

# REPORT ON OIL ENGINE MACHINERY.

REC'D NEW YORK JUL 6 1931

No. 573

18 JUL 1931

Date of writing Report April 13 1931 When handed in at Local Office July 31 1931 Port of Chicago  
 No. in Survey held at Deloit Wis Date, First Survey March 2 Last Survey March 23-31  
 Reg. Book.

Single on the Twin Triple Quadruple Screw vessel (wood) "Maneco" Cienfuegos.

Tons Gross 248 Net 142

Built at Nova Scotia By whom built J. Ennet & Co. Yard No. 20 When built 1931  
 Engines made at Deloit Wis By whom made Aulanks Morse Co. Engine No. 76291 When made 1931-3  
 Donkey Boilers made at By whom made Boiler No. When made  
 Brake Horse Power 250 Owners Bell Isle Steamship Co., Ltd. Port belonging to Lunenburg, N.S.  
 Nom. Horse Power as per Rule 172 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes  
 Trade for which vessel is intended In service in Conception Bay, Newfoundland.

**ENGINES, &c.**—Type of Engines Diesel (Pos. Scav) 2 or 4 stroke cycle 2 Single or double acting 5  
 Maximum pressure in cylinders 700 to 800 lbs. Diameter of cylinders 10 1/2" Length of stroke 12 1/2" No. of cylinders 5 No. of cranks 5  
 Position of bearings, adjacent to the Crank, measured from inner edge to inner edge 13" Is there a bearing between each crank Yes  
 Revolutions per minute 360 Flywheel dia. 36" Weight 826 tons Means of ignition Solid Kind of fuel used Diesel oil  
 Crank Shaft, dia. of journals as per Rule 6.64" as fitted 7 1/4" Crank pin dia. 7 1/4" Crank Webs Mid. length breadth 10" Mid. length thickness 4" Thickness parallel to axis  
 Flywheel Shaft, diameter as per Rule 6.64" as fitted 6 3/4" Intermediate Shafts, diameter as per Rule 6.64" as fitted 5" Thrust Shaft, diameter at collars as per Rule 6.64" as fitted  
 Main Shaft, diameter as per Rule 6.64" as fitted 5 1/2" Is the shaft fitted with a continuous liner Yes  
 Bronze Liners, thickness in way of bushes as per Rule 6.64" as fitted 1/2" Thickness between bushes as per Rule 6.64" as fitted 7/16" 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  
 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 Yes  
 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  
 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 22"

Propeller, dia. 58" Pitch 42" No. of blades 3 Material Cast steel whether Moveable No Total Developed Surface 8.6 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  
 Forced Thickness of cylinder liners Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or tagged with  
 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 Funnel

Boiling Water Pumps, No. 1-3 3/4" x 3 1/3" D.A. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
 26.5 Gallons per B.H.P. hr.  
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 2 1/4" Stroke 3 1/3" Can one be overhauled while the other is at work Yes  
 Pumps connected to the Main Bilge Line No. and Size 1-3 dia. suction, rotary 2 hand pumps 3" How driven 8 H.P. Aux. engine.

Fast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size 1-3 3/4" x 3 1/3" D.A.  
 26.5 Gallons per B.H.P. hr.  
 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 1-3 dia. rotary 2 @ 3" 1 @ 2 1/4" In Pump Room  
 Holds, &c. 1-3" hold + 1 @ 3" aft Dec 11 24/7/31

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size  
 all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces  
 from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
 all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Cocks  
 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  
 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  
 if pipes pass through the bunkers How are they protected  
 if 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  
 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 Is it fitted with a watertight door worked from  
 wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Engines and tanks fitted with drip trays

Two Air Compressors, No. 1 No. of stages 1 Diameters 8" Stroke 3 1/3" Driven by Main Engine  
 Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 2 1/4" + 3 1/4" Stroke 2 7/8" + 3 3/8" Driven by Aux. Diesel  
 Suctioning Air Pumps, No. 1 Diameter 22 3/4" Stroke 11" Driven by Main Engine

High Pressure Engines crank shafts, diameter as per Rule as fitted No. Position

**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

Pressure Air Receivers, No. 1 Cubic capacity of each Internal diameter thickness  
 less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual

Working Air Receivers, No. 2 Total cubic capacity 28 Internal diameter 30" Working pressure by Rules Actual  
 unless, lap welded or riveted longitudinal joint Riveted welded Material steel Range of tensile strength 26/30 tons Working pressure by Rules 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 Shifting  
(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

Compressor piston rings

Injection &amp; delivery valves

Injection pump with complete

Delivery pump with complete

1 set crankshaft pump

1 fuel pump

Quantity assorted bolts, nuts, springs etc.

1 length pipe for fuel delivery &amp; injection

in pipes, with connections

Quantity of extra rings, packing, Babbit, valves, seats, studs etc.

The foregoing is a correct description.

Fairbank, Morse &amp; Co.

By C. E. Bohman, Chief Inspector Manufacturer.

Dates of Survey while building

During progress of work in shops

During erection on board vessel

Total No. of visits

March 2, 3, 23, 1931

May 11-13-14-15-18-19-20-22-26-27-28-29-30, June 2-5-9-13-15-16-18-20-24

25

Dates of Examination of principal parts—Cylinders March 23 Covers March 23 Pistons March 23 Rods March 23 Connecting rods March 23

Crank shaft March 23 Flywheel shaft March 23 Thrust shaft March 23 Intermediate shafts May 12, May 11-18 Tube shaft March 23

Screw shaft May 12, May 11-18 Propeller May 14-18 Stern tube May 11-13-15 Engine seatings May 20-22-26-27 Engines holding down bolts May 22-26-27

Completion of fitting sea connections May 18 Completion of pumping arrangements June 16 Engines tried under working conditions June 16-20

Crank shaft, Material Steel Identification Mark Flywheel shaft, Material Steel Identification Mark

Thrust shaft, Material Identification Mark Intermediate shafts, Material Steel Identification Marks 2132

Tube shaft, Material Identification Mark Screw shaft, Material Steel Identification Mark 2131

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? If so, state name of vessel

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

The above mentioned engines have been built under Special Survey, & on completion were tested under full load in the shop. The materials & workmanship were found to be sound & efficient. When the engines have been fitted in the vessel, & tried out to the satisfaction of the Society's Surveyors, she will be eligible, in my opinion, for Record & LMC (with date) in the Register Book. (Enclosed herewith is copy of crank shaft drawing approved.) These engines have been satisfactorily installed in the vessel and tried under working conditions with satisfactory results. Speed and endurance trials were given the machinery and found satisfactory. The requirements of Section 20 of the Rules for using oil fuel have been complied with and machinery eligible, in my opinion, for record & LMC 6-31.

The amount of Entry Fee ... \$20.00. : When applied for, 12 March 1931  
 Special ... \$63.13 :  
 Donkey Boiler Fee ... \$63.12 :  
 Chicago expenses ... \$16.06 :  
 Travelling Expenses (if any) ... \$28.50 :  
 190.81 :  
 When received, 25.5.1931  
 Installation charge \$100.00  
 Electric light \$50.00  
 20.16/10/31

Committee's Minute

Assigned

+ L.M.C. 6.31

oil Eng.

CERTIFICATE WRITTEN.

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