

REPORT ON OIL ENGINE MACHINERY

No. 1533

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of writing Report 4th May. 1926, When handed in at Local Office 4th May 1926 Port of **NAGASAKI**.

No. in Survey held at **NAGASAKI**. Date, First Survey 13th May 1925. Last Survey 21st Apr. 1926.

Book. on the ~~Book~~ **Twin** Screw Motor Vessel **"LA PLATA MARU"**. Tons Gross 7267. Net 4387.

Built at **Nagasaki**. By whom built **Mitsubishi Zosen Kaisha Ltd.** Yard No. 411 When built 1926.

Engines made at **Winterthur**. By whom made **Sulzer Bros.** Engine No. 5477 5483 When made 1925.

Donkey Boilers made at **Nagasaki**. By whom made **Mitsubishi Zosen Kaisha Ltd.** Boiler No. 411. When made 1926.

Brake Horse Power 2300 each engine = Owners **Osaka Shosen Kabushiki Kaisha**. Port belonging to **Osaka**.

Nom. Horse Power as per Rule 1164. 2Eng Refrigerating Machinery fitted for cargo purposes **Yes** Is Electric Light fitted **Yes**

IL ENGINES, &c.—Type of Engines **Sulzer Diesel Engines**. 2 or 4 stroke cycle **2** Single or double acting **Single**.

Maximum pressure in cylinders **38 Ats.** No. of cylinders **12 Total** Diameter of cylinders **600 m/m.** No. of cranks **12 Total** Length of stroke **1060 m/m.**

a of bearings, adjacent to the Crank, measured from inner edge to inner edge **810 m/m.** Is there a bearing between each crank **Yes.**

olutions per minute **112.** Flywheel dia. **2100 m/m.** Weight **10300 Kg.** Means of ignition **Temp. due to Comp.** Kind of fuel used **Heavy Fuel Oil.**

ink Shaft, dia. of journals as per Rule **386 m/m.** Crank pin dia. **405 m/m.** Crank Webs Mid. length breadth **550 m/m.** Thickness parallel to a-s **1**

as fitted **405 "** Mid. length thickness **225 "** Thickness around eyehole **1**

Wheel Shafts, diameter as per Rule **386 m/m.** Intermediate Shafts, diameter as per Rule **292 m/m.** Thrust Shaft, diameter at collars as per Rule **306.6 m/m.**

as fitted **405 "** as fitted **337 "** as fitted **390 m/m.**

be Shafts, diameter as per Rule **326 m/m.** Is the **screw** shaft fitted with a continuous liner **Yes.**

as fitted **381 "**

onze Liners, thickness in way of bushes as per Rule **17.5 m/m.** Thickness between bushes as per rule **13.5 m/m.** Is the after end of the liner made watertight in the

as fitted **19 "** as fitted **15 "**

PELLER boss **Yes** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **In one length.**

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**

two liners are fitted, is the shaft lapped or protected between the liners **Is an approved Oil Gland or other appliance fitted at the after**

d of the tube shaft **No** Length of Bearing in Stern Bush next to and supporting propeller **1695 m/m.**

propeller, dia. **12'-10"** Pitch **15'-9"** No. of blades **4** Material **Nickel. whether Moveable Yes** Total Developed Surface **52.1 sq. feet**

ethod of reversing Engines **Direct.** Is a governor or other arrangement fitted to prevent racing of the engine **Yes** Means of lubrication

forced at top Thickness of cylinder liners **45 m/m.** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material **Yes** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine **Exh. led to funnel.**

ooling Water Pumps, No. **Five.** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**

Bilge Pumps fitted to the Main Engines, No. **None** Diameter **1** Stroke **1** Can one be overhauled while the other is at work **1**

Pumps connected to the Main Bilge Line { No. and Size **Four. 2 - 50 ton Bilge. 1 - 100 ton Bilge & Gen. Serv.**

How driven **Electric motor.** 1 - 200 ton Bilge and Ballast.

