Rpt. 4.

No. 77934

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report ..... 19 ..... When handed in at Local Office 4 JUN 1924 Port of NEWCASTLE-ON-TYNE THU JUN. 5 1924

No. in Reg. Book 41176 Survey held at NEWCASTLE-ON-TYNE. Date, First Survey Jan 8th 1924 Last Survey June 2 1924 (Number of Visits 29)

on the Steel Sc. TOGSTON Tons Gross 1560 Net 910

Built at Haverton Hill on Tees By whom built Furness S.B. Co. Ld. Yard No. 61 When built 1924

Engines made at Newcastle By whom made North Eastern Marine E. Co. Ld. Engine No. 2562 when made 1924

Boilers made at Newcastle By whom made North Eastern Marine Eng. Co. Ld. Boiler No. 2562 when made 1924

Registered Horse Power ..... Owners Broomhill Collieries Ld. Port belonging to Newcastle

Nom. Horse Power as per Rule 166. 166 166 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

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

Dia. of Cylinders 17½"- 29"- 48" Length of Stroke 33" Revs. per minute ..... No. of Cylinders 3 No. of Cranks 3

Dia. of **Crank shaft** journals as per rule 9·28" as fitted 9⅜" Dia. of Crank pin 9⅜" Crank webs Mid. length breadth 15⅞" Mid. length thickness 5⅝" If shrunk Thickness parallel to axis 5⅝" Thickness around eye-hole 4¾"

Diameter of **Thrust shaft** under collars as per rule 9·28" as fitted 9⅜" Diameter of **Tunnel shaft** as per rule 8·84" as fitted 9" Diameter of **Screw shaft** as per rule 9·8" see Sec. Ltr. 27.5.24 as fitted 9¾" (9·76) 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** 42" Diameter of **Propeller** 12'9"

Pitch of Propeller 12'9" No. of Blades 4 State whether Moveable No. Total Surface 50 square feet.

No. of **Feed Pumps** fitted to the Main Engines 2 Diameter of ditto 3" Stroke 16½" Can one be overhauled while the other is at work Yes

No. of **Bilge Pumps** fitted to the Main Engines 2 Diameter of ditto 3" Stroke 16½" Can one be overhauled while the other is at work Yes

Total number and size of power driven **Feed and Bilge Auxiliary Pumps** Two - 1 Feed 6"×4"×6" 1 Ballast 9"×11"×10"

No. and size of Pumps connected to the **Main Bilge Line** Main Engine Bilge rams + Ballast pump

No. and size of **Ballast Pumps** One 9"×11"×10" 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 suctions connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 3 - 2½" and in Holds, &c. Forward 2-3" No. 3 Hold 2-3" No. 4 Hold 2-3" Tunnel well 1 - 2½"

No. and size of **Main Water Circulating Pump Bilge Suctions** One 5" No. and size of **Donkey Pump Direct Suctions** to the Engine Room Bilges One 3½" 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 .....

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 Forward suctions How are they protected Wood cased

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 S) Total Heating Surface of Boilers 2870 ☐

Is Forced Draft fitted No. No. and Description of Boilers Two ~~S.E.~~ S.B. Cyl. 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 .....
(If not state date of approval)

General Pumping Arrangements No Oil Fuel Burning Piping Arrangements .....

SPARE GEAR. State the articles supplied:—

One Cast Iron propeller, 2 Bottom End Bolts & nuts, 2 Top End Bolts & nuts, 2 Main Bearing Bolts & nuts, one set Coupling Bolts, 2 Feed pumps valves, 2 Bilge pumps valves, 20 Condenser ferrules, 3 Condenser tubes, 6 junk ring studs, Set air pumps valves, One main and one Auxiliary feed check valves, One Safety Valve spring, One Set LP piston springs, Assorted Bolts, Nuts and Iron,

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING Co., LTD.

G. T. Harrison
Secretary.

Manufacturer.

W1150-0267

Dates of Survey while building

During progress of work in shops - - 1924
Jan 8 31 Feb 1 4 5 8 13. 15 21. 25. 29 Mar 3 4 7 10. 11. 17 19. 2 4 27 Apr 1. 3 19

During erection on board vessel - - - 21. 22 26 28. 30 Jun 2.

Total No. of visits 29.

Dates of Examination of principal parts—Cylinders 7. 3. 24 Slides 1. 4. 24

Covers 1. 4. 24 Pistons 1. 4. 24 Rods 27. 3. 24

Connecting rods 27. 3. 24 Crank shaft 10. 3. 24 Thrust shaft 8. 1. 24

Tunnel shafts 4. 2. 24 Screw shaft 3. 3. 24 Propeller 19. 3. 24

Stern tube 17. 3. 24 Engine and boiler seatings 19. 5. 24 Engines holding down bolts 26. 5. 24

Completion of pumping arrangements 30. 5. 24 Boilers fixed 26. 5. 24 Engines tried under steam 30. 5. 24

Completion of fitting sea connections at Middlesbrough Stern tube at Middlesbrough Screw shaft and propeller 21. 5. 24

Main boiler safety valves adjusted 30. 5. 24 Thickness of adjusting washers Port Boiler P⅞" 5 11/16" Stbd Boiler P⅞" 5 13/32"

Material of Crank shaft S. M. Steel Identification Mark on Do. 6791 N.

Material of Thrust shaft S. M. Steel Identification Mark on Do. 6791 N.

Material of Tunnel shafts S. M. Steel Identification Marks on Do. 6791 N.

Material of Screw shafts S. M. Steel Identification Marks on Do. 6791 N.

Material of Steam Pipes S. D. Steel ✓ Test pressure 540 lbs ✓ Date of Test 28. 5. 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 and workmanship are sound and good. It has been tried at a mooring trial with satisfactory results. The Boilers' safety valves have been adjusted under steam. In my opinion the vessel is eligible for notation in the Society's Register Book + L.M.C. 6.24 C.L.

NEWCASTLE-ON-TYNE.

Certificate to be sent to

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

The amount of Entry Fee ... £ 3 — —
Special ... ... £ 41 — 10 — :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for, - 4 JUN 1924 19
When received, 3/6/24 4/6

Committee's Minute WED. 11 JUN 1924

Assigned + LM.C. 6.24. C.L.

CERTIFICATE WRITTEN

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.24. CL.

10/6/24.

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