

# REPORT ON BOILERS.

No. 89704

19 JAN 1933

Received at London Office

Date of writing Report 19 When handed in at Local Office 18/11 1933 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at *Wallsend-on-Tyne* Date, First Survey *20 Dec 1932* Last Survey *13 Jan 1933*

Reg. Book. *859* on the *S. S. Dulwich* (Number of Visits *—*) Tons { Gross *4040* Net *2443*

Master *—* Built at *Stockton-on-Tees* By whom built *Smiths Dock Ltd* Yard No. *✓* When built *1931-3*

Engines made at *Stockton-on-Tees* By whom made *Blair & Co* Engine No. *✓* When made *do*

Boilers made at *do* By whom made *do* Boiler No. *✓* When made *do*

Nominal Horse Power *368* Owners *Britain S S Co Ltd* Port belonging to *London*

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

Manufacturers of Steel *Sitting of superheaters to Main Boilers* (Letter for Record *—*)

Total Heating Surface of Boilers *—* Is forced draught fitted *—* Coal or Oil fired *—*

No. and Description of Boilers *—* Working Pressure *—*

Tested by hydraulic pressure to *—* Date of test *—* No. of Certificate *—* Can each boiler be worked separately *—*

Area of Firegrate in each Boiler *—* No. and Description of safety valves to each boiler *—*

Area of each set of valves per boiler { per Rule *—* as fitted *—* Pressure to which they are adjusted *—* Are they fitted with easing gear *—*

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 *—*

Smallest distance between shell of boiler and tank top plating *—* Is the bottom of the boiler insulated *—*

Largest internal dia. of boilers *—* Length *—* Shell plates: Material *—* Tensile strength *—*

Thickness *—* Are the shell plates welded or flanged *—* Description of riveting: circ. seams { end *—* inter. *—*

Long. seams *—* Diameter of rivet holes in { circ. seams *—* long. seams *—* Pitch of rivets { *—*

Percentage of strength of circ. end seams { plate *—* rivets *—* Percentage of strength of circ. intermediate seam { plate *—* rivets *—*

Percentage of strength of longitudinal joint { plate *—* rivets *—* combined *—* Working pressure of shell by Rules *—*

Thickness of butt straps { outer *—* inner *—* No. and Description of Furnaces in each Boiler *—*

Material *—* Tensile strength *—* Smallest outside diameter *—*

Length of plain part { top *—* bottom *—* Thickness of plates { crown *—* bottom *—* Description of longitudinal joint *—*

Dimensions of stiffening rings on furnace or c.c. bottom *—* Working pressure of furnace by Rules *—*

End plates in steam space: Material *—* Tensile strength *—* Thickness *—* Pitch of stays *—*

How are stays secured *—* Working pressure by Rules *—*

Tube plates: Material { front *—* back *—* Tensile strength { *—* Thickness { *—*

Mean pitch of stay tubes in nests *—* Pitch across wide water spaces *—* Working pressure { front *—* back *—*

Girders to combustion chamber tops: Material *—* Tensile strength *—* Depth and thickness of girder *—*

At centre *—* Length as per Rule *—* Distance apart *—* No. and pitch of stays *—*

In each *—* Working pressure by Rules *—* Combustion chamber plates: Material *—*

Tensile strength *—* Thickness: Sides *—* Back *—* Top *—* Bottom *—*

Pitch of stays to ditto: Sides *—* Back *—* Top *—* Are stays fitted with nuts or riveted over *—*

Working pressure by Rules *—* Front plate at bottom: Material *—* Tensile strength *—*

Thickness *—* Lower back plate: Material *—* Tensile strength *—* Thickness *—*

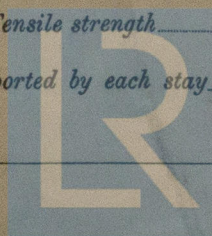
Pitch of stays at wide water space *—* Are stays fitted with nuts or riveted over *—*

Working Pressure *—* Main stays: Material *—* Tensile strength *—*

Diameter { At body of stay, *—* or *—* No. of threads per inch *—* Area supported by each stay *—*

Working pressure by Rules *—* Screw stays: Material *—* Tensile strength *—*

Diameter { At turned off part, *—* or *—* No. of threads per inch *—* Area supported by each stay *—*



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W384-0129



Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, \_\_\_\_\_  
or \_\_\_\_\_  
Over threads \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
Tubes: Material \_\_\_\_\_ External diameter { Plain \_\_\_\_\_ Thickness { \_\_\_\_\_ No. of threads per inch \_\_\_\_\_  
Stay \_\_\_\_\_  
Pitch of tubes \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ 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 \_\_\_\_\_ 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 Smelt tube Manufacturers of Tubes Yalhot Stead & Co.  
Steel castings forgings Widdingham Steel Coy  
Number of elements 138 Material of tubes Solid drawn steel Internal diameter and thickness of tubes 1 1/4" x 2 1/2" m  
Material of headers wrought steel Tensile strength 26 to 30 tons Thickness 1 1/8" Can the superheater be shut off and  
the boiler be worked separately no 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 3.1416 sq ft Are the safety valves fitted with easing gear yes Working pressure as per  
Rules 185 lbs Pressure to which the safety valves are adjusted 190 lbs Hydraulic test pressure:  
tubes 1500 lbs and after assembly in place 463 lbs 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 \_\_\_\_\_

The foregoing is a correct description, \_\_\_\_\_

Manufacturer. \_\_\_\_\_

Dates { During progress of  
of Survey { work in shops - - }  
while { During erection on  
building { board vessel - - }

Are the approved plans of boiler and superheater forwarded herewith  
(If not state date of approval.)

Total No. of visits \_\_\_\_\_

Is this Boiler a duplicate of a previous case \_\_\_\_\_ If so, state Vessel's name and Report No. \_\_\_\_\_

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

Superheaters fitted to the three main boilers.  
Materials & workmanship good. Hydraulic tests  
satisfactory.  
Safety valves adjusted under steam as above.

Survey Fee ... £ 15 : - : -

When applied for, 18 JAN 1933

Travelling Expenses (if any) £ : : -

When received, 11.2. 1933

William Butler

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 31 JAN 1933

Assigned



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