

# REPORT ON MACHINERY.

Date of writing Report 3rd June, 1918 When handed in at Local Office 10 Port of Yokohama Received at London Office MON 22 JUL 1918

No. in Survey held at Reg. Book. Date, First Survey Decr 27th, Last Survey 28th May, 1918  
(Number of Visits 21)

on the Steel Single Screw Steamer "Kureha Maru" Gross 5809  
Net 3648

Master Tsurumi Built at Tsurumi By whom built Asano S. B. Co. Ltd (Yard No. 7) When built 1918

Engines made at Tekie By whom made Ishikawajima Shipbuilding & E. Co. Ltd when made 1918

Boilers made at Tekie By whom made do when made 1918

I.H.P. 3500 Registered Horse Power 3500 Owners Tatsuuma S. S. Co Port belonging to Yokohama

Nom. Horse Power as per Section 28 513 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 26-43 1/2-72 Length of Stroke 48 Revs. per minute 79 Dia. of Screw shaft as per rule 15 Material of screw shaft S  
as fitted 16

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 I length 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 tight fit If two liners are fitted, is the shaft lapped or protected between the liners xx Length of stern bush 63 3/8"

Dia. of Tunnel shaft as per rule 13.6 Dia. of Crank shaft journals as per rule 14.25 Dia. of Crank pin 14 1/2 Size of Crank webs 27x9 1/2 Dia. of thrust shaft under collars 14 1/2 Dia. of screw 17-19" Pitch of Screw xx No. of Blades 4 State whether moveable Yes Total surface 99-65 sq ft

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 1 G.D. Sizes of Pumps 7"x5"x7" No. and size of Suctions connected to both Bilge and Donkey pumps  
1 B.D. 9x12x10

In Engine Room 2 Woodeson feed pumps 10 1/2 x 8 x 8 In Holds, &c. No. 1, 1-3 1/2" No. 2, 2-3 1/2"

No. 3, 2-3 1/2" No. 4, 2-3 1/2"

No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump Cer. P. Is a separate Donkey Suction fitted in Engine room & size Yes 5"

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 bilge 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 Worth Bros.

Total Heating Surface of Boilers 7376.4 Is Forced Draft fitted Yes No. and Description of Boilers 3 Multitubular

Working Pressure 200 Tested by hydraulic pressure to 400 Date of test 30-4-18 No. of Certificate A.7  
27-4-18

Can each boiler be worked separately Yes Area of fire grate in each boiler 58.289 ft No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 11.04 sq in Pressure to which they are adjusted 205 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 S

Thickness I 13/32 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.  
long. seams D.B.S.T.R. Diameter of rivet holes in long. seams I 1/2 Pitch of rivets 10 Lap of plates or width of butt straps 22

Per centages of strength of longitudinal joint rivets 91.4 Working pressure of shell by rules 223 Size of manhole in shell 16 x 12  
plate 85

Size of compensating ring 36 1/2 x 32 1/2 No. and Description of Furnaces in each boiler 3 Deighton Material S Outside diameter 3-10 1/2

Length of plain part top xx Thickness of plates crown 3 Description of longitudinal joint Weld No. of strengthening rings x  
bottom 3

Working pressure of furnace by the rules 217 Combustion chamber plates: Material S Thickness: Sides 45/64 Back 44/64 Top 45/64 Bottom 15/16

Pitch of stays to ditto: Sides 10 1/2 x 7 1/2 Back 8 3/8 x 8 5/8 Top 9 1/2 x 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 207

Material of stays S Area at smallest part 2-03 Area supported by each stay 83 Working pressure by rules 221 End plates in steam space:

Material S Thickness I 3/16 Pitch of stays 18 3/4 x 16 1/2 How are stays secured D. Nuts Working pressure by rules 214 Material of stays S

Area at smallest part 7.7 Area supported by each stay 311 sq in Working pressure by rules 249 Material of Front plates at bottom S

Thickness 3/4 Material of Lower back plate S Thickness 3/4 Greatest pitch of stays 8.5 Working pressure of plate by rules 276

Diameter of tubes 3 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S 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 225 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 x 13 1/2 Length as per rule 30 3/4 Distance apart 8 Number and pitch of stays in each 2 x 9 1/2

