

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 17 MAY 1943

Date of writing Report 14/5/1943 When handed in at Local Office 14/5/1943 Port of West Hartlepool
 No. in Survey held at Hartlepool Date, First Survey July 1942 Last Survey 11th May 1943
 Reg. Book. on the 3/5 "LAFIAN" (Number of Visits 69) Gross Tons 7221
 + 240 MBS Net Tons 5055
 Built at Haveron Hill By whom built Furness Shipbuilding Co. Ltd. Yard No. 352 When built 1943
 Engines made at Hartlepool By whom made Richardsons Westgarth Engine No. 2/32 When made "
 Boilers made at " By whom made " " Boiler No. " When made "
 Registered Horse Power Owners Martin & Co. Ltd. Port belonging to Liverpool
 Nom. Horse Power as per Rule 488 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines Triple expansion vertical Surface Condensing
 Dia. of Cylinders 23 1/2" x 38" x 66" Length of Stroke 45" No. of Cylinders 3 Revs. per minute 85
 Crank shaft, dia. of journals as per Rule 13.3 as fitted 13 3/4" Crank pin dia. 13 3/4" Crank webs Mid. length breadth shrunk Thickness parallel to axis 8 3/8"
 Intermediate Shafts, diameter as per Rule 12.67" as fitted 13" Thrust shaft, diameter at collars as per Rule 13.3 as fitted 13 3/4"
 Tube Shafts, diameter as per Rule 14.07" as fitted 14 3/4" Screw Shaft, diameter as per Rule 14.34" as fitted 14 3/4" Is the tube shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per Rule 3/32" as fitted 3/32" Thickness between bushes as per Rule .55" as fitted 9/16" 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 Yes
 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 Yes
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tub shaft No
 Propeller, dia. 16'-9 1/2" Pitch Variable No. of Blades 4 Material Brass whether Moveable No Total Developed Surface 93.8 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size two 9 1/2" x 7" x 21" How driven Steam Clark Chapman Pumps connected to the Main Bilge Line { No. and size 1 Ballast 9" x 11" x 10"; 2 Main 4" x 24" How driven Steam Main Engine
 Ballast Pumps, No. and size 1 G. Service 8" x 6" x 8" (Steam)
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 2-3" ER, 2-3" BR, 5" direct E.R.S., 3-2 1/2" well suction
 In Pump Room Nº3 Hold 2-3 1/2", Cofferdam fwd. 1-2 1/2", Tunnel well 1-3", Nº4 Hold 2-3" In Holds, &c. Nº1 Hold 2-3", Nº2 Hold 2-3 1/2", Nº3 Hold 2-3"
 Main Water Circulating Pump Direct Bilge Suctions, No. and size one 10" 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 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 below
 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 none How are they protected Yes
 What pipes pass through the deep tanks all for d. bilge & ballast through tunnel Have they been tested as per Rule Yes
 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 No worked from Escape Hatch

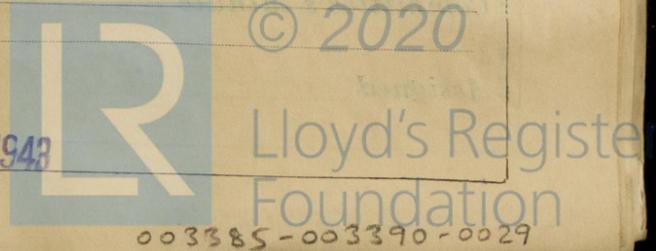
MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7362 sq. ft.
 Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters Yes
 No. and Description of Boilers 3 S.E. Multitubular Working Pressure 220 LB/SQ"
IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes
 Can the donkey boiler be used for domestic purposes only Yes
PLANS. Are approved plans forwarded herewith for Shafting 19/1/42 Main Boilers 24/11/41 Auxiliary Boilers Yes Donkey Boilers Yes
 Superheaters Yes General Pumping Arrangements 30/11/42 Oil fuel Burning Piping Arrangements Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied 1 Impeller shaft for centrifugal pump, 50 gram condenser pistons & 100 pistons.

