

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 11 AUG 1928

Date of writing Report 19 When handed in at Local Office 10 AUG 1928 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 23 Dec. '27 Last Survey 8th Aug 1928
 Reg. Book. 90103 on the S. S. "FAIRWATER" (Number of Visits 42)
 Built at Sunderland By whom built Robert Thompson & Sons L^d Yard No. 331 Tons { Gross 4108
 Engines made at Sunderland By whom made North Eastern Marine Eng^g L^d Engine No. 2654 when made 1928
 Boilers made at Sunderland By whom made North Eastern Marine Eng^g L^d Boiler No. 2654 when made 1928
 Registered Horse Power Owners Fairwater Shipping Co. L^d Port belonging to Cardiff.
 Nom. Horse Power as per Rule 376 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended General Cargo.

ENGINES, &c.—Description of Engines Triple Expansion - Single Screw Revs. per minute 65
 Dia. of Cylinders 25" - 41" - 68" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.179" Crank pin dia. 13½" Crank webs Mid. length breadth ✓ Thickness parallel to axis 8½"
 as fitted 13½" Mid. length thickness ✓ Thickness around eye-hole 6¾"
 Intermediate Shafts, diameter as per Rule 12.552" Thrust shaft, diameter at collars as per Rule 13.179"
 as fitted 12¾" as fitted 13½"
 Tube Shafts, diameter as per Rule ✓ Screw Shaft, diameter as per Rule 14.002" Is the { screw } shaft fitted with a continuous liner { yes
 as fitted ✓ as fitted 14¾"
 Bronze Liners, thickness in way of bushes as per Rule 7.26" Thickness between bushes as per Rule 5.445" Is the after end of the liner made watertight in the
 as fitted ¾" as fitted 19/32"
 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 ✓
 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 tube shaft ✓ Length of Bearing in Stern Bush next to and supporting propeller 4' 9½"
 Propeller, dia. 17' 6" Pitch 17' 6" No. of Blades 4 Material whether Moveable No Total Developed Surface 96 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 ✓ Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 ✓ Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 1 - 8½" x 6" x 18", 1 - 6" x 4" x 6" Pumps connected to the { No. and size 1 - 8½" x 11" x 10½"
 How driven Steam Main Bilge Line How driven Steam
 Ballast Pumps, No. and size 1 - 8½" x 11" x 10½" 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 @ 2½" Dia. ✓ 1 @ 3" Dia. (Dry Tank) ✓
 In Holds, &c. Fore Hold 2 @ 3" Dia, Fore Main Hold 2 @ 3¼" Dia, Aft Main Hold 2 @ 3" Dia, ✓
 aft Hold 2 @ 3" Dia, Tunnel Well 1 @ 2¼" Dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Dia. Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 @ 4½" Dia. ✓ 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 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 None How are they protected ✓
 What pipes pass through the deep tanks None Have they been tested as per Rule ✓
 Are all Pipts, 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 Yes ✓ worked from Top platform.

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 6174 sq. ft. ✓
 Is Forced Draft fitted No No. and Description of Boilers Three - Single ended Marine type Working Pressure 180 lbs. □"
 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 ✓ Main Boilers Yes Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)
 Superheaters ✓ General Pumping Arrangements Yes (with Ship Report) Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:— 1 Cast Iron Propeller, 2 Bottom End Bolts & Nuts, 2 Top End Bolts & Nuts,
 2 Main Bearing Bolts & Nuts, 6 Coupling Bolts & Nuts, 2 Feed Pump Valves, 2 Bilge Pump Valves,
 2 Cuts of Iron Plates, 1 Cut of Iron Bars, 200 assorted Bolts & Nuts, 12 Plain Boiler Tubes,
 6 Patent Tube Stoppers, 12 Piston Studs & Nuts. ✓

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. L^d

Archd. F. Berry

Manufacturer.



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Lloyd's Register
Foundation

002989-002996-0016

Dates of Survey while building
During progress of work in shops -- 1927. Dec. 23. 30. 1928. Jan. 26. Feb. 2. 14. 23. 27. Mar. 1. 7. 14. 22. 26. Apr. 12. 13. 18. 23. 27. May. 2. 11. 15. 18. 22. 24. 25. June. 1. 4. 7. 11. 18. 19. 22. 23. 25. July. 2. 4. 5. 6. 31. Aug. 3. 8.
During erection on board vessel ---
Total No. of visits 42

Dates of Examination of principal parts—Cylinders 11-5-28 Slides 2-5-28 Covers 11-5-28
Pistons 1-3-28 Piston Rods 30-12-27 Connecting rods 2-2-28
Crank shaft 12-4-28 Thrust shaft 13-4-28 Intermediate shafts 18-6-28
Tube shaft ✓ Screw shaft 7-6-28 Propellers 4-6-28
Stern tube 11-6-28 Engine and boiler seatings 20-6-28 Engines holding down bolts 5-7-28
Completion of fitting sea connections 19-6-28
Completion of pumping arrangements 3-8-28 Boilers fixed 31-7-28 Engines tried under steam 6-7-28
Main boiler safety valves adjusted 6-7-28 Thickness of adjusting washers P.P. 1/2" : P.S. 15/32" : C.P. 15/32" : C.S. 15/32" : S.P. 7/16" : S.S. 15/32"
Crank shaft material Ingot Steel Identification Mark A.T.G. 12-4-28. Thrust shaft material Ingot Steel Identification Mark A.T.G. 13-4-28
Intermediate shafts, material Ingot Steel Identification Marks SEE BELOW Tube shaft, material ✓ Identification Mark ✓
Screw shaft, material Ingot Steel Identification Mark A.T.G. 7-6-28. Steam Pipes, material SOLID DRAWN Test pressure 540 LBS. Date of Test 4-7-28
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.)
The Materials and Workmanship are good
The Machinery has been constructed under Special Survey, and satisfactorily fitted in the vessel, and is eligible in my opinion for classification and the notation L.M.C. 8.28. C.L.

INTERMEDIATE SHAFTS No 5, LLOYDS No 241, No 6, LLOYDS No 181, No 7, LLOYDS No 162, No 8, LLOYDS No 195, IDENTIFICATION MARKS No 9, LLOYDS No 162, No 10, LLOYDS No 162. A.T.G. 18-6-28.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8.28 CL.

95.1. 16/8/28.
J. 11

Particulars of Case
No. of Particulars
SUNDERLAND
The amount of Entry Fee ... £ 5 : :
Special ... £ 81 : 8 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 30 Aug 1928
When received, 16-8-28
Committee's Minute
Assigned + L.M.C. 8.28 C.L.

A. I. Griffith.
Engineer Surveyor to Lloyd's Register of Shipping.