

Rpt. 5a.  
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# REPORT ON BOILERS.

mal. Rpt.  
No. 6215

Received at London Office 12 OCT 1944

Date of writing Report April 5, 1944 When handed in at Local Office March 22, 1944 Port of Montreal, Que.

No. in Reg. Book. Survey held at Montreal, Que. Date, First Survey Feb. 10, 1944 Last Survey March 16, 1944

Saint John visits - June 9 - Sept. 5, 1944

= 15 visits (Number of Visits 11 -)

on the S/S "BLOOMFIELD PARK"

Tons { Gross 2884  
Net

Built at St. John, N. B. by whom built St. John Dry Dock & Shipbuilding Co. Ltd. Yard No. 18 When built 1944

Engines made at Three Rivers, Que. By whom made Canada Iron Foundries Ltd. Engine No. 2022 When made

Boilers made at LACHINE, QUE. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. B1340 P. 3 When made 1944

Nominal Horse Power Owners Canadian Government

Port belonging to

## MULTITUBULAR BOILERS—MAIN, ~~ACCOUNTABLE TO THE~~

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 16.3.44 No. of Certificate 1938

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 or woodwork 2 ft.

Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2 ft.

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

Pitch of rivets

inter

Welded

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

26-30 tons

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 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"

or Over threads

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 Over threads 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

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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 { in. 8 LSG No. of threads per inch 9  
Stay 3 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 85 Thickness of shell 11 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 Tube Tensile strength 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. In. Are the safety valves fitted with easing gear Yes Working pressure as per Rules 2500 lbs. Pressure to which the safety valves are adjusted 205 lbs. per sq. in. Hydraulic test pressure: tubes 2500 lbs. forgings and castings 550 lbs. and after assembly in place - 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.  
per H. Hall

Dates of Survey { During progress of work in shops Feb. 10, 16, 22, 24, 29 March 1, 3, 7, 8, 14, 16, 1944 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
During erection on board vessel June 9, 13, 24, July 8, 10, 12, 12, 25, 25, 31, August 4, 21, 23, Sept. 1, 4. Total No. of visits 26

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. 5

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.

This Boiler has been installed in this vessel under Special Survey and in accordance with the Rules and approved plans. The materials and workmanship are of good quality. On completion of Official Sea Trial, this boiler was emptied, manhole doors removed for internal examination, and boiler found in good condition. The combustion chamber fire boxes and furnaces were also examined and found satisfactory.

Survey Fee 100:00  
Travelling Expenses (if any) 18:50

When applied for 12<sup>th</sup> July 1944  
When received 19

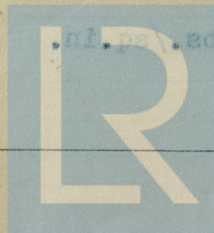
P. H. McChee & W. J. Redden  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 10 OCT 1944

Assigned

see minute on 15 Rpt.



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