

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 1693-D

Received at London Office
 Writing Report 20-6 1955 When handed in at Local Office JUL 1 1955 Port of YOKOHAMA
 Survey held at YOKOHAMA, JAPAN Date, First Survey 13-11-1954 Last Survey 11-6 1955
 Number of Visits 32
 on the Single Triple Quadruple Screw vessel M.V. "VIRGINIA MARU" YOKOHAMA SHIPYARD & ENGINE WORKS.
 YOKOHAMA, JAPAN By whom built MITSUBISHI NIPPON HEAVY INDUSTRIES, LTD. Yard No. S802 When built 6, 1955
 MITSUBISHI KAIUN K. K. Port belonging to TOKYO
 YOKOHAMA SHIPYARD & ENGINE WORKS.
 Engines made at YOKOHAMA, JAPAN By whom made MITSUBISHI NIPPON HEAVY INDUSTRIES Engine No. D133111~112 When made 3-55
 Motors made at KOBE, JAPAN By whom made MITSUBISHI ELECTRIC MANUFACTURING CO. LTD. Generator No. 15465 2-55
 15466 (170 KVA) When made 2-55
 of Sets 2 B.H.P. of each Set 204 M.N. of each Set as per Rule 41 Capacity of each Generator 136 Kilowatts
 intended for essential services YES

ENGINES, &c.—Type of Engines YOKOHAMA M.A.N 4 S.C. SA 2 or 4 stroke cycle 4 Single or double acting SINGLE
 um pressure in cylinders 55 KG/CM² Diameter of cylinders 220 MM Length of stroke 330 MM No. of cylinders 5 No. of cranks 5
 indicated pressure 7.37 KG/CM² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 260 MM
 e a bearing between each crank YES { Moment of inertia of flywheel (16 m² or Kg.-cm.²) 1455 KG.-CM² Revolutions per minute 514
 " " " " balance wts. " " " NO
 el dia. 1250 MM Weight 1323 KG Means of ignition COMPRESSION Kind of fuel used DIESEL OIL
 k Shaft, { Solid forged as per Rule 131.5 MM Crank pin dia 140 MM Crank Webs Mid. length breadth 265 MM Thickness parallel to axis —
 { Semi-built dia. of journals as fitted 140 MM Mid. length thickness 66 MM Thickness round eyehole —
 { All-built
 heel Shaft, diameter as per Rule — Generator armature, moment of inertia (16 m² or Kg.-cm.²) GENERATOR 460 KG.-CM² EXCITOR 6.7 KG.-CM²
 as fitted —
 Means provided to prevent racing of the engine YES Means of lubrication FORCED LUBRICATION Kind of damper if fitted NO
 Are the exhaust pipes and silencers water cooled or lagged with non-conducting material EXH. MANIFOLD — WATER COOL
 Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with non-conducting material SILENCER — LAGGED
 n, DRIVEN BY
 ing Water Pumps, No. and how driven 1- DRIVING LEVER Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES
 Manufac
 icating Oil Pumps, No. and size 1- GEAR PUMP NO. OF TEETH 12 MODULE 4 WIDTH OF TEETH 70 MM R.P.M 1028
 7-1 2ND STAGE 250 MM DIESEL
 Compressors, No. 2 No. of stages 2 Diameters 1ST STAGE 250-225 MM Stroke 150 MM Driven by GENERATOR ENGINE

nging Air Pumps or Blowers, No. — How driven —
 RECEIVERS:—Have they been made under Survey YES State No. of Report or Certificate YAR-52
 (other than main engines)
 full details of safety devices 1- SAFETY VALVE 16" FITTED DIRECT ON THE TOP
 be internal surfaces of the receivers be examined and cleaned YES, WITH 2- INSPECTION HOLES AND 1- STEAM CLEANING VALVE
 re a drain arrangement fitted at the lowest part of each receiver YES
 Pressure Air Receivers, No. — Cubic capacity of each — Internal diameter — thickness —
 ss, lap welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure —
 ing Air Receivers, No. 1 Total cubic capacity 200 LITERS Internal diameter 478 MM thickness 11 MM
 OPEN HEARTH SHELL 50.1~49.5 KG/MM²
 ss, lap welded or riveted longitudinal joint BUTT WELDED Material STEEL Range of tensile strength END 46.8~46.6 Working pressure 30 KG/CM²

