

REPORT ON BOILERS.

Std. No. 29677
Spl. No. 16599

Received at London Office

8 FEB 1928

Date of writing Report

192

When handed in at Local Office

24.1

1928

Port of

WEST HARTLEPOOL

No. in Survey held at

Hartlepool

Date, First Survey

17th Oct. 1927

Last Survey

6th Feb. 1928

1928

on the

S.S. "FORTHBRIDGE"

(Number of Visits

33

Tons

Gross

5140

Net

3156

ster

Built at

Sunderland

By whom built

Wm. Doxford

Yard No.

587

When built

1928

ines made at

Sunderland

By whom made

Richardsons Westgarth & Co. Ltd.

Engine No.

When made

1928

lers made at

Hartlepool

By whom made

Richardsons Westgarth & Co. Ltd.

Boiler No.

2196A

When made

1928

ninal Horse Power

Owners

Hosby Meyer & Co

Port belonging to

West Hartlepool.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons, Ltd.

(Letter for Record

(S)

al Heating Surface of Boilers

1646 sqft

Is forced draught fitted

Yes

Coal or Oil fired

Coal

and Description of Boilers

1 Single ended.

Working Pressure

180 lbs

ted by hydraulic pressure to

320 lbs

Date of test

16-11-27

No. of Certificate

312A

Can each boiler be worked separately

Yes

a of Firegrate in each Boiler

55.68 sqft

No. and Description of safety valves to each boiler

See Hpl. Ltr 18/2/27

Double spring loaded.

a of each set of valves per boiler

per Rule

10.55

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

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

No donkey boiler

allest distance between boilers or uptakes and bunkers or woodwork

1-6

Is oil fuel carried in the double bottom under boilers

No

allest distance between shell of boiler and tank top plating

2-0

Is the bottom of the boiler insulated

Yes

gest internal dia. of boilers

13-9 3/4

Length

10-6

Shell plates: Material

Steel

Tensile strength

28.5/32.5

ckness

1 1/8

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

inter.

seams

Tree Riv. D. Butt Strap

Diameter of rivet holes in

circ. seams

1 5/32

Pitch of rivets

3 1/2

centage of strength of circ. end seams

plate

67.

