

Zama Operations Center/Environmental Report 2006

Business Summary: Design and production of vehicle manufacturing equipment, and development, design and production of vehicle-associated parts

Address: 2-10-1 Hironodai, Zama-shi, Kanagawa, Japan

Start of Operations: December 1964

Number of Employees: 1,336

ISO 14001 Certification: January 2000

Environmental Slogan: Continuing to improve the environment and to protect our precious Earth



General Manager
Zama Operations Center
and Senior Vice President
Hidetoshi Imazu

Hidetoshi Imazu



Zama Operations Center

Major Results in FY 2005

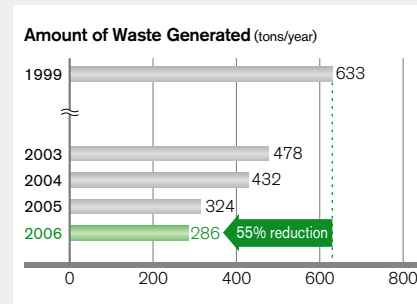
Reducing CO₂ Emissions

The lights in the 650 mercury lights used in the pressing plant and body unit plant were changed from 700-watt models to energy-saving 400-watt ceramic metal halide lights, bringing a saving in power consumption of over 40%. CO₂ emissions were also reduced by 280 tons per year as a result. We are planning to expand use of these lights in the future.



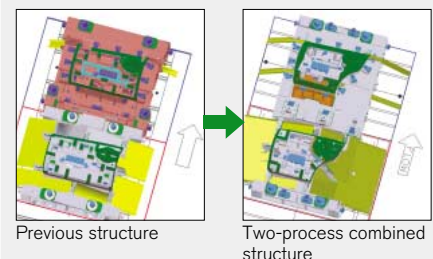
Resource Utilization

Since fiscal 2001 we have held the amount of direct landfill waste at zero, and the amount of incinerated waste also reached zero in fiscal 2003. From fiscal 2004 we began to cut generated waste, and by fiscal 2005 we had reduced the amount to 50% of the fiscal 1999 level. In fiscal 2006 we intend to raise this figure to 55%.



Resource Savings Activities on Production Equipment

In the Stamping Engineering Department, production usually involves two steps—a trimming process to remove excess sections of the sheet metal, and a flange process to perform the necessary bending—done on separate stamping dies. By combining these two processes, we are promoting resource conservation based on environmentally friendly development and designs that reduce the mass of the castings and number of components.



FY 2005 Objectives and Results

Objective	Target	Result	Comment
Prevention of environmental accidents	Zero environmental accident*	+	No environmental mishaps occurred during 2005. To avoid any mishaps in the future, we are conducting environment patrols and revising related rules.
Energy conservation	Reducing the amount of heat generated by 18,314,000 MJ/year, 717 tons of CO ₂ /year, a 6.6% drop compared to the previous fiscal year.	+	We reduced CO ₂ emissions by 824 tons per year, equivalent to an 8.8% drop over the previous fiscal year. We are also accumulating energy savings assessments and energy-saving items to improve energy efficiency.
Top level zero emissions	Reducing the amount of generated waste to under 317 tons per year, meeting our target of 50% of fiscal 1999's volume.	+	To achieve our target of reducing the amount of waste generated to 50% of fiscal 1999 level by the end of fiscal 2005, committee activities focused on identifying specific reduction items.
Promotion of environmentally-friendly development and design	Reducing resources for the production of stamping die materials	+	Targets were set for production numbers of each model, and processes were reduced.
	Conserving resources for body-assembly equipment	+	High-strength jigs were used on the body-assembly equipment, and we achieved reductions by downsizing control boxes, wiring, and the volume of tubing.
	Reducing wiring and capacity of manufacturing equipment	+	We adopted measures to reduce wiring and motor capacity when designing equipment.
	Reduction in environmental impacting substances of electronic parts	+	Suppliers were provided with technical assistance on how to eliminate lead from electronic products, and boxes were made to utilize these in some vehicles.
	Adopting environmental improvements into forklifts	+	Products were fitted with environmental improvements, such as maintenance-free motors (no need to change parts), clean diesel exhaust systems, and better exhaust measures.
Creating a corporate culture	Environmental Improvement Press Conferences	+	The operations center and cooperating companies introduced the contents of improvements covering 10 departments.
Cooperation and coexistence with local communities, local environmental protection	Environmental voluntary activity	+	Community cleaning activities were held 4 times per year in the area around the operations center, with community association and other companies
	Communication activities with the community and exchanges of opinion	+	Communications activities with the community and exchanges of opinions included an Operations Center Open House, a tour for members of the prefectural district waste measures council, and a tour for new members of the Zama municipal assembly.

