

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 1<sup>ST</sup> SEPT 1943. When handed in at Local Office 18<sup>TH</sup> SEPT 1943. Port of Greenock

No. in Survey held at Greenock. Date, First Survey 16<sup>TH</sup> AUGUST 1942. Last Survey 17<sup>TH</sup> SEPTEMBER 1943.

on the MAHADEVI Tons { Gross 5459.42. Net 3005.00. When built 1943.

Built at Port Glasgow By whom built Lithgows Ltd. Yard No. 984

Engines made at Greenock By whom made Rankin & Blackmore Ltd. Engine No. 491 When made 1943

Boilers made at Greenock By whom made Rankin & Blackmore Ltd. Boiler No. 491 When made 1943

Registered Horse Power Owners Asiatic Steam Navigation Co. Ltd. Port belonging to London

Nom. Horse Power as per Rule 517. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

Trade for which vessel is intended Foreign.

## ENGINES, &c.—Description of Engines Triple Expansion

Dia. of Cylinders 24 1/2" x 41" x 70". Length of Stroke 48". No. of Cylinders 3. Revs. per minute 72.

Crank shaft, dia. of journals as per Rule 14.2" as fitted 14 1/2". Crank pin dia. 14 1/2". Crank webs Mid. length breadth Thickness parallel to axis 9".

Intermediate Shafts, diameter as per Rule 13.53" as fitted 13 3/4". Thrust shaft, diameter at collars as per Rule 14.2" as fitted 14 1/2".

Tube Shafts, diameter as per Rule as fitted. Screw Shaft, diameter as per Rule 14.99" 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 .751" as fitted 7/8". Thickness between bushes as per Rule .565" as fitted 3/4". Is the after end of the liner made watertight in the propeller boss 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. 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.

Propeller, dia. 17'-6" Pitch 17 1/2" Max. No. of Blades 4 Material C.I. whether Moveable Yes. Total Developed Surface 102 sq. feet

Feed Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work. Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work Yes.

Feed Pumps No. and size 10 1/2" x 8" x 22" (TWIN) 1-12 x 9" x 24". Pumps connected to the Main Bilge Line No. and size 1-12 1/2" x 4" x 24" 1-8 x 9" x 18". How driven STEAM.

Ballast Pumps, No. and size ONE 12 1/2" x 14" x 24". Lubricating Oil Pumps, including Spare Pump, No. and size. Are two independent means arranged for circulating water through the Oil Cooler. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room 3-3".

In Pump Room Offordam 1@2". In Holds, &c. No 1-2@3" No 2-2@3 1/2" No 3-2@2 1/2". Main Water Circulating Pump Direct Bilge Suctions, No. and size 1@9". 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 OR ON RESERVOIR. 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 OTHER 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 FORE BILGE SUCTIONS. How are they protected WOOD CASINGS.

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 by trunk from Upper Deck worked from.

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 7266. Which Boilers are fitted with Forced Draft 3. Main Which Boilers are fitted with Superheaters. No. and Description of Boilers 3-SE. Multitubular Working Pressure 230 lbs.

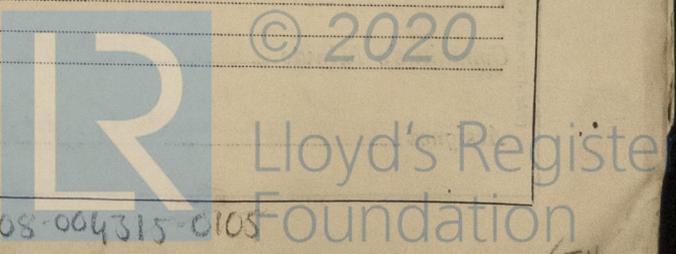
IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES. IS A DONKEY BOILER FITTED? NO. If so, is a report now forwarded? Can the donkey boiler be used for domestic purposes only.

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers. Superheaters 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. Rankin & Blackmore Ltd., Managing Director.

Manufacturer.



004308-004315-0105

J.H.

Dates of Survey while building  
 During progress of work in shops -- (1942) AUG. 18. SEPT. 4. 23. 28. OCT. 2. 5. 9. 13. 20. NOV. 3. 10. 13. 25. DEC. 2. 4. 10. 14. 24. 28. 30.  
 (1943) JAN. 5. 12. 13. 18. 22. 28. 29. FEB. 1. 10. 15. 18. 23. 25. MAR. 1. 15. 22. 30. APRIL 2. 6. 4. 16. 23. MAY 10. 21. 31.  
 During erection on board vessel --- JUNE 9. 11. 14. 17. 21. 25. 29. 30. JULY 15. 16. 20. 24. 28. 30. AUG. 6. 9. 13. 18. 24. SEPT. 9. 12. 15. 17.  
 Total No. of visits 68.

Dates of Examination of principal parts—Cylinders 24/1/43 Slides 18/2/43 Covers 25/2/43  
 Pistons 18/2/43 Piston Rods 23/2/43 Connecting rods 23/2/43  
 Crank shaft 30/12/42 Thrust shaft 29/6/43 Intermediate shafts 25/6/43  
 Tube shaft --- Screw shaft 11/6/43 Propeller 11/6/43  
 Stern tube 21/6/43 Engine and boiler seatings 17/6/43 Engines holding down bolts 9/8/43  
 Completion of fitting sea connections 17/6/43  
 Completion of pumping arrangements 13/8/43 Boilers fixed 30/7/43 Engines tried under steam 3/8/43  
 Main boiler safety valves adjusted 13/8/43 Thickness of adjusting washers PORT. 5 3/8" CENTRE. 5 23/64" STAR 5 3/8"  
 Crank shaft material Stal. Identification Mark MC. 30/12/42 Thrust shaft material Stal. Identification Mark MC. 29/6/43  
 Intermediate shafts, material Stal. Identification Marks MC. 25/6/43 Tube shaft, material --- Identification Mark ---  
 Screw shaft, material Stal. Identification Mark MC. 11/6/43 Steam Pipes, material B. Stal. Test pressure 660/lb/sq Date of Test 9/8/43  
 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 No  
 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. *Here engines and boilers have been built under Special Survey in accordance with the rules and the approved plans, securely fitted in the vessel and tried under steam satisfactorily. The materials and workmanship are good. The machinery is eligible, in my opinion, to have the record of + LMC. 9.43 and the notation S. Cl. and 3. Single boilers. F.D.*

Certificate to be sent to

The amount of Entry Fee ...	£ 6 : 0	} When applied for,
Special ...	£ 100 : 17	
Donkey Boiler Fee ...	£ : :	} When received,
Travelling Expenses (if any) £	: :	

M. Caldwell  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 21 SEP 1943

Assigned 1- LMC 9.43 F.D.



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