

REPORT ON BOILERS.

No. 16378

Received at London Office 24 JAN 1924

Port of LIVERPOOL.

Survey held at Birkenhead Date, First Survey 3rd Oct/22 Last Survey 25-1-1923

Boiler for S.S. "LA PLAYA" (DIESEL ELECTRIC SHIP) (Number of Visits ✓) Tons { Gross 3682 Net 2144

Built at Birkenhead By whom built Cammell Laird & Co Ltd Yard No. 894 When built 1921

Engines made at Birkenhead By whom made Cammell Laird & Co Ltd Engine No. 894 When made 1921

Boilers made at Birkenhead By whom made Cammell Laird & Co Ltd Boiler No. 894 When made 1921

Indicated Horse Power 51 Owners Muffint SS Co Ltd (Clark & Lennan Mgrs) Port belonging to Glasgow.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Lancashire Steel Co, Port Talbot Steel Co & John Spencer and Co Ltd (Letter for Record S.)

Total Heating Surface of Boilers 769 sq feet Is forced draught fitted No. ✓ Coal or Oil fired Oil ✓

No. and Description of Boilers One Cylindrical Multitubular Single ended Working Pressure 140 lbs.

Tested by hydraulic pressure to 260 lbs Date of test 25/1/23 No. of Certificate 2215 Can each boiler be worked separately ✓

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

Area of each set of valves per boiler { per Rule 7.45 sq/in ✓ as fitted 7.95 sq/in Pressure to which they are adjusted 140 lbs Are they fitted with easing gear Yes ✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boilers or uptakes and tankers or woodwork 15" 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 Yes ✓

Largest internal dia. of boilers 9'-9" Length 9'-4" Shell plates: Material Steel Tensile strength 28-32 tons

Thickness 2 1/32" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams { end Double ✓ inter. 2.567" ✓

Percentage of strength of circ. end seams { plate 68.4% ✓ rivets 50.5% ✓ Percentage of strength of circ. intermediate seam { plate 85.2% ✓ rivets 110.6% ✓ combined 92.5% ✓

Working pressure of shell by Rules 140.7 lbs.

Thickness of butt straps { outer 9/16" ✓ inner 3/4" ✓ No. and Description of Furnaces in each Boiler Two, corrugated, Dighton section.

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-2" ✓

Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 1/2" ✓ bottom 1/2" ✓ Description of longitudinal joint Welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 207.7 lbs.

Stays in steam space: Material Steel Tensile strength 26-30 tons Thickness 13/16" Pitch of stays 14" x 15" ✓

How are stays secured Nuts and washers Working pressure by Rules 142.5 lbs.

Stays plates: Material { front Steel ✓ back Steel ✓ Tensile strength { 26-30 tons ✓ Thickness { 13/16" ✓ 3/4" ✓

Span pitch of stay tubes in nests 8 1/4" Pitch across wide water spaces 14" Working pressure { front 149.1 lbs ✓ back 295.5 lbs ✓

Orders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder

centre 6" x 9/16" Length as per Rule 1'-10 1/16" Distance apart 7" No. and pitch of stays

each One Working pressure by Rules 149.7 lbs Combustion chamber plates: Material Steel ✓

Tensile strength 26-30 tons Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4" ✓

Pitch of stays to ditto: Sides 9" Back 9" x 8" Top 7" Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules 145.4 and 149 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 13/16" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 13/16" ✓

Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over Nuts ✓

Working Pressure 194 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter { At body of stay, 2 1/8" ✓ or Over threads No. of threads per inch 6 Area supported by each stay 210 sq/in

Working pressure by Rules 144.1 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter { At turned off part, 1 1/2" ✓ or Over threads No. of threads per inch 9 Area supported by each stay 72 sq/in

Working pressure by Rules 174 lbs Are the stays drilled at the outer ends ☒ Margin stays: Diameter { At turned off part, 1 5/8" or Over threads 1 5/8" }
No. of threads per inch 9 Area supported by each stay 99 sq. ins Working pressure by Rules 153.6 lbs
Tubes: Material Steel External diameter { Plain 3" Stay 3" } Thickness { 9 W.G. 5/16" } No. of threads per inch 9
Pitch of tubes A 1/8" x A 1/8" Working pressure by Rules 879 lbs and 212 lbs Manhole compensation: Size of opening 21 1/4" x 17 1/4" Section of compensating ring 7 5/8" x 3/4" No. of rivets and diameter of rivet holes 44 - 1 5/16" dia
shell plate 21 1/4" x 17 1/4" Outer row rivet pitch at ends 6 3/8" Depth of flange if manhole flanged 3 1/4" 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
How connected to shell Inner radius of crown Working pressure by Rules
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 23 inclusive for boilers been complied with Yes. ☒

The foregoing is a correct description,

J. W. P. Limited Manufacturer

Dates of Survey { During progress of work in shops - - - } See report on machinery. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes. ☒
while building { During erection on board vessel - - - }
Total No. of visits ☒

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

This Boiler has now been built under special survey and in accordance with the approved plan and Secretary's letter E 24 August 1922. The material and workmanship are of a good quality and when tested to 260 lbs per sq. inch was found tight and satisfactory in every respect. The Boiler has been fitted on board, examined under steam and safety valves adjusted to 140 lbs per sq. inch. Size of compression washer 5 1/16" dia. 3/8" dia. This Boiler is eligible in our opinion for notation + N.B. 1-24.

This Boiler has been fitted with an oil fuel installation in accordance with approved plans, Secretary's letter E August 30, 1923 and the rule requirements. On completion the installation was examined and tested under full working conditions and found satisfactory in every respect. The Boiler is eligible in our opinion to have notation "Fitted for oil fuel 1,24 F.P. above 150° F". For particulars of notation see Manchester report No 5181 attached.

Survey Fee ... £ 5 : 2 : 0 When applied for, 24 JAN 1924

Travelling Expenses (if any) £ : : When received, 24 JAN 1924

John Dykes and J. L. Leicester
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 25 JAN 1924

Assigned See report attached



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