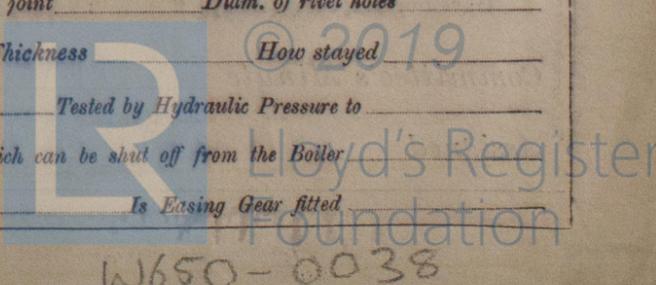
Working pressure by rules 225 Steam dome: description of joint to shell xx % of strength of joint

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

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

## SUPERHEATER. Type xx Date of Approval of Plan xx Tested by Hydraulic Pressure to xx

Date of Test xx Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler xx  
ometer of Safety Valve xx Pressure to which each is adjusted xx Is Easing Gear fitted xx



IS A DONKEY BOILER FITTED? No ✓

If so, is a report now forwarded? XX

SPARE GEAR. State the articles supplied :- One crank shaft, One propeller shaft, One propeller blade, 2 Connecting rod top-end belts and nuts, 2 connecting rod bottom-end belts and nuts, 2 main bearing belts, 1 set of coupling belts, 1 set of feed and bilge pump valves, 1 set of piston springs, A quantity of assorted belts and nuts, Iron of various sizes.

The foregoing is a correct description,

J. Uchida

THE ISHIKAWAJIMA SHIP BUILDING AND ENGINEERING Co. Ltd, TOKYO. Manufacturer.

Dates of Survey while building: During progress of work in shops - Decr 27, Jany 14, 18, 22, Feby 8, 21, 23, March 15, 26, April 4, 16, 22, 27, 30. During erection on board vessel - May 10, 11, 14, 23, 25, 27, 28. Total No. of visits - 21.

Is the approved plan of main boiler forwarded herewith No ✓

Dates of Examination of principal parts - Cylinders 30-4-18 Slides 30-4-18 Covers 30-4-18 Pistons 16-4-18 Rods 19-2-18 Connecting rods 8-2-18 Crank shaft 1-2-18 Thrust shaft 19-11-17 Tunnel shafts 12-2-18 26-2-18 Screw shaft 17-12-17 Propeller 16-4-18 Stern tube 15-3-18 Steam pipes tested 20-5-18 Engine and boiler seatings 8-3-18 Engines holding down bolts 14-5-18 Completion of pumping arrangements 23-5-18 Boilers fixed 14-5-18 Engines tried under steam 25-5-18 Completion of fitting sea connections 25-4-18 Stern tube 15-4-18 Screw shaft and propeller 25-4-18 Main boiler safety valves adjusted 23-5-18 Thickness of adjusting washers F.R.P. 15/16 in. A.S.B. 1/16 in. 3/16 in. A.P.B. Material of Crank shaft S Identification Mark on Do. R.O.B. Material of Thrust shaft S Identification Mark on Do. 13/16 in. R.O.B. Material of Tunnel shafts S Identification Marks on Do. R.O.B. Material of Screw shafts S Identification Marks on Do. R.O.B. Material of Steam Pipes Steel 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 approved plans and the Society's Rules, the materials and workmanship are good, The machinery has been satisfactorily tried under steam, and is in my opinion eligible for the record LMC 5-18.

It is submitted that this vessel is eligible for THE RECORD. + LMC 5. 18. F. D.

J.W.D. 26/7/18

Jas Cairns

Engineer Surveyor to Lloyd's Register of Shipping.

Table with 2 columns: Fee Type and Amount. Rows include: The amount of Entry Fee (£ 30), Special (£ 685), Donkey Boiler Fee (£), Travelling Expenses (if any) (£ 38:50).

Committee's Minute

FRI. 26 JUL. 1918

Assigned

+ LMC 5. 18 J.D.

MACHINERY CERTIFICATE



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Lloyd's Register Foundation

Port of Y... No. in Reg. Book... Owners... Yard No. 7

DESCRIPTION Two Cyl... Current... Capacity of D... Where is Dyn... Position of M... Positions of Engine R...

If fuses are circuits... If vessel is... Are the fu... Are all fu... are pe... Are all su... Total num... A... B... C... D... E...

2... 2... 5... If are... Where... DESCR... Main... A.Br... B.Br... C.Br... D.Br... Lead... Carg... DESC...

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