

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

21 NOV 1927

Date of writing Report 19 When handed in at Local Office 15 NOV. 1927 Port of *Sunderland*
 No. in Survey held at *Sunderland* Date, First Survey 16 Nov. 27 Last Survey 8th Nov. 1927
 Reg. Book. on the *S. S. BENTON* (Number of Visits 49)
 Built at *Sunderland* By whom built *Wm. Pickersill & Sons Ltd.* Yard No. 219 Tons { Gross 4385
 Engines made at *do* By whom made *George Rank Ltd.* Engine No. 1148 Net 2598
 Boilers made at *do* By whom made *do* Boiler No. 1148 When built 1927
 Registered Horse Power Owners *International British American Steamship Co. Ltd.* when made 1927
 Nom. Horse Power as per Rule 387 Port belonging to *Newcastle*
 Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*
 Trade for which Vessel is intended *General Trade*

ENGINES, &c.—Description of Engines *Triple expansion* Revs. per minute
 Dia. of Cylinders 25½", 41½", 69" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.34" as fitted 13½" Crank pin dia. 13½" Mid. length breadth 1-8" Thickness parallel to axis 8½"
 Intermediate Shafts, diameter as per Rule 12.70" as fitted 12¾" Thrust shaft, diameter at collars as per Rule 13.34" as fitted 13¾" Thickness around eye-hole 6½"
 Tube Shafts, diameter as per Rule 14.16" as fitted 14½" Is the { tube } shaft fitted with a continuous liner { *Yes* }
 Screw Shaft, diameter as per Rule 14.16" as fitted 14½" Is the { screw } shaft fitted with a continuous liner { *Yes* }
 Bronze Liners, thickness in way of bushes as per Rule ¾" as fitted ¾" Thickness between bushes as per Rule — as fitted — 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 *No*
 Propeller, dia. 17-6 Pitch 18-9 No. of Blades 4 Material *Cast Iron* whether Movable *No* Total Developed Surface 90.5 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3½" Stroke 26" Can one be overhauled while the other is at work *Yes*
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4¼" Stroke 26" Can one be overhauled while the other is at work *Yes*
 Feed Pumps { No. and size Two 7½" x 5" x 6" Pumps connected to the { No. and size One 9" x 11" x 10" }
 { How driven Steam Main Bilge Line { How driven Steam }
 Ballast Pumps, No. and size One 9" x 11" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size none
 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", 1 @ 4½", 1 @ 2½" TUNNEL WELL.
 In Holds, &c. No 1, 2 @ 2¾", No 2, 2 @ 3½" No 3, 2 @ 2¾" No 4, 2 @ 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 6½" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 4½"
 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*
 What Pipes pass through the bunkers — How are they protected —
 What pipes pass through the deep tanks — 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 *Yes* Is it fitted with a watertight door *Yes* worked from *Engine room*

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 6363 sq. ft.
 Is Forced Draft fitted *No* No. and Description of Boilers *Three cyl. muth* 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 *Yes* Main Boilers *Yes* Auxiliary Boilers — Donkey Boilers —
 (If not state date of approval)
 Superheaters — General Pumping Arrangements *Yes* Oil fuel Burning Piping Arrangements —

SPARE GEAR. State the articles supplied:— 2 connecting rod top end & 2 connecting rod bottom end bolts & nuts, 2 main bearing bolts, 1 set coupling bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts & nuts of various sizes, 1 set of pump & bilge pump 12 flange ring bolts, 12 cylinder tubes, 12 boiler tubes, 1 set valves for Ballast & Feed tanks, 1 set V.S. packing for piston & slide rod.

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED.

W. S. G. M. L.

Manufacturer.



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Lloyd's Register
Foundation

W166-0060

1927. *March* 16, 23. *April* 7, 8, 11, 21, 25. *May* 9, 10, 16, 27, 31. *June* 1, 9, 20, 24, 28. *July* 19, 21, 29. *Aug.* 3, 8, 10, 12, 23, 24, 25. *Sept.* 3, 5, 8, 13, 15, 19, 21, 23, 26, 27, 30. *Oct.* 3, 5, 7, 11, 14, 18, 19, 27. *Nov.* 1, 8.

Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits 49

Dates of Examination of principal parts—Cylinders 20/6/27 Slides 24/6/27 Covers 21/7/27

Pistons 29/7/27 Piston Rods 23/3/27 Connecting rods 25/8/27

Crank shaft 23/8/27 & 12/8/27 Thrust shaft 21/7/27 Intermediate shafts 5/8/27 & 26/9/27

Tube shaft - Screw shaft 8/9/27 & 26/9/27 Propeller 8/9/27

Stern tube 10/8/27 Engine and boiler seatings 30/9/27 Engines holding down bolts 18/10/27

Completion of fitting sea connections 21/9/27

Completion of pumping arrangements 27/10/27 Boilers fixed 7/10/27 Engines tried under steam 19/10/27

Main boiler safety valves adjusted 19/10/27 Thickness of adjusting washers PORT 5 7/16 CENTRE 5 7/16 STB 5 7/16

Crank shaft material I. STEEL Identification Mark 7551 JH Thrust shaft material I. STEEL Identification Mark 2815 JH

Intermediate shafts, material I. STEEL Identification Marks 1093, 1103, 706 Tube shaft, material - Identification Mark -

Screw shaft, material I. STEEL Identification Mark 680 JH Steam Pipes, material L.W. STEEL Test pressure 540 Date of Test 11/10/27

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. The engines & boilers of this vessel have been built under Special Survey & the materials & workmanship are good. On completion the machinery was tried under full head of steam with satisfactory results. The machinery of this vessel is now in a good & efficient condition & eligible in my opinion to have the notation LMC-11-27 marked in Red in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 11. 27. CL.

JWD.
22/11/27.
H. C.
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5-0-0 When applied for, 15 NOV. 1927

Special ... £ 83-1-0

Donkey Boiler Fee ... £ : : When received, 17 NOV. 1927

Travelling Expenses (if any) £ : :

Committee's Minute TUES. 22 NOV. 1927

Assigned + LMC 11:27 CL

CERTIFICATE WRITTEN.