

## REPORT ON MACHINERY.

No. 2495.

Received at London Office MON. 23 JUN. 1919

Date of writing Report 9<sup>th</sup> May 1919 When handed in at Local Office

Port of Kobe

No. in Survey held at Kobe

Date, First Survey 2<sup>nd</sup> Sept 1918 Last Survey 30<sup>th</sup> May 1919

Reg. Book. on the Steel Single Screw Steamer "Vancouver Maru"

Master K. Nakamura Built at Kobe

By whom built Kawasaki Wkyd. Co Ltd. When built 1919

Engines made at Kobe

By whom made The Kawasaki Wkyd. Co Ltd. when made 1919

Boilers made at do

By whom made do when made do

Registered Horse Power

Owners do

Port belonging to Kobe

Com. Horse Power as per Section 28 440

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &amp;c.—Description of Engines Triple Expansion

No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 26:43½:72

Length of Stroke 48

Revs. per minute 70

Dia. of Screw shaft 15.6

as per rule 15.4

Material of 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

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

screws are fitted, is the shaft lapped or protected between the liners

Length of stern bush 5': 5½"

Dia. of Tunnel shaft 13.55

as per rule 13.4

Dia. of Crank shaft journals 14.3

as per rule 14.2

Dia. of Crank pin 14.3

Size of Crank webs 402+208

Dia. of thrust shaft under

+268 at pin + journal

Diameters 14.3 Dia. of screw 14:6 Pitch of Screw 19:0 mean No. of Blades 1 State whether moveable Yes Total surface 100 sq. ft.

No. of Feed pumps one Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes (with Weir's feed)

No. of Bilge pumps two Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines three Sizes of Pumps 3" x 12" duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room three 3½ In Holds, &amp;c. Nos. 1, 3 + 1 holds each two 3½

+ one 3½ to tunnel well No. 2 hold, two 4"

No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room &amp; size Yes 3½

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

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper platform of Eng. Rm.

MANUFACTURERS, &amp;c.—(Letter for record S.) Manufacturers of Steel North Bros. Co. American Spiral pipe Wks.

Total Heating Surface of Boilers 5411 Is Forced Draft fitted Yes No. and Description of Boilers Two S. E. + aux. S. E.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 11/14 Dec 1918 No. of Certificate Lloyd's Test 400 LBS

Can each boiler be worked separately Yes Area of fire grate in each boiler 60½ No. and Description of Safety Valves 10

No. of boiler two Spring loaded Area of each valve 3¾ dia Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes

Minimum distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 14:6 Length 12:0 Material of shell plates Steel

Thickness 1½ Range of tensile strength 28 to 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double riv.

be gill. seams Double rivets Diameter of rivet holes in long. seams 1½ Pitch of rivets 8¾ + 1½ Lap of plates or width of butt straps 19½ x 1½

Percentages of strength of longitudinal joint rivets 95.84 plate 84.28 Working pressure of shell by rules 202 lbs. Size of manhole in shell 16 x 12

No. of compensating rings (1½ + flange) 1½ No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 18½

Length of plain part top 21/32 Thickness of plates crown 21/32 Description of longitudinal joint Weld No. of strengthening rings 1

Working pressure of furnace by the rules 221 Combustion chamber plates: Material Steel Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 7/8

Working pressure of stays to ditto: Sides 8½ x 8½ Back 8½ x 9 Top 8½ x 9½ If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203 lbs.

Material of stays Steel Area at smallest part 2.1" Area supported by each stay 8½ x 9½ Working pressure by rules 230 lbs. End plates in steam space:

Material Steel Thickness 1½ Pitch of stays 19¾ x 20½ How are stays secured Double nuts Working pressure by rules 201 lbs. Material of stays Steel

Area at smallest part 10" Area supported by each stay 19¾ x 20½ Working pressure by rules 260 lbs. Material of Front plates at bottom Steel

Thickness 13/16 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 13½ at wide water space Working pressure of plate by rules 200 lbs.

