

Rpt. 4. **REPORT ON MACHINERY.** No. 2196

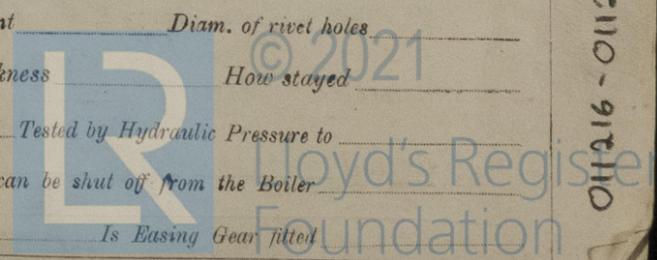
Received at London Office **JUL 8 - JUL 1919**

Date of writing Report **24th April 1919** When handed in at Local Office **Kobe** Port of **Kobe**
 No. in Survey held at **Kobe** Date, First Survey **10th Sept. 1918** Last Survey **20th March 1919**
 Reg. Book. on the **Steel Single Screw Steamer "San Francisco Maru"** Number of Visits **40**
 Master **H. Chisaki** Built at **Kobe** By whom built **The Kawasaki Dockyard Co. Ltd.** Gross **5863**
 Engines made at **Kobe** By whom made **The Kawasaki Dockyard Co. Ltd.** when made **1919** Net **4259**
 Boilers made at **do** By whom made **do** when made **1919**
 Registered Horse Power **440** Owners **The Kawasaki Kisen Kaisha** Port belonging to **Kobe**
 Nom. Horse Power as per Section 28 **440** Is Refrigerating Machinery fitted for cargo purposes **No.** Is Electric Light fitted **yes**

ENGINES, &c.—Description of Engines **Triple Expansion** No. of Cylinders **Three** No. of Cranks **Three**
 Dia. of Cylinders **26:43/2:72** Length of Stroke **48** Revs. per minute **70** Dia. of Screw shaft **15-47 15-7** Material of **Steel**
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube **No liner** Is the after end of the liner made water tight
 in the propeller boss **✓** If the liner is in more than one length are the joints burned **✓** If the liner does not fit tightly at the part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive **✓** If two
 liners are fitted, is the shaft lapped or protected between the liners **✓** Length of stern bush **5' : 5 1/4"**
 Dia. of Tunnel shaft **13-48 13-54** Dia. of Crank shaft journals **14-15 14-21** Dia. of Crank pin **14 3/4** Size of Crank webs **90 1/2 x 20 1/2** Dia. of thrust shaft under
 collars **14 3/8** Dia. of screw **17:6"** Pitch of Screw **19:0" mean** No. of Blades **4** State whether moveable **yes** Total surface **100 sq. ft.**
 No. of Feed pumps **One** Diameter of ditto **5"** Stroke **24"** Can one be overhauled while the other is at work **yes (with Weir's feed)**
 No. of Bilge pumps **Two** Diameter of ditto **5"** Stroke **24"** Can one be overhauled while the other is at work **yes**
 No. of Donkey Engines **Three** Sizes of Pumps **Bal. 19"x11"x12" Duplex** No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room **Three 3 1/2** **Weir's feed 9 1/2" x 7 1/2" x 24" two** **Gen. Sew. 7 1/2" x 5" x 6" dupl.** In Holds, &c. **No. 1, 3 + 4 holds each two 3 1/2**
and One 3 1/2 to tunnel well **No. 2 holds two 4"**
 No. of Bilge Injections **1** sizes **9"** Connected to condenser, or to circulating pump **in P.** Is a separate Donkey Suction fitted in Engine room & size **yes 3 1/2"**
 Are all the bilge suction pipes fitted with roses **yes** Are the roses in Engine room always accessible **yes** Are the sluices on Engine room bulkheads always accessible **None**
 Are all connections with the sea direct on the skin of the ship **yes** Are they Valves or Cocks **Larger Valves, smaller Cocks**
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **yes** Are the Discharge Pipes above or below the deep water line **above**
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel **yes** Are the Blow Off Cocks fitted with a spigot and brass covering plate **yes**
 What pipes are carried through the bunkers **None** How are they protected **✓**
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **yes**
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges **yes**
 Is the Screw Shaft Tunnel watertight **yes** Is it fitted with a watertight door **yes** worked from **upper platform of E. R.**

