

REPORT ON MACHINERY.

No. 2350

Received at London Office

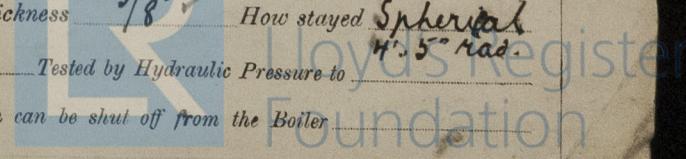
MON. 13 JAN. 1919

Writing Report 10 When handed in at Local Office 10 Port of **Kobe.**
 in Survey held at **Osaka** Date, First Survey **25 Jan'y** Last Survey **20 Sept 1918**
 on the **Steel Sloop Sei. Steamer "Shin fuku Maru"** (Number of Visits **1st**)
 ter **Built at Osaka** By whom built **Fujinagata Dockyard Co** Tons { Gross **2204.9**
 Net **1298.7**
 When built **1918**
 ines made at **Osaka** By whom made **Fujinagata Dockyard Co** when made **1918**
 ers made at **do** By whom made **do** when made **do**
 istered Horse Power **189** Owners **Nishimoto Kisen Kaisha** Port belonging to **Nishinomiyama**
 Horse Power as per Section 28 **189** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

FINES, &c.—Description of Engines **Triple Expansion** No. of Cylinders **3** No. of Cranks **3**
 of Cylinders **18 1/2 : 30 1/2 : 51 1/2** Length of Stroke **36** Revs. per minute **80** Dia. of Screw shaft as per rule **11.4** Material of screw shaft **Steel**
 as fitted **11.7/16** Is the after end of the liner made water tight
 the screw shaft fitted with a continuous liner the whole length of the stern tube **no**
 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
 cranks are fitted, is the shaft lapped or protected between the liners **lapped near liners** Length of stern bush **3" 8 1/2"**
 Dia. of Tunnel shaft as per rule **9.46** Dia. of Crank shaft journals as per rule **9.93** Dia. of Crank pin **10 1/4** Size of Crank webs **6 3/4 x 18** Dia. of thrust shaft under
 cranks **10 1/8** Dia. of screw **13" 6"** Pitch of Screw **16" 6"** No. of Blades **4** State whether moveable **no** Total surface **57.3 sq'**
 of Feed pumps **2** Diameter of ditto **3 1/2"** Stroke **16"** Can one be overhauled while the other is at work **yes**
 of Bilge pumps **2** Diameter of ditto **3 1/2"** Stroke **16"** Can one be overhauled while the other is at work **yes**
 of Donkey Engines **Two** Sizes of Pumps **Bal. 6 1/2 x 8 x 9 dupl. Gen. serv. 4 1/2 x 6 do** No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room **One 3" & two 2 3/4"** **small wky 7 x 4 1/2 x 6 dupl.** In Holds, &c. **Two 2 3/4" to each hold.**
 No. of Bilge Injections **1** sizes **5"** Connected to condenser, or to circulating pump **no** Is a separate Donkey Suction fitted in Engine room & size **yes 3"**
 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 **Large 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 **no**
 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 platform in E. Rm.**

OILERS, &c.—(Letter for record **S**) Manufacturers of Steel **Carnegie Steel Co. & Leeds Forge**
 Total Heating Surface of Boilers **3195 sq'** Is Forced Draft fitted **no** No. and Description of Boilers **Two Single ended**
 Working Pressure **180 lbs** Tested by hydraulic pressure to **360 lbs** Date of test **2 Sept. 1918** No. of Certificate **LLOYD'S TEST 360 lbs. hyd. 29/18 ALJ. R.**
 Can each boiler be worked separately **yes** Area of fire grate in each boiler **50 sq'** No. and Description of Safety Valves **no**
 Each boiler **Two Direct Spring** Area of each valve **2 5/8 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 **8" to bunk. pl. 14" to inside ceiling** Mean dia. of boilers **12.6"** Length **10.6"** Material of shell plates **Steel**
 Thickness **1 1/8"** Range of tensile strength **28-32 tons** Are the shell plates welded or flanged **no** Descrip. of riveting: cir. seams **W. Riv**
 long. seams **Doub. Straps** Diameter of rivet holes in long. seams **1 5/16"** Pitch of rivets **8 1/4" 7 1/8"** Top of plates or width of butt straps **17 1/2 x 7/8"**
 Per centages of strength of longitudinal joint plate **107.0** Working pressure of shell by rules **180 lbs** Size of manhole in shell **12" x 16"**
 Size of compensating ring **32" x 36" x 1 1/8"** No. and Description of Furnaces in each boiler **3 Morrison's Suspension** Material **Steel** Outside diameter **40 1/4"**
 Length of plain part top **2** Thickness of plates crown **1** Description of longitudinal joint **Weld** No. of strengthening rings **no**
 Working pressure of furnace by the rules **187 lbs** Combustion chamber plates: Material **Steel** Thickness: Sides **5/8"** Back **5/8"** Top **5/8"** Bottom **3/4"**
 Pitch of stays to ditto: Sides **7 1/2" x 9"** Back **7 3/4" x 7 1/4"** Top **8 1/2" x 8"** If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **197**
 Material of stays **Steel** Area at smallest part **1.77 sq'** Area supported by each stay **67 1/2 sq'** Working pressure by rules **210 lbs** End plates in steam space:
 Material **Steel** Thickness **1"** Pitch of stays **16" x 15"** How are stays secured **Doub. nuts 10" x 5/8" riv. washers** Working pressure by rules **213 lbs** Material of stays **Steel**
 Area at smallest part **5.9 sq'** Area supported by each stay **16" x 15"** Working pressure by rules **256 lbs** Material of Front plates at bottom **Steel**
 Thickness **3/4"** Material of Lower back plate **Steel** Thickness **3/4"** Greatest pitch of stays **14 1/2" at wide** Working pressure of plate by rules **180 lbs**
 Diameter of tubes **3 1/4"** Pitch of tubes **4 3/8"** Material of tube plates **Steel** Thickness: Front **3/4"** Back **3/4"** Mean pitch of stays **9 3/4"**
 Pitch across wide water spaces **14 3/4"** Working pressures by rules **180 lbs** Girders to Chamber tops: Material **Steel** Depth and
 thickness of girder at centre **7 3/4" x 1 3/4"** Length as per rule **29 1/2"** Distance apart **8"** Number and pitch of stays in each **2 @ 9" 8 1/2"**
 Working pressure by rules **216 lbs** Steam dome: description of joint to shell **Flanged & doub. riv** % of strength of joint **67 1/2%**
 Diameter **3" 4"** Thickness of shell plates **5/8"** Material **Steel** Description of longitudinal joint **W. Riv. lap** Diam. of rivet holes **1 1/16"**
 Pitch of rivets **3 1/4"** Working pressure of shell by rules **276 lbs** Crown plates Thickness **5/8"** How stayed **Spherical 4" 5" rad.**

