

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 15-OCT-1942

Date of writing Report 10 When handed in at Local Office - 2 OCT 1942 Port of **SUNDERLAND**

No. in Survey held at **SUNDERLAND** Date, First Survey 15 Jan Last Survey 26 Sept 1942
 Reg. Book. on the **1/5 " EMPIRE BANNER** (Number of Visits 80) Tons } Gross 6699
 Net 4833

Built at **Sunderland** By whom built **Bartholomew & Sons, Ltd** Yard No. 292 When built 1942

Engines made at **do.** By whom made **N.S. Mar. Eng. Co. (1938) Ltd** Engine No. 4018 When made 1942

Boilers made at **do.** By whom made **do.** Boiler No. 4018 When made 1942

Registered Horse Power Owners **M. S. W. T. Co. S. & Co.** Port belonging to **Sunderland**

Nom. Horse Power as per Rule 511 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

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"** Crank pin dia. **14"** Crank webs Mid. length breadth **—** Thickness parallel to axis **8 3/4" x 9 1/4"**
 as fitted **14"** Mid. length thickness **—** Thickness around eye-hole **7" x 7 1/2"**

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

Tube Shafts, diameter as per Rule **—** Screw Shaft, diameter as per Rule **14.57"** Is the tube shaft fitted with a continuous liner } **yes**
 as fitted **—** as fitted **15"** }

Bronze Liners, thickness in way of bushes as per Rule **23.8/32"** Thickness between bushes as per Rule **17.9/32"** Is the after end of the liner made watertight in the
 as fitted **3/4"** as fitted **21/32"** 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 shaft **no** If so, state type **—** Length of Bearing in Stern Bush next to and supporting propeller **5'-0"**

Propeller, dia. **17'-3"** Pitch **17'-6"** No. of Blades **4** Material **C.I.** whether Movable **not** Total Developed Surface **107 1/2** 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 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, 9" x 11" x 10"**, **1, 8" x 5 3/4" x 9"**
 } 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 **—** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **Eng. Rm. 2 @ 3" dia., Boiler Rm. 2 @ 3" dia.**

In Pump Room **—** In Holds, &c. **No. 1. 2 @ 3" dia.; No. 2. 2 @ 3 1/2" dia.; Cross Bunker 2 @ 2 1/2" dia.; No. 3, 2 @ 3" dia.; No. 4, 2 @ 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-bones **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 **—** How are they protected **—**

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 **3**) Total Heating Surface of Boilers **5716 sq ft + 1786 sq ft = 7502 sq ft**

Is Forced Draft fitted **yes** No. and Description of Boilers **2 S.B. + 1 aux. cylindrical** 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 **21/7/41** Main Boilers **12/7/41** Auxiliary Boilers **—** Donkey Boilers **—**
 (If not state date of approval)

Superheaters **—** General Pumping Arrangements **22.10.41 (as per HO 10)** 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 **—**

If not, state whether, and when, one will be sent

425.27
2 May
17.10.44
25
105

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.
The foregoing is a correct description,

Gus Sumbler
RESIDENT MANAGER

Manufacturer.



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Lloyd's Register
Foundation

W274-0145

1942. Jan. 15, 17, 22. Feb. 10, 12, 23, 24, 25, 27. Apr. 1, 2, 10, 13, 16, 17, 23, 24, 25. May. 1, 7, 8, 9, 12, 15, 18, 19
 21, 22, 26, 28, 29, 30. June 1, 2, 3, 4, 8, 9, 10, 11, 12, 13, 16, 17, 19, 20, 22, 23, 24, 25, 26, 29, 30. July 1, 3, 7, 9
 10, 13, 14, 16, 17, 20, 21, 22, 24. Aug. 7, 12, 19. Sep. 3, 9, 14, 16, 18, 19, 21, 22, 23, 26.
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits 80

Dates of Examination of principal parts—Cylinders 24/10/6/42 Slides 25/6/42 Covers 25/6/42
 Pistons 17/4/42 Piston Rods 12/6/42 Connecting rods 10/6/42
 Crank shaft 8/6/42 Thrust shaft 20/6/42 Intermediate shafts 25/6/42
 Tube shaft — Screw shaft 17/6/42 Propeller 1/7/42
 Stern tube 30/6/42 Engine and boiler seatings 29/6/42 Engines holding down bolts 16/7/42
 Completion of fitting sea connections 29/6/42 Boilers fixed 24/7/42 Engines tried under steam 24/7/42, 18/9/42
 Completion of pumping arrangements 18/9/42 Thickness of adjusting washers Port 15/32" 5/8" port; Starbd. 7/32" both
 Main boiler safety valves adjusted 24/7/42 Crank shaft material Steel Identification Mark 6399 Thrust shaft material Steel Identification Mark 6400
 Intermediate shafts, material Steel Identification Marks 6463, 4, 5, 6 Tube shaft, material — Identification Mark —
 Screw shaft, material Steel Identification Mark 6462 Steam Pipes, material Steel Test pressure 660 lbs. Date of Test 22.7.42.
 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 not required
 Is this machinery duplicate of a previous case NO. If so, state name of vessel Empire Ballan

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 conditions with satisfactory results and is eligible, in my opinion, for the

NOTATION + L.M.C. 9.42., C.L., 2.S.B. & 1. Aux. 220 lbs. F.D.

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

The amount of Entry Fee ... £ 6: - : : When applied for,
 Special Specification ... £ 100: 11 : : 28 Sep. 1942
 Donkey Boiler Fee ... £ 25: 2 : : 6
 Travelling Expenses (if any) £ : : : 19

Committee's Minute
 Assigned
 TUE. 18 OCT 1942
 Lumb. 9.42
 J.D., C.L.



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