

## REPORT ON BOILERS.

No. 16615.

Received at London Office

21 APR 1928

Date of writing Report

192

When handed in at Local Office

192

Port of

WEST HARTLEPOOL

No. in  
Reg. Book.

Survey held at

Hartlepool

Date First Survey

26 May 1928

Last Survey

1928

on the

M.V. "BRITISH RENOWN"

(Number of Visits

Tons

Gross  
Net

Master

Built at

Sunderland

By whom built

Sir J. Laing &amp; Sons

Yard No.

700.

When built

1928

Engines made at

Hartlepool

By whom made

Richardsons Westgarth &amp; Co. Ltd.

Engine No.

2659

When made

1928

Boilers made at

Hartlepool

By whom made

Richardsons Westgarth &amp; Co. Ltd.

Boiler No.

2659

When made

1928

Nominal Horse Power

106

Owners

Port belonging to

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

Manufacturers of Steel

David Colville &amp; Sons Ltd.

(Letter for Record

S.

Total Heating Surface of Boilers

1595

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

One single Enders.

Working Pressure

150

Tested by hydraulic pressure to

245

Date of test

30.6.24

No. of Certificate

3703

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 Direct Spring

Area of each set of valves per boiler

per Rule 14.49

as fitted 16.59

Pressure to which they are adjusted

155 lb.

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boiler

11.6"

Length

11.6"

Shell plates: Material

S

Tensile strength

28/32

Thickness

27/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end O.R.

Long. seams

D.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

3 1/4"

Percentage of strength of circ. end seams

plate 68.3

rivets 60.5

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 81.6

rivets 81.4

Working pressure of shell by Rules

152

Thickness of butt straps

outer 11/16"

inner 9/16"

No. and Description of Furnaces in each Boiler

2 Morrison

Material

S

Tensile strength

26/30

Smallest outside diameter

3.1 3/8"

Length of plain part

top

Thickness of plates

crown 7/16"

bottom 7/16"

Description of longitudinal joint

Weld

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

Yes

Working pressure of furnace by Rules

164

End plates in steam space: Material

S

Tensile strength

26/30

Thickness

1 1/2"

Pitch of stays 21 1/2" x 13 3/4"

How are stays secured

Double nuts

Working pressure by Rules

151

Tube plates: Material

front S

back S

Tensile strength

26/30

Thickness

13/16"

Lean pitch of stay tubes in nests

7 1/4" x 11 1/4"

Pitch across wide water spaces

13 1/2"

Working pressure

front 164

back 191

Girders to combustion chamber tops: Material

S

Tensile strength

26/30

Depth and thickness of girder

Centre

7 1/4" x 1 5/8"

Length as per Rule

2.5 13/32"

Distance apart

9 1/4"

No. and pitch of stays

each

3 7"

Working pressure by Rules

154

Combustion chamber plates: Material

S

Tensile strength

26/30

Thickness: Sides

9/16"

Back

19/32"

Top

9/16"

Bottom

9/16"

Pitch of stays to ditto: Sides

7" x 9 1/4"

Back

8" x 9 1/2"

Top

7" x 9 1/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

154

Front plate at bottom: Material

S

Tensile strength

26/30

Thickness

13/16"

Lower back plate: Material

S

Tensile strength

26/30

Thickness

3/4"

Pitch of stays at wide water space

13 1/2" x 8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

184

Main stays: Material

S

Tensile strength

28/32

Diameter

At body of stay, 2 1/2" x 2 5/8"

No. of threads per inch

6

Area supported by each stay

21 1/2" x 14 1/2"

Working pressure by Rules

150

Screw stays: Material

S

Tensile strength

26/30

Diameter

At turned off part, 1 1/2"

No. of threads per inch

9

Area supported by each stay

8" x 9 1/2"

W1645-0081



Working pressure by Rules **165** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, **1 5/8"**  
No. of threads per inch **9** Area supported by each stay **11 1/2" x 8"** Working pressure by Rules **164**  
Tubes: Material **Iron** External diameter { Plain **2 1/2"** Thickness { **10 W.C.** No. of threads per inch **9**  
Pitch of tubes **3 3/4" x 3 5/8"** Working pressure by Rules **175 P. 180 stay** Manhole compensation: Size of opening in  
shell plate **12" x 16"** Section of compensating ring **10 15/16" x 7/8"** No. of rivets and diameter of rivet holes **28 1 1/32"**  
Outer row rivet pitch at ends **5 5/8"** Depth of flange if manhole flanged **Steam Dome: Material**  
Tensile strength **8000** Thickness of shell **1/2"** Description of longitudinal joint **Plate**  
Diameter of rivet holes **1/2"** Pitch of rivets **1 1/2"** Percentage of strength of joint **80%**  
Internal diameter **18"** Working pressure by Rules **175 P. 180 stay** Thickness of crown **1/2"** No. and diameter of  
stays **18** Inner radius of crown **18"** Working pressure by Rules **175 P. 180 stay**  
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 **1 1/2"**

Type of Superheater **Waste Heat** Manufacturers of { Tubes **Waste Heat**  
Number of elements **1** Material of tubes **Iron** Internal diameter and thickness of tubes **10 W.C.**  
Material of headers **Iron** Tensile strength **8000** Thickness **1/2"** 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 **No. and D**  
Rules **Pressure to which the safety valves are adjusted** Hydraulic test pressure: Tested by  
tubes **castings** and after assembly in place **Are drain cocks or valves fitted** Area of F  
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,  
**DR RICHARDSON, WESTGARTH & CO. LIMITED** Manufacturer  
**MANAGER**

Dates { During progress of work in shops - - - **See Machinery Report**  
of Survey while building { During erection on board vessel - - - **See Machinery Report**  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **yes**  
Total No. of visits **1**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
**This boiler has been built under Special Survey. The materials and workmanship are good and efficient. It has been fitted and secured on board, examined under full steam, and its safety valves adjusted.**

Survey Fee **£ 10 : 12 : 0** When applied for, **23.4** 192 **8**  
Travelling Expenses (if any) **£ :** When received, **27.4** 192 **8**

**Robert Rae, R.D. Shilston**  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE 1 MAY 1928**

Assigned **See Rpt. attached**