

REPORT ON OIL ENGINE MACHINERY.

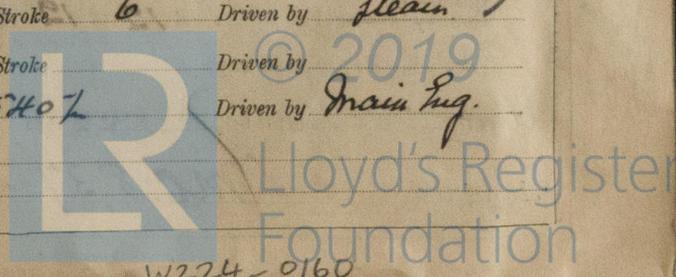
No. 58800
SEP 8 1937

Received at London Office

Date of writing Report 19 When handed in at Local Office 4.9.1937 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey Last Survey 30th Sep. 1937
 Reg. Book. 352469 on the ^{Single} ~~Double~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "M.V. Trevalgan" Number of Visits 5299
 Built at Pat Glasgow By whom built Lithgous Ltd. Yard No. 898 When built 1937-8.
 Engines made at Glasgow By whom made Barclay Curle & Co Ltd. Engine No. E-1109 When made 1934
 Donkey Boilers made at do By whom made do Boiler No. do When made 1934
 Brake Horse Power 1890 Owners Main S.S. Co. Ltd. Port belonging to London.
 Nom. Horse Power as per Rule 449 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted y/s.
 Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines Heavy oil (opposed piston) 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 600 lb Diameter of cylinders 22 1/2" 5607 Length of stroke 2160 (comb) No. of cylinders 3 No. of cranks 3
 Mean Indicated Pressure 89 Side cranks Is there a bearing between each crank -
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 11207
 Revolutions per minute 99 Flywheel dia. 23207 Weight 6.11 Ton Means of ignition Comp Kind of fuel used Diesel oil
 Crank Shaft, dia. of journals as per Rule app as fitted 4507 Crank pin dia. 4207 Crank Webs Mid. length breadth 9107 Mid. length thickness 1487 Thickness parallel to axis 2407 Thickness around eye-hole 1997
 Flywheel Shaft, diameter as per Rule app as fitted 4007 Intermediate Shafts, diameter as per Rule app as fitted 137 Thrust Shaft, diameter at collars as per Rule app as fitted 4207
 Tube Shaft, diameter as per Rule app as fitted Screw Shaft, diameter as per Rule app as fitted 1427 Is the tube screw shaft fitted with a continuous liner y/s
 Bronze Liners, thickness in way of bushes as per Rule 3/4 as fitted Thickness between bushes as per Rule 2 1/2 as fitted Is the after end of the liner made watertight in the propeller boss y/s If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner y/s
 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 y/s
 If two liners are fitted, is the shaft lapped or protected between the liners y/s 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 54 1/2
 Propeller, dia. 15-0 Pitch 12-0 No. of blades 4 Material bronze whether Moveable Solid Total Developed Surface 85 sq. feet
 Method of reversing Engines Comp Air Valve Is a governor or other arrangement fitted to prevent racing of the engine when disengaged y/s Means of lubrication Grease Thickness of cylinder liners 207 Are the cylinders fitted with safety valves y/s Are the exhaust pipes and steamers lagged with non-conducting material y/s 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. 1 28x9x8 2 23 1/2 x 2 1/2 x 4 Is the sea suction provided with an efficient strainer which can be cleared within the vessel y/s
 Bilge Pumps worked from the Main Engines, No. None Diameter Stroke Can one be overhauled while the other is at work
 Pumps connected to the Main Bilge Line No. and Size 1 @ 10 1/2 x 12 x 24 + 1 @ 8 x 9 x 18 How driven Steam
 Is the cooling water led to the bilges No 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 1 @ 10 1/2 x 12 x 24 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 @ 6 1/2 x 7 x 15 (spare) working pump driven by main engine
 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 @ 3" 1 @ 3" 1 @ 3" 1 @ 3" In Pump Room No. 1-2 @ 3" No. 2-2 @ 3 1/2" No. 3-2 @ 3" No. 4-2 @ 3"
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 5 1/2"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes y/s 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 y/s
 Are all Sea Connections fitted direct on the skin of the ship y/s 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 y/s Are the Overboard Discharges above or below the deep water line Below
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel y/s Are the Blow Off Cocks fitted with a spigot and brass covering plate y/s
 What pipes pass through the bunkers How are they protected
 What pipes pass through the deep tanks Bilge Pipes Have they been tested as per Rule y/s
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times y/s
 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 y/s Is the Shaft Tunnel watertight See full report Is it fitted with a watertight door y/s worked from Upper Deck
 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 10 1/2 - 2 1/2 Stroke 6" Driven by
Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 10 1/2 - 8 1/4 Stroke 6" Driven by Steam
Small Auxiliary Air Compressors, No. No. of stages Diameters 2 1/2 Stroke Driven by
Scavenging Air Pumps, No. 1 Diameter 16007 Stroke 5407 Driven by Main Eng.
Auxiliary Engines crank shafts, diameter as per Rule as fitted Steam No. Position



