

# REPORT ON BOILERS.

No. 2196.

Received at London Office

TUE 8 JUL 1919

Title of writing Report 101 When handed in at Local Office 101 Port of Kobe  
 No. in Survey held at Kobe Date, First Survey 2<sup>nd</sup> Dec. 1918 Last Survey 15<sup>th</sup> March 1919  
 Reg. Book. on the Steel Single screw Steamer "San Francisco Maru" (Number of Visits 10) Gross 5858  
 Tons } Net 4259  
 Built at Kobe By whom built The Kawasaki Dockyard Co. Ltd. When built 1919  
 Yard No. 438  
 Engines made at Kobe By whom made The Kawasaki Dockyard Co. Ltd. When made 1919  
 Boilers made at do By whom made do When made 1919  
 Registered Horse Power 440 Owners Kawasaki Kisen Kabushiki Kaisha Port belonging to Kobe

**WATER TUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.**—Manufacturers of Steel Worth Bros. & Amer. Spirit Tube Co.

Letter for record S Total Heating Surface of Boilers 1132<sup>0</sup> Is forced draft fitted yes No. and Description of Boilers One S.E. Aux. Boiler Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 8/1/19  
 No. of Certificate 400 LBS Can each boiler be worked separately yes Area of fire grate in each boiler 33<sup>0</sup> No. and Description of Safety valves to each boiler Two Direct Spring Area of each valve 5.93<sup>0</sup> Pressure to which they are adjusted 205 lbs.  
 Are they fitted with easing gear yes 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 18" Mean dia. of boilers 10' : 10" Length 10' : 6"  
 Material of shell plates Steel Thickness 1" Range of tensile strength 28 to 32<sup>lws</sup> Are the shell plates welded or flanged No  
 Description of riveting: cir. seams Doub. rivet long. seams Doub. straps Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 6 3/4" + 3 1/4"  
 Width of plates or width of butt straps 1 1/2" x 1" Percentages of strength of longitudinal joint rivets 95.2 Working pressure of shell by plate 84.6  
 Testes 200 lbs. Size of manhole in shell 12" x 16" Size of compensating ring (flange) 1" No. and Description of Furnaces in each Boiler Two Morrison Material Steel Outside diameter 40 1/4" Length of plain part ✓ Thickness of plates crown 9 1/16" bottom 2 1/8"  
 Description of longitudinal joint Weld No. of strengthening rings ✓ Working pressure of furnace by the rules 236 lbs. Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/4" Pitch of stays to ditto: Sides 7 x 8 1/2" Back 7 1/2 x 8 1/2"  
40 x 7" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 204 lbs. Material of stays Steel Area at smallest part 1.78<sup>0</sup> Area supported by each stay 66<sup>0</sup> Working pressure by rules 242 lbs. End plates in steam space: Material Steel Thickness 7/8"  
40 x 15 1/2" x 14 1/2" How are stays secured Doub. nuts Working pressure by rules 202 lbs. Material of stays Steel Area at smallest part 5.27  
40 x 15 1/2" x 14 1/2" Working pressure by rules 238 lbs. Material of Front plates at bottom Steel Thickness 3/4" Material of inner back plate Steel Thickness 3/4" Greatest pitch of stays 13 1/2" at Wide Space, Doubled 5/8" Working pressure of plate by rules 200 lbs. Diameter of tubes 3 1/4"  
 Diameter of tubes 4 3/4" mean Material of tube plates Steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 8 3/4" Pitch across wide  
 Spaces 13 3/4" double 5/8" Working pressures by rules 200 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 x 13/16 (two) Length as per rule 27" Distance apart 8" Number and pitch of Stays in each 3 @ 7"  
 Working pressure by rules 256 lbs. Steam dome: description of joint to shell \_\_\_\_\_ % of strength of joint \_\_\_\_\_  
 Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_  
 Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

**SUPERHEATER.** Type \_\_\_\_\_ Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_  
 Description of Test \_\_\_\_\_ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler \_\_\_\_\_  
 Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

**VERTICAL DONKEY BOILER—** No. \_\_\_\_\_ Description \_\_\_\_\_ Manufacturers of steel \_\_\_\_\_  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_ Working pressure \_\_\_\_\_  
 Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_  
 Description of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_  
 Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_  
 Description of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_  
 Description of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_  
 Description of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_ Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_  
 Description of furnace plates \_\_\_\_\_ Description of joint \_\_\_\_\_ Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown \_\_\_\_\_  
 Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_  
 Thickness of water tubes \_\_\_\_\_

The foregoing is a correct description,  
Kawasaki Dockyard Co., Ltd., Manufacturer.  
 Per. J. Matsumoto Secretary.

During progress of work in shops -- 2, 4, 11, 14, 23 Dec. 1918 8 Jan. 1919  
 During erection on board vessel --- 26 Feb. 7, 12, 15<sup>th</sup> March 1919  
 Total No. of visits 10

Is the approved plan of main boiler forwarded herewith \_\_\_\_\_  
 " " " donkey " " \_\_\_\_\_

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This Auxiliary Main Boiler has been made + fitted under special survey in accordance with the requirements of the Rules + the materials + workmanship are good.

This vessel is eligible in our opinion for the record.  
Aux. S. E. B. 200 lbs.

Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Fees included in Machy. S. S. fees

The amount of Entry Fee .. £	:	:	When applied for,
Special .. .. £	:	:	.....19.....
Donkey Boiler Fee .. .. £	:	:	When received,
Travelling Expenses (if any) £	:	:	.....19.....

FRI. 11 JUL. 1919

Committee's Minute

Assigned.

*A. L. Jones & Aulatt*  
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation