

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 26 MAY 1953

NEWCASTLE-ON-TYNE.

Date of writing Report 19 53 When handed in at Local Office 22 5 19 53 Port of NEWCASTLE-ON-TYNE.

No. in Survey held at SOUTH SHIELDS. Date, First Survey 31. 12. 51 Last Survey 12. 5. 19 53
Reg. Book (Number of Visits 73)

on the S.S. RUSHWOOD Tons { Gross 6208 Net 3344

Built at SOUTH SHIELDS. By whom built MESSRS J. READHEAD & SONS LTD. Yard No. 574 When built 1953

Engines made at " By whom made " Engine No. " When made "

Boilers made at " By whom made " Boiler No. " When made "

Registered Horse Power 2800 I.H.P. Owners WM. FRANCE FENWICK & CO LTD. Port belonging to LONDON.

Nom. Horse Power as per Rule $\frac{2800 \times 9}{5} = 504$ MN. 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 Triple expansion in conjunction with a Barmack Turbine Revs. per minute 83.

Dia. of Cylinders 24 1/2" - 40" - 68" Length of Stroke 45" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 13.65" as fitted 13.75" Crank pin dia. 13.75" Crank webs Mid. length breadth 20" Thickness parallel to axis 8.625" shrunk Mid. length thickness 8.625" Thickness around eye-hole 6.125"

Intermediate Shafts, diameter as per Rule 13.07" as fitted 13.25" Thrust shaft, diameter at collars as per Rule 13.60" as fitted 13.98"

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 14.532 as fitted 14.875" Is the screw shaft fitted with a continuous liner yes.

Bronze Liners, thickness in way of bushes as per Rule 3/4" as fitted 13/16" Thickness between bushes as per Rule 5 1/4" as fitted 5 1/4" 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 at No.

Propeller, dia. 17.5 feet. Pitch 15.86/12.22 ft. No. of Blades 4 Material Bronze. Length of Bearing in Stern Bush next to and supporting propeller 4-11 1/2" whether Moveable NO. Total Developed Surface 105.3 sq. feet

Feed Pumps worked from the Main Engines, No. NONE. Diameter Stroke Can one be overhauled while the other is at work yes.

Bilge Pumps worked from the Main Engines, No. 2. Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work yes.

Feed Pumps No. and size 2: 7" x 9 1/2" x 21" stroke. Pumps connected to the Main Bilge Line (No. and size 2 (by Main Engine) 1: 6.5" x 7" x 18" 2: 10" x 9" x 24" How driven Steam driven (Steam Driven)

Ballast Pumps, No. and size 2: 10" x 9" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size 2: 9" x 8" x 18"

Are two independent means arranged for circulating water through the Oil Cooler yes (Aires & G.S. pump) Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps: —In Engine and Boiler Room Engine room: 1- 3" 2- 3" 3- 3" 4- 3" Boiler room: 1- 3" 2- 3"

In Pump Room In Holds, &c. No. 1, 2, 3, 4 & 5 Holds: each 1- 3" 2- 3"

and 1- 2" oily bilge aft end of No. 5 hold.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1: 10" Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, No. and size 1- 5" 2- 3" 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. 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 pass through the bunkers No. 1, 2, 3, 4 & 5 hold bilge & oily bilge suction: How are they protected heavy gauge, continuous piping.

What pipes pass through the deep tanks None. 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 worked from yes.

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 6915 sqft. Superheaters 3000 sqft.

Which Boilers are fitted with Forced Draft All. Which Boilers are fitted with Superheaters all.

No. and Description of Boilers 3 Single Ended. Working Pressure 220 lb./sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes.

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

Can the donkey boiler be used for other than domestic purposes yes.

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

Superheaters See Manchester Certs. General Pumping Arrangements yes. Oil fuel Burning Piping Arrangements yes.

