

## REPORT ON BOILERS.

No. 32601

Date of writing Report

192

When handed in at Local Office

29 MAR 1939

Received at London Office

MAR 30 1939

Port of

SUNDERLAND.

No. in Survey held at

SUNDERLAND.

Date, First Survey

Last Survey

Mar 25 1939

on the

S.S. "BRET WALDA"

(Number of Visits

Tons

Gross 4906

Net 2766

Master

Built at Sunderland

By whom built

J. Thompson &amp; Sons, Ltd No. 591 When built 1939

Engines made at

Sunderland

By whom made

H.E. Marine Eng. Co. (1938) Ltd

Engine No. 2920

When made 1939

Boilers made at

do.

By whom made

do.

Boiler No. do.

When made do.

Nominal Horse Power

Owners

Hall Bros

Port belonging to

Newcastle

MULTITUBULAR BOILERS ~~MAIN~~, AUXILIARY, ~~OR DONKEY~~.

Manufacturers of Steel

Steel Company of Scotland

(Letter for Record 5)

Total Heating Surface of Boilers

1235 sq

Is forced draught fitted

no

Coal or Oil fired

coal

Description of Boilers

one cylindrical multitubular

Working Pressure

220 lbs.

Tested by hydraulic pressure to

380 lbs.

Date of test

12/10/38

No. of Certificate

4287

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

34.37 sq

No. and Description of safety valves to each boiler

2 direct spring

Area of each set of valves per boiler

per Rule

6.68 sq

as fitted

7.95 sq

Pressure to which they are adjusted

220 lbs.

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

Is oil fuel carried in the double bottom under boilers

no.

Smallest distance between shell of boiler and tank top plating

30"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

11'-9 1/2"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

29/32 tons/sq

Thickness

1 9/16"

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 3/16"

Pitch of rivets

3 1/2"

Percentage of strength of circ. end seams

plate

66

rivets

44

Percentage of strength of circ. intermediate seam

plate

—

rivets

—

Percentage of strength of longitudinal joint

plate

85.82

rivets

86.21

combined

88.76

Working pressure of shell by Rules

220.3 lbs.

Thickness of butt straps

outer

1/8"

inner

1"

No. and Description of Furnaces in each Boiler

2 Brighton. M. P. H. G. M. S. M. S.

Material

Steel

Tensile strength

26/30 tons/sq

Smallest outside diameter

3'-5 1/2"

Length of plain part

top

—

bottom

—

Thickness of plates

crown

4 1/4"

bottom

4 1/4"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

226 lbs.

Stays and plates in steam space: Material

Steel

Tensile strength

26/30 tons/sq

Thickness

1 1/16"

Pitch of stays

16 5/8" x 15"

How are stays secured

double nuts

Working pressure by Rules

223 lbs.

Stays and plates: Material

front

Steel

back

Steel

Tensile strength

26/30 tons/sq

Thickness

1 1/16"

Mean pitch of stay tubes in nests

10'-3"

Pitch across wide water spaces

14 1/4" x 9"

Working pressure

front

240 lbs.

back

229 lbs.

Orders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons/sq

Depth and thickness of girder

Centre

9 1/8" x 2 1/16"

Length as per Rule

2'-7 29/32"

Distance apart

11 3/4"

No. and pitch of stays

Each

3, 7 1/2"

Working pressure by Rules

224 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons/sq

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

10" x 9 5/8"

Back

9 1/4" x 9 5/8"

Top

7 1/2" x 11 1/4"

Are stays fitted with nuts or riveted over

nuts fitted

Working pressure by Rules

222 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons/sq

Thickness

1 1/16"

Lower back plate: Material

Steel

Tensile strength

26/30 tons/sq

Thickness

1 1/16"

Pitch of stays at wide water space

14 1/2" x 9 5/8"

Are stays fitted with nuts or riveted over

nuts fitted

Working Pressure

235 lbs.

Main stays: Material

Steel

Tensile strength

28/32 tons/sq

At body of stay,

2 3/8"

No. of threads per inch

6

Area supported by each stay

14 1/4" x 15"

Over threads

2 3/4"

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq

At turned off part,

1 7/8"

No. of threads per inch

9

Area supported by each stay

9 1/8" x 9 5/8"

Over threads

Working Pressure

220 lbs.

At body of stay,

2 3/8"

No. of threads per inch

6

Area supported by each stay

14 1/4" x 15"

Over threads

2 3/4"

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq

At turned off part,

1 7/8"

No. of threads per inch

9

Area supported by each stay

9 1/8" x 9 5/8"

Over threads

Working Pressure

220 lbs.

At body of stay,

2 3/8"

No. of threads per inch

6

Area supported by each stay

14 1/4" x 15"

Over threads

2 3/4"

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq

At turned off part,

1 7/8"

No. of threads per inch

9

Area supported by each stay

9 1/8" x 9 5/8"

Over threads

W11-0079

Lloyd's Register  
Foundation



Working pressure by Rules 223 1/2 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" or Over threads  
No. of threads per inch 9 Area supported by each stay 9 9/8" x 11 1/2" Working pressure by Rules 222 1/2  
Tubes: Material steel External diameter { Plain 3 3/4" Stay 3 3/4" Thickness { 8.4.6. 3/8", 5/16", 1/4" No. of threads per inch 9  
Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 223 Manhole compensation: Size of opening in  
END shell plate — 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 9/16" 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 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 22 inclusive for boilers been complied with yes.

The foregoing is a correct description,  
J. H. Smith Manufacture  
RESIDENT MANAGER.

Dates { During progress of work in shops - - } Please see Mch. 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.)

This boiler has been constructed under special survey in accordance with the approved plans, surveyor's letters and the requirements of the Rules. Workmanship and materials are good. In recommendation please see Rpt. 4.

L. R. Home

Survey Fee ... £ Rpt. 4 : When applied for, 192  
Travelling Expenses (if any) £ : When received, 192

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

WED 12 APR 1939

Assigned

See Sld. J.E. 32601

