

REPORT ON MACHINERY.

No. 2495.

Received at London Office MON. 23 JUN. 1919

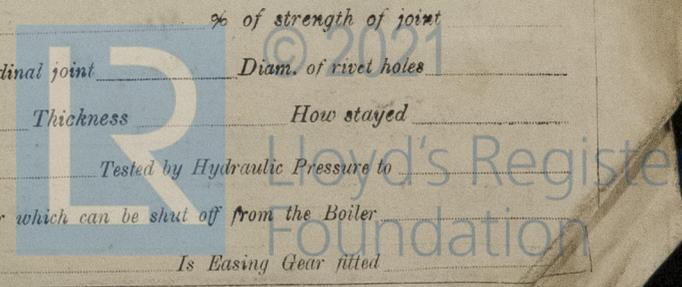
Date of writing Report 9th May 1919 When handed in at Local Office Kobe Port of Kobe
 No. in Survey held at Kobe Date, First Survey 2nd Sept 1918 Last Survey 30th Mar 1919
 Reg. Book. on the Steel Single Screw Steamer "Vancouver Maru" (Number of Visits 39)
 Master K. Nakamura Built at Kobe By whom built 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 440 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, &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 40 Dia. of Screw shaft 15.6 as per rule 15.41 Material of screw shaft 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
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5': 5¼"
 Dia. of Tunnel shaft 13.55 as per rule 13.55 Dia. of Crank shaft journals 14.23 as per rule 14.23 Dia. of Crank pin 14.75 Size of Crank webs 402x202 Dia. of thrust shaft under
 flanges 14.75 Dia. of screw 14:6" Pitch of Screw 19:0" mean No. of Blades 4 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 3½" No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room three 3½" In Holds, &c. Nos. 1, 3 + 4 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 no Is a separate Donkey Suction fitted in Engine room & 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 no
 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.

BOILERS, &c.—(Letter for record B) Manufacturers of Steel Worth Bros. Co. American Spiral pipe Wks.
 Total Heating Surface of Boilers 5741 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 11th + 14th Dec 1918 No. of Certificate LLOYD'S TEST 400 LBS 11/12/18 + 14/12/18 A.L.D.
 Can each boiler be worked separately yes Area of fire grate in each boiler 60½" No. and Description of Safety Valves to
 each 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 Straps 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 95:81 Working pressure of shell by rules 202 lbs. Size of manhole in shell 16 x 12
 plate 84:28 No. and Description of Furnaces in each boiler 3 Morrison's Material steel Outside diameter 18½"
 Length of plain part top Thickness of plates bottom 21/32" Description of longitudinal joint Weld No. of strengthening rings ✓
 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
 Spacing 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 2.10" 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 Working pressure of plate by rules 200 lbs.
 Diameter of tubes 3¼" Pitch of tubes 17/16" x 17/16" Material of tube plates steel Thickness: Front 1" Back 13/16" Mean pitch of stays 8¾"
 Spacing 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 ✓
 No. of rivets ✓ Working pressure of shell by rules ✓ Crown plates ✓ Thickness ✓ How stayed ✓
 SUPERHEATER. Type None 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 ✓

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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.	Crosshead + Crank
Set Coupling bolts + nuts ✓	Propeller shaft	brasses A.P. rods
Set Feed + Bilge pump valves ✓	Four blades + 2 sets studs + nuts	nut. 3 safety
Assorted bolts + nuts + iron ✓	Slide valve spindle each size	springs. Cord
		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

Dates of Examination of principal parts—Cylinders 9-1-19 etc. Slides 27/12/18 Covers 26/12/18 Pistons 17/1/19 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 Stable F 3/4 Port F 1/2
Material of Crank shaft Steel Identification Mark on Do. 20.12.18 Lloyd's A.W. Material of Thrust shaft Steel Identification Mark on Do. 20.12.18 Lloyd's A.W.
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 ✓ Is the flash point of the oil to be used over 150°F. *Span shaft*
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 *Washington Maru (Rpt 2478) Portland Maru (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.

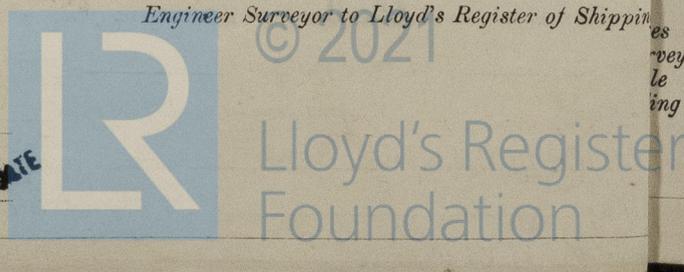
The vessel is eligible in our opinion for the notation + LMC 3.19 in the Register.

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

JWD 26/6/19
APR
A. L. Jones & A. Watt
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 : 18 Apr 1919

Committee's Minute
Assigned + LMC 3.19
FRI. 27 JUN. 1919
J. D.



Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.