

## REPORT ON OIL ENGINE MACHINERY.

No. 3177

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Writing Report 19 When landed in at Local Office DEC 30 1955 Port of K O B E  
Survey held at Tamano Date, First Survey 28th Dec., 1954 Last Survey 9th September 19 55  
Number of Visits 63  
Single on the Twin Triple Quadruple Screw vessel M.V. "MEIKI MARU" Tons Gross 7613.59 Net 4285.30  
Tamano, Japan By whom built Mitsui Shipbuilding & Engr. Co., Ltd. Yard No. 599 When built Sept., 55  
made at Tamano, Japan By whom made Mitsui Shipbuilding & Engr. Co., Ltd. Engine No. 562 When made Sept., 55  
Boilers made at Tamano, Japan By whom made Mitsui Shipbuilding & Engr. Co., Ltd. Boiler No. 386 When made Sept., 55  
Horse Power 6250 Owners Meiji Kaibun K.K. Port belonging to Kobe  
as per Rule 1250 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes  
which vessel is intended

GINES, &c. — Type of Engines Mitsui B & W. D.E. 574V TBF 160 2 or 4 stroke cycle 2 Single or double acting single  
pressure in cylinders 55 kg/cm<sup>2</sup> Diameter of cylinders 740mm. Length of stroke 1600mm No. of cylinders 5 No. of cranks 5  
Indicated Pressure 7.9 kg/cm<sup>2</sup> Ahead Firing Order in Cylinders 1-4-3-2-5 Span of bearings, adjacent to the crank, measured  
from edge to inner edge 972.6mm Is there a bearing between each crank Yes Revolutions per minute 115  
Diameter of journals 2430mm Weight 8068 kg Moment of inertia of flywheel (lbs.in<sup>2</sup> or Kg.cm.<sup>2</sup>) 65,000,000 Means of ignition Compression Kind of fuel used Diesel oil  
Solid forged dia. of journals as per Rule 510.73 mm Crank pin dia. 550 mm Crank webs Mid. length breadth 1180 mm Thickness parallel to axis 335 mm  
Semi built dia. of journals as fitted 550 mm Crank webs Mid. length thickness 280 mm shrunk Thickness around eyehole 250 mm  
All built as per Rule 373.685mm Thrust Shaft, diameter at collars as fitted 500mm (160mm Center hole)  
Shaft, diameter as fitted Intermediate Shafts, diameter as fitted 380mm Thrust Shaft, diameter at collars as per Rule 452.36mm  
Pitch, diameter as per Rule 20,777mm Screw Shaft, diameter as fitted 435mm Is the tube screw shaft fitted with a continuous liner Yes  
Bushes, thickness in way of bushes as per Rule 25mm Thickness between bushes as fitted 22.5mm Is the after end of the liner made watertight in the  
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 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  
shaft No If so, state type Length of bearing in Stern Bush next to and supporting propeller 1800mm  
Pitch 4231.9mm No. of blades 4 Material MnBSC whether moveable Moveable Total developed surface 101.9 sq. feet  
Moment of inertia of propeller (lbs.in<sup>2</sup> or Kg.cm.<sup>2</sup>) 156,000,000 Kind of damper, if fitted  
Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of  
forced Thickness of cylinder liners 52mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled  
with non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
engine Cooling Water Pumps, No. 2 by oil motor Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
Pumps worked from the Main Engines, No. 2 by steam Diameter 150mm Stroke 200mm Can one be overhauled while the other is at work No  
Connected to the Main Bilge Line (No. and size) 220m<sup>3</sup>/h x 70m 100m<sup>3</sup>/h x 70m 20m<sup>3</sup>/h x 40m 20m<sup>3</sup>/h x 50m  
How driven Steam Steam Main engine Steam Main engine  
Bilge 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  
Pumps, No. and size 1-220m<sup>3</sup>/h x 70m Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1-170m<sup>3</sup>/h x 125m Main eng. driven  
Independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary  
No. and size: In machinery spaces Fore P 1-3" Aft P 1-3" Well S 1-4" Emerg. 1-7" Coff. dam 1-3" 1-2" TK Top (P 1-2" S 1-2")  
P 1-3" 1-3" 1-3" 1-3" 1-3" deep tank P 1-2" 1-2" 1-2" In pump room Bilge hat 1-3"  
S 1-3" 1-3" 1-3" 1-3" 1-3" S 1-2" 1-2" 1-2"  
Power Pump Direct Suctions to the engine room bilges, No. and size 1-5" Ballast pump 1-3" G.S. Pump  
Bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily  
d-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
Connections fitted direct on the skin of the Ship Yes Are they fitted with valves or cocks Both Are they fixed  
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  
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  
pass through the bunkers None How are they protected  
pass through the deep tanks None Have they been tested as per Rule  
cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
gement 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  
om one compartment to another Yes Is the shaft tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper deck  
essel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork  
Compressors, No. 2 No. of stages 2 diameters H.P. 3" stroke driven by  
Air Compressors, No. 2 No. of stages 2 diameters L.P. 9" stroke 4" driven by steam engine  
Auxiliary Air Compressors, No. 1 No. of stages 2 diameters H.P. 50mm stroke 80mm driven by Hand  
on is made for first charging the air receivers by small hand compressor  
Air Pumps, No. 2 Turbo blower diameter stroke driven by Main eng. exh. gas.  
1 Emergency blower 148.48mm No. 2 (steam) Elec. motor  
Engines crank shafts, diameter as per Rule 170mm Position Port side built seat on tank top  
of Visiary engines been constructed under special survey Yes Is a report sent herewith Yes

