

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 8498
MAY 1934

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Kobe

No. in Survey held at Kobe Date, First Survey 31-5-33 Last Survey 7-10-1933
Reg. Book. Number of Visits

40819 on the Single Screw vessel "NICHIO MARU" Tons { Gross 7508.86
in Sup. Triple propellers Net 5521.88

Built at Nagasaki By whom built Mitsubishi Zosen Kaisha Ltd. Card No. 551 When built 1934

Owners Toyo Kisen Kabushiki Kaisha. Port belonging to Tokyo.

Oil Engines made at Kobe By whom made Mitsubishi Zosen Kaisha Ltd. Contract No. 408 When made 1933
409
410

Generators made at Nagasaki By whom made "Denki" Contract No. When made

No. of Sets 3 Engine Brake Horse Power 140 Nom. Horse Power as per Rule Total Capacity of Generators 270 Kilowatts.

OIL ENGINES, &c.—Type of Engines Mitsubishi M.R.A.3 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 47 Kg/cm² Diameter of cylinders 250 mm Length of stroke 380 mm No. of cylinders 3 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 294 mm Is there a bearing between each crank yes

Revolutions per minute 400 Flywheel dia. 1400 mm Weight 2155 Kg. Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule 155 mm Crank pin dia. 155 mm Crank Webs Mid. length breadth 226 mm Thickness parallel to axis shrunk
as fitted 155 mm Mid. length thickness 83 mm Thickness around eye-hole

Flywheel Shaft, diameter as per Rule 155 mm Intermediate Shafts, diameter as fitted Thickness of cylinder liners 24 mm

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication Forced lub. hugged Silencers

Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Water cooled

Cooling Water Pumps, No. One, lpl, dia 100 mm, Stroke 38 mm Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

Lubricating Oil Pumps, No. and size One, lpl, dia 60 mm, Stroke 38 mm

Air Compressors, No. Two Sets No. of stages 3 Diameters 70 x 270 x 310 Stroke 180 mm Driven by Auxiliary Engine.

Scavenging Air Pumps, No. ✓ Diameter Stroke Driven by

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 yes What means are provided for cleaning their inner surfaces Manhole

Is there a drain arrangement 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

Starting Air Receivers, No. One Total cubic capacity 267 litre Internal diameter 21" thickness 5/8"

Seamless, lap welded or riveted longitudinal joint D. Riveted Material Steel Range of tensile strength 28-32 Working pressure by Rules 646 lb.

ELECTRIC GENERATORS:—Type Multipole

Pressure of supply 225 volts. Load 400 Amperes. Direct or Alternating Current Direct

If alternating current system, state frequency of periods per second ✓

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes

Generators, do they comply with the requirements regarding rating yes are they compound wound yes

are they over compounded 5 per cent. yes, if not compound wound state distance between each generator

is an adjustable regulating resistance fitted in series with each shunt field yes Are all terminals accessible, clearly marked, and furnished with sockets yes

are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched yes Are the lubricating arrangements of the generators as per Rule yes

PLANS. Are approved plans forwarded herewith for Shafting 28-7-32 Receivers 25-2-33 Separate Tanks

(If not, state date of approval)

SPARE GEAR

See separate list.

The foregoing is a correct description,

T. Mase,

Manufacturer.



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Lloyd's Register Foundation

Dates of Survey while building { During progress of work in shops - - } 1933 - May 31, June 6, 9, 10, 12, 15, 17, 19, 21, 23, 28, July 4, 5, 7, 8, 10, 11, 12, 13, 14, 15, 17, 20, 24
 { During erection on board vessel - - - } 24, 25, 28, Aug 29, 10, 14, 16, 17, 19, 26, 30, 31, Sept 4, 8, 11, 13, 16, 22, 25, 27, 28, Oct 5, 6, 7.
 Total No. of visits

Dates of Examination of principal parts - Cylinders 4, 11, 12, 13, 15, 17, 22, 24-7-33, 26-8-33 Covers 28-7-33, 2-8-33 Pistons 31-5-33, 15, 19, 21, 28-6-33 Piston rods ✓

Connecting rods 8, 28-7-33, 14-8-33 Crank and Flywheel shaft 14, 18, 26, 31-7-33, 10, 14, 19, 30-8-33, + 4-9-33 Intermediate shaft ✓

Crank and Flywheel shaft, Material Steel Identification Mark LLOYD'S NO. 3646 19-8-33 NO. 3662 30-8-33 NO. 3669 4-9-33 A.D.M. Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case Yes If so, state name of vessel M.V. "KOYEI MARU"

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

The machinery herein described has been constructed under Special Survey in accordance with the Rules and approved plans. The materials and workmanship are good. The machinery has been tried on the test bed under full load, overload, and governor tests when connected to their generators: parallel running tests were also carried out and all found satisfactory and eligible in my opinion for classification.

The machinery have been shipped to Nagasaki where it is intended to install them on board ship no. 551.

Stamped as follows:-

No. 408	No. 409	No. 410
LLOYD'S	LLOYD'S	LLOYD'S
No. 3713 R	No. 3714 R	No. 3715 R
KK 7-10-33.	KK 7-10-33.	KK 7-10-33.

This machinery has been installed on board tested under full load & found satisfactory. Spare gear placed on board. for particulars see separate book

K. Kishigami
 Surveyor to Lloyd's Register of Shipping.

The amount of Fee ... Yen 600.- } When applied for, 18/1/1934
 Travelling Expenses (if any) £ ✓ } When received, paid 19

Committee's Minute TUE. 8 MAY 1934

Assigned See Nav. Rpt 1955



1m, 7, 20 - Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)