

Iwaki Plant / Environmental Report 2004

Business Summary: Manufacturing of vehicle engines

Location: 386 Shimokawa Otsurugi-aza, Otsurugi, Izumi-cho, Iwaki-shi, Fukushima, Japan

Start of Operations: January 1994

Number of Employees: 650

ISO 14001 Certification: March 1999

Environmental Slogan: Creating a clean facility, that is friendly to the environment and natural world of Iwaki.



General Manager
Iwaki Plant
Shinichi Asano



Iwaki Plant

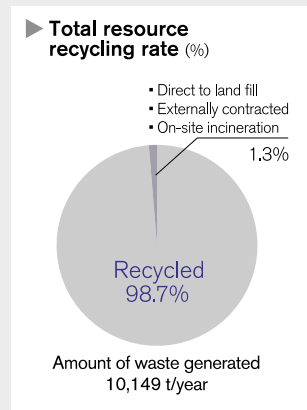
Major Results in FY 2003

Zero Emissions

Our efforts during fiscal year 2003 include waste separation and recycling of flexible, hard, and composite plastic waste products. The results of this effort made it possible to effectively utilize combustible wastes as refuse derived fuel (RDF) and other power-generating fuels, helping us achieve a recycling rate of 98.7%. In the future, we plan to work proactively to increase the recycling of liquid sealant and used filters.



Recycling station



Environmental Education

Employee Education

During Environment Month, we held study sessions on water pollution prevention and tours to observe the disposal process at the wastewater treatment facility as ways to educate management supervisors on environmental conservation.



Water Treatment Facility Tours

Starting next fiscal year, we plan to widely introduce the water treatment process at our plant by inviting the public to observe the process so that we can demonstrate that the wastewater from our plant is properly treated before it is released into the Onahama Port.



FY 2003 Objectives and Results

Objective	Target	Results	Comments
Energy conservation	Reduction in amount of heat 18,000 GJ	+ 38,600 GJ	Achieved through the implementation of improvement efforts (350 cases) in each work area
Zero emission of waste	Waste Disposed Directly to Landfill 8t/year	+ 5t/year	Made possible through advancements with recyclers in recycling metals and composite plastics.
	On-site incineration volume 30t/year	+ 26t/year	
Cooperation and coexistence with local communities, local environmental protection	Implementation of "Clean Day" (beautification of area surrounding plant)	+ 7 times/year	As part of "Clean Day," carried out activities to green the plant interior and collect litter from the public road bordering the plant.

Communication with the Community

“Clean Day”

We held “Clean Day” seven times throughout the year, during which all employees collected litter from areas surrounding the plant during their lunch break. Clean Day has become a well-established activity at the plant and will continue to be held every year.

2003 Iwaki Plant Autumn Festival

This year's festival celebrated Nissan's 70th anniversary and the Iwaki plant's 10th year of operation, and marked the cumulative production of three million VQ engines. A record 3,500 people attended the event. We held this event with the joint efforts of the local community, including participation by the local high school's brass band.

Event Date: October 11, 2003



Environmental Data

Air Quality (Air Pollution Control Law and ordinances)

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

Substance	Facilities	Legal Limits	Measured Value
NOx	Water cooling and heating generator	120	83
	Aluminum furnaces	100	32
	Aluminum chip melting furnaces	100	18
Soot and dust	Water cooling and heating generator	0.03	0.001
	Aluminum furnaces	0.03	0.012
	Aluminum chip melting furnaces	0.03	0.003
SOx	Water cooling and heating generator	4.5	< 0.01
	Aluminum furnaces	4.5	0.01
	Aluminum chip melting furnaces	4.5	0.01
Dioxins	Incinerators	1	< 0.0001

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	7.4	6.9	7.4
COD	16	6.8	3.4	4.9
SS*	56	< 5	ND	ND
Oil	5	< 0.5	ND	< 0.5
Zinc	4	—	—	< 0.1
Soluble iron	10	—	—	< 0.1
Nitrogen	60	—	—	5.1
Phosphorous	8	—	—	0.07

*Indicates pollution prevention agreement (Fukushima Prefecture, City of Iwaki, Nissan)
 • Measurements of items other than those listed above were below minimum quantifiable limits • ND indicates below minimum quantifiable limits • The above data are under normal operating conditions, not in the event of environmental accident

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
13	2,2'-azobisisobutyronitrile	66	0	0	6	0	0	0	59
16	2-Ethynol amine	93	0	5	88	0	0	0	0
40	Ethyl benzene	6,886	1	0	165	0	0	6,719	0
43	Ethylene glycol	4,285	0	0	0	0	0	0	4,285
44	Ethylene glycol monoethyl ether	3	3	0	0	0	0	0	0
63	Xylene	33,092	49	0	793	0	0	32,250	0
100	Cobalt and its compounds	85	0	0	9	0	0	0	77
227	Toluene	62,242	29	0	1,493	0	0	60,720	0
231	Nickel	176	0	0	18	0	0	0	158
283	Hydrogen fluoride and its compounds	204	0	0	203	0	0	0	0
299	Benzene	2,192	1	0	53	0	0	2,138	0
304	Boron and its compounds	12	0	1	0	0	0	11	0
307	Poly (oxyethylene) = alkyl ether (C =12 -15)	61	0	3	58	0	0	0	0
309	Poly (oxyethylene) nonyl phenyl ether	533	0	29	504	0	0	0	0
311	Manganese and its compounds	16	0	0	2	0	0	0	14
346	Molybdenum and its compounds	47	0	0	5	0	0	0	43
179	Dioxins	0.27	0.27	0	0	0	0	0	0
Total		109,993	83	38	3,396	0	0	101,839	4,636

• 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



VQ engine



ELGRAND



MURANO

NISSAN MOTOR CO., LTD.

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