

Date of writing Report 17 Aug 1916 When handed in at Local Office 10 Port of Kobe
No. in Survey held at Kobe Date, First Survey 13 January Last Survey 18 July 1916
Reg. Book. on the Steel Single Screw Steamer "Katsura Maru" (Number of Vessels 34) Gross 1725
Master M. Nagiwaru Built at Kobe By whom built The Mitsu Bishi Dryd & S Wks. when built 1916-7
Engines made at Kobe By whom made The Mitsu Bishi Dryd & S Wks. when made 1916-7
Boilers made at Kobe By whom made do when made do
Registered Horse Power Owners The Mitsu Bishi Goshi Kaisha Port belonging to Tokyo
Nom. Horse Power as per Section 28 168 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

ENGINE, &c.—Description of Engines Triple Expansion. No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 17" 28 1/2" 48 Length of Stroke 36" Revs. per minute 80 Dia. of Screw shaft as per rule 11.03 Material of screw shafts 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 3' 10"
Dia. of Tunnel shaft as per rule 9.31 Dia. of Crank shaft journals as per rule 9.78 Dia. of Crank pin 10 1/2" Size of Crank webs 6 1/2" x 19 1/2" Dia. of thrust shaft under
collars 10" Dia. of screw 13" 0" Pitch of Screw 14" 0" No. of Blades 4 State whether moveable No Total surface 54.41 sq ft
No. of Feed pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work Yes
No. of Donkey Engines Four Sizes of Pumps 9" x 8" 6 1/2" x 11 1/2" 4 1/2" x 3 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Three 2 1/2" Small 4 1/2" x 3 1/2" 4 1/2" x 3 1/2" In Holds, &c. Two 2 1/2" each hold.
One 2 1/2" to tunnel & one 2 1/2" to tunnel well.
No. of Bilge Injections One size 5" Connected to condenser, or to circulating pump Cir. p. Is a separate Donkey Suction fitted in Engine room & size Yes 2 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
Dates of examination of completion of fitting of Sea Connections 20 May 1916 of Stern Tube 13 May '16 Screw shaft and Propeller 20 May 1916
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper E. Rm. grating.
BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Wm Beardmore & Co. Leeds Forge.

Total Heating Surface of Boilers 2165.4 Is Forced Draft fitted Yes No. and Description of Boilers One Single Ended
Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 15 May 1916 No. of Certificate LLOYD'S TEST 400 LBS Q 15.5.16. ALJ. R
Can each boiler be worked separately Area of fire grate in each boiler 54.31 sq ft No. and Description of Safety Valves to
each boiler Two Spring loaded Area of each valve 2 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 18" Mean dia. of boilers 14" 0" Length 11' 6" Material of shell plates Steel
Thickness 1 5/16" Range of tensile strength 28 to 32 ton Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Doub. riv.
long. seams Trib. riv. Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/2" x 4 3/4" Lap of plates or width of butt straps 20 1/2" x 1 1/2" in.
Per centages of strength of longitudinal joint rivets 88.2 Working pressure of shell by rules 212 lbs Size of manhole in shell 16" x 12"
Size of compensating ring 37" x 33" x 1 5/16" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 45 1/4"
Length of plain part top Flanged crown 9' 11 1/2" Description of longitudinal joint Weld. No. of strengthening rings
Working pressure of furnace by the rules 216 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 15/16"
Pitch of stays to ditto: Sides 4 1/2" x 7 1/2" Back 9" x 10 1/2" Top 11 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 206 lbs
Material of stays Steel Section Diameter at smallest part 7.85" Area supported by each stay 360" Working pressure by rules 206 lbs End plates in steam space
Material Steel Thickness 1 9/32" Pitch of stays 20" x 18" How are stays secured Doub. nuts Working pressure by rules 214 lbs Material of stays Steel
Section Diameter at smallest part 7.85" Area supported by each stay 20" x 18" Working pressure by rules 225 lbs Material of Front plates at bottom Steel
Thickness 3 1/32" Material of Lower back plate Steel Thickness 3 1/32" Greatest pitch of stays 13 3/4" at ends Working pressure of plate by rules 200 lbs
Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 3 1/32" Back 27/32" Mean pitch of stays 11 1/8"
Pitch across wide water spaces 13 3/4" Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 11" x 7/8" (12") Length as per rule 2' 9 1/32" Distance apart 11 1/2" Number and pitch of stays in each 3 @ 7 1/2"
Working pressure by rules 227 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

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

SPARE GEAR.

State the articles supplied:-

Two crosshead bolts. Two crank pin bolts.
Two main bearing bolts. Set coupling bolts. Inlet & blow pump valves.
Piston packing for each piston Assorted bolts & nuts. Steel sheet various sizes
1 piece crank shaft.

The foregoing is a correct description,

MITSUBISHI DOCKYARD & ENGINE WORKS, KOBÉ.

Sugitani

Manufacturer.

Manager.
Dates of Survey while building { During progress of work in shops - - 13th 17th Jan'y 8th 15th 21st 28th Feb'y 2nd 15th 17th 25th 29th March 7th 12th 18th 20th 21st April
During erection on board vessel - - 3, 8, 11, 13, 15, 20, 21, 27 May. 1, 2, 6, 15, 19, 20 June 3, 11, 14, 18 July 1916
Total No. of visits 34

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " Yes

Dates of Examination of principal parts - Cylinders 13/1/16 etc Slides 8/2/16 etc Covers 8/2/16 etc Pistons 8/2/16 etc Rods 17/1/16 etc
Connecting rods 28/2/16 Crank shaft 2/3/16 etc Thrust shaft 15/3/16 etc Tunnel shafts 17/1/16 etc Screw shaft 21/2/16 Propeller 3/5/16 20/3/16
Stern tube 3/5/16 etc Steam pipes tested 20/6/16 Engine and boiler seatings 3/5/16 etc Engines holding down bolts 1/6/16 4/6/16
Completion of pumping arrangements 20/6/16 Boilers fixed 15/6/16 Engines tried under steam 3/7/16

Main boiler safety valves adjusted 3/7/16 Thickness of adjusting washers 7/16

Material of Crank shaft Steel Identification Mark on Do. R 7.4.16 Material of Thrust shaft Steel Identification Mark on Do. R 7.4.16
ALJ

Material of Tunnel shafts Steel Identification Marks on Do. R 7.4.16 Material of Screw shafts Steel Identification Marks on Do. R 7.4.16
ALJ

Material of Steam Pipes Steel & Copper Test pressure Steel 600 lbs. Copper 400 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 No If so, state name of vessel

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

The machinery has been made & fitted under special Survey in accordance with the requirements of the Rules & the workmanship has been found good throughout.

The machinery in my opinion renders the vessel eligible for the record + LMC 7.16

The Electric lighting report will be sent shortly

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

+ LMC 7.16. F.D.

7/8
25.9.16

A.P.R.

The amount of Entry Fee ... Yes : 20
Special ... Yes 348
Donkey Boiler Fee ... £ 40
Travelling Expenses (if any) £
When applied for, 28 July 1916
When received, 1st Aug. 1916

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUE SEP 26 1916

Assigned

+ LMC 7.16

F.D.

Arthur L. Jones



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Foundation