

REPORT ON MACHINERY.

No. 2512

Date of writing Report 30-7 1919 When handed in at Local Office 10 Port of Yokohama
 No. in Survey held at Uraga Date, First Survey Dec 15 1918 Last Survey July 21 1919
 Reg. Book. on the 1/2 "TSURISHIMA MARU" (Hull N° 140) (Number of Visits 37)
 Master Kumeke Nakada Built at Uraga By whom built Uraga Dock Co. Tons Gross 4645.8
 Engines made at Uraga By whom made Uraga Dock Co. Net 3351.29
 Boilers made at Uraga By whom made Uraga Dock Co. When built 1919
 Registered Horse Power Owners Uragima Unyu Kabushiki Kaisha. Port belonging to Uraga
 Nom. Horse Power as per Section 28 378 377 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Reciprocating Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24 1/2 - 40 1/2 - 67 Length of Stroke 48 Revs. per minute 74 Dia. of Screw shaft as per rule 13.9 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 1/4 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 61"
 Dia. of Tunnel shaft as per rule 12.5 Dia. of Crank shaft journals as per rule 13.12 Dia. of Crank pin 13 1/4 Size of Crank webs 23x8 1/4 Dia. of thrust shaft under
 collars 13 1/4 Dia. of screw 16-9 Pitch of Screw 18-0 No. of Blades 4 State whether moveable Yes Total surface 82.3 sq
 No. of Feed pumps 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 4 Sizes of Pumps 2 (21) 106x10-7 1/2 108x10-7 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 1 R.R. 3-3 1/2 In Holds, &c. No 1 Hold 2-2 1/4 No 2 Hold 2-2 1/4
 No 3 Hold 1-3 1/2 No 4 Hold 1-3 1/2
 No. of Bilge Injections 1 sizes 7" Connected to condenser, or to circulating pump Pump 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 Yes
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 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 Cylinder platform

BOILERS, &c.—(Letter for record 15.) Manufacturers of Steel North Brothers Co. Gatesville Pa. U.S.A.
 Total Heating Surface of Boilers 6381 sq Is Forced Draft fitted No No. and Description of Boilers 3 Scotch Type Single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 5-6-19 No. of Certificate 51
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60 sq No. and Description of Safety Valves to
 each boiler 2 Spring Loaded Area of each valve 8.29 sq Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 13-9" Length 10-9" Material of shell plates Steel
 Thickness 1 1/16" Range of tensile strength 60000/76800 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.LAP.
 long. seams TRDBS. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 18 1/2"
 Per centages of strength of longitudinal joint rivets 87.8 Working pressure of shell by rules 185.4 lbs Size of manhole in shell 16x12"
 plate 95.7 No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 44 1/2"
 Length of plain part top Thickness of plates crown 2" Description of longitudinal joint Welded. No. of strengthening rings
 bottom 1 1/16" Working pressure of furnace by the rules 198 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 15/16"
 Pitch of stays to ditto: Sides 9x7 3/4" Back 8 3/4x7 3/4" Top 8 3/4x8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 193 lbs
 Material of stays Steel Area at smallest part 1.79 sq Area supported by each stay 67.8 sq Working pressure by rules 193 lbs End plates in steam space:
 Material Steel Thickness 1" Pitch of stays 16 1/2x14 3/8 How are stays secured D. NUTS Working pressure by rules 190 lbs Material of stays Steel
 Area at smallest part 4.37 sq Area supported by each stay 235 sq Working pressure by rules 193 lbs Material of Front plates at bottom Steel
 Thickness 15/16" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 13 3/4x8" Working pressure of plate by rules 271 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" Material of tube plates Steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 8 3/4"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 197 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 7 1/2x1 1/2" Length as per rule 25 3/8" Distance apart 8" Number and pitch of stays in each 2 at 8 3/4"
 Working pressure by rules 260 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

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Bottom end bolts nuts, 4 top end bolts nuts, one set of shaft coupling bolts nuts, one set main bearing bolts nuts, one set piston rings for main engines, one A.P. & L.P. valve stems, 2 pair top end braces, 1 pair of bottom end braces, one circulating pump impeller & bronze shaft, one air pump rod, assorted bolts nuts, & nuts of various sizes.

Feed & Bilge valves

The foregoing is a correct description,

Y. K. Kaminura

Manufacturer.

Dates of Survey while building
During progress of work in shops
During erection on board vessel
Total No. of visits

Dec. 5, 13, 20, 1918 Jan 4, 24, Feb 7, 19, 24, March 3, 10, 18, 20, 25, 27, April 1, 8, 14, 17, 22, 26, 28, May 5, 8, 14, 22, 26, 28, June 2, 5, 16, 26, July 3, 8, 19, 12, 16, 21 - 1919.

Is the approved plan of main boiler forwarded herewith Retained for duplicate

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 20-12-18 Slides 28-5-19 Covers 28-5-19 Pistons 28-5-19 Rods 28-5-19

Connecting rods 28-5-19 Crank shaft 26-5-19 Thrust shaft 26-5-19 Tunnel shafts 26-5-19 Screw shaft 26-5-19 Propeller 26-5-19

Stern tube 5-5-19 Steam pipes tested 12-7-19 Engine and boiler seatings 26-5-19 Engines holding down bolts 8-7-19

Completion of pumping arrangements 21-7-19 Boilers fixed 8-7-19 Engines tried under steam 21-7-19

Completion of fitting sea connections 28-5-19 Stern tube fitted 26-5-19 Screw shaft and propeller 21-7-19

Main boiler safety valves adjusted 21-7-19 Thickness of adjusting washers None fitted Lock nuts adjusted.

Material of Crank shaft Steel Identification Mark on Do. LLOYD'S TEST TOKYO 26-5-19

Material of Tunnel shafts Steel Identification Marks on Do. 26-5-19

Material of Steam Pipes Steel Test pressure 540 lbs water pressure

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 Yes If so, state name of vessel SS. "TAMATSU MARU"

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery & Boilers of this vessel

have been constructed under special survey & according to the Rules & approved plans.

The materials have been tested, found efficient, & the workmanship throughout is

good. They have now been efficiently fitted on board & tested under steam

with satisfactory results. This case is now respectfully submitted for the Committee's

consideration, & the notation of L.M.C. 7-19 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD & LMC 7.19.

HW 7/9/19

The amount of Entry Fee ... ¥ 30.00
Special ... ¥ 730.00
Donkey Boiler Fee ... £ ✓
Travelling Expenses (if any) ¥ 30.00

When applied for.

23-7-1919

When received.

4-8-1919

H. Buchanan & F. G. Archbold

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 19 SEP 1919

Assigned + LMC 7.19

MINISTRY CERTIFICATE



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