

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office.

Date of writing Report 31/12/1943 When handed in at Local Office 31/12/1943 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at Wallsend Date, First Survey 3rd February 1943 Last Survey 31st December 1943
 Reg. Book (Number of Visits 46)
 on the SS "EMPIRE BERESFORD" Tons { Gross
 Net
 Built at Sunderland By whom built Sir J. Laing & Sons Ltd Yard No. 763 When built 1943-12
 Engines made at Wallsend By whom made H. E. Marine Eng Co (1938) Ltd Engine No. 3060 When made 1943
 Boilers made at " By whom made " Boiler No. 3066 When made 1943
 Registered Horse Power 674 Owners Ministry of War Transport Port belonging to Sunderland
 Nom. Horse Power as per Rule 674 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended Carrying Petroleum in bulk

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 85
 Dia. of Cylinders 27. 44. 76 Length of Stroke 51 No. of Cylinders 3 No. of Cranks 3
 as per Rule 15.2" Crank shaft, dia. of journals 15 1/2" Crank pin dia. 16 Crank webs HP-LP 9 3/8" Thickness parallel to axis 9 7/8" & 10 1/8"
 as fitted 15 1/2" Mid. length thickness MP 10 3/8" Thickness around eye-hole 18 1/2" P 8"
 Intermediate Shafts, diameter 14.48 Thrust shaft, diameter at collars 15.2
 as fitted 14 3/4" as per Rule 15.2
 as fitted 15 3/4"
 Tube Shafts, diameter 16 Is the { tube } shaft fitted with a continuous liner { yes }
 as fitted 16 1/4" as fitted 16 1/4"
 Screw Shaft, diameter 16 1/4"
 as fitted 16 1/4"
 Bronze Liners, thickness in way of bushes 79 Thickness between bushes 59
 as fitted 13/16" as fitted 13/16" 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 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
 at no If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 5-5 1/2"
 Propeller, dia. 18'-3" Pitch 14'-6" No. of Blades 4 Material Bronze whether Moveable no Total Developed Surface 131 3/4 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 5" Stroke 27" Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 5" Stroke 27" Can one be overhauled while the other is at work yes
 Feed { No. and size 2 @ 12x9x24" Pumps connected to the { No. and size 1 @ 10x12x12" 2 @ 5"x27"
 Pumps How driven Steam Main Bilge Line How driven Steam M. Eng?
 Ballast Pumps, No. and size 1 @ 10x12x12" Lubricating Oil Pumps, including Spare Pump, No. and size yes
 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 1 @ 5 1/2" & 1 @ 4 1/2" Eng Room 1 @ 5 1/2" in Boiler Room also
 In Pump Room Main 4" P.S. For 1 @ 2 1/2" In Holds, &c. 1 @ 2" P.S. 1 @ 2" in Boiler Room Gutters
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 @ 5" 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 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 none How are they protected yes
 What pipes pass through the deep tanks none 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 10020
 Which Boilers are fitted with Forced Draft yes all Which Boilers are fitted with Superheaters all
 No. and Description of Boilers 3 S.B. 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
 Can the donkey boiler be used for domestic purposes only yes
 PLANS. Are approved plans forwarded herewith for Shafting Standard Main Boilers 27.11.42 Auxiliary Boilers yes Donkey Boilers yes
 (If not state date of approval) Similar Vessels Similar
 Superheaters 16.5.42 General Pumping Arrangements 27.11.42 Oil fuel Burning Piping Arrangements 26.11.42

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.

John Neill

Manufacturer.

DIRECTOR.

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004512-004519-0080

Dates of Survey while building	During progress of work in shops - -	FEB. 3. 4. 11. 15. 19. 26. MAR. 8. 12. 19. 24. 24. APR. 8. 21. 27. MAY. 10. 13. 17. JUNE 2. 8. SEPT. 6. 9. Oct. 15. 25. 26. 27. 28.
		NOV. 2. 3. 4. 5. 9. 11. 12. 17. 22. 24. 25. 26. 27. 30. DEC. 3. 4. 8. 16. 21.
	During erection on board vessel - - -	
	Total No. of visits	46

Dates of Examination of principal parts—Cylinders 27.3.43 Slides 13.5.43 Covers 27.3.43

Pistons 13.5.43 Piston Rods 13.5.43 Connecting rods 13.5.43

Crank shaft 26.3.43 Thrust shaft 29.3.43 Intermediate shafts 9.9.43

Tube shaft ✓ Screw shaft 9.9.43 Propeller 9.9.43

Stern tube 6.9.43 10.9.43 Engine and boiler seatings 17-11.43 Engines holding down bolts 17-11.43

Completion of fitting sea connections 10.9.43

Completion of pumping arrangements 16.12.43 Boilers fixed 17-11.43 Engines tried under steam 30.4.21/12/43

Main boiler safety valves adjusted 4.12.43 Thickness of adjusting washers P $\frac{7}{8}$ " S $\frac{11}{32}$ " C $\frac{7}{16}$ " S $\frac{7}{16}$ " S $\frac{11}{32}$ " S $\frac{11}{32}$ "

Crank shaft material Steel Identification Mark 7911 CP 26.3.43 Thrust shaft material KeK 29.3.43 Identification Mark 7914 CP

Intermediate shafts, material " Identification Marks 1402 CP KeK 9.9.43 Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material " Identification Mark KeK 9.9.43 Steam Pipes, material Steel Test pressure 660 lbs Date of Test Various

Is an installation fitted for burning oil fuel yes ✓ Is the flash point of the oil to be used over 150° F. yes ✓

Have the requirements of the Rules for the use of oil as fuel been complied with yes ✓

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 Standard Tankers.

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been constructed & installed 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 quay.

The machinery is eligible in my opinion to have the Record
+ LMC 12.43. - 3 SB Spt - Rht FD. CL.
Fitted for oil fuel 12.43 FP above 150°F.

The amount of Entry Fee	... ✓ £ 6	: 0.0	} When applied for, 11 JAN 1944
Special +25%..	✓ £ 135	: 1716:	
Donkey Boiler Fee £	:	} When received, 19.....
Travelling Expenses (if any)	£	:	

R. C. M. Pitt
Engineer Surveyor to

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned + LMC 12.43

FBI. 21 JAN 1944

+ LMC 12.43
J.D. O.

NEWCASTLE-ON-TYNE

Certificate to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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