

REPORT ON MACHINERY.

No. 2521
SA 19-11-1919

Received at London Office

Date of writing Report

19

When handed in at Local Office

10

Port of Kobe

No. in Survey held at Osaka + Imosshima
Reg. Book.

Date, First Survey 14-10-18

Last Survey 30-1-1919

on the Steel Single Screw Steamer "Yomei Maru"

(Number of Visits)

Gross 7150.56
Tons Net 5183.01

Master

Built at Imosshima

By whom built Osaka Iron Works Ltd

When built 1919

Engines made at Osaka

By whom made Osaka Iron Works Ltd.

when made April 1919

Boilers made at do

By whom made do

when made April 1919

Registered Horse Power

Owners

Port belonging to Shinhaman

Nom. Horse Power as per Section 28

550

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Quadruple Expansion

No. of Cylinders

4

No. of Cranks

4

Dia. of Cylinders 23" 33" 44" 68"

Length of Stroke 51"

Revs. per minute 80

Dia. of Screw shaft

as per rule 14.675

Material of

Forged 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

✓

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' 1"

Dia. of Tunnel shaft

as per rule 13.15

Dia. of Crank shaft journals

as per rule 13.81

Dia. of Crank pin 1' 2 1/2"

Size of Crank webs

2nd 1' 4 1/2" 1' 9" x 2 1/2" 2 1/2"

Dia. of thrust shaft under

collars 1' 2 1/2" Dia. of screw 14' 9" Pitch of Screw 18' : 6"

No. of Blades 4

State whether moveable

yes

Total surface 100 sq. ft.

No. of Feed pumps 2

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps 2

Diameter of ditto 4 1/2"

Stroke 24"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines 3

Sizes of Pumps

Ballast 10" x 13" x 13" dupl.

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

In Engine Room Bilge main 4 1/2" or 3 1/2"

In Holds, &c. No. 1, 2 + 3 2-3 1/2 each No. 3

No. of Bilge Injections 1 sizes 9 1/2"

Connected to condenser, or to circulating pump

C. 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

yes

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks Both used

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 Voice tubes, electric pipes

How are they protected

with wood covering

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 Engine Room

OILERS, &c.—(Letter for record

Manufacturers of Steel

Olin Steel Co Lukens St. Co. Cambria St. Co.

Total Heating Surface of Boilers 8198 sq. ft.

Is Forced Draft fitted

yes

No. and Description of Boilers 3 single ended multitubular

Working Pressure 225 lbs.

Tested by hydraulic pressure to

450 lbs.

Date of test 8th 15th Mar. 1919

No. of Certificate

Marine Types Lloyd's Test

Can each boiler be worked separately

yes

Area of fire grate in each boiler

61.8 sq. ft.

No. and Description of Safety Valves to

each boiler 2 spring loaded

Area of each valve

3"

Pressure to which they are adjusted

220 lbs.

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

19"

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

Description of riveting: cir. seams

Doub. riv.

long. seams

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets 10 1/2" x 5 1/2"

Lap of plates or width of butt straps 11 1/2" x 1 1/2" (in)

Per centages of strength of longitudinal joint

rivets 92.4

plate 84.4

Working pressure of shell by rules

238.1

Size of manhole in shell

16 x 12

Size of compensating ring 3'-2" x 2'-10"

No. and Description of Furnaces in each boiler

3 Morrison

Material

Steel

Outside diameter

3' 11 1/4"

Length of plain part

top ✓

Thickness of plates

crown 1 1/2"

Description of longitudinal joint

Weld

No. of strengthening rings

✓

Working pressure of furnace by the rules

239.8

Combustion chamber plates: Material

Steel

Thickness: Sides

1 1/2"

Back 1 1/2"

Top 1 1/2"

Bottom 7/8"

Pitch of stays to ditto: Sides

8 x 8 1/2"

Back 8 x 8 1/2"

Top 8 x 8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

239

Material of stays

Steel

Area at smallest part

2' 1" x 4 1/2"

Area supported by each stay

8 x 11 3/8"

Working pressure by rules

240

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

18" x 20"

How are stays secured

Doub. nuts

Working pressure by rules

255 lbs.

