

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 16th SEPT. 1944. When handed in at Local Office 22nd SEPT 1944. Port of Greenock

No. in Survey held at Greenock Date, First Survey 5th AUGUST 1943. Last Survey 26th SEPTEMBER 1944
Reg. Book (Number of Visits 56)

on the 'EMPIRE BALFOUR' Tons { Gross 7200.97
Net 4946.38

Built at Port Glasgow By whom built Lithgows Ltd. Yard No. 998 When built 1944

Engines made at Glasgow By whom made Harland & Wolff Ltd. Engine No. 8370 When made 1944

Boilers made at Glasgow & Greenock By whom made John Brown & Co. Ltd. & Rankin & Blackmore Ltd. Boiler No. 496 When made 1944

Registered Horse Power Owners Ministry of War Transport Port belonging to GREENOCK

Nom. Horse Power as per Rule 560 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which vessel is intended Foreign

ENGINES, &c.—Description of Engines

Dia. of Cylinders Length of Stroke No. of Cylinders No. of Cranks Revs. per minute

Crank shaft, dia. of journals as per Rule Crank pin dia. length breadth Crank webs Thickness parallel to axis

Intermediate Shafts, diameter as per Rule as fitted Thrust shaft, diameter at collars as per Rule as fitted

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

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

Propeller, dia. 18'3" Pitch 16'6" Max. No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 110 sq. feet

Feed Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Feed Pumps No. and size Pair 10'5"-8"x22" One 9'5"-7"x21" Pumps connected to the Main Bilge Line No. and size One 9'-12"x12" One 9'5"-7"x21"

Ballast Pumps, No. and size One 9'-12"x12" Lubricating Oil Pumps, including Spare Pump, No. and size none

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps:—In Engine and Boiler Room 3 @ 3" In Pump Room No. 4. -2@3" No. 5. -2@2" 8 1@3" In Holds, &c. No. 1. -2@3" No. 2. -2@3" No. 3. -2@3" Tunnel Well one @ 2.5"

Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 9" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 5"

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

Are the Bilge Suctions in the Machinery Space 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. Main inlet in Reservoir Are they fitted with Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Mem. Tanks below deck above

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 Fuel Hold Suctions How are they protected Wood Casings

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 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 Access by trunk from Upper Deck

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 8368 sq. ft.

Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters Both wing boilers (main)

No. and Description of Boilers 3. Cylindrical Multitubular 258 sq. ft. Working Pressure 220 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Mem. Glasgow Report No. 68720. Reply. G.R. Report.

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Yes Donkey Boilers

(If not state date of approval)

Superheaters General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied As per Specification

The foregoing is a correct description.
For Rankin & Blackmore Ltd.
James Lewis
Works Manager.

Manufacturer.



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Lloyd's Register
Foundation

004906-004917-0144

Dates of Survey while building

During progress of work in shops - - (1943) AUG. 5. NOV. 16. DEC. 15. 28. (1944) JAN. 5. 14. 19. 24. 31. FEB. 14. MAR. 10. 21. 24. 29. APRIL 4. 10. 14. 19. 21. 24.

During erection on board vessel - - - MAY 2. 9. 15. 24. JUNE 1. 14. 19. 21. 23. 24. JULY 11. 12. 15. 17. 24. 25. 26. 27. AUG. 2. 5. 7. 8. 9. 10. 11. 16. 18. 21. 28.

SEPT. 1. 4. 11. 12. 13. 15. 20.

Total No. of visits 56.

Dates of Examination of principal parts—Cylinders _____ Slides _____

Pistons _____ Piston Rods _____ Connecting rods _____

Crank shaft _____ Thrust shaft 19.6.44. Intermediate shafts 19.6.44.

Tube shaft _____ Screw shaft 23.6.44 Propeller 23.6.44.

Stern tube 19.6.44. Engine and boiler seatings 27.6.44 Engines holding down bolts 7.8.44.

Completion of fitting sea connections 19.6.44

Completion of pumping arrangements 21.8.44 Boilers fixed 27.7.44 Engines tried under steam 21.8.44

Main boiler safety valves adjusted 21.8.44 Thickness of adjusting washers P 5 15/32 Supt 13/32 C 5 23/64 S 5 1/16 Supt 23/64

Crank shaft material _____ Identification Mark _____ Thrust shaft material S.M. Steel Identification Mark MC. 19.6.44

Intermediate shafts, material S.M. Steel Identification Marks MC. 19.6.44 Tube shaft, material _____ Identification Mark _____

Screw shaft, material S.M. Steel Identification Mark MC. 23.6.44 Steam Pipes, material S.D. Steel Test pressure 660 lbs. Date of Test Aug. 1944.

Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150° F. _____

Have the requirements of the Rules for the use of oil as fuel been complied with _____

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. 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 "EMPIRE TALISMAN" GRK. REPORT. NO. 22733

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

These engines and boilers, as per Glasgow Reports No 65888 and 68720. Have been built under Special Survey, and have been satisfactorily installed in the vessel, tried under steam on short sea trial.

The materials and workmanship are good.

The Ministry of War Transport Specification has been supervised.

They are eligible, in my opinion, to be classed in the Register book + LMC. 9.44. and the notation C.L. 2 main and 1 Auxly. boiler. Main boilers superheated.

The amount of Entry Fee ... £ : : When applied for,

Special 1/5 ... £ 20 : 12. : 16th SEPT 1944

Donkey Boiler Fee +25% ... £ 5 : 2. : When received,

Travelling Expenses (if any) £ : : 21st SEPT 1944

M. Caldwell.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 SEP 1944

Assigned H.M.C.G. 44

