

REPORT ON BOILERS.

No. 29630

Date of writing Report

192

When handed in at Local Office

1 FEB 1928

Port of

Received at London Office

30 FEB 1928

No. in
Reg. Book.

Survey held at

Sunderland

Date, First Survey

Last Survey

Jan 26 1928

40032 on the

S. S. "BRIGHTON"

(Number of Visits

Gross 5359

Tons Net 3237

Master

Built at

Sunderland

By whom built

Short Bros Ltd

Yard No. 428

When built 1928

Engines made at

Sunderland

By whom made

John Dickinson & Sons Ltd

Engine No. 886

When made 1928

Boilers made at

Sunderland

By whom made

John Dickinson & Sons Ltd

Boiler No. 1089

When made 1928

Nominal Horse Power

380

Owners

R. Chapman & Son

Port belonging to

Newcastle

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

Manufacturers of Steel

The Steel Company of Scotland Limited

(Letter for Record (S))

Total Heating Surface of Boilers

1178

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One - Single Ended Marine type - Plain furnaces

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

13.1.28

No. of Certificate

3974

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

35.4

No. and Description of safety valves to each boiler

Two - Direct Spring loaded

Area of each set of valves per boiler

per Rule 7.55

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

No - Non-return valve fitted

Smallest distance between boilers or uptakes and bunkers or woodwork

Fitted in Tween Deck

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

Fitted in Tween Deck

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

11' 4 1/8"

Length

10' 6" (FULL)

Shell plates: Material

Steel

Tensile strength

28 1/2 to 32 1/2 tons

Thickness

15/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D. R. Lap

long. seams

I. R. D. B. S.

Diameter of rivet holes in

circ. seams 1 1/16"

long. seams 1 1/16"

Pitch of rivets

3"

Percentage of strength of circ. end seams

plate 64.7

rivets 51.6

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.34

rivets 98.6

combined 90.4

Working pressure of shell by Rules

181.8 lbs

Thickness of butt straps

outer 3/4"

inner 7/8"

No. and Description of Furnaces in each Boiler

Two - Plain furnaces

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3' 4"

Length of plain part

top

bottom

Thickness of plates

crown 25"

bottom 32"

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

193 lbs

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

15/16"

Pitch of stays

15" x 16"

How are stays secured

Double Nuts and Washers

Working pressure by Rules

187 lbs

Tube plates: Material

front Steel

back Steel

Tensile strength

26 to 30 tons

Thickness

7/8"

Mean pitch of stay tubes in nests

11 1/4"

Pitch across wide water spaces

13 1/4"

Working pressure

front 21 1/4 lbs (W.W. space)

back 21 1/4 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

at centre

6 5/8" x 1 3/4"

Length as per Rule

29 7/8"

Distance apart

8 1/4"

No. and pitch of stays

in each

2 x 10"

Working pressure by Rules

187 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

11/16"

Back

11/16"

Top

11/16"

Bottom

15/16"

Pitch of stays to ditto: Sides

8 1/2" x 10"

Back

9 5/8" x 9 5/8"

Top

8 1/4" x 10"

Are stays fitted with nuts or riveted over

Fitted with nuts

Working pressure by Rules

Sides 152.5 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

15/16"

Pitch of stays at wide water space

14" x 9 1/8"

Are stays fitted with nuts or riveted over

Fitted with Nuts (inside only)

Working Pressure

258 lbs

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay,

2 1/2"

No. of threads per inch

6

Area supported by each stay

240

Working pressure by Rules

184 lbs

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part,

1 3/4"

No. of threads per inch

9

Area supported by each stay

Sides 850 x 900

Back 87.750

Top 82.50

W 459 - 0151

REPORT ON BOILERS

Sides 2048 lbs
Back 187 lbs
Tops 220 lbs

Working pressure by Rules *2048 lbs* Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter { At turned off part, *1 7/8"* ✓
or
Over threads

No. of threads per inch *9* ✓ Area supported by each stay *108.50"* Working pressure by Rules *196 lbs* ✓

Tubes: Material *Wrought Iron* External diameter { Plain *3 1/4"* ✓ Thickness { *8 W.G.* ✓ No. of threads per inch *9* ✓
Stay *3 1/4"* ✓

Pitch of tubes *4 1/2" x 4 1/2"* ✓ Working pressure by Rules *Plain 230 lbs* ✓
Stay 220 lbs ✓

Manhole compensation: Size of opening in shell plate *16" x 12"* ✓ Section of compensating ring *8 1/8" x 1 5/16"* No. of rivets and diameter of rivet holes *26 @ 1 1/8"* ✓

Outer row rivet pitch at ends *7 1/4"* ✓ Depth of flange if manhole flanged ✓

Steam Dome: Material

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 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,
[Signature] Manufacturer.
[Signature] Director.

Dates of Survey { During progress of work in shops - - *Please see Mch. Rpt.* 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.)

The materials and workmanship are good.

The Donkey Boiler has been constructed under Special Survey, and satisfactorily fitted in the vessel.

For notation see Machinery Report.

Survey Fee ... £ *Charged on Machinery Report.* When applied for, 192

Travelling Expenses (if any) £ When received, 192

A. T. Griffith.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 10 FEB 1928*

Assigned *see minute on Sld Rpt*
29630 attached