

REPORT ON MACHINERY.

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

Date, First Survey 12th July

Last Survey 23rd Nov 1919

Reg. Book. on the S.S. "Orie Maru"

(Number of Visits)

Master Built at Tsuyama By whom built Aramaki 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. 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 as fitted Material of screw shaft
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 as fitted Dia. of Crank shaft journals as per rule as fitted 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 moceable 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, Otis & Carnegie Steel Cos'

Total Heating Surface of Boilers 7376.4^{sq} Is Forced Draft fitted Yes No. and Description of Boilers (3) Multitubular, Cylindrical, 23-12-19.

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 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 Twin 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 D.R.L.A.P.

Long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Lap of plates on width of butt straps 23"

Percentages of strength of longitudinal joint rivets 91.4% Working pressure of shell by rules 223 Size of manhole in shell 16x12"

Size of compensating ring 36 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 1

Working pressure of furnace by the rules 217 lbs Combustion chamber plates: Material Steel Thickness: Sides 45/64 Back 44/64 Top 45/64 Bottom 15/76

Pitch of stays to ditto: Sides 10 1/2 x 7 1/2 Back 8 3/8 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 2030^{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 3/8

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

Lloyd's Register Foundation

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 - - { During erection on board vessel - - - { Total No. of visits	July 12	Aug 15, 16	Sep 29	Oct 7	13, 21	Nov 12, 17, 20, 24, 26	Dec 19, 23
	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 ... £ : : When applied for, **23-4** 19 **20** **H.D. Buchanan**

Special ... £ : : When received, **24-4** 19 **20**

Donkey Boiler Fee ... **7200** £

Travelling Expenses (if any) £

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. JUN. 25 1920**

Assigned **see rpt attached**



Certificate (if required) to be sent to
 The Surveyors are requested not to write on or below the space for Committee's Minutes.