

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

No. 7365

Received at London Office

- 2 DEC 1926

Date of writing Report *16th Nov 26* When handed in at Local Office *Dec 3 1926* Port of *Trieste*
 No. in Survey held at *Chiute* Date, First Survey *Oct 8, 1925* Last Survey *Nov 9 1926*
 Reg. Book. *3263* on the *Single* *Twin* *Triple* *Quadruple* Screw vessel *"Arabia"* Tons *Gross 7025*
 Built at *Chiute* By whom built *Cantini San Rocco S.A.* Yard No. *444* When built *1926*
 Engines made at *Chiute* By whom made *Stahlwerke Leopold Rustino* Engine No. *5559* When made *1926*
 Donkey Boilers made at *Aunau* By whom made *Bochran son* Boiler No. *9431* When made *1925*
 Brake Horse Power *652* Owners *Societa Marittima Italiana* Port belonging to *Genoa*
 Nom. Horse Power as per Rule *652* Is Refrigerating Machinery fitted for cargo purposes *No.* Is Electric Light fitted *Yes*
 Trade for which vessel is intended *Indian*

L ENGINES, &c.—Type of Engines *Burmeister & Wain Diesel* 2 or 4 stroke cycle *4* Single or double acting *Single*
 Maximum pressure in cylinders *35 kg/cm²* Diameter of cylinders *740* Length of stroke *1800* No. of cylinders *8* No. of cranks *8*
 Mean of bearings, adjacent to the Crank, measured from inner edge to inner edge *1004* Is there a bearing between each crank *Yes*
 Revolutions per minute *95* Flywheel dia. *2900* Weight *10,000 kg* Means of ignition *Compression* Kind of fuel used *Diesel oil*
 Crank Shaft, dia. of journals *as per Rule 481* Crank pin dia. *482* Crank Webs *as per Rule 344* Mid. length breadth *460* Thickness parallel to axis *310*
 Flywheel Shaft, diameter *as per Rule 481* Intermediate Shafts, diameter *as per Rule 344* Thrust Shaft, diameter at collars *as per Rule 361*
 Propeller Shaft, diameter *as per Rule 348* Screw Shaft, diameter *as per Rule 385* Is the *hub* shaft fitted with a continuous liner *Yes*
 Bronze Liners, thickness in way of bushes *as per Rule 19* Thickness between bushes *as per Rule 15* 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*
 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*
 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 *No.* Length of Bearing in Stern Bush next to and supporting propeller *1880*
 Propeller, dia. *4860* Pitch *4380* No. of blades *4* Material *bronze* whether Moveable *Yes* Total Developed Surface *7.24* sq. feet m.
 Method of reversing Engines *Comp. Air (Brown)* Is a governor or other arrangement fitted to prevent racing of the engine when decelerated *Yes* Means of lubrication
oil Thickness of cylinder liners *53.5/41* Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged with
 non-conducting material *Yes* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *to funnel*
 Sounding Water Pumps, No. *2 centrifugal 120 Ton per hr.* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*
 Bilge Pumps worked from the Main Engines, No. *3* Diameter *160* Stroke *280* Can one be overhauled while the other is at work *Yes*
 Pumps connected to the Main Bilge Line *No. and Size 2 duplex @ 170 x 150, 1 duplex @ 300 x 300*
 How driven *Electric motor*
 Main Pumps, No. and size *1 duplex 300 x 300* Lubricating Oil Pumps, including Spare Pump, No. and size *2 @ 30 Ton per hour*
 two independent means arranged for circulating water through the Oil Cooler in double bottom Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 Pumps, No. and size:—In Machinery Spaces *2 @ 90, 2 drain pots @ 80, Cofferdam 2 @ 80, Tunnel well 1 @ 80*
 Holds, &c. *Forward 6 @ 80, deep tank 2 @ 90 + 2 @ 80, aft 4 @ 80*
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *2 @ 90 to help pumps, 1 @ 180 to ballast pump*
 all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *Yes* Are the Bilge Suctions in the Machinery Spaces
 from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *Yes*
 all Sea Connections fitted direct on the skin of the ship *Yes* Are they fitted with Valves or Cocks *Valves*
 they fixed sufficiently high on the ship's side to be seen without lifting the platform plates *Yes* Are the Overboard Discharges above or below the deep water line *above*
 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*
 at pipes pass through the bunkers *Yes* How are they protected *Yes*
 at pipes pass through the deep tanks *Yes* Have they been tested as per Rule *Yes*
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*
 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 *Leakless Report* Is it fitted with a watertight door *Yes* worked from *top platform*
 wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *Yes*

