

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-9 JAN 1934

Date of writing Report 7th Decr 1934 When handed in at Local Office 8th Decr 1934 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at Newcastle-on-Tyne Date, First Survey 19 June 1933 Last Survey 5. 1. 1934
 Reg. Book. on the S.S. "ARCWEAR" (Number of Visits 51) Tons { Gross 4157
 Net 2503
 Built at Rynderland By whom built Short Bros. Yard No. 443. When built 1934.
 Engines made at Newcastle-on-Tyne By whom made R. E. Marine Eng. Co. Ltd Engine No. 2797. When made 1934.
 Boilers made at Newcastle-on-Tyne By whom made R. E. Marine Eng. Co. Ltd Boiler No. 2797. When made 1934.
 Indicated Horse Power 357 Owners Arcwear Shipping Co. Port belonging to London
 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes.

for which Vessel is intended

Triple Expansion
 Description of Engines 2 1/2" x 37" x 62" Length of Stroke 42" No. of Cylinders 3 Revs. per minute 62 normal
 No. of Cranks 3
 Shaft, dia. of journals 12 1/2" as per Rule 12 1/2" Crank pin dia. 12 5/8" Mid. length breadth 2 1/2" Thickness parallel to axis 7 3/4" x 8 1/4"
 as fitted 12 5/8" Crank webs 7 3/4" x 8 1/4" Mid. length thickness 7 3/4" x 8 1/4" Thickness around eye-hole 6 5/8" x 6 1/8"
 Intermediate Shafts, diameter 11 7/8" as per Rule 11 7/8" Thrust shaft, diameter at collars 12 5/8" as fitted 12 5/8"
 Shafts, diameter 13 1/8" as per Rule 13 1/8" Is the hub shaft fitted with a continuous liner yes
 as fitted 14" as fitted 14" Is the screw shaft fitted with a continuous liner yes
 Liners, thickness in way of bushes 6 5/4" as per Rule 6 5/4" Thickness between bushes 1 1/2" as fitted 1 1/2" Is the after end of the liner made watertight in the
 as fitted 4 1/2" as fitted 4 1/2" 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 fits full length
 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
 If so, state type variable Length of Bearing in Stern Bush next to and supporting propeller 4' 9"
 Propeller, dia. 17' 3" Pitch 18' 3" No. of Blades 4 Material Bronze whether Movable No Total Developed Surface 107 sq. feet
 Pumps worked from the Main Engines, No. None Diameter 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes
 Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes
 No. and size Two Weirs 6" x 8 1/2" x 18" Pumps connected to the { No. and size One 10" x 9" x 24"
 How driven Steam Main Bilge Line How driven Steam
 Main Pumps, No. and size One 10" x 9" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size None
 Independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary
 Pumps;—In Engine and Boiler Room 4 @ 2 1/2" + 1 @ 2 1/4" to Tunnel Well
 In Holds, &c. N=1 Hold 2 @ 3"; N=2 Hold 2 @ 3 1/2"; N=3
Hold 2 @ 2 3/4"; N=4 Hold 2 @ 2 3/4"

Water Circulating Pump Direct Bilge Suctions, No. and size One @ 7" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 ad size One @ 4 1/2" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-bones yes
 e 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
 l Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks both
 ey 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 except main discharge
 ey 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
 Pipes pass through the bunkers None How are they protected yes
 pipes pass through the deep tanks None Have they been tested as per Rule yes
 ll Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 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
 rtment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck

BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 5209 sq. ft.
 forced Draft fitted yes No. and Description of Boilers 2 S. E. Main + 1 S. E. Aux. Working Pressure 220 lbs./sq. in.
 A REPORT ON MAIN BOILERS NOW FORWARDED? yes

A DONKEY BOILER FITTED? No If so, is a report now forwarded? yes
 donkey boiler intended to be used for domestic purposes only

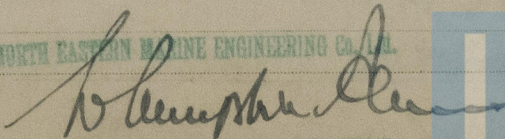
ANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes
 heaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR.

the spare gear required by the Rules been supplied yes
 the principal additional spare gear supplied one Cast Iron propeller.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO. LTD.



Manufacturer.



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Lloyd's Register
Foundation

007998-008007-0073

1933
June 19. 27. 29. July 4. 7. 14. 22. 27. Aug. 1. 2. 3. 4. 8. 10. 11. 14. 15. 18. 22. 24. 29. 30.
31. Sep. 5. 8. 11. 12. 14. 15. 19. 25. 28. 29. Oct. 3. 4. 9. 10. 12. 24. 25. 27. 29. Dec. 1. 5.
7. 8. 11. 12. 14. 22. Jan 5.
During progress of work in shops - -
Dates of Survey while building
During erection on board vessel - - -
Total No. of visits 51

Dates of Examination of principal parts—Cylinders 15.9.33 Slides 5.9.33 Covers 5.9.33
Pistons 5.9.33 Piston Rods 11.9.33 Connecting rods 11.9.33
Crank shaft 3.10.33 Thrust shaft 3.10.33 Intermediate shafts 3.10.33
Tube shaft ✓ Screw shaft 3.10.33 Propeller 9.10.33
Stern tube 9.10.33 Engine and boiler seatings 24.11.33 Engines holding down bolts 11.12.33
Completion of fitting sea connections Lee Sunderland Report
Completion of pumping arrangements 12.12.33 Boilers fixed 11.12.33 Engines tried under steam at Wharf 14.12.33
Main boiler safety valves adjusted 14.12.33 Thickness of adjusting washers { Cupht. P $\frac{7}{16}$ " S $\frac{7}{16}$ " P $\frac{7}{16}$ " S $\frac{11}{16}$ " P $\frac{15}{16}$ " S $\frac{11}{16}$ "
Crank shaft material Steel Identification Mark 2797 W.B. Thrust shaft material Steel Identification Mark 7987 W.B.
Intermediate shafts, material Steel Identification Marks { 9821, 9808, 768 Tube shaft, material ✓ Identification Mark ✓
Screw shaft, material Steel Identification Mark 7986 W.B. Steam Pipes, material 40 Steel Test pressure 660 lbs/sq. in. Date of Test 15.9.33
Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F. 8.12.33
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 ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery has been constructed under special survey in accordance with the Rules and approved plans; the materials and workmanship are good. The machinery has been satisfactorily installed in the vessel, examined under working conditions and found satisfactory, and is eligible, in our opinion, for classification, and to have the Record L.M.C. 1.34 - C.L. in the Register Book.
The S.P. Engine is fitted with Poppet valves.

Certificate to be sent to
The amount of Entry Fee ... £ 5 : 0 : 0 When applied for,
Special ... £ 78 : 11 : 0 6/11/34
Donkey Boiler Fee ... £ : : : When received, 8/11/34
Travelling Expenses (if any) £ : : :
Committee's Minute TUE 9 JAN 1934
Assigned + Lmc 134
C.L.
For Wm Butler & Self
S.B. Forster
Engineer Surveyor to Lloyd's Register of Shipping.
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