

# Environmental Report 2009

"Leaving nature and resources to posterity"



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Period covered by this report: The fiscal 2008 (April 1, 2008 to March 31, 2009)

Website: http://www.fanuc.com/

## A Message from Management

## Leaving nature and resources to posterity

As an all-round manufacturer of FA (factory automation) and robots, FANUC's operations are based on two principles. One involves making R&D and robotization central to our management, while the other is to preserve nature.

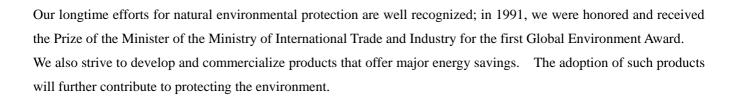
The FANUC headquarters are located in a stunning forest environment adjacent to the Fuji - Hakone Izu National Park. The forest of

Japanese larches and red pines is alive with wild birds and plants. This wonderful environment is dotted with a

number of yellow buildings.

It is our intention to preserve this environment for as long as we are here.

Since FANUC was first established, the company's Nature Preservation Committee has aimed to manage the forest with a policy of "not to cut a single tree." The FANUC Forest, located at the broad base of Mt. Fuji, not only contributes to the prevention of global warming but also cultivates an employee mindset to "live with nature." In addition, it provides us with a source for creating "nature-conscious technologies for manufacturing."

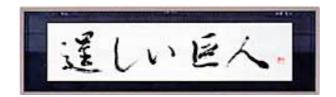


In August 1999, we acquired ISO 14001 certification for our company-wide business activities related to FA and robot products. We constantly strive to protect the environment in our corporate activities by setting more specific targets while protecting the natural environment.

We will continue to promote global environmental conservation in all aspects of our corporate activities, under the slogan of "Leaving nature and resources to posterity."

President and CEO

Dr. Eng. Yoshiharu Inaba





Keyaki

Company Name FANUC LTD
 Incorporated May 12, 1972
 Paid-up capital ¥69 billion

Performance data



Headquarters
 Laboratories
 Chuo Technical Center
 Factories

Oshino-mura, Yamanashi Prefecture, 401-0597

Hino Complex

Nagoya Branch

Kansai Branch Office

• Hokuriku Branch Office

Kyushu Branch Office

Tsukuba Branch Office

Hokkaido Branch Office

Maebashi Branch Office

• Chugoku Branch Office

• Hiroshima Branch Office

Tohoku Branch Office

Echigo Branch Office

Tsukuba Factory

Hayato Factory

3-5-1 Asahigaoka, Hino City, 191-8509

1918-1 Nishinoshima-choda, Komaki City, 485-0077

1-3-41 Nankokita, Suminoeku, Osaka, City, 559-0034

2-3-2 Ryuutsuu Center Mitoda, Imizu City, Toyama Prefecture, 939-0402

2570-2 Dagashiro, Tsukure, Kikuyomachi, Kikuchi-gun, Kumamoto

Prefecture, 869-1196

1-25-1 Kannondai, Tsukuba City, Ibaraki Prefecture, 305-0856

114-6 Nishinopporo, Ebetsu City, Hokkaido, 069-0832

521-10 Motosojamachi, Maebashi City, 371-0846

834 Oouchida, Okayama City, 701-0165

1-7-3 Kaminukushina, Higashiku, Hiroshima City, 732-0032

4-5 Akedoori, Izumiku, Sendai City, 981-3206

7-17-38 Imamachi, Mitsuke City, 954-0111

1500-2 Mukouueno, Chikusei City, Ibaraki Prefecture, 300-4522

2277 Uchi, Hayatocho, Kirishima City, Kagoshima Prefecture, 899-5116

# **Environmental Policy**

## **Basic Vision**

## Leaving nature and resources to posterity

With the slogan of "Leaving nature and resources to posterity," we aim to conserve the global environment in all aspects of our corporate activities.

