

REPORT ON MACHINERY.

THU. 20 APR. 1916

No. 1458

Received at London Office

20 APR. 1916

Date of writing Report 20th Feb. 1916. When handed in at Local Office 10 Port of Kobe

No. in Survey held at Inuoshima & Kobe Date, First Survey 12th June 1915 Last Survey 9th May 1916
 Reg. Book. on the Steel Single Screw Steamer "Yuki Maru" (Number of Visits)

Master T. Iki Built at Inuoshima By whom built Osaka Iron Works, Inuoshima, When built 1916-2 Tons: Gross 3162 Net

Engines made at Osaka By whom made The Osaka Iron Works Ltd when made 1916-2

Boilers made at do By whom made do when made do

Registered Horse Power 288 Owners Satsumu Kisen Kaisha Port belonging to Naba

Nom. Horse Power as per Section 28 288 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 22 : 37 : 61 Length of Stroke 42 Revs. per minute 70 Dia. of Screw shaft as per rule 12.8 as fitted 13 Material of screw shaft 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 Filled solid If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4" 8³/₄

Dia. of Tunnel shaft as per rule 11.2 as fitted 11 3/8 Dia. of Crank shaft journals as per rule 11.77 as fitted 12 Dia. of Crank pin 12 Size of Crank webs 7³/₈ Dia. of thrust shaft under collars 12 Dia. of screw 16.0 Pitch of Screw 16.0 No. of Blades 4 State whether moveable No Total surface 43⁵/₈

No. of Feed pumps Two Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps Ballast 7.8 2.9 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 3" in Boiler Rm two 3" In Holds, &c. Two 3" in each hold After well 3 1/2"

No. of Bilge Injections 1 size 4" Connected to condenser, or to circulating pump C.s.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

Dates of examination of completion of fitting of Sea Connections 15.1.16 of Stern Tube 17.12.15 Screw shaft and Propeller 15.1.16

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper grating in E. Rm.

BOILERS, &c.—(Letter for record 5.) Manufacturers of Steel Parkhead & Leeds Forge

Total Heating Surface of Boilers 3824 Is Forced Draft fitted Yes No. and Description of Boilers Two Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29 Oct 1915 No. of Certificate LLOYD'S TEST 360 LBS A.L. 29.10.15

Can each boiler be worked separately Yes Area of fire grate in each boiler 45 No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 3 1/2 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 10 Mean dia. of boilers 13.6 Length 11.6 Material of shell plates Steel

Thickness 1 3/32 Range of tensile strength 28 3/4 to 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double long. seams Strips riv. Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8 1/8 x 4 1/16 Top of plates or width of butt straps 1 3/4 x 1"

Per centages of strength of longitudinal joint rivets 97.9 x 88.5 com. plate 85.46 x 86.4 in strap Working pressure of shell by rules 184 lbs Size of manhole in shell 12 x 16 in End pl.

Size of compensating ring Flanged end pl. No. and Description of Furnaces in each boiler 3 Brighton Material Steel Outside diameter 40 1/4

Length of plain part top bottom Thickness of plates crown bottom 1/2 Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 184 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 7/8

Pitch of stays to ditto: Sides 9 x 10 Back 8 3/4 x 10 Top 9 x 10 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 184 lbs

Material of stays Steel Section Diameter at smallest part 2.1 Area supported by each stay 94 1/2 Working pressure by rules 200 lbs End plates in steam space: Material Steel Thickness 1 3/8 Pitch of stays 25 x 19 How are stays secured Bolt nuts Working pressure by rules 181 lbs Material of stays Steel

Diameter at smallest part 3 1/4 Area supported by each stay 25 x 19 Working pressure by rules 180 lbs Material of Front plates at bottom Steel

Thickness 1 Material of Lower back plate Steel Thickness 1 5/16 Greatest pitch of stays 14 (ends of stays) Working pressure of plate by rules 180 lbs

Diameter of tubes 3 Pitch of tubes 4 3/8 x 4 1/4 Material of tube plates Steel Thickness: Front 1 Back 13/16 Mean pitch of stays 10 1/2

Pitch across wide water spaces 14 Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 4 1/2 x 13 (two) Length as per rule 32 Distances apart 10 1/2 Number and pitch of stays in each 2 @ 9"

Working pressure by rules 202 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Crosshead bolts & nuts. 2 Crank pin bolts & nuts. 2 main bearing bolts & nuts. Set Coupling bolts & nuts. Feed & bilge pump valves. Set piston springs. Assorted bolts & nuts. Iron of various sizes.

