

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

IN D.O.

Received at London Office

18 AUG 1943

Date of writing Report 8th June 1943 When handed in at Local Office 8th June 1943 Port of Vancouver, B. C.

No. in Survey held at North Vancouver, B. C. Date, First Survey 12th April Last Survey 29th May 1943

Reg. Book. Steel Single Screw Steamer "FORT CAPOT RIVER" (Number of Visits 25) Tons 7127.58 Gross 4246.28 Net

Built at North Vancouver, By whom built North Van Ship Repairs, Limited Yard No. 124 When built 1943

Engines made at Toronto, Ontario By whom made John Inglis Co. Ltd. Engine No. 267 M68 When made 1943

Boilers made at Vancouver, B.C. By whom made Vancouver Iron Works, Ltd. Boiler No. 442 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 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" 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" Crank webs -- Mid. length thickness -- Thickness around eye-hole (7½" Pin)

Thrust shaft, diameter at collars 14.25" as per Rule 14.25" as fitted 14.25"

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

Bronze Liners, thickness in way of bushes .75" as per Rule .78125 as fitted .78125 Thickness between bushes .565" as per Rule .68" 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 whether Moveable Solid Length of Bearing in Stern Bush next to and supporting propeller 61"

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 Pumps (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 J.R. Weir Simplex Main Bilge Line { How driven Duplex Steam Duplex Steam M.E.

Ballast Pumps, No. and size (one) 10"x12"x10" Type (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 in Blr. Rm., 1-3" Dia. Port, 1-3" Dia. Starboard in Eng. Room, 1-2" Dia. in Thrust Recess. 1-4" Dia. to F.P.,

In Pump Room 1-2½" Dia. in Tunnel Well. 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 Yes Main injection 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 suction. 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 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

NORTH VAN SHIP REPAIRS LIMITED

Donald M. Service

Manager

Manufacturer.



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008550-008558-0014

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Dates of Survey while building
During progress of work in shops - - See Toronto Report No. 948
During erection on board vessel - - 1943 Apr. 12, 29; May 1,3,4,5,6,7,8,11,12,13,15,17,18,19,20,21,23,24,25,26, May 27,28,29.
Total No. of visits 25

SEE TORONTO REPORT NO. 948
Dates of Examination of principal parts
Cylinders Slides Covers
Pistons Piston Rods Connecting rods
Crank shaft Thrust shaft 13th May, 1943 Intermediate shafts 21st May, 1943
Tube shaft Screw shaft 12th April, 1943 Propeller 12th April, 1943
Stern tube 11th April, 1943 Engine and boiler seatings 7th May, 1943 Engines holding down bolts 7th May, 1943
Completion of fitting sea connections 10th April, 1943
Completion of pumping arrangements 21st May, 1943 Boilers fixed 13th May, 1943 Engines tried under steam 21st May, 1943
Main boiler safety valves adjusted 21st May, 1943 Thickness of adjusting washers P 15/32" S P 17/32" P 17/32" P 37/64" 39/64"
Crank shaft material O.H. Steel Identification Mark Lloyd's 53210 30-9-42 CHW Thrust shaft material O.H. Steel Identification Mark Lloyd's 2060 12-2-43 PW
Intermediate shafts, material O.H. Steel Identification Marks Lloyd's 8825 19-10-42 8846 9-10-42 EER 5679 28-8-42 PW 5868 6-11-42 PW
Screw shaft, material O.H. Steel Identification Mark Lloyd's 5984 31-12-42 PW Steam Pipes, material S.D. Steel Test pressure 660 lbs. Date of Test 18th May, 1943
Is an installation fitted for burning oil fuel 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 Toronto 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.

L.P. Cylinder: the top steam port ribs repaired under the supervision of the Toronto Surveyors by bolted patches on account of fractures. These repairs were examined after dock trials and again after sea trials, found efficient and may be regarded as a permanent repair.

Kindly refer to copy of attached letter to the Master of this ship, dated 1st June, 1943.

The Machinery of this Vessel is eligible in our opinion to be classed in the Register Book with Notation of M.L.M.C. 5,43, Screw Shaft C.L. 3 S.E. Blrs. 220 lbs. per square inch F.D.

Toronto fees charged in Toronto Report No. 948

The amount of Entry Fee	£	:	When applied for,
Special (Ver)	\$133.00	:	31st May 1943
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any)	\$20.00	:	19

Committee's Minute TUES. 7 SEP 1943
Assigned ALMC 6.43: F.D.C.L.