

# REPORT ON BOILERS.

No. 13065

Received at London Office - 6 OCT 1927

Date of writing Report 3. 10. 27 When handed in at Local Office 3. 10. 27 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON. Date, First Survey 29. 7. 1924 Last Survey 3. 10. 1927.

Reg. Book 76 on the (Number of Visits 4) Tons <sup>Gross</sup> <sub>Net</sub>

Built at \_\_\_\_\_ By whom built Davie S B Co. Yard No. 497. When built \_\_\_\_\_

Engines made at \_\_\_\_\_ By whom made Richardsons, Westgate St. Engine No. 2669. When made \_\_\_\_\_

Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_

Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## VERTICAL DONKEY BOILER.

Made at Stockton By whom made Riley Bros Boiler No. 5755 When made 1927. Where fixed \_\_\_\_\_

Manufacturers of Steel David Colville & Sons.

Total Heating Surface of Boiler 213 sq ft. Is forced draught fitted \_\_\_\_\_ Coal or Oil fired \_\_\_\_\_

No. and Description of Boilers One vertical Meredith Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs. Date of test 3. 10. 27. No. of Certificate 6581.

Area of Firegrate in each Boiler 18 sq ft. No. and Description of safety valves to each boiler \_\_\_\_\_

Area of each set of valves per boiler <sup>per rule</sup> \_\_\_\_\_ <sub>as fitted</sub> \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

State whether steam from main boilers can enter the donkey boiler \_\_\_\_\_ Smallest distance between boiler or uptake and bunkers \_\_\_\_\_

or woodwork \_\_\_\_\_ Is oil fuel carried in the double bottom under boiler \_\_\_\_\_ Smallest distance between base of boiler and tank top plating \_\_\_\_\_

Is the base of the boiler insulated \_\_\_\_\_ Largest internal dia. of boiler 5'-6" Height 8'-6"

Shell plates: Material Steel Tensile strength 28/32 Thickness C = 11/16

Are the shell plates welded or flanged no. Description of riveting: circ. seams <sup>end</sup> S.R. <sub>inter</sub> S.R. long. seams C = T.R. lap.

Dia. of rivet holes in <sup>circ. seams</sup> end 13/16 <sub>long. seams</sub> C = 15/16 Pitch of rivets <sup>end</sup> 2" <sub>To B 4 3/8 <sub>C 6 3/8 Percentage of strength of circ. seams <sup>plate</sup> end 59.3 <sub>end 55.9 <sub>end 52.0 <sub>end 47.5 Longitudinal joint <sup>plate</sup> 72.2 <sub>rivets</sub> 73.3 <sub>combined</sub> \_\_\_\_\_</sub></sub></sub></sub></sub>

Working pressure of shell by rules 112 lbs. Thickness of butt straps <sup>outer</sup> \_\_\_\_\_ <sub>inner</sub> \_\_\_\_\_

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat dished Material Steel

Tensile strength 26/30 Thickness 9/16 Radius 5'-6" Working pressure by rules 100 lbs.

Description of Furnace: Plain, spherical, or dished crown dished Material Steel Tensile strength 26/30

Thickness 5/8" External diameter <sup>top</sup> 4'-9 1/2" <sub>bottom</sub> 4'-11 1/2" Length as per rule 2'-1 3/4" Working pressure by rules 140 lbs.

Pitch of support stays circumferentially \_\_\_\_\_ and vertically \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

Diameter of stays over thread \_\_\_\_\_ Radius of spherical or dished furnace crown 4'-0" Working pressure by rule 108 lbs.

Thickness of Ogee Ring \_\_\_\_\_ Diameter as per rule <sup>D</sup> \_\_\_\_\_ <sub>a</sub> \_\_\_\_\_ Working pressure by rule \_\_\_\_\_

Combustion Chamber: Material Steel Tensile strength 26/30 Thickness of top plate 5/8"

Radius if dished \_\_\_\_\_ Working pressure by rule 134 lbs. Thickness of back plate 5/8" Diameter if circular \_\_\_\_\_

Length as per rule \_\_\_\_\_ Pitch of stays 11" x 12" Are stays fitted with nuts or riveted over nut & bolt

Diameter of stays over thread 1 5/8" Working pressure of back plate by rules 102 lbs.

Tube Plates: Material <sup>front</sup> Steel <sub>back</sub> \_\_\_\_\_ Tensile strength <sup>front</sup> 28/32 <sub>back</sub> 26/30 Thickness <sup>front</sup> 11/16 <sub>back</sub> 5/8 Mean pitch of stay tubes in nests 9 3/4 x 6 1/2

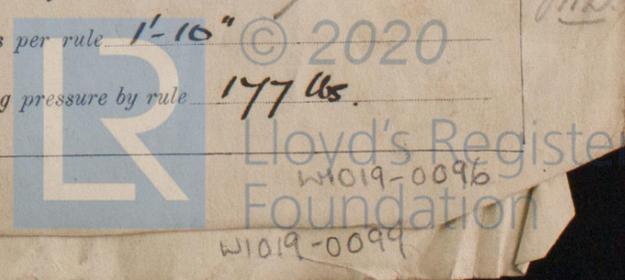
If comprising shell, Dia. as per rule <sup>front</sup> \_\_\_\_\_ <sub>back</sub> \_\_\_\_\_ Pitch in outer vertical rows 6 1/2" Dia. of tube holes FRONT <sup>stay</sup> 2 1/4 <sub>plain</sub> 2 1/4 BACK <sup>stay</sup> 2 1/2 <sub>plain</sub> 2 9/16

Is each alternate tube in outer vertical rows a stay tube yes. Working pressure by rules <sup>front</sup> 100 <sub>back</sub> 207

Girders to combustion chamber tops: Material Steel Tensile strength 28/32

Depth and thickness of girder at centre 6 1/4 x 7/8 (double) Length as per rule 1'-10"

Distance apart 9" No. and pitch of stays in each one Working pressure by rule 177 lbs.



**Crown stays:** Material  Tensile strength  Diameter  { at body of stay, or over threads }  
 No. of threads per inch  Area supported by each stay  Working pressure by rules   
**Screw stays:** Material Steel Tensile strength 26/30 Diameter  { at turned off part, or over threads } 1 7/8" No. of threads per inch 9  
 Area supported by each stay 132 sq Working pressure by rules 115 lbs Are the stays drilled at the outer ends no.  
**Tubes:** Material iron External diameter { plain 2 1/4" to 2 9/16" stay 2 1/4" to 2 1/2" } Thickness { 11 w.g. } 5/16"  
 No. of threads per inch 9 Pitch of tubes 3 1/4" x 3 1/4" & 3 1/4" x 4 1/2" Working pressure by rules p. 140 s 242 lbs  
**Manhole Compensation:** Size of opening in shell plate 16" x 11" Section of compensating ring 4 1/2" x 5/8" No. of rivets and diameter of rivet holes 34 - 3/16" Outer row rivet pitch at ends 4 1/2" Depth of flange if manhole flanged   
**Uptake:** External diameter  Thickness of uptake plate   
**Cross Tubes:** No.  External diameters  Thickness of plates   
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes.

The foregoing is a correct description,  
**RILEY BROS. (BOILERMAKERS) LIMITED.**  
*J.H. Shields* Secretary.

Dates of Survey { During progress of work in shops - - } 1924 Jul 29. Aug 5. Sep 8-16-26-27. Oct 3 Is the approved plan of boiler forwarded herewith  (If not state date of approval.)  
 while building { During erection on board vessel - - } Total No. of visits 4

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) This boiler is a duplicate of "Mussel" Riley Bros. No 5754 (Ind. Rpt No 13035)  
The materials and workmanship are good. This boiler has been built under special survey in accordance with the Rules and Approved Plan. It is being shipped to Quebec.

Survey Fee ... .. £ 4-4-0 When applied for, MONTHLY A/c 19...  
 Travelling Expenses (if any) £ : : ) When received, 19...

*P. J. Mac*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 TUES. 14 AUG 1928

Committee's Minute Assigned Not for Classy Comm | See Apr 30 16583 | Intl 30 3907  
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