

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

21 MAY 1943

Date of writing Report 19 7 May 19 43 When handed in at Local Office 7 May 19 43 Port of SUNDERLAND
 No. in Survey held at SUNDERLAND Date, First Survey 23 Oct 1942 Last Survey 5 May 1943
 Reg. Book (Number of Visits 71)
 on the 45 EMPIRE DEED Tons {Gross 6766
 Net 4639
 Built at Sunderland By whom built Bartram & Sons, Ltd. Yard No. 295 When built 1943
 Engines made at Glasgow By whom made American Steam Engine Co. Ltd. Engine No. 150 When made 1943
 Boilers made at Sunderland By whom made N.E. Mar. Eng. Co. (1938) Ltd. No. 4036 When made 1943
 Registered Horse Power 516 Owners M.O.V.T. (Mungo Campbell & Co. Ltd.) Port belonging to Sunderland
 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 General

ENGINES, &c.—Description of Engines See Glasgow Rpt. 66443. Revs. per minute
 Dia. of Cylinders Length of Stroke No. of Cylinders No. of Cranks
 Crank shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank webs Mid. length breadth Thickness parallel to axis
 as fitted Mid. length thickness shrunk Thickness around eye-hole
 Intermediate Shafts, diameter as per Rule appd. 13.34 Thrust shaft, diameter at collars as per Rule appd. 14.0
 as fitted 13.5/8" as fitted 14.1/2"
 Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule appd. 14.7
 as fitted 15.1/4" Is the {tube screw} shaft fitted with a continuous liner { yes }
 Bronze Liners, thickness in way of bushes as per Rule appd. Thickness between bushes as per Rule appd.
 as fitted 13/16" 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
 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. 17'-10 1/2" Pitch 15'-3" No. of Blades 4 Material C.I. whether Moveable not Total Developed Surface 114 3/4 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. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work yes
 Feed Pumps { No. and size 2, 7" x 9 1/2" x 21" Pumps connected to the { No. and size 1, 9 1/2" x 7" x 21" & 1, 10 1/2" x 13" x 24"
 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 @ 3" dia. Btr. Rm. 2 @ 3" dia.
 In Pump Room In Holds, &c. not 2 @ 3" dia.; no. 2 @ 3 1/2" dia.; in Bunker 2 at 2 1/2" dia.; No. 4 2 @ 3" dia.; no. 5 4 @ 3" dia.; Tunnel well 1 @ 2 1/2" dia.
 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. portable 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 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 food suction How are they protected bilge timbers
 What pipes pass through the deep tanks no 5 suction 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 4832 sq. ft. 7248
 Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters all
 No. and Description of Boilers 3 S.E. Gbl. Multi-tubular 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 3/8/42 Main Boilers 18/6/42 Auxiliary Boilers Donkey Boilers
 (If not state date of approval)
 Superheaters General Pumping Arrangements 20/8/42 Oil fuel Burning Piping Arrangements

SPARE GEAR.

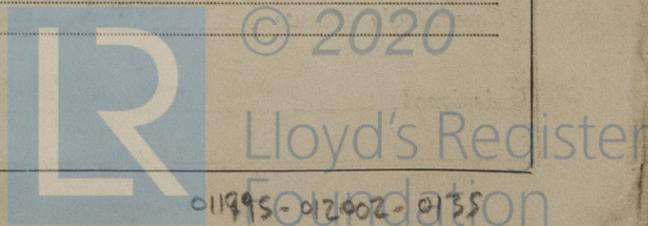
Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied

The foregoing is a correct description.

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

Wm. H. ...
 RESIDENT MANAGER.

Manufacturer.



Dates of Survey while building

During progress of work in shops -- { 1942 Oct 23, 28 Nov 10, 18, 19, 21, 22, 26, 30 Dec 2, 6, 8, 17, 19, 21, 30 1943 Jan 5, 6, 11, 12, 13, 15, 18, 19, 20, 21, 26, 29 Feb 1, 3, 4, 5, 6, 8, 9, 10, 11, 13, 15, 17, 18, 19, 20, 22, 25 Mar 2, 3, 4, 6, 10, 11, 12, 16, 17, 24, 26, 27, 29, 30, 31 Oct 1, 2, 5, 7.

During erection on board vessel -- { 8/12, 21, 22, 30 May 5.

Total No. of visits 71

Dates of Examination of principal parts—Cylinders — Slides — Covers —

Pistons — Piston Rods — Connecting rods —

Crank shaft — Thrust shaft 4/3/43 Intermediate shafts 4/3/43

Tube shaft — Screw shaft 6/3/43 Propeller 9/2/43

Stern tube 8/2/43 Engine and boiler seatings 9/2/43 Engines holding down bolts 8/4/43

Completion of fitting sea connections 4/2/43

Completion of pumping arrangements 2/4/43 Boilers fixed 11/3/43 Engines tried under steam 12/4/43 20/4/43

Main boiler safety valves adjusted 3/13/43 Thickness of adjusting washers Main 11/32" Superheats 1/4"

Crank shaft material — Identification Mark — Thrust shaft material *Steel* Identification Mark 9216

Intermediate shafts, material *Steel* Identification Marks 9224, 9221, 9223, 9222, 9219, 9220 Tube shaft, material — Identification Mark —

Screw shaft, material *Steel* Identification Mark 9215 Steam Pipes, material *Steel* Test pressure 660 lb Date of Test 3.3.43 to 29.3.43

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 *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. *See Glasgow Rpt. No. 66443.*

The machinery of this vessel has been efficiently fitted on board and tried under working conditions at the quayside with satisfactory results. Workmanship and materials are good. The machinery is suitable, in my opinion, for the

NOTATION + L.M.C. 5.43, C.L., 3 S.B. (Spt), 220 lb. F.D.

Note:- The items mentioned as incomplete in Gla. Rpt. No 66443 have been satisfactorily completed.

The amount of Entry Fee ... £ : : When applied for,

Special ... 3/5 ... £ 60 : 6 } at May 1943

Donkey Boiler Fee ... £ 15 : 1 } When received,

Travelling Expenses (if any) £ : : 19

L.R. Home
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES, 18 MAY 1943

Assigned + L.M.C. 5.43
FD CL



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