

Rpt. 5a.

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# REPORT ON BOILERS.

med. Rpt.  
No. 6906

Received at London Office 12 SEP 1946

Date of writing Report 20th. August 1946 Dec. 18th, 19 45 When handed in at Local Office 21st. August 1946 Dec. 18th, 19 45 Port of Montreal, Que. & Quebec, Que.

No. in Reg. Book Survey held at Montreal, Que. & Quebec, Que. Date, First Survey July 25th, 1945 Last Survey Nov. 21st, 45

(Number of Visits 25 (Cont. attendance)  
Tons { Gross 337.94  
Net 124.47

on the S.S. "OTTAWA MAYCLIFF"  
Built at Quebec, Que. By whom built Morton Engineering & Yard No. 66 When built 1946  
Dry Dock Co. Limited  
Engines made at MONTREAL By whom made CANADIAN VICKERS LIMITED Engine No. 35100-9 When made 1945  
B.1665/  
Boilers made at LACHINE, Que. By whom made DOMINION BRIDGE COMPANY LIMITED Boiler No. B.2 When made 1945  
Nominal Horse Power 73 Owners DOMINION OF CANADA Port belonging to -

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

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

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 19.11.45 No. of Certificate 4387 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" I.H.L. 21.9.46

Area of each set of valves per boiler { per Rule -3.87 7.7 for advance Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes  
as fitted 2" dia. 6.78 D" per 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 - 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" Shell plates: Material O.H. Steel Tensile strength 29-33 tons

Are the shell plates welded or flanged Riveted Description of riveting: circ. seams { end Double  
inter -

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

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

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 & Outside Nuts, Stays welded to end Working pressure by Rules 205 lbs./sq.in.

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

Mean pitch of stay tubes in nests 10 1/2" Pitch across wide water spaces 14" Working Pressure { front 266  
back 208

Girders to combustion chamber tops: Material O.H. Steel Tensile strength 26-30 29/33 in 29.733 in Depth and thickness of girder

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

in each 3 @ 8 1/2" Working pressure by Rules 207 215 for 26 ton 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"

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 Ring Nuts & 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"

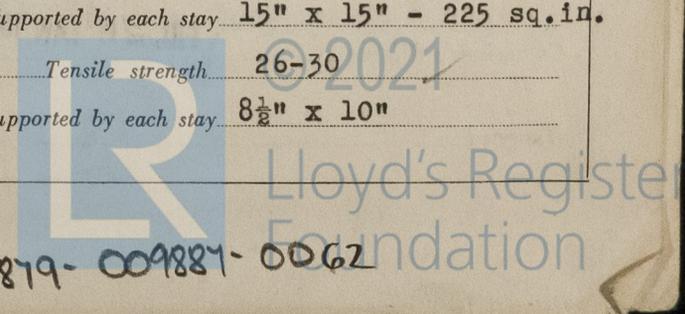
Pitch of stays at wide water space 14 1/2" x 10" Are stays fitted with nuts or riveted over Welded Ring Nuts & Welded Over

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

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

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

Diameter { At turned off part - No. of threads per inch 9 Area supported by each stay 8 1/2" x 10"  
or  
Over threads 1 3/4" & 2"



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Working pressure by Rules 213 lbs./sq. in. Are the stays drilled at the outer ends NO Margin stays: Diameter 2" Returned off part or Over threads

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" Stay 3" Thickness { 8 LSG 5/16" & 3/8" No. of threads per inch 9

Pitch of tubes 4" x 4 1/4" Working pressure by Rules 250 Manhole compensation: Size of opening in shell plate 1'-5-1/8" x 1'-9-1/8" Section of compensating ring 10 1/2" 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 of stays --

How connected to shell -- Inner radius of crown -- Working pressure by Rules --

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 --

Number of elements -- Material of tubes -- Internal diameter and thickness of tubes --

Material of headers -- Tensile strength -- Thickness -- Can the superheater be shut off and 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 per Rules --

Pressure to which the safety valves are adjusted -- Hydraulic test pressure: tubes -- forgings and castings -- and after assembly in place -- Are drain cocks or 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 -- JLB

The foregoing is a correct description,  
**DOMINION BRIDGE CO. LIMITED** Manufacturer.  
*per A. Hall*

Dates of Survey { During progress of work in shops - - July 25, 31 Aug. 1, 6, 9, 13, 20, 23, 27 Sept. 6, 12, 14, 18, 19, 25 Oct. 1, 4, Are the approved plans of boiler and superheater forwarded herewith (if not state date of approval.)  
16, 23, Nov. 5, 9, 13, 14, 19, 21.  
 { During erection on board vessel - - } 14th. December 1945 to 29th. June 1946 Total No. of visits 25  
 Constant attendance

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 relieved  
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. 6,46.

Survey Fee 100<sup>00</sup> } When applied for Aug 29 1946  
 Travelling Expenses (if any) -- } When received 19

T. J. Morris & S. J. Falkner  
 Engineer Surveyor to Lloyd's Register of Shipping.

**FRI. 16 JAN 1948**

Committee's Minute.....

Assigned.....



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