

REPORT ON MACHINERY.

No. 2292

Received at London Office

MON 21 OCT 1918

Date of writing Report

19

When handed in at Local Office

19

Port of Kobe

No. in Survey held at
Reg. Book.

Kobe

Date, First Survey

25 July 1917

Last Survey

1st July 1918

(Number of Visits)

48

on the Single Screw Steamer "Nagato Maru"

Gross 5900

Tons Net 4325

Master

Built at

Kobe

By whom built

The Kawasaki Dry Dock Co. Ltd.

When built

1918

Engines made at

Kobe

By whom made

The Kawasaki Dry Dock Co. Ltd.

when made

1918

Boilers made at

do

By whom made

do

when made

do

Registered Horse Power

444

Owners

The Nippon Yusen Kaisha

Port belonging to

Tokyo

Nom. Horse Power as per Section 28

444

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

26.43 1/2 x 79

Length of Stroke

48

Revs. per minute

70

Dia. of Screw shaft

as per rule 15.41

Material of

Steel

as fitted 16

screw shaft

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

Yes

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 13.48

as fitted 13 3/4

collars

14 3/8

Dia. of screw

17.6

Pitch of Screw

19.0

No. of Feed pumps

One

Diameter of ditto

5

Stroke

24

Can one be overhauled while the other is at work

Yes (+ Weirs fed)

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.

Weirs 9 1/2 x 7 x 24

Gen. Serv. 7 1/2 x 5.6

In Holds, &c.

Nos. 1, 3 & 4 holds, two 3 1/2

No 2 hold, two 4

No. of Bilge Injections

1

sizes

10

Connected to condenser, or to circulating pump

Cir. p.

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

Now

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 S. Rm

BOILERS, &c.—(Letter for record)

5

Manufacturers of Steel

Mitsui Steel Co. Carnegie Steel Co. Alan Wood Steel Co.

Total Heating Surface of Boilers

5809

Is Forced Draft fitted

Yes

No. and Description of Boilers

Two Single Ended

Working Pressure

200 lbs

Tested by hydraulic pressure to

400 lbs

Date of test

8 & 20 Feb. 1918

No. of Certificate

LLOYD'S TEST 400 LBS 8 & 20/2/18 ALJ. R.

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

63 1/4

No. and Description of Safety Valves in

each boiler

Two, Direct Spring

Area of each valve

11.02

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

18"

Mean dia. of boilers

16.0"

Length

12.0"

Material of shell plates

Steel

Thickness

1 1/5"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Butt riv.

long. seams

Dup. riv.

Diameter of rivet holes in long. seams

1 1/8"

Pitch of rivets

10 x 5"

width of butt straps

21 3/4 x 1 3/8"

Per centages of strength of longitudinal joint

rivets 97.00

plate 84.37

Working pressure of shell by rules

207 lbs

Size of manhole in shell

(16 x 12 in end plate)

No. and Description of Furnaces in each boiler

3 Morrison's

Material

Steel

Outside diameter

50 1/2"

Length of plain part

top 11 1/16

bottom 11 1/16

Description of longitudinal joint

Weld.

No. of strengthening rings

-

Working pressure of furnace by the rules

224 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

5/8"

Pitch of stays to ditto: Sides

9 3/4 x 8 1/4"

Back

8 x 9 1/2"

Top

9 3/8 x 8 3/8"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

200 lbs

Material of stays

Steel

Area at smallest part

2.1

Area supported by each stay

8 1/4 x 9 3/4"

Working pressure by rules

230 lbs

End plates in steam space:

Material

Steel

Thickness

1 3/16"

Pitch of stays

16 3/4 x 19 1/4"

How are stays secured

Butt nuts

Working pressure by rules

205 lbs

Material of Front plates at bottom

Steel

Thickness

13 1/16"

Material of Lower back plate

Steel

Thickness

3/4"

Greatest pitch of stays

13 1/2 wide

Working pressure of plate by rules

200 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 5/16"

Material of tube plates

Steel

Thickness: Front

13 1/16"