Percentage of strength of circ. intermediate seam

plate

rivets

centage of strength of longitudinal joint

plate

85.5

Working pressure of shell by Rules

182 lbs

ckness of butt straps

outer

1 1/8

No. and Description of Furnaces in each Boiler

3 Monsons.

terial

Steel

Tensile strength

26/30

Smallest outside diameter

3-5 9/16

gth of plain part

top

1 1/8

Thickness of plates

crown

1 1/8

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

184.6 lbs

d plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 1/8

Pitch of stays

16 x 19

o are stays secured

Double nuts

Working pressure by Rules

190.7

e plates: Material

front

Steel

back

Steel

Tensile strength

26/30

Thickness

1 3/16

in pitch of stay tubes in nests

13 1/2 x 8 3/4

Pitch across wide water spaces

14 1/4

Working pressure

front

188 lbs

back

192 lbs

ders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

centre

7 1/8 x 15 1/8

Length as per Rule

2-5 3/8

Distance apart

8

No. and pitch of stays

each

3, 7 1/2

Working pressure by Rules

191.5 lbs

Combustion chamber plates: Material

Steel

sile strength

26/30

Thickness: Sides

2 1/32

Back

5/8

Top

9/16

Bottom

2 1/32

ch of stays to ditto: Sides

7 1/2 x 8 1/2

Back

9 1/4 x 8

Top

7 1/2 x 8

Are stays fitted with nuts or riveted over

Nuts

orking pressure by Rules

180.5 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30

ckness

7/8

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

2 5/32

ch of stays at wide water space

13 1/4

Are stays fitted with nuts or riveted over

Nuts

orking Pressure

206.5

Main stays: Material

Steel

Tensile strength

28/32

meter

At body of stay,

or

Over threads

No. of threads per inch

6

Area supported by each stay

16 x 19

orking pressure by Rules

181.5

Screw stays: Material

Steel

Tensile strength

26/30

meter

At turned off part,

or

Over threads

No. of threads per inch

9

Area supported by each stay

7 1/2 x 8 1/2 & 8 x 9 1/4

W494-0342

Working pressure by Rules ^{8205 lbs} 196.5 lbs Are the stays drilled at the outer ends *Yes* ✓ Margin stays: Diameter { At turned off part, or Over threads } 1 3/4" ✓
No. of threads per inch *9* ✓ Area supported by each stay *8" x 11 1/4"* Working pressure by Rules *202 lbs*
Tubes: Material *Iron* ✓ External diameter { Plain *3 1/2"* ✓ Stay *3 1/2"* ✓ Thickness { *5/16, 3/8, 7/16* ✓ No. of threads per inch *9* ✓
Pitch of tubes *4 1/2" x 4 3/8"* ✓ Working pressure by Rules *238 lbs* Manhole compensation: Size of opening *15 1/2"* ✓
shell plate *12" x 16"* ✓ Section of compensating ring *7 1/4" x 1 1/8"* ✓ No. of rivets and diameter of rivet holes *32- 1 5/8"* ✓
Outer row rivet pitch at ends *8"* ✓ Depth of flange if manhole flanged *-* ✓ Steam Dome: Material *None* ✓
Tensile strength *182* Thickness of shell *5/16"* Description of longitudinal joint *Butt*
Diameter of rivet holes *1 1/8"* Pitch of rivets *2"* Percentage of strength of joint { Plate *100* Rivets *100*
Internal diameter *24"* Working pressure by Rules *238 lbs* Thickness of crown *5/16"* No. and diameter of rivets in crown *12- 1 1/8"*
stays *12"* Inner radius of crown *12"* Working pressure by Rules *238 lbs* Diameter of rivet holes and pitch in crown *1 1/8" x 2"*
How connected to shell *By stays* Size of doubling plate under dome *12" x 16"* Diameter of rivet holes and pitch in doubling plate *1 1/8" x 2"*
of rivets in outer row in dome connection to shell *12- 1 1/8"*

Type of Superheater *None* ✓ Manufacturers of { Tubes *None* Steel castings *None*
Number of elements *1* Material of tubes *Iron* Internal diameter and thickness of tubes *3 1/2" x 5/16"*
Material of headers *Iron* Tensile strength *182* Thickness *5/16"* Can the superheater be shut off from the boiler *Yes*
the boiler be worked separately *Yes* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Yes*
Area of each safety valve *1 1/2"* Are the safety valves fitted with easing gear *Yes* Working pressure at safety valves *238 lbs*
Rules *182* Pressure to which the safety valves are adjusted *238 lbs* Hydraulic test pressure *350 lbs*
tubes *12"* castings *12"* and after assembly in place *238 lbs* Are drain cocks or valves fitted to the superheater *Yes*
to free the superheater from water where necessary *Yes*

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

The foregoing is a correct description,
For RICHARDSONS, WESTGARTH & Co. LIMITED

Dates of Survey { During progress of work in shops - - - *See final report herewith* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *Yes*
while building { During erection on board vessel - - - *See final report herewith* Total No. of visits *33*

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

This boiler has been built under Special Survey. The materials & workmanship are good. On completion it satisfactorily withstood the hydraulic test. All the boiler mountings have been tested to 360 lbs. It is being despatched to Sunderland for fitting on board. The boiler has been satisfactorily fitted in the vessel & the safety valves adjusted under steam. (For notation see machinery report.)

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

R.D. Philston & A. Daintith.
Engineer Surveyors to Lloyd's Register of Shipping

Committee's Minute TUES. 27 MAR 1928

Assigned *See Sld Rpt No 29647*