

REPORT ON MACHINERY.

No. 3093

Date of writing Report 20th Oct^{br} 1922 When handed in at Local Office Yokohama Port of Yokohama Received at London Office THU. 7 DEC. 1922

No. in Survey held at Yokohama Date, First Survey Oct 29. 21. Last Survey Sept 29. 1922.

Reg. Book. on the Steel Single Screw Steamer "Yateishi Maru" (Number of Visits 46)

Master Yokohama Built at Yokohama By whom built Yokohama Dock Co. Tons } Gross 3801.31
 Net 2351.9
 When built 1922

Engines made at Yokohama By whom made Yokohama Dock Co. Ltd. when made 1922.

Boilers made at Yokohama By whom made Yokohama Dock Co. Ltd. when made 1922.

Registered Horse Power 351 Owners Ukon Shoji Kabushiki Kaisha Port belonging to KAWANO.

Nom. Horse Power as per Section 28 351 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 23", 38", 64" Length of Stroke 48 Revs. per minute 13 7/8 Dia. of Screw shaft as per rule 13 7/8 Material of screw shaft 8.

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 yes

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 ✓

liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5'-4 3/4"

Dia. of Tunnel shaft as per rule 12 1/2 Dia. of Crank shaft journals as per rule 13 1/8 Dia. of Crank pin 14" Size of Crank webs 19x8 3/4" Dia. of thrust shaft under collars 13 1/2 Dia. of screw 16-6" Pitch of Screw 17'-3" No. of Blades 4 State whether moveable Yes Total surface 804"

No. of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3-3 1/2" Sizes of Pumps 2-3 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps Boiler room 2-3 1/2", Nos. 1, 2, 3, 4

In Engine Room 3-3 1/2" In Holds, &c. Boiler room 2-3 1/2", Nos. 1, 2, 3, 4

holds 2-3 1/2" & tunnel well 1-3 1/2"

No. of Bilge Injections 1 sizes 8" Connected to condenser or circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 4"

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 Both

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 No 1 & 2 holds How are they protected 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 E.R. top platform.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Daejell

Total Heating Surface of Boilers 4604 Is Forced Draft fitted Yes No. and Description of Boilers 2- Multitubular

Working Pressure 200 Tested by hydraulic pressure to 350 Date of test 18.7.22 No. of Certificate 171-172

Can each boiler be worked separately Yes Area of fire grate in each boiler 57.28 No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 9.6" Pressure to which they are adjusted 200lb. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 0 Mean dia. of boilers 14'-3" Length 11'6" Material of shell plates S.

Thickness 15/16 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR.

long. seams TRDBS Diameter of rivet holes in long. seams 13/8" Pitch of rivets 9 5/16" Lap of plates or width of butt straps 1'-8 1/2"

Per centages of strength of longitudinal joint rivets 85.3 Working pressure of shell by rules 203 Size of manhole in shell 16"x12"

plate 90.3

Size of compensating ring 41 1/4 No. and Description of Furnaces in each boiler 3 Mor Material S Outside diameter 45 3/4"

Length of plain part top 5/8 Thickness of plates crown 5/8 Description of longitudinal joint weld No. of strengthening rings none

bottom 5/8

Working pressure of furnace by the rules 218 Combustion chamber plates: Material S Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 15/16

Pitch of stays to ditto: Sides 9"x8" Back 9"x8 1/2" Top 9"x8 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 212

Material of stays S Area at smallest part 2.07 Area supported by each stay 76.8 Working pressure by rules 243 End plates in steam space: Material S Thickness 1/32 Pitch of stays 16 1/2"x9 1/2" How are stays secured Nuts Working pressure by rules 208 Material of stays S

Area at smallest part 7.06 Area supported by each stay 3/8 Working pressure by rules 230 Material of Front plates at bottom S

Thickness 3/4 Material of Lower back plate S Thickness 1/16 Greatest pitch of stays 13 5/8"x8 1/2" Working pressure of plate by rules 236

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2"x4 3/8" Material of tube plates S Thickness: Front 3/4 Back 3/4 Mean pitch of stays 9"

Pitch across wide water spaces 13 3/4 Working pressures by rules 212 Girders to Chamber tops: Material S Depth and thickness of girder at centre 10'x1 1/2 Length as per rule 29 1/2 Distance apart 8 1/4 Number and pitch of stays in each 2'-9"

Working pressure by rules 327 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 _____

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:—

One set top & bottom ends with bolts & nuts
One set main bearing bolts, One set coupling bolts, One set feed & bilge
pump valves, One set of packing rings for each cylinder & piston valves
100 assorted bolts & nuts, 30 lbs Assorted Iron Two propeller blades
1 set Eccentric rods & bolts, 1 set valve handles, 1 air pump rod
1 set Cheek valves etc.

The foregoing is a correct description,

Samatao, Tokio Manufacturer.

Dates { During progress of work in shops -- Oct 29 1921 Dec 20. 1922
 of Survey while building { During erection on board vessel ---
 Total No. of visits Aug 11, 18, 23, 25, 28, 22, 25, 26, 28, 29. Sept 4, 5, 7, 12, 15. 46 visits
 Is the approved plan of main boiler forwarded herewith
 Dates of Examination of principal parts—Cylinders 11.1.22 Slides 18.5.22 Covers 14.1.22 Pistons 18.5.22 Rods 24.8.22
 Connecting rods 24.8.22 Crank shaft 11.7.22 Thrust shaft 11.7.22 Tunnel shafts 28.8.22 Screw shaft 28.8.22 Propeller 5.9.22
 Stern tube 18.8.22 Steam pipes tested 13-9-22 Engine and boiler seatings 12-9-22 Engines holding down bolts 12-9-22
 Completion of pumping arrangements 25-9-22 Boilers fixed 15-9-22 Engines tried under steam 25-9-22
 Completion of fitting sea connections 5.9.22 Stern tube 5.9.22 Screw shaft and propeller 5.9.22
 Main boiler safety valves adjusted 22-9-22 Thickness of adjusting washers ~~not~~ fitted
 Material of Crank shaft S Identification Mark on Do. J.S.C. Material of Thrust shaft S Identification Mark on Do. J.S.C
 Material of Tunnel shafts S Identification Marks on Do. J.S.C Material of Screw shafts S Identification Marks on Do. J.S.C
 Material of Steam Pipes S Test pressure 600 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 No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been built under special survey in accordance with the requirements of the Rules. The material & workmanship have been found good and the machinery worked satisfactorily under steam and a slight in my opinion for the record of + L.M.C. 9.22

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.22. F.D.

CH. H. B. 8/12/22

The amount of Entry Fee ... £ 750
 Special ... £ 1164
 Donkey Boiler Fee ... £ ✓
 Travelling Expenses (if any) £ ✓

When applied for. 29.9.1922
 When received. 27.10.1922

R. B. Patterson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned
FRI. 9 MAR. 1923
+ L.M.C. 9.22
F.D.



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

MACHINERY DEPT.
WRITTEN.