

Sl. No. 25941

Rpt. 5a.

REPORT ON BOILERS.

No. 8117. THU. SEP. 25. 1913

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 news "BERTRAND" (S.S. No 281) (Number of Visits 14) Gross 3613 Tons Net 2282
 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 Cardiff

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 of Boilers One single ended Working Pressure 100 Tested by hydraulic pressure to 200 Date of test 18.9.13

No. of Certificate 5154 Can each boiler be worked separately yes Area of fire grate in each boiler 29 sq ft No. and Description of safety valves to each boiler two direct spring Area of each valve 4.910 Pressure to which they are adjusted 103

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 10 1/2 External Mean dia. of boilers 10'-0" Length 10'-0"

Material of shell plates steel Thickness 12/32 Range of tensile strength 29-33 Are the shell plates welded or flanged no

Descrip. 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 74.13

Size 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 7/16 bottom 104 bottom 58 diam

Description of longitudinal joint Weld No. of strengthening rings none Working pressure of furnace by the rules 100 Combustion chamber plates: Material steel Thickness: Sides 9/16 Back 17/32 Top 9/16 Bottom 21/32 Pitch of stays to ditto: Sides 8 7/8 Back 9 1/2 x 9

Top 9 one of stays are fitted with nuts or riveted heads nuts Working pressure by rules 101 Material of stays steel Diameter at smallest part 1.23 Area supported by each stay 85.5 Working pressure by rules 111 End plates in steam space: Material steel Thickness 27/32

Pitch 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 2.09

Area supported by each stay 315 Working pressure by rules 113 Material of Front plates at bottom steel Thickness 27/32 Material of Lower back plate steel Thickness 27/32 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 27/32 Back 21/32 Mean pitch of stays 10 1/2 Pitch across wide water spaces 14 Working pressures by rules 116 Girders to Chamber tops: Material steel Depth and thickness of girder 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 one

Working 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.

Dates of Survey 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. Is the approved plan of boiler forwarded herewith yes Total No. of visits 14

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. washers - F 3/8 A 1 1/2

Survey Fee ... £ 2-18-0 When applied for, MONTHLY A/c 191...
Travelling Expenses (if any) £ 4 When received, 191...

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

Committee's Minute TUE. DEC. 16. 1913

Assigned See minute on Indab. Rpt 8213

