

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

No. 11659

15 MAR 1923

Received at London Office

Date of writing Report 19 When handed in at Local Office 12.5. 1923 Port of Middlesbrough
 No. in Survey held at Glasgow & Middlesbrough Date, First Survey 14th March Last Survey 15 May 1923
 Reg. Book. on the Steel Screw Steamer RAWLINSON (Number of Visits 12)
 Built at Middlesbrough By whom built Messrs The Furness S. B. & Co Yard No. 40 Tons ^{Gross} _{Net} When built 1923
 Engines made at Glasgow By whom made Messrs Ross & Duncan Engine No. 1095 when made 1923
 Boilers made at do By whom made do Boiler No. 1621-2 when made 1923
 Registered Horse Power Owners Port belonging to
 Nom. Horse Power as per Rule 156 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion See Glasgow Report No 42617
 Dia. of Cylinders 17-27½-45 Length of Stroke 33 Revs. per minute No. of Cylinders 3 No. of Cranks 3
 Dia. of Crank shaft journals ^{as per rule} 9.05 ^{as fitted} 9½ Dia. of Crank pin 9¼ Crank webs ^{Mid. length breadth} 17½ ^{shrunken} ^{Thickness parallel to axis} 6
 Diameter of Thrust shaft under collars ^{as per rule} 9.05 ^{as fitted} 9½ Diameter of Tunnel shaft ^{as per rule} 8.62 ^{as fitted} 8¾ Diameter of Screw shaft ^{as per rule} 9.82 ^{as fitted} 10¾ Is the Screw shaft fitted with a continuous liner the whole length of the stern tube yes 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 joints burned If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with plastic material insoluble in water and non-corrosive yes
 If two liners are fitted, is the shaft lapped or protected between the liners Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated no
 Pitch of Propeller 12'6" No. of Blades 4 State whether Moveable no Total Surface 50 ½ square feet.
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 2¾ Stroke 16½ Can one be overhauled while the other is at work yes
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 3 Stroke 16½ Can one be overhauled while the other is at work yes
 Total number and size of power driven Feed and Bilge Auxiliary Pumps 6 x 4½ x 6 Duplex (one)
 No. and size of Pumps connected to the Main Bilge Line Main engine pumps & Ballast pump, sizes as stated
 No. and size of Ballast Pumps one 6" x 8" x 8" No. and size of Lubricating Oil Pumps, including Spare Pump none
 Are two independent means arranged for circulating water through the Oil Cooler No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 3 @ 2½ and in Holds, &c. 2 @ 3" in fore hold;
3 @ 3" in aft hold; Tunnel Well one @ 2½
 No. and size of Main Water Circulating Pump Bilge Suctions one 4" No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges one 3½" 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 connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both
 Are they size sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes 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 Suctions to fore hold How are they protected wood ciling
 Are all Pipes, Cocks, Valves, and Pumps in connecti 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 Screw Shaft Tunnel watertight see hull rpt Is it fitted with a watertight door yes worked from top platform

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 2806 ½
 Is Forced Draft fitted no No. and Description of Boilers 2 single ended Working Pressure 180 lb
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes; Glasgow No 42617
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded?
 PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)
 General Pumping Arrangements app. 6.12.22 Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:—One cast iron propeller; Two each of con. rod top. end; bottom-end and main bearing bolts and nuts; one set of coupling bolts; one set of feed and bilge pump valves; assorted bolts and nuts. Iron of various sizes; one safety valve spring; 3 condenser tubes & 20 ferrules; 6 Boiler tubes; 4 Patent tube stoppers & 6 junk ring bolts

The foregoing is a correct description,

See Glasgow Report No 42617

—Manufacturer.

W646-0197



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

1923 Mar. 19. Apr. 11 14 17 23 24 25 27 30 May 2.3.4

12

Dates of Examination of principal parts - Cylinders *gls* 21.1.21 Slides *gls* 2.2.21
 Covers *gls* 5.11.20 Pistons *gls* 8.11.20 Rods *gls* 24.1.23
 Connecting rods *gls* 25.11.20 Crank shaft *gls* 21.1.21 Thrust shaft *gls* 2.2.21
 Tunnel shafts *gls* 24.1.21 Screw shaft *gls* 26.3.23 Propeller *gls* 24.1.23
 Stern tube *gls* 30.3.23 Engine and boiler seatings 11.4.23 Engines holding down bolts 30.4.23
 Completion of pumping arrangements 4.5.23 Boilers fixed 3.5.23 Engines tried under steam 3.5.23
 Completion of fitting sea connections 19.3.23 Stern tube 11.4.23 Screw shaft and propeller 11.4.23
 Main boiler safety valves adjusted 3.5.23 Thickness of adjusting washers Port Blr P-5/16 Star Blr P-5/16 f.
 Material of Crank shaft *Steel* Identification Mark on Do. 1090 J.E.S.
 Material of Thrust shaft *Steel* Identification Mark on Do. 1090 J.E.S.
 Material of Tunnel shafts *Steel* Identification Marks on Do. 1090 J.E.S.
 Material of Screw shafts *Steel* Identification Marks on Do. 1148 J.E.S.
 Material of Steam Pipes *Solid drawn Copper (4" x N° 7)* Test pressure 360 lbs ✓ Date of Test 25.4.23
 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 machinery of this vessel, which was built under special survey, has now been satisfactorily secured on board: the safety valves adjusted and the Engines, Boilers and auxiliaries examined under steam and all found satisfactory*
The machinery is in a good and safe working condition and renders the vessel eligible in our opinion to have the notation of L.M.C. 5.23 in the Register Book

It is submitted that
 this vessel is eligible for
 THE RECORD. + L.M.C. 5.23. CL

Wm Morrison & Co. Sills.
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ ✓ : :
 Special *1/5th* ... £ 7 : 16-0 ✓
 Donkey Boiler Fee ... £ ✓ : :
 Travelling Expenses (if any) £ ✓ : :
 When applied for, 14.5.1923
 When received, 24.5.1923

Committee's Minute WFD 27 MAY 1923

Assigned + L.M.C. 5.23
 C.L.

CERTIFICATE WRITTEN

