

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 14/4/1943 When handed in at Local Office 14/4/1943 Port of WEST HARTLEPOOL
 No. in Survey held at WEST HARTLEPOOL Date, First Survey 31st July, 1942 Last Survey 5th April, 1943
 Reg. Book. WEST HARTLEPOOL (Number of Visits 12)
 on the STEEL SCREW STEAMER "EMPIRE PROWESS" Tons { Gross 7057.97
 Net 4855.22
 Built at West Hartlepool By whom built Wm Gray & Co. Ltd Yard No. 1142 When built 1943
 Engines made at West Hartlepool By whom made Central Marine Eng Works Engine No. 1142 When made 1943
 Boilers made at West Hartlepool By whom made Central Marine Eng Works Boiler No. 1142 When made 1943
 Registered Horse Power 510 Owners Ministry of War Transport Port belonging to West Hartlepool
 Nom. Horse Power as per Rule 510 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 Inverted triple expansion Revs. per minute 76
 Dia. of Cylinders 24 1/2 x 39 x 70 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.99 Crank pin dia. 14 1/4 Crank webs 21 Mid. length breadth 21 Thickness parallel to axis 8 3/4
as fitted 14 1/4 Mid. length thickness 8 3/4 Thickness around eye-hole 6 1/4
 Intermediate Shafts, diameter as per Rule 13.32 Thrust shaft, diameter at collars as per Rule 13.99
as fitted 13 3/8 as fitted 14 1/4
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 14.84 Is the tube shaft fitted with a continuous liner Yes
as fitted as fitted 15 1/4 screw
 Bronze Liners, thickness in way of bushes as per Rule .753 Thickness between bushes as per Rule .56 Is the after end of the liner made watertight in the
as fitted .812 as fitted 21/32 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 One length
 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 lapped or protected between the liners - Is an approved Oil Gland or other appliance fitted at the after end of the tub
 shaft 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 Best Steel whether Moveable No Total Developed Surface 110 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. 2 Diameter 4 Stroke 28 Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 3 @ 9 1/2 x 7 x 21 SINGLEX Pumps connected to the { No. and size 2 @ 4 x 28 | @ 10 x 11 x 10 | @ 9 1/2 x 7 x 21
 { How driven Independent Steam Main Bilge Line { How driven Main Engine | Independent Steam
 Ballast Pumps, No. and size 1 @ 10 x 11 x 10 DUPLEX 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 4 @ 3" - 1 @ 5"
 In Pump Room - In Holds, &c. No 1, 2 @ 3" No 2, 2 @ 3" No 3, 2 @ 3" No 4, 2 @ 3"
Eng Rm. 2 @ 3" No 5, 2 @ 3" No 6, 2 @ 3" TUNNEL WELL 1 @ 2 1/2"

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" 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 On reservoirs 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 Bilge pipes to Forward Stacks How are they protected Wood ceiling
 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 7,248
 Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters all
 No. and Description of Boilers 3 single ended multitubular Working Pressure 220 lbs
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? - 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 9-5-41 Main Boilers 19-2-41 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 -

NOTE.—The words which do not apply should be deleted. If not, state whether, and when, one will be sent.

The foregoing is a correct description
 FOR THE CENTRAL MARINE ENGINE WORKS

(W. Gray & Co. Ltd.)
 J. H. Beaumont
 GENERAL MANAGER.

Manufacturer.



Dates of Survey while building:

 During progress of work in shops: 1942. July 31. Oct. 28. Nov. 6. 7. 20. Dec. 2. 12. 18. 19. 22. 23. 1943 - Jan. 5. 6. 8. 9. 11. 12. 13. 14. 15.

 During erection on board vessel: 1943. Jan. 22. Feb. 1. 10. 15. 20. March 1. 5. 11. 22. 23. 26. 29. 30. April 2. 5.

 Total No. of visits: 72

Dates of Examination of principal parts—Cylinders H-11-H2 - 23-1-H3 Slides 23-1-H3 Covers 23-1-H3.

 Pistons 23-1-H3. Piston Rods 23-1-H3 Connecting rods 23-1-H3.

 Crank shaft 28-10-H2 - 19-1-H3. Thrust shaft 22-12-H2 - 19-1-H3. Intermediate shafts 5-2-H3.

 Tube shaft - Screw shaft 18-1-H3 - 5-2-H3. Propeller 16-2-H3.

 Stern tube 16-2-H3. Engine and boiler seatings 26-1-H3 Engines holding down bolts 5-3-H3.

 Completion of fitting sea connections 26-1-H3.

 Completion of pumping arrangements 29-3-H3. Boilers fixed 5-3-H3. Engines tried under steam 30-3-H3.

 Main boiler safety valves adjusted 29-3-H3. Thickness of adjusting washers:

P	P	S	P	S	P	S
2 3/4"	1 1/2"	5/16"	5/16"	1 1/2"	2 1/4"	1 3/8"
SUP 1/32"	SUP 1/32"	SUP 1/64"	SUP 1/64"	SUP 1/32"	SUP 3/16"	SUP 1/16"

 Crank shaft material IMHOT STEEL Identification Mark N° 9800 C.P. Thrust shaft material IMHOT STEEL Identification Mark N° 9823 C.P.

 Intermediate shafts, material IMHOT STEEL Identification Marks N° 9825, 6, 7, 8, 9 Tube shaft, material IMHOT STEEL Identification Mark N° 9824 C.P.

 Steam Pipes, material SP STEEL Test pressure 660 lbs. Date of Test 13-3-H3.

 Is an installation fitted for burning oil fuel 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 S.S. EMPIRE MORTIMER RPT N° 18389.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been built under special survey and in accordance with approved plans and specification. The workmanship and materials have been found good. Upon completion they were examined under full working conditions and found satisfactory. It is recommended that the machinery of this vessel be classed in the Register Book as L.M.C. H. 43. 3SB (SFC.) F.D. CL. Basis Bessemer steel tubes, all auxiliary steam pipes to be submitted for examination after 4 years.

The amount of Entry Fee ... £ 6 : 0 : When applied for,

 Special ... £ 100 : 10 : 14/4/1943

 Donkey Boiler Fee ... £ 25 : 3 : When received,

 Travelling Expenses (if any) £ : : 1943

TUES. 20 APR 1943

Arthur W. Oxford,

 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ L.M.C. H. 43

 F.D. CL



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