## **Action Policy**

At FANUC LTD, as an all-around manufacturer of FA (factory automation) and robots, we follow the action policy described below.

- 1. Promote the protection of our environment, with a policy of "not to cut a single tree," observed since our establishment.
- 2. Fully understand the environmental aspect of our corporate activities and promote the continuous improvement of environmental conservation and the prevention of environmental pollution.
- 3. Observe all environmental legal regulations and industry standards to which we have subscribed, and any other requirements.
- 4. Reduce our energy consumption, particularly the amount of electric power that we use, to contribute to the prevention of global warming.
- 5. Promote waste reduction and recycling to make the maximum use of resources.
- 6. Promote the development of environmentally friendly products through energy saving design, lower weight, fewer parts, etc.
- 7. Promote the improvement of chemical substance control, so as to prevent environmental pollution.
- 8. Set environmental objectives and targets to achieve the environmental policy, review them periodically, and actively promote environmental improvement.

Keep all employees of FANUC LTD and its affiliated companies informed of our environmental policy. Vigorously publicize that policy

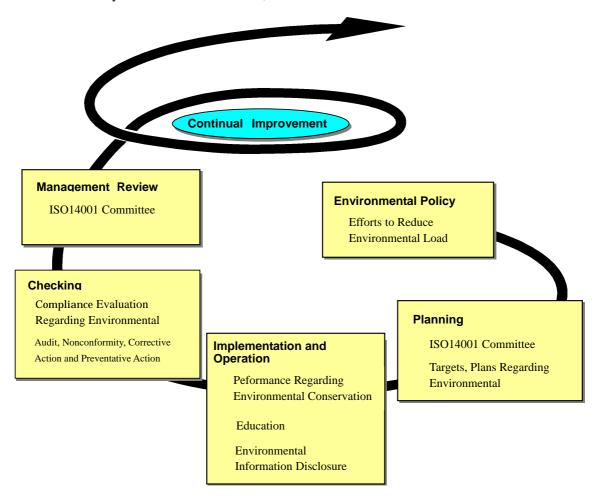
**Environmental Management** 

#### **Environmental Management System**

FANUC has devised and implemented an environmental management system in accordance with the ISO 14001 international standard.

In August 1999, the entire FANUC organization was granted ISO 14001 certification, with the registered range being those activities related to FA ,robot and robomachine products (including research and development, manufacturing, and sales & service). This not only covers the headquarters (Yamanashi) but also the Hino Complex, Tsukuba Factory, Hayato Factory, each of Nagoya, Kansai, Tsukuba, Hokkaido, Kyushu ,and Hokuriku Branches, every Branch Offices, and so on.

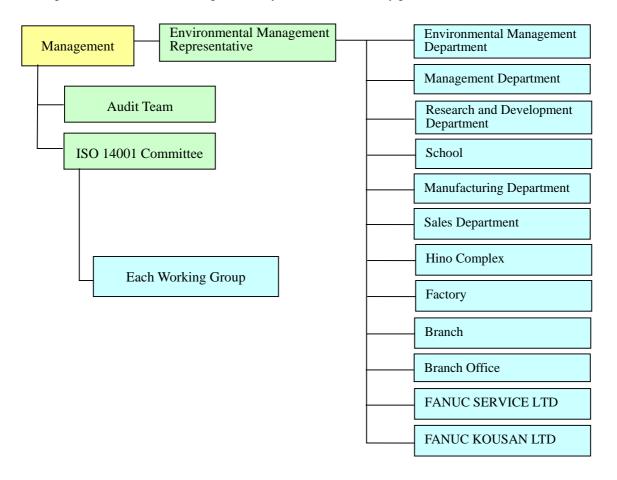
This environmental management system is applied to every FANUC LTD site, and also to the employees, factories, premises, buildings, facilities, corporate activities, and environmental conservation activities related to the products and services offered by FANUC SERVICE LTD, and FANUC KOUSAN LTD.



