

Rpt. 5a.

# REPORT ON BOILERS.

Int. Rpt. No. 6216

Rpt. 5a.

Received at London Office.

7 SEP 1944

Date of writing Report **May 3, 1944** When handed in at Local Office **April 22, 44** Port of **Montreal, Que.**

No. in Reg. Book. Survey held at **Montreal, Que.** Date, First Survey **March 7, 1944** Last Survey **April 13, 1944**

(Number of Visits **12**) Tons { Gross **2878** Net **1653**

on the **S/S "CATARAQUI PARK"**

Built at **Pictou, N. S.** By whom built **Foundation Maritime Limited** Yard No. **14** When built **1944**

Engines made at **Three Rivers** By whom made **Canada Iron Foundries Ltd.** Engine No. **2023** When made **1944**

Boilers made at **LACHINE, QUE.** By whom made **DOMINION BRIDGE COMPANY LIMITED** Boiler No. **B1340 S-4** When made **1944**

Nominal Horse Power **269** Owners **CANADIAN GOVERNMENT** Port belonging to **Montreal**

## MULTITUBULAR BOILERS—MAIN, ~~XXXXXXXXXXXXXXXXXXXX~~

Manufacturers of Steel **Bethlehem, Steel Co. of Canada, Lukens etc.** (Letter for Record **S**)

Total Heating Surface of Boilers **1927 sq.ft.** Is forced draught fitted **Yes** Coal or Oil fired **Coal**

No. and Description of Boilers **1 Single Ended Multitubular** Working Pressure **200 lbs./sq.in**

Tested by hydraulic pressure to **350 lbs./sq.in.** Date of test **13.4.44** No. of Certificate **1941** Can each boiler be worked separately **Yes**

Area of Firegrate in each Boiler **43.25 sq.ft.** and Description of safety valves to each boiler **One Twin Cockburn Improved High Lift, 2 1/2" dia. each**

Area of each set of valves per boiler { per Rule **6.72 sq.in.** Pressure to which they are adjusted **200 lbs.** Are they fitted with easing gear **Yes** as fitted **7.95 sq.in.**

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **-**

Smallest distance between boilers or uptakes and bunkers ~~XXXXXXXXXXXX~~ **2' 3"** Is oil fuel carried in the double bottom under boilers **NO**

Smallest distance between shell of boiler and tank top plating **24"** Is the bottom of the boiler insulated **YES**

Largest internal dia. of boilers **13' - 6"** Length **11' - 6"** Shell plates: Material **O.H. Steel** Tensile strength **29-33 tons**

Thickness **1 9/32"** Are the shell plates welded or flanged **Welded** Description of riveting: circ. seams { end **Welded** inter **Welded**

long. seams **Welded** Diameter of rivet holes in { circ. seams **-** long. seams **-** Pitch of rivets { **-**

Percentage of strength of circ. end seams { plate **-** rivets **-** Percentage of strength of circ. intermediate seam { plate **-** rivets **-**

Percentage of strength of longitudinal joint { plate **-** rivets **-** combined **-** Working pressure of shell by Rules **204.3 lbs./sq.in.**

Thickness of butt straps { outer **None** inner **None** No. and Description of Furnaces in each Boiler **3 Morrison Corrugated**

Material **O.H. Steel** Tensile strength **26-30 tons** Smallest outside diameter **38 1/2"**

Length of plain part { top **-** bottom **-** Thickness of plates { crown **9/16"** bottom **16"** Description of longitudinal joint **Lap Weld**

Dimensions of stiffening rings on furnace or c.c. bottom **-** Working pressure of furnace by Rules **212 lbs./sq.in.**

End plates in steam space: Material **O.H. Steel** Tensile strength **26-30 tons** Thickness **1 3/16"** Pitch of stays **18 1/2" x 17 1/2"**

How are stays secured **Inside and Outside Nuts** Working pressure by Rules **202.4 lbs./sq.in.**

Tube plates: Material { front **O.H. Steel** back **O.H. Steel** Tensile strength { **26-30 tons** Thickness { **29/32"** **26-30 tons** **13/16"**

Mean pitch of stay tubes in nests **8 3/8" x 10 5/16"** Pitch across wide water spaces **14"** Working Pressure { front **245 lbs./sq.in.** back **223 lbs./sq.in.**

Girders to combustion chamber tops: Material **O.H. Steel** Tensile strength **28-32 tons** Depth and thickness of girder

at centre **2 @ 7 1/2" x 7/8"** Length as per Rule **33 15/32"** Distance apart **8"** No. and pitch of stays

in each **2 @ 10 1/2" x 8"** Working pressure by Rules **206.2 lbs./sq.in.** Combustion chamber plates: Material **O.H. Steel**

Tensile strength **26-30 tons** Thickness: Sides **23/32"** Back **23/32"** Top **23/32"** Bottom **23/32"**

Pitch of stays to ditto: Sides **11" x 7 1/2"** Back **8 3/8" x 10 1/2"** Top **10 3/8" x 8"** Are stays fitted with nuts or riveted over **Welded Washers & Welded Over**

Working pressure by Rules **202 lbs./sq.in.** Front plate at bottom: Material **O.H. Steel** Tensile strength **26-30 tons**

