

## REPORT ON BOILERS.

No. 79788

Date of writing Report

Jan 4<sup>th</sup>

1925

When handed in at Local Office

Jan 4<sup>th</sup>

1925

Port of

Received at London Office

13 NOV 1925

NEWCASTLE-ON-TYNE,

No. in  
Reg. Book

Survey held at

Newcastle-on-Tyne

Date, First Survey

April 3<sup>rd</sup>

Last Survey

4<sup>th</sup> Nov

1925

38872 on the

S.S. "EASTVILLE"

(Number of Visits —)

Gross 3709.34  
Net 2282.18

Master

Built at South Shields

By whom built

J. Headhead &amp; Sons Ltd

Yard No. 481

When built 1925

Engines made at

South Shields

By whom made

John Headhead &amp; Sons Ltd

Engine No. 481

When made 1925

Boilers made at

do

By whom made

do

Boiler No. 481

When made 1925

Nominal Horse Power

328

Owners

Messrs. Ballo &amp; Mansfield

Port belonging to

Newcastle

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

Manufacturers of Steel

Steel Co of Scotland &amp; Dighton Patent 7 Ltd Co.

(Letter for Record

r.

Total Heating Surface of Boilers

899.5 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

One single ended multitubular

Working Pressure

90

Tested by hydraulic pressure to

180

Date of test

29.8.25

No. of Certificate

9938

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

29.2 sq ft

No. and Description of safety valves to each boiler

2 Spring loaded

Area of each set of valves per boiler

per Rule

5.3 sq ft

as fitted

5.94 sq ft

Pressure to which they are adjusted

90 lb/sq in

Are they fitted with easing gear

Yes

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

no

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

18"

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

10'-0"

Length

10'-0"

Shell plates: Material

steel

Tensile strength

28-32

Thickness

2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

double exp

long. seams

double butt straps

Diameter of rivet holes in

circ. seams

15/16"

long. seams

13/16"

Pitch of rivets

3"

Percentage of strength of circ. end seams

plate

68.7

rivets

63.6

Percentage of strength of circ. intermediate seam

plate

-

rivets

-

Percentage of strength of longitudinal joint

plate

80.88

rivets

100.2

combined

95.16

Working pressure of shell by Rules

1098

Thickness of butt straps

outer

1/2"

inner

5/8"

No. and Description of Furnaces in each Boiler

2 Plain

Material

steel

Tensile strength

26-30

Smallest outside diameter

3'-0"

Length of plain part

top

6'-2"

bottom

6'-7 1/2"

Thickness of plates

crown

9/16"

bottom

9/16"

Description of longitudinal joint

Welded

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

none

Working pressure of furnace by Rules

90.2

End plates in steam space: Material

steel

Tensile strength

26-30

Thickness

3/4"

Pitch of stays

17 1/2" x 17 1/2"

How are stays secured

double nuts and washers

Working pressure by Rules

102

Tube plates: Material

front

steel

back

steel

Tensile strength

26-30

26-30

Thickness

3/4"

Mean pitch of stay tubes in nests

9"

Pitch across wide water spaces

13 1/2" x 9"

Working pressure

front 104.4

back 90.2

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32

Depth and thickness of girder

at centre

6" x 1 1/4"

Length as per Rule

26"

Distance apart

10"

No. and pitch of stays

in each

2-8"

Working pressure by Rules

114

Combustion chamber plates: Material

steel

Tensile strength

26-30

Thickness: Sides

1/2"

Back

1/2"

Top

1/2"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

10" x 8"

Back

10" x 9"

Top

10" x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

90.2 + 102.8 x 4/5

Front plate at bottom: Material

steel

Tensile strength

26-30

Thickness

3/4"

Lower back plate: Material

steel

Tensile strength

26-30

Thickness

3/4"

Pitch of stays at wide water space

13 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

172

Main stays: Material

steel

Tensile strength

28-32

Diameter

At body of stay,

2 1/2"

Over threads

3/4" area 4.110"

No. of threads per inch

6

Area supported by each stay

3.12 sq in

Working pressure by Rules

142 psi

Screw stays: Material

Iron

Tensile strength

26-30

Diameter

At turned off part,

1 1/2"

Over threads

3/4" area 1.450"

No. of threads per inch

9

Area supported by each stay

90 sq in

009040-009049-0321



Working pressure by Rules *139* ✓ Are the stays drilled at the outer ends *45* ✓ Margin stays: Diameter { At turned off part, *1 1/2*" ✓  
 or Over threads  
 No. of threads per inch *9* ✓ Area supported by each stay *105 7/8* ✓ Working pressure by Rules *105* ✓  
 Tubes: Material *Iron* ✓ External diameter { Plain *3 1/2*" ✓ Thickness { *10.W.G.* ✓ No. of threads per inch *9* ✓  
 Stay *3 1/2*" ✓  
 Pitch of tubes *4 1/2" x 4 1/2"* ✓ Working pressure by Rules *130* ✓ Manhole compensation: Size of opening in  
 shell plate *16" x 12"* ✓ Section of compensating ring *7" x 9/16"* ✓ No. of rivets and diameter of rivet holes *38 x 13/16"* ✓  
 Outer row rivet pitch at ends *5"* ✓ Depth of flange if manhole flanged *No flange* ✓ 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 JOHN READHEAD & SONS LIMITED

Manufacturer.

*H. O. Stearns, Engineer*

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

*see Mach Rpt*

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.)

*This boiler has been examined during construction, and the materials and workmanship are good and in accordance with the requirements of the Rules and approved plan. On completion it was subjected to a hydraulic test with satisfactory results.*

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

*W. Brown, Marine Pilot*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 17 NOV 1925

Assigned



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 Foundation