

COPY.

REPORT ON OIL ENGINE MACHINERY.

YKA No. 4588.

No. 1243.

4b.

22nd Sept 1930.

22/9/30

Received at London Office

23 OCT 1930

Writing Report 21st March 1930 When handed in at Local Office

Ports of Bremen & Yokohama

Survey held at Augsburg & Yokohama

Date, First Survey 1st June 29

Last Survey 20th March 1930

Number of Visits 68+49.

on the Twin Screw Motor Vessel

"KWANTO MARU"

Tons Gross 8001 Net 5195

By whom built Yokohama Dock Yard Yard No. 179 When built 1929/30
By whom made Masch'fabrik Augsburg-Nürnberg Engine No. 330340 When made 1929/30
Boilers made at Yokohama By whom made Yokohama Dock Co. Ltd Boiler No. 179 When made 1930.
Horse Power 2x3750 Owners Kishimoto Kisen Kaisha Port belonging to Osaka Docks.
Horse Power as per Rule 2350 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes
for which vessel is intended Ocean going.

ENGINES, &c.—Type of Engines 2x2 6 1/2 x 60/90 2 or 4 stroke cycle 2 Single or double acting double
pressure in cylinders 45 atms Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 2x6 No. of cranks 2x6
Bearings, adjacent to the Crank, measured from inner edge to inner edge 855 mm Is there a bearing between each crank yes
Revs per minute 130 Flywheel dia. 3100 mm Weight 3400 kg Means of ignition Solid Injection Kind of fuel used Minioil
Crankshaft dia. of journals as per Rule 420 mm Crank pin dia. 420 mm Crank Webs Mid. length breadth 860 mm Thickness parallel to axis
3-THROW as fitted 420 mm Mid. length thickness 235 mm shrunk Thickness around eyehole
Crankshaft diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted 362 mm as fitted 380 mm
Crankshaft diameter as per Rule Screw Shaft, diameter as per Rule Is the screw shaft fitted with a continuous liner yes
as fitted 410 mm as fitted
Liner thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the
as fitted 2 mm as fitted 19 mm

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yes
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
If so, state type Length of Bearing in Stern Bush next to and supporting propeller 6'-1 1/4"
dia. 14'-9" Pitch 13'-2" No. of blades 4 Material M. Bronze whether Moveable yes Total Developed Surface 44 sq. feet
reversing Engines directly, compr. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched governor Means of lubrication
Thickness of cylinder liners 40 mm Are the cylinders fitted with safety valves yes, 2 Are the exhaust pipes and silencers water cooled or lagged with
lag material water cooled 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. 2x2 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
connected to the Main Bilge Line No. and Size One 15 T/Hr. Two 110 T/Hr. One 450 T/Hr. (Emergency only.)
How driven Electric motors.
Pumps, No. and size One 110 tons/hr. Lubricating Oil Pumps, including Spare Pump, No. and size 2x74 in 3/4, 50 in height. 1
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 3-3 1/2", 2-2 1/2", 4-2", One 11" 77 @ 11"
Dredge suction 1-2" nos. 1, 2, 3, 4 holds each 2-3 1/2" nos. 4, 6 holds each 2-3" Deep tanks each 1-4" (bilge or ballast suction).

at Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 11" 77 @ 11"
Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces
by accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes.
Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks Rock.
Are they 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 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
Have they been tested as per Rule

Are 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
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

Compressors, No. No. of stages Diameters Stroke Driven by
Air Compressors, No. 2 No. of stages 3 Diameters 360/305/105 1/2 Stroke 250 1/2 Driven by electric motor
Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 100/35 Stroke 100 Driven by Diesel engine
Suction Air Pumps, No. 3 Turbo blowers Diameter Stroke Driven by

Engines crank shafts, diameter as per Rule 170 mm
RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes
Internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces bottom opening
Arrangement fitted at the lowest part of each receiver yes
Pressure Air Receivers, No. Two Cubic capacity of each 15 m³ Internal diameter 1800 mm thickness 1 1/2" or 3/16"
welded or riveted longitudinal joint riveted Material steel Range of tensile strength 26-32 Working pressure by Rules 496 lbs.
Air Receivers, No. 1 for aux. engines Total cubic capacity 400 lbs Internal diameter 405 mm thickness 135 mm
welded or riveted longitudinal joint seamless Material S. M. Steel Range of tensile strength 44-50 1/2 Working pressure by Rules 30 atms

IS A DONKEY BOILER FITTED? Yes.

If so, is a report now forwarded? Yes.

PLANS. Are approved plans forwarded herewith for Shafting Yes
(If not, state date of approval)

Receivers Mr. Kobe. 22/10/29. Separate Tanks 24/1/30.