W224-0160

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115

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yps.* ✓
 Can the internal surfaces of the receivers be examined and cleaned. *Yps.* ✓ Is a drain fitted at the lowest part of each receiver *Yps.* ✓
 High Pressure Air Receivers, No. *1* Cubic capacity of each *2507* Internal diameter *4-1 1/2* thickness *1 3/4*
 Seamless, lap welded or riveted longitudinal joint Material *3* Range of tensile strength *29-33 tons* Working pressure Actual *1000 lb*
 Starting Air Receivers, No. *2* Total cubic capacity *2507* Internal diameter *4-1 1/2* thickness *1 3/4*
 Seamless, lap welded or riveted longitudinal joint Material *3* Range of tensile strength *29-33 tons* Working pressure Actual *600 lb*
 IS A DONKEY BOILER FITTED? *Yps.* ✓ If so, is a report now forwarded? *Yps.* ✓
 Is the donkey boiler intended to be used for domestic purposes only *No.* ✓
 PLANS. Are approved plans forwarded herewith for Shafting *6-6-36* Receivers *17-10-36* Separate Fuel Tanks
 Donkey Boilers *17-10-36* General Pumping Arrangements *17-10-36* Pumping Arrangements in Machinery Space *17-10-36*
 Oil Fuel Burning Arrangements *17-10-36* SPARE GEAR.

Has the spare gear required by the Rules been supplied. *Yps.* ✓
 State the principal additional spare gear supplied *See List attached*



The foregoing is a correct description,
 For **BARCLAY, CURLE & Co., Ltd.** Manufacturer.
Alexander Macnair

Dates of Survey while building
 During progress of work in shops-- *1937. July 13, 16, 19, 20, 22, 25, 29. Feb 2, 9, 10, 11, 13, 16, 19, 24, 26. Mar 1, 4, 8, 12, 16, 18, 22, 24, 30.*
 During erection on board vessel-- *at Greenock. 1937. May 13, June 15, 16, Aug 13, 14, 19, 20, 26, 28, 30.*
 Total No. of visits *68*
 Dates of Examination of principal parts—Cylinders *16-3-34* Covers *-* Pistons *6-4-34* Rods *6-4-34* Connecting rods *2-4-34*
 Crank shaft *and* Flywheel shaft *and* Thrust shaft *24-2-34* Intermediate shafts *6-4-34* Tube shaft *-*
 Screw shaft *22-4-34* Propeller *24-4-34* Stern tube *24-4-34* Engine seatings *13-5-37* Engines holding down bolts *8-7-34*
 Completion of fitting sea connections *26-6-37* Completion of pumping arrangements *19-8-37* Engines tried under working conditions *30-8-37*
 Crank shaft, Material *and* Identification Mark *and* Flywheel shaft, Material *and* Identification Mark *1802/8-AAT-5*
 Thrust shaft, Material *S. D. Ingt. Steel* Identification Mark *EW 109. 86* Intermediate shafts, Material *do.* Identification Marks *1809/10-AAT-5*
 Tube shaft, Material *-* Identification Mark *do.* Identification Mark *1809/10-AAT-5*
 Is the flash point of the oil to be used over 150° F. *Yps.* ✓
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yps.* ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *No.* ✓
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *Yps.* ✓
 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 machinery has been built under special survey and in accordance with the Rules. The materials and workmanship are good. It has been efficiently secured in position on board and afterwards tried under full working conditions with satisfactory results.
This machinery is eligible, in my opinion to be classed in the Register Books with notation of + L.M.C. 8-34. 2 D.B.-120 lb.
4/9/37

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

The amount of Entry Fee .. £ 5 : - : When applied for, **7-SEP-1937**
 Special £ 92 : 4 :
 WELDING Donkey Boiler Fee £ 12 : 12 : When received, 30/10 19. 37
 Travelling Expenses (if any) £ : :
 Committee's Minute **GLASGOW 7-SEP-1937**
 Assigned *+ L.M.C. 8, 37* *2 D.B.-120 lb.*

James D. ...
 Engineer Surveyors to Lloyd's Register of Shipping.

