

REPORT ON BOILERS.

No. 32601

Received at London Office

MAR 30 1939

Date of writing Report

192

When handed in at Local Office

29 MAR 1939

Port of

SUNDERLAND.

No. in Survey held at

SUNDERLAND.

Date, First Survey

Last Survey *March 25 1939*

on the

S.S. "BRET WALDA"

(Number of Visits

Gross 4906
Net 2766

Master

Built at *Sunderland* By whom built *J. Thompson & Sons, Ltd* No. *591* When built *1939*

Engines made at

Sunderland By whom made *N.E. Marine Eng. Co. (1938)* 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 *S*)

Total Heating Surface of Boilers

1235 sq ft

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 ft

No. and Description of safety valves to each boiler

2 direct spring

Area of each set of valves per boiler

6.68 sq in

Pressure to which they are adjusted

7.95 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

no

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 23/32"

Length *10'-6"*

Shell plates: Material

Steel

Tensile strength *29/33 tons/sq in*

Thickness

1 9/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R.L.

Working pressure of shell by Rules

220.3 lbs.

Percentage of strength of circ. end seams

66

44

Percentage of strength of circ. intermediate seam

—

Percentage of strength of longitudinal joint

85.82

86.21

88.76

Thickness of butt straps

outer 7/8"

inner 1"

No. and Description of Furnaces in each Boiler

2 Dighton, M. & P. G. & Co. Ltd.

Material

Steel

Tensile strength *26/30 tons/sq in*

Smallest outside diameter *3'-5 1/2"*

Length of plain part

—

Thickness of plates

4 1/6"

Description of longitudinal joint

weld

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

—

Working pressure of furnace by Rules *226 lbs.*

Stays in steam space: Material

Steel

Tensile strength *26/30 tons/sq in*

Thickness *1 1/6"*

Pitch of stays *15 9/8 x 15"*

How are stays secured

double nuts

Working pressure by Rules

223 lbs.

Tube plates: Material

Steel

front

back

Tensile strength *26/30 tons/sq in*

Thickness *1 1/6"*

13/16"

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 in*

Depth and thickness of girder

—

Centre

9 1/8 x 2 1/6"

Length as per Rule

2'-7 29/32"

Distance apart

11 3/4"

No. and pitch of stays

3, 7 1/2"

Working pressure by Rules

224 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons/sq in

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 in

Thickness

1 1/6"

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 in

At body of stay, or Over threads

2 3/4"

No. of threads per inch

6

Area supported by each stay

14 1/4" x 15"

Working pressure by Rules

220 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq in

Area supported by each stay

9 7/8" x 9 5/8"

At turned off part, or Over threads

1 7/8"

No. of threads per inch

9

Area supported by each stay

9 7/8" x 9 5/8"

Working pressure by Rules 223 1/2 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 2"
 No. of threads per inch 9 Area supported by each stay 9 5/8" x 11 1/2" Working pressure by Rules 222 1/2
 Tubes: Material steel External diameter ^{Plain} 3 1/4" Thickness ^{S.W.G.} 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
 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} —
 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} —
 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 of Survey ^{During progress of work in shops - -} Please see tech. Rpt Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 while building ^{During erection on board vessel - - -} 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 ... £ 192 When applied for, 192
 Travelling Expenses (if any) £ 192 When received, 192

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

WED 12 APR 1939

Assigned

See Sld. J.E. 32601



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