

# REPORT ON BOILERS.

No. 46750

Received at London Office 15 JUN 1927

of writing Report

192

When handed in at Local Office

10.6.1927

Port of Glasgow

in Survey held at

Glasgow

Date, First Survey

20th April 1926

Last Survey

7 June 1927

on the

Boiler for T.S.S. "EXPRESS OF AUSTRALIA"

(Number of Visits

191)

Tons

Gross 21861

Net 12292

Built at

Stettin

By whom built

Vulcanwerk A.G.

Yard No.

When built 1914

es made at

Glasgow

By whom made

The Fairfield S.B. &amp; E.C. Co.

Engine No. 623

When made 1927.

of made at

Glasgow

By whom made

The Fairfield S.B. &amp; E.C. Co.

Boiler No. 623

When made 1927

al Horse Power

Owners

Canadian Pacific Ry. Co.

Port belonging to London.

## LTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

shut off

facturers of Steel

W. Brammore &amp; Co. Ltd.

(Letter for Record 7. ✓)

Heating Surface of Boilers

3059 sq. ft. ✓

Is forced draught fitted

Gas ✓

Coal or Oil fired

Oil ✓

and Description of Boilers

One Cyl. Mult. Single Ended ✓

Working Pressure 220 lb. ✓

by hydraulic pressure to

380 lb. ✓

Date of test

16.3.27

No. of Certificate

17335

Can each boiler be worked separately

Gas ✓

of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 Corkburns Improved High Lift ✓

of each set of valves per boiler

per Rule

9.75 lb. ✓

as fitted

9.81 lb. ✓

Pressure to which they are adjusted

220 lb. ✓

Are they fitted with easing gear

Gas ✓

of donkey boilers, state whether steam from main boilers can enter the donkey boiler

