

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 6420

26 MAR 1929

Date of writing Report 20<sup>th</sup> Feb. 1929 When handed in at Local Office Osaka Port of Osaka  
 No. in Survey held at Osaka Date, First Survey 15<sup>th</sup> September 28 Last Survey 22<sup>nd</sup> Feb 1929  
 Reg. Book. on the single screw steamer "BUJUN MARU" (Number of Visits 22)  
 Built at Osaka By whom built Osaka Iron Works Ltd Yard No. 1124 Tons { Gross 4735 Net 2660  
 Engines made at do. By whom made do. Engine No. 1124 When built 1929.2  
 Boilers made at do. By whom made do. Boiler No. 1124 when made 1929  
 Registered Horse Power 346 Owners Daini Kisen Kabushiki Kaisha Port belonging to Dairen  
 Nom. Horse Power as per Rule 346 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes  
 Trade for which Vessel is intended ✓

**ENGINES, &c.**—Description of Engines Triple expansion surface condensing  
 Dia. of Cylinders 22 x 37 x 61 Length of Stroke 42" No. of Cylinders 3 Revs. per minute 75  
 Crank shaft, dia. of journals as per Rule 12" Crank pin dia. 12 1/2" Crank webs Mid. length breadth 17.5" No. of Cranks 3  
 Intermediate Shafts, diameter as per Rule 11.43" Thrust shaft, diameter at collars as per Rule 12"  
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 13.29" Is the tube shaft fitted with a continuous liner no.  
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the propeller boss ✓  
 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 ✓  
 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 ✓  
 Propeller, dia. 15'-6" Pitch 18 No. of Blades 4 Material Bronze whether Moveable yes Total Developed Surface 80 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 21" Can one be overhauled while the other is at work yes  
 Feed Pumps { No. and size 2 Wein type Pumps connected to the { No. and size 2 main eng. 4" 1 Ballast 9 1/2" x 12 x 10 1 G.S. 8 1/2" x 6 x 9  
 How driven Steam Main Bilge Line { How driven Steam  
 Ballast Pumps, No. and size one 2 9 1/2" x 12 x 10 Lubricating Oil Pumps, including Spare Pump, No. and size ✓  
 Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 4 2 3 1/2" & 2 direct 2 4 1/2"  
 In Holds, &c. N<sup>o</sup>. 1 hold 2 2 3 1/2" N<sup>o</sup>. 2 hold 2 2 3 1/2" N<sup>o</sup>. 3 & 4 holds 2 2 3 1/2" N<sup>o</sup>. 5 hold 2 2 3 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 2 7 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 2 4 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 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 stokehold 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 are carried through the bunkers none How are they protected ✓  
 What pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓  
 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 ✓ Is it fitted with a watertight door no worked from ✓

**MAIN BOILERS, &c.**—(Letter for record 5) Total Heating Surface of Boilers 5902  
 Is Forced Draft fitted yes No. and Description of Boilers 2 S.B. Working Pressure 200  
 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 3.12.28 Main Boilers 7.6.28 Auxiliary Boilers ✓ Donkey Boilers ✓  
 Superheaters ✓ General Pumping Arrangements 19.6.28 Oil fuel Burning Piping Arrangements ✓

**SPARE GEAR.** State the articles supplied:— 2 connecting rod top end bolts and nuts, 2 connecting rod bottom end bolts and nuts, 2 main bearing bolts and nuts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, 1 set of piston springs and rings for each piston, H.P. & L.P. valve rods, 1 set of bottom end bases complete, 2 eccentric straps, 1 spare propeller, a number spare tubes for boiler & condenser, & a quantity of assorted bolts and nuts.

The foregoing is a correct description,

*[Signature]*  
 Manufacturer.

Sept 1928. 15<sup>th</sup> Oct. 6, 22, 25, 30, Nov. 8, 15, 26, Dec, 3, 7, 19, 12, 18, 27, Jan 9, 14.

Dates of Survey while building  
 During progress of work in shops ---  
 During erection on board vessel ---  
 Total No. of visits

January 1929. 24<sup>th</sup> Feb. 4, 8, 9, 14, 22.  
 22

Dates of Examination of principal parts—Cylinders 4-12-28 Slides 26-11-28 Covers 4-12-28  
 Pistons 7-11-28 Piston Rods 15-12-28 Connecting rods 18-12-28  
 Crank shaft 5-10-28 Thrust shaft 12-9-28 Intermediate shafts 12-9-28  
 Tube shaft ✓ Screw shaft 15-12-28 Propeller 15-12-28  
 Stern tube 7-11-28 Engine and boiler seatings 24-1-29 Engines holding down bolts 4-2-29  
 Completion of pumping arrangements 9-2-29 Boilers fixed 24-2-29 Engines tried under steam 14-2-29  
 Main boiler safety valves adjusted 14-2-29 Thickness of adjusting washers  
 Crank shaft material Steel Identification Mark 5-10-28 ALL Thrust shaft material Steel Identification Mark 12-9-28 ALL  
 Intermediate shafts, material Steel Identification Marks 12-9-28 ALL Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material Steel Identification Mark 29-9-28 ALL Steam Pipes, material steel Test pressure 600 lbs Date of Test 31-1-29  
 Is an installation fitted for burning oil fuel ✓ 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 no If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under special survey in accordance with the requirements of the Rules and approved plans; the workmanship and materials are good and after being efficiently installed in the vessel the machinery was tested under full working conditions ahead and astern and found to be in good and efficient condition and is eligible, in my opinion, to be classed in the Register Book with the Records of +L.M.C. 2.29. T.S. (OG).  
 2.S.B. 200 lbs. ELECTRIC LIGHT.

It is submitted that this vessel is eligible for THE RECORD. +L.M.C. 2.29. F.D. O.G.

YRM  
 9.4.29

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

The amount of Entry Fee ... £ 5.4.  
 Special ... £ 1240.  
 Donkey Boiler Fee ... £  
 Travelling Expenses (if any) £ see Hull Rpt.  
 When applied for, 25-2-1929  
 When received, 2-5-29

M. J. Garnett  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 12 APR 1929  
 Assigned Thine 2.29 F.D. O.G.

