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YOKOHAMA NO. 4445.

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 8041

-8 JAN 1930

Received at London Office

Yokohama 12/12/29.

Date of writing Report 3rd July 1929 When handed in at Local Office 12-12-1929 Port of 10th April 1929 Copenhagen 30th November 1929

No. in Reg. Book. Survey held at Copenhagen & Yokohama. Date, First Survey 23rd January Last Survey 2nd July 1929

Number of Visits 40

on the Single / ~~Twin~~ / ~~Triple~~ / Quadruple Screw vessel "SYDNEY MARU" "~~OSAKA~~" Tons Gross 5436 Net 3237

t Yokohama By whom built Yokohama Dock Co. Ltd Yard No. 173 When built 1929

s made at Copenhagen By whom made Maskin og Skibsbyggeri. Akt. Burmeister & Wain's Engine No. 1590 When made 1929

Boilers made at Lincoln By whom made Babcock & Wilcox Ltd Designated "OSAKA 1" Boiler No. 73/4594 When made 1929

Horse Power 3000 Owners Osaka Shosen Kaisha Port belonging to Osaka

Horse Power as per Rule 489. Is Refrigerating Machinery fitted for cargo purposes Yes. Is Electric Light fitted Yes

for which vessel is intended Australia & Japan.

NGINES, &c.—Type of Engines Vertical Diesel Oil Engines (Crosshead type Solid injection) 2 or 4 stroke cycle 4 Single or double acting Single

pressure in cylinders 35 kg/cm² Diameter of cylinders 740 m/m = 29 1/8" Length of stroke 1500 m/m = 59.0 No. of cylinders 6 No. of cranks 6

arings, adjacent to the Crank, measured from inner edge to inner edge 1004 m.m. Is there a bearing between each crank Yes

s per minute 112 TURNING Flywheel dia. 2136 m/m Weight 1950 kg Means of ignition Air Compression Kind of fuel used Crude oil flash point above 150°F

haft, dia. of journals as per Rule 470 m/m. as fitted 476 m/m Crank pin dia. 476 m/m Crank Webs Mid. length breadth 770 m/m. M.d. length thickness 290 m/m. shrunk Thickness parallel to axis 310 m/m. Thickness around eyehole 217.5 m/m

l Shaft, diameter as per Rule / as fitted ✓ **Intermediate Shafts,** diameter as per Rule 13.06" as fitted 13.5" ✓ **Thrust Shaft,** diameter at collars as per Rule 14.175" ~~m/m~~ as fitted 14 1/4" ✓

haft, diameter as per Rule / as fitted ✓ **Screw Shaft,** diameter as per Rule 14.31" as fitted 14.75" ✓ Is the {~~tube~~ / screw} shaft fitted with a continuous liner { Yes.

Liners, thickness in way of bushes as per Rule .738" as fitted F. 7/8" aft. 13/16" ✓ Thickness between bushes as per rule .55" as fitted 9/16" Is the after end of the liner made watertight in the

oss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

er 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 ✓

ners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved **Oil Gland** or other appliance fitted at the after end of the tube ✓

o If so, state type ✓ Length of Bearing in **Stern Bush** next to and supporting propeller 6'-3" ✓

r, dia. 15 ft Pitch 12'-8.4" No. of blades 4 Material P. Bronze whether Moveable Yes Total Developed Surface 43 sq. feet

of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine ~~when declutched~~ Yes ✓ Means of lubrication

lubrication Thickness of cylinder liners 53.5 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

ting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Water Pumps, No. 2 off Centrifugal - 150 tons each ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel

mps worked from the **Main Engines,** No. 1 off - 20 tons Diameter of Plunger - 127 m/m ✓ Stroke 288 m/m Can one be overhauled while the other is at work

nnected to the **Main Bilge Line** { No. and Size One - 165 m/m x 230 m/m Stroke (Two plungers) / How driven Electric motor. ✓

umps, No. and size 180 m/m x 250 m/m Stroke **Lubricating Oil Pumps,** including Spare Pump, No. and size 2 off, Cog wheel pumps - 60 tons each

