

REPORT ON MACHINERY.

No. 3215

Date of writing Report July 1921. When handed in at Local Office 19 Port of Kobe
No. in Survey held at Kobe Date, First Survey 7th Feb. 1920 Last Survey July 1st 1921
Reg. Book. on the Steel Single Screw Steamer "VENICE MARU" (Number of Visits 92)
Master M. KANEKO Built at Kobe By whom built Kawasaki Dockyard Co. Ltd. Tons Gross 6571 Net 4013
Engines made at Kobe By whom made Kawasaki Dockyard Co. Ltd. When built 1921
Boilers made at do By whom made do when made 1921
Registered Horse Power Owners do Port belonging to Kobe
Nom. Horse Power as per Section 28 578 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 3
Dia. of Cylinders 28" 46 1/2" 78 Length of Stroke 54" Revs. per minute 85 max 70 nom Dia. of Screw shaft as per rule 16.65 Material of steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube No LINERS 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 71"
Dia. of Tunnel shaft as per rule 14.8 Dia. of Crank shaft journals as per rule 15.56 Dia. of Crank pin 16" Size of Crank webs 29" x 10" Dia. of thrust shaft under
collars 15 3/4" Dia. of screw 18" 0" Pitch of Screw 21" 6" No. of Blades 4 State whether moveable Yes Total surface 120^{sq} developed.
No. of Feed pumps One Diameter of ditto 5 1/4" Stroke 27" Can one be overhauled while the other is at work Yes (with Weir's feed pump)
No. of Bilge pumps Two Diameter of ditto 5 1/4" Stroke 27" Can one be overhauled while the other is at work Yes
No. of Donkey Engines Four Sizes of Pumps BALL PUMP: 10 x 11 x 12 dupl. GEN. SERV.: 7 x 5 x 6 WEIR'S FEED: 10 x 12 x 24 TWA OIL TRANSFER: 10 x 7 x 10 dupl. OIL FUEL TW: 7 x 5 x 12 SING. 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 Holds - two 3 1/2"; No. 2 - two 4"
In Eng. RM. Well - One 3 1/2"; In OFFERDAM - Aft of No. 3 D.B. tank - One 3 1/2"; In TUNNEL WELL - One 3 1/2"
No. of Bilge Injections 1 sizes 12 3/4" Connected to condenser, or to circulating pump Cir. pp. 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 21" below
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 Bilge Suctions How are they protected Wood covering
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 E.R. platform at W.P. deck.
OILERS, &c.—(Letter for record S Manufacturers of Steel (Kobe) Illinois Steel Co. Carnegie Steel Co. Kawasaki Dockyard Co. & Yogo Works.
John Marshall Co. (Furnaces).
Total Heating Surface of Boilers = 7800^{sq} Is Forced Draft fitted Yes No. and Description of Boilers Three Single Ended
Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 11-3-21 No. of Certificate
Can each boiler be worked separately Yes Area of fire grate in each boiler 63.25^{sq} No. and Description of Safety Valves to
each boiler Two Spring loaded Area of each valve 11" 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 2' 3" Mean dia. of boilers 15' 7 1/2" Length 12' 0" Material of shell plates Steel
Thickness 1 3/8" x 1/2 Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Ends doubl.
g. seams Double riveted Diameter of rivet holes in long. seams 1 1/2" x 1/32 Pitch of rivets 9 3/4" x 4 1/2" Lap of plates or width of butt straps 21 3/8"
given as per centages of strength of longitudinal joint rivets 100 Working pressure of shell by rules 202 lbs. Size of manhole in shell 16" x 12"
Size of compensating ring 37 x 33 x 1 1/4" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 50 1/4"
Length of plain part top Thickness of plates crown 1 1/8" Description of longitudinal joint Welded Suspension No. of strengthening rings
Working pressure of furnace by the rules 216 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1 1/8" Back 1 1/8" Top 1 1/8" Bottom 7/8"
Tech of stays to ditto: Sides 9 1/2" x 8 1/2" Back 9 1/4" x 8 1/4" Top 8 3/8" x 8 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 208 lbs.

Water Caps
Tons
104
36
724
83
1921
27, Jan.
11, 15, 16
Material of stays Steel Area at smallest part 2' 10" Area supported by each stay 78.13" Working pressure by rules 242 lbs. End plates in steam space:
Material Steel Thickness 1 1/8" Pitch of stays 17" x 15 1/4" How are stays secured Double nuts Working pressure by rules 205 lbs. Material of stays Steel
Area at smallest part 6' 33" Area supported by each stay 260.8" Working pressure by rules 252 lbs. Material of Front plates at bottom Steel
Thickness 1 3/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 9 1/4" x 8 1/4" Working pressure of plate by rules 309 lbs.
Pitch of tubes 4 1/2" x 4 1/8" Material of tube plates Steel Thickness: Front 1 3/8" with doublings 5/8" Back 1 3/8" Mean pitch of stays 9" x 8 5/8"
Pitch across wide water spaces 13 3/4" Working pressures by rules 240 lbs. Girders to Chamber tops: Material Steel Depth and
Thickness of girder at centre two 10 1/4" x 13" Length as per rule 35 1/8" Distance apart 8 1/2" Number and pitch of stays in each Three @ 8 1/2"
Working pressure by rules 232 lbs. Steam dome: description of joint to shell None % of strength of joint
Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Working pressure of shell by rules Crown plates Thickness How stayed
Type Schmidt Date of Approval of Plan Tested by Hydraulic Pressure to 600 lbs.
No. 1 No. 2 No. 3 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
No. of Test 13-4-21 16-4-21 19-4-21 Pressure to which each is adjusted 245 lbs. Relief valve would not keep tight at a lower adjustment. Is Easing Gear fitted Yes
No. of Safety Valve One 3" for each

