

# REPORT ON OIL ENGINE MACHINERY.

No. 2090  
11 MAY 1942

Received at London Office

Date of writing Report 22-10-42 when handed in at Local Office 4-4-42 Port of Caracas, V.W.I.  
No. in Survey held at 4-4-1942 Caracas, V.W.I. Date, First Survey 27-6-41 Last Survey 2-4-1942  
Reg. Book 77163 on the Single Screw vessel S. Eustatius ex Karibia Tons 428  
Twin  
Triple  
Quadruple

Built at Korsn By whom built A.S. Vulcanvarps Yard No.  When built 1921  
Engines made at Stockholm By whom made J.G. Bolinder Engine No.  When made 1918  
Donkey Boilers made at none By whom made  Boiler No.  When made   
Brake Horse Power 320 Owners Caracasche Scheepvaart Maatschappij port belonging to Willemstad  
Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
Trade for which vessel is intended Carrying Sulphuric Acid in portable cylindrical tanks between Oruba and Caracas.

**OIL ENGINES, &c.** Type of Engines J. & G. Bolinder 2 stroke cycle 2 Single or double acting 3  
Maximum pressure in cylinders 280 lb/sq Diameter of cylinders 16 9/16" Length of stroke 18 7/8" No. of cylinders 2 each No. of cranks 2  
Mean indicated pressure 70 lb Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 19 9/16" Is there a bearing between each crank yes  
Revolutions per minute 225 Flywheel dia. 36 1/2" Weight 1956 lbs Means of ignition Hot bulb Kind of fuel used gas oil  
Crank Shaft, dia. of journals as per Rule Crank pin dia. 6 13/16" Crank Webs Mid. length breadth 9 7/16" Thickness parallel to axis solid  
as fitted 6 1/4" as per Rule as fitted Mid. length thickness 3 5/16" Thickness around eyelets flanged  
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule  
as fitted 4 1/16" as fitted as fitted 5 29/32"  
Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the screw shaft fitted with a continuous liner no  
as fitted as fitted 5 3/4"

Bronze liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made water-tight in the propeller boss yes  
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 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 shaft yes  
shaft yes If so, state type Federal Length of Bearing in Stern Bush next to and supporting propeller 31 1/2"  
Propeller, dia. 5'-7" Pitch 48 1/8" No. of blades 4 Material C.I. whether Moveable not Total Developed Surface 16 1/2 sq. feet  
Method of reversing Engines Fuel pump Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced  
Thickness of cylinder liners 1 3/8" Are the cylinders fitted with safety valves no Are the exhaust pipes and silencers water cooled or lagged with non-conducting material exhaust lagged, silencer water  
If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine not

Cooling Water Pumps, No. One for each engine 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 each Diameter 4" Stroke 2" Can one be overhauled while the other is at work yes  
Pumps connected to the Main Bilge Line No. and Size 1 double acting 6" dia 1 3/4" stroke  
How driven Gasoline motor & belt drive  
Ballast Pumps, No. and size as above Lubricating Oil Pumps, including Spare Pump, No. and size 1 each engine  
Are two independent means arranged for circulating water through the Oil Cooler none Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces Two 2 1/2" dia. In Pump Room none  
In Holds, &c. Two

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 2 1/2" dia  
Are all the Bilge Suction pipes in Holds and Tunnel Wells fitted with strum-boxes yes 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 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 platform 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 none  
What pipes pass through the bunkers none How are they protected yes  
What pipes pass through the deep tanks none 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 none Is it fitted with a watertight door yes worked from yes  
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes  
Main Air Compressors, No. 1 on each engine No. of stages 2 Diameters 8 1/16" & 3 1/4" Stroke 7 1/2" Driven by main engine  
Auxiliary Air Compressors, No. none No. of stages yes Diameters yes Stroke yes Driven by yes  
Small Auxiliary Air Compressors, No. none No. of stages yes Diameters yes Stroke yes Driven by yes  
Scavenging Air Pumps, No. none Diameter yes Stroke yes Driven by yes  
Auxiliary Engine crank shafts, diameter as per Rule No. 2 Position Port side of engine room  
as fitted To be measured & forwarded later yes

**AIR RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes  
Can the internal surfaces of the receivers be examined and cleaned yes Is a drain fitted at the lowest part of each receiver yes  
High Pressure Air Receivers, No. 2 Cubic capacity of each to be forwarded Internal diameter to be forwarded thickness to be forwarded  
Seamless, lap welded or riveted longitudinal joint seamless Material S Range of tensile strength not known Working pressure by Rules 30 kg./sq. cm.  
Starting Air Receivers, No. 2 Total cubic capacity to be forwarded Internal diameter to be forwarded thickness to be forwarded  
Seamless, lap welded or riveted longitudinal joint seamless Material S Range of tensile strength not known Working pressure by Rules 12 kg./sq. cm.

IS A DONKEY BOILER FITTED? no

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 Plans & sketch app. Nov. 41 Receivers no Separate Tanks no  
(If not, state date of approval)

Donkey Boilers

General Pumping Arrangements sketch app. Nov. 41

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied? yes.

State the principal additional spare gear supplied none, Owners have well supplied store in Liverpool.

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 41

Dates of Examination of principal parts—Cylinders 27-6-41 Covers 27-6-41 Pistons 27-6-41 Rods  Connecting rods 27-6-41  
Crank shaft 27-6-41 Flywheel shaft 27-6-41 Thrust shaft 22-7-41 Intermediate shafts  Tube shaft   
Screw shafts 18-7-41 Propellers 18-7-41 Stern tubes 18-7-41 Engine seatings 27-6-41 Engines holding down bolts 27-6-41  
Completion of fitting sea connections  Completion of pumping arrangements in engine room not yet complete Engines tried under working conditions 19-10-41  
Crank shaft, Material S Identification Mark none Flywheel shaft, Material S Identification Mark none  
Thrust shaft, Material S Identification Mark none Intermediate shafts, Material  Identification Marks   
Tube shaft, Material  Identification Mark  Screw shaft, Material S Identification Mark none

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? yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo acid in tanks only If so, have the requirements of the Rules been complied with? yes

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with? not

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.)

The main and auxiliary machinery of this vessel has been examined throughout, repaired, repaired, tested under working conditions and found to be satisfactory except for the pumping arrangements in the engine room which require to be placed in accordance with the approved plan and particulars to be obtained of air receivers and auxiliary engine. This work is now being attended to, between voyages, and when completed, the machinery, in my opinion will be eligible to be classed with this Society and have a record of L.M.C. with date.

The amount of Entry Fee .. £s. 275 : When applied for, .. .. . 19.  
Special .. .. . : : : : : 19.  
Donkey Boiler Fee .. .. . : : : : :  
Travelling Expenses (if any)  : : : : : 19.

Committee's Minute TUE 14 JUL 1942

Assigned See Co. Rpt. 2168

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

*D. Chapman*  
Engineer Surveyor to Lloyd's Register of Shipping.



Rpt. 13.

Surveyed by  
(Ex "KARIB")  
Classified  
and that  
Register of  
recommendations  
been carried  
Recommendations  
recommendations  
be made in  
the survey

This Certificate is issued  
While the Committee has  
advised, it is to be understood  
that the responsibility for the  
accuracy of the information  
in the Register Book  
rests with the Member  
Surveyors or any Member

10m, 8.38. (MADE IN ENGLAND)