Rpt. 4. No. 22433

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 13 JUL 1944

Date of writing Report 30th JUNE 1944 When handed in at Local Office 30th JUNE 1944. Port of GREENOCK

No. in Reg. Book Survey held at GREENOCK Date, First Survey 15th JULY 1943. Last Survey 30th JUNE 1944 (Number of Visits 55)

on the "EMPIRE TALISMAN" Tons { Gross 7201 Net 4946

Built at Port Glasgow By whom built Messrs Lithgows Ld. Yard No. 997. When built 1944

Engines made at Glasgow By whom made Harland & Wolff. Engine No. A/77 MSM 8370 S.O. 5667 When made 1944

Boilers made at Glasgow By whom made Fairfield S.B. & E. Co. Ld. Boiler No. A/71. 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 GLASGOW REPORT No 66413 Revs. per minute

Dia. of Cylinders Length of Stroke No. of Cylinders No. of Cranks

Crank shaft, dia. of journals as per Rule / as fitted Crank pin dia. Crank webs Mid. length breadth / Mid. length thickness Thickness parallel to axis / shrunk / Thickness around eye-hole

Intermediate Shafts, diameter as per Rule 13·3" / as fitted 13 5/8" Thrust shaft, diameter at collars as per Rule 13·99. / as fitted 14¼

Tube Shafts, diameter as per Rule / as fitted Screw Shaft, diameter as per Rule 14·85" / as fitted 15¼" Is the {~~tube~~ screw} shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule ·754" / as fitted 13/16" Thickness between bushes as per Rule ·565" / as fitted 5/8" Is the after end of the liner made watertight in the 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 at No. If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 61"

Propeller, dia. 18'-3" Pitch 16'-6" Max Variable 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. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size Pair 10½"-8"x22" / 1 @ 9½"-7"x21" How driven Steam

Pumps connected to the Main Bilge Line { No. and size 1 @ 9½"-12"x12" / 1 @ 9½"-7"x21" How driven Steam.

Ballast Pumps, No. and size 1 @ 9"-12"x12" Lubricating Oil Pumps, including Spare Pump, No. and size —

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 — In Holds, &c. No 1 - 2@3". No 2 - 2@3". No 3 - 2@3". Crosskunker 2@2½". No 4 - 2@3". No 5 - 2@2", 1@3". Tunnel Well 1@2½"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 9" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 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 (Manifold 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 Main & Tank below others 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 Fwd. Weld 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 worked from

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

Which Boilers are fitted with Forced Draft All. Which Boilers are fitted with Superheaters Both main.

No. and Description of Boilers 2 Main & One Auxiliary Multitubular Working Pressure 220 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

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 26·4·41 (If not state date of approval) Gla. Rpt No 66413 Main Boilers Gla. Rpt No 66375 Auxiliary Boilers 17/2/43 Donkey Boilers —

Superheaters Manchester Superheaters. General Pumping Arrangements 21·9·43. 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 —

The foregoing is a correct description.

Rankin & Blackmore Ltd.

Managing Director.

Manufacturer.

NOTE.—The words which do not apply should be deleted. Is a Report also sent on the Hull of the Ship? If not, state whether one has been forwarded.

2m T 11.41. MCC. (MADE IN ENGLAND.)

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Dates of Survey while building

During progress of work in shops - - (1943) JULY 15·30· AUG. 5·21· SEPT. 21· OCT. 6·18·21· DEC 1·8·17·23·28· (1944) JAN 5·12·17·19·2
FEB. 4 14 21. MAR. 10·21·27·29. APRIL 4·7·10·14 19·21·24·28 MAY 2·3·5·9·10·15·16·22·30· JUNE 2·12·13

During erection on board vessel - - - 15·16·19·20·22·23·24·28·29·30·

Total No. of visits 55.

Dates of Examination of principal parts—Cylinders ..... Slides ..... Covers .....

Pistons ..... Piston Rods ..... Connecting rods .....

Crank shaft — Thrust shaft 10·4·44 Intermediate shafts 19·4·44

Tube shaft — Screw shaft 7·4·44 Propeller 7·4·44

Stern tube 19·4·44 Engine and boiler seatings 2·5·44 Engines holding down bolts 12·6·44

Completion of fitting sea connections 7·4·44

Completion of pumping arrangements 16·6·44 Boilers fixed 2·6·44 Engines tried under steam 16·6·44

Main boiler safety valves adjusted 16·6·44 Thickness of adjusting washers Port. D. 5/16" S. 13/32" Supplt. 5/16". C. 12 3/8" S. 21/64". Stard D. 5/16" 23/64" S. Supplt. 5/16"

Crank shaft material — Identification Mark — Thrust shaft material STEEL. Identification Mark M.C. 10·4·44

Intermediate shafts, material Steel Identification Marks Nº 12519. 19·4·44 Tube shaft, material — Identification Mark —

Screw shaft, material Steel Identification Marks Nº 12519. 7·4·44 Steam Pipes, material STEEL. Test pressure 660 lbs Date of Test June 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 — If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c. These engines and boilers, as per Glasgow Reports Nº 66413 and 66375, have been built under Special Survey and have been satisfactorily installed in the Vessel, tried under steam alongside and at short sea trial with satisfactory results.

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 with the Notation +LMC. 6·44. CL. and 2 main & 1 auxly. boiler. F.D. Superheated steam boilers.

These engines had been lying in store for some time before fitting on board, and have now been opened up, examined and closed up.

It was found necessary to return the crankshaft to Messrs Harland & Wolff where the journals were skimmed up and the shaft reheded

Special Fee + 25% = £128·15·0
Charged by Glasgow = £90·9·0

Certificate to be sent to Greenock

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

The amount of Entry Fee ... £	:	:	When applied for, 27th JUNE 1944
Remainder of Special ... ... £	:	:	
+ 25% for Specialing	38	6	
Donkey Boiler Fee ... ... £	:	:	When received, 29th JUNE 1944
Travelling Expenses (if any) £	:	:	

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

Committee's Minute GLASGOW 11 JUL 1944 D.J.

Assigned -/- Lmc 6.44 JD

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