

REPORT ON OIL ENGINE MACHINERY.

No. 7672

Received at London Office
 Reporting Date: Aug 10 1927 When handed in at Local Office: Aug 14 1927 Port of Trieste
 Survey held at: Monfalcone Date, First Survey: Mar 22 Last Survey: Aug 13 1927
 Number of Visits: 23

on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel **Ararangua** Tons { Gross 4872 Net 2974
 made at **Trieste** By whom built **Laniere Nav. Trieste** Yard No. 175 When built 1927
 Boilers made at **Sturin** By whom made **Triat Nat. Grandi Motori** Engine No. 1369/1370 When made 1927
 Horse Power **1008** Owners **Floyd National S. A.** Port belonging to **Rio de Janeiro**
 Is Refrigerating Machinery fitted for cargo purposes **yes** Is Electric Light fitted **yes**

Genoa Report No. 9951 Type of Engines **Triat Diesel** 2 or 4 stroke cycle **2** Single or double acting **single**
 pressure in cylinders **35 kg** Diameter of cylinders **680 mm** Length of stroke **960 mm** No. of cylinders **4** No. of cranks **4**
 bearings, adjacent to the Crank, measured from inner edge to inner edge **950 mm** Is there a bearing between each crank **yes**
 as per minute **125 mm** Flywheel dia. **3000 mm** Weight **12000 kg** Means of ignition **Compress.** Kind of fuel used **Diesel oil**
 shaft, dia. of journals as per Rule **407 1/2 mm** Crank pin dia. **420 mm** Crank Webs Mid. length breadth **530** Thickness parallel to axis **-**
 as fitted **420 mm** Mid. length thickness **265** shrunk Thickness around eyehole **-**
 1 Shaft, diameter as per Rule **407 1/2** Intermediate Shafts, diameter as per Rule **277.3** Thrust Shaft, diameter at collars as per Rule **291.2**
 as fitted **420 to 300** as fitted **290** as fitted **310**
 shaft, diameter as per Rule **-** Screw Shaft, diameter as per Rule **315.3** Is the ^{tube} screw shaft fitted with a continuous liner **No liner**
 as fitted **-** as fitted **335**

Liners, thickness in way of bushes as per Rule **-** Thickness between bushes as per Rule **-** Is the after end of the liner made watertight in the
 as fitted **-** as fitted **-**
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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 **-**
 are fitted, is the shaft lapped or protected between the liners **-** Is an approved Oil Gland or other appliance fitted at the after
 tube shaft **yes** **Edwards** Length of Bearing in Stern Bush next to and supporting propeller **1860 mm**
 dia. **3800** Pitch **4050** No. of blades **3** Material **Bronze** whether Moveable **no** Total Developed Surface **5.27** sq. ft.
 of reversing Engines **direct** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **yes** Means of lubrication
 ed Thickness of cylinder liners **55 mm** Are the cylinders fitted with safety valves **yes** Are the exhaust pipes and silencers water cooled or lagged with
 acting material **lagged** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine.

Water Pumps, No. **2 on main motor** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **yes**
 pumps worked from the **AUX.** Main Engines, No. **3** Diameter **85 mm** Stroke **100 mm** Can one be overhauled while the other is at work **yes**
 connected to the Main Bilge Line { No. and Size **Two 150 Tons. a 210 x 250 mm**
 How driven **Electric Motors**
 Pumps, No. and size **Two 150 T. 210 x 250 mm** Lubricating Oil Pumps, including Spare Pump, No. and size **one to each main motor**
 independent means arranged for circulating water through the Oil Cooler **one worked by Electric Mot.**
 No. and size:—In Machinery Spaces **Two 3 1/2" on main line. Three in Tunnel well 3 1/2"**
 &c. **Hold No 1 two 3 1/2" Hold No 2 two 3 1/2" Refrig. Hold two 3 1/2" Hold No 3 four 3 1/2" Hold No 4**
3 1/2" Cofferdam forward to tank No 1 one 3 1/2" Three Cofferdam in E. T. one in each 3 1/2"
 ident Power Pump Direct Suctions to the Engine Room Bilges, No. and size **Three, two a 4 1/4" one a 8"**

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **yes** Are the Bilge Suctions in the Machinery Spaces
 easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **yes**
 sea Connections fitted direct on the skin of the ship **yes** Are they fitted with Valves or Cocks **valves**
 sized 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**
 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**
 pass through the bunkers **none** How are they protected **-**
 pass through the deep tanks **-** Have they been tested as per Rule **-**
 pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **yes**
 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
 out to another **yes** Is the Shaft Tunnel watertight **yes** Is it fitted with a watertight door **yes** worked from **above deck**

vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 Compressors, No. **one each Eng.** No. of stages **three** Diameters **120 x 50 x 600** Stroke **620** Driven by **main Eng.**
 y Air Compressors, No. **one** No. of stages **three** Diameters **70 x 270 x 310** Stroke **250** Driven by **Electric Motor**
 Auxiliary Air Compressors, No. **one** No. of stages **three** Diameters **42 x 165 x 185** Stroke **140** Driven by **Hot bulb Motor**
 ing Air Pumps, No. **2 each Engine** **double acting** Diameter **850** Stroke **800** Driven by **Main Engine**
 Engines crank shafts, diameter as per Rule **154.3**
 as fitted **160**

