

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 When handed in at Local Office 7.1.19 28 Port of **NEWCASTLE-ON-TYNE**
 No. in Survey held at **SOUTH SHIELDS** Date, First Survey 27 April Last Survey 2 Jan 1928
 Reg. Book. on the **S.S. "KIRNWOOD"** (Number of Visits 39)
 Built at **SOUTH SHIELDS** By whom built **John Readhead & Sons Ltd.** Yard No. **487** When built **1928-1**
 Engines made at **SOUTH SHIELDS** By whom made **John Readhead & Sons Ltd.** Engine No. **487** when made **1928**
 Boilers made at **SOUTH SHIELDS** By whom made **John Readhead & Sons Ltd.** Boiler No. **487** when made **1928**
 Registered Horse Power Owners **Joseph Constantine Steamship Line Ltd** Port belonging to **MIDDLES BROUGH**
 Nom. Horse Power as per Rule **334** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **Yes**
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines **Triple-Expansion Surface-Condensing** Revs. per minute **65**
 Dia. of Cylinders **22½-37-61½** Length of Stroke **45** No. of Cylinders **three** No. of Cranks **three**
 Crank shaft, dia. of journals as per Rule **12.458** Crank pin dia. **12½** Mid. length breadth **17** Thickness parallel to axis **8¾**
 as fitted **12½** Crank webs Mid. length thickness **8¾** shrunk Thickness around eye-hole **5½**
 Intermediate Shafts, diameter as per Rule **11.865** Thrust shaft, diameter at collars as per Rule **12.458**
 as fitted **12** as fitted **12½**
 Tube Shafts, diameter as per Rule **13.219** Is the **no** screw shaft fitted with a continuous liner **yes**
 as fitted **13¼** as fitted **13¼**
 Bronze Liners, thickness in way of bushes as per Rule **.702** Thickness between bushes as per Rule **.527** Is the after end of the liner made watertight in the
 as fitted **¾** as fitted **¾** propeller boss **Rubber ring fitted** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
 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 Oil Gland or other appliance fitted at the after
 end of the tube shaft **no** Length of Bearing in Stern Bush next to and supporting propeller **4-7**
 Propeller, dia. **16-3** Pitch **16-3** No. of Blades **four** Material **Cast Iron** whether Moveable **solid** Total Developed Surface **81** sq. feet
 Feed Pumps worked from the Main Engines, No. **two** Diameter **3½** Stroke **24** Can one be overhauled while the other is at work **yes**
 Bilge Pumps worked from the Main Engines, No. **two** Diameter **4¾** Stroke **24** Can one be overhauled while the other is at work **yes**
 Feed Pumps { No. and size **1 direct-acting 8x6x18** Pumps connected to the { No. and size **Ballast pump**
 How driven **steam** Main Bilge Line { How driven **Steam**
 Ballast Pumps, No. and size **one duplex 9x11x10** 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 **three 2¾**
 In Holds, &c. **No 1 two 3 No 2 two 3¼ No 3 two 2¾ No 4 two 2¾ Tunnel Well, one 2½**

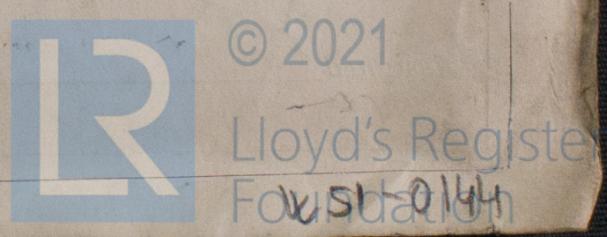
Main Water Circulating Pump Direct Bilge Suctions, No. and size **one 6** Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size **one 4½** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **yes**
 Are the Bilge Suctions in the Machinery Space 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 are carried through the bunkers **none** How are they protected
 What pipes pass through the deep tanks 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 **yes** Is it fitted with a watertight door **yes** worked from **upper platform**

