

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

26 FEB 1945

Date of writing Report 19... When handed in at Local Office 15 FEB 1945 Port of SUNDERLAND
 No. in Survey held at SUNDERLAND Date, First Survey 9th May 44 Last Survey 12th Feb 1945
 Reg. Book (Number of Visits 60)
 on the S/S EMPIRE MAURITIUS Tons {Gross 7309.66
 Net 5094.32
 Built at Sunderland By whom built Harland & Wolff Ltd Yard No. 302 When built 1945
 Engines made at Glasgow By whom made Jenau Stewart & Co Engine No. 215 When made 1945
 Boilers made at Sunderland By whom made H.S. MacGregor & Co (1928) Ltd Boiler No. 4100 When made 1945
 Registered Horse Power... Owners M.O.W.T. MacLellan & Co Ltd Port belonging to Sunderland
 Nom. Horse Power as per Rule 509 510 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended General

ENGINES, &c.—Description of Engines See Glasgow R. port No. 66838 Revs. per minute
 Dia. of Cylinders — Length of Stroke — No. of Cylinders — No. of Cranks —
 Crank shaft, dia. of journals as per Rule — Crank pin dia. — Crank webs — Thickness parallel to axis —
 as fitted — Mid. length thickness — Thickness around eye-hole —
 Intermediate Shafts, diameter as per Rule 13.33" Thrust shaft, diameter at collars as per Rule 14.0"
 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 {tube screw} shaft fitted with a continuous liner { yes
 as fitted — as fitted 15 1/4"
 Bronze Liners, thickness in way of bushes as per Rule 24/32" Thickness between bushes as per Rule 18/32" Is the after end of the liner made watertight in the
 as fitted 13/16" as fitted 5/8" 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 5'-1"
 Propeller, dia 18'-3" Pitch 15'-6" No. of Blades 4 Material C.I. whether Moveable not Total Developed Surface 98.5 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 3 9 1/2" x 7" x 21" Pumps connected to the { No. and size 1 10 1/2" x 13" x 24"; 1 9 1/2" x 7" x 21"
 { How driven Steam Main Bilge Line { How driven Steam
 Ballast Pumps, No. and size 1 10 1/2" x 13" x 24" 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 Eng. Rm. 2 at 3" (Port & Starboard); 1 1/2" Dia. 2 at 3" dia.
 In Pump Room — In Holds, &c. No. 1. 2 at 3" dia.; No. 2. 2 at 3 1/2" dia.; No. 3. 2 at 3" dia.; No. 4. 2 at 2 1/2" dia.; No. 5. 2 at 3" dia.; No. 6. 2 at 3" dia.; Tunnel well, 1 at 2 1/2" dia.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 at 9" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 at 5" dia & 1, 3" dia. Astern 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 yes
 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 both
 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 Feed Suctions How are they protected Bilge Liners
 What pipes pass through the deep tanks No. 1. Suctions 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 —

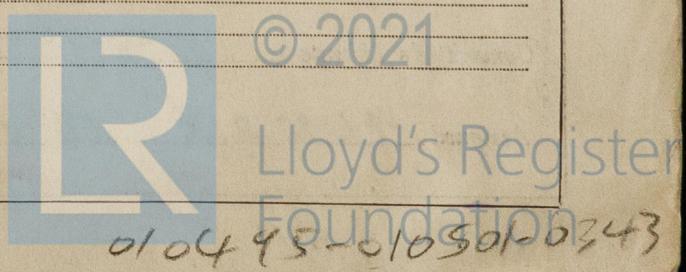
MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7248 sq ft
 Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters all
 No. and Description of Boilers 3 Single-Ended Cylindrical Working Pressure 220 lb
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? 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 3. 12.43 Main Boilers 18.9.43 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 NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.
 The foregoing is a correct description
 W. J. Hoy
 RESIDENT MANAGER

Manufacturer.



During progress of work in shops - - { 1944. May 9, 18 June 26, 29 July 3, 18, 19 Aug 23 Sep 8, 14, 27 Oct 12, 18, 23, 26, 27, 30
 Nov 1, 2, 3, 6, 7, 9, 10, 14, 17, 22, 23, 28, 29 Dec 1, 4, 5, 6, 7, 11, 13, 14, 18, 19, 20, 21, 22, 27, 28, 29 1945 Jan 7
 Dates of Survey while building { During erection on board vessel - - - { 5, 8, 9, 12, 16, 17, 19, 23, 29, 31 Feb 6, 7, 12
 Total No. of visits 60

Dates of Examination of principal parts - Cylinders - Slides - Covers -
 Pistons - Piston Rods - Connecting rods -
 Crank shaft - Thrust shaft 27/10/44 Intermediate shafts 10/11/44
 Tube shaft - Screw shaft 22/11/44 Propeller 22/11/44
 Stern tube 20/10/44 2/11/44 Engine and boiler seatings 12/10/44 Engines holding down bolts 5/12/44
 Completion of fitting sea connections 27/10/44
 Completion of pumping arrangements 19/1/45 Boilers fixed 22/12/44 Engines tried under steam 22/12/44
 Main boiler safety valves adjusted 22/12/44 Thickness of adjusting washers Port 1/4" p. 9/32" s. 1/4" s. Super heat. 5/16" s. 9/16" s. 7/32" s. s. p. s.
 Crank shaft material CP 3827, 3829, 3830 Identification Mark - Thrust shaft material steel Identification Mark 8826
 Intermediate shafts, material 3828, 3831, 3832 Identification Marks steel Tube shaft, material - Identification Mark 3826
 Screw shaft, material steel Identification Mark 3825 Steam Pipes, material steel Test pressure 66 lb. Date of Test 18.12.44
 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 Not required ✓
 Is this machinery duplicate of a previous case NO ✓ If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel has been efficiently fitted onboard in accordance with the approved plans, Secretary's letters and the requirements of the Rules. Workmanship & materials are good. The machinery has been tried under working conditions, at the grey wall, with satisfactory results and is eligible, in my opinion, for the

NOTATION + L.M.C. 2.45, C.L., 3.5.B. 220 lb. (Spt) F.D.

L. R. Howell

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee	£ - : -	When applied for, 16 Feb 1945
3/5 Special	£ 75 : 6	
Donkey Boiler Fee	£ : :	When received, 19
Travelling Expenses (if any)	£ : :	

Committee's Minute FRI, 23 MAR 1945

Assigned TLMC 245 F.D. C.L. sph



Certificate to be sent to

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