

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

1st FEB 1927

Date of writing Report 12th Feb 1926 When handed in at Local Office 12th Feb 1927 Port of *Nant*No. in Survey held at *St. Nazaire*Date, First Survey 23rd Oct 1924 Last Survey 1st March 1927Reg. Book *46* on the *Steel Twin Screw Passenger Vessel "ITAIMBE"*

(Number of Visits)

Built at *St. Nazaire* By whom built *Ch. et Atel. de St. Nazaire (Penhoët)* Yard No. *05*

Gross 4993

Tons Net 2941

When built 1927/2

Engines made at *St. Nazaire* By whom made *Ch. et Atel. de St. Naz. (Penhoët)* Engine No. *N5*

when made 1927

Boilers made at *St. Nazaire* By whom made *Ch. et Atel. de St. Naz. Penhoët* Boiler Nos *1196 to 1199* when made 1926Registered Horse Power Owners *Companhia Nacional Navegacao Costeira* Port belonging to *Rio de Janeiro*Nom. Horse Power as per Rule *679 625* Is Refrigerating Machinery fitted for cargo purposes *Yes* Is Electric Light fitted *Yes*

Trade for which Vessel is intended

ENGINES, &c. *22 1/2, 34 5/8 + 57 1/2* Description of Engines *Twin screw Triple expansion* Revs. per minute *115*

Dia. of Cylinders *560-880-1450* Length of Stroke *1000 mm* No. of Cylinders *3 per engine* No. of Cranks *3 per engine*

Crank shaft, dia. of journals as per Rule *286* as fitted *290* Crank pin dia. *290* Crank webs Mid. length breadth shrunk Thickness parallel to axis *184* Mid. length thickness shrunk Thickness around eye-hole *130*

Intermediate Shafts, diameter as per Rule *272.5 mm* as fitted *290* Thrust shaft, diameter at collars as per Rule *286* as fitted *290*

Tube Shafts, diameter as per Rule *312.5 mm* as fitted *330* Is the tube screw shaft fitted with a continuous liner *No*

Bronze Liners, thickness in way of bushes as per Rule *none* Thickness between bushes as fitted *none* 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 *Yes*

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 *Yes*

If two liners are fitted, is the shaft lapped or protected between the liners *Yes* Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft *Yes* Cedarwall Length of Bearing in Stern Bush next to and supporting propeller *1320 mm*

Propeller, dia. *4.000* Pitch *3.990* No. of Blades *4* Material *bronze* whether Moveable *No* Total Developed Surface *5.53 each sq. ft. mm.*

Feed Pumps worked from the Main Engines, No. *4* Diameter *90* Stroke *610* Can one be overhauled while the other is at work *Yes*

Bilge Pumps worked from the Main Engines, No. *2* Diameter *115* Stroke *610* Can one be overhauled while the other is at work *Yes*

Feed Pumps No. and size *2 main 305 x 228 x 609 mm. 1 auxiliary 178 x 127 x 305 mm.* Pumps connected to the Main Bilge Line No. and size *1 Ballast pump 203 x 228 x 228 mm, 1 service pump 228 x 165 x 254 mm.* How driven *Weirs independent steam* How driven *Cartridge duplex vertical pumps. Steam driven.*

Ballast Pumps, No. and size *1 duplex 203 x 228 x 228 mm.* Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler *Yes* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room *3 at 84 dia - 2 at 50 to bilge below killing tank - 2 at 60 to tank top forward of boilers.*

In Holds, &c. *Nº 1. 1 at 50 and 2 at 70. Nº 2. 2 at 70. Nº 3. 2 at 60. Cofferdam between E & B. 2 at 50. Nº 4. 2 at 70. Nº 5. 1 at 70. Tunnel well 1 at 60.*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *2 at 252 mm* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1 at 113 mm dia 4.45* 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 are carried through the bunkers (ie. 3 holds) *ER for hold bilge suction & double bottom D.F. How are they protected Killed below ceiling at bilge.*

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 *ER. Carrying above head time.*

MAIN BOILERS, &c.—(Letter for record *S.*) Total Heating Surface of Boilers *903 m² 60.* (1015 m² 60 oil fuel) Working Pressure *12 kg. 65 cm² 180 lb.*

