

## REPORT ON BOILERS.

No. 95792

Received at London Office JAN 5 1938

Date of writing Report

19

When handed in at Local Office

31/12/

1937

Port of NEWCASTLE ON TYNE

No. in  
Reg. Book.

Survey held at

Newcastle on Tyne

Date, First Survey

13/5/37

Last Survey

29/12/

1937

on the

s/s "BASSANO"

(Number of Visits

Gross

4843

Tons

Net

2687

Master

✓

Built at

Newcastle on Tyne

By whom built

Swan, Hunter &  
Wigham Richardson & Co

Yard No. 1560

When built 1937-12.

Engines made at

Newcastle on Tyne

By whom made

ditto.

Engine No. 1560

When made 1937

Boilers made at

ditto.

By whom made

ditto.

Boiler No. 1560

When made 1937

Nominal Horse Power

✓

Owners

Ellerman Wilson Line

Port belonging to

HULL.

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

Manufacturers of Steel

Steel Company of Scotland

(Letter for Record

S.

Total Heating Surface of Boilers

9870 Square feet

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

4 Single ended multitubular

Working Pressure

225 lbs.

Tested by hydraulic pressure to

388

Date of test

15/11/37

No. of Certificate

746, 748, 749, 750.

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

62 sq ft

No. and Description of safety valves to each boiler

2-2 1/4" dia. Cockburn's Improved High Lift Spring loaded.

Area of each set of valves per boiler

per Rule

6.51 sq in

Pressure to which they are adjusted

225 lbs.

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

NONE

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

Yes

Largest internal dia. of boilers

14'-9 3/32"

Length

12'-0"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

1 29/64"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end D.R. lap

long. seams

T.R. dbl butt straps

Diameter of rivet holes in

circ. seams

1 15/32"

Pitch of rivets

4.382"

Percentage of strength of circ. end seams

plate

66.48

rivets

42.19

Percentage of strength of circ. intermediate seam

plate

85.31

rivets

86.67

Percentage of strength of longitudinal joint

plate

85.31

rivets

86.67

combined

87.96

Working pressure of shell by Rules

226 lbs

Thickness of butt straps

outer

1 1/8"

inner

1 1/4"

No. and Description of Furnaces in each Boiler

3 Deighton Corrugated

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

44 3/8"

Length of plain part

top

3"

bottom

2'-9" cc. bottom

Thickness of plates

crown

1 1/16"

bottom

1 3/16" c.c. bottom

Description of longitudinal joint

fire welded

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

none

Working pressure of furnace by Rules

227 lbs

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 3/8"

Pitch of stays

20 1/2" x 18 3/4"

How are stays secured

Nuts inside &amp; outside

Working pressure by Rules

230 lbs.

Tube plates: Material

front

Steel

back

Tensile strength

26-30 tons

Thickness

1 5/16"

Mean pitch of stay tubes in nests

10 5/8"

Pitch across wide water spaces

13 1/2"

Working pressure

front

237 lbs.

back

245 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

10 5/8" x 1 5/8"

Length as per Rule

35 13/32"

Distance apart

9 7/8"

No. and pitch of stays

in each

3 at 8 1/4"

Working pressure by Rules

229 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

1 3/16"

Back

2 3/32"

Top

1 3/16"

Bottom

1 3/16"

Pitch of stays to ditto: Sides

8 1/4" x 9 7/8"

Back

8 5/8" x 9 7/8"

Top

8 1/4" x 9 7/8"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

226 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

3 1/32"

Pitch of stays at wide water space

14" x 8 5/8"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

264 lbs.

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

As body of stay

3 1/2" x 3 1/4"

No. of threads per inch

6

Area supported by each stay

(3 1/2") 417-84 sq in.

Working pressure by Rules

232 lbs. &amp; 228 lbs.

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

As turned off part

1 3/4"

No. of threads per inch

9

Area supported by each stay

(10 x 8 3/16) - 2

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Working pressure by Rules  $227\frac{1}{2}$  lb. Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, 2" Over threads }  
No. of threads per inch *9* ✓ Area supported by each stay  $(11\frac{1}{8} \times 8\frac{5}{8}) - 2.724$  in<sup>2</sup> Working pressure by Rules  $247\frac{1}{2}$  lb.  
Tubes: Material *IRON* ✓ External diameter { Plain 3" Stay 3" } Thickness { 8 WG.  $\frac{3}{8}$ " +  $\frac{5}{16}$ " } No. of threads per inch *9* ✓  
Pitch of tubes  $4\frac{1}{4} \times 4\frac{1}{4}$ " ✓ Working pressure by Rules  $255\frac{1}{2}$  lb. for  $\frac{3}{8}$ "  $225\frac{1}{2}$  lb. for  $\frac{5}{16}$ " Manhole compensation: Size of opening in  
shell plate  $20" \times 16"$  ✓ Section of compensating ring  $1\frac{1}{2} \times 23\frac{3}{4} + 1\frac{1}{2}$  No. of rivets and diameter of rivet holes *32 of  $1\frac{1}{8}$ " dia.*  
Outer row rivet pitch at ends  $11\frac{1}{4}$ " ✓ Depth of flange if manhole flanged  $2\frac{1}{8}$ " ✓ 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 *"North Eastern" Smoketube* Manufacturers of { Tubes *Jalbot Stead* Steel forgings *Frodingham Steel Co* Steel castings ✓  
Number of elements *208* Material of tubes *S.D. Steel* Internal diameter and thickness of tubes  $15\frac{1}{4}$ " ,  $2.5\frac{1}{4}$ " ✓  
Material of headers *Forged Steel* ✓ Tensile strength *26-30 tons* Thickness  $\frac{7}{8}$ " ✓ Can the superheater be shut off and  
the boiler be worked separately *Yes* ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Yes* ✓  
Area of each safety valve  $3.142$  sq. ins. ✓ Are the safety valves fitted with easing gear *Yes* ✓ Working pressure as per  
Rules  $225\frac{1}{2}$  lb. ✓ Pressure to which the safety valves are adjusted  $225\frac{1}{2}$  lb. ✓ Hydraulic test pressure:  
tubes  $1500$  lb. ✓ forgings and castings  $675$  lb. ✓ and after assembly in place  $450$  lb. ✓ Are drain cocks or  
valves fitted to free the superheater from water where necessary *Yes* ✓  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *Yes* ✓

FOR THE PRESIDENT, RICHARDSON, LTD.  
SWAN, HUNTER, & CO. LTD. is a correct description,  
E. J. Gaudy Manufacturer.  
DIRECTOR.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith *3/2/37*  
while building { During erection on board vessel - - } (If not state date of approval.)  
See *Mealy Report* Total No. of visits

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *75 CONSUELO.*

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

*The Boilers have been constructed under special survey in accordance with the Rules & approved plans, and the materials and workmanship are good. They have been satisfactorily fitted on board and tried under full working conditions.*

Survey Fee ... £ *See Rpt. 4* When applied for, 19  
Travelling Expenses (if any) £ : : When received, 19

*A. Watt*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 14 JAN 1938*

Assigned

*See Nwc. 76. 95792*



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