

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 21 NOV 1927

Date of writing Report 19 When handed in at Local Office 19 NOV. 1927 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 5th Feb. 27 Last Survey 10th Nov 1927
 Reg. Book. 41630 on the S.S. "LARISTAN" (Number of Visits 78) Tons { Gross 6417
 Net 3875
 Built at Sunderland By whom built Messrs Short Bros Yard No. 425 When built 1927
 Engines made at Sunderland By whom made Messrs J. Dickinson & Sons Ltd Engine No. 883 when made 1927
 Boilers made at Sunderland By whom made Messrs J. Dickinson & Sons Ltd Boiler No. 883 when made 1927
 Registered Horse Power Owners Hindustan Steam Shipping Co Ltd Port belonging to Newcastle
 Nom. Horse Power as per Rule 565 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion - Single Screw.
 Dia. of Cylinders 26" - 44" - 74" Length of Stroke 48" Revs. per minute 75 No. of Cylinders 3 No. of Cranks 3
 Dia. of Crank shaft journals as per rule 14.1015" as fitted 14.5" Dia. of Crank pin 14.5" Crank webs Mid. length breadth 28" Thickness parallel to axis 9.4"
 Mid. length thickness 9.4" shrunk Thickness around eye-hole 6.5"
 Diameter of Thrust shaft under collars as per rule 14.1015" as fitted 14.5" Diameter of Tunnel shaft as per rule 13.43" as fitted 14" Diameter of Screw shaft as per rule 14.89" as fitted 15.2" 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 Yes 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 Yes Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated Yes Length of Stern Bush 5' 3" Diameter of Propeller 17' 6"
 Pitch of Propeller 15' 9" No. of Blades 4 State whether Moveable No Total Surface 98 square feet.
 No. of Feed Pumps fitted to the Main Engines None Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
 Total number and size of power driven Feed and Bilge Auxiliary Pumps Two Weirs 8" x 10 1/2" x 22" One Bilge Pump 8" x 5 1/2" x 8"
 No. and size of Pumps connected to the Main Bilge Line One Ballast Pump 10" x 11 1/2" x 10" One Fire Pump 8" x 5" x 8"
 No. and size of Ballast Pumps One 10" x 11 1/2" x 10" No. and size of Lubricating Oil Pumps, including Spare Pump Yes
 Are two independent means arranged for circulating water through the Oil Cooler Yes No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 5 @ 2 1/2" Dia. and in Holds, &c. 2 - 2 1/4" for hold, 2 - 2 1/2"
pump room, 1 - 3 fore-cofferdam, 1 - 3 after-cofferdam, as per approved plan.

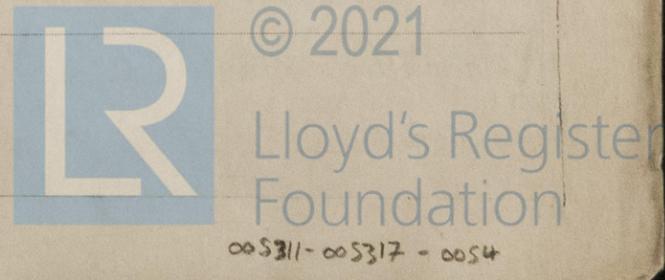
No. and size of Main Water Circulating Pump Bilge Suctions One @ 9" Dia No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges 1 @ 5" Dia Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Yes
 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 Yes How are they protected 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 Screw Shaft Tunnel watertight Machinery Is it fitted with a watertight door Yes worked from Yes

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 8316 sq ft
 Is Forced Draft fitted Yes No. and Description of Boilers Three Single ended Main type Working Pressure 200 lbs
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No 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) General Pumping Arrangements Yes (with Shil Report) Oil fuel Burning Piping Arrangements Yes

SPARE GEAR. State the articles supplied:— One 6.1. Propeller, One Set of Coupling Bolts & Nuts, Two main Bearing Bolts & Nuts, Two Connecting Rods Bolts & Nuts, Two Top End Bolts & Nuts, One Set of Bilge Pump Valve, 100 assorted Bolts & Nuts, 100 Condenser Thermometers, 1 cwt Bars of assorted Iron, 1 cwt Steel Plates, One Slide Rod, Four 6 inch Valve Lids, One set of Safety Valve Springs, Two Escape Valve Springs, Six Tube Stoppers (Ordinary), Six Tube Stoppers (Patent), 12 Cylinder Cover Studs, 12 Tank Ring Bolts & Nuts, 24 Boiler Tubes, 12 Condenser Tubes, One Set of Lead Donkey Valve, One Set of Donkey (Ballast) Valve, One Propeller Shaft, One set of Bottom end Brasses, 1 set of Springs for H. P. Piston Valve, 9 Spares of Oil Fuel Installation.

