

Rpt. 5a.

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## REPORT ON BOILERS.

No. 6073

3 MAR 1944

Received at London Office

28th. Dec./43 29th. Dec./43  
 Date of writing Report 5th. Oct. 1943 When handed in at Local Office 29th. Sept. 1943 Port of Montreal, P.Q.  
 No. in Reg. Book. Survey held at Montreal, P.Q. Date, First Survey 28th. Aug./43 Last Survey 21st. Dec. 43  
 (Number of Visits 15 & 17- 7140.89 Tons { Gross 4223.38 Net  
 on the S.S. "FORT BRUNSWICK"  
 Built at Lauzon, Levis, P.Q. By whom built Davie Shipbuilding & Repairing Co. Limited Yard No. 549 When built 1943  
 Engines made at Lachine P.Q. By whom made Dominion Engineering Works Ltd. Engine No. 133 When made 1943  
 Boilers made at Lachine, P.Q. By whom made Dominion Bridge Co. Limited Boiler No. B1264 - S2 When made 1943  
 Nominal Horse Power 509 Owners Park Steamship Co. Ltd. Port belonging to -

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

Manufacturers of Steel Bethlehem, Carnegie Illinois, Steel Co. of Canada Etc. (Letter for Record S ✓)  
 Total Heating Surface of Boilers 2380 Square Feet Is forced draught fitted Yes ✓ Coal or Oil fired Coal ✓  
 No. and Description of Boilers One Single Ended Multitubular Working Pressure 220 Lbs/Sq. In. ✓  
 Tested by hydraulic pressure to 380 Lbs/Sq. In. Date of test 2.9.43 No. of Certificate 9094 Can each boiler be worked separately  
 Area of Firegrate in each Boiler 51 Sq. Ft. No. and Description of safety valves to each boiler One Twin Cockburn Improved High Lift 2 1/2" Dia. Ea. ✓  
 Area of each set of valves per boiler { per Rule 6.33 Sq. In. Pressure to which they are adjusted 220 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 or woodwork 6'-0" ✓ 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 29-33 Tons ✓  
 Largest internal dia. of boilers 14' 6-3/16" Length 11'-9" Shell plates: Material O.H. Steel Tensile strength  
 Thickness 1-13/32" Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end Double  
 { inter -  
 long. seams Triple Zig Zag Diameter of rivet holes in { circ. seams 1 1/8" Pitch of rivets { 4-3/16" ✓  
 { long. seams 1 1/8" ✓ { 10-1/16" ✓  
 Percentage of strength of circ. end seams { plate 64.0 ✓ Percentage of strength of circ. intermediate seam { plate -  
 { rivets 47.0 ✓ { rivets -  
 Percentage of strength of longitudinal joint { plate 85.6 ✓ Working pressure of shell by Rules 223 Lbs/Sq. In.  
 { rivets 92.9 ✓  
 { combined 88.7 ✓  
 Thickness of butt straps { outer 1-3/32" No. and Description of Furnaces in each Boiler Three Morrison Corrugated ✓  
 { inner 1-7/32" ✓  
 Material O.H. Steel Tensile strength 26-30 Tons ✓ Smallest outside diameter 41-9/16" ✓  
 Length of plain part { top - Thickness of plates { crown 21/32" Description of longitudinal joint Lap Weld  
 { bottom - { bottom 32" ✓  
 Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 230 Lbs/Sq. In. ✓  
 End plates in steam space: Material O.H. Steel Tensile strength 26-30 Tons Thickness 1-7/16" Pitch of stays 21" x 21" ✓  
 How are stays secured Inside & Outside Nuts Working pressure by Rules 221 Lbs/Sq. In. ✓  
 Tube plates: Material { front O.H. Steel Tensile strength { 26-30 Tons ✓ Thickness { 31/32" ✓  
 { back O.H. Steel ✓ { 26-30 Tons ✓ { 13/16" ✓  
 Mean pitch of stay tubes in nests 10-5/8" x 8-1/4" Pitch across wide water spaces 14 1/2" ✓ Working Pressure { front 233 Lbs/Sq. In. ✓  
 { back 276 Lbs/Sq. In. ✓  
 Girders to combustion chamber tops: Material O.H. Steel Tensile strength 29-33 Tons ✓ Depth and thickness of girder  
 at centre 2 @ 10-1/4" x 7/8" Length as per Rule 34" Distance apart 11" ✓ No. and pitch of stays  
 in each 3 @ 7-5/8" x 11" Working pressure by Rules 229 Lbs/Sq. In. ✓ Combustion chamber plates: Material O.H. Steel ✓  
 Tensile strength 26-30 Tons Thickness: Sides 25/32" ✓ Back 23/32" ✓ Top 25/32" ✓ Bottom 25/32" ✓  
 Pitch of stays to ditto: Sides 10-3/16" x 9" Back 9" x 9" Top 11" x 7-5/8" Are stays fitted with nuts or riveted over Welded Washers & Welded Over  
 Working pressure by Rules 225 Lbs/Sq. In. Front plate at bottom: Material O.H. Steel Tensile strength 26-30 Tons ✓  
 Thickness 31/32" ✓ Lower back plate: Material O.H. Steel Tensile strength 26-30 Tons ✓ Thickness 29/32" ✓  
 Pitch of stays at wide water space 14-1/2" x 9" ✓ Are stays fitted with nuts or riveted over Welded Washers & Welded Over  
 Working pressure Supported by 3 Stays Main stays: Material O.H. Steel Tensile strength 28-32 Tons ✓  
 Diameter { At body of stay 3 1/8" No. of threads per inch 6 ✓ Area supported by each stay 21" x 21" = 44/Sq. In. ✓  
 { or -  
 { Over threads -  
 Working pressure by Rules 244 Lbs/Sq. In. Screw stays: Material O.H. Steel Tensile strength 26-30 Tons ✓  
 Diameter { At turned off part 2-1/8", 2", 1-7/8", 1 1/2" No. of threads per inch 9 ✓ Area supported by each stay 9" x 9" = 81/Sq. In. ✓  
 { or -  
 { Over threads -

