

REPORT ON OIL ENGINE MACHINERY.

No. 1760

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Survey held at Yamano, Japan Date, First Survey 13-1-53 Last Survey 28-11-1953
 Number of Visits 69

Single on the Twin Triple Quadruple Screw vessel M. V. "OMUROSAN MARU" Tons Gross 13102.72 Net 7713.17

Yamano, Japan By whom built Mitsui Shipbuilding & Engineering Co., Ltd. Yard No. 573 When built Nov. 53

Yamano, Japan By whom made Mitsui Shipbuilding & Engineering Co., Ltd. Engine No. 494 When made Nov. 53

Yamano, Japan By whom made Mitsui Shipbuilding & Engineering Co., Ltd. Boiler No. 366.367 When made Nov. 53

Maximum 8200 Service 7500 Owners Mitsui Senpaku K.K. Port belonging to Tokyo

N. as per Rule 1640 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ade for which vessel is intended Ocean going

ENGINES, &c. - Type of Engines B & W DE 774 VTBF 160 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 740 mm Length of stroke 1600 mm No. of cylinders 7 No. of cranks 7

Indicated Pressure 7.5 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in

of a crank) 972.6 mm Is there a bearing between each crank yes Revolutions per minute Maximum 115 Service 111.5

Wheel dia. 2240 mm Weight 6320 kg Moment of inertia of flywheel (lb-in² or Kg.cm²) 4750000 Means of ignition Compression Kind of fuel used Diesel oil

balance wts. (" " " " ")

Solid forged dia. of journals as per Rule 510.77 mm Crank pin dia. 550 mm Crank webs Mid. length breadth 1200 mm Thickness parallel to axis 335 mm

Semi built All built as fitted 550 mm Mid. length thickness 280 mm Thickness around eyehole 250 mm

Wheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 400.253 mm Thrust Shaft, diameter at collars as per Rule 440.25 mm

as fitted Screw Shaft, diameter as per Rule 160.544 mm Is the tube shaft fitted with a continuous liner yes

as fitted 480 mm as fitted 450 mm at coupling as per Rule 16.227 mm Is the after end of the liner made watertight in the

ize Liners, thickness in way of bushes as per Rule 21.742 mm Thickness between bushes as fitted 26 mm

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-

osive If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland fitted at the after

of stern tube No If so, state type Length of bearing in Stern Bush next to and supporting propeller 2000 mm

propeller, dia. 5800 mm Pitch 3997 mm No. of blades 4 Material M.B.C. whether moveable moveable Total developed surface 128.52 sq. feet

ment of inertia of propeller including entrained water (lb-in² or Kg.cm²) 242.657800 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

ication Forced Thickness of cylinder liners 42 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled

agged with non-conducting material Lagged 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 4 (2-oil motor, 2-steam) Working F.W. 1-oil motor

1-oil motor Spare F.W. 1-steam S.W. 1-steam Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

e Pumps worked from the Main Engines, No. and capacity 2, 20 M³/H Can one be overhauled while the other is at work No

ups connected to the Main Bilge Line No. and capacity of each 2-Bilge & Sanitary pump, 20 M³/H; 1-Spare S.W. Cool. pump, 350 M³/H; 1-Butter Worth pump 100 M³/H; 1-Bilge pump 30 M³/H

How driven Main Engine Steam Steam Steam

e 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

ngements

st Pumps, No. and capacity 1, 30 M³/H Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2, 250 M³/H

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

nd size: - In machinery spaces Fore - P1-4" S1-4" MID. P1-4" C1-3" S1-4" AFT 1-4" In pump room MAIN PUMPRM 5-4" S1-4" EMEGR. 1-3" FORE PUMPRM 1-3"

lds, &c. P1-3" S1-3" FR. 194-195 FR 57-58 COFF. in ENG. RM. FORE 1-3" MID 1-3" DRYTANK 1-3"

et Bilge Suctions to the engine room bilges, No. and size 1-4" 1-5 1/2" 1-12"

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

visible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

all Sea Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks Both Are they fixed

cently 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 above

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

pipes pass through the bunkers NONE How are they protected

pipes pass through the deep tanks NONE Have they been tested as per Rule

all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times yes

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

or from one compartment to another yes Is the shaft tunnel watertight Is it fitted with a watertight door worked from

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

ain Air Compressors, No. No. of stages diameters HP 280 mm stroke driven by

1 Auxiliary Air Compressors, No. 2 No. of stages 2 diameters LP 320 mm stroke 140 mm driven by Steam

7 All Auxiliary Air Compressors, No. 1 No. of stages 2 diameters HP 56 mm stroke 95 mm driven by Hand

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

38 Evenging Air Pumps or Blowers, No. 2 Turbo Blowers How driven Exhaust gas turbine

46 Auxiliary Engines Have they been made under survey yes Engine Nos. 496, 507

Makers name Mitsui Shipbuilding & Engineering Co., Ltd. Position of each in engine room Port side in Engine Room

