

# REPORT ON BOILERS

No. 1143  
TUE. 13 NOV. 1917

Date of writing Report 18<sup>th</sup> Sept. 1917 When handed in at Local Office 18<sup>th</sup> Sept. 1917 Port of NAGASAKI  
 Received at London Office  
 No. in Survey held at NAGASAKI Date, First Survey 17<sup>th</sup> Aug. 1916 Last Survey 3<sup>rd</sup> Sept. 1917  
 Reg. Book. on the s. s. "Jojo Maru No. 2" (Number of Visits 22)  
 Master O. Hayakawa Built at Nagasaki By whom built Matsuo Iron Works When built 1917  
 Engines made at Nagasaki By whom made Matsuo Iron Works when made 1917  
 Boilers made at Nagasaki By whom made Matsuo Iron Works when made 1917  
 Registered Horse Power Owners S. Sawayama Port belonging to Nagasaki

**MULTITUBULAR BOILERS** — ~~MAIN, AUXILIARY OR DONKEY.~~ — Manufacturers of Steel John Spencer & Sons & Carnegie Steel Coy.  
 (Letter for record S) Total Heating Surface of Boilers 702.2 sq. ft. Is forced draft fitted No. No. and Description of Boilers Single ended, Cylindrical Working Pressure 110 lbs. Tested by hydraulic pressure to 220 lbs. Date of test 25.5.17  
 No. of Certificate 73 Can each boiler be worked separately Yes Area of fire grate in each boiler 23.33 sq. ft. No. and Description of safety valves to each boiler 2 Spring loaded Area of each valve 7.06 sq. ins. Pressure to which they are adjusted 115 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 23 3/4" Mean dia. of boilers 9'0" Length 9'0"  
 Material of shell plates Steel Thickness 3/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No.  
 Descrip. of riveting: cir. seams Double lap long. seams 2 Straps Diameter of rivet holes in long. seams 15/16" Pitch of rivets 4 7/8"  
 Lap of plates or width of butt straps 10 1/2" Per centages of strength of longitudinal joint rivets 73.22 Working pressure of shell by rules 149 lbs. Size of manhole in shell 16" x 12" Size of compensating ring 32 1/2" x 28 1/2" x 3 1/2" No. and Description of Furnaces in each boiler Two Plain with Adamson ring Material Steel Outside diameter 2'7" Length of plain part top 37" Thickness of plates crown 1 1/2" bottom 1 1/2"  
 Description of longitudinal joint Welded No. of strengthening rings Yes Working pressure of furnace by the rules 182 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 5/8" Top 1/2" Bottom 5/8" Pitch of stays to ditto: Sides 7 1/2" x 9" Back 7 1/2" x 9"  
 Top 7 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 136 lbs. Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 67.9 sq. ins. Working pressure by rules 146 lbs. End plates in steam space: Material Steel Thickness 3/4"  
 Pitch of stays 13" x 14 1/2" How are stays secured Double nuts Working pressure by rules 140 lbs. Material of stays Steel Diameter at smallest part 2"  
 Area supported by each stay 189 sq. ins. Working pressure by rules 173 lbs. Material of Front plates at bottom Steel Thickness 5/8" Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 13 5/16" Working pressure of plate by rules 152 lbs. Diameter of tubes 3"  
 Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 5/8" Back 5/8" Mean pitch of stays 9 1/2" Pitch across wide water spaces 13 1/4" Working pressures by rules 162 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5 1/2" x 5/8" double Length as per rule 20 3/4" Distance apart 7 1/2" Number and pitch of Stays in each 2 @ 7 1/2"  
 Working pressure by rules 168 lbs. Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes  
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes  
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

The foregoing is a correct description,  
 For Matsuo Iron Works & Dockyard, K. Araki, Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1916 Aug. 17, Sept. 7, 13, 20, 29, Oct. 5, 21, Nov. 6, 20, Dec. 23, 1917 Jan. 17, Feb. 16, 23, Mar. 17, 31. Is the approved plan of boiler forwarded herewith Yes.  
 During erection on board vessel --- Apr. 10, May 25, July 27, Aug. 9, 15, 27, Sept. 3. Total No. of visits 22.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c. This Donkey Boiler has been constructed under Special Survey, in accordance with the Rules, and of good materials and workmanship. It is, in my opinion, eligible for record in the Register Book for a working pressure of 110 lbs.

Survey Fee ... £ : : When applied for, 19  
 Travelling Expenses (if any) £ : : When received, 19

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

Committee's Minute FRI. 16 NOV. 1917

Assigned



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