

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 7176

Received at London Office

14 APR 1934

Date of writing Report Mar. 12th 1934 When handed in at Local Office

Port of SAN FRANCISCO,

No. in Survey held at Oakland, California.

Date, First Survey Jan. 30th Last Survey Mar. 3rd 1934

Reg. Book.

Number of Visits Eighteen.

Suppl. on the ~~XXXXXX~~ Single Screw vessel M. S. "OHIAPAS" ex "Caldas"Tons Gross 207
Net 109

Built at Wivenhoe By whom built Rennie, Forrestt S.B. & Eng. Co. Ltd. Yard No. 10779 When built 1917-6
Engines made at Oakland, California, By whom made ATLAS IMPERIAL DIESEL ENGINE CO. When made Feb. 1934
Donkey Boilers made at --- By whom made --- Boiler No. --- When made ---
Brake Horse Power 200 Owners LINEAS GRACE DE MEXICO Port belonging to MAZATLAN
Nom. Horse Power as per Rule 59 Is Refrigerating Machinery fitted for cargo purposes --- Is Electric Light fitted ---
Trade for which vessel is intended ---

IL ENGINES, &c. Type of Engines Solid Injection Full Diesel 2 or 4 stroke cycle 4 Single or double acting Single
Maximum pressure in cylinders 650# sq. in. Diameter of cylinders 10" Length of stroke 13" No. of cylinders 6 No. of cranks 6
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 11 1/4" Is there a bearing between each crank Yes
Revolutions per minute 325 Flywheel dia. 35" Weight 2100 lbs. Means of ignition Compression Kind of fuel used Diesel fuel oil
Crank Shaft, dia. of journals as per Rule 5.8 as fitted 5-3/4" Crank pin dia. 5-3/4" Crank Webs Mid. length breadth 8 1/2" Thickness parallel to axis ---
Flywheel Shaft, diameter as per Rule 5.8 as fitted 5-3/4" Intermediate Shafts, diameter as fitted 4.25" Thrust Shaft, diameter at collars as per Rule 4.04" as fitted 5" Yes
Tube Shaft, diameter as per Rule --- as fitted --- Screw Shaft, diameter as per Rule 5" Is the tube screw shaft fitted with a continuous liner Yes
Bronze Liners, thickness in way of bushes as per Rule .44" as fitted .5" Thickness between bushes as per rule --- as fitted --- 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 ---
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 ---
If two liners are fitted, is the shaft lapped or protected between the liners --- Is an approved Oil Gland or other appliance fitted at the after end of the tube
shaft --- If so, state type --- Length of Bearing in Stern Bush next to and supporting propeller 22"
Propeller, dia. 56 Pitch 51 No. of blades 3 Material Mang. Bronze whether Moveable No. Total Developed Surface 10 sq. feet
Method of reversing Engines Latches Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication
ced feed Thickness of cylinder liners 3/4" to 15/16" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers 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 ---
Cooling Water Pumps, No. 1 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. 1 Diameter 2" Stroke 3 1/4" Can one be overhauled while the other is at work ---
Pumps connected to the Main Bilge Line No. and Size --- How driven --- Lubricating Oil Pumps, including Spare Pump, No. and size 1-1 1/2" dia. x 2" stroke 163 R.P.M.
Ballast Pumps, No. and size --- Are two independent means arranged for circulating water through the Oil Cooler no Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
Pumps, No. and size:—In Machinery Spaces --- In Pump Room ---
In Holds, &c. ---
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size --- Are the Bilge Suctions in the Machinery Spaces
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ---
led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges ---
Are all Sea Connections fitted direct on the skin of the ship --- Are they fitted with Valves or Cocks ---
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates --- Are the Overboard Discharges above or below the deep water line ---
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel --- Are the Blow Off Cocks fitted with a spigot and brass covering plate ---
What pipes pass through the bunkers --- How are they protected ---
What pipes pass through the deep tanks --- Have they been tested as per Rule ---
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ---
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 --- Is the Shaft Tunnel watertight --- Is it fitted with a watertight door --- worked from ---
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ---
Main Air Compressors, No. 1 No. of stages 1 Diameters 6" Stroke 4" Driven by Engine
Auxiliary Air Compressors, No. --- No. of stages --- Diameters --- Stroke --- Driven by ---
Small Auxiliary Air Compressors, No. --- No. of stages --- Diameters --- Stroke --- Driven by ---
Scavenging Air Pumps, No. --- Diameter --- Stroke --- Driven by ---
Auxiliary Engines crank shafts, diameter as per Rule --- as fitted --- Position ---