If not, state whether, and when, one is sent?

Is a Report also sent on the Hull of the Ship?

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Foundation



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Working pressure by Rules 224 Lbs. Are 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 3/4" x 9" = 105.8/Sq. In. Working pressure by Rules 235 Lbs/Sq. In.

Tubes: Material Steel External diameter { Plain 3" Thickness { 8 SWG No. of threads per inch 9 Stay 3" 5/16" & 3/8"

Pitch of tubes 10-5/8" x 8-1/4" 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 Company Steel forgings The Superheater Co., Sherbrooke P.Q. Steel castings " " " "

Number of elements 58 Material of tubes S.D. Steel Internal diameter and thickness of tubes .69 & .095

Material of headers O.H. Steel Tensile strength 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

Area of each safety valve 1.76 sq. ins. Are the safety valves fitted with easing gear Working pressure as per Rules 220 lbs. per sq. in. Hydraulic test pressure: tubes 1500 lbs. sq. in. forgings and castings 700 lbs. per sq. in. after assembly in place 400 lbs. per sq. in. 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. pu A.S. Hall

Dates of Survey while building { During progress of work in shops -- July 22, 24, 27, August 2, 7, 10, 14, 16, 18, 21, 25, 27, 28, 31. Sept. 2 Aug: 28, Sept: 8, 11, 17, 23 Oct: 2, 7, 16, 26 Nov: 7, 16, 25 Dec: 2, 9, 14, 18, 21

Are the approved plans of boiler and superheater forwarded herewith (if not state date of approval.)

Total No. of visits 14 & 17 31

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No FORT TADOUSSAC RPT. 5644 PRINCE ALBERT PARK 5664

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

The materials and workmanship are good. It was tested hydrostatically at 380 Lbs. pressure and found tight.

The longitudinal seams of the front and back end plates of this BOILER have been welded by the Union Melt Process.

They have now been properly installed on board and the safety valves adjusted under steam at 220 lbs. per square inch and washers noted.

Survey Fee 50.00 When applied for Jan 28 1944

Travelling Expenses (if any) Included When received 19

m Hull Rpt.

D. Galbraith & Sons Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 16 MAY 1944

Assigned no action

TUES. 19 SEP 1944 see minute on F.B. Rpt.