

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 2 DEC 1942

Date of writing Report 5th Oct. 1942 When handed in at Local Office 5th Oct. 1942 Port of Vancouver, B. C.
 No. in Survey held at Vancouver, B. C. Date, First Survey August 8th, 1942 Last Survey Sept. 30th 1942
 Reg. Book. (Number of Visits 23)
 on the Steel Single Screw Steamer "FORT RELIANCE" Tons Gross 7133.51 Net 4243.49
 Built at Vancouver, B. C. By whom built Burrard Dry Dock Co. Ltd. Yard No. 145 When built 1942
 Engines made at Montreal, P.Q. By whom made Dominion Engineering Wks Engine No. 37 When made 1942
 Boilers made at Vancouver, B. C. By whom made Dominion Bridge Co. Ltd. Boiler No. 240, 242 & 244. When made 1942
 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 24½" 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. 14½" Mid. length breadth -- Thickness parallel to axis 9" & 9½" L.P.
 as fitted 14½" Crank webs shrunk Mid. length thickness -- Thickness around eye-hole 7½" Pin
 Intermediate Shafts, diameter as per Rule 13.33" as fitted 13.5" Thrust shaft, diameter at collars as per Rule 13.99" as fitted 14.25" 7½" Journal
 Tube Shafts, diameter as per Rule -- as fitted -- Screw Shaft, diameter as per Rule 14.87" 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" 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 -- 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 4½" Stroke 26" Can one be overhauled while the other is at work Yes
 Feed (No. and size (Two) 8"x10½"x22" 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 type. How driven Duplex Steam Duplex Steam M.E.
 Ballast Pumps, No. and size (One) 10"x12"x10" (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. Star in Blr. Rm. 1-3" Dia. Port 1-3" Dia. Star
 in Eng. Room 1-2" Dia. in Thrust Recess. In Holds, &c. 1-4" Dia. to F.P. 1-3" Dia. P&S to Nos. 1-2-3-4-5 Holds
 in Pump Room 2½" Dia. in Tunnel well. 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. Star 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 Are they fitted with Valves or Cocks Valves.
 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. Yes
 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.

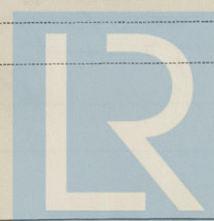
Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied

As per List forwarded with Vancouver Report No. 5718 - S.S. "FORT ST. JAMES"

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

Charles W. Burrard
 President

Manufacturer.



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002232-002240-0138

Dates of Survey while building
During progress of work in shops - - See Montreal Report No. 5702
During erection on board vessel - - 1942. Aug. 8, 18, 20, 23, 24, 25, 29 Sept. 1, 2, 3, 4, 5, 9, 12, 15, 21, 22, 23, 24, 25, 26, 28, 30.
Total No. of visits 23

Dates of Examination of principal parts — Cylinders Slides Covers
Pistons Piston Rods Connecting rods
Crank shaft Thrust shaft September 9th, 1942 Intermediate shafts September 9th, 1942
Tube shaft Screw shaft August 20th, 1942 Propeller August 23rd, 1942
Stern tube August 18th, 1942 Engine and boiler seatings August 25th, 1942 Engines holding down bolts September 9th, 1942
Completion of fitting sea connections August 20th, 1942
Completion of pumping arrangements September 21st, 1942 Boilers fixed August 29th, 1942 Engines tried under steam September 22nd, 1942
Main boiler safety valves adjusted September 21st, 1942 Thickness of adjusting washers P.Blr. 3/16" - 11/16" C.Hr. 3/16" - 23/32" S.Hr. 3/16" - 3/8"
Crank shaft material O.H. Steel Identification Mark Lloyd's 3872 A.R. 27-6-42 Thrust shaft material O.H. Steel Identification Mark Lloyd's 5403 T.M. 27-3-42
Intermediate shafts, material O.H. Steel Identification Marks Lloyd's 5304 T.M. 27-3-42 5311 T.M. 27-3-42 7000 T.M. 27-3-42 3892 T.M. 26-1-42
Screw shaft, material O.H. Steel Identification Mark Lloyd's 5550 P.W.W. 3-7-42 Steam Pipes, material S.D. Steel Test pressure 660 lbs. Date of Test Sept. 9th, 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 ST. JAMES" (Vancouver 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. 9,42 Screw Shaft C.L. 3 S.E. Blrs. 220 lbs. per sq. inch F.D.

Montreal fees charged in Montreal Rpt. No. 5702

The amount of Entry Fee	£	:	When applied for,
Special (Vcr.)	£	\$133.00	29th Sept. 42
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any)	£	\$ 20.00	✓ 19

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

Committee's Minute

Assigned



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