

# REPORT ON MACHINERY.

Received at London Office

Date of writing Report June 29<sup>th</sup> 1919 When handed in at Local Office June 30<sup>th</sup> 1919 Port of KOBE, JAPAN.  
 No. in Survey held at KOBE Date, First Survey 26-11-17. Last Survey 5<sup>th</sup> June 1919.  
 Reg. Book. on the S.S. "HANKOW MARU" (Number of Visits 39.) Tons } Gross 4103  
 No. 2524.

Master M. TAKEMURA Built at Kobe By whom built Kawasaki Dockyard Co. Ltd When built 1919.  
 Engines made at Kawasaki Dockyard By whom made Kawasaki Dockyard Co. Ltd when made 1919  
 Boilers made at do do By whom made do do do when made 1919.  
 Registered Horse Power \_\_\_\_\_ Owners Kawasaki Dockyard Co. Ltd. Port belonging to KOBE.  
 Nom. Horse Power as per Section 28 356 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

**ENGINES, &c.—Description of Engines** Triple Expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 23 1/2" + 39 + 65" Length of Stroke 18" Revs. per minute 84 max Dia. of Screw shaft 1 1/2" as per rule 1 1/2" as fitted 1 1/2" Material of screw shaft Forged 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 \_\_\_\_\_  
 Dia. of Tunnel shaft 12 1/2" as per rule 12 1/2" as fitted 12 1/2" Dia. of Crank shaft journals 13 1/2" as per rule 13 1/2" as fitted 13 1/2" Dia. of Crank pin 13 7/8" Size of Crank webs 25 1/2" x 9" Dia. of thrust shaft under collars 13 1/2" Dia. of screw 16'-6" Pitch of Screw 14'-0" to 19'-0" No. of Blades 4 State whether movable Yes Total surface 85 sq. ft.  
 No. of Feed pumps one Diameter of ditto 1 1/2" Stroke 2 1/4" Can one be overhauled while the other is at work Yes (with Weir's Independent feed pumps)  
 No. of Bilge pumps Two Diameter of ditto 1 1/2" Stroke 2 1/4" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines Three Sizes of Pumps Ballast 10" x 11" x 12" dupl. In Engine Room 3 1/2" In Boiler Room two 3 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps No. 1 - two 3 1/2" No. 2 - two 3 1/2" No. 3 - two 3 1/2" No. 4 - two 3 1/2" Tunnel Well - one 3"  
 No. of Bilge Injections 1 sizes 1 1/2" 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 both  
 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 Two 3 1/2" bilge suction from Nos. 1 & 2 Holds How are they protected Wood coloring  
 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 deck level

**BOILERS, &c.—(Letter for record \_\_\_\_\_) Manufacturers of Steel** Illinois Steel Co. & Amer. Special Pipe Co. U.S.A.  
 Total Heating Surface of Boilers 4610 Is Forced Draft fitted Yes No. and Description of Boilers Two - Single ended  
 Working Pressure 200 lbs. □ Tested by hydraulic pressure to 400 lbs. □ Date of test 31-3-19 and 4-4-19 No. of Certificate 31-3-19, 4-4-19  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60.5 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 18" Mean dia. of boilers 11'-6" Length 12'-0" Material of shell plates Steel  
 Thickness 1 5/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged Welded Descrip. of riveting: cir. seams Double riv. reeled  
 long. seams Double rivets Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 8 3/4" & 4 3/8" Lap of plates or width of butt straps 19 3/8" x 1 1/4"  
 Per centages of strength of longitudinal joint 81.3 Working pressure of shell by rules 202 Size of manhole in shell 18 x 22  
 Size of compensating ring 12" & 14" x 1 3/8" No. and Description of Furnaces in each boiler Three Morrison's suspension. Material Steel Outside diameter 18 1/4"  
 Length of plain part top 2 1/32" Thickness of plates bottom 2 1/32" Description of longitudinal joint Welded No. of strengthening rings ✓  
 Working pressure of furnace by the rules 221 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 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 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 202  
 Material of stays Steel Area at smallest part 2.10 Area supported by each stay 16.5 Working pressure by rules 247 End plates in steam space: Ag. ins.  
 Material Steel Thickness 1 5/16" Pitch of stays 19 3/4" x 20 1/2" How are stays secured Double nuts + small washers Working pressure by rules 202 Material of stays Steel  
 Area at smallest part 10-12 Area supported by each stay 105 Working pressure by rules 260 Material of Front plates at bottom Steel  
 Thickness 1 3/16" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 15 x 15 Working pressure of plate by rules 225  
 Diameter of tubes 3 1/2" Pitch of tubes 11 1/2" x 1 1/16" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 8 3/4"  
 Pitch across wide water spaces 13 3/4" x 3 3/4" Working pressures by rules 267 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 3/4" x 13 1/2" (2) Length as per rule 3 1/2" Distance apart 9 3/8" Number and pitch of stays in each Three @ 8 1/2"  
 Working pressure by rules 202 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 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 \_\_\_\_\_



