

# 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 Reg. Book. **Survey held at Vancouver, B. C.** Date, First Survey **December 14th 1942** Last Survey **February 16th 1943**  
(Number of Visits **19**)

— on the **Steel Single Screw Steamer "FORT STAGER"** Tons **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** When made **1942**  
**345**  
**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 as per Rule **13.99** Crank pin dia. **14½"** Mid. length breadth **--** Thickness parallel to axis **9 1/8" L.P.**  
as fitted **14½"** Crank webs **shrunk** Mid. length thickness **--** Thickness around eye-hole **7 3/8" Journal**

Intermediate Shafts, diameter as per Rule **13.33"** Thrust shaft, diameter at collars as per Rule **13.99"**  
as fitted **13.5"** as fitted **14.25"**

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

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  
as fitted **.78125** as fitted **.68"** 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 **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** 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. Starbd. in Blr. Rm; 1-3" dia. Port, 1-3" dia. Starbd. in Eng. Rm.**  
**1-2" dia. in Thrust Recess**  
In Pump Room **1-2½" dia. in Tunnel Well** In Holds, &c. **1-4" dia. to F.P. 1-3" dia. P. & S. to Nos. 1,2,3,4**  
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,  
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, to steel tube through **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** tanks bilge suction **under limber boards.** 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** Main Boilers **--** Auxiliary Boilers **--** Donkey Boilers **--**  
(If not state date of approval) **plans in U.K.**

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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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 \_\_\_\_\_ Piston Rods \_\_\_\_\_ Connecting rods \_\_\_\_\_  
 Crank shaft \_\_\_\_\_ Thrust shaft **February 6th, 1943** Intermediate shafts **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 arrangements **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 **P.Blr.P. 15/32 C.B.P. 27/64 S.B.S. 27/64**  
 Crank shaft material **O.H. Steel** Identification Mark **A.S. 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** Thrust shaft material **O.H. Steel** Identification Mark **Lloyd's 8863 13-10-42 EER**  
 Screw shaft, material **O.H. Steel** Identification Mark **Lloyd's 8229 A.S. 5784 9-10-42 PWW** 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. 1943
Donkey Boiler Fee ... £	:	When received,
Travelling Expenses (if any) \$ 20.00	:	19

*R. Knox*  
 Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 16 APR 1943

Committee's Minute \_\_\_\_\_  
 Assigned *See FE machy rpt*

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

