

Rpt. 5a.
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REPORT ON BOILERS.

No. 5645

Received at London Office

11 AUG 1942

Date of writing Report 6th June 1942 When handed in at Local Office 8th June 1942 Port of MONTREAL, QUE.

No. in Reg. Book. Survey held at MONTREAL, QUE. and Quebec. Date, First Survey 16th July Last Survey 30th April 1942

(Number of Visits 39) Gross 7130.17
Tons Net 4256.20

on the Steel Single Screw Steamer, "FORT CHAMBLY"

Built at LEVIS, P.Q. By whom built DAVIE SHIPBUILDING & REPAIRING CO. LIMITED Yard No. 533 When built 1942

Engines made at LACHINE, P.Q. By whom made Dominion Engineering Company Engine No. 2 When made 1941

Boilers made at LACHINE, P.Q. By whom made Dominion Bridge Company Limited Boiler No. B914C2 When made 1941

Nominal Horse Power 504 Owners The Government of the United States of America. Port belonging to -

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

Manufacturers of Steel Bethlehem Steel, Dominion Foundry & Steel, Lukens (Letter for Record (S))

Total Heating Surface of Boilers 2380 square feet Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers Three Single Ended Multitubular Working Pressure 220 lbs. per sq. in.

Tested by hydraulic pressure to 380 lbs. per sq. in. Date of test 19/11/41 No. of Certificate 2 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 51 sq. feet No. and Description of safety valves to each boiler One double spring safety valve

Area of each set of valves per boiler 8.87 sq. in. Pressure to which they are adjusted 220 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 6'0" 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 14' - 6-3/16" Length 11' - 9" Shell plates: Material Steel Tensile strength 29/33 tons

Thickness 1-13/32" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R.

long. seams T.R. zig zag DB's Diameter of rivet holes in 1 1/2" Pitch of rivets 4-3/16"

Percentage of strength of circ. end seams plate 64.0 rivets 47.0 Percentage of strength of circ. intermediate seam plate - - rivets - -

Percentage of strength of longitudinal joint plate 85.6 rivets 92.9 combined 88.7

Thickness of butt straps outer 1-3/32" inner 1-7/32" No. and Description of Furnaces in each Boiler Three Morrison Corrugated Type

Material Steel Tensile strength 26/30 tons Smallest outside diameter 41"

Length of plain part top - - bottom - - Thickness of plates 21/32" 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 1-7/16" Pitch of stays 21" x 21"

How are stays secured Inside and Outside Nuts

Tube plates: Material front O.H. Steel back O.H. Steel Tensile strength 26/30 tons Thickness 31/32" 13/16"

Mean pitch of stay tubes in nests 10-5/8" x 9.4375 Pitch across wide water spaces 14 1/2"

Girders to combustion chamber tops: Material O.H. Steel Tensile strength 29/33 tons Depth and thickness of girder

at centre 2 @ 10 1/2" x 7/8" Length as per Rule 34" Distance apart 11" No. and pitch of stays

in each 3 @ 7-5/8" Combustion chamber plates: Material O.H. Steel

Tensile strength 26/30 tons Thickness: Sides 25/32" Back 23/32" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 10-3/16" x 9" Back 9" x 9" Top 11" x 7-5/8" Are stays fitted with nuts or riveted over Nutted

Front plate at bottom: Material O.H. Steel Tensile strength 26/30 tons

Thickness 31/32" Lower back plate: Material O.H. Steel Tensile strength 26/30 tons Thickness 29/32"

Pitch of stays at wide water space 11 3/4" x 9" Are stays fitted with nuts or riveted over Nutted

Main stays: Material O.H. Steel Tensile strength 28/32 tons

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

Screw stays: Material O.H. Steel Tensile strength 26/30 tons

Diameter At turned off part, - - or Over threads, 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 2" Over threads 2"

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain 3" Stay 3" Thickness { 8 SWG No. of threads per inch 9 5/16" & 3/8"

Pitch of tubes 10-5/8" x 8 1/4" 4 1/2 x 4 1/2 Manhole compensation: Size of opening in shell plate None Section of compensating ring --- No. of rivets and diameter of rivet holes ---

Outer row rivet pitch at ends --- Depth of flange if manhole flanged 1 1/2" in back end plate Steam Dome: Material None

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. Penna. Steel forgings The Superheater Co. Sherbrooke, P. Q. Steel castings " " " " " "

Number of elements 58 Material of tubes S.D. Steel Internal diameter and thickness of tubes .69" - .095"

Material of headers O.H. Steel Tensile strength 33.5 tons Thickness 1-1/8" min. 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 3.1416 sq. in. Are the safety valves fitted with easing gear No

Pressure to which the safety valves are adjusted 220 lbs. per sq. in. Hydraulic test pressure: tubes 1500 lbs. per sq. in. forgings and castings 700 lbs. per sq. in. and after assembly in place 400 lbs. per sq. in. 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
Wm. & Hall Manufacturer.

Dates of Survey { During progress of work in shops -- 16, 29 July, 4, 18 Aug. 2, 10, 29 Sept. 1, 7, 16, 22, 28 Oct. 3, 5, 7 Nov. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During erection on board vessel -- 13, 16, 17, 29 Dec. 1942-5, 14, 19, 23 Jan. 9, 13, 19, 27 Feb. 6, 11, 18, 24 Total No. of visits 39

April. 31 Mar. 7, 9, 13, 20, 21, 27, 30

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. S.S. "Fort Tadoussac" Montreal Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These BOILERS have been constructed under Special Survey, and in accordance with the Approved Plans. The materials and workmanship are good. They were tested hydrostatically @ 380 lbs. per square inch pressure, and found good. They have been properly installed, and the safety valves adjusted under steam @ 220 lbs. per square inch and washers noted.

NOTE: The longitudinal seams of the front and back end plates of these BOILERS have been welded by the Union Melt Process. For further particulars see Approved Plans and results of tests.

Fee to be chg'd in London

Survey Fee ... £ \$ 150.00 } When applied for, 19
Travelling Expenses (if any) £ : : } When received, 19
Exps. Inclusive

W. H. Riddell & H. G. Saunders.
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute FRI. 21 AUG 1942

Assigned See Int. J.E. 5645