Donkey Boilers Kobe. 25/10/29.

General Pumping Arrangements Kobe. 24/1/30.

Oil Fuel Burning Arrangements 24/1/30.

SPARE GEAR In accordance with the Society's Rules and Regulations

The foregoing is a correct description,

J. Tsuchiya Manufacturer.

Dates of Survey while building
During progress of work in shops -- June 1, 3, 4, 10, 14, 20, 24, 27, July 27, August 2, 5, Sept. 2, 3, 4, Oct. 7, 14, 19, 23, 31, Nov. 5, 6, 13, 25, 26, 30, Decemb. 2, 3, 4, 5, 7, 12, 18, 19, 23, 24, 30, 31, January 2, 3, 4, 8, 9, 10, 11, 13, 20, 21, 23, 24, 26, Feb. 1, 2, 22, 29, March 4, 5, 6, 15, 16, 17, 18, 19, Yokohama 14, 19, 27, 31, March, April 3, 11, 14, 16, 17, 21, 23, 25, 30, May 2, 3, 14, 16, 19, 21, 23, April 7, 14, 17, 21, 22, 24, 26, 28, May 30, June 9, 14, 24, 27, July 2, 9, 16, 28, Aug. 7, 9, 13, 20, 23, Sept 9, 12th, 1930.
Total No. of visits 49.

Dates of Examination of principal parts—Cylinders 23/24.12.29 Covers 3/4/10/11/13/8/2 Pistons 26/11/2/23/12.29 Rods 23.12.29 Connecting rods 24
Crank shaft 30.12.29 Flywheel shaft and Thrust shaft 25.10.29 Intermediate shafts 27/31/2/10/26/14/22/11/23/6/30 Tube shaft 23/6/30

Screw shaft 21/4, 20/8, 18/8/30 Propeller 21/4, 18/8, 20/8/30 Stern tube 14/3, 17/4, 21/4, 22/4 Engine seatings 26/4, 20/5, 9/4, 24/4/30 Engines holding down bolts 24/6, 27

Completion of fitting sea connections 26/4/30 Completion of pumping arrangements 23-8-30 Engines tried under working conditions 4/9

Crank shaft, Material S.M. Steel Identification Mark LLOYD'S 362/22V.5 27.9.29 Flywheel shaft, Material 1 1/2 shells. LLOYD'S (M) 241
Flywheel and Thrust shaft, Material S.M. Steel Identification Mark LLOYD'S 862/28V.8 18.10.29 Intermediate shafts, Material Steel Identification Marks (1) 242
Screw Tube shaft, Material Steel Identification Mark LLOYD'S 2418. 25.10.29 Screw shaft, Material Steel Identification Mark LLOYD'S (1) 242.1. 26.2.30

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

General Remarks (State quality of workmanship, opinions as to class, &c. These Diesel engines and their accessories have been fitted under special survey in accordance with the Soc. Rules and Regulations as well as with the approved plan instructions thereto. The materials used in the constructions are good and the workmanship is satisfactory. The engines have been tested under full working conditions during several hours on the makers test bed with satisfactory result and may be in safe working conditions.

In my opinion the vessel for which these engines are intended will be eligible for the notation L.M.C. (with date) engines and their accessories have been satisfactorily fitted on board. Max. working pressure not to exceed 4.5 atm

For identification the cylinder jackets have been stamped:—

LLOYD'S TEST 6 atm No 703 V.S. 23.12.29

2 crankshafts for Diesel engines driving auxiliary machinery are tested by the germ. Lloyd. (Please see letter of 10th July 1929)

Yokohama. The machinery of this vessel has been fitted onboard under special survey. Materials good. On completion all machinery tried under full working conditions with satisfactory results. Machinery is eligible in my opinion for the notation L.M.C. 9-30 in the Register Book.

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|------------------------------|-------|---------------|------------------------------------|------------------------------|
| The amount of Entry Fee | 4/5. | £ 4 : 16 : 0 | When applied for, 7/11/29. 26/9/30 | YOKOHAMA FEES. YEN. 12.00 |
| Special | 4/5. | £ 127 : 0 : 0 | 25.3.1930 | " 602.00 |
| Donkey Boiler Fee | ... | £ : | When received, | " 63.00 |
| Travelling Expenses (if any) | £ 4 : | 0 : 10 : 5 | 19.30 | SUNDAY FEES 20.00 " 31.00 |

Paid 29.10.30
Engineer Surveyor to Lloyd's Register of Shipping
J. Miller

Committee's Minute Fri. 31 OCT 1930

Assigned + L.M.C. 9.30
Oil Eng. L.B. 100 lb.



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