

REPORT ON BOILERS.

No. 44830

Received at London Office

-5 AUG 1925

Date of writing Report

192

When handed in at Local Office

28.7.1925

Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

13.3.24

Last Survey

27-7-

1925

(Number of Visits)

Tons

Gross 8684

Net 5426

on the

new M/V "LIMERICK"

Master

Built at Port Glasgow

By whom built William Hamilton & Co. Ltd.

Yard No. 389

When built 1925

Engines made at

Glasgow

By whom made

John Brown & Co. Ltd.

Engine No. 501

When made 1925

Boilers made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Boiler No. 788

When made 1925

Nominal Horse Power

1495

Owners

Union S.S. Co. of New Zealand

Port belonging to

London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY. *Constructed under the Old Rules*

Manufacturers of Steel

Wm Beardmore & Co. Ltd.

(Letter for Record (S))

Total Heating Surface of Boilers

6776 sq ft

Is forced draught fitted

no

Coal or Oil fired

oil

No. and Description of Boilers

Two single ended marine

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

16-2-25

No. of Certificate

16729

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two, direct spring

Area of each set of valves per boiler

per Rule Old Rules

as fitted

19.24 sq ft

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

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

yes

Smallest distance between boilers

on uptakes and bunkers

21"

Is oil fuel carried in the double bottom under boilers

yes

Smallest distance between shell of boiler and tank top plating

2'-7"

Is the bottom of the boiler insulated

yes

Mean internal dia. of boilers

17'-6"

Length

12'-0"

Shell plates: Material

Steel

Tensile strength

30-34 tons

Thickness

1 1/4" & 1 5/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR

long. seams

1 5/16" back & centre

116 from

Pitch of rivets

9.3125

Tensile strength

30-34 tons

Back 3.75

long. seams

DRBS, TR

Diameter of rivet holes in

circ. seams

1 5/16"

long. seams

1 3/8"

Percentage of strength of circ. end seams

plate

Front 63. Back 65

Percentage of strength of circ. intermediate seam

plate

65

rivets

47.2

Percentage of strength of longitudinal joint

plate

85.23

rivets

90.3

combined

88.5

Working pressure of shell by Rules

180

Thickness of butt straps

outer 1"

inner 1 3/16"

No. and Description of Furnaces in each Boiler

Four Deighton

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-7 3/8"

Length of plain part

top

bottom

Thickness of plates

crown 3 3/4"

bottom 3 1/4"

Description of longitudinal joint

welded

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

none

Working pressure of furnace by Rules

211

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 9/32"

Pitch of stays

18 3/4" x 21 1/2"

How are stays secured

D.N.

Working pressure by Rules

181

Tube plates: Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

3 1/2"

2 5/8"

Working pressure

front 183

back 187

Mean pitch of stay tubes in nests

10.8

Pitch across wide water spaces

14"

Tensile strength

26-30 tons

Depth and thickness of girder

Girders to combustion chamber tops: Material

Steel

Tensile strength

26-30 tons

No. and pitch of stays

at centre

2 @ 9 3/4" x 13/16"

Length as per Rule

34 19/32"

Distance apart

9 3/8"

in each

3 @ 8 3/4"

Working pressure by Rules

196

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

2 1/2"

Back

5/8"

Top

3/2"

Bottom

1 3/16"

Pitch of stays to ditto: Sides

8 3/4" x 9 3/8"

Back

8 1/4" x 8 3/8"

Top

8 3/4" x 9 3/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

180

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1 3/16"

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

1 3/16"

Pitch of stays at wide water space

13 1/4" x 8 7/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

180

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay, or Over threads

3" & 2 3/4"

No. of threads per inch

6

Area supported by each stay

4090" & 3450"

Working pressure by Rules

180 & 180

Screw stays: Material

Steel

Tensile strength

26-30

Diameter

At turned off part, or Over threads

1 3/4"

No. of threads per inch

10

Area supported by each stay

820"

W1197-0030

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Working pressure by Rules 227 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 7/8"
No. of threads per inch 10 Area supported by each stay 92 sq" Working pressure by Rules 232
Tubes: Material W. Iron External diameter { Plain 3" Thickness { 8 w.s. No. of threads per inch 9
Stay 3" 5/16" 3/8"
Pitch of tubes 4 3/8" x 4 1/4" Working pressure by Rules 250 Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" Section of compensating ring 7 3/4" x 1 5/16" flange No. of rivets and diameter of rivet holes 34 @ 1 3/8"
Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 3" 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 yes

The foregoing is a correct description,
for David Rowan & Co. Ld.
Arch. W. Grierson. Manufacturer.

Dates of Survey { During progress of work in shops - - - See accompanying Machinery Report.
while building { During erection on board vessel - - -
Are the approved plans of boiler and superheater forwarded herewith yes
(If not state date of approval.)
Total No. of visits ✓

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

The workmanship and materials are good.
The boilers have been constructed under special survey in accordance with the Rules. satisfactorily fitted in the vessel and their safety valves adjusted under steam.

Survey Fee ... £ 35 : 2 : When applied for, 4/8 192 5.
Travelling Expenses (if any) £ : : When received, 192 5

L. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See accompanying machinery report.

GLASGOW

4-AUG 1925



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