

Rpt. 51

# REPORT ON BOILERS.

Appl. No. 13099  
No. 51510

Port of Newcastle

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No. in Survey held at Gateshead Date, first Survey 19<sup>th</sup> July Last Survey 31<sup>st</sup> August 1906  
Reg. Book. S. S. Harley (Number of Visits four)

Master W. B. Pope Built at Hartlepool By whom built Furnace Withy & Co. No. 1906 When built 1906  
Engines made at Hartlepool By whom made Richardsons Westgarth & Co. When made 1906

Boilers made at Gateshead By whom made Clarke Chapman & Co. No. 2613d when made 1906

Registered Horse Power ✓ Owners J. B. Harrison Ltd Port belonging to London

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Spence & Sons

(Letter for record S) Total Heating Surface of Boilers 580 sq ft Is forced draft fitted no No. and Description of Boilers one, single-ended Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 31/8/06

No. of Certificate 7304 Can each boiler be worked separately ✓ Area of fire grate in each boiler 22 sq ft No. and Description of safety valves to each boiler 2 Spring Area of each valve 5.25 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 or woodwork 18" Mean dia. of boilers 9'-0" Length 9'-0"

Material of shell plates Steel Thickness 9/16" Range of tensile strength 27-32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams S. Lap long. seams S. Lap Diameter of rivet holes in long. seams 7/8" Pitch of rivets 4 1/2"

Lap of plates or width of butt straps 6 1/2" Per centages of strength of longitudinal joint rivets 80.5% Working pressure of shell by rules 102 lbs Size of manhole in shell 15" x 12" Size of compensating ring 6" x 9/16" No. and Description of Furnaces in each boiler 2 - plain Material Steel Outside diameter 2'-7 1/4" Length of plain part top 68" Thickness of plates crown 9/16" bottom 9/16"

Description of longitudinal joint S. Lap No. of strengthening rings ✓ Working pressure of furnace by the rules 115 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16" Pitch of stays to ditto: Sides 10 1/2" x 9" Back 10 1/2" x 9"

Top 10 1/2" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 111 lbs Material of stays Steel Diameter at smallest part 1 1/4" Area supported by each stay 97 sq in Working pressure by rules 101 lbs End plates in steam space: Material Steel Thickness 3/4"

Pitch of stays 17" x 12" How are stays secured S. N. W. Working pressure by rules 122 lbs Material of stays Steel Diameter at smallest part 2"

Area supported by each stay 204 sq in Working pressure by rules 154 lbs Material of Front plates at bottom Steel Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 10" Working pressure of plate by rules 185 lbs Diameter of tubes 3"

Pitch of tubes 4 1/2" x 4" Material of tube plates Steel Thickness: Front 3/4" Back 1/16" Mean pitch of stays 10 3/4" Pitch across wide water spaces 13" Working pressures by rules 119 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/2" x 1 1/4" Length as per rule 25 1/2" Distance apart 9" Number and pitch of Stays in each 1 - 11"

Working pressure by rules 125 lbs 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 ✓

## VERTICAL DONKEY BOILER—No. \_\_\_\_\_ Description \_\_\_\_\_ Manufacturers of steel \_\_\_\_\_

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_

Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint Rivets \_\_\_\_\_ Plates \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_

Radius of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_ Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_

Thickness of furnace plates \_\_\_\_\_ Description of joint \_\_\_\_\_ Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_

Stayed by \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

FOR CLARKE, CHAPMAN & CO. LTD.

The foregoing is a correct description, Manufacturer.

Clarke Chapman 1906. July 19. August 9-21-31.

Dates of Survey while building: During progress of work in shops \_\_\_\_\_ During erection on board vessel \_\_\_\_\_ CHAIRMAN.

Total No. of visits \_\_\_\_\_

Is the approved plan of main boiler forwarded herewith ✓

" " " donkey " " yes

WS62-0041



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