

# REPORT ON MACHINERY.

No. 2983.

Received at London Office

MON. NOV. 15 1920

Date of writing Report 8th Oct 1920 When handed in at Local Office

Port of Kobe

No. in Survey held at KOBE.  
Reg. Book.

Date, First Survey 13th Nov. 1919. Last Survey 4th Sept. 1920  
(Number of Visits 62)

on the Steel Single Screw Steamer "OREGON MARU" Tons { Gross 5872.89  
Net 4253.84

Master K. Asano Built at Kobe By whom built Kawasaki Dockyard Co. Ltd. When built 1920

Engines made at Kobe By whom made Kawasaki Dockyard Co. Ltd. when made 1920

Boilers made at do By whom made do when made 1920

Registered Horse Power \_\_\_\_\_ Owners Kawasaki Dockyard Co. Ltd. Port belonging to Kobe

Nom. Horse Power as per Section 28 440 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 3  
Dia. of Cylinders 26: 43 1/2: 72 Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 15.41 Material of screw shaft as fitted 16" steel

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 ✓ 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" Dia. of Crank shaft journals as per rule 14.15 as fitted 14 3/8" Dia. of Crank pin 14 3/4" Size of Crank webs 9 1/2" x 20 1/2" Dia. of thrust shaft under collars 14 3/8" Dia. of screw 17'-6" Pitch of Screw 19'-0" mean No. of Blades 4 State whether moceable yes Total surface 100 sq. ft.

No. of Feed pumps One Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work yes (with Weir's feed)  
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 Five Sizes of Pumps Cal. 10x11x12 dupl. 9 1/2 x 7 x 24 hub 1 1/2 x 5 x 6 dupl. 5/2 x 5 1/2 x 9 " No. and size of Suctions connected to both Bilge and Donkey pumps in Engine Room Three 3 1/2" Oil transfer 10 x 7 x 10 " In Holds, &c. No. 1, 3 + 4 Holds each two 3 1/2" No. 2 Hold two 4"

No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Cur. 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 None

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 Up: platform of Eng. Rm.

MILLERS, &c.—(Letter for record S) Manufacturers of Steel Carnegie Stl. Co. Illinois Stl. Co. Marine Furnace Assn. + Kawasaki Hyogo Works.

Total Heating Surface of Boilers 56360' Is Forced Draft fitted yes No. and Description of Boilers Two 5. 6 + Auxcy. 5. 6.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 31-5-20 7-6-20 No. of Certificate NE1 NE2 NE3 NE4 NE5 NE6

Can each boiler be worked separately yes Area of fire grate in each boiler 60 1/2' No. and Description of Safety Valves to each boiler Two Spring Loaded Area of each valve 3 3/4" dia. 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 12" Mean dia. of boilers 14'-6" Length 12'-0" Material of shell plates steel

Thickness 1 3/8" Range of tensile strength 2678 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams double riveted Double straps Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 1/8" + 4 1/16" Lap of plates or width of butt straps 20 1/8" + 1 3/8"

Percentages of strength of longitudinal joint rivets 95.84 Working pressure of shell by rules 212 lbs. Size of manhole in shell 16" x 12" 84.28

Size of compensating ring (7 1/8" flange) 1 5/16" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 48 1/4"

Length of plain part top ✓ Thickness of plates crown 2 1/32" Description of longitudinal joint Welded No. of strengthening rings ✓ bottom ✓

Working pressure of furnace by the rules 221 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 8 1/2" x 9" Top 8 1/2" x 9 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203 lbs.

Material of stays Steel Area at smallest part 2.10" Area supported by each stay 8 1/2" x 9 3/8" Working pressure by rules 230 lbs. End plates in steam space: Material Steel Thickness 1 5/16" Pitch of stays 19 3/4" x 20 1/2" How are stays secured Double nuts + small washers Working pressure by rules 202 lbs. Material of stays steel

Area at smallest part 10" Area supported by each stay 19 3/4" x 20 1/2" Working pressure by rules 260 lbs. Material of Front plates at bottom steel

Thickness 1 3/16" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 13 1/2" at wide water space Working pressure of plate by rules 232 lbs.

Diameter of tubes 3 1/4" Pitch of tubes 4 1/16" x 4 5/16" Material of tube plates Steel Thickness: Front 1" Back 1 3/16" Mean pitch of stays 8 3/4"

Pitch across wide water spaces 13 3/4" + 3/8" double Working pressures by rules 240 lbs. Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10 3/4" + 13 1/16" (2) Length as per rule 34 1/2" Distance apart 9 3/8" Number and pitch of stays in each 3 @ 8 1/2"

Working pressure by rules 220 lbs. Steam dome: description of joint to shell None % of strength of joint \_\_\_\_\_

Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_

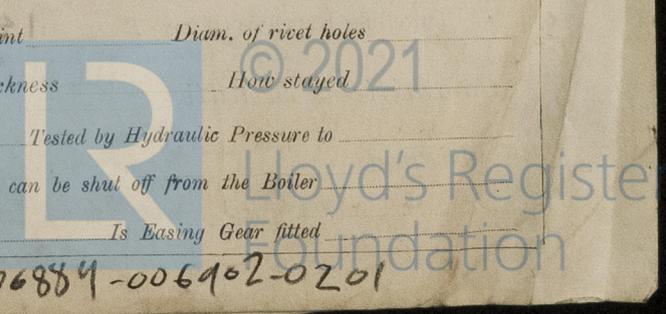
Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

SUPERHEATER. Type None Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_

Visits 55 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 \_\_\_\_\_

006884-006902-0201



AUXILIARY  
IS A ~~DONKEY~~ BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes.

