

REPORT ON MACHINERY.

No. 2401
WED. 20 NOV. 1918

Received at London Office

Date of writing Report **1st Oct, 1918** When handed in at Local Office **10** Port of **Yokohama**

No. in Survey held at **Uraga** Date, First Survey **April 30th** Last Survey **23rd Sept, 1918.**
 Reg. Booh. on the **Twin S. S. "Meiwu Maru"** (Number of Visits **27**)

Master **Uraga** Built at **Uraga** By whom built **Uraga Dock Co Ltd** Tons ^{Gross} **8230.09.**
^{Net} **5114.79.** When built **9 - 18.**

Engines made at **Uraga** By whom made **Uraga Dock Co Ltd** when made **9 - 18.**

Boilers made at **Tokyo** By whom made **Ishikawajima Shipbuilding & E Co Ltd** when made **9 - 18**

Registered Horse Power **700** Owners **Meiji Kaiun Kaisha** Port belonging to **Dairen**

Nom. Horse Power as per Section 28 **700** **703** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

ENGINES, &c.—Description of Engines **twin screw triple expansion** No. of Cylinders **6** No. of Cranks **6**

Dia. of Cylinders **22-36 1/2 - 61** Length of Stroke **48** Revs. per minute **86** Dia. of Screw shaft ^{as per rule} **13 1/2** Material of ^{as fitted} **13 7/8** screw shaft **S**

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 **x** 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 **xx** Length of stern bush **60"**

Dia. of Tunnel shaft ^{as per rule} **12.2** Dia. of Crank shaft journals ^{as per rule} **12.8** Dia. of Crank pin **13 1/2** Size of Crank webs **25x8 1/2** Dia. of thrust shaft under collars **13 1/2** Dia. of screw **16'-0** Pitch of Screw **18'-0** No. of Blades **4** State whether moveable **Yes** Total surface **85.3 sq ft**

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

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

No. of Donkey Engines **4** Sizes of Pumps **5x3 1/2 x 6" stroke, Ballast pump 9x12x10" stroke, 2 Mumford pump, 10 1/2 x 8" x 24" stroke.** No. and size of Suctions connected to both Bilge and Donkey pumps **In Engine Room 4 off-3 1/2" in bunkers, 2 off-3 1/2" In Holds, &c. No. 1 hold 2-3 1/2, No. 2 hold 2-3 1/2, No. 3 hold 2-3 1/2, No. 4 hold 2-3 1/2, No. 5 hold 2-3 1/2, tunnel 2-3 1/2, tunnel well 1-3 1/2.**

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 **Yes - 4 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 **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 **Bilge pipes** How are they protected **Wood casing & Iron in way of storm valves**

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 **9835** **11,219** **45B.** Is Forced Draft fitted **Yes** No. and Description of Boilers **4 Multitubular**

Working Pressure **200** Tested by hydraulic pressure to **400** Date of test **27-6-18** No. of Certificate **A 9, A 11.**

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 **1 1/2** 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 **1 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** **3 boilers 3-9 1/2** Outside diameter **1 boiler 3-9 1/2**

Length of plain part ^{top} **xx** Thickness of plates ^{bottom} **3/8** Description of longitudinal joint **Weld** No. of strengthening rings **x**

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 3/8** Top **9 1/4 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 **1 3/16** Pitch of stays **18 1/2 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 **3/8** Material of Lower back plate **S** Thickness **3/8** 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 **3/8** Back **3/8** 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 1 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

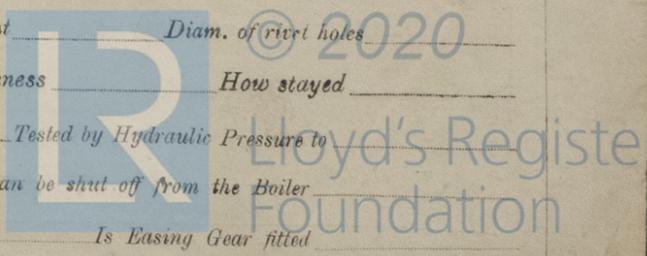
Diameter **xx** Thickness of shell plates **xx** Material **xx** Description of longitudinal joint **xx** Diam. of rivet holes **xx**

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 **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**

Diameter 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:— 4 connecting rod top end bolts & nuts 2 connecting rod bottom end bolts & nuts, 2 main bearing bolts, 6 coupling bolts, 1 set feed & bilge pump valves, 1 set piston springs, 1 section crank shaft, 1 propeller shaft, 4 propeller blades, top & bottom end brasses, main bearing brasses, ahead & astern eccentric rods, air pump rod, bolts & nuts assorted etc.

The foregoing is a correct description,

Y. Kamamura

Manufacturer.

Dates of Survey while building { During progress of work in shops - - April 30, May 13, 24, June 4, 14, 19, 27, July 5, 9, 10, 12, 13, 15, 22, 24, 25, Aug 2, 8, 9. During erection on board vessel - - - August 17, 27, Sept 7, 13, 14, 20, 21, 23. Total No. of visits 27. Is the approved plan of main boiler forwarded herewith No " " " donkey " " "

Dates of Examination of principal parts—Cylinders 9-13-7-18 Slides 22-7-18 Covers 22-7-18 Pistons 22-7-18 Rods 22-7-18 Connecting rods 22-7-18 Crank shaft 17-8-18 Thrust shaft 27-8-18 Tunnel shafts 27-8-18 Screw shaft 23-7-18 Propeller 8-8-18 Stern tube 25-7-18 Steam pipes tested 7-9-18 Engine and boiler seatings 25-7-18 Engines holding down bolts 27-8-18 Completion of pumping arrangements 21-9-18 Boilers fixed 27-8-18 Engines tried under steam 21-9-18 Completion of fitting sea connections 8-8-18 Stern tube 8-8-18 Screw shaft and propeller 13-9-18 Main boiler safety valves adjusted 23-9-18 Thickness of adjusting washers A.S.f 1 1/16", A.P.f 1 3/16", A.P.f 1 1/32", A.F.S.f 1 1/16", P.do 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 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 Yes If so, state name of vessel Mecanicien Donzel

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 L M C 9 - 18.

It is submitted that this vessel is eligible for THE RECORD. + L M C 9. 18. F. D.

JWD
21/11/18
J.P.S.

The amount of Entry Fee ... £ 850.00 When applied for, 26.9.18
Special ... £ : : When received, 1.10.18
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

Jack Cairns
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 24 DEC 1918
Assigned + L M C 9 18
F. D.

MACHINERY CERTIFICATE WRITTEN



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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.