#### Organization ,System

An organizational chart illustrating the environmental management system is shown below.

With top management acting as chairpersons, the ISO 14001 committee consisting of representatives of the departments concerned meets periodically to decide on activity plans and to review activities.



#### **Efforts to Reduce Environmental Load**

The following provides an overall picture of our efforts to reduce the environmental load incurred by FANUC's business activities.

#### **Environmental aspects**

Inputs

Electric power, kerosene, water, chemical substances, raw materials, etc.

Outputs

Products, exhaust gases, wastewater, noise and vibration, chemical substances, waste, etc.

#### **Business activities**

Research and development phase

Consideration is given in the research and development phase, such as reducing the size and weight of products, their power consumption, parts count, and the number of service parts, while extending the service lives of those parts.

Purchasing phase

Those raw materials and parts that incur a low environmental load, such as those containing no hazardous chemical substances, are selected.

Manufacturing phase

We reduce waste, install energy-saving manufacturing equipment, reuse parts packing materials, reduce the amount of chemical substances used, and conduct other activities.

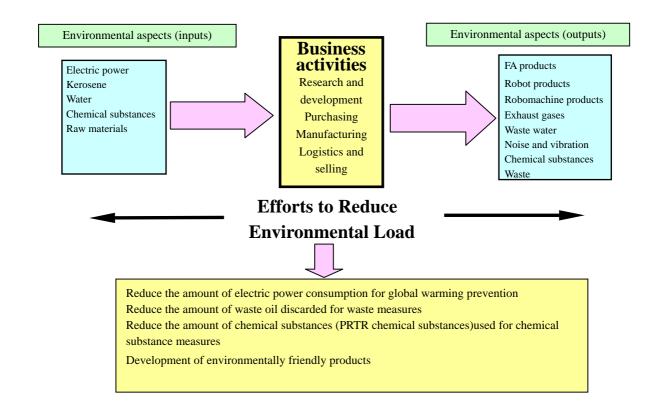
Logistics and selling phase

We review packing, reduce the energy consumption at the time of transport of products and their delivery to customers, and conduct other related activities.

#### **Environmental efforts**

To reduce the environmental load generated by its business activities, FANUC focuses on the measures given below.

Global warming prevention, Waste reduction measures, Chemical substance measures, Development of environmentally friendly products



**Targets and Performance** 

## **Targets, Plans, and Performance Regarding Environmental Conservation**

## Mid- to long-term environmental targets

Item	Mid- to long-term environmental target	
Power consumption	Reduce ratio to production by 13% from the fiscal 1997 levels by fiscal 2010.	
Amount of waste oil discarded	Reduce ratio to production by 20% from the fiscal 1997 levels by fiscal 2010.	
Amount of chemical ( PRTR chemical substances ) substances used	Reduce ratio to production by 12% from the fiscal 2004 levels by fiscal 2010.	
Development of environmentally friendly products	Implement reductions in size and weight, power consumption,, and number of service parts, while extending their service lives, etc., by establishing numeric targets for the end of fiscal 2010.	

## Environmental targets for fiscal 2008 and performance

Item	Environmental target for fiscal 2007	Performance
Power consumption	Reduce by 14% from the previous fiscal year's level.(Hold the increase to no more than 19% per production from the previous fiscal year's level)	Target achieved with 17.9% reduction from the previous fiscal year's level, holding the increase to no more than 15% per production from the previous fiscal year's level.
Amount of waste oil discarded	Hold the increase to no more than 8% per production from the previous fiscal year's level	Target achieved with holding the increase to no more than 3.1% per production from the previous fiscal year's level.
Amount of chemical ( PRTR chemical substances ) substances used	Reduce the ratio of PRTR chemical substance to production by 2% from the previous fiscal year's level., total chemical substance control	Target achieved.
Development of environmentally friendly products	For main products, implement reductions in size and weight, power consumption, and number of service parts, while extending the service life of those parts, etc., by establishing numeric targets for the current fiscal year.	Target achieved.

