

REPORT ON OIL ENGINE MACHINERY.

No. 7387.

Received at London Office

13 JUL 1931

ing Report 4-6-

1931

When handed in at Local Office

22-6-1931 Port of Kobe.

Survey held at

Yama.

Date, First Survey Aug. 6th 1930. Last Survey May 29th 1931.

Number of Visits 28.

Single
Triple
Quadruple

Screw

MOTOR VESSEL "SANTO MARU"

Tons Gross 3234.
Net

Yama.

By whom built Mitsui Bussan Kaisha Yard No. 184. When built May 1931.

made at Yama.

By whom made Mitsui Bussan Kaisha Engine No. 184. When made May 1931.

Boilers made at Sheffield

By whom made Davy Bros. Ltd. Boiler No. 3541. When made Nov. 1930.

orse Power 1400 HP

Owners Dairen Kisen Kab. Kaisha Port belonging to Dairen.

se Power as per Rule 271.

Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

which vessel is intended

Japan-China.

21/78

39/78

GINES, &c. Type of Engines Mitsui-B.W. 655-M.T.F.-100 2 or 4 stroke cycle 4 Single or double acting Single.

essure in cylinders 39 Kg/Cm² Diameter of cylinders 550 mm Length of stroke 1006 mm No. of cylinders 6 No. of cranks 6.

ings, adjacent to the Cranks, measured from inner edge to inner edge 730 mm Is there a bearing between each crank Yes.

er minute 140 Radius of gyration of Balance weight 2.268 Weight 7.7 tons Means of ignition Compression Kind of fuel used Heavy Oil Fuel.

ft. dia. of journals as per Rule 343 mm as fitted 350 mm Crank pin dia. 350 mm Crank Webs Mid. length breadth Thickness parallel to axis 218 mm

Shaft, diameter as per Rule See Intermediate Shafts, diameter as per Rule 9.24 inches Thrust Shaft, diameter at collars as per Rule 246 mm

t, diameter as fitted Thrust Shaft as fitted 9.5 inches Is the screw shaft fitted with a continuous liner Yes.

ers, thickness in way of bushes as per Rule 639 mm as fitted 1 1/16" Thickness between bushes as per rule 479 mm as fitted 1/2" Is the after end of the liner made watertight in the

Yes 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

s 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

If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 3'-10"

dia. 11 ft Pitch 8'-4.7" No. of blades 4 Material Bronze whether Moveable No. Total Developed Surface 40 sq. feet

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

Thickness of cylinder liners 38 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers lagged with

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

ater Pumps, No. 1 @ 80 tons/hr. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

ps worked from the Main Engines, No. 2 Diameter 150 mm Stroke 140 mm Can one be overhauled while the other is at work Yes

ected to the Main Bilge Line No. and Size 2 @ 20 tons; 1 @ 150 tons. How driven motor driven.

mps, No. and size 1 @ 150 tons Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 30 tons/hr.

pendent 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 1 @ 6"; 1 @ 4 1/2"; 2 @ 3 1/2"; 5 @ 3"

No. 1 hold. 2 @ 3"; No. 2 hold. 2 @ 3"; No. 3 hold. 2 @ 3"; Tunnel Well 1 @ 3"

nt Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 6" One @ 4 1/2"

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

ily 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 Yes.

l 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

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.

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

ement 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

l to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room upper deck.

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

Compressors, No. Three No. of stages 2 Diameters 280/320 Stroke 170 mm Driven by Aux. Diesel Engine.

Air Compressors, No. 1 on each Aux. Diesel Engine No. of stages 2 Diameters 13/16"/2 1/2" Stroke 5" Driven by Hand driven.

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 13/16"/2 1/2" Stroke 5" Driven by Hand driven.

Big Air Pumps, No. 1 Diameter Stroke Driven by

Engines crank shafts, diameter as per Rule See Separate report on Penetration L.H. as fitted

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

ernal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Starting A.R. Man hole. Spare A.R. Hand hole.

drain arrangement fitted at the lowest part of each receiver Yes

ssure Air Receivers, No. 2 Cubic capacity of each 380 cu. ft. Internal diameter 4 ft 1 1/2 inches thickness 3/4" Working pressure by Rules 517 lbs/sq. in.

p welded or riveted longitudinal joint T.R.L.J. Material Steel Range of tensile strength 26-28 Working pressure by Rules 517 lbs/sq. in.

Air Receivers, No. 2 Total cubic capacity 380 cu. ft. Internal diameter 4 ft 1 1/2 inches thickness 3/4" Working pressure by Rules 517 lbs/sq. in.

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LLOYD'S REGISTER FOUNDATION

L1028-0068

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IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? 17-11-30 at 5
PLANS. Are approved plans forwarded herewith for Shafting 5-8-30 & 2-10-30 Receivers 26-9-30 Separate Tanks 30-12-
Donkey Boilers See Sheffield Rep. no. 427. General Pumping Arrangements 3-9-30 Oil Fuel Burning Arrangements 15-10-
SPARE GEAR As per the Rules, checked & found satisfactory

Copies of Certificates for Forgings and Castings attached

The foregoing is a correct description,

S. Ukai

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1930-Aug. 6, Sept. 25, Oct. 20, 24, 31, Dec. 2, 10, 11, 1931-Jan. 13, Feb. 2, 16, Mar. 25, 30, Apr. 9, 10, 13, 14, 15, 20, 23, May 2, 8, 14, 23, 25, 29.
{ During erection on board vessel -
Total No. of visits 28

Dates of Examination of principal parts—Cylinders 13-3-31 to 30-3-31 Covers ditto Pistons 16-2-31 Rods Connecting rods 30-3-31
Crank shaft 9-2-31 Flywheel shaft Thrust shaft 9-2-31 Intermediate shafts 6-12-30 Tube shaft
Screw shaft 26-12-30 to 13-4-31 Propeller 13-4-31 Stern tube 25-3-31 Engine seatings 13-4-31 Engines holding down bolts 14-4-31

Completion of fitting sea connections 13-4-31 Completion of pumping arrangements 14-5-31 Engines tried under working conditions 23-4-31
Crank shaft, Material Forged Cast Steel Identification Mark R No. 2976 HAG. 9-2-31 Flywheel shaft, Material Identification Mark
Thrust shaft, Material Forged steel Identification Mark HAG. 9-2-31 5 Intermediate shafts, Material Forged Steel Identification Marks See R No. ADM.
Tube shaft, Material Identification Mark Screw shaft, Material Forged 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 Yes If so, state name of vessel Ronsan Maru, Konsan Ma
Jensan Maru, Sensan Ma

General Remarks (State quality of workmanship, opinions as to class, &c.)

Identification Marks on Intermediate Shafts:-

LLOYD'S Nos. 703, 704, 705, 706, 707. R M.K 6-12-30.

The machinery of this vessel has been constructed under Special Survey in accordance with the Rules and approved plans material and workmanship are good and on completion the machinery has been efficiently installed in the vessel and tested under full working conditions, found to be efficient and eligible in my opinion to have record of LMC 5.31, Oil Engine, TS (CL) 5.31, and one 100 lbs.

The amount of Entry Fee ... £ 40.-
Special ... £ 986.-
Donkey Boiler Fee ... £ 63.-
Travelling Expenses (if any) £ See Hull R. : 23. 7. 1931
When applied for, 9/6/31
When received, 23. 7. 1931

Committee's Minute

Assigned

+ L.M.C. 5.31 C.L.
Oil Eng. D.B. 100 lb.
CERTIFICATE WRITTEN.

K. Kibigami
Engineer Surveyor to Lloyd's Register of Shipping



Lloyd's Register
Foundation