Environmental Report 2003

FURUKAWA ELECTRIC

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Editorial Policy

This brochure reports on the environmental preservation activities of Furukawa Electric in fiscal 2002. In compiling this report, we made reference to Environmental Reporting Guidelines (Fiscal Year 2000 Version) (in Japanese) published by the Ministry of the Environment as well as Sustainability Reporting Guidelines 2000 by Global Reporting Initiative. In addition to the articles covered last year, this report will include, for better disclosing our initiatives in sociality and in consolidated, safety and health activities and the activities of affiliated companies.

Covered business bases

All the business bases of Furukawa Electric

1) Chiba Works	2) Nikko Works	3) Hiratsuka Works
4) Oyama Works	5) Mie Works	6) Osaka Works
7) Fukui Works	8) Shiga Works	9) Kambara Works
10) Shinagawa Works	11) Yokohama R&D Laboratories	

Affiliated Companies

TOTOKU ELECTRIC CO., LTD.
Nippon Foil Mfg. Co., Ltd.
Furukawa Engineering & Construction Inc.
THE FURUKAWA BATTERY CO., LTD.
Riken Electric Wire Co., Ltd. Other 35 companies

Covered period

From April 1, 2002 to March 31, 2003

Point of contact for further information

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A Message from the President

With rapid deterioration in the environment and depletion of natural resources, the model of civilization that prevailed in the 20th century, based on mass production, mass consumption and mass disposal, has been discredited for its inefficient consumption of energy and resources. For Japan, the 1990s have been called the “lost decade”, but they were also a decade which saw significant changes in legislation, together with significant development of the environmental infrastructure for a “resource- and environment-friendly society”--a term denoting a sustainable society that decreases environmental impact and increases resource productivity.

Within these changes in the structure of society, Furukawa Electric and its associated group of companies, as partners in the effort to achieve this sustainable society, have adopted environmental preservation as their most important management value, and are taking active steps to resolve the problems that it entails.

Furukawa Electric and its group are involved in a number of core areas of business, including Telecommunications, Plastic, Cables and Wires, Nonferrous Products, Electronics-related Products and Others. And we are old hands at taking active measures to recycle our main raw materials, and to recover and reuse plastics. The use of CFC- and lead-free reflow ovens and CFC-Substitute Compatible Magnet Wire in an effort to halt ozone layer depletion, and of wires and cables made of eco-materials to eliminate halogen and reduce environmental impact all contribute to the realization of a more affluent society while at the same time promoting conservation of the earth's resources through energy- and resource-saving. We also intend, through development of sophisticated recycling technologies and environment-friendly products, to make a contribution to protecting the earth’s environment and conserving its resources.

In terms of concrete actions relating to the environment, the Furukawa Electric Group has embarked on a program setting forth explicit targets that specify the levels and timeframes that must be achieved in each category. The most important objective for fiscal year 2002 was to acquire ISO14001 certification for all our operating facilities. In March, 2003, according to schedule, the Nikko Sheet Plant became the last of our 11 facilities to reach that goal. It was also the year in which an operational basis for green procurement was established throughout the Group.

With respect to reducing the use of organic chlorine compounds, on the other hand, it has not been possible to achieve “complete elimination within the year”, but with the development of replacement technologies we have been able to set a date for complete elimination within fiscal 2003.

We have also embarked on active programs of environmental preservation, to reduce energy use, achieve zero emissions, and establish systems for the management of chemical substances, as well as on the dissemination of environmental information.

Here we present a report summarizing our actions on environmental preservation focusing on fiscal year 2002. It is our hope that readers will reach some understanding of the activities of Furukawa Electric and its associated group of companies with respect to environmental preservation, and that you will pass on to us your frank opinions and suggestions.

