

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office
 Writing Report 13th MARCH 1945. When handed in at Local Office 16th MARCH 1945. Port of *Greenock* 21 MAR 1945 21 JUN 1945
 Survey held at *Greenock* Date, First Survey 11th OCTOBER 1943 Last Survey 12th MARCH 1945.
 Book (Number of Visits 39)
 on the *V 238, Y 5. "LOCH" CLASS "3037"* Tons Gross *4157* Net *2430*
 at *Greenock* By whom built *Rankin & Blackmore Ltd* Yard No. *783* When built *1945*
 Engines made at *Greenock* By whom made *Rankin & Blackmore Ltd* Engine No. *502* When made *1945*
 Boilers made at *Glasgow* By whom made *Babcock & Wilcox* Boiler No. *107/1630 4* When made *1945*
 Indicated Horse Power *5500* Owners *Admiralty* Port belonging to
 Horse Power as per Rule *658.28* Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Intended for which vessel is intended

Engines, &c.—Description of Engines *4 Crank Triple Expansion* Revs. per minute *185*
 of Cylinders *18 1/2" 31" 38 1/2" 38 1/2"* Length of Stroke *30"* No. of Cylinders *4* No. of Cranks *4*
 Crank shaft, dia. of journals as per Rule as fitted *10 1/2"* Crank pin dia. *10 1/2"* Mid. length breadth Thickness parallel to axis *6 1/2"*
 Crank webs shrunk Mid. length thickness Thickness around eye-hole *4 3/4"*

Intermediate Shafts, diameter as per Rule as fitted Thrust shaft, diameter at collars as per Rule as fitted
 Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the { tube } shaft fitted with a continuous liner { screw }

Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the
 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 no 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
 If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of Blades Material whether Moveable Total Developed Surface sq. feet
 Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work.
 Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work.

Number and size of Pumps connected to the Main Bilge Line No. and size How driven
 Lubricating Oil Pumps, including Spare Pump, No. and size
 Are there two independent means arranged for circulating water through the Oil Cooler Suctions, connected both to Main Bilge Pumps and Auxiliary
 Pumps:—In Engine and Boiler Room In Holds, &c.

Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, and size
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes
 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.
 Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water line
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate
 How are they protected
 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
 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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers
 Which Boilers are fitted with Forced Draft Which Boilers are fitted with Superheaters
 and Description of Boilers Working Pressure

A REPORT ON MAIN BOILERS NOW FORWARDED?
 A DONKEY BOILER FITTED? If so, is a report now forwarded?
 Is the donkey boiler be used for other than domestic purposes

APPROVED PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)
 Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.
 Is the spare gear required by the Rules been supplied
 Is the principal additional spare gear supplied *Spare gear supplied for two sets and will be dispatched with Y 238, Y 6. Messrs Rankin and Blackmore's No 503*

The foregoing is a correct description.
 Rankin & Blackmore Ltd. *James Lewis* (Manufacturer).
 Works Manager.



Dates of Survey while building

During progress of work in shops -- (1943) OCT 11. NOV. 18. 22. DEC. 15. (1944) JAN. 4. 19. FEB. 4. 21. 28. MAR. 3. 10. 16. 29. JULY 13. 21. AUG. 17. 28. OCT. 19. 24. NOV. 9. 17. 21. DEC. 1. 11. 15. 18. 21. 28. (1945) JAN. 5. 15. 24. FEB. 6. 14. 21. MAR. 1. 11. 18. 25. 29.

During erection on board vessel --- 12.

Total No. of visits 39.

Dates of Examination of principal parts—Cylinders *HP. 8 MP. 11.12.44* Slides *24.1.45* Covers *6.2.45*

Pistons *24.1.45* Piston Rods *1.3.45* Connecting rods *1.3.45*

Crank shaft *26.2.45* Thrust shaft --- Intermediate shafts ---

Tube shaft --- Screw shaft --- Propeller ---

Stern tube --- Engine and boiler seatings --- Engines holding down bolts ---

Completion of fitting sea connections --- Boilers fixed --- Engines tried under steam ---

Completion of pumping arrangements --- Thickness of adjusting washers ---

Main boiler safety valves adjusted --- Identification Mark *3210* Thrust shaft material --- Identification Mark ---

Crank shaft material *S.M. Steel* Identification Marks --- Tube shaft, material --- Identification Mark ---

Intermediate shafts, material --- Steam Pipes, material --- Test pressure --- Date of Test ---

Screw shaft, material --- Is an installation fitted for burning oil fuel --- 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 --- If so, state name of vessel ---

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery has been built under Special Survey in accordance with the rules and the Admiralty Specification which has been supervised. The materials and workmanship are good.*

The engine is being sent to Glasgow to be installed in a vessel building there.

For identification purposes the crank shaft has been stamped

LLOYDS NO 3210

MC. 26.2.45.

Classification Fee £ 22 : 10

The amount of Entry Fee £ 22 : 10

Special *Supervision fee charged by London Office* £ 22 : 10

Donkey Boiler Fee £ :

Travelling Expenses (if any) £ :

When applied for, 17 MAR. 1945

When received, 19 JUN 1945

ADMIRALTY

A/c rendered from London 27 MAR '45

M. Caldwell

Engineer Surveyor to Lloyd's Register of Shipping

Date **GLASGOW** 20 MAR 1945

Committee's Minute Transmit to *Warrington*



Certificate to be sent to...

The Surveyors are requested not to write on or below the space for Committee's Minute.