

Date of writing Report 4th Jan'y 1917 When handed in at Local Office 19 Port of Kobe
No. in Survey held at Kobe Date, First Survey 29th January Last Survey 19th Decem 1917
Reg. Book. on the Single Screw Steamer "Sumatra Maru" (Number of Visits 49)
Master Built at Kobe By whom built The Kawasaki Dry Dock Co. Ltd. Tons { Gross 5856
Engines made at Kobe By whom made The Kawasaki Dry Dock Co. Ltd. when made 1917
Boilers made at do By whom made do when made do
Registered Horse Power Owners The Osaka Shosen Kaisha Port belonging to Osaka
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 3
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
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 9½:20½ 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 (with bearings)
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
In Engine Room Three 3½" Gen. Serv. ½. 5. 6 dup In Holds, &c. Nos. 1, 3 & 4 holds. Two 3½" each hold. No 2 hold. Two 4"
One 3" to tunnel well. Small " 5½. 3½. 9 dup No 2 hold. Two 4"
No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump C.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 upper grating in E. Rm.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Beardmore. Jno Spencer. Jno Dunlop & Co.
4609 + 1132 (Ans Ber) Steel & Q.S. Co. David Galloway & Sons. Alaw Wood.
Total Heating Surface of Boilers 5741 Is Forced Draft fitted Yes No. and Description of Boilers Two S. E & 1 Ans S E.
Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 4th & 13th Aug No. of Certificate LLOYD'S TEST 400 LBS. HYD. ALJ 4713/8/17 R
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 spring 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 15 Range of tensile strength 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double long. seams Double ship. Diameter of rivet holes in long. seams 13/8 Pitch of rivets 8¾ x 4¾ Top of plates or width of butt straps 1.75
Per centages of strength of longitudinal joint rivets 95.8 Working pressure of shell by rules 209 lbs Size of manhole in shell 16 x 12
plate 84.3
Size of compensating ring (7½ + flange) 15½ No. and Description of Furnaces in each boiler One Morrison Material Steel Outside diameter 48½
Length of plain part top all round crown 5/8 Description of longitudinal joint weld No. of strengthening rings
bottom Thickness of plates 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
Pitch of stays to ditto: Sides 8½, 8½ Back 9 x 8½ Top 9½ 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 9½ x 8½ Working pressure by rules 230 lbs End plates in steam space:
Material Steel Thickness 15/16 Pitch of stays 19¾ x 20½ How are stays secured Double nuts Working pressure by rules 201 lbs Material of stays Steel
Area at smallest part 10 Area supported by each stay 19¾ x 20½ 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 13½ at wid. Working pressure of plate by rules 200 lbs
Diameter of tubes 3¼ 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 8¾
Pitch across wide water spaces 13¾ (two) Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10½ x 13 (two) Length as per rule 34½ Distance apart 9 3/8 Number and pitch of stays in each 3 @ 8½
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 600 lbs
Date of Test 11th Sept 1917 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
Diameter of Safety Valve 3 Pressure to which each is adjusted 205 lbs Is Easing Gear fitted No

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

SPARE GEAR. State the articles supplied:—

Four main bearing bolts + nuts ✓
Two crank pin " " ✓
Two cross head " " ✓
Set coupling " " ✓
Set feed & bilge pump valves ✓
Assorted bolts & nuts & iron ✓

Set packing rings + springs each piston.
Set joint ring bolts + nuts.
One crank shaft. Propeller shaft.
Four blades & two sets studs + nuts.
Slide valve spindle each size.
Centrifugal impeller + shaft.
Crosshead & cr. pin brasses. A.P. rod + nut.
Three safety valve springs. Condenser 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 shop --- Jan'y 29. Feb 10. 14. 16. 20. 28. Mar 14. April 26. May 4. 24. 25. 29. 30 June 5. 26. July 9. 23. 24. 25
During erection on board vessel --- Aug 4. 13. 25. 30. Sept. 7. 11. 14. 17. 22. 25. 28. Oct 16. 22. 25. 29. Nov 5. 8. 14. 19. 24. 26. 27.
Total No. of visits 49

Is the approved plan of main boiler forwarded herewith? Forwarded
Aut. with Rpt No 211 on the
donkey side vessel "Borneo Man"

Dates of Examination of principal parts—Cylinders 30/5/17 etc Slides 5/6/17 etc Covers 30/5/17 Pistons 31/4/17 Rods 7/9/17 etc
Connecting rods 7/9/17 etc Crank shaft 7/9/17 etc Thrust shaft 17/9/17 etc Tunnel shafts 25/9/17 Screw shaft 25/9/17 Propeller 14/9/17
Stern tube 22/10/17 Steam pipes tested 22/10/17 5/26/17 Engine and boiler seatings 24/11/17 Engines holding down bolts 5/12/17
Completion of pumping arrangements 13/12/17 17/12/17 Boilers fixed 5/12/17 Engines tried under steam 15.11.17 Dec 1917
Completion of fitting sea connections 24/11/17 Stern tube 8/11/17 Screw shaft and propeller 19/11/17
Main boiler safety valves adjusted 12/12/17 Thickness of adjusting washers Lock nuts. Intervals. Ste. Bls. A 10/32 Port B. A 9/16
Material of Crank shaft Steel Identification Mark on Do. LLOYD'S ALJ. R. Material of Thrust shaft Steel Identification Mark on Do. LLOYD'S ALJ. R.
Material of Tunnel shafts Steel Identification Marks on Do. ALJ. Material of Screw shafts Steel Identification Marks on Do. ALJ.
Material of Steam Pipes Steel Test pressure 600 lbs Span 24 R. 19.11.17 ALJ 25/9/17

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" "War Admiral" "Borneo Man" "Celebes Man" etc

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 have been found good.

On trial a mean speed of over 14 knots was maintained & the main parts of the machinery afterwards opened for survey were found in good condition. The vessel is in my opinion eligible for the notation + LMC 12.17.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 12.17. F.D.

3/4/18

Arthur L. Jones

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... 4a 30 : When applied for,
Special ... 4a 594 : 26 Dec 1917
Donkey Boiler Fee ... 4a 50 :
Travelling Expenses (if any) £ : : When received,
27 Dec 1917

Committee's Minute

WED. APR. 3 1918.

Assigned

+ L.M.C. 12.17. J.D.

MACHINERY CERTIFICATE
WRITTEN



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Foundation