IS A DONKEY BOILER FITTED? None

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

1 Set packing rings for all pistons + piston valves. 4 main bearing bolts + nuts. 1 set A.P. head valves.
15 studs + nuts for junk rings. 1 Slide valve rod of each size. 3 Safety valves springs.
1 pair Eccentric rods. 1 Set feed check valves + seats. 1 Set feed + bilge pump valve + seats.
1 propeller shaft with nut. 1 Centrifugal pump impeller + shaft. Condenser tubes + ferrules, bolts, nuts etc.
2 bolts + nuts for Conn. rod top + bottom ends. 1 Set crosshead + Crank-pin brasses. Oil burning sprayers + etc.
9 shaft coupling bolts + nuts. 1 Air pump rod + nut. Superheater tubes etc.

The foregoing is a correct description,

Kawasaki Dockyard Co., Ltd.

Manufacturer.

Port Shanghai Secretary L. C. Lane
Dates of Survey while building: During progress of work in shops - 1920 Feb. 7, 10, 12, 17, 24, 28; Mar. 4, 13; Apr. 6; May 22, 25, 29; July 6, 9, 13, 17, 20, 24, 29, 31; Aug. 3, 4, 7, 11, 12, 13, 14, 21, 24, 26; Sep. 1921 Jan. 14, 15, 21, 22, 24, 31; Feb. 1, 3, 8, 10, 14, 16, 17, 21; Mar. 3, 9, 14, 28; Apr. 13, 16, 19, 21; May 6, 10, 11, 13, 15, 16, 23, 24, 25, 28, 31; June 1, 13, 23; July 1.
Total No. of visits 22 Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 3-3-21 Slides 13-5-21 Covers 21-4-21 Pistons 9-2-21 Rods 21-4-21
Connecting rods 23-2-21 Crank shaft 22-1-21 Thrust shaft 22-1-21 Tunnel shafts 5-11-20 Screw shaft 22-1-21 Propeller 23-2-21
Stern tube 24-1-21 Steam pipes tested 19-5-21 Engine and boiler seatings 21-4-21 Engines holding down bolts 16-5-21
Completion of pumping arrangements 28-5-21 Boilers fixed 16-5-21 Engines tried under steam 28-5-21
Completion of fitting sea connections 17-2-21 Stern tube 14-3-21 Screw shaft and propeller 21-4-21
Main boiler safety valves adjusted 24-5-21 Thickness of adjusting washers Lock nuts
Material of Crank shaft Steel Identification Mark on Do. LLOYDS 22-1-21 A.W. Material of Thrust shaft Steel Identification Mark on Do. LLOYDS 22-1-21 A.W.
Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS 5-11-20 A.W. Material of Screw shafts Steel Identification Marks on Do. LLOYDS 22-1-21 A.W.
Material of Steam Pipes Solid drawn steel Test pressure 600 lb. spare
Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes
Have the requirements of Section 49 of the Rules been complied with yes
Is this machinery duplicate of a previous case yes If so, state name of vessel S/S. FUJI MARU (Kobe Rpt. No. 314)
General Remarks (State quality of workmanship, opinions as to class, &c.) S/S. BALTIMORE MARU (" " " 314)

The machinery has been made and fitted under special survey in accordance with the requirements of the Rules + the materials + workmanship are good. The machinery worked satisfactorily on trial.

The Oil Fuel Suction Piping from settling tanks to stockhold pumps was tested to 50 lb./sq. inch Water pressure; the pressure piping from pumps to burners - to 100 lb./sq. inch.

The machinery of this vessel is eligible, it is submitted, for the notation L.M.C 7-21 and Fitted for oil fuel 7-21 (F.P. above 150°F.)

A Blue print of arrangement of oil fuel piping and shut-off valves in E + B spaces is sent herewith.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.21. FD. Fitted for Oil Fuel 7.21 F.P. above 150°F

The amount of Entry Fee ... Yen 60.- When applied for, July 13 1921
Special ... £ 1569.- When received, July 13 1921
ENG. STEEL CASTINGS 288.-
ENG. STEEL FORGINGS 30.-
Travelling Expenses (if any) £ 248.-
ELECTRIC INST. SURVEY FEE

Committee's Minute

Assigned

MACHINERY DEPT.
WATER

FRI. 26 JAN. 1923

Engineer Surveyor to Lloyd's Register of Shipping.

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Foundation