J. T. Ettingham & Cos Boiler No 1495

Lon. No. 71202

Rpt. 5a.

REPORT ON BOILERS.

No. 54011.

Received at London Office FRI. 20 DEC 1907

Date of writing Report ..... 19 ..... When handed in at Local Office 19 DEC 1907 Port of Newcastle on Tyne

No. in Reg. Book. Survey held at South Shields Date, First Survey 23rd Aug. 1907. Last Survey Decr 9th 1907.

(Number of Visits) Gross ..... Tons Net .....

on the For Messrs Crabtree & Co No 2707 & 2711 (deceased)

Master ..... Built at ..... By whom built ..... When built .....

Engines made at ..... By whom made ..... when made .....

Boilers made at South Shields By whom made Jos. T. Ettingham & Co. when made 1907.

Registered Horse Power ..... Owners Cochrans Port belonging to .....

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

(Letter for record S) **Total Heating Surface of Boilers** 1240 □ft Is forced draft fitted ..... **No. and Description of Boilers** One Multitubular Cyl **Working Pressure** 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 9-12-07

No. of Certificate 7643 Can each boiler be worked separately ✓ **Area of fire grate in each boiler** ..... No. and Description of safety valves to each boiler ..... Area of each valve ..... 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 12'-6 7/8" Length 10'-8 1/8"

Material of shell plates Steel Thickness 7/8" Range of tensile strength 28 3/4 - 32 tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams lap d.r. long. seams Butt d.r. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 5 7/16

~~Lap of plates or~~ width of butt straps 11 1/4" Per centages of strength of longitudinal joint rivets 83.2 % plate 80.4 % Working pressure of shell by rules 142 lbs Size of manhole in shell 16" x 12" Size of compensating ring 7 1/2 x 1

No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 48" Length of plain part top 78" bottom 78" Thickness of plates crown 45/64" bottom 45/64

Description of longitudinal joint Butt S. R. No. of strengthening rings 1 Working pressure of furnace by the rules 138 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 45/64" Pitch of stays to ditto: Sides 16 1/2" x 9" Back 10 3/4" x 8 3/4" Top 10" x 9 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 140 lbs Material of stays Steel Diameter at smallest part 1 15/32" Area supported by each stay 94.06 □" Working pressure by rules 142 lbs End plates in steam space: Material Steel Thickness 1 1/16"

Pitch of stays 17 3/4" x 17 1/2" How are stays secured S. Nuts & W Working pressure by rules 141 lbs Material of stays Steel Diameter at smallest part 2 13/32"

Area supported by each stay 310.6 □" Working pressure by rules 147 lbs Material of Front plates at bottom Steel Thickness 7/8" Material of Lower back plate Steel Thickness 29/32" Greatest pitch of stays 15" x 10 3/4" Working pressure of plate by rules 166 lbs Diameter of tubes 3 1/2"

Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates Steel Thickness: Front 1 1/16" x 7/8" Back 7/8" Mean pitch of stays 11 7/8" Pitch across wide water spaces 14 1/2" Working pressures by rules 192 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 1/4" - 2 7/16" Length as per rule 2'-9" Distance apart 9 1/2" Number and pitch of Stays in each 2 x 10"

Working pressure by rules 130 lbs Superheater or Steam chest; how connected to boiler ✓ 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,

Jos. T. Ettingham & Co Manufacturers

Dates of Survey while building — During progress of work in shops: 1907. Aug 23.26.29. Sep 3.6.10.17.20.23.26. Oct 1.7.11.15.18.24. During erection on board vessel: 1908. Nov 7.10.14.19.21.26.29 Dec 2.4.9

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits 28.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey, the workmanship and material is sound and good.

Survey Fee ... ... £ 4 : 5 : ⎫ When applied for, 19 DEC 1907 19

Travelling Expenses (if any)) £ · : · : ⎭ When received, 11 . 1 . 08 19

J. E. Sellex.

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

Committee's Minute FRI. 20 NOV 1908

Assigned

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