## Environmental targets for fiscal 2009

Item	Environmental target for fiscal 2009	
Power consumption	Reduce the amount of electric power consumption by 12% from the previous fiscal year's level.	
Amount of waste oil discarded	Reduce the ratio of amount of waste oil discarded to production by 2% from the previous fiscal year's level.	
Amount of chemical ( PRTR chemical substances ) substances used	Reduce the ratio of PRTR chemical substance to production by 1% from the previous fiscal year's level.	
Development of environmentally friendly products	For main models of individual products, implement reductions in size and weight, power consumption, and number of service parts, while extending the service life of those parts, etc., by establishing numeric targets for the current fiscal year.	

#### **Power Consumption**

#### Power use reduction results

As part of our efforts to reduce our output of greenhouse gases such as CO<sub>2</sub> and thus prevent global warming, we are constantly aiming to reduce the amount of electric power that we use.

In fiscal 2008, the amount of electric power was down by 17.9% from the previous fiscal year's level, held the increase to no more than 15% per production from the previous fiscal year's level, achieving our target for fiscal 2008.

#### Power use reduction measures

Disconnection of power from office automation equipment and lighting fixtures throughout the company when not in use and during recesses

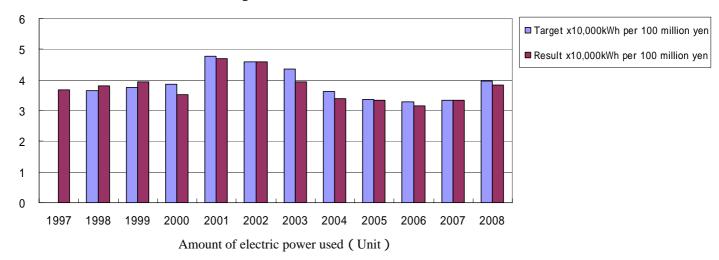
Some machine tools in our plant facilities were exchanged for those incorporating auto power-off devices.

Some of the compressors in our plant facilities were exchanged for those incorporating inverter control.

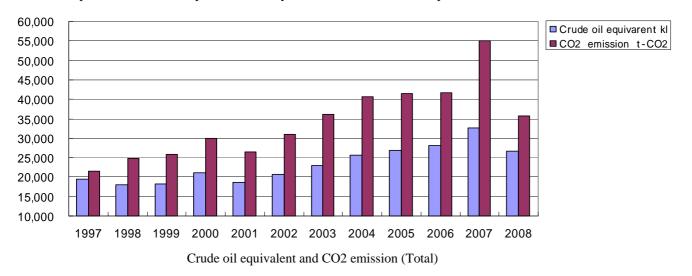
Some of the feed pumps were exchanged to inverter types.

Aging fluorescent ballasts were gradually replaced with energy-saving electronic ballasts.

Energy-saving fluorescent lamps (with electronic ballasts) and energy-saving compressors (inverter type) were installed in new buildings.



The total amount of energy used in fiscal 2008 (total of electric power, oil, and gas) was down by 18% per production from the previous fiscal year's level on a crude oil equivalent basis.



#### **Amount of Waste Oil Discarded**

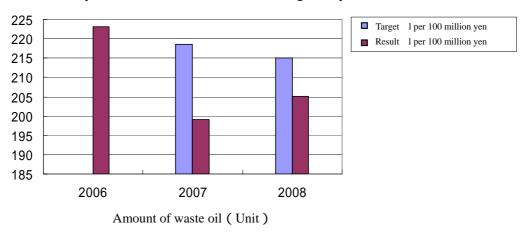
#### Waste oil reduction results

The amount of waste oil generated in fiscal 2008 was held the increase to no more than 3.1% from the previous fiscal year's level per production unit, achieving the fiscal 2008 target.

#### Waste oil applied reduction measures

Introduction of oil water separators.

