

REPORT ON OIL ENGINE MACHINERY.

No. 1794

26 JAN 1942

Received at London Office
MOBILE, ALABAMA

25th Nov. 41 When handed in at Local Office 27th Nov. 41 Port of
MOBILE Date, First Survey 30th July 1940 Last Survey 6th April 19 41
Number of Visits 46

on the ~~Triple~~ ^{Single} Screw vessel **M. V. "PHILAE" ex "TRENTO"** Tons ^{Gross} 4403 ^{Net} 3245

built at **Pascagoula, Miss.** By whom built **International S.B.Co.** Yard No. **2** When built **1920**

Engines made at **New London, Conn.** By whom made **New London Ship & Eng.Co.** Engine No. **692/3** Completed **1941**

Donkey Boilers made at **Chattanooga, Tenn.** By whom made **Combustion Engineering Co.** Boiler No. **806** When made **1941**

Brake Horse Power **2400 total** Owners **Frango Corporation** Port belonging to **Panama City, R.P.**

nom. Horse Power as per Rule **436** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

Trade for which vessel is intended **Freighter.**

ENGINES, &c.—Type of Engines **2 Diesel engines geared to 1 shaft** Single or double acting **single**

Maximum pressure in cylinders **500 lbs.** Diameter of cylinders **15.75"** Length of stroke **18.11"** No. of cylinders **9 each** No. of cranks **9 ea. engine**

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge **14.8"** Is there a bearing between each crank **yes**

Revolutions per minute **380 eng.** **85 propeller** Means of ignition **compression** Kind of fuel used **Diesel oil**

Crank Shaft, dia. of journals **8.77** Crank pin dia. **9.625** Crank Webs **3.625** Thickness parallel to axis **-**

as per Rule **9.625** Crank pin dia. **WITH 4.92 BORE** as per Rule **12.5 approved** Thrust Shaft, diameter at collars **13.2**

as fitted **WITH 4.92 BORE** as fitted **12.5** as fitted **9-3/8" no torque**

Intermediate Shafts, diameter **13.9** Is the **yes** shaft fitted with a continuous liner **yes**

as per Rule **13.9** as fitted **14-1/4"** as per rule **9/16** Is the after end of the liner made watertight in the

as fitted **14-1/4"** as fitted **3/4"** as fitted **3/4"**

Tube Shaft, diameter **none** as per Rule **2 3/32** Thickness between bushes **3/4"**

as fitted **none** as fitted **3/4"**

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 **-**

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 **no** If so, state type **-** Length of Bearing in Stern Bush next to and supporting propeller **4'-11 1/2"**

Propeller, dia. **16.0'** Pitch **13 to 15.25'** No. of blades **4** Material **bronze** whether Moveable **no** Total Developed Surface **100.6** sq. feet

Method of reversing Engines **direct** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **yes** Means of lubrication **led up stack**

forced Thickness of cylinder liners **1.34"** Are the cylinders fitted with safety valves **yes** Are the exhaust pipes and silencers water cooled or lagged with **led up stack**

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 **yes**

Cooling Water Pumps, No. **three (3)** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **yes**

What special arrangements are made for dealing with cooling water if discharged into bilges **not discharged to bilge**

Bilge Pumps worked from the Main Engines, No. **none** Diameter **-** Stroke **-** Can one be overhauled while the other is at work **-**

Pumps connected to the Main Bilge Line { No. and Size **1-100 GPM** **1-250 GPM SERVICE** **1-5 1/2 x 4 3/4 x 5** AUX. GEN. SERVICE

How driven **ELEC. MOTOR** **ELEC. MOTOR** **STEAM** **STEAM**

Ballast Pumps, No. and size **1 12x12x18** Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **1 each engine**

Are two independent means arranged for circulating water through the Oil Cooler **yes** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge **1 300 GPM independent.**

Pumps, No. and size:—In Machinery Spaces **3'-2 1/2"** In Pump Room **-**

in Holds, &c. **2 - 3 1/2" in each hold**

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1 - 5" & 1 - 3"**

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **yes** Are the Bilge Suctions in the Machinery Spaces **yes**

and 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 **valves**

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 **oil fuel**

What pipes pass through the deep tanks **no deep tanks** 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 **upper deck**

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. **none** No. of stages **-** Diameters **-** Stroke **-** Driven by **-**

Auxiliary Air Compressors, No. **one** No. of stages **2** Diameters **4" - 8"** Stroke **6"** Driven by **elec. motor**

Small Auxiliary Air Compressors, No. **one** No. of stages **2** Diameters **1.78 - 4 1/2** Stroke **4"** Driven by **diesel eng.**

