

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 79 DEC 1941

Date of writing Report 1 DEC 1941 When handed in at Local Office 1 DEC 1941 Port of SUNDERLAND.

No. in Survey held at Sunderland Date, First Survey 10 June Last Survey 9 Dec 1941
 Reg. Book. Sunderland (Number of Visits 77) Tons } Gross 7168
 on the S.S. "EMPIRE HALLEY" Net 4290

Built at Sunderland By whom built J. I. Thompson & Sons, Ltd Yard No. 612 When built 1941

Engines made at do. By whom made H. E. Mann Eng. Co. (1938) No. 4008 When made 1941

Boilers made at do. By whom made do. Boiler No. do. When made do.

Registered Horse Power 506 Owners W. J. Gould & Co. Ltd Port belonging to Sunderland

Nom. Horse Power as per Rule 506 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 Triple expansion Revs. per minute 3

Dia. of Cylinders 24", 39", 68" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 13.78" as fitted 14" Crank pin dia. 14" Crank webs Mid. length breadth shrunk Thickness parallel to axis 8 3/4" x 9 1/4"
 as fitted 14" Mid. length thickness shrunk Thickness around eye-hole 7 1/2" x 7"

Intermediate Shafts, diameter as per Rule 13.13" as fitted 13 1/4" Thrust shaft, diameter at collars as per Rule 13.78" as fitted 14"

Tube Shafts, diameter as per Rule 14.67" as fitted 15" Screw Shaft, diameter as per Rule 14.67" as fitted 15" Is the { tube } shaft fitted with a continuous liner { yes }

Bronze Liners, thickness in way of bushes as per Rule 23.9/32" as fitted 3/4" Thickness between bushes as per Rule 9/16" as fitted 21/32" 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 no

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 no

If two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia. 18'-0" Pitch no No. of Blades 4 Material C.I. whether Moveable not Total Developed Surface 117 sq. feet

Feed Pumps worked from the Main Engines, No. 0 Diameter — Stroke — Can one be overhauled while the other is at work no

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work yes

Feed Pumps { No. and size 2, 9 1/2" x 7" x 21" Pumps connected to the { No. and size 1, 8" x 5 3/4" x 9" & 1, 9" x 11" x 10" }
 How driven Steam Main Bilge Line How driven Steam

Ballast Pumps, No. and size 1, 9" x 11" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size —

Are two independent means arranged for circulating water through the Oil Cooler no Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room Eng. Rm. 2 @ 3" dia.; 1 @ 2" dia.; Boiler Rm. 2 @ 3" dia.; Dry tank 2 @ 3" dia.
 In Pump Room — In Holds, &c. 2 @ 3" dia. in each of Holds Nos. 1, 2, 3, 4 & 5.

Tunnel Well 1 @ 2 1/2" dia.; Dup tanks 6" dia. port & stbd.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 9" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 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 — How are they protected —

What pipes pass through the deep tanks none 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 5716 + 1682 = 7398 sq. ft.

Is Forced Draft fitted yes No. and Description of Boilers 2 S.E. & 1 Aux. 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? —

Is the donkey boiler intended to be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting 4/10/41 Main Boilers 1/16/41 Auxiliary Boilers 9/14/41 Donkey Boilers —
 (If not state date of approval)

Superheaters — General Pumping Arrangements in London 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,
 THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

J. H. Subst.
 RESIDENT MANAGER.

Manufacturer.



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002435-002441-0083

Dates of Survey while building
 During progress of work in shops --- 1941. June 10, 18, 30. July 2, 3, 11, 16, 28, 31. Aug. 5, 6, 7, 9, 11, 13, 15, 18, 25, 26, 29. Sep. 1, 3, 4, 5, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 20, 22, 23, 25, 26, 29. Oct. 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 20, 21, 22, 24, 25, 27, 29, 30, 31. Nov. 1, 4, 5, 6, 7, 11, 13, 26, 27, 28, 29. Dec. 2, 5, 9.
 Total No. of visits 77

Dates of Examination of principal parts—Cylinders 5/6/41, 3/10/41 Slides 10/10/41 Covers 5/6/41, 3/10/41
 Pistons 10/10/41 Piston Rods 29/9/41 Connecting rods 27/10/41
 Crank shaft 26/9/41 Thrust shaft 24/10/41 Intermediate shafts 24/10/41
 Tube shaft — Screw shaft 29/9/41 Propeller 7/10/41
 Stern tube 18/9/41 Engine and boiler seatings 25/9/41 Engines holding down bolts 24/10/41
 Completion of fitting sea connections 25/9/41
 Completion of pumping arrangements 28/11/41 Boilers fixed 13/11/41 Engines tried under steam 13/11/41
 Main boiler safety valves adjusted 13/11/41 Thickness of adjusting washers Port 1/2" port 1/16" Std.; C 3/8"; Std 1/2" port 1/16" Std.
 Crank shaft material Steel Identification Mark 5839 Thrust shaft material Steel Identification Mark 5853
 Intermediate shafts, material Steel Identification Marks 6025/6/48/9 Tube shaft, material — Identification Mark —
 Screw shaft, material Steel Identification Mark 5854 Steam Pipes, material Steel Test pressure 660 lbs. Date of Test 8.10.41 to 17.10.41
 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 (see below).
 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 constructed under special survey in accordance with the approved plans, Secretary's letters and the requirements of the Rules. Workmanship and materials are good. The machinery has been efficiently fitted on board and tried under working with satisfactory results and is eligible, in my opinion, to have the notation

+ L.M.C. 12-41, C.L., 2 S.B. & 1 Ouz 220 lbs.

L.R. Home

Note: Steaming connections, through reducing valves, has subsequently been fitted to the sea connections & stern tube. L.R.H.

SUNDERLAND.

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

The amount of Entry Fee ... £ 6 : : When applied for,
 Special ... £ 100 : 6 : 9 Dec 19 41
 Donkey Boiler Fee ... £ 25 : 1 :
 Travelling Expenses (if any) £ : : 12 Dec 19 41

Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 6 JAN 1942

Committee's Minute
 Assigned + LMC 12.41 FD CL



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