

# REPORT ON BOILERS.

No. 6611  
LUP. 28 MAR 1911  
SAT. 14 JAN 1911

Received at London Office

Date of writing Report 13/1/11 19 11 When handed in at Local Office 13<sup>th</sup> Jan. 1911 Port of Middlesbrough  
 No. in Survey held at Stockton-on-Tees Date, First Survey 4<sup>th</sup> Dec. 1910 Last Survey 9<sup>th</sup> Jan. 1911  
 Reg. Book. on the Steel Screw Steamer "Amicus" S.S.N. 143 (Number of Visits 1) Gross Tons      Net Tons       
 Master      Built at Thornaby By whom built Messrs Craig Taylor & Co When built 1911  
 Engines made at Sunderland By whom made H. E. Marine Eng Co Ltd when made       
 Boilers made at Stockton By whom made Thos Piley Bros (No 4191) when made 1911  
 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 885 sq ft Is forced draft fitted      No. and Description of Boilers One Single Ended Working Pressure 100 Tested by hydraulic pressure to 200 Date of test 9.1.11

No. of Certificate 4556 Can each boiler be worked separately      Area of fire grate in each boiler 29 sq ft No. and Description of safety valves to each boiler 2 direct spring Area of each valve 4.91 Pressure to which they are adjusted 105 lbs

Are they fitted with casing 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      Inside Mean dia. of boilers 10'-0" Length 10'-0"  
 Material of shell plates steel Thickness 9/16" Range of tensile strength 28-32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams 2 Riv lap long, seams 2 Riv Diameter of rivet holes in long. seams 13/16" Pitch of rivets 4 1/2"  
3 Rivets per pitch  
 Lap of plates or width of butt straps 8 1/2 x 9/16" Per centages of strength of longitudinal joint rivets 91.8 Working pressure of shell by rules 106 lbs Size of manhole in shell 16 x 12 Size of compensating ring 4 1/2" dia plate 81.9

No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 36" Length of plain part top 78 1/2" Thickness of plates crown 3/8" bottom 5/8" man  
 Description of longitudinal joint welded No. of strengthening rings none Working pressure of furnace by the rules 111 Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 3/8" Top 1/2" Bottom 1/2" Pitch of stays to ditto: Sides 10" x 7" Back 9 1/2" x 8 1/2"

Top 10" x 7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 103 Material of stays steel Diameter at smallest part 1 1/8" Area supported by each stay 70 Working pressure by rules 113 End plates in steam space: Material steel Thickness 1 1/2"  
 Pitch of stays 19 1/2" x 19 1/4" How are stays secured nuts & 12 x 1/2" sbl. strip Working pressure by rules 100 Material of stays steel Diameter at smallest part 2.41

Area supported by each stay 372.25 Working pressure by rules 128 Material of Front plates at bottom steel Thickness 1 1/2" Material of Lower back plate steel Thickness 1 1/2" Greatest pitch of stays 21 1/2" x 8 1/2" Working pressure of plate by rules 100 Diameter of tubes 3 1/4"  
 Pitch of tubes 4 1/4" x 4 1/4" Material of tube plates steel Thickness: Front 1 1/2" Back 5/8" Mean pitch of stays 10" Pitch across wide water spaces 13 1/2" Working pressures by rules 120 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 6 1/2" x 1 1/4" Length as per rule 26" Distance apart 10" Number and pitch of Stays in each 2 @ 7"

Working pressure by rules 114 Superheater or Steam chest: low 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 casing gear     

The foregoing is a correct description,  
J. W. Piley Manufacturer.

Dates of Survey: During progress of work in shops -- 1910. Dec. 4, 6, 8, 11, 18, 20, 21, 28. Nov. 2, 29. Is the approved plan of boiler forwarded herewith yes  
 while building: During erection on board vessel -- Dec. 20, 23, 20. 1911. Jan. 5, 9. 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. The boiler has now been satisfactorily secured on board, examined under steam and safety valves adjusted.

Survey Fee ... .. £ 2-19-0 When applied for 16.2.11  
 Travelling Expenses (if any) £ : : When received, 28. 2. 11

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



