

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 5415

25 JAN 1935

Received at London Office

Date of writing Report 18th December 1934 When handed in at Local Office 18/12/1934 Port of Yokohama
 No. in Survey held at Yokohama Date, First Survey 8th March 1934 Last Survey 10th December 1934
 Reg. Book. Number of Visits 107

1734 on the Single Screw vessel M/V "NARUTO MARU" Tons { Gross 7142
Triple Net 4246
Quadruple

Built at Yokohama By whom built Yokohama Dock & Co Ltd Yard No. 222 When built 1934-12

Owners Nippon Yusen K. K. Port belonging to Tokio

Oil Engines made at Yokohama By whom made Yokohama Dock & Co Ltd Contract No. 14215 When made 1934
14216
14217

Generators made at Nagasaki By whom made Mitsubishi Denki K. K. Contract No. ✓ When made 1934

No. of Sets 3 Engine Brake Horse Power 375 Nom. Horse Power as per Rule 73 Total Capacity of Generators 750 Kilowatts.

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

Maximum pressure in cylinders 45 Kg/cm² Diameter of cylinders 285 mm Length of stroke 420 mm No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 350 mm Is there a bearing between each crank yes

Revolutions per minute 375 Flywheel dia. 1700 mm Weight 2400 Kg Means of ignition airless Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 166.5 Crank pin dia. 170 mm Crank Webs Mid. length breadth 280 mm Thickness parallel to axis Solid
 as fitted 170 mm Mid. length thickness 85 mm Thickness around eye-hole

Flywheel Shaft, diameter as per Rule 166.5 Intermediate Shafts, diameter as per Rule ✓ Thickness of cylinder liners 20 mm
 as fitted 180 mm as fitted

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced

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

Cooling Water Pumps, No. 2 (same pumps as for Main Engine) Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
for harbor purposes

Lubricating Oil Pumps, No. and size one for each engine 3980 litres/hour

Air Compressors, No. Two No. of stages 3 Diameters H.P. 105 mm Stroke 250 mm Driven by aux engine No 14216
M.P. 360-365 mm
L.P. 360-105 mm

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 by hand Hole

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 for the 3 Sets Total cubic capacity 14.126 cu. ft. Internal diameter 500 mm thickness 13 mm

Seamless, lap welded or riveted longitudinal joint S.R.D.B.S Material Steel Range of tensile strength 44/55 kg/cm² Working pressure by Rules 32.9 Kg
proposed 30 Kg

ELECTRIC GENERATORS:—Type Multipole 250 K. W.

Pressure of supply 225 volts. Load 1110 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 22/4/33 Receivers 1/5/33 Separate Tanks 13/10/33
 (If not, state date of approval)

SPARE GEAR as per Rules

The foregoing is a correct description,

S. Tsunematsu

Manufacturer.



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Dates of Survey while building { During progress of work in shops - - 8, 24, 27, 30/3 4, 5, 7, 10, 11, 26/4 1, 2, 3, 17, 22, 23, 24, 27/5 9, 10, 13/6 6, 7, 10, 13, 15, 25/7 2, 27/8 1/9 11, 24, 29/11 4, 6, 9, 18, 19, 27/12/1933
During erection on board vessel - - - 5, 12, 16, 18, 23, 27, 30, 31/10 2, 8, 9, 10, 13, 16, 24/11 6, 10/12/1934
Total No. of visits 107

Dates of Examination of principal parts—Cylinders 27/3/33 to 18/12/33 Covers 22, 23/5, 10/6 13/5/7/1933 Pistons 13/7 19/7 28/8/1934 Piston rods ✓

Connecting rods 8/3/33 to 8/3/34 Crank and Flywheel shaft 13/7 18/8 12/10/1934 Intermediate shaft ✓

Crank and Flywheel shaft, Material Steel Identification Mark 13/7 18/8 12/10/1934 Intermediate shafts, Material ✓ Identification Marks ✓

Is this machinery duplicate of a previous case Yes. If so, state name of vessel NAGARA MARU & NAKO MARU

General Remarks (State quality of workmanship, opinions as to class, &c. The auxiliary machinery has been built and fitted on board the Vessel under Special Survey in accordance with the Rules and approved plans. Material and Workmanship good. The machinery was examined running on Shop Trials and afterwards under full working conditions on board with satisfactory results.

The machinery of this Vessel is eligible in my opinion to have the record of + L.M.C. 12.34 in the Register Book.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ ✓ : When applied for, 19...
Travelling Expenses (if any) £ ✓ : When received, 19...

G. H. Macdonald
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 29 JAN 1935

Assigned See other T.E. - JKa. 5415-



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