

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 26-4-1926 When handed in at Local Office 26/5/26 Port of Greenock
 No. in Survey held at Greenock Date, First Survey 25th September 1925 Last Survey 24th May 1926
 Reg. Book. 515 "Vitruria" (Number of Visits 53)
 Built at Glasgow By whom built R. Duncan & Co. Ltd. Yard No. 370 When built 1926
 Engines made at Greenock By whom made Rankin & Blackmore Engine No. 417 when made 1926
 Boilers made at auto By whom made auto Boiler No. 417 when made 1926
 Registered Horse Power Owners Voreda Steamship Co. Ltd. Port belonging to Glasgow
 Nom. Horse Power as per Rule 470 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Triple Expansion
 Dia. of Cylinders 25 $\frac{1}{2}$ -42-70 Length of Stroke 48 Revs. per minute 65 No. of Cylinders 3 No. of Cranks 3
 Dia. of Crank shaft journals as per rule 13.37 as fitted 14 Dia. of Crank pin 14 Crank webs Mid. length breadth 14.19 Mid. length thickness 14.19 Thickness parallel to axis 8 $\frac{3}{4}$ Thickness around eye-hole 6 $\frac{3}{8}$
 Diameter of Thrust shaft under collars as per rule 13.37 as fitted 14 Diameter of Tunnel shaft as per rule 12.43 as fitted 13 $\frac{1}{8}$ Diameter of Screw shaft as per rule 14.19 as fitted 14 $\frac{3}{4}$ 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 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated No Length of Stern Bush 65 Diameter of Propeller 14-6
 Pitch of Propeller 18-6 No. of Blades 4 State whether Moveable No Total Surface 1024 square feet.
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 4 Stroke 26 Can one be overhauled while the other is at work Yes
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 4 $\frac{1}{2}$ Stroke 26 Can one be overhauled while the other is at work Yes
 Total number and size of power driven Feed and Bilge Auxiliary Pumps 4 (8 $\frac{1}{2}$ x 8 Ball) (5 x 8 S) (8 x 22 WEIRS FEED) (4 $\frac{1}{4}$ x 6 Donkey Feed)
 No. and size of Pumps connected to the Main Bilge Line 8 $\frac{1}{2}$ x 8
 No. and size of Ballast Pumps 8 $\frac{1}{2}$ x 8 No. and size of Lubricating Oil Pumps, including Spare Pump
 Are two independent means arranged for circulating water through the Oil Cooler No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ Coff. 12 $\frac{3}{4}$ x 62 Bunkers 2 x 2 $\frac{1}{2}$ x 12 Balist R. 1 x 23 $\frac{1}{4}$ and in Holds, &c. aft Coff. 2 x 4 Cargo Tanks 2 x 8 Fore Coff. 2 x 3

No. and size of Main Water Circulating Pump Bilge Suctions 1-8 No. and size of Donkey Pump Direct Suctions
 to the Engine Room Bilges 1 x 3 $\frac{1}{2}$ 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 size 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 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
 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 None Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S)

Total Heating Surface of Boilers 6950 #
 Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended Working Pressure 180 lb
 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 (If not state date of approval)

Main Boilers Yes Auxiliary Boilers Donkey Boilers Yes

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:—2 Connecting Rod bolts 1 each for top end, auto for bottom end 2 main bearing bolts, one set of coupling bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts, nuts, & iron of various sizes.

The foregoing is a correct description,

RANKIN & BLACKMORE, LTD.,

Manufacturer.

Director.



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Lloyd's Register

W552-0156

During progress of work in shops - - (1925) Sept 25 Oct 11-26-28 Nov 4-12-17-20-27-30 Dec 3-9-16-24-29 (1926) Jan 12-14-21-26-28 Feb 1-10-12-17-19-24 Mar 2-5-9-12-17
19-22-26-31 Apr 2-7-13-14-23-26-27-28-30 May 1-3-6-7-11-12-18-21-24
Dates of Survey while building During erection on board vessel - - -
Total No. of visits 53

Dates of Examination of principal parts - Cylinders 17. 2. 26 Slides 9. 3. 26
Covers 17. 2. 26 Pistons 24. 2. 26 Rods 24. 2. 26
Connecting rods 24. 2. 26 Crank shaft 10 2. 26 Thrust shaft 9. 3. 26
Tunnel shafts 22. 3. 26 Screw shaft 22. 3. 26 Propeller 22. 3. 26
Stern tube 17. 2. 26 Engine and boiler seatings 9. 2. 26 Engines holding down bolts 23. 4. 26
Completion of pumping arrangements 6. 5. 26 Boilers fixed 23. 4. 26 Engines tried under steam 24. 5. 26
Completion of fitting sea connections 2. 4. 26 Stern tube 2. 4. 26 Screw shaft and propeller 13. 4. 26
Main boiler safety valves adjusted 12. 5. 26 Thickness of adjusting washers PY 5 1/16 S 5 1/16 P 9 1/16 S 5 1/16 F 3 1/8 A 7 1/16
Material of Crank shaft S Identification Mark on Do. 10. 2. 26 LR 7848 HG M
Material of Thrust shaft S Identification Mark on Do. 9. 3. 26 LR 7842 HG M
Material of Tunnel shafts S Identification Marks on Do. 22. 3. 26 LR 7845 HG M
Material of Screw shafts S Identification Marks on Do. 22. 3. 26 LR 7854 HG M
Material of Steam Pipes S ✓ Test pressure 540 ✓ Date of Test 1. 5. 26
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 carrying and burning oil fuel been complied with Yes ✓
Is this machinery duplicate of a previous case - If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.) These Enguin. Boilers have been built under Special Survey in accordance with the approved plans. The workmanship, material are of good quality. They have been securely fitted on board, tried under steam, found satisfactory. The Machinery is eligible in my opinion for the record of LMC 5-26 Fitted for oil fuel FP above 150°F 5-26

It is submitted that this vessel is eligible for THE RECORD. + LMC 5. 26. FD. CL. Fitted for oil fuel 5. 26. FP above 150°F.

W. Gordon-Mitchell 3/6/26

The amount of Entry Fee ... £ 5 : : When applied for, Special ... £ 95 : 10 : 27th May 1926 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 28th May 1926

W. Gordon-Mitchell Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1-JUN 1926

Assigned + LMC 5,26 72

CERTIFICATE WRITTEN 2. 6. 26

Fitted for oil fuel 5,26 F.P. above 150°F.

