

REPORT ON BOILERS.

No. 31054

Received at London Office

-1 OCT 1932

No. of writing Report

192

When handed in at Local Office

8 0 SEP 1932

Port of

Sunderland.

No. in Survey held at

Sunderland.

Date, First Survey

Last Survey

Sep. 27 1932

2758. on the

STEEL Ss. "TYNDALL"

(Number of Visits

Gross

1314

Tons

Net

731

Master

Built at

Sunderland.

By whom built

S.P. Austin & Co. Ltd.

Yard No.

325

When built

1932- no

Engines made at

Sunderland.

By whom made

J. Dickinson & Co. Ltd.

Engine No.

911

When made

1932

Boilers made at

Sunderland.

By whom made

J. Dickinson & Co. Ltd.

Boiler No.

911

When made

1932

Nominal Horse Power

142.47

Owners

London Power Co. Ltd.

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland.

(Letter for Record

(S)

Total Heating Surface of Boilers

2240 sq ft

Is forced draught fitted

No.

Coal or Oil fired

coal

No. and Description of Boilers

1 Single End Multitubular.

Working Pressure

200 lb

Tested by hydraulic pressure to

360 lb

Date of test

15-7-32

No. of Certificate

4135

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

61 sq ft

No. and Description of safety valves to each boiler

2 Spring loaded High Lift.

Area of each set of valves per boiler

(per Rule

6.65 sq ft

(as fitted

7.96 sq ft

Pressure to which they are adjusted

205 lb

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 uprights and bunkers on woodwork

17"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and

floor or plating

17"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

15'-6 3/4"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28/32 Tms.

Thickness

1 1/32"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

Double Lap.

Long. seams

Double Butt Strap Rivet.

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

Pitch of rivets

4"

10 1/2"

Percentage of strength of circ. end seams

plate

62.5

ribs

51.6

Percentage of strength of circ. intermediate seam

plate

-

ribs

Percentage of strength of longitudinal joint

plate

85.1

ribs

96.2

Working pressure of shell by Rules

200.1

combined

89.4

Thickness of butt straps

outer

1 1/8"

inner

1 1/2"

No. and Description of Furnaces in each Boiler

3 Corrugated, Right Hand Section.

Material

Steel

Tensile strength

26/30 Tms.

Smallest outside diameter

3'-10 5/16"

Length of plain part

top

2'-10 1/2"

bottom

2'-10 1/2"

Thickness of plates

crowd

2 1/32"

bottom

Description of longitudinal joint

Weld.

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

Working pressure of furnace by Rules

200.26

End plates in steam space: Material

Steel

Tensile strength

26/30 Tms.

Thickness

1 7/32"

Pitch of stays

18 1/2" x 20 1/2"

How are stays secured

Nuts.

Working pressure by Rules

204.8

Tube plates: Material

front

Steel

back

Tensile strength

26/30 Tms.

Thickness

7/8"

Mean pitch of stay tubes in nests

11 1/4" x 9"

Pitch across wide water spaces

13 1/2"

Working pressure

front

206.6

back

218.8

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 Tms.

Depth and thickness of girder

at centre

7 1/2" x 2"

Length as per Rule

2'-10 1/2"

Distance apart

8 5/8"

No. and pitch of stays

in each

2 at 10 1/2"

Working pressure by Rules

210

Combustion chamber plates: Material

Steel

Tensile strength

28/32 Tms.

Thickness: Sides

25/32"

Back

23/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

17/8"

Back

1 3/4"

Top

1 3/4"

Are stays fitted with nuts or riveted over

Riveted.

Working pressure by Rules

201.2

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tms.

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30 Tms.

Thickness

27/32 Tms.

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

Nuts.

Working Pressure

203.4

Main stays: Material

Steel

Tensile strength

26/32 Tms.

Diameter

At body of stay,

or

Over threads

3 1/4"

No. of threads per inch

6

Area supported by each stay

379.25 sq in

Working pressure by Rules

212

Screw stays: Material

Steel

Tensile strength

26/30 Tms.

Diameter

At turned off part,

or

Over threads

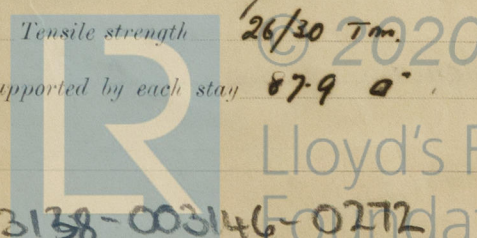
1 3/4"

No. of threads per inch

9

Area supported by each stay

879 sq in



003138-003146-0272

Working pressure by Rules **206** 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 **9** Area supported by each stay **100.01 sq"** Working pressure by Rules **212**
Tubes: Material **W.I. Lap welded** External diameter ^{Plain} **3 1/4"** ^{Stay} **3 1/4"** Thickness ^{8 w.g.} **5/16"** No. of threads per inch **9**
Pitch of tubes **4 1/2"** Working pressure by Rules **213.5** Manhole compensation: Size of opening
End plate **16" x 12"** Section of compensating ring ☒ No. of rivets and diameter of rivet holes **32 1 1/2"**
Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged **3 7/8"** Steam Dome: Material
Tensile strength **258** Thickness of shell **11/16"** Description of longitudinal joint
Diameter of rivet holes **11/16"** Pitch of rivets **1 1/2"** Percentage of strength of joint ^{Plate} **100%** ^{Rivets}
Internal diameter **11 1/2"** Working pressure by Rules **213.5** Thickness of crown **11/16"** No. and diameter
stays **11** Inner radius of crown **11 1/2"** Working pressure by Rules **213.5**
How connected to shell **Welded** Size of doubling plate under dome **16" x 12"** Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell **1 1/2"**

Type of Superheater **Water tube** Manufacturers of ^{Tubes} **W. & A. Mitchell & Co. Ltd.** ^{Steel castings}
Number of elements **1** Material of tubes **W.I.** Internal diameter and thickness of tubes **1 1/2" x 11/16"**
Material of headers **W.I.** Tensile strength **258** Thickness **11/16"** Can the superheater be shut off
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 **1 1/2"** Are the safety valves fitted with easing gear ☒ Working pressure as per
Rules **213.5** Pressure to which the safety valves are adjusted **213.5** Hydraulic test pressure **258**
tubes **W.I.** and after assembly in place **213.5** 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,

Dates of Survey ^{During progress of} ^{work in shops - -} ^{while} ^{building} ^{During erection on} ^{board vessel - - -}
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits **1**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This Boiler has been built under Special Survey. The materials and workmanship are good. On completion the boiler was tested hydraulically and found sound and tight. The boiler has been satisfactorily fitted in the vessel and examined under a full head of steam. The safety valves were adjusted under steam and accumulation test carried out satisfactorily. The boiler is reliable, in my opinion, to have the notation recommended in the Machinery Report.**

Survey Fee **£ 100** When applied for, **192**
Travelling Expenses (if any) **£ 100** When received, **192**

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FEB 7 OCT 1932

Assigned

See other Sld.
Rpt 31054



© 2020

Lloyd's Register Foundation