The foregoing is a correct description, OSAKA IRON WORKS, LTD.

T. Yamaguchi Manufacturer.

Dates of Survey while building: During progress of work in shops - June 12, 24, July 2, 3, 13, Aug 18, 21, 28, Sep 2, 16, Oct 5, 13, Nov 8, 11, 24, 29, Dec 2, 6, 9, 15, 17, 21, 28 1915. During erection on board vessel - Jan. 15, Feb 3, 9, 1916. Total No. of visits - 27.

Is the approved plan of main boiler forwarded herewith No. (Same as for "Teusho Maru" Koh. Rep. 1737 with wh. rep. plan was sent "donkey")

Dates of Examination of principal parts: Cylinders 16/9/15, Slides 2/9/15, Covers 29/10/15, Pistons 5/10/15, Rods 28/8/15, 14/9/15, Connecting rods 28/8/15, Crank shaft 30/6/15, Thrust shaft 14/5/15, Tunnel shafts 14/5/15, Screw shaft 14/5/15, Propeller 15/1/16, Stern tube 28/8/15, Steam pipes tested 3/2/16, Engines and boiler seatings 17/12/16, Engines holding down bolts 15/1/16, Completion of pumping arrangements 3/2/16, Boilers fixed 3/2/16, Engines tried under steam 9/2/16, Main boiler safety valves adjusted 9/2/16, Thickness of adjusting washers 7/16, Material of Crank shaft Steel, Identification Mark on Do. LLOYDS 30.6.15, Material of Thrust shaft Steel, Identification Mark on Do. 14.5.15, Material of Tunnel shafts Steel, Identification Marks on Do. LLOYDS 14.5.15, Material of Screw shafts Steel, Identification Marks on Do. LLOYDS 14.5.15, Material of Steam Pipes Steel, Test pressure 540 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 "Peking Maru", "Nan Kung Maru", "Teusho Maru", Koh. Rpts Nos 1498, 1520, 1737

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

The machinery has been made & fitted under Special Survey & in accordance with the requirements of the Rules. The workmanship has been found good.

All the shafting has been made at The Kobe Steel Works & the Certificate is enclosed. An Electric Lighting Report is enclosed herewith.

The machinery in my opinion renders the vessel eligible for the record LMC 2.16 in the Register Book.

It is submitted that this vessel is eligible for THE BROOD + LMC 2.16. F.D.

J.W.D. 25/4/16. G.P.R.

The amount of Entry Fee ... Yes 20 : When applied for, Special ... Yes 516 : 16 Feb 1916 Donkey Boiler Fee ... Travelling Expenses (if any) £ 21 Feb 1916

Arthur L. Jones Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute WED. 26 APR. 1916

Assigned + L.M.C. 2.16. J.D.

MACHINERY CERTIFICATE WRITTEN.

Rpt. 13.

Port of

No. in Reg. Book

Owners

Yard No.

DESCRIPTION

Compound Vertical

Capacity of D

Where is Dyn

Position of M

Positions of at

upper bridge

one in engine

If fuses are

circuits

If vessel is wi

Are the fuses

Are all fuses

are perma

Are all switch

Total number

A

B

C

D

E

2 Mast

2

2 arc lights

If arc lights, u

Where are the

DESCRIPTION

Main cable carr

Branch cables ca

Branch cables ca

are light calls

Leads to lamps

Cargo light cable

DESCRIPTION

Insulated

Joints in cables,

Cable are jo

Are all the joint

positions,

Are there any j

How are the ca

by steam

