

# REPORT ON OIL ENGINE MACHINERY.

No. 8467.

-8 FEB 1934

Received at London Office

Date of writing Report 9-1-34 When handed in at Local Office 13-1-34 Port of Kobe  
 Date, First Survey 14-3-33 Last Survey 23-12-33 1933  
 Number of Visits 45  
 No. in Survey held at Tama  
 No. in Book 115  
 Single Double Triple Quadruple Screw vessel  
 "AMAGISAN MARU"  
 Tons { Gross 7624  
 Net 5578

By whom built Inumitsuri Buran Kaisha Ltd Yard No. 196 When built 1933  
 By whom made " " " " " Engine No. 196 When made 1933  
 By whom made " " " " " Boiler No. 196 When made 1933  
 Owners Inumitsuri Buran Kaisha Ltd. Port belonging to Kobe  
 Indicated Horse Power 7000  
 Net Horse Power as per Rule 1230 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes  
 Made for which vessel is intended Ocean Going 2476 5578

ENGINES, &c.—Type of Engines Oil Injection Diesel Inboard Type 2 stroke cycle 2 Single or double acting double  
 Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 620 mm Length of stroke 1400 mm No. of cylinders 6 No. of cranks 6  
 No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 946 mm Is there a bearing between each crank yes  
 Revolutions per minute 110 Turning Wheel 1975 mm Weight 2200 Kgs Means of ignition Compression Kind of fuel used Diesel Oil  
 Crank Shaft, dia. of journals as per Rule 467 as fitted 485 mm Crank pin dia. 485 mm Crank Webs Mid. length breadth 860 mm Thickness parallel to axis 305 mm  
 as fitted 485 mm M. d. length thickness 305 mm Thickness around eye hole 232 mm  
 Wheel Shaft, diameter as per Rule 17 3/4 Intermediate Shafts, diameter as per Rule 17 3/4 Thrust Shaft, diameter at collars as per Rule 463 mm  
 as fitted 17 3/4 as fitted 17 3/4 as fitted 463 mm  
 Propeller Shaft, diameter as per Rule 19 1/4 as fitted 19 1/4 Is the tube shaft fitted with a continuous liner yes  
 as fitted 19 1/4 as fitted 19 1/4  
 Liners, thickness in way of bushes as per Rule 7/8 as fitted 7/8 Thickness between bushes as per rule 7/8 Is the after end of the liner made watertight in the  
 as fitted 7/8 as fitted 7/8 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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 yes  
 If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 6'-5"  
 Propeller, dia. 18'-0" Pitch 15'-8" No. of blades 4 Material Brass whether Moveable yes Total Developed Surface 110 sq. feet  
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication oil  
 Thickness of cylinder liners 42 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with  
 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 yes

Working Water Pumps, No. 2-40 H.P. 300 mm 9" Delivery Pipe Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
 Pumps worked from the Main Engines, No. 2 Diameter 160 mm Stroke 238 mm Can one be overhauled while the other is at work yes  
 Pumps connected to the Main Bilge Line { No. and Size 2-165 x 230 mm Bilge Suction Ballast 250 x 300 mm Three three  
 How driven Motor  
 Main Pumps, No. and size One 250 x 300 mm 150 Tons Lubricating Oil Pumps, including Spare Pump, No. and size 2-60 H.P. 250 Tons 10" Delivery  
 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 2 @ 3", 2 @ 4" 1 @ 8" Emergency  
 Holds, &c. N°1 Hold 2-3"; N°2 Hold 2-3 1/2"; N°3 Hold 2-3"; Deep Tank 2-3"; Tunnel 1-4 1/4"; N°4 Hold 2-3 1/2"; N°5 Hold 2-3"; Tunnel Well 1-3 1/2"  
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-8"  
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces  
 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 Both  
 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 Both  
 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  
 Are the pipes pass through the bunkers yes How are they protected yes  
 Are the 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 Top platform  
 If the vessel is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters N.P. 350 mm L.P. 400 mm Stroke 300 mm Driven by Motor  
 All Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters N.P. 13 1/16 L.P. 3 5/32 Stroke 3 3/16 Driven by Petrol Engine  
 Ventilating Air Pumps, No. Two Reciprocating Blowers Diameter 699.2 mm Stroke 1097.6 mm Driven by Main Engine  
 Auxiliary Engines crank shafts, diameter as per Rule 150 mm as fitted 150 mm  
 An additional Reciprocating Blower fitted 3.26 but will not be used until additional fan motor is fitted (in 3.37)

