

REPORT ON OIL ENGINE MACHINERY.

No 68212

RECEIVED

6 MAR 1944

Received at London Office

16 MAR 1944

12 MAY 1944

Date of writing Report 19 **13.3** When handed in at Local Office **13.3** 19 **10.3** Port of **Glasgow**
 No. in Survey held at **Glasgow** Date, First Survey **10.1941** Last Survey **10.3** 19**44**.
 eg. Book. **552** on the **TRUJIPER** Number of Visits **61**
 Single **TRUJIPER** Screw vessel
 Triple
 Quadruple
 built at **Port Glasgow** By whom built **Lithgow's Std** Yard No. **986** When built **1944**
 Engines made at **Glasgow** By whom made **Harland & Wolff, Std.** Engine No. **8462/A** When made **1944**
 Donkey Boilers made at By whom made Boiler No. When made
 Brake Horse Power **3300** Owners **Ministry of War Transport.** Port belonging to
 Nom. Horse Power as per Rule **490** Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Trade for which vessel is intended **29 1/8"** **59 1/16"**

L ENGINES, &c.—Type of Engines **Heavy Oil, Airless Injection** 2 or 4 stroke cycle **4** Single or double acting **S-A**
 Maximum pressure in cylinders **700 lb**
 Mean Indicated Pressure **128** Diameter of cylinders **740 mm.** Length of stroke **1500 mm.** No. of cylinders **6** No. of cranks **6**
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **972 mm.** Is there a bearing between each crank **yes**
 Revolutions per minute **110** Flywheel dia. **2489 mm.** Weight **2590 Kgs.** Means of ignition **Compression** Kind of fuel used **Diesel Oil.**

Crank Shaft, **Solid forged** dia. of journals **as per Rule Appl. 505 mm.** Crank pin dia. **505 mm.** Crank Webs **Mid. length breadth 980 mm.** Thickness parallel to axis **310 mm.**
Semi built dia. of journals **as fitted 505 mm.** Crank Webs **Mid. length thickness 310** Thickness around eye-hole **292.5**
All built Bored **115** Bored **230**
 Flywheel Shaft, diameter **as per Rule** Intermediate Shafts, diameter **as per Rule Appl. 13 3/8** Thrust Shaft, diameter at collars **as per Rule Appl. 45.4 mm.**
as fitted **as fitted 13 3/8** **as fitted 45.4**

Stern Tube Shaft, diameter **as per Rule** Screw Shaft, diameter **as per Rule Appl. 14 2/8** Is the shaft fitted with a continuous liner **yes**
as fitted **as fitted 14 2/8**
 Bronze Liners, thickness in way of bushes **as per Rule Appl. 3/16** Thickness between bushes **as per Rule Appl. 9/16** Is the after end of the liner made watertight in the
as fitted **as fitted**

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
 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 **no** If so, state type Length of Bearing in Stern Bush next to and supporting propeller **4-11 1/2**

Propeller, dia. **16'-0"** Pitch **12'-0"** No. of blades **4** Material **Bronze** whether Moveable **no** Total Developed Surface **94** 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
greased Thickness of cylinder liners **53 lb** Are the cylinders fitted with safety valves **yes** Are the exhaust pipes and silencers water cooled or 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
 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. **three** 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 **1 engine driven, 100 ton per hour.**
 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

What provision is made for first Charging the Air Receivers
 Scavenging Air Pumps, No. Diameter Stroke Driven by
 Auxiliary Engines crank shafts, diameter **as per Rule** No. Position
as fitted

Have the Auxiliary Engines been constructed under special survey Is a report sent herewith
 Lloyd's Register Foundation

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, 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? _____

PLANS. Are approved plans forwarded herewith for Shafting *Inlet & Screw Shafts, 22-8-42* Receivers _____ Separate Fuel Tanks _____
 (If not, state date of approval) *Crank & Thrust shafts 23-4-41*

Donkey Boilers _____ General Pumping Arrangements _____ Pumping Arrangements in Machinery Space _____
 Oil Fuel Burning Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied _____
 State the principal additional spare gear supplied _____

The foregoing is a correct description,
Wm. J. Wright. Manufacturer.

Dates of Survey of Survey while building
 During progress of work in shops: 1941 Oct 7, Dec 30, 1942 Mar 11, Apr 22, May 4, Jul 19, Aug 14, Sep 7, 18, 29, Oct 16, Nov 16, Dec 2, 11, 25, 1943 Jan 14, 15, 18, 20, 22, 27, 29, Feb 8, 10, 11
 During erection on board vessel: Mar 2, 5, 18, Apr 15, 20, 28, May 10, 12, 17, Jun 7, 16, 28, Jul 23, 29, Aug 12, 27, Sep 15, Oct 21, Nov 3, 19, 22, 29, Dec 6, 8, 9, 13, 15, 16, 1944 Jan 6, 11, 24, Feb 8, 10, 11
 Total No. of visits: 61

Dates of Examination of principal parts—Cylinders 19-2-43 Covers 19-2-43 Pistons 27-1-43 Rods 27-1-43 Connecting rods 20-4-43
 Crank shaft 16-10-42 Flywheel shaft ✓ Thrust shaft 11-12-42 Intermediate shafts 19-11-43, 22-11-43, 15-12-43, 16-12-43 Tube shaft ✓
 Screw shaft 21-10-43 Propeller 21-10-43 Stern tube 21-10-43 Engine seatings _____ Engines holding down bolts _____
 Completion of fitting sea connections _____ Completion of pumping arrangements _____ Engines tried under working conditions _____
 Crank shaft, Material **Steel** Identification Mark **8462/1 P.9** Flywheel shaft, Material _____ Identification Mark _____
 Thrust shaft, Material **Steel** Identification Mark **S. 3959 P.9** Intermediate shafts, Material **Steel** Identification Marks **See below.**
 Tube shaft, Material _____ Identification Mark _____ Screw shaft, Material **Steel** Identification Mark **S-7435 P.9**

Identification Marks on Air Receivers
 Intermediate shafting: No. 1. S. 4033; No. 2. S. 3775; No. 3. S. 3542; No. 4. S. 3918; No. 5. S. 4160 No. 6. S. 3971
 No. 7. S. 3464; No. 8. S. 3877 Lloyd's. P. 9.

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 _____
 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 **Engines duplicate of A/91 MSM. Glasgow Report No. 67774**

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This machinery has been built under Special Survey and in accordance with the approved plans, the Rules of this Society, and the Ministry of War Transport Specification.
 The materials and workmanships are good.
 The machinery has been despatched to Greenock to be installed on board the vessel yard No. 986, building by Messrs Lithgow's, Ltd.
 On completion it will be eligible in my opinion to be classed in the Register Book with record of LMC. G.L. with date.

The amount of Entry Fee .. £ 5 : - :
 2/3 of £98-10-0 Special Specification .. £ 65 : 13 :
 Donkey Boiler Fee .. £ 16 : 8 :
 Travelling Expenses (if any) £ : :
 When applied for 14 MAR 1944
 When received, 19 _____

P. Fitzgerald.
 Engineer Surveyor to Lloyd's Register of Shipping.



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Committee's Minute **GLASGOW** 14 MAR 1944
 Assigned *Deferred for completion*

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