

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 8 FEB 1943

Date of writing Report Oct. 1st 1942 When handed in at Local Office Oct. 1st 1942 Port of MONTREAL, QUE.

No. in Survey held at MONTREAL, QUE. Date, First Survey 26th June, 1942 Last Survey 25th August 1942

Reg. Book. on the S/S "Ocean Crusader" (Number of Visits 30)

Built at SOUTH PORTLAND, ME. By whom built TODD-BATH SHIPBUILDING COMPANY - Yard No. When built 1942

Engines made at IACHINE, P. Q. By whom made CANADIAN ALLIS-CHALMERS LTD. Engine No. 115 When made 1942

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

Registered Horse Power --- Owners --- Port belonging to ---

Nom. Horse Power as per Rule 504 505 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" Crank webs Mid. length breadth --- Thickness parallel to axis 9" & 9 1/2" L.P.

as fitted 14 1/2" Mid. length thickness --- Thickness around eye-hole 7.125

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" Is the box screw shaft fitted with a continuous liner Yes

as fitted --- as fitted 15.25"

Bronze Liners, thickness in way of bushes as per Rule .75" Thickness between bushes as per Rule .565" Is the after end of the liner made watertight in the propeller boss Yes Solid

as fitted .78125" as fitted .68" If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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 ---

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) --- Pumps connected to the Main Bilge Line (No. and size) --- How driven ---

Ballast Pumps, No. and size --- 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 ---

In Pump Room --- In Holds, &c. ---

Main Water Circulating Pump Direct Bilge Suctions, No. and size --- Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ---

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

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 ---

Are all Sea Connections fitted direct on the skin of the ship --- Are they fitted with Valves or Cocks ---

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates --- Are the Overboard Discharges above or below the deep water line ---

Are 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 ---

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 all boiler mountings accessible at all times ---

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 --- Is the Shaft Tunnel watertight --- Is it fitted with a watertight door --- 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)

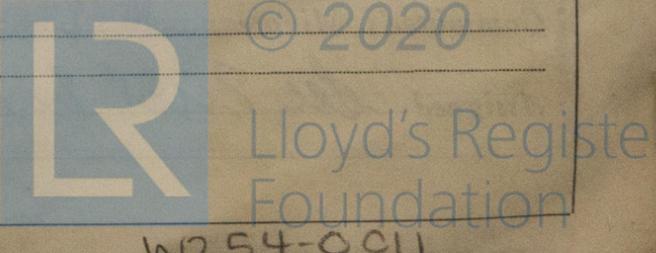
Superheaters --- General Pumping Arrangements --- Oil fuel Burning Piping Arrangements ---

## SPARE GEAR.

Has the spare gear required by the Rules been supplied ---

State the principal additional spare gear supplied ---

The foregoing is a correct description  
*Canadian Allis Chalmers Ltd.* Manufacturer.



26, 27, 29th June, 2, 3, 8, 10, 14, 16, 17, 18, 20, 21, 22, 24, 27, 28, 30th July, 1, 4, 6, 7, 8, 11, 14, 17,

During progress of work in shops - - 19, 21, 24, 25th August 1942.

Dates of Survey while building

During erection on board vessel - - -

Total No. of visits

Dates of Examination of principal parts - Cylinders 30-7-42, 4-8-42, 6-8-42 Slides 30-7-42, 4-8-42, 6-8-42 Covers 30-7-42, 4-8-42, 6-8-42
Pistons 30-7-42, 4-8-42, 6-8-42 Piston Rods 7-8-42 Connecting rods 7-8-42
Crank shaft 13-8-42 Thrust shaft 14-8-42 Intermediate shafts
Tube shaft Screw shaft Propeller
Stern tube Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections
Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Crank shaft material O H Steel Identification Mark L.R. 4336 Thrust shaft material O H Steel Identification Mark L.R. 7018

Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark

Screw shaft, material Identification Mark Steam Pipes, material Test pressure Date of Test

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 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 CHAMELY"

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. TODD BATH SHIPBUILDING COMPANY, SOUTH PORTLAND, ME., for installation and

official trials. It is recommended for the favourable consideration of the Committee that the record of L.M.C. (with

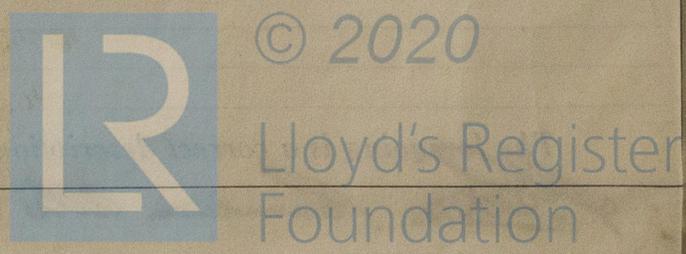
be made in the Register Book in the case of this Vessel, subject to satisfactory installation and sea trials.

The amount of Entry Fee ... £/ \$30.00
Special ... £ 267.00
Donkey Boiler Fee ... £
Travelling Expenses (if any) £ 36.00

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

Committee's Minute NEW YORK JAN 6 - 1943

Assigned See First Entry Report



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