

REPORT ON MACHINERY.

No. 2383

Received at London Office

Date of writing Report 6 Jan 1919 When handed in at Local Office 19 Port of Kobe
 No. in Survey held at Osaka Date, First Survey 1st March Last Survey 26 Dec 1918
 Reg. Book. on the Steel Single Screw Steamer "Taiho Maru" (Number of Vents 45) Gross 6097
 Master N. Santo Built at Osaka By whom built The Osaka Iron Works Ltd Tons Net 4453
 Engines made at Osaka By whom made The Osaka Iron Works Ltd When built 1918
 Boilers made at do By whom made do when made do
 Registered Horse Power 553 Owners Uchida Kisen Kaisha Port belonging to Osaka
 Nom. Horse Power as per Section 28 553 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 27.45 x 75 Length of Stroke 51 Revs. per minute 65 Dia. of Screw shaft 13.27 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 Yes 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 Lightly fitted If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5' 6"
 Dia. of Tunnel shaft 13.27 Dia. of Crank shaft journals 14.35 Dia. of Crank pin 14.7/8 Size of Crank webs 9 1/2 x 7 1/2 Dia. of thrust shaft under
 collars 14 7/8 Dia. of screw 18 x 3 Pitch of Screw 18 x 3 No. of Blades 4 State whether moveable Yes Total surface 100 sq ft
 No. of Feed pumps Two Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Three Sizes of Pumps Bal. 10, 13 x 13 Dupl No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3 1/2 x 4 1/2 in two 3 1/2 x 4 1/2 in In Holds, &c. 3 1/2 each side each hold
 Tunnel way One 2 1/2 No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Yes 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 Now
 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 Sunk air pipes How are they protected Strong wood casings
 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 Eng. rm. Top platform

BOILERS, &c.—(Letter for record) S Manufacturers of Steel Yawata Imperial Steel Works Beighton Pat. Rec. & Tals. Cabin
 Total Heating Surface of Boilers 8100 Is Forced Draft fitted Yes No. and Description of Boilers Three S. E.
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 25.11.18, 2.12.18 No. of Certificate 360 LBS
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63.70 No. and Description of Safety Valves to
 each boiler Two Spring loaded Area of each valve 3" 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 20" Mean dia. of boilers 15" Length 12' 0" Material of shell plates Steel
 Thickness 1 1/8" Range of tensile strength 28 to 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lock riv
 long. seams Double Strap Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 4 x 4 1/2 Top of plates or width of butt straps 19 1/2 x 1 1/4
 Per centages of strength of longitudinal joint 85.5 Working pressure of shell by rules 187 Size of manhole in shell 12 x 16
 Size of compensating ring 34 x 38 x 1 1/2 No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 48 1/2
 Length of plain part top 21 1/2 bottom 21 1/4 Thickness of plates 21 1/4 Description of longitudinal joint Weld No. of strengthening rings
 Working pressure of furnace by the rules 195 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 7/8
 Pitch of stays to ditto: Sides 8 1/2 x 8 1/2 Back 8 1/2 x 8 1/2 Top 8 x 9 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 187 1/2
 Material of stays Steel Area at smallest part 1.79 Area supported by each stay 72 1/4 Working pressure by rules 222 End plates in steam space:
 Material Steel Thickness 1 1/2 Pitch of stays 18 x 20 How are stays secured Double nuts Working pressure by rules 193 1/2 Material of stays Steel
 Area at smallest part 7.06 Area supported by each stay 18 x 20 Working pressure by rules 204 Material of Front plates at bottom Steel
 Thickness 3/4 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 14 at 14 1/2 Working pressure of plate by rules 180
 Diameter of tubes 3" Pitch of tubes 4 1/4 x 4 1/2 Material of tube plates Steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10"
 Pitch across wide water spaces 13 1/4 Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 1/2 x 13 Length as per rule 33 1/2 Distance apart 9" Number and pitch of stays in each 3 @ 8"
 Working pressure by rules 202 1/2 Steam dome: description of joint to shell Yes % of strength of joint Yes
 Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
 Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

SUPERHEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes
 Date of Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Diameter of Safety Valve Yes Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

IS A DONKEY BOILER FITTED? No

so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Set packing rings & springs each piston
Crank pin & Xhd. brasses
Slide valve rods & ecc. rods
Piston rod each size
A.P. rod & valves
Four bolts & nuts for Xhd.
Two bolts & nuts for cr. pins
4 main bearing bolts
Set Coupling bolts
Feed & bilge pump valves
Assorted bolts & nuts
Iron various sizes
Junk ring bolts
Propeller shaft & nuts
4 2 blades
Centrif pump impeller
to shaft.
Safety Valve Springs
etc. etc.

The foregoing is a correct description,



Dates of Survey while building
During progress of work in shops -- 1.12.19. 22 Mar. 19 Apr. 1.10.20. 31 May. 4.11.18 21.28 June. 2.12.23.31 July.
During erection on board vessel -- 2.13.24.30 Aug. 4.7.11.16.20.26 Sep. 3.8.18.24.30 Oct.
Total No. of visits 45

Is the approved plan of main boiler forwarded herewith

yes
None

Dates of Examination of principal parts—Cylinders 24/8/18 Slides 26/9/18 Covers 26/9/18 Pistons 13/8/18 Rods 20/11/18
Connecting rods 7/11/18 Crank shaft 26/9/18 Thrust shaft 2/7/18 Tunnel shafts 13/8/18 Screw shaft 20/11/18 Propeller 20/11/18
Stern tube 30/10/18 Steam pipes tested 12 & 21 Dec. Engine and boiler seatings 25 Nov. Engines holding down bolts 21/12/18
Completion of pumping arrangements 19.12.18 Boilers fixed 19.12.18 Engines tried under steam 23/12/18
Completion of fitting sea connections 23.12.18 Stern tube 26/9/18 Screw shaft and propeller 2.12.18
Main boiler safety valves adjusted 23/12/18 Thickness of adjusting washers 1/32, 1/16, 1/8, 1/4, 1/2, 3/4, 1, 1 1/2, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
Material of Crank shaft Steel Identification Mark on Do. Lloyd's 26/9/18 Material of Thrust shaft Steel Identification Mark on Do. Lloyd's 2/7/18
Material of Tunnel shafts Steel Identification Marks on Do. Lloyd's 4.21.28/6/18: 23/7/18: 2/12/8/18. Material of Screw shafts Steel Identification Marks on Do. Lloyd's 18.6.18
Material of Steam Pipes S.D. Steel 5 1/2 bore, 5 1/16 A.L.J. D. 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. 20.11.18

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

Notaisan Maru. Koyeisan Maru.
Raishu Maru. Rai Gai Maru.
(Excepting that in the present model no Donkey Bler. has been fitted)

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 materials & workmanship have been found good.

The vessel is in my opinion eligible for the notation + L.M.C. 12.18

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 12.18. F.D.

The amount of Entry Fee ... 1/2p 30 :
Special ... 1/2p 834 :
Donkey Boiler Fee ... 1/2p :
Travelling Expenses (if any) 1/2p 10 :
When applied for, 26 Dec 1918
When received, 13 Jan 1919

Committee's Minute

Assigned

12.18

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation