

REPORT ON OIL ENGINE MACHINERY.

No. 1999

Received at London Office 26 NOV 1934

Date of writing Report 5th Nov. 1934 When handed in at Local Office 5th Nov. 1934 Port of NAGASAKI

No. in Survey held at NAGASAKI. Date, First Survey 14th Nov. 1933 Last Survey 14th Oct. 1934

Reg. Book. Number of Visits 168

2167 on the ~~Deck~~ ^{Single} ~~Trade~~ ^{Trade} ~~Quadruple~~ ^{Quadruple} Screw vessel "NOTO MARU" Tons { Gross 7184.51 Net 4317.76

Built at Nagasaki By whom built Mitsubishi Jukogyo Kaisha. Yard No. 580 When built 1934

Engines made at Nagasaki By whom made Mitsubishi Jukogyo Kaisha. Engine No. 580 When made 1934

Donkey Boilers made at Nagasaki By whom made Mitsubishi Jukogyo Kaisha. Boiler No. 580 When made 1934

Brake Horse Power 6,700 Owners Nippon Yusen Kabushiki Kaisha. Port belonging to Tokio.

Nom. Horse Power as per Rule 1,851. Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

which vessel is intended All Seas.

GINES, &c. Type of Engines Mitsubishi-Sulzer Airless Injection 2 stroke cycle 2 Single or double acting Double

Pressure in cylinders 50 Kg/cm² Diameter of cylinders 700 m/m Length of stroke 1200m/m No. of cylinders 7 No. of cranks 7

ated Pressure 5.3 Kg/cm² Rings, adjacent to the Crank, measured from inner edge to inner edge 1020 m/m Is there a bearing between each crank Yes

per minute 106 Flywheel dia. 2740 m/m Weight 2365 Kgs Means of ignition Compression Kind of fuel used Diesel oil F.P. above 150° F.

shaft, dia. of journals as per Rule App. Lon. Crank pin dia. 510 m/m Crank Webs Mid. length breadth 895 m/m Thickness parallel to axis 320 m/m

as fitted 510 m/m Mid. length thickness 320 m/m Thickness around eyehole 242.5m/m

Shaft, diameter as per Rule App. Lon. Intermediate Shafts, diameter as per Rule 408.7 m/m Thrust Shaft, diameter at collars as per Rule App. Lon.

as fitted 510 m/m to 424 m/m as fitted 420 m/m as fitted 510 m/m

ft, diameter as per Rule / Screw Shaft, diameter as per Rule 446.3 m/m Is the ~~tee~~ ^{screw} shaft fitted with a continuous liner Yes

as fitted / as fitted 470 m/m as per rule 15 m/m as fitted 25 m/m Is the after end of the liner made watertight in the

ss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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 /

ers 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 the tube

If so, state type / Length of Bearing in Stern Bush next to and supporting propeller 1875 m/m

, dia. 5400m/m Pitch 4950m/m No. of blades 4 Material Bronze whether Moveable Moveable Total Developed Surface 112.05 sq. feet

of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

Thickness of cylinder liners 45to40m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers ~~unobstructed~~ ^{unobstructed} lagged with

ing 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 /

Water Pumps, No. Two, Jacket & Piston Rotary Pumps. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

mps worked from the Main Engines, No. / Diameter / Stroke / Can one be overhauled while the other is at work /

connected to the Main Bilge Line { No. and Size 2 reciprocating 30 M³/hr. & 100 M³/hr. 1 rotary 110 M³/hr. How driven Electric motor.

ing 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

ls / 1 Rotary 110 M³/hr. 1 Reciprocating 100 M³/hr. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 Rotary 65 M³/hr

dependent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

and size:—In Machinery Spaces Bilge well 3 @ 90m/m: Coff. 4 @ 50m/m: Bilge hat 1 @ 90m/m. In Pump Room

No.1 Hold 2 @ 80 & 1 @ 50 in Cofferdam: No.2 Hold 2 @ 90m/m: No.3 Hold 2 @ 80m/m: No.4 Hold

Ec. (Deep tanks) 4 @ 180m/m: No.5 Hold 3 @ 80m/m: No.6 Hold 1 @ 80m/m: Tunnel well 1 @ 80m/m:

lent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 140 m/m: 1 @ 200 m/m:

e Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

asily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

a Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes

ed 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

ch 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 / How are they protected /

pass through the deep tanks / Have they been tested as per Rule /

pes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

ngement 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

nt to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Same level as Bridge deck.

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

Compressors, No. 2. Kob. Cert. No. 4103 & 4104 No. of stages 3 Diameters 360x310x80 Stroke 180 m/m Driven by Aux. Engine.

Air Compressors, No. One No. of stages One Diameters 150m/m Stroke 230 m/m Driven by 20KW. Generator.

Auxiliary Air Compressors, No. One No. of stages 2 Diameters 80x32m/m Stroke 80 m/m Driven by Hand

Turbo Blower capacity 975 M³/hr Stroke / Driven by MOTOR

Engines crank shafts, diameter as per Rule See Kobe report No. 8711, attached herewith.



AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule.

