

# REPORT ON BOILERS

No. 16298.

13 APR 1929

Received at London Office

Date of writing Report 12.4.29 When handed in at Local Office 12.4.29 Port of Grimsby

No. in Reg. Book Survey held at Lincoln Date, First Survey 5-2-29 Last Survey 4.4.29

on the (Number of Visits 9) Tons } Gross } Net

Built at Yokohama By whom built Yokohama Dock Co. Yard No. ? When built

Engines made at By whom made Engine No. When made

Boilers made at Lincoln By whom made Babcock & Wilcox, Ltd. Boiler No. 73/4595 When made 1929

Owners Port belonging to

## VERTICAL DONKEY BOILER.

Made at Lincoln By whom made Babcock & Wilcox, Ltd. Boiler No. 73/4595 When made 1929 Where fixed -

Manufacturers of Steel Parkgate St. L. Co. Ltd.

Total Heating Surface of Boiler 350 sq. ft. Is forced draught fitted - Coal or Oil fired oil & coke

No. and Description of Boilers one, Clarken, waste heat Working pressure 100 lbs

Tested by hydraulic pressure to 200 lbs. Date of test 27th March, 1929 No. of Certificate 266

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler Two spring loaded.

Area of each set of valves per boiler } per rule 4.56 } as fitted 6.28 Pressure to which they are adjusted - Are they fitted with easing gear -

State whether steam from main boilers can enter the donkey boiler - Smallest distance between boiler or uptake and bunkers

or woodwork - Is oil fuel carried in the double bottom under boiler - Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated - Largest internal dia. of boiler 5'-0" Height 8'-3 7/8"

Shell plates: Material S. M. steel Tensile strength 28/32 T Thickness 7/16"

Are the shell plates welded or flanged D. R. Lap Description of riveting: circ. seams SR & DR Lap long. seams DR Lap

Dia. of rivet holes in } circ. seams 13/16 } Pitch of rivets 1 7/8 x 2 5/8 } Percentage of strength of circ. seams } plate 57.69 } rivets 52.74 } of longitudinal joint } plate 69 } rivets 74 } combined 75

Working pressure of shell by rules 133 lbs Thickness of butt straps } outer } inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Flat Material S. M. steel

Tensile strength 26/30 T. Thickness 5/8" Radius - Working pressure by rules 230 lbs.

Description of Furnace: Plain, spherical, or dished crown dished Material S. M. steel Tensile strength 26 T.

Thickness 7 13/16" External diameter } top 4'-1 1/8" } bottom - Length as per rule 5'-2 1/2" Working pressure by rules 112 lbs.

Pitch of support stays circumferentially - and vertically - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Radius of spherical or dished furnace crown 3'-8" Working pressure by rule 117 lbs

Thickness of Ogee Ring 7/8" Diameter as per rule } D 4'-1 1/8" } a 4'-1 3/8" Working pressure by rule 182 lbs.

Combustion Chamber: Material - Tensile strength - Thickness of top plate -

Radius if dished - Working pressure by rule - Thickness of back plate - Diameter if circular -

Length as per rule - Pitch of stays - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Working pressure of back plate by rules -

Tube Plates: Material } front } back } Tensile strength } Thickness } Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule } front } back } Pitch in outer vertical rows } Dia. of tube holes FRONT } stay } plain } BACK } stay } plain }

Is each alternate tube in outer vertical rows a stay tube - Working pressure by rules } 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 rule -



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**Crown stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter <sup>at body of stay,</sup> \_\_\_\_\_  
or <sub>over threads</sub> \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

**Screw stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter <sup>at turned off part,</sup> \_\_\_\_\_  
or <sub>over threads</sub> \_\_\_\_\_ No. of threads per inch \_\_\_\_\_  
Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_

**Tubes:** Material \_\_\_\_\_ External diameter <sup>plain</sup> 3 1/2" \_\_\_\_\_ Thickness <sup>6 Bwg</sup> \_\_\_\_\_  
or <sub>stay</sub> \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_ 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 \_\_\_\_\_

**Uptake:** External diameter \_\_\_\_\_ Thickness of uptake plate \_\_\_\_\_

**Cross Tubes:** No. \_\_\_\_\_ External diameters \_\_\_\_\_ Thickness of plates \_\_\_\_\_

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,

**BALFOUR & WILCOX LTD**

(Lincoln Branch), Manufacturer.

Annual Survey Request.

Dates of Survey <sup>while building</sup> <sub>During progress of work in shops - -</sub> 1929 Feb 5, 13, 22, 26 Mar 1, 8, 15, 27 Apr 4

Is the approved plan of boiler forwarded herewith (If not state date of approval.)

yes from 16302

Total No. of visits 9

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

This boiler has been built under special survey and in accordance with the rules and approved plan. The materials and workmanship are good.

This boiler has now been despatched to Yokohama.

This case is a duplicate of Gravity Rpt No. 16297.

Survey Fee ... .. £ 4 : 4 : 7 When applied for, 3/4/19 29

Travelling Expenses (if any) £ 1 : 8 : 7 When received, 3.7.19 29 Huly

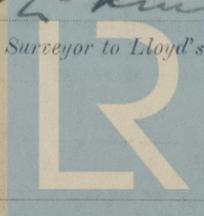
*W. G. C. K. L. L.*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 2 MAY 1930

Assigned

See F.E. Rpt



Lloyd's Register Foundation