

REPORT ON MACHINERY.

No. 2419

MON 17 MAR. 1919

Received at London Office

Date of writing Report 24 Jan'y 1919 When submitted to Local Office 4 Feb'y 1919 Port of Kobe
No. in Survey held at Kobe Date, First Survey 1st May 1918 Last Survey 12 Jan'y 1919
Reg. Book. on the Steel Single Screw Steamer "Keifuku Maru" (Number of Volls 110) Gross 5857.42
Master Built at Kobe By whom built The Kawasaki Dryd. Co Ltd. When built 1919
Engines made at Kobe By whom made The Kawasaki Dryd. Co Ltd. when made 1919
Boilers made at do By whom made do when made do
Registered Horse Power Owners The Kawasaki Dryd Co Ltd. Port belonging to Kobe
Nom. Horse Power as per Section 28 436 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 3
Dia. of Cylinders 26 : 43½ : 72 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 15.41 15.52 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
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' 5¼"
Dia. of Tunnel shaft as per rule 13.48 13.54 Dia. of Crank shaft journals as per rule 14.15 14.22 Dia. of Crank pin 14¾ Size of Crank webs 9½ x 20½ Dia. of thrust shaft under
collars 14¾ Dia. of screw 17.6 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 (+ 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 Super No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Three 3½" Gen. Serv. 7½, 5, 6 In Holds, &c. Nos. 1, 3 & 4 holds 3½" each side
No 2 hold, 4" each side
No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Air p. 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
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 Engine Rm top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Illinois Ste. Co. Worth Bros. Yawata Ste. Wks.
Total Heating Surface of Boilers 5636 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 5th & 9th Nov. 1918 No. of Certificate 5-11-18; 9-11-18 ALJ
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 Direct springs Area of each valve 3¾ 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" 6" Length 12' 0" Material of shell plates Steel
Thickness 1⅜ Range of tensile strength 26,785-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Ends Double
long. seams Treb. riv. Diameter of rivet holes in long. seams 17/16 Pitch of rivets 9½ x 4½ Top of plates or width of butt straps 20½ x 1⅜
Per centages of strength of longitudinal joint rivets 96.1 Working pressure of shell by rules 203 lbs Size of manhole in shell 12" x 16"
Size of compensating ring (1/2 + flange) 1⅜ No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 48¼"
Length of plain part top Thickness of plates crown 21/32 Description of longitudinal joint Weld No. of strengthening rings
bottom Thickness 1⅜ Working pressure of furnace by the rules 221 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 7/8
Pitch of stays to ditto: Sides 8⅝ x 8½ Back 9 x 8½ Top 9⅜ x 8½ 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 9⅜ x 8½ Working pressure by rules 201 lbs Material of stays Steel
Material Steel Thickness 1⅝ Pitch of stays 19¼ x 20½ How are stays secured Double nuts Working pressure by rules 201 lbs Material of Front plates at bottom Steel
Area at smallest part 10.1 Area supported by each stay 19¼ x 20½ Working pressure by rules 266 lbs
Thickness 3/4 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 13½ at ends Working pressure of plate by rules 200 lbs
Diameter of tubes 3¼ Pitch of tubes 4⅝ x 4⅝ Material of tube plates Steel Thickness: Front 3/4 Back 13/16 Mean pitch of stays 8¾"
Pitch across wide water spaces 13¾ Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10¾ x 13 (2) Length as per rule 34½ Distance apart 9⅜ Number and pitch of stays in each 3 @ 8½"
Working pressure by rules 236 lbs Steam dome: description of joint to shell None % of strength of joint
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
UPERHEATER. 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

010526 - 010536 - 0159

IS A DONKEY BOILER FITTED? *S. S. Auxiliary B¹* If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:—

Four main bearing bolts & nuts ✓
Two crank pin bolts & nuts ✓
Two crosshead bolts & nuts ✓
Set coupling bolts & nuts ✓
Set feed & bilge pump valves ✓
Assorted bolts & nuts & iron ✓

Set packing rings & springs each piston ✓
Set pump ring bolts & nuts ✓
One part crank shaft. Propeller shaft ✓
Four propeller blades & two sets studs & nuts ✓
Slide valve spindle each side ✓
Centrifugal impeller and shaft ✓
Crankd. & crank pin bushes. A.P. rod & nut ✓
Three safety valve springs. Condenser tubes etc etc ✓

The foregoing is a correct description,

Kawasaki Dockyard Co., Ltd.,

Per *J. Nakayama* Secretary.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1.13.14 May. 24 June. 5.7.8.18.27.29 Aug. 5.6.11.13.19 Sept. 9.12.19.23.26 Oct.*
 { During erection on board vessel -- } *5.7.9.18.25.27.30 Nov. 3.6.7.9.12.14.22.23.27.28 Dec. 1918*
 Total No. of visits *40/ 9 & 12 Jan'y 1919*

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *5.9.18* Slides *7.11.18* Covers *7.11.18* Pistons *5.11.18* Rods *12.10.18*
 Connecting rods *23.10.18* Crank shaft *7.8.18* Thrust shaft *7.8.18* Tunnel shafts *23.10.18* Screw shaft *26.10.18* Propeller *25.11.18*
 Stern tube *25.11.18* Steam pipes tested *27.11.18* Engine and boiler seatings *12.12.18* Engines holding down bolts *23.12.18*
 Completion of pumping arrangements *23.12.18* Boilers fixed *22.12.18* Engines tried under steam *9.1.19*
 Completion of fitting sea connections *14.12.18* Stern tube *14.12.18* Screw shaft and propeller *14.12.18*
 Main boiler safety valves adjusted *28.12.18* Thickness of adjusting washers *Lloyd's Star B. F. 7/16 Port B. A. 11/16* *Aut. B. F. 11/16* *A. 5/8*
 Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYD'S* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S*
 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. *Spure*

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 Diver" "Argonia" "East Wind" etc*
"Seaford" "Marin" "Yofuku Maru" etc

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

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

The vessel is eligible in my opinion for the notation + L.M.C. 1.1919 in the Register

It is submitted that
 this vessel is eligible for
 THE RECORD. + L.M.C. 1.19 F.D.

18/3/19 J.R.R.

The amount of Entry Fee ... *£ 30* : When applied for, *10 Jan 1919*
 Special ... *£ 375* :
 Donkey Boiler Fee ... *£ 15* :
 Travelling Expenses (if any) *£ 15* :
 FRI. 21 MAR. 1919

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



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