Ballast Pumps, No. and size **1 - 200 ton.** Lubricating Oil Pumps, including Spare Pump, No. and size **3 - { 2 - 25 M³: 1 - 10 M³: }**

Are two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Engine ~~Room~~ **3- 3½" dia. to Eng. well or No.2 Cofferdam. 2- 3½" dia. to Engine Room.**

In Holds, &c. **1- 3" to No.1 Cofferdam. 2- 3" to No.1 Hold. 2- 3½" to Nos.2 & 3 Holds. 1- 2" to No.3 Coff.**

Independent Power Pump Direct Suctions to the Engine Room Bldgs, No. and size **1- 3" to No.4 & 5 Holds. 1- 2½" to Tunnel well. 1- 8" dia. 3- 5" dia. 3- 3½" dia. to Eng. well or No.2 Cofferdam.**

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **Yes.** Are the Bilge Suctions in the Machinery Space

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **Yes.**

Are all Sea Connections fitted direct on the skin of the ship **Yes.** Are they fitted with Valves or Cocks **Valves & cocks.**

Are they fixed sufficiently high on the ship's side to be seen without lifting the ~~platform~~ plates **Yes** Are the Overboard Discharges 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 pass through the bunkers **None.** How are they protected **1**

What pipes pass through the deep tanks **None.** Have they been tested as per Rule **1**

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes.**

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

compartment to another **Yes** Is the Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **Uppermost Cont. deck.**

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork **1**

Main Air Compressors, No. **Two each engine** No. of stages **3** Diameters **640/580/140** Stroke **560 m/m** Driven by **Crank shaft.**

Auxiliary Air Compressors, No. **2** No. of stages **3** Diameter **325/290/65** Stroke **180 m/m** Driven by **Elec. motors.**

Small Auxiliary Air Compressors, No. **1** No. of stages **2** Diameters **110/35** Stroke **120 m/m** Driven by **Hot Bulb Eng.**

Scavenging Air Pumps, No. **Two turbo scavenging blowers each having an intake volume of 660 cu. metres of free air per min. Driven by Elec. motors.**

Auxiliary Engines crank shafts, diameter as per Rule **152.5 m/m.**

as fitted **175 "**

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule **Yes**

Can the internal surfaces of the receivers be examined **Yes** What means are provided for cleaning their inner surfaces **HP Inj. air rec. hole 150 m/m at one end. HP starting air rec. holes 270 m/m at each end.**

Is there a drain arrangement fitted at the lowest part of each receiver **Yes.**

High Pressure **Injection Starting** Air Receivers, No. **2** Cubic capacity of each **150 litres** Internal diameter **300 m/m** thickness **15 m/m.**

10 **800 "** **540 "** **25 "**

Seamless, lap welded or riveted longitudinal joint **Seamless** Material **M. Steel.** Range of tensile strength **50-60 Kg. m/m²** Working pressure by Rules **102.8 Ats. @ 47 Kg. m/m²**

28-35 tons sq. in.

Starting Air Receivers, No. **2** Total cubic capacity **5 Cu. metres.** Internal diameter **1200 m/m** thickness **7/8"**

Seamless, lap welded or riveted longitudinal joint **Riveted** Material **M. Stl.** Range of tensile strength **28-32 tons sq. in.** Working pressure by Rules **427 lbs sq. in.**

IS A DONKEY BOILER FITTED? Yes. If so, is a report now forwarded? Yes.
HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	11-5-25 to 19-5-25.	38 Ats.	75 Ats.	LR.	Tested in winterth
" " COVERS	" "	"	"	"	" "
" " JACKETS	" "	1	6	"	" "
" " PISTON WATER PASSAGES	4-6-25 to 12-6-25.	2 "	6 "	"	" "
MAIN COMPRESSORS—1st STAGE	8-5-25 to 12-5-25.	3	50 "	"	" "
" 2nd "	" "	17.5 "	" "	"	" "
" 3rd "	13-5-25 to 14-5-25.	70 "	150 "	"	" "
AIR RECEIVERS—STARTING	25-8-25 to 7-7-25.	" "	" "	MB.HK.JQ.LR.	Tested in Dusseldo
" INJECTION	15-7-20 to 27-3-25.	" "	" "	HK & LR.	Tested in winterth
AIR PIPES	7-7-25 to 24-7-25.	" "	" "	LR	" "
FUEL PIPES	" "	" "	" "	LR	" "
FUEL PUMPS & Valves	16-1-25 to 14-4-25.	" "	140 or 150	"	" "
SILENCER	22-7-25 to 4-8-25.	.05 "	2.5 Ats.	"	" "
" WATER JACKET					
SEPARATE FUEL TANKS	11-12-25 to 6-1-26.	Atmospheric	14.5 lbs & coils 300 lbs.	WK or LR	2- 8 ton D.B.Sett 2- 10 ton M.E. "

