

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

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Date of writing Report 19 When handed in at Local Office 29 1. 1945 Port of Glasgow
 No. in Survey held at Glasgow & Grangemouth Date, First Survey 9. 12. 43 Last Survey 5. 1. 1945
 Reg. Book on the ss EMPIRE JUMNA Tons { Gross 2370.49
 Net 1281.29
 Built at Grangemouth By whom built Grangemouth Dockyard Co. Ltd. Yard No. 458 When built 1944
 Engines made at Glasgow By whom made David Rowan & Co. Ltd. Engine No. 1157 When made 1944
 Boilers made at -do- By whom made -do- Boiler No. 1157 When made 1944
 Registered Horse Power Owners The Ministry of War Transport Port belonging to Grangemouth
 Nom. Horse Power as per Rule 242 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended International

GINES, &c.—Description of Engines Triple Expansion Revs. per minute 86½
 Dia. of Cylinders 18" - 31" - 52" Length of Stroke 39" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 10.653" Crank pin dia. 10¾" Mid. length breadth 21" Thickness parallel to axis 6¾"
 as fitted 10¾" Crank webs Mid. length thickness 6¾" shrunk Thickness around eye-hole 4¾"
 as per Rule 10.145" Thrust shaft, diameter at collars as per Rule 10.653"
 as fitted None as fitted 10¾"
 Tube Shafts, diameter as per Rule 11.311" Is the { tube } shaft fitted with a continuous liner { Yes
 as fitted 11½" { screw }
 Screw Shaft, diameter as per Rule 6.42" as fitted 5" Is the after end of the liner made watertight in the
 as fitted 11" Thickness between bushes as fitted 5" 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
 at No If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 3'-10"
 Propeller, dia. 14'-0" Pitch 14'-0" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 64 sq. feet
 Feed Pumps worked from the Main Engines, No. None Diameter 3½" Stroke 21" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3½" Stroke 21" Can one be overhauled while the other is at work Yes
 Feed { No. and size 2 @ 8½" x 6" x 18" Pumps connected to the { No. and size General Service one @ 7" x 8" x 18"
 Pumps { How driven Steam Main Bilge Line { How driven Steam
 Ballast Pumps, No. and size None in E.R. Lubricating Oil Pumps, including Spare Pump, No. and size 1
 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 @ 2½" & one @ 2"
 In Pump Room One @ 4" In Holds, &c. None

Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 6" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One @ 4" 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 Both
 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 No tunnel Is it fitted with a watertight door Yes worked from Yes

MAIN BOILERS, &c.—(Letter for record (3)) Total Heating Surface of Boilers 3360
 Which Boilers are fitted with Forced Draft main Which Boilers are fitted with Superheaters None
 No. and Description of Boilers One S.E. Working Pressure 220 lbs/sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No 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 Yes Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes
 (If not state date of approval)
 Superheaters Yes General Pumping Arrangements Yes 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 List attached

The foregoing is a correct description.

For David Rowan & Co. Ltd.
 Archd. W. Grierson

Manufacturer.



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Foundation 42213-0042214-0123

Dates of Survey while building

During progress of work in shops - - 1943 Dec 9.25 1944 Jan 14.21 Feb 4.9.11 Mar 7.13.14.16.27.30 Apr 30.25.16.20 May 1.6.9.18.
23.25 Jun 1.6.16.19.20.21 Jul 3.6.10.13. Aug 7.10.19.25.28.31 Nov 16 Dec 11.13.14.19.24.28.29.30

During erection on board vessel - - 1943 Jan 5.

Total No. of visits 48.

Dates of Examination of principal parts—Cylinders 18-5-44 Slides 10-8-44 Covers 18-5-44

Pistons 6-7-44 Piston Rods 6-7-44 Connecting rods 6-7-44

Crank shaft 1-6-44 Thrust shaft 1-6-44 Intermediate shafts ✓

Tube shaft ✓ Screw shaft 21-6-44 Propeller 21-6-44

Stern tube 31-8-44 Engine and boiler seatings 25-8-44 Engines holding down bolts 16-11-44

Completion of fitting sea connections 25-8-44

Completion of pumping arrangements 25-12-44 Boilers fixed 16-11-44 Engines tried under steam 25-12-44

Main boiler safety valves adjusted 25-12-44 Thickness of adjusting washers P + 5 3/8"

Crank shaft material S.M. Steel Identification Mark 132/8 J.S. Thrust shaft material S.M. Steel Identification Mark 132/8 J.S.

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

Screw shaft, material S.M. Steel Identification Mark 132/8 J.S. Steam Pipes, material O.H. Steel Test pressure 660 lbs/sq. in. Date of Test Sept 1944

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 with 1 1/2 by 1 1/2

Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel "Empire Pym" Glasgow Report No 68260

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under special survey in accordance with the Rules & approved plans and the materials and workmanship are good. It has been satisfactorily installed in the vessel, tested under working conditions and, in our opinion, is eligible to be classed with record L.M.C. 1,45 and notation C.L. Fitted for oil fuel 1,45 F.P. above 150° F. The specification requirements have been carried out satisfactorily.

The amount of Entry Fee ... £ 4 : 0 : 0 When applied for, 30 JAN 1945

Special Specification Fee ... £ 60 : 10 : 0

Donkey Boiler Fee ... £ 15 : 2 : 0

Travelling Expenses (if any) £ 3 : 12/6 When received, 19

Committee's Minute

Assigned

1- Dec 1.45

Fitted for oil fuel 1.45
F.P. above 150° F

Geo Stevenson & R. Del

Engineer Surveyors to Lloyd's Register of Shipping.



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