

4b.

REPORT ON OIL ENGINE MACHINERY.

No. 7356

15 NOV 1931 786

15-10-31

Writing Report 20-5-1931

When handed in at Local Office 20-5-1931

Received at London Office

Port of Kobe & Yokohama
YOKOHAMA 26-11-30

Date, First Survey 28-4-30

Last Survey 1-10-31

9-4-1931

Number of Visits 54 + 22

on the Single
Twin
Triple
Quadruple

Screw vessel M.V. "KATSURAGI MARU"

Tons Gross 5841
Net 3485

at Uraga By whom built Uraga Dockyard Co. Ltd Yard No. 374 When built 1931
 es made at Fama By whom made Mitsui Bussan Kaisha Engine No. 4000 When made 4-31
 y Boilers made at Uraga By whom made Uraga Dock Co. Ltd Boiler No. 374 When made 1931
 Horse Power 6000 Owners Kobunai Kisen Kaisha Port belonging to Hakodate
 Horse Power as per Rule 814.2 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 for which vessel is intended Ocean going 29'8" 59'16"

ENGINES, &c.—Type of Engines Solid injection Supercharging 2 or 4 stroke cycle 4 Single or double acting Single
 n pressure in cylinders 12 Kg/cm² Diameter of cylinders 740 mm Length of stroke 1500 mm No. of cylinders 10 No. of cranks 10
 bearings, adjacent to the Crank, measured from inner edge to inner edge 1040 mm Is there a bearing between each crank yes
 ms per minute 115 Flywheel dia. 7.01 ft Weight 1.968 tons Means of ignition Compression Kind of fuel used Heavy fuel oil
 Shaft, dia. of journals as per Rule 5.147 in Crank pin dia. 5.25 in Crank Webs Mid. length breadth about 860 mm Thickness parallel to axis
 as fitted 5.25 in with 175 mm hole M.d. length thickness 326 mm shrank Thickness around eye-hole 232
 el Shaft, diameter as per Rule 15.99 inches Intermediate Shafts, diameter as per Rule 15.225 inches Thrust Shaft, diameter at collars as per Rule 15.99 inches
 as fitted 16 1/2 inches as fitted 15 7/8 inches as fitted 16 1/2 inches
 shaft, diameter as per Rule 16.64 in Is the twin shaft fitted with a continuous liner yes
 as fitted 17 1/16 inches as per rule .607 as fitted 5/8 + 1/32 Is the after end of the liner made watertight in the
 Liners, thickness in way of bushes as per Rule .809 Thickness between bushes as per rule .607
 as fitted 7/8 inch as fitted 5/8 + 1/32

boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length
 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 yes
 ners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of the tube
 o If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 5'-8 1/2"
 er, dia. 17'-0" Pitch 14'-6" No. of blades 4 Material M. Bronze whether Moveable yes Total Developed Surface 83.5 sq. feet
 of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when de-coupled yes Means of lubrication
 ed Thickness of cylinder liners 53.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water-cooled or lagged with
 cting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being siphoned back to the engine

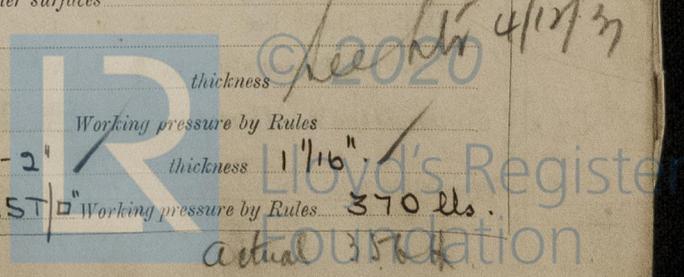
Water Pumps, No. 2 @ 275 tons per hour Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 umps worked from the Main Engines, No. 2 Diameter 160 mm Stroke 196 mm Can one be overhauled while the other is at work yes
 onnected to the Main Bilge Line { No. and Size One 150 T/hr. One 80 T/hr. One 40 T/hr.
 How driven motors
 Pumps, No. and size One 150 T/hr. Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 125 tons per hour
 dependent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 o. and size:—In Machinery Spaces 6-2", 4-3 1/2", 1-3", 1-2 1/2"
 &c. no hold, no 3 dept tank, no 4 dept tank, no 5 hold each 2-3 1/2" dia, no 6 hold 2-3 1/4", fwd pipe tunnel 1-2" dia

alent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 10" dia, 2 pumps 275 T/hr each. see plans
 e Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces
 asily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes
 a 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
 pass through the bunkers yes How are they protected yes
 pass through the deep tanks yes Have they been tested as per Rule yes

es, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 gement 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
 to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top of engine room
 vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes
 Compressors, No. 3 No. of stages 2 Diameters 2.80 / 3.20 mm Stroke 2'10" Driven by 3 Aux. Diesel Engine
 Air Compressors, No. 1 No. of stages 2 Diameters 1 1/2" / 2 1/2" Stroke 5" Driven by Hand
 Charging Turbo blowers 1 Capacity 265 m³/min Pressure 3 meter in water column Driven by Main Engine
 Engines crank shafts, diameter as per Rule 166 mm
 as fitted 180 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes
 ter of Spherical surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces yes
 train arrangement fitted at the lowest part of each receiver X
 sure Air Receivers, No. two Cubic capacity of each 1060 cuft Internal diameter 6'-2" thickness 1 1/16"
 welded or riveted longitudinal joint Material Steel Range of tensile strength 28-35 T Working pressure by Rules 370 lbs.
 r Receivers, No. two Total cubic capacity 1060 cuft Internal diameter 6'-2" thickness 1 1/16"
 welded or riveted longitudinal joint riveted Material Steel Range of tensile strength 28-35 T Working pressure by Rules 370 lbs.
 actual 370 lbs.

