

REPORT ON BOILERS.

No. 95580.

Received at London Office

29 JUN 1929

Writing Report

192

When handed in at Local Office

27 JUNE 1929

Port of

LIVERPOOL

Survey held at

Fleetwood

Date, First Survey

Apr 15th

Last Survey

June 24th 1929

on the

steamer

"BOSTONIAN"

ex

"DRAGON ROUGE"

(Number of Visits)

22

Gross

285 289

Tons

Net 93 115

Built at

Middlesbrough

By whom built

Smiths Dock Co Ltd

Yard No.

691

When built

1916

es made at

Middlesbrough

By whom made

Smiths Dock Co Ltd

Engine No.

158

When made

1916

made at

Newcastle

By whom made

Hawthorn Leslie & Co Ltd

Boiler No.

✓

When made

1916

al Horse Power

87

Owners

Boston Deep Sea Fishing & Ice Co Ltd

Port belonging to

Fleetwood

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

(Letter for Record 5)

Heating Surface of Boilers

1619 sq ft.

Is forced draught fitted

no

Coal or Oil fired

coal

and Description of Boilers

One SE. HORZ. MULTITUBULAR

15B

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

5.6.29

No. of Certificate

✓

Can each boiler be worked separately

✓

of Firegrate in each Boiler

54.0 sq ft.

No. and Description of safety valves to each boiler

2 Spring loaded

of each set of valves per boiler

(per Rule)

10.3

as fitted

9.6

Pressure to which they are adjusted

180

Are they fitted with easing gear

yes

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

✓

Least distance between boilers or uptakes and bunkers on woodwork

16"

Is oil fuel carried in the double bottom under boilers

no

Least distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

no

Least internal dia. of boilers

13'-6"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28/32 per plan

ness

1 1/8"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

D.R. lap

seams

I.R. Double Butt.

Diameter of rivet holes in

circ. seams

13/16"

long. seams

13/16"

Pitch of rivets

4 7/8"

Percentage of strength of circ. end seams

plate

71

rivets

48

Percentage of strength of circ. intermediate seam

plate

86

rivets

✓

Percentage of strength of longitudinal joint

plate

86

rivets

95

combined

89

Working pressure of shell by Rules

182 cos 10°

No. and Description of Furnaces in each Boiler

3

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-6"

Thickness of plates

6-5 1/2"

bottom

7-3 1/2"

crown

3/4 + 1/32

bottom

3/4 + 1/32

Description of longitudinal joint

welded along bottom

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

✓

Working pressure of furnace by Rules

187

plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

15/32

Pitch of stays

18 1/2"

are stays secured

Double Nuts + Washers

Working pressure by Rules

186

plates: Material

front

Steel

back

Tensile strength

26/30

Thickness

1 1/16"

pitch of stay tubes in nests

10.06

Pitch across wide water spaces

14 1/2"

Working pressure

front 188

back 198

rs to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

are

8 1/2 x 1 3/4"

Length as per Rule

33 3/32"

Distance apart

8 3/4"

No. and pitch of stays

ch

2-10"

Working pressure by Rules

224

Combustion chamber plates: Material

Steel

le strength

26/30

Thickness: Sides

1 1/16"

Back

21/32"

Top

1 1/16"

Bottom

1"

of stays to ditto: Sides

7 1/2 x 10"

Back

7 1/2 x 9 1/2"

Top

10 x 8 3/4"

Are stays fitted with nuts or riveted over

Nuts

ing pressure by Rules

203

Front plate at bottom: Material

Steel

Tensile strength

26/30

ness

1 1/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

15/16"

of stays at wide water space

14 1/2 x 7 1/2"

Are stays fitted with nuts or riveted over

nuts

ing Pressure

196

Main stays: Material

Steel

Tensile strength

28/32

At body of stay,

or

Over threads

3"

No. of threads per inch

6

Area supported by each stay

17 x 18 1/2"

ing pressure by Rules

213

Screw stays: Material

Steel

Tensile strength

26/30

At turned off part,

or

Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

9 1/2 x 7 1/2"

Working pressure by Rules **254** Are the stays drilled at the outer ends **no** Margin stays: Diameter **17/8** (At turned off part, or Over threads)

No. of threads per inch **9** Area supported by each stay **4 1/2 x 7 1/2** Working pressure by Rules **203**

Tubes: Material **Iron Lapwelded** External diameter **3 1/2** Thickness **5/16 - 3/8** No. of threads per inch **9**

Pitch of tubes **4 3/4** Working pressure by Rules **215** Manhole compensation: Size of opening in shell plate **21 x 17** Section of compensating ring **37 x 33 x 1 1/8** No. of rivets and diameter of rivet holes **40 - 1 3/16**

Outer row rivet pitch at ends **4 1/2** Depth of flange if manhole flanged

Tensile strength **180** Thickness of shell **2** Description of longitudinal joint

Diameter of rivet holes **128** Pitch of rivets **2** Percentage of strength of joint **100**

Internal diameter **21** Working pressure by Rules **215** Thickness of crown **1** No. and diameter of stays **1** Inner radius of crown **1** Working pressure by Rules **215**

How connected to shell **4** Size of doubling plate under dome **2** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **2**

Type of Superheater

Number of elements **2** Material of tubes **Iron** Manufacturers of **Steel castings** Internal diameter and thickness of tubes **2**

Material of headers **Iron** Tensile strength **180** Thickness **1** 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 **1** Are the safety valves fitted with easing gear **Yes** Working pressure as per Rules **215** Hydraulic test pressure: **350**

tubes **castings** Pressure to which the safety valves are adjusted **180** and after assembly in place **180** Are drain cocks or valves fitted to free the superheater from water where necessary **1**

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

The foregoing is a correct description,

Manufacturer.

Dates of Survey **1922** During progress of work in shops - - **1922** Are the approved plans of boiler and superheater forwarded herewith **yes** (If not state date of approval.)

while building **1922** During erection on board vessel - - **1922** Total No. of visits **1**

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

This boiler was not built under special survey of Lloyd's Register, but has now been opened out and examined internally & externally with mountings & safety valves. The material & workmanship appear to be of good quality. The boiler was tested at 320 lb/sq. in. hydraulic pressure & found tight & satisfactory. It has been also examined under steam, an accumulation test held, & safety valves adjusted to 180 lb/sq. in.

Copy of approved plans herewith.

Survey Fee **£ 100** See accompanying When applied for, **1922**

Travelling Expenses (if any) **£ 10** Report **1922** When received, **1922**

C. W. Reed
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **LIVERPOOL 28 JUNE 1929**

Assigned **See accompanying rpt. 8.**