

Rpt. 4.

REPORT ON MACHINERY

No. 2669.

Received at London Office

Date of writing Report Dec 2nd 1919 When handed in at Local Office 19 Port of Kobe
No. in Survey held at Kobe Date, First Survey June 13th 1919 Last Survey Nov 17th 1919
Reg. Book. on the Steel Single Screw Steamer "ENGLAND MARU" (Number of Visits 57)
Master R. ISHIOZUKA Built at Kobe By whom built The Kawasaki Dockyard Co. Ltd. When built 1919
Engines made at Kobe By whom made The 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, Ltd. Port belonging to Kobe
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 3 No. of Cranks 3
Dia. of Cylinders 26 : 43½ : 72 Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 15.4" 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 13.40 as per rule 13.54 Dia. of Crank shaft journals 14.15 as per rule 14.22 Dia. of Crank pin 14¾ Size of Crank webs 9½ x 29½ 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. 10" x 11" x 12" dup. No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room three 3½" Gen. Serv. 7½ x 5 x 6 dup. In Holds, &c. Nos. 1, 3, + 4 Hold each two 3½"
One 3½" to tunnel well No. 2 Hold two 4"
No. of Bilge Injections 1 sizes 9 Connected to condenser, or to circulating pump Cur. 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 up platform of E. R.

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Illinois Stl. Co. Carnegie Stl. Co. Am. Spiral Pipe Co. (Furnaces)
2252 x 2 + 1132 (AUX. BLR) 2 S.B. 1 Aux. S.B.
Total Heating Surface of Boilers = 5636 sq. ft. Forced Draft fitted yes No. and Description of Boilers Two S.B. + Aux. S.B.
Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 15-9-19 1-10-19 No. of Certificate Nº. 1 Lloyd's Test Nº. 2
Can each boiler be worked separately yes Area of fire grate in each boiler 60½ sq. ft. No. and Description of Safety Valves to
each boiler Two Spring loaded 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 1¾" Range of tensile strength 26785 to 32000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Ends Doub.
long. seams Double riveted Diameter of rivet holes in long. seams 17/16" Pitch of rivets 9½" + 4½" Lap of plates or width of butt straps 20½" + 1¾"
Per centages of strength of longitudinal joint 95.84 Working pressure of shell by rules 200 lbs. Size of manhole in shell 16" x 12"
Size of compensating ring (7½" + flange) 1½" No. and Description of Furnaces in each boiler 3 Morrison's Material steel Outside diameter 48¾"
Length of plain part top ✓ Thickness of plates bottom 21/32" Description of longitudinal joint Weld No. of strengthening rings ✓
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 8½ x 8½ Back 8½ x 9 Top 8½ x 9½ If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203 lbs.
Material of stays steel Area at smallest part 2.10" Area supported by each stay 8½ x 9½ Working pressure by rules 230 lbs. End plates in steam space:
Material steel Thickness 15/8" Pitch of stays 19¾ x 20½ How are stays secured Doub. nuts + small washers 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 ¾" Greatest pitch of stays 13½" at wide Working pressure of plate by rules 200 lbs.
Diameter of tubes 3¼" Pitch of tubes 4½ x 4½ Material of tube plates steel Thickness: Front 1" Back 13/16" Mean pitch of stays 8¾"
Pitch across wide water spaces 13¾ + 3/4 double Working pressures by rules 210 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 9¾" Number and pitch of stays in each 3 @ 8½"
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 ✓

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 ✓
Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓

IS A DONKEY BOILER FITTED? *Ausc. 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 ✓
Two Crank pin " " ✓ Set junk ring bolts + nuts ✓ Crosshd. + Crankpin bra ✓
Two Crosshead " " ✓ One part Crank shaft ✓ A.B. rod + nut ✓
Set coupling " " ✓ Propeller shaft ^{P.370} LLOYDS ²⁰⁻¹⁰⁻¹⁹ W.L.R. ✓ 3 Safety valve springs ✓
Set Feed + Bilge pump valves ✓ Four blades + 2 sets slides + nuts ✓ Cond. + Blr. tubes etc. ✓
Assorted bolts + nuts + iron ✓ Slide Valve sprindles each size ✓

The foregoing is a correct description,

Kawasaki Dockyard Co., Ltd.

Per

J. O. Takane

Manufacturer.

Secretary

Dates of Survey while building { During progress of work in shops -- } 1919 June: 13, 25, 26; July: 4, 15, 19, 21, 24, 28, 31; Aug: 2, 7, 12, 14, 15, 16, 18, 19, 20, 21, 22, 23, 26, 27, 28
{ During erection on board vessel -- } Sept: 1, 2, 5, 6, 10, 12, 13, 15, 17, 18, 29; Oct: 1, 3, 4, 6, 9, 10, 11, 14, 16, 18, 20, 25, 27, 28; Nov: 1, 4, 8, 10, 14, 17
Total No. of visits 57.

Is the approved plan of main boiler forwarded herewith *yes*

" " " *Ausc. donkey* " " " *yes*

Dates of Examination of principal parts—Cylinders 6-10-19 Slides 21-11-19 Covers 18-10-19 Pistons 18-10-19 Rods 28-10-19

Connecting rods 4-10-19 Crank shaft 18-9-19 Thrust shaft 18-9-19 Tunnel shafts 14-10-19 Screw shaft 3-10-19 Propeller 9-10-19

Stern tube 10-10-19 Steam pipes tested 16-10-19 Engine and boiler seatings 6-10-19 Engines holding down bolts 1-11-19

Completion of pumping arrangements 10-11-19 Boilers fixed 1-11-19 Engines tried under steam ⁷⁻¹¹⁻¹⁹ overhaul 8-11-19

Completion of fitting sea connections 6-10-19 Stern tube 11-10-19 Screw shaft and propeller 14-10-19

Main boiler safety valves adjusted 4-11-19 Thickness of adjusting washers Locknuts (locked by Japanese Govt.)

Material of Crank shaft *steel* Identification Mark on Do. ¹⁸⁻⁹⁻¹⁹ LLOYDS ^{W.L.R.} Material of Thrust shaft *steel* Identification Mark on Do. ¹⁸⁻⁹⁻¹⁹ LLOYDS ^{W.L.R.}

Material of Tunnel shafts *steel* Identification Marks on Do. ¹⁴⁻¹⁰⁻¹⁹ LLOYDS ^{W.L.R.} Material of Screw shafts *steel* Identification Marks on Do. ¹⁴⁻¹⁰⁻¹⁹ LLOYDS ^{W.L.R.}

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. ✓

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 S.S. War Queen Rpt. No. 201

General Remarks (State quality of workmanship, opinions as to class, &c. S.S. War Prince " " 202

S.S. Naples Marie " " 258

S.S. Fortsaid " " 258

S.S. Scotland " " 263

S.S. Italy " " 263

S.S. France " " 264

The Machinery of this vessel has been made + fitted under

Special Survey in accordance with the requirements of the Rules, and the

workmanship are good.

The vessel is eligible in my opinion for the notation *L.M.C. 11-*

It is submitted that this vessel is eligible for

THE RECORD + L.M.C. 11-19 F.D.

2 S.B. & 1 Aux S.B.

J.W.D. 9/1/20

G.P.R.

The amount of Entry Fee ... *yen* 30.-

Special ... £ 735.-

Donkey Boiler Fee ... included

Travelling Expenses (if any) £ 20.-

When applied for, 20th Nov. 1919

When received, 27th Nov. 1919

Committee's Minute

Assigned

FRI JAN 16 1920

L.M.C. 11-19

F.D.

WARRANTY CERTIFICATE

WRITTEN

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