

REPORT ON MACHINERY

No. 2206

Received at London Office WED. 1 MAY 1918

of writing Report 26 Feb 1918 When handed in at Local Office ✓ 10 Port of Rohe
 in Survey held at Rohe Date, First Survey 8 May 1917 Last Survey 8 Feb 1918
 Book. on the Steel Single Screw Steamer "Tofuku Maru" (Number of Visits)
 ter Built at Rohe By whom built Kawasaki Dock Co. Ltd. Tons } Gross 5858
 Net 4292
 When built 1918
 ines made at Rohe By whom made Kawasaki Dock Co. Ltd. when made 1918
 ers made at do By whom made do when made do
 stered Horse Power 444 Owners do Port belonging to Rohe
 Horse Power as per Section 28 444 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INES, &c.—Description of Engines Type Expansion No. of Cylinders Three No. of Cranks Three
 of Cylinders 26" 43 1/2" 72" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 13.4 Material of Steel
as fitted 16 screw shaft)
 e 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
 e 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
 en the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two
 s are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5" 5 1/4"
 of Tunnel shaft as per rule 13.48 Dia. of Crank shaft journals as per rule 14.15 Dia. of Crank pin 14 3/8 Size of Crank webs 9 1/2" x 20 1/2" at waist
as fitted 13 3/4 as fitted 14 3/8 26 1/8" at pin & journals
 rs 14 3/8" Dia. of screw 17" 6" Pitch of Screw 19" 0" mean No. of Blades 4 State whether moveable Yes Total surface 100 sq. ft.
 of Feed pumps One Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes (Dies fed)
 of Bilge pumps Two Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
 of Donkey Engines Three Sizes of Pumps Bal. 10" 11" 12" dup. No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Three 3 1/2" 2 Weirs fed 9 1/2" x 7" 24" In Holds, &c. Nos. 1, 3 & 4 holes two 3 1/2"
one 3 1/2" to tunnel well. one 2" hole two 4"
 Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump air 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
 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
 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
 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
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper platform in S.R.

ERS, &c.—(Letter for record 5) Manufacturers of Steel D. Colville, Steel Co. of Scotland, Illinois Steel Co., Alan Wood
John Marshall & Co.
 Heating Surface of Boilers 5809 Is Forced Draft fitted Yes No. and Description of Boilers Two Single ended
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 6 Dec. 1917 No. of Certificate LLOYD'S TEST 400 LBS HYD
ALJ 6/12/17 18/12/17 R2
 each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2 No. and Description of Safety Valves to
 boiler Two Spring loaded Area of each valve 1104 Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes
 least distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 16" 0" Length 12' 0" Material of shell plates Steel
 Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Drub. riv.
 Diameter of rivet holes in long. seams 1 9/16 Pitch of rivets 10" x 5" Top of plates or width of butt straps 21 3/4"
 Rivets 97 Working pressure of shell by rules 207 lbs Size of manhole in shell (16" x 12" in end plate)
 No. and Description of Furnaces in each boiler 3 Motion Susp. Material Steel Outside diameter 50 1/4"
 Thickness of plates 11/16" Description of longitudinal joint Weld No. of strengthening rings ✓
 Working pressure of furnace by the rules 224 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/8"
 of stays to ditto: Sides 9 3/4" x 8 1/4" Back 8" x 9 1/2" Top 9 3/8" x 8 3/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 200 lbs
 Area at smallest part 2.1 Area supported by each stay 8 1/4" x 9 3/4" Working pressure by rules 230 lbs End plates in steam space:
 Thickness 1 3/16" Pitch of stays 16 3/4" x 19 1/4" How are stays secured Drub. nuts Working pressure by rules 205 lbs Material of stays Steel
 Area supported by each stay 16 3/4" x 19 1/4" Working pressure by rules 240 lbs Material of Front plates at bottom Steel
 Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13 1/2" set. 3/4" Working pressure of plate by rules 200 lbs
 Pitch of tubes 4 1/2" x 4 5/16" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 10 1/4"
 Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and
 Length as per rule 35 1/4" Distance apart 9 3/16" Number and pitch of stays in each Three @ 8 3/8"
 Working pressure by rules 230 lbs Steam dome: description of joint to shell ✓ % of strength of joint ✓
 Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓
 Working pressure of shell by rules ✓ Crown plates ✓ Thickness ✓ How stayed ✓
 RHEATER. Type Schmidt's Date of Approval of Plan 6 Dec. 1917 Tested by Hydraulic Pressure to 600 lbs
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Pressure to which each is adjusted 205 lbs Is Easing Gear fitted No