Hiroshi Ishihara, President

I Corporate Profile and Summary of Business

Corporate Profile
Summary of Business

Corporate Profile

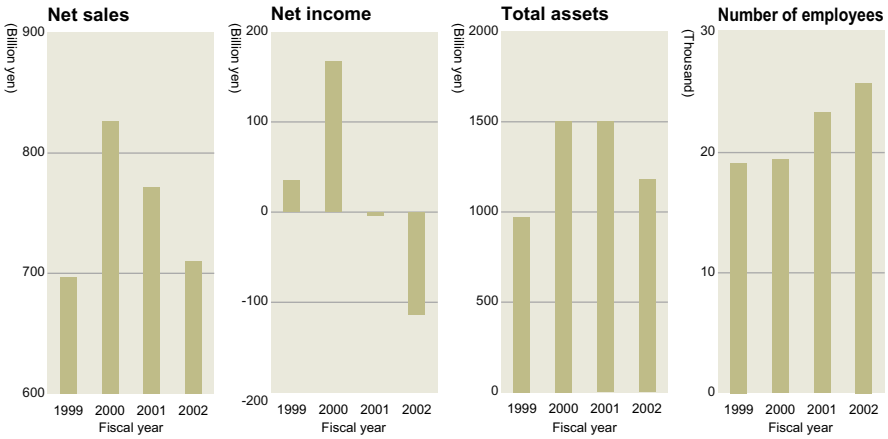
Since its establishment more than a century ago, Furukawa Electric has kept pace with the progress in technology which has shaped the foundations of Japanese industry. Originally fostered by electric cables and non-ferrous metals, the Company's advanced technologies have steadily expanded in response to the needs of the times and still continue to challenge new possibilities with innovation and creativity.

Head Office:	6-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8322
Founded:	1884, changed firm name in 1920
Paid-in Capital	59.2 billion yen
Number of Employees:	7,889
Works:	Chiba Works, Nikko Works, Hiratsuka Works, Oyama Works, Mie Works, Osaka Works, Fukui Works, Shiga Works, Kambara Works, Shinagawa Works, Yokohama R&D Laboratories
Sales Offices:	Kansai Branch Office, Chubu Branch Office, Kyusyu Branch Office, Chugoku Branch Office, Tohoku Branch Office, Hokkaido Branch Office
Overseas Representative Offices:	London Representative Office, Beijing Representative Office, Shanghai Representative Office, North America Representative Office
Research Laboratories:	Yokohama R&D Laboratories, Metal Research Center, Ecology & Energy Laboratory, FITEL Network Laboratory, FITEL Photonics Laboratory, Automotive Technology Center

As of March 31, 2003

Consolidated Business Performance

In spite of overall decline in demands, domestic demands in such fields as optical fiber cable, aluminum can stock for beverage and copper strip saw a sign of recovery since the beginning of the last half. However, under the influence of the worldwide IT depression and because of a significant decrease in the sales of fiber optic products centering North America, the consolidated sales ended up with 710,616 million yen (minus 7.9 % over the previous fiscal year).



Summary of Business

Major market products are summarized here together with their environmental aspects, whereby the products, ranging from raw materials to various systems, are categorized into four business areas that supported by the advanced technology of Furukawa Electric.

Major market products	Sales composition ratio	Production Bases											Environmental aspects				
		Chiba	Nikko (Copper)	Nikko (Aluminum)	Hiratsuka	Oyama	Mie	Osaka	Fukui	Shiga	Kambara	Shinagawa	Yokohama	Energy conservation	Global warming	Resource saving	Recycling	Hazardous substance elimination
Telecommunications Optical fibers and cables, Optical components, Optical fiber cable accessories and Installations, Network equipments	22%	○	—	—	○	—	○	—	—	—	—	○	○	—	—	○	○	○
Plastic, Cables and Wires Bare wires, Aluminum wires, Insulated wires, Magnet wires, Power cables, Power transmission cable accessories and installations, Plastic products such as power cable conduit material and foam sheet, and thermoelectric products	23%	○	○	—	○	—	○	—	—	—	○	○	—	○	○	○	○	○
Nonferrous Products Copper pipes and rods, Electrolytic copper foils, Shape memory alloys, Aluminum sheets, Extruded aluminum products, Cast and forged products	36%	—	○	○	—	○	○	○	○	○	—	—	—	○	○	○	○	—
Electronics-related Products and Others Automotive components and electric wirings, Heat pipes, Aluminum circuit boads for memory discs, Electronic component materials	19%	○	○	○	○	—	○	○	—	—	—	—	○	—	—	○	—	○

II Pro-environmental Management Policy

Basic Policy
Action Guidelines

Basic Policy

Furukawa Electric recognizes that preservation of the global environment is a critical issue for society, and shall incorporate consideration of environmental preservation issues into every phase of corporate activity, to contribute forwards the sustainable, happy and prosperous society.

