

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 31 JAN 1942
NEWCASTLE-ON-TYNE.

Date of writing Report 0.8.19 When handed in at Local Office 29/1/1942 Port of

No. in Survey held at South Shields Date, First Survey 24 June 1941 Last Survey 14 Jan 1942
Reg. Book. 66376 on the S.S. EMPIRE SQUIRE (Number of Visits 95)

Gross 7043.56
Net 4966.55
Tons

Built at S. Shields By whom built J. Readhead & Sons Ltd Yard No. 525 When built 1942

Engines made at South Shields By whom made J. Readhead & Sons Ltd Engine No. 525 When made 1942

Boilers made at South Shields By whom made J. Readhead & Sons Ltd Boiler No. 525 When made 1942

Registered Horse Power Owners Ministry of War Transport Port belonging to S. Shields

Norm. Horse Power as per Rule 510 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended General Cargo

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 76

Dia. of Cylinders $24\frac{1}{2} \times 39 \times 70$ Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 14 Crank pin dia. $14\frac{3}{4}$ Crank webs Mid. length breadth 22 Thickness parallel to axis 9
as fitted $14\frac{1}{4}$ Mid. length thickness 9

Intermediate Shafts, diameter as per Rule 13.33 Thrust shaft, diameter at collars as per Rule 14
as fitted $13\frac{5}{8}$ as fitted $14\frac{1}{4}$

Tube Shafts, diameter as per Rule 14.85 Screw Shaft, diameter as per Rule 15.4 Is the tube screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 765 Thickness between bushes as per Rule 812 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 shaft Yes If so, state type Length of Bearing in Stern Bush next to and supporting propeller $15\frac{1}{8}$

Propeller, dia. $18\frac{3}{4}$ Pitch $16\frac{1}{2}$ No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 110 sq. feet

Feed Pumps worked from the Main Engines, No. None 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) $4\frac{1}{2} \times 9\frac{1}{2} \times 21$ (1) $7 \times 9\frac{1}{2} \times 21$ Pumps connected to the Main Bilge Line No. and size (1) $10\frac{1}{2} \times 13 \times 24$ (1) $7 \times 9\frac{1}{2} \times 21$
How driven Steam How driven Steam

Ballast Pumps, No. and size (1) $10\frac{1}{2} \times 13 \times 24$ Lubricating Oil Pumps, including Spare Pump, No. and size

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 4-3 dia In Pump Room In Holds, &c. N°1 hold 2-3 dia N°2 hold 2-3 dia N°3 hold 2-3 dia
N°4 tank 2-2½ dia N°4 hold 2-3 dia N°5 hold 2-3 dia Tunnel well 1-2½ dia

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 5 dia 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 Bilge How are they protected Wood casings

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 S) Total Heating Surface of Boilers 72484

Is Forced Draft fitted Yes No. and Description of Boilers 3 Main S.E.M. Working Pressure 220 lb

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 22-8-41 Main Boilers 9-1-41 Auxiliary Boilers Donkey Boilers
(If not state date of approval)

Superheaters General Pumping Arrangements 22-8-41 Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes—see specification

State the principal additional spare gear supplied

The foregoing is a correct description.
FOR JOHN READHEAD & SONS LTD.

J. R. Readhead & Sons Ltd.

Manufacturer.

27.1.42.

MANAGING DIRECTOR.



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Lloyd's Register
Foundation

004954-004961-0019

1941
 June 24. July 2. 11. 15. 17. 22. 24. 25. 30. Aug. 8. 18. 19. 21. 22. 26. 27. 29. Sep. 1. 2. 3. 4. 5. 9. 10. 11. 12
 During progress of work in shops - -
 15. 16. 18. 19. 22. 23. 25. 26. 29. 30. Oct. 1. 2. 3. 6. 7. 8. 9. 10. 13. 14. 15. 16. 17. 20. 21. 22. 27. 28. 29. 30. 31. Nov
 During erection on board vessel - - -
 4. 5. 10. 11. 12. 13. 14. 17. 19. 20. 21. 25. 26. 28. Dec. 1. 2. 3. 4. 5. 8. 9. 10. 11. 16. 17. 22. 24. 29. 31. 1942
 14. Jan. 1. 2. 3. 5. 7. 8
 Total No. of visits 95.

Dates of Examination of principal parts—Cylinders 10-11-41 Slides 11-11-41 Covers 11-11-41
 Pistons 10-11-41 Piston Rods 11-11-41 Connecting rods 11-11-41
 Crank shaft 2-10-41 Thrust shaft 2-1-42 Intermediate shafts 2-1-42
 Tube shaft ✓ Screw shaft 5-11-41 Propeller 5-11-41
 Stern tube 17-10-41 Engine and boiler seatings 4-12-41 Engines holding down bolts 30-12-41
 Completion of fitting sea connections 4-11-41
 Completion of pumping arrangements 5-1-42 Boilers fixed 22-12-41 Engines tried under steam 1-1-42
 Main boiler safety valves adjusted 2-1-42 Thickness of adjusting washers P 5-3/8" C 5-1/2" S 5-3/8" 2-1-42
 Crank shaft material S.M. Steel Identification Mark 5944 Thrust shaft material S.M. Steel Identification Mark 6087
 Intermediate shafts, material S.M. Steel Identification Marks 6081 6084 6082 6085 6083 6086 Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material S.M. Steel Identification Mark 6088 Steam Pipes, material S.D. Steel Test pressure 660 lb. Date of Test 9-10-41
 Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F. 10-12-41
 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 ✓ Empire Rhodes

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
 moving trials & in my opinion is eligible for classification with records
 of + L.M.C.1, 42. F.D.C.L.

The amount of Entry Fee ... £ 6 : 0 :
 Special ... £ 125 : 12 : 6 19/11/42
 Donkey Boiler Fee ... £ ✓
 Travelling Expenses (if any) £ ✓

When applied for,
 When received,

Committee's Minute TUE. 10 FEB 1942

Assigned

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



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