

# REPORT ON MACHINERY

No. 2418  
JUL 21 1919

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 + O Harima

Date, First Survey 10<sup>th</sup> July

Last Survey 7<sup>th</sup> March 1919

Reg. Book. on the Steel Single Screw Steamer "Yone Maru"

(Number of Visits)

Gross 6780.00

Net 5056.08

Master Built at O Harima

By whom built Harima Dockyard Company

When built 1919

Engines made at Kobe (Steel Works)

By whom made Kobe Steel Works

When made 1919

Boilers made at Kobe Steel Works

By whom made Kobe Steel Works

When made 1919

Registered Horse Power

Owners Teikoku Steamship Co Ltd

Port belonging to

Nom. Horse Power as per Section 28

555  
547

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 27: 45: 75 Length of Stroke 51

Revs. per minute 70

Dia. of Screw shaft as per rule 15 1/4 15 1/4

as fitted 16 Material of screw shaft 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

in the propeller boss Yes If the liner is in more than one length are the joints burned

Yes

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

Yes

If two

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

Yes

Length of stern bush 11-5 3/4

Dia. of Tunnel shaft as per rule 13-67 13-9

14

Dia. of Crank shaft journals as per rule 14-55 14-6

as fitted 14 3/4

Dia. of Crank pin 15

Size of Crank webs 4-6-2-4

9 1/2

Dia. of thrust shaft under

collars 14 3/4

Dia. of screw 18-6

Pitch of Screw 18-9

No. of Blades 4

State whether moveable Yes

Total surface 106.44 sq ft

No. of Feed pumps 2 Diameter of ditto 5" Stroke 25 1/2 Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2 Diameter of ditto 5" Stroke 25 1/2 Can one be overhauled while the other is at work

Yes

No. of Donkey Engines Three

Sizes of Pumps

Ballast. Pp. 9 1/2 x 10 1/2  
G.S.D. 7 1/2 x 4 1/2  
Heads. 12 1/2 x 8 1/2 x 2 1/2

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

In Engine Room 2 @ 3 1/2"

No 3 hold 2 @ 3 1/2"

No 4 hold 2 @ 3 1/2"

No 5 hold 2 @ 3 1/2"

In Holds, &c. No 1 hold 2 @ 3 1/2"

No 2 hold 2 @ 3 1/2"

1 @ 3 1/2" Tunnel bilge

No. of Bilge Injections 1

sizes 8 3/4"

Connected to condenser, or to circulating pump

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

Yes

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

Yes

How are they protected

Yes

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 E.R. top platform

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Cambria Steel Co. North Brothers Co. The American Spiral Pipe Works Charles McNeil & Co.

Total Heating Surface Boilers 7974 sq ft

Is Forced Draft fitted

Yes

No. and Description of Boilers

Three Single Sided

Working Pressure 190 lbs

Tested by hydraulic pressure to

380 lbs

Date of test

24.4.19

No. of Certificate

ALL

No. and Description of Safety Valves to

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

64 sq ft

No. and Description of Safety Valves to

Are they fitted with easing gear

Yes

each boiler Two Spring loaded

Area of each valve 4"

Pressure to which they are adjusted

190 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers 15-9"

Length 11-9"

Material of shell plates

Steel

Thickness 1 1/2"

Range of tensile strength 28 to 32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: air. seams

DRL

long. seams TRDBS

Diameter of rivet holes in long. seams 1 9/16"

Pitch of rivets 9 7/8"

Lap of plates or width of butt straps

20 1/2"

Per centages of strength of longitudinal joint

rivets 98

plate 83.7

Working pressure of shell by rules

214

Size of manhole in shell

16 x 12"

Size of compensating ring 3-4 x 2-6 x 1 1/2"

No. and Description of Furnaces in each boiler

Three Morrison

Material Steel

Outside diameter 4-1 3/4"

Length of plain part

top

Thickness of plates

bottom 7/8"

Description of longitudinal joint

weld

No. of strengthening rings

Yes

Working pressure of furnace by the rules 202 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

2 1/32"

Back

2 3/32"

Top

2 1/32"

Bottom

Pitch of stays to ditto: Sides

9 1/8 x 8 1/4"

Back

9 1/8 x 9"

Top

9 x 8 1/4"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

200 lbs

Material of stays Steel

Area at smallest part

17982.10

Area supported by each stay

88.870

Working pressure by rules

212

End plates in steam space:

Material of stays

Steel

Material Steel

Thickness 1 1/4"

Pitch of stays

How are stays secured

DN + W

Working pressure by rules

196

Material of Front plates at bottom

Steel

Area at smallest part

7.50

Area supported by each stay

Working pressure by rules

208

Material of Front plates at bottom

Steel

Working pressure of plate by rules

180 lbs

Thickness 3/32"

Material of Lower back plate

Steel

Thickness 7/8"

Greatest pitch of stays

14 1/2"

Working pressure of plate by rules

180 lbs

Mean pitch of stays

9.26"

Diameter of tubes 3"

Pitch of tubes

4 1/4"

Material of tube plates

Steel

Thickness: Front

3/32"

Back

7/8"

Mean pitch of stays

9.26"

Pitch across wide water spaces

14"

Working pressures by rules

275

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

1 1/2"

Length as per rule

34"

Working pressure by rules

183

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

Tested by Hydraulic Pressure to

Date of Approval of Plan

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Is Easing Gear fitted

Diameter of Safety Valve

Pressure to which each is adjusted

20

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

Is Easing Gear fitted

Diameter of Safety Valve

Pressure to which each is adjusted

20

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

Is Easing Gear fitted

Diameter of Safety Valve

Pressure to which each is adjusted

20

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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Rpt. 13.

