

REPORT ON OIL ENGINE MACHINERY.

No. Kobe 2157
1458-4

Received at London Office 3 - AUG 1954

Date of writing Report 30th June 1954 When handed in at Local Office Kobe JUN 12 1954 19 Port of Kobe and Yokohama

No. in Survey held at Tamashima & Yokosuka Date, First Survey Yokohama 19-10-53 Last Survey Yokohama 28-6-1954

Reg. Book. Single on the Twin Triple Quadruple Screw vessel M. V. "TAMON MARU" Number of Visits Kobe 21 visits
Yokohama 8 visits
Gross 7713.61
Net 4425.92

Built at Yokosuka Japan By whom built THE URAGA DOCK CO., LTD. Yard No. 655 When built 6-54

Engines made at TAMASHIMA JAPAN By whom made URAGA TAMASHIMA DIESEL KOGYO K.K. Engine No. 245 When made 3-54
10717 (YAR 46)

Donkey Boilers made at YOKOSUKA JAPAN By whom made THE URAGA DOCK CO., LTD. Boiler No. 10718 (YAR 47) When made 4-54

Brake Horse Power 7300 Owners HACHIUMA KISEN K. K. Port belonging to NISHINOMIYA

M.N. Power as per Rule 1460 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted Yes

Trade for which vessel is intended Ocean going

OIL ENGINES, &c. — Type of Engines 2 SCSA

Maximum pressure in cylinders 52.7 kg/cm² Diameter of cylinders 720 mm Length of stroke 1250 mm No. of cylinders 10 No. of cranks 10

Mean Indicated Pressure 6.1 kg/cm² Ahead Firing Order in Cylinders 1-8-7-4-3-10-5-2-9-6 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 930 mm Is there a bearing between each crank yes Revolutions per minute 128

Flywheel dia 2423.9 mm Weight 1340 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 5.1 X 10⁷ Means of ignition Compression Kind of fuel used diesel oil

Crank Shaft, Solid forged dia. of journals as per Rule 473 mm as fitted 490 mm Crank pin dia 490 mm Crank webs Mid. length breadth 810 mm Thickness parallel to axis 305 mm
All built as fitted 490 mm Mid. length thickness 295 mm Thickness around eyehole 243 mm

Flywheel Shaft, diameter as per Rule 390.08 mm Intermediate Shaft, diameter as fitted 400 mm Thrust Shaft, diameter at collars as fitted 490 mm
as fitted 430.54 mm as fitted 440 mm Is the tube shaft fitted with a continuous liner yes
as fitted 440 mm as fitted 15.2 mm

Tube Shaft, diameter as per Rule 20.35 mm as fitted 24.25 mm Screw Shaft, diameter as fitted 440 mm Is the after end of the liner made watertight in the propeller boss yes

Bronze Liners, thickness in way of bushes as per Rule 20.35 mm as fitted 24.25 mm Thickness between bushes as fitted 21 mm Is the after end of the liner made watertight in the propeller boss yes

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 tube shaft — If so, state type — Length of bearing in Stern Bush next to and supporting propeller 1830 mm

Propeller, dia. 5250 mm Pitch 4050 (0.7R) No. of blades 4 Material Mn. Br. whether moveable NO Total developed surface 103.12 sq. feet

Moment of inertia of propeller (lbs. in² or Kg. cm²) 2.16 X 10⁸ Kind of damper, if fitted —

Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced Thickness of cylinder liners 45 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine — Cooling Water Pumps, No. 2 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. — Diameter — Stroke — Can one be overhauled while the other is at work —

Pumps connected to the Main Bilge Line { No. and size Bilge P. 30 1/2 x 35 1/2 x 1 1/2 Bilge + ballast P. 200 1/2 x 20 1/2 x 1 1/2 G.S.P. 200 1/2 x 20 1/2 x 1 1/2
How driven motor driven steam driven (Washington type) motor driven

Is the cooling water led to the bilges — 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 size 1 x 200 1/2 x 20 1/2 Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2, 280 1/2 x 45 mm

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:— In machinery spaces 10 (2" x 3" 3" x 6" 5" x 1") In pump room —

In holds, &c. Nos. 1, 2, 3, 4, 5 Hold: 3" x 2 each NO. 6 Hold: 3" x 4
25 1/2 x 1 1/2 x 1 1/2 25 1/2 x 1 1/2 x 1 1/2

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2 (3" x 1" 5" x 1") + (1 @ 240 mm) emergency

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 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 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 bunkers NO How are they protected —

What pipes pass through the deep tanks NO 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 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. — No. of stages — diameters — stroke — driven by —

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 310/340 mm stroke 180 mm driven by main dynamo engine

Small Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 40/92 mm stroke 70 mm driven by hand

What provision is made for first charging the air receivers manual air compressor & small starting air receiver (100 l x 20 kg/cm²)

Scavenging Air Pumps, No. 10 diameter 950 mm stroke 520 mm driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule 163.3 mm as fitted 200 mm No. — Engine No. 256 Position Manoeuvring platform: Rafter 9.5th R forward

Have the auxiliary engines been constructed under special survey yes Is a report sent herewith yes

AIR RECEIVERS:—Have they been made under survey yesIs each receiver, which can be isolated, fitted with a safety valve as per Rule yesCan the internal surfaces of the receivers be examined and cleaned yesIs a drain fitted at the lowest part of each receiver yes

