

Rpt. 4. **REPORT ON MACHINERY** No. 2994

Received at London Office

TUE. JAN. 25 1920

Date of writing Report Dec. 14th 1920 When handed in at Local Office 10 Port of Kobe

No. in Survey held at Ou, Harima Date, First Survey Dec. 26th 1919 Last Survey Sept. 27th 1920
Reg. Book. on the Steel Single Screw Steamer "YPRES MARU" (Number of Visits 43) Gross 6783.03
Tons Net 4987.89

Master J. Ando Built at Ou, Harima By whom built Teikoku Steamship Co., Harima When built 1920

Engines made at Kobe By whom made Kobe Steel Wks., Ltd. when made 1920

Boilers made at Kobe + Harima By whom made Kobe Steel Works, Ltd. + Harima Dockyard. when made 1920

Registered Horse Power Owners Teikoku Steamship Co. Port belonging to Ou.

Nom. Horse Power as per Section 28 584 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 3

Dia. of Cylinders 28" 47" 79" Length of Stroke 51" Revs. per minute 75 Dia. of Screw shaft as per rule 15.82 Material of steel
as fitted 16.25 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 ✓ 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 ✓ If two

liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5'-8"

Dia. of Tunnel shaft as per rule 14.54 Dia. of Crank shaft journals as per rule 15.27 Dia. of Crank pin 16" Size of Crank webs 30x10 Dia. of thrust shaft under
as fitted 14.75 as fitted 15.75 1552 EXPANDED

collars 15.75 Dia. of screw 18'-6" Pitch of Screw 19'-9" No. of Blades 4 State whether moveable yes Total surface 106.6

No. of Feed pumps 2 Diameter of ditto 5' Stroke 25 1/2" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 5' Stroke 25 1/2" Can one be overhauled while the other is at work yes

No. of Donkey Engines 5 Sizes of Pumps Five - 9 x 7 1/2 x 33 impeller No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2 @ 3 1/2" 1 @ 4" In Holds, &c. 2 each @ 3 1/2" in Nos. 1, 2, 3, 4 + 5.

1 in Tunnel Well 3 1/2" 2 @ 3 1/2" in Deep tank

No. of Bilge Injections 1 sizes 8 3/4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 1 @ 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 ✓

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 Suctions to No 1, 2 holds, Abl. Room How are they protected Wooden casing

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 E. R. top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Illinois Steel Co.

Total Heating Surface of Boilers 7956 Is Forced Draft fitted yes No. and Description of Boilers 3 Single Ended Scotch

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 23-7-20; 24-7-20; 4-8-20 No. of Certificate 237-2001-201 4-8-20

Can each boiler be worked separately yes Area of fire grate in each boiler 64 No. and Description of Safety Valves to

each boiler two spring loaded Area of each valve 12.566 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 1'-6" Mean dia. of boilers 15'-6" Length 11'-9" Material of shell plates steel

Thickness 1 1/8" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. lap

long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10 1/8" Lap of plates or width of butt straps 22.25

Per centages of strength of longitudinal joint rivets 90.29 Working pressure of shell by rules 211 lbs. Size of manhole in shell 16" x 12"
plate 85.18

Size of compensating ring 35 1/4" x 31 1/4" No. and Description of Furnaces in each boiler 3 Morrison's Material steel Outside diameter 4'-1 1/4"

Length of plain part top ✓ Thickness of plates crown 5/8" bottom 7/8" Description of longitudinal joint Welded No. of strengthening rings ✓

Working pressure of furnace by the rules 202 lbs. Combustion chamber plates: Material steel Thickness: Sides 1/16" Back 23/32" Top 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 8 1/4" x 9 3/8" Back 9" x 9 3/4" Top 8 1/4" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 202 lbs.

Material of stays steel Area at smallest part 2.10 Area supported by each stay 88.03 Working pressure by rules 214 lbs. End plates in steam space:

Material steel Thickness 1 1/32" Pitch of stays 21 1/4" x 16 1/2" How are stays secured D.N. + Washers Working pressure by rules 214 lbs. Material of stays steel

Area at smallest part 8.296 Area supported by each stay 361.9 Working pressure by rules 238 lbs. Material of Front plates at bottom steel

Thickness 1 1/32" Material of Lower back plate steel Thickness 15/16" Greatest pitch of stays 14" x 12" Working pressure of plate by rules 231 lbs.

Diameter of tubes 3" Pitch of tubes 4 1/4" x 4 1/4" Material of tube plates steel Thickness: Front 1 1/32" Back 7/8" Mean pitch of stays 10.625

Pitch across wide water spaces 14 Doubling Working pressures by rules 361 lbs. Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 10 1/2" x 1 1/2" Length as per rule 2'-10" Distance apart 9" Number and pitch of stays in each 3'-8 1/4"

Working pressure by rules 223 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

UPERHEATER. Type Foster Date of Approval of Plan marked Tested by Hydraulic Pressure to 600 lbs.

Date of Test 23-8-20 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 lbs. Is Easing Gear fitted no

IS A DONKEY BOILER FITTED? **no**

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

- 1 Set of packing rings for each piston.
- 1/4 Junk ring bolts + nuts.
- 1 of each size of slide valve rod with nut + washer
- 1 pair of Eccentric rods.
- 1 Complete set of Crosshead brass bolts + nuts.
- 1 " " " Crank pin " " "
- 1 " " " Main bearing bolts.
- 1 " " " each of metallic packing for piston + slide valve rods.
- 1 of each size of spring for cyl. + receiver escape valve
- 3/4 of whole number of main condenser tubes.
- 1 Complete set of coupling bolts.

- 1/2 of whole number of main condenser ferrules.
- 1 air pump rod + nut.
- 1/2 set of air pump valve + guard.
- 1 Complete set of valves seats + guards for each hot well pump.
- 1 set of escape valve springs for each hot well pump.
- 1 Complete set of valves + seats for main feed check valve.
- 1 Safety valve spring for each boiler
- 1/4 of whole number of fire bars.

The foregoing is a correct description,

THE TEIKOKU STEEL CO., LTD.

S. Nishida
Manufacturer.

Director

Dates of Survey while building

- During progress of work in shops --
- During erection on board vessel ---
- Total No. of visits

Continuous attendance Dec. 26, 1919 - May 10th 1920; July 6, 7, 10, 15, 16, 17, 20, 21, 22, 23, 24, 27, 28, 30, 31;
Aug. 4, 5, 7, 10, 15, 19, 23, 25, 29; Sept. 1, 3, 4, 9, 10, 13, 22, 27.
43.

1920 May 21, 24, 31; June 4, 10, 11, 23, 30; July 2, 3, 5, 6, 7, 10, 15, 16, 17, 20, 21, 22, 23, 24, 27, 28, 30, 31;

Is the approved plan of main boiler forwarded herewith **yes**

" " " donkey " " "

Dates of Examination of principal parts—Cylinders ⁵⁻⁸⁻²⁰ 13-2-20 Slides ¹¹⁻²⁻²⁰ 11-2-20 Covers ⁵⁻⁸⁻²⁰ 13-2-20 Pistons 24-7-20 Rods 21-7-20
Connecting rods 10-6-20 Crank shaft 10-5-20 Thrust shaft 31-5-20 Tunnel shafts ⁴⁻⁸⁻²⁰ 10-2-20 Screw shaft 23-6-20 Propeller 9-9-20
Stern tube 24-5-20 Steam pipes tested 13-9-20 Engine and boiler seatings 15-8-20 Engines holding down bolts 3-9-20
Completion of pumping arrangements 10-9-20 Boilers fixed 19-8-20 Engines tried under steam ²⁷⁻⁹⁻²⁰ 27-9-20
Completion of fitting sea connections 4-9-20 Stern tube 29-8-20 Screw shaft and propeller 3-9-20
Main boiler safety valves adjusted 22-9-20 Thickness of adjusting washers Lock nuts
Material of Crank shaft **steel** Identification Mark on Do. ³⁰⁻⁴⁻²⁰ Material of Thrust shaft **steel** Identification Mark on Do. ³¹⁻⁵⁻²⁰
Material of Tunnel shafts **steel** Identification Marks on Do. ³¹⁻⁵⁻²⁰ Material of Screw shafts **steel** Identification Marks on Do. ³¹⁻⁵⁻²⁰
Material of Steam Pipes **Solid** ~~double~~ **steel** Test pressure 600 lb.
Is an installation fitted for burning oil fuel **Partly 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 **yes**
Is this machinery duplicate of a previous case **yes** If so, state name of vessel **1/2 "SEINE MARU" (Kobe Rpt. No. 2984)**

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

The machinery of this vessel has been made and fitted under special survey in accordance with the requirements of the rules. The materials and workmanship are good and the machinery worked satisfactorily on trial. It is eligible in my opinion for the notation **LMC 9-20**

It is submitted that this vessel is eligible for **THE RECORD. + LMC. 9.20 FI**

Fitted for Oil Fuel 9.20 FP above 130°F

Roll 29/1/21

R. P. Batcher
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... **Yes** 30.- : When applied for,
Special ... £ 875.- : Oct. 8th 1920
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : 30/10/20

Committee's Minute **THE REC. + 11921**
Assigned **+ L.M.C. 9.20**

F.D.

CERTIFICATE WRITTEN



Certificate (if required) to be sent to

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