

REPORT ON BOILERS.

mtb. Rpt.
No. 6440

Received at London Office 26 JUN 1945

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Date of writing Report Dec. 29, 1944 When handed in at Local Office Dec. 9, 1944 Port of Montreal, Que.
No. in Survey held at Montreal, Que. Date, First Survey Oct. 4, 1944 Last Survey Nov. 16, 1944.
eg. Book. (Number of Visits 12)
On the S.S. "EVANGELINE PARK"
Built at Pictou, N.S. By whom built Foundation Maritime Limited Yard No. 21 When built 1944
Engines made at Three Rivers, Quebec. By whom made Canada Iron Foundries Engine No. 2034 When made 1944
Boilers made at LACHINE, QUE. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. B1421 When made 1944
Nominal Horse Power 269 Owners CANADIAN GOVERNMENT Port belonging to MONTREAL

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 16.11.44 No. of Certificate 4583 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 --
Smallest distance between boilers or uptakes and bunkers or woodwork 2' 3" Is oil fuel carried in the double bottom under boilers NO
2' 0" Is the bottom of the boiler insulated YES
Smallest distance between shell of boiler and tank top plating
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 Welded
inter Welded
long. seams Welded Diameter of rivet holes in { circ. seams - Pitch of rivets { -
long. seams - Percentage of strength of circ. intermediate seam { plate -
rivets -
Percentage of strength of circ. end seams { plate - Working pressure of shell by Rules 204.3 lbs./sq.in.
rivets -
combined -
Percentage of strength of longitudinal joint { plate -
rivets -
combined -
Thickness of butt straps { outer None No. and Description of Furnaces in each Boiler 3 Morrison Corrugated
inner None Tensile strength 26-30 tons Smallest outside diameter 38 1/2"
Material O.H. Steel Thickness of plates { crown 9/16" Description of longitudinal joint Lap Weld
Length of plain part { top - Thickness of plates { bottom - Working pressure of furnace by Rules 212 lbs./sq.in.
bottom - Dimensions of stiffening rings on furnace or c.c. bottom -- Pitch of stays 18 1/4" x 17 1/4"
End plates in steam space: Material O.H. Steel Tensile strength 26-30 tons Thickness 1 3/16" Pitch of stays 18 1/4" x 17 1/4"
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 Thickness { 29/32"
back O.H. Steel 26-30 tons 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 3/4" x 7/8" Length as per Rule 33 15/32" Distance apart 8" No. and pitch of stays
in 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
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 & 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" No. of threads per inch 6 Area supported by each stay 18 1/4" x 17 1/4" = 324 sq.in.
Over threads - Screw stays: Material O.H. Steel Tensile strength 26-30 tons
Working pressure by Rules 207 lbs./sq.in. No. of threads per inch 9 Area supported by each stay 8 3/8" x 10 1/2" = 87.5 sq.in.
Diameter { At turned off part, 2", 1 1/2"
Over threads -

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"** 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 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 **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 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. ins. (1 1/2" dia)** Are the safety valves fitted with easing gear **YES** Working pressure as per Rules **200** Pressure to which the safety valves are adjusted **205 lbs.** Hydraulic test pressure: **2500 lbs./sq. in.** forgings **550 lbs./sq. in.** and after assembly in place **under working conditions** 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.

Dates of Survey { During progress of work in shops - - **Oct. 4, 5, 11, 16, 20, 23, 25** During erection on board vessel - - **Nov. 2, 7, 13, 14, 16.**

Jan. 11, 26, Feb. 1, 6, 1945

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

Total No. of visits **16**

Is this Boiler a duplicate of a previous case **Yes** If so, state Vessel's name and Report No. **S/S "ROCKWOOD PARK" Mtl. 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 square inch 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. 4,45, insofar as the boiler is concerned.

Survey Fee **100**

Travelling Expenses (if any) **-**

Charged on **Hfr rpt. 5205**

When applied for **Jan. 24 1945**

When received **19**

Jan. H. Nairn & Weyl
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 15 JUN 1945

Assigned

See Minute on B. Rpt.



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