

Rpt. 4.

REPORT ON MACHINERY.

No. 2247.

THU. 8-AUG. 1918

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of Kobe.

No. in Survey held at
Reg. Book.

Osaka and Innoshima.

Date, First Survey

Sept 3rd

Last Survey

March 20th 1918.

on the Steel Screw Steamer "Meiko Maru"

(Number of Visits 22.)

Master K. Tagano.

Built at

Innoshima

By whom built

The Osaka Iron Works Co.

Innoshima

Tons

Gross 4438.49.

Engines made at

Osaka.

By whom made

The Osaka Iron Works Co.

when made

1918.

Boilers made at

Osaka.

By whom made

The Osaka Iron Works Co.

when made

1918.

Registered Horse Power

Owners

Meiji Kaisha Kabushiki Kaisha

Port belonging to

Yarumi.

Nom. Horse Power as per Section 28

390.

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

24. 41. 67.

Length of Stroke

48.

Revs. per minute

Dia. of Screw shaft

as per rule 13.96.

Material of

Steel.

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Yes.

Is the after end of the liner made water tight

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

Closely fitted

If two liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

5'-4".

Dia. of Tunnel shaft

as per rule 12.46.

Dia. of Crank shaft journals

as per rule 13.09.

Dia. of Crank pin

13.2.

Size of Crank webs

8 1/2 x 25.

Dia. of thrust shaft under

collars

13 1/4.

Dia. of screw

17'-0".

Pitch of Screw

17'-0".

No. of Blades

4.

State whether moveable

No.

Total surface

90 ft.

No. of Feed pumps

Two.

Diameter of ditto

4".

Stroke

25".

Can one be overhauled while the other is at work

Yes.

No. of Bilge pumps

Two.

Diameter of ditto

4 1/2".

Stroke

26".

Can one be overhauled while the other is at work

Yes.

No. of Donkey Engines

Two.

Sizes of Pumps

Gaines. 7 1/2 x 12 x 10.

7 1/2 x 8 x 6.

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

In Engine Room

Tunnel well 3 1/2".

In Holds, &c. After hold 2 @ 3 1/2". Cen. & 2 @ 3 1/2" hings.

No. of Bilge Injections

1 size

7".

Connected to condenser, or to circulating pump

Circ. App.

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 plating in Engine room

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Osaka Steel Co.

North Bros. Co.

Bourne Fuller & Co.

Allegany Steel Co.

Total Heating Surface of Boilers

5400 sq. ft.

Is Forced Draft fitted

Yes.

No. and Description of Boilers

Two Single Ended.

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

30 Jan. 1918.

No. of Certificate

LLOYD'S TEST: 380 LBS. 30.1.1918.

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

634 sq. ft.

No. and Description of Safety

Valves

10

each boiler

2 Spring loaded.

Area of each valve

3" dia.

Pressure to which they are adjusted

185 lbs.

Are they fitted with easing gear

Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

15'-0".

Length

12'-0".

Material of shell plates

Steel.

Thickness

1 1/2".

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

DR.

long. seams

TRDBS.

Diameter of rivet holes in long. seams

1 5/16".

Pitch of rivets

9 x 4 1/2".

Lap of plates or width of butt straps

19 1/2 x 1"

And 1 3/4"

Per centages of strength of longitudinal joint

rivets 89.25.

plate 85.41.

Working pressure of shell by rules

188.

Size of manhole in shell

12" x 16"

Size of compensating ring

2'-10" x 3'-2" x 1 1/4".

No. and Description of Furnaces in each boiler

3 Brighton

Material

Steel

Outside diameter

48 1/4".

Length of plain part

top

bottom

Thickness of plates

crown 19/32.

bottom 19/32.

Description of longitudinal joint

Weld.

No. of strengthening rings

✓

Working pressure of furnace by the rules

199 lbs.

Combustion chamber plates: Material

Steel

Thickness: Sides

5/8"

Back

7/8"

Top

7/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

8 x 8 1/2"

Back

8 1/2 x 8 1/2"

Top

9 x 8"

If stays are fitted with nuts or riveted heads

Nuts.

Working pressure by rules

187 lbs.

Material of stays

Steel

Area at smallest part

1.79 sq. ft.

Area supported by each stay

8 1/2 x 8 1/2"

Working pressure by rules

187 lbs.

