

# REPORT ON WATER TUBE BOILERS.

No. 6192

Received at London Office.

of writing Report **3rd May, 1944** When handed in at Local Office **3rd May, 1944** Port of **Vancouver, B. C.**  
 o. in Survey held at **Vancouver, B.C.** Date, First Survey **3rd January, 1944** Last Survey **3rd May, 1944**  
 Bk. on the **Steel Single Screw Steamer "CRYSTAL PARK"** (Number of Visits **16**) Tons { Gross **7161.44**  
 at **North Vancouver, B. C.** By whom built **North Van Ship Repairs, Ltd.** When built **1944**  
 nes made at **Toronto** By whom made **John Inglis Co. Ltd.** When made **1944**  
 rs made at **Vancouver, B. C.** By whom made **Vancouver Iron Works, Ltd.** When made **1944**  
 inal Horse Power **628** Owners **Minister of Munitions & Supply of Canada. (Mtrs. - Park Steamship Co. Ltd.)** Port 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.**  
 of Approval of plan **17-7-43** (Spt. 230 lb.) Number and Description or Type  
 Boilers **2 Sinuous Header Watertube** Working Pressure **250 lbs.** Tested by Hydraulic Pressure to **425 lbs.** Date of Test **10-1-44 & 12-1-44.**  
 of Certificate **Nos. 649 & 650** Can each boiler be worked separately **Yes** Total Heating Surface of Boilers **9704 sq. ft. (2 Blrs.)**  
 rced draught fitted **Yes** Area of fire grate (coal) in each Boiler  
 and type of burners (oil) in each boiler **4 Todd "Hex - Press" Burners** No. and description of safety valves on  
 boiler **One Twin 4" spring loaded** Area of each set of valves per boiler { per rule **22.9 sq. in.** as fitted **25.14 "** Pressure to which they  
 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"**  
 lth and Length **14'-7 3/4" x 18'-7 1/2"** Steam Drums:—Number in each boiler **One** Inside diameter **47 3/4"**  
 ckness of plates **15/16"** Range of Tensile Strength **70,000 to 82,000 lbs.** Are drum shell plates welded  
 4-44 langed **Welded** If fusion welded, state name of welding firm **Vancouver Iron Works, Ltd.** Have all the requirements of the rules  
 Class I vessels been complied with **Yes** Description of riveting:—Cir. seams **--** long. seams **--**  
 meter of rivet holes in long. seams **--** Pitch of rivets **--** Thickness of straps **--** Percentage strength of  
 g. joint:—Plate **--** Rivet **--** Diameter of tube holes in drum **4-1/32"** Pitch of tube holes **7"**  
 centage strength of shell in way of tubes **42.5%** Steam Drum Heads or Ends:—Range of tensile strength **65,000 to 77,000 lbs.**  
 ckness of plates **15/16"** Radius or how stayed **38"** Size of manhole or handhole **12" x 16"** Water Drums:—Number  
 each boiler **One** Inside Diameter **5 1/2" sq.** Thickness of plates **3/4"** Range of tensile strength **60,000-70,000 lbs.** Are drum shell plates  
 ded or flanged **Solid drawn** If fusion welded, state name of welding firm **--** Have all the requirements of the rules  
 Class I vessels been complied with **Certificate received** Description of riveting:—Cir. seams **--** long. seam **--**  
 meter of rivet holes in long. seams **--** Pitch of rivets **--** Thickness of straps **--**  
 centage strength of long. joint:—Plate **--** Rivet **--** Diameter of tube holes in drum **4-1/32"** Pitch of tube holes **7"**  
 centage 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.**  
 ckness of plates **9/16" min.** Radius or how stayed **Handholes in end** Size of manhole or handhole **4 1/2" x 5 1/2"**  
 eaders or Sections:—Number **22** Material **Steel** Thickness **9/16"** Tested by Hydraulic Pressure to **500 lbs.**  
 bes:—Diameter **2" & 4"** Thickness **10&6 BWG { .134" / .203"** Number **602-2". 44-4".** Steam Dome or Collector:—Description of  
 nt to Shell **--** Inside diameter **--** Thickness of shell plates **--** Range of tensile  
 on length **--** Description of longitudinal joint **--** If fusion welded, state name of welding  
 m **--** Have all the requirements of the rules for Class I vessels been complied with **--** Diameter of rivet holes **--**  
 lso ch of rivets **--** Thickness of straps **--** Percentage strength of long. joint **--** Plate **--** Rivet **--**  
 rms own or End Plates:—Range of tensile strength **--** Thickness **--** Radius or how stayed **--**  
**SUPERHEATER.** Drums or Headers:—Number in each boiler **Two** Inside Diameter **6" square**  
 ckness **5/8"** Material **Steel** Range of tensile strength **60,000 to 70,000 lbs.** Are drum shell plates welded  
 flanged **Forged** If fusion welded, state name of welding firm **--** Have all the requirements of the rules  
 r Class I vessels been complied with **--** Description of riveting:—Cir. seams **--** long. seams **--**  
 ameter of rivet holes in long. seams **--** Pitch of rivets **--** Thickness of straps **--** Percentage strength of  
 ng. joint:—Plate **--** Rivet **--** Diameter of tube holes in drum **2-1/64"** Pitch of tube holes **3-3/4"** Percentage strength of  
 um shell in way of tubes **46%** Drum Heads or Ends: **Welded to inlet and outlet nozzles.** Range of tensile strength **--**  
 adius or how stayed **--** Size of manhole or handhole **4 1/2" x 5 1/2"** Number, diameter, and thickness of tubes **22 off 2" OD 10BWG, 134 wall.**  
 ested by Hydraulic Pressure to **425 lbs.** Date of Test **10-1-44 & 12-1-44** Is a safety valve fitted to each section of the superheater which  
 n be shut off from the boiler **Yes** No. and description of Safety Valves **One** Area of each set  
 valves **1.76 sq. inches** Pressure to which they are adjusted **230 lbs.** Is easing gear fitted **No**

pare Gear. Has the spare gear required by the rules been supplied **Yes**  
 te:— **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.

**VANCOUVER IRON WORKS LTD.**

Manufacturer.

Dates } During progress of } **1944. January 3, 4, 5, 6, 7, 10, 12, 13.**  
 f Survey } work in shops - - }  
 while } During erection on } **April 17, 20, 21, 22, 24, 25. May 2, 3.**  
 building } board vessel - - - }

Is the approved plan of boiler forwarded herewith **No**  
 Plans in U.K.

Total No. of visits **16**

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 **3rd May, 1944**  
 Travelling Expenses (if any) **\$15.00** When received **19**

Committee's Minute

Assigned

TUES. 18 JUL 1944

see minute on  
 J.E.R.P.

**D. J. Archibald** (Signature)  
 Engineer Surveyor to Lloyd's Register of Shipping.

008597 - 008607 - 0286

Lloyd's Register  
 Foundation