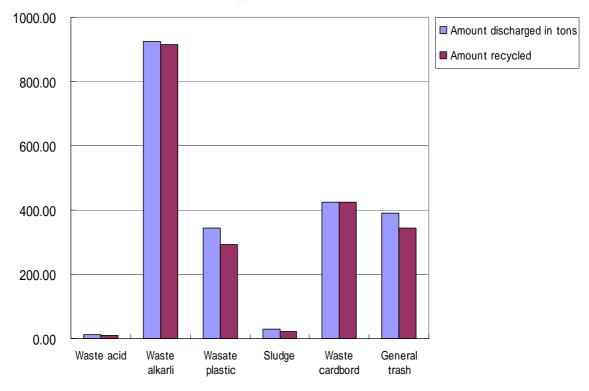
Recovery and reuse of the coolant left adhering to chips.



#### Other Waste output

Most are recycled waste.

Waste metal (10,156.57 t), water-soluble copper salts (567.14 t) and sludge (47.10 t) are sold, and recycled waste.



Amount of waste output discarded in fisical 2008 (Except waste oil and goods sold)

#### Amount of Chemical (PRTR Chemical Substances) Substances used

#### PRTR chemical substance reduction results

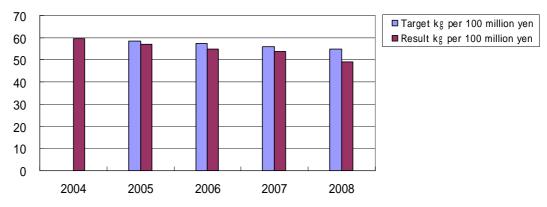
For fiscal 2008,we achieved with 8.9% reduction from the previous fiscal year's level in the use of PRTR substances per production unit. achieving the fiscal 2008 target.

## PRTR chemical substance applied reduction measures

Some of the HCFC-141b cleaning alternatives

Ability of the HCFC-141b vapor recovery up

Play the HCFC-141b waste



Amount of PRTR chemical substances used (Unit)

#### Total chemical substance control

To implement the total field control of objects stored by departments using chemical substances, we conducted the following inspections and remedied those defects revealed as a result of those inspections:

Entry of stored objects into the ledger

Name indication

Maximum quantity of stored objects that can be held in the storehouse

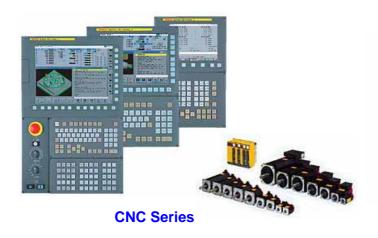
Whether storage containers are free from damage and leakage

Whether periodic inspections are conducted

Whether protective custody of the situatoin

## **Development of Environmentally Friendly Products**

## **Environmentally Friendly Products**





**Lasers** 



**Robots** 

**ROBODRILL** 





**ROBOSHOT** 

**ROBOCUT** 

## Development of Environmentally Friendly Products

The research and development department evaluates the environmental impact of products and sets targets for developing environmentally friendly products.

Product	Target	
CNCs	Reduction in power consumption	
	CNC performance improvement	
	Hazardous chemical substance reduction	
Lasers	Reduction in power consumption	
	Consumer goods reduction	
	Hazardous chemical substance reduction	
Robots	Reduction in power consumption	
	Reduction in size and weight	
	Reduction in number of service parts, while extending their service lives	
	Hazardous chemical substance reduction	
ROBODRILL	Reduction in power consumption	
	Reduction in number of service parts ,while extending their service lives	
	Hazardous chemical substance reduction	
ROBOSHOT	Reduction in power consumption	
	Reduction in number of service parts ,while extending their service lives	
	Hazardous chemical substance reduction	
ROBOCUT	Reduction in number of service parts, while extending their service lives	
	Hazardous chemical substance reduction	

FANUC's products have been awarded the prizes listed below for the "Excellent Energy Saving Device Award" by the Japan Machinery Federation.

