4b.

REPORT ON OIL ENGINE MACHINERY.

No. 7207.

Received at London Office 9 APR 1931

writing Report 28-1-31 19 When handed in at Local Office 2-2-31 19 Port of Kobe

n Survey held at Kobe Date, First Survey 11-8-30 Last Survey 23-1-31 19

ook. Number of Visits 55

on the Single / ~~Twin~~ / ~~Triple~~ / ~~Quadruple~~ Screw vessel "RYOYO MARU" Tons Gross 5973·8 Net 3649·87

t Kobe By whom built Kawasaki Dockyard Yard No. 562 When built 1930

s made at Augsburg Germany By whom made M.A.N Engine No. 330390 When made 1930

Boilers made at Kobe By whom made Kawasaki Dockyard Boiler No. 562 When made 1930

Horse Power 3200 Owners Toyo Kisen Kaisha Port belonging to Akashi

Horse Power as per Rule 1175 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

for which vessel is intended Ocean Going

NGINES, &c.—Type of Engines Six Cylinder D.A. Loop Scavenge Type M.A.N 2 or 4 stroke cycle 2 Single or double acting Double

n pressure in cylinders 35 Kg/cm² Diameter of cylinders 600 m/m 23 5/8 Length of stroke 900 m/m 35-7/16 No. of cylinders 6 No. of cranks 6

earings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

ns per minute Flywheel dia. Weight Means of ignition Kind of fuel used Diesel oil

Shaft, dia. of journals as per Rule / as fitted Crank pin dia. Crank Webs Mid. length breadth / M d. length thickness shrunk Thickness parallel to axis / Thickness around eyehole

el Shaft, diameter as per Rule / as fitted **Intermediate Shafts,** diameter as per Rule 12·6" 12·8 / as fitted 14 1/4" ✓ **Thrust Shaft,** diameter at collars as per Rule / as fitted

Shaft, diameter as per Rule ✓ / as fitted ✓ **Screw Shaft,** diameter as per Rule 19·87" / as fitted 16 1/8" ✓ Is the { tube / screw } shaft fitted with a continuous liner { ✓ / Yes ✓

Liners, thickness in way of bushes as per Rule ·724 / as fitted ·90125 ✓ Thickness between bushes as per rule / as fitted .75 Is the after end of the liner made watertight in the

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

ner 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

iners 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

✓ If so, state type ✓ Length of Bearing in **Stern Bush** next to and supporting propeller 6'-0" ✓

ller, dia. 15'-3" ✓ Pitch 13'-6" No. of blades 4 Material Bronze whether Moveable Yes Total Developed Surface 72·8 sq. feet

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

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

ducting 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 ✓

g Water Pumps, No. 2 - 1 Spare 210 tons / 1 aux. 30 tons Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Pumps worked from the **Main Engines,** No. ✓ Diameter Stroke Can one be overhauled while the other is at work

s connected to the **Main Bilge Line** { No. and Size Four, Bilge, Sanitary, Aux. Cooling & Ballast 45 tons, 45 tons, 30 tons, 200 tons / How driven Electric motor

t Pumps, No. and size One 200 tons 280 m/m dia × 280 m/m Stroke **Lubricating Oil Pumps,** including Spare Pump, No. and size Two 82 m/m dia Gear Pumps ✓

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

No. and size:—In Machinery Spaces 4 @ 3 1/2" 1 @ 2 1/2 Bilge well, 1 @ 3 1/2 Cooling direct, 2 @ 2 1/2 Effordam 1 @ 3" Tunnel well

ds, &c. N°1 Hold 2 @ 3 1/2 N°2 Hold 2 @ 3 1/2 N°3 Hold 2 @ 3 1/2 N°4 Hold 2 @ 3 1/2 N°5 Hold 2 @ 3 1/2 N°6 Hold 2 @ 3 1/2 ✓

endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 8" One 3 1/2 ✓

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

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

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

y 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 ✓

y 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 ✓

pipes pass through the bunkers ✓ How are they protected ✓

pipes pass through the deep tanks Bilge Pipes ✓ Have they been tested as per Rule Yes ✓

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

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

tment to another Yes ✓ Is the Shaft Tunnel watertight Yes ✓ Is it fitted with a watertight door Yes ✓ worked from Top Platform ✓