Diameter of tubes 3¾ Pitch of tubes 1½ x 1½ Material of tube plates Steel Thickness: Front 1" Back 13/16 Mean pitch of stays 8¾

Girders across wide water spaces 13¾ + 3/4 Working pressures by rules 210 lbs. Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 10¾ + 13/16 (2) Length as per rule 31½ Distance apart 9¾ Number and pitch of stays in each 3 @ 8½

Working pressure by rules 220 lbs. Steam dome: description of joint to shell

% of strength of joint

Material Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type None Date of Approval of Plan Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Pressure to which each is adjusted Is Easing Gear fitted

1570-69690056900



IS A DONKEY BOILER FITTED? *Auxiliary Blr.* If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:—

Four main bearing bolts + nuts	Set packing rings + springs each piston	Centrifugal pump
Two Crank pin bolts + nuts	Set junk ring bolts + nuts	impeller + shaft
Two crosshead bolts + nuts	One part Crank shaft.	Grosshead + Crank
Set Coupling bolts + nuts	Propeller shaft	brasses A.P. rods
Set Feed + Bidge pump valves	Four blades + 2 sets studs + nuts	nut. 3 safety
assorted bolts + nuts + iron	Slide valve spindle each size	springs. Tord
		Blr tubes etc.

The foregoing is a correct description,  
**Kawasaki Dockyard Co., Ltd.**

Per *Shanaguma*  
Secretary.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 2, 10, 13, 19, 21 Sept. 2, 16 Oct. 14, 18, 21, 25 Nov. 2, 11, 20, 25, 26, 27 Dec. 1918  
During erection on board vessel - - - 9, 16, 17, 28 Jan. 5, 7, 12, 13, 14, 18, 24, 26, 28 Feb. 3, 4, 10, 13, 14, 15, 19, 20, 21 Mar. 1919  
Total No. of visits 39

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " *San Francisco Mar. (No. 12/2)*

Dates of Examination of principal parts—Cylinders 9-1-1918 Slides 27/12/18 Covers 26/12/18 Pistons 17/11/19 Rods 9/1/19

Connecting rods 9-1-19 Crank shaft 20/12/18 Thrust shaft 20/12/18 Tunnel shafts 5/2/19 Screw shaft 13/2/19 Propeller 7/2/19

Stern tube 13-3-19 Steam pipes tested 14, 24/2/19 Engine and boiler seatings 26/2/19 Engines holding down bolts 13-3-19

Completion of pumping arrangements 13-3-19 Boilers fixed 10/3/19 Engines tried under steam 19-3-19

Completion of fitting sea connections 18-2-19 Stern tube 28/2/19 Screw shaft and propeller 28/2/19

Main boiler safety valves adjusted 15/3/19 Thickness of adjusting washers Locknut clearance *Stair Bls F 3/4 Port F 1/2*

Material of Crank shaft *Steel* Identification Mark on Do. *20.12.18* Material of Thrust shaft *Steel* Identification Mark on Do. *20.12.18*

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

Test pressure 600 lbs

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Span shaft 14.10*

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 *Washington Mar. (Rpt 2478) Portland Mar. (2473) etc*

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

This machinery has been made + fitted under Special Survey in accordance with the requirements of the Rules + the materials and Workmanship are good.

The vessel is eligible in our opinion for the notation + LMC 3.19 in the Register.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 3.19.  
2SB. & 1A4XSB. F.D.

*JWD*  
26/6/19

*APR*

*A. L. Jones & A. L. A. Latt*

Engineer Surveyor to Lloyd's Register of Shipping

The amount of Entry Fee ... *4/6* 30 : When applied for,  
Special ... *4/6* 735 : 17 Apr 1919  
Donkey Boiler Fee ... *4/6* : :  
Travelling Expenses (if any) *4/6* 15 : When received,  
18 Apr 1919

Committee's Minute

Assigned

FRI. 27 JUN. 1919

+ LMC 3.19

*J. D.*



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Foundation