

Tochigi Plant / Environmental Report 2004

Business Summary: Automobile, automobile engine, and axel manufacturing

Location: 2500 Kamigamo, Kaminokawa-machi, Kawaguchi-gun, Tochigi, Japan

Start of Operations: October 1968

Number of Employees: 6,500

ISO 14001 Certification: December 1997

Environmental Slogan: To make continuous efforts to preserve the water and environment surrounding the plant.



General Manager
Tochigi Plant
Kiyoshi Higuchi

K. Higuchi

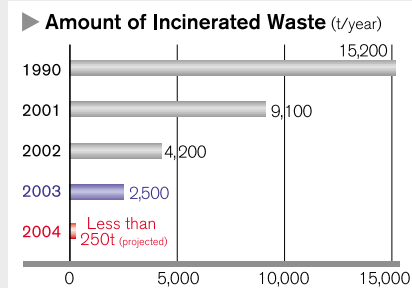


Tochigi Plant

Major Results in FY 2003

Zero Emissions

We were able to reduce the amount of incinerated waste by 2,561t/year, far surpassing our target of 3,180t/year. Our efforts focused on the promotion of recycling activities and due to this large reduction, we have ceased the operation of our waste incinerator as of the end of March 2004.



Energy Conservation

February is Energy Conservation Month, and as part of our activities we held a contest where representatives from each department presented on examples of improved energy conservation. The top two groups were nominated for the Kanto Area Case Example Competition of the National Energy Conservation Promotion Competition and one of the groups was honored with the "Superior Energy Conservation Center Award". Starting with the Minister of Foreign Affairs Award, we have been honored with 13 awards in the past 17 years.



Case Example Competition

Activities to Reduce Our Environmental Impact

We have reduced volatile organic compounds (VOC) emissions by switching to water-based paint in the painting process. In switching approximately half the painting volume to water-based paint in fiscal year 2004, emissions have decreased by 30%. In the future, we will continue to work to reduce our use of substances with an environmental impact.



Paint booth utilizing water-based paint

FY 2003 Objectives and Results

Objective	Target	Results	Comments
Environmental preventive measures	1. Zero environmental accidents*	+	Able to maintain the generation of waste to "zero" due to the appropriate education provided on environmental conservation and environmentally focused measures for facilities.
	2. Improvement plan 100% implementation rate	+	Taken measures to implement 8 improvements as planned.
Zero emission of waste	Reduction in amount of incinerated waste to less than 3,180t/year 65% reduction as compared to 1999	+	With developments in the recycling of paint residue, etc., the volume of incinerated waste has been reduced to 2,561t / year. Ceased operation of the incinerator as of March 2004.
Energy conservation	Various activities to reduce amount of heat more than 269,000 GJ	+	Passed our target of 269,000 GJ through various energy conservation activities achieving 281,200 GJ (2,309 conservation activities).
Reduction of water usage	5% reduction as compared to 1999 levels Reduction volume more than 300,000t/year	+	With the implementation of technical items and items with minor incremental improvements, we reached a reduction level of 422,000t / year.
Reduction of VOC emissions	Cleaning thinner recovery rate of over 60%	+	Maintained a recovery rate of over 60% at all our paint shops.

*Environmental Accident: A spill above legal requirements leaving company grounds

Communication with the Community

Environmental Facilities Tour

Starting with the President of the local neighborhood association, we have offered tours to such groups as the Environmental Committee of Tochigi Prefecture and the Eco-Life Network Tochigi to foster continued information exchange and deeper understanding of our environmental efforts.



Facility Tour

Shirasagi Festival

With more than 35,000 participants every year, this festival is our best opportunity to open up lines of communication with the community. We further deepen communication with the community by widely advertising for volunteers to participate in the festival.



Shirasagi Festival venue

Local Environmental Protection

On an ongoing basis, our employees take time during their lunch breaks to pick up litter along the public road bordering our plant. This hands-on activity has become part of new employee training as a way to teach the importance of environmental conservation.



