

REPORT ON WATER TUBE BOILERS.

No. 6306

Received at London Office

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of writing Report **25th Aug., 1944** When handed in at Local Office **25th Aug., 1944** Port of **Vancouver, B. C.**

Survey held at **Vancouver, B. C.** Date, First Survey **26th May, 1944** Last Survey **18th August, 1944**

Boiler on the **Steel Single Screw Steamer "RICHMOND PARK"** (Number of Visits **15**) Tons { Gross **7163.10**
Net **4218.73**

at **North Vancouver, B. C.** By whom built **North Van Ship Repairs, Ltd.** When built **1944**

Boilers made at **Lachine, P.Q.** By whom made **Canadian Allis-Chalmers, Ltd.** When made **1944**

Boilers made at **Vancouver, B. C.** By whom made **Vancouver Iron Works, Ltd.** When made **1944**

Original Horse Power **628** Owners **Minister of Munitions & Supply of Canada. (Mfrs. - Park Steamship Co. Ltd., Montreal, P.Q.)**

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel **Steel Co. of Canada, Page-Hersey Tubes, Combustion Engineering 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 **6-6-44 & 7-6-44.**

of Certificate **Nos. 711 & 712** Can each boiler be worked separately **Yes** Total Heating Surface of Boilers **9704 sq. ft. (2 Birs.)**

Revised 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 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 1/2" x 18'-7 1/2"** Steam Drums:—Number in each boiler **One** Inside diameter **47 3/8"**

Thickness of plates **15/16"** Range of Tensile Strength **70,000 to 82,000 lbs.** Are drum shell plates welded **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 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 3/4" 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 **--**

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 1/2" x 5 1/2"**

Headers or Sections:—Number **22** Material **Steel** Thickness **9/16"** Tested by Hydraulic Pressure to **500 lbs.**

Boiler 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 **--**

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 **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 **s. 4 1/2" x 5 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 **6-6-44 & 7-6-44.** 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**

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, **VANCOUVER IRON WORKS LTD** Manufacturer.

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

Total No. of visits **15**

Is this boiler a duplicate of a previous case **Yes** If so, state vessel's name and report No. **"FORT COLUMBIA" (Vcr. 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, **21st Aug, 1944**

Survey Fee **\$150.00** When applied for **21st Aug, 1944**

Travelling Expenses (if any) **\$ 15.00** When received **19**

Committee's Minute assigned **see minute on P.C. Rpt.**

FRI. 10 NOV 1944

R. Knowles, J. Caldwell
Engineer Surveyor to Lloyd's Register of Shipping.

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