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Four main bearing bolts & nuts ✓	Set packing rings & springs each piston
Two crank pin do do ✓	Set junct ring bolts & nuts
Two crosshead do do ✓	One part Crank shaft. Propeller Shaft
Set coupling do do ✓	Four blades & two sets studs & nuts.
Set feed & bilge pump valves ✓	Slide valve spindle each size
Assorted bolts & nuts & iron. ✓	Centrifugal impeller & shaft
	Crosshead & Crank pin brasses.
	A.P. rod & nut. Three safety valve springs
	Condenser tubes. Boiler tubes, etc. etc.

The foregoing is a correct description,

Kawasaki Dockyard Co., Ltd.

Per *Munakama* Secretary.

Manufacturer.

Dates of Survey while building

{ During progress of work in shops -- }	8 th May to January 1918
{ During erection on board vessel -- }	January to 8 th Feb, 1918
{ Total No. of visits }	Continuous attendance

Is the approved plan of main boiler forwarded herewith Sent with Rpt No 2205 on 3/5/18

Dates of Examination of principal parts—Cylinders 7/4/17 etc Slides 14/9/17 etc Covers 9/7/17 etc Pistons 22/9/17 etc Rods 20/7/17 etc

Connecting rods 20/7/17 etc Crank shaft 21/9/17 etc Thrust shaft 21/9/17 etc Tunnel shafts 4/10/17 etc Screw shaft 24/11/17 etc Propeller 18/12/17

Stern tube 18/12/17 Steam pipes tested 24/12/17 18 & 25/1/18 Engine and boiler seatings 10/1/18 Engines holding down bolts 29/1/18

Completion of pumping arrangements 28/1/18 Boilers fixed 18/1/18 Engines tried under steam 4th Feb. 1918

Completion of fitting sea connections 10/1/18 Stern tube 25/12/17 Screw shaft and propeller 10/1/18

Main boiler safety valves adjusted 1st Feb. 1918 Thickness of adjusting washers Star B F 3/4 Port F 3/16 & locknuts A 5/8 A 19/32

Material of Crank shaft Steel Identification Mark on Do. R 21/9/17 ALJ Material of Thrust shaft Steel Identification Mark on Do. R 21/9/17 ALJ

Material of Tunnel shafts Steel Identification Marks on Do. 44045 4.10.17 Material of Screw shafts Steel Identification Marks on Do. R 24.11.17 ALJ

Material of Steam Pipes Steel ✓ Test pressure 600 lbs } Spare shaft R 28.1.18 ALJ (6538 1/2)

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 "Shin Roku Mani" Kobe Rpt. No 2205 & for Engines only "Was Queen" Was Prime - 42 etc

General Remarks (State quality of workmanship, opinions as to class, &c. 8.7.18)

The machinery has been made & fitted under special survey in accordance with the requirements of the Rules & the materials & workmanship are good. The machinery worked satisfactorily on trial & was afterwards opened out & found in good order. In my opinion the vessel is eligible for the notation + LMC 2.18

It is submitted that this vessel is eligible for THE RECORD. + LMC 2.18. F.D. *AWD.* 2/5/18

Arthur Jones Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ...	<i>Yes</i> : 30 :	When applied for,
Special ...	<i>Yes</i> 6 33 :	12 Feb 1918
Donkey Boiler Fee ...	<i>Yes</i> — :	When received,
Travelling Expenses (if any) <i>Yes</i> : 15 :		14 Feb 1918

Committee's Minute FRI. 3-MAY. 1918 + LMC 2.18 J.D.

Certificate (if required) to be sent to

MACHINERY CERTIFICATE WRITTEN

