

# REPORT ON OIL ENGINE MACHINERY.

No. 526

Received at London office \_\_\_\_\_  
 Port of Cleveland, Ohio 28 JUL 1930  
 of writing Report May 9 1930 When handed in at Local Office \_\_\_\_\_  
 in Survey held at Cleveland, Ohio Date, First Survey Feb. 14th Last Survey April 23 1930  
 Book. Number of Visits 20

on the Single Screw vessel "LTC No 3" Tons Gross 548  
Triple Net 321  
Quadruple  
 at Fore River, Mass. By whom built Bethlehem S. B. Co. Yard No. 1442 When built 1930  
 lines made at Cleveland By whom made Winton Engine Company Engine No. 3801 When made 1930  
3802  
 key Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
 ke Horse Power 325 (each) Owners LAKE TANKERS CORP. Port belonging to WILMINGTON DEL.  
 e. Horse Power as per Rule 142 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES  
 de for which vessel is intended INLAND WATERS.

**ENGINES, &c.**—Type of Engines Winton Diesel-Port & Starboard 2 or 4 stroke cycle 4 Single or double acting S.  
 Model 149  
 um pressure in cylinders 675 lbs. Diameter of cylinders 11" Length of stroke 15" No. of cylinders 6 No. of cranks 6  
 of bearings, adjacent to the Crank, measured from inner edge to inner edge 13 1/2" Is there a bearing between each crank Yes  
 tions per minute 375 Flywheel dia. 60" Weight 5360 lbs. Means of ignition Solid inj. Kind of fuel used Diesel oil  
 k Shaft, dia. of journals as per Rule 6.32" Crank pin dia. 7" Crank Webs Mid. length breadth 9 3/8" Thickness parallel to axis  
 as fitted 7" Mid. length thickness 3 7/8" Thickness around eyehole  
 heel Shaft, diameter as per Rule 6.32" Intermediate Shafts, diameter as per Rule \_\_\_\_\_ Thrust Shaft, diameter at collars as per Rule  
 as fitted 7" as fitted \_\_\_\_\_ as fitted \_\_\_\_\_  
 e Shaft, diameter as per Rule \_\_\_\_\_ as per Rule \_\_\_\_\_ Is the { tube } shaft fitted with a continuous liner {  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_

ize Liners, thickness in way of bushes as per Rule \_\_\_\_\_ as per rule \_\_\_\_\_ Is the after end of the liner made watertight in the  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner \_\_\_\_\_  
 e 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 \_\_\_\_\_  
 ve 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  
 If so, state type \_\_\_\_\_ Length of Bearing in Stern Bush next to and supporting propeller \_\_\_\_\_  
 umber, dia. \_\_\_\_\_ Pitch \_\_\_\_\_ No. of blades \_\_\_\_\_ Material \_\_\_\_\_ whether Moveable \_\_\_\_\_ Total Developed Surface \_\_\_\_\_ sq. feet  
 od of reversing Engines Elect. drive Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication  
 orced Thickness of cylinder liners 3/4" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with  
 onducting 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 ✓  
 ing Water Pumps, No. 106 G. P. M. Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES  
 o Pumps worked from the Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_

ps connected to the Main Bilge Line { No. and Size ONE 2 1/2" ROTARY ONE 3" ROTARY  
 How driven ELECTRIC MOTOR  
 ast Pumps, No. and size \_\_\_\_\_ Lubricating Oil Pumps, including Spare Pump, No. and size 26.5 G. P. M.  
2 cyl. S. A. type  
 wo independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
 ps, No. and size:—In Machinery Spaces 3 - 2 1/2 DIAM. In Pump Room TWO 2 1/2 diam  
 olds, &c. (Tanker)

pendent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ONE 2 1/2"  
 all the Bilge Suction pipes in MACH. SPACE Holds and Tunnel Well fitted with stream-boxes YES Are the Bilge Suctions in the Machinery Spaces  
 rom easily accessible mud-boxes, placed above the level of the working floor, with straight fast pipes to the bilges YES  
 all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks VALVES  
 hey 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 YES  
 hey 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 ✓  
 k pipes pass through the bunkers ✓ How are they protected ✓  
 t pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓  
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES  
 e 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  
 artment to another YES Is the Shaft Tunnel watertight NONE Is it fitted with a watertight door ✓ worked from ✓  
 ood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

