

REPORT ON BOILERS.

No. 14041

22 APR 1930

Received at London Office

Date of writing Report 16.4.30 When handed in at Local Office 16.4.30 Port of MIDDLESBROUGH.

No. in Reg. Book. Survey held at STOCKTON Date, First Survey 5th February Last Survey 16.4.30.
on the boiler for Messrs. Plenty, Son T.S.S. 'SALVADOR' (Number of Visits 14) Tons Gross 255-42 Net ✓Master Built at Selby By whom built Cochrane & Son Yard No. 1049 When built 1930
Engines made at Newbury By whom made Plenty & Sons. Engine No. 2640 When made 1930
Boiler made at Stockton By whom made Riley Bros. (Boilermakers) Ltd. Boiler No. 5984 When made 1930.
Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Iron Co. (Letter for Record S.)
 Total Heating Surface of Boilers 1650 sq. ft. Is forced draught fitted Coal or Oil fired
 No. and Description of Boilers 1 S.B. Working Pressure 190 lbs. ✓
 Tested by hydraulic pressure to 335 lbs. Date of test 16.4.30 No. of Certificate 6776. Can each boiler be worked separately
 Area of Firegrate in each Boiler 53 sq. ft. No. and Description of safety valves to each boiler
 Area of each set of valves per boiler $\frac{1}{2}$ per Rule Pressure to which they are adjusted 190 lbs. (See over) 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 13'-3 $\frac{3}{4}$ " Length 10'-6" Shell plates: Material Steel ✓ Tensile strength 29/33 ✓
 Thickness 1 $\frac{1}{8}$ " Are the shell plates welded or flanged No. ✓ Description of riveting: circ. seams $\frac{29}{32}$ end D.R. ✓
 long. seams T.R.D.B.S. (52 welds) Diameter of rivet holes in circ. seams 1 $\frac{7}{32}$ " ✓ Pitch of rivets 3 $\frac{1}{2}$ " ✓
 Percentage of strength of circ. end seams plate 65.2 rivets 47.1 Percentage of strength of circ. intermediate seam plate 85.8 rivets 87.4 ✓
 Percentage of strength of longitudinal joint plate 89.0 rivets 89.0 Working pressure of shell by Rules 192 lbs.
 Thickness of butt straps outer 27/32" inner 31/32" No. and Description of Furnaces in each Boiler 3 C.F. ✓
 Material Steel ✓ Tensile strength 26/30. ✓ Smallest outside diameter 3'-3 $\frac{5}{16}$ " ✓
 Length of plain part top bottom ✓ Thickness of plates crown 1 $\frac{7}{32}$ " bottom 3/32" ✓ Description of longitudinal joint weld. ✓
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 195 lbs.
 End plates in steam space: Material Steel ✓ Tensile strength 26/30. ✓ Thickness 1 $\frac{1}{32}$ " ✓ Pitch of stays 19" x 16" ✓
 How are stays secured D.N.W. Working pressure by Rules 192 lbs. ✓
 Tube plates: Material front Steel ✓ back Steel ✓ Tensile strength 26/30. ✓ Thickness 29/32" front 13/16" back 194 lbs. ✓
 Mean pitch of stay tubes in nests 10 $\frac{3}{16}$ " Pitch across wide water spaces 14 $\frac{3}{4}$ " x 8 $\frac{1}{2}$ " ✓ Working pressure 228 lbs. ✓
 Girders to combustion chamber tops: Material Steel ✓ Tensile strength 28/32. ✓ Depth and thickness of girder
 at centre 9" x 3 $\frac{1}{4}$ " (double) Length as per Rule 2'-6" ✓ Distance apart 11" ✓ No. and pitch of stays
 in each 3-7" Working pressure by Rules 190 lbs. ✓ Combustion chamber plates: Material Steel ✓
 Tensile strength 26/30. ✓ Thickness: Sides 1 $\frac{1}{16}$ " ✓ Back 2 $\frac{1}{32}$ " ✓ Top 1 $\frac{1}{16}$ " ✓ Bottom 1 $\frac{1}{16}$ " ✓
 Pitch of stays to ditto: Sides 10 $\frac{1}{2}$ " x 7" ✓ Back 9" x 8 $\frac{1}{4}$ " ✓ Top 11" x 7" ✓ Are stays fitted with nuts or riveted over nuts. ✓
 Working pressure by Rules 194 lbs. ✓ Front plate at bottom: Material Steel ✓ Tensile strength 26/30. ✓
 Thickness 32 ✓ Lower back plate: Material Steel ✓ Tensile strength 26/30 ✓ Thickness 32 ✓
 Pitch of stays at wide water space 14 $\frac{3}{4}$ " x 9" Are stays fitted with nuts or riveted over nuts ✓
 Working Pressure 194 lbs. ✓ Main stays: Material Steel ✓ Tensile strength 28/32. ✓
 Diameter At body of stay, or Over threads 2 $\frac{7}{8}$ " ✓ No. of threads per inch 6. ✓ Area supported by each stay 297.5 sq. in. ✓
 Working pressure by Rules 205 lbs. ✓ Screw stays: Material Steel ✓ Tensile strength 26/30. ✓
 Diameter At turned off part, or Over threads 1 $\frac{5}{8}$ " ✓ No. of threads per inch 9. ✓ Area supported by each stay 75 sq. in. ✓

Working pressure by Rules 202 lbs. Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part, 1 7/8" or Over threads }
 No. of threads per inch 9. Area supported by each stay 101 sq Working pressure by Rules 211 lbs.
 Tubes: Material iron External diameter { Plain 3 1/4" 16 3/16" Stay 3 1/4" 16 3/16" Thickness { 8 wgs. No. of threads per inch 9.
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules p. 230 lbs. s. 197 lbs. Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 9" x 18" No. of rivets and diameter of rivet holes 44 - 1 3/32"
 Outer row rivet pitch at ends 9" 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 Manufacturers of { Tubes Steel castings }
 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 easing gear Working pressure as per Rules
 Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes, 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

Ye. RILEY BROS. (BOILERMAKERS) LIMITED.
 The foregoing is a correct description,
J. H. Shields SECRETARY Manufacturer.

Dates of Survey { During progress of work in shops - - } 1930: Feb. 5, 12, 19, 24 Mar. 4, 6, 12, 19 Are the approved plans of boiler and superheater forwarded herewith Ye.
 { During erection on board vessel - - } 25, 28, Apr. 1, 8, 11, 16 (If not state date of approval.)
 Total No. of visits 14

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

The materials and workmanship are good.
 This boiler has been built under special survey in accordance with the Rules and Approved Plan.
 It will be installed in the Hull district

This boiler has been satisfactorily fitted on board, tried under steam, and its safety valves adjusted to 190 lbs. sq.

John H. Shields

Survey Fee £ 11-0-0 When applied for, Monthly
 Travelling Expenses (if any) £ : : When received, 192

P. J. Mac

Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 1 JUL 1930

Committee's Minute

Assigned

See J. H. Shields



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