Back

13 1/16"

Mean pitch of stays

10 1/4"

Pitch across wide water spaces

13 3/4"

Working pressures by rules

200 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10 3/4 x 13 1/16"

Length as per rule

35 1/4"

Distance apart

9 3/16"

Number and pitch of stays in each

Three @ 8 3/8"

Working pressure by rules

230 lbs

Steam dome: description of joint to shell

Yes

96 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

Schmidt

Date of Approval of Plan

Tested by Hydraulic Pressure to

600 lbs

Date of Test

26/2/18 & 5/3/18

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

Yes

Diameter of Safety Valve

3

Pressure to which each is adjusted

205 lbs

Is Easing Gear fitted

No

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Four main bearing bolts & nuts.
Two crank pin " "
Two Crosshead " "
Set Coupling " "
Set feed & bldg pump valves.
Assorted bolts & nuts & iron

Set packing rings & springs each piston
Set journal ring bolts & nuts.
One part crank shaft
Propeller shaft
Four blades & 2 sets studs & nuts
Slide valve spindle each size
Centrifugal pump impeller & shaft.
Crosshead & crank pin trusses. A Prod tank.
3 Safety valve springs. Cond. & blower etc. etc.

The foregoing is a correct description,

KAWASAKI DOCKYARD COMPANY, LTD

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 25.31 July. 3.10.13.29 Aug. 3.7.10.20.25.26.28 Sept. 5.15.18.25.29 Oct.
During erection on board vessel -- 3.15.21.26.29 Nov. 3.15.22 Dec. 1917. 1.5.8.20.22.26 Feb. 5.22 March
Total No. of visits 48. 19.27 April. 4.13.15.21.27.29 May. 4.8.12.15.18. June. 1 July 1918.

Is the approved plan of main boiler forwarded herewith With Rpt 2206 on S.S.

" " " donkey " " " Tofuku maru

Dates of Examination of principal parts—Cylinders 3/8/17 Elc Slides 15/10/17 Covers 15/10/17 Pistons 29/8/17 Rods 29/10/17
Connecting rods 29/10/17 Crank shaft 25/10/17 Thrust shaft 25/10/17 Tunnel shafts 3/11/17 Screw shaft 26/2/18 Propeller 22/2/18
Stern tube 5/2/18 Steam pipes tested 19/2/18 4/5/18 Engine and boiler seatings 15/5/18 Engines holding down bolts 4/6/18
Completion of pumping arrangements 15/6/18 Boilers fixed 4/6/18 Engines tried under steam 13/6/18. opened after trial 15/6/18
Completion of fitting sea connections 21/5/18 Stern tube 22/2/18 Screw shaft and propeller 21/5/18
Main boiler safety valves adjusted 12/6/18 Thickness of adjusting washers Star Blr. Fore 5/16" Port Blr. Aft 3/4" Fore 3/4" Aft 3/4"
Material of Crank shaft Steel Identification Mark on Do. LLOYD'S 25.10.17 Material of Thrust shaft Steel Identification Mark on Do. LLOYD'S 25.10.17
Material of Tunnel shafts Steel Identification Marks on Do. LLOYD'S 26.2.18 Material of Screw shafts Steel Identification Marks on Do. LLOYD'S 26.2.18
Material of Steam Pipes Steel 3.11.17 Test pressure 600 lbs. ALJ R

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 (Shinkoku Maru. No. 406
Tofuku Maru " 407
Seiyuku Maru " 408)

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 have been found good.

The vessel is eligible in my opinion for the notation ÷ LMC 7.18.

The report upon the Electric lighting will be sent very shortly.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.18 F.D.

23-10-18
APR

The amount of Entry Fee ... Yen 30 : When applied for,
Special ... Yen 633 : 4 July 1918
Donkey Boiler Fee ... : :
Travelling Expenses (if any) Yen 15 : When received, 6 July 1918

Arthur L. Jones

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 29 OCT. 1918

Assigned

MACHINERY CERTIFICATE
WRITTEN

+ LMC 7.18
F.D.



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Foundation