

## REPORT ON OIL ENGINE MACHINERY.

No. 73527

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in Survey held at Glasgow Date, First Survey 2.10.44 Last Survey 29.12.48 19

Book. Number of Visits 86

Single on the Twin Triple Quadruple Screw vessel Motor Tanker "British Mariner" Tons Gross 8545 Net

at Glasgow By whom built Harland & Wolff Ltd Yard No. 13486 When built 1948

ines made at By whom made Engine No. 13486 When made 1948

key Boilers made at Belfast By whom made Boiler No. 13486 When made 1948

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

Power as per Rule 696 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

for which vessel is intended Carrying Petroleum in Bulk.

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

um 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

Indicated Pressure 128 lbs/sq. in Ahead Firing Order in Cylinders 1.5.3.6.2.4 Span of bearings, adjacent to the crank, measured

inner edge to inner edge 942 mm Is there a bearing between each crank Yes Revolutions per minute 115

eel dia. 2489 mm Weight 2590 kgs Moment of inertia of flywheel (16 lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 2350 Means of ignition Comp. Kind of fuel used Diesel Oil

Solid forged dia. of journals as per Rule AS APP Crank pin dia. 505 mm Crank webs Mid. length breadth 840 mm Thickness parallel to axis 310 mm

Semi built dia. of journals as fitted 505 mm Crank webs Mid. length thickness 310 mm Thickness around eyehole 222.5 mm

All built dia. of journals as fitted 505 mm Crank webs Mid. length thickness 310 mm Thickness around eyehole 222.5 mm

eel Shaft, diameter as per Rule AS APP Intermediate Shafts, diameter as fitted 14" Thrust Shaft, diameter at collars as fitted 45.4 mm

Shaft, diameter as per Rule AS APP Screw Shaft, diameter as fitted 16" Is the shaft fitted with a continuous liner Yes

e Liners, thickness in way of bushes as per Rule AS APP Thickness between bushes as fitted 2/32 Is the after end of the liner made watertight in the

ler boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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-

ive 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

tube shaft No If so, state type Length of bearing in Stern Bush next to and supporting propeller 60"

ller, dia. 15'-6" Pitch 12'-0" No. of blades 4 Material 1/2" Bronze whether moveable No Total developed surface 45 sq. feet

nt of inertia of propeller (16 lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 10020 Kg. cm<sup>2</sup> Kind of damper, if fitted NONE

od of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of

ation Forced Thickness of cylinder liners 53-41 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

ed with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

o the 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

Pumps worked from the Main Engines, No. NONE Diameter Stroke Can one be overhauled while the other is at work

ps connected to the Main Bilge Line No. and size 2 Bilge Duplex 8" x 8" x 8" 1 Ballast Duplex 9" x 10" x 10"

How driven Steam Steam

e 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

gements

st Pumps, No. and size 1 @ 9" x 10" x 10" Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 Stand By @ 100 Tons/Hr

two 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 @ 3 1/2" : 5 @ 2" (only Bilge Suctions) In pump room

lds, &c.

pendent Power Pump Direct Suctions to the engine room bilges, No. and size 2 @ 6" : 1 @ 8"

all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction pipes in the machinery spaces led from easily

sible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

all Sea Connections fitted direct on the skin of the Ship Yes Are they fitted with valves or cocks Both Are they fixed

iently 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

hey 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

t pipes pass through the bunkers NONE How are they protected

t pipes pass through the deep tanks Have they been tested as per Rule

all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

he 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

ces, or from one compartment to another Yes Is the shaft tunnel watertight NONE Is it fitted with a watertight door worked from

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

in Air Compressors, No. NONE No. of stages diameters stroke driven by

iliary Air Compressors, No. Two No. of stages Two diameters 280-245 stroke 130 mm driven by Steam Engines

all Auxiliary Air Compressors, No. NONE No. of stages diameters stroke driven by

at provision is made for first charging the air receivers Two Steam driven Compressors as above

avenging Air Pumps, No. diameter stroke driven by

iliary Engines crank shafts, diameter as per Rule AS APP No. Yes Position S.S. For

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

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Foundation



AIR RECEIVERS:—Have they been made under survey. Yes State No. of report or certificate X. 94  
Is each receiver, which can be isolated, fitted with a safety valve as per Rule. 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, welded or riveted longitudinal joint. - Material. - Range of tensile strength. - Working pressure. -  
Starting Air Receivers, No. Two Total cubic capacity. 800 cu ft Internal diameter. 68 1/4" thickness. 1 1/32"  
Seamless, welded or riveted longitudinal joint. ALL Welded Material. S Range of tensile strength. 29-33 Working pressure. Actual 35

