

Received at London Office

THUR. 3 NOV 1910

Date of writing Report 10. 10 1910 When handed in at Local Office 12. 10 1910 Port of Nagasaki

No. in Survey held at Nagasaki  
Reg. Book.

Date, First Survey Dec 22. 09 Last Survey 10. 06. 1910.

21 on the Twin S.S. Mexico Maru

(Number of Visits 133.)

Gross 6064.  
Tons Net 3760.  
When built 1910.

Master N. Kobashi Built at Nagasaki By whom built Mitsu Bishi

Engines made at Nagasaki By whom made " " when made 1910

Boilers made at Nagasaki By whom made " " when made 1910

Registered Horse Power Owners Osaka Shosen Kaisha Port belonging to Osaka

Nom. Horse Power as per Section 28 578 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &amp;c.—Description of Engines J.S. Triple Expansion No. of Cylinders Six Size 12.93 12.0 Material of Steel

Dia. of Cylinders 19 1/4 32 5/4 Length of Stroke 48 Revs. per minute 85 Dia. of Screw shaft as per rule 13.5 as fitted 13.5 screw shaft)

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight

in the propeller boss Yes 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 Yes lapped at ends Length of stern bush 5 3/2

Dia. of Tunnel shaft as per rule 11.2 as fitted 11.25 Dia. of Crank shaft journals as per rule 11.7 as fitted 12.0 Dia. of Crank pin 12.5 Size of Crank webs 16x8 Dia. of thrust shaft under

collars 12 Dia. of screw 14.9 Pitch of Screws 17-9 No. of Blades 4 State whether moveable Yes Total surface 68.4 ft each.

No. of Feed pumps 4 Diameter of ditto 3 3/4 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 4 Diameter of ditto 3 3/4 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps See next page No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 @ 3 1/2 Boiler Room 2 @ 3 1/2 In Holds, &amp;c. Two 3 1/2 in each hold.

One 3 in each Tunnel and one 3 in Tunnel well.

No. of Bilge Injections 2 sizes 7 Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room &amp; size Yes 7

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 Nil

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both valves and 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 Air, Exhaust, Bilge How are they protected Strong wood casings

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

Dates of examination of completion of fitting of Sea Connections 29. 6. 10 of Stern Tube 27. 6. 10 Screw shaft and Propeller 2. 6. 10

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Bridge deck.

BOILERS, &amp;c.—(Letter for record S.) Manufacturers of Steel Beardmores, Frodingham, Hanniel + Luig.

Total Heating Surface of Boilers 8344 Is Forced Draft fitted Yes No. and Description of Boilers Three scotch.

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 20. 6. 10 No. of Certificate 44.

Can each boiler be worked separately Yes Area of fire grate in each boiler 66 ft No. and Description of Safety Valves to

each boiler 2 Spring 3 1/2 Area of each valve 9.62 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 1-6 Mean dia. of boilers 15.6 Length 11.9 Material of shell plates Steel

Thickness 15/32 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2 R. Lap.

long. seams 3 R. 2 S. Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 10 x 5 Lap of plates or width of butt straps 1-10

Per centages of strength of longitudinal joint rivets 90 % plate 85 % Working pressure of shell by rules 217 lbs Size of manhole in shell 16 x 12

Size of compensating ring 37 x 33 x 1/2 No. and Description of Furnaces in each boiler 3. L.F. Built Material Steel Outside diameter 46 5/16

Length of plain part top Nil bottom Nil Thickness of plates crown 21 bottom 32 Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 232 Combustion chamber plates: Material Steel Thickness: Sides 16 Back 16 Top 16 Bottom 8

Pitch of stays to ditto: Sides 9 x 8 3/4 Back 9 x 8 1/2 Top 9 x 8 1/2 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 212

Material of stays Steel Diameter at smallest part 1 5/8 Area supported by each stay 78 3/4 Working pressure by rules 232 End plates in steam space:

Material Steel Thickness 1 9/32 Pitch of stays 20 x 15 1/2 How are stays secured 2 N + Ws Working pressure by rules 202 Material of stays Steel

Diameter at smallest part 3 3/4 Area supported by each stay 370 Working pressure by rules 229 Material of Front plates at bottom Steel

Thickness 3/4 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 14 1/2 x 9 Working pressure of plate by rules 270

Diameter of tubes 3 Ex Pitch of tubes 4 3/8 x 4 1/8 Material of tube plates Steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 8 1/2

Pitch across wide water spaces 13 1/4 Working pressures by rules 269 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 12 x 1 3/4 Length as per rule 34 1/6 Distance apart 9 Number and pitch of stays in each 3 @ 8 1/2

Working pressure by rules 310 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

