

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office APR 15 1937  
NEWCASTLE-ON-TYNE

Date of writing Report 19 When handed in at Local Office 14/4/37 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at **Wallsend** Date, First Survey 8 Sept 36 Last Survey 12 April 1937  
Reg. Book. on the **"MULUBINBA"** (Number of Visits 42)

Built at **Latham** By whom built **H. Robb. Ltd.** Yard No. 234 Tons Gross Net When built 1937

Engines made at **Wallsend** By whom made **North Eastern Marine Eng Co Ltd** Engine No. 2865 When made 1937

Boilers made at **Refrew** By whom made **Babcock & Wilcox. Ltd.** Boiler No. 6/1310 When made 1937

Registered Horse Power Owners **Newcastle & Hunter River Steam Ship Co. Ltd.** Port belonging to **Newcastle**

Nom. Horse Power as per Rule 265 Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **Yes**

Trade for which Vessel is intended **Australian Coast.**

**ENGINES, &c.** — Description of Engines **Triple Expansion** Revs. per minute 105

Dia. of Cylinders **16 1/2 x 28 1/2 x 48** Length of Stroke **33"** No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule **9.72"** as fitted **10"** Crank pin dia. 10" Crank webs Mid. length breadth 17" Thickness parallel to axis 6 1/4" Mid. length thickness 6 1/4" shrunk Thickness around eye-hole **Pin 5" JOURNAL 5 3/8"**

Intermediate Shafts, diameter as per Rule **9.26"** as fitted **9 1/2"** Thrust shaft, diameter at collars as per Rule **9.72"** as fitted **10"**

Tube Shafts, diameter as per Rule **—** as fitted **—** Screw Shaft, diameter as per Rule **10.24"** as fitted **10 1/2"** Is the **tube** shaft fitted with a continuous liner **Yes**

Bronze Liners, thickness in way of bushes as per Rule **19.49 32"** as fitted **20 3/8"** Thickness between bushes as per Rule **14.61 32"** as fitted **18 3/8"** 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 **one length**

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 **its full length**

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 **45 3/4"**

Propeller, dia. **11-0"** Pitch **Various 11-0"** No. of Blades 4 Material **Bronze** whether Moveable **no** Total Developed Surface 50 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 16 1/2" Can one be overhauled while the other is at work **Yes**

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 16 1/2" Can one be overhauled while the other is at work **Yes**

Feed Pumps { No. and size **Three 6 x 8 1/2 x 18"** How driven **Steam** Pumps connected to the Main Bilge Line { No. and size **One 9 x 8 x 18"** How driven **Steam**

Ballast Pumps, No. and size **One 9 x 8 x 18"** 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 **1 @ 3"** Boiler Room **2 @ 3"** 1 — Bunker **1 @ 2"** In Pump Room **—** In Holds, &c. **Nº1. 3 @ 2 1/2" Nº2 3 @ 2 1/2"**

**Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1 @ 4"** 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** 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 **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 pass through the bunks **none** How are they protected **—**

What pipes pass through the deep tanks **none** 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 **machinery** Is it fitted with a watertight door **—** worked from **—**

**MAIN BOILERS, &c.** — (Letter for record **S.**) Total Heating Surface of Boilers **4200 #**

Is Forced Draft fitted **Yes** No. and Description of Boilers **Two water tube** Working Pressure **235 lbs**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **Yes (Sls 58199)**

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 **27-7-36** Main Boilers **10-31/8/1936** Auxiliary Boilers **—** Donkey Boilers **—**

Superheaters **—** General Pumping Arrangements **26-11-36** Oil fuel Burning Piping Arrangements **—**

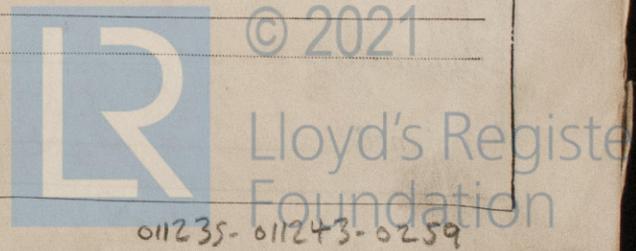
### SPARE GEAR.

Has the spare gear required by the Rules been supplied **Yes**

State the principal additional spare gear supplied **Screw shaft: 1 cast iron propeller: 1 eccentric strap: 50 condenser tubes: 1 set of rings for HP Piston: 1 set of springs for MP&L Piston rings: 1 set of pads for thrust block: 1 circulating pump impeller & shaft: 1 set of top end braces: 1 set of bottom end braces: spare parts for auxiliary feed pumps: Ballast donkey pump: fan engines: automatic stokers: 1 set of safety valve springs: 1 set of dead check valves: spare boiler tubes: spare parts for main engine HP & IP poppet valves & pins.**

The foregoing is a correct description,  
for THE NORTH EASTERN MARINE ENGINEERS CO LTD  
**John Neill**

Manufacturer.



1936  
 Sep. 8. Oct. 8. 22, 23. Nov. 3. 9. 11. 13. 16. 17. 18. 19. 25. Dec. 1. 2. 3. 4. 8. 18. 22. 23. 29. 1937  
 Jan. 4. 6.  
 During progress of work in shops -- 11. 13. 15. 18. 19. 20. Mar. 10. 16. 19. 23. 24. 31. Apr. 5. 6. 8. 9. 12.  
 Dates of Survey while building  
 During erection on board vessel ---  
 Total No. of visits 42.

Dates of Examination of principal parts—Cylinders 17-11-36 Slides 3-12-36 Covers 17-11-36  
 Pistons 19-11-36 Piston Rods 19-11-36 Connecting rods 19-11-36  
 Crank shaft 13-11-36 Thrust shaft 8-9-36 Intermediate shafts 8-9-36  
 Tube shaft --- Screw shaft 1-12-36 Propeller 22-12-36  
 Stern tube 25-11-36 Engine and boiler seatings 31-12-36 Engines holding down bolts 19-3-37  
 Completion of fitting sea connections 27-1-37  
 Completion of pumping arrangements 8-4-37 Boilers fixed 24-3-37 Engines tried under steam 9-4-37  
 Main boiler safety valves adjusted 9-4-37 Thickness of adjusting washers STARBO --- --- 7/16" --- 3/4" --- 1/2" --- 1/4" --- 1/8"  
 Crank shaft material Steel Identification Mark 13-11-36 J.E.S. Thrust shaft material Steel Identification Mark 8-36  
 Intermediate shafts, material Steel Identification Marks 5-9-36 H.C.F. Tube shaft, material --- Identification Mark ---  
 Screw shaft, material Steel Identification Mark 1-12-36 J.E.S. Steam Pipes, material S.D. Steel Test pressure 705-lbs Date of Test 1-4-37  
 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 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 built under special survey, in accordance with the approved plans and the Rules. The materials and workmanship are sound and good. They have been fitted in the vessel in an efficient manner, tried under working conditions and found satisfactory and are eligible in my opinion to be classed with record of L.M.C. 4-37. C.L. Water Tube Boilers: F.D. and the notation 2 WT (Spt).

The amount of Entry Fee ... £ 4 : 0 : 0  
 Special ... £ 38 : 5 : 0  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 14 APR 1937  
 When received, 16.4.37 1914

J. Seller  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 25 MAY 1937

Assigned + Lmb. H. 37  
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Newcastle-on-Tyne

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