

REPORT ON BOILERS.

No. 46801

7 JUL 1926

Received at London Office

Date of writing Report

192

When handed in at Local Office

5-2-1926

1926

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

5-5-26

Last Survey

1-7-

1926

Reg. Book.

on the *Twin & Double Ended Ferry Steamer* "IMBUHY"

(Number of Visits 6)

Tons

Gross 480.29

Net 216.13

Master

Built at Southampton

By whom built J. J. Thornycroft

Yard No. 1060

When built 1926

Engines made at

Southampton

By whom made

J. J. Thornycroft & Co Ltd

Engine No. 1060

When made 1926

Boilers made at

Glasgow

By whom made

D & W Henderson & Co Ltd

Boilers No. 850

When made 1926

Nominal Horse Power

127

Owners

Companhia Cantanira Viscoo Aluminea

Port belonging to

Rio de Janeiro

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David White & Sons Ltd

(Letter for Record 5)

Total Heating Surface of Boilers

2412 sq ft

Is forced draught fitted no

Coal or Oil fired Coal

No. and Description of Boilers

Three single ended marine

Working Pressure 150

Tested by hydraulic pressure to

275

Date of test

24-6-26

No. of Certificate

17158

Can each boiler be worked separately

Area of Firegrate in each Boiler

34.9

No. and Description of safety valves to each boiler

Cockburn High Lift

Area of each set of valves per boiler

4.8

Pressure to which they are adjusted

150 lb

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

10"

Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating

No tank under boiler

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

9'-6"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

45" / 64"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end WR

Long. seams

WBS, TR

Diameter of rivet holes in

circ. seams 15" / 16"

long. seams 15" / 16"

Pitch of rivets

3.4"

5 3/8"

Percentage of strength of circ. end seams

plate 72.5

rivets 47.5

Percentage of strength of circ. intermediate seam

plate 82.5

rivets 112

Percentage of strength of longitudinal joint

plate 82.5

rivets 112

combined 93

Working pressure of shell by Rules

151

Thickness of butt straps

outer 11" / 16"

inner 11" / 16"

No. and Description of Furnaces in each Boiler

Two Mouson corrugated

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

35.875

Length of plain part

top / bottom

Thickness of plates

crown 7 1/16"

bottom 7 1/16"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

173

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

27" / 32"

Pitch of stays

back 14 1/2" x 17"

front 16 1/2" x 12 1/2"

How are stays secured

front DN, Back DN&W

Working pressure by Rules

150

Tube plates: Material

front steel

back "

Tensile strength

26-30 tons

Thickness

27" / 32"

11" / 16"

Lean pitch of stay tubes in nests

10.31"

Pitch across wide water spaces

13 1/2"

Working pressure

front 194

back 162

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

At centre

2 @ 7" x 5"

Length as per Rule

27.92

Distance apart

8 1/2"

No. and pitch of stays

At each

2 @ 9 1/2"

Working pressure by Rules

169

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

5/8"

Back

1 1/8"

Top

5/8"

Bottom

5/8"

Pitch of stays to ditto: Sides

9 1/2" x 8 1/2"

Back

8 1/2" x 9"

Top

9 1/2" x 8 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

158

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

27" / 32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

27" / 32"

Pitch of stays at wide water space

14" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

217

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay or Over threads

2 3/4"

No. of threads per inch

6

Area supported by each stay

206 sq"

Working pressure by Rules

182

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part or Over threads

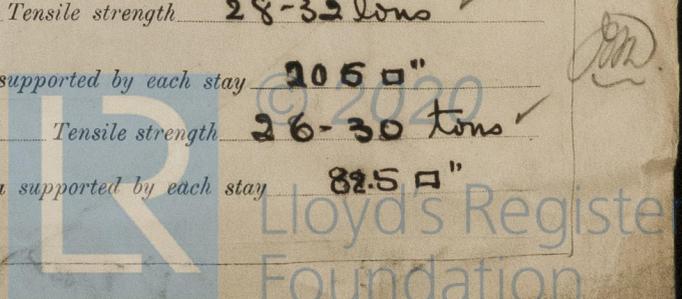
1 1/2"

No. of threads per inch

9

Area supported by each stay

82.5 sq"



Working pressure by Rules 151 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 5/8" or Over threads }
 No. of threads per inch 9 Area supported by each stay 97.80" Working pressure by Rules 155
 Tubes: Material Iron External diameter { Plain 3" Stay 3" Thickness { 9 L.S.G. 5/16" 3/8" No. of threads per inch 9
 Pitch of tubes 4 1/8" x 4 1/8" Working pressure by Rules 190 Manhole compensation: Size of opening in end plate 16 x 12" Section of compensating ring flanges 3 3/16" No. of rivets and diameter of rivet holes ✓
 Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged ✓ 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 ✓ Working pressure by Rules ✓ Thickness of crown ✓ No. and diameter of 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 none Manufacturers of { Tubes 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 ✓, 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 23 inclusive for boilers been complied with ✓

The foregoing is a correct description,
 For DAVID & W. HENDERSON & CO. Manufacturer.
 J. P. Paterson

Dates of Survey { During progress of work in shops - - } 1926 May 5-19 June 15-21-26 Are the approved plans of boiler and superheater forwarded herewith yes
 { During erection on board vessel - - - } July 1 Sept 15-20 29 Oct 12 Nov 3-17 Dec 2-3 Total No. of visits 6 8

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

The materials and workmanship are good.
 The boiler has been constructed under Special Survey, in accordance with the Rules.
 The boilers have been installed in the vessel in accordance with the requirements of the Rules and their safety valves adjusted under steam to 150 lbs. ✓

a.b.
5/7/26.

Survey Fee £ 16 : 2 : ✓
 Travelling Expenses (if any) £ : : ✓
 When applied for, 3.7.26
 When received, 5.8.26

S. C. Davis.
 Engineer Surveyor to Lloyd's Register of Shipping.
 TUES. 14 DEC 1926

Committee's Minute GLASGOW 6 - JUL 1926

Assigned TRANSMIT TO LONDON