Injection Air Receivers, No. — Cubic capacity of each — Internal diameter — thickness — by Rules —
Seamless, welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure Actual —
Starting Air Receivers, No. 2 (for M.E.) Total cubic capacity 10.5 m³ x 2 Internal diameter 1740 mm thickness shell 38 mm, end 40 mm
Seamless, welded or riveted longitudinal joint welded Material O.H. steel Range of tensile strength 43.1, 43.4, 43.6 Working pressure 33.9 kg/cm² Actual 30 "

IS A DONKEY BOILER FITTED yes If so, is a report now forwarded yesIs the donkey boiler intended to be used for domestic purposes only NOPLANS. Are approved plans forwarded herewith for shafting 22/4/54 Kobe Receivers 24-11-53 Note Separate fuel tanks 24-2-54Donkey boilers oil burning 27-11-53 General pumping arrangements 12-1-54 Pumping arrangements in machinery space 10-12-53Oil fuel burning arrangements 8-2-54Have Torsional Vibration characteristics been approved NO Date of approval —

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes

State the principal additional spare gear supplied 1 piston crown 1/2 set of guide shoe for one cylinder 1 scavenging guide
piston complete 1 scavenging pump piston and piston rod 1 scavenging pump driving lever complete
1 pilot valve complete 1 governor spring 1 mechanical cylinder lubrication complete
5 indicator valves

The foregoing is a correct description,

Manufacturer.

Uraga Tamashima Diesel Kogyo K.K.
S. Kaneko

Dates of Survey while building
During progress of work in shops -- 1953 NOV. 12, 20, 27, DEC. 4, 11, 16, 22, 29, 1954 JAN. 3, 9, 20, 26, 29, APR. 8, 15, 22, 29, MAY 5, 12, 19, 26, 30, JUN 3, 10, 17, 24, 28, 1954 JAN. 6, 8, 11, 13, 18, 20, 22, 25, 27, 29, 30, FEB. 5, 8, 10, 12, 16, 17, 19, 22, 24, 26, 1953 OCT. 14, 30, NOV. 7, 13, 15, 26, DEC. 4, 7, 9, 14, 18, 21, 23, 26, 28, 1954 MAR. 1, 5, 8, 10, 12, 15, 19, 22, 26, 29, 31, APR. 2, 5, 7, 9, 12, 14, 16, 17, 19, 21, 23, 27, 28, 30, MAY 10, 12, 17, 20, 24, 28, JUN 3, 7
During erection on board vessel -- 1954 MAY 5, 12, 17, 20, 24, 28, JUN 3, 7, 11, 14, 19, 22, 24, 25, 28
Total No. of visits 22 (Kobe) 81 (Yokohama)
Dates of examination of principal parts—Cylinders 29-12-53 Covers 29-8-53 pistons 22-12-53 Rods 28-12-52, 9-10-53
Crank shaft 2-12-53 Flywheel shaft — Thrust shaft 22-12-53 Intermediate shafts 7-4-54 Tube shaft —
Screw shaft 23-12-53 Propeller 12-4-54 Stern tube 7-4-54 Engine seatings 28-5-54 Engine holding down bolts 28-5-54
Completion of fitting sea connections 17-4-54 Completion of pumping arrangements 7-6-54 Engines tried under working conditions sea trial 22-6-54
Crank shaft, material O.H. steel Identification mark LR NO. Y 3661 Flywheel shaft, material — Identification mark LLOYD'S YKA NO. FSF 808, 809, 810
Thrust shaft, material O.H. steel Identification mark LR NO. H-F 1495 Intermediate shafts, material O.H. steel Identification marks H.T. 7-4-54
Tube shaft, material — Identification mark — Screw shaft, material O.H. steel Identification mark NOFSF 814 H.T. 7-4-54
Identification marks on air receivers for M.E. (10.5 m³ x 2) NO. YAR 25 + 26 LLOYD'S TEST YKA WP 48.5 KG HT 30-4-54 for A.M.E. NO. YAR 27 LLOYD'S TEST YKA WP 48.5 KG HT 10-5-54 NO. YAR 28 LLOYD'S TEST YKA WP 33.5 KG HT 17-4-54

Welded receivers, state Makers' Name Uraga Shipbuilding yard, The Uraga Dock Co. Ltd.Is the flash point of the oil to be used over 150°F yesHave the requirements of the Rules for oil fuel pipes and tank fittings been complied with yesDescription of fire extinguishing apparatus fitted Steam smothering system, 45' x 2' x 9' x 12' foam fire extinguishers, 3 hydrantsIs 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 —

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 M.V. "EISHIN MARU" 813EGeneral Remarks (State quality of workmanship, opinions as to class, &c. This main engine has been constructed

under Special Survey in accordance with the Rules approved plans and Secretary's letters. The workmanship and materials are sound and good.

The main engine has been examined under full working condition in the shop and found satisfactory. This engine is intended for the installation in the ship No. 655 being built by Uraga Dock Co. Ltd. Yokosuka.

It is recommended that this engine is eligible in our opinions to have a record of + LMC with date when satisfactorily installed in the vessel.

The machinery of this vessel was satisfactorily installed in the vessel and tested under working condition.

It is submitted that the machinery of this vessel is eligible to be classed with this Society with the notation of + LMC 6.54 and TS (CL) 6.54.

The amount of Entry Fee KOB ¥ 512,000 YKA JUL 15, 1954Pumps, air receivers, oil heating YOKOHAMA ¥ 286,000 Kobe JUN 12, 1954Special ¥ 134,300 When applied for 19Donkey Boiler Fee see 5.2 When received 19Travelling Expenses KOB ¥ 17,600 YKA FRIDAY 10 SEP 1954

Committee's Minute

Assigned + LMC 6.542 WDB 142 cl.CL.Lloyd's Register
Foundation