

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 3 NOV 1943 When handed in at Local Office 3 NOV 1943 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Walker & Walker Date, First Survey 15 June, 1942 Last Survey 5 October, 1943  
 Reg. Book 37252 on the SS. "EMPIRE FLAG" Tons (Gross 7024 Net 4734)  
 Built at Walker By whom built Armstrong Whitworth & Co. Ltd. Yard No. 4 When built 1943  
 Engines made at Walker By whom made C. E. Marine Eng. Co. Ltd. 3052 When made 1943  
 Boilers made at " By whom made " Boiler No. 3036 When made 1943  
 Registered Horse Power " Owners Ministry of War Transport Port belonging to Newcastle  
 Nom. Horse Power as per Rule 542 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes  
 Trade for which vessel is intended ocean going

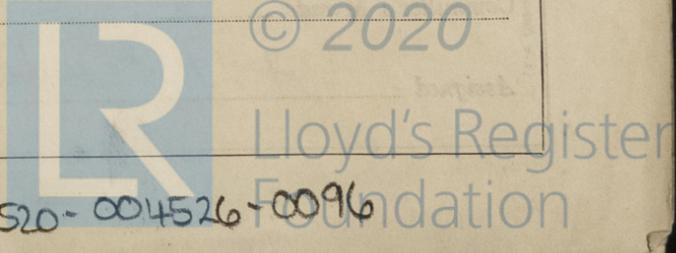
**GINES, &c.—Description of Engines.** Triple Expansion Revs. per minute 76  
 Dia. of Cylinders 24 1/2 39 70 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13.98 as fitted 14 1/4 Crank pin dia. 14 3/4 Crank webs Mid. length breadth 22 Thickness parallel to axis 9  
 as fitted 14 1/4 Crank webs Mid. length thickness 9 shrunk Thickness around eye-hole 6 3/8  
 Intermediate Shafts, diameter as per Rule 13.32 as fitted 13 5/8 Thrust shaft, diameter at collars as per Rule 13.98 as fitted 14 1/4  
 Tube Shafts, diameter as per Rule 14.84 as fitted 15 1/4 Is the tube screw shaft fitted with a continuous liner yes  
 as fitted 15 1/4 as per Rule 7.53 Thickness between bushes as per Rule 5.5 Is the after end of the liner made watertight in the  
 as fitted 8.1 as fitted 6.5  
 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 If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 5-11"  
 Propeller, dia. 17-10 1/2 Pitch 15.6 No. of Blades 4 Material C-1 whether Moveable no Total Developed Surface 114 3/4 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 27 Can one be overhauled while the other is at work yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 27 Can one be overhauled while the other is at work yes  
 Feed Pumps { No. and size 2 @ 8 x 10 1/2 x 22 1 @ 9 1/2 x 7 x 21 Pumps connected to the Main Bilge Line { No. and size 1 @ 10 1/2 x 13 x 24 1 @ 9 1/2 x 7 x 21 2 @ 4 x 27  
 How driven Steam How driven Steam M. Eng.  
 Ballast Pumps, No. and size 1 @ 10 1/2 x 13 x 24 Lubricating Oil Pumps, including Spare Pump, No. and size yes  
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps:—In Engine and Boiler Room 2 @ 3" in Eng. Rm 2 @ 3" in Boiler Room  
 In Pump Room 1 at 2 1/2" Tunnel Well In Holds, &c. 1 Port 1 Starboard 3" in each hold  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 9" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1 @ 5" 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 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 For Bilge Suctions How are they protected Lumber Boards  
 What pipes pass through the deep tanks yes 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 no worked from yes

**MAIN BOILERS, &c.—**(Letter for record S) Total Heating Surface of Boilers 7974  
 Which Boilers are fitted with Forced Draft yes Which Boilers are fitted with Superheaters PT&S main boilers  
 No. and Description of Boilers 2 SB + 1 Aux SB Working Pressure 220 lbs  
 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 domestic purposes only yes  
**PLANS.** Are approved plans forwarded herewith for Shafting B type Main Boilers 10.11.41 Auxiliary Boilers 11.10.41 Donkey Boilers yes  
 (If not state date of approval)  
 Superheaters Standard General Pumping Arrangements 27.8.42 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

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.  
 The foregoing is a correct description.  
 John Neill  
 DIRECTOR

Manufacturer.



004520-004526-0096

1942  
 During progress of work in shops - - JUNE 15.22. JULY 21. AUG. 27. SEPT. 10. OCT. 2. 7. 13. 15. 19. NOV. 2. 4. 13. 18. 19. 25. 26. DEC. 1. 2. 4. 16. 17. 31.  
 1943  
 During erection on board vessel - - JAN. 4. 6. 13. FEB. 1. 10. 17. 19. MAR. 10. 23. APR. 19. 21. 28. 30. MAY. 4. 6. 10. 11. 17. 20. 24. 31. JUNE 2. 15. 16. 22. 24.  
 JULY 20. 22. 26. 29. AUG. 3. 9. 10. 12. SEPT. 14. OCT. 5.  
 Total No. of visits 61

Dates of Examination of principal parts - Cylinders 21.7.42. Slides 4.9.42 Covers 21.7.42  
 Pistons 4.9.42. Piston Rods 4.9.42 Connecting rods 4.9.42  
 Crank shaft 26.11.42 Thrust shaft 15.6.42 Intermediate shafts 15.6.42 & 22.6.42  
 Tube shaft ✓ Screw shaft 17.5.43 Propeller 17.5.43  
 Stern tube 28.4.43. 31.5.43 Engine and boiler seatings 2.6.43 Engines holding down bolts 15.6.43  
 Completion of fitting sea connections 2.6.43  
 Completion of pumping arrangements 24.6.43 Boilers fixed 10.6.43 Engines tried under steam 24.6.43  
 Main boiler safety valves adjusted 24.6.43 Thickness of adjusting washers P 1 1/2" Spt 1/2" C 7/16" S 5/16" Spt 1/2"  
 Crank shaft material Steel Identification Mark 8543. 4. 5. 6. EP 5.6.42. 8548 RA 26.11.42 Thrust shaft material Steel Identification Mark 6967. 8. 9. 70. 1 & 2 JFC  
 Intermediate shafts, material Steel Identification Marks 6966 JFC 15.6.42 Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material Steel Identification Mark 17.5.43 Steam Pipes, material Steel ✓ Test pressure 660 ✓ Date of Test Various  
 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 ✓  
 Is this machinery duplicate of a previous case NO If so, state name of vessel B Class Engines

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed & installed under Special Survey in accordance with the Requirements of the Rules, the Approved Plans & the Specification. The materials & workmanship are good & the machinery proved satisfactory under working conditions at quay. The machinery is eligible in my opinion to have the Record + LMC. 10.43. 2SB(spt) - 1 LMC SB. FD. CL.

NEWCASTLE-ON-TYNE.

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 ... £ 6 : 0 :  
 Special + 25% ... £ 127 : 12 : 6  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 112 NOV 1943  
 When received, 19

*Recliff*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ...  
 Assigned ... + LMC 10.43 FD CL

TUES. 30 NOV 1943



Date of writ  
 No. in Reg. Book.  
 37252  
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