

## REPORT ON BOILERS.

No. 30265

Received at London Office

24 JAN 1930

Date of writing Report

192

When handed in at Local Office

20 Jan 1930

Port of Sunderland.

No. in  
Reg. Book.

Survey held at

Sunderland.

Date, First Survey

Last Survey

13 Jan 1930

on the

S.S. "AMENT"

(Number of Visits

Gross

2798

Tons

Net

1656

Master

Built at

Sunderland

By whom built

William Pickering &amp; Co. Ltd.

When built

1930

Engines made at

Sunderland

By whom made

Gerr. Black Ltd.

Engine No. 1183

When made

1930

Boilers made at

Do

By whom made

Do

Boiler No. 1183

When made

1930

Nominal Horse Power

277

Owners

Port belonging to

Sunderland.

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

Manufacturers of Steel

Vereinigte Stahlwerke AG, Essen, Mulheim Ruhr

(Letter for Record

S.)

Total Heating Surface of Boilers

4488 sq. ft.

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

Two S.E. Sgl. Multit. 250

Working Pressure

180 lbs.

Tested by hydraulic pressure to

320 lbs.

Date of test

28/1/29

No. of Certificate

4076

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

63 sq. ft.

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

15.6 sq. ft.

as fitted

15.3 sq. ft.

Pressure to which they are adjusted

185 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 or uptakes and bunkers or woodwork

2'-0"

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

No

Largest internal dia. of boilers

15'-3 3/8"

Length

10'-9"

Shell plates: Material

Steel

Tensile strength

29 to 33 TONS

Thickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

D.R.L.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 3/8" &amp; 1 1/4"

Pitch of rivets

3 3/8" &amp; 3 1/2"

8 5/8"

Percentage of strength of circ. end seams

plate

65.6 &amp; 64.4%

rivets

42 &amp; 46.8%

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.5%

rivets

86.4%

combined

88.4%

Working pressure of shell by Rules

182 lbs.

Thickness of butt straps

outer

1 5/8"

inner

1 7/8"

No. and Description of Furnaces in each Boiler

3 Jeighthead's Brn. 3 C.

Material

Steel

Tensile strength

26 to 30 TONS

Smallest outside diameter

45 3/32"

Length of plain part

top

37"

bottom

64"

Thickness of plates

crown

3 3/4"

bottom

64"

Description of longitudinal joint

Welded.

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

Yes

Working pressure of furnace by Rules

183 lbs.

End plates in steam space: Material

Steel

Tensile strength

26 to 30 TONS

Thickness

1 3/2"

Pitch of stays

21" x 1 1/8"

How are stays secured

D.N.W.

Working pressure by Rules

187 lbs.

Tube plates: Material

front

Steel

back

"

Tensile strength

26 to 30 TONS.

Thickness

1 3/8" &amp; 1 3/16" Double.

Mean pitch of stay tubes in nests

10 3/8"

Pitch across wide water spaces

14 1/4"

Working pressure

220 FRONT

180 BACK.

Girders to combustion chamber tops: Material

Steel.

Tensile strength

29 to 33 TONS

Depth and thickness of girder

at centre

8" x 1 3/4"

Length as per Rule

33 5/8"

Distance apart

9 1/2"

No. and pitch of stays

in each

2 x 10"

Working pressure by Rules

182 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 TONS

Thickness: Sides

23/32"

Back

1 1/8"

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

10" x 10"

Back

10 5/8" x 9"

Top

10" x 9 1/2"

Are stays fitted with nuts or riveted over

Nuts.

Working pressure by Rules

180 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 TONS

Thickness

13 1/16"

Lower back plate: Material

Steel

Tensile strength

26 to 30 TONS

Thickness

15"

Pitch of stays at wide water space

16 1/4" x 9 3/8"

Are stays fitted with nuts or riveted over

Nuts.

Working Pressure

197 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 TONS

Diameter

At body of stay,

2 7/8"

Over threads

No. of threads per inch

6

Area supported by each stay

18" x 22"

Working pressure by Rules

180 lbs.

Screw stays: Material

Steel

Tensile strength

26 to 30 TONS

Diameter

At turned off part,

1 3/4"

Over threads

No. of threads per inch

9

Area supported by each stay

10" x 10"



Working pressure by Rules 180 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 1/8" & 2"  
 No. of threads per inch 9 Area supported by each stay 11 5/8" x 9 5/8" Working pressure by Rules 180-250  
 Tubes: Material Steel External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { No 8 W.B. 14, 5/16 & 3/8" No. of threads per inch 9  
 Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 205-250 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 CLARK LIMITED  
1098/1111 Manufacturer.

Dates of Survey { During progress of work in shops - - } Please see Machy. Rpt. Are the approved plans of boiler and superheater forwarded herewith  
 while building { During erection on board vessel - - - } (If not state date of approval.)  
 Total No. of visits ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey & the materials & workmanship are good. On completion they were 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

Shawbottle  
 Engineer-Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 28 JAN 1930

Assigned See other rpt.  
Same do.