Area at smallest part

8' 4" x 16"

Area supported by each stay

18 x 20

Working pressure by rules

253 lbs.

Material of Front plates at bottom

Steel

Thickness

Material of Lower back plate

Steel

Thickness

3/8"

Greatest pitch of stays

1 1/2" at Nids

Working pressure of plate by rules

225 lbs.

Space for stays doubled 7/8"

Diameter of tubes

3"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

Steel

Thickness: Front

7/8"

Back 7/8"

Mean pitch of stays

9 1/4"

Pitch across wide water spaces

13 1/2" x 2 1/2"

Working pressures by rules

297 lbs.

Girders to Chamber tops: Material

Steel

Thickness of girder at centre

9 1/2" x 2"

Length as per rule

2' 9 1/2"

Distance apart

8 1/2"

Number and pitch of stays in each

3 x 8"

Working pressure by rules

280 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

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

W648-0060

Lloyd's Register

Foundation

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two Connecting rods top end bolts+nuts	Quantity of assorted bolts+nuts	One set of Eccentric rods
Two Connecting rods bottom end bolts+nuts	Iron of various sizes	Air pump rod
Two main bearing bolts	One spare propeller blades	Two Safety valve springs
One set coupling bolts	One spare propeller shaft	
One set Feed + Bilge pump valves	Set Crank pin + Crosshead brasses	
One set piston springs	One set of Slide Valve rods	

The foregoing is a correct description,

Gisaburo Yumura



Dates of Survey: During progress of work in shops - - Oct. 14th, 18, 21; Nov. 5th, 9th, 20; Dec. 23, 25th, 1918; Jan. 8, 13, 15, 20, 23, 27, 28; Feb. 1, 3, 7, 10, 14, 17, 20, 26
During erection on board vessel - - March 5, 7, 8, 10, 14, 15, 17, 26; Apr. 1, 10, 15, 19, 30th
Total No. of visits: Thirty seven

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 20/1/19 etc. Slides 23/1/19 Covers 20/1/19 Pistons 28/1/19 Rods 8/1/19
Connecting rods 8/1/19 etc. Crank shaft 5-11-18 Thrust shaft 12/7/1918 Tunnel shafts 28-5-18 Screw shaft 12-7-18 Propeller 7/3/19
Stern tube 19-2-19 Steam pipes tested 5-4-19 Engine and boiler seatings 27-2-19 Engines holding down bolts 11-4-19
Completion of pumping arrangements 15-4-19 Boilers fixed 26-3-19 Engines tried under steam 17-4-19
Completion of fitting sea connections 7-3-19 Stern tube 19-2-19 Screw shaft and propeller 7-3-19
Main boiler safety valves adjusted 11-4-19 Thickness of adjusting washers Cock nuts
Material of Crank shaft Forged steel Identification Mark on Do. 7405-4-1 Material of Thrust shaft Forged steel Identification Mark on Do. 7536-1
Material of Tunnel shafts Forged steel Identification Marks on Do. 7505 7436 7523 7425 Material of Screw shafts Forged steel Identification Marks on Do. 796
Material of Steam Pipes Solid drawn steel Test pressure 675 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 No If so, state name of vessel

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 material and workmanship have been found good. The Machinery is eligible in my opinion for the record of + L.M.C. 12-18. See above

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 4.19 F.D.

R.M. 14/8/19

APR

The amount of Entry Fee ... £30.- : When applied for,
Special ... £228.- : 19
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 19

Committee's Minute

FRI. 14 NOV. 1919

Assigned

+ L.M.C. 4.19 F.D.

John Sim
Engineer Surveyor to Lloyd's Register of Shipping



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