

Rpt. 5a.
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REPORT ON BOILERS.

No. 6004

16 MAR 1944

Received at London Office

Date of writing Report 16th. Aug. 1943 When handed in at London Office 19 Port of Montreal, P.Q.

No. in Reg. Book. Survey held at Montreal, P.Q. Date, First Survey 16th. June. Last Survey Jan. 24 1944

on the S/S "MEWATAKAKU" "FAWKNER PARK" Montreal: 14 (Number of Visits) Gross 2882 St. John 16 Tons Net

Built at St. John, N.B. By whom built St. John Dry Dock & Shipbuilding Company Yard No. 16- When built 1943

Engines made at Three Rivers, P.Q. By whom made Canada Iron Foundries Ltd. Engine No. 2011 When made 1943

Boilers made at Lachine, P.Q. By whom made Dominion Bridge Company Limited Boiler No. B1147 When made 1943

Nominal Horse Power 269 Owners Canadian Government Port belonging to --

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~

Manufacturers of Steel Bethlehem Steel, Steel Co. of Canada, Trenton Steel Co. & Steel Dom. Foundries Steel (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 11.8.43 No. of Certificate 7447 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 1/4" Ea.

Area of each set of valves per boiler { per Rule 6.72 Sq. In. as fitted 7.952 Sq. In. Pressure to which they are adjusted 200 Lbs/Sq. In. Are they fitted with easing gear Yes

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 ft. Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2 ft. Is the bottom of the boiler insulated Yes

Largest internal diameter 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 No Description of riveting: circ. seams { end Welded inter. (Union Melt)

Long. seams Welded (Union Melt) Diameter of rivet holes in { circ. seams -- long. seams -- Pitch of rivets { --

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 --

Thickness of butt straps { outer None inner None No. and Description of Furnaces in each Boiler Three Morrison Corrugated

Material O.H. Steel Tensile strength 26-30 Tons/Sq. In. Smallest outside diameter 38 1/2"

Length of plain part { top -- bottom -- Thickness of plates { crown 9/16" bottom 16" Description of longitudinal joint Lap Weld

Dimensions of stiffening rings on furnace or c.c. bottom --

End plates in steam space: Material O.H. Steel Tensile strength 26-30 Tons Thickness 1 3/16" Pitch of stays 17 3/4" x 18 1/4"

How are stays secured Inside & Outside Nuts

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 10 3/8" Pitch across wide water spaces 14" x 8 1/4"

Girders to combustion chamber tops: Material O.H. Steel Tensile strength 28-32 Tons Depth and Thickness of girder

at centre 7 3/4" x 7/8" Length as per Rule 2'-9 15/32" Distance apart 8" Centre to Centre No. and pitch of stays

in each 2 at 10 3/4" 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 3/4" x 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 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

Main stays: Material O.H. Steel Tensile strength 28-32 Tons

Diameter { At body of stay -- or Over threads 3 1/4" and 2 1/4" No. of threads per inch 6

crew stays: Material O.H. Steel Tensile strength 26-30 Tons

Diameter { At turned off part -- or Over threads 2" and 1 3/4" No. of threads per inch 9



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 O.H. Steel External diameter Plain 3" Stay 3" Thickness 8 L.S.G. No. of threads per inch 9 5/16" & 1/4"

Pitch of tubes 4 1/8" x 4 3/16" 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 3 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 Plate -- 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., Ellwood City, Pa. Steel forgings -- Steel castings --

Number of elements 48 Material of tubes O.H. Seamless Steel Internal diameter and thickness of tubes .69 .095

Material of headers O.H. Seamless Tube Tensile strength -- 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 No

Area of each safety valve 1.767 sq. in. Are the safety valves fitted with edging gear Yes Yes No

Pressure to which the safety valves are adjusted 217 lbs. per sq. in. Hydraulic test pressure: tubes 2500 lbs. forgings and castings 550 lbs. and after assembly in place -- Are drain cocks or valves fitted to free the superheater from water where necessary Yes Yes No

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes Yes No

The foregoing is a correct description,
 DOMINION BRIDGE CO. LIMITED Manufacturer.

Dates of Survey During progress of work in shops -- June 16, 19, 21, 24, 28, 29. July 1, 3, 7, 8, 12, 13, 14, 17, 19, 22, 27. August 2, 10, 11. During erection on board vessel -- 1943: Oct. 19, 21; Nov. 2, 5, 22; Dec. 2, 6, 14, 15, 31; 1944: Jan. 10, 10, 12, 21, 24

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes Yes No

Total No. of visits 24

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "ROCKWOOD PARK" Mtl. Rpt. No. 5740

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 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 was installed in this vessel under special survey, and in accordance with the Rules and approved plans. The materials and workmanship are of good quality. Both Port and Starboard boilers were emptied and manhole doors removed for an internal examination after the official dock steaming trial and were both found in good condition. The combustion chamber fire boxes were examined at this time and found satisfactory. After the official Sea Trial, the Port boiler was emptied and manhole doors removed for an internal examination and found in good condition. The combustion chamber fire boxes were also examined at this time and found satisfactory.

Survey Fee 100.00 When applied for, Oct. 29 1943
 Travelling Expenses (if any) 50.00 When received, 19

Weybridge & P. B. The Chief
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 21 APR 1944

Assigned see minute on 20 Apr