* Environmental accident: A spill above legal requirements leaving plant grounds

Communication with the Community

Voluntary Activities in the Local Community

As a local voluntary activity, we use our nonworking days to conduct cleanup activities around the operations center area in collaboration with local companies and the neighborhood community association. This year marks the fifth consecutive year since we began the activity, which has led to the curtailment of illegal dumping.

Dates: June, September and November 2005, February 2006

Number of Participants: 444



Zama Operations Center Open House

We invited members of the local community to an open house at which we introduced our business and development activities such as automobile recycling, die stamping, body equipment manufacture, fork lifts and so on. We also introduced our environmental efforts, such as reducing generated wastes and recycling.

Date: November 3, 2005

Number of Participants: 345



Sagami River Cleanup Activity

The fourth Sagami River Cleanup Campaign, sponsored by Zama City, drew 104 participants from the Zama Operations Center this year. A total of about a thousand people helped clean up the river, collecting several truckloads of junk such as beds, furniture, tires and flowerpots.

Date: September 4, 2005

Number of Nissan Participants: 104



Environmental Data

Air Quality (Air Pollution Control Law and ordinances)

Substance	Facility	Legal Limit	Measured Value
NOx	Boiler	60	28
	Air heating furnace	150	48
	Heater	125	47
Soot and dust	Boiler	-	0.001
	Air heating furnace	0.3	0.023
	Heater	0.3	0.001

Unit: NOx: ppm, Soot and dust: g/m³N

* Measured values are the maximum measured values in FY 2005.

Wastewater Quality (Water Pollution Control law and other ordinances)

Item	Legal Limit	Measured Value		
		Maximum	Minimum	Average
pH	5.8-8.6	7.7	7.3	7.5
COD	60	6.6	3.8	5.1
BOD	60	7.0	0.6	2.2
SS	90	7.4	1.0	3.8
Oil	5	1.3	ND	1.03
Phenol	0.5	0.06	0.06	0.06
Soluble iron	10	0.09	ND	0.06
Total Nitrogen	120	9.1	2.5	6.2
Total Phosphorous	16	0.43	ND	0.2

Unit: mg/L (except pH)

* Measurements of items other than those listed above were below minimum quantifiable limits

* ND indicated values lower than the minimum quantifiable limit

PRTR Substances

Unit: kg/year (Dioxins: mg-TEQ/year)

Substance number	Chemical substance	Amount handled	Air	Water	Waste	Landfilled by Nissan	Recycled	Chemically changed	Product
30	Bisphenol A type epoxy resin	52	1	0	0	0	0	51	0
40	Ethyl benzene	568	334	0	0	0	0	233	0
43	Ethylene glycol	32	0	0	0	0	0	32	0
63	Xylene	3,457	2,261	0	0	0	0	1,195	0
101	2-ethoxyethyl acetate	10	10	0	0	0	0	0	0
224	1,3,5 trimethylbenzene	45	19	0	0	0	0	27	0
227	Toluene	2,624	1,024	0	0	0	0	1,600	0
230	Lead and its compounds	364	0	0	0	0	152	0	212
299	Benzene	66	0	0	0	0	0	66	0
309	Poly (oxyethylene) nonyl phenyl ether	11	10	1	0	0	0	0	0
Total		7,229	3,659	1	0	0	152	3,204	212

*PRTR: Pollutant Release and Transfer Register. This system calculates the extent to which the production, use, and storage of chemical substances result in the release and transfer of those substances into the environment. The PRTR Law was originally enacted in July 1999 in Japan. *According to PRTR law, raw materials that contain 0.1% or more of carcinogen and those that contain 1% or more of other substances are measured, and substances that contain carcinogens handled in quantities of over 500kg per year, or other substances of over 1 ton, are reported to the local government, but information on additional substances is included in this chart. *As the figures are rounded to the first place, the sum of air, water, waste, or buried by Nissan, recycled, chemically changed, and made into products may not necessarily be the same as the sum of the amount handled or total.

Major Products



Body panel stamping die



Body welding equipment

Nissan Motor Co., Ltd.

[For inquiries, please contact]

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