Action Guidelines

- All activities shall be based on an awareness of its effect on the global environment, and environmental preservation activity shall be pursued by all employees.
- We shall observe environmental laws and regulations and requirements from our customers, and set up voluntary standards to upgrade control levels.
- We shall define environmental targets and objectives, and carry out activities according to the plan, thereby continuously improving environmental preservation activity.
- Environmental concern shall be taken into consideration in every phase of our work from the R&D and design stages to supply environment-friendly products.
- In every phase of procurement, manufacturing, distribution and customer service we shall work to reduce consumption of resources and energy, to promote recycling, and to reduce waste materials and environmental loading.
- We shall carry out environmental audit, and review environmental management system and environmental preservation activity for continuous improvement.
- We shall educate all employees to enhance their environmental awareness, and promote disclosure of information and social communication, thereby actively contribute to community activities.

Revised January 6, 2003

The former Action Guidelines established in January 1998 has been revised here to cover our extended environmental concern in every field around the Company to reflect recent trends in society.

III Overview of Target, Plan and Performance regarding Environmental Preservation

Medium-Term Targets and Performance

Targets and Performance of Medium-Term Plan for Environment Preservation Activities 2002

In fiscal 2001, based on the Basic Concept and Activity Guidelines, the Medium-Term Plan for Environment Preservation Activities 2002 was formulated. The plan organizes the Company's environmental tasks, and sets up specific items and targets of environmental preservation activity to be fulfilled by the end of fiscal 2002. The table shows the performance and evaluation at the end of the last period.

Targets and Performance of Medium-Term Plan for Environment Preservation Activities 2002

Item	Target	Performance	Evaluation
Acquisition of ISO14001 certification and continuous upgrading	Acquisition by all Works	Completed March 2003	○
Effluent reduction of hazardous substances and strengthening of chemical substance control	Complete abolition of use of organic chlorine compounds by fiscal 2002	Incompletely abolished	△
Reduction of industrial waste	40 % reduction over fiscal 1995 in fiscal 2002	59 % reduction	◎
	Start zero-emission activities	Definition formulated	○
Development of education and promotion of information disclosure; Joining social activities			○
Formulation of medium- and long-term energy conservation plan	Formulation of medium- and long-term energy conservation plan	Five-year plan formulated	○
	Annual reduction of 1 % in energy intensity per unit product (EIPUP)	8.2 % reduction over fiscal 1999	◎
Promotion of development of products with small environmental impact		Promotion by development committee	△

Legend ◎: Achieved beyond target ○: Achieved △: Slightly un-achieved ×: Considerably un-achieved

Targets of Medium-Term Plan for Environment Preservation Activities 2005

Based on the Environmental Activity Guidelines reviewed in January 2003 and the results of the Medium-Term Plan for Environment Preservation Activities 2002, the Medium-Term Plan for Environment Preservation Activities 2005 has been formulated. Activity items and targets until fiscal 2005 will be developed into annual priority environmental activity targets, and subsequently brought into environmental management activities of individual business bases.

Targets of Medium-Term Plan for Environment Preservation Activities 2005

■**Reduction of industrial waste**

Reduction of industrial waste	30 % reduction over fiscal 2000 in fiscal 2005
Zero-emission activities	50 % reduction of land fill quantity over fiscal 2000 in fiscal 2005

■**Reduction of greenhouse gases**

Reduction of CO_2 emission	5 % reduction over fiscal 2000 in fiscal 2005
Reduction of SF_6 emission	50 % reduction over fiscal 2000 in fiscal 2005
Energy conservation	1 % reduction over previous year in terms of EIPUP

■**Effluent reduction of chemical substances**

25 % reduction over fiscal 2000 in fiscal 2005
(Targeted substances: Toluene, Xylene, Ethylbenzene, Trimethylbenzene)

■**Promotion of green procurement**

Achievement ratio for general commodity including stationery	100 % in fiscal 2005
Achievement ratio for purchased products from major vendors	100 % in fiscal 2004

■**Eco-design activities**

Development of environment-friendly products	
Evaluation of environmental impact	Investigation of trends and necessity by fiscal 2004

■**Reinforcement of organization for environmental management**

Establishment of environmental management organizations in the head and branch offices by fiscal 2005

■**Promotion of consolidated pro-environmental management**

Promotion of environmental activities in affiliated companies

Last Year's Performance and This Year's Targets

Priority Environmental Activity Targets and Performance in Fiscal 2002

Performance in Fiscal 2002 for the Medium-Term Plan for Environment Preservation Activities 2002 is shown in the Table here.

