

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

MAR 13 1941

Date of writing Report 10/3/41 When handed in at Local Office 10/3/41 Port of WEST HARTLEPOOL.
 No. in Survey held at WEST HARTLEPOOL. Date, First Survey 19th January, 1940 Last Survey 5th March 1941.
 Reg. Book. on the S.S. 'IKAUNA' (Number of Visits 118) Tons { Gross 6798
 Net 3969
 Built at West Hartlepool By whom built Wm Gray & Co. Ltd Yard No. 1106 When built 1941.
 Engines made at West Hartlepool By whom made Central Marine Eng. Works Engine No. 1106 When made 1941.
 Boilers made at West Hartlepool By whom made Central Marine Eng. Works Boiler No. 1106 When made 1941.
 Registered Horse Power Owners British India Steam Nav. Co. Ltd Port belonging to LONDON.
 Nom. Horse Power as per Rule 669. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
 Trade for which Vessel is intended Ocean-going.

ENGINES, &c.—Description of Engines Simple expansion with Bauer Wack Exhaust tube Revs. per minute 83
 Dia. of Cylinders 22-37-65 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.65 Crank pin dia. 14 Crank webs Mid. length breadth 20 Thickness parallel to axis 8.5
 as fitted 14 Mid. length thickness 8.5 shrunk Thickness around eye-hole 6
 Intermediate Shafts, diameter as per Rule 13.57 Thrust shaft, diameter at collars as per Rule 13.65
 as fitted 14.5 as fitted 14.5
 Tube Shafts, diameter as per Rule 15.169 Screw Shaft, diameter as per Rule 15.2 Is the { tube } shaft fitted with a continuous liner { Yes.
 as fitted 15.2 as fitted 15.2 { screw }
 Bronze Liners, thickness in way of bushes as per Rule .763 Thickness between bushes as per Rule .572 Is the after end of the liner made watertight in the
 as fitted .78 as fitted .59 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 No. If so, state type Yes. Length of Bearing in Stern Bush next to and supporting propeller 66
 Propeller, dia. 18.6 Pitch 16.9 No. of Blades 4. Material Brass whether Moveable Yes. Total Developed Surface 102 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 28 Can one be overhauled while the other is at work Yes.
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 Stroke 28 Can one be overhauled while the other is at work Yes.
 Feed Pumps { No. and size Two 9.25 x 7 x 2.4 Pumps connected to the { No. and size 2 @ 4 x 28 / One 9 x 10.5 x 10
 How driven Independent steam. Main Bilge Line { How driven Main engine / Independent steam
 Ballast Pumps, No. and size One 9 x 10.5 x 10 Lubricating Oil Pumps, including Spare Pump, No. and size Two 8 x 9 x 18
 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" Dry tank 1 @ 3" 1 @ 5" (dupl)
 In Pump Room — In Holds, &c. H.1 2 @ 3" H.2 2 @ 3" H.3 2 @ 3" Brass bumper
 2 @ 2.5" H.4 2 @ 3" H.5 2 @ 3" Tunnel well 1 @ 2.5" Drain tank cofferdam 1 @ 2"
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 11" 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 MAIN BELOW
 REST 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 None. How are they protected —
 What pipes pass through the deep tanks — 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 Yes. Is it fitted with a watertight door Yes. worked from Eng Rm top.

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 8,500 sq ft
 Which Boilers are fitted with Forced Draft all. Which Boilers are fitted with Superheaters all.
 No. and Description of Boilers Four single ended multitubular Working Pressure 250 lbs.
 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 —
 PLANS. Are approved plans forwarded herewith for Shafting Yes. Main Boilers Yes. Auxiliary Boilers — Donkey Boilers —
 (If not state date of approval)
 Superheaters Yes. General Pumping Arrangements — Oil fuel Burning Piping Arrangements —

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
 FOR THE CENTRAL MARINE ENGINE WORKS,
 (25, Gray & Co., Ltd.)

J. H. Frame
 GENERAL MANAGER.

Manufacturer.



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Lloyd's Register
 Foundation

015493-015495-0146

NOTE.—The words which do not apply should be deleted. Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent? 5,111, ST. T. (MADE IN ENGLAND.)

Dates of Survey while building

During progress of work in shops - - 1940. Jan. 19. Feb. 20. 26. March 18. April 16. 25. June 12. 25. 30. Aug. 1. 2. 6. 18. 13. 14. 15. 16. 22. 23. Sept. 2. 3. 4. 5. 10. 11. 12. 13. 16. 26. Oct. 1. 8. 11. 15. 17. 21. 22. 23. 24. 25. 28. 29. 30. 31. Nov. 1. 4. 6. 7. 11. 12. 14. 15. 17. 21. 22. 23. 24. 28. 29. 30. Dec. 2. 3. 4. 6. 9. 10. 11. 12. 13. 14. 16. 17. 18. 19. 20. 27. 30. 31. 1941. Jan. 2. 3. 7. 10. 11. 16. 17. 18. 21. 22. 24. 25. 27. 28. 30. 31. Feb. 1. 3. 5. 6. 7. 10.

During erection on board vessel - - - 1940. Nov. 15. 21. 29. Dec. 13. 18. 23. 24. 1941. Jan. 3. 7. 15. 16. 20. 27. Feb. 3. 12. 18. 19. 28. March 5.

Total No. of visits 118

Dates of Examination of principal parts—Cylinders 23-8-40 to 25-11-40 Slides 7-11-40 Covers 7-11-40

Pistons 7-11-40 Piston Rods 4-9-40 to 25-11-40 Connecting rods 4-9-40 to 25-11-40

Crank shaft 16-8-40 to 18-11-40 Thrust shaft Intermediate shafts 4-11-40 to 29-11-40

Tube shaft ✓ Screw shaft 4-11-40 to 29-11-40 Propeller 18-12-40

Stern tube 18-12-40 Engine and boiler seatings 29-11-40 Engines holding down bolts 18-1-41

Completion of fitting sea connections 18-2-41

Completion of pumping arrangements 19-2-41 Boilers fixed 18-1-41 Engines tried under steam 19-2-41

Main boiler safety valves adjusted 18-2-41 Thickness of adjusting washers P PORT 5 11 32 SUP 15 16 32 P CENTRE 5 11 32 SUP 15 16 32 STAR 5 11 32 SUP 15 16 32 FORD 5 11 32 SUP 15 16 32

Crank shaft material INHOT STEEL Identification Mark N° 3395 REG Thrust shaft material Identification Mark

Intermediate shafts, material INHOT STEEL Identification Marks N° 3877-82 REG Tube shaft, material Identification Mark ✓

Screw shaft, material INHOT STEEL Identification Mark N° 3876 REG Steam Pipes, material SD STEEL Test pressure 750 lbs Date of Test

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 SS 'IKAVHA' ROTH° 18096.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been constructed under special survey and in accordance with the approved plans. The workmanship and materials have been found good. Upon completion they were examined under full working conditions and found satisfactory. It is recommended that the machinery of this vessel be classed in the Register Book of H.M.C. 3.41 4 SB. (3/4) F.D. C.L.

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,
Special ...	£ 108 : 9 :	19
Donkey Boiler Fee ...	£ :	When received,
Travelling Expenses (if any) £	:	19

Arthur W. Oxford.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 18 MAR 1941

Assigned *F. Lamb. 241*
J.D. Ed.



If not, state whether, and when, use will be sent. Is a Report also sent in the Hull of the Ship.