

# REPORT ON BOILERS.

Received at London Office

9 JAN 1937

Date of writing Report - 12- 1936 When handed in at Local Office 4. 1. 1937. Port of West Hartlepool

No. in Survey held at Hartlepool Date, First Survey 3-6-36 Last Survey 3. 1. 1937

87732 on the Steel screw Steamer "Cyprian Prince" (Number of Visits ) Gross 1988 Tons Net 1061

Master \_\_\_\_\_ Built at Haverton Hill on Tees By whom built Jarvis Shipbuilding Co. Yard No. 263 When built 1936

Engines made at Hartlepool By whom made Richardsons, Westgarth & Co. Ltd Engine No. 2680 When made 1936

Boilers made at Hartlepool By whom made Richardsons, Westgarth & Co. Ltd Boiler No. 2680 When made 1936

Nominal Horse Power 315 Owners Prince Line Ltd Port belonging to London

## MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel The Steel Company of Scotland (Letter for Record S)

Total Heating Surface of Boilers 4830 sq ft Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers 2, single ended, cylindrical, multitubular, return tube type Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lbs Date of test 22-9-36 No. of Certificate 3850 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 60 1/2 sq ft No. and Description of safety valves to each boiler 2 1/2 High lift type

Area of each set of valves per boiler {per Rule 6.4 sq ins as fitted 7.95 sq ins Pressure to which they are adjusted 225 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 bunkers or woodwork 15" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 18" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 14' 9 1/8" Length 12' 0" Shell plates: Material steel Tensile strength 29-33 tons

Thickness 17/16" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D.P. Lap joint inter. 4 long. seams D.B.S. Triple riveted Diameter of rivet holes in {circ. seams 17/16" long. seams 17/16" Pitch of rivets {plate 9 3/4" rivets 4

Percentage of strength of circ. end seams {plate 64 rivets 44 Percentage of strength of circ. intermediate seam {plate 85.25 rivets 86

Percentage of strength of longitudinal joint {plate 87.7 rivets 86 Working pressure of shell by Rules 223 lbs

Thickness of butt straps {outer 1 1/32" inner 17/32" No. and Description of Furnaces in each Boiler 3 Deighton type 39

Material steel Tensile strength 26-30 tons Smallest outside diameter 3' 9 3/8"

Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 11/16" bottom 11/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 222 lbs

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 15/16" Pitch of stays 20 1/2 x 17 1/2"

How are stays secured Double nuts Working pressure by Rules 222 lbs

Tube plates: Material {front steel back steel Tensile strength {front 26-30 tons back 26-30 tons Thickness {front 15/16" back 27/32"

Mean pitch of stay tubes in nests 97/16" Pitch across wide water spaces 14" Working pressure {front 229 lbs back 252 lbs

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

at centre 10 5/8" 2 3/4" plate Length as per Rule 36 1/2" Distance apart centre 8 3/4" wing 8" No. and pitch of stays

in each 3 8 5/8" Working pressure by Rules 225 lbs Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 23/32" Back centre 2 1/2" wing 1 1/2" Top 23/32" Bottom 15/16"

Pitch of stays to ditto: Sides 9" x 8 5/8" Back 8 1/2" x 7 1/2" Top 8 3/4" x 8 5/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 233 lbs Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 15/16" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 29/32"

Pitch of stays at wide water space 15" x 8 1/2" Are stays fitted with nuts or riveted over nuts

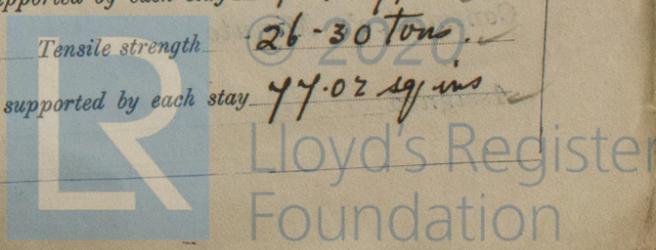
Working Pressure 227 lbs Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 20 1/2" x 17 1/2"

Working pressure by Rules 224 lbs Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, 1 3/4" 1 5/8" No. of threads per inch 9 Area supported by each stay 47.02 sq ins

Is a Report also sent on the basis of the copy?



Working pressure by Rules 235 lbs. Are the stays drilled at the outer ends no. Margin stays: Diameter <sup>At turned off part.</sup> 1 7/8" or <sup>Over threads</sup> 1 7/8"

No. of threads per inch 9 Area supported by each stay 95.52 sq. in. Working pressure by Rules 222 lbs.

Tubes: Material Iron External diameter <sup>Plain</sup> 3" <sup>Stay</sup> 3" Thickness <sup>8 W.S.</sup> 7/16, 3/8, 5/16 No. of threads per inch 9

Pitch of tubes 4 1/4" x 4 1/8" Working pressure by Rules 250 lbs. Manhole compensation: Size of opening in shell plate 16 1/2" x 20 1/2" Section of compensating ring flanged double 36 x 32 No. of rivets and diameter of rivet holes 36 x 1 7/16

Outer row rivet pitch at ends 9 3/4" Depth of flange <sup>doubler</sup> 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 <sup>Plate</sup>  <sup>Rivets</sup>

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 Smoke tube Manufacturers of Tubes Superheated Ltd

Number of elements 52 each boiler Material of tubes solid drawn steel Steel forgings do. Steel castings J. Hos Summers & Sons

Material of headers steel Tensile strength 1 3/8" Internal diameter and thickness of tubes 16 in. 2 1/2 in.

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 1.76 sq. ins Are the safety valves fitted with easing gear yes Working pressure as per Rules approved 220 lbs. Pressure to which the safety valves are adjusted 230 lbs. Hydraulic test pressure: tubes 1,000 lbs. forgings and castings 660 lbs. and after assembly in place 660 lbs. Are drain cocks or 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 yes

The foregoing is a correct description,  
 For RIGGALL & WESTBATH & Co. LIMITED.  
 W. E. Bridge Manufacturer.

Dates of Survey while building <sup>During progress of work in shops - -</sup>  <sup>During erection on board vessel - - -</sup>

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes

Total No. of visits           

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Syrian Prince. WHPL Rpt No 17621.

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

The safety valves of these boilers adjusted under steam.

P. J. McA.  
Feb 4. 1. 37.

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

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

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

Committee's Minute FRI. JAN 15 1937

Assigned See mab 15892



2020 See MAB 15892 - Syrian Prince