

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 15 SEP 1941

Date of writing Report 10 When handed in at Local Office SEP 1941 Port of HULL

No. in Survey held at Reg. Book. Date, First Survey 28.4.41 Last Survey 1-9-1941  
(Number of Visits 12)

on the S.S. Tug. **EMPIRE MAPLE**

Built at Thorne By whom built R. Dunston & Co. Yard No. 358 Tons { Gross 129 Net Nil.

Engines made at Paisley By whom made McFie & Baxter & Co. Engine No. 1327 When built 1941-9

Boilers made at Glasgow By whom made John Thompson (Marine Eng'g) & Co. Boiler No. 5156 When made 1941-9

Registered Horse Power Owners Ministry of Shipping Port belonging to

Nom. Horse Power as per Rule 85 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Young Service

**ENGINES, &c.**—Description of Engines Triple expansion

Dia. of Cylinders 12" - 20" - 32" Length of Stroke 22" No. of Cylinders 3 Revs. per minute 140

Crank shaft, dia. of journals as per Rule 6.44 as fitted 6 1/2" Crank pin dia. 6 1/2" Crank webs Mid. length breadth shrunk Thickness parallel to axis 4 1/8"

Intermediate Shafts, diameter as per Rule 6.13 as fitted 6 1/4" Thrust shaft, diameter at collars as per Rule 6.44 as fitted 6 1/2" Thickness around eye-hole 2 1/8" pins

Tube Shafts, diameter as per Rule shrunk as fitted shrunk Screw Shaft, diameter as per Rule 7.12 as fitted 7 1/8" Is the { tube } shaft fitted with a continuous liner { No }

Bronze Liners, thickness in way of bushes as per Rule shrunk as fitted shrunk Thickness between bushes as per Rule shrunk as fitted shrunk 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 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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes Length of Bearing in Stern Bush next to and supporting propeller 29"

Propeller, dia. 8'3" Pitch 10'-0" No. of Blades 4 Material C.I. whether Moveable Solid Total Developed Surface 24 sq. feet

Feed Pumps worked from the Main Engines, No. One Diameter 2 1/2" Stroke 12 Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. One Diameter 2 1/2" Stroke 12 Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size One 6" x 4 1/2" x 10" How driven None Pumps connected to the Main Bilge Line { No. and size One General Service 5" x 3 1/2" x 6" How driven None }

Ballast Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size Yes

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 Eng Rm - 1 1/2" dia, Bil Rm 1 1/2" dia; also independent direct sea belns.

In Pump Room Bunker Tunnel. 1 1/2" dia In Holds, &c. Fore & Aft Compartment each one each 2" dia. At the request of M.O.S. Peak Suctions have been removed. The Bulkheads have drain valves fitted to them controlled from U.D. in lieu.

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 3 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Eng + Bil Rm 1 each 2 1/2" dia. 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 lead 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 Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates Yes Are the Overboard Discharges above or below the deep water line at W.L.

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 Yes

What pipes pass through the deep tanks None Have they been tested as per Rule Yes

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 worked from

**MAIN BOILERS, &c.**—(Letter for record S.) Total Heating Surface of Boilers 1356 sq. ft.

Which Boilers are fitted with Forced Draft Yes Which Boilers are fitted with Superheaters No

No. and Description of Boilers One S.B. Working Pressure 200 lbs/10"

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? None If so, is a report now forwarded? Yes

Can the donkey boiler be used for domestic purposes only Yes

**PLANS.** Are approved plans forwarded herewith for Shafting 29-11-39 Main Boilers 6-11-39 Auxiliary Boilers Yes Donkey Boilers Yes

(If not state date of approval)

Superheaters Yes General Pumping Arrangements 17-3-41 Oil fuel Burning Piping Arrangements Yes

### SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied See list attached to Glasgow Rpt.

\* Stoke hole mud boxes are under removable floor plates in machined position

The foregoing is a correct description.

Manufacturer.



Lloyd's Register Foundation

During progress of work in shops --

Dates of Survey while building

During erection on board vessel --

1941 - Apr 28. May 9. 29. June 5. 17. July 20. 23. 28. Aug. 6. 16. 29. Sep. 1.

EMPIRE MARLE

Total No. of visits 12.

Dates of Examination of principal parts	Cylinders	G/b Rpt	Slides	G/b Rpt	Covers	G/b Rpt
Pistons	G/b Rpt		Piston Rods	G/b Rpt	Connecting rods	G/b Rpt
Crank shaft	G/b Rpt		Thrust shaft	G/b Rpt	Intermediate shafts	G/b Rpt & 28.7.41
Tube shaft	✓		Screw shaft	G/b Rpt & 9.5.41	Propeller	9.5.41
Stern tube	G/b Rpt &		Engine and boiler seatings	9.5.41	Engines holding down bolts	28.7.41
Completion of fitting sea connections	9.5.41.					
Completion of pumping arrangements	1-9.41.		Boilers fixed	28.7.41.	Engines tried under steam	29-8-41.
Main boiler safety valves adjusted	29-8-41		Thickness of adjusting washers	Port 7/16" Star 15/32"		
Crank shaft material	Steel	Identification Mark 9922 G.A.L.	Thrust shaft material	Steel	Identification Mark 5568 GAL 14.5.41 JFC. 22.4.41	
Intermediate shafts, material	Steel	Identification Marks 5558 GAL 14.5.41 JFC. 14.2.41.	Tube shaft, material	✓	Identification Mark	✓
Screw shaft, material	Steel	Identification Mark 5557 GAL 14.5.41 JFC. 14.2.41.	Steam Pipes, material	Steel	Test pressure 600 lb/sq in	Date of Test 23.7.41 6.8.41
Is an installation fitted for burning oil fuel	CYO		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	CYO		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	CYO required					
Is this machinery duplicate of a previous case	CYO		If so, state name of vessel	✓		

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

The Machinery of this vessel has been constructed & fitted on board under Special Survey in accordance with the approved plans, the Society's Rules & the Specifications. The workmanship & materials are good & when tried under working conditions it was found satisfactory in every respect.

It is eligible, in my opinion, when the vessel is closed to have the records of L.M.C. 9.41.09. & the notations T. 3 Cy. 12"-20"-32" - 22" 85 NH. 200 lbs I.S.B. 2 Cf. G.S. 37. H.S. 1356. F.D.

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

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

The amount of Entry Fee ...	£	:	:	When applied for,
1/5 Special Balance of 25% of Transfer	£	4	5	13 SEP 1941
Dockyard Fee for Specification	£	3	6/3	When received,
Travelling Expenses (if any)	£	:	:	19

Committee's Minute TUE 30 SEP 1941

Assigned + LMC 9.41. FD. 09.

