

Rpt. 4.

Slid. No. 34144  
Slid. No. 66838

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

26 FEB 1945

Date of writing Report 19 When handed in at Local Office 22-3-1943 Port of Glasgow  
No. in Survey held at Glasgow Reg. Book Date, First Survey 26-2-1942 Last Survey 19-3-1943  
(Number of Visits 25)  
On the S/S EMPIRE MAURITIUS Tons { Gross 7309.66  
Net 5094.32  
Built at Sunderland By whom built Bartram & Son Ltd Yard No. 302 When built 1945  
Engines made at Glasgow By whom made Duncan Stewart & Co Ltd Engine No. 215 When made 1943  
Boilers made at Sunderland By whom made H. & J. Macdonald & Co (1938) Boiler No. 4100 When made 1945  
Registered Horse Power Owners Macdonald & Co Ltd Port belonging to Sunderland  
Nom. Horse Power as per Rule 510 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
Trade for which vessel is intended

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute  
Dia. of Cylinders 24 1/2"-39"-70" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
Crank shaft, dia. of journals as per Rule 14 1/4" Crank pin dia. 14 3/4" Mid. length breadth 22" Thickness parallel to axis 9"  
as fitted 14 1/4" Crank webs shrunk Mid. length thickness 9" Thickness around eye-hole 6 3/8"  
Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule  
as fitted Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule  
as fitted Is the { tube } shaft fitted with a continuous liner { screw }  
Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the  
as fitted propeller boss 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  
at 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  
Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work yes  
Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work yes  
Feed { No. and size Pumps connected to the { No. and size  
Pumps { How driven Main Bilge Line { How driven  
Ballast Pumps, No. and size 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 In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges,  
No. 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  
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  
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  
No. and Description of Boilers Working Pressure  
IS A REPORT ON MAIN BOILERS NOW FORWARDED?  
IS A DONKEY BOILER FITTED? 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  
(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 only as per list attached  
State the principal additional spare gear supplied

The foregoing is a correct description.

DUNCAN STEWART &amp; CO. LTD.

Frank R. Kindlay

Manufacturer.

Director



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Lloyd's Register  
Foundation

010495-010501-0344

During progress of work in shops - - { 1942 Feb 26 May 4 Jun 8.16 Jul 3.27 Aug 3.11 Sep 9.22 Oct 23 Nov 9.10 Dec 2.8.22 1943 Jan 19.22  
Feb 1.5.7.23 Mar 1.10.19  
Dates of Survey while building {  
During erection on board vessel - - - {  
Total No. of visits 25.

Dates of Examination of principal parts—Cylinders 9-9-42 Slides 22-12-42 Covers 3-7-42  
Pistons 3-7-42 Piston Rods 22-12-42 Connecting rods 8-12-42  
Crank shaft 9-12-42 Thrust shaft Intermediate shafts  
Tube shaft Screw shaft Propeller  
Stern tube Engine and boiler seatings Engines holding down bolts  
Completion of fitting sea connections  
Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers  
Crank shaft material 9. Steel Identification Mark LLOYD'S REGISTER 11385  
Intermediate shafts, material Identification Marks L.C.D. 9-12-42  
Screw shaft, material Identification Mark Steam Pipes, material Test pressure Date of Test

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. yes If so, state name of vessel (in stone) Gls Rpl. No 65360

General Remarks (State quality of workmanship, opinions as to class, &c.)

\* In addition, all the original identification marks are stamped on each forging, as per report attached.  
The materials and workmanship are good.

The engines have been constructed under special survey and in accordance with the M.S. specification. Upon satisfactory completion of fitting in the vessel and of trials, they will, in my opinion be eligible for classification and the record of L.M.C. (with date).

All the requirements of the specification for engines working with superheated steam have been carried out except that the insulation under the cylinders has been omitted, this is to enable the cylinders to be lifted and transported. Insulation to be fitted after erection in the vessel.  
These engines are being sent to the L.M.S. London Road Mineral station Glasgow for storage

The amount of Entry Fee ... £ 6 :  
Special SPECIFICATION FEE ... £ 50 : 5  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :  
When applied for, 23 MAR 1943  
When received, 19

Committee's Minute GLASGOW 23 MAR 1943

Assigned Defered for completion // See F.E. machy. rpt.

Sh. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 23 MAR 1945

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