

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 16. 3. 1942 When handed in at Local Office 16. 3. 1942 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 3. 4. 41 Last Survey 9. 3. 1942
 Reg. Book. on the SS. "EMPIRE MAIDEN" (Number of Visits 51)
 Built at Glasgow By whom built Messrs R & J Inglis Yard No. 1151 P
 Engines made at Glasgow By whom made Messrs David Rowan & Co Engine No. 1087
 Boilers made at Glasgow By whom made Messrs David Rowan & Co Boiler No. 1087
 Registered Horse Power 139 Owners Port belonging to
 Nom. Horse Power as per Rule 139 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Ocean Going Service

ENGINES, &c.—Description of Engines
 Dia. of Cylinders 15" : 25 1/2" : 41" Length of Stroke 30" No. of Cylinders 3 Revs. per minute 3
 Crank shaft, dia. of journals 8 1/2" as per Rule 8 1/2" Crank pin dia. 8 1/2" Crank webs 16 1/2" Mid. length breadth 5 3/8" Thickness parallel to axis 5 3/8"
 Intermediate Shafts, diameter 7.776 as per Rule 7.776 Thrust shaft, diameter at collars 8 1/2" as per Rule 8 1/2"
 Tube Shafts, diameter 8 1/2" as per Rule 8 1/2" Is the tube shaft fitted with a continuous liner Yes
 Screw Shaft, diameter 56" as per Rule 56" Thickness between bushes 1 1/2" as per Rule 1 1/2" 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 shaft Yes
 Propeller, dia. 10'-9" Pitch 11'-3" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 41 sq. feet
 Feed Pumps worked from the Main Engines, No. None Diameter 3 3/4" Stroke 15" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 3/4" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 2 @ 7" x 5" x 12" Pumps connected to the Main Bilge Line { No. and size 1 @ 6 1/2" x 7" x 15"
 How driven Steam How driven Steam
 Ballast Pumps, No. and size 1 @ 6 1/2" x 7" x 15" Lubricating Oil Pumps, including Spare Pump, No. and size 1 @ 4"
 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 3 @ 2 1/2", 1 @ 2"
 In Pump Room 1 @ 3" In Holds, &c. 1 @ 4"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 4" Independent Power Pump Direct Suctions to the Engine 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 Below
 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 Yes How are they protected Yes
 What pipes pass through the deep tanks Yes 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 Yes worked from Yes

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2100 sq. ft.
 Which Boilers are fitted with Forced Draft Main Which Boilers are fitted with Superheaters Yes
 No. and Description of Boilers One Single ended Working Pressure 190 lbs/sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? Yes
 Can the donkey boiler be used for domestic purposes only Yes If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes
 (If not state date of approval)
 Superheaters Yes General Pumping Arrangements 24-4-41 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 separate list.

The foregoing is a correct description.

For David Rowan & Co. Ltd.
 Arch. N. Grierson

Manufacturer.



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1941 Apr: 3. 16. 28 Aug: 20. 21. 28 Sep: 9. 15. 16 Oct: 1. 3. 9. 16. 20. 21. 27. 27 Nov 3. 4. 5. 17. 20. 21. 26. 27 Dec: 1. 4. 9. 10. 15. 25. 31 (1942) Jan: 2. 5. = 34
During progress of work in shops - -
Dates of Survey while building
During erection on board vessel - - -
Total No. of visits 51

Dates of Examination of principal parts—Cylinders 1-10-41 Slides 4-12-41 Covers 1-10-41
Pistons 20-11-41 Piston Rods 20-11-41 Connecting rods 26-11-41
Crank shaft 3-11-41 Thrust shaft 20-11-41 Intermediate shafts none
Tube shaft ✓ Screw shaft 17-11-41 Propeller 17-11-41
Stern tube 26-11-41 Engine and boiler seatings 18-11-41 Engines holding down bolts 5-1-42
Completion of fitting sea connections 30-11-41

Completion of pumping arrangements 6-3-42 Boilers fixed 5-1-42 Engines tried under steam 6-3-42

Main boiler safety valves adjusted 16-2-42 Thickness of adjusting washers P 7/16 S 7/16

Crank shaft material S.M. Forged Steel Identification Mark 11103 3-11-41 Thrust shaft material S.M. Forged Steel Identification Mark 10719, H.A.I. F27 20-11-41

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

Screw shaft, material S.M. Forged Steel Identification Mark 10719, H.A.I. F28 17-11-41 Steam Pipes, material Steel Test pressure 570 Date of Test 31-12-41

Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of the Rules for the use of oil as fuel been complied with Yes

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 SS. "EMPIRE BARN" Hls. Report 10-41

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under Special Survey in accordance with the Approved Plan and the Society's Rules and the Specification

The material and workmanship are good.

The machinery has been satisfactorily fitted on board Messrs A. J. Inglis No 1151 SS. EMPIRE MAIDEN and tried under working conditions.

The machinery of this vessel is in our opinion eligible to be classed in the Register Book with a record + L.M.C. 3-42 and notation CL. Fitted for oil fuel 3-42 F.P. above 150°F.

Rob
16/3/42

GLASGOW

Certificate to be sent to

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

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 17 MAR 1942
Special Specification ... £ 34 : 15 : 0
Donkey Boiler Fee ... £ 8 : 14 : 0
Travelling Expenses (if any) £ : : 19 When received,

Committee's Minute GLASGOW 17 MAR 1942

Assigned. 1-1-42

Fitted for oil fuel 3.42 F.P. above 150°F

M. Dale W.P. Gibson.
Engineer Surveyor to Lloyd's Register of Shipping.



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