

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

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Date of writing Report 25th May 1942 When handed in at Local Office 28th May 1942 Port of Dundee
 No. in Survey held at Dundee Date, First Survey 16th Feb 42 Last Survey 21st May 1942
 Reg. Book. 36463 on the s/s "EMPIRE PRINCE" (Number of Visits 20)
 Built at Dundee By whom built Caledon S. B. & Co. Ltd. Yard No. 394 When built 1942
 Engines made at Wallsend By whom made H. E. Mac Eng Co (1938) Ltd Engine No. 3017 When made 1942
 Boilers made at Dundee By whom made Caledon S. B. & Co. Ltd Boiler No. 593 When made 1942
 Registered Horse Power ✓ Owners The Ministry of War Transport Port belonging to Dundee
 Nom. Horse Power as per Rule 570 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Ocean-going

ENGINES, &c.—Description of Engines

Revs. per minute
 Dia. of Cylinders _____ Length of Stroke _____ No. of Cylinders _____ No. of Cranks _____
 Crank shaft, dia. of journals as per Rule Crank pin dia. _____ Crank webs Mid. length breadth _____ Thickness parallel to axis _____
as fitted _____ Mid. length thickness _____ shrunk _____ Thickness around eye-hole _____
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule
as fitted _____ as fitted _____
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule
as fitted _____ as fitted _____
 Bronze Liners, thickness in way of bushes as per Rule Thickness of bushes as per Rule Is the after end of the liner made watertight in the
as fitted _____ as fitted _____
 propeller boss _____ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner _____
 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 _____
 If two liners are fitted, is the shaft protected between the liners _____ Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft _____ If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller _____
 Propeller, dia. _____ Pitch _____ No. of Blades _____ Material _____ whether Moveable _____ Total Developed Surface _____ sq. feet
 Feed 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. _____ Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____
 Feed Pumps { No. and size 2 off, 9 1/2" - 7" - 21" Pumps connected to the { No. and size 93 Pumps 9 1/2" - 7" - 21" Ballast Pumps 10 1/2" - 13" - 24"
 { How driven Steam-driven Main Bilge Line { How driven Steam-driven
 Ballast Pumps, No. and size one - 10 1/2" - 13" - 24" 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 In E.R. aft. 1-3" Port, 1-3" Starb In Boiler Room 1-3" Port 1-3" Starb
 In Pump Room Dry tank 1-2 1/2" Port, 1-2 1/2" Starb In Holds, &c. No 1:- 1-3" Port, 1-3" Starb. No 2:- 1-3" Port, 1-3" Starb,
No 3:- 1-3" Port, 1-3" Starb. No 4:- 1-3" Port, 1-3" Starb. No 5:- 1-3" Port, 1-3" Starb
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-9" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1-5" Starb aft 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 except low injection thru D.B. tank 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 Suctions to fore hold How are they protected In the limbers
 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 door worked from access from deck.

MAIN BOILERS, &c.—(Letter for record (S))

Total Heating Surface of Boilers 4248 sq. ft.
 Is Forced Draft fitted Yes No. and Description of Boilers 3 - Single Ended Multi. Working Pressure 220 lbs.
 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 intended to be used for domestic purposes only ✓
 PLANS. Are approved plans forwarded herewith for Shafting ✓ Main Boilers Yes Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)
 Superheaters ✓ General Pumping Arrangements With hull report 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 1 Aux. Feed check Valve + seat. 1 Boiler Safety Valve Spring; one set
 of valves for water end of each steam-driven pump. 1 coke basket for feed water filter + one
 complete set of cloth covered cartridges assorted bolts + nuts + studs.

The foregoing is a correct description,

Manufacturer.



During progress of work in shops - - -
 Dates of Survey while building
 During erection on board vessel - - -
 Total No. of visits 20

1942 Feb 16-19-23-25 Mar 5-9-13-19-23-26-31 Apr 3-8-16-23-30 May 11-14-18-21

Dates of Examination of principal parts—Cylinders _____ Slides _____ Covers _____
 Pistons _____ Piston Rods _____ Connecting rods _____
 Crank shaft _____ Thrust shaft _____ Intermediate shafts _____
 Tube shaft _____ Screw shaft in place 26-3-42 Propeller in place 26-3-42
 Stern tube in place 23-3-42 Engine and boiler seatings 19-3-42 Engines holding down bolts 23-4-42
 Completion of fitting sea connections 31-3-42 Boilers fixed 23-4-42 Engines tried under steam at Sea 18-5-42 ^{In dock 11-5-42}
 Completion of pumping arrangements 14-5-42 Main boiler safety valves adjusted 11-5-42 Thickness of adjusting washers Port 1 1/4" P.V. 3/16" S.V. 1/32" Centre P.V. 27/64" S.V. 29/64" Star 19/32" S.V. 11/16"
 Crank shaft material _____ Identification Mark _____ Thrust shaft material _____ Identification Mark _____
 Intermediate shafts, material _____ Identification Marks _____ Tube shaft, material _____ Identification Mark _____
 Screw shaft, material _____ Identification Mark _____ Steam Pipes, material Steel Test pressure 660 lbs. Date of Test Dun 23/4/42
 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 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 9/3" Empire Rhodes"

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This Machinery - Inc. Rpt N° 100314 on the Main Engines & Dun Rpt N° 9311 on the Boilers - has been efficiently fitted on board, the materials & workmanship being sound & good. The Main & Auxiliary Machinery, when tried out under full power & working conditions, was found satisfactory in all respects.
 The requirements of the Ministry of War Transport specification, & the provisions of M.O.S. Circular No 191, so far as they apply, have been satisfactorily carried out.
 In my opinion, the Machinery of this vessel is eligible to be classed in the Register Book with the notation of + L.M.C. 5-42, & the records of T.S.C.L. + 3 S.B.F.D.

The amount of Entry Fee ... £ : : When applied for,
 Special 1/5th L.M.C. £ 25 : 2' 6" 28/5/1942
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 19

John Houston
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW** 2 JUN 1942
 Assigned 1- LMC 5.42

