

REPORT ON OIL ENGINE MACHINERY.

No. 1528

Received at London Office

28 AUG 1953

Date of writing Report 19 When handed in at Local Office 7. MAY 1953 Port of KOBE

No. in Survey held at Tamano, Japan Date, First Survey 22-3-1952 Last Survey 3-4-1953
Reg. Book. Number of Visits 79

Single on the Twin Triple Quadruple Screw vessel M. V. "ASASHIO MARU" Tons Gross 7524.02 Net 4184.98

Built at Tamano, Japan By whom built Mitsui Shipbuilding Engineering Co., Ltd. Yard No. 575 When built April 53

Engines made at Tamano, Japan By whom made Mitsui Shipbuilding Engineering Co., Ltd. Engine No. 478 When made April 53

Rank Boilers made at Tamano, Japan By whom made Mitsui Shipbuilding Engineering Co., Ltd. Boiler No. 362 When made April 53

Indicated Horse Power Maximum 6450 Service 5750 Owners Nakamura Steam Ship Co., Ltd. Port belonging to KOBE

N. as per Rule 1290 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Ocean going

2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 49 kg/cm² Diameter of cylinders 740 mm Length of stroke 1600 mm No. of cylinders 7 No. of cranks 7

Mean Indicated Pressure 6.5 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in

Revolutions per minute Maximum 115 Service 110.5

Is there a bearing between each crank Yes

Moment of inertia of flywheel (lbs. in² or Kg. cm²) 4750000 Means of ignition Compression Kind of fuel used Diesel oil

flywheel dia. 2240 mm Weight 6320 kg balance wts. (" " " ") No. 1 1030 X 2, No. 7 1030 X 2, No. 3 24500, No. 4 24500

Crank pin dia. 550 mm Crank webs Mid. length breadth 1020 mm Mid. length thickness 280 mm

Intermediate Shafts, diameter 369.468 mm Thrust Shaft, diameter at collars 413.48 mm

Screw Shaft, diameter 425 mm Is the screw shaft fitted with a continuous liner Yes

Thrust Liners, thickness in way of bushes 20.625 mm Thickness between bushes 22.5 mm 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

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-

Is an approved Oil Gland fitted at the after

Length of bearing in Stern Bush next to and supporting propeller 1800 mm

Propeller, dia. 5400 mm Pitch 4298.9 mm No. of blades 4 Material MnBC whether moveable moveable Total developed surface 101 sq. feet

Moment of inertia of propeller including entrained water (lbs. in² or Kg. cm²) 15000000 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

Thickens of cylinder liners 52 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

Lagged with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

Cooling Water Pumps, No. and how driven 3 Electric motor Working F.W. 1

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 2 20 M³/h each Can one be overhauled while the other is at work No

No. and capacity of each 1-Ballast pump 180 M³/h 1-G.S. pump 180 M³/h 2-Bilge & Sanitary pump 20 M³/h each

How driven Electric motor Electric motor main engine

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

Ballast Pumps, No. and capacity 1-180 M³/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 240 M³/h

Are two independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions

No. and size: In machinery spaces Starboard 2-3", Port 2-3" Bilge 1-3" In pump room

holds, &c. No. 1 to No. 5 1-3" TUNNEL DEEP P.W. 1-2 1/2" S.W. 1-2 1/2" DEEP TANK P-1-2" ENGRM 1-3" ENGRM 1-2" FORE 1-2" AFT 1-2"

Direct Bilge Suctions to the engine room bilges, No. and size 1-3" (G.S. pump), 1-5" (Ballast pump), 1-9" (main cooling S.W. pump)

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily

possible 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

efficiently 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

What pipes pass through the deep tanks NONE How are they protected

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes Have they been tested as per Rule

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 a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. 2 No. of stages 2 diameters HP 115 stroke 120 driven by Electric motor

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters LP 130 stroke 120 driven by Electric motor

Small Auxiliary Air Compressors, No. 1 No. of stages 2 diameters HP 1 1/2" stroke 3" driven by Electric motor

What provision is made for first charging the air receivers Hand compressor

Scavenging Air Pumps or Blowers, No. 2 (Roots Blower) How driven Main Engine Engine Nos 479, 480, 481

Auxiliary Engines Have they been made under survey Yes Position of each in engine room Port Forward, midship & aftward

Makers name Mitsui Shipbuilding Engineering Co., Ltd. Report No. 013728 - 013734 - 0157

AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate AR-14158

State full details of safety devices 1 Spring loaded safety valve Valve diam 50 mm

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 2 x 10 m³ Internal diameter 1720 mm thickness 24 mm