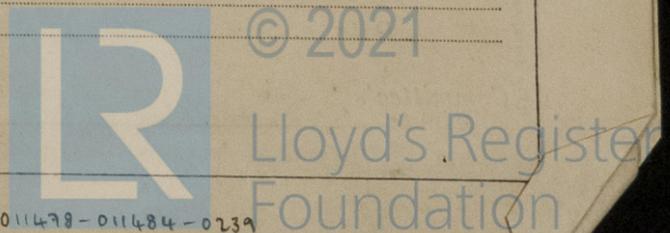
SPARE GEAR.

Has the spare gear required by the Rules been supplied yes.

State the principal additional spare gear supplied One screw shaft. (LR 5697: JUV 31-12-52: GM 16-11-52)

The foregoing is a correct description.

H. H. Coatsworth. Manufacturer.
Director.



Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits. **73**

Dates of Examination of principal parts—Cylinders **22-8-52/25/3/52**: 19-9-52: Slides **22-9-52**. Covers **19-9-52**.

Pistons **22-9-52**: Piston Rods **22-9-52**. Connecting rods **22-9-52**.

Crank shaft **25-8-52**: Thrust shaft *See Nav. Report No 109782*. Intermediate shafts ✓

Tube shaft ✓. Screw shaft **30-12-52**: *Spare 31-12-52*. Propeller **13-1-53**.

Stern tube **5-1-53**: Engine and boiler seatings **16-1-53**: Engines holding down bolts **3-3-53**.

Completion of fitting sea connections **14-1-53**.

Completion of pumping arrangements **5-7-53**. Boilers fixed **3-3-53**: Engines tried under steam **30-4-53** **8612/5/5**.

Main boiler safety valves adjusted **25-9-53** **7th 10-4-53**. Thickness of adjusting washers *P: 5.11/52 Spdt 3/8 S: 5 1/2 Spdt 7/16 F.P. 3 1/2*

Crank shaft material **O.H. Steel**. Identification Mark **5093/4/5: 4-3-52**. Thrust shaft material *See Nav. Rpt.* Identification Mark —

Intermediate shafts, material **O.H. Steel**. Identification Marks **5695: 15-1-52**. Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material **O.H. Steel**. Identification Mark **16-11-51**. Steam Pipes, material **Seamless Steel**. Test pressure **660lb/sq**. Date of Test **Dec 52**

Is an installation fitted for burning oil fuel **Yes**. Is the flash point of the oil to be used over 150° F. **Yes**

Have the requirements of the Rules for the use of oil as fuel been complied with **Yes**

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 **Not Required**

Is this machinery duplicate of a previous case **Yes**. If so, state name of vessel **M.V. Rookwood**.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery of this vessel has been built under special survey and in accordance with the requirements of the Rules, the Secretary's letters and approved plans.

The Materials and workmanship are good.

On completion the main and auxiliary machinery were examined under working conditions alongside the quay, and under full power trials at sea with satisfactory results, and is eligible in my opinion for classification with the record + LMC 5/53 and notations **CL 3SB (3pht.) 220lb/sq. F.P. and "Fitted for Oil Fuel 5/53 F.P. above 150°F."**

NOTE:- at the request of the Owners; the L.P. piston for this vessel has been constructed by fabricating & electric welding.

Copy of drawing No 6624 (approved locally) attached herewith.

Material & electrodes used were of approved qualities.

Welding & heat treatment satisfactorily carried out.

Weight of fabricated piston 23 cwt.

ALL FEES AT NEWCASTLE

Construction Main Engines £46-0

The amount of Entry Fee

Installation ... £ 86-0

Special Boilers ... £ 115-4

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for, **25 MAY 1953**

When received, 19

J. W. Walker
 Engineer Surveyor to Lloyd's Register of Shipping.

Date **FRI, 19 JUN 1953**

Committee's Minute **+ LMC 5/53**

FITTED FOR OIL FUEL **5/53** FLASH POINT ABOVE 100°F. **FD CL 3SB 220lb Sp.**