n Air Compressors, No. 1 No. of stages 2 Diameters 3 1/4-4 Stroke 4" Driven by MOTOR  
 ilary Air Compressors, No. 1 No. of stages 2 Diameters 2 1/2-3 1/4 Stroke 3" Driven by GASOLINE ENG.  
 ll Auxiliary Air Compressors, No. \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
 venging Air Pumps, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
 ilary Engines crank shafts, diameter as per Rule SEE ATTACHED REPORT.  
 as fitted \_\_\_\_\_

**RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES  
 The internal surfaces of the receivers be examined and cleaned YES Is a drain fitted at the lowest part of each receiver YES  
 n Pressure Air Receivers, No. \_\_\_\_\_ Cubic capacity of each \_\_\_\_\_ Internal diameter \_\_\_\_\_ Thickness \_\_\_\_\_  
 lass, lap welded or riveted longitudinal joint \_\_\_\_\_ Material \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Working pressure by Rule \_\_\_\_\_  
 rting Air Receivers, No. Four Total cubic capacity 36 cub. ft. Internal diameter 16" Thickness 3/8"  
 lass, lap welded or riveted longitudinal joint L. D. R. Material Steel Range of tensile strength 55000 lbs. Working pressure by Rule 400 lbs.  
& copper brazed. minimum Actual

2021  
 Lloyd's Register  
 Foundation  
 009004-009027-0085

**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 Yes Receivers No Separate Tanks

Donkey Boilers General Pumping Arrangements Oil Fuel Burning Arrangements

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied

The foregoing is a correct description.

*Winton Engine Co. - J. H. Hutton* Manufacturer.

Dates of Survey while building  
 During progress of work in shops -- 1930 Feb. 14, 24, 25, 26, 27, 28, March 5, 11, 13, 24, 26, 31, April, 2, 3, 7, 10  
 During erection on board vessel -- 14, 15, 16, 23, MAR 3, AP. 24, MAY 20, 23, 28, JUNE 3, 5, 9, 10, 12, 16, 21, 24, 30, 1930  
 Total No. of visits 20 & 14

Dates of Examination of principal parts -- Cylinders Feb. 14 - Mar. 26 Covers Feb. 14 - Mar. 26 Pistons Feb. 14 - Mar. 26 Rods - Connecting rods Feb. 14 - Mar. 26

Crank shaft Mar. 13-26 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 O.H. Steel Identification Mark 12-12-29 Lloyd's 2103-2112 Flywheel shaft, Material Identification Mark

Thrust shaft, Material Identification Mark G.D. 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 "LTC No 1" "LTC No 2"

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

The above mentioned engines (Port & Starboard) have been built under Special Survey, and on completion were tested under full and intermediate loads in the Shop. The materials and workmanship were found to be sound and efficient. When the engines have been fitted on board the vessel and tried out, to the satisfaction of the Society's surveyors, she will, in my opinion, be eligible for record L.M.C. (with date) in the Register Book. (The engines are intended to be used in connection with the electric system of propulsion.)

Enclosed herewith is copy of crank shaft drawing, forging reports Nos. 2103 and 2112, also copies of certificates for air receivers Nos. 480, 481, 488, 489.

THE ABOVE MENTIONED ENGINES HAVE BEEN FITTED ON BOARD, EXAMINED UNDER WORKING CONDITIONS AND FOUND SATISFACTORY. QUALITY OF WORKMANSHIP AND MATERIALS IS GOOD AND IN THE OPINION OF THE UNDERSIGNED ELIGIBLE TO HAVE THE RECORD OF L.M.C. 6-3

WITH THE NOTATION "2 OIL ENGINES CONNECTED TO ELECTRIC MOTOR & SC. SHAFT."  
 Fee charged as per agreement with Winton Engine Co., Request No. 194.

The amount of Entry Fee	£	:	:	When applied for,
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	7.50	:	13.6.19.30

Engineer Surveyor to Lloyd's Register of Shipping.



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Committee's Minute

Assigned See N.Y.K. 31527

The Surveyors are requested not to write on or below the space for Committee's Minute.