

# REPORT ON OIL ENGINE MACHINERY.

No. 2182

Received at London Office 18 AUG 1942

Date of writing Report 10 May 1942 When handed in at Local Office

Port of Curacao, Z. V. Z.

No. in Survey held at Curacao, Z. V. Z.

Date, First Survey 7 Oct. 1940 Last Survey 7 May 1942

Number of Visits 4

1003 on the Single  
Triple  
Quadruple

Screw vessel

"Bonair" ex Henry Horn

Tons { Gross 3164  
Net 1857

built at Hamburg

By whom built Reichardt, Schiffpfl. Werkh. Yard No 578 When built 1926

Engines made at Winterthur

By whom made Julius B. & Co. Engine No 2914 When made 1922

Donkey Boiler made at Hamburg

By whom made Reichardt, Schiffpfl. Werkh. Yard No 920 When made 1926

Brake Horse Power 1360

Owners Government of Curacao, Z. V. Z. Port belonging to Willemstad

Net Horse Power as per Rule 378.7

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended General cargo with accommodation for 4 passengers.

## L ENGINES, &c.—Type of Engines

Subje 2 or 4 stroke cycle 2 Single or double acting 3

Maximum pressure in cylinders 650 Lb/sq. in. Diameter of cylinders 28 1/2 in. Length of stroke 41 3/4 in. No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 17 7/16 in. Is there a bearing between each crank yes

Revolutions per minute 110 Flywheel dia. 82 1/16 in. Weight not known Means of ignition compression Kind of fuel used dist. oil

Crank Shaft, dia. of journals 14 1/16 in. Crank pin dia. 14 1/16 in. Crank Webs Mid. length breadth 29 1/8 in. Mid. length thickness 9 1/16 in. Thickness parallel to axis 6 1/16 in. Thickness around eyehole 7 3/32 in.

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the screw shaft fitted with a continuous liner yes

Bronze 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

propeller boss yes, rubber ring If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length

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 tube

shaft no If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 63 in.

Propeller, dia. 161 7/16 in. Pitch 12 1/16 in. No. of blades 4 Material Brass whether Moveable not Total Developed Surface 65.8 sq. feet

Method of reversing Engines Hand gear Is a governor or other arrangement fitted to prevent racing of the engine yes Means of lubrication

forced Thickness of cylinder liners 10 1/16 in. Are the cylinders fitted with safety valves no Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material both If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine yes

Cooling Water Pumps, No. 2 Bottom & 2 Jacket 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. One Diameter 6 3/16 in. Stroke 5 7/16 in. Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size 2 in. Pump. Ballast Pump 4 in. Independent Bilge Pump 5 3/16 in. duplex How driven Electric motor. Electric motor

Ballast Pumps, No. and size Two 4 in. Lubricating Oil Pumps, including Spare Pump, No. and size Two 4 in. One 2 1/2 in. duplex

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

Pumps, No. and size:—In Machinery Spaces Five on main 3 in. dia. Two direct 3 in. dia. Two circulating In Pump Room

In Holds, &c. Eight 3 1/2 in. { pumps 4 in. dia. Two for oil with 2 in. dia.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two 3 in.

Are all the Bilge Suction pipes in Holds and Tunnel Well 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 no, steel studs Are they fitted with Valves or Cocks above

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 yes

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 yes Is it fitted with a watertight door yes worked from S.S. main deck

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. One No. of stages three Diameters 5 1/2, 22 3/4, 25 3/4 Stroke 10 7/8 in. Driven by main engine

Auxiliary Air Compressors, No. Two No. of stages three Diameters 2 1/2, 1 3/4, 1 3/4 Stroke 7 in. Driven by generator engines

Small Auxiliary Air Compressors, No. One No. of stages two Diameters 1 3/16, 4 7/16 Stroke 4 1/16 in. Driven by emergency gen. eng.

Scavenging Air Pumps, No. Two rotary Diameter 29 1/2 in. Stroke 3,600 r.p.m. Driven by electric motor

Auxiliary Engines crank shafts, diameter as per Rule Position —each side of M.E. on bottom platform.

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. 6 storage Cubic capacity of each 0.5 Internal diameter 20 5/16 in. thickness 1 1/2 in.

Seamless, lap welded or riveted longitudinal joint stainless Material S.M. Range of tensile strength not known Working pressure Actual 70 Lbs./sq. in.

Starting Air Receivers, No. 1 for main & aux. eng. 1 for emergency eng. Total cubic capacity 0.05 Internal diameter 10 1/8 in. thickness 3/4 in.

Seamless, lap welded or riveted longitudinal joint main riveted Material S.M. Range of tensile strength not known Working pressure Actual 25 Lbs./sq. in.



# IS A DONKEY BOILER FITTED?

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

yes

If so, is a report now forwarded?

yes

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

no

Receivers

no

Separate Tanks

no

Donkey Boiler

yes

General Pumping Arrangements

no

Oil Fuel Burning Arrangements

no

## SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes

State the principal additional spare gear supplied

none.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building  
During progress of work  
on board vessel -  
Total No. of visits 64  
1940. Oct. 7, 21, 1941 Jan. 3, 6, 10, 13, 16, 24, 31, Feb. 3, 7, 11, 20, 25, 28, March 8, 13, 21, April 2, 4, 9, 23, May 5, 8, 12, 16, 20, 23, June 26, July 16, 21, Aug. 15, Sept. 18, 19, Oct. 3, Nov. 11, 15, 20, 24, Dec. 10, 1942 Jan. 13, 14, 15, 24, 30, 31, Feb. 2, 3, 4, 9, 11, 12, 13, 17, 18, 19, 21, April 7, 17, 20, 24, May 2, 6, 7

Dates of Examination of principal parts—Cylinders 15-8-41 Covers 13-1-41 Pistons 15-11-41 Rods 15-11-41 Connecting rods 15-11-41

Crank shaft 8-3-41 Flywheel shaft 8-3-41 Thrust shaft 8-3-41 Intermediate shafts 13-1-41 Tube shaft 13-1-41

Screw shaft 2-2-42 Propeller 2-2-42 Stern tube 2-2-42 Engine seatings 8-3-41 Engines holding down bolts 8-3-41

Completion of fitting sea connections 3-2-42 Completion of pumping arrangements 24-4-42 Engines tried under working conditions 12-2-42

Crank shaft, Material S.M. Identification Mark Lloyds 1-20, 6-22 Flywheel shaft, Material S.M. Identification Mark not found

Thrust shaft, Material S.M. Identification Mark not found Intermediate shafts, Material S.M. Identification Marks 94. 11-4-25

Tube shaft, Material S.M. Identification Mark 94. 11-4-25 Screw shaft, Material S.M. Identification Mark 94. 11-4-25

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

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 no 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.) The main and auxiliary machinery, originally built to Germanische Lloyd's class, has been examined throughout, placed in good condition in accordance with the rules except the main injection air vessels and the emergency engine starting air vessel which require to be docked at the first opportunity. The machinery of this vessel is eligible, in my opinion, to be classed with this Society and have the marks of D.B.S. 2.42, T.S.(C) 2.42 and notation of LMC with date when the machinery survey has been completed.

Certificate (if required) to be sent to

The amount of Entry Fee .. £637:50 When applied for, 8/5742  
Special .. £318:75 When received, 19  
Donkey Boiler Fee .. £55:00  
T.S. Travelling Expenses (if any) .. £30:00  
Committee's Minute FRI, 16 OCT 1942  
Assigned 5.2.42 note NRP Eng. made 22 fitted '26

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation