

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

31 JUL 1925

Date of writing Report 10 When handed in at Local Office 29th July 1925 Port of NEWCASTLE-ON-TYNE

No. in Survey held at **So. Shields** Date, First Survey 13th Feb 1925 Last Survey 29th July 1925
 Reg. Book. **36/24.** on the **SS. "WAIPAHI"** (Number of Visits 40.) Tons { Gross 1720
 Net 1080.
 Built at **Howden-on-Tyne** By whom built **Northumberland S. B. Co. Ltd.** Yard No. **388.** When built **1925.**
 Engines made at **So. Shields** By whom made **G. T. Grey & Co.** Engine No. **613.** when made **1925.**
 Boilers made at **Jarrow-on-Tyne** By whom made **Palmers S.B. & I Ltd.** Boiler No. **1051-2.** when made **1925.**
 Registered Horse Power Owners **Union S.S. Co of New Zealand Ltd.** Port belonging to **Wellington N.Z.**
 Nom. Horse Power as per Rule **223.** Is Refrigerating Machinery fitted for cargo purposes **no.** Is Electric Light fitted **yes.**
 Trade for which Vessel is intended **Ocean Going.**

ENGINES, &c.—Description of Engines **Inverted Triple Expansion** Revs. per minute **3.**

Dia. of Cylinders **18 1/2" 31" 52"** Length of Stroke **36"** No. of Cylinders **3.** No. of Cranks **3.**

Crank shaft, dia. of journals as per Rule **10.04"** as fitted **10 1/4"** Crank pin dia. **10 1/4"** Crank webs Mid. length breadth **14 3/8"** Thickness parallel to axis **6 3/4"**
 Mid. length thickness **6 3/4"** shrunk Thickness around eye-hole **4 9/16"**

Intermediate Shafts, diameter as per Rule **9.563"** as fitted **9 3/4"** Thrust shaft, diameter at collars as per Rule **10.04"** as fitted **10 1/4"**

Tube Shafts, diameter as per Rule **10.64"** as fitted **11 3/8"** Is the shaft fitted with a continuous liner **yes.**

Bronze Liners, thickness in way of bushes as per Rule **5/8"** as fitted **1/16"** Thickness between bushes as per Rule **1/16"** as fitted **1/16"** 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 shaft **yes.**

Propeller, dia. **13'-0"** Pitch **13'-6"** No. of Blades **4** Material **Bronze** whether Moveable **No** Total Developed Surface **64** sq. feet

Feed Pumps worked from the Main Engines, No. **2.** Diameter **3 3/8"** Stroke **18"** Can one be overhauled while the other is at work **yes.**

Bilge Pumps worked from the Main Engines, No. **2.** Diameters **3 3/8"** Stroke **18"** Can one be overhauled while the other is at work **yes.**

Feed Pumps { No. and size **1. 7" x 5 1/2" x 8" duplex.** Pumps connected to the Main Bilge Line { No. and size **ONE. 6" x 7" x 12" single (Steam).**
 How driven **Steam.** How driven **also, 1. Electrical Ballast pump 3 1/2" suction**

Ballast Pumps, No. and size **1. Elect. Pump. 3 1/2" suction** Lubricating Oil Pumps, including Spare Pump, No. and size **1.**

Are two independent means arranged for circulating water through the Oil Cooler **yes.** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **3 @ 3 1/2" dia. one 4" dia Bilge Suct.**

In Holds, &c. **No 1 hold. 2 @ 3 1/2" dia. No 2 hold. 2 @ 3 1/2" dia. Fore Peak 1 @ 2 1/2" dia. After Peak one @ 3" dia.**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **one 4" dia.** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **one 4" dia.** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strain wires **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 **Below.**

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 **None.** How are they protected **yes.**

What pipes pass through the deep tanks **yes.** 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 **S.R. Grating.**

MAIN BOILERS, &c.—(Letter for record **S.**) Total Heating Surface of Boilers **4000 sq ft**

Is Forced Draft fitted **no.** No. and Description of Boilers **2. S.E. Multi?** Working Pressure **190 lbs.**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **yes.**

IS A DONKEY BOILER FITTED? **no.** If so, is a report now forwarded? **yes.**

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

Superheaters **yes.** General Pumping Arrangements **yes.** Oil fuel Burning Piping Arrangements **yes.**

SPARE GEAR. State the articles supplied:— **2 Top End Bolts, 2 Bottom End Bolts, 2 main bearing bolts, 1 set of Coupling Bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts, iron of various sizes. Spare screw shaft & propeller. Piston rod, one crank pin, web & crank shaft journal.**

The foregoing is a correct description,

GEO. T. GREY & CO. LTD.

H. O. Cunningham

SECRETARY.

Manufacturer of Main Engines



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Lloyd's Register Foundation

003401-003408-0136

1925
 Feb. 13. 20. 24. Mar 23. 31. Apr 9. 17. 22. 27. 28. May 4. 5. 12. 13. 14. 18. 19. 20. 26. 28. June 3.
 12. 15. 17. 19. 22. 29. 30. July 1. 3. 7. 8. 10. 14. 21. 22. 24. 25. 29.

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

Dates of Examination of principal parts—Cylinders 12. 5. 25. Slides 12. 5. 25. Covers 20. 5. 25.
 Pistons 20. 5. 25. Piston Rods 26. 5. 25, 28. 5. 26. Connecting rods 20. 5. 25.
 Crank shaft 27. 4. 25. Thrust shaft 19. 6. 25. Intermediate shafts 21. 4. 25 & 6. 5. 25.
 Tube shaft ✓ Screw shaft 14. 5. 25. Propeller 22. 6. 25.
 Stern tube 12. 5. 25. Engine and boiler seatings 3. 6. 25. Engines holding down bolts 21. 7. 25.
 Completion of pumping arrangements 21. 7. 25. Boilers fixed 14. 7. 25. Engines tried under steam 25. 7. 25.
 Main boiler safety valves adjusted 25. 7. 25. Thickness of adjusting washers P. Boiler PV 1/2 SV 1/2 S. Boiler PV 1/2 SV 1/2
 Crank shaft material Steel Identification Mark 1114. Thrust shaft material Steel Identification Mark 1131.
 Intermediate shafts, material Steel Identification Marks 1132. 1132A. 1132B. 1132C.
 Screw shaft, material Steel Identification Mark 1133. Steam Pipes, material S.D. Steel Test pressure 570-600 lbs Date of Test 24. 7. 25.
 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. The main machinery has been tried out under steam, and all the boilers safety valves adjusted to the working pressure. The machinery of this vessel is in our opinion eligible to have the notation of + LMC 7, 25 & TS CL entered in the register book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7. 25. CL.

L. P. Skett
 31/7/25.

L. P. Skett & L. R. Horne
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 4 : - : When applied for, 30 JUL 1925
 Special 3/5 Total ... £ 33 : 9 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : : When received, 25 AUG 1925

WED. 5 AUG 1925

Committee's Minute

Assigned

+ LMC 7. 25 -
 C.L.

CERTIFICATE WRITTEN



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Certificate to be sent to NEWCASTLE ON TYNE.

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