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule **yes**
 internal surfaces of the receivers be examined **yes** What means are provided for cleaning their inner surfaces **plugs in ends**
 drain arrangement fitted at the lowest part of each receiver **yes**
 Pressure Air Receivers, No. **4** Cubic capacity of each **190 lit.** Internal diameter **291 mm** thickness **12.5 mm**
 lap welded or riveted longitudinal joint **seamless** Material **S.M. Steel** Range of tensile strength **45 kg/mm²** Working pressure by Rules **80 kg**
 Air Receivers, No. **2 Auxiliary** Total cubic capacity **9200 lit.** Internal diameter **291 mm** thickness **12.5 mm**
23 Main lap welded or riveted longitudinal joint **seamless** Material **S.M. Steel** Range of tensile strength **45 kg/mm²** Working pressure by Rules **80 kg**

IS A DONKEY BOILER FITTED? Yes

If so, is a report now forwarded? Yes G.L. Rpt No 4640

PLANS. Are approved plans forwarded herewith for Shafting See Genoa Rpt Receivers ✓

Separate Tanks ✓

Donkey Boilers ✓

General Pumping Arrangements Yes 31826

Oil Fuel Burning Arrangements ✓

SPARE GEAR One cylinder cover with valves, springs etc. One set of valves etc. for one cylinder. Four needle valves. One cylinder liner. One set of complete with rings, studs & nuts. One set of piston rings for one pig. Two telescopic cooling pipes. One complete set of skew wheels for each. One set of studs and nuts for two cylinder covers. One cross head cover in bearing with bolts & nuts. One bottom end bearing with bolts & nuts. One main bearing with bolts & nuts. Two sets of bolts & nuts for each shaft. Two sets of bolts & nuts for intermediate shaft coupling. One set of piston rings for each size used in the air compressors. One retractor suction and delivery valve for main and auxiliary compressor. One complete set of suction and delivery valves for scavange air pump. Work parts for one fuel pump. One water circulating pump fitted in crew by for use. One complete set of valves, springs etc. for one cylinder.

The foregoing is a correct description, auxiliaries diesel. Four needle valves for pump

Manufacturer.

Dates of Survey while building

Dates	During progress of work in shops - -	1927 Mar 22, 25, Apr 15, 22, May 16, 20, 23, June 13, 27, 28, 30, July 7, 14, 20, 22, 26, 27, Aug	
			During erection on board vessel - - -
			Total No. of visits <u>Twenty three</u>

Dates of Examination of principal parts - Genoa

Cylinders	1822/4/27	Covers	1822/4/27	Pistons	1-22/4/27	Rods	22/4/27	Connecting rods	22/4/27
Crank shaft	28.6.27	Flywheel shaft	28.6.27	Thrust shaft	28.6.27	Intermediate shafts	26.6.27	Tube shaft	-
Screw shaft	23.5.27	Propeller	23.5.27	Stern tube	22.3.27	Engine seatings	22.3.27	Engines holding down bolts	28
Completion of fitting sea connections	22.3.27	Completion of pumping arrangements	20.7.27	Engines tried under working conditions	4.8.				

Crank shaft, Material SMS Identification Mark CRH 3068-69 Flywheel shaft, Material - Identification Mark -

Thrust shaft, Material SMS Identification Mark MB 7131-2 Intermediate shafts, Material SMS Identification Marks MK 179

Tube shaft, Material - Identification Mark - Screw shaft, Material SMS Identification Mark MB 7340

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

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.)

These engines were fitted on board at Monfalcone under supervision and satisfactorily tested under full working condition. In my opinion the machinery is eligible for notation of + LMC 8.27

See also Genoa Report No 9951

Certificate (if required) to be sent to retained in duplicate in Loan Office (See Notice 23/5/27 + Com. L. O. 26.8.27)

The amount of Entry Fee ... £ 68 When applied for, 30.8.27

1/5 Special ... £ 3895 When received, 26.9.27

Donkey Boiler Fee ... £ 1.820

Travelling Expenses (if any) £ 1.820

Committee's Minute

FRI 16 SEP 1927

Assigned

Home 8.27 09.

DB 12016

CERTIFICATE WRITTEN

Oil Engines

R. R. F. F. F.
Engineer Surveyor to Lloyd's Register of Shipping



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Lloyd's Register Foundation

Trieste

Continuation of Report No. 7672 dated Aug 11, 1927 on the

Ch V Arar Anque

one set of piston rings for one piston of the Auxiliaries. One
 set of stud and nuts for one cylinder cover of the Auxiliaries.
 one crank pin bearing bolts and nuts and two main bea-
 ring bolts and nuts for Auxiliaries. One set of piston rings
 and one piston of each size in the air compressors of the
 auxiliaries. One set of suction and delivery valves for
 like compressors of the Auxiliaries. Working parts for one
 crank pump of the Auxiliaries. Suction and delivery
 valves for daily fuel supply pump. Suction and delivery
 valves for cooling water pump. Suction and delivery
 valves for bilge pumps. Assorted quantity of bolts and
 nuts. Length of pipes of each size used for the fuel de-
 livery and injection air pipes with suitable flanges &
 unions. One piston rod for pistons of main engine. One
 complete set of pads for Thrust block. 2 gudgeon pins for
 crank piston of the auxiliaries

Aug
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 28
 4.8.7
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