

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 6.9.46. 19 When handed in at Local Office 6.9.46. 19 Port of GREENOCK.

No. in Survey held at GREENOCK. Date, First Survey 1<sup>st</sup> AUG: Last Survey 31<sup>st</sup> AUG: 1946.  
Reg. Book (Number of Visits 5.)

89217. on the STEEL S.S. "THE EMPEROR" Tons { Gross 1058, Net 584.

Built at GREENOCK. By whom built GEO. BROWN & CO. (MARINE) LTD. Yard No. 235. When built 1946.

Engines made at GREENOCK. By whom made RANKIN & BLACKMORE, LTD. Engine No. 511. When made 1946.

Boilers made at GREENOCK. By whom made RANKIN & BLACKMORE, LTD. Boiler No. 511. When made 1946.

Registered Horse Power Owners J. HAY & SONS, LTD. Port belonging to GLASGOW.

Nom. Horse Power as per Rule 130.129 Is Refrigerating Machinery fitted for cargo purposes No. ✓ Is Electric Light fitted YES. ✓

Trade for which vessel is intended COASTING.

ENGINES, &c.—Description of Engines STEAM TRIPLE EXPANSION. Revs. per minute 117.  
Dia. of Cylinders 14" - 24" - 40". Length of Stroke 27". No. of Cylinders 3. No. of Cranks 3.  
Crank shaft, dia. of journals as per Rule 7.7 as fitted 7.75 Crank pin dia. 7.75 Mid. length breadth 15" Thickness parallel to axis 5" ✓  
Crank webs shrunken Mid. length thickness 5" Thickness around eye-hole 3 1/2" ✓

Intermediate Shafts, diameter as per Rule 7.34 ✓ as fitted 7.32 Thrust shaft, diameter at collars as per Rule 7.7 as fitted 7.75 ✓

Tube Shafts, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule 8.62 as fitted 9.25 ✓ Is the shaft fitted with a continuous liner No. ✓

Bronze 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 propeller boss ✓

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 YES. ✓ If so, state type NEWARK. ✓ Length of Bearing in Stern Bush next to and supporting propeller 37" ✓

Propeller, dia. 10'-8" Pitch 11'-9" (VAR) No. of Blades 4 Material CAST IRON. whether Moveable NO. Total Developed Surface 36.7 sq. feet

Feed Pumps worked from the Main Engines, No. TWO. Diameter 2 1/2" Stroke 14" Can one be overhauled while the other is at work YES. ✓  
Bilge Pumps worked from the Main Engines, No. TWO. Diameter 2 3/4" Stroke 14" Can one be overhauled while the other is at work YES. ✓

Feed Pumps { No. and size ONE 6" 3/4" 6" DUPLEX. Pumps connected to the Main Bilge Line { No. and size (2) ONE 7" 8 1/2" - 8" & ONE 6" 4 1/4" - 6" How driven STEAM.

Ballast Pumps, No. and size ONE 7" - 8 1/2" - 8" DUPLEX. Lubricating Oil Pumps, including Spare Pump, No. and size ✓  
Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room 2 @ 2 1/2" ✓

Main Water Circulating Pump Direct Bilge Suctions, No. and size ONE @ 4" ✓ Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, No. and size ONE @ 3" ✓ 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 } OTHERS-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 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 NONE FITTED. Is it fitted with a watertight door worked from ✓

MAIN BOILERS, &c.—(Letter for record (S) ✓ Total Heating Surface of Boilers 1953 ft<sup>2</sup> ✓  
Which Boilers are fitted with Forced Draft 1 MAIN BOILER ✓ Which Boilers are fitted with Superheaters NONE. ✓  
No. and Description of Boilers ONE MAIN BOILER. Working Pressure 200 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 other than domestic purposes ✓

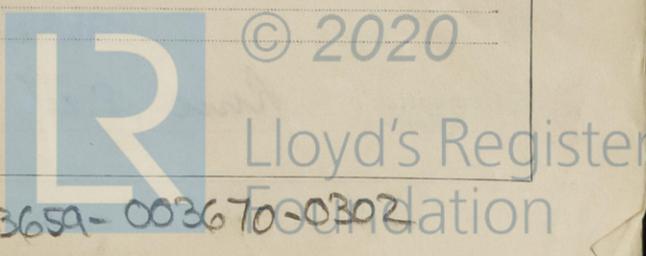
PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers  
(If not state date of approval)

Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.  
Has the spare gear required by the Rules been supplied YES. ✓  
State the principal additional spare gear supplied MINOR DETAILS AS PER SPECIFICATION.

The foregoing is a correct description.

Manufacturer.



During progress of work in shops - - No VISITS MADE DURING CONSTRUCTION.

Dates of Survey while building { During erection on board vessel - - - 1<sup>ST</sup> AUG - 19 - 30 & 2 ON 31<sup>ST</sup> AUG. 1946.

Total No. of visits 5.

Dates of Examination of principal parts - Cylinders Slides Covers  
 Pistons Piston Rods Connecting rods  
 Crank shaft 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 1.8.46 Engines tried under steam 30/31<sup>ST</sup> AUG. 1946.

Completion of pumping arrangements Thickness of adjusting washers FB VALVE = 5/8" AFT. VALVE = 11/32"

Main boiler safety valves adjusted 30<sup>TH</sup> AUG. 1946. Crank shaft material SM. STEEL Identification Mark Thrust shaft material SM. STEEL Identification Mark

Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark

Screw shaft, material SM. STEEL Identification Mark Steam Pipes, material S.D. STEEL Test pressure 600 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 "THE MONARCH" BUILT TO B.C. CLASS.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery & boilers of this vessel have

been built under survey by the British Corporation Register, & at the special request of the Owners Representative, have now been generally examined without any special opening out for examination during fitting out on board. In so far as could be seen, the workmanship appears to be satisfactory & the materials sound & good throughout, & efficiently installed on board the vessel.

On completion, the machinery & boilers were examined under working conditions ahead & astern on basin trial, when the main engine was worked up to 66 RPM. for about 2 hours after the official sea trial, & found satisfactory. The safety valves & easing gear were tested, & found efficient & satisfactory.

The machinery & boilers are eligible in my opinion to be classed in the Register Book with the notation of LMC\* 8.46, - 1. SB. (S) 200 lbs & screw shaft O.G.

The foregoing particulars are submitted for the information of the Committee.

Greenock

The amount of Entry Fee	£	:	:	When applied for,
Special	£ 21	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

*J. Frechman*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Date GLASGOW 11 SEP 1946  
 Committee's Minute LMC 8.46

