

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

THU. 15 MAY. 1924

Date of writing Report 26<sup>th</sup> Mar. 1924 When handed in at Local Office Osaka Port of Kobe

No. in Survey held at Osaka Date, First Survey 31<sup>st</sup> July 1923 Last Survey 26<sup>th</sup> March 1924

Reg. Book. on the S.S. "KOAN MARU" (Number of Visits 32) Tons { Gross 3180 Net 1973

Built at Osaka By whom built Osaka Iron Works Yard No. 1057 When built 1924

Engines made at Osaka By whom made Osaka Iron Works Engine No. 1057 when made 1924

Boilers made at Osaka By whom made Osaka Iron Works Boiler No. 1057 when made 1924

Registered Horse Power Owners Kiromi Shoji Kabushiki Kaisha Port belonging to Kobe

Nom. Horse Power as per Rule 288 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

**ENGINES, &c.**—Description of Engines Triple Expansion

Dia. of Cylinders 22, 37, 61 Length of Stroke 42 Revs. per minute 83 No. of Cylinders 3 No. of Cranks 3

Dia. of Crank shaft journals 11.76 as per rule 12 as fitted 12 Dia. of Crank pin 12 Crank webs Mid. length breadth 23 Mid. length thickness 7 3/8 If shrunk Thickness parallel to axis 7 3/8 Thickness around eye-hole 5 1/2

Diameter of Thrust shaft under collars 11.76 as per rule 12 as fitted 12 Diameter of Tunnel shaft 11.20 as per rule 11 3/8 as fitted 11 3/8 Diameter of Screw shaft 12.81 as per rule 13 as fitted 13 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 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated No Length of Stern Bush 4'-9" Diameter of Propeller 16'-0"

Pitch of Propeller 16'-0" No. of Blades 4 State whether Moveable No Total Surface 80 square feet.

No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 3 1/4 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 3 1/2 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 One Gen. Service 6" x 4" x 6"

No. and size of Pumps connected to the Main Bilge Line 2 Main Eng. 3 1/2" x 24", Gen. Serv. 6" x 4" x 6" & Ballast 7 1/2" x 8 1/2" x 9"

No. and size of Ballast Pumps One 7 1/2" x 8 1/2" x 9" No. and size of Lubricating Oil Pumps, including Spare Pump Yes

Are two independent means arranged for circulating water through the Oil Cooler Yes No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room four 3" and in Holds, &c. 2 of 3" in No. 1 hold, 2 of 3" in No. 2, 2 of 3" in No. 3 hold and one of 2 1/2" in tunnel well

No. and size of Main Water Circulating Pump Bilge Suctions One 6" No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges One 3 1/2" 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 None How are they protected 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 Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from E.R. top platform

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 3824 Working Pressure 180 lbs.

Is Forced Draft fitted Yes No. and Description of Boilers 2 single ended

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting 9/7/23 Main Boilers Yes Auxiliary Boilers — Donkey Boilers —

General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

**SPARE GEAR.** State the articles supplied:—

- 2 connecting rod top end bolts & nuts ✓
- 2 " " bottom " " " " ✓
- 2 main bearing bolts ✓
- 1 set of coupling bolts ✓
- 1 " " feed & bilge pump valves ✓
- 1 " " piston packing rings ✓
- Bolts & nuts ✓

The foregoing is a correct description,

*K. Kiyo*



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Foundation

008691-008699-0079  
008691-008699-0075

During progress of work in shops -- 1923 July 31, Aug. 6, Oct. 15, 20, 21, 30. Nov. 10, 12, 13, 19, 20, 24.  
 Dec. 6, 15, 18, 20, 21. 1924 Jan. 8, 14, 15, 17, 23, 24 Feb. 4, 6, 15

Dates of Survey while building During erection on board vessel --- 1924 Feb. 19, 22, 25, Mar. 8, 19<sup>th</sup>, 26<sup>th</sup>.

Total No. of visits 32

Dates of Examination of principal parts - Cylinders 21-12-23. Slides 1-2-24.  
 Covers 1-2-24. Pistons 1-2-24. Rods 4-2-24.  
 Connecting rods 21-12-23. Crank shaft 24-11-23. Thrust shaft 12-11-23.  
 Tunnel shafts 12-11-23. Screw shaft 6-2-24. Propeller 6-2-24.  
 Stern tube 4-2-24. Engine and boiler seatings 6-2-24. Engines holding down bolts 25-2-24.  
 Completion of pumping arrangements 25-2-24. Boilers fixed 25-2-24. Engines tried under steam 17-3-24.  
 Completion of fitting sea connections 6-2-24. Stern tube 6-2-24. Screw shaft and propeller 9-2-24.  
 Main boiler safety valves adjusted 15-3-24. Thickness of adjusting washers Lock nuts  
 Material of Crank shaft O.A. Steel Identification Mark on Do. 216 H.D.B. O.Y.J. 24-11-23.  
 Material of Thrust shaft " Identification Mark on Do. 988 H.D.B. 12-11-23.  
 Material of Tunnel shafts " Identification Marks on Do. 1511, 1511, 825, 882, 885 H.D.B. 12/11/24.  
 Material of Screw shafts " Identification Marks on Do. A.L.J. 11-7-17.  
 Material of Steam Pipes Steel Test pressure 540 lbs. Date of Test 11-3-24  
 Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F. ✓  
 Have the requirements of the Rules for carrying and burning oil fuel been complied with ✓  
 Is this machinery duplicate of a previous case Yes If so, state name of vessel "Seikai Maru" (No. 44: 30)

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

The machinery of this vessel has been constructed and fitted on board in accordance with the requirements of the Rules and the approved plans. The materials and workmanship are good. The machinery has been tried under full working conditions and found satisfactory. The vessel is eligible in our opinion to be classed with the record F L.M.C. - 3.24

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.24. FD. CL.

*[Signatures]*  
21/5/24

L. A. F. Young + Y. Jo.  
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 40.  
 Special ... £ 1023.  
 Donkey Boiler Fee ... £ ✓.  
 Travelling Expenses (if any) £ See Hull Report.

Committee's Minute FRI. MAY. 23 1924  
 Assigned + L.M.C. 3.24  
 F. D. C.L.

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

