20441.

JUN 26 1939

Received at London Office

Date of writing Report 23/6/39 19 When handed in at Local Office 24/6/39 19 Port of GREENOCK.

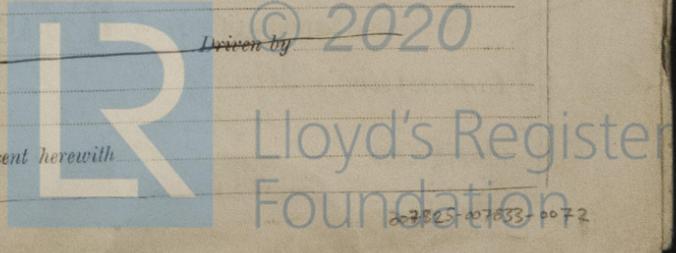
No. in Survey held at Reg. Book. Port Glasgow. Date, First Survey 9th FEBRUARY 1939. Last Survey 23rd June 1939. Number of Visits 21.

on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ } Single } Screw vessel **PETRO** } Tons } Gross 444.49 }
 } } } Net 228.19 }

Built at Port Glasgow. By whom built Ferguson Bros (P. Al) Ltd. Yard No. 341. When built 1939-6
 Engines made at Cologne. By whom made Klockner-Humboldt Deutz A/G. Engine No. 486563/70. When made 1939
 Donkey Boilers made at home. By whom made —. Boiler No. —. When made —
 Brake Horse Power 400. Owners Union Lighterage Co. Ltd. Port belonging to London.
 Nom. Horse Power as per Rule 94. Is Refrigerating Machinery fitted for cargo purposes ho. Is Electric Light fitted Yes
 Trade for which vessel is intended Carrying Petroleum in Bulk. - Smooth Water Service

OIL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders _____ Diameter of cylinders _____ Length of stroke _____ No. of cylinders _____ No. of cranks _____
 Mean Indicated Pressure _____
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge _____ Is there a bearing between each crank _____
 Revolutions per minute _____ Flywheel dia. _____ Weight _____ Means of ignition _____ Kind of fuel used _____
 Crank Shaft, { Solid forged _____ as per Rule _____ Crank pin dia. _____ Crank Webs _____ Mid. length breadth _____ Thickness parallel to axis _____
 { Semi built dia. of journals as per Rule _____ as fitted _____ Mid. length thickness _____ shrunk _____ Thickness around eyehole _____
 { All built _____ as fitted _____
 Flywheel Shaft, diameter as per Rule _____ as fitted _____ Intermediate Shafts, diameter as per Rule 4.52" _____ as fitted 5" _____ Thrust Shaft, diameter at collars as per Rule 4.75" _____ as fitted 6.299" _____
 Tube Shaft, diameter as per Rule _____ as fitted _____ Screw Shaft, diameter as per Rule 5.18" _____ as fitted 5.51" _____ Is the { tube } shaft fitted with a continuous liner { ho }
 { screw }
 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 Yes. If so, state type Newark - Ferguson Bros. Length of Bearing in Stern Bush next to and supporting propeller 2'-3 1/4"
 Propeller, dia. 5'-6 1/8" Pitch 3'-10 1/2" No. of blades 3 Material Bronze whether Moveable No. Total Developed Surface 10 1/2 sq. feet
 Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when disengaged _____ Means of lubrication _____
 Thickness of cylinder liners _____ Are the cylinders fitted with safety valves _____ 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 Funnel Exhaust
 Cooling Water Pumps, No. Two. 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. Ref. Diam. 315 Stroke _____ Can one be overhauled while the other is at work _____
 Pumps connected to the Main Bilge Line { No. and Size Main Engines as Ref. Rpt 315 and Two - 60 tons / hour }
 { How driven Diesel }
 Is the cooling water led to the bilges ho. 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 None. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Ref. Rpt's
 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 Two - 2" One - 3"
 In Holds, 6" Hand pump suction of 6-2" side coffendaus. 2-2" through ship coffendaus - 1-2" in each of four holds & four peaks. In Pump Room 2-2" side 2-2" through coffendaus
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one - 3"
 Are all the Bilge Suction pipes in Holds with 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 Yes. Are they fitted with Valves or Cocks Both.
 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 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 None. 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. One. No. of stages Ref. Rpt. 315. Stroke _____ Driven by _____
 Auxiliary Air Compressors, No. One. No. of stages 2. Diameters 110/90. m/m Stroke 85 m/m Driven by Diesel.
 Small Auxiliary Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____
 What provision is made for first Charging the Air Receivers Hand driven compressor.
 Scavenging Air Pumps, No. _____ Diameter _____ Driven by _____
 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 _____



AIR RECEIVERS:—Have they been made under survey Yes State No. of Report or Certificate Ref. Rpt 315
 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. none 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 no 315 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? 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 — Receivers Ref. Rpt 315 Separate Fuel Tanks Yes
 (If not, state date of approval) Donkey Boilers — General Pumping Arrangements Yes Pumping Arrangements in Machinery Space Yes
 Oil Fuel Burning Arrangements none

SPARE GEAR.
Ref. Rpt 315
 Has the spare gear required by the Rules been supplied —
 State the principal additional spare gear supplied —

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- }
 { During erection on board vessel -- } (1939) FEB 9-16-14-24. MAR 22. APR 4-26. MAY 11-18-19-22-24-29. JUNE 1-8-9-12-15-20-21-23.
 Total No. of visits 21.

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
 Crank shaft Flywheel shaft Thrust shaft Rottendam 17-12-39 Intermediate shafts 18-5-39 Tube shaft —
 Screw shaft 18-5-39 Propeller 26-4-39 Stern tube 26-4-39 Engine seatings 11-5-39 Engines holding down bolts 27-5-39
 Completion of fitting sea connections 22-5-39 Completion of pumping arrangements 23-6-39 Engines tried under working conditions 21-6-39
 Crank shaft, Material Ref. Identification Mark Rpt. Flywheel shaft, Material 315 Identification Mark —
 Thrust shaft, Material Steel Identification Mark 3322 HG/ABF Rpt. Intermediate shafts, Material Steel Identification Marks 4232 J.D.B
 Tube shaft, Material — Identification Mark — Screw shaft, Material Steel Identification Mark 4231 J.D.B
 Identification Marks on Air Receivers Ref. Rpt. 315

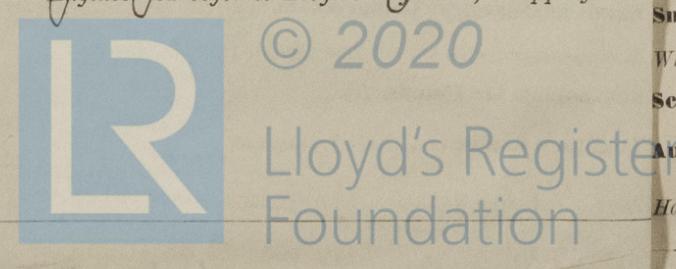
Is the flash point of the oil to be used over 150° F. Yes
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Tanker If so, have the requirements of the Rules been complied with —
 If 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. These engines (as per Ref. Rpt. 315) together with the Auxiliaries (Ref Rpts 297 & 303) have been properly fitted on board the vessel, examined under full power and found satisfactory.
This machinery is eligible, in our opinion, to be classed in the Register book with Records + L.M.C. 639. Oil Engine Shaft - O.G.

The amount of Entry Fee .. £ Already : When applied for, —
 Special £ changed : —
 Donkey Boiler Fee £ in Rpt : When received, —
 Travelling Expenses (if any) £ of 27/3/39 : —

Committee's Minute TUE 27 JUN 1939
 Assigned to class 6.39
oil Eng, Rpt.

M. Caldwell Jun Self and J.D. Boyle
 Engineer Surveyor to Lloyd's Register of Shipping.



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