Thickness **29/32"** Lower back plate: Material **O.H. Steel** Tensile strength **26-30 tons** Thickness **29/32"**

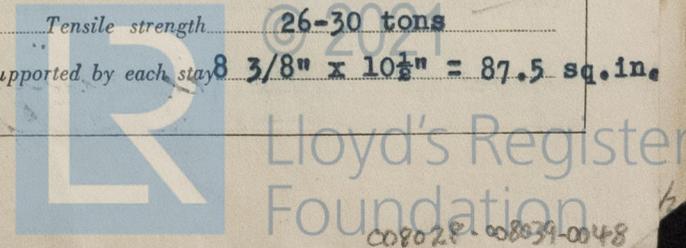
Pitch of stays at wide water space **14 3/8" x 10 1/2"** Are stays fitted with nuts or riveted over **Welded Washers & Welded Over**

Working pressure **214 lbs./sq.in.** Main stays: Material **O.H. Steel** Tensile strength **28-32 tons**

Diameter { At body of stay **3"** No. of threads per inch **6** Area supported by each stay **18 1/2" x 17 1/2" = 324 sq.in.** or **-** Over threads **-**

Working pressure by Rules **207 lbs./sq.in.** Screw stays: Material **O.H. Steel** Tensile strength **26-30 tons**

Diameter { At turned off part **2", 1 1/2"** No. of threads per inch **9** Area supported by each stay **8 3/8" x 10 1/2" = 87.5 sq.in.** or **-** Over threads **-**



CO 7028 08039-0048

Working pressure by Rules **207 lbs./sq. in.** Are the stays drilled at the outer ends **No** Margin stays: Diameter **2"**  
 No. of threads per inch **9** Area supported by each stay **11 3/8" x 10 1/2" = 119.5 sq. in.** Working pressure by Rules **207 lbs./sq. in.**  
 Tubes: Material **Steel** External diameter { Plain **3"** Thickness **8 LSG** No. of threads per inch **9**  
 Stay **3"** Thickness **5/16" & 1/4"**  
 Pitch of tubes **4 1/8" x 4 3/16"** Working pressure by Rules **250 lbs./sq. in.** Manhole compensation: Size of opening in shell plate **-** Section of compensating ring **-** No. of rivets and diameter of rivet holes **-**  
 Outer row rivet pitch at ends **-** Depth of flange if manhole flanged **-** Steam Dome: Material **-**  
 Tensile strength **-** Thickness of shell **-** Description of longitudinal joint **-**  
 Diameter of rivet holes **-** Pitch of rivets **-** Percentage of strength of joint { Plate **-**  
 Rivets **-**  
 Internal diameter **-** Working pressure by Rules **-** Thickness of crown **-** No. and diameter of stays **-** Inner radius of crown **-** Working pressure by Rules **-**  
 How connected to shell **-** Size of doubling plate under dome **-** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **-**

Type of Superheater **Smoke Tube** Manufacturers of

Tubes **National Tube Co.**

Steel forgings

Steel castings

Number of elements **48** Material of tubes **O.H. Seamless** Internal diameter and thickness of tubes **.69 & .095**

Material of headers **O.H. Seamless** Tensile strength **ASTM Spec. A-192-40** Thickness **1 1/8"** Can the superheater be shut off and the boiler be worked separately **YES** Is a safety valve fitted to every part of the superheater which can be shut off from the boiler **YES**

Area of each safety valve **1.77 Sq. Ins. (1 1/2" Dia.)** Are the safety valves fitted with easing gear **YES** Working pressure as per Rules **200 lbs.** Pressure to which the safety valves are adjusted **205 lbs./sq. in.** Hydraulic test pressure: tubes **2,500 lbs.** forgings and castings **550 lbs.** and after assembly in place **under working conditions** Are drain cocks or valves fitted to free the superheater from water where necessary **YES**

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **YES**

The foregoing is a correct description,

**DOMINION BRIDGE CO. LIMITED** Manufacturer.

Dates of Survey { During progress of work in shops - **March 7, 8, 14, 16, 21, 23, 25, 31 April 3, 6, 10, 13, 1944** Are the approved plans of boiler and superheater forwarded herewith (if not state date of approval.)  
 while building { During erection on board vessel - - - Total No. of visits **-**

Is this Boiler a duplicate of a previous case **-** If so, state Vessel's name and Report No. **S/S "ROCKWOOD PARK" Montreal Rpt. 57**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This BOILER has been constructed under Special Survey and in accordance with Approved Plans.**

**The shell longitudinal and circumferential seams are welded by the Union Melt Process and have been tested and X-rayed in accordance with the Rules for Class 1 Pressure Vessels.**

**The longitudinal seams of the front and back end plates are welded by the Union Melt Process.**

**The BOILER was tested hydrostatically at 350 lbs. per square inch pressure and found tight.**

Survey Fee **100.00** When applied for **12<sup>th</sup> July 1944**  
 Travelling Expenses (if any) **-** When received **19**

**Weyl Peditel**  
 Engineer, Surveyor to Lloyd's Register of Shipping.

Committee's Minute **OCT 6 1944**

Assigned **see minute on J.E.R.P.**