

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 22-11-1924 When handed in at Local Office 19 Port of Kobe  
 No. in Survey held at Tama (Uno) Date, First Survey Jan 18<sup>th</sup> Last Survey Nov 19<sup>th</sup> 1924  
 Reg. Book. on the Single Sew "AKIBASAN MARU" (Number of Visits 37)  
 Built at Tama By whom built Mitsui Bussan Kaisha Ltd Yard No. 64 Tons Gross 4670.04 Net 2907.79  
 Engines made at " By whom made do do Engine No. when made 1924  
 Boilers made at " By whom made do do Boiler No. when made 1924  
 Registered Horse Power 376 Owners Mitsui Bussan Kaisha Ltd Port belonging to Kobe  
 Nom. Horse Power as per Rule 376 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines 3 Cyl. Triple expansion (Surface Condensing)  
 Dia. of Cylinders 23 - 38 - 64 Length of Stroke 48 Revs. per minute No. of Cylinders 3 No. of Cranks 3  
 Dia. of Crank shaft journals as per rule 13.116 as fitted 13 3/8 Dia. of Crank pin 14 Crank webs Mid. length breadth 19 1/2 If shrunk Thickness parallel to axis 8 3/4  
 Diameter of Thrust shaft under collars as per rule 13.116 as fitted 13 3/8 Diameter of Tunnel shaft as per rule 12.492 as fitted 12 5/8 Diameter of Screw shaft as per rule 13.86 as fitted 14 1/4 Is the Screw shaft fitted with a continuous liner the whole length of the stern tube Yes 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 joints burned 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  
 If two liners are fitted, is the shaft lapped or protected between the liners Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated Length of Stern Bush 62 Diameter of Propeller 16 7/8  
 Pitch of Propeller 16 9/16 No. of Blades 4 Bronze State whether Moveable Moveable Total Surface 92 square feet.  
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 5 Stroke 24 Can one be overhauled while the other is at work Yes  
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 5 Stroke 24 Can one be overhauled while the other is at work Yes  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps 2 Fed 10 1/2 x 8 x 21 one fed. bilge 7 x 5 x 9 one Centrif. bilge 9 x 7 1/2  
 No. and size of Pumps connected to the Main Bilge Line 2 M.E. Pumps 5" DIA: 1 G.S. 7 x 5 x 9 1 BALL: 9 x 11 x 11 1 HAND PMP: 5 1/2" DIA: BARREL  
 No. and size of Ballast Pumps 1 - 9 x 11 x 11, 200 Tons/HR. No. and size of Lubricating Oil Pumps, including Spare Pump  
 Are two independent means arranged for circulating water through the Oil Cooler No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 5 OFF 3" DIA: INCL 1 IN FOR P. 1 IN AFT COFF. and in Holds, &c. N:1 HOLD 2 @ 3" DIA: N:2 HOLD 2 @ 3" DIA: O.L.F. PMP RM: 1 @ 3" DEEP TANK (AFT) 2 @ 6" (BILGE & BALL) N:3 HOLD 2 @ 3" DIA: N:4 HOLD 2 @ 3" DIA: TUNNEL WELL 1 @ 3" DIA:  
 No. and size of Main Water Circulating Pump Bilge Suctions ONE @ 9" DIA: No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges ONE @ 4 1/2" DIA: Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BOTH  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes 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 are carried through the bunkers N:1 & 2 HOLD BILGE SUCT. ON PORT SIDE How are they protected WOOD CASINGS  
 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 Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from CHILD. PLATFORM

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 5175 2 SB 2 S.E. CYLINDRICAL, R.T. Working Pressure 200 lbs.  
 Is Forced Draft fitted Yes No. and Description of Boilers 2 S.E. CYLINDRICAL, R.T. Working Pressure 200 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Donkey Boilers  
 (If not state date of approval) Yes Oil Fuel Burning Piping Arrangements Yes

SPARE GEAR. State the articles supplied:—

One set M.E. piston rings & springs; 1/4 set of junk ring bolts & nuts, 1 slide valve spindle; 2 Ecc. Rods; one Crank pin brass with bolt & nut; 2 Crosshead brasses with bolts & nuts; One main bearing brass with bolts & nut; One set of shaft coupling bolts; 30 Condenser Tubes & ferrules; one air pump rod; one set of air pump valves; one Centrif. pump impeller shaft; one set of feed & bilge pump valves; 2 Safety valve springs; 24 Cyl. cover studs & nuts; A considerable quantity of spares for all auxiliaries; & hand tools; A quantity of bolts, nuts, & iron of various sizes.

