

REPORT ON BOILERS.

No. 17344

Received at London Office 14 APR 1934

Date of writing Report 11th April 1934 When handed in at Local Office 1934 Port of West Hartlepool

No. in Survey held at West Hartlepool Date, First Survey 17th Febry Last Survey 10 April 1934

8001 on the Steel Sc "WILLOWPOOL" (Number of Visits 20) (Gross 4815) (Net 2978) Tons

Master ✓ Built at Stockton By whom built Popner, Br & Pingle (Stockton) Ltd. Yard No. When built 1925

Engines made at Stockton By whom made Blair & Co Ltd. Engine No. When made 1925

Boilers made at By whom made Boiler No. When made 1925

Nominal Horse Power 437. Owners Pool Shipping Co Ltd. Port belonging to West Hartlepool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record)

Total Heating Surface of Boilers Is forced draught fitted Coal or Oil fired Working Pressure

No. and Description of Boilers

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 joints {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 Working pressure by Rules

How are stays secured

Tube plates: Material {front back} Tensile strength Thickness Working pressure {front back}

Mean pitch of stay tubes in nests Pitch across wide water spaces

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

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 Over threads} 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 Over threads} 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 _____

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Type of Superheater Smoke tube Manufacturers of Tubes Stewart & Lloyd Glasgow
Lairington Steel Foundry Leyland Lancs

Number of elements 44 (each boiler) Material of tubes Solid drawn steel Internal diameter and thickness of tubes 19 mfm. 13 mfm.

Material of headers Mild steel Tensile strength 26-30 tons Thickness 1 7/16 mean 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 1.465 sq inch Are the safety valves fitted with easing gear Yes. Working pressure as per Rules 180 lbs per square inch Pressure to which the safety valves are adjusted 190 lbs per square inch Hydraulic test pressure: tubes 1250 lbs per square inch castings 600 lbs per sq inch and after assembly in place 1,000 lbs per sq inch Are drain 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 - - - 1941 Feb 1, 5, 6, 7, 8, 12, 13, 14, 15, 19, 20
 while building { During erection on board vessel - - - Mar 1, 9, 10, 12, 13, 19, 22, 27, 28

Are the approved plans of boiler and superheater forwarded herewith No. 2-10-33
 (If not state date of approval.)

Total No. of visits _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The smoke tube superheaters have been constructed in accordance with the approved plans and are fitted to each main boiler. The materials and workmanship have been found good.

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Survey Fee ... See in chy Rpt. When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

J. Brooke Smith
 Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 24 APR 1934

Committee's Minute _____
 Assigned _____