

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

30 MAR 1927

Date of writing Report 29 March 1927 When handed in at Local Office 29 March 1927 Port of WEST HARTLEPOOL  
 No. in Survey held at Hartlepool Date, First Survey 13<sup>th</sup> May 1926 Last Survey 22nd March 1927  
 Reg. Book. 89194 on the S. S. GYPSUM KING. (Number of Visits 98)  
 Built at Middlesbrough By whom built The Furness S. A. Co. Ltd. Yard No. 108 Tons { Gross 3842  
 Engines made at Hartlepool By whom made Richardson Westgarth Engine No. 2656 when made 1924 Net 1938  
 Boilers made at Hartlepool By whom made Richardson Westgarth Boiler No. 2656 when made 1924  
 Registered Horse Power 409 Owners Gypsum Packet Co. Ltd. Port belonging to Middlesbrough  
 Nom. Horse Power as per Rule 409 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which Vessel is intended Ocean going

ENGINE, &c.—Description of Engines Triple Expansion Revs. per minute 42  
 Dia. of Cylinders 24 $\frac{1}{2}$ " 41" 68" Length of Stroke 45" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals 12.97" as per Rule 13.25" as fitted 13.5" Crank pin dia. 13.5" Crank webs Mid. length breadth 19 $\frac{1}{8}$ " Thickness parallel to axis 8"  
 Intermediate Shafts, diameter 12.36" as per Rule 12.5" as fitted 12.5" Thrust shaft, diameter at collars 12.97" as per Rule 14.5" as fitted 14.5"  
 Tube Shafts, diameter 13.82" as per Rule 14.25" as fitted 14.25" Is the tube shaft fitted with a continuous liner Yes  
 Screw Shaft, diameter 13.76" as per Rule 14.25" as fitted 14.25" Is the screw shaft fitted with a continuous liner Yes  
 Bronze Liners, thickness in way of bushes .72" as per Rule .75" as fitted .75" Thickness between bushes .54" as per Rule .625" as fitted .625" Is the after end of the liner made watertight in the 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 Yes  
 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 Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners Yes 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 4" 9 $\frac{1}{4}$ "  
 Propeller, dia. 16" 9" Pitch 16" 6" No. of Blades 4 Material Bronze whether Moveable Yes Total Developed Surface 92 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 27" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 $\frac{3}{4}$ " Stroke 27" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size 2 main 7" Lamont 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ " x 8" Pumps connected to the { No. and size 2 main, 2 Lamont 10" x 11" x 10" + 1 Lamont 5" x 4 $\frac{1}{2}$ " x 6"  
 How driven Lamont Steam Main Bilge Line How driven 2 main engines. Lamont by steam  
 Ballast Pumps, No. and size Two 10" x 11" x 10" 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 3 & 3". one 3 $\frac{1}{2}$ " main bilge pump only.  
 In Holds, &c. N<sup>o</sup> 1 Hold 2 of 2 $\frac{1}{2}$ ". N<sup>o</sup> 2 2 of 3 Holds 4 drains on each side 4" diam lifting valves through non return valves to D.B. tanks. Bunkers 2 of 2 $\frac{1}{2}$ ".  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 of 5 $\frac{1}{2}$ " dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 4 $\frac{1}{2}$ "  
 Are all the Bilge Suction Pipes in holds and bilges well fitted with strum-boxes Steamers. See pumping plan  
 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 Are they fitted with Valves or Cocks Yes  
 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 Above  
 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 are carried through the bunkers None How are they protected ✓  
 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 None Is it fitted with a watertight door ✓ worked from ✓

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 5412 sq. ft.  
 Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended Working Pressure 190 lbs per  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓  
 PLANS. Are approved plans forwarded herewith for Shafting No Main Boilers Yes Auxiliary Boilers ✓ Donkey Boilers ✓  
 Superheaters ✓ General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:— 2 bolts & nuts for connecting rod top ends, 2 ditto for bottom ends, 2 ditto for main bearings, 1 set coupling bolts and nuts, 1 set of feed and bilge pump valves, assorted bolts & nuts, 1 set of various sizes, 1 spare bronze propeller blade, 2 safety valve springs, 50 plain boiler tubes, 1 set of coils for feed heater, 100 condenser tubes For each size of auxiliary pump 1 set of valves and seats, 1 set of packing rings for buckets

The foregoing is a correct description  
 for RICHARDSONS, WESTGARTH & CO., LIMITED.

