

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Received at London Office

23 APR 1930

Date of writing Report 19 When handed in at Local Office 24/4/30 Port of Newcastle-on-Tyne  
 No. in Survey held at St. Peter's, Hebburn Date, First Survey 25.6.29 Last Survey 15 April 1930  
 Reg. Book. on the steel twin screw ferry "NORTHUMBRIAN." (Number of Visits 37.)  
 Built at Hebburn By whom built Messrs R. W. Hawthorn Leslie & Co. Ward No. 543 Tons { Gross 344  
 Net 154  
 When built 1930  
 Engines made at St. Peter's By whom made ~ do ~ Engine No. 3464 when made 1930.  
 Boilers made at ~ do - By whom made ~ do - Boiler No. when made 1930.  
 Registered Horse Power Owners Type Improvement Company's Port belonging to Y. Shields  
 Nom. Horse Power as per Rule 114 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.  
 Trade for which Vessel is intended North & South Shields Series.

ENGINES, &c.—Description of Engines Twin screws Triple expansion Revs. per minute 130  
 Dia. of Cylinders 12-20-32" Length of Stroke 22" No. of Cylinders 6 No. of Cranks 6  
 Crank shaft, dia. of journals as per Rule 6" Crank pin dia. 4" Crank webs Mid. length breadth 16" Thickness parallel to axis 4.45"  
 as fitted 4" Mid. length thickness - shrunk Thickness around eye-hole 3"  
 Intermediate Shafts, diameter as per Rule 5.4" Thrust shaft, diameter at collars as per Rule 6.0"  
 as fitted 6.45" as fitted 4"  
 Tube Shafts, diameter as per Rule } None Screw Shaft, diameter as per Rule 6.42"  
 as fitted } Is the screw shaft fitted with a continuous liner } No  
 Bronze Liners, thickness in way of bushes as per Rule } None Thickness between bushes as per Rule -  
 as fitted } Is the after end of the liner made watertight in the propeller boss -  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -  
 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 -  
 If two liners are fitted, is the shaft lapped or protected between the liners - Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft YES Length of Bearing in Stern Bush next to and supporting propeller 2-3"  
 Propeller, dia. 8-3" Pitch 9-3" No. of Blades 4 Material Bronze whether Moveable No Total Developed Surface 28 Each 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. NONE Diameter - Stroke - Can one be overhauled while the other is at work -  
 Feed Pumps { No. and size 2-4x5x12" Pumps connected to the Main Bilge Line { No. and size one 4x6 1/2 x 15"  
 How driven Steam How driven Steam  
 Ballast Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size None  
 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 Engine room 3-2 1/2" Boiler Room 1-2 1/2" 1 Direct }  
 In Holds, etc. Bilge suction 2 1/2" 2 Bilge ejectors 2 1/2"

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 one - 2 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 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 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 pass through the bunkers Atmospheric to Steam How are they protected Steel casings  
 What pipes pass through the deep tanks None 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 - Is it fitted with a watertight door - worked from -

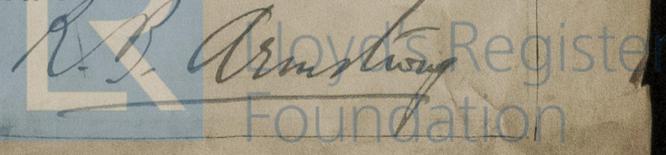
MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 1902  
 Is Forced Draft fitted No No. and Description of Boilers Two simple ended Working Pressure 180 lbs per sq  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? None If so, is a report now forwarded? -  
 PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers - Donkey Boilers -  
 (If not state date of approval)  
 Superheaters - General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements -

SPARE GEAR. State the articles supplied:—  
 As per attached list

The foregoing is a correct description,

Manufacturer.

FOR R. & W. HAWTHORN, LESLIE & CO. LD.



1929  
 Oct. 25. 28. Nov. 4. 11. 19. 22. 27. Dec. 4. 11. 20. 1930  
 Jan. 7. 8. 9. 13. 21. 22. Feb. 3. 6. 7. 13. 20. 27.  
 During progress of work in shops -- Mar. 6. 10. 11. 12. 14. 17. 19. 25. 28. 31. Apr. 3. 4. 7. 9. 15.  
 Dates of Survey while building { During erection on board vessel ---  
 Total No. of visits 37

Dates of Examination of principal parts—Cylinders 11. 3. 30. Slides 11. 3. 30 Covers 11. 3. 30.  
 Pistons 11. 3. 30 Piston Rods 11. 3. 30 Connecting rods 11. 3. 30  
 Crank shaft A 31. 12. 29. Thrust shaft 11. 3. 30. Intermediate shafts 11. 3. 30.  
 Tube shaft STAD 6. 1. 30. Screw shaft 10. 3. 30 Propeller 12. 3. 30  
 Stern tube 12. 3. 30 Engine and boiler seatings 14. 3. 30 Engines holding down bolts 4-4-30.  
 Completion of fitting sea connections 10. 3. 30.  
 Completion of pumping arrangements 26. 3. 30 Boilers fixed 14. 4. 30 Engines tried under steam 14. 4. 30.  
 Main boiler safety valves adjusted 9. 4. 30 Thickness of adjusting washers 3/8 - 3/9 PT. 13/32 - 3/8 STAD.  
 Crank shaft material Steel Identification Mark 6. 1. 30 Thrust shaft material Steel Identification Mark 6. 1. 30  
 Intermediate shafts, material Steel Identification Marks 31. 12. 30 Tube shaft, material --- Identification Mark ---  
 Screw shaft, material Steel Identification Mark 10. 3. 30 Steam Pipes, material S.P. Copper Test pressure 160 lb. Date of Test 28. 3. 30.  
 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  If so, state name of vessel ---

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 The Machinery has been built under Special Survey in accordance with the approved plans & the Rules of the Society & has been seaweely fitted on board the vessel, tried under full working conditions & found satisfactory.  
 The Workmanship & materials are of good quality throughout.  
 It is recommended that the machinery of this vessel be recorded + M.C. 4. 30 + S. S. O. G. 4. 30.

It is submitted that this vessel is eligible for THE RECORD. + M.C. 4. 30 O.G.

J.A. 29/4/30

Thos. A. Berguoy  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : 0 : 0. When applied for,  
 Special ... £ 28 : 10 : 0. 17. 4. 30  
 Donkey Boiler Fee ... £ : : : When received,  
 Travelling Expenses (if any) £ : : : 23. 4. 30

Committee's Minute  
 Assigned

TUE. 20 APR 1930  
 + Lumb 4. 30 O.G.



© 2020 Lloyd's Register Foundation