

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 40005.

MAY -6 1940

Received at London Office

Date of writing Report 9 MAR 1940 When handed in at Local Office

Port of

NEW YORK

No. in Survey held at Rochester N.Y. + New York Reg. Book.

Date, First Survey

6 Oct 1938

Last Survey

3 Mar

1940

Number of Visits 49

on the ~~Single~~ ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel T.S.M.V. PETROHEAT

Tons { Gross 2348. Net 1880

Built at Rochester N.Y. By whom built Dolomite Marine Corp³ Yard No. 4 When built 1940

Engines made at Auburn N.Y. By whom made American Locomotive Co Engine No. 24941 When made 1940

Donkey Boilers made at Titusville Pa By whom made Titusville Iron Works Boiler No. When made 1940

Brake Horse Power 1440 Owners DOLOMITE 3 CORPORATION. Port belonging to New York

Nom. Horse Power as per Rule 245 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended TANKER. COASTWISE & WEST INDIES

OIL ENGINES, &c. Type of Engines 2 OIL ENGINES S.R. GEARED TO 2 S.C. SHAFTS 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 700 LBS Diameter of cylinders 12½ Length of stroke 13 No. of cylinders 8 EACH ENG. No. of cranks 8 EACH ENGINE

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 13¾ Is there a bearing between each crank YES

Revolutions per minute 600 ENGINE 300 PROPELLER Flywheel dia. 4' 5½" Weight 965 LBS Means of ignition COMPRESSION Kind of fuel used FUEL OIL F.P. ABOVE 150°F

Crank Shaft, dia. of journals as per Rule 7.38 Crank pin dia. 8½ WITH 3/8" Crank Webs Mid. length breadth 10½ Thickness parallel to axis shrunk Thickness around eyehole 3¼

Flywheel Shaft, diameter as per Rule 6.1 Intermediate Shafts, diameter as fitted 8" Thrust Shaft, diameter at collars as per Rule 6.4 as fitted 7"

Tube Shaft, diameter as per Rule 6.98 Screw Shaft, diameter as fitted 8 Is the { tube } shaft fitted with a continuous liner { YES

Bronze Liners, thickness in way of bushes as per Rule ½" Thickness between bushes as fitted 3/8 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 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 FITS TIGHT

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 Length of Bearing in Stern Bush next to and supporting propeller 31"

Propeller, dia. 6'-3" Pitch 4'-6" No. of blades 4 Material BRONZE whether Moveable NO Total Developed Surface 26.2 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 13/16 Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with LAG UP

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

Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel BUSH OUT CONNECTIONS PROVIDED

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- BILGE 2½" SUCTION 1- SALT WATER CIRCULATING 400 GPM 1- FIRE PUMP 450 GPM 1- AUX FIRE PUMP 150 GPM How driven MOTOR MOTOR STEAM TURBINE MOTOR

Ballast Pumps, No. and size OIL CARGO PUMPS ONLY Lubricating Oil Pumps, including Spare Pump, No. and size 5-2"

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 3-2½ 2-5" In Pump Room 1-2"

In Holds, &c. OIL CARGO PUMPING SYSTEM BILGE PUMP 2" FORWARD 2-5"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-5"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes NO. OIL CARGO 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 NO. STRAINER BOX + STRUMS PROVIDED

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 BELOW

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 SPIGOT YES

What pipes pass through the bunkers OIL FUEL SUCTIONS How are they protected NOT PROTECTED. OIL FUEL ONLY

What pipes pass through the deep tanks OIL CARGO PUMPING SYSTEM 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 NO TUNNEL 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 STEEL VESSEL

Main Air Compressors, No. NONE No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 4'-3½" Stroke 4' Driven by ELEC. MOTOR

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 3½'-2½" Stroke 3" Driven by ELEC. MOTOR

Scavenging Air Pumps, No. NONE Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule 3¾ No. 1 DIESEL 1 TURBO-GENERATOR as fitted 3½ Position ENG ROOM STA² ENG ROOM PORT

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. NONE Cubic capacity of each Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual

Starting Air Receivers, No. 2 Total cubic capacity 50 cu ft Internal diameter 30" thickness 9/16"

Seamless, lap welded or riveted longitudinal joint FUSION WELDED Material STEEL Range of tensile strength 55000 LBS Working pressure by Rules Actual 385 LBS 360 "

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 Shifting (If not, state date of approval)

YES

Receivers

YES

Separate Tanks

NONE

Donkey Boilers

YES

General Pumping Arrangements

Oil Fuel Burning Arrangements

YES

SPARE GEAR.