SUPERHEATER. Type **Horizontal** Date of Approval of Plan **no** Tested by Hydraulic Pressure to **no**
 Date of Test **no** Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler **no**
 Diameter of Safety Valve **no** Pressure to which each is adjusted **no** Is Easing Gear fitted **no**



IS A DONKEY BOILER FITTED? *no* ✓

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two main bearing bolts ✓

Two crank pin bolts & set braces ✓

Four crosshead bolts ✓

Two sets coupling bolts ✓

Two eccentric rods ✓

One valve rod.

Air & circulating pump rods.

Feed & bilge pump valves & seats ✓

Packing rings each piston ✓

Safety valve springs.

Assorted bolts & nuts. ✓

Iron various sizes. ✓

The foregoing is a correct description,

Fujinagata Dockyard Manufacturer.

Dates of Survey while building	During progress of work in shops --	25 th Jan'y.	19 th Feb'y.	19 th Mar.	26 th Mar.	24.	26 Apr	&	27 th Jly before	
		During erection on board vessel --	request for class was made.							
			30 th Jly.	16 th Aug.	22 nd Aug.	2.13.	16.	20 th Sep.	19.	
Total No. of visits		14								

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

None

Dates of Examination of principal parts—Cylinders 30th Jly Slides 30th Jly Covers 30th Jly Pistons 30th Jly Rods 21st Apr

Connecting rods 21st Apr. Crank shaft 26th Apr. Thrust shaft 30th Jly Tunnel shafts 30th Jly Screw shaft 22nd Aug Propeller 22nd Aug

Stern tube 22nd Aug Steam pipes tested 16th Sept. Engine and boiler seatings 22nd Aug Engines holding down bolts 16th Sept.

Completion of pumping arrangements 16th Sept. Boilers fixed 13th Sept. Engines tried under steam 20th Sept.

Completion of fitting sea connections 16th Sept. Stern tube 13th Sept. Screw shaft and propeller 16th Sept.

Main boiler safety valves adjusted 20th Sept. Thickness of adjusting washers Locknuts

Material of Crank shaft Steel Identification Mark on Do. *Japan Govt mark* Material of Thrust shaft Steel Identification Mark on Do. *Japan Govt mark*

Material of Tunnel shafts Steel Identification Marks on Do. *Japan Govt marks* Material of Screw shafts Steel Identification Marks on Do. *do*

Material of Steam Pipes Solid drawn Copper Test pressure 360 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 *Yoto Maru, Chojun Maru, Sachin Yoto Maru II. by same builders.*

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

The survey was requested after all parts of the engines had been machined & were nearly completed. The boilers have been surveyed during construction. The engines had been seen from time to time in surveying other work before the survey for class was requested. The workmanship & dimensions have been found to accord with the plans & the Society's Rules. Compensation for the weakening of the boiler shells by the dome connections has been fitted as in the sister vessels. The boiler steel is all certified as having been tested by the Society's Surveyors. The steel shafting & rods are certified as tested by the Government Surveyors to the same limits as required by this Society.

The machinery is in my opinion eligible for the record LMC 9.18.

It is submitted that this vessel is eligible for THE RECORD. LMC 9.18.

Arthur Jones
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ...	£ 20	When applied for,
Special ...	£ 4.00	30 th Sep 1918.
Donkey Boiler Fee ...	£	When received,
Travelling Expenses (if any) £	: 10	1 st Oct. 1918.

Committee's Minute FRI. 17 JAN. 1919

Assigned LMC 9.18.



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