

REPORT ON BOILERS.

No. 1143
TUE. 13 NOV. 1917

Date of writing Report 18th Sept. 1917 When handed in at Local Office 18th Sept. 1917 Port of NAGASAKI
 No. in Survey held at NAGASAKI
 Reg. Book. on the s. s. "Toyo Maru No. 2"
 Master C. 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 Corp.(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, cylindricalWorking Pressure 110 lb. Tested by hydraulic pressure to 220 lb. Date of test 25.5.17No. 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 loadedArea of each valve 7.06 sq. ins. Pressure to which they are adjusted 115 lb.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" 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 lb. Size of manhole in shell 16" x 12" Size of compensating ring 32 1/2" x 28 1/2" x 3/4" No. and Description of Furnaces in each boiler Two Plain with Adamson ringMaterial Steel Outside diameter 2' 7" Length of plain part 37" Thickness of plates 1 1/2"Description of longitudinal joint Welded No. of strengthening rings 1 Working pressure of furnace by the rules 182 lb. 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 lb. Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 67.9 sq. in. Working pressure by rules 146 lb. 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 lb. Material of stays Steel Diameter at smallest part 2"Area supported by each stay 189 sq. in. Working pressure by rules 173 lb. 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 lb. Diameter of tubes 3"Pitch of tubes 4 1/4" x 4 1/4" 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 lb. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5 1/2" x 5/8" 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 lb. 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 stayedWorking pressure of end plates Area of safety valves to superheater Are they fitted with easing gear Yes

The foregoing is a correct description,

For Matsuo Iron Works & Dockyard. K. Araki Manufacturer.

Dates of Survey 1916
 During progress of work in shops -- Aug. 17. Sept. 7. 13. 20. 29. Oct. 5. 21. Is the approved plan of boiler forwarded herewith Yes
 while building Nov. 6. 24. Dec. 23. 1917 Jan. 17. Feb. 16. 23. Mar. 17. 31.
 During erection on board vessel -- Apr. 10. May. 25. July. 27. Aug. 9. 15. 27 Total No. of visits 22.
Sept. 3.

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 lb.

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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