

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

15 OCT 1942

Date of writing Report 14/10/1942 When handed in at Local Office 14/10/1942 Port of WEST HARTLEPOOL
 No. in Survey held at WEST HARTLEPOOL Date, First Survey 14th May, 1942 Last Survey 3rd October, 1942
 Reg. Book. on the STEEL SCREW STEAMER "EMPIRE CENTAUR" (Number of Visits 71)
 Gross 7041.34 Tons
 Net 5024.18 Tons
 Built at WEST HARTLEPOOL By whom built WM GRAY & CO LTD Yard No. 1134 When built 1942
 Engines made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WRKS Engine No. 1134 When made 1942
 Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WRKS Boiler No. 1134 When made 1942
 Registered Horse Power _____ 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 Mid. length breadth 21 Thickness parallel to axis 8 3/4
 as fitted 14 1/4 Mid. length thickness 8 3/4 shrunk 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 5/8 as fitted 14 1/4

Tube Shafts, diameter as per Rule _____ as fitted _____ 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 as per Rule 15.6 Is the after end of the liner made watertight in the propeller boss Yes
 as fitted _____ as fitted 8.12 Thickness between bushes as fitted 2 1/32 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 tube shaft No
 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 CAST IRON 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 2 @ 9 1/2 x 7 x 21, 1 @ 9 1/2 x 7 x 21 GSPump connected to the { No. and size 2 @ 4 x 28 | 1 @ 10 x 11 x 10 DUPLEX | 1 @ 9 1/2 x 7 x 21 SINGLEX
 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. N°1. 2 @ 3" N°2. 2 @ 3" N°3. 2 @ 3" BILGE. 2 @ 3"
ENG RM. 2 @ 3" N°4. 2 @ 3" N°5. 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 reservoir Are they fitted with Valves or Cocks Both

Are they fitted 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 Forward bilge pipes 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 None worked from _____

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7248 ft²
 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? 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 9-5-41 Main Boilers 19-2-41 Auxiliary Boilers _____ Donkey Boilers _____
 Superheaters _____ General Pumping Arrangements _____ Oil fuel Burning Piping Arrangements _____

SPARE GEAR.
 Is the spare gear required by the Rules been supplied Yes
 What is the principal additional spare gear supplied _____

The foregoing is a correct description.

FOR THE CENTRAL MARINE ENGINE WORKS

(W. Gray & Co. Ltd)

Manufacturer.

Jeff Searney
GENERAL MANAGER.



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Lloyd's Register Foundation

004394-004404-0140

Dates of Survey while building

During progress of work in shops - - 1942. May 14. 15. 29. June 1. 3. 8. 25. 26. 29. 30. July 1. 2. 4. 6. 7. 8. 9. 10. 13. 14. 15. 16. 17. 20. 21. 22. 23. 24. 25. 27. 28. 29. 30. 31. August 1. 10. 11. 12. 13. 14. 15. 17. 18. 19. 21. 25. 26. 27. 28. September 1. 2. 3. 4. 14. 15.

During erection on board vessel - - - 1942. June 11. July 9. 14. 27. August 10. 13. 25. 26. September 3. 4. 15. 21. 28. 29. 30. October 3.

Total No. of visits 71

Dates of Examination of principal parts—Cylinders 29.5.42 - 20.7.42. Slides 8.7.42. Covers 8.7.42.

Pistons 8.7.42. Piston Rods 2.7.42. Connecting rods 2.7.42.

Crank shaft 3.6.42 - 20.7.42. Thrust shaft 30.6.42 - 20.7.42. Intermediate shafts 21.7.42 - 1.8.42.

Tube shaft - Screw shaft 9.7.42 - 1.8.42. Propeller 1.8.42.

Stern tube 10.8.42. Engine and boiler seatings 9.7.42. Engines holding down bolts 26.8.42.

Completion of fitting sea connections 27.7.42.

Completion of pumping arrangements 29.9.42. Boilers fixed 26.8.42. Engines tried under steam 30.9.42.

Main boiler safety valves adjusted 28.9.42. Thickness of adjusting washers 2 3/4", 1 1/2", 3/8", 1 1/2", 3/8", 1 1/2", 3/8".

Crank shaft material Ingot Steel Identification Mark N° 8594 CP. Thrust shaft material Ingot Steel Identification Mark N° 8598 CP.

Intermediate shafts, material Ingot Steel Identification Marks N° 8600, 1, 2, 3, 4, 5. Tube shaft, material - Identification Mark -

Screw shaft, material Ingot Steel Identification Mark N° 8599 CP. Steam Pipes, material SP Steel. Test pressure 660 lbs. Date of Test 11.8.42.

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 SS. EMPIRE CLARION RPT N° 18.330.

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 the 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 Books of L.M.C. 10.42 3SB (SH) F.D. C.L.

Note: - Basic Bessemer Steel Tubes. All auxiliary steam pipes to be submitted for examination after 4 years.

The amount of Entry Fee ... £ 6 : 0 :

Special ... £ 100 : 10 :

Donkey Boiler Fee ... £ 25 : 3 :

Travelling Expenses (if any) £ : : 19

When applied for, 11/10/1942

When received, 19

Arthur W. Oxford
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 20 OCT 1942

Assigned + LMC 10.42
FD. C.L.



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