

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 *24 June 1920*
 Reg. Book. *39078* on the *S. S. "FIRBY"* (Number of Visits *19*) 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* Crank pin dia. *14"* Crank webs *Mid. length breadth 20"* Thickness parallel to axis *8 1/2"*
 Intermediate Shafts, diameter *as per Rule 12.901* Thrust shaft, diameter at collars *as per Rule 13.546*
 Tube Shafts, diameter *as per Rule 14.4"* Screw Shaft, diameter *as per Rule 15"* Is the tube shaft fitted with a continuous liner *yes*
 Bronze Liners, thickness in way of bushes *as per Rule 7.38* Thickness between bushes *as per Rule 5.53* 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 *Brass* whether Movable *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" 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 1/2" 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 *yes* Main Boilers *yes* Auxiliary Boilers *yes* Donkey Boilers *yes*
 (If not state date of approval) 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.)

W. H. Seamer
 DIRECTOR

Manufacturer.

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Lloyd's Register
 Foundation

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. 1/16 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 50lbs. and the body to 50lbs 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.

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, 12.4.26.

FRI. 9 JUL 1926

Committee's Minute

Assigned

+ L.M.C. 6. 26
 C.L.

