

Rpt. 4.

No. 77693

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Received at London Office

WED. MAR. 26 1924

Date of writing Report 19 When handed in at Local Office 15/3/1924 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at **Newcastle** Date, First Survey 15 March 1923 Last Survey 14 March 1924
 Reg. Book. 40037 on the "MARS DEN" (Number of Visits 48)

Built at **Newcastle** By whom built **Wood Skinner & Co. Ltd.** Yard No. 232 Tons { Gross 2875
 Net 1695
 When built 1924

Engines made at **Newcastle** By whom made **North Eastern Marine Eng. Co. Ltd.** Engine No. 2537 when made 1924

Boilers made at **Newcastle** By whom made **North Eastern Marine Eng. Co. Ltd.** Boiler No. 2537 when made 1924

Registered Horse Power Owners **(Burnett & Co. Mgrs)** Port belonging to **Newcastle**

Nom. Horse Power as per Rule 359 Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **Yes**

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

Dia. of Cylinders **33"-38 1/2"-65"** Length of Stroke **42"** Revs. per minute No. of Cylinders **3** No. of Cranks **3**

Dia. of Crank shaft journals as per rule 12.54" ✓ as fitted 12.3/4" Dia. of Crank pin 12 3/4" ✓ Crank webs Mid. length breadth 20" ✓ Thickness parallel to axis 7 3/4" ✓
 as fitted 12 3/4" Mid. length thickness 7 3/4" ✓ shrunk Thickness around eye-hole 7 3/4" ✓

Diameter of Thrust shaft under collars as per rule 12.54" ✓ as fitted 12 3/4" Diameter of Tunnel shaft as per rule 11.95" ✓ as fitted 12 1/8" Diameter of Screw shaft as per rule 13.24" ✓ as fitted 13 3/8" ✓ 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 **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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated **Yes** ✓

Pitch of Propeller 17'0" ✓ No. of Blades **4** ✓ State whether Moveable **No** ✓ Total Surface **78 sq** ✓ square feet.

No. of Feed Pumps fitted to the Main Engines **2** ✓ Diameter of ditto **3 1/2"** ✓ Stroke **21"** ✓ 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 1/2"** ✓ Stroke **21"** ✓ Can one be overhauled while the other is at work **Yes** ✓

Total number and size of power driven Feed and Bilge Auxiliary Pumps **One Feed 7 1/2" x 5" x 6" ✓ Two Bilge Ballast 8" x 10" x 10" ✓**

No. and size of Pumps connected to the Main Bilge Line **Two Bilge Ballast 8" x 10" x 10" ✓ Two Main Engine Bilge Rams 3 1/2" x 21" ✓**

No. and size of Ballast Pumps **Two 8" x 10" x 10" ✓** No. and size of Lubricating Oil Pumps, including Spare Pump **None** ✓

Are two independent means arranged for circulating water through the Oil Cooler **Yes** ✓ No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **2 off 3" dia. ✓** and in Holds, &c. **2- 2 3/4" in No. 1 Hold. ✓**

2- 2 3/4" in No. 3 Hold ✓ 2- 3 1/2" in aft Hold ✓ One 3 1/2" Hold well ✓ One 2 1/4" Tunnel well ✓

No. and size of Main Water Circulating Pump Bilge Suctions **One 8" ✓** No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges **Two 4" dia. ✓** 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 **Two main Bilge Sump pipes ✓** How are they protected **hood cases ✓**

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 **2nd platform**

MAIN BOILERS, &c.—(Letter for record **S** ✓) Total Heating Surface of Boilers **6120 sq**

Forced Draft fitted **No** ✓ No. and Description of Boilers **2 S.E. MULTIPLE CYL ✓** Working Pressure **200 LBS. ✓**

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

IS A DONKEY BOILER FITTED? **Yes** ✓ If so, is a report now forwarded? **Inst. Rpt. No. 11637. ✓**

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

(If not state date of approval)

General Pumping Arrangements **Yes** ✓ Oil fuel Burning Piping Arrangements **Yes** ✓

SPARE GEAR. State the articles supplied:— **1 Cast Iron propeller, 2 Boltons End bolts nuts, 2 2nd End bolts nuts, 2 main bearing bolts nuts, 6 Coupling Bolts nuts, 4 Feed Pump Valves, 4 Bilge Pump Valves, Assorted plates, bars, bolts nuts, 8 Phosphor Bronze Springs for Feed & Bilge Pump Valves, 16 Jauge Glasses, 1 set Air Pump valves, 1 set Feed Check Valves (main & auxiliary), 12 Sump Ring Bolts, One Spring for H.P. piston, 1/2 set Feed Donkey valves, 1/2 set Ballast Donkey Valves, 100 Condenser grommets, 5 Condenser Joints ✓**

The foregoing is a correct description TD.

