

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 1 DEC 1942

Date of writing Report 19 When handed in at Local Office 14: 9: 10 42 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 26: 12: 41 Last Survey 9: 9: 1942
 Reg. Book. (Number of Visits 22)
 on the STEEL SCREW STEAMER EMPIRE DRIVER Tons { Gross 7041.89 Net 4839.66
 Built at West Hartlepool By whom built W. Gray & Co. Ltd. Yard No. 1137 When built 1942
 Engines made at Glasgow By whom made Harland & Wolff, Ltd. Engine No. 6.0.8370 1/2 A/75 MSM When made 1942
 Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINEWORKS Boiler No. 1137 When made 1942
 Registered Horse Power Owners Ministry of War Transport Port belonging to WEST HARTLEPOOL
 Nom. Horse Power as per Rule 510 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES
 Trade for which Vessel is intended OCEAN GOING.

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 76
 Dia. of Cylinders 24 1/2 - 39 - 70 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 1 1/4 Crank pin dia. 14 3/4 Crank webs Mid. length breadth 22 Thickness parallel to axis 9
 as fitted 1 1/4 Crank webs Mid. length thickness 9 shrunk Thickness around eye-hole 6 3/8
 Intermediate Shafts, diameter as per Rule 13.33 Thrust shaft, diameter at collars as per Rule 14 1/4
 as fitted 13 5/8 as fitted 14 1/4
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 14.85 Is the screw shaft fitted with a continuous liner yes
 as fitted 15 1/4 as fitted 15 1/4 Is the after end of the liner made watertight in the propeller boss yes
 Bronze Liners, thickness in way of bushes as per Rule 26/32 Thickness between bushes as per Rule 18/32 Is the after end of the liner made watertight in the propeller boss yes
 as fitted 13/16 as fitted 21/32 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
 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 shaft no
 Propeller, dia. 18-3 Pitch 16-6 No. of Blades 4 Material Cast Iron whether Moveable no Total Developed Surface 110 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 27 Can one be overhauled while the other is at work yes
 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 3 @ 9 1/2 x 7 x 21 Pumps connected to the Main Bilge Line { No. and size 2 @ 4 x 25 1 @ 10 x 11 x 10 1 @ 9 1/2 x 7 x 21 SINGLEX.
 How driven INDEPENDENT STEAM. How driven MAIN ENGINE INDEPENDENT STEAM.
 Ballast Pumps, No. and size 1 @ 10 x 11 x 10 DUPLEX 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 4 @ 3" 1 @ 5"
 In Pump Room In Holds, &c. No. 1. 2 @ 3" No. 2. 2 @ 3" No. 3. 2 @ 3" BLRRM. 2 @ 3"
 ENG RM. 2 @ 3" No. 4. 2 @ 3" No. 5. 3 @ 3" TUNNEL WELL. 1 @ 2 1/2"
 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 on reservoirs. 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 Bilge pipes to Forward Holds. How are they protected Wood ceiling
 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 no worked from

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 7243 sq. ft.
 Which Boilers are fitted with Forced Draft steel Which Boilers are fitted with Superheaters steel.
 No. and Description of Boilers 3 single ended, 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 Main Boilers 19-2-41 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.

Wm J. Wright Manufacturer.

Finlayson Secretary

THE CENTRAL MARINE ENGINE WORKS, Ltd. 18/9/42

Lloyd's Register Foundation

010933-010942-0191

NOTE.—The words which do not apply should be deleted. If not, state whether, and when, one will be sent.

Nov 19
 1941 Dec: 26-30 (1942) Jan: 13 Feb: 5-12 Mar: 2-3-5-12-27 Apr: 10-14-16-28 May:
 19 June: 11-26 July: 30-31 Aug: 13-19 Sep: 9

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --
 Total No. of visits 22

Dates of Examination of principal parts—Cylinders 27-3-42 Slides 11-6-42 Covers 27-3-42
 Pistons 11-6-42 Piston Rods 26-6-42 Connecting rods 30-7-42
 Crank shaft 19-11-41 Thrust shaft 21-6-41 * Intermediate shafts 20-6-41 to 19-8-41 *
 Tube shaft * Examined at C.F.C. Works, Canada. Screw shaft 19-8-41 * Propeller 31-7-42
 Stern tube Engine and boiler seatings 25-9-42 Engines holding down bolts 24-10-42
 Completion of fitting sea connections 1-10-42
 Completion of pumping arrangements 17-11-42 Boilers fixed 24-10-42 Engines tried under steam 17-11-42
 Main boiler safety valves adjusted 16-11-42 Thickness of adjusting washers
 Crank shaft material Steel Identification Mark 8370/2 P.7. Thrust shaft material Steel Identification Mark 7550 JKM.
 Intermediate shafts, material Steel Identification Marks 6345 O.N. 7541 O.N.H.; 6242 O.N. 6240 O.N. Tube shaft, material Identification Mark
 Screw shaft, material Steel Identification Mark 6349 O.N. Steam Pipes, material SP Steel Test pressure 660 lbs Date of Test 28-10-42.
 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 M.W.T. Specification 24 1/2" 39" 70" x 48" Engine

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery has been built under Special Survey and in accordance with the approved plans, the Rules of this Society, & the Ministry of War Transport Specification.
 The materials and workmanships are good.
 The machinery has been despatched to West Hartlepool to be installed on board the vessel, Messrs Wm Gray & Co. Ltd; yard No. 1137.
 It will be eligible in my opinion to be classed in the Register Book with the notation 1-LMC. C.L. with date when officiously installed on board the vessel and tried under working conditions.
 This machinery has been installed on board and tried under working conditions with satisfactory results.
 It is recommended that the machinery of this vessel be classed 1-LMC. 11.42. 3SB(SM) F.D.C.L.
 Arthur W. Oxford.
 West Hartlepool.

Note Basic Bessemer steel slides. All auxiliary steam pipes to be submitted for examination after 4 years.

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|--------------------------------|------|-----|---|-------------------|
| The amount of Entry Fee ... | £ 6 | : - | : | When applied for, |
| Special Specification | £ 40 | : 4 | : | 15 SEP 1942 |
| Donkey Boiler Fee ... | £ 10 | : 0 | : | When received, |
| Travelling Expenses (if any) £ | 15 | : 3 | : | 19 |

P. Fitzgerald.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 SEP 1942

Assigned. Referred for Completion

TUE 8 DEC 1942

Handwritten initials and date: + dmb. 11/42

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