005029-005037-0023



AIR RECEIVERS:—Have they been made under survey... Yes State No. of report or certificate AR-23893  
Is each receiver, which can be isolated, fitted with a safety valve as per Rule 1-20mm spring loaded escape valve & 1-20mm 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... 14 m<sup>3</sup> Internal diameter... 1718 mm thickness... 25 mm  
Seamless, welded or riveted longitudinal joint... Welded Material... O.H. Steel Range of tensile strength... Working pressure...  
Shell 50.0 to 50.1 kg/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... 28 - 4-1955 Kobe Receivers... 11-4-1955 Kobe Separate fuel tank...  
Donkey boilers... 11-3-1955 Kobe General pumping arrangements... 9-2-1955 Kobe Pumping arrangements in machinery space... 29-3-1955  
Oil fuel burning arrangements... 9-2-1955 Kobe  
Have Torsional Vibration characteristics been approved... Yes Date of approval... 30-8-1955 Kobe

### SPARE GEAR.

Has the spare gear required by the Rules been supplied... Yes  
State the principal additional spare gear supplied... 3-Exhaust valves, 1-Starting valve, 1-Relief valve,  
4 sets - Piston ring for one cylinder, 4 sets - Fuel pipes for one cylinder,  
1 set - Turbo charger, 1 set - cylinder liner, 1 set - cylinder cover,  
1 - Propeller blade.

MITSUI SHIPBUILDING & ENGINEERING CO., LTD., TAMANO WORKS.

The foregoing is a correct description of the vessel for S. Tanaka

1954 Dec. 28  
During progress of work in shops - - 1955 Jan. 13, 18, 25 Feb. 11, 15, 22, 25 Mar. 1, 4, 11, 17, 23, 29 Apr. 1, 6, 9, 12, 15, 26, 30  
May 6, 10, 17, 20, 27, 29, 30, 31 Jun. 3, 4, 6, 7, 11, 14, 16, 18, 22, 25, 28 Jul. 2, 8, 12, 15, 19, 26  
Aug. 2, 5, 9, 13, 17, 24, 26, 29, 30, Sep. 2, 7, 9.  
During erection on board vessel - - 1955 June 7, 22, Aug. 8, 17, 26, 30 Sep. 2, 3, 9.  
Total No. of visits... 68  
Dates of examination of principal parts—Cylinders 31-5-55 Covers 14-6-55 Pistons 7-6-55 Rods 25-4-55 Connecting rods...  
Crank shaft 9-5-55 Flywheel shaft... Thrust shaft 9-5-55 Intermediate shafts 13-5-55 Tube shaft...  
Screw shaft 23-5-55 Propeller 19-7-55 Stern tube 4-6-55 Engine seatings 8-8-55 Engine holding down bolts...  
Completion of fitting sea connections 22-6-55 Completion of pumping arrangements 30-8-55 Engines tried under working conditions...  
Crank shaft, material F.S. & C.S. Identification mark K-CK 462 Flywheel shaft, material... Identification mark...  
Thrust shaft, material O.H. Steel Identification mark K-F 1849 Intermediate shafts, material O.H. Steel Identification mark...  
Tube shaft, material... Identification mark... Screw shaft, material O.H. Steel Identification mark...  
Identification marks on air receivers No. 628 LLOYD'S TEST KOB W.T.P. 41 kg/cm<sup>2</sup> W.P. 25 kg/cm<sup>2</sup> JN LR 27-5-55  
No. 629 LLOYD'S TEST KOB W.T.P. 41 kg/cm<sup>2</sup> W.P. 25 kg/cm<sup>2</sup> JN LR 27-5-55

Welded receivers, state Makers' Name Mitsui Shipbuilding & Engineering Co., Ltd., Tamano Works, Tamano

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  
Description of fire extinguishing apparatus fitted... Steam pipe & CO<sub>2</sub> gas pipe leading to eng. & boiler room. 8-9 ltr. foam portable ex.  
2 - horse connection (by ballast & G.S. Pump) 1-45 ltr. foam  
1 - Fire pump in Steering room (Capacity 318m<sup>3</sup>/h x 45m)  
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...  
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, etc.)

The machinery of this vessel has been constructed under Special Survey in accordance with the Rule, approved by the Committee's Minute.  
plans and Secretary's letters.  
The workman ship and materials are sound and good.  
The machinery was examined under working condition during shop trial and comprehensive sea trials and found satisfactory.

In our opinion this machinery is worthy to have a record of +LMC 9,55, T.S.(CL) 9,55 and D.B.S. 9,55 W.P. 25 kg/cm<sup>2</sup>

The amount of Entry Fee ... £ 738,000 :  
Special ... £ :  
Donkey Boiler Fee... £ :  
Travelling Expenses (if any) ... £ :  
When applied for DEC 30 1955  
When received 19

Committee's Minute

Assigned

FRIDAY 10 FEB 1956  
+LMC 9.55 (with Tors. Ed.)  
CL.



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