

REPORT ON MACHINERY.

No. 2101

Received at London Office

Date of writing Report 19 Oct. 1917 When handed in at Local Office 19 Port of Kobe
 No. in Survey held at Kobe Date, First Survey Nov. 22nd 1916 Last Survey 16th October 1917
 Reg. Book. on the Steel Single Screw Steamer "War Hero" Number of Voids Gross 5875
 Tons Net 4278
 Master Williams Built at Kobe By whom built The Kawasaki Dryd. Co. Ltd. When built 1917
 Engines made at Kobe By whom made The Kawasaki Dryd. Co. Ltd. when made 1917
 Boilers made at do By whom made do when made do
 Registered Horse Power Owners Furness Withy & Co. Ltd. Port belonging to London
 Nom. 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" 43 1/2" 72" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 15.4" 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
 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' 5 1/2"
 Dia. of Tunnel shaft as per rule 13.48" Dia. of Crank shaft journals as per rule 14.15" Dia. of Crank pin 14 3/4" Size of Crank webs 9 1/2" 20 1/2" Dia. of thrust shaft under
 rollers 14 3/8" Dia. of screw 17'-6" Pitch of Screw 19'-0" mean No. of Blades 4 State whether movable 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 (+ wear 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 Four Sizes of Pumps Bal. 10, 11, 12 duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Three 3 1/2" Small 5 1/2, 3 1/2, 9" In Holds, &c. Nos. 1, 3 + 4 holds, two 3 1/2"
 One 3 1/2" to tunnel well. No 2 hold, two 4"
 No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump ditto Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"
 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
 That 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 Upper grating in E. Rm.
 MILLERS, &c.—(Letter for record S.) Manufacturers of Steel Steel Co. of Scotland, W. Colville, St. Dunstons, Carnegie
 4609 + 1132 (for A.W.H.) Wm. Beardmore & Co., John Spence, John Marshall.
 Total Heating Surface of Boilers 5441 sq. ft. Is Forced Draft fitted Yes No. and Description of Boilers Two S.E. 4 on A.W.H. S.E. B
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 30/4/17 12/5/17 No. of Certificate 400 LBS. H.Y.D.
 In each boiler be worked separately Yes Area of fire grate in each boiler 60 1/2 sq. ft. No. and Description of Safety Valves to
 Each boiler Two, Direct Spring 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 14.6" Length 12'0" Material of shell plates Steel
 Thickness 1 5/16" Range of tensile strength 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double riv.
 g. seams Double strap Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 8 3/4" 7 1/4" Gap of plates or width of butt straps 1' 7 3/8"
 Percentages of strength of longitudinal joint rivets 95.8 plate 84.3 Working pressure of shell by rules 209 lbs Size of manhole in shell 16" 12"
 Length of compensating ring (7 1/2" + flange) 1 5/8" No. and Description of Furnaces in each boiler Three "Morini" Material Steel Outside diameter 48 1/4"
 Length of plain part top all round. crown 5/8" Description of longitudinal joint Weld No. of strengthening rings
 Working pressure of furnace by the rules 208 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/8"
 Pitch of stays to ditto: Sides 8 5/8" 8 1/2" Back 9 x 8 1/2" Top 9 3/8" 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" 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 5/16" 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
 126 lbs at smallest part 10" 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
 93 lbs Thickness 1 3/16" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13 1/2" at wide Working pressure of plate by rules 200 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 7/16" x 4 5/16" 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 1/2" x 13 (2) 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 230 lbs Steam dome: description of joint to shell % 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
 SUPERHEATER. Type Schmidt Date of Approval of Plan Tested by Hydraulic Pressure to 200 lbs
 Date of Test 31st July + 2nd Aug. 1917 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Size of Safety Valve 3" Pressure to which each is adjusted 205 lbs Is Easing Gear fitted No

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 for each piston
Two crank pin do do ✓ Set joint 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 pump + bilge pump valves. ✓ Slide valve spindle Each size.
Assorted bolts + nuts + iron. ✓ Centrifugal impeller + shaft.
Crosshead + cr. pin braces. A.P. rod + nut
Three safety valve springs. Condenser tubes
Etc. Etc.

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

Per. J. Nakajima

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } Nov. 22nd 1916 to Sept. 1917
{ During erection on board vessel -- } Sept. to 16 Oct 1917
Total No. of visits Continuous attendance. Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 11/2/17 etc Slides 22/3/17 Covers 13/3/17 Pistons 22/3/17 etc Rods 28/2/17
Connecting rods 28/2/17 Crank shaft 13/8/17 Thrust shaft 23/5/17 Tunnel shafts 18/4/17 Screw shaft 25/8/17 Propeller 4/9/17
Stern tube 22/8/17 Steam pipes tested 13/21/9/17 Engine and boiler seatings 10/9/17 Engines holding down bolts 29/9/17
Completion of pumping arrangements 2/10/17 Boilers fixed 21/9/17 Engines tried under steam 6th & 8th Oct 1917
Completion of fitting sea connections 8/9/17 Stern tube 8/9/17 Screw shaft and propeller 12/9/17
Main boiler safety valves adjusted 12th Oct. 1917 Thickness of adjusting washers Locknuts Star B. A 7/16 Port B. A 9/16
Material of Crank shaft Steel Identification Mark on Do. Z.S. 3-1917 Material of Thrust shaft Steel Identification Mark on Do. Z.S. 3-1917
Material of Tunnel shafts Steel Identification Marks on Do. Z.S. 3-1917 Material of Screw shafts Steel Identification Marks on Do. Z.S. 3-1917
Material of Steam Pipes Steel (S. drawn) ✓ Test pressure 600 lbs. ✓ Span " 6-12
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 "War Queen" (Rpt No. 2009).
"War Prince" (" " 2031).
"War Council" (" " 2046).

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

The machinery has been made + fitted under special Survey, in accordance with the requirements of the Rules + the materials + workmanship are good.

The vessel made satisfactory full speed trials on the 8th October. Average speed 14.38 Knots. Draught F. 8' 5". A. 15' 8" Mean 12' 0 1/2" 81 tons. Stm HP 200 I.P. L.P. 15 lbs. Vac. 27.8". IHP 967 + 1302 + 1367 = 3636 total I.H.P. Coal conspt. 135 lbs. I.H.P. per hr. Impulse valves open on I.P. + L.P. Engines.

The vessel is, in my opinion, eligible for the notation + LMC 10.17

It is submitted that
this vessel is eligible for
THE RECORD + LMC 10.17. F.D.

The amount of Entry Fee ... £ 30 : When applied for, 15 Oct. 1917
Special ... £ 594 :
Donkey Boiler Fee ... £ 50 : When received, 16 Oct. 1917
Travelling Expenses (if any) £ :

Committee's Minute

Assigned

FRI. 28 DEC. 1917

Engine Surveyor to Lloyd's Register of Shipping.



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Foundation