

REPORT ON BOILERS.

No. 85338

18 FEB 1930

Received at London Office

Date of writing Report

1930

When handed in at Local Office

12.2.

1930

Port of

NEWCASTLE-ON-TYNE

No. in
q. Book.

St. Peter's + Hebburn.

Date, First Survey

20 Aug/29

Last Survey

12 Feb

1930

on the

Two single ended boilers for the S. S. "WAINUI"

(Number of Visits)

Gross

Tons

Net

aster

Built at Hebburn

By whom built R. W. Hawthorn

Leslie No.

Yard No. 669

When built 1930.

engines made at

St. Peter's

By whom made R. W. Hawthorn Leslie No. 2

Engine No. 3462

When made 1930.

boilers made at

do

By whom made

do

Boiler No. 3462

When made 1930.

Nominal Horse Power

289.6.

Owners The Union Steamship Co. of

Port belonging to

Wellington

New Zealand.

N. Z.

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY. Two cylindrical.

Manufacturers of Steel

D. Colville & Son

(Letter for Record S.)

Total Heating Surface of Boilers

4542 sq

Is forced draught fitted

yes

Coal or Oil fired

oil

No. and Description of Boilers

Two cylindrical

258

Working Pressure 200 lbs

Tested by hydraulic pressure to

350 lbs

Date of test

28.10.29.

No. of Certificate

399

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

9 sq.

No. and Description of safety valves to each boiler

2 Spring loaded.

Area of each set of valves per boiler

per Rule 16.21"

as fitted 16.59"

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

yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-3"

Is oil fuel carried in the double bottom under boilers

yes.

Smallest distance between shell of boiler and tank top plating

16"

Is the bottom of the boiler insulated

yes.

Largest internal dia. of boilers

14'-3"

Length

11'-8"

Shell plates: Material

Steel

Tensile strength

28/32 tons

Thickness

1 5/16"

Are the shell plates welded or flanged

yes

Description of riveting: circ. seams

end

D. Lap.

Long. seams

S. R. D. B. S.

Diameter of rivet holes in

circ. seams

1 3/8"

Pitch of rivets

3 7/8"

Percentage of strength of circ. end seams

plate

64.5

rivets

48.

Percentage of strength of circ. intermediate seam

plate

90.

Percentage of strength of longitudinal joint

plate

85.3.

rivets

92.6

combined

89.1

Working pressure of shell by Rules

200 lbs

Thickness of butt straps

outer

1 1/8"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 Deighton.

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

3'-4 5/8"

Length of plain part

top

-

bottom

Thickness of plates

crown

9 1/16"

bottom

Description of longitudinal joint

Weld.

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

yes

Working pressure of furnace by Rules

200 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 1/32"

Pitch of stays

23.5 x 14"

How are stays secured

Double nuts

Working pressure by Rules

201 lbs

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30 tons.

Thickness

1 3/16"

Mean pitch of stay tubes in nests

9"

Pitch across wide water spaces

13 3/4"

Working pressure

front

240 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

Double 10 x 7/8"

Length as per Rule

29"

Distance apart

9 3/8"

No. and pitch of stays

in each

3 @ 8 3/4"

Working pressure by Rules

204 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

1 1/16"

Back

5 7/8"

Top

1 1/16"

Bottom

4/8"

Pitch of stays to ditto: Sides

8 x 9 3/8"

Back

8 x 9 3/8"

Are stays fitted with nuts or riveted over

yes

Working pressure by Rules

201 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons.

Thickness

1 1/32"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

4/8"

Pitch of stays at wide water space

15" x 4 7/8"

Are stays fitted with nuts or riveted over

yes.

Working Pressure

204 lbs per sq

Main stays: Material

Steel

Tensile strength

28/32 tons.

Diameter

At body of stay,

or

Over threads

3 1/4"

No. of threads per inch

6

Area supported by each stay

399.5 sq

Working pressure by Rules

201 lbs

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

45 sq

Lloyd's Register

Foundation

002418-002426-0226

PILLARS
Centre
Stiffen
Plating
STRINGER
Upper
Stringer
Thick
in v
Thick
in v
Thick
If Sh
Second
Stringer
STR
FLAT PL
BOTTOM I
of Strake
BILGE PL
Strake
SIDE PL
Strake
UPPER I
strake
UPPER I
strake
STRAKE
strake
STRAKE
strake
POOP SID
BRIDGE S
FOREC'TL
Total N
MIDSI
COLLI
AFTER
STEE

Working pressure by Rules 202 lbs Are the stays drilled at the outer ends 9/10 Margin stays: Diameter { At turned off part, 1 1/8" or Over threads 2 1/8" Working pressure by Rules 225 lbs

No. of threads per inch 9 Area supported by each stay 94.5 sq in

Tubes: Material Iron External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 9 w. a. 3/8" 5/16" No. of threads per inch 9

Pitch of tubes 4" x 4" Working pressure by Rules 210 lbs

Manhole compensation: Size of opening shell plate 14" x 13" Section of compensating ring 9 1/2" x 14 1/8" No. of rivets and diameter of rivet holes 30 @ 1 9/16"

Outer row rivet pitch at ends 10 3/8" Depth of flange if manhole flanged None Steam Dome: Material Iron

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

Number of elements Material of tubes Manufacturers of { Tubes Steel castings Internal diameter and thickness of tubes

Material of headers Tensile strength Thickness Can the superheater be shut off from the boiler

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 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

The foregoing is a correct description,
-6 FEB. 1930
Manufactured by

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

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

These boilers have been built under special survey in accordance with the approved plans & the rules of the Society.

They have been securely fitted on board the vessel and their safety valves adjusted under steam to working pressure.

The workmanship & materials are of good quality throughout.

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

Committee's Minute FRI. 21 FEB 1930
Assigned Sec F.E. Rpt.
Fred. A. Ferguson
Engineer Surveyor to Lloyd's Register of Shipping.