

REPORT ON MACHINERY.

No. 2567

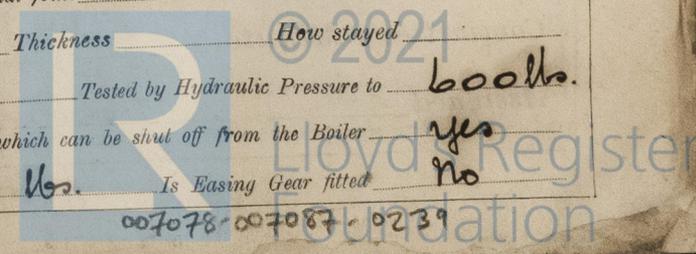
Received at London Office

TUE SEP 23 1919

Date of writing Report 15th Aug 1919 When handed in at Local Office 15 Port of Kobe
 No. in Survey held at Kobe Date, First Survey 18th Jan. Last Survey 5th July 1919
 Reg. Book. on the Steel Single Screw Steamer "Aden Maru" (Number of Visits 43) Tons } Gross 5860
 Net 4260
 Master K. NAGOYA Built at Kobe By whom built Kawasaki Kkyd. Co. Ltd. When built 1919
 Engines made at Kobe By whom made Kawasaki Dockyard Co. Ltd. when made 1919
 Boilers made at do By whom made do when made 1919
 Registered Horse Power 437 Owners The Kawasaki Kisen Kaisha Port belonging to Kobe
 Nom. Horse Power as per Section 28 110 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 15-6 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 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' : 5 1/4"
 Dia. of Tunnel shaft as per rule 13-48 13-54 as fitted 13 3/4 Dia. of Crank shaft journals as per rule 14-15 14-21 as fitted 14 3/8 Dia. of Crank pin 14 3/4 Size of Crank webs 90 1/2 x 208 Dia. of thrust shaft under collars 14 3/8 Dia. of screw 17 : 6 Pitch of Screw 19 : 0 mean No. of Blades 1 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 Weir's 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" x 11" x 12" Dupl. Weir's feed 9 1/2" x 7" x 24" Two Gen. Serv. 7 1/2" x 5" x 6" Dupl. No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Three 3 1/2 and One 3 1/2 to tunnel well
 In Holds, &c. Nos. 1, 3 + 1 holds each two 3 1/2 No. 2 hold, two 1"
 No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump ✓ 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
 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 upper platform of E. R.

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Illinois Steel Co, Carnegie Steel, North Br. & Amer. Spiral
2252 x 2 + 1132 (aux. lbs.) 2SB & 1 Aux. SB Tube Co.
 Total Heating Surface of Boilers = 5636 Is Forced Draft fitted Yes No. and Description of Boilers Two 3. 6 + Aux. 3. 6
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 21-5-19 No. of Certificate 21-5-19
24-5-19 LLOYD'S TEST 400 LBS
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60 1/2 No. and Description of Safety Valves to each boiler Two Spring loaded 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 3/8 Range of tensile strength 26,48 to 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Ends Double Middle Triple
 long. seams Double riveted Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 9 1/8 + 1 1/16 Lap of plates or width of butt straps 20 1/8 + 1 3/8
 Per centages of strength of longitudinal joint rivets 95.84 Working pressure of shell by rules 200 lbs. Size of manhole in shell 16 x 12
 plate 81.28 Size of compensating ring (7 1/2 + flange) 1 1/16 No. and Description of Furnaces in each boiler 3 "Morison's" Material Steel Outside diameter 48 1/2"
 Length of plain part top Thickness of plates crown 21/32 Description of longitudinal joint Weld No. of strengthening rings ✓
 bottom bottom Working pressure of furnace by the rules 221 Combustion chamber plates: Material Steel Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 7/8
 Pitch of stays to ditto: Sides 8 1/2 x 8 1/2 Back 8 1/2 x 9 Top 8 1/2 x 9 3/8 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 8 1/2 x 9 3/8 Working pressure by rules 230 lbs. End plates in steam space: ✓
 Material Steel Thickness 1 3/8 Pitch of stays 19 1/2 x 20 1/2 How are stays secured Double nuts + small washers Working pressure by rules 201 lbs. Material of stays Steel
 Area at smallest part 10" Area supported by each stay 19 1/2 x 20 1/2 Working pressure by rules 260 lbs. Material of Front plates at bottom Steel
 Thickness 13/16 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 1/16 x 4 5/16 Material of tube plates Steel Thickness: Front 1" Back 13/16 Mean pitch of stays 8 3/4
 Pitch across wide water spaces 13 3/4 + 3/4 Working pressures by rules 210 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 3/4 + 13/16 (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 220 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 ✓
 Tested by Hydraulic Pressure to 600 lbs.
 SUPERHEATER. Type Schmidt's Date of Approval of Plan ✓ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Date of Test 22nd May No. 13h; 21st No. 2 Bh. Is Easing Gear fitted No
 Diameter of Safety Valve 3" Pressure to which each is adjusted 205 lbs.