Is Forced Draft fitted *Yes* No. and Description of Boilers *Four Single ended.*

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 *30.9.24* Main Boilers *19.11.24* Auxiliary Boilers *3.12.25* Donkey Boilers *3.12.25*

(If not state date of approval)

Superheaters *Yes* General Pumping Arrangements *Ship 14.2.25. ER 2.2.26* Oil fuel Burning Piping Arrangements *3.12.25*

SPARE GEAR. State the articles supplied:— *2 top and bolts and nuts, 2 bottom and bolts and nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts, 1 set of fuel and bilge pump valves, 1 set of springs & rings for HP, MP and LP pistons, 2 cast iron propellers, 1 slide valve handle complete, 1 pair bottom and bearings, 2 safety valve springs, 24 condenser tubes, 12 boiler tubes, 1 set of valves for main & auxiliary fuel check valves, 1 air pump rod, 1 set of valves for air pump, quantity of assorted bolts & nuts and iron of various sizes, 1 slide valve box complete for Weir fuel pumps & 1 set of suction & delivery valves for same, 1 pair top and bearings.*

The foregoing is a correct description.

Manufacturer.

© 2021

Lloyd's Register Foundation

015102-015110-0081

During progress of work in shops - 1924 Oct. 23 Nov. 3-5-13-21-28 Dec. 11-18-22 1925 Jan. 2-7-15-19-29 Feb. 3-5-10-13-25 Mar. 2-11-20-24-30 Apr. 1-6-15
During erection on board vessel - 1926 June 9-18-25-28 July 1-20-23-27 Aug. 3-6-10-13-19-25-27 Sept. 16-20-24-29 Oct. 12-18-25
Total No. of visits 191

Dates of Examination of principal parts - Cylinders 12.8.25 to 29.3.26 Slides 9.12.25 to 17.5.26 Covers 12.8.25 to 29.3.26
Pistons 9.12.25 to 17.5.26 Piston Rods 18.12.25 to 6.4.26 Connecting rods 30.7.25
Crank shafts 23.12.25 Thrust shafts 22.3.26 Intermediate shafts (Nants) 5.2.26 and 26.2.26
Tube shaft 26.2.26 and 12.11.26 Propellers 24.9.26
Stern tubes 5.2.26 Engine and boiler seatings 3.8.26 Engines holding down bolts 27.8.26 and 16.9.26
Completion of pumping arrangements 21.1.27 Boilers fixed 7.1.27 Engines tried under steam 7.1.27. *Not tried*
Main boiler safety valves adjusted 7.1.27 and 21.1.27 Thickness of adjusting washers S.A. 9.9.26 P.A. 9.9.26 S.F. 8.8.26 P.F. 8.8.26
Crank shaft material 4.2.26 Identification Mark 1693/95.96. Thrust shaft material 4.2.26 Identification Mark 1922/3.
Intermediate shafts, material 4.2.26 Identification Marks 1927/8. 1960-1-6-8-9 1970. Tube shaft, material 4.2.26 Identification Mark 1.10.26
Screw shaft material 4.2.26 Identification Mark 1930, 1932. Steam Pipes, material S.D. *Not* Test pressure 39kg. Date of Test 25.10.26
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.)
Workmanship good. These main engines have been specially surveyed during their construction. They have been built in accordance with the approved plans and the materials used have been tested by the surveyors to this Society as required by the Rules.
They have been fitted onboard in accordance with the Rules and they are submitted for the favourable consideration of the Committee for notation in the Register Book of + L.M.C. 2.27. H.P. 180 h.p. T.S. 04. Fitted for oil fuel F.P. above 150°F. when satisfactory steaming trials have been carried out.

It is submitted that 3
this vessel is eligible for
THE RECORD. + LMC 2.27. FD. OG.
Fitted for oil fuel 3.27. F.P. above 150°F.

Cert. not to be issued until the machinery under working conditions is satisfactory.

exchange. 0
The amount of Entry Fee £6.0.0
Special £108.19.0
Donkey Boiler Fee
Travelling Expenses (if any) £

When applied for, 26.7.1927
When received, 11.3.1928

CERTIFICATE WRITTEN 8/3/27
G.W. Rang
Engineer, Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 11 MAR 1927

Assigned + LMC 3.27
Fitted for Oil Fuel 3.27. F.P. above 150°F