

REPORT ON MACHINERY.

No. 2310

Received at London Office SAT. 30 NOV. 1918

Date of writing Report 6 Oct 1918 When handed in at Local Office 19 Port of Kobe
 No. in Survey held at Kobe Date, First Survey 23 Aug 1917 Last Survey 24 August 1918
 Reg. Book. on the Steel Single Screw Steamer "Kofuku Maru" (Number of Visits) Gross 5860 Tons
 Master Built at Kobe By whom built Kawasaki Dockyard Co. Ltd. When built 1918
 Engines made at Kobe By whom made The Kawasaki Dockyard Co. Ltd. when made 1918
 Boilers made at do By whom made do when made do
 Registered Horse Power Owners The Kawasaki Dockyard Co. Ltd. Port belonging to Kobe
 Nom. Horse Power as per Section 28 4440 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 70 Dia. of Screw shaft as per rule 15.41" Material of screw shaft Steel
 as fitted 16"

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
 in 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' 5½"

Dia. of Tunnel shaft as per rule 13.48" Dia. of Crank shaft journals as per rule 14.15" Dia. of Crank pin 14¾" Size of Crank webs 9½" x 26" Dia. of thrust shaft under
 collars 14¾" Dia. of screw 17" 6" Pitch of Screw 19' 0" No. of Blades 4 State whether moveable Yes Total surface 100" shaped

No. of Feed pumps One Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes (Weir 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 Bal. 10-11-12 duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Three 3½" + one 3½" to tunnel well. Weir 9½" x 7" 24" two Gen. serv. ½" 5.6 duplex In Holds, &c. Nos. 1, 3 & 4 holds, two 3½" to each
 No. 2, 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 & 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 Yes

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
 Are pipes 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 Grating of Eng. Rm.

MANUFACTURERS, &c.—(Letter for record S) Manufacturers of Steel Illinois Steel Co. Carnegie Steel Co. Leeds Forge
 4609 + 1132 (aw ber) 2SB & 1 Aux SB.

Heating Surface of Boilers 5741" Is Forced Draft fitted Yes No. and Description of Boilers Two S.E. & One Aw S.E.
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Dates of test 13th & 21st May No. of Certificate 400 LBS
 13/5/18 21/5/18 ALJ R

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

Least 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 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Doubt riv.

seams Doubt shape Diameter of rivet holes in long. seams 1⅜" Pitch of rivets 8¼" 14⅜" Lap of plates or width of butt straps 19⅝"
 6 ribs rolled rivets 95.8 Working pressure of shell by rules 209 lbs Size of manhole in shell 16" x 12"

Percentages of strength of longitudinal joint plate 84.3 No. and Description of Furnaces in each boiler Three Morrison Material Steel Outside diameter 48¼"
 of compensating ring (7½" + flange) 1½" No. of strengthening rings

of plain part top 5/8" crown 5/8" Description of longitudinal joint Weld No. of strengthening rings
 bottom 5/8" bottom 5/8"

Working pressure of furnace by the rules 208 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"
 of stays to ditto: Sides 8⅝" 8½" Back 9" 8½" Top 9⅜" 8½" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 203 lbs

Area of stays Steel Area at smallest part 2.10" Area supported by each stay 9⅜" x 8½" Working pressure by rules 230 lbs End plates in steam space:
 al Steel Thickness 1½" Pitch of stays 19¾" 20½" How are stays secured Doubt nuts + small washers Working pressure by rules 201 lbs Material of stays Steel

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

of tubes 3¼" Pitch of tubes 4⅞" 4⅝" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 8¾"
 across wide water spaces 13¾" Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and

of girder at centre 10½" 13" (two) Length as per rule 34½" Distance apart 9⅜" Number and pitch of stays in each 3 @ 8½"
 of 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
 rivets Working pressure of shell by rules Crown plates Thickness How stayed

HEATER. Type Schmidt Date of Approval of Plan 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

of Safety Valve 3" Pressure to which each is adjusted 205 lbs Is Easing Gear fitted No