Scavenging Air Pumps, No. **none** Diameter **-** Stroke **-** Driven by **-**

Auxiliary Engines crank shafts, diameter **3.2** as per Rule **5.5** as fitted **Two generators.**

Position **Engine room.**

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule **yes** Is a drain fitted at the lowest part of each receiver **yes**

Can the internal surfaces of the receivers be examined and cleaned **yes**

High Pressure Air Receivers, No. **none** Cubic capacity of each **-** Internal diameter **-** thickness **-**

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

Starting Air Receivers, No. **3** Total cubic capacity **375 cu.ft.** Internal diameter **36 15/16"** thickness **9/16"**

Seamless, lap welded or riveted longitudinal joint **double riveted steel** Range of tensile strength **60,000 lb** Working pressure **360 lb.**

IS A DONKEY BOILER FITTED? **yes**

If so, is a report now forwarded? **yes**

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

no

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

Receivers **yes**

Separate Tanks **no**

Donkey Boilers **yes**

General Pumping Arrangements **yes**

Oil Fuel Burning Arrangements **none**

SPARE GEAR.

Has the spare gear required by the Rules been supplied **yes**

State the principal additional spare gear supplied **1 tail shaft complete, many minor items.**

The foregoing is a correct description.

ALABAMA DRY DOCK & SHIPBUILDING CO.

By **G. W. Szepinski, Naval Architect.**

Manufacturer.

Dates of Survey while building
During progress of work in shops - **1940. Oct. 4, 5.**
During erection on board vessel - **1940. July 30, Aug. 2, 14, 15, 16, 17, 19, 20, Sept. 14, 15, 18, 24, Dec. 16, 18, 30, 31.**
1941. Jan. 2, 3, 4, 6, 8, 10, 17, 18, 23, Feb. 6, 8, 19, 27, Mar. 5, 10, 12, 18, 19, 22, 24, 25, 31, April 1, 2, 3, 4, 5, 6.
Total No. of visits **46**

Dates of Examination of principal parts—Cylinders **18/9/40** Covers **18/9/40** Pistons **18/9/40** Rods **-** Connecting rods **18/9/40**

Crank shaft **18/9/40** Flywheel shaft **-** Thrust shaft **11/26/40** Intermediate shafts **6/2/41** Tube shaft **-**

Screw shaft **3/1/41** Propeller **6/1/41** Stern tube **6/1/41** Engine seatings **17/1/41** Engines holding down bolts **12/3/41**

Completion of fitting sea connections **3/1/41** Completion of pumping arrangements **18/3/41** Engines tried under working conditions **5/4/41**

Crank shaft, Material **steel** Identification Mark **none** Flywheel shaft, Material **none** Identification Mark **-**

Thrust shaft, Material **steel** Identification Mark **Lloyd's 1181 GN 11/26/40** Intermediate shafts, Material **steel** Identification Marks **Lloyd's 6186 GN 8/11/41**

Tube shaft, Material **none** Identification Mark **-** Screw shaft, Material **steel** Identification Mark **Lloyd's 799 WHS 26/10/41**

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 machinery of this vessel consists of two 9 cylinder Diesel engines, single reduction geared to one screw shaft.

The engines are not new, having been taken out of a U.S. Navy submarine. They have, however, been opened up and examined and they comply with the Rules and have been put in good condition.

The Reduction Gear is new and was built under Special Survey as per Chicago report herewith. Its forgings and steel castings have been tested in accordance with the Rules and the workmanship and material are good. A new tail shaft, one new intermediate shaft and two new stub shafts (to connect engines to Reduction Gear) have now been fitted and these were tested in accordance with the Rules. The other intermediate shafts are old, being intended to be used when the vessel was built in 1920.

This machinery has now been fitted on board under the supervision of the Society's Surveyors and satisfactorily tried at full power. It is now in good and safe working condition and eligible, in our opinion, to receive record of LMC 4,41 and the notation 2 Oil Eng. Geared to 1 Sc. Shaft - Built 1932 - Refitted 1941 and 1 W.T.D.B. 150 lbs. and 1 Exhaust Gas Fired W.T.D.B. 150 lbs. and Shaft Seen CI and NDB 4,41 in the Register Book.

The amount of Entry Fee .. **\$ 25.00** : When applied for,
Special ... **£ 447.50** : **Dec. 2, 1941**
Donkey Boiler Fee ... : When received,
Travelling Expenses (if any) **£ 50.50** : 19

Committee's Minute

Assigned **N.E. 32 REFITTED '41.**

NOTE - CL -
1 WTDB - 150 lb. 0"
1 WTDB (EXHAUST GAS FIRED) 150 lb. 0"

for W.H. Stewart and self,

W.H. Stewart

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation