

SAT. AUG. 17. 1912

Rpt. 5a.

# REPORT ON BOILERS.

No. 7438.

Received at London Office

SAT. JUL. 6 - 1912

Date of writing Report 4.7.12 When handed in at Local Office 4.7 1912 Port of MIDDLESBROUGH  
 No. in Survey held at Stockton-on-Tees Date, First Survey 11<sup>th</sup> May Last Survey 27<sup>th</sup> June, 1912  
 Reg. Book. on the S. S. Warley Pickering (Number of Visits 11) Tons (S.S. No 571)  
 Master S. S. Warley Pickering Built at Middlesbrough By whom built Sir Raylton Dixon & Co When built 1912  
 Engines made at Stockton By whom made Messrs Blair & Co Ltd when made 1912  
 Boilers made at Stockton By whom made Messrs Riley Bros (No 4422) when made 1912  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY. - Manufacturers of Steel J. Spencer & Sons

(Letter for record (5)) Total Heating Surface of Boilers 1580 sq ft Is forced draft fitted no No. and Description of Boilers One single ended Working Pressure 120 Tested by hydraulic pressure to 240 Date of test 27.6.12  
 No. of Certificate 4900 Can each boiler be worked separately yes Area of fire grate in each boiler 42 1/2 sq ft No. and Description of safety valves to each boiler 2 direct spring Area of each valve 5.94 sq in Pressure to which they are adjusted 125  
 Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no  
 Smallest distance between boilers or uptakes and bunkers or ~~woodwork~~ 1' 6" <sup>Inside</sup> dia. of boilers 13' 0" Length 10' 6"  
 Material of shell plates steel Thickness 13/16" Range of tensile strength 28-32 Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams 2 R. Lap long. seams 2 B-3 Riv Diameter of rivet holes in long. seams 15/16" Pitch of rivets 7 1/4"  
~~Top of plates or~~ width of butt straps 13 1/2 x 13/16" Per centages of strength of longitudinal joint rivets 87.3 Working pressure of shell by rules 134 Size of manhole in shell 16" x 12" Size of compensating ring 7" x 1" No. nil No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 48" Length of plain part 77" Thickness of plates 7/8" <sup>top</sup> 7/8" <sup>bottom</sup> 7/8" <sup>mean</sup> 7/8"  
 Description of longitudinal joint Weld No. of strengthening rings none Working pressure of furnace by the rules 128 Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1" Pitch of stays to ditto: Sides 9" x 9" Back 9" x 9" Top 9" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 135 Material of stays steel <sup>area</sup> 7/8" at smallest part 1.23 Area supported by each stay 81 Working pressure by rules 121 End plates in steam space: Material steel Thickness 7/8" Pitch of stays 18" x 16" How are stays secured nuts & washers Working pressure by rules 125 Material of stays steel <sup>area</sup> 7/8" at smallest part 3.67 Area supported by each stay 288 Working pressure by rules 132 Material of Front plates at bottom steel Thickness 7/8" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 14" x 9" Working pressure of plate by rules 140 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 10 3/8" Pitch across wide water spaces 14" Working pressures by rules 120 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7" x 1 1/2" Length as per rule 31" Distance apart 9" Number and pitch of Stays in each 2 @ 9" Working pressure by rules 128 Superheater or Steam chest: ~~how connected to boiler~~ none Can the superheater be shut off and the boiler worked separately \_\_\_\_\_ Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_ If stiffened with rings \_\_\_\_\_ Distance between rings \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_ Working pressure of end plates \_\_\_\_\_ Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

FOR THE FOREGOING IS A CORRECT DESCRIPTION, RILEY BROS. (BOILERMAKERS) LIMITED.

J. Spencer & Sons Manufacturer.

Dates of Survey 1912 May 11, 16, 21, 27, 28, June 1, 5, 7, 11, 14 Is the approved plan of boiler forwarded herewith yes  
 while building During erection on board vessel 17, 19, 21, 27 Total No. of visits 11

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey, is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results. The boiler is to be fitted on board at this port. This boiler has now been satisfactorily secured on board, examined under steam & safety valves adjusted.

Survey Fee £ 5-5-0 When applied for 19 MONTHLY A/c. SURVEY REQUEST NO. 148 ATTACHED. 10.8.12  
 Travelling Expenses (if any) £ : When received 19

Wm Morrison Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute TUE. AUG. 20. 1912  
 Assigned see Minute on Indb. Rpt 7500



