

4b.

# REPORT ON OIL ENGINE MACHINERY.

No. **68982<sup>A</sup>**

Received at London Office **23 NOV 1944**

Survey Report 19... When handed in at Local Office **14. 11.** 19... Port of **GLASGOW.**  
 Survey held at **GLASGOW** Date, First Survey **7th October 1944** Last Survey **2nd November 1944.**  
 Number of Visits **51**  
 Single on the Screw vessel **M/V "BRITISH COURAGE"** Tons Gross **6952** Net **4132**  
 PORT **GLASGOW** By whom built **LITHGOWS LTD.** Yard No. **-** When built **1928-3**  
 made at **GLASGOW** By whom made **HARLAND & WOLFF LTD.** A/MS/M. **96** Engine No. **8463/3** When made **1944**  
 boilers made at **-** By whom made **-** Boiler No. **-** When made **1928**  
 Indicated Power **3300** Owners **BRITISH TANKER CO., LTD.** Port belonging to **LONDON.**  
 Indicated Power as per Rule **490** Is Refrigerating Machinery fitted for cargo purposes **NO** Is Electric Light fitted **YES**  
 for which vessel is intended **TANKER.**

Types of Engines **Heavy Oil Airless injection.** 2 or 4 stroke cycle **4** Single or double acting **S.A.**  
 Pressure in cylinders **700 lbs.** Diameter of cylinders **740 m/m** Length of stroke **1500 m/m** No. of cylinders **6** No. of cranks **6**  
 Rated Pressure **120 lbs.** Crank webs Mid. length breadth **980 m/m** Thickness parallel to axis **310 m/m**  
 Crank webs Mid. length thickness **310 m/m** Thickness around eye hole **292.5 m/m**  
 Bearings, adjacent to the crank, measured from inner edge to inner edge **972 m/m** Is there a bearing between each crank **Yes**  
 Revolutions per minute **110** Flywheel dia. **2489 m/m** Weight **2590 Kgs.** Means of ignition **Compression** Kind of fuel used **Diesel oil.**  
 Journals dia. of journals as per Rule **Approved 505 m/m** Crank pin dia. **505 m/m** Crank webs Mid. length breadth **980 m/m** Thickness parallel to axis **310 m/m**  
 Journals dia. of journals as fitted **Bored 115"** Crank webs Mid. length thickness **310 m/m** Thickness around eye hole **292.5 m/m**  
 Main shaft, diameter as per Rule **-** Intermediate Shafts, diameter as per Rule **As approved** Thrust Shaft, diameter at collars as fitted **As approved**  
 Main shaft, diameter as fitted **-** Intermediate Shafts, diameter as fitted **16"** Thrust Shaft, diameter at collars as per Rule **454 m/m**  
 Main shaft, diameter as per Rule **-** Screw Shaft, diameter as per Rule **As approved** Is the **tube** shaft fitted with a continuous liner **Yes**  
 Main shaft, diameter as fitted **-** Screw Shaft, diameter as fitted **15 7/8"** Is the **screw** shaft fitted with a continuous liner **Yes**  
 Liners, thickness in way of bushes as per Rule **As approved** Thickness between bushes as per Rule **As approved** Is the after end of the liner made watertight in the boss **Yes**  
 Liners, thickness in way of bushes as fitted **13/16** Thickness between bushes as fitted **25/32** Is the after end of the liner made watertight in the boss **Yes**  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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-  
 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  
**No** If so, state type **-** Length of bearing in Stern Bush next to and supporting propeller **-**  
**12'0"** No. of blades **4** Material **Bronze** whether moveable **No** Total developed surface **75** sq. feet  
**Direct** Is a governor or other arrangement fitted to prevent racing of the engine when disconnected **Yes** Means of  
**Forced** Thickness of cylinder liners **53 to 41 m/m** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water-cooled  
 with non-conducting material **Lagged** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
 engine **-** Cooling Water Pumps, No. **2 S.W.** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**  
**2 F.W.**  
 Pumps worked from the Main Engines, No. **None** Diameter **-** Stroke **-** Can one be overhauled while the other is at work **-**  
 Connected to the Main Bilge Line { No. and size **Ballast 170 tons W/1 9"x10"x10"**, Bilge **100 tons per hr.**  
 How driven **Steam** **Motor.**  
 Bilge 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 **-**

