

REPORT ON MACHINERY.

No. 2420

Received at London Office

MON 24 MAR 1919

Date of writing Report 30th Jan 1919 When handed in at Local Office 19 Port of Kobe
No. in Survey held at Kobe Date, First Survey 12 June 1918 Last Survey 29th Jan 1919
Reg. Book. on the Steel Single Screw Steamer "Chifuku Maru" (Number of Visits 32)
Master R. Ori Built at Kobe By whom built The Kawasaki Kkyd. Co. Ltd. (Kawasaki, Jpn No 431) Tons { Gross 5854
Engines made at Kobe By whom made The Kawasaki Kkyd. Co. Ltd. when made 1919
Boilers made at do By whom made do when made do
Registered Horse Power Owners do 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 18" Revs. per minute 70 Dia. of Screw shaft as per rule 15.41" Material of screw shaft as fitted 16" 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" as fitted 13¾" Dia. of Crank shaft journals as per rule 14.15" as fitted 14¾" Dia. of Crank pin 14¾" Size of Crank webs 9½" x 208" 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 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. 10x11x12 Duplex Weir's Feed 9½" x 7" x 24" two No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Three 3½" Gen. Hdy. 7½" x 5" x 6" Dup. In Holds, &c. Nos. 1, 3 + 4 holds, two 3½" each hold.
One 3½" to tunnel well. No. 2 hold, 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 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 in Eng. Room

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Allison Ste. Co. Wash Bco. 25B. & 14ux 5B.
Total Heating Surface of Boilers 56360" Is Forced Draft fitted Yes No. and Description of Boilers Two S. E. + One Aux. S. E.
Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 16th & 19th Nov. 1918 No. of Certificate 400 LBS
Can each boiler be worked separately Yes Area of fire grate in each boiler 602' No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 33" 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 18" Mean dia. of boilers 14': 6" Length 12': 0" Material of shell plates Steel
Thickness 1½" Range of tensile strength 26783 to 32105 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams mid. Jrb. long. seams double straps Diameter of rivet holes in long. seams 17/16" Pitch of rivets 9/8" + 4 9/16" or width of butt straps 208" x 1 3/8"
Per centages of strength of longitudinal joint rivets 96.1 plate 84.2 Working pressure of shell by rules 203 lbs. Size of manhole in shell 12" x 16"
Size of compensating ring (7½" + flange) 12" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 18½"
Length of plain part top 21/32" bottom 21/32" Thickness of plates crown 21/32" bottom 21/32" Description of longitudinal joint Weld No. of strengthening rings ✓
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 8 3/8" x 8 1/2" Back 9" x 8 1/2" Top 9 3/8" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 208 lbs
Material of stays Steel Area at smallest part 2.10" Area supported by each stay 9 3/8" x 8 1/2" Working pressure by rules 230 lbs End plates in steam space: 126. Material Steel Thickness 17/16" Pitch of stays 9 3/8" x 20 1/2" How are stays secured Small nuts Working pressure by rules 201 lbs Material of stays Steel
Area at smallest part 10" Area supported by each stay 9 3/8" x 20 1/2" Working pressure by rules 260 lbs Material of Front plates at bottom Steel
Thickness 3/4" 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 1/2" x 4 1/2" 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 3/4" x 3 3/4" (two) 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 217 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 ✓ 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
Material of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

008201-008210-0103

IS A DONKEY BOILER FITTED? Aux. 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 bolts + nuts + set brasses ✓ Set junk ring bolts + nuts ✓
Two Crosshead bolts + nuts + brasses ✓ Propeller shaft. Four prop. blades + two
Set Coupling bolts + nuts ✓ sets studs + nuts.
Sets feed + bilge pump valves ✓ Slide valve spindle each size.
Assorted bolts + nuts + iron ✓ Centrif. impeller + shaft.
A.P. rod + nut. 3 safety valve springs
Condenser tubes. Fire bars. Boiler Tubes
etc. etc.

The foregoing is a correct description,

Kawasaki Dockyard Co. Ltd.,

Per

J. Ota Kane

Manufacturer.

Secretary.

Dates of Survey while building { During progress of work in shops - - - 26 June 2.8.21 Aug. 2.7.13.19 Sep. 3.14.21.26 Oct. 1.7.16.18.19.27.30 Nov.
During erection on board vessel - - - 9.10.14.24.28 Dec. 1918. 12.13.17.20.25.28.29 January 1919
Total No. of visits 32.

Is the approved plan of main boiler forwarded herewith

Yes ✓

" " " donkey " " " Yes ✓

Dates of Examination of principal parts—Cylinders 21/10/18 27/11/18 Slides 26/10/18 Covers 26/10/18 Pistons 1/11/18 Rods 2.8.18
Connecting rods 2/8/18 Crank shaft 2/9/18 Thrust shaft 2/9/18 Tunnel shafts 12/6/18 Screw shaft 10/12/18 Propeller 9/12/18
Stern tube 9.12.18 Steam pipes tested 7/11/18 27/11/18 Engine and boiler seatings 28.12.18 Engines holding down bolts 20.1.19
Completion of pumping arrangements 17.1.19 Boilers fixed 20.1.19 Engines tried under steam 28.1.19.
Completion of fitting sea connections 12.1.19 Stern tube 24.12.18 Screw shaft and propeller 12.1.19

Main boiler safety valves adjusted 25.1.19 Thickness of adjusting washers Locknuts Clearance Star Blr F¹¹/₁₆ Port Blr F³/₄ In F⁹/₁₆
Material of Crank shaft Steel Identification Mark on Do. LLOYD'S 2.9.18 Material of Thrust shaft Steel Identification Mark on Do. LLOYD'S 2.9.18
Material of Tunnel shafts Steel Identification Marks on Do. LLOYD'S Material of Screw shafts Steel Identification Marks on Do. K.S. 29
Material of Steam Pipes Steel (S.D.) ✓ 12.6.18 A.L.J. R Test pressure 600 lbs. LLOYD'S 10.12.18
Is an installation fitted for burning oil fuel No ✓ Is the flash point of the oil to be used over 150°F. ✓ Space K.S. 4F LLOYD'S 13.1.19 A.W. R

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" "Bar Wolf" etc
"East Port" "Seifuken Maru" etc 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 approved plans + the Society's Rules + the materials + workmanship have been found good.

Photoprints of the midship section + prop. + deck plans are forwarded under separate cover.

Class Recommendation

It is submitted that
this vessel is eligible for
THE RECORD + LMC 1.19. E.D.

The amount of Entry Fee ... 4m 30 : When applied for,
Special ... 4m 735 : 1st Feb. 1919
Donkey Boiler Fee ... 4m : When received,
Travelling Expenses (if any) 4m 15 : 7.3.19 1919

Arthur Jones
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 28 MAR. 1919

+ d. Mr. 1.19 J. O.

HULL CERTIFICATE
WRITTEN.



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Foundation