

REPORT ON WATER TUBE BOILERS.

No. 6322

Received at London Office 26 OCT 1944

Date of writing Report **11th Sept. 44** When handed in at Local Office **11th Sept. 44** Port of **Vancouver, B. C.**
 No. in Survey held at **North Vancouver, B.C.** Date, First Survey **26th May, 1944** Last Survey **2nd Sept., 1944**
 Reg. Bk. on the **Steel Single Screw Steamer "TOBIATIC PARK"** (Number of Visits **34**) {Gross **7162.75**
 Tons {Net **4218.14**
 Built at **North Vancouver, B. C.** By whom built **Burrard Dry Dock Co. Ltd.** When built **1944**
 Engines made at **Lachine, P.Q.** By whom made **Dominion Engineering Works, Ltd.** When made **1944**
 Boilers made at **Vancouver, B. C.** By whom made **Vancouver Iron Works, Ltd.** When made **1944**
 Nominal Horse Power **628** Owners **Minister of Munitions & Supply of Canada (Mtrs. Park Steamship Co. Ltd.)** Part belonging to **Montreal, P.Q.**

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel **Steel Co. of Canada, Page-Hersey Tubes, Combustion Eng. Co., Chattanooga.**
 Date of Approval of plan **17-7-43** Working Pressure **250 lbs. (Spt. 230 lb.)** Number and Description or Type
 of Boilers **2 Sinuous Header Watertube** Tested by Hydraulic Pressure to **425 lbs.** Date of Test **8-6-44 & 10-6-44.**
 No. of Certificate **Nos. 713 & 714** Can each boiler be worked separately **Yes** Total Heating Surface of Boilers **9704 sq. ft. (2 Blrs.)**
 Is forced draught fitted **Yes** Area of fire grate (coal) in each Boiler **--**

No. and type of burners (oil) in each boiler **4 Todd "Hex - Press" Burners** No. and description of safety valves on each boiler **One Twin 4" spring loaded** Area of each set of valves per boiler {per rule **22.9 sq. in.** ex $8\frac{1}{4} = 23.9$ with 450°
 as fitted **25.14 " "** Pressure to which they are adjusted **250 lbs.** Are they fitted with easing gear **Yes** In case of donkey boilers state whether steam from main boilers can enter donkey boiler **--** Smallest distance between boilers or uptakes and bunkers or woodwork **23"** Height of boiler **16'-5-5/8"**

Width and Length **14'-7 $\frac{3}{4}$ " x 18'-7 $\frac{1}{2}$ "** Steam Drums:—Number in each boiler **One** Inside diameter **47 $\frac{3}{8}$ "**
 Thickness of plates **15/16"** Range of Tensile Strength **70,000 to 82,000 lbs.** Are drum shell plates welded or flanged **Welded** If fusion welded, state name of welding firm **Vancouver Iron Works, Ltd.** Have all the requirements of the rules for Class I vessels been complied with **Yes** Description of riveting:—Cir. seams **--** long. seams **--**
 Diameter of rivet holes in long. seams **--** Pitch of rivets **--** Thickness of straps **--** Percentage strength of long. joint:—Plate **--** Rivet **--** Diameter of tube holes in drum **4-1/32"** Pitch of tube holes **7"**

Percentage strength of shell in way of tubes **42.5%** Steam Drum Heads or Ends:—Range of tensile strength **65,000 to 77,000 lbs.**
 Thickness of plates **15/16"** Radius or how stayed **38"** Size of manhole or handhole **12" x 16"** Water Drums:—Number in each boiler **One** Inside Diameter **5 $\frac{1}{2}$ " sq.** Thickness of plates **3/4"** Range of tensile strength **60,000-70,000 lbs.** Are drum shell plates welded or flanged **Solid drawn** If fusion welded, state name of welding firm **--** Have all the requirements of the rules for Class I vessels been complied with **Yes** Description of riveting:—Cir. seams **--** long. seam **--**

