

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 21 MAR 1944 When handed in at Local Office 21 MAR 1944 Port of NEWCASTLE-ON-TYNE
No. in Survey held at Wallsend Date, First Survey 17th June 1943 Last Survey 10th March 1944
Reg. Book (Number of Visits 48)
on the SS 'EMPIRE ABBEY' Tons Gross 7032 Net 4732
Built at Newcastle By whom built Armstrong Whitworth Ltd Yard No. 6 When built 1944
Engines made at Wallsend By whom made N.E. Marine Engls (1938) Engine No. 3062 When made 1944
Boilers made at Sunderland By whom made G. Clark Ltd (2 boilers B.C. Survey) 1323 Boiler No. 1307 (NS) When made 1944
Registered Horse Power Owners Ministry of War Transport Port belonging to Newcastle
Nom. Horse Power as per Rule 542 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes
Trade for which vessel is intended Ocean Going

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 76
Dia. of Cylinders 24½ - 39 - 70 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3
Crank shaft, dia. of journals as per Rule 13.98 Crank pin dia. 14¾ Mid. length breadth 22 Thickness parallel to axis 9
as fitted 14¼ Crank webs Mid. length thickness 9 shrunk Thickness around eye-hole 6½
Intermediate Shafts, diameter as per Rule 13.32 Thrust shaft, diameter at collars as per Rule 13.98
as fitted 13¾ as fitted 14¼
Tube Shafts, diameter as per Rule 14.84 Is the tube shaft fitted with a continuous liner yes
as fitted 15¼ screw as fitted 15¼
Bronze Liners, thickness in way of bushes as per Rule 75 Thickness between bushes as per Rule 56 Is the after end of the liner made watertight in the
as fitted 81 as fitted 65 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 6-1
Propeller, dia. 17'10½" Pitch 15.6 No. of Blades 4 Material C.I. whether Moveable no Total Developed Surface 114¾ 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 @ 8x10½x22 1 @ 9½x7x21 Pumps connected to the Main Bilge Line No. and size 1 @ 10½x13x24 1 @ 9½x7x21 2 @ 4x27
How driven Steam How driven Steam M. Eng.
Ballast Pumps, No. and size 1 @ 10½x13x24 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 2 @ 3" in Eng Room 2 @ 3" in Blr Room
In Pump Room 1 @ 2½" Tunnel Well In Holds, &c. 1 @ 1½" 1 @ 1" in each hold
Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 9" 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 forward Bilge Suctions How are they protected lumber boards
What pipes pass through the deep tanks 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 no worked from yes

MAIN BOILERS, &c.—(Letter for record yes) Total Heating Surface of Boilers 7974 sq. ft.
Which Boilers are fitted with Forced Draft yes Which Boilers are fitted with Superheaters P.S. main boilers
No. and Description of Boilers 2 SB & 1 aux SB Working Pressure 220
IS A REPORT ON MAIN BOILERS NOW FORWARDED? 2 main boilers B.C. Survey (Cert. attached)
IS A DONKEY BOILER FITTED? yes 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 B. Type Main Boilers yes Auxiliary Boilers 11.10.41 Donkey Boilers yes
(If not state date of approval)
Superheaters Standard General Pumping Arrangements 27.8.42 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

1943	
Dates of Survey while building	During progress of work in shops - -
	During erection on board vessel - - -
	Total No. of visits

1943
JUNE 17. JULY 23. SEPT. 7. 8. 13. 15. 20. 30. OCT. 15. NOV. 2. 11. 17. 19. 30. DEC. 1. 2. 3. 9. 13. 14. 15. 17.
1944
JAN. 5. 12. 13. 14. 18. 19. 20. 21. 24. 25. 26. 27. 28. 31. FEB. 1. 3. 9. 14. 15. 18. 24. MARCH 1. 9. 10

Dates of Examination of principal parts—Cylinders..... 14. 10. 43..... Slides..... 8. 12. 43..... Covers..... 14. 10. 43.....

Pistons 8.12.43 Piston Rods 8.12.43 Connecting rods 8.12.43

Crank shaft 22. 10. 43 Thrust shaft 22. 10. 43 Intermediate shafts

Tube shaft ☒ Screw shaft ☐ 11. 11. 43 Propeller 5. 1. 44

Stern tube 15. 10. 43 9. 12. 43 Engine and boiler seatings 19. 1. 44 Engines holding down bolts 19. 1. 44

Completion of fitting sea connections.....9.12.43.

Completion of pumping arrangements 28/1/44. 1/2/44 Boilers fixed 19.1.44. Engines tried under steam 27.28/1/44

Main boiler safety valves adjusted 27. 1. 44 Thickness of adjusting washers P 5 x 3/16 L 5 7/16 S 5 7/16 3/4

Crank shaft material Steel Identification Mark Roll 22-10-43 Thrust shaft material Steel Identification Mark Roll 22-10-43

Intermediate shafts, material Steel Identification Marks _____ Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material S Identification Mark Roll 11-10-45 Steam Pipes, material Steel Test pressure 660 Date of Test Various

Is an installation fitted for burning oil fuel no Is the flash point of the oil to be used over 150° F. no

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..... 110

Is this machinery duplicate of a previous case 422..... If so, state name of vessel Empire Flag M. P. B. L.

General Remarks (State quality of workmanship opinions as to class, &c. *The machinery has been constructed*

7 installed under Special Survey in accordance with the Approved Plans, the Requirements of the Rules & the Specification. The main boilers were constructed under the Survey of the British Corporation.

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* 3. 44. ✓ 2 SB. Spt. 91 Aux SB. F.D. Cl.

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,
$\frac{3}{5}$ Special 125%	...	£	76	:	11	:	
Donkey Boiler Fee	...	£		:		:	} When received,
Travelling Expenses (if any)	£	:		:		:	
							19

R. Moffitt.
Engineer Surveyor to

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute THUR. 1 APR 1943

Assigned LMC - 3,44



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Foundation