

REPORT ON BOILERS.

M.D. RPT.
No. 6532

Received at London Office

31 JUL 1945

Date of writing Report 9th April 1945 When handed in at Local Office March, 24 th 1945 Port of MONTREAL, Que.

No. in Reg. Book. Survey held at MONTREAL Date, First Survey 22nd January Last Survey 8th March 1945

(Number of Visits 15)
Tons { Gross 2930
Net 1622

on the S.S. "Lorne Park"

Built at Pictou, Nova Scotia By whom built Foundation Maritimes Ltd. Yard No. 24 When built 1945

Engines made at Three Rivers, Que. By whom made CANADA IRON FOUNDRIES LTD. Engine No. 2041 When made 1945

Boilers made at LACHINE, P.Q. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. B 1509 S 4 When made 1945

Nominal Horse Power 269 Owners CANADIAN GOVERNMENT Port belonging to MONTREAL

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. 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 8th March 1945 No. of Certificate 6781 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. 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

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 - rivets - Percentage of strength of circ. intermediate seam { plate - rivets -

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

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 - bottom - Thickness of plates { crown 9/16" bottom - 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 1/4" 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 back O.H. Steel Tensile strength { 26-30 tons Thickness { 29/32" 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 1/2" x 7/8" Length as per Rule 33 15/32" Distance apart 8" No. and pitch of stays

in each 2 @ 10 3/8" 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 3/8" 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"

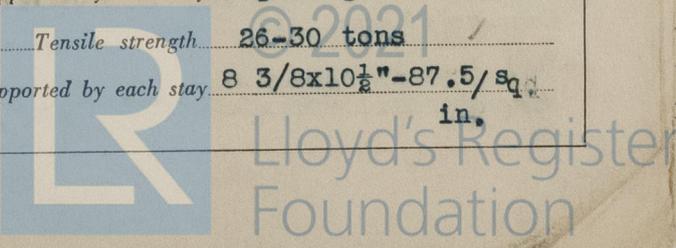
Pitch of stays at wide water space 14 3/8" x 10 1/2" Are stays fitted with nuts or riveted over welded washers and welded over

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. ins.
or - - -

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

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



Working pressure by Rules 207 lbs/sq. in. Are the stays drilled at the outer ends No. Margin stays: Diameter At turned off part, 2"
 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 8 LSG 5/16" x 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
 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:
 tubes 2500 lbs/sq. in. forgings and castings 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 while building During progress of work in shops - Jan. 22, 25, 26, 29 and 31st. During erection on board vessel - Feb. 2, 8, 14, 19, 22, 27, and 28th.
Mar. 2, 6 and 8th. May 11, 22, June 22, 28, 29
 Are the approved plans of boiler and superheater forwarded herewith (if not state date of approval.)
 Total No. of visits 20

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.

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. 7,45 insofar as the boiler is concerned.

Survey Fee 100.00 : } When applied for 26th June 1945
 Travelling Expenses (if any) - : } When received 19

Jas. H. Nairn & Weyburn
 Engineer-Surveyors to Lloyd's Register of Shipping.

FRI 3 AUG 1945

Committee's Minute
 Assigned Su F.E. machy. rpt.

