

REPORT ON BOILERS.

mtb. Rpt. No. 6664

Received at London Office

11 OCT 1945

Date of writing Report 10th September 45 18th September 1945
11th April 1945 When handed in at Local Office March 24th 1945. Port of MONTREAL, Que. & QUEBEC, QUE.

No. in Survey held at MONTREAL & QUEBEC, QUE. Date, First Survey 30th March 45 29th August 1945
Leg. Book. 31st January Last Survey March 21st 1945.

(Number of Visits 14) & Continuous.
Tons { Gross 2967.24
Net 1640.77

on the STEEL SINGLE SCREW STEAMER "WESTDALE PARK"
Built at QUEBEC, QUE. By whom built MORTON ENGINEERING & Yard No. 63 When built 1945
DRY DOCK CO. LTD.

Engines made at THREE RIVERS By whom made CANADA IRON FOUNDRIES LTD. Engine No. 2040 When made 1945
B 1509

Boilers made at LACHINE, P.Q. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. S 5 When made 1945.

Nominal Horse Power 268.81 Owners CANADIAN GOVERNMENT Port belonging to MONTREAL
(MGRS. PARK S.S. CO. LTD.)

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. both 3854 ✓ 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 21st March 1945 No. of Certificate 6783 Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 43.25 sq. ft. No. 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. for 14L. 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 and bunkers 2'-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 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. end seams { plate - Percentage of strength of circ. intermediate seam { plate -
rivets - rivets -

Percentage of strength of longitudinal joint { plate - Working pressure of shell by Rules 204.3 lbs/sq. in.
rivets -
combined -

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 - Thickness of plates { crown 9/16" Description of longitudinal joint LAP weld
bottom - bottom -

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 212 lbs/sq. in.

Stays and 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 3/4"

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"

Lean 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

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"

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 and 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"

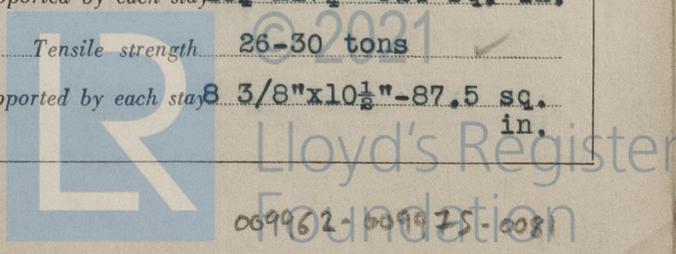
Pitch of stays at wide water space 14 3/8" x 10 1/2" Are stays fitted with nuts or riveted over welded washers and welded over.

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 1/2" x 17 3/4" = 324 sq. in.
or -
Over threads -

Working pressure by Rules 207 lbs/sq. in. Screw stays: Material O.H. Steel Tensile strength 26-30 tons

Diameter { At turned off part, No. of threads per inch 9" Area supported by each stay 8 3/8" x 10 1/2" = 87.5 sq. in.
or -
Over threads 2", 1 3/4"



Working pressure by Rules. **207 lbs/sq. in.** are the stays drilled at the outer ends. No. Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 2'' \\ \text{or} \\ \text{Over threads } - \end{array} \right.$

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 $\left\{ \begin{array}{l} \text{Plain } 3 \\ \text{Stay } 3 \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 8 \text{ ISG} \\ 5/16" \& 1/4" \end{array} \right.$ 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 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 $\left\{ \begin{array}{l} \text{Plate } - \\ \text{Rivets } - \end{array} \right.$

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 $\left\{ \begin{array}{l} \text{Tubes } \text{NATIONAL TUBE COMPANY} \\ \text{Steel forgings } \text{Penn. Forge Corp. Tacony, Pa.} \\ \text{Steel castings } - \end{array} \right.$

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 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 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 **550 Lbs. Sq. ins.** Are drain cock 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 $\left\{ \begin{array}{l} \text{During progress of work in shops } - - \\ \text{During erection on board vessel } - - \end{array} \right.$ **Jan. 31st.** **Feb. 2, 8, 14, 19, 22, 27 and 28th.** **Mar. 2, 8, 12, 14, 19 and 21st.** **30th. March 45 to 29th. August** Are the approved plans of boiler and superheater forwarded herewith. (If not state date of approval.) **Continuous attendance**

Total No. of visits **1945**

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 square inch 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 \boxtimes L.M.C. 8,45.

Survey Fee **162** ⁵⁰ } When applied for **22nd Sept. 1945**
 Travelling Expenses (if any) **included** } When received **19**
in Hull Rpt.

R. H. Stanley **Allyn Redner**
 Engineer, Surveyor to Lloyd's Register of Shipping

Committee's Minute **FRI. 2 NOV 1945**

Assigned **See F.E. machy. rpt.**



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