

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

9 SEP 1941

Date of writing Report 19 5/9/41 When handed in at Local Office 5/9/41 Port of Newcastle-on-Tyne

No. in Survey held at South Shields Date, First Survey 24 Dec/40 Last Survey 26 August 1941
Reg. Book. 1052 on the S.S. EMPIRE SCOTT (Number of Visits 91)

Built at S. Shields By whom built J. Readhead & Sons Ltd Yard No. 523 When built 1941
Engines made at South Shields By whom made J. Readhead & Sons Ltd Engine No. 523 When made 1941

Boilers made at South Shields By whom made J. Readhead & Sons Ltd Boiler No. 523 When made 1941

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

Horse Power as per Rule 415 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Use for which Vessel is intended General Cargo

GINES, &c. Description of Engines Triple Expansion Revs. per minute 66
No. of Cylinders 24 x 40 x 60 Length of Stroke 45" No. of Cylinders 3 No. of Cranks 3
Crank shaft, dia. of journals as per Rule 13 1/2" Crank pin dia. 13 1/2" Crank webs Mid. length breadth 1 1/4" Thickness parallel to axis 8 1/2"
as fitted 13 1/2" Mid. length thickness 8 1/2" shrunk Thickness around eye-hole 6"

Intermediate Shafts, diameter as per Rule 12.87" Thrust shaft, diameter at collars as per Rule 13 1/2"
as fitted 12 7/8" as fitted 13 1/2"

Propeller Shafts, diameter as per Rule 14.33" Screw Shaft, diameter as per Rule 14 1/2" Is the tube shaft fitted with a continuous liner Yes
as fitted 14 1/2" as fitted 14 1/2" Is the screw shaft fitted with a continuous liner Yes

Liner Liners, thickness in way of bushes as per Rule .74" Thickness between bushes as per Rule _____ Is the after end of the liner made watertight in the
as fitted .76" as fitted _____ as fitted _____ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes

Propeller Boss _____ 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
No 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 Yes

Propeller, dia. 17-6" Pitch 17-6" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 98 sq. feet
Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes

Pumps worked from the Main Engines, No. 2 Diameter 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
No. and size (2) 7 x 9 1/2 x 21. (1) 7 x 9 1/2 x 21. Pumps connected to the Main Bilge Line (No. and size (1) 9 1/2 x 12 x 10. (1) 8 x 11 x 10.)
How driven Steam How driven Steam

Oil Pumps, No. and size (1) 9 1/2 x 12 x 10. Lubricating Oil Pumps, including Spare Pump, No. and size _____
Independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Pumps;—In Engine and Boiler Room 3-3 dia.

Engine 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.
dry tank 2-2 1/2 dia. N 4 hold 2-3 dia. N 5 hold 2-3 dia. Tunnel well 1-2 1/2 dia.

Water Circulating Pump Direct Bilge Suctions, No. and size One 7 dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 5 dia.
Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

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
Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both

Pipes sized 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
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

Pipes pass through the bunkers Bilge-side ports How are they protected Wood savings
Pipes pass through the deep tanks _____ Have they been tested as per Rule Yes

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
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 _____

BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 5486 sq
Boilers are fitted with Forced Draft Main Which Boilers are fitted with Superheaters None

Description of Boilers 2 Main S.E.M. 2 SB Working Pressure 220 lbs
REPORT ON MAIN BOILERS NOW FORWARDED? Yes

DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes
Donkey boiler be used for domestic purposes only Yes

N.S. Are approved plans forwarded herewith for Shafting 31-12-40 Main Boilers 22-5-40 Auxiliary Boilers Yes Donkey Boilers Yes
(If not state date of approval) _____
General Pumping Arrangements 24-12-40 Oil fuel Burning Piping Arrangements Yes

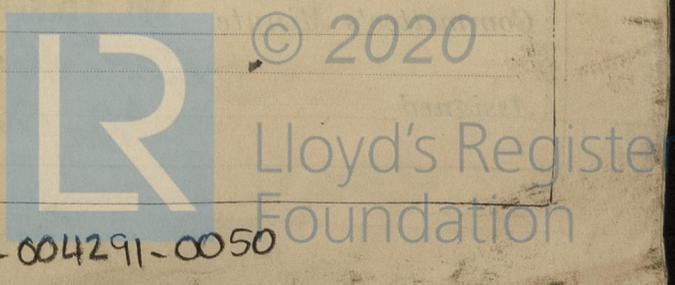
SPARE GEAR.
Spare gear required by the Rules been supplied Yes
Principal additional spare gear supplied _____

Specification as fitted for list of Manager's additional spare gear. _____

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

John Readhead Manufacturer. 4.9.41

MANAGING DIRECTOR: _____



004285-004291-0050

1940 1941
 Dec. 24. Jan. 10. 16. 23. Feb. 4. 7. 10. 13. 14. 17. 21. 25. 28. Mar. 5. 10. 12. 17. 18. 26. Apr. 1. 2. 3.

Dates of Survey while building
 During progress of work in shops - - - 8. 9. 11. 18. 21. 24. 29. May 1. 2. 6. 8. 9. 12. 14. 16. 19. 20. 22. 23. 27. 29. 30. May 3. 4. 5. June 6. 10.
 During erection on board vessel - - - 17. 19. 23. 24. 25. 27. July 2. 3. 4. 7. 9. 10. 11. 14. 15. 16. 17. 18. 22. 23. 25. 28. 29. 30. Aug. 1. 5.
 Total No. of visits 91.

Dates of Examination of principal parts—Cylinders 14-7-41 Slides 16-7-41 Covers 16-7-41
 Pistons 10-7-41 Piston Rods 15-7-41 Connecting rods 15-7-41
 Crank shaft 23-5-41 Thrust shaft 14-8-41 Intermediate shafts 14-8-41
 Tube shaft ✓ Screw shaft 11-7-41 Propeller 11-7-41
 Stern tube 7-7-41 Engine and boiler seatings 30-7-41 Engines holding down bolts 12-8-41
 Completion of fitting sea connections 10-7-41
 Completion of pumping arrangements 21-8-41 Boilers fixed 31-7-41 Engines tried under steam 13-8-41
 Main boiler safety valves adjusted 15-8-41 Thickness of adjusting washers P-3/8" S-3/8" P-3/8" S-3/8" 14-8-41 15-8-41
 Crank shaft material S.M. Steel Identification Mark 5450 Thrust shaft material S.M. Steel Identification Mark 554
 Intermediate shafts, material S.M. Steel Identification Marks 5550 5553 5551 5554 5552 5555 Tube shaft, material ✓ ✓ Identification Mark ✓ 4-4-
 Screw shaft, material S.M. Steel Identification Mark 5556 Steam Pipes, material S.S. Steel Test pressure 660 lbs Date of Test 1-8-
 Is an installation fitted for burning oil fuel No 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 and workmanship are good. The machinery was satisfactorily tested on mooring trials & in my opinion is eligible for classification with records of +L.M.C.B., A.F.D.C.L.

Certificate to be sent to Newcastle-on-Tyne

The amount of Entry Fee ... £ 5 : 0 : When applied for,
 Special ... £ 109 : 1 : 3 15 SEP 1941
 Donkey Boiler Fee ... £ ✓ : When received,
 Travelling Expenses (if any) £ ✓ : 19.....

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

Committee's Minute FRI. 19 SEP 1941
 Assigned T. Lamb, P. 41
 J. D. C. L.

