

Received at London Office

Date of writing Report 15th March 1919 at Osaka Port of Kobe
 No. in Survey held at Osaka Date, First Survey 29 May 1918 Last Survey 10 June 1918
 Reg. Book. on the Steel Single Screw Steamer "Kaisho Maru" (Number of Vents 3) Gross 6071
 Master Osaka Built at Osaka By whom built Osaka Iron Works Ltd. When built 1918 Net 4433
 Engines made at Osaka By whom made Osaka Iron Works Ltd. when made 1918
 Boilers made at do By whom made do when made do
 Registered Horse Power 553 Owners Katsuda Kisen Kaisha Port belonging to Mitsuyama
 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 Trip. Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27.45.75 Length of Stroke 57 Revs. per minute 65 Dia. of Screw shaft 15.27 Material of 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 Fits tightly. If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5.6
 Dia. of Tunnel shaft 13.67 Dia. of Crank shaft journals 14.35 Dia. of Crank pin 14.78 Size of Crank webs 9.4 x 27 Dia. of thrust shaft under
 collars 14.7 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 4.5 Stroke 27 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Three Sizes of Pumps Bal. 10 x 13 x 13 Dup. In Engine Room Two 3.5 Small 6 x 4 x 6 In Holds, &c. 3.5 each side each hold

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Wm Beardmore & Co. Glasgow
 Total Heating Surface of Boilers 8100 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 1st April 1918 No. of Certificate 360 LBS
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63.5 No. and Description of Safety Valves to
 each boiler Two, 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 1.8 Mean dia. of boilers 15.0 Length 12.0 Material of shell plates Steel
 Thickness 1.4 Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double riv.
 long. seams Double riv. Diameter of rivet holes in long. seams 1.5 Pitch of rivets 9 x 4.5 Lap of plates or width of butt straps 1.75 x 1.8
 Per centages of strength of longitudinal joint 89.25 Working pressure of shell by rules 187 lbs Size of manhole in shell 12 x 16
 Size of compensating ring 34 x 38 x 1.4 No. and Description of Furnaces in each boiler 3 Brighton Material Steel Outside diameter 48.4
 Length of plain part 19.32 Thickness of plates 19/32 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 7/8 Bottom 7/8
 Pitch of stays to ditto: Sides 8.4 x 8.5 Back 8.5 x 8.5 Top 8 x 9 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 187 lbs
 Material of stays Steel Diameter at smallest part 1.79 Area supported by each stay 42.4 Working pressure by rules 222 lbs End plates in steam space:
 Material Steel Thickness 1.73 Pitch of stays 18 x 20 How are stays secured Double nuts Working pressure by rules 193 lbs Material of stays Steel
 Diameter at smallest part 7.06 Area supported by each stay 18 x 20 Working pressure by rules 204 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 Working pressure of plate by rules 180 lbs
 Diameter of tubes 3 Pitch of tubes 4.4 x 4.5 Material of tube plates Steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10
 Pitch across wide water spaces 13.4 Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9.5 x 7 (top) Length as per rule 39.5 Distance apart 9 Number and pitch of stays in each 3 @ 8
 Working pressure by rules 218 lbs Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked
 separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet
 holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓
 If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓
 Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied: -

4 Bolts + nuts for crosshead	Propeller shaft + nut
2 " " " " " " " " " " " "	2 Propeller blades
2 " " " " " " " " " " " "	Centrif. impeller shaft
4 " " " " " " " " " " " "	Safety valve springs
Set packing rings + Springs for each piston	Etc. etc.
Crank pin + xhd braces	
Slide valve rods	
Eccentric rods	
Piston rod each size	
A.P. rod + valves	
Set coupling bolts + nuts	
Feed + help pump valves	
Assorted bolts + nuts	
Iron, various sizes	
Crank ring bolts	

The foregoing is a correct description

Plum sign
L. J. Jones



Dates of Survey while building

During progress of work in shops	29 Aug. 3 Sep. 1. 20 Nov. 12 Dec. 1917.	11. 22. 24 Jan. 1. 7. 8. 19. 22 Feb. 5. 8. 15. 22 Mar.
During erection on board vessel	1. 5. 12. 13. 15. 18. 19. 24. 30 April. 3. 9. 10. 11 May. 7. 10 June 1918	
Total No. of visits	33.	

Is the approved plan of main boiler forwarded herewith *Yes with Rpt No 2141 on the "donkey" "Hovaisan Mem"*

Dates of Examination of principal parts -

Cylinders	22/1/18	Slides	24/1/18	Covers	24/1/18	Pistons	7/2/18	Rods	8/2/18
Connecting rods	25/12/17	Crank shaft	12/4/18	Thrust shaft	26/2/18	Tunnel shafts	5/4/18	Screw shaft	5/3/18
Stern tube	8/3/18	Steam pipes tested	3 & 4 May '18	Engine and boiler seatings	22/2/18	Engines holding down bolts	9/5/18		
Completion of pumping arrangements	7/6/18	Boilers fixed	24/4/18	Engines tried under steam	11/5/18				
Main boiler safety valves adjusted	11/5/18	Thickness of adjusting washers	do check						

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S 12.4.18 A.L.J.R.*

Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S 26.2.18 A.L.J.R.*

Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYD'S 11/1/18: 8/3/18 26/3/18: 15/3/18: 5/4/18: 22/3/18 A.L.J.R.*

Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S 5.3.18 A.L.J.R.*

Material of Steam Pipes *S.d. Steel 5 1/2 dia. 5/16 thick* 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. *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 *Hovaisan Mem No 881 (2141) Taiyu Mem. " 898 (2177)*

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

The machinery has been made + fitted under Special Survey in accordance with the requirements of the Rules + the materials + workmanship are good.

On the preliminary trial the starboard furnace flue of the middle boiler partially collapsed + was afterwards replaced by a new flue + the boiler retested to 270 lbs hyd pr. + found tight.

The vessel is eligible in my opinion for the notation + L.M.C 6.18

It is submitted that this vessel is eligible for THE RECORD + L.M.C 6.18 F.D.

L. J. Jones
11-10-18

The amount of Entry Fee ... *4en 30* When applied for, *27 May 1918*

Special ... *4en 7/5*

Donkey Boiler Fee ... *£*

Travelling Expenses (if any) & ... *£*

Arthur L. Jones
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. OCT. 11. 1918*

Assigned *+ L.M.C 6.18*



Rpt. 5a.

Date of writing Report

No. in Survey Reg. Book.

on the

Master

Engines made at

Boilers made at

Registered Horse

MULTITUB

(Letter for record)

Boilers

No. of Certificate

safety valves to

Are they fitted u

Smallest distance

Material of shell

Descrip. of rivet

Rules

boiler

Description of lo

plates: Material

Top

smallest part

Pitch of stays

Area supported

Lower back plat

Pitch of tubes

water spaces

girder at centre

Working pressure

Diameter

Pitch of rivets

SUPERHEA

Date of Test

Diameter of Safety

GENERAL

Shi

accord

Survey Fee

Travelling E

Committee's

Assigned

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