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# REPORT ON OIL ENGINE MACHINERY.

Received at London Office

Date of writing Report **12th. July 45** **MARCH 9 45** When handed in at Local Office **14th. July 19 45** Port of **CHICAGO, ILLINOIS & QUEBEC, P.Q.**  
**23rd. March 45** **12th. July 1945**  
**JANUARY 11** Last Survey **FEBRUARY 28 19 45**

No. in Survey held at **BELOIT, WISCONSIN & LAUZON, P.Q.** First Survey  
Reg. Book. **Number of Visits 4**  
**(Quebec - 12 visits)**

on the **Single** Screw vessel **"SAULT-AU-MOUTON"** Tons **Gross 450.43**  
**Triple**  
**Quadruple** **Net 236.71**

Built at **LEVIS, QUEBEC, CANADA** By whom built **GEORGE T. DAVIE & SONS, LTD.** Yard No. **34** When built **1945**

Engines made at **BELOIT, WISCONSIN** By whom made **FAIRBANKS MORSE & COMPANY** Engine No. **867323** When made **1945**

Donkey Boilers made at **-** By whom made **-** Boiler No. **-** When made **-**

Brake Horse Power **200 (EACH)** Owners **QUEBEC SALES & TRANSPORTATION CO.** Port belonging to **QUEBEC, P.Q.**  
Combine **175**

Nom. Horse Power as per Rule **88 (EACH)** Is Refrigerating Machinery fitted for cargo purposes **NO** Is Electric Light fitted **YES**  
**MN = 175.**

Trade for which Vessel is intended **PULP WOOD BARGE**

OIL ENGINES, &c.—Type of Engines **VERTICAL MARINE DIESEL** 2 or 4 stroke cycle **2** Single or double acting **SINGLE?**

Maximum pressure in cylinders **700** Diameter of cylinders **10"** Length of stroke **12 1/2"** No. of cylinders **5** No. of cranks **5**

Mean Indicated Pressure **56** Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **12 5/16"** Is there a bearing between each crank **YES**

Revolutions per minute **400** Flywheel dia. **35"** Weight **1523 LBS.** Means of ignition **COMPRESSION** Kind of fuel used **HEAVY OIL**

Crank Shaft, **Solid forged** as per Rule **5.24"** Crank pin dia. **6"** Crank Webs **Mid length breadth 8"** Thickness parallel to axis **-**  
**Semi-built** dia. of journals as fitted **6"** **Mid length thickness 3 3/8"** Thickness around eye-hole **-**  
**All built** as per Rule **-** as per Rule **-**

Flywheel Shaft, diameter as per Rule **-** Intermediate Shafts, diameter as per Rule **-** Thrust Shaft, diameter at collars as per Rule **-**  
as fitted **-** as fitted **-** as fitted **-**

Tube Shaft, diameter as per Rule **-** Screw Shaft, diameter as per Rule **-** Is the **screw** shaft fitted with a continuous liner **Yes**  
as fitted **-** as fitted **4 1/2"** as fitted **-**

Bronze Liners, thickness in way of bushes as per Rule **-** Thickness between bushes as per Rule **-** Is the after end of the liner made watertight in the propeller boss **Yes**  
as fitted **13/32** as fitted **-** **Yes**

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **Yes**  
**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 **-**

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 **Cutless Rubber Bearing** Length of Bearing in Stern Bush next to and supporting propeller **20"**

Propeller, dia. **54"** Pitch **36"** No. of blades **3** Material **Bronze** whether Moveable **Fixed** 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 **FORCED**  
Thickness of cylinder walls **9/16"** 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. **2 - 100 GPM (EACH ENG.)** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**

Bilge Pumps worked from the Main Engines, No. **1 (EACH ENG.)** Diameter **2"** Stroke **2"** Can one be overhauled while the other is at work **YES**

Pumps connected to the Main Bilge Line { No. and Size **Two X 2", One X 3"**  
How driven **Main Eng. Aux. diesel Eng.**

Is the cooling water led to the bilges **No** If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements **-**

Ballast Pumps, No. and size **One X 3"** Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **2 - 20 GPM (EACH ENG.)**

Are two independent means arranged for circulating water through the Oil Cooler **No Oil Cooler** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces **One X 3", Two X 2"** In Pump Room **-**

In Holds, &c. **Three X 3"**

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **One X 2 1/2"**

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 **No all fitted on Stools** 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 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 ~~at all times~~ 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 **-** 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. **1 (EACH ENG.)** No. of Stages **1** Diameters **6"** Stroke **4 1/2"** Driven by **ECCENTRIC ON CRANK SHAFT**

Auxiliary Air Compressors, No. **One** No. of stages **2** Diameters **-** Stroke **-** Driven by **Clutch**

Small Auxiliary Air Compressors, No. **-** No. of stages **-** Diameters **-** Stroke **-** Driven by **-**

