

# REPORT ON MACHINERY.

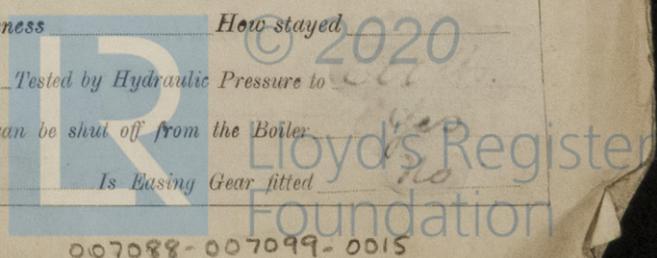
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Date of writing Report 20<sup>th</sup> Aug 1919 When handed in at Local Office 19 Port of Kobe  
 No. in Survey held at Kobe Date, First Survey 18<sup>th</sup> Jan<sup>y</sup> Last Survey 17<sup>th</sup> July 1919  
 Reg. Book. on the Steel Single Screw Steamer "Naples Maru" (Number of Visits 50) Tons { Gross 5869  
 Net 4260  
 Master N. MARUYAMA Built at Kobe By whom built The Kawasaki Dockyard Co. Ltd When built 1919  
 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 437 Owners The Kawasaki Yusen 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 3 No. of Cranks 3  
 Dia. of Cylinders 26: 13 1/2: 12 Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 15.41 Material of screw shaft Steel  
 as per rule 15.41 as fitted 16"  
 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 1/2"  
 Dia. of Tunnel shaft 13.48 as per rule 13.54" Dia. of Crank shaft journals 11.15 as per rule 14.22" Dia. of Crank pin 14 3/4" Size of Crank webs 9 1/2 x 20 1/2" Dia. of thrust shaft under collars 14 3/8" Dia. of screw 14' 6" Pitch of Screw 19' 0" mean No. of Blades 1 State whether moveable yes Total surface 10039 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. 10" x 11" x 12 dup. Weir's feed 9 1/2 x 7 x 24 two Gen. Sw. 7 1/2 x 5 x 6 dup. No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room three 3 1/2  
 In Holds, &c. Nos. 1, 3 + 1 holds each two 3 1/2 No. 2 hold two 1"  
 No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump air 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 Upp. platform of E. R.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Illinois Steel, Carnegie Steel, North Bros. + Amer. Spiral Pipe Co. 2SB & 1AUX x SB  
 Total Heating Surface of Boilers 5636 Is Forced Draft fitted yes No. and Description of Boilers Two S. & Aux. S. & C.  
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 30-5-19: 3-6-19 No. of Certificate 30-5-19 3-6-19  
 Can each boiler be worked separately yes Area of fire grate in each boiler 60 1/2 sq. ft. No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 3 1/2" 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 3/8" Range of tensile strength 2678 to 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams ends double mid. treble  
 long. seams double riveted Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 1/8 + 1 1/8" Lap of plates or width of butt straps 20 1/8 + 1 3/8"  
 Per centages of strength of longitudinal joint rivets 95.84 Working pressure of shell by rules 200 lbs. Size of manhole in shell 16 x 12  
 plate 84.28  
 Size of compensating ring (7 1/2 + flange) 17 1/2" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 18 1/2"  
 Length of plain part top ✓ Thickness of plates crown 21/32" Description of longitudinal joint Weld No. of strengthening rings ✓  
 bottom ✓ Working pressure of furnace by the rules 221 Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1/8"  
 Pitch of stays to ditto: Sides 8 3/8 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 hout. 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 1 1/16 x 1 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 + 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 ✓  
 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 ✓  
 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 ✓



IS A DONKEY BOILER FITTED? *Aux. Blr. only* If so, is a report now forwarded? *Yes.*

SPARE GEAR. State the articles supplied:—

Four main bearing bolts + nuts ✓ Set packing rings + springs each piston. Centrifugal pump impeller  
Two Crank pin bolts + nuts ✓ Set junk ring bolts + nuts. Crosshead + Crank pin  
Two Crosshead bolts + nuts ✓ One part Crank shaft. A. B. rod + nut.  
Set coupling bolts + nuts ✓ Propeller shaft. 3 safety valve springs  
Set Feed + Bilge pump valves ✓ Four blades + 2 sets studs + nuts. Cond. + Blr tubes etc.  
Assorted bolts + nuts + iron ✓ Slide valve spindle each size.

The foregoing is a correct description,  
Kawasaki Dockyard Co., Ltd.

Per. *J. Okamura* Secretary. Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1919 Jan 18, 21, 29; Feb. 5, 12, 18, 21, 25, 28; Mar 3, 11, 14, 18, 20, 24, 28, 31; Apr 5, 8, 11, 16, 25, 27, 30; May 1, 2, 3, 6, 8, 10, 14, 16, 19, 20, 22, 30, 31; June 3, 5, 7, 11, 14, 18, 24, 30; July 7, 11, 12, 14, 17; Total No. of visits 50.

Dates of Examination of principal parts—Cylinders 30/4-19. Slides 18-6-19. Covers 30-4-19. Pistons 18-6-19. Rods 18-6-19. Connecting rods 14-6-19. Crank shaft 3-5-19. Thrust shaft 3-5-19. Tunnel shafts 7-6-19. Screw shaft 5-6-19. Propeller 5-6-19. Stern tube 10-6-19. Steam pipes tested 28-6-19. Engine and boiler seatings 24-6-19. Engines holding down bolts 7-7-19. Completion of pumping arrangements 7-7-19. Boilers fixed 7-7-19. Engines tried under steam 16-7-19. Completion of fitting sea connections 13-6-19. Stern tube 13-6-19. Screw shaft and propeller 24-6-19. Main boiler safety valves adjusted 12-7-19. Thickness of adjusting washers Lock-nuts - Caps sealed by Com. Insp. Material of Crank shaft Steel Identification Mark on Do. 3-5-19 LLOYDS AW R. Material of Thrust shaft Steel Identification Mark on Do. 3-5-19 LLOYDS AW R. Material of Tunnel shafts Steel Identification Marks on Do. 7-6-19 LLOYDS AW R. Material of Screw shafts Steel Identification Marks on Do. 7-6-19 LLOYDS AW R. Material of Steam Pipes Steel Test pressure 600 lb. SPARE T.S. LLOYDS 5-6-19 AW R.

Is an installation fitted for burning oil fuel *no.* Is the flash point of the oil to be used over 150°F. Have the requirements of Section 49 of the Rules been complied with.

Is this machinery duplicate of a previous case *Yes.* If so, state name of vessel *S.S. War Queen Rpt No 2009. S.S. War Prince " " 2031 S.S. Glasgow Maru " " 2528 S.S. Singapore Maru " " 2530 S.S. Aden Maru " " 2567.*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The Machinery of this vessel has been made & fitted in accordance with the requirements of the Rules, and the workmanship & materials are good. The vessel is eligible, in my opinion, for the notation + LMC.*

It is submitted that this vessel is eligible for THE RECORD + LMC 7.19. F.D. 2SB & 1Aux SB. *J.W.D. 1/10/19.*

The amount of Entry Fee ... *Yen 30.-* When applied for, 19<sup>th</sup> July 1919.  
Special ... £ 735.-  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ 15.- When received, 23<sup>rd</sup> July 1919.

*Alexander Watt*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 10E. 14 OCT. 1919  
Assigned + LMC 7.19 7D.