

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 14th Dec. 1928 When handed in at Local Office 17th Dec. 1928 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey Jan 3 24 Last Survey Dec 14 1928
 Reg. Book. on the S. S. "ATHELSTANE" (Number of Visits 47)
 Built at Goole By whom built Goole Shipbuilding & Repairing Co. (1917) Ltd Yard No. 284 Tons { Gross
 Engines made at Sunderland By whom made MacColl & Pollock, Ltd. Engine No. 304 When built 1928
 Boilers made at Sunderland By whom made MacColl & Pollock, Ltd. Boiler No. 304 when made 1928
 Registered Horse Power Owners United Molasses Co. Ltd. Port belonging to Liverpool
 Nom. Horse Power as per Rule 166 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Carrying Molasses in Bulk.

ENGINES, &c.—Description of Engines Triple Expansion - Single Screw Revs. per minute 90
 Dia. of Cylinders 16" - 27" - 44" Length of Stroke 30" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 8.379" Crank pin dia. 8 3/4" Crank webs Mid. length breadth ✓ Thickness parallel to axis 5 1/2"
 Intermediate Shafts, diameter as per Rule 7.98" as fitted None fitted Thrust shaft, diameter at collars as per Rule 8.379" as fitted 8 3/4"
 Tube Shafts, diameter as per Rule as fitted ✓ Screw Shaft, diameter as per Rule 8.938" as fitted 9 1/2" Is the tube shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per Rule 5.568" as fitted 9/16" Thickness between bushes as per Rule 4.27" as fitted 1/2" 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 ✓
 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 ✓
 Propeller, dia. 11' 6" Pitch 12' 3" No. of Blades 4 Material C. I. whether Moveable No Total Developed Surface 44 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 16" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 1/2" Stroke 16" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 1 - 7 1/2" x 5" x 6" Pumps connected to the { No. and size 1 - 6 1/2" x 8 1/2" x 8"
 { How driven Steam Main Bilge Line { How driven Steam
 Ballast Pumps, No. and size 1 - 6 1/2" x 8 1/2" x 8" 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 2 @ 2 1/4" Dia., 1 @ 2" Dia.
 in Holds, &c. Cargo Hold 2 @ 2" Dia., Cofferdam 1 @ 2 1/2" Dia. (For Pump only)

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 4 1/2" Dia. Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 @ 2 1/2" 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 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
 That Pipes pass through the bunkers None How are they protected ✓
 That 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 Machy Aft Is it fitted with a watertight door ✓ worked from ✓

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 3265 sq. ft.
 Forced Draft fitted No No. and Description of Boilers Two Single Ended Marine type Working Pressure 180 lbs. sq. in.
 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 Hull Ship Report) Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:— Cast Iron Propeller, 2 Main Bearing Bolts & Nuts, 2 Top End Bolts & Nuts,
2 Bottom End Bolts & Nuts, 1 Set of Coupling Bolts & Nuts, 44 Assorted Bolts & Nuts, 1 Set of Air Pump Valves,
1 Set of Circulating Pump Valves, 6 Junk Ring Studs, 6 Cylinder Cover Studs, 6 Condenser Tubes,
1 Set of Iron of Various Sizes, 6 Boiler Tubes, 2 Safety Valve Springs.

The foregoing is a correct description,
 PER PRO MACCOLL & POLLOCK LTD.

Manufacturer.



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W432-0173

1924. Jan. 3. 11. 22. Feb. 1. 12. 19. Mar. 6. 19. 25. Apr. 3. 9. 24. May. 6. 20. July. 2. 16. Aug. 12. 20. Sep. 3. 12. 1928. July. 5. 16. Aug. 9. 14. 29. Sep. 14. 13. 20. 28. Oct. 1. 5. 19. 29. Nov. 13. 14. 27. 30. Dec. 3. 6. 7. 10. 11. 12. 13. 14

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - - -

Total No. of visits 47

Dates of Examination of principal parts—Cylinders 3 - 9 - 24. Slides 6 - 5 - 24. Covers 6 - 5 - 24.

Pistons 6 - 5 - 24. Piston Rods 1 - 2 - 24. Connecting rods 24 - 4 - 24.

Crank shaft 26 - 2 - 24. (Leith) Thrust shaft 13 - 9 - 28. Intermediate shafts None fitted.

Tube shaft ✓ Screw shaft 2 - 11 - 28. Propeller 13 - 11 - 28.

Stern tube 9 - 11 - 28. Engine and boiler seatings 30 - 11 - 28. Engines holding down bolts 12 - 12 - 28.

Completion of fitting sea connections 27 - 11 - 28. (HULL)

Completion of pumping arrangements 13 - 12 - 28. Boilers fixed 13 - 12 - 28. Engines tried under steam 13 - 12 - 28.

Main boiler safety valves adjusted 13 - 12 - 28. Thickness of adjusting washers S.P. 1/2": S.S. 1/2": P.S. 1/2": P.P. 1/2".

Crank shaft material Ingot Steel Identification Mark A.T.T. 26-2-24. Thrust shaft material Ingot Steel Identification Mark A.T.G. 13-9-28.

Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material Ingot Steel Identification Mark A.T.G. 2-11-28. Steam Pipes, material S.D. Copper. Test pressure 360 lbs. □ Date of Test 25-10-28.

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 built under Special Survey, and satisfactorily fitted in the vessel, and is eligible in my opinion for classification and the notation + L.M.C. 12, 28.

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. 12.28. CL.

31/12/28

The amount of Entry Fee ... £ 3 : : When applied for, 18 DEC 1928

Special ... £ 41 : 10 : : When received, 2-1-29

Donkey Boiler Fee ... £ . : : : 19

Travelling Expenses (if any) £ . : : : 19

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

Committee's Minute

WED. 2 JAN 1929

Assigned

+ L.M.C. 12:28

CERTIFICATE WRITTEN



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