

# REPORT ON BOILERS.

No. 34868

Received at London Office

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Date of writing Report 23-6-1918 When handed in at Local Office 191 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 14<sup>th</sup> May, 1914 Last Survey 21-5-1918  
 Reg. Book. on the 3 Marine Return Tube Boilers for Messrs Blair & Co. Stockton. (Number of Visits 30) Gross Tons }  
 Net Tons }  
 Master Built at Sunderland By whom built W. S. B. Co. (No. 319) When built  
 Engines made at By whom made When made  
 Boilers made at Glasgow By whom made Messrs A. & G. Inglis Ltd 9<sup>th</sup> 594 When made 1918  
 Registered Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Stewart & Lloyd, D Colville & Sons, The Dudley Iron Works

(Letter for record S) Total Heating Surface of Boilers 4020 sq ft Is forced draft fitted - No. and Description of Boilers 3 Single ended Marine Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 14/21-5-18  
 No. of Certificate 14285 Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 sq ft No. and Description of safety valves to each boiler 2 Spring Area of each valve 9.62 Pressure to which they are adjusted -  
 Are they fitted with easing gear - 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 - Mean dia. of boilers 13.6" Length 11.6"  
 Material of shell plates S Thickness 1 1/4" Range of tensile strength 28/32 Tons Are the shell plates welded or flanged No  
 Descrip. of riveting: cir. seams D. R. long. seams J. R. D. B. S Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9 1/8"  
 Lay of plates width of butt straps 19 1/2" Per centages of strength of longitudinal joint rivets 88.3% Working pressure of shell by rules 181 Size of manhole in shell 16" x 12" Size of compensating ring None plate 85.6%  
 boiler 3 Deighton Material S Outside diameter 4-2 3/16" Length of plain part top - Thickness of plates crown } 19 1/32" bottom }  
 Description of longitudinal joint Welded No. of strengthening rings Nil Working pressure of furnace by the rules 189 Combustion chamber plates: Material S Thickness: Sides 23/32 Back 1 1/16" Top 23/32 Bottom 23/32 Pitch of stays to ditto: Sides 9 1/4" x 10 5/8" Back 9 x 10"  
 Top 9 1/4" x 10 5/8" If stays are fitted with nuts or riveted heads None Working pressure by rules 186 Material of stays S Diameter at smallest part 2.04" Area supported by each stay 98.28" Working pressure by rules 190 End plates in steam space: Material S Thickness 1 1/32"  
 Pitch of stays 21 3/4" x 20 1/2" How are stays secured D. None Working pressure by rules 182 Material of stays S Diameter at smallest part 8.29"  
 Area supported by each stay 446" Working pressure by rules 195 Material of Front plates at bottom S Thickness 3 1/32" Material of Lower back plate S Thickness 2 7/32" Greatest pitch of stays 9 x 13 3/8" Working pressure of plate by rules 204 Diameter of tubes 3"  
 Pitch of tubes 4 1/4" Material of tube plates S Thickness: Front 3 1/32" Back 3/4" Mean pitch of stays 12 3/4" x 8 1/4" Pitch across wide water spaces 13 5/8" Working pressures by rules 181 Girders to Chamber tops: Material S Depth and thickness of girder at centre 11 x 7/8" D Length as per rule 38 9/16" Distance apart 10" Number and pitch of Stays in each 3 @ 9 1/4"  
 Working pressure by rules 189 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

The foregoing is a correct description,  
 William Allardes Manufacturer.

Dates of Survey } During progress of 1914 May 14, June 13, July 9, Aug 8, Oct 13, Nov 4, 21, 25 Is the approved plan of boiler forwarded herewith Yes  
 while building } During erection on 14, 24, 26, 1918 Jan 10, 16, 22, 30, Mar 4, 19, 22, 23, Apr 3, 16, 18, 22 Total No. of visits 30  
 board vessel } May 2, 13, 14, 15, 14, 21

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
 The Boilers have been built under special survey in accordance with the approved plan & the Rules of the Society & have been forwarded to Messrs Blair & Co Stockton. When filling the centre main boiler with water a slight crack was found in the back end plate, this with the approval of the D. B. A. S has now been electrically welded & the boiler found tight & satisfactory under double working pressure.

Survey Fee £ 29: 8 When applied for 191  
 Travelling Expenses (if any) £ : : When received, 191

Harry Clarke & Fred A. Ferguson  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW, 4 JUN 1918  
 Assigned Transmit to London

