

Rpt. 4.

REPORT ON MACHINERY.

No. 2648.

Received at London Office

FRI JUN 11 1920

Date of writing Report 10-1-20

When handed in at Local Office

Port of Yokohama.

No. in Survey held at Uraga
Reg. Book.Date, First Survey 12th JulyLast Survey 23rd Nov 1919.

on the

S. S. "Orie Maru"

(Number of Visits)

Master

Built at

Isurumi

By whom built

Kureha S.S. Co.

Tons } Gross
Net
When built

Engines made at

By whom made

when made

Boilers made at Uraga

By whom made Uraga Dock Co. Ltd

when made 1919.

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders

Length of Stroke

Revs. per minute

Dia. of Screw shaft

as per rule

Material of

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

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

If two

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

Length of stern bush

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars

Dia. of screw

Pitch of Screw

No. of Blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

In Engine Room

In Holds, &c.

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

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

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

OILERS, &c.—(Letter for record B)

Manufacturers of Steel

Illinois, Otto & Carnegie Steel Cos'

Total Heating Surface of Boilers

7376.4

Is Forced Draft fitted

Yes

No. and Description of Boilers

(3) Multitubular, Cylindrical.

Working Pressure

200 lbs

Tested by hydraulic pressure to

400 lbs

Date of test

23-12-19.

No. of Certificate

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

58.289 sq

No. and Description of Safety Valves to

each boiler

Swing Spring loaded

Area of each valve

11.04 sq

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

Mean dia. of boilers

14.3"

Length

11.6"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

28/32 Ton

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

DR. LAP

Long. seams

T.R. D.B.S.

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

10"

Gap of plates on width of butt straps

22"

Percentages of strength of longitudinal joint

rivets 91.4%

plate 85. %

Working pressure of shell by rules

223

Size of manhole in shell

16x12"

Size of compensating ring

16 1/2 x 32 1/2"

No. and Description of Furnaces in each boiler

3 Morrison

Material

Steel

Outside diameter

3'-10 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

5/8"

Description of longitudinal joint

Welded.

No. of strengthening rings

✓

Working pressure of furnace by the rules

217 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

4 1/2"

Back

4 1/2"

Top

4 1/2"

Bottom

15"

Pitch of stays to ditto: Sides

10 1/2 x 7 1/2"

Back

8 1/2 x 8 1/2"

Top

9 1/4 x 8"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

207.

Material of stays

Steel

Area at smallest part

203 sq

Area supported by each stay

7874 sq

Working pressure by rules

232 lbs

End plates in steam space:

Material

Steel

Thickness

1 3/16"

Pitch of stays

16 1/2 x 19"

How are stays secured

D. Nuts.

Working pressure by rules

211 lbs

Material of stays

Steel

Area at smallest part

7068 sq

Area supported by each stay

3114 sq

Working pressure by rules

233.5 lbs

Material of Front plates at bottom

Steel

Thickness

3/4"

Material of Lower back plate

Steel

Thickness

3/4"

Greatest pitch of stays

14 x 8 1/2"

Working pressure of plate by rules

257 lbs

Diameter of tubes

3"

Pitch of tubes

4 1/4 x 4 1/8"

Material of tube plates

Steel

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

8 1/8"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

224.5 lbs

Girders to Chamber tops: Material

Steel

Depth and

Thickness of girder at centre

9 x 1 3/4"

Length as per rule

29 13/16"

Distance apart

8"

Number and pitch of stays in each

2 @ 9 1/4"

Working pressure by rules

308 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

✓

W1311-0133

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - *July 12. Aug 15. 16. Sep 29. Oct 7. 13. 21. Nov 12. 17. 20. 24. 26. Dec 19. 23.*
During erection on board vessel - - -
Total No. of visits *15*

Is the approved plan of main boiler forwarded herewith *RETAINED FOR DUPLICATE*

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller
Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts
Completion of pumping arrangements Boilers fixed Engines tried under steam
Completion of fitting sea connections Stern tube Screw shaft and propeller
Main boiler safety valves adjusted Thickness of adjusting washers
Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.
Material of Steam Pipes Test pressure
Is an installation fitted for burning oil fuel 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 If so, state name of vessel

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

The amount of Entry Fee ... £ : :
Special ... £ : :
Donkey Boiler Fee ... *7200* : :
Travelling Expenses (if any) £ : :
When applied for, *23-4* 19 *H.D. Buchanan.*
When received, *24-4* 19 *Engineer Surveyor to Lloyd's Register of Shipping.*

Committee's Minute

Assigned

FRI. JUN. 25 1920

See p. rpt attached



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