Date of writing Report
No. in Survey
Reg. Book.

on the
Master
Engines made at
Boilers made at
Registered Horse

MULTITUB

(Letter for record)

Boilers *On*

No. of Certificate

safety valves to

Are they fitted with

Smallest distance

Material of shell

Descrip. of riveting

Lap of plates or

rules 200 lbs

boiler 2' mo

Description of long

plates: Material

Top 4' 8" If st

smallest part 1' 7"

Pitch of stays 15"

Area supported by

Lower back plate

Pitch of tubes 4"

water spaces 13"

rider at centre 8"

Working pressure b

Diameter

pitch of rivets

PERHEATE

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diameter of Safety Val

Dates
Survey
while
building

GENERAL RI

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Survey Fee

Travelling Expens

Committee's Mi

signed

Lloyd's Register

Foundation

IS A DONKEY BOILER FITTED? *Anchor 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 junk ring bolts & nuts.
Two crosshead do do ✓	One part crank shaft. Propeller shaft
Set Coupling do do ✓	Four propeller blades & two sets slide & nuts
Set feed & bilge pump valves. ✓	Slide valve spindle each size
Assorted bolts & nuts & iron. ✓	Centrifugal impeller & shaft.
	Cross head & Cr. pin brasses. A.P. rod & nut
	Three safety valve springs. Condenser tube
	Boiler tubes. Etc. etc.

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

Per. *Shakajima* Secretary

Manufacturer.

Dates of Survey while building
During progress of work in shops - - 23^d August 1917 to 27th July 1918
During erection on board vessel - - 27th July to 24th August 1918
Total No. of visits Continuous attendance

Is the approved plan of main boiler forwarded herewith

Yes" " " *Yes*

Dates of Examination of principal parts—Cylinders 1/11/17 etc Slides 28/9/17 etc Covers 28/9/17 etc Pistons 7/12/17 etc Rods 26/12/17 etc
Connecting rods 18/3/18 Crank shaft 29/11/17 Thrust shaft 29/11/17 Tunnel shafts 26/12/17 Screw shaft 25/5/18 Propeller 20/7/18
Stern tube 20/7/18 Steam pipes tested 4/5/18 8/8/18 Engine and boiler seatings 26th July Engines holding down bolts 12/8/18
Completion of pumping arrangements 19/8/18 Boilers fixed 12/8/18 Engines tried under steam 22nd Aug. 1918
Completion of fitting sea connections 3/8/18 Stern tube 3/8/18 Screw shaft and propeller 6/8/18
Main boiler safety valves adjusted 19/8/18 Thickness of adjusting washers Star. Bls. F. 1/2 Port Bls. F. 9/16 Aux. Bls. F. 5/8 Top 4' 8" If st
Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S 3.12.17 A.L.J. R* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S 26.12.17 A.L.J. R* smallest part 1' 7"
Material of Tunnel shafts *Steel* Identification Marks on Do. *do.* Material of Screw shafts *Steel* Identification Marks on Do. *do.* Pitch of stays 15"
Material of Steam Pipes *Steel* ✓ Test pressure 600 lbs ✓ Area supported by *LLOYD'S 15.8.18 A.L.J.*
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 *Yes*
Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *"War Queen" War Prince "Seymour"*

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

The machinery & boilers have been made & fitted under Special Survey in accordance with the requirements of the Rules & the materials & workmanship have been found good.

A report upon the Electric lighting is forwarded.

The vessel is in my opinion eligible for the record & LMC 8.18

It is submitted that
this vessel is eligible for
THE RECORD & LMC 8.18. E.D.

AWD.
4/12/18 *GRF*

Arthur L. Jones

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... *4/6* : 30 : When applied for,
Special ... *4/6* : 633 : 6th Sept 1918
Donkey Boiler Fee ... *4/6* : : When received,
Travelling Expenses (if any) *4/6* : 15 : 10th Sept 1918

Committee's Minute

FRI 6 DEC 1918

Assigned

+ L.M.C. 8.18

F.D.

MASTERY CERTIFICATE



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