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

High Pressure Air Receivers, No.

Cubic capacity of each

Internal diameter

Thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules
Actual

Starting Air Receivers, No. 2. (Nag. Cert No. 1022)

Total cubic capacity each 15 M³

Internal diameter 1800 m/m

Thickness 31 m/m

~~Seamless, lap welded or riveted longitudinal joint~~

T.R.D.B.S. Material Steel

Range of tensile strength

Shell 44 to 50 Kgs
Ends 41 to 47 Kgs

Working pressure

by Rules 31.9 Kgs
Actual 30 "

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

(If not, state date of approval)

6-6-33. 5-9-33

Receivers 13-6-33

Separate Tanks

12-10-33

Donkey Boilers 20-11-33

General Pumping Arrangements

8-5-34

Oil Fuel Burning Arrangements

/

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes.

State the principal additional spare gear supplied

See Separate list, forwarded under separate cover.

The foregoing is a correct description.

NAGASAKI WORKS, MITSUBISHI STEEL CO. LTD. NAGASHIKI KAISHA.

GENERAL MANAGER

Manufacturer.

1933: Nov 14.18.21.25.28 Dec 15.20.30. 1934:- Jan 8.10.12.13.15.16.18.20.22.23.24.26.28 Mar 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 May 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 Jun 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 Jul 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 Aug 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 Sep 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 Oct 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 Nov 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28 Dec 1.3.5.6.8.9.10.12.13.15.16.18.20.22.23.24.26.28

Dates of Survey while building

During progress of work in shops - 15.20.22.26.27.30 Apr 2.4.6.7.10.12.13.14.16.18.19.20.21.23.25.26.28 May 2.4.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30 June 1.4.6.8.9.11.12.13.15.16.18.19.20.21.22.23.24.25.26.27.28.29.30 July 1.3.5.6.7.10.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30 Aug 1.2.3.4.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30 Sep 1.3.5.6.7.10.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30 Oct 1.3.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30 Nov 1.3.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30 Dec 1.3.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30

During erection on board vessel - 14.16.18.20.21.22.24.27.28.30.31 Sep 3.4.5.6.7.10.13.14.19.20.27.28.29 Oct 1.3.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30

Total No. of visits 167.

Dates of Examination of principal parts—Cylinders 19-6-34 Covers 20-1-34 to 20-1-34 to 20-1-34 to 15-1-34 to 16-1-34

Crank shaft 4-4-34 to 18-6-34 Flywheel shaft 27-1-34 to 12-6-34 Thrust shaft See flywheel shaft Intermediate shafts 12-1-34 to 23-4-34 Tube shaft /

Screw shaft 8-2-34 to 19-4-34 Propeller 19-4-34 Stern tube 19-4-34 Engine seatings 31-3-34 Engines holding down bolts 8-8-34

Completion of fitting sea connections 25-4-34 Completion of pumping arrangements 6-8-34 Engines tried under working conditions 29-9-34

Crank shaft, Material Ingot steel Identification Mark LLOYD'S No. 1017 HDB. Flywheel shaft, Material Ingot steel Identification Mark LLOYD'S No. 1017A TK

Thrust shaft, Material Ingot steel Identification Mark See flywheel shaft Intermediate shafts, Material Ingot steel Identification Mark LLOYD'S No. 1017A TK

Tube shaft, Material / Identification Mark / Screw shaft, Material Ingot steel Identification Mark LLOYD'S No. 1055 TK. Spare Screw shaft. LLOYD'S No. 1055 TK.

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

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

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, &c.)

This machinery has been constructed under special survey in accordance with the terms of the Rules

and approved plans.

The materials have been tested found efficient and the workmanship throughout is good.

Full power, overload and governor tests were carried out on the test bed with satisfactory results.

afterwards opened up cleaned, examined and found in good order.

This machinery has now been efficiently installed on board, tested under full power, manoeuvring

(12 stops & starts) and slow running (32-35 r.p.m) conditions with satisfactory results, and a mean

sea speed of 18.5 knots/hr was obtained on light draught. Upon completion of trials all main engi

cylinders, pistons, valves, crank, thrust and tunnel shafting was examined, also the auxiliary engi

cylinders, pistons and crank shafts, oil & water service pumps, were examined, and all found in good

order.

This case is eligible in our opinion to have the record of LMC, 10-34 in the register

Note:- The hand air compressor and the aux. air compressor, using one cylinder of the 20 K.W. gener

as an air compressor, were tested and found satisfactory.

The amount of Entry Fee .. £ 6-0-0 : When applied for,

Special ... £ 182-16-10 : 24. 10. 1934

Donkey Boiler Fee ... £ 5-5-0 : When received,

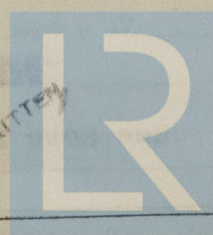
Air Receivers £ 10-10-0 : 27-12-34

Travelling Expenses (if any) £ : 18 DEC 1934

Feed water heater £ 50-00

Committee's Minute

Assigned + Lmb. 10.34 S-B. 100th



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