

REPORT ON BOILERS.

No. 30171

24 OCT 1929

Received at London Office

Date of writing Report

192

When handed in at Local Office

23 OCT. 1929

Port of *Sunderland.*No. in
Reg. Book.

Survey held at

Sunderland

Date, First Survey

Last Survey

Oct 21 1929

on the

S.S. "SUNTRAP"

(Number of Visits

Gross
Tons
Net

Master

Built at

Newcastle

By whom built

*Hawthorn Leslie & Co. Ltd.*Yard No. *562* When built *1929*

Engines made at

Sunderland

By whom made

*George Stark Ltd*Engine No. *1177* When made *1929*

Boilers made at

Do

By whom made

*Do*Boiler No. *1177* When made *1929*

Nominal Horse Power

115

Owners

Gas Light & Coke Co. Ltd.

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Verenigde Stahlwerke A.G. Stahlwerk, Essen(Letter for Record *S*)

Total Heating Surface of Boilers

1786 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One 8 ft. Mult. S.E.

Working Pressure

180 lb/sq in

Tested by hydraulic pressure to

320 lb/sq in

Date of test

1/10/29

No. of Certificate

4061

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

55.5 sq ft

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

per Rule 11.6 sq ft

as fitted

11.88 sq ft

Pressure to which they are adjusted

185 lb/sq in

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

1-5 coal heat

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

OPEN FLOOR 1-0

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

13-9 3/4

Length

10-6

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

1 1/8

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

end D.R.L.

long. seams

TR. JBS.

Diameter of rivet holes in

*circ. seams 1 3/8**long. seams 1 3/8*

Pitch of rivets

3 1/8

Percentage of strength of circ. end seams

*plate 85.6 %**ribs 45.6 %*

Percentage of strength of circ. intermediate seam

*plate 85.6 %**ribs 87 %*

Percentage of strength of longitudinal joint

*plate 85.6 %**ribs 87 %*

Working pressure of shell by Rules

184 lb/sq in

Thickness of butt straps

*outer 7/8**inner 1*

No. and Description of Furnaces in each Boiler

3 Light and 3 cf.

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

39 3/4

Length of plain part

*top 1**bottom 1*

Thickness of plates

*crown 1/2**bottom 1/2*

Description of longitudinal joint

Welded.

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

Yes

Working pressure of furnace by Rules

181 lb/sq in

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/2

Pitch of stays

22 x 17 1/4

How are stays secured

D.N. & W.

Working pressure by Rules

183

Tube plates: Material

*front Steel**back Steel*

Tensile strength

26 to 30 tons

Thickness

1 1/8

Mean pitch of stay tubes in nests

10 1/4

Pitch across wide water spaces

14 1/4

Working pressure

*front 185 lb/sq in**back 192*

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

at centre

7 3/8 x 13 1/4

Length as per Rule

32

Distance apart

9

No. and pitch of stays

in each

2 @ 10

Working pressure by Rules

184 lb/sq in

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

23/32

Back

1/8

Top

1/8

Bottom

23/32

Pitch of stays to ditto: Sides

9 1/2 x 10

Back

9 1/2 x 9 1/2

Top

10 x 9

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

189 lb/sq in

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 3/8

Lower back plate: Material

Steel

Tensile strength

29 to 30 tons

Thickness

1 3/8

Pitch of stays at wide water space

15 3/4 x 9 1/2

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

210 lb/sq in

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

*At body of stay, 2 7/8**Over threads, 3 1/4 @ ends*

No. of threads per inch

6

Area supported by each stay

365 sq in

Working pressure by Rules

193 lb/sq in

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

*At turned off part, 1 3/4**Over threads, 1 3/4*

No. of threads per inch

9

Area supported by each stay

95 sq in

003450-003457-0004

Working pressure by Rules *188 lbs.* Are the stays drilled at the outer ends *No* Margin stays: Diameter *1 1/8"* { At turned off part, or Over threads *1 1/8"*
No. of threads per inch *9* Area supported by each stay *1170"* Working pressure by Rules *181 lbs.*
Tubes: Material *Steel* External diameter { Plain *3 1/4"* Thickness *208 WC* No. of threads per inch *9*
Pitch of tubes *4 1/2" x 4 3/8"* Working pressure by Rules *214 lbs.* Manhole compensation: Size of opening in shell plate *16" x 12"* Section of compensating ring *-* No. of rivets and diameter of rivet holes *-*
Outer row rivet pitch at ends *-* Depth of flange if manhole flanged *3 1/8"* Steam Dome: Material *-*
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 pitch of rivets in outer row in dome connection to shell *-*

Type of Superheater *-* 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 22 inclusive for boilers been complied with *Yes.*

The foregoing is a correct description,

FOR GEORGE WATKINS & CO. LTD.

Harbottle

Manufacturer.

Dates of Survey { During progress of work in shops - -
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

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

This 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

Harbottle
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 5 NOV 929

Assigned

Su Dwe. 29 yrs. No. 84903.



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