

Rpt. 5a.

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# REPORT ON BOILERS.

Received at London Office

knli. Rpt.  
No. 6644

13th. August 45

14th. August 1945

Date of writing Report 23rd Mch. 1945 When handed in at Local Office

Feb. 10

Port of MONTREAL, Que. & QUEBEC, QUE.

1st. February

9th. August 1945

7th Nov. 1944

Last Survey

19th Dec. 1944

No. in Survey held at MONTREAL & LAUZON

Date, First Survey

(Number of Visits 13 & Continuous at-  
Tons Gross 2963.40  
Net 1635.10

-- on the S.S. "CARTIER PARK"

Built at Lauzon, Levis, By whom built Geo. T. Davie & Sons Yard No. 33- When built 1945  
Que. Limited

Engines made at THREE RIVERS

By whom made CANADA IRON FOUNDRIES LTD.

Engine No. 2037 When made 1945

Boilers made at LACHINE, Que.

By whom made DOMINION BRIDGE CO. LIMITED

Boiler No. S.10 When made 1944

nominal Horse Power 268.81

Owners. CANADIAN GOVERNMENT  
(Mgrs. PARK S.S.CO.LTD.)

Port belonging to MONTREAL.

## MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~ OR DONKEY.

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

Total Heating Surface of Boilers 1927 sq.ft. each boiler 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 19/12/44 No. of Certificate 4588 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 NO

Smallest distance between boilers and bunkers 2'-0" Is oil fuel carried in the double bottom under boilers Yes

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 " 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/  
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 Tensile strength { 26-30 tons  
back O.H. steel Thickness { 29/32"  
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 20 7 3/4 x 7/8" Length as per Rule 33 15/32" Distance apart 8" No. and pitch of stays

in each 20 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"

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 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"

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 1/4" x 17 3/4" - 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, 2", 1 3/4" 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 2"  
 No. of threads per inch 9 Area supported by each stay 11 3/8"x10 1/2" Working pressure by Rules 207 lbs/sq.in.  
 Tubes: Material steel External diameter 3 Thickness 5/16"x1/4" No. of threads per inch 9  
 Pitch of tubes 4 1/8"x4 3/16" Working pressure by Rules 250 lbs/sq.in. Manhole compensation: Size of opening -  
 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 -  
 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 National Tube Company  
Penn. Forge Corp. Tacony, Pa.  
 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 1.76 Sq. ins. Are the safety valves fitted with easing gear No Working pressure as per  
 Rules - Pressure to which the safety valves are adjusted 200 Lbs. Sq. ins. Hydraulic test pressure:  
 tubes 2500 lbs/sq.in. forgings and castings 550 lbs/sq.in. and after assembly in place 400 Lbs. Sq. Ins. Are drain cocks  
 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 Nov. 7, 13, 14, 16, 23 and 28th. Are the approved plans of boiler and superheater forwarded herewith -  
 while building Dec. 1, 4, 5, 7, 12, 15 and 19th. (If not state date of approval.)  
 During erection on board vessel 1ST. FEBRUARY TO 9TH. AUGUST 1945 Total No. of visits Continuous attendance

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 5740

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.  
This BOILER has been satisfactorily fitted aboard this Vessel, and examined under Steam. The Safety Valves have been adjusted under steam, tested for accumulation and thickness of Washers noted.  
This Vessel is eligible in my opinion for record of L.M.C. 8,45.

Survey Fee 162  
 Travelling Expenses (if any) Included  
in Hull Rpt.

When applied for 6th Sept. 1945  
 When received 19

S. Falkner  
 Engineer Surveyor to Lloyd's Register of Shipping.

FM, 28 SEP 1945

Committee's Minute

Assigned Sa F.E. machy spk



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