

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 18333

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Date of writing Report 28/9/1942 When handed in at Local Office 28/9/1942 Port of WEST HARTLEPOOL
 in Survey held at WEST HARTLEPOOL. Date, First Survey 28 January 1942 Last Survey 23rd September 1942
 g. Book. on the STEEL SCREW STEAMER "EMPIRE BOSWELL" (Number of Visits 51)
 Tons { Gross 2873.91
 Net 1695.16
 Built at WEST HARTLEPOOL By whom built WM. GRAY & CO LTD Yard No. 1135 When built 1942.
 Engines made at WEST HARTLEPOOL. By whom made CENTRAL MARINE ENG. WORKS Engine No. 1135 When made 1942.
 Boilers made at WEST HARTLEPOOL. By whom made CENTRAL MARINE ENG. WORKS Boiler No. 1135 When made 1942.
 Registered Horse Power Owners MINISTRY OF WAR TRANSPORT. Port belonging to WEST HARTLEPOOL.
 n. Horse Power as per Rule 269. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
 ade for which Vessel is intended OCEAN GOING.

GINES, &c.—Description of Engines. Inverted triple expansion. Revs. per minute 72.
 No. of Cylinders 20 x 31 x 55 Length of Stroke 39" No. of Cylinders 3. No. of Cranks 3.
 Crank shaft, dia. of journals as per Rule 11.0" Crank pin dia. 11.4" Crank webs Mid. length breadth 16" Thickness parallel to axis 6.3" shrunk
 as fitted 11.4" Mid. length thickness 6.3" Thickness around eye-hole 4.3"
 Intermediate Shafts, diameter as per Rule 10.47" Thrust shaft, diameter at collars as per Rule 11.0"
 as fitted 10.4" as fitted 11.4"
 Main Shafts, diameter as per Rule 11.78" Is the { tube } shaft fitted with a continuous liner { yes }
 as fitted 12.4" as fitted { screw }
 Bronze Liners, thickness in way of bushes as per Rule 6.57" Thickness between bushes as per Rule 4.92"
 as fitted 11.0" as fitted 5.2" Is the after end of the liner made watertight in the
 reller 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.
 he 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
 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
 No. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 4-3 3/4"
 Propeller, dia. 15'-9" Pitch 14'-9" No. of Blades 4. Material CAST IRON, whether Moveable No. Total Developed Surface 75. sq. feet
 d Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 26" Can one be overhauled while the other is at work yes.
 ge Pumps worked from the Main Engines, No. 2 Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work yes.
 ed { No. and size 2@3"x26" 1@8"x6"x15" SINGLE Pumps connected to the { No. and size 2@14"x26" 1@10"x11"x10" DUPLEX
 ps { How driven MAIN ENGINE. INDEPENDENT STEAM. Main Bilge Line How driven MAIN ENGINE INDEPENDENT STEAM.
 last Pumps, No. and size 1@10"x11"x10" DUPLEX. Lubricating Oil Pumps, including Spare Pump, No. and size
 two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary
 e Pumps;—In Engine and Boiler Room 5@3" 1@4" In Holds, &c. No. 1, 2@3" No. 2, 2@3" BOILER RM, 2@3"
 Pump Room 19 RM, 3@3" No. 3, 4@2 1/2" TUNNEL WELL 1@2 1/2"
 n Water Circulating Pump Direct Bilge Suctions, No. and size 1@6" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 and size 1@4" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes.
 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.
 all Sea Connections fitted direct on the skin of the ship or reservoirs. Are they fitted with Valves or Cocks Both.
 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 MAIN AIX BELOW
 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.
 t Pipes pass through the bunkers Bilge pipes to Forward Holds. How are they protected Wood ceiling
 t pipes pass through the deep tanks Have they been tested as per Rule
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes.
 e 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
 artment to another yes. Is the Shaft Tunnel watertight yes. Is it fitted with a watertight door No. worked from

IN BOILERS, &c.—(Letter for record 5.) Total Heating Surface of Boilers 3,854.5
 ich Boilers are fitted with Forced Draft Both. Which Boilers are fitted with Superheaters No.
 and Description of Boilers 2 Single ended, Multitubular Working Pressure 200 lbs.
 A REPORT ON MAIN BOILERS NOW FORWARDED? yes.
 A DONKEY BOILER FITTED? No. If so, is a report now forwarded?

the donkey boiler be used for domestic purposes only
 ANS. Are approved plans forwarded herewith for Shafting 2-10-40. Main Boilers 11-11-40. Auxiliary Boilers Donkey Boilers
 (If not state date of approval)
 reheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.

the spare gear required by the Rules been supplied yes.
 the principal additional spare gear supplied

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

123, Gray & Co. Ltd.

J. H. Seamaney
 GENERAL MANAGER

Manufacturer.



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Lloyd's Register
 Foundation

W1025-0234

Dates of Survey while building
During progress of work in shops - - 1942. January 8. March 30. April 10. 15. 20. 22. 27. 29. May 4. 5. 6. 8. 9. 11. 12. 14. 15. 16. 20. 21. 22. 26. 28. 29.
June 1. 2. 3. 4. 5. 10. 13. 23. 24. 25. 26. July 1.
During erection on board vessel - - - 1942 May 27. 29. June 1. 5. 10. 22. 30. August 10. 12. September 8. 9. 13. 14. 23.
Total No. of visits 51

Dates of Examination of principal parts—Cylinders 29.4.42 - 28.5.42 Slides 28.5.42 Covers 28.5.42
Pistons 28.5.42. Piston Rods 28.5.42. Connecting rods 28.5.42.
Crank shaft 9.5.42 - 28.5.42. Thrust shaft 12.5.42 - 28.5.42. Intermediate shafts 21.5.42 - 2.6.42.
Tube shaft - Screw shaft 29.4.42 - 2.6.42. Propeller 2.6.42.
Stern tube 21.5.42 - 1.6.42. Engine and boiler seatings 27.5.42. Engines holding down bolts 22.6.42.
Completion of fitting sea connections 27.5.42.
Completion of pumping arrangements 14.9.42. Boilers fixed 22.6.42. Engines tried under steam 9.9.42.
Main boiler safety valves adjusted 8.9.42. Thickness of adjusting washers P 1 1/32 P 5 13/32 P 29 1/64 S 1/2
Crank shaft material Ingot Steel Identification Mark N°8395CP Thrust shaft material Ingot Steel Identification Mark N°8382CP
Intermediate shafts, material Ingot Steel Identification Mark N°8384, 5, 6, 7, 8 Tube shaft, material - Identification Mark -
Screw shaft, material Ingot Steel Identification Mark N°8383CP Steam Pipes, material SD Steel Test pressure 600 lbs Date of Test 25.6.42
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 S.S. "EMPIRE GARETH" RAN° 18308

General Remarks (State quality of workmanship, opinions as to class, &c. See engines & 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 Book of H.M.C. 9.42.
2SB. 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 ... £ 4 : 0 :
Special ... £ 65 : 7 :
SUPERVISION Donkey Boiler Fee ... £ 16 : 7 :
Travelling Expenses (if any) £ : :
When applied for, 19...
When received, 19...

Committee's Minute
Assigned
+ Lmb. 9.42
FD, Ch.

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