

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report **7th January 43** When handed in at Local Office **7th Jan. 1943** Port of **VANCOUVER, B.C.**  
 No. in Survey held at **NORTH VANCOUVER, B.C.** Date, First Survey **9th November 1942** Last Survey **6th January 1943**  
 Reg. Book. on the **Steel Single Screw Steamer "FORT DREW"** (Number of Visits **30**) Tons {Gross **7133.91**  
 {Net **4243.89**  
 Built at **North Vancouver B.C.** By whom built **North Van Ship Repairs, Limited** Yard No. **115** When built **1942**  
 Engines made at **Montreal, Quebec** By whom made **Canadian Allis-Chalmers Co. Limited.** Engine No. **119** When made **1942**  
 Boilers made at **Vancouver, B.C.** By whom made **Vancouver Iron Works, Ltd.** Boiler Nos. **315 317 318** When made **1942**  
 Registered Horse Power **229** Owners **Minister Munitions & Supply of Canada** 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 **General cargo.**

ENGINES, &c.—Description of Engines **Triple expansion, Superheat to 575°F** Revs. per minute **80**  
 Dia of Cylinders **24½" x 37" x 70"** Length of Stroke **48"** No. of Cylinders **3** No. of Cranks **3**  
 Crank shaft, dia. of journals **13.99** as per Rule **14½"** as fitted **14½"** Crank pin dia. **14½"** Crank webs **Mid. length breadth --** Thickness parallel to axis **9&9½" L.P.**  
 Intermediate Shafts, diameter **13.33** as per Rule **13.5"** as fitted **13.5"** Thrust shaft, diameter at collars **13.99** as per Rule **14.25"** as fitted **14.25"** Thickness around eye-hole **7½" Pin**  
 Tube Shafts, diameter **14.87** as per Rule **15.25"** as fitted **15.25"** Is the {tube screw} shaft fitted with a continuous liner { **Yes**  
 Screw Shaft, diameter **.75"** as per Rule **.565"** as fitted **.565"** Thickness between bushes **.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 **--** Length of Bearing in Stern Bush next to and supporting propeller **61"**  
 Propeller, dia. **18'-6"** Pitch **16'-0" mean** 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 **4½"** Stroke **26"** Can one be overhauled while the other is at work **Yes**  
 Feed {No. and size **Two (10"x7"x24")** Pumps connected to the {No. and size **Four (one) 10x12x10" (one) 9x6x10" Two Rams**  
 Pumps {How driven **Steam Worthington Simplex type** Main Bilge Line {How driven **Duplex steam Duplex steam M.E.**  
 Ballast Pumps, No. and size **(one) 10x12x10" (duplex)** Lubricating Oil Pumps, including Spare Pump, No. and size **None**  
 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 **1-3" dia. Port 1-3" dia. Starboard Bilge Rm. 1-3" dia. Port 1-3" dia. Starboard Eng. Rm. 1-2" dia. in**  
 Thrust Room **1-2" dia. in Tunnel Well** In Holds, &c. **1-4" dia. to F.P. 1-3" dia. P.&S. to Nos. 1-2-3-4 &**  
**5 Holds 1-4" dia. to A.P.**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **One 9"** Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size **One 5" dia. Starboard side** 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 to steel tube through the hull **Yes, Main Injection fitted**  
 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 **steel air pipes to No. 4 D.B. tanks** How are they protected **steel straps welded across frames**  
 What pipes pass through the deep tanks **No. 7 D.B. air pipes** Have they been tested as per Rule **Yes**  
 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 **--**) Total Heating Surface of Boilers **7,140 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 sq. 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 **in U.K.** Main Boilers **--** Auxiliary Boilers **--** Donkey Boilers **--**  
 (If not state date of approval) **Approved plans in**  
 Superheaters **United Kingdom** 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 **As per list forwarded with Vancouver Report No. 5718**  
**S. S. "FORT ST. JAMES"**

The foregoing is a correct description

NORTH VAN SHIP REPAIRS LIMITED

Donald M. Source

Manager

Manufacturer.



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Lloyd's Register  
Foundation



During progress of work in shops - - SEE MONTREAL REPORT NO. 5778  
 Dates of Survey while building  
 During erection on board vessel - - November-9,10,11,13,16,23,28,30. December-1,3,4,5,7,8,9,10,12,14,15,16,17,  
 December-18,19,21,22,23,24,28,29. January-6  
 Total No. of visits 30

Dates of Examination of principal parts - Cylinders Slides Covers  
 Pistons Connecting rods  
 Crank shaft Thrust shaft 15th December, 1942 Intermediate shafts 15th December, 1942.  
 Tube shaft Screw shaft 13th November, 1942 Propeller 13th November, 1942.  
 Stern tube 10th November, 1942 Engine and boiler seatings 3rd December, 1942 Engines holding down bolts 12th December, 1942.  
 Completion of fitting sea connections 13th November, 1942  
 Completion of pumping arrangements 19th December/42 Boilers fixed 9th December 1942 Engines tried under steam 16th December, 1942  
 Main boiler safety valves adjusted 16th December, 1942 Thickness of adjusting washers P. 9/16" P. 7/16" P. 31/64"  
 Crank shaft material O.H. Steel Identification Mark Lloyd's 5056 Thrust shaft material O.H. Steel Identification Mark Lloyd's 8608  
 Intermediate shafts, material O.H. Steel Identification Mark LLOYDS 5670 PWV 21-8-42 5639 PWV 7-8-42  
 Screw shaft, material O.H. Steel Identification Mark Lloyd's 8446 5695 PWV 4-9-42 5682 PWV 28-8-42  
 Steam Pipes, material S.D. Steel Test pressure 660 lbs. Date of Test 10th Dec. 1942  
 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 ALEXANDRIA" Vancouver  
 General Remarks (State quality of workmanship, opinions as to class, &c.) Report No. 5755

The machinery of this vessel has been constructed under Special Survey of the  
 Montreal Surveyors and installed on board under Special Survey in accordance with the approved plans,  
 New York letters and otherwise in conformity with the Society's Rules. The materials and workmanship  
 are good and the tests required by the Rules have been satisfactorily carried out. The whole  
 installation has been examined and tested under full working conditions on sea trials and afterwards  
 part opened out, examined and found satisfactory. The machinery has also been surveyed during  
 construction and installation on behalf of Wartime Merchant Shipping, Ltd., to ensure that the terms  
 of the specifications have been fully complied with and this work has been satisfactorily carried  
 out.

The machinery of this vessel is eligible in our opinion to be classed in the  
 Register Book with Notation of \* L.M.C. 12,42. Screw shaft C.L. 3 S.E. Blrs. 220 lbs.sq.in F.D.

Montreal fees charged in Montreal Report No. 5778

The amount of Entry Fee	£	:	:	When applied for,
Special (Vor)	\$	133.00	:	29 Dec. 1942
Donkey Boiler Fee	\$	:	:	When received,
Travelling Expenses (if any)	\$	20.00	:	19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 2 MAR 1943  
 Assigned J. L. 1.43  
 J. J. CH