PLANS. Are approved plans forwarded herewith for Shafting Yes Receivers Yes Separate Tanks Yes
(If not, state date of approval)
Donkey Boilers Yes General Pumping Arrangements Yes Oil Fuel Burning Arrangements /

SPARE GEAR As per Rules and in addition:—
(See separate list).

The foregoing is a correct description,

(Sign) Sulzer Bros.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1925 May 13.14.15. July 6.27. Aug. 20.27. Sep. 7.10.24.25.28.29.30. Oct.1.5.19
29.30. Nov.2.3.4.6.7.9.11.12.13.16.17.19.23.24.25.26. Dec. 2.12.21.28.29.30.
During erection on board vessel - 1926 Jan.4.6.8.9.11.12.15.16.17.20.22.25.28.29. Feb.2.3.4.5.9.12.15.15.17.18.
24.26.27. Mar. 2.4.9.11.12.19.30.31. Apr.2.6.8.14.21.
Total No. of visits 85.

Dates of Examination of principal parts—Cylinders 30-7-25. Covers 30-7-25. Pistons 30-7-25. Rods 30-7-25. Connecting rods 30-7-25.
Crank shaft 4-8-25. Flywheel shaft 4-8-25. Thrust shaft 4-8-25. Intermediate shafts 1-10-25. Tube shaft /
Screw shaft 7-9-25. Propeller s 19-3-26. Stern tube s 19-3-26. Engine seatings 9-12-25. Engines holding down bolts 3-2-26.
Completion of fitting sea connections 19-3-26. Completion of pumping arrangements 4-3-26. Engines tried under working conditions 30-3-26.
Crank shaft, Material M.S. (E.No.5477 Lyd MB 5924 KH 12152. (E.No.5477 Lyf TQ 1000 2-12-
(16-4-25 or 4-2-25 LR 4-6-25. Flywheel shaft, Material M.S. (LR 4-8-25. (E.No.5483 Lyd JQ
(E.No.5483 Lyd KH 12151. 5-1-25 LR 4-8-25. (2-12-24 LR 4-8-25.
Thrust shaft, Material " Identification Mark See Flywheel shaft. Intermediate shafts, Material M.S. Identification Marks R.C. 222.
Tube shaft, Material / Identification Mark / Screw shaft, Material M.S. Identification Mark R.C. 222.

Is the flash point of the oil to be used over 150° F. Yes.

Is this machinery duplicate of a previous case Yes If so, state name of vessel M/V. "Santos Maru".

General Remarks (State quality of workmanship, opinions as to class, &c. The Main & Auxiliary Machinery including M.E.

Nos.5477 & 5483 & Auxiliary Engines Nos.14189, 14193 & 14197 (Type 4 RH 31) No.14215 (Type 2 RH 2
and two auxiliary compressors Nos.1 & 2 (Type MC 6) have all been properly secured on board in ac
dance with the Rules & finally examined under full working conditions.

Mean speed on trials 16.036 knots (Half load).

The Machinery of this vessel is in my opinion eligible for the record of LMC, 4-'26.
in the Register Book.

Sister vessel "Santos Maru", Nagasaki Report No.1514.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ 403:10 : 21. 4. 19. 26
Air Receivers ... £ 65:60 :
Donkey Boiler Fee ... £ 65:60 : When received,
Aux. Air Compressors 234:20 : 26. 4. 19. 26
Travelling Expenses (if any) £ : :
Committee's Minute TUES. 8. JUN 1926

Assigned + L.M.C. 4.26 Oil Engines C.P.

Engine Surveyor to Lloyd's Register of Shipping.



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