Litter collection

Environmental Data

Air Quality (Air Pollution Control Law and ordinances)

Unit: NOx: ppm, Soot and dust: g/m³ N, Dioxins: ng-TEQ/m³ N

Substance	Facilities	Legal Limits	Measured Value
NOx	Boilers	190	120
	Heating furnaces	230	10
	Diesel engines	950	640
	Incinerators	300	85
	Furnaces	200	120
	Smelters	180	57
Soot and dust	Boilers	0.15	0.013
	Heating furnaces	0.2	0.061
	Diesel engines	0.1	0.025
	Incinerators	0.5	0.002
	Furnaces	0.2	0.012
	Smelters	0.2	0.061
Dioxins	Smelters	5	0.4
	Incinerators	10	1.8

Measured values are the maximum measured values in FY 2003

Wastewater Quality (Waste Water Pollution Control Law and other ordinances)

Unit: mg/L (except pH)

Item	Legal Limits	Measured Values		
		Maximum	Minimum	Average
pH	5.8~8.6	7.9	6.6	7.3
BOD*	25	19.3	1.0	3.1
SS*	50	14.8	1.0	2.3
Zinc	5	0.4	0.1	0.1
Soluble iron*	3	0.5	0.1	0.1
Soluble manganese*	3	0.2	0.1	0.1
Chromium	2	0.1	0.1	0.1
Fluoride	8	1.2	0.2	0.4
Nitrogen	20	19.2	2.0	7.2
Phosphorous	2	0.8	0.1	0.4

*Tochigi prefectural ordinance • Measurements of items other than those listed above were below minimum quantifiable limits

PRTR Substances

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

Substance number	Chemical substance	Amount handled	Air	Water	Waste	Landfilled by Nissan	Recycled	Chemically changed	Product
1	Water-soluble zinc compounds	654	0	2	83	0	0	0	569
9	Bis (2-ethylhexyl)apitate	708	0	0	0	0	0	35	673
16	2-Ethynol amine	349	0	70	0	0	0	279	0
25	Antimony and its compounds	23,760	0	0	0	0	0	0	23,760
29	Bisphenol A	13,375	0	0	0	0	0	13,375	0
30	Bisphenol A mold epoxy resin	3,477	91	0	0	0	0	0	3,386
40	Ethyl benzene	37,066	23,280	0	0	0	293	5,918	7,575
44	Ethylene glycol monoethyl ether	290	248	0	0	0	0	42	0
63	Xylene	926,795	314,904	0	0	0	529,786	47,747	34,358
67	Cresol	1,605	0	0	0	0	0	1,605	0
68	Chromium and trivalent chromium compounds	11,875	0	0	0	0	0	0	11,875
109	2-(Diethylamino)ethanol	300	0	60	0	0	0	240	0
224	1,3,5 trimethylbenzene	11,489	9,427	0	0	0	226	1,836	0
227	Toluene	281,103	93,006	0	0	0	168,025	13,906	6,166
232	Nickel compounds	537	0	13	341	0	0	0	183
260	Pyrocatechol	19,160	0	0	0	0	0	19,160	0
266	Phenol	12,255	0	0	0	0	0	12,255	0
270	Di-n-Butyl Phthalate	1	1	0	0	0	0	0	0
272	Bis (2-ethylhexyl) phthalate	57,165	0	0	0	0	0	2,765	54,400
283	Hydrogen fluoride and its compounds	3,194	100	247	296	0	2,551	0	0
299	Benzene	9,862	5	0	0	0	0	0	9,857
304	Boron and its compounds	119	0	0	116	0	0	0	3
309	Poly (oxyethylene) nonyl phenyl ether	605	0	72	0	0	0	533	0
310	Formaldehyde	3,240	2,657	0	0	0	0	583	0
311	Manganese and its compounds	354,233	0	46	372	0	0	0	353,815
346	Molybdenum and its compounds	7,475	0	0	0	0	0	0	7,475
179	Dioxins	142	69	0	73	0	0	0	0
Total		1,780,576	443,719	510	1,092	0	700,881	120,279	514,095

• PRTR : Pollution 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 (designated type 1 chemical substances) and those that contain 1% or more of other substances are measured. All are reported to the local government, but information on additional substances is included in this chart (all types of dioxin are stated). • 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



FAIRLADY Z
ROADSTER



FUGA

NISSAN MOTOR CO., LTD.

[For inquiries, please contact]

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