

REPORT ON BOILERS.

No. 29090

Received at London Office 24 JUN 1925

Date of writing Report

192

When handed in at Local Office

23 JUNE 1925

Port of

Sunderland

No. in Survey held at
Reg. Book.

Sunderland

Date, First Survey

Last Survey 12th June 1925

on the SS "SANDSEND"

(Number of Visits

Gross 3612.19
Net 2146.02

Master

Built at Sunderland

By whom built

W. Pickersill & Son

Yard No. 214

When built 1925

Engines made at

Sunderland

By whom made

G. Clark & Co

Engine No. 1141

When made 1925

Boilers made at

Sunderland

By whom made

G. Clark & Co

Boiler No. 1141

When made 1925

Nominal Horse Power.

315

Owners

Rowland & Marwood's S. S. Co Ltd
(Headlam & Rowland, Mess)

Port belonging to

Whitby

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

Manufacturers of Steel

Rheinische Stahlwerke, Duisberg

(Letter for Record S)

Total Heating Surface of Boilers

4834 sq

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

Two single ended 2SB

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

23.4.25

No. of Certificate

3918

Can each boiler be worked separately

YES

Area of Firegrate in each Boiler

66 1/2 sq

No. and Description of safety valves to each boiler

2 Spring Valves

Area of each set of valves per boiler

{per Rule
as fitted15.49 sq
16.58 sq

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

✓

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-2"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

YES

Largest internal dia. of boilers

15'-9 13/32"

Length

10'-9"

Shell plates: Material

S

Tensile strength

28-32

Thickness

1 1/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end laps all

long. seams

all butt riv

Diameter of rivet holes in

{circ. seams
long. seams1 1/4" F 1 5/8" B.
1 5/16"

Pitch of rivets

3 1/2" + 4"
9 1/4"

Percentage of strength of circ. end seams

{plate
rivets63.8 F 67.3 B.
45 43.2

Percentage of strength of circ. intermediate seam

{plate
rivets

—

Percentage of strength of longitudinal joint

{plate
rivets
combined85.8
87.
89.3

Working pressure of shell by Rules

182

Thickness of butt straps

{outer
inner

1" 1 1/8"

No. and Description of Furnaces in each Boiler

3 Brighton

Material

S

Tensile strength

26-30

Smallest outside diameter

47 7/16"

Length of plain part

{top
bottom

✓

Thickness of plates

{crown
bottom

1 1/4" 3/32"

Description of longitudinal joint

welded

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

✓

Working pressure of furnace by Rules

182

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

1 3/8"

Pitch of stays

22 3/4" x 2 1/4"

How are stays secured

d. n. + w.

Working pressure by Rules

184

Tube plates: Material

{front
back

S S

Tensile strength

26-30

Thickness

{2 1/2"
13/16"

Mean pitch of stay tubes in nests

11 1/8"

Pitch across wide water spaces

14 1/4" all

Working pressure

{front
back206
190

Girders to combustion chamber tops: Material

S

Tensile strength

28-32

Depth and thickness of girder

at centre

8 1/4" x 1 3/4"

Length as per Rule

33"

Distance apart

10"

No. and pitch of stays

in each

2 @ 10"

Working pressure by Rules

185

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

23/32"

Back

1 1/16"

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

10" x 10"

Back

10" x 9 1/8"

Top

10" x 10"

Are stays fitted with nuts or riveted over

nuts on margins

Working pressure by Rules

180

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

27/32"

Lower back plate: Material

S

Tensile strength

26-30

Thickness

15/16"

Pitch of stays at wide water space

16" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

180

Main stays: Material

S

Tensile strength

28-32

Diameter

{At body of stay,
Over threads2 7/8" + 3"
swelled into

No. of threads per inch

6

Area supported by each stay

378 sq

Working pressure by Rules

189

Screw stays: Material

S

Tensile strength

26-30

Diameter

{At turned off part,
Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

100 sq

W79-0181

Working pressure by Rules 180 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads 2 + 2 1/4 ✓

No. of threads per inch 9 ✓ Area supported by each stay 115 sq. in. Working pressure by Rules 183

Tubes: Material S.D. Hull iron External diameter { Plain 3 1/4 ✓ Stay 3 1/4 ✓ Thickness { 1/8 5/16 1/4 ✓ No. of threads per inch 9 ✓

Pitch of tubes 4 1/2 + 4 3/8 ✓ Working pressure by Rules 208 Manhole compensation: Size of opening in END plate 16 x 12 ✓ Section of compensating ring Flanged ✓ No. of rivets and diameter of rivet holes ✓

Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 4 1/2 ✓ Steam Dome: Material NONE ✓

Tensile strength Thickness of shell Description of longitudinal joint { Plate Rivets

Diameter of rivet holes Pitch of rivets Percentage of strength of joint

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of

stays Inner radius of crown Working pressure by Rules Diameter of rivet holes and pitch

How connected to shell Size of doubling plate under dome

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 GEORGE CLARK LIMITED W. G. Smith Manufacture

Dates of Survey { During progress of See Machinery Report Are the approved plans of boiler and superheater forwarded herewith yes (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 boilers have been constructed under special survey

and satisfactorily fixed in the vessel.

Survey Fee ... £ See Machinery Report When applied for, 192

Travelling Expenses (if any) £ When received, 192

H. A. Hake & G. Anderson
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUES. 30 JUN 1925

Assigned