

Rpt. 5a
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REPORT ON BOILERS.

mil. Rpt.
No. 6073

Received at London Office

3 MAR 1944

Date of writing Report 28th. Dec./43 19 43 When handed in at London Office 29th. Dec./43
 Port of Montreal, P.Q. & Quebec P.Q.
 Date, First Survey 28th. August/43 Last Survey 21st. Dec./43
 No. in Reg. Book. Survey held at Montreal, P.Q. Date, First Survey 13th. July 1943 Last Survey 19
 on the S.S. "FORT BRUNSWICK" (Number of Visits 14 & 17) Tons {Gross 7140.89
 Net 4223.38
 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 Limited Engine No. 133 When made 1943
 Boilers made at Lachine, P.Q. By whom made Dominion Bridge Co. Ltd. Boiler No. B1264 C1 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 Steel, Steel Co. of Canada, Dominion Foundry & Steel (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 220Lbs/Sq. In.
 Tested by hydraulic pressure to 380Lbs/Sq. In. Date of test 25.8.43 No. of Certificate 9091 Can each boiler be worked separately Yes
 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" 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 Yes
 Largest internal diameter of boilers 14'-6-3/16" Length 11'-9" Shell plates: Material O.H. Steel Tensile strength 29-33Tons/Sq. In.
 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 1/2" Pitch of rivets {4-3/16"
 long. seams 1 1/2" 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% 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/Sq. In. 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 -
 End plates in steam space: Material O.H. Steel Tensile strength 26-30 Tons/Sq. In. Thickness 1-7/16" Pitch of stays 21" x 21"
 How are stays secured Inside & Outside Nuts
 Tube plates: Material {front O.H. Steel Tensile strength {26/30 Tons/Sq. In. Thickness {31/32"
 back O.H. Steel 13/16"
 Mean pitch of stay tubes in nests 10-5/8" x 8 1/2" = 9.4375 Pitch across wide water spaces 14 1/2"
 Girders to combustion chamber tops: Material O.H. Steel Tensile strength 29/33 Tons/Sq. In. Depth and Thickness of girder
 at centre 2 at 10 1/2" x 7/8" Length as per Rule 34" Distance apart 11" No. and pitch of stays
 in each 3 at 7-5/8" Combustion chamber plates: Material O.H. Steel
 Tensile strength 26-30 Tons/Sq. In. 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 and Welded Over
 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/Sq. In. Thickness 29/32"
 Pitch of stays at wide water space 11-3/4" x 9" Are stays fitted with nuts or riveted over Welded Washers & Welded Over
 Main stays: Material O.H. Steel Tensile strength 28-32 Tons/Sq. In.
 Diameter {At body of stay 3 1/2" No. of threads per inch 6
 or -
 Over threads -
 Screw stays: Material O.H. Steel Tensile strength 26-30 Tons/Sq. In.
 Diameter {At turned off part - No. of threads per inch 9
 or -
 Over threads 1-3/4"

If a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?

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Are the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, or Over threads **2"**

No. of threads per inch **9**

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

Pitch of tubes **10-5/8" x 8-1/4"** Manhole compensation: Size of opening in shell plate **None** Section of compensating ring **--** No. of rivets and diameter of rivet holes **--**

Outer row rivet pitch at ends **--** Depth of flange if manhole flanged **4 1/2" in back end** Steam Dome: Material **--**

Tensile strength **--** Thickness of shell **--** Description of longitudinal joint **--**

Diameter of rivet holes **--** Pitch of rivets **--** Percentage of strength of joint { Plates Rivets **--**

Internal diameter **--** Thickness of crown **--** No. and diameter of stays **--** Inner radius of crown **--**

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., Penn.** 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 **33.5 Tons** Thickness **1-1/8" Min.** 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 **-**

Pressure to which the safety valves are adjusted **220 lbs. per sq. in.** Hydraulic test pressure: tubes **1500 Lbs./Sq. In.** forgings and castings **700 Lbs./Sq. In.** and after assembly in place **400 Lbs./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.
per Ad. Hall

Dates of Survey { During progress of work in shops **July 13, 14, 19, 22, 24, 27** while building { During erection on board vessel **Aug. 2, 7, 10, 14, 16, 18, 21, 25** 1943 **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.) **Yes**

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 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. per square inch pressure and found good.

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, **1944**

D. Falkitt & W. Hey-Edwards
 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 J.C. Rpt.

