

# REPORT ON OIL ENGINE MACHINERY.

No. 106084

11 JUL 1938

Received at London Office

Date of writing Report 7-1938 When handed in at Local Office

11 JUL 1938 Port of

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No. in Survey held at Rowledge

Date, First Survey 29-6-38

Last Survey 14 July 1938

Number of Visits FOUR

on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel wood motor vessel "CALARABIA II" of "MINATITLAN" Tons

Built at Rowledge By whom built Rowledge Ironworks Co. Ltd. Yard No. 563. When built 1937.

Engines made at Patricroft By whom made Norris, Huntly & Gardiner Ltd. Engine No. When made 1937.

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 102. Owners California Standard Oil Co. Ltd. Port belonging to

Nom. Horse Power as per Rule 18. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

Trade for which vessel is intended Towing Service in the Persian Gulf.

OIL ENGINES, &c.—Type of Engines Heavy Oil 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 650 lb/sq. in. Diameter of cylinders 5 1/2" Length of stroke 7 3/4" No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 108 lb/sq. in. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 13/32" Is there a bearing between each crank No

Revolutions per minute 800 Flywheel dia. 29 1/2" Weight 584 lb. Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 4 1/8" as fitted Crank pin dia. 3 5/8" Crank Webs Mid. length breadth 5 1/2" Thickness parallel to axis No

Flywheel Shaft, diameter as per Rule 3 1/2" as fitted Intermediate Shafts, diameter as per Rule 2 3/4" as fitted Thrust Shaft, diameter at collars as per Rule No

Tube Shaft, diameter as per Rule No as fitted Screw Shaft, diameter as per Rule 3 3/8" as fitted Is the shaft fitted with a continuous liner Bronze shaft

Bronze Liners, thickness in way of bushes as per Rule No as fitted Thickness between bushes as per rule No as fitted Is the after end of the liner made watertight in the

propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner No

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 No

If two liners are fitted, is the shaft lapped or protected between the liners No Is an approved Oil Gland or other appliance fitted at the after end of the tube

shaft No If so, state type Length of Bearing in Stern Bush next to and supporting propeller 13"

Propeller, dia. 36" Pitch 41" No. of blades 3 Material Bronze whether Moveable No Total Developed Surface 4.25 sq. feet

Method of reversing Engines Reverser Gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched No Means of lubrication

forced Thickness of cylinder liners Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled & lagged with

non-conducting material No 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. 6 Is the sea suction provided with an efficient strainer which can be cleared within the vessel No

Bilge Pumps worked from the Main Engines, No. 6 Diameter 2 3/8" Stroke 1 1/4" Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size How driven Main Engine

Is the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 22 pints/minute

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces 6 — 1" 6 — 1 1/4" In Pump Room

2 — 1" Independent Hand Pump Direct Suctions to the Engine Room Bilges, No. and size 6 — 1 1/4" Semi Rotary

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes No Are the Bilge Suctions in the Machinery Spaces

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges No

Are all Sea Connections fitted direct on the skin of the ship No Are they fitted with Valves or Cocks Cocks

Are they fitted sufficiently high on the ship's side to be seen without lifting the platform plates No 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 No Are the Blow Off Cocks fitted with a spigot and brass covering plate

Do that pipes pass through the bunkers No How are they protected

Do that pipes pass through the deep tanks No 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 No

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 No Is the Shaft Tunnel watertight No Is it fitted with a watertight door No worked from

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Drip trays under Engine & Tanks

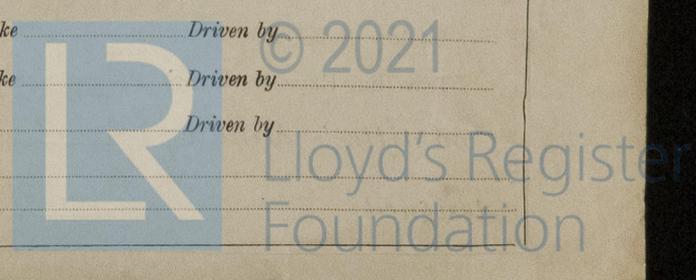
Main Air Compressors, No. No. of stages Diameters Stroke Driven by

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 No. 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 <sup>by Rules</sup> Actual

**Starting Air Receivers, No.** ..... Total cubic capacity ..... Internal diameter ..... thickness .....  
 Seamless, lap welded or riveted longitudinal joint ..... Material ..... Range of tensile strength ..... Working pressure <sup>by Rules</sup> Actual

**IS A DONKEY BOILER FITTED?**

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

**PLANS.** Are approved plans forwarded herewith for Shafting 27-6-38 Receivers  Separate Fuel Tanks   
 (If not, state date of approval)

Donkey Boilers  General Pumping Arrangements  Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements  **SPARE GEAR.**

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops --   
 { During erection on board vessel --   
 Total No. of visits 29-6-38, 4-7-38, 7-7-38

Dates of Examination of principal parts—Cylinders  Covers  Pistons  Rods  Connecting rods   
 Crank shaft  Flywheel shaft  Thrust shaft  Intermediate shafts  Tube shaft   
 Screw shaft  Propeller 29-6-38 Stern tube  Engine sealings 29-6-38 Engines holding down bolts 29-6-38  
 Examination of fitting sea connections 29-6-38 Completion of pumping arrangements ..... Engines tried under working conditions

Crank shaft, Material  Identification Mark  Flywheel shaft, Material  Identification Mark   
 Thrust shaft, Material  Identification Mark  Intermediate shafts, Material  Identification Marks   
 Tube shaft, Material  Identification Mark  Screw shaft, Material  Identification Mark

Is the flash point of the oil to be used over 150° F.  No

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with  No

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.)

A Standard Gardner 6 L 3 type engine has been fitted in this vessel in an efficient manner.

A General examination of the machinery has been made, the scantlings checked and the materials & workmanship, so far as could be seen, are sound & of good description.

The requirements as stated in the Secretary's letter M. 27-6-38 have been complied with and in my opinion the machinery of this vessel is eligible to be classed and have notation of T.M.C. 7-38.

Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £ : : When applied for, ..... 19  
 Special ... .. £ : : ..... 19  
 Donkey Boiler Fee ... .. £ : : When received, .....  
 Travelling Expenses (if any) £ 100 ..... 19

Committee's Minute TUE 12 JUL 1938

Assigned

Lmc 7.38

oil eng

A. J. Hill

Engineer Surveyor to Lloyd's Register of Shipping.



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