

# REPORT ON MACHINERY

Received at London Office

MON. 21 OCT. 1921

Date of writing Report 2-8-1921 When handed in at Local Office 2-8-1921 Port of YOKOHAMA

No. in Survey held at TSURUMI Date, First Survey 26<sup>th</sup> JUNE 1920 Last Survey 12<sup>th</sup> AUG 1921  
Reg. Book. (Number of Visits 37)

on the STEEL TWIN SCREW STEAMER "GINYO MARU"

Gross 8600.18  
Net 6255.34  
When built 1921

Master GIICHI YAMAMASU Built at TSURUMI By whom built ASANO S.B.C<sup>o</sup>

Engines made at INDIANAPOLIS By whom made MIDWEST ENGINE CO when made 1920

Boilers made at TSURUMI By whom made ASANO S.B.C<sup>o</sup> when made 1921

Registered Horse Power **NHP. 965** Owners TOYO KISEN KAISHA Port belonging to YOKOHAMA

SHAFT ~~Normal~~ Horse Power **AT FULL POWER 5600** Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

ENGINES, &c.—Description of Engines PARSONS CROSS COMPOUND No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 13.62 Length of Stroke 13.75 Revs. per minute 90 Dia. of Screw shaft as per rule 13.62 Material of STEEL  
as fitted 13.75 screw shaft

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 YES If two

liners are fitted, is the shaft lapped or protected between the liners YES Length of stern bush 5'-2"

Dia. of Tunnel shaft as per rule 12.6 Dia. of Crank shaft journals as per rule 13 Dia. of Crank pin 13 Size of Crank webs 13 Dia. of thrust shaft under

collars 13 Dia. of screw 15'-9" Pitch of Screw 17-9" No. of Blades 4 State whether moccable YES Total surface 79.75

No. of Feed pumps 3 WOODSON Diameter of ditto 10 1/2 x 5 Stroke 24 Can one be overhauled while the other is at work YES

No. of Bilge pumps 1 DUPLEX Diameter of ditto 6 x 4 1/4 Stroke 6 Can one be overhauled while the other is at work

BILGE & BALLAST 1 " " " 9 x 12 " 10" No. and size of Suctions connected to both Bilge and Donkey pumps

No. of Donkey Engines 1 G.S. DONKEY Sizes of Pumps 10 x 6 x 10 In Engine Room 4. 3/2 ON MAINLINE 2, 3 1/2 INDEPENDENT In Holds, &c. SIDE BUNKERS 2 3/2: B.R. 2, 3/2: N<sup>o</sup> 1 HOLD 2. 3/2

N<sup>o</sup> 2 HOLD 2 3/2: N<sup>o</sup> 3 HOLD 2. 3/2: N<sup>o</sup> 4 HOLD 2. 3/2: N<sup>o</sup> 5 HOLD 1 3/2 TUNNEL 1 3/2

No. of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump YES Is a separate Donkey Suction fitted in Engine room & size 2. 3/2

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

Are all connections with the sea direct on the skin of the ship YES Are they Valves or Cocks BOTH YES

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 BELOW

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 FORF. HOLD SUCTIONS How are they protected WOOD CEILING

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 TOP PLATFORM

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

Total Heating Surface of Boilers 2461.1 Is Forced Draft fitted YES No. and Description of Boilers 4 S.B.

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 26-5-21 No. of Certificate 166

Can each boiler be worked separately YES Area of fire grate in each boiler 60.4 No. and Description of Safety Valves to

each boiler 2 SPRING LOAD Area of each valve 9.64 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 22" Mean dia. of boilers 14'-3" Length 11'-6" Material of shell plates STEEL

Thickness 1 13/32 Range of tensile strength 28 TO 32 Are the shell plates welded or flanged NO Descrip. of riveting: cir. seams DOUBLE

long. seams TRAB RIVET Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Lap of plates or width of butt straps 22"

Per centages of strength of longitudinal joint rivets 97 Working pressure of shell by rules 217 lbs Size of manhole in shell 12' x 16"

Size of compensating ring 36 1/2 x 32 1/2 No. and Description of Furnaces in each boiler 3 MORISON Material STEEL Outside diameter 41.25

Length of plain part top 36 1/2 bottom 32 1/2 Thickness of plates crown 5/8 Description of longitudinal joint WELDED No. of strengthening rings 2