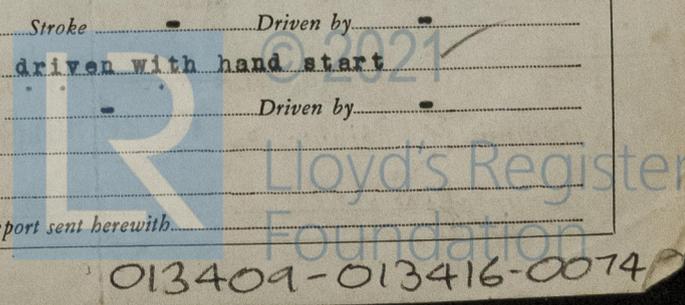
What provision is made for first Charging the Air Receivers **Aux. air compressor diesel driven with hand start**

Scavenging Air Pumps, No. **-** Diameter **-** Stroke **-** Driven by **-**

Auxiliary Engines crank shafts, diameter as per Rule **-** No. **-** as fitted **2 3/4** Position **-**

Have the Auxiliary Engines been constructed under special survey **American Bureau** Is a report sent herewith **-**

LM 9-41 Printed in U.S.A.



013409-013416-0074

**AIR RECEIVERS:**—Have they been made under survey Yes ✓ State No. of Report or Certificate 2991 & 2992  
 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 ✓  
 Injection Air Receivers, No. - 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 78.4 Cub.ft. Internal diameter 2'-6" thickness 7/16  
 Seamless, lap welded or riveted longitudinal joint Welded Material O.H.S. Range of tensile strength 59,430 Working pressure 253 by Rules 250 Actual 250

**IS A DONKEY BOILER FITTED?** - If so, is a report now forwarded? -  
 Is the donkey boiler intended to be used for domestic purposes only SAME AS ENGINE NO.  
**PLANS.** Are approved plans forwarded herewith for Shafting 842658 Receivers - Separate Fuel Tanks -  
 (If not, state date of approval)  
 Donkey Boilers - General Pumping Arrangements - Pumping Arrangements in Machinery Space -  
 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

E. J. Fish, Asst Chief Inspector For Manufacturer.

Dates of Survey while building { During progress of work in shops -- } JAN. 11; FEB. 12, 20, 28, 1945  
 { During erection on board vessel --- } MARCH 1945, 23. APRIL 9, 21, MAY 5, JUNE 2, 14, 20, 23, 28 JULY 10, 11, 12.  
 Total No. of visits TWELVE  
 Dates of Examination of principal parts—Cylinders FEB. 20-45 Covers DITTO Pistons DITTO Rods - Connecting rods DITTO  
 Crank shaft FEB. 12-45 Flywheel shaft - Thrust shaft - Intermediate shafts - Tube shaft -  
 Screw shaft 8-6-45 Propeller 23-6-45 Stern tube 2-6-45 Engine seatings 23-3-45 Engines holding down bolts 20-6-45  
 Completion of fitting sea connections 10-7-45 Completion of pumping arrangements 11-7-45 Engines tried under working conditions 11-7-45  
 Crank shaft, Material O.H. STEEL Identification Mark FEB. 12-45 RR 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 -  
 Identification Marks on Air Receivers -

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 NO ✓ If so, state name of vessel -

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 THE ABOVE MENTIONED DIESEL ENGINES WERE BUILT TO THIS SOCIETY'S SPECIAL SURVEY REQUIREMENTS OF TESTED MATERIALS AND IN ACCORDANCE WITH APPROVED PLANS.  
 THE ENGINES WERE OPERATED AT LOW, INTERMEDIATE, FULL, AND OVERLOAD BREAK TEST LOADS, UNDER GOVERNOR, CONTROL, WITH SATISFACTORY RESULTS.  
 THE REVERSING ARRANGEMENTS WERE PROVEN SATISFACTORY. THE WATER JACKETS WERE TESTED AS REQUIRED BY THE RULES. THE MATERIAL AND WORKMANSHIP IS OF GOOD QUALITY.  
 THE ENGINES ARE BEING FORWARDED TO THE GEORGE T. DAVIE & SONS, LTD. QUEBEC, CANADA, FOR INSTALLATION, AND WHEN THIS IS DONE IN ACCORDANCE WITH THE RULES AND TO THE SATISFACTION OF THIS SOCIETY'S SURVEYORS, THE MACHINERY WILL BE ELIGIBLE, IN MY OPINION, TO RECEIVE THE NOTATION OF OIL ENG. AND

\* LMC (WITH DATE). The Machinery of this vessel has now been properly fitted on board & on completion tried under full working conditions & found satisfactory. The Safety Valves of the Compressor & Air Vessels have been adjusted to 250 lbs. & tested. In my opinion this Vessel is eligible for record of LMC 7,45 Oil Engines & Notation T.S. (O.L.S.)

ATTACHED HEREWITH REPORT 10 & REPORT 7 (FORGING REPORT).  
 The amount of Entry Fee 15.00 ~~146.66 (U.S.)~~ When applied for, 12-Sept 1945  
 Special 219.00 (Chicago fee)  
 Installation Eng. 109.50  
 Donkey Boiler Fee 50.25 (Chicago fee)  
 Travelling Expenses (if any) 45.00 (U.S.)

Walter D. Falkner  
 Engineer Surveyor to Lloyd's Register of Shipping.



Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Committee's Minute FRI. 26 JUL 1946  
 Assigned + LMC 7,45 Oil Eng. C.L.