Priority Environmental Activity Targets and Performance in Fiscal 2002

Item	Target	Performance	Evaluation
Acquisition of ISO14001 certification	Yokohama, Oyama, Shiga, Nikko (Sheet Plant)	Acquisition completed	○
Complete use abolition of three organic chlorine compounds	Oyama, Nikko, Kambara, Yokohama	Kambara, Yokohama	△
Reduction of industrial waste	40 % reduction over fiscal 1995	57%	◎
Zero-emission activities	Start of initiatives	Definition formulated	○
Promotion of energy conservation activities	1 % reduction over the previous year in EIPUP	5.7 % increase over fiscal 2001	×
	Level up and strict enforcement of control level	Review of set point for compressor pressures; Promotion of inverter-controlled pumps	△
Introduction of chemical substance control system	Expansion to all Works	Limited to certain Works	△
Green procurement activities	Start of activity	Definition of related standards	○
Improvement in accuracy of environmental accounting		Review of guidelines	△
Active participation in local community activities		Participation of business bases	△

Legend ◎: Achieved beyond target ○: Achieved △: Slightly un-achieved ×: Considerably un-achieved

Priority Environmental Activity Targets for Fiscal 2003

The Table here shows activity items and targets for fiscal 2003 developed from the Medium-Term Plan for Environment Preservation Activities 2005. Individual business bases will bring in these targets into their environmental management activities, and plan to promote their own activities.

Priority Environmental Activity Targets for Fiscal 2003

■Reduction of industrial waste 18 % reduction over fiscal 2000

■Zero-emission activities 30 % reduction over fiscal 2000

■Reduction of greenhouse gases 4 % reduction of CO_2 emission over fiscal 2000

■Promotion of energy conservation activities 1 % reduction in EIPUP over previous year

■Effluent reduction of chemical substances 25 % reduction over fiscal 2000

■Promotion of green procurement Designing evaluation measure and procurement processing system

■Promotion of consolidated pro-environmental management

Framework establishment of consolidated pro-environmental management and establishment of promotion organization

■Eco-design activities

Development of environment-friendly products — Promotion by Committee for Development of Environment-Friendly Products

Evaluation of environmental impacts — Investigation of LCA cases related to the Company

■Reinforcement of organization for environmental management

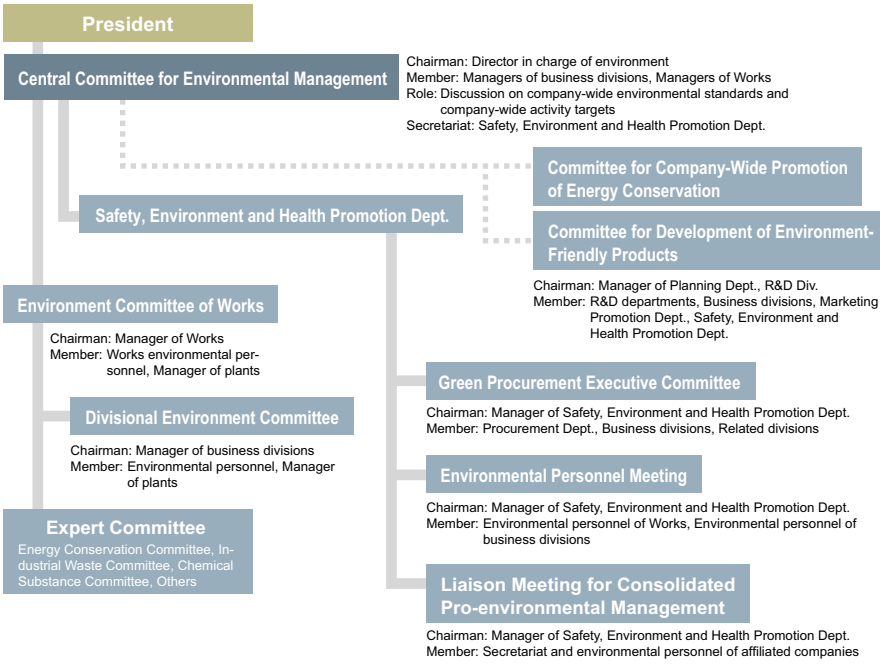
Establishment of environmental management organization