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

18 x 20"

How are stays secured

Double nuts

Working pressure by rules

194.

Material of stays

Steel

Area at smallest part

7.50 sq. ft.

Area supported by each stay

18 x 20"

Working pressure by rules

216.

Material of Front plates at bottom

Steel.

Thickness

3/4".

Material of Lower back plate

Steel.

Thickness

3/4".

Greatest pitch of stays

13 1/4".

Working pressure of plate by rules

180.

Diameter of tubes

3"

Pitch of tubes

4 1/8 x 4 1/4".

Material of tube plates

Steel

Thickness: Front

3/4".

Back

3/4".

Mean pitch of stays

9 1/2".

Pitch across wide water spaces

13 1/4".

Working pressures by rules

180.

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 1/2 x 7 1/8"

Length as per rule

34"

Distance apart

9".

Number and pitch of stays in each

3 @ 8"

Working pressure by rules

212 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

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Set piston rings for all cylinders.

One set of feed and bilge pump valves.

Set of crank pin and crosshead brasses.

Assorted bolts and nuts and steel plate.

4 Crosshead bolts and nuts.

2 Crank pin bolts

Set of coupling bolts and nuts.

2 Main bearing bolts and nuts.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *Sept 3rd 9th, 29th October 20th Nov 1st 4th 5th 13th 14th 19th 27th Dec 4th, 12th, 20th*
 { During erection on board vessel -- } *March 11th 14th 20th*
 Total No. of visits *22.*

Is the approved plan of main boiler forwarded herewith *Yes.*

Dates of Examination of principal parts—Cylinders *Sept 29th* Slides *Nov 13th* Covers *Nov 13th* Pistons *Nov 27th* Rods *5.12.17.*
 Connecting rods *7.12.17.* Crank shaft *7.12.17.* Thrust shaft *27.9.17.* Tunnel shafts *15 Jan'y.* Screw shaft *Feb'y 9th* Propeller *14th March.*
 Stern tube *14th March.* Steam pipes tested *March 23rd* Engine and boiler seatings *Feb'y 9th* Engines holding down bolts *March 11th*
 Completion of pumping arrangements *19th March.* Boilers fixed *March 14th* Engines tried under steam *March 20th*
 Completion of fitting sea connections *Feb 28th* Stern tube *Feb 28th* Screw shaft and propeller *Feb 28th*
 Main boiler safety valves adjusted *March 20th* Thickness of adjusting washers *Lock nuts.*
 Material of Crank shaft *Steel* Identification Mark on Do. *Do.* Material of Thrust shaft *Steel* Identification Mark on Do. *Do.*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *Do.* Material of Screw shafts *Steel* Identification Marks on Do. *Do.*
 Material of Steam Pipes *Steel* Test pressure *340 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 *P.P. Mughal Maru*

P.P. Mughal Maru 16th rpt No
P.P. Indus Maru " "

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

The Machinery has been made and fitted under Special Survey in accordance with the requirements of the Rules and the materials and workmanship have been found good.
 In my opinion the machinery of this vessel is eligible for the record of + L.M.C. 3.18.

It is submitted that
 this vessel is eligible for
 THE RECORD. + L.M.C. 3.18 F.D.

Certificate (if required) to be sent to

The amount of Entry Fee ... £ *400* 30.00 When applied for, *March 22nd 1918*
 Special ... £ *593* 00.00
 Donkey Boiler Fee ... £ : : When received, *March 28th 1918*
 Travelling Expenses (if any) £ : :

Committee's Minute

FRI. AUG. 16. 1918

Assigned

+ L.M.C. 3.18
 F.D.

Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register Foundation

Port of

No. in Reg. Book

Owners

Yard No.

DESCRIPTION

Capacity of L

Where is Dye

Position of M

Positions of

one for

for water

If fuses are

circuits

If vessel is u

Are the fuses

Are all fuses

are per

Are all swite

Total number

A Eng

B offic

C Cre

D Wiser

E stan

Mo

If arc lights

S. acc. la

Where are

DESCRIPTION

Main cable c

Branch cable

Branch cable

Leads to lam

Cargo light ca

DESCRIPTION

offices

engines

Joints in cab

Porc

Are all the jo

position

Are there an

How are the