

REPORT ON BOILERS.

No. 16827

Received at London Office 31 OCT 1929

Date of writing Report

192

When handed in at Local Office

30.10.1929

Port of

WEST HARTLEPOOL

No. in Reg. Book.

Survey held at

Hartlepool

Date, First Survey

10th Sept.

Last Survey

25th Oct. 1929

41012 Sup.

on the

Main Boilers

D 193

se. 'KYLE'

(Number of Visits

12)

Gross 2822

Tons

Net 1662.

Master

Built at

Middlesbrough

By whom built

Smiths Dock Co

Yard No.

892

When built

1929

Engines made at

Middlesbrough

By whom made

Smiths Dock Co

Engine No.

359

When made

1929

Boilers made at

Hartlepool

By whom made

Richardsons Westgarth & Co Ltd

Boiler No.

D 193

When made

1929

Nominal Horse Power of boilers

304.

Owners

Sharp S.S. Co Ltd.

Port belonging to

Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd

(Letter for Record

S)

Total Heating Surface of Boilers

4554 sq. ft.

Is forced draught fitted

no

Coal or Oil fired

coal.

No. and Description of Boilers

Two, single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

17.10.29

No. of Certificate

3770

Can each boiler be worked separately

Area of Firegrate in each Boiler

60 sq. ft.

No. and Description of safety valves to each boiler

Pair Spring loaded

Area of each set of valves per boiler

per Rule

14.5 sq. ft.

as fitted

16.58 sq. ft.

Pressure to which they are adjusted

180 lbs

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

plates and bunkers or woodwork

1' 6"

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' 6"

Length

10' 9"

Shell plates: Material

Steel

Tensile strength

28/32

Thickness

1 7/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR Lap

long. seams

J.R. D.B.S.

Diameter of rivet holes in

circ. seams

1 3/32"

long. seams

1 3/32"

Pitch of rivets

3 3/4"

9"

Percentage of strength of circ. end seams

plate

65.85

rivets

46.2

Percentage of strength of circ. intermediate seam

plate

85.78

rivets

87

Percentage of strength of longitudinal joint

plate

85.78

rivets

87

Working pressure of shell by Rules

181 lbs

Thickness of butt straps

outer

1 1/8"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 Deightons

3cf

Material

Steel

Tensile strength

26/30

Smallest outside diameter

44 3/8"

Length of plain part

top

bottom

Thickness of plates

crown

9/16"

Description of longitudinal joint

welded

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

Yes

Working pressure of furnace by Rules

184 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 3/32"

Pitch of stays

21 1/2" x 22"

How are stays secured

Double nuts & washers

Working pressure by Rules

181 lbs

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30

Thickness

7/8"

3/4"

3/4" doubler.

Mean pitch of stay tubes in nests

10 13/32"

Pitch across wide water spaces

14 1/2"

Working pressure

front

184 lbs

back

186 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

8 3/4" x 1 7/8"

Length as per Rule

32 1/2"

Distance apart

11 3/4"

No. and pitch of stays

in each

Three 8"

Working pressure by Rules

182 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

10" x 10"

Back

10 1/8" x 9 3/4"

Top

8" x 11 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

7/8"

Pitch of stays at wide water space

14 1/2" x 10 1/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

200 lbs

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

3 1/8"

No. of threads per inch

6

Area supported by each stay

21 1/2" x 22"

Working pressure by Rules

180 lbs

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

1 3/4"

No. of threads per inch

9

Area supported by each stay

10" x 10"

Working pressure by Rules 181 lbs Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 1/8"
 No. of threads per inch 9 Area supported by each stay 11 5/8" x 10 5/8" Working pressure by Rules 180 lbs
 Tubes: Material Iron External diameter ^{Plain} 3 1/4" Thickness ^{Stay} 3/4" No. of threads per inch 9
 Pitch of tubes 4 5/8" x 4 5/8" Working pressure by Rules 190 lbs Manhole compensation: Size of opening in
 shell plate 13" x 16 1/2" Section of compensating ring 13 7/8" x 1 1/4" No. of rivets and diameter of rivet holes 32 1 3/32"
 Outer row rivet pitch at ends 9" Depth of flange if manhole flanged ✓ 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} /
 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 pitch
 of rivets in outer row in dome connection to shell /

Type of Superheater / Manufacturers of ^{Tubes} /
 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 22 inclusive for boilers been complied with

Yes.

The foregoing is a correct description.

George Clark. Manufacturer.

Dates of Survey ¹⁹²⁹ 10.11.13.24.26.1.3.4.7.10.14.17.28 Are the approved plans of boiler and superheater forwarded herewith
 while building ^{work in shops - - -} / (If not state date of approval.)
^{During erection on} /
 board vessel - - - /
 Total No. of visits 12

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

These boilers have been built under Special Survey.
 The materials and workmanship are good and efficient.
 On completion they satisfactorily withstood the
 hydraulic test.
 They are being despatched to Middlesbrough for
 fitting on board.

These boilers have been securely fitted aboard and their
 safety valves adjusted and tested under steam with satisfactory
 results.

M. Ma

Thab.
3.3.30

Survey Fee £ 27: 14: -

When applied for, 30.10.1929

Travelling Expenses (if any) £ : : -

When received, 5.11.29

R.D. Shilston.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 11 MAR 1930

Assigned

See Thab. GE 13994



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 Foundation