

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

DEC 16 1940

Date of writing Report 12/12/1940 When handed in at Local Office 12/12/1940 Port of WEST HARTLEPOOL.

No. in Survey held at WEST HARTLEPOOL Date, First Survey 3rd November, 1939 Last Survey 5th December 1940  
Reg. Book. (Number of Visits 125)

on the S.S. ISMAILA Gross 6793.06 Tons Net 3969.29

Built at West Hartlepool By whom built Wm Gray & Co. Ltd Yard No. 1105 When built 1940

Engines made at West Hartlepool By whom made Central Marine Eng. Works Engine No. 1105 When made 1940

Boilers made at West Hartlepool By whom made Cent. Mar. Eng. Works Boiler No. 1105 When made 1940

Registered Horse Power Owners British India Steam Nav. Co. Ltd Port belonging to LONDON.

Tom. 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 Triple expansion with Bauer Wack Exhaust Turbines, 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" as fitted 14" Crank pin dia. 14" Crank webs Mid. length breadth 20" Mid. length thickness 8 1/2" Thickness parallel to axis 8 1/2" Thickness around eye-hole 6"

Intermediate Shafts, diameter as per Rule 13.57" as fitted 14 1/2" Thrust shaft, diameter at collars as per Rule 13.65" as fitted 14 1/2"

Tube Shafts, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule 15.169" as fitted 15 1/2" Is the tube screw shaft fitted with a continuous liner? Yes

Bronze Liners, thickness in way of bushes as per Rule .763" as fitted .78" Thickness between bushes as per Rule .572" as fitted .59" 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 -

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

shaft No. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 66"

Propeller, dia. 18'6" Pitch 16'9" No. of Blades 4 Material Bronze 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 1/2" x 7" x 24" Pumps connected to the Main Bilge Line { No. and size 2 @ 4" x 28" One 9" x 10 1/2" x 10"

How driven Independent steam Main engines Independent steam

Ballast Pumps, No. and size One 9" x 10 1/2" 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"

In Pump Room In Holds, &c. H°1, 2 @ 3" H°2, 2 @ 3" H°3, 2 @ 3" Cross bunkers

2 @ 2 1/2" H°4, 2 @ 3" H°5, 2 @ 3" Sunnel well 1 @ 2 1/2" 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 -

Superheaters Yes. General Pumping Arrangements - Oil fuel Burning Piping Arrangements -

### SPARE GEAR.

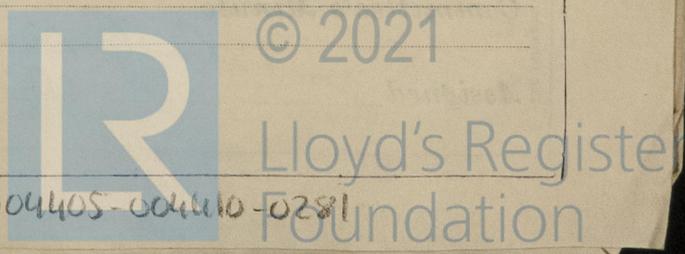
Is the spare gear required by the Rules been supplied Yes.

State the principal additional spare gear supplied

The foregoing is a correct description FOR THE CENTRAL MARINE ENGINE WORKS,

(W. Gray & Co. Ltd.)  
J. H. Gramp  
GENERAL MANAGER

Manufacturer.



004405-004410-0281

4 18096.

1940  
 1939. Nov. 3. 19. Feb. 12. 16. 20. 26. March 7. 18. 30. April 6. May 27. 31. June 3. 4. 5. 6. 7. 11. 19. 21. 28.  
 25. 26. 28. July 1. 2. 3. 4. 9. 11. 12. 15. 22. 25. 26. 30. 31. Aug. 1. 2. 6. 7. 8. 12. 13. 14. 16. 19. 22. 23. 26. 28. 29. 30.  
 Sept. 2. 3. 4. 5. 9. 10. 11. 12. 14. 17. 18. 19. 30. Oct. 1. 9. 3. 4. 8. 9. 10. 11. 16. 17. 18. 21. 23. 24. 25. 26. 28. 30. 31. Nov. 1. 2. 4. 5. 6. 7.  
 13. 14. 15. 16. 18. 21. 22.  
 During erection on board vessel --- June 17. 21. Aug. 30. Sept. 12. Oct. 8. 16. 18. 24. 28. 29. Nov. 4. 7. 12. 13. 14. 15. 21. 25. 26. 27. 28. 29. 30.  
 Total No. of visits = 125

Dates of Examination of principal parts—Cylinders 21/6/40 - 10/9/40. Slides 10/9/40. Covers 10/9/40.  
 Pistons 10/9/40. Piston Rods 22/7/40 - 10/9/40. Connecting rods 22/7/40.  
 Crank shaft 3/6/40 - 28/8/40. Thrust shaft. Intermediate shafts 11/9/40 - 26/9/40.  
 Tube shaft. Screw shaft 11/9/40 - 26/9/40. Propeller 26/9/40.  
 Stern tube 26/9/40. Engine and boiler seatings 30/8/40. Engines holding down bolts 24/10/40.  
 Completion of fitting sea connections 30/8/40.  
 Completion of pumping arrangements 27/11/40. Boilers fixed 24/10/40. Engines tried under steam 28/11/40.  
 Main boiler safety valves adjusted 27/11/40. Thickness of adjusting washers 11/11/40.  
 Crank shaft material INGOT STEEL. Identification Mark 3135 AEG. Thrust shaft material INGOT STEEL. Identification Mark 3384-5-6-7-8-9 AEG.  
 Intermediate shafts, material INGOT STEEL. Identification Marks 3384-5-6-7-8-9 AEG. Tube shaft, material INGOT STEEL. Identification Mark 3383 AEG.  
 Screw shaft, material INGOT STEEL. Identification Mark 3383 AEG. Steam Pipes, material S.P. Steel. Test pressure 750 lbs. Date of Test 15/11/40.  
 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 Yes. If so, state name of vessel S.S. ITAURA No 18077

**General Remarks** (State quality of workmanship, opinions as to class, &c. She engines and boilers of this vessel have been constructed under Special Survey and in accordance with the approved plans. She 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 as H.M.C. 12 HSB (SFC) F.D. CL.

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 :  
 Special ... £ 108 : 9 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 19...  
 When received, 11 Jan 41 19...

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

Committee's Minute  
 Assigned  
 FRI. 20 DEC 1940  
 + Lamb 12.40  
 J.D., C.L.

