

# REPORT ON BOILERS.

No. 27021

Received at London Office

Date of writing Report 1917 When handed in at Local Office 4.7.1917 Port of Sunderland  
 No. in Survey held at Sunderland Date, First Survey 2 Oct. 1916 Last Survey 29 June 1917  
 Reg. Book. on the donkey boiler of the new steel s/s Aberdeen (Number of Visits) 9 Gross 4372 Net 2692  
 Master Shepherd Built at Sunderland By whom built Sunderland SBC Co. Ld. (S/N 292) When built 1917  
 Engines made at SUNDERLAND By whom made North Eastern Mar. Eng. Co. Ld. When made 1917  
 Donkey Boilers made at Sunderland By whom made Mac Gole & Pollock Ld. (N 659) When made 1917  
 Registered Horse Power \_\_\_\_\_ Owners Adam Sd. Co. Ld. Port belonging to Aberdeen

## MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY. - Manufacturers of Steel John Spence & Sons Ld.

Letter for record (5) Total Heating Surface of Boilers 1315 sq ft Is forced draft fitted no No. and Description of Boilers one single ended marine Working Pressure 150 Tested by hydraulic pressure to 200 Date of test 27.2.17  
 No. of Certificate 3385 Can each boiler be worked separately no Area of fire grate in each boiler 37 sq ft No. and Description of safety valves to each boiler 2 direct spring Area of each valve 7.068 sq in Pressure to which they are adjusted 100 lbs  
 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 18 in Mean dia. of boilers 12'-0" Length 10'-6"  
 Material of shell plates steel Thickness 1/16" Range of tensile strength 292-33 Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams S.R. long. seams lap T.R. Diameter of rivet holes in long. seams 15/16" Pitch of rivets 4 7/8"  
 Lap of plates or width of butt straps 6 3/4" Per centages of strength of longitudinal joint rivets 82.7 Working pressure of shell by rules 104 Size of manhole in shell 16" x 12" Size of compensating ring 26" x 28" x 1 1/2" No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 3'-8 1/2" Length of plain part 77" Thickness of plates crown 5/8" bottom 5/8"  
 Description of longitudinal joint welded No. of strengthening rings none Working pressure of furnace by the rules 112 Combustion chamber plates: Material steel Thickness: Sides 1 1/8" Back 9/16" Top 1 1/8" Bottom 1 1/8" Pitch of stays to ditto: Side 9 1/4" x 8 7/8" Back 10 5/8" x 9 3/4"  
 Top 9" x 8 1/2" If stays are fitted with nuts or riveted heads nuts in case only Working pressure by rules 105 Material of stays steel Diameter at smallest part 1.020" Area supported by each stay 77.30 Working pressure by rules 105 End plates in steam space: Material steel Thickness 1 3/16"  
 Pitch of stays 1 1/4" x 16 1/2" How are stays secured DN Working pressure by rules 105 Material of stays steel Diameter at smallest part 2.870"  
 Area supported by each stay 290.0 Working pressure by rules 106 Material of Front plates at bottom steel Thickness 1/16" Material of Lower back plate steel Thickness 3/16" Greatest pitch of stays 12 1/2" x 9 3/4" Working pressure of plate by rules 118 Diameter of tubes 3 1/4"  
 Pitch of tubes 4 1/2" x 4 7/8" Material of tube plates steel Thickness: Front 1/16" Back 5/8" Mean pitch of stays 11 1/16" Pitch across wide water spaces 1 1/4" + 1/2" DP Working pressures by rules 160 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 6 1/4" x 7 1/4" Length as per rule 29 13/16" Distance apart 8 1/2" Number and pitch of Stays in each 2 @ 9"  
 Working pressure by rules 109 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,  
G. R. Pollock Manufacturer.

Dates of Survey: During progress of work in shops - 1916 Oct. 2 Nov. 28. Jan. 9 Feb. 22. 27 Is the approved plan of boiler forwarded herewith yes  
 while building: During erection on board vessel - June 12. 19. 26. Total No. of visits 9

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

Survey Fee ... £ 2 : 2 : } When applied for, 9 JUL 1917  
 Travelling Expenses (if any) £ : : } When received, 1/9/17  
W. Davis C. Cooper  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute \_\_\_\_\_  
 Assigned \_\_\_\_\_  
 FRI. 13 JUL. 1917

