

# REPORT ON BOILERS.

No. 16282

Received at London Office 12 MAR 1925

Date of writing Report 14.2.1925 When handed in at Local Office 11 March 1925 Port of WEST HARTLEPOOL

No. in Reg. Book. Survey held at West Hartlepool Date, First Survey Last Survey 192

40453 on the S S 'QUERIMBA' (Number of Visits) Tons {Gross 7700. Net 7198.

Master Built at Sunderland By whom built Wm Gray & Co Ltd Yard No. 964 When built 1925

Engines made at West Hartlepool By whom made Central Marine Engine Works Engine No. 964 When made 1925

Boilers made at ditto By whom made ditto Boiler No. 964 When made 1925

Nominal Horse Power Owners British India S. N. Co Ltd Port belonging to London

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

Manufacturers of Steel D Colville & Co Ltd (Letter for Record S)

Total Heating Surface of Boilers 9243 sq ft Is forced draught fitted yes Coal or Oil fired Coal

No. and Description of Boilers 3 single ended Working Pressure 225

Tested by hydraulic pressure to 388 Date of test 5.12.24 No. of Certificate 3651 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 784 sq ft No. and Description of safety valves to each boiler 2 Cockburn Medical high lift

Area of each set of valves per boiler {per Rule 10.68 as fitted 14.137 Pressure to which they are adjusted 230 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 18" Is oil fuel carried in the double bottom under boilers no

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

Largest internal dia. of boilers 16'-7 1/2" Length 12'-6" Shell plates: Material Steel Tensile strength 29/33

Thickness 1 5/8" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D.R. Lap inter J.R. Lap

long. seams J.R. D.R.S. Diameter of rivet holes in {circ. seams 1 5/8" long. seams 1 5/8" Pitch of rivets {End 4 3/4" Inter 5"

Percentage of strength of circ. end seams {plate 65.8 rivets 42.7 Percentage of strength of circ. intermediate seam {plate 67.5 rivets 60.5

Percentage of strength of longitudinal joint {plate 85.3 rivets 85.4 combined 87.6 Working pressure of shell by Rules 225.

Thickness of butt straps {outer 1 5/8" inner 1 1/2" No. and Description of Furnaces in each Boiler 4 H Deightons

Material Steel Tensile strength 26/30 Smallest outside diameter HH 13/16

Length of plain part {top bottom Thickness of plates {crown 23" bottom 32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 231

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/4" Pitch of stays 15 3/4" x 22

How are stays secured Double nuts & washers Working pressure by Rules 227

Tube plates: Material {front Steel back Steel Tensile strength {26/30 Thickness {3 1/2" 13/16

Mean pitch of stay tubes in nests 12" x 8" Pitch across wide water spaces 14" Working pressure {front 249 back 237

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

at centre 10 1/2" x 1 3/4" Length as per Rule 38 1/2" Distance apart 8 3/4" No. and pitch of stays

in each 3 9" Working pressure by Rules 230 Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 23" Back 23" Top 23" Bottom 7"

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

Working pressure by Rules 230 Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 3 1/32" Lower back plate: Material Steel Tensile strength 26/30 Thickness 15/16

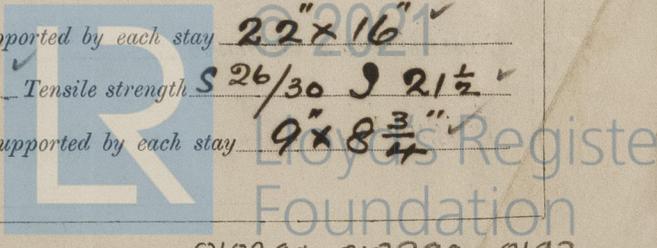
Pitch of stays at wide water space 9" x 15" Are stays fitted with nuts or riveted over nuts

Working Pressure 236 Main stays: Material Steel Tensile strength 28/32

Diameter {At body of stay or Over threads} 3 1/4" No. of threads per inch 6 Area supported by each stay 22" x 16"

Working pressure by Rules 228 Screw stays: Material Steel, tops iron Tensile strength S 26/30 J 21 1/2

Diameter {At turned off part or Over threads} 1 3/4" No. of threads per inch 9 Area supported by each stay 9" x 8 3/4"



Working pressure by Rules 230 Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part,</sup> 2" or <sup>Over threads</sup> 2"  
 No. of threads per inch 9 Area supported by each stay 11 7/8" x 9" Working pressure by Rules 232  
 Tubes: Material Iron External diameter <sup>Plain</sup> 2 3/4" Thickness <sup>8 x 6</sup> 1/4" + 5/16" No. of threads per inch 9  
 Pitch of tubes 4" x 4" Working pressure by Rules 245 + 244 Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 22" x 1 5/8" No. of rivets and diameter of rivet holes 28 1 5/8"  
 Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 4 1/2" 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 <sup>Plate</sup> \_\_\_\_\_ <sup>Rivets</sup> \_\_\_\_\_  
 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 <sup>Tubes</sup> \_\_\_\_\_ <sup>Steel castings</sup> \_\_\_\_\_  
 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. Sill <sup>MANUFACTURER.</sup>

Dates of Survey <sup>During progress of work in shops - -</sup> \_\_\_\_\_ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) \_\_\_\_\_  
<sup>while building</sup> <sup>During erection on board vessel - - -</sup> \_\_\_\_\_ Total No. of visits \_\_\_\_\_

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

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

R. D. Shilston.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 13 MAR 1925  
 Assigned \_\_\_\_\_

