

REPORT ON MACHINERY.

No. 1249

Received at London Office

of writing Report 28th Aug. 1917 When handed in at Local Office 28th Aug. 1917 Port of NAGASAKI MON. 28 10, 1917

in Survey held at NAGASAKI Date, First Survey 2nd May 1918 Last Survey 12th Aug. 1917
 on the s.s. "Kohyo Maru" (Number of Visits 140) Tons Gross 3010
Net 1820

Built at Nagasaki By whom built Matsuo Iron Works & Dockyard When built 1917

Lines made at Nagasaki By whom made Matsuo Iron Works & Dockyard when made 1917

Engines made at Nagasaki By whom made Matsuo Iron Works & Dockyard when made 1917

Registered Horse Power Owners Kobe Sanbashi Kaisha Port belonging to Kobe

Horse Power as per Section 28 265 300 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

INES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

of Cylinders 22" 37" 61" Length of Stroke 42 Revs. per minute 77 Dia. of Screw shaft as per rule 12.76 Material of steel
as fitted 13.5" screw shaft)

the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight

the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part

when the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two

are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 4' 7"

of Tunnel shaft as per rule 11.3" Dia. of Crank shaft journals as per rule 11.86" Dia. of Crank pin 12 1/2" Size of Crank webs 8 1/2" x 23 1/2" Dia. of thrust shaft under

rs 12 1/2" Dia. of screw 15' 9" Pitch of Screw 16' 9" No. of Blades 4 State whether moveable Yes Total surface 77.2 sq. ft.

of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 21" Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 21" Can one be overhauled while the other is at work Yes

of Donkey Engines 3 Sizes of Pumps 1" 4 1/2" x 3 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3 @ 3 1/2" In Holds, &c. No. 1 Hold 2 @ 3 1/2" No. 2 Hold 2 @ 3 1/2"

No. 3 Hold 2 @ 3 1/2" Tunnel well 1 @ 2 1/2"

Bilge Injections 1 sizes 7 1/2" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"

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

all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

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

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

pipes are carried through the bunkers Bilge pipes How are they protected with iron plates

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper deck

ERS, &c.—(Letter for record S.) Manufacturers of Steel Illinois Steel Co.

Heating Surface of Boilers 4004.7 Is Forced Draft fitted No. No. and Description of Boilers 2 Cylindrical, Single ended

ing Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 11th June 1919 No. of Certificate 92

each boiler be worked separately Yes Area of fire grate in each boiler 55.8 sq. ft. No. and Description of Safety Valves to

boiler 2 Spring loaded Area of each valve 8.61 sq. ins. Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear Yes

st distance between boilers or uptakes and bunkers or woodwork 21 1/2" Mean dia. of boilers 14' 3" Length 11' 0" Material of shell plates Steel

ess 1 5/8" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams Double lap

Forecas Double riveted Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9" x 4 1/2" Lap of plates or width of butt straps 18 1/2"

stages of strength of longitudinal joint rivets 85.25 Working pressure of shell by rules 207 lbs. Size of manhole in shell 16" x 12"

compensating ring 36 1/4" x 32 1/4" x 1 1/2" No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 3' 6"

of plain part top 2' 5 1/2" Thickness of plates crown 1 1/2" Description of longitudinal joint Welded No. of strengthening rings Two

ing pressure of furnace by the rules 210 lbs. Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/4"

stays to ditto: Sides 7 1/2" x 8 1/2" Back 7 1/2" x 8 1/2" Top 7 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 217 lbs.

al of stays Steel Area at smallest part 1' 79 sq. ins. Area supported by each stay 57.8 sq. ins. Working pressure by rules 260 lbs. End plates in steam space:

al Steel Thickness 1 1/8" Pitch of stays 16 3/4" x 15 1/2" How are stays secured Double nuts Working pressure by rules 237 lbs. Material of stays Steel

at smallest part 5' 93 sq. ins. Area supported by each stay 260 sq. ins. Working pressure by rules 230 lbs. Material of Front plates at bottom Steel

ess 7/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13 3/4" Working pressure of plate by rules 207 lbs.

er of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9 1/2"

across wide water spaces 13 3/4" Working pressures by rules 267 lbs. Girders to Chamber tops: Material Steel Depth and

is of girder at centre 9" x 8" double Length as per rule 34 Distance apart 8 1/2" Number and pitch of stays in each 3 @ 7 1/2"

g pressure by rules 197 lbs. Steam dome: description of joint to shell Yes % of strength of joint Yes

r Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes

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

HEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes

Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Safety Valve Yes Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

IS A **DONKEY** BOILER FITTED?

