

REPORT ON MACHINERY.

No. 2247
THU. 8-AUG. 1918

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Kobe.

No. in Survey held at Osaka and Innoshima. Date, First Survey Sept 3rd Last Survey March 20th 1918.
Reg. Book. on the Steel Screw Steamer "Meiko Maru" (Number of Visits 22.)

Master K. Jageno. Built at Innoshima By whom built The Osaka Iron Works Co. Innoshima Tons Gross 44383.49. Net 2708.71.
Engines made at Osaka. By whom made The Osaka Iron Works Co. when made 1918.
Boilers made at Osaka. By whom made The Osaka Iron Works Co. when made 1918.
Registered Horse Power Owners Meiji Kaun Kabushiki Kaisha Port belonging to Tarumi.
Nom. Hors. Power as per Section 28 390. 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 Three.

Dia. of Cylinders 24. 41. 67. Length of Stroke 48. Revs. per minute Dia. of Screw shaft as per rule 13.96. 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 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 Closely fitted If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5'-4".

Dia. of Tunnel shaft as per rule 12.46. as fitted 12 3/4. Dia. of Crank shaft journals as per rule 13.09. as fitted 13.25. Dia. of Crank pin 13 1/2. Size of Crank webs 8 1/2 x 25. Dia. of thrust shaft under collars 13 1/4. Dia. of screw 17'-0". Pitch of Screw 17'-0". No. of Blades 4. State whether moveable No. Total surface 90 ft.
No. of Feed pumps Two. Diameter of ditto 4". Stroke 25". Can one be overhauled while the other is at work Yes.
No. of Bilge pumps Two. Diameter of ditto 4 1/2". Stroke 26". Can one be overhauled while the other is at work Yes.
No. of Donkey Engines Two. Sizes of Pumps 9 1/2 x 12 x 10. 7 1/2 x 5 x 6. No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Tunnel well 3 1/2". In Holds, &c. After hold 2 @ 3 1/2". Cen. + 2 @ 3 1/2" Kings.

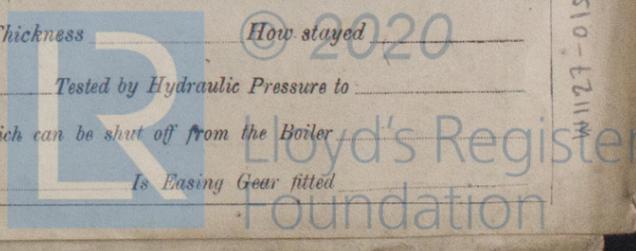
No. of Bilge Injections 1 sizes 7". Connected to condenser, or to circulating pump Core App. Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2".
Are all the bilge suction pipes fitted with roses Yes. Are the roses in Engine room always accessible Yes. Are the sluices on Engine room bulkheads always accessible None.
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 None. How are they protected ✓
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 Upper plating in Engine room.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel
Lloyds Steel Co. Bounce Fuller & Co. North Bros & Co. Deception Patent Pipe Co. Allegheny Steel Co.

Total Heating Surface of Boilers 5400 sq. ft. Is Forced Draft fitted Yes. No. and Description of Boilers Two Single Ended.
Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 30 Jan'y 1918. No. of Certificate LLOYD'S TEST: 280 LBS. 30.1.1918.
Can each boiler be worked separately Yes. Area of fire grate in each boiler 63 1/4 sq. ft. No. and Description of Safety Valves to each boiler 2 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 12". Mean dia. of boilers 15'-0". Length 12'-0". Material of shell plates Steel.
Thickness 1 1/16". Range of tensile strength 28-32 tons. Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams DR. long. seams TRDBS. Diameter of rivet holes in long. seams 15/16". Pitch of rivets 9 x 4 1/2". Lap of plates or width of butt straps 19 1/2 x 1" And 1 3/8".
Per centages of strength of longitudinal joint rivets 89.25. plate 85.41. Working pressure of shell by rules 188. Size of manhole in shell 12" x 16".
Size of compensating ring 2'-10" x 3'-2" x 1 1/4". No. and Description of Furnaces in each boiler 3 Dighton. Material Steel. Outside diameter 48 1/4".
Length of plain part top ✓ bottom ✓ Thickness of plates crown 19/32. Description of longitudinal joint Weld. No. of strengthening rings ✓
Working pressure of furnace by the rules 199 lbs. Combustion chamber plates: Material Steel. Thickness: Sides 5/8". Back 7/8". Top 7/8". Bottom 7/8".
Pitch of stays to ditto: Sides 8 x 8 1/2". Back 8 1/2 x 8 1/2". Top 9 x 8. If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 187 lbs.
Material of stays Steel. Area at smallest part 1.79 sq. ft. Area supported by each stay 8 1/2 x 8 1/2". Working pressure by rules 187 lbs. End plates in steam space: Material Steel. Thickness 1 1/32". Pitch of stays 18 x 20. How are stays secured Double nuts. Working pressure by rules 194. Material of stays Steel.
Area at smallest part 7.50 sq. ft. Area supported by each stay 18 x 20. Working pressure by rules 216. Material of Front plates at bottom Steel.
Thickness 3/4". Material of Lower back plate Steel. Thickness 3/4". Greatest pitch of stays 13 3/4". Working pressure of plate by rules 180.
Diameter of tubes 3". Pitch of tubes 4 1/8 x 4 1/4". Material of tube plates Steel. Thickness: Front 3/4". Back 3/4". Mean pitch of stays 9 1/2".
Pitch across wide water spaces 13 1/4". Working pressures by rules 180. Girders to Chamber tops: Material Steel. Depth and thickness of girder at centre 9 1/2 x 7/8". Length as per rule 34". Distance apart 9". Number and pitch of stays in each 3 @ 8".
Working pressure by rules 212 lbs. 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 None. 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



