

REPORT ON OIL ENGINE MACHINERY.

No. 6246

Received at London Office 11 OCT 1928

Date of writing Report 6-9-1928 When handed in at Local Office 19 Port of KOBE

No. in Survey held at Reg. Book. Sama. Date, First Survey 12-6-28 Last Survey 3-9-1928 Number of Visits 18

on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel "TAIHEI MARU"

Tons Gross 6285 Net 3835

Built at Sama. By whom built Mitsui Bussan Kaisha. Yard No. 146 When built 1928
Engines made at Copenhagen. By whom made Burmeister & Wain. Engine No. 146 When made 1927-28
Donkey Boiler made at Sama. By whom made Mitsui Bussan Kaisha. Boiler No. 146 When made 1928
Brake Horse Power 2,100 Owners. Shunantani Kisen K. Kaisha. Port belonging to Kobe.
Nom. Horse Power as per Rule 473. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted YES.
Trade for which vessel is intended JAPAN - USA.

OIL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting
Maximum pressure in cylinders See Copenhagen Report No 7716. Length of stroke No. of cylinders No. of cranks
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank
Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used
Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eyehole
Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 11 9/16" Thrust Shaft, diameter at collars as per Rule as fitted
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 13 05/16" Is the shaft fitted with a continuous liner YES.
Bronze Liners, thickness in way of bushes as per Rule as fitted 7" Thickness between bushes as per rule as fitted 53" Is the after end of the liner made watertight in the propeller boss YES. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
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 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 5'-8"
Propeller, dia. 14'-3" Pitch 10'-9" No. of blades FOUR. Material BRONZE whether Moveable NO. Total Developed Surface 64.1 sq. feet
Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when detached YES. Means of lubrication FORCED FEED. Thickness of cylinder liners 44%. Are the cylinders fitted with safety valves YES. Are the exhaust pipes and silencers water cooled or lagged with non-conducting 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
Cooling Water Pumps, No. One 120 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. TWO. Diameter 160 1/2". Stroke 234 1/2". Can one be overhauled while the other is at work YES.
Pumps connected to the Main Bilge Line No. and Size One 150 ton. One 20 ton. Two 160 1/2" x 234 1/2". How driven Electric motor except 160 1/2" x 234 1/2" which is driven by main engine.
Ballast Pumps, No. and size One 150 ton. Lubricating Oil Pumps, including Spare Pump, No. and size Two 45 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" (ER bilge) one 3" (copper dam) one 3" (tunnel well)
In Holds, &c. No 1 hold, two 3 1/2", No 2 hold, two 3 1/2", No 3 hold, two 3 1/2", No 4 hold, two 3 1/2", FOREPEAK TANK TOP, two 1 1/2" to Land pump.
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3", One 5"
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 F. PEAK, NO 102 HOLD BILGE & FORD DEEP TANK How are they protected
What pipes pass through the deep tanks SUCTIONS. 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 UPPER DECK LEVEL.
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

AIR COMPRESSORS. No. No. of stages Diameters Stroke Driven by
Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
Scavenging Air Pumps, No. Diameter Stroke Driven by
Auxiliary Engines crank shafts, diameter as per Rule as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule
Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces
Is there a drain arrangement fitted at the lowest part of each receiver
High Pressure Air Receivers, No. 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. Two. Total cubic capacity 420 cu. ft. Internal diameter 6'-8" thickness 1 1/8" ends 1 3/8"
Seamless, lap welded or riveted longitudinal joint Riveted Material Q.H.S.R. Range of tensile strength 28-32 T. 26-30 S. Working pressure by Rules 372 1/2 psi

SEE COPENHAGEN REPORT No 7716.

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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 19-1-28. Receivers 7-2-28. Separate Tanks 14-3-28.

Donkey Boiler 4-2-28. General Pumping Arrangements 29-11-27. Oil Fuel Burning Arrangements 14-3-28.

SPARE GEAR As per list attached to Copenhagen Report's No 7716, & in addition one set of six intermediate shaft coupling bolts.

[Faint handwritten notes and stamps, including 'URAM 13H1AT' and 'A2U - WARA']

The foregoing is a correct description,

S. Vikar Manufacturer.

Dates of Survey while building
 During progress of work in shops - 1928, JUNE, 7, 12, 26. JULY, 4, 5, 9, 13, 20, 18, 24, 31. AUG, 9.
 During erection on board vessel - 1928, JULY, 9, 13, 19, 24, 31. AUG, 3, 6, 21, 29. SEPT, 3.
 Total No. of visits 18.

Dates of Examination of principal parts - Cylinders Covers Pistons Rods Connecting rods
 Crank shaft Flywheel shaft Thrust shaft Intermediate shafts 21-8-28 Tube shaft
 Screw shaft 4-7-28 Propeller 4-7-28 Stern tube 7-6-28 Engine seatings 9-7-28 Engines holding down bolts 18-7-28
 Completion of fitting sea connections 21-8-28 Completion of pumping arrangements 29-8-28 Engines tried under working conditions 29-8-28
 Crank shaft, Material Identification Mark Flywheel shaft, Material Identification Mark
 Thrust shaft, Material Identification Mark Intermediate shafts, Material O.H.S.M. Identification Marks No 1411. 9-6-28
 Tube shaft, Material Identification Mark Screw shaft, Material O.H.S.M. Identification Mark No 1416. 19-6-28

Is the flash point of the oil to be used over 150° F. YES. * See Copenhagen Report No 7716.

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.) The machinery described above has been securely installed aboard the vessel in accordance with the Rule requirements & approved plans.

The materials used are good & the workmanship employed up to standard. The machinery has been tested under working conditions with satisfactory results.

In my opinion the vessel is now entitled to the records of + L.M.C. 9-28. T.S. (CL) New 9-28. OIL ENGINES. in the Register Book.

NOTE: - From Copenhagen Report No 7716 it is noted that 1/5 First Entry Fee has been charged.

Certificate, (if required) to be sent to the Registrar of Shipping, London, E.C. 4, 10, Abchurch Lane.

The amount of Entry Fee ... 11 : - : When applied for, ...
 1/5 Special ... 307 : - : ... 19
 AIR RECEIVER
 Donkey Boiler Fee ... 134 : - : When received, ...
 Travelling Expenses (if any) 5 : - : ... 5.11.1928
 Included in Hull Report.
 Committee's Minute

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

FR. 26 OCT 1928



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Assigned + L.M.C. 9-28
Oil Engines D.B. 100lb.