Award year	Prize name	Prize-winning product
FY 1995 (16th)	Prize of the Minister of the Ministry of International Trade and Industry	Electric plastic injection molding machines with AI features (FANUC ROBOSHOT Series)
FY 1998 (19th)	Prize of the Minister of the Ministry of International Trade and Industry	Wire-cut electric discharge machines equipped with high-speed automatic wire feed and board thickness follow-up control (FANUC ROBOCUT $\alpha$ i Series)
FY 1999 (20th)	Prize of the Minister of the Ministry of International Trade and Industry	Digital servo system using phase control power regeneration and cycle time reduction (FANUC AC Servo Motor $\alpha$ Series)
FY 2003 (24th)	Prize of the Director General of Agency of Natural Resources and Energy	Large-capacity servo system with a power regeneration feature and precision digital control (FANUC Large-Size AC Servo Motor αi Series)
FY 2005 (26th)	Prize of the Director General of Agency of Natural Resources and Energy	LD-excited YAG laser machining system with guaranteed durability (FANUC YAGROBOT Series)

# **Other Efforts**

#### **Education, Environmental Information Disclosure**

#### Education

To fully understand the significant environmental aspects and to minimize, control, and improve the environmental load, we provide environmental education to all our employees. New recruits, regular employees, people in charge of specific tasks, and people in charge of environmental management are educated in accordance with their respective tasks.

#### **Environmental Information Disclosure**

We are widely disclosing environmental reports on our website (http://www.fanuc.co.jp/).

We exchange environmental information by mail, telephone, facsimile, e-mail, and other means, and will endeavor to provide bidirectional communication as much as possible in the future.

We received zero complaints regarding the environment from local residents or other parties in fiscal 2008.

#### RoHS Directive • REACH Regulation

We had 21 inquiries about RoHS and REACH in last year, all of which received individual responses.

We are striving to reduce our use of RoHS Directive targeted chemical substances.

## **Compliance Evaluation Regarding Environmental**

We have identified and conform to the applicable environmental laws and regulations listed below. We obtain information from government publications and the like to keep these laws and regulations up to date. Besides these laws and regulations, we are committed to observing environmental local ordinances and environmental standards of the industry groups to which FANUC belongs.

The national laws and regulations that directly affect FANUC are as listed below. We observe these and other laws and regulations as part of our efforts toward environmental conservation.

Laws	Name
Laws concerning the environment in general	Law Concerning the Improvement of Pollution Prevention Systems in Specific Factories
	Factory Location Law
	Basic Law for Establishing a Recycling-Based Society
	Air Pollution Control Law
Laws concerning air quality conservation	Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures
	Law Concerning the Recovery and Destruction of Fluorocarbons
Laws concerning water quality	Water Pollution Control Law
conservation	Sewerage Law
	Law for Combine Household Wastewater Treatment Facility
Laws concerning the living	Noise Regulation Law
environment	Vibration Regulation Law
Laws concerning waste treatment	Waste Management (Disposal) and Public Cleansing Law
Laws concerning the global environment	Law concerning the Rational Use of Energy
Laws concerning the handling of chemical substances and disaster prevention	Occupational Health and Safety Law
	Fire Defense Law
	Poisonous and Deleterious Substances Control Law
	High-Pressure Gas Safety Law
	Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

## Audit, Nonconformity, Corrective Action and Preventative Action

#### Audit

In the Recertification audit of 2008, one item were pointed out, which we have been improved.

To ensure that the environmental management system conforms to the ISO 14001 standard and is implemented and maintained appropriately, an internal environmental audit is conducted on all departments each year. The internal environmental audit is conducted by auditors selected from departments other than the department being audited, to maintain the subjectivity and fairness of the audit.

#### Nonconformity, Corrective Action and Preventative Action

In the internal environmental audit, nonconformity were pointed out, all of which are corrected.