MAIN BOILERS, &c.—(Letter for record **Y**) Total Heating Surface of Boilers **4564 sq. FT.**
 Is Forced Draft fitted **yes** No. and Description of Boilers **Two (S.E.) Multitubular** Working Pressure **200lbs**
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? **yes**
 IS A DONKEY BOILER FITTED? **yes** If so, is a report now forwarded? **yes**
 PLANS. Are approved plans forwarded herewith for Shafting **no** Main Boilers **yes** Auxiliary Boilers **—** Donkey Boilers **yes**
 Superheaters General Pumping Arrangements **yes** Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:— **Two Connecting Rod top end bolts, nuts: Two Connecting Rod bottom end bolts
 & nuts: Two Main-bearing bolts: One set Coupling bolts: One set Feed & Bilge pump Valves: Bolts & Nuts assorted:
 One Cast iron propeller: One Tail Shaft: Two Main & Two Auxiliary Check Valves: Three sets of Air pump Valves: Two Safety Valve
 Springs.**

The foregoing is a correct description,
 FOR JOHN READHEAD & SONS, LIMITED.

W. P. Murray Eng. Manager. Manufacturer.



1927
 Apr. 27. May 10. 24. 31. June 8. 17. 28. 29. July 8. 28 Aug. 10. 11. 24. 31. Sept. 9.
 13. 15. Oct. 3. 4. 5. 10. 13. 14. 18. 21. 26. Nov. 1. 2. 4. 7. 8. 11. 17. 22. 23. 30. Dec. 2. 28.
 1928
 Jan. 2.
 Total No. of visits 39.

Dates of Examination of principal parts—Cylinders 27/4/27-10/5/27-31/5/27 Slides 10/8/27-3/10/27 Covers 10/8/27 3/10/27
 Pistons 8/6/27 10/8/27 3/10/27 Piston Rods 8/7/27 31/8/27 Connecting rods 10/5/27 8/7/27 31/8/27
 Crank shaft 16/7/27 10/8/27 Thrust shaft 31/8/27 15/9/27 Intermediate shafts 31/8/27 15/9/27-3/10/27
 Tube shaft — Screw shaft 29/6/27 15/9/27 14/10/27 Propeller 3/10/27-18/10/27
 Stern tube 3/10/27 14/10/27 21/10/27 Engine and boiler seatings 14/10/27 Engines holding down bolts 17/11/27
 Completion of pumping arrangements 30/11/27 Boilers fixed 1/11/27 Engines tried under steam 11/11/27
 Main boiler safety valves adjusted 11/11/27 Thickness of adjusting washers Stan. Bo. Port 5/16" : Prt. Bo. port 5/16"
 Crank shaft material S.M.I. Steel Identification Mark 8501 : Thrust shaft material S.M.I. Steel Identification Mark 8490
 Intermediate shafts, material S.M.I. Steel Identification Marks 8486-8488-8489 Tube shaft, material — Identification Mark —
 Screw shaft, material S.M.I. Steel Identification Mark 8485-8487 Steam Pipes, material Steel Test pressure 600lbs Date of Test 7/11/27-7/14/27
 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 yes ✓ If so, state name of vessel S.S. Hazelwood. ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The Machinery of this Vessel has been constructed under special survey in accordance with the requirements of the rules and the approved plans.
 The Materials and the Workmanship are good.
 The Machinery was securely fitted on board and tested under steam and in my opinion the Vessel is eligible for record of + L.M.C. 1-28

It is submitted that this vessel is eligible for THE RECORD. + LMC 1-28. FD. CL.

J.W.D.
 10/11/28

W^m Morrison
 Engineer Surveyor to Lloyd's Register of Shipping.

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 ... £ 5 : 0 :
 Special ... £ 75 : 2 :
 Donkey Boiler Fee ... £ 8 : 2 :
 Travelling Expenses (if any) £ — : — :
 When applied for, 7 JAN 1928
 When received, 11 JAN 1928

Committee's Minute FRI. 13 JAN 1928

Assigned + L.M.C. 1-28
 F.D. CL.

CERTIFICATE WRITTEN.

