

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

APR 26 1924

Received at London Office

Date of writing Report 10 When handed in at Local Office 3/4/1924 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at **Newcastle** Date, First Survey **9<sup>th</sup> July 1923** Last Survey **1<sup>st</sup> April 1924**  
 Reg. Book. **38529** on the **Steel Ss.** "CAMBERWELL" (Number of Visits **26**)

Built at **Newcastle** By whom built **June Iron S.S. Co. Ltd.** Yard No. **227** When built **1924**  
 Engines made at **Newcastle** By whom made **North Eastern Marine E. Co. Ltd.** Engine No. **2556** when made **1924**  
 Boilers made at **Newcastle** By whom made **North Eastern Marine E. Co. Ltd.** Boiler No. **2556** when made **1924**  
 Registered Horse Power Owners **South Metropolitan Gas Company** Port belonging to **London**  
 Nom. Horse Power as per Rule **182** Is Refrigerating Machinery fitted for cargo purposes **No.** Is Electric Light fitted **Yes**

**ENGINES, &c.**—Description of Engines **Inverted Triple Expansion**

Dia. of Cylinders **18"-30"-49"** Length of Stroke **33** Revs. per minute \_\_\_\_\_ No. of Cylinders **3** No. of Cranks **3**  
 Dia. of Crank shaft journals as per rule **9.47"** as fitted **9.47"** Dia. of Crank pin **9.3/4"** Crank webs Mid. length breadth **16.1/4"** Thickness parallel to axis **6"**  
 Diameter of Thrust shaft under collars as per rule **9.47"** as fitted **9.3/4"** Diameter of Tunnel shaft as per rule **9.02"** as fitted **9.3/4"** Diameter of Screw shaft as per rule **10.18"** as fitted **10.1/4"** Is the Screw shaft fitted with a continuous liner the whole length of the stern tube **Yes** 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 joints burned \_\_\_\_\_ 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated **No.** Length of Stern Bush **45"** Diameter of Propeller **12'-6"**  
 Pitch of Propeller **12'-6"** No. of Blades **4** State whether Moveable **No.** Total Surface **48** square feet.  
 No. of Feed Pumps fitted to the Main Engines **None** Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Bilge Pumps fitted to the Main Engines **2** Diameter of ditto **3"** Stroke **16.5"** Can one be overhauled while the other is at work **Yes**  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps **2 Feed 8 1/2" x 6", 1 Feed Dry 4 1/2" x 3" x 6", 1 Ballast Dry 8" x 9" x 8"**  
 No. and size of Pumps connected to the Main Bilge Line **2 Main Engine + 1 Ballast Donkey**  
 No. and size of Ballast Pumps **One 8" x 9" x 8"** No. and size of Lubricating Oil Pumps, including Spare Pump **None**  
 Are two independent means arranged for circulating water through the Oil Cooler \_\_\_\_\_ No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **4-2 1/2"** and in Holds, &c. **Fore Hold 2-2 1/2"**  
**After Hold 2-2 1/2"** **Tunnel Well 1-2 1/2"**

No. and size of Main Water Circulating Pump Bilge Suctions **One 6"** No. and size of Donkey Pump Direct Suctions \_\_\_\_\_  
 to the Engine Room Bilges **One - 2 1/2"** 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 connections with the sea direct on the skin of the ship **Yes** Are they 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 Discharge Pipes 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 are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 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 Screw Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **main Deck**

**MAIN BOILERS, &c.**—(Letter for record **5**) Total Heating Surface of Boilers **3260 sq. ft.**  
 Forced Draft fitted **No.** No. and Description of Boilers **2 S.E. byl. Mult.** Working Pressure **180 lbs.**  
**IS A REPORT ON MAIN BOILERS NOW FORWARDED?** **Yes**  
**IS A DONKEY BOILER FITTED?** **No.** If so, is a report now forwarded? \_\_\_\_\_  
**PLANS.** Are approved plans forwarded herewith for Shafting \_\_\_\_\_ Main Boilers **Yes** Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 General Pumping Arrangements \_\_\_\_\_ Oil fuel Burning Piping Arrangements \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— **Two Connecting rod top end Bolts & nuts, Two Bottom End Bolts & nuts, Two Main Bearing Bolts, One set Coupling Bolts, Set of feed & bilge pump valves Assorted bolts, nuts and rivs, Cast Iron propeller.**

The foregoing is a correct description  
 THE NORTH EASTERN MARINE ENGINEERING Co., LTD.

*J. G. Harrison*  
 Secretary

Manufacturer.



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Lloyd's Register Foundation

002816 - 002824 - 0053

1923 July 9. 16. Aug. 16. Sep. 25. Nov. 20. 22. 30. Dec. 27. 1924 Jan. 7. 8. 10. 25. 31. Feb. 4. 5. 8. 13.  
 During progress of work in shops -- 15. 27. Mar. 3. 11. 14. 17. 19. 21. Apr. 1.  
 Dates of Survey while building }  
 During erection on board vessel --- }  
 Total No. of visits 26.

Dates of Examination of principal parts—Cylinders 8. 2. 24 Slides 27. 2. 24  
 Covers 27. 2. 24 Pistons 27. 2. 24 Rods 27. 2. 24  
 Connecting rods 27. 2. 24 Crank shaft 20. 11. 23 Thrust shaft 26. 9. 23  
 Tunnel shafts 10. 1. 24 Screw shaft 8. 2. 24 Propeller 15. 2. 24  
 Stern tube 8. 2. 24 Engine and boiler seatings 11. 3. 24 Engines holding down bolts 17. 3. 24  
 Completion of pumping arrangements 21. 3. 24 Boilers fixed 17. 3. 24 Engines tried under steam 21. 3. 24  
 Completion of fitting sea connections 3. 3. 24 Stern tube 3. 3. 24 Screw shaft and propeller 3. 3. 24  
 Main boiler safety valves adjusted 21. 3. 24 Thickness of adjusting washers Pat. Bl. P 3/8" S 7/16" Stan. Bl. P 7/16" S 1/4"  
 Material of Crank shaft S. M. Steel Identification Mark on Do. 6701N M. R. R. L. A.  
 Material of Thrust shaft S. M. Steel Identification Mark on Do. 6701N M. R.  
 Material of Tunnel shafts S. M. Steel Identification Marks on Do. 6701N R. L. A.  
 Material of Screw shafts Scrap Iron Identification Marks on Do. 6705N R. L. A.  
 Material of Steam Pipes S. M. Steel ✓ Test pressure 540 lbs ✓ Date of Test 14. 3. 24 19. 3. 24  
 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 carrying and burning oil fuel been complied with ✓  
 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. The materials & workmanship are sound and good. It has been efficiently installed on board and the main and auxiliary machinery has been tried out at a morning trial with satisfactory results.  
 This vessel is eligible, in my opinion, for notation in the Society's Register Book  
 + L.M.C. 4. 24 C.L.

It is submitted that  
 this vessel is eligible for  
**THE RECORD. + LMC 4. 24. CL.**

[Signature] 28/4/24

R. Lee Arneson  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : 0 ✓  
 Special ... £ 145 : 10 ✓  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 24 APR 1924  
 When received, 19/4/1924

Committee's Minute TUE. APR. 29 1924  
 Assigned + L.M.C. 4. 24  
 C.L.



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

CERTIFICATE APR 29 1924