

REPORT ON BOILERS.

No. 84420

Received at London Office

-4 JUL 1929

Date of writing Report

192

When handed in at Local Office

25/6/1929

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at Reg. Book.

Wallsend-on-Tyne

Date, First Survey

3-7 Jan

Last Survey

24 June 1929

on the

New Steel S.S. Yowberry Tower

(Number of Visits)

Gross 4484
Tons Net 2756

Master

Built at

Newcastle

By whom built

Hawthorne Leslie & Co

Yard No.

When built

Engines made at

Wallsend

By whom made

North Eastern Marine & Eng. Co. Ltd

Engine No.

When made

Boilers made at

Wallsend

By whom made

North Eastern Marine & Eng. Co. Ltd

Boiler No.

When made

Nominal Horse Power

426

Owners

The Milburn & Co. Ltd

Port belonging to

Newcastle

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

Manufacturers of Steel

Steel Company of Scotland Ltd & D. Chalmers & Sons Ltd.

(Letter for Record

S.

Total Heating Surface of Boilers

3500

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

Three Single Ended.

3 S.B.

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

19-4-29

No. of Certificate

345

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

632

No. and Description of safety valves to each boiler

Yupp spring loaded

Area of each set of valves per boiler

per Rule

15.4

Pressure to which they are adjusted

185 lbs

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

3'-0"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2'-5"

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

15'-6"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

28 to 32

Thickness

1 1/8"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

D.R

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/2"

Pitch of rivets

9"

Percentage of strength of circ. end seams

plate

64.8

rivets

43.45

Percentage of strength of circ. intermediate seam

plate

85.4

rivets

Percentage of strength of longitudinal joint

plate

91.0

rivets

89.0

Working pressure of shell by Rules

180.4 lbs.

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 Corrugated Dighton

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3'-8 3/8"

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

none

Working pressure of furnace by Rules

184 lbs.

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/8"

Pitch of stays

1-1/4" x 2-1/4"

How are stays secured

Double nuts

Working pressure by Rules

180.1 lbs.

Tube plates: Material

front

steel

back

✓

Tensile strength

26 to 30 tons

Thickness

1 1/16"

3/4"

Mean pitch of stay tubes in nests

11 1/4" x 9"

Pitch across wide water spaces

14 1/2" x 9"

Working pressure

front 182 lbs.

back 248 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

at centre

2 @ 9 1/2" x 3 1/4"

Length as per Rule

2'-9"

Distance apart

11 1/2"

No. and pitch of stays

in each

2 @ 10"

Working pressure by Rules

184 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

15/16"

Pitch of stays to ditto: Sides

11 1/2" x 10"

Back

10 1/2" x 9 1/2"

Top

11 1/2" x 10"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181 lbs

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/8"

Pitch of stays at wide water space

14 1/2" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

208 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay,

3 3/8"

or

3 1/4"

Over threads

No. of threads per inch

6

Area supported by each stay

28" x 19 3/4"

Working pressure by Rules

195 lbs

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part,

1 3/4"

or

1 1/2"

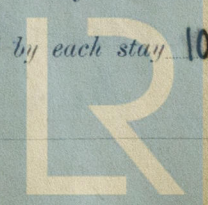
Over threads

No. of threads per inch

9

Area supported by each stay

10 1/2" x 9 1/2" & 11 1/2" x 10"



Lloyd's Register

Foundation

W 38-0074

Working pressure by Rules 185+182 lbs Are the stays drilled at the outer ends ho Margin stays: Diameter { At turned off part, 2" or Over threads 187 lbs

No. of threads per inch 9 Area supported by each stay 13 3/4 sq in Working pressure by Rules 187 lbs

Tubes: Material Steel External diameter { Plain 3 1/4" Thickness { 8 L.S.G. No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 192 lbs Manhole compensation: Size of opening 4 1/2"

Shell plate 16" x 12" Section of compensating ring flanged No. of rivets and diameter of rivet holes 4 1/2"

Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 4 1/2" Steam Dome: Material none

Tensile strength 800 Thickness of shell 3/16" Description of longitudinal joint butt

Diameter of rivet holes 4 1/2" Pitch of rivets 4 1/2" Percentage of strength of joint { Plate 80% Rivets 80%

Internal diameter 40 1/2" Working pressure by Rules 192 lbs Thickness of crown 3/16" No. and diameter of stays 40 1/2"

How connected to shell by stays Inner radius of crown 4 1/2" Working pressure by Rules 192 lbs

Size of doubling plate under dome 4 1/2" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 4 1/2"

Type of Superheater one Manufacturers of { Tubes one Steel castings one

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

Material of headers one Tensile strength one Thickness one Can the superheater be shut off and the boiler be worked separately one

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler one

Area of each safety valve one Are the safety valves fitted with easing gear one Working pressure as per Rules one

Pressure to which the safety valves are adjusted one Hydraulic test pressure one

tubes one and after assembly in place one Are drain cocks or valves fitted to free the superheater from water where necessary one

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description,

W. J. P. Smith Manufacturer

Dates of Survey { During progress of work in shops - - } while building { During erection on board vessel - - }

See Index Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes

Total No. of visits one

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

These boilers have been built under Special Survey. Materials & Workmanship good. Hydraulic tests satisfactory. They have been efficiently installed & fixed in the vessel examined under steam & safety valves adjusted.

Survey Fee £ 100 When applied for 192

Travelling Expenses (if any) £ 100 When received 192

William P. Smith

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 9 JUL 1929

Assigned see minute on p
RWC. RPL 84420



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