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

Air Compressors, No. One No. of stages 3 Diameters Stroke Driven by

iary Air Compressors, No. Two No. of stages 3 Diameters Stroke Driven by

l Auxiliary Air Compressors, No. One No. of stages 2 Diameters Stroke Driven by

enging Air Pumps, No. One Tumbo Blower Diameter Stroke ✓ Driven by

xiliary Engines crank shafts, diameter as per Rule / as fitted 170 m/m

---

R 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 Manhole

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

Re Bremen Rpt. 1284 **High Pressure Air Receivers,** No. 1 Emg. 6 Starting 1 Spare Emg. Cubic capacity of each Internal diameter thickness

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

Starting Air Receivers, No. 1 for Aux. Eng. Total cubic capacity 45 Internal diameter 3'-0" thickness 3/4"

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 28-32 Working pressure by Rules 171·6 lbs.

IS A DONKEY BOILER FITTED? yes

PLANS. Are approved plans forwarded herewith for Shafting 21-2-29 (If not, state date of approval) If so, is a report now forwarded? yes

Donkey Boiler ~~18-4-30~~ 3-2-31 General Pumping Arrangements 4-3-30, 30-6-30 Receivers L.P. 21-2-29 Oil Fuel Burning Arrangements 27-5-30 Separate Tanks 12-4-30,

SPARE GEAR As required by the Rules.

One spare screw shaft with liner.

One spare propeller blade

The foregoing is a correct description,

S. Mimino

for Kawasaki D.Y. Co Manufacturer.

Dates of Survey while building — During progress of work in shops: —

During erection on board vessel: 1930 Aug. 5, 11, 16, 18, 23, 29. Sept. 10, 12, 13, 16, 17, 20, 23, 25. Oct. 1, 2, 6, 8, 9, 13, 18, 24, 27, 28, 30, 31. Nov. 7, 14, 19, 25, 27, Dec. 2, 4, 6, 8, 11, 12, 13, 18, 19, 22, 24, 27. 1931 Jan. 8, 12, 14, 15, 16, 19, 20, 21, 22, 23

Total No. of visits 55

Dates of Examination of principal parts—Cylinders — Covers — Pistons — Rods — Connecting rods —

Crank shaft — Flywheel shaft — Thrust shaft — Intermediate shafts 6-10-30, 9-10-30 Tube shaft —

Screw shaft 16-9-30, 8-10-30, 20-9-30 fitted Propeller 12-9-30 Stern tube 10-9-30 17-9-30 Engine seatings 20-9-30 Engines holding down bolts 5-12-

Completion of fitting sea connections 28-9-30 Completion of pumping arrangements 21-1-31 Engines tried under working conditions 12-1-31

Crank shaft, Material — Identification Mark — Flywheel shaft, Material — Identification Mark N° 2774 6-10-30 A.D.M. N° 2773 6-10-

Thrust shaft, Material — Identification Mark — Intermediate shafts, Material Steel Identification Marks N° 2768 10-10-30 A.D.M. N° 2765 6-10- N° 2574 6-

Tube shaft, Material — Identification Mark — Screw shaft, Material Steel Identification Marks N° 2766 6-10- N° 2575 9-10-

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

Spare	N° 2579	N° 2577
	8-10-30	16-9-30
	A.D.M.	A.D.M.

Identification Mark

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo yes If so, have the requirements of the Rules been complied with yes

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.

This machinery has been installed under special survey in accordance with the Rules and approved plans. The materials and workmanship are good. The main and auxiliary was tried under full working conditions and found to be efficient and legible, in my opinion, to have merit of ✠L.M.C 1.31, as engines, T.S. 1.31, C.L. and D.B 100 lbs. (See Bremen Rpt N° 1284)

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 ... ¥ 60;00

Special ¥381;00

~~Donkey Boiler~~ Fee ... (¥ 32;00

Travelling Expenses (if any) (See Hull Rept):

When applied for, 22/1/1931

When received, 6/2/1931

Committee's Minute FRI. 17 APR 1931

Assigned ✠ L.M.C. 1.31 Oil Eng. / D.B. 100 lbs. C.L. CERTIFICATE WRITTEN

Engineer Surveyor to Lloyd's Register of Shipping.

Has the Steel been tested as required by the Rules? yes.