THE NORTH EASTERN MARINE ENGINEERING Co., LTD.

Manufacturer.

Secretary.



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Lloyd's Register

002449-002456-005

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WEB-I
BRACE Web
BULK
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POOP SIDES
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UPPER DECK
STRINGER PL
SECOND DECK
STRINGER PL
FRAMES EXTER
REVERSED F
WEB MASTS.
SPRIT
MASTS, YARD
GANGING, MATERI
LS.

1923
During progress of work in shops - Mar. 15, 21, 22, Apr. 6, 11, 17, 19, May 1, 4, 7, 9, 17, June 1, 12, 14, 22, July 3, 12, 27, Aug. 1, 15, 16, 22, 28, Oct. 16, 26, Nov. 1, 8, 30, Dec. 11, 18, 18.
1924
During erection on board vessel - Jan. 29, 30, 31, Feb. 4, 7, 11, 12, 13, 14, 15, 18, 19, 22, Mar. 5, 13, 14.
Total No. of visits 48.

Dates of Examination of principal parts - Cylinders 16. 8. 23 - 11. 12. 23 Slides 7. 5. 23
Covers 7. 5. 23 Pistons 3. 7. 23 Rods 7. 5. 23
Connecting rods 3. 7. 23 Crank shaft 28. 8. 23 Thrust shaft 21. 3. 23
Tunnel shafts 1. 5. 23 Screw shaft 18. 12. 23 Propeller 1. 11. 23
Stern tube 19. 4. 23 Engine and boiler seatings 30. 1. 24 Engines holding down bolts 18. 2. 24
Completion of pumping arrangements 14th Mar. 1924 Boilers fixed 18th Feb. 1924 Engines tried under steam 14th Mar. 1924
Completion of fitting sea connections 30. 1. 24 Stern tube 30. 1. 24 Screw shaft and propeller 7. 2. 24
Main boiler safety valves adjusted 14th Mar. 1924 Thickness of adjusting washers Pat. Bl. 1 1/16" 5/16" Sph. 1/4" Stan. Bl. 1 1/2" 5/16" Sph.
Material of Crank shaft S. M. Steel Identification Mark on Do. 6553N 28. 8. 23
Material of Thrust shaft S. M. Steel Identification Mark on Do. 6553N 21. 3. 23
Material of Tunnel shafts S. M. Steel Identification Marks on Do. 6553N 1. 5. 23
Material of Screw shafts S. M. Steel Identification Marks on Do. 6553N 18. 12. 23
Material of Steam Pipes Superheaters Headers S.D. Steel Kapwelded Steel Test pressure 600 lbs. Date of Test 2. 2. 24 & 5. 3. 24
Is an installation fitted for burning oil fuel ho ✓ 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 ho ✓ 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. The main and auxiliary machinery have been tried under steam with satisfactory results and the safety valves of the main and Donkey Boilers have been adjusted under steam together with those of the Superheaters. In my opinion the vessel is eligible for notation in the Society's Register Book
+ L.M.C. 3. 24 C.L.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.24. CL.

J.W.D. P.S.
28/3/24

The amount of Entry Fee ... £ 5 : - :
Special ... £ 78 : 17 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 22 MAR 1924
When received, 29.3.24

Committee's Minute TUE 1 APR 1924
Assigned + dmb 3, 24 C.L.

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



Rpt. 5a.
Date of writing
No. in Surv. Reg. Book. 40037 on t
Master
Engines made
Boilers made
Nominal Horse
MULTITU
Manufacturers
Total Heating
No. and Descri
Tested by hydr
Area of Firegr
Area of each se
In case of donke
Smallest distanc
Smallest distanc
Largest internal
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Percentage of st
Percentage of st
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Dimensions of s
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How are stays p
Tube plates: M
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Pitch of stays to
Working pressure
Thickness 7/8
Pitch of stays at
Working Pressure
Diameter { At body or Over thro
Working pressure
Diameter { At turned or Over thro