

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

SEP 30 1938

Date of writing Report 19. 8. 1938 When handed in at Local Office 26th SEPTEMBER 1938 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 9th AUGUST 1934 Last Survey 23. 9. 1938
 Reg. Book. S/S "Saultan" (Number of Visits) Gross 3458.43
 on the S/S "Saultan" Net 2155.26
 Built at Glasgow By whom built Lithgow & Co. Yard No. 913 When built 1938
 Engines made at Glasgow By whom made Rankine Blackmore & Co. Engine No. 459 When made 1938
 Boilers made at ditto By whom made ditto Boiler No. 459 When made 1938
 Registered Horse Power _____ Owners Dornoch Shipping Co. Ltd. Port belonging to Glasgow
 Nom. Horse Power as per Rule 450 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Foreign

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 72
 Dia. of Cylinders 21 1/2" - 35" - 62" Length of Stroke 45" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 12.56" as fitted 12.3/4" Crank pin dia. 12.3/4" Crank webs Mid. length breadth shrunk Thickness parallel to axis 8.1/8"
 Intermediate Shafts, diameter as per Rule 11.97" as fitted 12.3/4" Thrust shaft, diameter at collars as per Rule 12.56" as fitted 12.3/4"

Tube Shafts, diameter as per Rule _____ as fitted _____ Screw Shaft, diameter as per Rule 10.428" as fitted 14" Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 3/4" as fitted 3/4" Thickness between bushes as per Rule 5/8" as fitted 5/8" 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 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 No If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller 56 1/2"

Propeller, dia. 14.6 Pitch 14.2 No. of Blades 4 Material Brass whether Movable No Total Developed Surface 98 sq. feet

Feed Pumps worked from the Main Engines, No. None Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 2 1/2" Can one be overhauled while the other is at work Yes

Feed Pumps No. and size 2. 6x8 1/2 x 18 + 6x8 1/2 x 18 Main Bilge Line Pumps connected to the No. and size 2. 11x9 1/2 x 12 + 6x8 1/2 x 18 How driven Steam

Ballast Pumps, No. and size 1 - 10" x 9 x 12" 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 3 at 3" 4 3/4" Dry Tants 1. 2 1/2"
 In Pump Room _____ In Holds, &c. 90% 2 3" 90% 2 3" 90% 2 3" 90% 2 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1. 4 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1. 4 3/4" 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 bunkers Bilge Suctions How are they protected Wood Caskey

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 U.E.R. PLATFORM

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 4215 # (MAIN 5720 # AUX 1495 #)

Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended Working Pressure 220

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A Auxiliary DONKEY BOILER FITTED? Yes If so, is a report now forwarded? Yes

Is the donkey boiler intended to be used for domestic purposes only Yes

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

Superheaters Yes General Pumping Arrangements Yes 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 Propeller shaft-coupling (continuous liner) stamped LR 18200, SHA1. W.G.M. 5/8/38. Cast Iron Propeller

RETAIN

The foregoing is a correct description,

RANKIN & BLACKMORE, LTD.,

[Signature]

DIRECTOR, Manufacturer.



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W379-0070

NOTE.—The words which do not apply should be deleted.

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(1934) AUG. 9-24 SEPT. 9-15-23 OCT. 12-15-19-24 NOV. 2-4-11-16-24 DEC. 2-4-16-22-30 (1938) JAN. 10-14-19-24
 During progress of work in shops - - FEB. 1-10-14-22 MAR. 1-9-17-22-30 APR. 1-4-11-12-14-22-26-28 MAY 5-10-13-20-25-24 JUNE 3-16-21-22-24
 Dates of Survey while building During erection on board vessel - - - JULY 13-15-20-26-28-29 AUG. 5-9-12-16-14-18-22-25-26-30 SEPT. 2-5-6-8-14-16-23
 Total No. of visits 43 44

Dates of Examination of principal parts—Cylinders 22. 3. 38 Slides 5- 5- 38 Covers 22. 3. 38
 Pistons 4- 4- 38 Piston Rods 4- 4- 38 Connecting rods 12- 4- 38
 Crank shaft 9. 3- 38 Thrust shaft 29. 4. 38 Intermediate shafts 22. 4. 38
 Tube shaft ✓ Screw shaft 13- 4. 38 Propeller 13- 7. 38
 Stern tube 13- 4. 38 Engine and boiler seatings 21. 6- 38 Engines holding down bolts 16- 8- 38
 Completion of fitting sea connections 28- 4. 38
 Completion of pumping arrangements 16- 8- 38 Boilers fixed 30. 8- 38 Engines tried under steam 23. 9- 38
 Main boiler safety valves adjusted 8- 9- 38 Thickness of adjusting washers PV 3/16 SV 3/8 S 1/4 P 5/16 S 5/16 PV 2/8 SV 1/8 S 3/16
 Crank shaft material S Identification Mark LR 459 WGM Thrust shaft material S Identification Mark LR 1354 WGM
 Intermediate shafts, material S Identification Marks LR 1084 WGM Tube shaft, material ✓ Identification Mark LR 1354 WGM
 Screw shaft, material S Identification Mark LR 1354 WGM Steam Pipes, material S Test pressure 660 lb Date of Test 6. 9. 38
 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 No
 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. These engines & 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 \times h m e q. 38. Notation of 2 s 13 (S.P.)

The amount of Entry Fee ... £ 5 : - : When applied for,
 Special ... £ 92 : 10 : 26th SEPT. 1938.
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 24th SEPT. 1938.

W. E. London-Davies
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 29 SEP 1938 JRA.
 Assigned + dmc 9.38 70 sht.



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