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes  
 Are the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces Manhole  
 Is there a drain arrangement fitted at the lowest part of each receiver yes  
 High Pressure Air Receivers, No. 2 Cubic capacity of each 610 cubic feet Internal diameter 7'-0 3/8" thickness 1 3/16"  
 Seamless, lap welded or riveted longitudinal joint Material Steel Range of tensile strength 28-32 Working pressure by Rules 370 lb. sq. in.  
 Storing Air Receivers, No. 2 Total cubic capacity 610 cubic feet Internal diameter 7'-0 3/8" thickness 1 3/16" Working pressure by Rules 370 lb. sq. in.  
 Seamless, lap welded or riveted longitudinal joint Material Steel Range of tensile strength 28-32 Working pressure by Rules 370 lb. sq. in.



IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

PLANS. Are approved plans forwarded herewith for Shafting *4-5-32, 31-3-32, 25-3-32* Receivers *17-5-32*

Separate Tanks *31-8-32*

Donkey Boilers *4-10-32*

General Pumping Arrangements *29-7-32*

Oil Fuel Burning Arrangements

SPARE GEAR

*As required by the Rules List attached Report N° 8297 (Ship N° 195)*

The foregoing is a correct description,

*Stukas*

Manufacturer.

Dates of Survey while building  
During progress of work in shops-- *1933 March 14. 15. 27 April 17. 26 May 8. 18. 29 June 12. 19. 23. 26 July 7. 13. 14. 31. Aug 16. 17. 23. 28*  
During erection on board vessel-- *Sept. 19. 25. Oct. 5. 9. 10. 12. 21. 23. 24. 25. 31. Nov. 4.*  
Total No. of visits *45*

Dates of Examination of principal parts—Cylinders *8.5.33, 26.9.33* Covers *9.10.33* Pistons *9.10.33* Rods *26.9.33* Connecting rods *26.9.33*

Crank shaft *4.3.33* Flywheel shaft *15.4.33* Thrust shaft *15.4.33* Intermediate shafts *21.1.33, 5.8.33* Tube shaft *—*

Screw shaft *12.9.33 18.9.33* Propeller *22.10.33, 4.11.33* Stern tube *29.5.33, 24.10.33* Engine seatings *14.8.33, 9.10.33* Engines holding down bolts *29.11.33*

Completion of fitting sea connections *4.11.33* Completion of pumping arrangements *20.12.33* Engines tried under working conditions *20.12.33*

Crank shaft, Material *Steel* Identification Mark *LLOYD N° 340 S.A.B* Flywheel shaft, Material *Steel* Identification Mark *LLOYD N° 837*

Thrust shaft, Material *Steel* Identification Mark *LLOYD N° 830* Intermediate shafts, Material *Steel* Identification Marks *825, 836, 837*

Tube shaft, Material *Steel* Identification Mark *15.4.33 M.K* Screw shaft, Material *Steel* Identification Marks *LLOYD N° 3691*

Is the flash point of the oil to be used over 150° F. *yes* *18.9.33 12.9.33 H.A.G*

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 *yes* If so, state name of vessel *M.S. "AZUMASAN MARU"*

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

*This machinery has been constructed under special survey in accordance with the Rules and approved plans. The materials & workmanship are good. On completion the machinery was efficiently installed in the vessel and tested under full working conditions and is eligible, in my opinion, for classification with the need of +L.M.C 12.33 Oil Engine; T.S. 12.33 C.L. and D.B 120 lbs.*

The amount of Entry Fee ... £ 6 : 0 : 0  
Special ... £ 196 : 2 : 6  
Donkey Boiler Fee ... £ 9 : 9 : 0  
Travelling Expenses (if any) £ See Hull : 12th Jan 1934

Committee's Minute *TUE, 13 FEB 1934*

Assigned *+Lmb 12.33 Oil Eng Cl.*

*D.B. 120 lbs Elec Lt*



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