IV Environmental Preservation Initiatives

Environmental Management Activities

Organization Chart for Company-Wide Environmental Management

The Chart here shows the environmental management organization of the company. Central Committee for Environmental Management, in which a Director in charge of the environment comes in as Chairman, has been set up to carry out pro-environmental management under direct control of President, thereby promoting environmental preservation activities of the entire company.



ISO14001 Certification

Considering that ISO14001 would be a very effective scheme for environmental preservation, we have been pursuing certification acquisition since fiscal 1998, and all the Works achieved the aim in fiscal 2002.
Hereafter, we will proceed to improve environmental performance. Moreover, we will support the environmental management of affiliated companies, thus promoting preservation of the global environment from the standpoint of consolidated pro-environmental management.

Works	Date of acquisition	Certification agency	Certification No.
Chiba	June 18, 1998	DNV	EMSC-1208
Mie	November 24, 1998	JACO	EC98J1097
Hiratsuka	September 1, 2000	DNV	EMSC-1699
Osaka	December 19, 2000	DNV	EMSC-1114
Kambara	December 25, 2000	JSA	JSAE315
Shinagawa	November 2, 2001	DNV	00372-2001-AE-KOB-RvA
Nikko (Kiyotaki District)	March 14, 2002	DNV	1851-2002-AE-KOB-RvA/JAB
Fukui	April 19, 2002	DNV	00484-2002-AE-KOB-RvA
Yokohama	June 14, 2002	DNV	1849-2002-AE-KOB-RvA
Oyama	September 27, 2002	DNV	00583-2002-AE-KOB-RvA
Shiga			
Nikko (Sheet Plant)	March 14, 2003	DNV	Expansion of Nikko Works

Education and Training

■ Education of Internal Auditor

An educational course for internal auditor was given twice at the Headquarters, and once in the Nikko, Yokohama and Hiratsuka Works to bring up 91 internal auditors.

■ Environmental Education

Company-wide education was given to 52 new recruits on April 4, and to 23 second-year administrative employees on June 30. Moreover, general and special environmental education is provided for all employees at their Works and worksites.

Education of Internal Auditor

Date	Place	Target	Turnout
April, 2002	Headquarters	Six Works of Furukawa Electric	24
May, 2002	Headquarters	Ten affiliated companies	14
August, 2002	Nikko	Nikko Works	18
October, 2002	Yokohama	Two Works of Furukawa Electric and one affiliated company	16
March, 2003	Hiratsuka	Two Works of Furukawa Electric	19
		Total	91

Stocked Material Pollution, Accidents, Disasters and Compliance with Laws and Regulations

Situation and Countermeasures Regarding Pollution of Soil and Groundwater

We have been conducting soil and groundwater pollution investigations, which are aimed at those Works where heavy metals or organic chlorine compounds had been used before. Although some pollution exceeding environmental standards was identified in certain places, it has been confirmed that these places are within the premises of Works or company-owned lands and that the pollution has no influence on the surrounding areas. Moreover, voluntary countermeasures are being taken against the pollution giving due consideration to the results of investigations.

Two Works are taking such countermeasures as described below.

■ Nikko Works

It was found that the soil in the premises of the Works and its company-owned peripheral areas was polluted with selenium, arsenic, lead and cadmium; and the groundwater in the Works premises with selenium, arsenic and lead. These facts have been reported to the administration, and are under in-depth examination.

We discontinued in 1988 the copper refinery business that apparently caused this pollution, so that there is no possibility of new pollution.

With respect to purification of the soil in the company-owned peripheral areas, we held a briefing session for residents about the countermeasure work in March 2003, and after installing purification facilities, started the work in July. The polluted soil will be transported out of the premises, and will be cleansed.

■ Oyama Works

Treatment of the tetrachloroethylene pollution of soil and groundwater within the premises is under way, whereby the water is pumped up and is aerated. The use of the solvent had been discontinued, so that there is no possibility of new pollution. The results of purification are routinely reported to the administration concerned.

