

# REPORT ON OIL ENGINE MACHINERY

No. 1422

Received at London Office

Date of writing Report 19... When handed in at Local Office 8 JUL 1953 Port of KOBE  
Survey held at Tamano & Kobe Date, First Survey 15th Aug., 1952 Last Survey 5th May 1953  
Number of Visits 94

Single on the Tackle Screw vessel M.V. "SHOSEI MARU" Tons Gross 7199.23 Net 4175.29  
Built at Osaka, Japan By whom built Fujinagata Shipbuilding Co., Ltd. Yard No. 30 When built May, 1953  
Engines made at Tamano, Japan By whom made Mitsui Shipbuilding & Eng., Co., Ltd. Engine No. 486 When made May, 1953  
Mitsui Shipbuilding & Eng., Ltd. Boiler No. 326 When made May, 1953  
Boiler No. 328  
Horse Power 5530 (Service 4700) Owners Matsuoka Kisen K.K. Port belonging to Ashiya, Japan  
N. as per Rule 1106 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
Trade for which vessel is intended Ocean Going (General Cargo)

ENGINES &c. - Type of Engines B & W D.E. 674 VTF 160 2 or 4 stroke cycle 2 Single or double acting Single  
Maximum pressure in cylinders 49kg/cm<sup>2</sup> Diameter of cylinders 740mm Length of stroke 1600mm No. of cylinders 6 No. of cranks 6  
Mean Indicated Pressure 6.5kg/cm<sup>2</sup> Span of bearings (i.e., distance between inner edges of bearings in  
of a crank) 972.6mm Is there a bearing between each crank Yes Revolutions per minute 115  
Flywheel dia. 1930mm Weight 2198kg Moment of inertia of flywheel (lbs.in<sup>2</sup> or Kg.cm<sup>2</sup>) 11000000 Means of ignition Compression Kind of fuel used Diesel oil

Propeller dia. 5,250mm Pitch 4,030mm No. of blades 4 Material Manganese Bronze whether moveable Yes Total developed surface 9,060M<sup>2</sup> sq. feet  
Shaft dia. 180mm Intermediate Shafts, diameter as per Rule As approved Thrust Shaft, diameter at collars as per Rule As approved  
Screw Shaft, diameter as per Rule As approved Is the screw shaft fitted with a continuous liner Yes  
Thickness of liners, thickness in way of bushes as per Rule As approved Thickness between bushes as per Rule As approved  
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 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 fitted at the after end of stern tube  
Length of bearing in Stern Bush next to and supporting propeller 1,800mm  
Kind of damper, if fitted -

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of lubrication Forced  
Thickness of cylinder liners 52mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled  
Lined with non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned to the engine  
Cooling Water Pumps, No. and how driven No. 5 X Motor Driven Working F.W. Main 1x230M<sup>3</sup>/H Aux. 1x30M<sup>3</sup>/H  
Spare F.W. 230M<sup>3</sup>/H S.W. - Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
Bilge Pumps worked from the Main Engines, No. and capacity No. 2, Dia. 150mm Stroke 200mm Can one be overhauled while the other is at work No  
Pumps connected to the Main Bilge Line No. and capacity of each 1 - 180M<sup>3</sup>/H 1 - 120M<sup>3</sup>/H  
How driven Motor Driven Motor Driven  
Is the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Oil Pumps, No. and capacity 1-180M<sup>3</sup>/H Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2-220M<sup>3</sup>/H  
Two independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions  
In machinery spaces Fw'd Port 1-3" stab'd 1-3" Aft port 1-3" 1-5" Starb'd 1-3" Shaft Tunnel Hot 2-3 1/2" Well 1-3 1/2"  
No. 1 to 5 Hold port & Starb'd 1x3 1/2" each. Deep Tk. port & Starb'd 1-3 1/2" each. Deep Tank top port & Starb'd 1-3" each. Echo Sounding Room 1-2" Electric Rog. space 1-2" Engine Room Coffm.  
Bilge Suctions to the engine room bilges, No. and size Fore port & Starb'd Centre 1-2" each Aft port center & wing 1-2"  
Ballast Pump / starb'd centre & wing 1-2" each  
All the bilge suction pipes in holds are fitted with strum-boxes Yes Are the bilge suction pipes in the machinery spaces led from easily accessible man-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
Are they fitted with valves or cocks Both Are they fixed  
Are they 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 Below  
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 -  
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 Yes Is it fitted with a watertight door Yes worked from Upper Deck  
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  
Air Compressors, No. 2 No. of stages 2 stages diameters HP3" LP9 1/2" stroke 6" driven by Dynamo Eng.  
Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -  
All Auxiliary Air Compressors, No. 1 No. of stages 2 stages diameters HP28mm LP30mm stroke 55mm driven by Petrol Eng.  
Is provision made for first charging the air receivers Hand started small auxiliary air compressor.  
Ventilating Air Pumps or Blowers, No. 2 (Root's Blower) Dia. 820mm Length 1500mm driven by Main Engine  
Have they been made under survey Yes Engine Nos. 2  
Position of each in Engine Room Port inboard & outboard in Engine Room  
Make's name HANSHIN DIESEL WORKS, LTD. Position of each in Engine Room  
Report No. 011844-011850-0244

Lloyd's Register Foundation

AIR RECEIVERS:—Have they been made under survey... Yes ✓ State No. of report or certificate. No. AR-13862