SPARE GEAR. State the articles supplied:-

- 2 Connecting rod top end bolts & nuts. Quantity assorted bolts & nuts
- 2 Connecting rod bottom end bolts & nuts. Non of various sizes.
- 2 main bearing bolts & nuts.
- 1 set coupling bolts & nuts.
- 1 set of feed & bilge pump valves.
- 1 set of piston springs.



The foregoing is a correct description,

M. Kimura, Superintendent Engineer of Kobe Steel Works  
Kobe Steel Works Limited. Manufacturer.

Dates of Survey while building: Continuous attendance at Kobe Steel Works. 1<sup>st</sup> May 18. to 17<sup>th</sup> Jan. 1919.  
 During progress of work in shops -- 3<sup>rd</sup> Jan. 14, 8<sup>th</sup>, 15<sup>th</sup>, 20<sup>th</sup>, 25<sup>th</sup> Feb. & 7<sup>th</sup> March 1919.  
 During erection on board vessel -- Continuous attendance @ Kobe Steel Works Is the approved plan of main boiler forwarded herewith? Yes.  
 Total No. of visits and 7 visits during erection.

Dates of Examination of principal parts: Cylinders 2<sup>nd</sup> May Slides 2<sup>nd</sup> May Covers 2<sup>nd</sup> May Pistons 2<sup>nd</sup> May Rods 27/6/18  
 Connecting rods 27/6/18 Crank shaft 2. 2. 18 Thrust shaft 1/6/18 Tunnel shafts 26/11/18 Screw shaft 7/10/18 Propeller Feb 4<sup>th</sup>  
 Stern tube Jan 11<sup>th</sup> Steam pipes tested 4<sup>th</sup> Feb. 19 Engine and boiler seatings Dec 21<sup>st</sup> 18. Engines holding down bolts Feb 15<sup>th</sup>  
 Completion of pumping arrangements 20<sup>th</sup> Feb. 19. Boilers fixed Feb 15<sup>th</sup>. Engines tried under steam Feb 20<sup>th</sup>  
 Completion of fitting sea connections Feb. 4<sup>th</sup> Stern tube Feb. 4<sup>th</sup> Screw shaft and propeller Feb 4<sup>th</sup>  
 Main boiler safety valves adjusted 20<sup>th</sup> Feb. 19. Thickness of adjusting washers lock nuts.  
 Material of Crank shaft Steel Identification Mark on Do. Material of Thrust shaft Steel Identification Mark on Do.  
 Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.  
 Material of Steam Pipes Copper Test pressure 400 lb

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? Yes.  
 Is this machinery duplicate of a previous case? Yes. If so, state name of vessel S.S. Eastern Shore. Kobe rpt no 2

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 is eligible for the Record of + LMC March 1919.

The amount of Entry Fee ... £ 30.00 When applied for.  
 Special ... £ 8.28.00 Mar 4 1919  
 Donkey Boiler Fee ... £ : : When received.  
 Travelling Expenses (if any) £ : : Mar 7 1919

R. B. Batchelor  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 25 JUL. 1919  
 Assigned + LMC 3 19  
 F.D.

MACHINERY CERTIFICATE WRITTEN.



RE...  
 Port of ...  
 No. in Reg. Book ...  
 Owners ...  
 Yard No. //

DESCRIPTION OF ...  
 One der ...  
 Speed ...  
 Capacity of Dyna ...  
 Where is Dynam ...  
 Position of Main ...  
 Positions of auxi ...  
 viz. ...  
 Crew ...  
 If cut outs are fo ...  
 circuits ...  
 If vessel is wire ...  
 Are the cut outs ...  
 Are all cut outs ...  
 are perman ...  
 Are all switches ...  
 Total number of ...  
 A 141 ...  
 B 3 ...  
 C 614 ...  
 D ...  
 E ...

If are lights, ...  
 Where are th ...  
 DESCRIPTION ...  
 Main cable ca ...  
 Branch cables ...  
 Branch cables ...  
 Leads to lamp ...  
 Cargo light ca ...  
 Unless le ...  
 DESCRIPTION ...  
 Armo ...  
 in ...  
 Joints in cab ...  
 spec ...  
 Are all the ...  
 made in ...  
 Are there a ...  
 How are th ...  
 pane ...