Diameter of rivet holes in long. seams **--** Pitch of rivets **--** Thickness of straps **--** Percentage strength of long. joint:—Plate **--** Rivet **--** Diameter of tube holes in drum **4-1/32"** Pitch of tube holes **7"**
 Percentage strength of drum shell in way of tubes **42.5%** Water Drum Heads or Ends:—Range of Tensile strength **60,000 to 70,000 lbs.**
 Thickness of plates **9/16" min.** Radius or how stayed **Handholes in end** Size of manhole or handhole **4 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ "**

Leaders or Sections:—Number **22** Material **Steel** Thickness **9/16"** Tested by Hydraulic Pressure to **500 lbs.**
 Tubes:—Diameter **2" & 4"** Thickness **10&6 BWG (.134" & .203")** Number **602-2", 44-4"** Steam Dome or Collector:—Description of joint to Shell **--** Inside diameter **--** Thickness of shell plates **--** Range of tensile strength **--** Description of longitudinal joint **--** If fusion welded, state name of welding firm **--**

Have all the requirements of the rules for Class I vessels been complied with **--** Diameter of rivet holes **--** Thickness of straps **--** Percentage strength of long. joint **--** Plate **--** Rivet **--**
 Crown or End Plates:—Range of tensile strength **--** Thickness **--** Radius or how stayed **--**

UPERHEATER. Drums or Headers:—Number in each boiler **Two** Inside Diameter **6" square**
 Thickness **5/8"** Material **Steel** Range of tensile strength **60,000 to 70,000 lbs.** Are drum shell plates welded or flanged **Forged** If fusion welded, state name of welding firm **--** Have all the requirements of the rules for Class I vessels been complied with **--** Description of riveting:—Cir. seams **--** long. seams **--**

Diameter of rivet holes in long. seams **--** Pitch of rivets **--** Thickness of straps **--** Percentage strength of long. joint:—Plate **--** Rivet **--** Diameter of tube holes in drum **2-1/64"** Pitch of tube holes **3-3/4"** Percentage strength of drum shell in way of tubes **46%** Drum Heads or Ends: **Welded to inlet and outlet nozzles.** Range of tensile strength **--**
 Radius or how stayed **--** Size of manhole or handhole **4 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ "** Number, diameter, and thickness of tubes **22 off 2" OD 10BWG .134 wall.**
 Tested by Hydraulic Pressure to **425 lbs.** Date of Test **8-6-44 and 10-6-44** Is a safety valve fitted to each section of the superheater which can be shut off from the boiler **Yes** No. and description of Safety Valves **One** Area of each set of valves **1.76 sq. inches** Pressure to which they are adjusted **230 lbs.** Is easing gear fitted **No**

Spare Gear. Has the spare gear required by the rules been supplied **Yes**
 Note:—Headers, Superheater headers and mud drums manufactured by Combustion Engineering Co. Inc. at Chattanooga, Tennessee, under Mobile Surveyors inspection and certificate.

The foregoing is a correct description of the boiler.

Dates } During progress of } **1944. May 26, 29, 30, 31. June 2, 6, 8, 10, 12** Is the approved plan of boiler forwarded herewith **No**
 Survey } work in shops - - }
 while } During erection on } **1944. June 29. July 8, 10, 11, 14, 17, 18, 19** Plans in U.K.
 building } board vessel - - } **July 22, 24, 25, 26, 28. Aug. 12, 14, 15, 16, 17, 24, 26, 28, 30, 31. Sept. 1, 2.** Total No. of visits **34**

Is this boiler a duplicate of a previous case **Yes** If so, state vessel's name and report No. **"FORT COLUMBIA" (Ver. Report No. 5942)**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been built and fitted on board under Special Survey in accordance with the approved plans, New York letters and the Rules.**

The workmanship is good and the materials tested as per Rule. Satisfactorily tested under hydraulic pressure as above, examined under working conditions, safety valves adjusted to the W.P. and a satisfactory accumulation test carried out.

Survey Fee **\$150.00** When applied for **5th Sept, 1944**
 Travelling Expenses (if any) **\$ 15.00** When received, **19**

Committee's Minute

signed

FRI. 3 NOV 1944

see minute on 26. Sept.

Engine Surveyor to Lloyd's Register of Shipping.

004824-004832-0115

Lloyd's Register Foundation