

Rpt. 4. **REPORT ON MACHINERY.** No. 2616

Date of writing Report 19 When handed in at Local Office 19 Port of Kobe. Received at London Office THU. 13 NOV. 1919
No. in Survey held at Kobe and Otaru. Date, First Survey 15th May Last Survey 14th August 1919
Reg. Book. on the Mail Single Screw Steamer "Yuri Maru" (Number of Visits Continuous attendance during building 6 during erection Tons Gross 6787.02 Net 5085.25)
Master J. Yutushima Built at Narima By whom built Narima Dockyard Company. When built 1919.
Engines made at Kobe By whom made Kobe Steel Works. when made 1919.
Boilers made at Kobe By whom made Kobe Steel Works. when made 1919.
Registered Horse Power 557 Owners Yokosuka Steamship Coy Ltd Port belonging to Kobe
Nom. Horse Power as per Section 28 547 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Is

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three
Dia. of Cylinders 27. 45. 75. Length of Stroke 51 Revs. per minute 70 Dia. of Screw shaft as per rule 15 1/4 Material of screw shaft Steel
Is 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
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 Length of stern bush 5'-8"
Dia. of Tunnel shaft as per rule 13.67 as fitted 14.1 Dia. of Crank shaft journals as per rule 14.35 as fitted 14 3/4 Dia. of Crank pin 15 Size of Crank webs 4'-6"x2'-4" Dia. of thrust shaft under
collars 14 3/4 Dia. of screw 18-6 Pitch of Screw 8'-9" No. of Blades 4 State whether moveable Total surface 106.44 sq ft
No. of Feed pumps 2 Diameter of ditto 5 Stroke 26 1/2 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 5 Stroke 26 1/2 Can one be overhauled while the other is at work Yes
No. of Donkey Engines Three Sizes of Pumps 9 S.D. 9"x12"x10" here 10 1/2"x8"x4" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two @ 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 No 4 hold 2 @ 3 1/2 No 5 hold 2 @ 3 1/2 Tunnel well 1 @ 3 1/2
No. of Bilge Injections 1 sizes 8 3/4 Connected to condenser, or to circulating pump Circ pp Is a separate Donkey Suction fitted in Engine room & size Is 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
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Larger Cocks, 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 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 P.R. top platform.

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Yawata, Kure Naval Works, Kamihara Steel Company, Kawasaki Steel Coy, Kawasaki Steel Works, American Steel Pipe Works
Total Heating Surface of Boilers 7884 sq ft 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 June 24 & 26, 1919 No. of Certificate 200 lbs. 24.6.19
Can each boiler be worked separately Yes Area of fire grate in each boiler 64 sq ft No. and Description of Safety Valves to
each boiler Two spring loaded Area of each valve 4" Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 15'-9" Length 11'-5 1/4 Material of shell plates Steel
Thickness 1 1/2 Range of tensile strength 28-32 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR.
long. seams TR DBS Diameter of rivet holes in long. seams 1 9/16 Pitch of rivets 9 5/8 Lap of plates or width of butt straps 22"
Per centages of strength of longitudinal joint rivets 98.6 Working pressure of shell by rules 244 lbs Size of manhole in shell 12" x 16"
plate 83.7 No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 4'-13 1/4
Size of compensating ring 3'-4" x 2'-6" Length of plain part top 5'-8" Thickness of plates crown 5'-8" Description of longitudinal joint Weld No. of strengthening rings
bottom 5'-8" Working pressure of furnace by the rules 202 Combustion chamber plates: Material Steel Thickness: Sides 2 3/32 Back 23 3/32 Top 2 1/32 Bottom 1"
Pitch of stays to ditto: Sides 8"x8 1/4" Back 9 1/2"x9 1/2" Top 8 1/4"x8 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 205 lbs
Material of stays Steel Area at smallest part 2.43 sq ft Area supported by each stay 86.68 sq ft Working pressure by rules 291 lbs End plates in steam space:
Material Steel Thickness 1 1/4 Pitch of stays 17.5"x22" How are stays secured ON & W Working pressure by rules 243 lbs Material of stays Steel
Area at smallest part 7.07 sq ft Area supported by each stay 385 sq ft Working pressure by rules 200 lbs Material of Front plates at bottom Steel
Thickness 3/32 Material of Lower back plate Steel Thickness 7/8 Greatest pitch of stays 15" Working pressure of plate by rules 343 lbs
Diameter of tubes 3" Pitch of tubes 4 1/4" x 4 1/4" Material of tube plates Steel Thickness: Front 3 1/32 Back 7/8 Mean pitch of stays 8 1/2"
Pitch across wide water spaces 14" Working pressures by rules 379 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10 3/4" x 1 1/2" Length as per rule 34 Distance apart 8 3/4 Number and pitch of stays in each 3 @ 8 1/4"
Working pressure by rules 244 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

SUPERHEATER. 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

004557-004564-0147

If so, is a report now forwarded?

- Two Connecting Rod top end bolts & nuts.
- Two Connecting Rod bottom end bolts & nuts.
- Two main bearing bolts & nuts.
- One set coupling bolts & nuts.
- One set feed and bilge pump valves
- One set of piston springs.

Quantity of assorted bolts & nuts
Iron of various sizes

is a correct description,

W. C. Clegg
Director

Manufacturer.

Dates of Survey while building {

During progress of work in shops --	Continuous attendance 15 th May - 5 th July. 1919.
During erection on board vessel --	July 18 th , 22 nd , 28 th August 5 th , 11 th & 14 th
Total No. of visits	Continuous attendance while building. 6 visits during erection.

Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts—Cylinders ^{3rd 16th May} 5th June Slides 16th May Covers 16th May Pistons 16th May Rods 16th May.

Connecting rods ^{10/9/18} 4/7/19. Crank shaft ^{30.4.19} 21.5.19. Thrust shaft 7/4/19-2/7/19 Tunnel shafts 9/6/19-2/7/19. Screw shaft 4/3/19-25/6/19. Propeller

Stern tube Steam pipes tested July 28th Engine and boiler seatings 5th July Engines holding down bolts 13th July

Completion of pumping arrangements 26th July Boilers fixed 12th July Engines tried under steam 4th August

Completion of fitting sea connections 27th July Stern tube 3rd July Screw shaft and propeller 10th - 22nd July

Main boiler safety valves adjusted 5th August Thickness of adjusting washers lock nuts. 11/16" 12/16" HT. 58/

Material of Crank shaft Steel Identification Mark on Do. Rob Material of Thrust shaft Steel Identification Mark on Do. Rob

Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYD'S* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S*

Material of Steam Pipes Copper. R.B.R. Test pressure 400 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 ☒ P. S. Sacklin Shore, SS Yone Maru

Is this machinery duplicate of a previous case Yes. If so, state name of vessel SS Naye Mark

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

The Machinery has been made and fitted under special survey
in accordance with the requirements of the Rules and the
materials and workmanship have been found good.
In my opinion the Machinery is eligible for the record of
+ L.M.C. 8.19

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 8-19

F.D.

18/11/19.

The amount of Entry Fee	...	£	30.00	:		When applied for,
Special	...	£	858.00	:		22 nd Aug 1919
Donkey Bailer Fee	...	£	:	:		When received,
Travelling Expenses (if any)	£	:	:	:		15 th Sept 1919

R. B. Alcheton

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ Ltr 6. 8. 19

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Foundation