

REPORT ON BOILERS.

No. 29051

18 APR 1925

Received at London Office

Date of writing Report

192

When handed in at Local Office

8th Apr 1925

Port of

SUNDERLAND.

No. in
Reg. Book.

Survey held at

Sunderland

Date, First Survey

Last Survey

6th Apr 1925

on the

S.S. "COPSEWOOD"

(Number of Visits

Gross

969

Tons

Net

537

Master

Built at

Sunderland

By whom built

Osbourne Graham & Co

Card No.

264

When built

1925

Engines made at

Sunderland

By whom made

G. Clark & Co

Engine No.

1142

When made

1925

Boilers made at

Sunderland

By whom made

G. Clark & Co

Boiler No.

1142

When made

1925

Nominal Horse Power

Owners

Joseph Constantine S.S. Line Ltd belonging to Middlesbrough

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Messrs. Gutbierhoffnungshütte A. G.

(Letter for Record

(S)

Total Heating Surface of Boilers

2239 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single end 15B

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

23.3.25

No. of Certificate

3914

Can each boiler be worked separately

Area of Firegrate in each Boiler

61 sq ft

No. and Description of safety valves to each boiler

2 Spring valves

Area of each set of valves per boiler

per Rule 7.3
as fitted 7.67

Pressure to which they are adjusted

185

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'-3"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and top of floors

1'-4"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

15'-6"

Length

10'-6"

Shell plates: Material

S

Tensile strength

28-32

Thickness

1 7/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end lap 4"

Long. seams

A. H. & Co

Diameter of rivet holes in

circ. seams 1 3/8" + 1 5/8"
long. seams 1 5/8"

Pitch of rivets

3 7/8" + 4"

Percentage of strength of circ. end seams

plate 65 + 67
rivets 42 + 44.8

Percentage of strength of circ. intermediate seam

plate —
rivets —

Percentage of strength of longitudinal joint

plate 65 + 67
rivets 91
combined 89.5

Working pressure of shell by Rules

182

Thickness of butt straps

outer 1"
inner 1 1/8"

No. and Description of Furnaces in each Boiler

3 Plain

Material

S

Tensile strength

26-30

Smallest outside diameter

3'-10"

Length of plain part

top 6'-0"
bottom 5'-6"

Thickness of plates

crown 2 5/8"
bottom 3 3/8"

Description of longitudinal joint

welded

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

none

Working pressure of furnace by Rules

188 lbs

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

1 9/32"

Pitch of stays

21 x 19 3/8"

How are stays secured

A. H. & Co

Working pressure by Rules

187 13/16

Tube plates: Material

front S
back S

Tensile strength

26-30

Thickness

3/4"

Mean pitch of stay tubes in nests

10 3/8"

Pitch across wide water spaces

14 1/2 x 9"

Working pressure

front 181 lbs
back 186

Girders to combustion chamber tops: Material

S

Tensile strength

28-32

Depth and thickness of girder

at centre

8 1/8 x 13 3/4"

Length as per Rule

33 5/8"

Distance apart

9 1/2"

No. and pitch of stays

in each

2 @ 10"

Working pressure by Rules

181

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

2 3/32"

Back

1 1/16"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

10 x 10"

Back

10 1/8 x 9"

Top

10 x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

180

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

1 3/16"

Lower back plate: Material

S

Tensile strength

26-30

Thickness

1 5/16"

Pitch of stays at wide water space

16 x 9 7/8"

Are stays fitted with nuts or riveted over

nuts in margin stays

Working Pressure

203

Main stays: Material

S

Tensile strength

28-32

Diameter

At body of stay, 2 7/8"
or Over threads 3 1/4"

No. of threads per inch

6

Area supported by each stay

396 sq in

Working pressure by Rules

180

Screw stays: Material

S

Tensile strength

26-30

Diameter

At turned off part, 1 3/4"
or Over threads 1 3/4"

No. of threads per inch

9

Area supported by each stay

100 sq in

Working pressure by Rules 180 Are the stays drilled at the outer ends Yes Margin stays: Diameter ^{At turned off part} 1 7/8 + 2"
 No. of threads per inch 9 Area supported by each stay 114 sq" Working pressure by Rules 185
 Tubes: Material Steel, solid drawn Internal diameter ^{Plain} 3 1/4 ^{Stay} 3 1/4 Thickness 2 1/4, 5/16, 3/8 No. of threads per inch 9
 Pitch of tubes 4 1/2 + 4 3/8 Working pressure by Rules 205 Manhole compensation: Size of opening in
 END shell plate 16 + 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 3 15/16 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} ^{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 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. S. G. M. C.

Manufacturer.

Dates of Survey ^{During progress of work in shops - -} Please see Machinery Are the approved plans of boiler and superheater forwarded herewith yes
^{while building} ^{During erection on board vessel - - -} Report attached Total No. of visits —

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

See other sheet.

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

G. A. H. K.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUES. 21 APR 1925

Assigned

See other rpt
Sld. 29051



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