

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 330

7-JUL 1954

of writing Report 23 March 1954 When handed in at Local Office 19 Port of Shimonoseki
 in Survey held at Nagasaki Date, First Survey 27 April 1953 Last Survey 4 Feb 1954
 on the Single motor "AKI-MARU" Number of Visits 71
Triple Screw/vessel
Quadruple
 at Nagasaki By whom built Nagasaki Works, Mitsubishi Zosen K.K. Yard No. 1438 When built 1954 2 Mo
 ers Nippon Yusen Kaisha Port belonging to Tokyo
 Engines made at Nagasaki By whom made Nagasaki Works, Mitsubishi Zosen K.K. Engine No. 267268, 269 When made 1954 2 Mo
 rators made at Nagasaki By whom made Nagasaki Works, Mitsubishi Zosen K.K. Generator No. 40043, 40044, 40045 When made 1954 2 Mo
 of Sets 3 B.H.P. of each Set 350 M.N. of each Set as per Rule Capacity of each Generator 245 Kilowatts
 et intended for essential services Yes

ENGINES, &c.—Type of Engines 54T 22/40 2 or 4 stroke cycle 2 Single or double acting Single
 imum pressure in cylinders 60 kg/cm² Diameter of cylinders 220 mm Length of stroke 400 mm No. of cylinders 5 No. of cranks 5
 indicated pressure 6.7 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 288.5 mm
 off are a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 547.5 Kg.-cm.² Revolutions per minute 375
 wheel dia. 1450 mm Weight 1555 Kgs Means of ignition Compression Kind of fuel used Heavy oil
 k Shaft, { Solid forged dia. of journals as per Rule 144 mm Crank pin dia 150 mm Crank Webs Mid. length breadth 200 mm Thickness parallel to axis shrunk
 { Semi-built as fitted 150 mm Mid. length thickness 22.5 mm Thickness round eye hole
 { All built

Wheel Shaft, diameter as per Rule Generator armature, moment of inertia (16 m² or Kg.-cm.²) 1546.64 Kg.-cm.²
 as fitted
 means provided to prevent racing of the engine Yes Means of lubrication Forced Kind of damper if fitted
 the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Exh. pipe water cooled
 ailing Water Pumps, No. and how driven Self-contained Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

icating Oil Pumps, No. and size 1-100 mm dia x 60 mm stroke single acting
 Compressors, No. None No. of stages Diameters Stroke Driven by
 enging Air Pumps or Blowers, No. 1-Roots blower How driven By each engine

RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate AR-10630
 (other than main engines)
 full details of safety devices Spring loaded relief valve
 the internal surfaces of the receivers be examined and cleaned Yes
 ere a drain arrangement fitted at the lowest part of each receiver Yes

Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness
 less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure
 ing Air Receivers, No. 1 Total cubic capacity 500 Litres Internal diameter 696 mm thickness Shell 16 mm, End 25 mm
 less, lap welded or riveted longitudinal joint Riveted Material Boiler quality steel Range of tensile strength 28-32 T/0 Working pressure 30 kg/cm²

ELECTRIC GENERATORS:—Type Open drip proof
 ure of supply 230 volts. Full Load Current 606.5 Amperes. Direct or Alternating Current Direct current
 ernating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
 d off Yes Generators, are they compounded as per Rule Yes is an adjustable regulating resistance fitted in series with each shunt field Yes
 all terminals accessible, clearly marked, and furnished with sockets Yes Are they so spaced
 elded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes
 generators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements
 generators are 100 kw. or over have they been built and tested under survey Yes

ls of driven machinery other than generator Starting air compressors
 NS.—Are approved plans forwarded herewith for Shafting Kob 21 July 1953 Receivers Kob 12 June 1953 Separate Tanks Kob 11 Sep 1953
 (If not, state date of approval)
 Torsional Vibration characteristics if applicable been approved Kob 11 Sep 1953 Armature shaft Drawing No. C-33.11
 (State date of approval and name of previous duplicate case, if any)

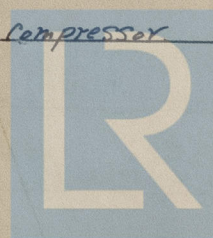
he spare gear required by the Rules been supplied As per Rules requirement and following in addition
Fuel needle valves for 6 cylinders Piston rings for 2 pistons
Studs & nuts for 2 cylinder covers
Two and half set of suction and delivery valves of each size used for compressor

The foregoing is a correct description,

J. Matsushita

Manufacturer.

MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD.



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Lloyd's Register
Foundation

01474-014805-0048

Dates of Survey while building { During progress of work in shops - - 1953 April 27 May 16 June 15 16 17 18 19 20 22 24 25 26 27 29 July 1 3 6 9 10 13 14 21 22 23 24 25 28 29 31 Aug 1 3 5 8 10 13 14 17 21 22 24 26 27 28 31 Sep 2 5 9 11 1953 Oct 14 29 30 Nov 1 25 28 Dec 2 9 11 19 26 29 1954 Jan 6 12 18 20 22 Feb 1 4
During erection on board vessel - -
Total No. of visits 71

Dates of Examination of principal parts—Cylinders 27.7.53 10.8.53 11.8.53 Covers 24.7.53 29.7.53 29.7.53 Pistons 7.6.53 16.8.53 28.8.53 Piston rods

Connecting rods 22.7.53 13.8.53 26.8.53 Crank and Flywheel shafts 9.6.53 9.6.53 12.8.53 Intermediate shafts

Crank shaft { Material Forged steel Tensile strength 33 T/O"
Elongation 33 % in 2 ins Identification Marks C.N. No. 751069 PCNO 206 LLOYD NO M-10340 H.O. 9.6.53
651124 266 M-10341 H.O. 9.6.53
M-10337 X.H. 12.8.53

Flywheel shaft, Material Identification Marks

Identification marks on Air Receivers

No 14-22, AR-10630 4.0 R 29.10.53

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These machines have been constructed under Special Survey in accordance with the Rules, Approved plan and Secretary's letter.

The material and workmanship are good.

On completion, these machines have been examined under full working condition at shop and after installation in the vessel in accordance with the Rules and found satisfactory.

13/8/54

The amount of Fee ... 150.000 : When applied for JUN 25 1954 LOCALLY 19

Travelling Expenses (if any) & See Rpt. 1 : When received 19

Peter Hansen, Hamada
Surveyor to Lloyd's Register of Shipping.

TUESDAY 31 AUG 1954

Committee's Minute

Assigned See Rpt. 4 & 6.

4m.52.-T. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minutes.)