*L. D. W. J. L.*

DIRECTOR AND GENERAL MANAGER.

Manufacturer.



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Lloyd's Register  
Foundation

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1926. May 13. 21. 26. 28. June. 1. 4. 7. 8. 10. 14. 16. 18. 22. 23. 24. 25. 29. July. 1. 2. 5. 6. 7. 8. 9. 13. 16. 19. 20. 21. 23.  
 During progress of work in shops - - (Aug. 16. 18. 19. 20. 24. Sept. 1. 1. 13. 14. 21. 23. 24. 28. Oct. 11. 18. 19. 20. 22. Nov. 15. 17. Dec. 16. 18. 16. 20. 22. 23. 24. 30. Jan. 4. 6. 12. 13. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 31. Feb. 1. 3. 7. 11. 14. 15. 18. 21. 22. 24. 25. 26. Mar. 2. 3. 7. 8. 9. 10. 11. 14. 15. 16. 17. 21. 22.)  
 Dates of Survey while building During erection on board vessel - - -  
 Total No. of visits 98.

Dates of Examination of principal parts—Cylinders 13/5/26. 21/4/26 Slides 24/6/26. 16/8/26. Covers 8/6/26. 1/7/26.  
 Pistons 1/7/26. 20/8/26. Piston Rods 25/6/26. 19/8/26 Connecting rods 23/6/26. 19/8/26.  
 Crank shaft 26/5/26. 6/7/26. Thrust shaft 18/5/26. 22/10/26. Intermediate shafts 13/8/26. 6/1/27  
 Tube shaft ✓ Screw shaft 22/10/26. 4/1/27 Propeller 18/10/26. 13/1/27  
 Stern tube 23/12/26 30/12/26. Engine and boiler seatings 9/3/27 Engines holding down bolts 9/3/27 11/3/27  
 Completion of pumping arrangements 10/3/27 16/3/27 Boilers fixed 11/3/27 Engines tried under steam 16/3/27  
 Main boiler safety valves adjusted 16/3/27 Thickness of adjusting washers Port Boiler  $P\frac{1}{4}$  "3v $\frac{1}{4}$ " Star Boiler  $P\frac{1}{4}$  "3v $\frac{1}{4}$ "  
 Crank shaft material Steel Identification Mark 6865 Thrust shaft material Steel Identification Mark 200  
 Intermediate shafts, material Steel Identification Marks 6992 Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material Steel Identification Mark 198 Steam Pipes, material Steel Test pressure 570 lbs Date of Test 14/4/27  
 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 carrying and burning oil fuel been complied with ✓  
 Is this machinery duplicate of a previous case No ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

A live steam feed heater has been fitted, the tubes, headers, and body of which has been tested to 400 lbs per sq. in.

This vessel's machinery has been built under Special Survey. The materials and workmanship are good and efficient. On completion it was tried under full steam satisfactorily, and is now eligible to have the notation of  $\nabla$  L.M.C 3-27.

It is submitted that  
 this vessel is eligible for  
 THE RECORD. + L.M.C 3. 27. FD. CL.

AWD.  
 31/3/27.

The amount of Entry Fee ... £ 5 : 0 : 0  
 Special ... £ 86 : 4 : 0  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 29.3.27  
 When received, 1.4.27

R. D. Shilston & Robert Ra  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 8 APR 1927.

Assigned

+ L.M.C 3. 27 F8.  
 CR



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