

REPORT ON BOILERS.

Final Rpt.
No. 6409

22 FEB 1945

Received at London Office

1. 5a. 2" t. 5a. bs./sq.in. 9 of writing Report Oct. 11th, 19 44 When handed in at Local Office Oct. 10th, 19 44 Port of Montreal, Que.

Size of opening in Survey held at Montreal, Que. Date, First Survey Aug. 3rd, 1944 Last Survey Sept. 19th, 1944

on the S.S. "ASHBY PARK" (Number of Visits 12) Tons { Gross Net

Built at Pictou, N. S. By whom built Foundation Maritime Limited Yard No. 20 When built 1944

Engines made at Three Rivers, Que. By whom made Canada Iron Foundries Ltd. Engine No. 2032 When made 1944

No. and diameter of boilers made at LACHINE, Que. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. B1421 When made 1944

Rivet holes and minimal Horse Power 269 Owners Canadian Government Port belonging to Montreal

95 MULTITUBULAR BOILERS—MAIN, ~~ALXIDARKXOUBXIONEXX~~

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 19-9-44 No. of Certificate 4577 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

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 -

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 None

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/
bottom - bottom 16"

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 1/2" x 17 1/2"

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

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"

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 Washers & 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"

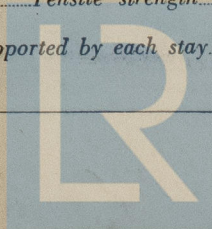
Pitch of stays at wide water space 14 3/8" x 10 1/2" Are stays fitted with nuts or riveted over Welded Washers & Welded Over

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 1/2" x 17 1/2" = 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 2", 1 1/2"
Over threads -



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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"x10 1/2" = 119.5 sq. in. 8 LSG 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 open 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 stays - Inner radius of crown - Working pressure by Rules -
How connected to shell - Size of doubling plate under dome - Diameter of rivet holes and 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 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 Rules 200 Pressure to which the safety valves are adjusted 205 lbs. Hydraulic test pressure tubes 2500 lbs./sq. in. forgings 550 lbs./sq. in. and after assembly in place Under working conditions. 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 Manufactured by

Dates of Survey { During progress of work in shops - Aug. 3, 9, 11, 15, 17, 23, 29 Sept. 6, 11, 13, 18, 19 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
During erection on board vessel - Nov. 27, Dec. 13, 19, 21 Total No. of visits 16

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report NS/S "ROCKWOOD PARK" Mtl. Rpt. 5

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 sq. in. 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.12,44, insofar as the boiler is concerned.

Survey Fee 100:00 : } When applied for 20th Dec. 19 44
Travelling Expenses (if any) 20:00 : } When received 19

for H. Nairn & A. E. Redden
Engineer Surveyors to Lloyd's Register of Shipping

Committee's Minute FRI. 2 MAR 1945
Assigned See F.E. Mackay rpt.