The foregoing is a correct description,
 For John Dickinson & Sons, Limited. Manufacturer.
A. W. Dickinson Director



Dates of Survey while building:

 During progress of work in shops: 1927 Feb. 5, 7, 18, 21, 23. March 2, 5, 8, 12, 15, 21, 25, 30. April 1, 5, 12, 14, 23, 27. May 2, 9, 11, 20.

 June 2, 8, 9, 11, 13, 14, 15, 17, 18, 21, 24, 27. July 2, 5, 7, 8, 13, 18, 20, 26, 27. Aug. 3, 4, 8, 17, 19, 22, 30, 31. Sep. 5

 During erection on board vessel: 27, 28, 29. Oct. 4, 6, 7, 11, 12, 13, 14, 18, 20, 24, 25, 27, 31. Nov. 1, 4, 5, 7, 8, 9, 10.

 Total No. of visits: 78.

Dates of Examination of principal parts - Cylinders 15-6-27 Slides 17-6-27

 Covers 17-6-27 Pistons 21-6-27 Rods 12-5-27

 Connecting rods 5-4-27 Crank shaft 21-6-27 Thrust shaft 8-8-27

 Inter Funnel shafts 19-8-27 Screw shafts (Working & Spare) 22-8-27 Propellers (Working & Spare) 19-8-27

 Stern tube 19-8-27 Engine and boiler seatings 27-9-27 Engines holding down bolts 4-10-27

Completion of pumping arrangements 18-10-27 Boilers fixed 11-10-27 Engines tried under steam 8-11-27

 Completion of fitting sea connections 17-8-27 Stern tube 28-9-27 Screw shaft and propeller 29-9-27

 Main boiler safety valves adjusted 18-10-27 Thickness of adjusting washers F.P. $\frac{91}{64}$; F.S. $\frac{11}{32}$; A.P.P. $\frac{23}{64}$; A.P.S. $\frac{5}{16}$; A.S.P. $\frac{23}{64}$; A.S.S. $\frac{5}{16}$

Material of Crank shaft Ingot Steel Identification Mark on Do. LLOYDS N^o 700.D. 21-6-27. A.T.G.

 Material of Thrust shaft Ingot Steel Identification Mark on Do. LLOYDS N^o 2713.D. 8-8-27. A.T.G.

 Material of Inter Funnel shafts Ingot Steel Identification Marks on Do. LLOYDS N^o 7535.D. 19-8-27. A.T.G.

 Material of Screw shafts Ingot Steel Identification Marks on Do. Spare LLOYDS N^o 2712.D. 22-8-27. A.T.G.

Material of Steam Pipes Hot rolled Solid Drawn Steel ✓ Test pressure 600 lbs sq in ✓ Date of Test 6-10-27

 Is an installation fitted for burning oil fuel Yes ✓ Is the flash point of the oil to be used over 150°F. Yes ✓

 Have the requirements of the Rules for carrying and burning oil fuel been complied with Yes ✓

 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. 11, 27. Fitted for oil fuel 11, 27. F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + LMC 11. 27. FD. CL. Fitted for oil fuel 11. 27. F.P. above 150°F.

J.W.D.
 23/11/27

a. i. Griffith.
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 6 : : When applied for, 17 NOV. 1927

 Special ... £ 103 : 5 : :

 Donkey Boiler Fee ... £ : : : When received, 19 NOV. 1927

 Travelling Expenses (if any) £ : : :

Committee's Minute FRI. 25 NOV 1927

 Assigned ✠ + L.M.C. 11: 27 F.D. CL Fitted for Oil Fuel 11: 27 F.P. above 150°F



Certificate to be sent to SUNDERLAND.

The Surveyors are requested not to write on or below the space for Committee's Minute.