Report No. 011725-011736-0274

AIR RECEIVERS:—Have they been made under survey yes ✓ State No. of report or certificate. AR-16688V
State full details of safety devices 1 x 10 MM Fusible plug ✓
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 10 x 2 = 20M³ Internal diameter 1672 MM thickness 24 MM
Seamless, welded or riveted longitudinal joint Riveted Material O.H. Steel Range of tensile strength FLANGE 48.1-53.9 kg/cm² Working pressure 25 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 NO

PLANS. Are approved plans forwarded herewith for shafting 7-5-53 Receivers 9-6-53 Separate fuel tanks ER
(If not, state date of approval)
Donkey boilers 19-6-53 General pumping arrangements 15-5-53 Pumping arrangements in machinery space 15-5-53
Oil fuel burning arrangements 1-9-53
Have Torsional Vibration characteristics been approved yes ✓ Date and particulars of approval 2-9-53 ✓

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 6 Exhaust valves, 2 Starting valves, 9 Fuel valves, 2 Safety valves, 2 Set pistons complete, 15 sets piston rings for one cylinder, 2 sets piston cooling pipes, 4 Links cam drive chains, 6 sets fuel pipes for one cylinder, 1 cylinder liner, 1 cylinder cover, 8 Ind valves, 1 set main bearings, 1 Propeller blade with studs & nuts.

mitsui shipbuilding & engineering co., ltd., yamato works.

The foregoing is a correct description, S. Tanaka

Senior Managing Director Manufacturer.

Dates of Survey while building
During progress of work in shops - 1953- JAN. 13, 31. FEB. 6, 10, 13, 17, 24, 27, 28. MAR. 3, 6, 10, 17 APR. 3, 10, 14, 24 MAY 2, 9, 15, 19, 26. JUN 2, 5, 6, 12, 15, 16, 19, 23, 26, 30 JUL. 3, 8, 10, 14, 17, 21, 24, 27, 28, 29, 31. AUG. 1, 5, 6, 11, 25, 27. SEP. 4, 7, 11, 15, 18, 22. OCT. 5, 6, 29.
During erection on board vessel - 1953- AUG. 14. SEP. 1, 8. OCT. 2 NOV. 7, 13, 17, 25, 28.
Total No. of visits 69.

Dates of examination of principal parts—Cylinders 23-6-53 Covers 21-7-53 Pistons 24-7-53 Rods 3-7-53 Connecting rods 1-7-53
Crank shaft 15-6-53 Flywheel shaft - Thrust shaft 15-6-53 Intermediate shafts 23-6-53 Tube shaft -
Screw shaft 24-7-53 Propeller 1-8-53 Stern tube 24-7-53 Engine seatings 2-10-53 Engine holding down bolts 2-10-53
Completion of fitting sea connections 14-8-53 Completion of pumping arrangements 25-11-53 Engines tried under working conditions 28-11-53
Crank shaft, material F.S. & C.S. Identification mark K-CK 323 Flywheel shaft, material - Identification mark -
Thrust shaft, material O.H. Steel Identification mark K-F 1405 Intermediate shafts, material O.H. Steel Identification marks Y3535, Y3536, Y3537, Y3538, Y3539, Y3540, Y3541, Y3542, Y3543, Y3544, Y3545, Y3546, Y3547, Y3548, Y3549, Y3550, Y3551, Y3552, Y3553, Y3554, Y3555, Y3556, Y3557, Y3558, Y3559, Y3560, Y3561, Y3562, Y3563, Y3564, Y3565, Y3566, Y3567, Y3568, Y3569, Y3570, Y3571, Y3572, Y3573, Y3574, Y3575, Y3576, Y3577, Y3578, Y3579, Y3580, Y3581, Y3582, Y3583, Y3584, Y3585, Y3586, Y3587, Y3588, Y3589, Y3590, Y3591, Y3592, Y3593, Y3594, Y3595, Y3596, Y3597, Y3598, Y3599, Y3600, Y3601, Y3602, Y3603, Y3604, Y3605, Y3606, Y3607, Y3608, Y3609, Y3610, Y3611, Y3612, Y3613, Y3614, Y3615, Y3616, Y3617, Y3618, Y3619, Y3620, Y3621, Y3622, Y3623, Y3624, Y3625, Y3626, Y3627, Y3628, Y3629, Y3630, Y3631, Y3632, Y3633, Y3634, Y3635, Y3636, Y3637, Y3638, Y3639, Y3640, Y3641, Y3642, Y3643, Y3644, Y3645, Y3646, Y3647, Y3648, Y3649, Y3650, Y3651, Y3652, Y3653, Y3654, Y3655, Y3656, Y3657, Y3658, Y3659, Y3660, Y3661, Y3662, Y3663, Y3664, Y3665, Y3666, Y3667, Y3668, Y3669, Y3670, Y3671, Y3672, Y3673, 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