

## REPORT ON MACHINERY.

No. 2411

Received at London Office

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Writing Report *Jan'y 1<sup>st</sup> 1919* When handed in at Local OfficePort of *Kobe*in Survey held at *Kobe*  
Book.Date, First Survey *14 May*Last Survey *22<sup>nd</sup> Nov. 1918*on the *Steel Single Screw Steamer "Hofuku Maru"*(Number of Visits *35*)Built at *Kobe*By whom built *The Kawasaki Dry Dock Co. Ltd.*Tons } Gross  
NetWhen built *1918*Machinery made at *Kobe*By whom made *The Kawasaki Dry Dock Co. Ltd.*When made *1918*Engines made at *do*By whom made *do*When made *do*

Registered Horse Power

Owners

Port belonging to *Kobe*Horse Power as per Section 28 *436*Is Refrigerating Machinery fitted for cargo purposes *No*Is Electric Light fitted *Yes*MACHINERY, &c.—Description of Engines *Triple Expansion*No. of Cylinders *3*No. of Cranks *3*No. of Cylinders *26: 43 1/2: 72*Length of Stroke *48*Revs. per minute *70*Dia. of Screw shaft *15 1/4*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 *No liner*

Is the after end of the liner made water tight

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

If the shaft is lapped or protected between the liners

Length of stern bush *5' 5 1/4"*Dia. of Tunnel shaft *13 1/4*as per rule *13 1/4*Dia. of Crank shaft journals *14 1/2*as per rule *14 1/2*Dia. of Crank pin *14 3/4*Size of Crank webs *9 1/2 x 26*

Dia. of thrust shaft under

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 wear feed pump)*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 *Bal. 10 x 11 x 12 dupl.*

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *Three 3 1/2"*

No. and size of Suctions connected to both Bilge and Donkey pumps

No. 1, 3 &amp; 4 holds, two 3 1/2" to each

No. 2 hold, two 4"

No. of Bilge Injections *1*Connected to condenser, or to circulating pump *Cir. p.*Is a separate Donkey Suction fitted in Engine room & size *Yes 3 1/2"*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*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*

How are they protected

What pipes are carried through the bunkers *None*

How are they protected

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 *Eng. Rm. top pl. 400m*Manufacturers of Steel *Worm Bros. Leeds Mfg. Co. Ltd.*

Yawata Steel Works: Kawasaki S. M. Co. (Rishi)

Alan Wood S. Co.

Total Heating Surface of Boilers *5636*Is Forced Draft fitted *Yes*No. and Description of Boilers *Two S. E. (one Aux. S. E.)*Working Pressure *200 lbs*Tested by hydraulic pressure to *400 lbs*Date of test *4/9/18: 7/9/18*No. of Certificate *LL0303 HYD. TEST*

No. and Description of Safety Valves to

In each boiler be worked separately *Yes*Area of fire grate in each boiler *60 1/2*No. of boilers *Two*Spring loaded *Yes*Area of each valve *3 3/4 dia.*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 *12"*Mean dia. of boilers *14 1/2"*Length *12' 0"*Material of shell plates *Steel*Thickness *1 3/8"*Range of tensile strength *26,783 to 32*Are the shell plates welded or flanged *No*Description of riveting: cir. seams *Mid truss*Long. seams *Welded for a few inches at ends of longitudinal seams. Ends double*Diameter of rivet holes in long. seams *1 7/16"*Pitch of rivets *9 1/2 x 4 9/16"*Length of plates or width of butt straps *20 1/2 x 1 3/8"*Percentage of strength of longitudinal joint *96.1*Working pressure of shell by rules *203 lbs*Size of manhole in shell *12 x 16"*No. and Description of Furnaces in each boiler *3 Morrison*Material *Steel*Outside diameter *48 1/4"*Length of plain part *7 1/2' + flange*Thickness of plates *3 1/4"*Description of longitudinal joint *Weld*

No. of strengthening rings

Working pressure of furnace by the rules *221 lbs*Combustion chamber plates: Material *Steel*Thickness: Sides *1 1/16"*Pitch of stays to ditto: Sides *8 5/8 x 8 1/2"*Back *9 x 8 1/2"*Top *9 3/8 x 8 1/2"*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 1/2"*Area supported by each stay *9 3/8 x 8 1/2"*Working pressure by rules *230 lbs*

End plates in steam space:

Material *Steel*Thickness *1 5/8"*Pitch of stays *19 3/4 x 20 1/2"*How are stays secured *Double nuts*Working pressure by rules *201 lbs*Material of stays *Steel*Area at smallest part *10 1/2"*Area supported by each stay *19 3/4 x 20 1/2"*Working pressure by rules *260 lbs*Material of Front plates at bottom *Steel*Thickness *3/4"*Material of Lower back plate *Steel*Thickness *3/4"*Greatest pitch of stays *13 1/2 (double)*Working pressure of plate by rules *200 lbs*Diameter of tubes *3 1/4"*Pitch of tubes *4 5/16 x 4 7/16"*Material of tube plates *Steel*Thickness: Front *13/16"*Back *13/16"*Mean pitch of stays *8 3/4"*Pitch across wide water spaces *13 3/4"*Working pressures by rules *200 lbs*Girders to Chamber tops: Material *Steel*

Depth and

Thickness of girder at centre *10 3/4 x 9 1/4 (two)*Length as per rule *34 1/2"*Distance apart *9 3/8"*Number and pitch of stays in each *3 @ 8 1/2"*Working pressure by rules *217 lbs*

Steam dome: description of joint to shell

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 *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

Pressure to which each is adjusted

Is Easing Gear fitted

004721-009724-0145

Lloyd's Register

Foundation



IS A DONKEY BOILER FITTED? *Auxiliary boiler*. 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	✓
Two crank pin	do do	Set pump ring bolts & nuts	
Two crosshead	do do	One part crank shaft. Propeller shaft	
Set Coupling	do do	Two propeller blades & two sets slides & nuts	
Set feed & bilge pump valves	✓	Slide valve spindle each size	
Assorted bolts & nuts & iron	✓	Centrif. impeller & shaft.	

The foregoing is a correct description,

*Kawasaki Dockyard Co., Ltd.*

Per *J. H. H. H. H. H.* Manufacturer.

Dates of Survey while building	(During progress of work in shops --)	14. 21 May. 7. 12. 24 June 3. 10. 18. 27 July 3. 8. 21. 26. 30 Aug. 4. 7. 13. 19 Sept
	(During erection on board vessel ---)	7. 10. 11. 21. 22. 23. 25. 26. 28. 29 Oct 1. 5. 9. 11. 19. 21. 22 Nov. 1918
	Total No. of visits	35

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

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders *27/7/18* tested Slides *24/6/18* Covers *26/8/18* Pistons *26/8/18* Rods *30/8/18*

Connecting rods *3/8/18* Crank shaft *18/7/18* Thrust shaft *18/7/18* etc Tunnel shafts *12/6/18* etc Screw shaft *11/10/18* etc Propeller *27/7/18*

Stern tube *10/10/18* Steam pipes tested *23/10/18* *28/10/18* Engine and boiler seatings *26/10/18* Engines holding down bolts *11/11/18*

Completion of pumping arrangements *9/11/18* Boilers fixed *9/11/18* Engines tried under steam *19/11/18*

Completion of fitting sea connections *25/10/18* Stern tube *21/10/18* Screw shaft and propeller *29/10/18*

Main boiler safety valves adjusted *21/11/18* Thickness of adjusting washers *Cocknuth. Intervals Port A  $\frac{3}{4}$  Star A  $\frac{1}{2}$  Aux F  $\frac{1}{2}$  rates.*

Material of Crank shaft *Steel* Identification Mark on Do. *18-7-1918* Material of Thrust shaft *Steel* Identification Mark on Do. *18-7-1918*

Material of Tunnel shafts *Steel* Identification Marks on Do. *18-7-1918* Material of Screw shafts *Steel* Identification Marks on Do. *18-7-1918*

Material of Steam Pipes *Steel* Test pressure *600 lbs*

Is an installation fitted for burning oil fuel *No* Is the flash point of the oil to be used over 150°F. *Span*

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 *War Queen East Cape Raifuku*

General Remarks (State quality of workmanship, opinions as to class, &c. *Seifuku man etc etc*

*The machinery has been made & fitted under Special Survey in accordance with the Rule requirements & the materials & workmanship are good.*

*The vessel is in my opinion eligible for the notation + LMC 11.18*

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 11.18. F.D.

The amount of Entry Fee ...	<i>Yes 30</i>	When applied for,
Special ...	<i>Yes 735</i>	<i>20 Nov. 1918</i>
Donkey Boiler Fee ...	<i>£</i>	When received,
Travelling Expenses (if any) <i>Yes 15</i>		<i>25 Nov. 1918</i>

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 11 MAR. 1919*

Assigned

*+ LMC 11.18. F.D.*

MACHINERY CERTIFICATE  
REGISTERED



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Foundation