The foregoing is a correct description,

Manufacturer.



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JAN. 18 26 FEB. 13 16. MAR. 1 5. APRIL 1 9 15  
 During progress of work in shops -- JUNE 3 JULY 8 12 25 AUG. 4 6 9 25 SEPT. 2 6 9 13 15 23 25  
 Dates of Survey while building During erection on board vessel -- OCT. 6 7 9 15 21 27 29 NOV. 1 8 10 11 13 19  
 Total No. of visits 37

Dates of Examination of principal parts - Cylinders 15-4-24. Slides 9-10-24.  
 Covers 15-4-24 Pistons 9-8-24. Rods 23-8-24 (N<sup>o</sup> 711; 712; 713)  
 Connecting rods 9-8-24 Crank shaft 9-8-24 Thrust shaft 9-8-24  
 Tunnel shafts 9-8-24 Screw shaft 25-8-24 Propeller 25-8-24  
 Stern tube 4-8-24 Engine and boiler seatings 2-9-24 Engines holding down bolts 9-10-24.  
 Completion of pumping arrangements 10-11-24 Boilers fixed 25-10-24. Engines tried under steam 11-11-24.  
 Completion of fitting sea connections 6-8-24 Stern tube 6-8-24 Screw shaft and propeller 6-8-24.  
 Main boiler safety valves adjusted 10-11-24 Thickness of adjusting washers LOCK NUTS FITTED.  
 Material of Crank shaft O. H. FORGED STEEL. Identification Mark on Do. N<sup>o</sup> 499-500 & 501 19-4-24 Z.S.  
 Material of Thrust shaft " " " Identification Mark on Do. N<sup>o</sup> 502 19-4-24 Z.S.  
 Material of Tunnel shafts " " " Identification Marks on Do. N<sup>o</sup> 473 to 478 INCL 503 4-10-20 Z.S.  
 Material of Screw shafts " " " Identification Marks on Do. N<sup>o</sup> 434 17-4-24 Y.J.  
 Material of Steam Pipes S. D. STEEL. Test pressure 600 <sup>lbs</sup>/sq. Date of Test 1-11-24.  
 Is an installation fitted for burning oil fuel YES Is the flash point of the oil to be used over 150°F. YES  
 Have the requirements of the Rules for carrying and burning oil fuel been complied with YES.  
 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 & Boilers of this vessel have been constructed under Special Survey, according to the Rules & approved plans. The materials have been tested found efficient & the workmanship is good. They have now been efficiently installed on board & tested under steam with satisfactory results. This case is now submitted for the committee's consideration, & eligible in my opinion to have the record of + L.M.C. 11-24 & notation "Fitted for Oil fuel 11-24 F.P. above 150°F." in the Register Book.

NOTE! Crank, thrust, tunnel shafting & piston/rods were made & finish machined by The Nippon Seikosho, Hakodate. & the propeller shaft was supplied by the Kobe steel Works; test certificates (copies) sent herewith.

It is submitted that this vessel is eligible for THE RECORD. + LMC 11.24. FD. CL.

Fitted for oil fuel 11.24. F.P. above 150°F.

CERTIFICATE WRITTEN

16/1/25. *[Signature]*

The amount of Entry Fee ... £ YEN 61<sup>00</sup> : When applied for,  
 Special ... £ 1474<sup>00</sup> : 24-11-1924  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ SEE HULL RPT. 1<sup>st</sup> Dec 1924.

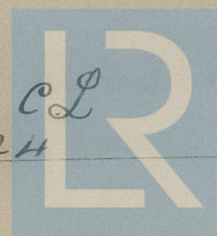
Committee's Minute

FRI. 16 JAN 1925

Assigned

+ L.M.C. 11.24. F.D. CL  
 Fitted for oil fuel 11.24  
 F.P. above 150°F.

*[Signature]*  
 Engineer Surveyor to Lloyd's Register of Shipping.



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