

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

2 JUL 1920

Date of writing Report 1st July 1920 When handed in at Local Office 1st July 1920 Port of WEST HARTLEPOOL
 No. in Survey held at West Hartlepool Date, First Survey 8 Dec/19 Last Survey 26 June 1920
 Reg. Book. 39078 on the S. S. "FIRBY" (Number of Visits 79) Tons } Gross 4867.75
 } Net 2998.91
 Built at West Hartlepool By whom built Wm Gray & Co Ltd Yard No. 979 When built 1926
 Engines made at ditto By whom made Central Marine Engine No. 979 when made 1926
 Boilers made at ditto By whom made Engine Works Boiler No. 979 when made 1926
 Registered Horse Power 439 Owners Ropner Shipping Co Ltd Port belonging to West Hartlepool
 Nom. Horse Power as per Rule 440 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 Triple expansion Revs. per minute 64
 Dia. of Cylinders 26" 43" 71" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.546 as fitted 14" Crank pin dia. 14" Crank webs Mid. length breadth 20" Thickness parallel to axis 8 1/2"
 as fitted 14" Mid. length thickness 8 1/2" Thickness around eye-hole 6 1/2"
 Intermediate Shafts, diameter as per Rule 12.901 as fitted 13 1/4" Thrust shaft, diameter at collars as per Rule 13.546 as fitted 14"
 Tube Shafts, diameter as per Rule 14.4 as fitted 15" Is the tube shaft fitted with a continuous liner yes
 Screw Shaft, diameter as per Rule 14.4 as fitted 15" Is the screw shaft fitted with a continuous liner yes
 Bronze Liners, thickness in way of bushes as per Rule .738 as fitted 3/4" Thickness between bushes as per Rule .553 as fitted 5/16" 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 yes
 Propeller, dia. 18'-0" Pitch 17'-6" No. of Blades 4 Material Bronze whether Moveable no Total Developed Surface 103 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3 3/4" Stroke 28" Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/4" Stroke 28" Can one be overhauled while the other is at work yes
 Aux Feed Pumps No. and size 1. 7 1/2" x 5" x 6" duplex Pumps connected to the Main Bilge Line No. and size 2 maint 4 1/4" x 28" 1 Ballast 9" x 10 1/2" x 10" How driven Steam How driven Steam
 Ballast Pumps, No. and size 1. 9" x 10 1/2" x 10" 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 3 of 2 3/4" dia Tunnel 1 of 2 1/4" dia
 In Holds, &c. No 1. 2 of 3" No 2 2 of 3 1/2" No 3 2 of 2 3/4" No 4 2 of 3 1/4"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 of 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 4 1/2"
 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 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 yes
 What pipes pass through the deep tanks yes Have they been tested as per Rule yes
 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 see ship report Is it fitted with a watertight door yes worked from Cylinder grating

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7614
 Is Forced Draft fitted no No. and Description of Boilers 3 single 3 ended Working Pressure 180 lbs
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
 IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes
 PLANS. Are approved plans forwarded herewith for Shafting Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes
 Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR. State the articles supplied:— 2 Bolts & nuts for connecting rod top ends,
2 ditto for bottom ends, 2 ditto main bearing, 1 set coupling ditto,
1 set feed and bilge pump valves, 1 set H.P. piston springs,
1 propeller shaft, 1 propeller, 2 air pump valves, 4 feed
check valves, 1 safety valve spring, 3 condenser tubes
10 boiler tubes. Bolts, studs, nuts and iron assorted.

The foregoing is a correct description,
 (W. Gray & Co. Ltd.)

J. H. Gearmes
 DIRECTOR

Manufacturer.

WS51-0222



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NOTE.—The records which do not apply should be deleted.

1925. Dec 8. 9. 10. 11. 14. 15. 16. 17. 29. 1926. Jan 7. 8. 15. 16. 19. 22. 26. 27. 28. 29. Feb 1. 2. 3. 4. 8. 10. 12. 15. 16. 17. 18. 19. 22. 23. 25. 29. 30. Mar 1. 2. 3. 9. 10. 12. 15. 16. 17. 18. 19. 22. 23. 25. 29. 30. Apr 8. 12. 14. 15. 16. 19. 19. 28. 28. May 4. 17. 18. June 7. 8. 8. 10. 11. 18. 23. 24.

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits 79.

Dates of Examination of principal parts - Cylinders 29.1.26 - 16.3.26 Slides 22.1.26 Covers 1.2.26 - 19.2.26
 Pistons 3.2.26 - 10.2.26 Piston Rods 26.1.26 - 2.2.26 Connecting rods 8.12.25 - 17.2.26
 Crank shaft 15.1.26 - 25.2.26 Thrust shaft 8.2.26 - 25.2.26 Intermediate shafts 12.2.26 - 16.4.26
 Tube shaft 1.2.26 - 23.3.26 Propeller 9.3.26 - 23.3.26
 Stern tube 11.2.26 - 18.2.26 Engine and boiler seatings 19.4.26 - 17.5.26 Engines holding down bolts 8.6.26
 Completion of pumping arrangements 18.6.26 Boilers fixed 11.6.26 Engines tried under steam 24.6.26
 Main boiler safety valves adjusted 24.6.26 Thickness of adjusting washers P.P. 1/32 S. 5/16 C.P. 5/16 S. 1/32 S.P. 3/8 S. 3/8.
 Crank shaft material Ingot steel Identification Mark 5111D Thrust shaft material Ingot steel Identification Mark 5111D
 Intermediate shafts, material Ingot steel Identification Marks 5111D Tube shaft, material Lap welded steel Identification Mark
 Screw shaft, material Scrap iron Identification Mark 6370H Steam Pipes, material Steel Test pressure 600lbs Date of Test 17.3.11.6
 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 yes ✓ If so, state name of vessel "Sinderby" ✓
 General Remarks (State quality of workmanship, opinions as to class, &c.)

An evaporator fitted, the coils of which were tested to 50lb. and the body to 50lb per square inch.

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 with satisfactory results and is now eligible to have the notation **L.M.C. 6. 26.**

It is submitted that this vessel is eligible for THE RECORD. + LMC 6. 26. CL.

[Signature]
5/7/26

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

The amount of Entry Fee ... £ 5 : 0 :
 Special ... £ 91 : 0 :
 Donkey Boiler Fee ... £ 4 : 4 :
 Travelling Expenses (if any) £ : :
 When applied for, 1 July 1926.
 When received, 12. 7. 26.

FRI. 9 JUL 1926

Committee's Minute
 Assigned + L.M.C. 6. 26
 C.L.

