

Rpt. 5a.

REPORT ON BOILERS.

No. 8117.
THU. SEP. 25. 1913

Sh. No. 25941

Date of writing Report 24/9/13 When handed in at Local Office 24/9/13 Port of Middlesbrough
 No. in Survey held at Stockton-on-Tees Date, First Survey 5th May 1913 Last Survey 18th Sept 1913
 Reg. Book. on the Donkey boiler for the new S.S. "BERTRAND" (S.S. No 281) (Number of Visits 14) Gross 36.13 Tons Net 22.82
 Master Jenkins Built at Sunderland By whom built R. Thompson & Sons Ltd When built 1913
 Engines made at Stockton By whom made Blair & Co Ltd (No 1779) When made 1913
 Boilers made at Stockton By whom made Thos Sudron & Co Ltd (No 3292) When made 1913
 Registered Horse Power Owners Turnbull Bros Port belonging to Bandiff

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel John Spencer & Sons(Letter for record (S)) Total Heating Surface of Boilers 871 sq ft Is forced draft fitted no No. and Description ofBoilers One single ended Working Pressure 100 Tested by hydraulic pressure to 200 Date of test 18.9.13No. of Certificate 5154 Can each boiler be worked separately yes Area of fire grate in each boiler 29 sq ft No. and Description ofsafety valves to each boiler two direct spring Area of each valve 4.910 Pressure to which they are adjusted 103Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler noSmallest distance between boilers or uptakes and bunkers on woodwork 10 1/2" External Mean dia. of boilers 10'-0" Length 10'-0"Material of shell plates steel Thickness 1/2" Range of tensile strength 29-33 Are the shell plates welded or flanged noDescrip. of riveting: cir. seams S. lap long. seams 3 Riv. lap Diameter of rivet holes in long. seams 15/16 Pitch of rivets 3 5/8"Lap of plates or width of butt straps 6 1/2" Per centages of strength of longitudinal joint rivets 82.5 Working pressure of shell by rules 100 plate 74.13Size of manhole in shell 16" x 12" Size of compensating ring 5 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 36" Length of plain part top 79 1/2 Thickness of plates crown 7/8 bottom 104 bottom 58 diamDescription of longitudinal joint Weld No. of strengthening rings none Working pressure of furnace by the rules 100 Combustion chamberplates: Material steel Thickness: Sides 7/8 Back 1 1/2 Top 7/8 Bottom 2 1/2 Pitch of stays to ditto: Sides 8 7/8 Back 9 1/2 x 9Top 9 one of stays are fitted with nuts or riveted heads nuts Working pressure by rules 101 Material of stays steel Diameter atsmallest part 1.23 Area supported by each stay 85.5 Working pressure by rules 111 End plates in steam space: Material steel Thickness 2 7/8Pitch of stays 17 1/2 x 18 How are stays secured nuts & washers Working pressure by rules 100 Material of stays steel Diameter at smallest part 2.09Area supported by each stay 315 Working pressure by rules 113 Material of Front plates at bottom steel Thickness 2 7/8 Material ofLower back plate steel Thickness 2 7/8 Greatest pitch of stays 13 x 9 Working pressure of plate by rules 196 Diameter of tubes 3 1/4"Pitch of tubes 4 3/4 x 4 3/8 Material of tube plates steel Thickness: Front 2 7/8 Back 2 1/2 Mean pitch of stays 10 1/2" Pitch across widewater spaces 14" Working pressures by rules 116 Girders to Chamber tops: Material steel Depth and thickness ofgirder at centre 6 1/4" x 1 1/4" Length as per rule 25 1/8" Distance apart 9" Number and pitch of Stays in each oneWorking pressure by rules 110 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

SURVEY REQUEST NO. 768 ATTACHED. The foregoing is a correct description, THOMAS SUDRON & CO. LIMITED Manufacturer.Is the approved plan of boiler forwarded herewith yes Total No. of visits 14 16.

Dates of Survey During progress of work in shops - - - 1913. May 5. 7. 16. 19. 30. June 3. 9. 16. 19. 26. July 24. 29. Aug. 8. 13. 28. Sep 18. Dec 2. 10.

During erection on board vessel - - -

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.

Satisfactorily fixed on the upper deck of the vessel and its safety valves adjusted as above. workers - F 3/8" A 1 1/2"Survey Fee ... £ 2-18-0 When applied for, MONTHLY A/c. 191Travelling Expenses (if any) £ 4 When received, 191

Committee's Minute TUE. DEC. 16. 1913

Assigned See Minute onInst. Rpt 8213

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

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