Air Compressors, No. *1* No. of stages *3* Diameters *160, 675, 150* Stroke *610* Driven by *Crank Shaft*
 Auxiliary Air Compressors, No. *1 each* No. of stages *3* Diameters *322, 288, 79* Stroke *140* Driven by *2 @ 1/4 Diesel Engine*
 All Auxiliary Air Compressors, No. *1* No. of stages *3* Diameters *106 + 34* Stroke *80* Driven by *Single @ Steam Engine*
 Evacuating Air Pumps, No. *1* Diameter *106* Stroke *80* Driven by *1/4 Diesel Engine*
 Auxiliary Engines crank shafts, diameter *as per Rule 665, 676 + 682 built by AEG, Berlin*
 as fitted *Black, bolts, marked Nos. 106, 118 + 120 - 1/8/15 - J.Q.*

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes* Starting air receivers *4 @ 1/4 Diesel Engine*
 the internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their inner surfaces *Covers (Removable)*
 there a drain arrangement fitted at the lowest part of each receiver *Yes*
 High Pressure Air Receivers, No. *3* Drain *3 @ 500 liter* Cubic capacity of each *2 @ 250* Internal diameter *480* thickness *20*
 Seamless, lap welded or riveted longitudinal joint *Seamless* Material *S* Range of tensile strength *41-47* Working pressure by Rules *84.5*
 Starting Air Receivers, No. *2* Total cubic capacity *40 m³* Internal diameter *1953* thickness *26.5*
 Seamless, lap welded or riveted longitudinal joint *Seamless* Material *S* Range of tensile strength *44-50.5* Working pressure by Rules *25*

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

PLANS. Are approved plans forwarded herewith for Shafting

24/4/24

Receivers

23/10/24

Separate Tanks

30/11/24

Donkey Boilers

Yes

General Pumping Arrangements

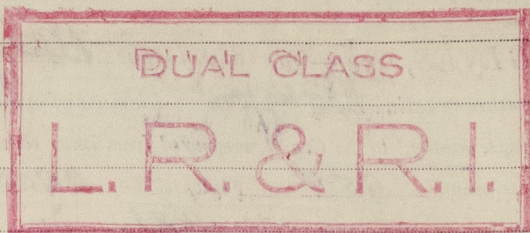
Yes

Oil Fuel Burning Arrangements

16/7/25

SPARE GEAR

See attached list



The foregoing is a correct description,
Stabilimento Tecnico Triestino
Fabbrica macchine S. Andrea - Trieste

Manufacturer.

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

See attached list

Dates of Examination of principal parts - Cylinders 30/1/26 Covers 22/1/26 Pistons 23/4/26 Rods 8/8/25 Connecting rods 8/9/25
Crank shaft 28/9/25 Flywheel shaft and Thrust shaft 28/9/25 Intermediate shafts 28/9/25 Tube shaft
Screw shaft 28/9/25 Propeller 15/4/26 Stern tube 12/1/26 Engine seatings 10/8/26 Engines holding down bolts 16/10/26
Completion of fitting sea connections 15/5/26 Completion of pumping arrangements 15/10/26 Engines tried under working conditions 9/11/26
Crank shaft, Material S.A. Supt steel Identification Mark 661.706 x 12 Flywheel shaft, Material S.A. Supt steel Identification Mark 7. ASM-28
Thrust shaft, Material - Identification Mark - Intermediate shafts, Material - Identification Marks 8/14-ASM
Tube shaft, Material - Identification Mark - Screw shaft, Material - Identification Mark 5 x 6-ASM

Is the flash point of the oil to be used over 150° F.

Yes

Is this machinery duplicate of a previous case

Yes

If so, state name of vessel

Giulia & India

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been built under special survey and in accordance with the Rules. The materials and workmanship are good. On completion it has been tested under full working conditions with satisfactory results. The manoeuvring trials have been carried out in accordance with the Rules.

The machinery of this vessel is eligible, in my opinion to be classed in the Register Book with notation of + LMC 11.26.

Trieste Office

The amount of Entry Fee ... £ 697.-
Special ... £ 13.485.-
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 180.-

When applied for, Dec 4 1926

When received, 10/1/27

Committee's Minute

FRI. 10 DEC 1926

Assigned

+ LMC 11.26
Oil Engines

John Munro, Lockney
Engineer Surveyor to Lloyd's Register of Shipping



TUES. 18 JAN 1927

FRI. 18 FEB 1927

Lloyd's Register Foundation