

REPORT ON MACHINERY

No. 2187

Received at London Office

THU. JUN. 6 - 1918

Date of writing Report 25th July 1918 When handed in at Local Office to Port of Kobe

No. in Survey held at Osaka Date, First Survey 13 March 1917 Last Survey 28 Jan'y. 1918

Reg. Book. on the Steel Single Screw Steamer "Kifunezan Maru No. 2" (Number of Visits 40)

Master Osaka Built at Osaka By whom built The Osaka Iron Works Ltd When built 1918

Engines made at Osaka By whom made The Osaka Iron Works, Ltd. when made 1918

Boilers made at do By whom made do when made do

Registered Horse Power 287 Owners Hashimoto Kisen Kaisha Port belonging to Nagasaki

Nom. Horse Power as per Section 28 287 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 22" : 37" : 61" Length of Stroke 42" Revs. per minute 70 Dia. of Screw shaft 12.82 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 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 4" 9"

Dia. of Tunnel shaft 11.21 as per rule 11.38 as fitted Dia. of Crank shaft journals 11.77 as per rule 12" as fitted Dia. of Crank pin 12" Size of Crank webs 7 3/8" x 26 at joint Dia. of thrust shaft under collars 12 Dia. of screw 16" 0' Pitch of Screw 16" 0' No. of Blades 4 State whether moveable No Total surface 80 sq. ft.

No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps Bal. 7 x 8 1/2 x 9" duplex No. and size of Suctions connected to both Bilge and Donkey pumps General 6 x 6 x 6" duplex In Engine Room Two 3" dia. each side In Holds, &c. Two 3" dia. to each hold

No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump Cir. P. 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 Yes

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.R.

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Cambria Steel Co. Deighton's Pat. Steel & Tube Co.

Total Heating Surface of Boilers 3652 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 5 Nov. 1917 No. of Certificate LLOYD'S HYD. TEST. 360 LBS. ALD. 5-11-17

Can each boiler be worked separately Yes Area of fire grate in each boiler 45.3 No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 3 1/2" 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 13" 6" Length 11" 6" Material of shell plates Steel

Thickness 1 1/4" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double No. long. seams Double riveted Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 5/8" x 4 5/16" Top of plates or width of butt straps 18 3/8" x 1 1/2" out

Per centages of strength of longitudinal joint 84.8 rivets. 85.5 plate Working pressure of shell by rules 209 lbs 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 "Deighton" Material Steel Outside diameter 40 1/2"

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

Working pressure of furnace by the rules 186 lbs Combustion chamber plates: Material Steel Thickness: Sides 25/32 Back 21/32 Top 23/32 Bottom 25/32

Pitch of stays to ditto: Sides 8 x 10 1/2" Back 8 1/2 x 8 1/4" Top 10 1/2 x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 194 lbs

Material of stays Steel Area at smallest part 1.79 sq. ins Area supported by each stay 70.1 sq. ins Working pressure by rules 200 lbs End plates in steam space: Material Steel Thickness 1 1/8" Pitch of stays 16 1/2 x 18 1/4" How are stays secured Double nuts Working pressure by rules 187 lbs Material of stays Steel

Area at smallest part 5.9 sq. ins Area supported by each stay 16 1/2 x 18 1/4" Working pressure by rules 204 lbs Material of Front plates at bottom Steel

Thickness 29/32 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 14" set stay Working pressure of plate by rules 190 lbs

Diameter of tubes 3" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 29/32 Back 1/8" Mean pitch of stays 10 1/2"

Pitch across wide water spaces 14" Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 3/4" x 13" (top) Length as per rule 34" Distance apart 9 3/8" Number and pitch of stays in each 3 @ 8"

Working pressure by rules 240 lbs Steam dome: description of joint to shell Yes % of strength of joint Yes

SUPERHEATER. Type None Date of Approval of Plan None Tested by Hydraulic Pressure to None

Date of Test None Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler None

Diameter of Safety Valve None Pressure to which each is adjusted None Is Easing Gear fitted None



W1208-0233

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two main bearing bolts + nuts ✓
Sea & helge pump valves ✓ Two cross pin bolts + nuts ✓
Safety valve springs ✓ Two crosshead bolts + nuts ✓
Packing for each piston ✓ Set coupling bolts + nuts ✓
Pin + bolts + nuts of assorted sizes ✓*

The foregoing is a correct description,

C. Yumda

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *13th, 24th March. 6th, 16th, 23rd April. 1. 8. 14. 22 May. 4. 16. 30 June. 6. 10. 28 July*
{ During erection on board vessel -- } *10. 16. 24 29 Aug. 3rd 13 28 Sept. 4. 8. 20 28 Oct. 1st 5. 13. 20 Nov.*
Total No. of visits *1st 7. 12. 20 Dec. 1917*

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

40. / 8th 9th 10th 14th 22nd 24th 28th Jan. 1918 " " " donkey " " "

Dates of Examination of principal parts—Cylinders *30/6/17* Slides *28/7/17* Covers *10/8/17* Pistons *10/8/17* Rods *10/7/17*
Connecting rods *10/7/17* Crank shaft *28/7/17* Thrust shaft *10/8/17* Tunnel shafts *10/8/17* Screw shaft *20/12/17* Propeller *20/10/17*
Stern tube *28/10/17* Steam pipes tested *19/1/18* Engine and boiler seatings *20/12/17* Engines holding down bolts *14/1/18*
Completion of pumping arrangements *22/1/18* Boilers fixed *14/1/18* Engines tried under steam *24/1/18*
Completion of fitting sea connections *8/1/18* Stern tube *20/12/18* Screw shaft and propeller *9/1/18*
Main boiler safety valves adjusted *24/1/18* Thickness of adjusting washers *Locknuts*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S 16.7.17 A.L.J.R.* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S 30.5.18 A.L.*
Material of Tunnel shafts *Steel* Identification Marks on Do. *do.* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S 9.4.18 A.L.J.*
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 If so, state name of vessel

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

The machinery has been made & fitted under Special Survey & the materials & workmanship have been found good.

The vessel is eligible in my opinion for the notation + LMC 1.18 in the Register.

The shafting has been made at the Sunittomo Steel Works.

It is submitted that this vessel is eligible for THE RECORD + LMC 1.18.

J.W.D. 7/5/18

Arthur Jones

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee *Yes : 20* When applied for, *28 Jan 1918*
Special *Yes : 514*
Donkey Boiler Fee *---* When received, *1st Feb. 1918*
Travelling Expenses (if any) *Yes : 20*

TUE. 11 JUN. 1918

Committee's Minute

Assigned

+ L.M.C. 1:18

MACHINERY CERTIFICATE WRITTEN.



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