

REPORT ON OIL ENGINE MACHINERY.

No. 6195

Received at London Office

23 AUG 1928

Date of writing Report 25-7-1928 When handed in at Local Office

Port of Kobe

No. in Survey held at Reg. Book.

Sama

Date, First Survey 26-9-27

Last Survey 24-7-1928

Number of Visits 44

Single
Triple
Quadruple

Screw vessel "TATSUTASAN MARU"

Tons Gross 1992 Net 1098

Built at Sama By whom built Mitsui Bussan Kaisha Yard No. 134 When built 1928
 Engines made at Sama By whom made Mitsui Bussan Kaisha Engine No. 134 When made 1928
 Donkey Boiler made at Sama By whom made Mitsui Bussan Kaisha Boiler No. 134 When made 1928
 Brake Horse Power 950 Owners Mitsui Bussan Kaisha Port belonging to Sokio
 Nom. Horse Power as per Rule 224 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES
 Trade for which vessel is intended China - Japan

OIL ENGINES, &c. Type of Engines Trunk type 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 500 lbs Diameter of cylinders 500 Length of stroke 900 No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 685 Is there a bearing between each crank YES

Revolutions per minute 160 Flywheel dia. 1,900 Weight 4.04 tons Means of ignition heat generated by high compression Kind of fuel used Steel oil F.P. over 150°

Crank Shaft, dia. of journals as per Rule 310 as fitted 310 Crank pin dia. 310 Crank Webs Mid. length breadth 600 Thickness parallel to axis 195 Mid. length thickness 195 Thickness around eyehole 142

Flywheel Shaft, diameter as per Rule 310 as fitted 310 Intermediate Shafts, diameter as per Rule 8.2 as fitted 8.2 Thrust Shaft, diameter at collars as per Rule 300 as fitted 300

Tube Shaft, diameter as per Rule 9.3 as fitted 9.3 Is the tube shaft fitted with a continuous liner YES

Bronze Liners, thickness in way of bushes as per Rule 58 as fitted F. 1/16 A. 5/8 Thickness between bushes as per rule 43 as fitted 7/16 Is the after end of the liner made watertight in the propeller boss YES

If the liner 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 two liners 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 shaft No

Length of Bearing in Stern Bush next to and supporting propeller 4'-0"

Propeller, dia. 9'-6" Pitch 7'-3" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 28 sq. feet

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine YES Means of lubrication oil feed

Thickness of cylinder liners 36 Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with non-conducting material YES

Cooling Water Pumps, No. One 50 ton Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Bilge Pumps worked from the Main Engines, No. 2 Diameter 150 Stroke 100 Can one be overhauled while the other is at work YES

Pumps connected to the Main Bilge Line No. and Size One 100 ton (Ball & Bilge) One 15 ton (Bilge & Sanitary) Two 150 x 100 (Bilge) How driven Electric motors except 150 x 100 which is driven by main engine

Ballast Pumps, No. and size One 100 ton Lubricating Oil Pumps, including Spare Pump, No. and size Two 25 ton

Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces Three 3"

In Holds, &c. Fore hold two 3 1/2" After hold two 3 1/2" one 2" in chain lockers connected to hand pumps

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 5" One 3"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES Are the Bilge Suctions in the Machinery Spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

Are all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks YES

Are they 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

Are they 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

What pipes pass through the bunkers YES How are they protected YES

What pipes pass through the deep tanks YES Have they been tested as per Rule YES

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES

Is the 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 compartment to another YES Is the Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from Main deck

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork YES

Main Air Compressors, No. One No. of stages 3 Diameters 102 x 445 x 500 Stroke 340 Driven by Main Engine

Auxiliary Air Compressors, No. One No. of stages 2 Diameters 78 x 285 x 318 Stroke 170 Driven by Aux Engines

Small Auxiliary Air Compressors, No. One No. of stages 2 Diameters 2 1/2" & 1 5/16" Stroke 5" Driven by Hand

Scavenging Air Pumps, No. YES Diameter YES Stroke YES Driven by YES

Auxiliary Engines crank shafts, diameter as per Rule See Copenhagen reports Nos 7676 & 7675 as fitted " " " "

AIR 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 Steam conn. adjoining

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

High Pressure Air Receivers, No. 5 Cubic capacity of each 2. 250 litres. See LONDON letter 8-2-28. 1. 125 " 2. 25 " See Copenhagen reports Internal diameter 1.38475 thickness "

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

Starting Air Receivers, No. One Total cubic capacity 6 cub. metre Internal diameter 4'-7" thickness Shell 7/8" Ends 1 3/8"

Seamless, lap welded or riveted longitudinal joint Riveted Material O.H.S.L. Range of tensile strength 28-32 tons Working pressure by Rules 410 lbs. sq. in.