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

. and size:—In Machinery Spaces Eleven. 2 1/2" x 3". ✓

&c. Nine. 3 1/2" x 2". ✓

lent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 180 m/m x 250 m/m. @ 6" & @ 3" & 2 centrifugal pumps. (Cooling water)

e Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes ✓ Are the Bilge Suctions in the Machinery Spaces

sily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes. ✓

n Connections fitted direct on the skin of the ship Yes. ✓ Are they fitted with Valves or Cocks Both. ✓

ed 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. ✓

h 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. ✓

s pass through the bunkers ✓ How are they protected ✓

s pass through the deep tanks ✓ Have they been tested as per Rule ✓

pes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes ✓

ngement 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

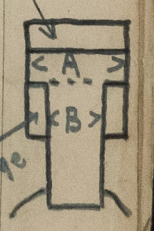
nt to another Yes ✓ Is the Shaft Tunnel watertight Yes ✓ Is it fitted with a watertight door Yes ✓ worked from Top of Eng. Room

vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

r Compressors, No. none		No. of stages		Diameters		Stroke	Driven by
y Air Compressors, No. 2 off		No. of stages 2		Diameters A 210 m/m - B 176 m/m		Stroke 216 m/m	Driven by Electric motors
xiliary Air Compressors, No. 1 off		No. of stages 2		Diameters 90 " - 35 "		Stroke 120 "	Driven by Hand
ng Air Pumps, No.			Diameter		Stroke		Driven by

Engines crank shafts, diameter as per Rule 132 m/m. as fitted 140 m/m. ✓

1st stage



2nd stage

ECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Two Air Reservoirs connected. One common Safety Valve.

ternal surfaces of the receivers be examined yes. ✓ What means are provided for cleaning their inner surfaces Manhole door. 12"x16". ✓

re a drain arrangement fitted at the lowest part of each receiver yes. ✓

Pressure Air Receivers, No. 2 Cubic capacity of each 15 m³. Internal diameter 6ft ✓ thickness 1", 1 1/32", ends 1 3/16" ✓

~~lap welded or~~ riveted longitudinal joint Riveted Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 355 lbs. ✓

ting Air Receivers, No. not yet finished Total cubic capacity Internal diameter thickness

ess, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

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IS A DONKEY BOILER FITTED? ✓ Yes. If so, is a report now forwarded? Yes.

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval) 17th. September 28. Receivers 4/12/28, Separate Tanks 2/6, 2/7/29.

Donkey Boilers ✓ General Pumping Arrangements 11/6, 24/5/29. Oil Fuel Burning Arrangements

SPARE GEAR as per accompanying list. Checked onboard.

One spare propeller shaft and two bronze blades fitted onboard as spare.

✓

YOKOHAMA DOCK Co., LTD.
ENGINE DESIGN DEPT.

The foregoing is a correct description,

akt Burmeister Wain's Maskin-og Skibsbyggeri (Signed)

Manufacturer. J. Tsuchiya

Dates of Survey while building

During progress of work in shops: 10/4, 2/5, 23/5, 31/5, 6/6, 7/6, 17/6, 18/6, 26/6, 27/6, 29/6, 4, 11, 15, 24/7, 13/8, 15/8, 24/8, 3/9, 16, 20, 28/9, 4, 14, 16, 21, 22, 23/10,

During erection on board vessel: 8/8, 13/8, 13/8, 22/8, 28/8, 3, 9, 11, 12, 17, 26, 27/9, 9, 18, 24, 26, 28, 29/10, 15, 20, 22, 28/11/1929. & 30/11/29.

Total No. of visits 40 + 52 = 92.