BOILERS, &c.—(Letter for record **S.**) Manufacturers of Steel **Worth Bros. Amer. Spiral Tube Co.**
 Total Heating Surface of Boilers = **5741** Is Forced Draft fitted **yes** No. and Description of Boilers **Two S. E. + Aux. S. E.**
 Working Pressure **200 lbs.** Tested by hydraulic pressure to **400 lbs.** Date of test **19/12/18 23/12/18** No. of Certificate **1100 LBS**
 Can each boiler be worked separately **yes** Area of fire grate in each boiler **60 1/2'** No. and Description of Safety Valves to
 each boiler **Two Spring loaded** Area of each valve **3 3/4" dia.** Pressure to which they are adjusted **205 lbs.** Are they fitted with easing gear **yes**
 Smallest distance between boilers or uptakes and bunkers or woodwork **12"** Mean dia. of boilers **14:6"** Length **12:0"** Material of shell plates **Steel**
 Thickness **1 5/16"** Range of tensile strength **28 to 32 tons** Are the shell plates welded or flanged **No** Descrip. of riveting: cir. seams **Doub. rivd**
 long. seams **Doub. Straps** Diameter of rivet holes in long. seams **1 3/8"** Pitch of rivets **8 3/4" + 4 1/2"** Lap of plates or width of butt straps **19 1/8" x 1 1/4"**
 Per centages of strength of longitudinal joint **95.84** Working pressure of shell by rules **202 lbs.** Size of manhole in shell **16" x 12"** **18 x 22**
 Size of compensating ring **1 1/2" (flange) 1 1/2"** No. and Description of Furnaces in each boiler **3 Morrison's** Material **Steel** Outside diameter **48 1/2"**
 Length of plain part **top 2 1/2"** Thickness of plates **bottom 2 1/2"** Description of longitudinal joint **Weld** No. of strengthening rings **✓**
 Working pressure of furnace by the rules **221** Combustion chamber plates: Material **Steel** Thickness: Sides **1/16"** Back **11/16"** Top **1/16"** Bottom **7/8"**
 Pitch of stays to ditto: Sides **8 1/2" x 8 1/2"** Back **8 1/2" x 9"** Top **8 1/2" x 9 3/8"** If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules **203 lbs.**
 Material of stays **Steel** Area at smallest part **2:10"** Area supported by each stay **8 1/2" x 9 3/8"** Working pressure by rules **230 lbs.** End plates in steam space:
 Material **Steel** Thickness **1 5/8"** Pitch of stays **19 3/4" x 20 1/2"** How are stays secured **Doub. nuts + small washers** Working pressure by rules **201 lbs.** Material of stays **Steel**
 Area at smallest part **10"** Area supported by each stay **19 3/4" x 20 1/2"** Working pressure by rules **260 lbs.** Material of Front plates at bottom **Steel**
 Thickness **13/16"** Material of Lower back plate **Steel** Thickness **3/4"** Greatest pitch of stays **13 1/2" at wide** Working pressure of plate by rules **200 lbs.**
 Diameter of tubes **3 1/4"** Pitch of tubes **4 1/16" x 4 5/16"** Material of tube plates **Steel** Thickness: Front **1"** Back **13/16"** Mean pitch of stays **8 3/4"**
 Pitch across wide water spaces **13 3/4" + 3/4"** Working pressures by rules **210 lbs.** Girders to Chamber tops: Material **Steel** Depth and
 thickness of girder at centre **10 3/4" x 13/16" (2)** Length as per rule **34 1/2"** Distance apart **9 3/8"** Number and pitch of stays in each **3 @ 8 1/2"**
 Working pressure by rules **220 lbs.** Steam dome: description of joint to shell **% of strength of joint**

SUPERHEATER. Type **None** Date of Approval of Plan **Tested by Hydraulic Pressure to**
 Date 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**



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