

# REPORT ON MACHINERY.

No. 2405

Received at London Office

MON 17 MAR. 1919

Date of writing Report 19 When handed in at Local Office 19

Port of Kobe

No. in Survey held at Osaka and Imosshima.

Date, First Survey January 22<sup>nd</sup> Last Survey October 23<sup>rd</sup> 1918.

Reg. Book. on the Steel Screw Steamer "Hoyeisan Maru"

(Number of Visits 29)

Master K. Tsugi Built at Imosshima By whom built Osaka Iron Works.

Innosshima branch. Tons } Gross 6079.05  
Net 3850.07

Engines made at Osaka By whom made Osaka Iron Works.

when made 1918

Boilers made at Osaka By whom made Osaka Iron Works.

when made 1918

Registered Horse Power Owners Mitsui bussan Kaishiki Kaisha Port belonging to Kobe

Nom. Horse Power as per Section 28 553 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 27" 45" 75" Length of Stroke 51" Revs. per minute 65 Dia. of Screw shaft as per rule 15.27" 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 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

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5'-6"

Dia. of Tunnel shaft as per rule 13.67" Dia. of Crank shaft journals as per rule 14.35" Dia. of Crank pin 14 7/8" Size of Crank webs 9 1/4 x 27 1/2" Dia. of thrust shaft under

collars 14 7/8" Dia. of screw 18-3" Pitch of Screw 18-3" No. of Blades 4 State whether moveable Yes Total surface 100 sq ft

No. of Feed pumps Two Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps 10 x 13 x 13, 10 x 13 x 13, 10 x 13 x 13 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 3 1/2" Boiler Room 2 @ 3 1/2" & 2 @ 2 1/2" In Holds, &c. 3 1/2" to each side in each hold

No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Circ. pump 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 Vank air pipes How are they protected Strong hood 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 Upper Plating in Eng. room

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel Dukes Iron & Steel Coy. Reading Iron Coy.

Total Heating Surface of Boilers 8100 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Three Single ended

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 15.7.18 No. of Certificate 360 lbs.

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 Two Spring loaded Area of each valve 3" dia Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 15'-0" Length 12'-0" Material of shell plates Steel

Thickness 1 5/16" Range of tensile strength 26,79-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DRL

long. seams TRDBS Diameter of rivet holes in long. seams 1 5/16 + 1/16 Pitch of rivets 9" Lap of plates or width of butt straps 1'-7 1/2"

Per centages of strength of longitudinal joint rivets 85 plate 85.3 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 Three Dagon Material Steel Outside diameter 4'-0 1/4"

Length of plain part top 19 1/2" Thickness of plates crown 19 1/2" Description of longitudinal joint Weld. No. of strengthening rings

Working pressure of furnace by the rules 195 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 7/8"

Pitch of stays to ditto: Sides 8 1/4 x 8 1/2 Back 8 1/2 x 8 1/2 Top 8 x 9 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 in Area supported by each stay 72 1/4 sq in Working pressure by rules 222 End plates in steam space:

Material Steel Thickness 1 7/32 Pitch of stays 18 x 20 How are stays secured Nuts Working pressure by rules 193 lbs Material of stays Steel

Area at smallest part 7.50 Area supported by each stay 18 x 20 Working pressure by rules 204 Material of Front plates at bottom Steel

Thickness 3/4 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 14" Working pressure of plate by rules 180 lbs

Diameter of tubes 3" Pitch of tubes 4 1/4 x 4 1/8 Material of tube plates Steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10"

Pitch across wide water spaces 13 1/4 Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 3/4 x 1 3/4 Length as per rule 33 1/2 Distance apart 9" Number and pitch of stays in each 3 @ 8"

Working pressure by rules 192 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 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

iameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W1333-0301



IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded?

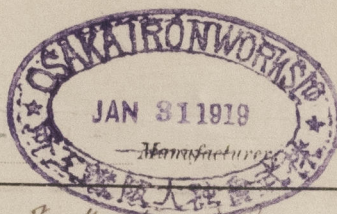
Yes.

SPARE GEAR. State the articles supplied:—

Two Connecting Rod bolts & nuts. ✓ Iron of Various sizes. ✓ Set of Eccentric Rods (Ahead & Aft).  
Two Connecting Rod bottom end bolts & nuts. ✓ One Spare Propeller Shaft. ✓ Air Pump Rod.  
Two Main bearing bolts. ✓ One propeller Blade (Bruntz metal) ✓ Set Sea Check Valves & Seats.  
One Set of feed & bilge pump valves. ✓ One set crank pin & crosshead brasses. ✓ Two Safety Valve springs.  
One set of piston springs. ✓ One set of Coupling bolts. ✓ One Quadrant.  
Quantity of assorted bolts & nuts. ✓ Set of slide valve rods. ✓ 20 plain boiler tube. etc. ✓

The foregoing is a correct description,

Kahachi Abe



Dates of Survey while building  
During progress of work in shops -- Jan. 22. 24. 28. Feb. 1. 7. 13. 23. March 6. 19. 30. Apr 5. 11. May 9 June 7  
During erection on board vessel -- 20 29 July 1 August 13. 15. 20  
Total No. of visits -- Sept 8. 11. 13. 21. 23 Oct 1. 7. 13. 23  
Is the approved plan of main boiler forwarded herewith Yes. ✓  
29. Visits.

Dates of Examination of principal parts—Cylinders Jan 24<sup>th</sup> Slides Feb 7<sup>th</sup> Covers Feb 7<sup>th</sup> Pistons Feb 7<sup>th</sup> Rods Feb 7<sup>th</sup>  
Connecting rods 28/1/18 Crank shaft 26. 8. 18. Thrust shaft 26. 6. 18. Tunnel shafts 9. 8. 18. Screw shaft 1. 7. 18. Propeller Sept 8<sup>th</sup>  
Stern tube Aug 8<sup>th</sup> Steam pipes tested 16<sup>th</sup> & 21<sup>st</sup> Sept. Engine and boiler seatings Sept 8. Engines holding down bolts Sept 21  
Completion of pumping arrangements Sept 28<sup>th</sup> Boilers fixed Sept 23<sup>rd</sup> Engines tried under steam Sept 29<sup>th</sup>  
Completion of fitting sea connections Sept 23<sup>rd</sup> Stern tube August 13<sup>th</sup> Screw shaft and propeller Sept 11<sup>th</sup>  
Main boiler safety valves adjusted Sept 25. Thickness of adjusting washers lock nuts.  
Material of Crank shaft Steel Identification Mark on Do. LLOYD'S 26. 8. 18. Material of Thrust shaft Steel Identification Mark on Do. LLOYD'S 26. 6. 18.  
Material of Tunnel shafts Steel Identification Marks on Do. LLOYD'S 9. 8. 18. Material of Screw shafts Steel Identification Marks on Do. LLOYD'S 1. 7. 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. Noaisan Maru T.S. Taibu Mar  
Kobe report nos. 2441 and.

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.

The Machinery is in my opinion eligible for the Record of + L.M.C. 10. 18.

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 10. 18. F.D.

Handwritten signature and date: 17/3/19

Handwritten signature: R. B. Batcher

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... Yen 30. :  
Special ... Yen 7.5. :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :  
When applied for, Oct 15 1918  
When received, Oct 22 1918

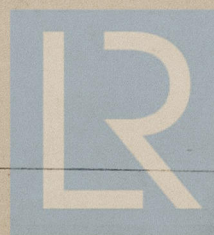
TUE. 1-APR. 1919

Committee's Minute

Assigned

+ L.M.C. 10:18 F.D.

MAILED CERTIFICATE



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