

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report June 2nd, 1943 <sup>43</sup> When handed in at Local Office Jan. 2nd, 1943 <sup>43</sup> Port of Quebec, P.Q. <sup>22nd. Aug. /42</sup> Received at London Office 22 JUL 1943

No. in Survey held at MONTREAL, QUE. Date, First Survey 15th Sept. Last Survey 27th. May 1942 <sup>43</sup>

Reg. Book: Steel Single Screw Steamer "FORT CARILLON" (Number of Visits 31 & 48)

Gross Tons 7129.23  
Net Tons 5243.42

Built at LAUZON, LEVIS, P.Q. By whom built DAVIE SHIPBUILDING & REPAIRING CO. LTD. Yard No. 542 When built 1943

Engines made at LACHINE, P. Q. By whom made DOMINION ENGINEERING WORKS Engine No. 59 When made 1942

Boilers made at Toronto Ont. By whom made J. Inglis & Co. Ltd. Boiler No. 4380, 4381, 4382 When made 1942

Registered Horse Power - Owners Park Steamship Co. Ltd. Port belonging to -

Nom. Horse Power as per Rule 504 <sup>505</sup> Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended -

**ENGINES, &c.**—Description of Engines Triple Expansion Revs. per minute 76

Dia of Cylinders 24 1/2" x 37" x 70" Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 13.99" Crank pin dia. 14 1/2" Mid. length breadth - Thickness parallel to axis 9" & 9 1/2" L.F.

as fitted 14 1/2" Crank webs - Mid. length thickness - Thickness around eye-hole 7.625

Intermediate Shafts, diameter as per Rule 13.33 Thrust shaft, diameter at collars as per Rule 13.99

as fitted 13.5 as fitted 14.25

Tube Shafts, diameter as per Rule - Screw Shaft, diameter as per Rule 14.87

as fitted - as fitted 15.25 Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule .75" Thickness between bushes as per Rule .565"

as fitted .78125" as fitted .68" Is the after end of the liner made watertight in the propeller boss Yes Solid

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

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 Yes

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 No

If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 61"

Propeller, dia. 18'-6" Pitch 16'-0" No. of Blades 4 Material Bronze whether Moveable Solid Total Developed Surface 117 sq. ft.

Feed Pumps worked from the Main Engines, No. None Diameter - Stroke - Can one be overhauled while the other is at work -

Bilge Pumps worked from the Main Engines, No. Two Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work Yes

Feed Pumps (No. and size) Two 10 1/2" x 8" x 22" Pumps connected to the Main Bilge Line (No. and size) Three-two 4 1/2" Rams, one 10" x 12" x 10"

How driven Weirs steam driven How driven Two main engines, one duplex steam

Ballast Pumps, No. and size one 10" x 12" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size -

Are two independent means arranged for circulating water through the Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room E.R. three x 3", one x 5", one x 9", B.R. two x 3"

In Pump Room - In Holds, &c. No. 1, 2, 3, 4, & 5 each one x 3" p&s., Deep Tanks (P&S) one each 6", After tunnel well one 2 1/2", F.P.&A.P. on Ballast range one each 4".

Main Water Circulating Pump Direct Bilge Suctions, No. and size one 19" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size st. one x 5"

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

Are the Bilge Suctions in the Machinery Space 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 except main injection Are they fitted with Valves or Cocks 7 Valves, 2 cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold 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 Yes

What Pipes pass through the bunkers P&S steel bilge lines to No. 1, 2 & 3 holds. How are they protected By bilge covering boards.

What pipes pass through the deep tanks None Have they been tested as per Rule -

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 Yes Is it fitted with a watertight door No worked from -

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 7140 square feet

Which Boilers are fitted with Forced Draft All three Which Boilers are fitted with Superheaters All three

No. and Description of Boilers 3 Single Ended Multitubular Working Pressure 220 lbs. per square inch

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? -

Can the donkey boiler be used for domestic purposes only -

**PLANS.** Are approved plans forwarded herewith for Shafting - Main Boilers - Auxiliary Boilers - Donkey Boilers -

(If not state date of approval)

Superheaters - General Pumping Arrangements - Oil fuel Burning Piping Arrangements -

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied Yes

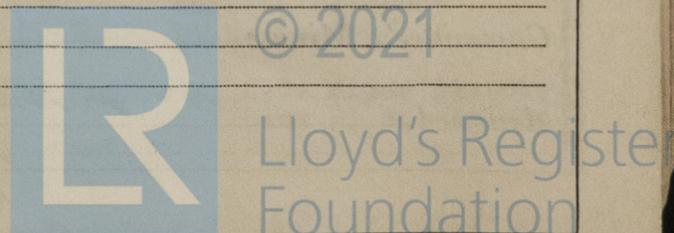
State the principal additional spare gear supplied -

The foregoing is a correct description

DOMINION ENGINEERING WORKS LIMITED

Per W. Van Datta

Manufacturer.



