

Rpt. 4.

REPORT ON MACHINERY

No. 2162
MON. 10. MAR. 1918

Received at London Office

Date of writing Report 4th Jan 1918 When handed in at Local Office 19 Port of Kobe

No. in Survey held at Kobe Date, First Survey Jan. 15th Last Survey Dec. 13 1917
Reg. Book. on the Single Screw Steamer "Celebes Maru" (Number of Visits 50) Tons { Gross 5856
Net 4254

Master Built at Kobe By whom built The Kawasaki Dockyard Co. Ltd. When built 1917

Engines made at Kobe By whom made The Kawasaki Dockyard Co. Ltd. when made 1917

Boilers made at do By whom made do when made do

Registered Horse Power Owners The Osaka Shosen Kaisha Port belonging to Osaka

Nom. Horse Power as per Section 28 440 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 26" 43 1/2" 42" Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 15.41" Material of screw shaft Steel
as fitted 16"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tight

In the propeller boss 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' 5 1/2"

Dia. of Tunnel shaft as per rule 13.48" Dia. of Crank shaft journals as per rule 14.15" Dia. of Crank pin 14 3/4" Size of Crank webs 9 1/2" x 20 1/2" Dia. of thrust shaft under
as fitted 13 3/4" as fitted 14 3/8"

Collars 14 3/8" Dia. of screw 17' 6" Pitch of Screw 19' 0" mean No. of Blades 4 State whether moveable Yes Total surface 100 sq. ft.

No. of Feed pumps One Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes (+ twin feed)

No. of Bilge pumps Two Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Four Sizes of Pumps Bal. 10, 11, 12 dupe. No. and size of Suctions connected to both Bilge and Donkey pumps
Gen. Ser. 4 1/2 x 5.6 dupe.
In Engine Room Three 3 1/2" 2 Wein 9 1/2 x 7.24 In Holds, &c. Nos. 1, 3 & 4 holds, two 3 1/2" each.
One 3" to tun. well. Small Dry 5 1/2 x 3 1/2 x 9 dupe. No. 2 hold, two 4"

No. of Bilge Injections 1 sizes 10" 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

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 grating in Eng. Rm.

BOILERS, &c.—(Letter for record S. V.) Manufacturers of Steel Beardmore, Jno. Spence, Jno. Marshall.
4609 + 1132 (Ans. ber.) David Colville & Sons. J. & C. Scotland. Alan Wood

Total Heating Surface of Boilers 5741 sq. ft. Is Forced Draft fitted Yes No. and Description of Boilers Two S.E. & Aw. S.E.

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 24 & 31 July 1917 No. of Certificate 400 lbs H.Y.D.
A.L.S. 24/31/17 R

Can each boiler be worked separately Yes Area of fire grate in each boiler 60 1/2 sq. ft. No. and Description of Safety Valves to

each boiler Two, Direct Spring Area of each valve 3 3/4" dia. 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 12" Mean dia. of boilers 14' 6" Length 12' 0" Material of shell plates Steel

Thickness 1 5/16" Range of tensile strength 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Doub. riv.

ng. seams Doub. Straps Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 8 3/4" x 4 3/8" Top of plates or width of butt straps 1' 7 5/8"

Per centages of strength of longitudinal joint rivets 95.8 plate 84.3 Working pressure of shell by rules 209 lbs Size of manhole in shell 16" x 12"

Size of compensating ring (7 1/2" + flange) 1 5/16" No. and Description of Furnaces in each boiler Three Morrison Material Steel Outside diameter 48 1/2"

Length of plain part top all round crown 5 7/8" Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 208 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"

Pitch of stays to ditto: Sides 8 5/8" x 8 1/2" Back 9 x 8 1/2" Top 9 3/8" x 8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 203 lbs

Material of stays Steel Area at smallest part 2.1 sq. ft. Area supported by each stay 9 3/8" x 8 1/2" Working pressure by rules 230 lbs End plates in steam space:

Material Steel Thickness 1 5/16" Pitch of stays 19 3/4" x 20 1/2" How are stays secured Doub. nuts Working pressure by rules 201 lbs Material of stays Steel

Area at smallest part 10 sq. ft. Area supported by each stay 19 3/4" x 20 1/2" Working pressure by rules 260 lbs Material of Front plates at bottom Steel

Thickness 13/16" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13 1/2" at ends Working pressure of plate by rules 200 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 7/16" x 4 5/16" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 8 3/4"

