

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No.

26 JAN 1942

Date of writing Report May 27 1941 When handed in at Local Office Army Base, Norfolk Va

Port of Newport News Va

No. in Survey held at Army Base, Norfolk Va Date, First Survey Oct 29 40

Last Survey 19 Number of Visits 5

on the Single Twin Triple Quadruple Screw vessel

Tons } Gross  
          } Net

Built at W. Hill, Habana By whom built Alabama D. P. Shipbuilding Co Card No 223 When built STAR. 2054

Engines made at Cubana New York By whom made W. C. Worth & Co Engine No. 2057 When made 1929

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

Brake Horse Power per engine 1200 Owners National Fuel Oil Co Port belonging to \_\_\_\_\_

Nom. Horse Power as per Rule 625 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which vessel is intended \_\_\_\_\_

**OIL ENGINES, &c.** Type of Engine Vertical Heavy Oil Turbine 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 600-650 Diameter of cylinders 20" Length of stroke 24" No. of cylinders 8 No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 25 1/16" Is there a bearing between each crank Yes.

Revolutions per minute 250 Flywheel dia. \_\_\_\_\_ Weight \_\_\_\_\_ Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 12 1/4" as fitted 13" Crank pin dia. 13" Crank Webs Mid. length breadth 20 3/4" Mid. length thickness 6 1/2" Thickness parallel to axis \_\_\_\_\_ Thickness around eye-hole \_\_\_\_\_

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

Tube Shaft, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Screw Shaft, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Is the tube shaft fitted with a continuous liner \_\_\_\_\_

Bronze Liners, thickness in way of bushes as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ Thickness between bushes as per Rule \_\_\_\_\_ 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 \_\_\_\_\_

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 \_\_\_\_\_

Propeller, dia. \_\_\_\_\_ Pitch \_\_\_\_\_ No. of blades \_\_\_\_\_ Material \_\_\_\_\_ whether Moveable \_\_\_\_\_ Total Developed surface \_\_\_\_\_ 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 Foetal

Thickness of cylinder liners 1/2" Are the cylinders fitted with safety valves Yes. Are the exhaust pipes and silencers water cooled or lagged with non-conducting material \_\_\_\_\_

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. \_\_\_\_\_ Is the sea suction provided with an efficient strainer which can be cleared within the vessel \_\_\_\_\_

What special arrangements are made for dealing with cooling water if discharged into bilges \_\_\_\_\_

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 \_\_\_\_\_ How driven \_\_\_\_\_

Ballast Pumps, No. and size \_\_\_\_\_ Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size \_\_\_\_\_

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 \_\_\_\_\_ In Pump Room \_\_\_\_\_

In Holds, &c. \_\_\_\_\_

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size \_\_\_\_\_

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes \_\_\_\_\_ 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 \_\_\_\_\_

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. One per engine No. of stages 3 Diameters 3 1/2"-15-17" Stroke 14 1/4" Driven by Crank Shaft

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 No. Is a drain fitted at the lowest part of each receiver \_\_\_\_\_

High Pressure Air Receivers, No. 2 Small 2 Large Cubic capacity of each 2.427/6.04 Cu. Ft. Internal diameter 18 7/11" thickness 3/4 9/16"

Seamless, lap welded or riveted longitudinal joint Stitch down Material Steel Range of tensile strength \_\_\_\_\_ Working pressure Actual 1129/1467 lbs

Starting Air Receivers, No. \_\_\_\_\_ Total cubic capacity \_\_\_\_\_ Internal diameter \_\_\_\_\_ thickness \_\_\_\_\_ Working pressure Actual \_\_\_\_\_

Seamless, lap welded or riveted longitudinal joint \_\_\_\_\_ Material \_\_\_\_\_ 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 (If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

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

Crankshaft in Hooper. Oct 29. Nov. 23. Dec. 12. 1940. Jan 16 30. 1941.

Dates of Examination of principal parts—Cylinders 29.10.40 Covers 29.10.40 Pistons 29.10.40 Rods 30.11.40 Connecting rods 30.11.40

Crank shaft 23.11.40 Flywheel shaft Thrust shaft Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material Steel Identification Mark A.B.S. 7.24.2R. E.G.S. 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.

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 YES. If so, state name of vessel M/S PETROFUEL.

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines are of good sturdy design and all forgings and castings requiring test were carried out by the American Bureau of Shipping. The engines have been thoroughly overhauled and adjusted as found necessary. They have now been dispatched to Mobile, Ala., for fitting on board. The case is submitted for the favorable consideration of the Committee for the record of LMC, with date upon completion of the survey.

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

Signature of Engineer Surveyor

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK DEC 10 1941

Assigned See MOB. RPT. NO. 1809.



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