15, 17, 18, 22, 23, 24, 25, 26, 28, 29, 30 September, 1, 2, 3, 5, 6, 10, 13, 14, 16, 20, 21, 23, 26, 27, 28, 29, 30th  
 During progress of work in shops - - - October, 2, 3, 4, November, 1942  
 1942- Aug. 22, 25, Sept. 3, 4, 12, 19, 24, Nov. 3, 10, 16, 17, 20, 21, 25, Dec. 2, 10, 14, 18, 23  
 During erection on board vessel - - - 1943- Jan. 5, 12, 16, 29, Feb. 8, 12, 17, 23, 27, Mar. 4, 10, 16, 20, 26, 31 Apr. 5, 12, 17, 26, May 1, 10, 15, 22, 27.  
 Total No. of visits 31 & 48 = 79.

Dates of Examination of principal parts - Cylinders 16.9.42, 28.9.42, 21.10.42 Slides 16.9.42, 28.9.42, 21.10.42 Covers 16.9.42, 28.9.42, 21.10.42  
 Pistons 16.9.42, 28.9.42, 21.10.42 Piston Rods 4.11.42 Connecting rods 4.11.42  
 Crank shaft 4.11.42 Thrust shaft 2.11.42 Intermediate shafts 6 at 4-12-42  
 Tube shaft - Screw shaft 4-12-42 Propeller 5967 No. 113 F.W.M. 21-10-42  
 Stern tube 11-2-43 Engine and boiler seatings 24-12-42 Engines holding down bolts 10-3-43  
 Completion of fitting sea connections 15-4-43  
 Completion of pumping arrangements 1-5-43 Boilers fixed 30-12-42 Engines tried under steam 5-5-43  
 Main boiler safety valves adjusted 5-5-43 Thickness of adjusting washers P 9/16"x5/8" C 15/32"x7/16" St. 9/16"x17/32  
 Crank shaft material O H Steel Identification Mark Lloyd's No. 3894 H.S. 4.11.42 Thrust shaft material O H Steel Identification Mark Lloyd's No. 5  
 Intermediate shafts, material - Identification Marks See below Tube shaft, material - Identification Mark -  
 Screw shaft, material I.J.T. Identification Mark 5746 Steam Pipes, material S.B.H.R.8 Test pressure - 660 Date of Test D.H. 8.3.43  
 Is an installation fitted for burning oil fuel. No Is the flash point of the oil to be used over 150°F. -  
 Have the requirements of the Rules for the use of oil as fuel been complied with -  
 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 - Yes If so, state name of vessel S/S "FORT TADOUSSAC" & S/S "FORT CHAMBLY"

General Remarks (State quality of workmanship, opinions as to class, &c. This ENGINE has been constructed under Special Survey in accordance with the Rules and Approved Plans. The materials and workmanship are good. The cylinders were tested hydrostatically to 330, 110 and 30 lbs. pressure per square inch respectively, and found tight under those pressures. This ENGINE has now been shipped to Messrs. DAVIE SHIPBUILDING & REPAIRING COMPANY LIMITED, LAUZON, LEVIS, P. Q., for installation and official trials. It is recommended for the favourable consideration of the Committee that the record of \* L.M.C. (with date) be made in the Register Book in the case of this Vessel, subject to satisfactory installation and sea trials.

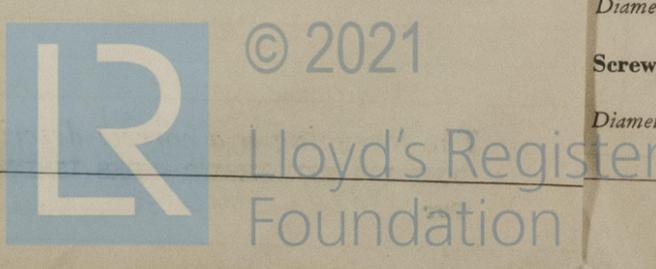
The MACHINERY of this vessel has now been properly fitted on board, and on completion tried under under full working conditions and found satisfactory. The safety valves have been adjusted under steam and tested for accumulation. In my opinion this Vessel is eligible for record of \* L.M.C. 5, 43 "and Notation T.S. (C.L.)".

Intermediate shafting identification Marks:-  
 5849, 4898, 5848, 5881, 5889, 5792 All I.J.T. 4.12.42.

The amount of Entry Fee ... \$ 30.00 : When applied for, June 12, 43  
 Special ... \$ 400.00 :  
 Donkey Boiler Fee ... £ :  
 Travelling Expenses (if any) \$ Included with Hull Rpt. : When received, 19.

H. J. Saunders & D. Galkin  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 16 JUL 1943  
 Assigned + L.M.C. 5.43  
 F.R.  
 C.L.



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