

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 3 SEP 1942

Date of writing Report 19 When handed in at Local Office 2-9-1942 Port of Newcastle-on-Tyne.
 No. in Survey held at Reg. Book. 73464 on the SS. EMPIRE. THACKERAY. Date, First Survey 13-1-42. Last Survey 26.8.1942
 (Number of Visits 34.)
 Built at Sunderland By whom built Sir J. Laing & Sons Ltd Yard No. 744 When built 1942.
 Engines made at Wallsend By whom made N.E. Marine & Co (1938) Ltd Engine No. 3025 When made 1942
 Boilers made at " By whom made " Boiler No. 3025 When made 1942.
 Registered Horse Power Owners Ministry of War Transport Port belonging to Sunderland.
 Nom. Horse Power as per Rule 275 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted yes
 Trade for which Vessel is intended Ocean going.

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 72
 Dia. of Cylinders 20.31.55 Length of Stroke 39 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 10.99 as fitted 11 1/4 Crank pin dia. 11 1/4 Crank webs Mid. length breadth 19.28 shrunk Thickness parallel to axis 7
 Intermediate Shafts, diameter as per Rule 10.47 as fitted 10 3/4 Thrust shaft, diameter at collars as per Rule 10.99 as fitted 11 1/4
 Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 11.78 as fitted 12 1/4 Is the {tube/screw} shaft fitted with a continuous liner {yes
 Bronze Liners, thickness in way of bushes as per Rule .656 as fitted .687 Thickness between bushes as per Rule .492 as fitted .531 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
 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 no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 4'-3 3/8"
 Propeller, dia. 15'-9" Pitch 14'-0" No. of Blades 4 Material C.I. whether Movable no Total Developed Surface 101.5 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/4 Stroke 22 Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 1/4 Stroke 22 Can one be overhauled while the other is at work yes
 Feed Pumps {No. and size 1 2 6 x 1 1/4 x 6 7 2 2 3 1/4 x 2 2 2 3 1/4 x 2 2 How driven Steam Main Bilge Line Pumps connected to the {No. and size 1 2 10 x 1 1/2 x 10 1 2 6 x 4 1/4 x 6 2 2 3 1/4 x 2 2 How driven Steam Main Eng.
 Ballast Pumps, No. and size 1 2 10 x 1 1/2 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 2 Port & 1 Starb 3" Eng Room 1 Port & 1 Starb 3" Stokehold 1 P & S 3" Dry Tank In Pump Room In Holds, &c. 1 P & S 3" No 1 hold 1 P & S 2 1/2" No 3 hold

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 2 7" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 2 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 yes 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 How are they protected
 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 no worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 4006 sq. ft.
 Is Forced Draft fitted yes No. and Description of Boilers 2 SB. Working Pressure 200.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes.
 IS A DONKEY BOILER FITTED? no. If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only
PLANS. Are approved plans forwarded herewith for Shafting 20.3.41 Main Boilers 15.10.41 Auxiliary Boilers Donkey Boilers
 Superheaters General Pumping Arrangements 30.1.42. 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

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

John Nell
 MANUFACTURER

Manufacturer.



1942. Jan. 13. 16. Feb. 2. 4. 11. 17. 18. 23. 24. Mar. 2. 23. 25. April. 7. 8. 9. 10. 17. 20. 21
 During progress of work in shops --
 28. May. 4. 12. 21. 28. June. 1. 17. 19. Aug. 4. 6. 10. 12. 13. 26.
 Dates of Survey while building
 During erection on board vessel ---
 Total No. of visits 34

Dates of Examination of principal parts—Cylinders 17.2.42. Slides 25.3.42 Covers 17.2.42
 Pistons 25.3.42 Piston Rods 25.3.42 Connecting rods 25.3.42
 Crank shaft 11.2.42 Thrust shaft 11.2.42 Intermediate shafts 9.4.42 9.6.42
 Tube shaft ✓ Screw shaft 2.3.42 Propeller 23.2.42
 Stern tube 1.6.42 & 25.6.42 Engine and boiler seatings 6.8.42 Engines holding down bolts 6.8.42

Completion of fitting sea connections 30.6.42
 Completion of pumping arrangements 26.8.42 Boilers fixed 6.8.42 Engines tried under steam 12.13.726/8/42
 Main boiler safety valves adjusted 12.8.42 Thickness of adjusting washers P. 7 3/8 5 7/16 S 7 3/8 5 13/32
 Crank shaft material Steel Identification Mark 6547.8.9950 AEG. Roll 11.2.42 Thrust shaft material Steel Identification Mark 6592 AEG. RM 11.2.
 Intermediate shafts, material Steel Identification Marks 6594.5.67718 AEG. & P. Roll 9/4/42 9/6/42 Tube shaft, material ✓ Identification Mark 28.4.42
 Screw shaft, material Steel Identification Mark 5589. ERB. Roll 2.3.42 Steam Pipes, material Steel Test pressure 600 Date of Test 17.6.42

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 ✓ 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 ✓ *Ample Division*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Grangemouth 437. NWC Rpt 9995*
 General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery has been made under Special Survey in accordance with the approved Plans, the Requirements of the Rules & the Specification. The materials & workmanship are good & the Machinery proved satisfactory under working conditions at Lucey.*

The machinery is eligible in my opinion to have the Record + LMC 8.42. 2 SB FD. CL.

NEWCASTLE-ON-TYNE.

The amount of Entry Fee ... £ 4 : 0 : 0
 Special *+ 25%* ... £ 82 : 16 : 0
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *-2 SEP 1942*
 When received, 19.....

Robell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 18 SEP 1942*
 Assigned *and see Rd. J.E 33477*

