

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office **11.6 MAY 1944**

Date of Writing Report **13th March, 1944** When handed in at Local Office **13th March, 1944** Port of **Vancouver, B. C.**

Survey held at **Prince Rupert, B. C.** Date, First Survey **9th Oct., 1943** Last Survey **6th March, 1944**

on the **Steel Single Screw Steamer "FORT PERROT"** (Number of Visits **60**) Tons {Gross **7170.64** Net **4237.06**

built at **Prince Rupert, BC** By whom built **Prince Rupert Dry Dock & Shipyard,** Yard No. **50** When built **1944**

Engines made at **Montreal, P.Q.** By whom made **Canadian Allis-Chalmers, Ltd.** Engine No. **254** When made **1944**

Boilers made at **Vancouver, B. C.** By whom made **Vancouver Iron Works, Ltd.** Boiler Nos. **527 & 524.** When made **1944**

Registered Horse Power **229** Owners **Minister of Munitions & Supply of Canada.** Port belonging to **--**

Indicated Horse Power as per Rule **628** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Use for which Vessel is intended **General Cargo**

Engines, &c.—Description of Engines **Triple Expansion. Superheat to 450° F.** Revs. per minute **76**

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 **14.21** Crank pin dia. **14 1/2"** Crank webs Mid. length breadth **--** Thickness parallel to axis **9" & 9 1/2" L.P.**

Intermediate Shafts, diameter as per Rule **13.53** as fitted **13.5** Thrust shaft, diameter at collars as per Rule **14.21** as fitted **14.25** Thickness around eye-hole **7 1/2" Pin**

Main Shafts, diameter as per Rule **--** as fitted **--** Screw Shaft, diameter as per Rule **15.07** as fitted **15.25** Is the screw shaft fitted with a continuous liner **Yes**

Liner 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

liner boss **Yes** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **Continuous**

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**

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"**

Propeller, dia. **18'-6"** Pitch **16'-0"** No. of Blades **4** Material **Bronze** whether Moveable **Solid** Total Developed Surface **117** sq. ft.

Pumps worked from the Main Engines, No. **None** Diameter **--** Stroke **--** Can one be overhauled while the other is at work **--**

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**

How driven **Two 12" x 8" x 24"** Pumps connected to the Main Bilge Line { No. and size **Four (Two) 10" x 11" x 12"** Two **4 1/2" Rams**

How driven **Steam Worthington Simplex** Main Bilge Line { How driven **Duplex - Steam** M.E.

Oil Pumps, No. and size **One - 10" x 11" x 12" (Duplex)** Lubricating Oil Pumps, including Spare Pump, No. and size **None**

Independent means arranged for circulating water through the Oil Cooler **--** Suctions, connected to both Main Bilge Pumps and Auxiliary

Pumps;—In Engine and Boiler Room **One 3" P&S, one 3" thrust recess, one 2 1/2" tunnel well, one 3" P&S for'd.**

Cofferdam. **One 2 1/2" P&S after Cofferdam.** In Holds, &c. **One 3" P&S Nos. 1, 2, 3, 4 & 5 Holds, One 5" P&S Deep Tanks.**

Water Circulating Pump Direct Bilge Suctions, No. and size **(One) 10"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **(Two) 5"**

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 **As approved.**

Sea Connections fitted direct on the skin of the ship **No: To cast steel** 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 **Welded**

Pipes pass through the bunkers **None** How are they protected **--**

Pipes pass through the deep tanks **D.B. Air Pipes** Have they been tested as per Rule **Yes**

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes**

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 **--**

HEATING BOILERS, &c.— (Letter for record **--**) Total Heating Surface of Boilers **9704 sq. ft.**

Boilers are fitted with Forced Draft **Both** Which Boilers are fitted with Superheaters **Both**

Description of Boilers **Two - Babcock & Wilcox W.T.** Working Pressure **250 lb. (Spt. 230 lb.)**

