

Rpt. 4.

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# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

knab Rpt. No. 5887

Received at London Office 5-NOV 1943

Date of writing Report May 29th. 19 43 When handed in at Local Office 22nd May 19 43 Port of Montreal

No. in Reg. Book. Survey held at Montreal. Date, First Survey 2nd March Last Survey 20th May 19 43

on the S. S. "FORT ASTORIA" (Number of Visits 36)

Built at Vancouver, B.C. By whom built West Coast Shipbuilders, Ltd. Yard No. 123. When built Gross 7188.56  
Canadian Allis-Chalmers Limited Net 4241.65

Engines made at Lachine, P.Q. By whom made Limited Engine No. 241 When made 1943

Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

Nom. Horse Power as per Rule 504 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

Dia of Cylinders 24 1/2" x 37" x 70" Length of Stroke 48" No. of Cylinders 3 Revs. per minute 76

Crank shaft, dia. of journals as per Rule 13.99" 14 1/2" Crank pin dia. 14 1/2" No. of Cranks 3 Mid. length breadth --- Thickness parallel to axis 9" & 9 1/8" L.P.

Intermediate Shafts, diameter as per Rule 13.33" 13.53 as fitted 13.5" Crank webs --- Mid. length thickness --- sbrunk Thickness around eye-hole 7.125  
as fitted 14.25" Thrust shaft, diameter at collars as per Rule 13.99" 16.21 as fitted 14.25" Thickness around eye-hole 7.625

Tube Shafts, diameter as per Rule --- as fitted --- Screw Shaft, diameter as per Rule 14.87" 15.07 as fitted 15.25" Is the --- shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule .75" as fitted .78125" Thickness between bushes as per Rule .565" as fitted .68" 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 Solid

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 Tight Fit

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 ---

Propeller, dia. 18'-6" Pitch 16'-0" No. of Blades 4 Material Bronze Length of Bearing in Stern Bush next to and supporting propeller 61" 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 (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 \_\_\_\_\_ Oil Cooler \_\_\_\_\_ Suctions, connected to both Main Bilge Pumps and Auxiliary 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 Three Single Ended Multitubular Working Pressure 220 lbs./Sq. In. 250 lb. (Plu 230 lb.)

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 \_\_\_\_\_

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 LIMITED  
PER: L.P. Rody

Manufacturer.



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Dates of Survey while building  
 During progress of work in shops - - 2, 4, 5, 9, 11, 15, 19, 22, 24, 26, 29, March. 2, 3, 5, 8, 9, 14, 15, 16, 19, 20, 21, 22, 27, 28  
 29, 30 April. 3, 4, 6, 12, 14, 15, 18, 19, 20 May.  
 During erection on board vessel - - -  
 Total No. of visits

Dates of Examination of principal parts — Cylinders 6.5.43, 3.5.43, 4.5.43 Slides 6.5.43, 3.5.43, 4.5.43 Covers 6.5.43, 3.5.43, 4.5.43  
 Pistons 3.5.43, 4.5.43. Piston Rods 14.5.43 Connecting rods 26.2.43  
 Crank shaft 17.5.43 Thrust shaft 14.5.43 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 HGS.17.5.43 Thrust shaft material O.H. Steel Identification Mark 3508 HGS.14.5.43  
 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 SS "FORT TADOUSSAC" & "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 Vancouver, B.C., 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.

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

The amount of Entry Fee ... \$ 30.00  
 Special ... \$ 26.00  
 Donkey Boiler Fee ... £ 7.00  
 Travelling Expenses (if any) ...  
 When applied for, 10/12/1943  
 When received, 30/8/43  
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VCR  
 RR

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

TUES. 7 DEC 1943

Committee's Minute  
 Assigned See You for R/L 5549