Dates of Examination of principal parts—Cylinders and Covers 25/3, 17/6, 14/5, Pistons 25/3, 19/6, 14/5 29, Rods 25/2, 26/2, 9/4 29, Connecting rods 23/1, 17/6

Crank shaft 31/1, 8/2, 16/3, 28/3, Flywheel shaft Thrust shaft 20/3, 23/4, 2/5, 29/5 29. Intermediate shafts 6/6, 27/6, 8/8, 29/9/29. Tube shaft ✓

Screw shaft 6/6, 27/6, 5/7, 1/11, 8/11/29. Propeller 13/8, 8/11/29. Stern tube 23/5, 8/8, 13/8, Engine seatings 22-8-29. Engines holding down bolts 26/9/

Completion of fitting sea connections 22-8-29. Completion of pumping arrangements 15/11/29 Engines tried under working conditions 20/11

Crank shaft, Material S.M.I. Steel Crank webs - Cast Steel Identification Mark LLOYDS No. 18419 14.5.29. Flywheel shaft, Material ✓ Identification Mark ✓

Thrust shaft, Material S.M.I. Steel Identification Mark LLOYDS No. 38 K 22.5.29. Intermediate shafts, Material Steel Identification Marks LLOYD'S NO J.F.N. 8/8/29 LLOYD'S No. C. 37 J.F.N. 22

~~Spare tail Shaft~~ ~~Tube shaft~~ Material Steel Identification Mark LLOYDS No. E.1461 J.F.N. 22/11/29. Screw shaft, Material Steel Identification Mark

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements 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.

In accordance with the Society's Rules for Special survey we have examined the materi from the commencement of construction of the main & Auxiliary engines with their until the final test under full power working condition on the test bench in and found all good and efficient.

The material used in the construction of the engines has been tested by the Rules, either by us or as per test certificate produced, issued by this Society.

The dimensions are as specified and in accordance with the Rules, the plans and the requirements contained in the Secretary's letter dated 17th Sept The emergency starting air receiver for the engines which also shall be su Messrs. Burmeister Wain has not yet been received by the makers. The rec be examined and tested by hydraulic pressure when the valve chests have bee before being despatched to Japan.

Recommend the vessel to have notation in the Register Book of + LMC with a OIL ENGINES when the machinery has been fitted onboard under supervisi tested to the satisfaction of the local Surveyors to this Society. (Please s

For Yokohama Fees please see following sheet.

Certificate (if required) to be sent to

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

The amount of Entry Fee	£	72.80
4/5 Special	£	1431.98
Donkey Boiler Fee	£	:
Travelling Expenses (if any)	£	5.50

When applied for, 3.7.1929. ASM

When received, 8/8/29 EBB

(S) A. F. Orbech (S) L. Klausen

Engineer Surveyor to Lloyd's Register of Shi

Committee's Minute FRI. 17 JAN 1930

Assigned + Lmc 11.29 Oil Engines C.L. D.B. 100 lbs

CERTIFICATE ISSUED

Rpt. No. YOKOHAMA

Port of YOKOHAMA. *Continuation of Report No.* 44445 *dated* 12th Decr. YOKOHAMA. *on the*

M.V. "SYDNEY MARU"

Machinery & Donkey Boiler (Continued)

The main engines of this vessel were built under Special Survey at Copenhagen (Report No. and the Donkey Boiler at Lincoln. Grimsby Report No 16994. The tunnel shafting and tail shaft (working and spare) were made at Kobe and machined at Yokohama. Air Reservoirs made at Yokohama.

The main engines, auxiliaries and donkey boiler were shipped to Yokohama and have been securely fitted onboard the vessel, under Special Survey by Messrs. Yokohama Dock Co. of Yokohama.

On completion of installing the main and auxiliary engines, pumps and donkey boiler were examined under full working conditions on trial trip and all found in order.

The machinery of this vessel is eligible in my opinion to have the record of ✠ LMC. 11-29. and T.S-C.L. in the Register Book

J. Nicholas.

Fees charged at Yokohama.

The amount of Entry Fee 1/5 £10-0 = ¥EN 10.00
1/5 Special = £29-5-0 = ¥EN. 292.00 } applied for. 17-12-29
Travelling Expenses. = ¥EN. 21.00 } Paid 11/3/30 EBB

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