least distance between boilers or uptakes and bunkers or woodwork

Wm. ✓

Is oil fuel carried in the double bottom under boilers

No ✓

least distance between shell of boiler and tank top plating

20" ✓

Is the bottom of the boiler insulated

Gas ✓

least internal dia. of boilers

17'-3" ✓

Length

12'-0" ✓

Shell plates: Material

S. ✓

Tensile strength

30/34 T. ✓

Are the shell plates welded or flanged

No ✓

Description of riveting: circ. seams

end 4.2 R. ✓

seams

D.B.S./T.R. ✓

Diameter of rivet holes in

circ. seams

15/8" ✓

long. seams

15/8" ✓

Pitch of rivets

4.49" ✓

centage of strength of circ. end seams

plate

63.7 ✓

rivets

44.1 ✓

Percentage of strength of circ. intermediate seam

plate

✓

centage of strength of longitudinal joint

plate

85.0 ✓

rivets

85.2 ✓

combined

87.2 ✓

Working pressure of shell by Rules

221 lb. ✓

ness of butt straps

outer

17/32" ✓

inner

11/32" ✓

No. and Description of Furnaces in each Boiler

4 Dighton ✓

Tensile strength

26/30 T. ✓

Smallest outside diameter

44 1/32" ✓

h of plain part

top

✓

bottom

✓

Thickness of plates

crown

43/64" ✓

bottom

✓

Description of longitudinal joint

Weld ✓

visions of stiffening rings on furnace or c.c. bottom

None ✓

Working pressure of furnace by Rules

222 lb. ✓

plates in steam space: Material

S. ✓

Tensile strength

26/30 T. ✓

Thickness

19/32" ✓

Pitch of stays

19/4 x 1/8" ✓

are stays secured

D.N. ✓

Working pressure by Rules

221 lb. ✓

plates: Material

front

S. ✓

back

S. ✓

Tensile strength

26/30 T. ✓

Thickness

29/32" ✓

pitch of stay tubes in nests

10' x 8" ✓

Pitch across wide water spaces

13 3/4" ✓

Working pressure

front 223 lb. ✓

back 294 lb. ✓

ers to combustion chamber tops: Material

S. ✓

Tensile strength

28/32 T. ✓

Depth and thickness of girder

tre

10 1/4' x 15/8" ✓

Length as per Rule

33 9/16" ✓

Distance apart

10" ✓

No. and pitch of stays

h

3 @ 7" ✓

Working pressure by Rules

228 lb. ✓

Combustion chamber plates: Material

S. ✓

e strength

26/30 T. ✓

Thickness: Sides

11/16" ✓

Back

11/16" ✓

Top

11/16" ✓

Bottom

13/16" ✓

of stays to ditto: Sides

8 7/8' x 8 3/8" ✓

Back

9 7/8' x 7" ✓

Top

10' x 7" ✓

Are stays fitted with nuts or riveted over

Nuts ✓

ing pressure by Rules

222 lb. ✓

Front plate at bottom: Material

S. ✓

Tensile strength

26/30 T. ✓

ness

29/32" ✓

Lower back plate: Material

S. ✓

Tensile strength

26/30 T. ✓

Thickness

27/32" ✓

of stays at wide water space

14' x 7" ✓

Are stays fitted with nuts or riveted over

Nuts ✓

Tensile strength

28/32 T. ✓

Shipping Pressure

237 lb. ✓

Main stays: Material

S. ✓

Area supported by each stay

304 sq. ft. ✓

ter

At body of stay,

27/8" ✓

No. of threads per inch

6 ✓

Area supported by each stay

304 sq. ft. ✓

ter

Over threads

3/8" ✓

Screw stays: Material

I. ✓

Tensile strength

72.15 lb. ✓

ing pressure by Rules

235 lb. ✓

No. of threads per inch

9 ✓

Area supported by each stay

72.15 sq. ft. ✓

ter

At turned off part,

15/8" ✓

No. of threads per inch

9 ✓

Area supported by each stay

72.15 sq. ft. ✓

ter

Over threads

15/8" ✓

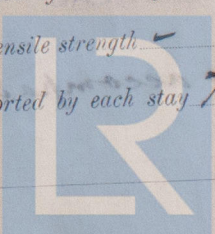
No. of threads per inch

9 ✓

Area supported by each stay

72.15 sq. ft. ✓

5910-9801M



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Working pressure by Rules **220 u** Are the stays drilled at the outer ends **no** Margin stays: Diameter <sup>At turned off part.</sup> **1 3/4** ✓  
No. of threads per inch **9** ✓ Area supported by each stay **83.76** ✓  
Tubes: Material **I** ✓ External diameter <sup>Plain</sup> **2 3/4** ✓ <sup>Stay</sup> **2 3/4** ✓ Thickness <sup>8.49</sup> **1/4** ✓ **5/16** ✓ **3/8** ✓ No. of threads per inch **9** ✓  
Pitch of tubes **4" x 4"** ✓ Working pressure by Rules **282 u** Manhole compensation: Size of opening **40 - 1 7/8** ✓  
shell plate **20 1/2" x 16 1/2"** ✓ Section of compensating ring **18 1/4" x 1 3/4"** ✓ rivets and diameter of rivet holes **40 - 1 7/8** ✓  
Outer row rivet pitch at ends **10 7/8"** ✓ Depth of flange if manhole flanged **4 7/16"** ✓  
Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint ✓  
Diameter of rivet holes ✓ Pitch of rivets ✓ Percentage of strength of joint <sup>Plate</sup> ✓ <sup>Rivets</sup> ✓  
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 ✓  
of rivets in outer row in dome connection to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes and

Type of Superheater **See how with Rpt. C6738** ✓ Manufacturers of <sup>Tubes</sup> ✓ <sup>Steel castings</sup> ✓  
Number of elements **82** ✓ Material of tubes ✓ Internal diameter and thickness of tubes ✓  
Material of headers ✓ Tensile strength ✓ Thickness ✓ Can the superheater be shut off  
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 **3.976** ✓ Are the safety valves fitted with easing gear **yes** ✓ Working pressure a  
Rules ✓ Pressure to which the safety valves are adjusted **220 lb** ✓ Hydraulic test press  
tubes ✓ castings ✓ and after assembly in place ✓ Are drain cocks or valves  
to free the superheater from water where necessary **yes** ✓  
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with **yes** ✓

The foregoing is a correct description.  
**THE FAIRFIELD SHIPBUILDING AND  
ENGINEERING CO., LIMITED** Manufact

Dates of Survey <sup>During progress of work in shops - -</sup> **See accompanying**  
<sup>while building</sup> <sup>During erection on board vessel - - -</sup> **Machinery report**

Are the approved plans of boiler and superheater forwarded herewith **yes** ✓  
(If not state date of approval.)  
Total No. of visits **191**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been constructed under special survey in accordance with the Rules. It has now been fitted to the above vessel.**

Survey Fee ... £ - : : When applied for, 192  
Travelling Expenses (if any) £ - : : When received, 192

**W. Lane**

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 14 JUN 1927**

**FRI. 24 JUN 1927  
FRI. 29 JUL 1927**

Assigned **See accompanying report RPT**



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