Diameter. Inches. 7/8
 As approved late. Angles. 38 8 x 3 1/2 x 5/8
 38 8 x 3 1/2 x 6/8
 40 8 x 3 1/2 x 6/8
 Water Capacity Tons. 115. 29. 693.
 of Visits 18
 If not, state whether, and when, one will be sent
 In a Report also sent on the Hull of the Ship
 510-6211W

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

- Set piston rings for all cylinders. *One set of feed and bilge pump valves.*
- Set of crank pin and crosshead brasses. *Assorted bolts and nuts and steel plate.*
- 4 Crosshead bolts and nuts.
- 2 Crank pin bolts
- Set of coupling bolts and nuts.
- 2 Main bearing bolts and nuts.

The foregoing is a correct description,

X *L. Jemura*

Manufacturer.

Dates of Survey while building: During progress of work in shops - *Sept 3rd, 9th, 29th* October 20th *Nov 1st, 4th, 5th, 13th, 14th, 19th, 27th* Dec 4th, 12th, 20th
 During erection on board vessel - *March 11th, 14th, 20th*
 Total No. of visits *22.*

Is the approved plan of main boiler forwarded herewith *Yes.*

Dates of Examination of principal parts—Cylinders *Sept 29th* Slides *Nov 13th* Covers *Nov 13th* Pistons *Nov 27th* Rods *5.12.17.*
 Connecting rods *7.12.17.* Crank shaft *7.12.17.* Thrust shaft *27.9.17.* Tunnel shafts *15 Jan'y.* Screw shaft *Feb'y 9th* Propeller *14th March.*
 Stern tube *14th March.* Steam pipes tested *March 23rd* Engine and boiler seatings *Feb'y 9th* Engines holding down bolts *March 11th*
 Completion of pumping arrangements *19th March.* Boilers fixed *March 14th* Engines tried under steam *March 20th*
 Completion of fitting sea connections *Feb 28th* Stern tube *Feb 28th* Screw shaft and propeller *Feb 28th*
 Main boiler safety valves adjusted *March 20th* Thickness of adjusting washers *Lock nuts.*
 Material of Crank shaft *Steel* Identification Mark on Do. *Lloyds 27.9.17. A.L.S.R.* Material of Thrust shaft *Steel* Identification Mark on Do. *Lloyds 27.9.17. A.L.S.R.*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *Lloyds 27.9.17. A.L.S.R.* Material of Screw shafts *Steel* Identification Marks on Do. *OZ 6, 14, 11, 17, 18.*
 Material of Steam Pipes *Steel.* 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. *✓*

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 *S.S. Meighen Maru Report No. S.S. Indus Maru.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery has been made and fitted under special survey in accordance with the requirements of the Rules and the materials and workmanship have been found good. In my opinion the machinery of this vessel is eligible for the record of + L.M.C. 3.18.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3.18 F.D.

13-8-18 *APK*

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

The amount of Entry Fee ... £ *Yen 30.00* When applied for, *March 22nd 1918*
 Special ... £ *Yen 593.00*
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : : *March 28th 1918*

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

Committee's Minute *FRI. AUG. 16. 1918*
 Assigned *+ L.M.C. 3.18*
F.D.

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