Pitch across wide water spaces 13 3/4" Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 10 1/2" x 13 (two) Length as per rule 34 1/2" Distance apart 9 3/8" Number and pitch of stays in each 3 @ 8 1/2"

Working pressure by rules 230 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

Visits 34 SUPERHEATER. Type Schmidt Date of Approval of Plan Tested by Hydraulic Pressure to 600 lbs

Date of Test 29 Aug + 3rd Sept. 1917 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 3" Pressure to which each is adjusted 205 lbs Is Easing Gear fitted No

2500-935500-125500

Yes

Four main bearing bolts & nuts. ✓	Set packing rings & springs for each piston
Two crank pin bolts & nuts. ✓	Set fund ring bolts & nuts
Set coupling " " ✓	One Crank shaft. One Propeller shaft
Two Cross head " " ✓	Four prop. blades & two sets studs & nuts.
Set feed & bilge pump valves. ✓	Slide valve spindle Each size.
Assorted bolts & nuts & iron. ✓	Centrifugal impeller & shaft.

Howasak: D. & W. Co., Ltd.

Per: _____

Manufacturer.

Στε. & Cer

Dates of Survey while building	{	During progress of work in shops --	Jan'y 15 th 24 th 29 th Feb. 10 th 14 th 21 st 28 th Mar. 14 th Apr. 9 th May 11 th 19 th 24 th June 5 th 9 th 11 th July 9 th
		During erection on board vessel --	Aug. 2 nd 20 th 29 th Sept. 3 rd 7 th 17 th 22 nd 25 th 28 th Oct. 9 th 11 th 18 th 21 st 22 nd 29 th 30 th Nov. 3 rd 5 th 6 th 9 th 13 th 14 th
		Total No. of visits	50.
			Dec. 3 rd 4 th 6 th 11 th 13 th 1914.

Is the approved plan of main boiler forwarded herewith? 2

Is the approved plan of main boiler forwarded herewith ⁹ ~~trial~~ ^{at} ~~of~~
 " " " ^{Ans.} ~~Donkey~~ " ^{with report no. 1} ~~on~~ ^{on} ~~Sister W.~~ ^{"Donkey} ~~at~~

Dates of Examination of principal parts—Cylinders 19/5/17 etc		Slides 5/6/17 etc		Covers 19/5/17 etc		Pistons 24/7/17 etc		Rods 11/5/17 etc	
Connecting rods 28/9/17 etc		Crank shaft 13/7/17 etc		Thrust shaft 7/9/17 etc		Tunnel shafts 7/9/17 etc		Screw shaft 5/10/17 etc	
Stern tube 30/10/17		Steam pipes tested 4/10/17		5/10/17		Engine and boiler seatings 3/11/17		Engines holding down bolts 24/11/17	
Completion of pumping arrangements 29/11/17		Boilers fixed 24/11/17		Engines tried under steam 4/12/17					
Completion of fitting sea connections 6/11/17		Stern tube 3/11/17		Screw shaft and propeller 6/11/17					
Main boiler safety valves adjusted 27/11/17		Thickness of adjusting washers		Lock nuts					
Material of Crank shaft Steel		Identification Mark on Do. L10405		Material of Thrust shaft Steel		Identification Mark on Do. L10405			
Material of Tunnel shafts Steel		Identification Marks on Do. L10405		Material of Screw shafts Steel		Identification Marks on Do. L10405			
Material of Steam Pipes Steel		" 10 " and " 17 1/2 " A.L.J.		Test pressure 600 lbs.		Span 1/2 in.			
Is an installation fitted for burning oil fuel No				Is the flash point of the oil to be used over 150°F. K53D					

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 War Queen War Prince Bonanza of the U.S. Navy

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.

The vessel made satisfactory trial trips making an average speed of 14 knots & the main parts of the engines opened out after the trials were finished in good condition.

The kernel is in my opinion eligible for the notation $+LMC 12.14$.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 12.17. F.D.

AUD.
 18/3/18

The amount of Entry Fee	...	Rs 30	:	} When applied for, Dec. 21, 1917
Special	...	Rs 594	:	
Donkey Boiler Fee	...	Rs 50	:	
Travelling Expenses (if any)	£	:	:	When received, Dec. 27, 1917

Arthur L. Jones

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 22. MAR. 1918

Assigned

+ L. MC 12:17 J. H.

MACHINERY CERTIFICATE
WRITTEN

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Lloyd's Register
Foundation