ELECTRIC GENERATORS:—Type DRIP PROOF - SELF-VENTILATING
 sure of supply 450 volts. Full Load Current 218 x 2 Amperes. Direct or Alternating Current ALTERNATING CURRENT
 ernating current system, state the periodicity 60 % Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
 nd off YES Generators, are they compounded as per Rule YES is an adjustable regulating resistance fitted in series with each shunt field —
 all terminals accessible, clearly marked, and furnished with sockets YES Are they so spaced
 ielded that they cannot be accidentally earthed, short circuited, or touched YES Are the lubricating arrangements of the generators as per Rule YES
 e 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
 of driven machinery other than generator ONE AIR COMPRESSOR

ANS:—Are approved plans forwarded herewith for Shafting 27-11-1954 Receivers 26-1-55 Separate Tanks 8-3-55 & 8-4-55
 (If not, state date of approval)
 Torsional Vibration characteristics if applicable been approved 17-6-55 Armature shaft Drawing No. A-248512
 (State date of approval and name of previous duplicate case, if any)
 the spare gear required by the Rules been supplied STARTING VALVE 4 SETS, SAFETY VALVE 4 SETS, SUCTION VALVE 4 SETS,
 HAUST VALVE 6 SETS, FUEL VALVE 6 SETS, CONNECTING ROD LARGE END BEARING 2 SETS, PISTON PIN BUSH
 SHIP ET. PISTON PACKING RING COMPRESSION 20 P, OIL SCRAPING 15 P, FUEL PUMP 2 SETS,
 IEL INJECTION PIPE 5 SETS.

The foregoing is a correct description,

M. Kagehara, Engineer, Manufacturer.



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Dates of Survey while building { During progress of work in shops - } NOV/13.25 DEC/4.18.27 JAN/6.8.11.18.20.22.25.27.29 FEB/1.5.8.10.14.17.22.26
MAR/8.11.26 APRIL/5.7.
During erection on board vessel - - - APRIL 30. MAY 19
JUNE/5.9.11
Total No. of visits 32

Dates of Examination of principal parts—Cylinders 15-2-'55 Covers 25-1-'55 Pistons 30-1-'55 Piston rods —

Connecting rods 3-3-'55 Crank and Flywheel shafts 29-11-'54 Intermediate shafts —

Crank shaft { Material ELECTRIC FURNACE STEEL Tensile strength 54.8 KG/MM² 54.5 KG/MM²
D133111 D133112
Elongation 30% 31% Identification Marks NGA/279 MO NGA/280 MO

Flywheel shaft, Material — Identification Marks —

Identification marks on Air Receivers YAR-52 LLOYD'S TEST YKA W.T.P. 48.5 KG W.P. 30 KG KM 17-3-'55

Is this machinery duplicate of a previous case — If so, state name of vessel —

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

THE ELECTRIC GENERATOR SETS HAVE BEEN CONSTRUCTED UNDER THE SUPERVISION OF THE SOCIETY'S SURVEYORS IN ACCORDANCE WITH THE APPROVED PLANS AND RULES.

THE WORKMANSHIP AND MATERIALS HAVE BEEN FOUND SATISFACTORY.

THE ELECTRIC GENERATOR SETS HAVE BEEN EXAMINED DURING AND AFTER SHOP TRIAL AND FOUND IN ORDER.

THE ELECTRIC GENERATOR SETS HAVE BEEN SATISFACTORY^{ILY} INSTALLED IN THE VESSEL AND TESTED UNDER WORKING CONDITION.

IT IS SUBMITTED THAT THE ELECTRIC GENERATOR SETS ARE ELIGIBLE TO BE CLASSED WITH THIS SOCIETY WITH THE NOTATION OF * LMC 6.55.

RELIEF
✓ CRANK CASE EXPLOSION DEVICE FITTED AS PER PLAN IN ACCORDANCE WITH CIR. NO. 2045.

The amount of Fee ... ¥ 70,000-

When applied for JUL. 1955 19

Travelling Expenses (if any) ¥

When received 19

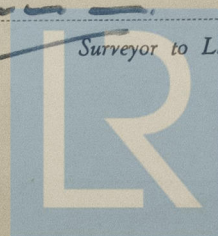
Committee's Minute

Assigned

See Rpt. 46.

FRIDAY 16 SEP 1955

Surveyor to Lloyd's Register of Shipping.



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