IS A DONKEY BOILER FITTED Yes If so, is a report now forwarded. Yes  
Is the donkey boiler intended to be used for domestic purposes only. No

PLANS. Are approved plans forwarded herewith for shafting. APP. 28.3.44 Receivers. APP. 28.3.44 Separate fuel tank. -  
(If not, state date of approval)  
Donkey boilers. APP. Belfast General pumping arrangements. 14.5.44 Pumping arrangements in machinery space. 8.1.48  
Oil fuel burning arrangements. 24.1.48  
Have Torsional Vibration characteristics been approved. Yes Date of approval. 28.3.44

#### SPARE GEAR.

Has the spare gear required by the Rules been supplied. Yes and as per attached list  
State the principal additional spare gear supplied. Screw shaft Cast Iron Propeller  
Lloyds 59143 X. 44144. No. 1.  
S.S. Lloyds No 14053  
8.10.44 A.W. 26.1.48  
A.A.C. 16.3.48

The foregoing is a correct description,

Wm. J. Wright Manufacturer.  
Dates of Survey while building  
During progress of work in shops - 1947 OCT. 2. DEC. 4. 15. 24. 1948. JAN. 12. MAR. 15. 16. 26. APR. 13. 14. 16. 26. MAY. 5. 6. 17. 19. 24. 26. 28. JUN. 2. 7. 9. 14. 17. 18. 21. 24. 28. 30.  
During erection on board vessel - JUL. 1. 5. 7. 8. 15. AUG. 6. 11. 12. 16. 18. 19. 23. 25. 30. SEP. 1. 15. 16. 24. 27. 28. 29. 30. OCT. 4. 6. 7. 11. 12. 14. 18. 25. 27. 28. NOV. 1. 3. 5. 8. 10. 11. 15. 17. 22. 25. 29. DEC. 1. 2. 8. 9. 13. 15. 16. 18. 20. 21. 27. 29.  
Total No. of visits. 6.8.48 16 6.8.48 16 12.8.48 16

Dates of examination of principal parts—Cylinders. 6.8.48 16 Covers. 6.8.48 16 Pistons. 12.8.48 16 Rods. 18.8.48 Connecting rods. 18.8.48  
Crank shaft. 9.6.48 Flywheel shaft. ✓ Thrust shaft. 14.6.48 Intermediate shafts. 19.5.48 Tube shaft. ✓  
Screw shaft. 16.3.48 Propeller. 12.6.48 Stern tube. 5.6.48 Engine seatings. 25.11.48 Engine holding down bolts. 2.12.48  
Completion of fitting sea connections. 4.8.48 Completion of pumping arrangements. 24.12.48 Engines tried under working conditions. 29.12.48  
Crank shaft, material. S.M.S Identification mark. Lloyds 14698 Test Marks Flywheel shaft, material. ✓ Identification mark. ✓  
Thrust shaft, material. S.M.S Identification mark. Lloyds 81450 Intermediate shafts, material. S.S. Identification marks. Lloyds 5962  
Tube shaft, material. ✓ Identification mark. ✓ Screw shaft, material. S.S. Identification mark. Lloyds 5904  
Identification marks on air receivers. No. 431 & 432 : Lloyds Test 584 : W.R. 356185 : R.O.B. 8.10.48

Welded receivers, state Makers' Name. Harland & Wolff Ltd. Belfast.  
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. Water, Steam & Foamite  
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. "British Ranger" (13622)

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery which has been constructed in accordance with the Rules and Approved Plans, has been efficiently secured in position in this vessel, tried under full power conditions satisfactorily.  
The materials and workmanship are good.  
Eligible in my opinion to be classed in the Register Book with Record & LMC 12.48 and notation F.S. and D.B. working pressure 150 LBS/SQ. INCH Oil Engines

The amount of Entry Fee ... £ 214:-  
Special ... £ 14 JAN 1949  
Donkey Boiler Fee... £ When applied for 19  
Travelling Expenses (if any) £ When received 19  
Committee's Minute GLASGOW 18 JAN 1949  
Assigned L.M.C. 12.48 OIL ENG  
DB 150 lb

H. Clive  
Engineer Surveyor to Lloyd's Register of Ships