

Rpt. 4.

REPORT ON MACHINERY.

No. 2448

Received at London Office

Date of writing Report

10

When handed in at Local Office

10

Port of Kobe

MON. JUN. 2 - 1919

No. in Survey held at
Reg. Book.

Kobe

Date, First Survey 23rd Sept 1918 Last Survey 10th March 1919

on the Steel Single Scr. Steamer "Washington" (Number of Vials 42)

Master M. Yamamoto Built at Kobe

By whom built Kawasaki Dryd. Co. Lim.

Gross 5863.89

Net 4259.19

When built 1919

Engines made at Kobe

By whom made The Kawasaki Dryd Co. Lim.

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 28 440

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 26:13½:72

Length of Stroke 18

Revs. per minute 70

Dia. of Screw shaft

as per rule 15½

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' 5¼"

Dia. of Tunnel shaft

as per rule 13.48

Dia. of Crank shaft journals

as per rule 14.15

Dia. of Crank pin 14.21

Size of Crank webs 90½ x 20½

Dia. of thrust shaft under

collars 14¾

Dia. of screw 17' 6"

Pitch of Screw 19' 0" mean

No. of Blades 1

State whether moveable Yes

Total surface 100 sq. ft.

+ 268 at pin + journal

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" duplex
Weir's feed 9½ x 1 x 24 hop
Gen. serv. 7½ x 5 x 6 dupl.

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 3½

In Holds, &c. Nos. 1, 3 + 4 holds 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

Circ. 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

Dates of examination of completion of fitting of Sea Connections 13/2/19

of Stern Tube 6/2/19

Screw shaft and Propeller 13/2/19

Is the Screw Shaft Tunnel watertight Yes

Is it fitted with a watertight door Yes

worked from Upper platform of Eng. Rm.

OILERS, &c.—(Letter for record S.)

Manufacturers of Steel Carnegie, Worth Bros. Man Wood. Illinois Steel Co.

2304.8 x 2 + 1132 Am. lbs

Total Heating Surface of Boilers 5741

Is Forced Draft fitted Yes

No. and Description of Boilers

Two S. & A. & one S.E.

Working Pressure 200 lbs

Tested by hydraulic pressure to 400 lbs

Date of test 25.6.1918

No. of Certificate

LLOYD'S TEST 400 LBS

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 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 1½"

Range of tensile strength 28 to 32

Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams Doub. riv.

Long. seams 16 riv.

Diameter of rivet holes in long. seams 1½"

Pitch of rivets 8¾ x 4¾

Lap of plates or width of butt straps 19½ x 1¼"

Per centages of strength of longitudinal joint

rivets 95.84

plate 84.28

Working pressure of shell by rules

202 lbs

Size of manhole in shell 16 x 12"

Size of compensating ring (7½ x flange) 1½"

No. and Description of Furnaces in each boiler 3 Morrison's

Material Steel Outside diameter 48½"

Length of plain part

top

Thickness of plates

crown 9/32"

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 9¾

If stays are fitted with nuts or riveted heads Nuts

Working pressure by rules 203 lbs

Material of stays Steel

Diameter at smallest part 2.1"

Area supported by each stay 8½ x 9¾

Working pressure by rules 230 lbs

End plates in steam space:

Material Steel

Thickness 1½"

Pitch of stays 19¾ x 20½

How are stays secured

Doub. nut

Working pressure by rules 201 lbs

Material of stays Steel

Diameter 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

weld space

Diameter of tubes 3¼"

Pitch of tubes 4 7/16 x 4 5/16"

Material of tube plates Steel

Thickness: Front 1"

Back 13/16"

Mean pitch of stays 8¾"

Pitch across wide water spaces 13 3/4 x 13 3/4"

Working pressures by rules

210 lbs

Girders to Chamber tops: Material Steel

Depth and

Number and pitch of stays in each 3 @ 8½"

Thickness of girder at centre 10 3/4 x 13 (2)

Length as per rule 34½"

Distance apart 9 3/8"

Working pressure by rules

220 lbs

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

How stayed

Lloyd's Register

Foundation

WI 310 - 0039

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safe _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:—

Four main bearing bolts + nuts Set feed + bilge pump valves Propeller shaft.
Two Crank pin " " Assorted bolts + nuts + iron Four blades + 2 sets studs +
Two Crosshead " " Set packing rings + springs each piston Slide valve spindle each size
Set Coupling " " Set junk ring bolts + nuts Centrifugal pump impeller + sh.
One part Crank shaft. Crosshead + Crank pin brasses A
rod + nut. 3 safety valve spring
Cond. + blr. tubes etc. etc.

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

Per _____ Secretary. 23. Sept. 4.8.9.12.16.18 Oct. 4.5.6.7.11.13.14.15.22 Nov. 2.5.6.9.16.20.24
Dates of Survey while building { During progress of work in shops -
During erection on board vessel - - } 7.9.22.23 Jan. 3.4.5.6.13.14.18.20.24.26.27 Feb. 1.3.10 Mar. 1919
Total No. of visits 42 : Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Cylinders 7.1.19 etc Slides 20/12/18 Covers 20.12.18 Pistons 9.1.19 Rods 5.12.18
Connecting rods 8.10.18 etc Crank shaft 14.11.18 Thrust shaft 14.11.18 Tunnel shafts 22.1.19 Screw shaft 5.2.19 Propeller 23.1.19
Stern tube 23.1.19 Steam pipes tested 14.2.19/2/19 Engine and boiler seatings 6/2/19 Engines holding down bolts 26/2/19
Completion of pumping arrangements 18.2.19 Boilers fixed 24/2/19 Engines tried under steam 1.3.19
Main boiler safety valves adjusted 26/2/19 Thickness of adjusting washers Lock nuts. Clear. Sh. Bolts F 9/16 Port F 3/4 A 7/16 A 7/16
Material of Crank shaft Steel Identification Mark on Do. LLOYDS 14.11.18 Material of Thrust shaft Steel Identification Mark on Do. LLOYDS 14.11.18
Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS 22.1.19 Material of Screw shafts Steel Identification Marks on Do. LLOYDS 5.2.19
Material of Steam Pipes Steel Test pressure 600 lbs Same on spare shaft 5.2.19 A.W. LLOYDS 5.2.19

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 is in my opinion eligible for the notation + LMC. 3.19

It is submitted that
this vessel is eligible for
THE RECORD. + LMC. 3.19 F.D.

Reck 6.6.19
A. H. Jones & Allatt.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

The amount of Entry Fee .. 4/6 30 : When applied for,
Special .. 4/6 735 : 25th May 1919
Donkey Boiler Fee .. 4/6 :
Traveling Expenses (if any) 4/6 15 : 28th May 1919

Committee's Minute

FRI. 6-JUN. 1919

Assigned

+ LMC 3.19 F.D.



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