State full details of safety devices... Yes ✓

Can the internal surfaces of the receivers be examined and cleaned... Yes ✓ Is a drain fitted at the lowest part of each receiver... Yes ✓

Injection Air Receivers, No. - Cubic capacity of each - Internal diameter - thickness -

Seamless, welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure -

Starting Air Receivers, No. 2 ✓ Total cubic capacity 9.13M<sup>3</sup>x2 Internal diameter 1.675mm thickness 28mm End plate 40mm

Seamless, welded or riveted longitudinal joint Rivetted joint ✓ Material O.H. Steel Range of tensile strength 51.7kg/mm<sup>2</sup> Working pressure 25kg/cm<sup>2</sup>

IS A DONKEY BOILER FITTED Yes ✓ If so, is a report now forwarded Yes

Is the donkey boiler intended to be used for domestic purposes only No

PLANS. Are approved plans forwarded herewith for shafting 16th February, 1953 Receivers 5th Jan., 1953 Separate fuel tanks 1

Donkey boilers 10th Oct., 1952 General pumping arrangements 27th Jan., 1953 Pumping arrangements in machinery space 15th Jan., 1

Exhaust gas boiler 5th Jan., 1953 Oil fuel burning arrangements 16th Jan., 1953

Have Torsional Vibration characteristics been approved Yes Date and particulars of approval 16th February, 1953.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes ✓ State if for "short voyages" only

State the principal additional spare gear supplied 1 Cylinder cover complete, 1 cylinder liner, 6 Fuel valves, 2 ex valves, 1 starting valve, 1 safety valve, 10 sets piston rings, 2 crosshead bearings with bolts nuts, 1 set crank pin bearings with bolts and nuts, 1 set main bearing brasses with bolts & nut 3 Fuel pump bodies, 1 scavenging blower rotor & its bearings.

The foregoing is a correct description,

Fujinagata Shipbuilding Co., Ltd. Casegawa Manufacturer.

Dates of Survey while building During progress of work in shops - - - 1952-Apr. 10, 17, 21, 27 June 10, 13, 27 July 1, 7, 11, 14, 18 Aug. 4, 8, 15, 19, 25, Sept. 2, 5, 9, 12, 17, 24, 29 Oct. 3, 7, 14, 16, 17, 22, 24, 28 Nov. 4, 8, 21, 28 Dec. 5, 19, 1953-Jan. 6, 9, 14, 16, 21 Feb. 2 Feb. 5, 7, 8, 9, 10, 12, 16, 17, 21, 24, 27, 28 Mar. 2, 3, 5, 6, 7, 9, 10, 11, 12, 14, 16, 17, 18, 24, 25, 26, 28, 30 Apr. 3, 8, 10, 14, 15, 17, 20, 22, 25, 30 May 2, 5

Total No. of visits 9493 Dates of examination of principal parts - Cylinders 27-12-52 Covers 16-1-53 Pistons 14-1-53 Rods 27-12-52 Connecting rods 14-10-52 Crank shaft 16-10-52 Flywheel shaft - Thrust shaft 16-10-52 Intermediate shafts 20-10-52 Tube shaft 29-10-52 17-2-53 Screw shaft 10-10-52 Propeller 28-3-53 Stern tube 28-2-53 Engine seatings 7-3-53 Engine holding down bolts 7-3-53 Completion of fitting sea connections 12-2-53 Completion of pumping arrangements 10-4-53 Engines tried under working conditions Shop Trial Sea trial Crank shaft, material F.S. & C.S. Identification mark K-CK301 MS LR Flywheel shaft, material - Identification mark - Thrust shaft, material O.H. Steel Identification mark K-F1223 MS LR Intermediate shafts, material O.H. Steel Identification marks Y3365- Tube shaft, material - Identification mark - Screw shaft, material O.H. Steel Identification mark Y3366 IS Identification marks on air receivers No. AR 467, 468 LLOYD'S TEST W.T.P. 39kgs/cm<sup>2</sup> W.P. 25kgs/cm<sup>2</sup> KT LR 5-3-53

Welded receivers, state Makers' Name -

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 ✓

Full description of fire extinguishing apparatus fitted in machinery spaces 9-9.5 liter each & 2-45.5 liter each of Formite, 2-CO<sub>2</sub> Reel & 12-CO<sub>2</sub> Blow in engine room

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No ✓ If so, have the requirements of the Rules been complied with -

What is the special notation desired -

If the notation for ice strengthening is desired, state whether the requirements in this respect have 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, Speed restrictions, &c.) The Machinery of this vessel has

constructed under Special Survey in accordance with the Rules, Approved Plans and Secretary's Le

The Materials and Workmanship are sound, good and free from defect.

The Machinery has been examined under working condition during shop and comprehensive sea t

and found satisfactory.

In our opinion the machinery of this vessel is eligible to have a record of +LMC 5,53, TS(C

5,53 and D.B.S. 5,53, W.P. 10kg/cm<sup>2</sup> in the Register Book.

The amount of Entry Fee ... 444,000

Special ... 252,000

Donkey Boiler Fee... f : : When applied for 8. JUL 1953

Travelling Expenses (if any) f : : When received 19

Committee's Minute

Assigned +LMC 5,53 Oil Eng.

FRIDAY 28 AUG 1953

CL 203 14216 (with torsional endorsement)

