

REPORT ON BOILERS.

No. 78431

Received at London Office 22 OCT. 1924

Date of writing Report 2nd Oct 1924 When handed in at Local Office 2nd Oct 1924 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Hebburn & Newcastle Date, First Survey 11 June 1923 Last Survey 2nd October 1924

90919 on the Steel Iron Screw Steamer Talamba. (Number of Visits —) Tons {Gross — Net —}

Master Built at Hebburn By whom built R. W. Hawthorn Leslie & Co Ltd Yard No. 533 When built 1924

Engines made at St. Peter's Newcastle By whom made R. W. Hawthorn Leslie & Co Ltd Engine No. 3571 When made 1924

Boilers made at do By whom made do Boiler No. 3571 When made 1924

Nominal Horse Power 1376 Owners British India Steam Nav Co Ltd Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel J. Spencer & Son Ltd & D Colville & Son Ltd (Letter for Record S)

Total Heating Surface of Boilers 21582 sq ft Is forced draught fitted yes Coal or Oil fired Oil

No. and Description of Boilers Seven Single Ended 7SE Working Pressure 215 lbs

Tested by hydraulic pressure to 373 lbs Date of test 27/11/23 14/12/23 11/12/23 9795, 9796, 9798 No. of Certificate 9799, 9802, 9803 Can each boiler be worked separately yes.

Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler 3, direct spring

Area of each set of valves per boiler per Rule 14.96 sq in as fitted 16.58 Pressure to which they are adjusted 220 lbs Are they fitted with easing gear yes.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler none

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Is oil fuel carried in the double bottom under boilers yes.

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated yes.

Largest internal dia. of boilers 16'-6" Length 12'-0" Shell plates: Material Steel Tensile strength 31/35 tons

Thickness 1 5/32" Are the shell plates welded or flanged No Description of riveting: circ. seams end 2 R Lap

long. seams Double Steps 5 rivets Diameter of rivet holes in circ. seams 1 9/16" Pitch of rivets 4.122"

Percentage of strength of circ. end seams plate 62.7 rivets 46.5 Percentage of strength of circ. intermediate seam plate 84.9 rivets 87.5

Percentage of strength of longitudinal joint plate 84.9 rivets 87.5 combined 87.4 Working pressure of shell by Rules 217 lbs per sq in

Thickness of butt straps outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler 4 cf. Four Horizons

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 42 1/4"

Length of plain part top bottom Thickness of plates crown 5/8" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 215 lbs

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 3/8" Pitch of stays 22" x 18"

How are stays secured Double nuts & washers Working pressure by Rules 219 lbs

Tube plates: Material front back Steel Tensile strength 26 to 30 tons Thickness 1 3/16"

Mean pitch of stay tubes in nests 8 1/2" Pitch across wide water spaces 13.5" Working pressure front 278 lbs back 277

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

at centre 10 1/4" x 1 1/2" Length as per Rule 34" Distance apart 9 1/2" No. and pitch of stays

in each three 7 3/4" Working pressure by Rules 233 lbs Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"

Pitch of stays to ditto: Sides 9" x 8 1/4" Back 9 1/4" x 8 1/8" Top 9 1/2" x 7 3/4" Are stays fitted with nuts or riveted over Nuts inside

Working pressure by Rules 220 lbs Front plate at bottom: Material Steel Tensile strength 26 to 30 tons

Thickness 1" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 27/32" + 1" double at bottom

Pitch of stays at wide water space 14 1/4" x 8 1/8" Are stays fitted with nuts or riveted over Nuts

Working Pressure 216 lbs per sq in Main stays: Material Steel Tensile strength 28/32 tons

Diameter At body of stay, 3 3/8" No. of threads per inch 6 Area supported by each stay 396 sq in

Over threads 3 3/8" Working pressure by Rules 220 lbs Screw stays: Material Steel Tensile strength 26/30 tons

Diameter At turned off part, 1 5/4", 1 7/8" x 2 1/4" No. of threads per inch 9 Area supported by each stay 74 sq in

Over threads 1 5/4", 1 7/8" x 2 1/4"

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Working pressure by Rules 244 lb Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 1 7/8 or Over threads 1 7/8 ✓

No. of threads per inch 9 ✓ Area supported by each stay 10.3 sq in Working pressure by Rules 220 lb

Tubes: Material Iron External diameter { Plain 2 1/2 - 2 3/4 Stay 2 1/2 Thickness { 5/8 - 5/16 No. of threads per inch 9

Pitch of tubes 3 3/4 x 3 3/4 ✓ Working pressure by Rules 275 lb Manhole compensation: Size of opening in shell plate 17" x 13" Section of compensating ring 18" x 1 7/8" No. of rivets and diameter of rivet holes 15, 1 9/16"

Outer row rivet pitch at ends 10 ✓ Depth of flange if manhole flanged ✓ Steam Dome: Material None ✓

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 None 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.

R. B. Armstrong Manufacturer.

Dates of Survey { During progress of work in shops - - - } while building { During erection on board vessel - - - } See Mch Rept.

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Total No. of visits

GENERAL REMARKS

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

These 7 boilers have been built under special survey, the materials and workmanship are of good quality and on completion were tested by hydraulic pressure to 37.3 lb per sq in and were found tight and sound and are now securely fitted on board.

For Recommendations as to class, please see report form & now attached.

Survey Fee ... £ : When applied for, 192 Travelling Expenses (if any) £ : When received, 192

George Murdoch
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 24 OCT 1924

Assigned

