

# REPORT ON BOILERS.

No. 89569

Received at London Office

14 DEC 1932

Date of writing Report 19 When handed in at Local Office 12/12/1932 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. 60846 Survey held at Walsend-on-Tyne Date, First Survey 7<sup>th</sup> hour Last Survey 8 Dec 1932

on the "S.S. Dartford" (Number of Visits 8) (Gross 4046 Tons) (Net 2443 Tons)

Master Stockton-on-Tees Built at Stockton-on-Tees By whom built Smiths & Co Ltd Yard No.  When built 1930-10

Engines made at Stockton-on-Tees By whom made Blair & Co (1926) Ltd Engine No.  When made do

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

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

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

Manufacturers of Steel Fitting 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            <sup>end</sup>            <sub>inter.</sub>           

long. seams            Diameter of rivet holes in            <sup>circ. seams</sup>            <sub>long. seams</sub>            Pitch of rivets           

Percentage of strength of circ. end seams            <sup>plate</sup>            <sub>rivets</sub>            Percentage of strength of circ. intermediate seam            <sup>plate</sup>            <sub>rivets</sub>           

Percentage of strength of longitudinal joint            <sup>plate</sup>            <sub>rivets</sub>            <sub>combined</sub>            Working pressure of shell by Rules           

Thickness of butt straps            <sup>outer</sup>            <sub>inner</sub>            No. and Description of Furnaces in each Boiler           

Material            Tensile strength            Smallest outside diameter           

Length of plain part            <sup>top</sup>            <sub>bottom</sub>            Thickness of plates            <sup>crown</sup>            <sub>bottom</sub>            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            <sup>front</sup>            <sub>back</sub>            Tensile strength            Thickness           

Mean pitch of stay tubes in nests            Pitch across wide water spaces            Working pressure            <sup>front</sup>            <sub>back</sub>           

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           

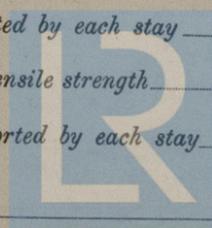
Pitch of stays at wide water space            Are stays fitted with nuts or riveted over           

Working Pressure            Main stays: Material            Tensile strength           

Diameter            <sup>At body of stay,</sup>            <sub>or</sub>            <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>            <sub>or</sub>            <sub>Over threads</sub>            No. of threads per inch            Area supported by each stay           



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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 \_\_\_\_\_ Stay \_\_\_\_\_ Thickness { \_\_\_\_\_ 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 \_\_\_\_\_ 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 Smoke tube Manufacturers of Weldless Steel Tube Coy  
Forgings Yorkshire Steel Coy  
 Number of elements 138 Material of tubes Solid drawn steel Internal diameter and thickness of tubes 1 1/4" x 2.5" thick  
 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 2.1416 sq" 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. castings 555 lbs. and after assembly in place 465 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 of Survey { During progress of work in shops - - } 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 \_\_\_\_\_

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 : 0 : 0 | When applied for, 13 DEC 1932  
 Travelling Expenses (if any) £ : ✓ : | When received, 30.12.32  
William P. Butler  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 23 DEC 1932

Assigned \_\_\_\_\_

