

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 20 JUL 1943
 Date of writing Report 2-7-1943 When handed in at Local Office 7-7-1943 Port of GLASGOW
 No. in Survey held at Paisley Date, First Survey 12-3-42 Last Survey 7-7-1943
 Reg. Book on the Steamer "EMPIRE LEWIS" (Number of Visits 29)
 Built at Thorne By whom built Messrs R. Dunston Ltd Yard No. 383 Tons {Gross Net
 Engines made at Paisley By whom made Messrs McVie, Beale Engine No. 1339 When made 1943
 Boilers made at By whom made Boiler No. When made
 Registered Horse Power Owners Port belonging to
 Nom. Horse Power as per Rule 85 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Trade for which vessel is intended Towing

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute
 Dia. of Cylinders 12'-20"-22" Length of Stroke 22" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 6.44 Crank pin dia. 6 1/2" Mid. length breadth 9 1/2" Thickness parallel to axis 4 1/8"
 as fitted 6 1/2" Crank webs Mid. length thickness 4 1/8" shrunk Thickness around eye-hole 2 13/16" 2 7/8" (pins)
 Intermediate Shafts, diameter as per Rule 6.13 Thrust shaft, diameter at collars as per Rule 6.44
 as fitted 6 1/4" as fitted 6 1/2"
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 4 1/2" Is the {screw} shaft fitted with a continuous liner {no liner
 as fitted Thickness between bushes as per Rule 4 1/8" as fitted

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the propeller boss as fitted
 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 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 2'-5"

Propeller, dia. 8'-3" Pitch 10'-0" No. of Blades 4 Material Cast Iron whether Moveable No Total Developed Surface 24 sq. feet
 Feed Pumps worked from the Main Engines, No. 1 Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work

Feed Pumps {No. and size Pumps connected to the Main Bilge Line {No. and size How driven
 Ballast Pumps, No. and size 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 In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 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 Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges
 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 stokehold 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

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 1356 sq. ft.
 Which Boilers are fitted with Forced Draft Yes Which Boilers are fitted with Superheaters
 No. and Description of Boilers 1—Single Ended Working Pressure 200 lbs/sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? No.
 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 16-7-42 Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)

Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements
 SPARE GEAR.

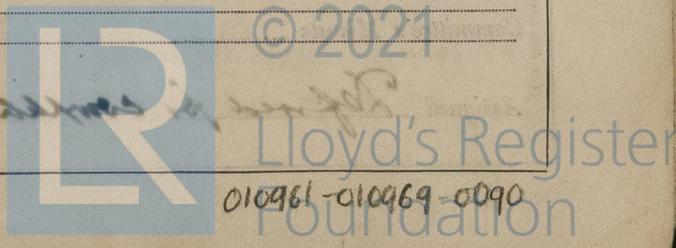
Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied

The foregoing is a correct description.
 For MCKIE & BAXTER, LIMITED, Manufacturer.
 DIRECTOR

If not, state whether, and when, one will be sent.

Is a Report also sent on the hull of the ship?

NOTE.—The words which do not apply should be deleted.



02372

During progress of work in shops -- { 1942 Apr 16 21 Jun 26 Jul 7 13 Sep 2 8-17 Oct 1 7 13 14 21 30 Nov 4 13 Dec 23
 1943 Jan 29 Feb 19 Mar 3 12 23 Apr 25 May 3 Jun 25 July 7
 During erection on board vessel --- {
 Total No. of visits 29

Dates of Examination of principal parts—Cylinders 12-3, 16, 21-4-42 Slides 16-4-42 Covers 7-7-43
 Pistons 2-9-42 Piston Rods 2-9-42 Connecting rods 1-10-42
 Crank shaft 2-9-42, 24-12-42 Thrust shaft 2-9-42, 28-4-43 Intermediate shafts 2-9-42, 28-4-43
 Tube shaft --- Screw shaft 8-9-42, 13-11-42, 28-4-43 Propeller 3-3-43, 28-4-43
 Stern tube 28-4-43 Engine and boiler seatings --- Engines holding down bolts ---
 Completion of fitting sea connections --- Boilers fixed --- Engines tried under steam ---
 Completion of pumping arrangements --- Thickness of adjusting washers ---
 Main boiler safety valves adjusted --- Crank shaft material O.H. Steel Identification Mark LLOYDS No 11602
 Thrust shaft material S.M. Steel Identification Mark LLOYDS No 6902
 Intermediate shafts, material S.M. Steel Identification Marks LLOYDS No 6901, No 6902, No 6903, No 6904, No 6905, No 6906, No 6907, No 6908, No 6909, No 6910, No 6911, No 6912, No 6913, No 6914, No 6915, No 6916, No 6917, No 6918, No 6919, No 6920, No 6921, No 6922, No 6923, No 6924, No 6925, No 6926, No 6927, No 6928, No 6929, No 6930, No 6931, No 6932, No 6933, No 6934, No 6935, No 6936, No 6937, No 6938, No 6939, No 6940, No 6941, No 6942, No 6943, No 6944, No 6945, No 6946, No 6947, No 6948, No 6949, No 6950, No 6951, No 6952, No 6953, No 6954, No 6955, No 6956, No 6957, No 6958, No 6959, No 6960, No 6961, No 6962, No 6963, No 6964, No 6965, No 6966, No 6967, No 6968, No 6969, No 6970, No 6971, No 6972, No 6973, No 6974, No 6975, No 6976, No 6977, No 6978, No 6979, No 6980, No 6981, No 6982, No 6983, No 6984, No 6985, No 6986, No 6987, No 6988, No 6989, No 6990, No 6991, No 6992, No 6993, No 6994, No 6995, No 6996, No 6997, No 6998, No 6999, No 7000
 Tube shaft, material --- Identification Mark ---
 Screw shaft, material S.M. Steel Identification Mark LLOYDS No 6900 Steam Pipes, material --- Test pressure --- Date of Test ---

Is an installation fitted for burning oil fuel --- 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 --- 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. No Report No 65420

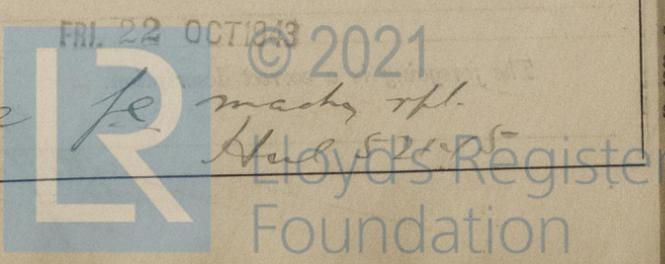
General Remarks (State quality of workmanship, opinions as to class, etc.)
 The machinery of this vessel has been constructed under Special Survey in accordance with the Rule Requirements, approved plans, or specification. The materials & workmanship are good. The machinery has been dispatched to Hull for installation in a vessel building by Messrs R. Duwaston Ltd, Yard No. 383

The above main engine installed on board single screw tug "Empire Lewis" at Hull. See separate report no 4
 W.S. Shields

(The Surveyors are requested not to write on or below the space for Committee's Minute.)
 Certificate to be sent to ---
 To ---
 MI ---
 CO ---
 AF ---
 ST ---

The amount of Entry Fee	£ 2	When applied for,	13 JUL 1943
Special	£ 8	When received,	
Donkey/Boiler Fee	£ 2		
Travelling Expenses (if any)	£		19

Committee's Minute GLASGOW 13 JUL 1943
 Assigned Deposed & completed. See fe machy rpl.



If not, state whether, and when, one will be sent? Is a report also sent on the Hull of the Ship?