

Rpt. 5a.
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REPORT ON BOILERS.

Ind. Rpt.
No. 6933

1 OCT 1946

Sept. 6 46
Date of writing Report Jan. 4th, 19 46 When handed in at Local Office Jan. 3rd, 19 46 Port of Montreal, Que. & Quebec, Que.

No. in Survey held at Montreal, Que. & Lauzon, Que. Date, First Survey Aug. 20th, 1945 Last Survey 31st. August 1946
Reg. Book. Dec. 28th, 1945

on the S.S. "OTTAWA MAYHAVEN" (Number of Visits 28 & Constant attendance
Tons { Gross 337.94
Net 124.47

Built at Lauzon, Levis, By whom built Geo. T. Davie & Sons Yard No. 37 When built 1946
Que. Limited

Engines made at MONTREAL, QUE. By whom made CANADIAN VICKERS LTD. Engine No. 35100-8 When made 1946
B.1665/

Boilers made at LACHINE, Que. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. B.8 When made 1945

Nominal Horse Power 73 Owners DOMINION OF CANADA Port belonging to /

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

Manufacturers of Steel Steel Co. of Canada, Lukens, etc. (Letter for Record)

Total Heating Surface of Boilers 1331 square feet Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 1 - Single Ended Multitubular Working Pressure 200 lbs./sq.in

Tested by hydraulic pressure to 350 lbs. Date of test 27.12.45 No. of Certificate 4401 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler -- No. and Description of safety valves to each boiler Double spring loaded. 2 1/4" 21.9.46

Area of each set of valves per boiler { per Rule 3.87 7.7/10 ordinary valves
as fitted 2" dia. Pressure to which they are adjusted 200 lbs. 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 -- Is oil fuel carried in the double bottom under boilers --

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 11'-6-15/16" Length 7'-1/2" 10'6" Shell plates: Material O.H. Steel Tensile strength 29-33 tons

Thickness 1-1/32" Are the shell plates welded or flanged Riveted Description of riveting: circ. seams { end Double 22.4
inter --

Long. seams Treble 12 DBS Diameter of rivet holes in { circ. seams 1-1/8" Pitch of rivets { 3-1/4" 7-13/16" 1-1/8" ✓

Percentage of strength of circ. end seams { plate 65.0 Percentage of strength of circ. intermediate seam { plate --
rivets 54.1 rivets --

Percentage of strength of longitudinal joint { plate 85.6 Working pressure of shell by Rules 201.5 lbs./sq.in.
rivets 91.7 combined 89.5

Thickness of butt straps { outer 25/32" No. and Description of Furnaces in each Boiler 3 - Deighton Section Corrugated
inner 29/32" ✓

Material O.H. Steel Tensile strength 26-30 tons Smallest outside diameter 2'-9-3/4" ✓

Length of plain part { top -- Thickness of plates { crown 1/2" Description of longitudinal joint Lap Weld
bottom -- bottom 1/2" ✓

Dimensions of stiffening rings on furnace or c.c. bottom -- Working pressure of furnace by Rules 213.0 lbs./sq.in.

End plates in steam space: Material O.H. Steel Tensile strength 26-30 tons Thickness 1" Pitch of stays 15" x 15" ✓

How are stays secured Inside and Outside Nuts, Stays Welded to End Plates Working pressure by Rules 205 lbs./sq.in.

End plates: Material { front O.H. Steel Tensile strength 26-30 tons Thickness 1"
back O.H. Steel 26-30 tons 25/32" ✓

Span pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 14" Working Pressure { front 266
back 208

Ends to combustion chamber tops: Material O.H. Steel Tensile strength 26-30 29.33 by plan. Depth and thickness of girder

Centre 2 @ 9 1/2" x 15/16" Length as per Rule 2'-10" Distance apart 10" No. and pitch of stays

Each 3 @ 8 1/2" Working pressure by Rules 207 215 lb for 26 tons Steel 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 Ring Nuts

Pitch of stays to ditto: Sides 10" x 8 1/2" Back 10" x 8 1/2" Top 10" x 8 1/2" Are stays fitted with nuts or riveted over & Welded Over

Working pressure by Rules 212 Front plate at bottom: Material O.H. Steel Tensile strength 26-30 tons ✓

Thickness 1" Lower back plate: Material O.H. Steel Tensile strength 26-30 tons Thickness 1" ✓

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

Working pressure 266 lbs./sq.in. Main stays: Material O.H. Steel Tensile strength 28-32 tons ✓

At body of stay 2 1/2" No. of threads per inch 6 Area supported by each stay 15" x 15" - 225 sq.in.

Over threads -- Working pressure by Rules 238 lbs./sq.in. Screw stays: Material O.H. Steel Tensile strength 26-30 tons

At turned off part -- No. of threads per inch 9 Area supported by each stay 8 1/2" x 10" 2021

Over threads 1 3/4" and 2" ✓

Working pressure by Rules 213 lbs./sq. in. Are the stays drilled at the outer ends No Margin stays: Diameter 2"
No. of threads per inch 9 Area supported by each stay 10" x 11 1/2" Working pressure by Rules 215
Tubes: Material Steel External diameter { Plain 3" Thickness { 8 LSG No. of threads per inch 9
Stay 3" 5/16" & 3/8"
Pitch of tubes 4" x 4 1/4" Working pressure by Rules 250 Manhole compensation: Size of opening
shell plate 1 5/8" x 1 9/16" Section of compensating ring 10 1/4" x 1-1/16" No. of rivets and diameter of rivet holes 32 - 1-3/8"
Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 3-3/4" 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 pitch
of rivets in outer row in dome connection to shell --
Type of Superheater -- Manufacturers of { Tubes --
Steel forgings --
Steel castings --
Internal diameter and thickness of tubes --
Number of elements -- Material of tubes -- Thickness -- Can the superheater be shut off
Material of headers -- Tensile strength -- the boiler be worked separately --
Is a safety valve fitted to every part of the superheater which can be shut off from the boiler --
Area of each safety valve -- Are the safety valves fitted with easing gear -- Working pressure as
Rules -- Pressure to which the safety valves are adjusted -- Hydraulic test pressure
tubes -- forgings and castings -- and after assembly in place -- Are drain cocks
valves fitted to free the superheater from water where necessary --
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with --

The foregoing is a correct description,

DOMINION BRIDGE CO. LIMITED Manufactured by per AS Hall

Dates of Survey { During progress of work in shops -- } Aug. 20, 23, 27 Sept. 6, 12, 14, 18, 19, 25
while building { During erection on board vessel -- } Oct. 1, 4, 16, 23 Nov. 5, 9, 13, 14, 19, 21, 23, 28 Dec. 3, 6, 7, 11, 18, 27, 28.
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
2nd. December 1945 to 31st. August 1946 Total No. of visits CONTINUOUS.

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Montreal Report No. 6900

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 and material.

Each End Plate is made of two plates butt welded together by Union Melt Process and stress relief
The workmanship throughout was found to be good and on completion the BOILER was hydrostatically
tested to 350 lbs. per square inch with satisfactory results.

This Boiler has been satisfactorily fitted aboard this Vessel, and examined under Steam.
The Safety Valves have been adjusted under steam, tested for accumulation and thickness of
washers noted.

This Vessel is eligible in my opinion for a record of L.M.C. 8,46.

Survey Fee 100.00
Travelling Expenses (if any) charged in
Eng. Rpt.

When applied for Sept 18 1946
When received 19

T. J. Morris D. Hall
Engineer-Surveyor to Lloyd's Register of Shipping

Committee's Minute 21 MAR 1947

Assigned See F.E. mch. rpt.



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Foundation