

RECEIVED

# REPORT ON OIL ENGINE MACHINERY.

LPL F.E.R.M. NO 130215

No. 74814

DEC 1949

Received at London Office 1 DEC 1949

Date of writing Report 26.11.49 19 28 NOV 1949 When handed in at Local Office Glasgow 19 Glasgow Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 30-5-49 Last Survey 6-10-1949

Reg. Book. Number of Visits 25

Single on the Triple Screw vessel M.V. "British Triumph" Tons Gross 8450 Net 4934

Built at Barnhead By whom built Commerzhaerder Co. Ltd. Yard No. 1199 When built 1949

Engines made at Glasgow By whom made Harland & Wolff Ltd. Engine No. A3280 When made 1949

Donkey Boilers made at Glasgow By whom made Harland & Wolff Ltd. Boiler No. 1 When made 1949

Brake Horse Power 3200 Owners British Tanker Co. Ltd. Port belonging to Glasgow

M.N. Power as per Rule 696 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which vessel is intended Ocean Going

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

Maximum pressure in cylinders 650 lbs/sq. in. Diameter of cylinders 440 mm Length of stroke 1500 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 128 lbs/sq. in. Ahead Firing Order in Cylinders 153624 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 942 mm

Is there a bearing between each crank Yes Revolutions per minute 115

Weight 2590 kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 2355 Means of ignition Comp. Kind of fuel used Heavy Oil

Crank Shaft, Solid forged dia. of journals 505 mm Crank pin dia. 505 mm Crank webs Mid. length breadth 840 mm Thickness parallel to axis 310 mm

Semi built dia. of journals 505 mm Crank webs Mid. length thickness 310 mm Thickness around eye hole 2225 mm

All built dia. of journals 505 mm Crank webs Mid. length thickness 310 mm Thickness around eye hole 2225 mm

Flywheel Shaft, diameter as per Rule APPD Intermediate Shafts, diameter as per Rule APPD Thrust Shaft, diameter at collars as per Rule APPD

Tube Shaft, diameter as per Rule APPD Screw Shaft, diameter as per Rule APPD Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule APPD Thickness between bushes as per Rule APPD 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

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 Yes

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

If so, state type Oil Gland Length of bearing in Stern Bush next to and supporting propeller 100 mm

Propeller, dia. 440 mm Pitch 100 mm No. of blades 3 Material Cast Iron whether moveable Yes Total developed surface 1.5 sq. feet

Moment of inertia of propeller (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 1000 Kind of damper, if fitted NONE

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication Forced

Thickness of cylinder liners 53 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled Yes

Are they lagged with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Sea suction

Cooling Water Pumps, No. 2 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. NONE Diameter 100 mm Stroke 100 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and size 100 mm How driven Electric

Is the cooling water led to the bilges Yes If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements Sea suction

Ballast Pumps, No. and size 100 mm Power Driven Lubricating Oil Pumps, including spare pump, No. and size 100 mm

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 100 mm In pump room 100 mm

In holds, &c. 100 mm

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 100 mm

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction 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 Yes 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 Below 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 Water How are they protected Lead

What pipes pass through the deep tanks Water 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 compartment to another Yes

Is the shaft tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Lead

Main Air Compressors, No. 2 No. of stages 2 diameters 100 mm stroke 100 mm driven by Electric

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 100 mm stroke 100 mm driven by Electric

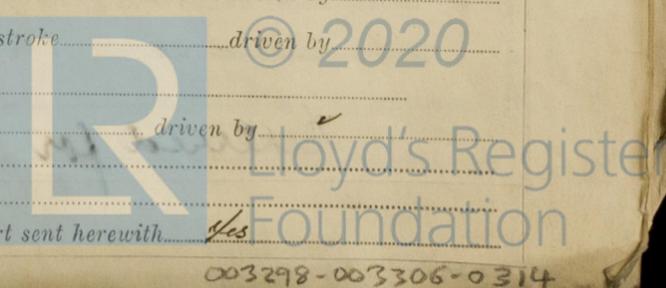
Small Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 100 mm stroke 100 mm driven by Electric

What provision is made for first charging the air receivers None

Scavenging Air Pumps, No. NONE (Under piston supercharge) diameter 100 mm stroke 100 mm driven by Electric

Auxiliary Engines crank shafts, diameter as per Rule APPD No. 2 Position Horizontal

Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes



AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....

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.....

Injection Air Receivers, No..... Cubic capacity of each..... Internal diameter..... thickness.....

Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

Starting Air Receivers, No..... Total cubic capacity..... Internal diameter..... thickness.....

Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

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..... Receivers..... Separate fuel tanks.....

Donkey boilers..... General pumping arrangements..... Pumping arrangements in machinery space.....

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved..... Yes (for service speed 115 RPM) Date of approval..... 16.2.48

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... As per Rule and attached list. ✓

State the principal additional spare gear supplied.....

The foregoing is a correct description, Harland and Wolff Limited, Manufacturer.

Dates of Survey while building: During progress of work in shops - 1949 MAY 10 JUN 1 2 6 9 13 23 29 30 JUL 4 7 21 25 27 AUG 4 22 23 24 31 SEP 12 4 21 22 OCT 3 6

Dates of examination of principal parts: Cylinders 5.8.49, Covers 5.8.49, Pistons 29.6.49, Rods 29.6.49, Connecting rods 28.4.49

Crank shaft 19.6.49, Flywheel shaft ✓, Thrust shaft 14.6.49, 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 S.M.S, Identification mark Lloyd's 19310, Flywheel shaft, material ✓, Identification mark ✓

Thrust shaft, material S.M.S, Identification mark Lloyd's 83583, Intermediate shafts, material, Identification marks

Tube shaft, material, Identification mark, Screw shaft, material, Identification mark

Identification marks on air receivers.....

Welded receivers, state Makers' Name.....

Is the flash point of the oil to be used over 150°F.....

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..... Yes If so, state name of vessel. M/V 1348 (British marine)

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

This machinery which has been constructed under Special Survey in accordance with the Rules and Approved Plans and Secretary's letters, has been now transported to Birkenhead to be installed in Messrs Cammell Laird & Co Ltd. Yard No 1199 where it will be tried under full power conditions. Materials & workmanship are good.

This machinery is eligible, in our opinion, to be classed in the Register Book with Record L.M.C (with date) on completion of installation in Messrs Cammell Laird & Co Ltd. Yard No 1199. (Birkenhead)

Remaining forging reports common to A3280 and Nos 1394, 1398, 1399 to follow, will be forwarded on completion.

The amount of Entry Fee: Glas 2/5 £ 142.13.4, Credit 2/pool 1/3 £ 41 6.8, Special £ : : When applied for 30 NOV 1949, Donkey Boiler Fee... £ : : When received 19, Travelling Expenses (if any) £ : :

Assigned Defered for completion

R. Clouston for self & J. Wilson, Engineer Surveyors to Lloyd's Register of Shipping.

LIVERPOOL 31 JAN 1950, See Minute on Liverpool Registry Rpts. Foundation

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