

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report **17th Feb. 1943** When handed in at Local Office **17th Feb. 1943** Port of **VANCOUVER, B.C.**

No. in Survey held at **Vancouver, B. C.** Date, First Survey **December 14th** Last Survey **February 16th 1943**

Reg. Book. **Steel Single Screw Steamer "FORT STAGER"** (Number of Visits **19**) Tons **7131.76**
 Gross **7131.76**
 Net **4244.31**

Built at **Vancouver, B.C.** By whom built **West Coast Shipbuilders Limited** Yard No. **114** When built **1943**

Engines made at **Toronto, Ontario** By whom made **John Inglis & Son** Engine No. **137** When made **1942**

Boilers made at **Vancouver, B.C.** By whom made **Vancouver Iron Works, Ltd.** Boiler No. **343**
345 When made **1942**
347

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"** Crank pin dia. **14½"** Mid. length breadth **--** Thickness parallel to axis **9" x 9½" L.P.**
 as fitted **14½"** Crank webs **--** Mid. length thickness **--** Thickness around eye-hole **7½" Journal**
7½" Pin

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"**

Tube Shafts, diameter **--** as per Rule **--** as fitted **--** Screw Shaft, diameter **14.87"** as per Rule **15.25"** as fitted **15.25"** Is the **zwe** 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 **61"**

shaft **No** If so, state type **--** Length of Bearing in Stern Bush next to and supporting propeller **117** sq. ft.

Propeller, dia. **18'-6"** Pitch **16'-0" mean** No. of Blades **4** Material **bronze** whether Moveable **solid** Total Developed Surface **--**

Feed Pumps worked from the Main Engines, No. **none** Diameter **4½"** Stroke **26"** Can one be overhauled while the other is at work **Yes**

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 Main Bilge Line { No. and size **Four (one) 10"x12"x10" (one) 9"x6"x10"** Two Rams
 How driven **Steam** **Worthington Simplex Type** **Duplex Steam** **Duplex Steam** **M.E.**
(one) 10"x12"x10" (Duplex) **None**

Ballast Pumps, No. and size **--** Lubricating Oil Pumps, including Spare Pump, No. and size **--**

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. Starbd. in Eng. Rm.**
1-2" dia. in Thrust Recess
1-2" dia. in Tunnel Well
and 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, **Yes**

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** 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.** 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 **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

Manufacturer.



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009994-010003-0155

Dates of Survey while building
During progress of work in shops - - See TORONTO Report No. 913
1942
Dec. 14, 17, 19, 23, 28, 30: 1943
Jan. 6, 8, 12, 19, 20, 26, 29 Feb. 1, 6, 10, 11, 15, 16.
During erection on board vessel - -
Total No. of visits 19

Dates of Examination of principal parts - Cylinders Slides Covers
Pistons
Crank shaft Thrust shaft February 6th, 1943 b Connecting rods January 19th, 1943
Tube shaft Screw shaft December 17th, 1942 Propeller December 17th, 1942
Stern tube December 14th, 1942 Engine and boiler seatings January 20th, 1943 Engines holding down bolts January 6th, 1943
Completion of fitting sea connections December 17th, 1942
Completion of pumping arrangement Feb. 10th, 1943 Boilers fixed December 28th, Engines tried under steam 6th February, 1943
Main boiler safety valves adjusted February 1st, 1943 Thickness of adjusting washers S. Blr. P. 15/32 C. B. P. 27/64 S. B. S. 27/64
Crank shaft material O.H. Steel Identification Mark Lloyd's 8108 2-7-42 Thrust shaft material O.H. Steel Identification Mark Lloyd's 5574 10-7-42
Intermediate shafts, material O.H. Steel Identification Mark Lloyd's 8656 18-9-42 EER Lloyd's 8863 13-10-42 EER P.W.W.
Screw shaft, material O.H. Steel Identification Mark Lloyd's 8229 A.S. 5784 9-10-42 PWW Lloyd's 8867 13-10-42 EER
Steam Pipes, material S.D. Steel Test pressure 660 lbs Date of Test Jan. 12/43
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. Rpt. No. 57
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 Limited to ensure that the terms of the specification 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. 2-43 Screw Shaft C.L. 3 S.E. Blrs. 220 lbs. per sq. in. F.D.

Toronto fees charged in Toronto Report No. 913

The amount of Entry Fee ... £	:	When applied for,
Special (Ver.) ... \$ 133.00	:	17 Feb. 43
Donkey Boiler Fee ... £	:	When received,
Travelling Expenses (if any) \$ 20.00	:	✓ 19

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 16 APR 1943

Committee's Minute

Assigned

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