

# 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

No. in Survey held at Tama Date, First Survey 14-3-33 Last Survey 23-12-33 1933  
No. of Visits 45

Kind of Vessel Single Screw vessel "AMAGISAN MARU" Tons {Gross 7624  
Net

Where built Tama By whom built Inumitsuki Bunran Kaisha Ltd Yard No. 196 When built 1933

Engines made at Tama By whom made " " " " Engine No. 196 When made 1933

Boiler made at Tama By whom made " " " " Boiler No. 196 When made 1933

Indicated Horse Power 7000 Owners Inumitsuki Bunran Kaisha Ltd. Port belonging to Kobe

Net Horse Power as per Rule 1230 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

Trade for which vessel is intended Ocean Going BiW 24 7/8 55 3/8

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

Distance between 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  
M.d. length thickness 305 mm Thickness around eye-hole 232 mm

Intermediate Shafts, diameter as per Rule 17 3/4 Thrust Shaft, diameter at collars as per Rule 463 mm

Screw Shaft, diameter as per Rule 19 1/4 Is the tube shaft fitted with a continuous liner yes

Oil Liners, thickness in way of bushes as per Rule 7/8 Thickness between bushes as per rule 7/8 Is the after end of the liner made watertight in the

celler boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yes

When 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 no

When two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube no

Length of Bearing in Stern Bush next to and supporting propeller 6-5

Propeller, dia. 18-0 Pitch 15-8.1 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 de-clutched 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

Delivering Water Pumps, No. 2-40 H.P. 300 mm 9" Delivery Pipes Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Charge 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+230 mm Bilge + Sanitary, Ballast 250+300 mm Three Three  
How driven Motor

Ballast Pumps, No. and size One 250+300 mm 150 Tons Lubricating Oil Pumps, including Spare Pump, No. and size 2-60 H.P. 250 Tons 10" Delivery Pipes

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 2 @ 3", 2 @ 4" 1 es 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 2-3 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

How are they protected 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

When in 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 H.P. 350 mm L.P. 400 mm Stroke 300 mm Driven by Motor

all Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters H.P. 13/16 L.P. 3 7/32 Stroke 3 3/16 Driven by Petrol Engines

Reversing Air Pumps, No. Two Reciprocating Rotary Blowers Diameter 699.2 mm Stroke 1097.6 mm Driven by Main Engines

Auxiliary Engines crank shafts, diameter as per Rule 150 mm as fitted 150 mm

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

Are they seamless, lap welded or riveted longitudinal joint Painted Material Steel Range of tensile strength 28-32 Working pressure by Rules 370 lb. Shell 357 lb. Tension

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; 25-3-33* Receivers *17-5-32* Separate Tanks *31-8-32*  
(If not, state date of approval)

Donkey Boilers *4-10-32* General Pumping Arrangements *29-7-32* Oil Fuel Burning Arrangements

SPARE GEAR

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

The foregoing is a correct description,

*W. Kas*

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*  
Nov. 8-9-13-14-17-27-27 Dec. 5-12-15-19-20-27  
Total No. of visits *45*

Dates of Examination of principal parts—Cylinders *8-5-33, 26-9-33 9-10-33* Covers *16-9-33 8-5-33 13-7-33* Pistons *8-5-33 13-7-33* Rods *26-4-33 9-10-33* Connecting rods *8-5-33*

Crank shaft *4-3-33* Flywheel shaft *✓* 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 4-3-33 H.A.G* Flywheel shaft, Material *✓* Identification Mark *LLOYD N° 837*

Thrust shaft, Material *Steel* Identification Mark *LLOYD N° 830* Intermediate shafts, Material *Steel* Identification Marks *825, 836, 837 M.K 5-8-33*

Tube shaft, Material *✓* Identification Mark *15-4-33 M.K* Screw shaft, Material *Steel* Identification Marks *LLOYD 18-9-33 12-9-33 H.A.G*

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 *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  
Air Receivers Donkey Boiler Fee ... £ 9 : 9 : 0  
Travelling Expenses (if any) £ See Hull : 12th Jan 1934

*O. J. Morrison*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE, 13 FEB 1934**

Assigned *+L.M.C 12.33 Oil Eng Cl. Elec Lt. D.B. 120 lbs*



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