

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

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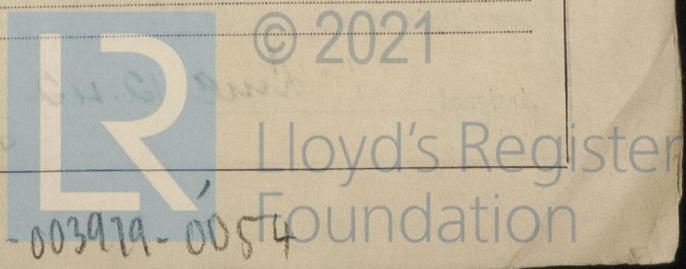
of writing Report 19 21.12.1942 When handed in at Local Office GLASGOW Port of GLASGOW
 in Survey held at GLASGOW & GREENOCK Date, First Survey 26th July 1942 Last Survey 16th DECEMBER 1942
 J. Book (Number of Visits 56) Tons {Gross 7043.49
 Net 4908.57
 on the S/S "EMPIRE PENNANT" Yard No. 972 When built 1942
 built at PORT GLASGOW By whom built LITHGOWS' LD. Engine No. 1117 When made 1942
 engines made at GLASGOW By whom made DAVID ROWAN & CO. LD. Boiler No. A 60 When made 1942
 cylinders made at CLYDEBANK By whom made JOHN BROWN & CO. LD. Owners MINISTRY OF WAR TRANSPORT Port belonging to GREENOCK
 registered Horse Power 558 Is Refrigerating Machinery fitted for cargo purposes YES Is Electric Light fitted YES
 name of vessel EMPIRE PENNANT
 name of vessel as per Rule 558

Types, &c.—Description of Engines TRIPLE EXPANSION Revs. per minute
 No. of Cylinders 24 1/2 - 39 - 70 Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 14" Mid. length breadth 27 1/2" Thickness parallel to axis 9"
 as fitted 14 1/4" Crank pin dia. 14 3/4" Crank webs Mid. length thickness 9" Thickness around eye-hole 6 3/8"
 Intermediate Shafts, diameter as per Rule 13.93" Thrust shaft, diameter at collars as per Rule 14"
 as fitted 13 5/8" as fitted 14 1/4"
 Main Shafts, diameter as per Rule 14.85" Is the tail screw shaft fitted with a continuous liner YES
 as fitted 15 1/4" as fitted 9/16"
 Propeller Liners, thickness in way of bushes as per Rule 3/4" Thickness between bushes as per Rule 9/16" Is the after end of the liner made watertight in the
 as fitted 13/16" as fitted 3/4" 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
 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 5'-1"
 Propeller, dia. 18'3" Pitch 16'-6" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 110 sq. feet
 Bilge Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work —
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work YES
 Feed Pumps { No. and size 2 @ 10 1/2" x 8" x 22" Pumps connected to the Main Bilge Line { No. and size BALLAST PUMP 200 TONS/HR. GEN. SERVICE PUMP
 How driven STEAM How driven STEAM 30 TONS/HR.
 Ballast Pumps, No. and size 1 @ 9" x 12" x 12" Lubricating Oil Pumps, including Spare Pump, No. and size —
 Are there 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 @ 3" In Holds, &c. YES 1, 3 1/4" HOLOS 2 @ 3" MIP HOLO 2 @ 2 1/2"
 In Pump Room — CROSSBUNKER HOLO 2 @ 2 1/2" TUNNEL WELL 1 @ 2 1/2"
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 @ 5" 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 — How are they protected —
 What pipes pass through the deep tanks — Have they been tested as per Rule —
 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 No worked from —

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 8336 sq
 Which Boilers are fitted with Forced Draft ALL Which Boilers are fitted with Superheaters NONE
 No. and Description of Boilers 3 SINGLE-ENDED 2 SB & 1 C.I. Working Pressure 220 LBS/SQ"
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES
 IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded? —
 Can 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 — Oil fuel Burning Piping Arrangements —
 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, T.B. & Co.,
 Archd. W. Guerson

Manufacturer.



003971-003979-0054

Dates of Survey while building
 During progress of work in shops - - { 1942 Feb 26 Mar 3, 16, 31 Apr 22, 25 May 7, 11, 19, 28 Jun 1, 9, 11, 15, 18, 19, 25 July 3, 6, 7, 13, 14, 15, 16, 17, 24 Aug 3, 4, 5, 10, 21, 24, 31 Sep 4, 15, 21, 24, 29, 30 Oct 27, 30 Nov 19, 23, 24 }
 During erection on board vessel - - - { }
 Total No. of visits 56
 VISITS BY GRK. SURVEYOR: - (942) SEPT. 29. NOV. 26, 30. DEC. 3, 4, 6, 7, 8, 11, 13, 14, 16.

Dates of Examination of principal parts - Cylinders 6-7-42 Slides 7-7-42 Covers 6-7-42
 Pistons 19-6-42 Piston Rods 19-6-42 Connecting rods 17-7-42
 Crank shaft 28-7-42 Thrust shaft 28-7-42 Intermediate shafts 10-8-42
 Tube shaft - Screw shaft 24-9-42 Propeller 24-9-42
 Stern tube 9-6-42 Engine and boiler seatings 29/9/42 Engines holding down bolts 12/12/42
 Completion of fitting sea connections 29/9/42
 Completion of pumping arrangements 5/12/42 Boilers fixed 2/12/42 Engines tried under steam 16/12/42
 Main boiler safety valves adjusted 5/12/42 Thickness of adjusting washers P 5 1/16" C 5 1/4" S 3 1/8"
 Crank shaft material SM. Steel Identification Mark 11522 AJB Thrust shaft material SM. Steel Identification Mark 11522
 Intermediate shafts, material SM. Steel Identification Marks 11522 AJB Tube shaft, material - Identification Mark -
 Screw shaft, material SM. Steel Identification Mark 11522 TP9 Steam Pipes, material O.H. Steel Test pressure 660 lb. Date of Test 11/11/42
 Is an installation fitted for burning oil fuel No 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 - 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 Lancer" G.B. Reg. No 66336

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. It has been efficiently installed in the vessel, tested under working conditions and found satisfactory and, in our opinion, is eligible to be classed in the Register Book with read + LMC 12, 42 and notation CL. The specification requirements have been carried out satisfactorily.

The following steam pipes are made of Bessemer steel and the flanges have been stamped accordingly:-
 5 - 4" OD 6 W G Nos 117, 117A, 118, 118A, 119
 6 - 3 1/2" OD 6 W G Nos 119A, 119B + 119C

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

21/12/42
 The amount of Entry Fee ... £ 6 : - :
 BALANCE Special + SPEC. ... £ 88 : 6/6 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 22 DEC 1942
 When received, 19

M. J. Burns + M. Caldwell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 22 DEC 1942

Assigned - 1 Dec 12.42

