

# REPORT ON BOILERS.

No. 28857.

Date of writing Report 19 \_\_\_\_\_ When handed in at Local Office 30 June 1924 Port of Sunderland  
 Received at London Office 1 JUL 9 1924  
 No. in Survey held at Sunderland Date, First Survey \_\_\_\_\_ Last Survey June 20 1924  
 Reg. Book. \_\_\_\_\_ (Number of Visits) \_\_\_\_\_  
 on the new steel S/S "THISTLEBEN". Tons } Gross 4589  
 } Net 2688  
 Master Built at Sunderland By whom built W. Pickering & Sons Ltd (S/S No 210) When built 1924  
 Engines made at Sunderland By whom made Richardson Westgarth & Co. Ltd (No 2643) When made 1924  
 Boilers made at Sunderland By whom made Richardson Westgarth & Co. Ltd (No 2643B) When made 1924  
 Registered Horse Power \_\_\_\_\_ Owners Allan, Black & Co. Port belonging to Sunderland

**MULTITUBULAR BOILERS** — MAIN, AUXILIARY OR DONKEY. — Manufacturers of Steel John Spence & Sons Ltd.  
 (Letter for record (S) ) Total Heating Surface of Boilers 1362 sq ft Is forced draft fitted no  
 Boilers One single ended marine Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 12-11-23  
 No. of Certificate 3858 Can each boiler be worked separately yes Area of fire grate in each boiler 38 sq ft No. and Description of  
 safety valves to each boiler two, direct spring Area of each valve 4.908 sq in Pressure to which they are adjusted 185  
 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 24" Mean dia. of boilers 12'-0" Length 11'-0"  
 Material of shell plates steel Thickness 1" Range of tensile strength 28-32 tm Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams DR long. seams NBS-TR Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 1/2"  
 Lap of plates or width of butt straps 16" Per centages of strength of longitudinal joint rivets 91 plate 85.8 Working pressure of shell by  
 rules 182 Size of manhole in shell 16 x 12" Size of compensating ring 32 x 28 x 1" No. and Description of Furnaces in each  
 boiler 2 Morrison Material steel Outside diameter 3'6 1/4" Length of plain part top 9'1" Thickness of plates crown 3/16"  
 Description of longitudinal joint welded No. of strengthening rings — Working pressure of furnace by the rules 193 Combustion chamber  
 plates: Material steel Thickness: Sides 11/16" Back 21/32" Top 11/16" Bottom 3/4" Pitch of stays to ditto: Sides 9 3/4" x 9 3/4" Back 9 1/2" x 8 1/2"  
 Top 9 3/4" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 Material of stays steel Area at  
 smallest part 1.730" Area supported by each stay 80-60" Working pressure by rules 189 End plates in steam space: Material steel Thickness 1 1/2"  
 Pitch of stays 17 x 16" How are stays secured DN.W Working pressure by rules 180 Material of stays steel Area at smallest part 5.05 sq ft  
 Area supported by each stay 272 sq in Working pressure by rules 196 Material of Front plates at bottom steel Thickness 13/16" Material of  
 Lower back plate steel Thickness 25/32" Greatest pitch of stays 14" Working pressure of plate by rules 184 Diameter of tubes 3 1/4"  
 Pitch of tubes 4 1/2 x 4 3/8" Material of tube plates steel Thickness: Front 13/16" Back 25/32" Mean pitch of stays 10.7" Pitch across wide  
 water spaces 14 1/2" (13" DP) Working pressures by rules 185 Girders to Chamber tops: Material steel Depth and thickness of  
 girder at centre 2 @ 7 1/2 x 3/4" Length as per rule 30 1/2" Distance apart 8 1/2" Number and pitch of Stays in each 2 @ 9 3/4"  
 Working pressure by rules 191 Steam dome: description of joint to shell none % of strength of joint \_\_\_\_\_  
 Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_  
 Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

**SUPERHEATER.** Type \_\_\_\_\_ Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_  
 Date of Test \_\_\_\_\_ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler \_\_\_\_\_  
 Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

For RICHARDSONS, WESTGARTH & Co. LIMITED  
 The foregoing is a correct description,  
 H. de Visser, Russell  
 Manufacturer.

Dates of Survey } During progress of } Please see Machinery report Is the approved plan of boiler forwarded herewith  
 } work in shops - - }  
 while } During erection on } Total No. of visits  
 building } board vessel - - }

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
 The workmanship and materials are good  
 The boiler has been constructed under special survey

Survey Fee ... £ \_\_\_\_\_ Included in invoice: } When applied for, ..... 19  
 Travelling Expenses (if any) £ fee : } When received, ..... 19  
 S. J. Davis  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_ TUES. 15 JUL 1924  
 Assigned See other rpt Sld 28857  
 © 2021 Lloyd's Register Foundation