Working pressure of furnace by the rules 221 Combustion chamber plates: Material STEEL Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 15/16

Pitch of stays to ditto: Sides 10 x 7 1/2 Back 8 1/2 x 8 1/8 Top 8 x 9 1/4 If stays are fitted with nuts or riveted heads NUTS Working pressure by rules 212

Material of stays STEEL Area at smallest part 2.14 Area supported by each stay 75.4 Working pressure by rules 242 End plates in steam space:

Material STEEL Thickness 13/16 Pitch of stays 16 1/2 x 19 How are stays secured NUTS & WASHERS Working pressure by rules 230 Material of stays STEEL

Area at smallest part 8.14 Area supported by each stay 313.5 Working pressure by rules 279 Material of Front plates at bottom STEEL

Thickness 3/4 Material of Lower back plate STEEL Thickness 3/4 Greatest pitch of stays 18" INSCRIBED CIRCLE Working pressure of plate by rules 268

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 200 Girders to Chamber tops: Material STEEL Depth and

thickness of girder at centre 9" x 13 1/4 Length as per rule 30 1/2 Distance apart 8 Number and pitch of stays in each 2-9 1/4

Working pressure by rules 322 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 FOSTER Date of Approval of Plan YES Tested by Hydraulic Pressure to 650

Date of Test AT BUFFALO 14-6-20 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler YES

Diameter of Safety Valve 2" Pressure to which each is adjusted 205 Is Easing Gear fitted YES

IS A DONKEY BOILER FITTED? **NO**

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Spare gear supplied as per rule requirement with extra spare gear as per owners requirements

The foregoing is a correct description,

*A. Arata* Manufacturer.

Dates of Survey while building: During progress of work in shops (1920) JUNE 26 NOV 2 DEC 17-27 (1921) FEB 2-5-15 MAR 2-15-18-29 APR 4-8-16-20-27-28 MAY 10-13-17-21 JUNE 1. During erection on board vessel (1921) MAY 19-21 JUNE 23-27 JULY 4-8-9-12-14-15-19-22-26 AUG 11-12 Total No. of visits 37

Is the approved plan of main boiler forwarded herewith **NO**  
" " " donkey " " " **NO**

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓ Pistons ✓ Rods ✓  
Connecting rods ✓ Crank shaft ✓ Thrust shaft ✓ Tunnel shafts 4-7-21 Screw shaft 27-4-21 Propeller 27-4-21  
Stern tube 27-4-21 Steam pipes tested 14-7-21 Engine and boiler seatings 1-6-21 Engines holding down bolts 9-7-21  
Completion of pumping arrangements 15-7-21 Boilers fixed 23-6-21 Engines tried under steam 19-8-21  
Completion of fitting sea connections 19-5-21 Stern tube 19-5-21 Screw shaft and propeller 19-5-21  
Main boiler safety valves adjusted 15-7-21 Thickness of adjusting washers FP 17/32 1/2 FS 1/2 1/2 AP 19/32 25/32 AS 23/32 3/8  
Material of Crank shaft ✓ Identification Mark on Do. ✓ Material of Thrust shaft ✓ Identification Mark on Do. ✓  
Material of Tunnel shafts STEEL Identification Marks on Do. LLOYDS R.O.B WITH DATES Material of Screw shafts STEEL Identification Marks on Do. LLOYDS 26-10-20 S 11-12-20 P 14-3-21 SP ROB  
Material of Steam Pipes STEEL Test pressure 600 lbs

Is an installation fitted for burning oil fuel **SUCTIONS ONLY FITTED** 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

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 approved plans and the Society's Rules. The materials and workmanship are good. The machinery tried under steam and found satisfactory eligible in my opinion for record of LMC 8-21**

It is submitted that this vessel is eligible for THE RECORD. + LMC. 8-21. FI. CL. 965. NHP  
4 Steam turbines geared to 2 Screw shafts

*Roll* *ARR*  
26/10/21

The amount of Entry Fee ... ¥ 60.00 When applied for,  
Special ... ¥ 1095.00 15-8-1921  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ 44.00 13-9-1921

Committee's Minute TUE. NOV. 7 1921

Assigned + *Amc 8.31* *J.D. Cl*

*Alex Ewing*  
Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 22 NOV. 1921



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Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

CERTIFICATE WRITTEN.