

REPORT ON MACHINERY

No. 2599

TUE. 14 OCT. 1919

Received at London Office

Date of writing Report 1st Sept 1919 When handed in at Local Office

Port of Kobe

No. in Survey held at Kobe
Reg. Book.

Date, First Survey Feb. 19th

Last Survey Aug 18th 1919

on the Steel Single Screw Steamer "Karachi Maru"

(Number of Visits 52)

Gross 5860

Net 4260

Master Y. Saito Built at Kobe

By whom built Kawasaki Dockyard Co. Ltd.

When built 1919

Engines made at Kobe

By whom made Kawasaki Dockyard Co. Ltd.

when made 1919

Boilers made at do

By whom made do.

when made 1919

Registered Horse Power

Owners Jokusai Kisen Kabushiki 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 1/2 : 72 Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 15.41 Material of screw shaft 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' - 5/4"

Dia. of Tunnel shaft 13.48 Dia. of Crank shaft journals 14.15 Dia. of Crank pin 14.21 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 Weir's feed 9 1/2 x 7 x 24 two Gen. Sbr. 7 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 In Holds, &c. Nos. 1, 3 + 4 Hold each two 3 1/2 No. 2 Hold two 4"

No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump ✓ 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 Eng. Rm.

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Illinois Steel Co, Carnegie Steel Co and Amer. Spiral Pipe Works (Farmaco)

Total Heating Surface of Boilers 5636 Is Forced Draft fitted yes No. and Description of Boilers Two 2. 6 + Aux 5. 6

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 24-6-19 28-6-19 No. of Certificate 400 LBS TEST #02 200 LBS WP 28-6-19 A.W.B.

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 3/8" Range of tensile strength 26-18 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Ends Table

long. seams 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 1/8 + 1 3/8"

Per centages of strength of longitudinal joint 95.84 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 1/2" No. and Description of Furnaces in each boiler 3 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 Weld No. of strengthening rings ✓

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 1/8"

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 3/8" Pitch of stays 19 3/4 x 20 1/2 How are stays secured Double 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 water space 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 + 13/4 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 _____

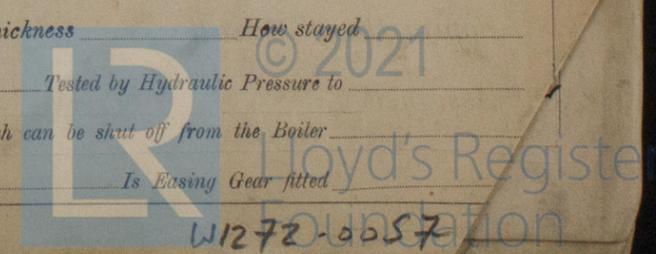
Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____

Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

UPERHEATER. 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
Two Crank-pin	Set junk ring bolts + nuts	Impeller shaft
Two Crosshead	One part Crank Shaft	Crosshead + Crank
Set coupling	Propeller shaft.	A. B. rod + nut.
Set Feed + Bilge pump valves	Four blades + 2 sets studs + nuts	3 Safety Valve spr
Assorted bolts + nuts + iron	Slide Valve spindle each size	Cond. + Blr. tubes etc.

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

Per *J. Ota Kane*
Secretary.

Manufacturer.

Dates of Survey while building

During progress of work in shops - -	<i>Feb 18, 21, 25, 28; Mar 3, 10, 17, 21, 24, 26, 29; Apr 5, 11, 14, 21, 30; May 6, 10, 13</i>
During erection on board vessel - - -	<i>May 19, 23, 26, 31; June 3, 5, 6, 10, 11, 12, 14, 16, 18, 19, 23, 24, 26, 27, 28; July 5, 7, 15, 16, 17, 21</i>
Total No. of visits	<i>52</i>

Dates of Examination of principal parts—Cylinders *7-6-19* Slides *17-7-19* Covers *7-6-19* Pistons *16-7-19* Rods *16-7-19*

Connecting rods *17-7-19* Crank shaft *23-6-19* Thrust shaft *23-6-19* Tunnel shafts *7-7-19* Screw shaft *6-6-19* Propeller *6-6-19*

Stern tube *11-7-19* Steam pipes tested *15-7-19* Engine and boiler seatings *21-7-19* Engines holding down bolts *1-8-19*

Completion of pumping arrangements *5-8-19* Boilers fixed *1-8-19* Engines tried under steam *9-8-19*

Completion of fitting sea connections *21-7-19* Stern tube *21-7-19* Screw shaft and propeller *25-7-19*

Main boiler safety valves adjusted *6-8-19* Thickness of adjusting washers *Locknuts - Caps sealed by Gen. Insp.*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S 23-6-19 AW R*

Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S 23-6-19 AW R*

Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYD'S 7-7-19 AW R*

Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S 6-6-19 AW R*

Material of Steam Pipes *Steel* Test pressure *600 lbs.*

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 *55 War Queen Rpt No 2009*

55. War Prince Rpt. No. 2031

" Glasgow Maru " " 2324

" Singapore Maru " " 2531

" Naples Maru " " 2584

" Port Said Maru " " 2589

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery of this vessel has been made + fitted under Special Survey in accordance with the requirements of the Rules, and the Workmanship + materials are good.

The vessel is eligible, in my opinion, for the notation

✦ L.M.C. 8.19.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 8.19. FI.

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

The amount of Entry Fee *Yes* 30.- : When applied for, *Aug. 12th 1919*

Special *Yes* 435.- : *Aug. 12th 1919*

Boiler Fee *included* :- : *Aug. 12th 1919*

Travelling Expenses (if any) *Yes* 15.- : *Aug. 16th 1919*

Committee's Minute *TUE. 21 OCT. 1919*

Assigned *+ L.M.C. 8.19*

Roll
16/10/19
AW R

a Watt.
Engineer Surveyor to Lloyd's Register of Shipping.