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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 23-4-30 Receivers 23-6-30 Separate Tanks 9-5-31
Donkey Boilers 28-7-30 General Pumping Arrangements 23-6-31, 28-6-31 Oil Fuel Burning Arrangements 23-6-31

SPARE GEAR As per the Rules, checked and found satisfactory.
Checked aboard & found in order.

the machinery of the MV. "KATSURAGI MARU"

Order on Intermediate shafts:-

C. 3732 A1. LLOYD'S NO. 2824 J.F.N. LR. 19/3/31.	C. 3694 A1. LLOYD'S NO. 2790 J.F.N. LR. 19/3/31.	C. 3709 A1. LLOYD'S NO. 2789 J.F.N. LR. 19/3/31.	C. 3718 A1. LLOYD'S NO. 2807 J.F.N. LR. 19/3/31.
C. 3715 A1. LLOYD'S NO. 2798 J.F.N. LR. 19/3/31.	C. 3686 A1. LLOYD'S NO. 2816 J.F.N. LR. 19/3/31.	E. 1885 A1. LLOYD'S NO. 2825 J.F.N. LR. 13/4/31.	PROPELLER SHAFTS. SPARE. C. 2624 C.1. LLOYD'S NO. 2775 J.F.N. LR. 13/4/31.

The foregoing is a correct description,

E. O. Ozo Manufacturer.
for Uraga Dock Co. Ltd.

Dates of Survey while building

During progress of work in shops -	1930 Apr. 28, 30, May 12, 20, 22, June 30, July 4, 8, 10, 15, 22, 24, Aug. 6, 12, 19, 27, Sept. 22, 26, 30, Oct. 3, 6, Dec. 3, 9, 12, Jan. 15, Feb. 24, March 19, April 13, 14, 1931.
During erection on board vessel -	Yokohama May 14, 15, June 10, 12, 14, 29, July 15, 20, 24, Aug. 6, Sept. 1, 5, 9, 26 Oct. 17, 1931.
Total No. of visits	54 visits + 22.

Dates of Examination of principal parts - Cylinders 28-10-30 Covers Ditto Pistons 28-10-30 Rods 21-5-30 Connecting rods 22-10-30

Crank shaft 24-6-30 Flywheel shaft 28-10-30 Thrust shaft 28-10-30 Intermediate shafts 3-12-30 Tube shaft 15-1-31

Screw shaft 1-5-31 Propeller 13/4, 14/5, 19/31 Stern tube 24/2, 1-9-31 Engine seatings 14-5, 10/6/31 Engines holding down bolts 0/6/31

Completion of fitting sea connections 14/5/31 Completion of pumping arrangements 26/9/31 Engines tried under working conditions 9.12.31

Crank shaft, Material Forged Steel Identification Mark See below Flywheel shaft, Material See below Identification Mark See below

Thrust shaft, Material Forged Steel Identification Mark ADM. 28-8-30 Intermediate shafts, Material Steel Identification Marks See below

Screw shaft, Material Steel Identification Mark J.F.N. 13-4-31 Screw shaft, Material Steel Identification Mark J.F.N.

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 Yes If so, have the requirements of the Rules been complied with Yes

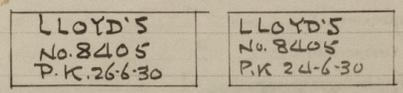
Is this machinery duplicate of a previous case No If so, state name of vessel Yes

General Remarks (State quality of workmanship, opinions as to class, etc.) The machinery described herein has been constructed under special survey in accordance with the Rules and approved plans. Materials and workmanship are good. On completion the machinery was run under full power on the test bed, afterwards opened up, examined and found satisfactory, and eligible, in my opinion, to have record of + LMC oil engine, date - when the survey has been completed.

The machinery is being forwarded to Uraga for installation on the vessel No. 374, Uraga Dockyard Co. Ltd.

A copy of the report is being forwarded to Yokohama.

Identification marks on Crank Shafts.



Please see following sheet for Yokohama Fees.

The amount of Entry Fee <u>Not yet charged</u> When applied for, <u>19</u>
4/5 Special Survey Fee <u>¥ 1,389.00</u> : <u>19</u>
Donkey Boiler Fee <u>...</u> : <u>...</u> When received, <u>...</u>
Travelling Expenses (if any) <u>¥ 11.00</u> : <u>27.12.31</u>

M. D. Buchanan & self.
K. Kihigami
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI, 13 NOV 1931

Assigned + d.m.c. 10.31 C.L.
oil eng. R.R. 100lb.

The machinery of this vessel has been fitted onboard the vessel at Uraga, under special survey in accordance with the Rules, material workmanship good. On completion of fitting out all tried under full working conditions with satisfactory results.

The machinery of this vessel is eligible in my opinion to have the record of + LMC. 110-31.

1st Entry Fee. YEN. 60.00

1/5 Special Survey fee " 344.00

Donkey Boiler fee 63.00

Oil Reservoirs 126.00

Expenses 63.00

Fees applied for: 6th October, 1931.

" paid: 12th October, 1931.

J. Milwals

Certificate (if required) to be sent to Committee's Minute