

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

NEWCASTLE-ON-TYNE, 27 NOV 1942

Date of writing Report 19 When handed in at Local Office 24.11.1942 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Wallend. Date, First Survey 9 June Last Survey 19 Nov 1942
 Reg. Book. on the "EMPIRE BARDOLPH" (Number of Visits 2)

Built at Sunderland By whom built Short Bros Ltd Yard No. 474 When built 1942
 Engines made at Wallend. By whom made N.E. Marine Eng Co (1938) Ltd Engine No. 3031 When made 1942
 Boilers made at Wallend. By whom made Wallend Slipway & Co Ltd Boiler No. 396 B. When made 1942
Boiler Registered Horse Power 537 Owners Ministry of War Transport Port belonging to Sunderland
 Nom. Horse Power as per Rule 537 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted yes
 Trade for which Vessel is intended becau going

ENGINES, &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 13.99 Crank pin dia. 14 3/4 Crank webs Mid. length breadth 22 Thickness parallel to axis 9
as fitted 14 1/4 Mid. length thickness 9 Thickness around eye-hole 6 3/8

Intermediate Shafts, diameter as per Rule 13.32 Thrust shaft, diameter at collars as per Rule 13.98
as fitted 13 3/8 as fitted 14 1/4

Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 74.84 Is the tube shaft fitted with a continuous liner yes
as fitted as fitted 15 1/4 as fitted 15 1/4

Bronze Liners, thickness in way of bushes as per Rule .753 Thickness between bushes as per Rule .565 Is the after end of the liner made watertight in the propeller boss yes
as fitted .81 as fitted .65 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 shaft no Length of Bearing in Stern Bush next to and supporting propeller 5'-1"

Propeller, dia. 17-10 1/2 Pitch 15.6' No. of Blades 4 Material C.I. whether Moveable no Total Developed Surface 114.75 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 @ 10 1/2 x 13 x 24 1 @ 9 1/2 x 7 x 21 Pumps connected to the { 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 Main Bilge Line 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 2 @ 5" in Boiler Rooms

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 @ 5" in Eng Room 2 @ 5" in Boiler Rooms
 In Pump Room yes In Holds, &c. yes

Main Water Circulating Pump Direct Bilge Suctions, No. and size 2 @ 5" in Eng Room **Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size** 2 @ 5" in Boiler Rooms

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

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 yes

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 yes How are they protected yes

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 yes worked from yes

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 7868 sq. ft.

Is Forced Draft fitted yes No. and Description of Boilers 2 SB (apt) + 1 aux SB Working Pressure 220

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? yes

Is the donkey boiler intended to be used for domestic purposes only yes

PLANS. Are approved plans forwarded herewith for Shafting B Type Main Boilers yes Auxiliary Boilers 11.10.41 Donkey Boilers yes
 (If not state date of approval)

Superheaters Standard General Pumping Arrangements 27-9-42 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 yes

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

Nancy Hunter

Manufacturer.

DIRECTOR



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1942
 June 9. July 10. 22. Aug. 13. 25. Sept. 3. 10. 16. 17. 18. Oct. 9. 29. Nov. 2. 4. 5.

Dates of Survey while building
 During progress of work in shops -- 6. 9. 10. 13. 18. 19.
 During erection on board vessel ---
 Total No. of visits 21.

Dates of Examination of principal parts—Cylinders 9.6.42 Slides 9.10.42 Covers 9.6.42
 Pistons 9.10.42 Piston Rods 4.11.42 Connecting rods 4.11.42
 Crank shaft 25.8.42 Thrust shaft 10.7.42 Intermediate shafts 17.9.42
 Tube shaft ✓ Screw shaft 5.11.42 Propeller 9.11.42
 Stern tube 29.10.42 Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections
 Completion of pumping arrangements Boilers fixed Engines tried under steam
 Main boiler safety valves adjusted Thickness of adjusting washers
 Crank shaft material Steel Identification Mark 8608. A. 5. JFC Webb 6275 & 6742 ERB. Thrust shaft material Steel Identification Mark 8135 ERB
 Intermediate shafts, material Steel Identification Marks 8550. 1. 2. 3. 475 CP. Tube shaft, material Identification Mark
 Screw shaft, material Steel Identification Mark 8549 CP. Steam Pipes, material Test pressure Date of Test
 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 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
 Is this machinery duplicate of a previous case *yes* If so, state name of vessel *B. type Engines.*

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery has been made under Special Survey in accordance with the Requirements of the Rules, the Approved Plans & the Specification. The materials & workmanship are good. The machinery is to be shipped to Sunderland to be installed by Messrs G. Clark Ltd in Messrs Short Bros. No 174.*

NEWCASTLE-ON-TYNE

The amount of Entry Fee ... £ 6 : 0 : 0
 Remainder of 475 (Special 25%) ... £ 43 : 8 : 0
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 26 NOV 1942
 When received, 19

R. C. Moffitt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 31 MAR 1943
 Assigned See Std. J.E. 33637

