

Rpt. 4.

REPORT ON MACHINERY.

No. 2307

Date of writing Report 22nd Sep 1918 When handed in at Local Office

Received at London Office

WED. 1 JAN. 1919

No. in Survey held at

Osaka

Port of Kobe

Reg. Book.

on the Steel Single Screw Steamer "Chojun Maru"

Date, First Survey 25 January Last Survey 2nd Sep 1918

(Number of Visits 15)

Master

Built at

Osaka

By whom built Sh. Fujimata Dryd. Co. Ltd

Tons

Gross 2213.07

Engines made at

Osaka

By whom made

Sh. Fujimata Dryd. Co. Ltd

When built 1918

Boilers made at

do

By whom made

do

when made

1918

Registered Horse Power

Owners Daisen Kisen Kabushiki Kaisha Port belonging to Daisen

Nom. Horse Power as per Section 28

189

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 18½ : 30½ : 57½

Length of Stroke 36

Revs. per minute 80

Dia. of Screw shaft

as per rule 11.4

Material of

Steel

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

No

Is the after end of the liner made water tight

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

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

Lapped near liners

Length of stern bush 3' 8½"

Dia. of Tunnel shaft

as per rule 9.46

Dia. of Crank shaft journals

as per rule 9.43

Dia. of Crank pin 10½"

Size of Crank webs 6½ x 18

Dia. of thrust shaft under

collars 10½"

Dia. of screw 13' 6"

Pitch of Screw 16' 4½"

No. of Blades 4

State whether moveable

No

Total surface

No. of Feed pumps 2

Diameter of ditto 3½"

Stroke 16"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 3½"

Stroke 16"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines Two

Sizes of Pumps

Bal. 6½ x 8. 9 duplex

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

In Engine Room One 3" + two 2¼"

In Holds, &c.

Two 2¼" to each hold.

No. of Bilge Injections 1

sizes 5"

Connected to condenser, or to circulating pump

Air p.

Is a separate Donkey Suction fitted in Engine room & size

Yes 3"

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

Large valves: Small 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 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 in Engine Room

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Carnegie Steel Co.

Upper platform in Engine Room

Total Heating Surface of Boilers 3135 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

Two Single Ended

Working Pressure 180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test 30 July 1918

No. of Certificate

LLOYD'S TEST

Can each boiler be worked separately

Yes

Area of fire grate in each boiler 50 sq ft

No. and Description of Safety Valves to

each boiler Two. Spring loaded

Area of each valve 2½ 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 8" to side

Mean dia. of boilers 12' 6"

Length 10' 6"

Material of shell plates

Steel

Thickness 1½"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

O. riveted

long. seams

Diameter of rivet holes in long. seams 1½"

Pitch of rivets 8½ x 4½

Top of plates or width of butt straps 17½ x 7½"

Per centages of strength of longitudinal joint

rivets 107

Working pressure of shell by rules 180 lbs

Size of manhole in shell 12' x 16'

Material Steel

Size of compensating ring 32' x 36' x 1½"

No. and Description of Furnaces in each boiler

Strength as per sketch

2 Morrison's

Material Steel

Outside diameter 40½"

Length of plain part

Thickness of plates

crown 1½"

bottom 1½"

Description of longitudinal joint

Weld

No. of strengthening rings

Working pressure of furnace by the rules 187 lbs

Combustion chamber plates: Material Steel

Pitch of stays to ditto: Sides 7½ x 9

Back 7½ x 7½

Top 8½ x 8

If stays are fitted with nuts or riveted heads

XXXX nuts

Working pressure by rules 197 lbs

Material of stays Steel

Area at smallest part 1.77 sq ft

Area supported by each stay 67½ sq ft

Material of stays Steel

Thickness 1"

Pitch of stays 16 x 15

How are stays secured

Dnut nuts

Working pressure by rules 213 lbs

Material of stays Steel

Area at smallest part 5.9 sq ft

Area supported by each stay 15' x 16'

Thickness 3¼"