Pumps, No. and size **1 off 9"x10"x10"** Power Driven Lubricating Oil Pumps, including spare pump, No. and size **1ME 100 tons/hour.**  
 Independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both main bilge pumps and auxiliary  
 pumps, No. and size:—In machinery spaces **3 off 3 1/2** In pump room **-**  
 In pump room **-**  
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size **2 off 5"**  
 Are bilge suction pipes in hold and tunnel well fitted with strum-boxes **Yes** Are the bilge suction in the machinery spaces led from easily  
 mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **Yes**  
 Connections fitted direct on the skin of the Ship **Yes** Are they fitted with valves or cocks **Both** Are they fixed  
 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 **Yes**  
 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**  
 Do they pass through the bunkers **None** How are they protected **-**  
 Do they pass through the deep tanks **-** Have they been tested as per Rule **-**  
 Are cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times **Yes**  
 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  
 from one compartment to another **Yes** Is the shaft tunnel watertight **-** Is it fitted with a watertight door **-** worked from **-**  
 On the vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork **-**

Compressors, No. **None** No. of stages **-** diameters **-** stroke **-** driven by **-**  
 Air Compressors, No. **1** No. of stages **3** **11 1/2-2 3/4" 11 1/2-9 1/4" 2 3/4"** driven by **Steam**  
 Auxiliary Air Compressors, No. **1** No. of stages **3** diameters **78/285/3187/** stroke **7"** driven by **Steam**  
 Is provision made for first charging the air receivers **Steam Weir compressor.**  
 Air Pumps, No. **None** diameter **-**  
 Engines crank shafts, diameter as per Rule **-**  
 Engines crank shafts, diameter as fitted **-**  
 Have auxiliary engines been constructed under special survey **-**



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**AIR RECEIVERS:**—Have they been made under survey See original 1st Entry State No. of report or certificate -  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule Rpt. 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 -  
**Starting Air Receivers,** No 2 Total cubic capacity 960 cu.ft. Internal diameter 6'6" thickness -  
 Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 28/32 tons. Working pressure -  
**IS A DONKEY BOILER FITTED** Yes If so, is a report now forwarded Original  
 Is the donkey boiler intended to be used for domestic purposes only No

**PLANS.** Are approved plans forwarded herewith for shafting 15: 1: 44 23: 3: 44 Receivers - Separately -  
 (If not, state date of approval)  
 Donkey boilers - General pumping arrangements ✓ Pumping arrangements in machinery space -  
 Oil fuel burning arrangements 14: 7: 44

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied Yes  
 State the principal additional spare gear supplied As per specification for main engines only.

The foregoing is a correct description,

*Wm. J. Wright*

Manufacturer.

Dates of Survey while building  
 During progress of work in shops - 1944 Oct 7 Dec 31 1943 Mar 13 Apr 25 May 5 Sep 22 1943 Mar 3 Jun 23 Sep 6 Nov 29 Dec 1943  
 During erection on board vessel - 21 22 23 24 25 26 27 28 29 30 31 Apr 6 May 1 4 16 25 31 Jun 15 21 26 29 Jul 3 5 Aug 3 24 Sep 19 22 Oct 5 9 11 12 1944  
 Total No. of visits 51

Dates of examination of principal parts—Cylinders 21: 3: 44 to 21: 3: 44 to 2: 3: 44 to  
31: 3: 44 Covers 31: 3: 44 Pistons 27: 3: 44 Rods -  
 Crank shaft 29: 11: 43 Flywheel shaft - Thrust shaft 29: 11: 43 Intermediate shafts -  
 Screw shaft 3: 8: 44 25: 5: 44 Propeller 3'8/44 Stern tube 9.10:44 Engine seatings 3: 7: 44

Completion of fitting sea connections - Completion of pumping arrangements 2: 11: 44 Engines tried -  
 Crank shaft, material Steel Identification mark Lloyds 8463/SP.F 29/11/43 Flywheel shaft, material -  
 Thrust shaft, material - Identification mark Lloyds S.4555 W.H. 22107A2 Intermediate shafts, material Steel  
 Tube shaft, material - Identification mark 16. 3. 42 P.F. 29.11.43 Screw shaft, material -

Identification marks on air receivers The bottom starboard air receiver has been removed  
The remaining two (See original 1st entry report.)

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  
 Description of fire extinguishing apparatus fitted Steam and foamite.  
 Is the vessel (not ~~being~~) fitted for carrying oil as cargo Yes If so, have the requirements of the Rules been complied with Yes  
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with (Main engines)  
 Is this machinery duplicate of a previous case Yes If so, state name of vessel M/V

**General Remarks** (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under special survey and in accordance with the approved plans, the Rules of this Society, and the Ministry of War Transport Specification for the Main engines. The materials and workmanship are good. The machinery has been efficiently secured in position on board the vessel, and afterwards tried under full working condition with satisfactory results. The machinery is eligible in our opinion to be classed in the Register Book with notation of L.M.C. N.E. 11-44 C.L.(N) 11-44. (Specification for main engines only)  
 Note: attached report 9

The amount of Entry Fee ... £ 21 NOV 1944

*G. E. Murdoch & Jas. Stevenson*  
 Engineer Surveyors to Lloyd's Register of Shipping.



(it required) to be sent to the Secretary of the Committee for Committee's Minutes.