

REPORT ON MACHINERY.

No. 2530

Received at London Office

Date of writing Report 29 June 1919 When handed in at Local Office 29 June 1919 Port of Kobe

No. in Survey held at Kobe Date, First Survey 24 Oct 1918 Last Survey 14 May 1919

Reg. Book. on the Steel Single Screw Steamer "Singapore Maru" (Number of Visits 51) Tons Gross 5859 Net 4260

Master M. I. Kouchi 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 do

Registered Horse Power 437 Owners The Kawasaki Kisen Kaisha Port belonging to Kobe

Nom. Horse Power as per Section 28 437 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: 7 1/2 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 15 1/4 15 1/6 Material of steel as fitted 16" screw shaft

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 as per rule 13 1/4 13 5/8 Dia. of Crank shaft journals as per rule 14 1/4 14 1/2 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 14' - 6" Pitch of Screw 19' - 0" mean No. of Blades 1 State whether moveable yes Total surface 100 sq. ft.

No. of Feed pumps one Diameter of ditto 5" Stroke 2 1/4" 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 2 1/4" Can one be overhauled while the other is at work yes

No. of Donkey Engines three Sizes of Pumps Bal. 10" x 11 1/2" x 12" dupl. Weir's feed 9 1/2" x 7 1/2" x 2 1/2" dupl. Gen. Sew. 1 1/2" x 5" x 6" dupl. No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room three 3 1/2 No. 1, 3 + 1 holds each two 3 1/2 & one 3 1/2 to tunnel well 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 upper platform of E. R.

OILERS, &c.—(Letter for record S.) Manufacturers of Steel Illinois Steel Co. Wash Bros. Amer. Spiral Tube Wks.

Total Heating Surface of Boilers = 5636 Is Forced Draft fitted yes No. and Description of Boilers Two 5' 6" + Aux. 3' 6"

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 13/18 July 19 No. of Certificate 44016 TEST 400 LBS 13/19/18/19 A.W.

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 1/2" Range of tensile strength 26,780 to 32,000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams (Ends double Middle double) Double straps Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 9 1/8 + 1 1/16 Lap of plates or width of butt straps 20 1/2" x 1 1/8"

Percentage of strength of longitudinal joint rivets 95.84 plate 84.28 Working pressure of shell by rules 200 lbs. Size of manhole in shell 16 x 12

Size of compensating ring (1 1/2" + flange) 1 1/16 No. and Description of Furnaces in each boiler 3 Morrison's Material steel Outside diameter 18 1/4"

Length of plain part top ✓ Thickness of plates crown 2 1/32 Description of longitudinal joint Weld 2 No. of strengthening rings ✓ bottom ✓

Working pressure of furnace by the rules 221 Combustion chamber plates: Material steel Thickness: Sides 1 1/16 Back 1 1/16 Top 1 1/16 Bottom 1 1/2

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 203 lbs.

Material of stays steel Area at smallest part 2.10" Area supported by each stay 8 1/2 x 9 1/2 Working pressure by rules 230 lbs End plates in steam space:

Material steel Thickness 1 1/8" Pitch of stays 19 1/2 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 1/2 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 1/16 Material of tube plates steel Thickness: Front 1" Back 13/16 Mean pitch of stays 8 1/4"

Pitch across wide water spaces 13 1/2 + 3/4 double Working pressures by rules 210 lbs Girders to Chamber, tops: Material steel Depth and

Thickness of girder at centre 10 3/4 + 1 1/16 (2) Length as per rule 3 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

Total No. of Visits 2 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

008288-008245-0043

IS A DONKEY BOILER FITTED? *Ans. 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 + shaft
Two Crank pin bolts + nuts	Set junk ring bolts + nuts	Crosshead + Crankpin
Two Crosshead bolts + nuts	One part Crank shaft.	A.P. 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.

M. Nakajima

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 24.30. Oct. 1.2.13.14.21.27.29. Nov. 5.7.11.28 Dec. 1918. 8.13.18.22.24.25.30 Jan.
During erection on board vessel -- 1.4.7.12.13.15.18.20.24. 31y. 1.3.5.14.17.19.24.25.27.29 Mar. 1.4.5.8.10.12.14.16.5
Total No. of visits 31. 1.14 May 1919

Is the approved plan of main boiler forwarded herewith *With Reg. No. 3538 on 3.1.19*

Dates of Examination of principal parts—Cylinders 21/2/19 Slides 17/3/19 Covers 17/3/19 Pistons 1/3/19 Rods 2/11/18
Connecting rods 8/4/19 Crank shaft 3/3/19 Thrust shaft 3/3/19 Tunnel shafts 24/3/19 Screw shaft 19/3/19 Propeller 25/3/19
Stern tube 25/3/19 Steam pipes tested 12/4/19 16/4/19 Engine and boiler seatings 10/4/19 Engines holding down bolts 26/4/19
Completion of pumping arrangements 22/4/19 Boilers fixed 16/4/19 Engines tried under steam 26/4/19 Overhaul 1/5/19
Completion of fitting sea connections 4/4/19 Stern tube 4/4/19 Screw shaft and propeller 10/4/19
Main boiler safety valves adjusted 26 Apr. 1919 Thickness of adjusting washers *check nut clearance Port A 5/8 Star A 9/8*
Material of Crank shaft *Steel* Identification Mark on Do. *Lloyds* Material of Thrust shaft *Steel* Identification Mark on Do. *Lloyds*
Material of Tunnel shafts *Steel* Identification Marks on Do. *Lloyds* Material of Screw shafts *Steel* Identification Marks on Do. *Lloyds*
Material of Steam Pipes *Steel* Test pressure 600 lbs

Is an installation fitted for burning oil fuel ☒ Is the flash point of the oil to be used over 150°F. *Span 110° shaft 19.4 power*

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 *War Queen War Prince etc*

General Remarks (State quality of workmanship, opinions as to class, &c.) *Argonne Portland men Lisexp*

The machinery has been made & fitted under special survey in accordance with the requirements of the Rules & the materials & workmanship are good.

The vessel is eligible in my opinion for the record + LMC 5.19 in the Register Born.

It is submitted that this vessel is eligible for THE RECORD + LMC 5.19. F.D. 5.19

Certificate (if required) to be sent to

The amount of Entry Fee ... *Yes* : 30 : When applied for, 28 May 1919
Special ... *Yes* : 735 :
Donkey Boiler Fee ... *X* : :
Travelling Expenses (if any) *Yes* : 15 : 2nd Jun 1919

Committee's Minute

Assigned

FRI. 8-AUG. 1919

Home 5.19

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