

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office **LIVERPOOL** 30 DEC 1942

Date of writing Report 19 **21 DEC 1942** When handed in at Local Office 19 **21 DEC 1942** Port of **LIVERPOOL**

No. in Survey held at **WIGAN** Date, First Survey **19/12/41** Last Survey **10/12/42**

Reg. Book **WIGAN** (Number of Visits **17**) Tons { Gross **138**
Net **111**

on the **Stal Singh Senu Tug EMPIRE LILLIPUT** A/M 5401

Built at **Thorne** By whom built **Richard Dunston L^d** Yard No. **T385** When built **1944**

Engines made at **WIGAN** By whom made **WORSLEY MESNES IRONWORKS** Engine No. **M.3.** When made **1942**

Boilers made at **Stockton-on-Tees** By whom made **Stockton Chem Eng & Boiler Co. L^d** Boiler No. **6618** When made **1944**

Registered Horse Power **85** Owners **Ministry of War Transport** Port belonging to **Ministry of War Transport**

Nom. Horse Power as per Rule **85** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **Yes**

Trade for which vessel is intended **Yaring Service**

ENGINES, &c.—Description of Engines **TRIPLE EXPANSION (INVERTED)** Revs. per minute **140**

Dia. of Cylinders **12" x 20" x 32"** Length of Stroke **22"** No. of Cylinders **3** No. of Cranks **3**

Crank shaft, dia. of journals **6.4** as per Rule **6.5** as fitted **6.5** Crank pin dia. **6.5** Mid. length breadth **9.6** Thickness parallel to axis **4.125**

Intermediate Shafts, diameter **6.12** as per Rule **6.25** as fitted **6.25** Thrust shaft, diameter at collars **6.4** as per Rule **6.5** as fitted **6.5**

Tube Shafts, diameter **7.08** as per Rule **7.125** as fitted **7.125** Is the **tube** shaft fitted with a continuous liner **NO**

Bronze Liners, thickness in way of bushes **as per Rule** Thickness between bushes **as per Rule** 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 **Yes**

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 **Yes**

If two liners are fitted, is the shaft lapped or protected between the liners **Yes** Is an approved Oil Gland or other appliance fitted at the after end of the tube **Yes**

Propeller, dia. **8'-0"** Pitch **9'-2"** No. of Blades **4** Material **CI** whether Moveable **Yes** Total Developed Surface **25.2** sq. feet

Feed Pumps worked from the Main Engines, No. **1** Diameter **2 1/2"** Stroke **12"** Can one be overhauled while the other is at work **Yes**

Bilge Pumps worked from the Main Engines, No. **1** Diameter **2 1/2"** Stroke **12"** Can one be overhauled while the other is at work **Yes**

Feed Pumps { No. and size **One 6", 4 1/2", 10"** Pumps connected to the Main Bilge Line { No. and size **One 7 1/2", 5", 6"**

How driven **Ind. Strm.** How driven **Ind. Strm.**

Ballast Pumps, No. and size **One 7 1/2", 5", 6" as above** Lubricating Oil Pumps, including Spare Pump, No. and size **None**

Are two independent means arranged for circulating water through the Oil Cooler **Yes** Sections, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room **E.R. 1-2" B.R. 1-2" also direct suction - see below.**

In Pump Room **Yes** In Holds, &c. **FPT One 2" APT One 2"**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **One 3 1/2"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **One 2 1/2" in E.R. One 2 1/2" B.R.** 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, OR ON E.W. STR. BOXES** Are they fitted with Valves or Cocks **Both**

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 **Above**

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 **NONE** How are they protected **Yes**

What pipes pass through the deep tanks **NONE** 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 **Yes** worked from **Yes**

MAIN BOILERS, &c.—(Letter for record **5**) Total Heating Surface of Boilers **1716 sq. ft.**

Which Boilers are fitted with Forced Draft **NONE** Which Boilers are fitted with Superheaters **NONE**

No. and Description of Boilers **158** Working Pressure **200 lb.**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **Yes**

IS A DONKEY BOILER FITTED? **No** If so, is a report now forwarded? **Yes**

Can the donkey boiler be used for domestic purposes only **Yes**

PLANS. Are approved plans forwarded herewith for Shafting **16.7.42** Main Boilers **10.11.41** Auxiliary Boilers **Yes** Donkey Boilers **Yes**

(If not state date of approval)

Superheaters **Yes** General Pumping Arrangements **17.3.41** Oil fuel Burning Piping Arrangements **Yes**

SPARE GEAR.