W 1142-0065

IS A DONKEY BOILER FITTED? **YES.** If so, is a report now forwarded? **YES.**

PLANS. Are approved plans forwarded herewith for Shafting **6-9-27** Receivers **1-10-27** Separate Tanks
(If not, state date of approval)
Donkey Boilers **19-9-27** General Pumping Arrangements **4-11-27** Oil Fuel Burning Arrangements

SPARE GEAR **To Rule requirements & a few additional items. (see attached list.)**

[Faint handwritten notes and signatures, including "USAM KAZATUTAT" and "S. Uta"]

The foregoing is a correct description,

S. Uta

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1927, Sept. 26, Oct. 4, 14, 22, 26, Nov. 8, 14, 18, 25, Dec. 15, 8, 20, 1928, Jan. 12, 17, 23, 30, Feb. 9, 10, 13, MAR. 19, 15, 19, 26, 28, APR. 4, 9, 16, 24, 30, MAY 4, 7, 23, 29, JUNE 4, 6, 7, 19, 26, JULY 4, 13, 24.
During erection on board vessel - JULY 4, 13, 19, 20, 24.
Total No. of visits **44.**

Dates of Examination of principal parts—Cylinders **7-6-28**, Covers **7-6-28**, Pistons **12-6-28**, Rods Connecting rods **12-6-28**

Crank shaft **12-6-28**, Flywheel shaft **See crankshaft**, Thrust shaft **12-6-28**, Intermediate shafts **4-7-28**, Tube shaft

Screw shaft **9-3-28**, Propeller **9-3-28**, Stern tube **17-1-28**, Engine seatings **4-7-28**, Engines holding down bolts **13-7-28**

Completion of fitting sea connections **9-3-28**, Completion of pumping arrangements **20-7-28**, Engines tried under working conditions **19-6-28, 20-7-28**

Crank shaft, Material **S.M.I. SR**, Identification Mark **LLOYD'S 1243 R**, Flywheel shaft, Material **See crankshaft**, Identification Mark

Thrust shaft, Material **S.M.I. SR**, Identification Mark **LLOYD'S 1259 R**, Intermediate shafts, Material **S.M.I. SR**, Identification Marks **LLOYD'S 1225 R**

Tube shaft, Material Identification Mark Screw shaft, Material **S.M.I. SR**, Identification Mark **LLOYD'S 1224 R**

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

Is this machinery duplicate of a previous case **YES.** If so, state name of vessel **M/V "TAKAMISAN MARU"**

General Remarks (State quality of workmanship, opinions as to class, &c. **With the exception of the two 250 litre H.P. air receivers (see hon. letter dated 8-2-28) the machinery referred to herein has been constructed under special survey, in accordance with the Rule requirements & approved plans. The materials & workmanship are good & both test bed & sea trials were satisfactory. In my opinion, the vessel is entitled to the record of Oil Engrs. & LMC 7-28 in the Register Book, subject to the two spare H.P. air receivers being renewed at the first convenient opportunity.**

It is submitted that this vessel is eligible for THE RECORD. **Oil Engrs 7-28**

OIL ENGINES: 224 N.H.P. by 19 1/16 - 35 7/16 DB80H MITSUBI BUSSAN KAISHA, TAMPA

[Handwritten signatures and dates: "J. L. ... 27/11/20", "P.S.A. 19/11/20"]

The amount of Entry Fee ... **YEN 43:-** When applied for, ...
Special AIR RECEIVER ... **" 898:-** ... 19
Donkey Boiler Fee ... **" 45:-** When received, ...
Travelling Expenses (if any) ... **£ -:-** ...
Included in Hull report.
Committee's Minute

Assigned

thru 7-28

Oil Engines DB-80H

W. Kumber
Engineer Surveyor to Lloyd's Register of Shipping.



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