

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 When handed in at Local Office 15 FEB 1945 Port of SUNDERLAND. Received at London Office 26 FEB 1945

No. in Survey held at SUNDERLAND. Date, First Survey 9th May 1944 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 Hartman & Sons Ltd Yard No. 302 When built 1945

Engines made at Glasgow By whom made Duncan Stewart & Co Engine No. 215 When made 1945

Boilers made at Sunderland By whom made H. S. MacGregor & Co. (1938) Boiler No. 4100 When made 1945

Registered Horse Power Owners Macdonald & 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 As 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 — shrunk Thickness around eye-hole —

Intermediate Shafts, diameter as per Rule 13.33" as fitted 13.58" Thrust shaft, diameter at collars as per Rule 14.0" as fitted 14.14"

Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 14.85" as fitted 15.14" Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 24/32" as fitted 13/16" Thickness between bushes as per Rule 18/32" 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 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 Main Bilge Line { No. and size 1 & 2 10 1/2" x 13" x 24"; 1 & 2 9 1/2" x 7" x 21"
How driven Steam 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. Ruc. 2 at 3" (Port & Thrust main); Bth Ruc. 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 1 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. 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. Fuel Suctions How are they protected Bilge Suctions

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 ft²

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. H. H. H. H.
RESIDENT MANAGER.

Manufacturer.



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010495-010301-0343

Dates of Survey while building
During progress of work in shops - - 1944. May 9, 18 June 26, 29 July 3, 18, 19 Aug 21 Sep 8, 14, 27 Oct 12, 18, 23, 26, 27, 30
Apr 1, 2, 3, 6, 7, 9, 10, 14, 17, 20, 23, 28, 29 Dec 1, 4, 5, 6, 7, 11, 12, 14, 18, 19, 20, 21, 22, 27, 28, 29 1945 Jan 7
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 19/11/44
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 1/4" 9/32" 2 1/4" 5/16" 3 1/2" 5/16" 5 1/2" 5/16" 7 1/2" 5/16"
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 660 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 quay 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.

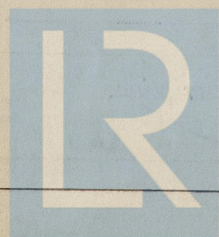
L. R. Hornell

The amount of Entry Fee ... £ — : — : When applied for,
3/5.2 Special ... £ 75 : 6 : 16 Feb 1945
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ... FRI, 23 MAR 1945

Assigned + LMC 2.45 F.D. C.L. 2ph



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