IS A DONKEY BOILER FITTED? *Aux. Blr. only* 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	Centrifugal pump impeller shaft
Two crank pin bolts + nuts	Set junk ring bolts + nuts	Crosshead + crankpin brasses
Two crosshead bolts + nuts	One part crank shaft	A.P. rod + nut.
Set coupling bolts + nuts	Propeller shaft. { P.F. 801 LLOYDS. AW. R.	3 safety valve springs Cond.
Set feed + bilge pump valves	Four blades + 2 sets studs + nuts	Blr. ticks etc. etc.
Assorted bolts + nuts + iron	Slide valve spindle each size	

The foregoing is a correct description,

Kawasaki Dockyard Co., Ltd.

Per *J. Otake* Secretary.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1919 Jan. 18, 21, 24, 29; Feb. 5, 12, 21, 25, 28; Mar. 1, 3, 6, 24, 28, 29; Apr. 4, 8, 11, 12, 19, 22, 25*

{ During erection on board vessel -- } *May 1, 2, 5, 10, 14, 16, 17, 19, 21; June 3, 5, 9, 11, 12, 13, 30; July 3, 4, 5.*

Total No. of visits *42.*

Is the approved plan of main boiler forwarded herewith *No*

Dates of Examination of principal parts—Cylinders *8-4-19* Slides *21-5-19* Covers *8-4-19* Pistons *21-5-19* Rods *11-6-19*

Connecting rods *9-6-19* Crank shaft *30-4-19* Thrust shaft *30-4-19* Tunnel shafts *16-5-19* Screw shaft *15-5-19* Propeller *21-5-19*

Stern tube *21-5-19* Steam pipes tested *13-6-19* Engine and boiler seatings *12-6-19* Engines holding down bolts *25-6-19*

Completion of pumping arrangements *25-6-19* Boilers fixed *30-6-19* Engines tried under steam *3-7-19* overhaul *4-7-19*

Completion of fitting sea connections *12-6-19* Stern tube *6-6-19* Screw shaft and propeller *12-6-19*

Main boiler safety valves adjusted *30-6-19* Thickness of adjusting washers *Lock nuts — Caps sealed by Jap. Gov. Ins.*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS 30-4-19 AW R.* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYDS 30-4-19 AW R.*

Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYDS 16-5-19 AW R.* Material of Screw shafts *Steel* Identification Marks on Do. *PF 815 LLOYDS 19-5-19 AW R.*

Material of Steam Pipes *Steel* Test pressure *600 lbs sq inch water.*

Is an installation fitted for burning oil fuel 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*

General Remarks (State quality of workmanship, opinions as to class, &c.) *War Prince " " 2031*

Glasgow Maru .. 2528

Brazil Maru .. 2572

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

The vessel is eligible in my opinion for the notation **+L.M.C. 7, 19** in Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 7, 19. FD.

A.W.D.
25/9/19.
J.R.S.
Alexander Watt
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... *Yen 30⁰⁰* : When applied for, *7th July 1919*

Special ... *Yen 735⁰⁰* : When received, *11th July 1919.*

Boiler Fee *Incl. £*

Travelling Expenses (if any) *Yen 15⁰⁰*

Committee's Minute **TUE 7-OCT. 1919**

Assigned *+ L.M.C. 7, 19*



Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.