

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 22/5/1943 When handed in at Local Office 22/5/1943 Port of WEST HARTLEPOOL
 No. in Survey held at WEST HARTLEPOOL Date, First Survey 22 Sept, 1942 Last Survey 15th May, 1943
 Reg. Book. (Number of Visits 75)
 on the STEEL SCREW STEAMER "EMPIRE STALWART" Tons { Gross 7044.60
 Net 4845.47
 Built at WEST HARTLEPOOL By whom built WM. GRAY & CO. LTD Yard No. 1147 When built 1943
 Engines made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG. WORKS Engine No. 1147 When made 1943
 Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG. WORKS Boiler No. 1147 When made 1943
 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 - 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 2 1/32" 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 CAST IRON whether Moveable no Total Developed Surface 110 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 28" Can one be overhauled while the other is at work yes
 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" Single Pumps connected to the { No. and size 2 @ 4 x 28" | 1 @ 10 x 11 x 10 1/4 | 1 @ 9 1/2 x 7 x 21"
 How driven Independent Steam Main Bilge Line How driven Main Engines | 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 yes Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room 4 @ 3" | 1 @ 5"
 In Pump Room 2 @ 3" Eng Rm | 2 @ 3" N°5 | 2 @ 3" N°6 | 1 @ 4" @ 2 @ 3" Sunnel well | 1 @ 2 1/2"
 In Holds, &c. N°1, 2 @ 3" N°2, 2 @ 3" N°3, 2 @ 3" N°4 & Blk Rm
 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 Stolds 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 sq ft
 Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters all
 No. and Description of Boilers 3 Single ended shell tubular 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 -
 (If not state date of approval)
 Superheaters - General Pumping Arrangements - Oil fuel Burning Piping Arrangements -

SPARE GEAR.

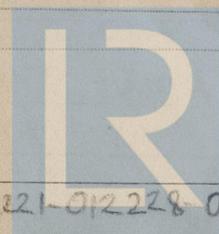
Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied -

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

(S. Gray & Co. Ltd.)

S. Gray & Co. Ltd.
 GENERAL MANAGER.

Manufacturer.



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Lloyd's Register
 Foundation

012221-012228-0064

Is a Report also sent on the Hull of the ship? If not, state whether, and when, one will be sent? RULE.—THE WORDS WHICH DO NOT APPLY SHOULD BE DELETED. 5038. T. (MADE IN ENGLAND)

1942. Sept. 22. Dec. 2. 1943. Jan. 25. 26. Feb. 2. 3. 4. 11. 13. 15. 18. 19. 20. 22. 23. 25. 26. March 1. 2. 3. 4. 5. 8. 9.
 10. 12. 13. 15. 18. 19. 23. 24. 27. 29. 30. 31. April 4. 5. 7. 8. 9. 10. 13. 14. 15. 16. 19. 20. 21. 22. 23. 28. 29. May 3. 5. 6. 7.
 1943. May 1. 11. 22. April 10. 13. 15. 16. 22. 27. May 1. 10. 11. 12. 15. 17. 22.

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits 73

Dates of Examination of principal parts—Cylinders 25-1-43-26-2-43 Slides 15-3-43 Covers 15-3-43
 Pistons 15-3-43 Piston Rods 15-3-43 Connecting rods 15-3-43
 Crank shaft 1-2-43-4-3-43 Thrust shaft 26-1-43-4-3-43 Intermediate shafts 10-3-43-29-3-43
 Tube shaft - Screw shaft 3-2-43-29-3-43 Propeller 29-3-43
 Stern tube 29-3-43 Engine and boiler seatings 22-3-43 Engines holding down bolts 27-4-43
 Completion of fitting sea connections 22-3-43
 Completion of pumping arrangements 10-5-43 Boilers fixed 27-4-43 Engines tried under steam 11-5-43
 Main boiler safety valves adjusted 10-5-43 Thickness of adjusting washers 1/16" 3/16" 1/4" 3/8" 1/2" 5/8" 3/4" 7/8" 1"
 Crank shaft material Sugar Steel Identification Mark H°9990 CP Thrust shaft material Sugar Steel Identification Mark H°9982 CP
 Intermediate shafts, material Sugar Steel Identification Marks H°9983, 4, 5, 6, 7, 8, 9 CP Tube shaft, material - Identification Mark -
 Screw shaft, material Sugar Steel Identification Mark H°9981 CP Steam Pipes, material SD Steel Test pressure 660 lbs Date of Test 3-5-43
 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. EM. PROWESS. RPN° 18404

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been constructed under special survey - and in accordance with the approved plans and specification. The materials and workmanship 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 L.M.C. 5.43. 3SB(SPT) FD. CL. Note: The L.P. back column has been satisfactorily patched in accordance with the approved plan dated 13-1-43. Basic Bessemer steel tubes and auxiliary steam pipes to be submitted for examination after 4 years.

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

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|------------------------------|--------------|-------------------|
| The amount of Entry Fee | £ 6 : 0 : | When applied for, |
| Special | £ 100 : 10 : | 22/5/1943 |
| SUPERVISION | | |
| Donkey Boiler Fee | £ 25 : 3 : | When received, |
| Travelling Expenses (if any) | £ : : | 19..... |

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

Committee's Minute FRI, 28 MAY 1943
 Assigned + LMC 5.43
 FD CL