Has the spare gear required by the Rules been supplied? YES. FOR SHORT VOYAGES ONLY.

State the principal additional spare gear supplied

The foregoing is a correct description.

J. W. Humphord

Manufacturer.

Dates of Survey while building

During progress of work in shops - NONE

During erection on board vessel - 1938 Oct 6, Nov 12, 1939 May 19, Jul 22, Aug 7, Dec 6, 8, 9, 11, 13, 18, 20, 27, 1940 Jan 2, 4, 5, 6, 10, 12, 14, 17, 18, 23, 24, 29, 30

Total No. of visits 49

Dates of Examination of principal parts—Cylinders 12/11/38 Covers 12/11/38 Pistons 12/11/38 Rods 3/1/40

Crank shaft 3/1/40 Flywheel shaft 4/12/39 Thrust shaft 4/12/39 Intermediate shafts 6/12/39 Tube shaft 4/12/39

Screw shaft 7/8/39 Propeller 6/1/40 Stern tube 7/8/39 Engine seatings 7/8/39 Engines holding down bolts 8/1/40

Completion of fitting sea connections 7/8/39 Completion of pumping arrangements 26/1/40 Engines tried under working conditions 2/9/40

Crank shaft, Material STEEL Identification Mark NOT MARKED Flywheel shaft, Material STEEL Identification Mark NOT MARKED

Thrust shaft, Material STEEL Identification Mark NOT MARKED Intermediate shafts, Material STEEL Identification Marks NOT MARKED

Tube shaft, Material STEEL Identification Mark NOT MARKED Screw shaft, Material STEEL Identification Mark NOT MARKED

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 YES

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with NOT REQ^d

Is this machinery duplicate of a previous case YES If so, state name of vessel DOLOMITE 4

General Remarks (State quality of workmanship, opinions as to class, etc.) This vessel was originally intended for classification with the American Bureau of Shipping & when the decision was made to submit her for classification with this Society, the whole of the machinery, the reduction gear, air receiver, donkey boiler & pumps were complete & in the builders yard.

Therefore, the Main & Auxiliary Engines were not built under Survey, but they have been opened up & examined & they comply with the Rules & the workmanship & material are good. They have been satisfactorily tried at full power & they are now in good & safe working condition.

The Air Receiver was built under U.S. Port supervision. They have been examined & they comply with the Rules, & they have been tested to 525 lbs in presence of the undersigned & found good, & in my opinion, they are in good & safe working condition for a working pressure of 350 lbs. Safety valves adjusted to blow at 360 lbs.

The amount of Entry Fee .. £ 20.00

Special ... £ 32.50

Donkey Boiler Fee ... £ 100.00

Travelling Expenses (if any) \$ 110.00

Committee's Minute

Assigned LMC 3.40

Note Oil Engine

CH

Rpt. 9a.

Port of New York

Continuation of Report No. 40005 dated 9 March 1940 on the

MAY -6 1940

M.V. PETROHEAT

OIL ENGINE MACHINERY continued

The engine room bilge pumps are not self priming as required by Rule but they are fitted with arrangements for priming & with non-return foot valves to ensure the same. Rough sketches showing the arrangement of piping & of the foot valves are hereto attached.

The bilges were flooded & all pumps tried & found to pump efficiently. In my opinion, the arrangement is safe & may be accepted by the Committee.

General

The machinery of this vessel is now in good & safe working condition & eligible, in my opinion, to receive the notations LMC 3.40 & 2 OIL ENG S.R. GEARED TO 2 SC SHAFTS & DB 184 lbs.

John S. Heck

John S. Heck
Engineer Surveyor to Lloyd's Register of Shipping.