

REPORT ON BOILERS.

No. 7324

Received at London Office

14 DEC 1927

Writing Report

2-12-1927

When handed in at Local Office

3-12-1927

Port of

Glasgow.

Survey held at

Renfrew

Date, First Survey

18.1.27

Last Survey

1-12-1927

(Number of Visits

37)

Gross

509

Tons

Net

211

on the

Bucket Dredger

"Lady Bonnie"

Built at

Renfrew

By whom built

Lobnitz & Co. Ltd

Yard No.

929

When built

1927.

s made at

Renfrew

By whom made

Lobnitz & Co. Ltd

Engine No.

929

When made

1927.

s made at

Renfrew

By whom made

Lobnitz & Co. Ltd

Boiler No.

929

When made

1927.

al Horse Power

77.

Owners

Crown Agents for Colonies

Port belonging to

Lagos

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Wm Beardmore & Co. Ltd

(Letter for Record

S. ✓)

Heating Surface of Boilers

1496 sq ft

Is forced draught fitted

No ✓

Coal or Oil fired

Coal ✓

Description of Boilers

One - multitubular

Working Pressure

160 ✓

ed by hydraulic pressure to

290

Date of test

15.6.27 ✓

No. of Certificate

17464 ✓

Can each boiler be worked separately

✓

of Firegrate in each Boiler

54 sq ft

No. and Description of safety valves to each boiler

Double - spring loaded

of each set of valves per boiler

per Rule

10.69

as fitted

11.8

Pressure to which they are adjusted

165

Are they fitted with easing gear

yes ✓

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

no

Least distance between boilers or uptakes and bunkers or woodwork

9'-0" ✓

Is oil fuel carried in the double bottom under boilers

none ✓

Least distance between shell of boiler and tank top plating

open floors ✓

Is the bottom of the boiler insulated

yes ✓

greatest internal dia. of boilers

13'-0" ✓

Length

10'-0" ✓

Shell plates: Material

S. ✓

Tensile strength

28-32 ✓

Thickness

3/64" ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

end

A.R. ✓

inter.

file ✓

J. seams

T.R.D.B.S. ✓

Diameter of rivet holes in

circ. seams

1 1/16" ✓

long. seams

1 1/16" ✓

Pitch of rivets

3 1/2" ✓

7 1/2" ✓

Percentage of strength of circ. end seams

plate

69.5

rivets

42.5

Percentage of strength of circ. intermediate seam

plate

85.75

rivets

92.7

Percentage of strength of longitudinal joint

plate

85.75

rivets

92.7

Working pressure of shell by Rules

165

Thickness of butt straps

outer

3/4" ✓

inner

7/8" ✓

No. and Description of Furnaces in each Boiler

3 - Dighton ✓

Material

S. ✓

Tensile strength

26-30 ✓

Smallest outside diameter

37" 3 1/2" ✓

Length of plain part

top

bottom

Thickness of plates

crown

1/2" ✓

bottom

1/2" ✓

Description of longitudinal joint

weld ✓

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

none ✓

Working pressure of furnace by Rules

195

and plates in steam space: Material

S. ✓

Tensile strength

26-30 ✓

Thickness

13/16" ✓

Pitch of stays

15" x 13" ✓

How are stays secured

D.N.L.W. ✓

Working pressure by Rules

174

Tube plates: Material

front

S. ✓

back

S. ✓

Tensile strength

26-30 ✓

Thickness

3/4" ✓

Lean pitch of stay tubes in nests

9.3" ✓

Pitch across wide water spaces

13 7/8" ✓

Working pressure

front

382

back

207

Riders to combustion chamber tops: Material

S. ✓

Tensile strength

28-32 ✓

Depth and thickness of girder

at centre

7" x 1 1/8" ✓

Length as per Rule

28 1/2" ✓

Distance apart

6 15/16" ✓

No. and pitch of stays

in each

2-9" x 6 15/16" ✓

Working pressure by Rules

160

Combustion chamber plates: Material

S. ✓

Tensile strength

26-30 ✓

Thickness: Sides

37/64" ✓

Back

9/16" ✓

Top

9/16" ✓

Bottom

7/8" ✓

Pitch of stays to ditto: Sides

9" x 7 1/2" ✓

Back

7 3/4" x 7 3/4" ✓

Top

9" x 6 15/16" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

165

Front plate at bottom: Material

S. ✓

Tensile strength

26-30 ✓

Thickness

6 1/64" ✓

Lower back plate: Material

S. ✓

Tensile strength

26-30 ✓

Thickness

23/32" ✓

Pitch of stays at wide water space

13 7/8" x 9 1/4" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

162

Main stays: Material

S. ✓

Tensile strength

28-32 ✓

Diameter

At body of stay,

2 1/4" ✓

or

Over threads

No. of threads per inch

6 ✓

Area supported by each stay

15" x 13" ✓

Working pressure by Rules

177

Screw stays: Material

S. ✓

Tensile strength

26-30 ✓

Diameter

At turned off part,

1 1/2" ✓

or

Over threads

No. of threads per inch

9 ✓

Area supported by each stay

9" x 7 3/4" ✓

Lloyd's Register
Foundation

Working pressure by Rules **183** Are the stays drilled at the outer ends **No** ✓ Margin stays: Diameter { At turned off part, **1 3/4"** or Over threads **1 3/4"**

No. of threads per inch **9** ✓ Area supported by each stay **10.8" x 7.75"** Working pressure by Rules **218**

Tubes: Material **8** ✓ External diameter { Plain **3 1/2"** ✓ Thickness { **5/16"** ✓ No. of threads per inch **9** ✓

Pitch of tubes **4 5/8" x 4 1/16"** ✓ Working pressure by Rules **180** Manhole compensation: Size of opening **1 3/4"**

shell plate **18 3/4" x 14 3/4"** ✓ Section of compensating ring **26 1/2" x 30 1/2" x 1"** No. of rivets and diameter of rivet holes **44 - 1 7/8"**

Outer row rivet pitch at ends **7 1/2"** Depth of flange if manhole flanged **3 1/2"** ✓ 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

of rivets in outer row in dome connection to shell

Type of Superheater

Number of elements Material of tubes Manufacturers of { Tubes Steel castings Internal diameter and thickness of tubes

Material of headers Tensile strength Thickness Can the superheater be shut off from the boiler

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

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

tubes and after assembly in place Are drain cocks or valves

to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

FOR LOBNITZ & Co., LIMITED
The foregoing is a correct description.
J. P. Sullivan Director

Dates of Survey { During progress of work in shops - - - See Accompanying Machinery report
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 **37**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under special survey in accordance with the approved plan and the Society's Rules & Requirements. The materials and workmanship are good. The Boiler has been securely fitted on board, and the safety valves adjusted under steam.**

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

Jas. Cairns
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 13 DEC 1927** TUES. 13 MAR 1928
Assigned **See accompanying mach. report.**