

Rpt. 4b.  
RECEIVED  
27 FEB 1946

# REPORT ON OIL ENGINE MACHINERY.

MOB 18205  
No. 34413  
25 FEB 1946

Received at London Office

Date of writing Report **27 FEB 1946** When handed in at Local Office **27 FEB 1946** Port of **Sunderland**  
 No. in Survey held at **Sunderland** Date, First Survey **9 Oct 45** Last Survey **6 Feb 1946**  
 Reg. Book. **Sunderland** Number of Visits **59**  
 on the **Single** Screw vessel **"M/V BRITISH ADMIRAL"** Tons: Gross **8738** Net **4983**  
 Built at **Haverhill Hill** By whom built **Fussess P. B. Col. J.** Yard No. **390** When built  
 Engines made at **Sunderland** By whom made **Wm. Leyland & Sons Ld.** Engine No. **253** When made **1946.**  
 Donkey Boilers made at **Wallsend.** By whom made **NE. M. Eng. Co. (1938) Ltd** Boiler No. **RW. 2744** When made **1946.**  
 Brake Horse Power **3100** Owners **BRITISH TANKERS C. L.** Port belonging to **LONDON.**  
 Nom. Horse Power as per Rule **684** Is Refrigerating Machinery fitted for cargo purposes **No.** Is Electric Light fitted **YES.**  
 Trade for which vessel is intended **235/9 915/16**

**OIL ENGINES, &c.**—Type of Engines **Approved piston action injection or 4 stroke cycle 2** Single or double acting **Single**  
 Maximum pressure in cylinders **640 lbs/sq. in.** Diameter of cylinders **600 mm** Length of stroke **Upper 980 mm Lower 1340 mm** No. of cylinders **4** No. of cranks **4 (3 throws)**  
 Mean Indicated Pressure **85 lbs/sq. in.** Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **886 mm** F. **1.690** F. **1.33** Is there a bearing between each crank **Between each 3 throws**  
 Revolutions per minute **F. 1690** Weight **A. 3.26 Tons** Means of ignition **Compression** Kind of fuel used **—**  
 Crank Shaft, **Solid forged** dia. of journals **as per Rule 431 mm** Crank pin dia. **450 mm** Crank Webs **Med. length breadth 650 mm** Thickness parallel to axis **255 mm**  
 Flywheel Shaft, diameter **as per Rule 431 mm** Intermediate Shafts, diameter **as per Rule 450 mm** Thrust Shaft, diameter at collars **as per Rule**  
 Tube Shaft, diameter **as per Rule** Screw Shaft, diameter **as per Rule** Is the tube shaft fitted with a continuous liner **—**

**Bronze Liners, thickness in way of bushes** as per Rule **as fitted** Thickness between bushes **as per Rule** 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** **Hand lever** Is a governor or other arrangement fitted to prevent racing of the engine **when decelerated** **Yes** Means of lubrication **forced**  
**Thickness of cylinder liners** **25 mm** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers **water cooled or lagged with non-conducting material** **Yes** 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.** **one engine driven** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **—**  
**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** **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** **one engine driven 110 mm x 510 mm**  
 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** **—**  
**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 **—**  
 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 **—**  
 On 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** **—**

Is provision made for first Charging the Air Receivers **—**  
**Revolving Air Pumps, No.** **Two** Diameter **1510 mm** Stroke **510 mm** Driven by **Direct from Main Engine**  
**Auxiliary Engines crank shafts, diameter** **as per Rule** **No.** **Position** **—**  
 Have the Auxiliary Engines been constructed under special survey **—** Is a report sent herewith **—**



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9110-91700-116

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?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herefor for Shafting

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

1 Cylinder liner complete with jacket, 1 upper & 1 lower piston skirt, 4 scraper rings, 40 main piston rings, 1 piston head, 4 fuel valves complete, 8 spray plugs, 1 centre conn. rod with spherical bearing, 2 side conn. rod with spherical bearings, 1 main (sph?) bearing, 2 main bearing slide & nuts, 4 centre & side (each) top & bottom bearing bolts & nuts, 2 top side rod bolts & nuts, 2 air starting valves, 2 cyl. relief valves, 1 fuel pump sucl. chamber complete, 2 fuel pump bodies complete with valves, 1 scav. pump sucl. & del. valve, 8 rubber hoses for upper piston cooling system, 1 roller chain for camshaft drive.

The foregoing is a correct description.

WILLIAM DONFORD & SONS, Limited.

Wm. J. Purdie

Manufacturer.

Director.

Dates of Survey while building: During progress of work in shops - 1945. Oct 9, 11, 15, 17, 19, 22, 24, 25, 30, 31. Nov. 1, 6, 8, 9, 12, 13, 15, 16, 19, 22, 26, 27, 29, 30. Dec. 5, 6, 7, 11, 12, 14, 17, 18, 19. During erection on board vessel - 20, 27, 28, 31. 1946. Jan 3, 4, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 22, 23, 24, 25, 30, 31. Feb. 1, 5, 6.

Dates of Examination of principal parts - Cylinders 8/11/45, 12/11/45; Cranks 18/11/45, 22/11/45; Pistons 18/12/45; Rods 18/12/45; Connecting rods 10/1/46.

Crank shaft 21/1/46; Flywheel shaft as crank; Thrust shaft as crank; Intermediate shafts -; Tube shaft -

Screw shaft -; Propeller -; Stern tube -; Engine seatings -; Engines holding down bolts -

Completion of filling sea connections -; Completion of pumping arrangements -; Engines tried under working conditions 5/6/2/46

Crank shaft, Material Ingot Steel; Identification Mark No 253 NMF; Flywheel shaft, Material as crank; Identification Mark as crank

Thrust shaft, Material as crank; Identification Mark as crank; Intermediate shafts, Material -; Identification Marks -

Tube shaft, Material -; Identification Mark -; Screw shaft, Material -; Identification Mark -

Identification Marks on Air Receivers.

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

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 in accordance with the approved plans & the rules of the Society. The materials & workmanship are good.

On completion it has been tried under full load conditions on test bed with satisfactory results.

It has now been despatched to Haverton Hill for installation on board the vessel & upon this being completed satisfactorily the machinery will be eligible, in my opinion, to have an L.M.C. (with date) entered in the Register Book

The amount of Entry Fee .. £ 6 : : When applied for, 2/3 Special ... £ 18 : 18 : 3 FEB 1946

Builder's Fee ... £ 12 : 12 : When received, held Const. Travelling Expenses (if any) £ : : 19

Committee's Minute

Assigned See F.E. mchey. rpt.

J. St. Grass. Engineer Surveyor to Lloyd's Register of Shipping.



Certificate (if required) to be sent to SUNDERLAND.

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