REPORT ON MAIN BOILERS NOW FORWARDED? **Yes**

DONKEY BOILER FITTED? **No** If so, is a report now forwarded? **--**

Are approved plans forwarded herewith for Shafting **in U.K.** Main Boilers **17-7-43** Auxiliary Boilers **--** Donkey Boilers **--**

General Pumping Arrangements **6-7-43** Oil fuel Burning Piping Arrangements **9-7-43**

As fitted plan attached. **SPARE GEAR.**

Are spare gear required by the Rules been supplied **Yes**

Are principal additional spare gear supplied **--**

As per List forwarded with Vancouver Report No. 5942 - S.S. "FORT COLUMBIA"

The foregoing is a correct description
PRINCE RUPERT DRY DOCK & SHIPYARD

B. Allen Manager

Manufacturer.



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010720-010726-0045

During progress of work in shops - - See Montreal Report No. 6027
 Dates of Survey while building
 During erection on board vessel - - -
 1943. Oct. 9, 19, 20, 25. Dec. 13, 30, 31.
 1944. Jan. 1, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27.
 Jan. 28, 29, 30, 31. Feb. 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.
 Feb. 19, 20, 21, 22, 23, 24, 25, 26, 27. March 2, 6.
 Total No. of visits 62

Dates of Examination of principal parts — Cylinders Slides Covers
 Pistons
 Crank shaft See Montreal Report No. 6027 Thrust shaft 1-2-44 Connecting rods
 Tube shaft Screw shaft 19-10-43 Intermediate shafts 14-2-44
 Stern tube 9-10-43 Engine and boiler seatings 13-12-43 Propeller 25-10-43
 Engines holding down bolts 27-1-44
 Completion of fitting sea connections 20-10-43
 Completion of pumping arrangements 1-2-44 Boilers fixed 30-12-43 Engines tried under steam 14-2-44
 Main boiler safety valves adjusted 14-2-44 Thickness of adjusting washers Lock nuts fitted
 Crank shaft material O.H. Steel Lloyd's No. 167 Thrust shaft material O.H. Steel Lloyd's No. 7113
 Identification Mark 7-10-43 B.H. Thrust shaft material O.H. Steel Identification Mark 6-10-43
 Lloyd's 5328 27-5-43 EER 5315 24-5-43 EER 5322 25-5-43 EER 5324 25-5-43 EER
 Intermediate shafts, material O.H. Steel Identification Mark 24-5-43 EER
 Lloyd's 8533
 Screw shaft, material O.H. Steel Identification Mark 16-7-43 Steam Pipes, material S.D. Steel Test pressure 750 lbs. Date of Test 31-1-44
 J.H.N.
 Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes
 Have the requirements of the Rules for the use of oil as fuel been complied with Yes
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Yes If so, have the requirements of the Rules been complied with Yes
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with No
 Is this machinery duplicate of a previous case Yes If so, state name of vessel S.S. "FORT COLUMBIA" (Vanc. Reg. No. 5942)

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 approved plans, New York letters and otherwise in conformity with the Society's Rules. The materials and workmanship are and the tests required by the Rules have been satisfactorily carried out. The whole installation been examined and tested under full working conditions on sea trials and afterwards part opened examined and found satisfactory. The machinery has also been surveyed during construction and installation on behalf of Wartime Shipbuilding, 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 B with Notation of *L.M.C. 2,44 Screw Shaft C.L. 2 - W.T. Blrs. 250 lb. (Spt. 230 lb.) F.D.
 Fitted for oil fuel 2,44. Flash point above 150°F.

Montreal fees charged in Montreal Report No. 6027

The amount of Entry Fee ... \$:
 Special (Vcr.) ... \$ 133.00 :
 Donkey Boiler Fee ... \$:
 Travelling Expenses (if any) \$ 100.00 :

When applied for, 28th Feb. 1944
 When received, 19

W.B. Gill

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute THURS 25 MAY 1944

Assigned *L.M.C. 2,44 subject*

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

