

LONDON

6 FEB 1953

REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS.

No. 1172

4c.

Received at London Office

of writing Report 19 When handed in at Local Office 19 Port of Kobe
in Survey held at Nagasaki Date, First Survey 15th January Last Survey 28th August 1952
of Book. Number of Visits 61
on the Single motor Triple Screw vessel "AWATA MARU" Tons Gross 7,601.48 Net 4,320.50
at Nagasaki By whom built Nagasaki Works, Mitsubishi Zosen K.K. Yard No. 1428 When built 1952, 8 mo
Nippon Yusen Kaisha Port belonging to Tokyo
Engines made at Nagasaki By whom made Nagasaki Works, Mitsubishi Zosen K.K. Contract No. 252, 253, 254 When made 1952, 5 mo
Generators made at Nagasaki By whom made Mitsubishi Electric Mfg. Co. Contract No. 318825, 318826, 318827 When made 1952, 2 mo
of Sets 3 Engine Brake Horse Power 350 (Each) M.N. as per Rule Total Capacity of Generators 690 Kilowatts.
intended for essential services. Yes

ENGINES, &c.—Type of Engines 5 HAT 22/40 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 60 Kgs/cm² Diameter of cylinders 220 mm Length of stroke 400 mm No. of cylinders 5 No. of cranks one
Indicated pressure 6.7 Kgs/cm² Firing order in cylinders 1-4-3-2-5 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 290.5 mm
Are there a bearing between each crank Yes Moment of inertia of flywheel (16 m² or Kg.-cm.²) 5,475 Kg.-cm.² Revolutions per minute 375
Flywheel dia 1,450 mm Weight 1,555 Kgs Means of ignition Compression Kind of fuel used Heavy oil
Crank Shaft, dia. of journals as per Rule 140 mm Crank pin dia 150 mm Crank Webs Mid. length breadth 200 mm Thickness parallel to axis shrunk
as fitted 150 mm Mid. length thickness 825 mm Thickness round eye hole
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Generator armature, moment of inertia (16 m² or Kg.-cm.²) 15,466 Kg.-cm.²

Means provided to prevent racing of the engine when declutched Yes Means of lubrication Forced Kind of damper if fitted
Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Ship's water cooled
Lubricating Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
Lubricating Oil Pumps, No. and size one - 100 mm dia x 60 mm stroke single acting

Compressors, No. none No. of stages Diameters Stroke Driven by
Sucking Air Pumps, No. one Roots blower Diameter of rotor 270 mm Stroke Length 499 mm Driven by Each engine

RECEIVERS:—Have they been made under Survey Yes State No. of Report or Certificate No. AR-333
Each receiver, which can be isolated, fitted with a safety valve as per Rule Yes
Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces None
Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. None Cubic capacity of each Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules
Sucking Air Receivers, No. one Total cubic capacity 500 litres Internal diameter 69.6 mm thickness 16 mm
Seamless, lap welded or riveted longitudinal joint Riveted Material Boiler quality steel Range of tensile strength 26-35 Working pressure by Rules 30 Kgs/cm²

ELECTRIC GENERATORS:—Type Open drip proof
Voltage of supply 230 volts Full Load Current 6000 Amperes Direct or Alternating Current D.C.
Is the alternating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown
and off Yes Generators, are they compounded as per Rule Yes 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
Are the generators shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes
Do the generators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements
Do the generators are 100 kw. or over have they been built and tested under survey Yes
Are there tails of driven machinery other than generator Starting air compressor

PLANS.—Are approved plans forwarded herewith for Shafting London 17 July 1952 Receivers Kob 14 Aug 1952 Separate Tanks Kob 20 June 1952
(If not, state date of approval)
Are Torsional Vibration characteristics if applicable been approved London 17 July 1952 Armature shaft Drawing No. C333061
(state date of approval)

PREPARE GEAR As required by Rules and following in addition:
Fuel needle valves for 6 cylinders
Piston rings for two pistons. Studs and nuts for 7 cylinder covers
Two and half set of suction and delivery valves of each size used for compressor

The foregoing is a correct description,

NAGASAKI WORKS
MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD.

Manufacturer.



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