

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 21 NOV 1941

Date of writing Report 20/11/41 When handed in at Local Office 20/11/41 Port of W. Hartlepool
 Date, First Survey 5th March Last Survey 18th November 1941
 No. in Survey held at Hartlepool (Number of Visits 94)
 on the S/S "EMPIRE CELT" Gross Tons 8032.2
 Built at Haverham Hill By whom built Farness Shipbuilding Co. Ltd. Yard No. 335 Net 4664.17
 Engines made at Hartlepool By whom made Richardson, Westgarth & Co. Engine No. 2710 When built 1941
 Boilers made at " By whom made " Boiler No. 2710 When made 1941
 Registered Horse Power 674 Owners Ministry of War Transport. Port belonging to Huddersburg.
 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

MAKING, &c.—Description of Engines Triple Expansion Vertical Surface Condensing Revs. per minute 85.5
 No. of Cylinders 3 Length of Stroke 51" No. of Cranks 3
 Diameter of Journals 15.24" as per Rule 15.24" Crank pin dia. 16" Mid. length breadth 19.5" Thickness parallel to axis 10.8"
 Intermediate Shafts, diameter 14.49" as per Rule 14.49" Mid. length thickness 15.24" Thickness around eye-hole 8.4"
 Main Shafts, diameter 16.01" as per Rule 16.01" Is the tube shaft fitted with a continuous liner Yes
 Liners, thickness in way of bushes 7.9" as per Rule 7.9" Thickness between bushes 13.1" Is the after end of the liner made watertight in the stern 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
 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 5'-5"
 Total Developed Surface 131.75 sq. feet
 Pumps worked from the Main Engines, No. 2 Diameter 5" Stroke 27" Can one be overhauled while the other is at work Yes
 Pumps connected to the Main Bilge Line { No. and size 2-5"x27"; 5" connection Ballast Pump
 How driven Main Engine; Steam
 Lubricating Oil Pumps, including Spare Pump, No. and size 1-10"x12"x12"
 Independent means arranged for circulating water through the Oil Cooler Yes
 Suctions, connected to both Main Bilge Pumps and Auxiliary Pumps:—In Engine and Boiler Room 3 1/2" aft. wall, 3 1/2" E.R.P., 3 1/2" E.R.S., 2 1/2" Cofferdam, 3 1/2" B.R.P., 3 1/2" B.R.S.
 Fore Peak 1-4", Chain Locker Flat 1-2 1/2", Main Pump Room (Aft.) 1-3" P+1-3" S. Aft. Coff. 1-3" 4 sector.
 Water Circulating Pump Direct Bilge Suctions, No. and size 1-10" P.
 Are all the Bilge Suction Pipes in hull and tunnel well fitted with strum-boxes Yes
 Sea Connections fitted direct on the skin of the ship Yes
 Are they fitted with Valves or Cocks Both
 Are the Overboard Discharges above or below the deep water line Below
 Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
 How are they protected Yes
 Have they been tested as per Rule Yes
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 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 None
 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 100.20 sq. ft.
 Which Boilers are fitted with Superheaters all
 Working Pressure 220 lb/sq. in.
 REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 DONKEY BOILER FITTED? Yes
 If so, is a report now forwarded? Yes

Are approved plans forwarded herewith for Shafting 21/1/40 Main Boilers 16/10/39 Auxiliary Boilers 12/3/40 Oil fuel Burning Piping Arrangements 28/10/41
 (If not state date of approval) 30/10/39
 General Pumping Arrangements Yes

Spare gear required by the Rules been supplied Yes
 principal additional spare gear supplied Yes

The foregoing is a correct description.
 For RICHARDSON, WESTGARTH & CO. LIMITED.

W. E. Coverage
 DIRECTOR

Manufacturer.



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W1169-0057

During progress of work in shops - - - 1941. March 5-11-28 April 7-10-17-19-23-29 May 1-2-13-14-22-28-29 June 7-11-13-18-23-25-30 July 1-2-3-4-10-11-21-31 August 1-5-7-8-11-12-13-25-29 September 1-2-4-8-9-12-15-16-17-18-19-22-24-25-26-29-30 October 3-4-6-7-8-9-10-13-14-15-16-17-18-20-21-23-24-27-28-30 November 3-4-5-6-7-10-11-12-13-14-17-18

Dates of Survey while building

During erection on board vessel - - -

Total No. of visits

Dates of Examination of principal parts—Cylinders 4/7, 14/7, 5/8 (1941) Slides 21/7/41 Covers 1/9/41
 Pistons 1/9/41 Piston Rods 1/9/41 Connecting rods 13/6/41
 Crank shaft 14/5/41 Thrust shaft 2/9/41 Intermediate shafts 23/9/41
 Tube shaft ✓ Screw shaft 23/9/41 Propeller ✓
 Stern tube 21/9/41 Engine and boiler seatings 30/10/41 Engines holding down bolts ✓ 30/10/41
 Completion of fitting sea connections ✓ 3/10/41 Boilers fixed ✓ 30/10/41 Engines tried under steam ✓ 25/11/41
 Completion of pumping arrangements 25/11/41 Thickness of adjusting washers For 13 1/2, F. 3/8 A. 1 1/2 P. 3/4 P. 3/2 S. 3/4 P. 3/4 S. 1 1/2
 Main boiler safety valves adjusted ✓ 25/11/41 Crank shaft material Steel Identification Mark 9820 HAI Thrust shaft material Steel Identification Mark 9820 HAI
 Intermediate shafts, material Steel Identification Marks 4816 AEG Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Steel Identification Mark 9820 HAI Steam Pipes, material SD Steel Test pressure 660 lb. Date of Test 18-11
 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 Gil tanker. 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 Not required
 Is this machinery duplicate of a previous case Yes If so, state name of vessel R.W. 2705 "Empire Emerald"
 General Remarks (State quality of workmanship, opinions as to class, &c.)

The engines & boilers of this vessel have been constructed under Special Survey & in accordance with the approved plans.

The workmanship & materials have been found good.

The machinery has been forwarded to Harston Hill to be fitted on board by Messrs. Furness Shipbuilding Co. in their Yard CP 335.

In my opinion, this vessel will be eligible to have record of + LMC - with date - on completion.

The machinery fitted on board in accordance with the approved plans & Rule Requirements, tried out under working conditions & found satisfactory & in my opinion is eligible for record of + LMC - 11.41 & notation of TS (CL) 11.41. Three draught & superheated.

The ships side inlet & discharge valves re. insured as required, in accordance with Admiralty Notice MS/2285/40 MS 3192/40.

The amount of Entry Fee ... £ 6 : 0 :
 Special $\frac{4}{5}$ LMC ... £ 86 : 19 :
 Donkey Boiler Fee ... £ 21 : 15 :
 Travelling Expenses (if any) £ : :
 When applied for, 22/12/1941
 When received, 19

Committee's Minute

TUE. 6 JAN 1942

Assigned

+ LMC 11.41 FD CL

Clive Bell

Engineer Surveyor to Lloyd's Register of Shipping

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