

REPORT ON OIL ENGINE MACHINERY.

Received at London Office 26 JAN 1942

Date of writing Report 29th Nov. 41 When handed in at Local Office 1st Dec. 41 Port of MOBILE, ALABAMA

No. in Survey held at MOBILE Date, First Survey 11th April Last Survey 28th July 1941 Reg. Book. Number of Visits 13

90609 on the ^{Single} Twin ^{Triple} Screw vessel "WILLIAM C. McTARNAHAN" Tons Gross 7302 Net 5826

Built at Mobile, Alabama By whom built Alabama D.D. & S.B. Co. Yard No. 223 When built 1941

Engines made at Auburn, N.Y. By whom made McIntosh & Seymour Engine No. 2054 When made 1929 Refitted 1941

Donkey Boilers made at none By whom made - Boiler No. - When made -

Brake Horse Power 1200 each engine Owners National Bulk Carriers, Inc. Port belonging to Wilmington, Del.

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 TANKER

OIL ENGINES, &c.—Type of Engines Diesel Trunk Piston 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 11/16 Is there a bearing between each crank yes

Revolutions per minute 250 Flywheel dia. 4'-6" Weight 6500 lbs. Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule 12.1" as fitted 13" Crank pin dia. 13" Crank Webs Mid. length breadth 20-3/4 Thickness parallel to axis solid

Flywheel Shaft, diameter as per Rule 12.1" as fitted 13" Intermediate Shafts, diameter as per Rule 7-1/4 as fitted 9-1/4 Thrust Shaft, diameter at collars as per Rule 7.6 as fitted 10-1/4

Tube Shaft, diameter as per Rule 7.6 as fitted 9-3/8 Screw Shaft, diameter as per Rule 8.3 as fitted 9-3/8 Is the tube screw shaft fitted with a continuous liner 2 liners

Bronze Liners, thickness in way of bushes as per Rule 1/2 as fitted 5/8 Thickness between bushes as per Rule 3/8 as fitted 5/8 Is the after end of the liner made watertight in the

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 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 fits tight

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 yes If so, state type Guthans Patent Length of Bearing in Stern Bush next to and supporting propeller 3'-0"

Propeller, dia. 8'-9" Pitch 5'-3" at 35" R. No. of blades 4 Material bronze whether Moveable no Total Developed Surface ea. 30 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

forced Thickness of cylinder liners 1-1/2 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

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 led up

Cooling Water Pumps, No. Two additional means 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 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 1 - 4" suction, 2 - 2 1/2" suction, 1 - 3" suction electric motors

Ballast Pumps, No. and size 5 cargo pumps deep well type 8" suction Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 - 5" rotary

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 2 - 4", 3 - 3" In Pump Room 1 - 2"

In Holds, &c. Oil pumping cargo system.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 3", 1 - 4"

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 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 cover covering plate yes

What pipes pass through the bunkers bilge suction How are they protected pipe tunnels

What pipes pass through the deep tanks oil cargo pipe lines only 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 Mch. aft 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 steel vessel

Main Air Compressors, No. 1 each engine No. of stages 3 Diameters 3 1/2"-15"-17 1/2" Stroke 14 1/2" Driven by main crank shaft

Auxiliary Air Compressors, No. 3 No. of stages 2 Diameters 6 1/2"-2 1/2" Stroke 5 1/2" Driven by 2 - oil eng. 1 - elec. motor

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters - Stroke - Driven by steam

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

Auxiliary Engines crank shafts, diameter as per Rule 5.06 as fitted 6-7/8 5 3/4 Position on gallery deck in eng. room

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule H.P. no Starting yes Is a drain fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. 2 small 2 large Cubic capacity of each 2.4 & 16 cu. ft. Internal diameter 10-7/8 & 17.75 thickness 1/2 & 13/16

Seamless, lap welded or riveted longitudinal joint seamless Material steel Range of tensile strength not known Working pressure by Rules 1154 & 1200 lbs. Actual 1000

Starting Air Receivers, No. 2 Total cubic capacity 385 cu. ft. Internal diameter 48" thickness 1" Working pressure by Rules 402 lbs. Actual 400 lbs.

Seamless, lap welded or riveted longitudinal joint fusion welded Material steel Range of tensile strength 55000 Working pressure Actual 400 lbs.

IS A DONKEY BOILER FITTED? ⁷ Exhaust Gas Fired 30 lbs. W.P. only If so, is a report now forwarded? no ✓

Is the donkey boiler intended to be used for domestic purposes only? yes for small compressor
 PLANS. Are approved plans forwarded herewith for Shafting? yes Receivers? yes Separate Tanks? yes
 (If not, state date of approval)
 Donkey Boilers - General Pumping Arrangements yes Oil Fuel Burning Arrangements -

SPARE GEAR.

Has the spare gear required by the Rules been supplied? yes ✓
 State the principal additional spare gear supplied:
 1 Main Engine Liner
 2 Main Engine Pistons
 2 Main Engine Cylinder Covers

The foregoing is a correct description.
 ALABAMA DRY DOCK & SHIPBUILDING Co.
 G.W. Szepinski, Naval Architect Manufacturer.

Dates of Survey while building: During progress of work in shops - -
 During erection on board vessel - - 1941 - Apr. 11, 28, May 21, 37, June 2, 6, 7, July 7, 8, 19, 22, 24, 28
 Total No. of visits 13

Dates of Examination of principal parts—Cylinders N. News Covers N. News Pistons N. News Rods N. News Connecting rods N. News
 Crank shaft N. News Flywheel shaft 27/5/41 Thrust shaft 27/5/41 Intermediate shafts 27/5/41 Tube shaft 8/7/41
 Screw shaft 8/7/41 Propeller 8/7/41 Stern tube 20/6/41 Engine seatings 27/5/41 Engines holding down bolts 6/6/41
 Completion of fitting sea connections 22/6/41 Completion of pumping arrangements 19/7/41 Engines tried under working conditions 28/7/41
 Crank shaft, Material steel Identification Mark none Flywheel shaft, Material steel Identification Mark
 Thrust shaft, Material steel Identification Mark Intermediate shafts, Material none Identification Marks -
 Tube shaft, Material steel Identification Mark Screw shaft, Material Identification Mark

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? tanker 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? not desired
 Is this machinery duplicate of a previous case? yes ✓ If so, state name of vessel "PETROFUEL" Mobile Rpt. 1786

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The main engines of this vessel were not built under Special Survey and are second hand. They have been completely opened up and examined and put in good condition, as per Newport News Reports 5385
 They have now been fitted on board under Special Survey, in accordance with the Rules and approved plans and the workmanship and material are good. The machinery of this vessel has been satisfactorily tried at full power and it is now in good and safe working condition and eligible, in my opinion, to receive the record of LMC 7,41 and the notations of OIL ENG. and SHAFT SEEN C.L. in the Register Book.

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 .. \$ 30.00 : When applied for,
 Special £ 532.00 : Dec. 2, 19 41
 Donkey Boiler Fee ... £ - : When received,
 Travelling Expenses (if any) £ 50.00 : 19

T. H. Wood
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned N.E. 1929 REFITTED 1941
 LMC-7-41

