

REPORT ON MACHINERY.

No. 2519

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of Kobe

No. in Survey held at Kobe
Reg. Book.

Date, First Survey 12 Oct. 1918

Last Survey 26 April 1919

(Number of Visits 41)

on the Steel Single Screw Steamer "Liverpool Mary"

Master

Built at Kobe

By whom built The Kawasaki Dockyard Co. Ltd.

Engines made at Kobe

By whom made The Kawasaki Dockyard Co. Ltd.

When built 1919

Boilers made at Do.

By whom made Do.

when made 1919

Registered Horse Power

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: 13 1/2: 7 1/2

Length of Stroke 18

Revs. per minute 70

Dia. of Screw shaft

as per rule 15 1/4

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: 5 1/4

Dia. of Tunnel shaft

as per rule 13 1/2

Dia. of Crank shaft journals

as per rule 14 1/2

Dia. of Crank pin 14 3/4

Size of Crank webs 90 1/2 x 20 1/2

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 150 sq. ft.

+ 26 1/2 at pin-journal

No. of Feed pumps One

Diameter of ditto 5"

Stroke 21"

Can one be overhauled while the other is at work Yes (with Weir's feed)

No. of Bilge pumps

Diameter of ditto 5"

Stroke 21"

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 2 1/2 two
Don. 5 1/2 x 4 1/2 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 Cir. f.

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 Eng. R.

OILERS, &c.—(Letter for record 5)

Manufacturers of Steel Carnegie. Men Word. North Bros. Illinois. Kawasaki.

230 1/2 x 8 x 2 + 1132 Aux. Blr.

Total Heating Surface of Boilers 5741

Is Forced Draft fitted Yes

No. and Description of Boilers Two 5. 6 + Aux. 5. 6.

Working Pressure 200 lbs.

Tested by hydraulic pressure to 400 lbs.

Date of test 25 1/2 29 Jan 1919

No. of Certificate

LLOYD'S TEST 400 LBS. 25/1/19 + 29/1/19 A.W. 1919

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 5/16"

Range of tensile strength 28 to 32 tons

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams

Double riv.

Diameter of rivet holes in long. seams 1 3/8"

Pitch of rivets 8 1/4 + 1 3/8"

Lap of plates or width of butt straps 19 5/8 x 1 1/4"

Per centages of strength of longitudinal joint

rivets 95.81

plate 84.28

Working pressure of shell by rules 202 lbs.

Size of manhole in shell 16 x 12

Size of compensating ring (1 1/2 + flange) 1 5/16

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

Material Steel

Outside diameter 18 1/4"

Length of plain part top ✓

Thickness of plates

crown 2 1/32"

Description of longitudinal joint Weld

No. of strengthening rings

Working pressure of furnace by the rules 221

Combustion chamber plates: Material Steel

Thickness: Sides 1 1/16

Back 1 1/16

Top 1 1/16

Bottom 7/8

Pitch of stays to ditto: Sides 8 5/8 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 5/8"

Pitch of stays 19 3/4 x 20 1/2

How are stays secured Doub. nuts

Working pressure by rules 201 lbs.

Material of stays Steel

Area at smallest part 10"

Area supported by each stay 19 3/4 x 20 1/2

Working pressure by rules 260 lbs.

Material of Front plates at bottom Steel

Thickness 1 3/16

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 1/2

Pitch of tubes 1 1/2 x 1 1/2

Material of tube plates Steel

Thickness: Front 1"

Back 1 3/16"

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 + 1 3/16 (2)

Length as per rule 3 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

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

Lloyd's Register

Foundation

007620 - 007625 - 0148

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

On an. Ber

SPARE GEAR. State the articles supplied:-

Four main bearing bolts + nuts Set packing rings + springs each piston Centrifugal pump impeller
Two crank pin bolts + nuts Set junk ring bolts + nuts Crosshead + crankpin bar
Two crosshead bolts + nuts One part crank shaft. A.P. rod + nut.
Set coupling bolts + nuts Propeller shaft. 3 safety valve springs
Set feed + bilge pump valves Four blades + 2 sets studs + nuts Cond. + Air tubes etc.
Assorted bolts + nuts + iron Slide valve sprindle each size

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

Per.

Secretary.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } Oct. 12.23.24. Nov. 11.14.16.27. Dec. 20.23.24.27. 1918. Jan. 9.15.20.21.25.27.
{ During erection on board vessel -- } Feb. 1.7.8.10.13.15.17.24. Mar. 3.10.14.15.17.18. 20.25.27. Apr. 8.12.17.26 April 1919
Total No. of visits 44.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 31/1/19 etc Slides 21/1/19 Covers 10/2/19 Pistons 10/2/19 Rods 11/11/18

Connecting rods 10/2/19 Crank shaft 1/2/19 Thrust shaft 1/2/19 Tunnel shafts 13/2/19 Screw shaft 23/2/19 Propeller 14/3/19

Stern tube 10/3/19 Steam pipes tested 27/1/19 Engine and boiler seatings 27/3/19 Engines holding down bolts 8/4/19

Completion of pumping arrangements 8/4/19 Boilers fixed 8/4/19 Engines tried under steam 16/4/19

Completion of fitting sea connections 14/3/19 Stern tube 20/3/19 Screw shaft and propeller 27/3/19

Main boiler safety valves adjusted 12/4/19 Thickness of adjusting washers Locknuts S. Ber. F. 9/32 P. Ber. F. 9/16

Material of Crank shaft Steel Identification Mark on Do. Lloyd's A.M. Material of Thrust shaft Steel Identification Mark on Do. Lloyd's A.M.

Material of Tunnel shafts Steel Identification Marks on Do. Lloyd's 12.10.18:23.10.18:13.2.19 Material of Screw shafts Steel Identification Marks on Do. Lloyd's 12.10.18:23.10.18:13.2.19

Material of Steam Pipes Steel solid Iron ALJ ALJ AW Test pressure 600 lbs. Span shaft 16.3.19

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 Prince" "Portland Mar." "San Francisco Mar." etc. etc.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This Machinery has been made and fitted under Special Survey in accordance with the requirements of the Rules and the materials and workmanship are good.

This vessel is eligible in my opinion for the notation
+ L.M.C. 4.1919

It is submitted that
this vessel is eligible for
THE RECORD + LMC 4.19 F.D.

Roll. 7/8/19

The amount of Entry Fee ... Yen. 30. :
Special ... Yen 735. :
Donkey Boiler Fee included :
Travelling Expenses (if any) Yen 15. :
When applied for, 17 May 1919
When received, 20 May 1919

Committee's Minute

Assigned

FRI. 8-AUG. 1919

thmc 4. 19

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



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Foundation