Has the spare gear required by the Rules been supplied **YES, EXCEPT SET OF RINGS FOR HP PISTON & PISTON VALVES.**

State the principal additional spare gear supplied **As per specification**

The foregoing is a correct description.

WORSLEY MESNES IRONWORKS LTD.

J. A. Melling

Director

Manufacturer.



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004062-004066-0175

1941 1942
 Dec 19. Jan 8 June 11. Sept 15. 24. Oct 1. 8. 13. 22. 29. Nov 5. 12. 19. 26. Dec 3. 10.

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - -
 Total No. of visits 17 + 23 = 40.

Dates of Examination of principal parts - Cylinders 22-10-42 Slides 22-10-42 Covers 22-10-42
 Pistons 8-10-42 Piston Rods 8-10-42 Connecting rods 8-10-42
 Crank shaft 8-10-42 Thrust shaft 8-10-42 Intermediate shafts 30-11-43
 Tube shaft - Screw shaft 8-10-42 Propeller 8-11-43
 Stern tube 8-11-43 Engine and boiler seatings 29-11-43 Engines holding down bolts 7-12-43
 Completion of fitting sea connections 8-11-43 Boilers fixed 7-12-43 Engines tried under steam 28/12/43
 Completion of pumping arrangements 28/12/43 Thickness of adjusting washers P 9/32 S 3/16
 Main boiler safety valves adjusted 21/1/44 Identification Mark 2343 Thrust shaft material F.I.S. Identification Mark 2340. 8-10-42.
 Crank shaft material STEEL Identification Mark 2343 Thrust shaft material F.I.S. Identification Mark 2340. 8-10-42.
 Intermediate shafts, material F.I.S. Identification Marks 2418. 18-11-43 Tube shaft, material NONE Identification Mark ✓
 Screw shaft, material F.I.S. Identification Mark 2342. 8-10-42 Steam Pipes, material STL. Test pressure 600 lb Date of Test 10.12.43.
 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 ✓
 Is this machinery duplicate of a previous case YES If so, state name of vessel E. LEWIS

General Remarks (State quality of workmanship, opinions as to class, &c.)

THESE ENGINES HAVE BEEN BUILT UNDER SPECIAL SURVEY IN ACCORDANCE WITH THE RULES. THE MATERIALS & WORKMANSHIP ARE GOOD.
 THE ABOVE ENGINES HAVE BEEN ERECTED & AWAIT DELIVERY INSTRUCTIONS. STATE) THEY WILL BE FITTED TO R DUNSTON TUG N° 385 AT HULL.

The machinery of this vessel has been installed under Special Survey in accordance with the Rule requirements, approved plans & specifications. The materials and workmanship are good and machinery found satisfactory in every respect after all tests.
 Eligible for record of * LMC 2, 44 OG T 3 Cy. 12", 20", 32" - 22" NHP 85.
 15B 200 lb. 3cf HS 1716 4 GS 59 4 W.S. Shields, Hull

Certificate to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Also chgd at Hull. 28-1-44
 F.E. 52. } Hullage. 28-1-44
 Class (P.M.) 24.5.0. }
 Spec. do. 23.3.3. }
 The amount of Entry Fee ... £ 8 : 10 :
 Special SPECIFICATION ... £ 2 : 2/6 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 3 : 5/6 :
 When applied for, 23 DEC 1942
 When received, 19

H. Taylor.

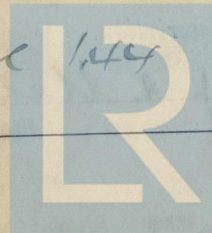
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Transmit to London.

TUES. 22 FEB 1944



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