Yes.

If so, is a report now forwarded? Yes.

SPARE GEAR. State the articles supplied:— As per Rule, and in addition one set of packing rings, junk rings, bolts & nuts for each piston, 3 valve spindles, 2 eccentric rods, 1 set each of top and bottom braces for connecting rod, 43 condenser tubes, 1 set of air pump valves & 1 impeller spindle for circulating pump, 2 safety valve springs, 3 escape valve springs, 1 set of valves & seats for feed & bilge pumps, 1 propeller blade &c.

The foregoing is a correct description,

M. Matsuo, Matsuo Iron Works Ltd. Yokohama, Japan. Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1918 May 2, July 5, 6, 23, Aug. 2, 13, 23, 30, Sept. 2, 3, Oct. 22, Nov. 8, 23, Dec. 12, 17, 27, 1919 Jan. 15, 24, Feb. 8, March 21, 24, April 2, 15, 18, May 8, 26, 28, June 11, 30, July 9, 17, 18, 19, 21, 24, 29, Aug. 5, 7, 9, 12, Total No. of visits 40

Is the approved plan of main boiler forwarded herewith? Yes.

Dates of Examination of principal parts: Cylinders 24.1.19, Slides 24.1.19, Covers 24.1.19, Pistons 8.5.19, Rods 15.4.19, Connecting rods 15.4.19, Crank shaft 16.9.18, Thrust shaft 23.7.18, Tunnel shafts 23.7.18, Screw shaft 21.2.19, Propeller 9.7.19, Stern tube 28.5.19, Steam pipes tested 29.7.19, Engine and boiler seatings 28.5.19, Engines holding down bolts 21.7.19, Completion of pumping arrangements 5.8.19, Boilers fixed 24.7.19, Engines tried under steam 9.8.19, Completion of fitting sea connections 9.7.19, Stern tube 9.7.19, Screw shaft and propeller 17.7.19, Main boiler safety valves adjusted 7.8.19, Thickness of adjusting washers Jam nuts, Material of Crank shaft Steel, Identification Mark on Do. R.O.B., Material of Thrust shaft Steel, Identification Mark on Do. R.O.B., Material of Tunnel shafts Steel, Identification Marks on Do. R.O.B., Material of Screw shafts Steel, Identification Marks on Do. R.O.B., Material of Steam Pipes Copper, Test pressure 60 lbs.

Is an installation fitted for burning oil fuel? 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 "Jama Maru"

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

The Engines and Boilers have been constructed under Special Survey in accordance with the Rules, and of good materials and workmanship. They have been securely fitted on board, and have been satisfactory tried under steam.

The machinery of this vessel is eligible, in my opinion, for the use of **L.M.C. 8.19** in the Register Book.

Mean speed of 6 runs on Trial in Ballast condition = 11.9 knots.

It is submitted that this vessel is eligible for THE RECORD.

+ L.M.C. 8.19. 13/11/19.

The amount of Entry Fee ... 20/- : When applied for, Special ... 57.92/- : 28 Aug. 1919. Donkey Boiler Fee ... 1/- : When received, Travelling Expenses (if any) £ ... : 1st Sept. 1919.

Committee's Minute

Assigned

LLOYD'S REGISTER

THICKNESSES OF SHELL PLATING.

	No.1 Hold		Amidships		After Hold.	
	Port	Starboard	Port	Starboard	Port	Starboard.
Sheerstrake	15	14	16	16	14	14
1st below sheerstrake	12	12.5	13	14	12	12
2nd below sheerstrake	9	9.5	10	10	9	9
3rd below sheerstrake	8	9	10	10	8	8
4th below sheerstrake	8	8	10	10	9	9
5th below sheerstrake	9	9	12	12	10	10
6th below sheerstrake	8	9	13	14	9	10
7th below sheerstrake	10	11	14	14	10	12
8th below sheerstrake	10	10			14	11
9th below sheerstrake	10	10			13	11
10th below sheerstrake	9	10			12	10
11th below sheerstrake	9	9			9	9

15 to 16
14 to 15
10 to 11
12 to 13
12 to 13
13 to 14
13 to 14
11 to 12
11 to 12
11 to 12