The foregoing is a correct description,
 for RICHARDSONS, WESTGARTH & CO. LIMITED,
 Manufacturers.

18 MAR 1943



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

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

5c.938. T. (MADE IN ENGLAND.)

During progress of work in shops - - - 1942 July 9, Sept 4 Oct 1, 7, 11, 16, 19, 23, 30 Nov 2, 4, 5, 11, 12, 15, 16, 17, 19, 23 Dec 1, 9, 14, 15, 17, 18, 21, 22, 23, 24, 29, 31
 1943 Jan 8, 15, 18, 19, 22, 27, 30 Feb 1, 2, 3, 4, 5, 9, 13, 15, 16, 18, 17, 22 March 2, 3, 15, 16, 19, 22, 26, 31 April 2, 9, 10, 20, 22, 23, 30 May 1, 6, 7, 8, 11
 1943 MAR: 8, 10, 17, 19, 23, 26 Apr: 16, 21, 27, 29, 29, MAY: 3, 5, 7, 14, 15, 17, (2) 19, 20, 21, 24, 27, 31
 Total No. of visits 69 (Mdb = 24)

Dates of Examination of principal parts—Cylinders 9.9.42 Slides 9.9.42 Covers 23.11.42
 Pistons 18.12.42 Piston Rods 12.11.42 Connecting rods 19.11.42
 Crank shaft 4.11.42 Thrust shaft 23.11.42 Intermediate shafts 15.3.43
 Tube shaft ✓ Screw shaft 3.3.43 Propeller 23/3/43
 Stern tube 12.3.43 Engine and boiler seatings 23/3/43 + 16/4/43 Engines holding down bolts 7/5/43
 Completion of fitting sea connections 23/3/43
 Completion of pumping arrangements Boilers fixed 21/4/43 Engines tried under steam 24/5/43
 Main boiler safety valves adjusted 20/5/43 Thickness of adjusting washers P.B.M. 1 7/16 S 7/16 - C.B.M. P. 1 13/32 S 7/16 S.B.M. P. 1 13/32 S 3/8
 Crank shaft material *Steel* Identification Mark 11413 HAI Thrust shaft material *Steel* Identification Mark 8120 E.R.B.
 Intermediate shafts, material *Steel* Identification Marks 11413 HAI 11414 DB 8102 E.R.B. Tube shaft, material Identification Mark
 Screw shaft, material *Steel* Identification Mark 11413 HAI Steam Pipes, material *Steel* Test pressure 660 18 1/2 Date of Test 13.5.43
 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 *R.W. 2731*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The engines & boilers of this vessel have been constructed under Special Survey & in accordance with the approved plans.
The workmanship & material have been found good.
The machinery has been forwarded to Haverton Hill to be fitted on board by Messrs. James Shipbuilding Co. in their Yd. No 352
In my opinion, this vessel will be eligible to have record of + LMC - with date - on completion.
The machinery has fitted on board in accordance with the approved plans & Rule Requirements, tried out under working conditions & found satisfactory & in my opinion is eligible for record of + LMC - 5.43 & notation of T.S. (ca) 5.43.

The amount of Entry Fee ... £ 5 : 0 :
 Special $\frac{4}{5}$ LMC ... £ 78 : 11 :
 Donkey Boiler Fee ... £ ✓ : :
 Travelling Expenses (if any) £ ✓ : :
 Special 7/5 LMC. 19 : 13 :

When applied for, 11/5/1943
 When received, 5/6/43
 19

Committee's Minute WED. 23 JUN 1943

Clive Bell
 Engineer Surveyor to Lloyd's Register of Shipping.

Assigned + LMC 5.43
 FD CL



Certificate to be sent to
 The Surveyors are requested not to write on or below the space for Committee's Minute.