SPARE GEAR. State the articles supplied:-

Four Main bearing bolts + nuts.	Set packing rings + springs each piston.	Centrifugal pump impel shaft + nut.
Two Crank pin bolts + nuts.	Set junk ring bolts + nuts.	
Two Crosshead bolts + nuts	Set of packing for each piston rods + valve rods.	A.P. rod + nut.
Set coupling bolts + nuts.	Propeller shaft with nut.	3 safety valve spring
Set feed + bilge pump valves	1 Feed check valve + seat.	Cond. boiler tubes etc.
Assorted bolts, nuts + iron.	Slide valve spindle each size.	1 Set A.P. lead valve

The foregoing is a correct description,

Kawasaki Dockyard Co., Ltd.,

Per

*Satahano*

Manufacturer.

Secretary.

Dates of Survey while building

During progress of work in shops --	1919 Nov. 13; Dec 20; 1920 Jan 29; Feb. 7, 10, 14, 21, 25; Mar. 1, 5, 9, 13, 16, 17, 18, 24, 29, 30, 31; Apr. 1, 5, 6, 10, 15, 17, 20, 26, 27
During erection on board vessel --	May 1, 4, 5, 7, 11, 14, 15, 20, 21, 22, 24, 26, 27, 28, 29, 31; June 1, 2, 4, 5, 7, 20, 22, 29; July 12; Aug 7, 11, 13, 17; Sept 2, 4
Total No. of visits	62.

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 27-5-20 Slides 20-6-20 Covers 22-6-20 Pistons 5-6-20 Rods 29-6-20

Connecting rods 14-5-20 Crank shaft 1-6-20 Thrust shaft 31-5-20 Tunnel shafts 29-5-20 Screw shaft <sup>working 11-5-20</sup> 12-7-20 Propeller 1-6-20

Stern tube 31-5-20 Steam pipes tested 24-5-20 Engine and boiler seatings 8-6-20 Engines holding down bolts 8-7-20

Completion of pumping arrangements 27-7-20 Boilers fixed 8-7-20 Engines tried under steam 11-8-20 overhaul 13-8-20

Completion of fitting sea connections 8-6-20 Stern tube 1-6-20 Screw shaft and propeller 8-6-20

Main boiler safety valves adjusted 7-8-20 Thickness of adjusting washers Locknuts.

Material of Crank shaft O.H.F.S. Identification Mark on Do. LLOYDS 1-6-20 A.W.R.

Material of Thrust shaft O.H.F.S. Identification Mark on Do. K1.21 LLOYDS 31-5-20 A.W.R.

Material of Tunnel shafts O.H.F.S. Identification Marks on Do. LLOYDS 29-5-20 A.W.R.

Material of Screw shafts O.H.F.S. Identification Marks on Do. PA 213 LLOYDS 11-5-20 A.W.R.

Material of Steam Pipes Solid Drawn Steel. Test pressure 600 lb water SPARE T.S. KP2 LLOYDS 12-7-20 A.W.R.

Is an installation fitted for burning oil fuel Yes. Is the flash point of the oil to be used over 150°F. Yes.

Have the requirements of Section 49 of the Rules been complied with Yes.

Is this machinery duplicate of a previous case Yes. If so, state name of vessel 5/5 ARGONNE (Kobe Rpt No), 5/5 War Queen ( " " " ), 5/5 Eastern Ocean ( " " " ), 5/5 Thames Maru ( " " " )

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 materials and the workmanship are good.

The machinery worked satisfactorily on trial - coal being used for boilers.

The Machinery of this vessel is eligible, it is submitted for the notation L.M.C 9-20 and fitted for Burning Oil Fuel 9-20 F.P. above 150 Fahr.

A Blue print of arrangement of Oil Fuel Piping and Shut-off Valves is sent herewith.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.20 F.D. Fitted for oil fuel 9.20 F.P. above 150°F. Rell 19/11/20

The amount of Entry Fee ... Yen 30.- : When applied for.

Special ... £ 35.- : Sept. 15 1920

Donkey Boiler Fee ... £ : v : When received.

Travelling Expenses (if any) £ : 15.- : Sept. 20 1920

Alexander Watt  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned + L.M.C 9.20 F.D. Fitted for oil fuel 9.20 F.P. above 150°F.

