

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report April 14th, 1943 When handed in at Local Office April 14th, 1943 Port of Vancouver, B. C.

No. in Survey held at Vancouver, B. C. Date, First Survey Feb. 23rd/43 Last Survey April 13th, 1943

Reg. Book. --- on the Steel Single Screw Steamer "FORT ASH" (Number of Visits 24)

Built at North Vancouver, B.C. By whom built Burrard Dry Dock Co. Ltd. Yard No. 174 When built 1943

Engines made at Montreal, P.Q. By whom made Dominion Engineering Wks. Engine No. 79 When made 1943

Boilers made at Vancouver, B. C. By whom made Dominion Bridge Co. Ltd. Boiler No. (382 & 397) When made 1943

Registered Horse Power 229 Owners Minister of 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 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. 14-1/4" Mid. length breadth --- Thickness parallel to axis 9" & 9 1/2" L.P.

Intermediate Shafts, diameter as per Rule 13.33" Thrust shaft, diameter at collars as per Rule 13.99" Thickness around eye-hole (7 5/8" Pin)

Tube Shafts, diameter as per Rule --- Screw Shaft, diameter as per Rule 14.87" Is the 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" 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

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 4 1/2" 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 Main Bilge Line { No. and size Four (One) 10"x12"x10" (One) 9"x6"x10" Two Rams

Pumps (How driven Steam Worthington Simplex (One) 10"x12"x10" type. (Duplex) How driven Duplex Steam Duplex Steam M.E.

Ballast Pumps, No. and size --- 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. Starbd in Blr. Rm., 1-3" Dia. Port, 1-3" Dia.

In Pump Room 1-2 1/2" Dia. in Starbd in Eng. Rm., 1-2 1/2" Dia. in Thrust Recess, 1-3" Dia. P&S to Nos. 1-2-3-4 & 5

Funnel well. In Holds, &c. 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. Starbd 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 Yes. Main injection fitted to Steel tube through D.B. tank. Are they fitted with Valves or Cocks Yes

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 under Limber Boards.

What pipes pass through the deep tanks Bilge Suctions. 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 S) Total Heating Surface of Boilers 7140 sq. ft.

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 Approved Plans in U.K. Main Boilers --- Auxiliary Boilers --- Donkey Boilers ---

(If not state date of approval) Superheaters Approved Plans in U.K. 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 Vancr. Report No. 5718 - S.S. "FORT ST. JAMES"

The foregoing is a correct description  
Burrard Dry Dock Company, Limited

*W. J. ...*  
President

Manufacturer.



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Foundation

During progress of work in shops - - See Montreal Report No. 5820  
 Dates of Survey while building  
 During erection on board vessel - - - 1943.- Feb. 23,24,25,27. Mar. 1,3,4,9,15,16,17,20,22,27,31.  
 April 1,2,4,5,7,8,9,12,13.  
 Total No. of visits 24

Dates of Examination of principal parts — Cylinders Slides Covers  
 Pistons Piston Rods Connecting rods  
 Crank shaft See Montreal Report No. 5820 Thrust shaft March 17th, 1943 Intermediate shafts March 17th, 1943  
 Tube shaft Screw shaft Feb. 23rd, 1943 Propeller Feb. 25th, 1943  
 Stern tube Feb. 24th, 1943 Engine and boiler seatings March 4th, 1943 Engines holding down bolts March 22nd, 1943  
 Completion of fitting sea connections Feb. 23rd, 1943

Completion of pumping arrangements April 1st, 1943 Boilers fixed March 1st, 1943 Engines tried under steam April 4th, 1943  
 Main boiler safety valves adjusted April 2nd, 1943 Thickness of adjusting washers P.Blr. S. 5/8" - 27/64 C.Blr. S. 5/64" - 13/16" S.Blr. S. 5/64" - 13/16"  
 Crank shaft material O.H. Steel Identification Mark Lloyd's 3914 H.S. 5-2-43 Thrust shaft material O.H. Steel Identification Mark Lloyd's 5918 P.W. 27-11-42  
 Intermediate shafts, material O.H. Steel Identification Mark Lloyd's 9507 EER 29-10-42 257 EER 19-11-42 8915 EER 17-10-42 HS 3-2-43  
 Screw shaft, material O.H. Steel Identification Mark Lloyd's 2233 W.S. 1-15-43 Steam Pipes, material S.D. Steel Test pressure 660 lbs. Date of Test Mar. 27/43

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 ST. JAMES" (Ver. Report No. 5718)

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 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. 4,43 Screw Shaft C.L. 3 S.E. Blrs. 220 lbs. per sq. inch F.D.

**Montreal fees charged in Montreal Report No. 5820.**

The amount of Entry Fee	£	:	:	When applied for, 13 <sup>th</sup> Apr. 1943
Special (Ver.)	\$133.00			
Donkey Boiler Fee	£	:	:	When received, 19
Travelling Expenses (if any)	\$ 20.00			

W.E. Baillie  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 11 JUN 1943

Assigned + L.M.C. 4.43. J.D. G.L.

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

