

## REPORT ON BOILERS.

Incl. Rpt.  
No. 6311

Received at London Office 15 NOV 1944

Date of writing Report **June 14, 1944** When handed in at Local Office **June 1, 1944** Port of **Montreal, Que.**  
No. in Reg. Book. Survey held at **Montreal, Que.** Date, First Survey **April 20, 1944** Last Survey **May 24, 1944**  
on the **S.S. "LISCOMB PARK"** (Number of Visits **12**)  
Tons { Gross  
Net  
Built at **Pictou, N. S.** By whom built **Foundation Maritime Limited** Yard No. **17-** When built **1944**  
Engines made in **Three Rivers, Que.** By whom made **Canada Iron Foundries Ltd.** Engine No. **2025** When made **1944**  
Boilers made at **LACHINE, QUE.** By whom made **DOMINION BRIDGE COMPANY LIMITED** Boiler No. **B1340 P-7** When made **1944**  
Nominal Horse Power **269** Owners **CANADIAN GOVERNMENT** Port belonging to **MONTREAL**

MULTITUBULAR BOILERS—MAIN, ~~ADDITIONAL COOKHOUSE~~

Manufacturers of Steel **Bethlehem, Steel Co. of Canada, Lukens, etc.** (Letter for Record **S**)  
Total Heating Surface of Boilers **1927 sq.ft.** As 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 **24.5.44** No. of Certificate **1946** 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.** 5.6 for 14 1/2" 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 **2' 3"** Is oil fuel carried in the double bottom under boilers **No**  
Smallest distance between shell of boiler and tank top plating **2' 0"** 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  
long. seams **Welded** Diameter of rivet holes in { circ. seams - inter **Welded**  
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 - Working pressure of shell by Rules **204.3 lbs./sq.in.**  
combined -  
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"** Description of longitudinal joint **Lap Weld**  
bottom - Working pressure of furnace by Rules **212 lbs./sq.in.**  
Dimensions of stiffening rings on furnace or c.c. bottom  
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** Tensile strength { **26-30 tons** Thickness { **29/32"**  
back **O.H. Steel** **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.**  
Girders to combustion chamber tops: Material **O.H. Steel** Tensile strength **28-32 tons** Depth and thickness of girder { back **223 lbs./sq.in.**  
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.**  
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.**  
Over threads -



Working pressure by Rules. **207 lbs./sq.in.** the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, **2"**  
or  
Over threads **-**  
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 **5/16" & 1/4"** No. of threads per inch **9**  
Stay **3**  
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 **Penn. Forge Corporation, Tacony, Pa.**  
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. Forged** Tensile strength **28-33 tons** 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 **1.767 sq.ins. (1 1/2" dia.)** Are the safety valves fitted with easing gear **Yes** Working pressure as per  
Rules **200** Pressure to which the safety valves are adjusted **205 lbs.** Hydraulic test pressure:  
tubes **2500 lbs./sq.in.** forgings ~~xxxxxxx~~ **550 lbs./sq.in.** 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,  
*for A. H. Hall*

Dates { During progress of } **April 20, 21, 25, 26 May 1, 4,**  
of Survey while work in shops - - **8, 12, 16, 18, 22, 24.** Are the approved plans of boiler and superheater forwarded herewith  
building { During erection on } **Aug. 19th. Sept. 16, 21 & 22.** (If not state date of approval.)  
board vessel - - Total No. of visits **16**

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

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 sq. in. pressure and found tight.**

Survey Fee **100.00** } When applied for **25th Sept. 1944**  
Travelling Expenses (if any) **18.50** } When received **19**

*J. H. Harris & W. J. Redden*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute.

Assigned

*see minute  
on J.E.R. rpt.*



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Foundation