

Anal. Rpt. No. 6409

# REPORT ON BOILERS.

22 FEB 1945

Received at London Office

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bs./sq.in

of writing Report Oct. 11th, 1944 When handed in at Local Office Oct. 10th, 1944 Port of Montreal, Que.

Size of opening in Survey held at Montreal, Que. Date, First Survey Aug. 3rd, 1944 Last Survey Sept. 19th, 1944

(Number of Visits 12)

on the S.S. "ASHBY PARK"

Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_

Built at Pictou, N. S. By whom built Foundation Maritime Limited Yard No. 20 When built 1944

Engines made at Three Rivers, Que. By whom made Canada Iron Foundries Ltd. Engine No. 2032 When made 1944

Boilers made at LACHINE, Que. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. B1421 When made 1944

P 4

Rivet holes and minimal Horse Power 269 Owners Canadian Government Port belonging to Montreal

ony, Pa.

095

## 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 19-9-44 No. of Certificate 4577 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. as fitted 7.95 sq.in. Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes

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 \_\_\_\_\_ 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 \_\_\_\_\_ 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" 13/16"

Lean 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 3/4" x 7/8" Length as per Rule 33 15/32" Distance apart 8" No. and pitch of stays \_\_\_\_\_

On each 2 @ 10 3/4" 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" Welded Washers & Welded Over

Pitch of stays to ditto: Sides 11" x 7 3/4" Back 8 3/8" x 10 1/2" Top 10 3/8" x 8" Are stays fitted with nuts or riveted 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"

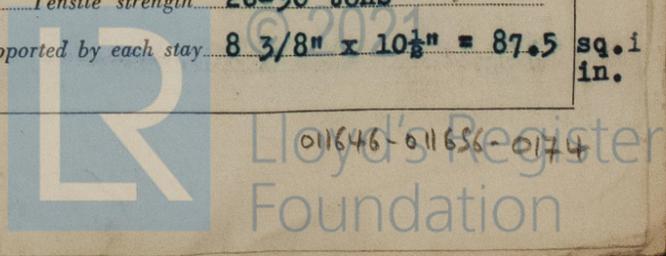
Pitch of stays at wide water space 14 3/8" x 10 1/2" Are stays fitted with nuts or riveted over Welded Washers & Welded Over

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

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

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

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



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. 8 LSG** Working pressure by Rules **207 lbs./sq. in.**

Tubes: Material **Steel** External diameter { Plain **3** Stay **3** Thickness **5/16" & 1/4"** No. of threads per inch **9**

Pitch of tubes **4 1/8" x 4 3/16"** Working pressure by Rules **250 lbs./sq. in.** Manhole compensation: Size of open 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 stays **-** Inner radius of crown **-** Working pressure by Rules **-**

How connected to shell **-** Size of doubling plate under dome **-** Diameter of rivet holes and of rivets in outer row in dome connection to shell **-**

Type of Superheater **Smoke Tube** Manufacturers of { Tubes **National Tube Company** Steel forgings **Penn. Forge Corp., 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 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 at Rules **200** Pressure to which the safety valves are adjusted **205 lbs.** Hydraulic test pressure tubes **2500 lbs./sq. in.** forgings ~~2000~~ **550 lbs./sq. in.** and after assembly in place **Under working conditions.** Are drain cock 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** Manufactured by *per Ad. Hall*

Dates of Survey { During progress of work in shops - - } **Aug. 3, 9, 11, 15, 17, 23, 29** Are the approved plans of boiler and superheater forwarded herewith (if not state date of approval.)  
 { During erection on board vessel - - } **Sept. 6, 11, 13, 18, 19**  
**Nov. 27, Dec. 13, 19, 21** Total No. of visits **16**

Is this Boiler a duplicate of a previous case **Yes** If so, state Vessel's name and Report **NS/S "ROCKWOOD PARK" Mtl. Rpt. 51**

**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.**

The safety valves were adjusted under steam as stated above and the boiler examined under full working conditions with satisfactory results. The vessel is eligible to have the notation **+ L.M.C.12,44**, insofar as the boiler is concerned.

Survey Fee **100.00** : } When applied for **20<sup>th</sup> Dec. 19 44**  
 Travelling Expenses (if any) **20.00** : } When received **19**

*Jas. H. Mann & A.G. Redden*  
 Engineer Surveyors to Lloyd's Register of Shipping

Committee's Minute **FRI. 2 MAR 1945**  
 Assigned **See F.E. Machy opt.**

