

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 24 FEB 1926

Date of writing Report 10th Feb. 1926. When handed in at Local Office 18. 2. 1926. Port of Greenock  
 No. in Survey held at Greenock Date, First Survey 9th June, 1925. Last Survey 15th February 1926  
 Reg. Book. S/S "Sandviken" (Number of Visits 4)  
 on the S/S "Sandviken"  
 Built at P. Glasgow By whom built W. Hamilton & Co. Yard No. 394 When built 1926  
 Engines made at Greenock By whom made Rankin & Blackmore Engine No. 416 when made 1926  
 Boilers made at ditto By whom made ditto Boiler No. 416 when made 1926  
 Registered Horse Power \_\_\_\_\_ Owners Wallen & Co. S Port belonging to Bergen  
 Nom. Horse Power as per Rule 244 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

**ENGINES, &c.**—Description of Engines Triple Expansion  
 Dia. of Cylinders 20 1/2 - 34 - 56 Length of Stroke 36 Revs. per minute 80 No. of Cylinders 3 No. of Cranks 3  
 Dia. of Crank shaft journals as per rule 10 1/4 as fitted 10 5/8 Dia. of Crank pin 10 5/8 Crank webs Mid. length breadth \_\_\_\_\_ Thickness parallel to axis 4  
 as per rule 10 1/4 as fitted 10 5/8 Diameter of Tunnel shaft as per rule 9.99 as fitted 10 Diameter of Screw shaft as per rule 11.204 as fitted 11 1/4 Thickness around eye-hole 4 3/4  
 Diameter of Thrust shaft under collars as per rule 10 1/4 as fitted 10 5/8 Is the after end of the liner made watertight in the propeller boss Yes  
 fitted with a continuous liner the whole length of the stern tube Yes If the liner does not fit tightly at the part  
 If the liner is in more than one length are the joints burned \_\_\_\_\_ between the bearings in the stern tube, is the space charged with plastic material insoluble in water and non-corrosive Yes  
 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 \_\_\_\_\_ Length of Stern Bush 45 Diameter of Propeller 14.6  
 Pitch of Propeller 15.6 No. of Blades 4 State whether Moveable No Total Surface 65.4 square feet.  
 No. of Feed Pumps fitted to the Main Engines one Diameter of ditto 33 1/2 Stroke 21 Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 3 1/2 Stroke 21 Can one be overhauled while the other is at work Yes  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps 3 (6x18) (4 1/4 x 6) (10x10)  
 No. and size of Pumps connected to the Main Bilge Line one 10x10  
 No. and size of Ballast Pumps one 10x10 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 4 - 2 1/4 Tunnel Well 1. 2 1/4 and in Holds, &c. 701. 2 at 3 1/2 702. 2 at 3

No. and size of Main Water Circulating Pump Bilge Suctions one 6 No. and size of Donkey Pump Direct Suctions \_\_\_\_\_  
 to the Engine Room Bilges one 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 connections with the sea direct on the skin of the ship Yes Are they 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 Discharge Pipes above or below the deep water line above  
 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 Bilge Suction How are they protected Wood casing  
 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 Yes Is it fitted with a watertight door Yes worked from Top Platform UERP

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 4302.4  
 Is Forced Draft fitted No No. and Description of Boilers 2 Single Ended 2SB Working Pressure 180  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? \_\_\_\_\_  
**PLANS.** Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval)  
 General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:—2 Connecting Rod bolts, nuts for top end  
ditto for bottom end, 2 Main Bearing bolts, 1 set of Coupling  
bolts, one set of fixed Bilge Pump Gaskets, a quantity of  
grooved bolts, nuts, & nuts of various sizes.

The foregoing is a correct description,  
RANKIN & BLACKMORE, LTD.,

A. J. Smith Director. Manufacturer.



ater Caps  
Tons.  
88  
105

Dates of Survey while building

During progress of work in shops -- (1925) June 9. 15. 18. 30. July 16. 30. Aug. 4. 19. 28. Sept. 2. 8. 15. 18. 25. 28. Oct. 7. 13. 14. 21. 28. Nov. 4. 12. 17. 20. 27. 30. Dec. 4. 9. 16. 17. 24. 29. 30. (1926) Jan. 5. 12. 14. 15. 25. 27. 29. Feb. 3. 12. 15.

During erection on board vessel ---

Total No. of visits 44.

Dates of Examination of principal parts - Cylinders 13 - 10 - 25 Slides 24. 11. 25  
 Covers 13 - 10 - 25 Pistons 26 - 10 - 25 Rods 12. 11. 25  
 Connecting rods 26 - 10 - 25 Crank shaft 7. 10 - 25 Thrust shaft 24. 12. 25  
 Tunnel shafts 24. 12. 25 Screw shaft 24. 12. 25 Propeller 24. 12. 25  
 Stern tube 24 - 12. 25 Engine and boiler seatings 8. 1. 26 Engines holding down bolts 29. 1 - 26  
 Completion of pumping arrangements 29. 1 - 26 Boilers fixed 25 - 1 - 26 Engines tried under steam 15. 2 - 26  
 Completion of fitting sea connections 12. 1 - 26 Stern tube 8 - 1. 26 Screw shaft and propeller 12. 1 - 26  
 Main boiler safety valves adjusted 3. 2 - 26 Thickness of adjusting washers P23/64" S 3/8" P25/64" S 3/8"

Material of Crank shaft Identification Mark on Do. Lloyd's W.G.M. 111. H.L.  
 Material of Thrust shaft Identification Mark on Do. Lloyd's W.G.M. 247 H.L.  
 Material of Tunnel shafts Identification Marks on Do. Lloyd's W.G.M. 357. 281. 246. 343. 293  
 Material of Screw shafts Identification Marks on Do. Lloyd's H16 HT 100 W.G.M.  
 Material of Steam Pipes Iron ✓ Test pressure 540 lb. ✓ Date of Test 29. 1 - 26 (L.S.)

Is an installation fitted for burning oil fuel 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 Norwicken 4th 1919

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines 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 L.M.C. 2-26

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 2. 26. CL.

*[Signature]*  
24/2/26.

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

The amount of Entry Fee ... £ 4 :  
 Special ... £ 61 : -  
 Donkey Boiler Fee ... £ ✓ :  
 Travelling Expenses (if any) £ ✓ :  
 When applied for, Feb. 10. 1926.  
 When received, Feb. 13. 1926.

Committee's Minute GLASGOW 23 FEB 1926  
 Assigned + L.M.C. 2.26



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CERTIFICATE WRITTEN 24.2.26

GREENBOOK

Certificate to be sent to

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