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Is a drain fitted at the lowest part of each receiver

High Pressure Air Receivers, No. --- Cubic capacity of each --- Internal diameter --- thickness ---

Seamless, lap welded or riveted longitudinal joint --- Material --- Range of tensile strength --- Working pressure Actual ---

Starting Air Receivers, No. 2 Total cubic capacity 36 cu. ft. Internal diameter 22" thickness 5/16" Working pressure by Rules 212 Actual 200

Seamless, lap welded or riveted longitudinal joint Rivetted. Material steel Range of tensile strength --- Working pressure Actual ---

IS A DONKEY BOILER FITTED? --

If so, is a report now forwarded? --

Is the donkey boiler intended to be used for domestic purposes only? --

PLANS. Are approved plans forwarded herewith for Shafting **No** Receivers **No** Separate Tanks **--**
(If not, state date of approval)

Donkey Boilers **--** General Pumping Arrangements **--** Oil Fuel Burning Arrangements **--**

SPARE GEAR.

Has the spare gear required by the Rules been supplied? **Yes**State the principal additional spare gear supplied **---**

The foregoing is a correct description.

ATLAS IMPERIAL DIESEL ENG. CO. *W.M. Griffith* Manufacturer.

Dates of Survey while building

During progress of work in shops--	Jan. 30th, 31st, Feb. 1, 5, 6, 7, 8, 9, 13, and 14th.
During erection on board vessel--	Feb. 14, 15, 16, 17, 18, 19, 20, and Mar. 3rd
Total No. of visits	Eighteen.

Dates of Examination of principal parts—Cylinders **Feb. 2** Covers **Feb. 2** Pistons **Feb. 2** Rods **Feb. 2** Connecting rods **Feb. 2**Crank shaft **Feb. 6** Flywheel shaft **Feb. 6** Thrust shaft **Feb. 6** Intermediate shafts **--** Tube shaft **--**Screw shaft **Feb. 16** Propeller **Feb. 17** Stern tube **Feb. 17** Engine seatings **Feb. 16** Engines holding down bolts **Feb. 27**Completion of fitting sea connections **--** Completion of pumping arrangements **--** Engines tried under working conditions **Mar. 3**Crank shaft, Material **Steel** Identification Mark **LLOYD'S No. 1085 FGA.2-6-34** Flywheel shaft, Material **Steel** Identification Mark **---**Thrust shaft, Material **Steel** Identification Mark **---** Intermediate shafts, Material **---** Identification Marks **---**Tube shaft, Material **---** Identification Mark **---** Screw shaft, Material **Steel** Identification Mark **LLOYD'S No. 1089 FGA.2-16-34**

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo **--** If so, have the requirements of the Rules been complied with **--**If the notation for Ice Strengthening is desired, state whether the requirements in this respect have 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.)

This Oil Engine has now been constructed under special survey, of materials tested to Rule requirements and workmanship found sound throughout. On completion machinery thoroughly tested under working conditions both on the test stand and after installation on board a bay trial was witnessed with satisfactory results. This engine has now been installed on the M.S. "CHIAPAS" and in the opinion of the undersigned same is eligible to be classed in the Register Book N.E.3.

The amount of Entry Fee **\$ 10.-**Special **\$ 74.-**Forgings **\$ 60.-**Air Tanks **\$ 25.-**Travelling Expenses (if any) **\$ 6.-**

When applied for,

Mar. 8th 1934.

When received,

19

Committee's Minute

NEW YORK APR 4 - 1934

Assigned

+ N.E. 3.34 Oil Engine**+ LMC. 3.34**CERTIFICATE WRITTEN
3.5.34

H. B. Archbold
Engineer Surveyor to Lloyd's Register of Shipping.

RETAIN

RETAIN



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Foundation