

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office
 Date of writing Report 19 When handed in at Local Office 27/1/1943 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at South Shields Date, First Survey 2 June 1942 Last Survey 11 Jan 1943
 Reg. Book. 86331 on the S.S. EMPIRE FORTUNE (Number of Visits 92)
 Built at S. Shields By whom built J. Readhead & Sons Ltd Yard No. 531 Tons { Gross 6140.31
 Engines made at South Shields By whom made J. Readhead & Sons Ltd Engine No. 531 Net 4103.21
 Boilers made at South Shields By whom made J. Readhead & Sons Ltd Boiler No. 531 When built 1943
 Registered Horse Power Owners Ministry of War Transport Port belonging to S. Shields
 Nom. Horse Power as per Rule 508 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒
 Trade for which Vessel is intended General Cargo

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 77
 Dia. of Cylinders 24" x 41" x 68" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.78" as fitted 13.78" Crank pin dia. 13.78" Crank webs Mid. length breadth 1.734" Thickness parallel to axis 8.34" shrunk
 Intermediate Shafts, diameter as per Rule 13.12" as fitted 13.12" Thrust shaft, diameter at collars as per Rule 13.78" as fitted 13.78"
 Tube Shafts, diameter as per Rule 14.58" as fitted 14.58" Is the tube screw shaft fitted with a continuous liner ☒
 Screw Shaft, diameter as per Rule 14.34" as fitted 14.34"
 Bronze Liners, thickness in way of bushes as per Rule 2.75" as fitted 2.75" Thickness between bushes as per Rule 2.75" as fitted 2.75" 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 ☒
 If so, state type ☒ Length of Bearing in Stern Bush next to and supporting propeller 4-11"
 Propeller, dia. 17-6" Pitch 17-6" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 98 sq. feet
 Feed Pumps worked from the Main Engines, No. 1 Diameter 4" Stroke 24" Can one be overhauled while the other is at work ☒
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/2" Stroke 24" Can one be overhauled while the other is at work ☒
 Feed Pumps { No. and size (2) 7 x 9 1/2 x 21 (1) 7 x 9 1/2 x 21 Pumps connected to the { No. and size (1) 9 1/2 x 12 x 18 (1) 7 x 9 1/2 x 21
 How driven Steam Main Bilge Line How driven Steam
 Ballast Pumps, No. and size (1) 9 1/2 x 12 x 18 (1) 7 x 9 1/2 x 21 Lubricating Oil Pumps, including Spare Pump, No. and size 1
 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 3-3 dia
 In Pump Room ☒ In Holds, &c. N°1 hold 2-3 dia. N°2 hold 2-3 1/2 dia. N°3 hold 2-2 1/2 dia. N°4 hold 2-3 dia. N°5 hold 2-3 dia. Tunnel well 1-2 1/2 dia.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 8 dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 5 dia
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes ☒
 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 ☒
 Are Sea Connections fitted direct on the skin of the ship 4 on W.B. tube—Yes Are they fitted with Valves or Cocks ☒
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ☒ 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 ☒ Are the Blow Off Cocks fitted with a spigot and brass covering plate ☒
 What Pipes pass through the bunkers Bilge—side pockets How are they protected Wood casings
 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 ☒
 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 ☒ Is the Shaft Tunnel watertight ☒ Is it fitted with a watertight door No worked from ☒

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 7444 sq. ft.
 Is Forced Draft fitted ☒ No. and Description of Boilers 2 Main—1 Aux S.E.M. Working Pressure 220 lbs.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? ☒
 IS A ~~DONKEY~~ BOILER FITTED? ☒ 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 11-5-42 Main Boilers 25-2-42 Auxiliary Boilers 25-2-42 Donkey Boilers ☒
 (If not state date of approval)
 Superheaters ☒ General Pumping Arrangements ☒ Oil fuel Burning Piping Arrangements ☒
 SPARE GEAR.
 Has the spare gear required by the Rules been supplied ☒
 State the principal additional spare gear supplied

The foregoing is a correct description.

H. H. Coateworth

Director.

Manufacturer.



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003208-003216-0144

1942
 June 2.5. July 6.9.13.16.20.23.24.31. Aug. 4.6.7.10.12.14.17.18.19.20.21.24.28. Sep. 1.4.11.15.16.17.22.
 During progress of work in shops -- 23.25.28.29.30. Oct. 1.5.6.8.9.12.16.20.22. 23.28.29.30.31. Nov. 2.3.4.6.9.10.11.12.13.16.17.18.19.20.23.
 1943
 24.25.27.28. Dec. 1.3.4.7.8.14.15.16.17.18.21.22.23.29.30.31. Jan. 4.6.7.8.11.
 During erection on board vessel ---
 Total No. of visits 92.

Dates of Examination of principal parts—Cylinders 13-11-42 Slides 16-11-42 Covers 22-10-42
 Pistons 16-11-42 Piston Rods 24-12-42 Connecting rods 24-12-42
 Crank shaft 28-9-42 Thrust shaft 21-12-42 Intermediate shafts 21-12-42
 Tube shaft ✓ Screw shaft 6-11-42 Propeller 6-11-42
 Stern tube 2-11-42 Engine and boiler seatings 18-12-42 Engines holding down bolts 17-12-42
 Completion of fitting sea connections 9-11-42 21-12-42
 Completion of pumping arrangements 31-12-42 Boilers fixed 21-12-42 Engines tried under steam 22-12-42
 Main boiler safety valves adjusted 22-12-42 Thickness of adjusting washers P/P- $\frac{3}{8}$ " S/P- $\frac{3}{8}$ " Aux/P- $\frac{1}{8}$ "
 Crank shaft material S.M.Steel Identification Mark 6298 Thrust shaft material S.M.Steel Identification Mark 7231
 Intermediate shafts, material S.M.Steel Identification Marks 7233 7236 Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material S.M.Steel Identification Mark 7232 Steam Pipes, material S.S.Steel Test pressure 660 lb Date of Test 19-11-42
 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 No If so, state name of vessel ✓
 General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under special survey in accordance with rule requirements & approved plans. Materials & workmanship are good. The machinery was satisfactorily tested on mooring trials & in my opinion is eligible for classification with records of T.L.M.C.1,43 F.D.C.L. 2 S.B. (34F) - 1 Aug 5 S.B.

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 : When applied for,
 Special ... £ 125 : 10 : 27-1-43
 Donkey Boiler Fee ... £ ✓ : ✓ : When received, 5/6
 Travelling Expenses (if any) £ ✓ : ✓ : 10 Feb 43

Committee's Minute FRI. 5 MAR 1943

Assigned 2 S.B. 1.43
 1 Aug 5 S.B. } 22, C.L.

J. H. Matthews
 Engineer Surveyor to Lloyd's Register of Shipping.



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