Material of Lower back plate Steel

Thickness 3¼"

Greatest pitch of stays 14½"

at end

Working pressure of plate by rules 180 lbs

Material of Front plates at bottom Steel

Diameter of tubes 3½"

Pitch of tubes 4½"

Pitch across wide water spaces 14½"

Working pressures by rules 180 lbs

Girders to Chamber tops: Material Steel

Depth and

Thickness of girder at centre 7½' x 1½'

Length as per rule 29½"

Distance apart 8"

Number and pitch of stays in each 2 @ 8' 8½"

% of strength of joint 67½

Working pressure by rules 226 lbs

Steam dome: description of joint to shell

Flanged + dnut. riveted

Description of longitudinal joint

Dnut riv.

Diam. of rivet holes 1½"

Crown plates Steel

Thickness 5/8"

How stayed Spherical

Pitch of rivets 3½"

Working pressure of shell by rules 276 lbs

Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

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

Pressure to which each is adjusted

Is Easing Gear fitted

PERHEATER.

Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

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Pressure to which each is adjusted

Is Easing Gear fitted

Date of Test

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Pressure to which each is adjusted

Diameter of Safety Valve

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IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two main bearing bolts. ✓
Two crank pin bolts & nuts & set screws. ✓
Iron crosshead bolts ✓
Two sets coupling bolts. ✓
Two eccentric rods & one valve rod. ✓
Air & circulating pump rods. ✓
Two + helix pump valves & seats. ✓
Packing rings each piston ✓
Safety valve springs ✓
Assorted bolts & nuts ✓
Iron various sizes ✓

The foregoing is a correct description,

Fujinagata Dockyard.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 25th Jan'y 23rd Feb. 19th Mar. 24th Apr. 30th Apr. before request for classification
During erection on board vessel -- 22nd May 10th 13th June 3rd 12th 27th 30th July 16th + 22nd Aug + 2nd Sept 1918
Total No. of visits 15

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

None

Dates of Examination of principal parts—Cylinders 22nd May Slides 13th June Covers 22nd May Pistons 13th June Rods 13th June
Connecting rods 13th June Crank shaft 10th June Thrust shaft 10th June Tunnel shafts 3rd July Screw shaft 27th July Propeller 27th July
Stern tube 3rd July Steam pipes tested 30th July Engine and boiler seatings 27th July Engines holding down bolts 30th July
Completion of pumping arrangements 22nd August Boilers fixed 30th July Engines tried under steam 2nd Sept.
Completion of fitting sea connections 3rd July Stern tube 22nd August Screw shaft and propeller 22nd August
Main boiler safety valves adjusted 2nd Sept Thickness of adjusting washers Locknuts
Material of Crank shaft Steel Identification Mark on Do. 14th Material of Thrust shaft Steel Identification Mark on Do. 14th
Material of Tunnel shafts Steel Identification Marks on Do. 14th Material of Screw shafts Steel Identification Marks on Do. 14th
Material of Steam Pipes Solid drawn copper ✓ Test pressure 360 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

Wayland Rpt No. 1957
Yoro Maru " 2246
Sache Maru " 2315
Yoro Maru II " 2306 ✓

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

The survey was requested after the forgings had been machined & the castings made. The engines were surveyed during construction in the workshops & the boilers from the commencement. The forgings were seen during manufacture at the Kobe Steel Works but not specially surveyed at that time nor tested. They were surveyed & tested by the Government Surveyors to the same requirements as those of the Rules. The strengthening of the boiler shells to compensate for the close pitch of the holes in the dome connection has been carried out as in the sister vessels. The boiler steel is all certified by the Society's Surveyors & bears the stamp R. The vessel is in my opinion eligible for the record + LMC 9.18

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 9.18.

The amount of Entry Fee ... Yen : 20 :
Special ... Yen 400 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) Entered on :
hull report.

When applied for,

12th Sept. 1918

When received,

14th Sep. 1918

Committee's Minute

TUE. 7-JAN. 1919

Assigned

+ LMC 9.18

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation