

Rpt. 5a.
1942, Rpt. 5a

REPORT ON BOILERS.

No. 5758

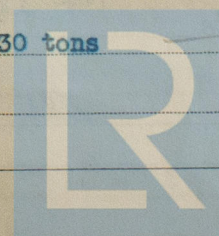
28 DEC 1942

Received at London Office

Date of writing Report Aug. 15th 19 42 When handed in at London Office Aug. 15th 19 42 Port of MONTREAL, QUE.
No. in Survey held at MONTREAL, QUE. Date, First Survey June 9th, 1942 Last Survey Nov. 19th 19 42
Reg. Book. Single Screw Steamer "FORT CONCORD" (Number of Visits 20 Quebec 29) Tons { Gross 7138.31
Net 4245.41
Built at LAUZON, LEVIS, P.Q. By whom built DAVIE SHIPBUILDING & REPAIRING COMPANY LTD. Yard No. 539 When built 1942
Engines made at Lachine, P. Q. By whom made Dominion Engineering Ltd. Engine No. 46 When made 1942
Boilers made at LACHINE, P.Q. By whom made DOMINION BRIDGE CO. LIMITED Boiler No. B968 C1 When made 1942
Nominal Horse Power 509 Owners Ministry of War Transport Port belonging to Montreal.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Bethlehem Steel, Steel Co. of Canada, Dominion Foundry and Steel - (Letter for Record S)
Total Heating Surface of Boilers 2380 square feet - x 3 = 7140 for 3 blrs Is forced draught fitted Yes Coal or Oil fired Coal
No. and Description of Boilers Three Single Ended Multitubular St 4070 Working Pressure 220 lbs. per sq. in.
Tested by hydraulic pressure to 380 Date of test 31-7-42 No. of Certificate C 4071 Can each boiler be worked separately Yes
Area of Firegrate in each boiler 51 sq. ft. No. and Description of Safety valves to each boiler One Double Spring Safety Valve -
Area of each set of valves per boiler { per Rule 8.87 sq. in. Pressure to which they are adjusted 220 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 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 diameter of boilers 14' - 6-3/16" Length 11' - 9" Shell plates: Material O. H. Steel Tensile strength 29-33 tons per sq. in.
Thickness 1-13/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end Double
inter - -
Long. seams Triple zig zag Diameter of rivet holes in { circ. seams 1 1/8" Pitch of rivets { 4-3/16"
long. seams 1 1/8" 10-1/16"
Percentage of strength of circ. end seams { plate 64.0% Percentage of strength of circ. intermediate seam { plate - -
rivets 47.0% rivets - -
plate 85.6% rivets - -
Percentage of strength of longitudinal joint { plate 92.9% combined 88.7%
Thickness of butt straps { outer 1-3/32" No. and Description of Furnaces in each Boiler 3 Morrison Corrugated -
inner 1-7/32" Material O H Steel Tensile strength 26-30 tons Smallest outside diameter 41 inches
Length of plain part { top - - Thickness of plates { crown 21/32" Description of longitudinal joint lap weld -
bottom - - bottom - -
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 Tensile strength { 26/30 tons Thickness { 31/32"
back O H Steel 13/16"
Mean pitch of stay tubes in nests 10-5/8" x 8 1/4" = 9.4375 Pitch across wide water spaces 14 1/4"
Girders to combustion chamber tops: Material O H Steel Tensile strength 29/33 tons Depth and Thickness of girder
at centre 2 @ 10 1/4" x 7/8" Length as per Rule 34 inches Distance apart 11 inches 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" No. of threads per inch 6
or - -
Over threads - -
Screw stays: Material O H Steel Tensile strength 26-30 tons
Diameter { At turned off part - - No. of threads per inch 9
or 1-3/4"
Over threads - -



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

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 4 1/2" in back end plate 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. Penn. 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 1.76 sq. ins. Are the safety valves fitted with easing gear -

Pressure to which the safety valves are adjusted 220 lbs. per sq. ins. 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
per A. Schall Manufacturer.

Dates { During progress of work in shops - - June 9, 11, 23, 24, 29, 30, July 2, 3, 4, 9, 10, 11, 13, 16, 20, 24, 30, 31, Aug. 3, 5
while building { During erection on board vessel - - May 27, 29, June 3, 11, 18, 26, July 1, 3, 10, 22, 24, Aug. 6, 12, 21, Sept. 2, 5, 10, 16 (2) 22, 29.
Oct. 3, 8, 16, 21, 28, Nov. 7, 14, 19.

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Montreal - 20.
Quebec - 29.

Total No. of visits

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. S.S. "FORT TADOUSSAC"
S.S. "PRINCE ALBERT PARK"

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.

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.

These BOILERS have been properly installed, and the safety valves adjusted under steam at 220 lbs. per square inch., and washers noted.

Survey Fee \$ 150.00

Travelling Expenses (if any) £ : - : included in Hull Rpt.

When applied for, Nov 28 1942

When received, 19

W. G. Pilditch & D. J. Walker
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 12 JAN 1943

Assigned

See Mch 26 5758



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