Seamless, welded or riveted longitudinal joint Riveted Material O.H. Steel Range of tensile strength SHELL 30.1-34.2 kg/cm² Working pressure 25 kg/cm²
FLANGE 28.6-28.9 kg/cm²

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 yes

PLANS. Are approved plans forwarded herewith for shafting 17-2-53 Receivers 5-1-53 Separate fuel tanks 4
(If not, state date of approval)

Donkey boilers 19-11-52 General pumping arrangements 22-10-52 Pumping arrangements in machinery space 12-2-53

Oil fuel burning arrangements 23-1-53

Have Torsional Vibration characteristics been approved yes Date and particulars of approval 17-2-53
for 115 rpm

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes State if for "short voyages" only No

State the principal additional spare gear supplied 5 Exhaust valves, 3 Starting air valves, 3 Safety valves,
2 Sets piston rings, 4 Links camshaft drive chain, 1 set & 4 Links scavenge blower chain,
6 Sets fuel pipes, 1 Cylinder liner, 5 Indicator valves, 1 set main bearings, 1 Propeller
blade.

MITSUBI SHIPBUILDING & ENGINEERING CO., LTD. YAMANO WORKS.

The foregoing is a correct description,

Manufacturer S. Tanaka

Dates of Survey while building
During progress of work in shops - 1952-MAR. 22, APR. 14, MAY 9, 17, 21, 27, JUN. 6, 10, 13, 20, 24, 27, 28, 29, JUL. 4, 7, 8, 11, 15, 18, 21, 22, AUG. 8,
19, 21, 25, SEP. 2, 4, 5, 8, 10, 12, 19, 20, 24, 26, 29, OCT. 3, 7, 17, 28, NOV. 4, 7, 8, 11, 12, 13, 14, 17, 21,
DEC. 2, 13, 15, 16, 19, 23, 24, 26, 27, 1953-JAN. 9, 12, 16, 21, FEB. 2, 6, 13, 28, MAR. 6, 13, 17,

During erection on board vessel - 1953-MAR. 2, 20, 23, 27, APR. 2, 3,

Total No. of visits 79

Dates of examination of principal parts—Cylinders 28-10-52 Covers 17-11-52 Pistons 25-11-52 Rods 17-11-52 Connecting rods 4-9-

Crank shaft 8-9-52 Flywheel shaft - Thrust shaft 10-9-52 Intermediate shafts 17-12-52 Tube shaft -

Screw shaft 2-12-52 Propeller 9-1-53 Stern tube 16-12-52 Engine seatings 12-3-53 Engine holding down bolts 12-3-

Completion of fitting sea connections 16-1-53 Completion of pumping arrangements 27-3-53 Engines tried under working conditions 2-4-

Crank shaft, material F.S. & C.S. Identification mark K-CK 295 Flywheel shaft, material - Identification mark -

Thrust shaft, material O.H. Steel Identification mark K-F 1191 Intermediate shafts, material O.H. Steel Identification marks Y-3395.A

Tube shaft, material - Identification mark - Screw shaft, material O.H. Steel Identification mark K-F 1261

Identification marks on air receivers No. AR 457 LLOYD'S TEST W.T.P. 39 kg/cm² W.P. 25 kg/cm² M.H.R. 31-1-53

No. AR 458 LLOYD'S TEST W.T.P. 39 kg/cm² W.P. 25 kg/cm² M.H.R. 3-2-53

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 Steam pipes & CO₂ gas piping from CO₂ bottle room built in upper

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

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 yes If so, state name of vessel "KAMOGAWA MARU"

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

The Machinery of this vessel has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

Materials and the workmanship are sound and good.

The Machinery has been examined under full working condition during deck and comprehensive sea trials and found satisfactory.

In our opinion, the Machinery of this vessel is eligible to have a record of + L.M.C. 4.53 T.S.C.C.L. 4.53 & P.B.S. W.P. 7 kg/cm² 4.53.

The amount of Entry Fee ... £750.000

Special ... £ : : When applied for 13. AUG. 1953

Donkey Boiler Fee... £ : : When received 19

Travelling Expenses (if any) £ : : TUESDAY 22 SEP 1953

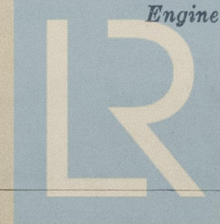
Committee's Minute

Assigned

+ LMC 4.53 Gil Eng.

DB 100 lb. CL.

L. T. Williams & J. J. Williams
Engineer Surveyor to Lloyd's Register of Shipping



Lloyd's Register
Foundation