

REPORT ON BOILERS.

No. 24325

Received at London Office

30 JUL 1947

Date of writing Report 29-7-47 When handed in at Local Office 28-7-47 Port of Antwerp.

No. in Survey held at Antwerp. Date, First Survey 6-11-46. Last Survey 16 June 1947.

g. Book. 19904 on the S.S. "HEMBURY" ex H.M.S. "GREENWICH" (Number of Visits 11) Gross Tons 11 Net Tons 11

Master Wallsend-on-Tyne Built at Newcastle-on-Tyne By whom built Wm. Robson Ltd. Yard No. 184 When built 1915

Engines made at Wallsend-on-Tyne By whom made Swan, Hunter & Wigham Richardson Engine No. ✓ When made 1913.

Boilers made at Stockton By whom made Sudron Co. Boiler No. ✓ When made 1913.

Nominal Horse Power ✓ Owners J & R Gault Ltd. Port belonging to London.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (stated) John Spencer Sons Ltd. (Letter for Record ✓)

Total Heating Surface of Boilers 1076 sq ft Is forced draught fitted No Coal or Oil fired Coal.

No. and Description of Boilers One - Single-End Scotch Type. Working Pressure 100 lbs/sq in.

Tested by hydraulic pressure to 200 lbs/sq in. Date of test 25-5-47. No. of Certificate ✓ Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 32.8 sq ft No. and Description of safety valves to each boiler Two direct spring loaded.

Area of each set of valves per boiler per Rule 16.4 Pressure to which they are adjusted 100 lbs/sq in. Are they fitted with easing gear yes.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No - Non Return Valve fitted

Smallest distance between boilers or uptakes and bunkers or woodwork Fitted in tween De. Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating No - Is the bottom of the boiler insulated yes.

Largest internal dia. of boilers 10' - 10 1/16" Length 9' 6" Shell plates: Material Steel Tensile strength 29-32.8 tons/sq in.

Thickness 21/32" Are the shell plates welded or flanged No Description of riveting: circ. seams end 3/4"

Long. seams T.R. Lap. Diameter of rivet holes in circ. seams 15/16" Pitch of rivets 3 15/16"

Percentage of strength of circ. end seams plate 64.0 Percentage of strength of circ. intermediate seam plate 76.1

Percentage of strength of longitudinal joint rivets 50.8 Working pressure of shell by Rules 103 lbs/sq in.

Thickness of butt straps outer ✓ No. and Description of Furnaces in each Boiler 2 - Plain Welded.

Material Steel Tensile strength 26-30 tons/sq in. Smallest outside diameter 3' 4 1/2"

Length of plain part top 6' - 6 13/16" Thickness of plates bottom 19/32" Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 102 lbs/sq in.

End plates in steam space: Material Steel Tensile strength 26-30 tons/sq in. Thickness 3/4" Pitch of stays 15 3/4" x 14 3/4"

How are stays secured Double Nuts & Washers. Working pressure by Rules 102 lbs/sq in.

Tube plates: Material Steel Tensile strength 26-30 tons/sq in. Thickness 3/4"

Mean pitch of stay tubes in nests 9" Pitch across wide water spaces 15 1/2" Working pressure front 106 lbs/sq in. (w.w. space).

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons/sq in. Depth and thickness of girder back 222 lbs/sq in.

Distance apart 8" No. and pitch of stays 27

Working pressure by Rules 111 lbs/sq in. Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/sq in. Thickness: Sides 1 1/32" Back 1/2" Top 15/32" Bottom 27/32"

Pitch of stays to ditto: Sides 7" x 7 1/2" Back 7 3/4" x 7 1/2" Top 8" x 7" Are stays fitted with nuts or riveted over Fitted with nuts

Working pressure by Rules 101 lbs/sq in. (sides) Front plate at bottom: Material Steel Tensile strength 26-30 tons/sq in.

Thickness 3/4" Lower back plate: Material Steel Tensile strength 26-30 tons/sq in. Thickness 3/4"

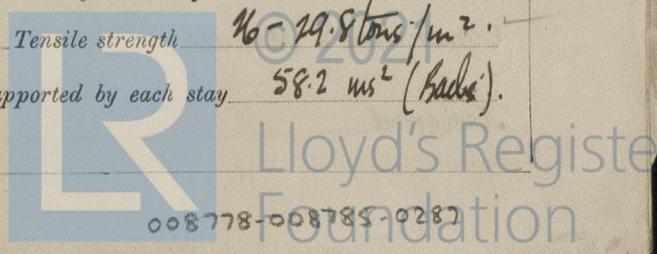
Pitch of stays at wide water space 14" x 7 3/4" Are stays fitted with nuts or riveted over Fitted with nuts.

Working Pressure 205 lbs/sq in. Main stays: Material Steel Tensile strength 27-29.8 tons/sq in.

Diameter At body of stay, 2 1/4" No. of threads per inch 8 Area supported by each stay 242 sq in.

Working pressure by Rules 108 lbs/sq in. Screw stays: Material Steel Tensile strength 26-29.8 tons/sq in.

Diameter At turned off part, 1 1/2", 1 9/8" x 1 1/4" No. of threads per inch 9. Area supported by each stay 58.2 sq in. (backs).



Working pressure by Rules $113 \frac{1}{2} \text{ lbs/in}^2$ Are the stays drilled at the outer ends *No* Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. 1 \frac{3}{8} \text{ to } 1 \frac{1}{2} \text{''}$

No. of threads per inch *8* Area supported by each stay 52.5 ins^2 Working pressure by Rules $112 \frac{1}{2} \text{ lbs/in}^2$

Tubes: Material *Steel* External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. \left. \begin{array}{l} 3 \frac{1}{2} \text{''} \\ 3 \frac{1}{4} \text{''} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 5 \frac{1}{16} \text{''} \\ 3 \frac{3}{8} \text{''} \end{array} \right.$ No. of threads per inch *9*

Pitch of tubes $1 \frac{1}{2} \text{''} \times 1 \frac{1}{4} \text{''}$ Working pressure by Rules $112 \frac{1}{2} \text{ lbs/in}^2$ Manhole compensation: Size of opening in shell plate $16 \text{''} \times 12 \text{''}$ Section of compensating ring $5 \frac{1}{2} \text{''} \times 7 \frac{1}{8} \text{''}$ No. of rivets and diameter of rivet holes $34 \text{ C } 1 \frac{5}{16} \text{''}$

Outer row rivet pitch at ends $3 \frac{15}{16} \text{''}$ 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 $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$ _____

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

Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{array} \right.$

Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____

Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off and the boiler be worked separately _____

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____

Area of each safety valve _____ Are the safety valves fitted with casing gear _____ Working pressure as per Rules _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____

Forgings and castings _____ and after assembly in place _____ Are drain cocks or valves fitted to free the superheater from water where necessary _____

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 $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building } \left\{ \begin{array}{l} \text{During erection on board vessel - - -} \end{array} \right. \end{array} \right.$

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.)

Please see Report 9. for details of Recommendations etc.

Survey Fee ... £ : : } When applied for, 19

Travelling Expenses (if any) £ : : } When received, 19

J. S. Martin
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____

Assigned _____



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