

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

23 JUL 1942

Date of writing Report 9-6-42. 5. When handed in at Local Office 20 JUL 1942 19. Port of Hull
 No. in Survey held at Reg. Book 27. 12. 41. Date, First Survey Last Survey 7. 7. 1942.
 on the H.M.T. GRAYLING (Number of Visits 40)
 Tons { Gross 387, Net 127 }
 Built at SEKBY By whom built Cochrane & Co. Ltd Yard No. 1245 When built 1942
 Engines made at HULL By whom made Auns Smith Engine No. 707 When made "
 Boilers made at HULL By whom made Auns Smith Boiler No. 707 When made "
 Registered Horse Power Owners The Admiralty Port belonging to "
 Nom. Horse Power as per Rule 125 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 115
 Dia. of Cylinders 13 1/2, 24, 30 Length of Stroke 27 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 7.65 as fitted 8 Crank pin dia. 8 Crank webs Mid. length breadth — Thickness parallel to axis 5
 as fitted 8 Mid. length thickness — shrunk Thickness around eye-hole 3 9/16
 Intermediate Shafts, diameter as per Rule 7.29 as fitted 7 3/4 Thrust shaft, diameter at collars as per Rule 7.65 as fitted 8
 Tube Shafts, diameter as per Rule — as fitted None Screw Shaft, diameter as per Rule 8.152 as fitted 8 1/2 Is the { tube } shaft fitted with a continuous liner { screw } Yes
 Bronze Liners, thickness in way of bushes as per Rule 9/16 as fitted 19/32 Thickness between bushes as per Rule 19/32 as fitted 19/32 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 One length
 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 at No If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 2-11 9/16
 Propeller, dia. 10-3 Pitch 10-9 No. of Blades 4 Material C.I. whether Moveable Solid Total Developed Surface 39 1/2 sq. feet
 Feed Pumps worked from the Main Engines, No. One Diameter 3 Stroke 15 Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. One Diameter 3 Stroke 15 Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size One 6" x 4 1/4" x 6" Duplex Pumps connected to the { No. and size 6" x 4 1/4" x 6" Duplex 3" Ejector M.C. How driven Independent Beam Main Bilge Line { How driven Independent Beam } Beam } Pumps
 Ballast Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size None
 Are two independent means arranged for circulating water through the Oil Cooler None Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room 2 @ 2" Dia. and one 3" Dia Ejector (see below)
 In Pump Room — In Holds, &c. One @ 2" Dia in each of the following: End Ballast Space, Asdic Room, After Ballast Space, Magazine, Magazine locker, Spirit Room
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3" Dia Beam Ejector 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 Above
 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 Heavy wood casing
 What pipes pass through the deep tanks None 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 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 None Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 1873
 Which Boilers are fitted with Forced Draft All Which Boilers are fitted with Superheaters None
 No. and Description of Boilers One S.B. Working Pressure 210 lbs 1A
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? —
 Can the donkey boiler be used for domestic purposes only Yes
 PLANS. Are approved plans forwarded herewith for Shafting 13-8-41 (Main Boilers, 13-8-41 Auxiliary Boilers, None Donkey Boilers, None
 (If not state date of approval)
 Superheaters None General Pumping Arrangements 16-6-41 Oil fuel Burning Piping Arrangements None

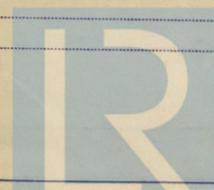
SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied See attached list.

The foregoing is a correct description.
 For AMOS & SMITH LTD.

A.S. Clewley
 DIRECTOR

Manufacturer.



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Lloyd's Register Foundation

002362-002373-0150

GRAYLING

1942.
 During progress of work in shops - - - } 1941. Dec. 27. Jan 6. 23. 31. Feb. 11. 13. Mar. 4. 16. 27. 30. Apr. 1. 7. 14. 17. 20. 22. 24.
 Dates of Survey while building }
 During erection on board vessel - - - } May. 1. 6. 19. June 3. 4. 5. 8. 9. 10. 11. 12. 15. 17. 18. 19. 22. 23. 24. 26. 29. 30.
 Total No. of visits 40.

Dates of Examination of principal parts - Cylinders 14/4/42 20/4/42 22/4/42 Slides 13-2-42 Covers 14/4/42 20/4/42 22/4/42
 Pistons 7/4/42 Piston Rods 7/4/42 Connecting rods 7/4/42
 Crank shaft 1/4/42 Thrust shaft 27/12/41 Intermediate shafts 21/6/3/42
 Tube shaft None Screw shaft 22/1/42 Propeller 11/2/42
 Stern tube 11/2/42 Engine and boiler seatings 9.6.42 Engines holding down bolts 9.6.42
 Completion of fitting sea connections 4.3.42
 Completion of pumping arrangements 22.6.42 Boilers fixed 4/6/42 Engines tried under steam 22.6.42 1.7.42
 Main boiler safety valves adjusted 22.6.42 Thickness of adjusting washers P¹³/₃₂ S⁷/₁₆
 Crank shaft material M.S. Cuplin 196 A.E.G. 1 1/4" LT. Pin Walsley 269 LT 18/11/41 1510 Identification Mark 481 482 Thrust shaft material M.S. Identification Mark N.C.J 27/12/41
 Intermediate shafts, material M.S. 527 8 3/2/42 Identification Marks 16.3.42 1510 W.K. 13-1-42 Tube shaft, material NONE Identification Mark
 Screw shaft, material 22/1/42 1510 J.S. 4/1/42 292. LT. Identification Mark 18-11-41 Steam Pipes, material Steel Test pressure 630 lb Date of Test 11.6.42

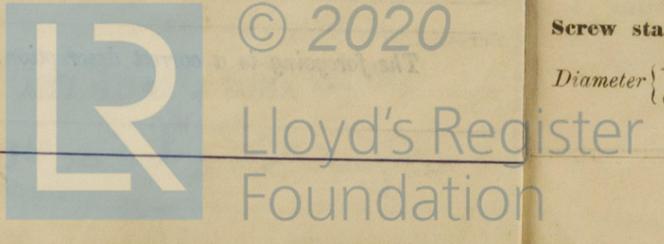
Is an installation fitted for burning oil fuel No
 Is the flash point of the oil to be used over 150° F.
 Have the requirements of the Rules for the use of oil as fuel been complied with ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with ✓
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓
 Is this machinery duplicate of a previous case YES If so, state name of vessel Whiting

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The Machinery of the vessel has been constructed in accordance with the approved Admiralty plans, the Specification and the Society's Rules; of tested material supplied by firms approved by the Society.
 The Workmanship and Materials are good.
 The Machinery and auxiliaries have been fitted abroad and when tried under steam at a sea full power as practicable in the basin, were found satisfactory in every respect.
 The Vessel is eligible, in our opinion, when classed, to have the records of LMC 7,42 and C.L. and the notation, T. 3.C. 13 1/2", 24", 39" - 27. 210 lbs / ft. N.H. 125. G.S. 50. H.S. 1873. F.D.

The amount of Entry Fee ... £ : : When applied for,
 Special ... £ 62 : : 22 JUL 1942
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : : When received,
 19

W.S. Shields and J. Allen
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 28 JUL 1942
 Assigned + Lamb 7.42
 J.D. Cd.



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