

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

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Date of writing Report 19 26 10 19 44 Port of Glasgow
 No. in Survey held at Reg. Book Glasgow Date, First Survey 18.1.44 Last Survey 16-10-1944
 (Number of Visits 46)
 on the S.S. "EMPIRE JURA" Tons Gross 813 Net 334
 Built at Glasgow By whom built A. & J. Inglis Ltd Yard No. 1282 P When built 1944
 Engines made at Glasgow By whom made David Rowan & Co. Ltd Engine No. 1158 When made 1944
 Boilers made at -do- By whom made -do- Boiler No. 1158 When made 1944
 Registered Horse Power Owners Ministry of War Transport 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

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 108
 Dia. of Cylinders 15"-25½"-41" Length of Stroke 30" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 8.165" Crank pin dia. 8½" Mid. length breadth 16½" Thickness parallel to axis 5½" shrunk
 as fitted 8½" Crank webs Mid. length thickness 5½" Thickness around eye-hole 4"
 Intermediate Shafts, diameter as per Rule 4.44" Thrust shaft, diameter at collars as per Rule 8.165" as fitted 8"
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 8.64" Is the shaft fitted with a continuous liner Yes
 as fitted Bronze Liners, thickness in way of bushes as per Rule .556" Thickness between bushes as per Rule .4" 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 at No
 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 36"
 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 Stroke Can one be overhauled while the other is at work Yes
 Large Pumps worked from the Main Engines, No. 2 Diameter 3½" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed Pumps No. and size 2 @ 7"x5"x12" Pumps connected to the Main Bilge Line No. and size One @ 6½"x4"x15" How driven Steam
 Ballast Pumps, No. and size One @ 6½"x4"x15" 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 3 @ 2½", One @ 2" In Holds, &c. One @ 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 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 mam Inlet on Reservoir 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
 How are they protected
 What Pipes pass through the bunkers Have they been tested as per Rule
 What pipes pass through the deep tanks
 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 Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 2100 ft²
 Which Boilers are fitted with Forced Draft Main Which Boilers are fitted with Superheaters
 and Description of Boilers One S.E. Working Pressure 190 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?
 Is the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Donkey Boilers
 (If not state date of approval)
 Superheaters General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes
 SPARE GEAR.
 Is the spare gear required by the Rules been supplied Yes
 Is the principal additional spare gear supplied List attached

The foregoing is a correct description.
 For David Rowan & Co. Ltd
 Arch. W. Grierson Manufacturer.



Dates of Survey while building

During progress of work in shops - - 19-4 Jan 18-21-24 Feb 11-24 Mar 7-13-14-16-30 Apr 20-25 May 9-22-23-25 Jun 13-16-19-27 July 3-10-13 Aug 7-8-9-10-11-13-14-22-25-28-29-30 Sep 6-13-14-20 Oct 2-10-13-14-16

During erection on board vessel - - -

Total No. of visits 46

Dates of Examination of principal parts - Cylinders 10-7-44 Slides 6-7-44 Covers 10-7-44

Pistons 10-8-44 Piston Rods 10-8-44 Connecting rods 6-7-44

Crank shaft 22-5-44 Thrust shaft 22-5-44 Intermediate shafts ✓

Tube shaft ✓ Screw shaft 11-8-44 Propeller 11-8-44

Stern tube 8-8-44 Engine and boiler seatings 8-8-44 Engines holding down bolts 14-9-44

Completion of fitting sea connections 8-8-44 Boilers fixed 14-9-44 Engines tried under steam 2-10-44

Completion of pumping arrangements X Thickness of adjusting washers P 11/32 S 3/8

Main boiler safety valves adjusted 2-10-44 Identification Mark 13677 J.S. Thrust shaft material S.M. Steel Identification Mark 13531 ✓

Crank shaft material S.M. Steel Identification Mark 13677 J.S. Tube shaft, material ✓ Identification Mark ✓

Intermediate shafts, material ✓ Identification Marks ✓ Steam Pipes, material A.H. Steel Test pressure 540 lbs/sq. in. Date of Test Sept 1944

Screw shaft, material S.M. Steel Identification Mark 13531 J.S. Is the flash point of the oil to be used over 150° F. Yes ✓

Is an installation fitted for burning oil fuel 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 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 "Empire Coppice" Glasgow Report No 674

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. The material 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.10, 44 and notation C.L. Fitted for oil fuel 10, 44 F.P. above 150°F.

The specification requirements have been carried out satisfactorily.

Certificate to be sent to Glasgow (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£ 3 : 0	When applied for,
Special Specification Fee	£ 34 : 15	31 OCT 1944
Donkey Boiler Fee	£ 8 : 13	When received,
Travelling Expenses (if any)	£ :	19

Jas. Stevenson & Mr Dale
Engineer Surveyors to Lloyd's Register of Shipping

Committee's Minute

Assigned -/- Recd 10.44

Fitted for oil fuel 10.44

S.P. above 150°F