W1336-0092



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. *✓* Description *NIL* *✓*

Made at *✓* By whom made *✓* When made *✓* Where fixed *✓*

Working pressure *✓* tested by hydraulic pressure to *✓* Date of test *✓* No. of Certificate *✓* Fire grate area *✓* Description of Safety *✓*

Valves *✓* No. of Safety Valves *✓* Area of each *✓* Pressure to which they are adjusted *✓* Date of adjustment *✓*

If fitted with easing gear *✓* If steam from main boilers can enter the donkey boiler *✓* Dia. of donkey boiler *✓* Length *✓*

Material of shell plates *✓* Thickness *✓* Range of tensile strength *✓* Descrip. of riveting long. seams *✓*

Dia. of rivet holes *✓* Whether punched or drilled *✓* Pitch of rivets *✓* Lap of plating *✓* Per-centage of strength of joint *✓* Rivets *✓*

Working pressure of shell by rules *✓* Thickness of shell crown plates *✓* Radius of do. *✓* No. of stays to do. *✓* Dia. of stays *✓*

Diameter of furnace Top *✓* Bottom *✓* Length of furnace *✓* Thickness of furnace plates *✓* Description of joint *✓*

Working pressure of furnace by rules *✓* Thickness of furnace crown plates *✓* Stayed by *✓*

Diameter of uptake *✓* Thickness of uptake plates *✓* Thickness of water tubes *✓* Dates of survey *✓*

SPARE GEAR. State the articles supplied:— *As per rule, and in addition, One Propeller shaft, one length crank shaft, Four Propeller blades, one Piston Rod, Two Eccentric Rods and straps, Two Valve spindles, one set Crank pin brasses, one set top end brasses, thrust rings &c. &c.*

The foregoing is a correct description,

Manufacturer.

MITSU BISHI DOCKYARD & ENGINE WORKS.

*Shiota*  
for General Manager.

Dates of Survey while building *During progress of work in shops— Dec 22nd 1909. 1910; January 13 Kisito. February 14; March 5; April 14; May 19; June 22. July 2.*  
*During erection on board vessel— July 1910. 15 August 13; September 15.*  
Total No. of visits *133.*

Is the approved plan of main boiler forwarded herewith *yes* *✓*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *20.7.10* Slides *6.6.10* Covers *23.6.10* Pistons *4.6.10* Rods *2-6.10*

Connecting rods *9.5.10* Crank shaft *3.5.10* Thrust shaft *4.5.10* Tunnel shafts *24.6.10* Screw shaft *23.6.10* Propeller *3.6.10*

Stern tube *24.6.10* Steam pipes tested *4.6.10* Engine and boiler seatings *19.7.10* Engines holding down bolts *3.8.10*

Completion of pumping arrangements *16.9.10* Boilers fixed *4.8.10* Engines tried under steam *15.9.10*

Main boiler safety valves adjusted *14.9.10* Thickness of adjusting washers *No washers, jam nuts.*

Material of Crank shaft *Steel* Identification Mark on Do. *39 4.5.10* Material of Thrust shaft *Steel* Identification Mark on Do. *39 7.5.10*

Material of Tunnel shafts *Steel* Identification Marks on Do. *39 24.6.10 11.7.10 8.7.10* Material of Screw shafts *Steel* Identification Marks on Do. *39 23.6.10*

Material of Steam Pipes *Iron, lap welded, straight* Test pressure *Six hundred pounds, 600 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines and Boilers have been constructed, under Special Survey, and in accordance with the Rules. The workmanship, and materials used are of good quality, They have been securely and satisfactorily fitted on board the vessel, and have been been working well under a full head of steam, and are now in my opinion, eligible to be recorded L.M.C. 10.10. in Register Book.*

*Engines fitted amidships.*

*Evaporator Safety Valve set to blow at 16 lbs, Weirs N° 3359.*

*Mean Speed on Trials with half deadweights 14.82 Knots.*

*Weirs Feed Pumps duplex 10 1/2" x 8" x 21"*

*Ballast Donkey. " 9" x 12" x 10"*

*General Donkey. " 12" x 8" x 10"*

*It is submitted that this vessel is eligible for THE RECORD, L.M.C. 10.10.*

*J.W.D. 4/11/10*

The amount of Entry Fee .. £ 3-0-0: : When applied for, *13.10.1910*  
Special .. £ 73-10-0: : *A.C.H.*  
Donkey Boiler Fee .. £ : : When received, *14.10.1910*  
Travelling Expenses (if any) £ : : *14.10.1910*

Committee's Minute

Assigned

*+ L.M.C. 10.10*

*A.C. Heron,*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Lloyd's Register Foundation

MACHINERY CERTIFICATE  
WRITTEN.

Rpt. 13.

Port of

No. in Reg. Book *21 in 5*

Owners

Yard No.

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