

REPORT ON MACHINERY.

No. 2140

THU, 7 FEB. 1919

Received at London Office

Date of writing Report 20th Nov. 1917 When handed in at Local Office

Port of Kobe

No. in Survey held at Osaka Date, First Survey 16th Jan'y 1917 Last Survey 10th Novem. 1917
Reg. Book. on the Steel Twin Screw Steamer "Alps Maru" (Number of Vials 40)

Master Built at Osaka By whom built The Osaka Iron Works, Ltd. Tons Gross 7489 Net 4861
When built 1917

Engines made at Osaka By whom made The Osaka Iron Works 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

Net Horse Power as per Section 28 655 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Engines, &c.—Description of Engines Triple Expansion No. of Cylinders 6 Three No. of Cranks 3 Each engine

Dia. of Cylinders 21½:35:58 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 13½ as fitted 13¾ 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

Is 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 Fitted closely If two

boilers are fitted, is the shaft lapped or protected between the liners Length of stern bush 4'9"

Dia. of Tunnel shaft as per rule 11'9½ as fitted 12'8" Dia. of Crank shaft journals as per rule 12'5½ as fitted 12'¾ Dia. of Crank pin 12¾ Size of Crank webs 8½x17½ Dia. of thrust shaft under

bolts 12¾ Dia. of screw 15'9" Pitch of Screw 18'0" to 19'0" No. of Blades 4 State whether moveable Yes Total surface 78 sq. ft

No. of Feed pumps 2 Diameter of ditto 3½ Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3½ Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps Bal. 9½-12. 10 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Three 3½ & two 3" in tunnels In Holds, &c. Two 3½" in each hold

No. of Bilge Injections 2 sizes 7½ Connected to condenser, or to circulating pump Cir. p. Is a separate Donkey Suction fitted in Engine room & size Yes 3½

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 No

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

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 platform S. Rm.

Boilers, &c.—(Letter for record S.) Manufacturers of Steel Newburn (John Spencer & Sons) Brighton & Co.

Total Heating Surface of Boilers 9332 Is Forced Draft fitted Yes No. and Description of Boilers Three S. E. & one aux. S. E.

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 22nd May 1917 No. of Certificate 440-105

Can each boiler be worked separately Yes Area of fire grate in each boiler 20'6" x 3' = 61'8" No. and Description of Safety Valves to 22'5'17 lbs

In each boiler Two Spring Loaded Area of each valve 3" 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 15'0" Length 12'0" Material of shell plates Steel

Thickness 1½ Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double

butt straps Diameter of rivet holes in long. seams 1½ Pitch of rivets 9¾ & 4½ Lap of plates or width of butt straps 2½ x 1½

Percentage of strength of longitudinal joint rivets 91.9 plate 85.2 Working pressure of shell by rules 203 lbs Size of manhole in shell 12'16"

No. and Description of Furnaces in each boiler Three Brighton Material Steel Outside diameter 47½"

Length of plain part top bottom Thickness of plates crown 5/8 Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 213½ Combustion chamber plates: Material Steel Thickness: Sides 2½/32 Back 2½/32 Top 2½/32 Bottom 7/8"

Pitch of stays to ditto: Sides 8½ x 8½ Back 8½ x 8½ Top 8 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 206 lbs

Material of stays Steel Area at smallest part 179 Area supported by each stay 72 Working pressure by rules 223 End plates in steam space:

Material Steel Thickness 1/9 Pitch of stays 18 x 20 How are stays secured Nut nuts Working pressure by rules 215 lbs Material of stays Steel

Area at smallest part 8.29 Area supported by each stay 18 x 20 Working pressure by rules 239 Material of Front plates at bottom Steel

Thickness 13/16 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 14½ between nuts Working pressure of plate by rules 200 lbs

Diameter of tubes 3¼ Pitch of tubes 4½ x 4½ Material of tube plates Steel Thickness: Front 13/16 Back 13/16 Mean pitch of stays 10½/16

Pitch across wide water spaces 14" double Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 10½ x 7/8 (2) Length as per rule 34'6" Distance apart 9" Number and pitch of stays in each 8" (three)

Working pressure by rules 246 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 Schmidt Date of Approval of Plan Tested by Hydraulic Pressure to 600 lbs

Date of Test 13th 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

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Lead & bilge pump valves. ✓
Safety valve springs ✓
Piston packing ✓
Two crank pin bolts & nuts. ✓
Two cross head bolts & nuts. ✓
Set Coupling bolts & nuts. ✓
Two main bearing bolts & nuts ✓
Junk ring bolts ✓
Assorted bolts & nuts ✓
Iron, various sizes. ✓

The foregoing is a correct description,

G. Yerrunde
Eng. Mgr. O. J. Wds. Manufacturer.

Dates of Survey while building
During progress of work in shops -- 16th 30th Jan'y 9th 24th Feb'y 14th 24th March 12th 23rd April 1st 8th 22nd 30th May
During erection on board vessel --- 4th 6th 12th 13th 16th 19th 23rd 26th 30th June 4th 6th 10th 11th 20th 21st 27th July 2nd 10th 20th 24th August
Total No. of visits 40 3rd 13th Sept. 4th 18th 20th Oct. 1st 4th 10th November 1917.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 16/1/17 etc Slides 16/1/17 etc Covers 9/2/17 etc Pistons 9/2/17 etc Rods 24/3/17
Connecting rods 12/4/17 Crank shaft 16/6/17 Thrust shaft 12/6/17 etc Tunnel shafts 20/4/17 etc Screw shaft 26/6/17 etc Propeller 10/7/17
Stern tube 26/6/17 Steam pipes tested 20/8/17 Engine and boiler seatings 4/7/17 Engines holding down bolts 3/9/17
Completion of pumping arrangements 4/10/17 Boilers fixed 3/9/17 Engines tried under steam 20/10/17
Completion of fitting sea connections 6/7/17 Stern tube 6/7/17 Screw shaft and propeller 6/7/17
Main boiler safety valves adjusted 18/10/17 Thickness of adjusting washers locknuts

Material of Crank shaft Steel Identification Mark on Do. 16.6.17 20.6.17
Material of Tunnel shafts Steel Identification Marks on Do. 12.6.17 20.6.17
Material of Steam Pipes Steel ✓ 23.6.17 27.7.17
Material of Thrust shaft Steel Identification Mark on Do. 12.6.17 20.6.17
Material of Screw shafts Steel Identification Marks on Do. 12.6.17 20.6.17

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 No. ✓ 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 in accordance with the requirements of the Rules & the materials & workmanship have been found good.

The mean speed on trial was 14½ Knots at 90 revs. Draught 13' 11½" mean. I.H.P. 5438.

The shafting was made at The Simitone Steel Works & copies of the Certificate are enclosed.

The machinery is in my opinion eligible for the notation +LMC 11.17.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 11.17. F.D.

AF-8
12/7/18.

Arthur L. Jones

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... You : 30⁰⁰
Special ... You 791²⁵
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 10th Nov 1917
When received, 16th Nov 1917

Committee's Minute TUE. FEB. 12 1918.

Assigned + L.M.C. 11.17.

F.D.



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