Furthermore, although it is not a case with heavy metals nor organic chlorine compounds, a purification program against soil pollution with alkaline effluents is under way as described below.

■ Shiga Works

In 1998, a caustic alkali effluent was accidentally leaked in the Works. While the leaked effluent was immediately recovered and treated, the groundwater has been pumped up continuously for pH treatment until today. Because the pH has reached a level that requires no treatment, we are going to confer with the administration to finish the treatment.

Investigation Regarding Illegal Disposal of Industrial Waste at Prefecture Borders between Aomori and Iwate

We received a request, dated February 5, 2003 and addressed to the Oyama Works, under the name of prefectural governors of Aomori and Iwate to report, under the name of our President, on the illegal disposal at the prefectural borders. It was an investigation regarding the volume of business, from January 1991 through August 2000, with San'ei Kagaku Kogyo (in Japanese) in Aomori Prefecture who committed the illegal disposal and Ken-nan Eisei (in Japanese) in Saitama Prefecture who conducted the collection, transportation and intermediate processing.

Internal investigation found that two Works had a track record in waste oil and burnt residue, and this fact was reported to the two prefectures.

In our judgment, our action of disposal commitment does not conflict any laws and regulations.

Storage Situation of PCB

PCB had been used, as an insulation oil for electrical equipment, in transformers, electrical capacitors and stabilizers for fluorescent light. Whereas 1,500 liters of PCB stored in the Chiba Works was detoxified through a chemical process in February 2002, the containers are still under storage and control.

The situation of use and storage at each Works is shown in the Table here.

PCB Storage Situation

Unit: Number of equipment

No.	Name of Works	Removed and stored	In use	Total
1	Chiba (Processed)	86	0	86
	Chiba (Unprocessed)	36	0	36
2	Nikko (Kiyotaki District)	182	140	322
3	Nikko (Sheet Plant)	7	44	51
4	Hiratsuka	40	3	43
5	Oyama	14	36	50
6	Mie	53	73	126
7	Osaka	55	11	66
8	Fukui	0	0	0
9	Shiga	9	0	9
10	Kambara	0	3	3
11	Shinagawa	Stabilizer only	0	Stabilizer only
12	Yokohama	9	0	9
	Total	491	310	801

Compliance with Laws and Regulations

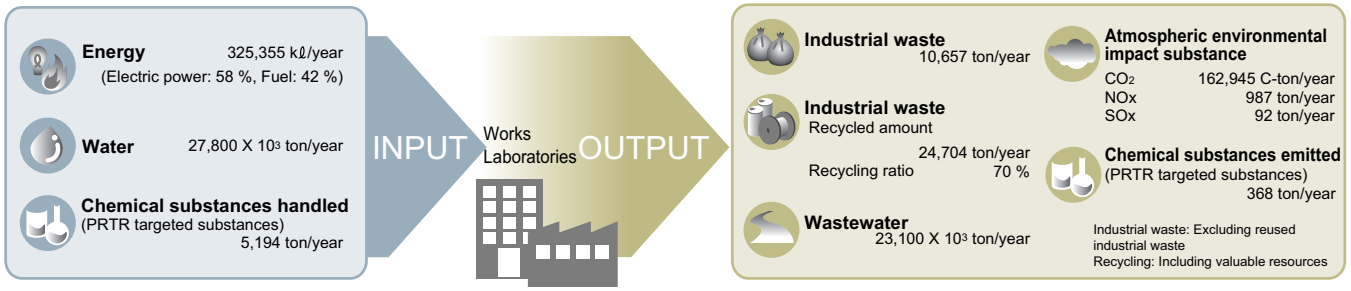
We are regularly confirming laws and regulations to be observed, making efforts to observe them. Only one case shown below infringed the regulation, and was immediately dealt with.

■ Shiga Works

Exhaust noise of blowers was found to exceed the noise control limits in certain spots, so that these spots were provided with noise barriers.

Material Flow
Global Warming Prevention and Energy Conservation

Material Flow



Global Warming Prevention

In response to the ratification of Kyoto Protocol by the Japanese Government in June 2002, Furukawa Electric has established medium- to long-term targets for reduction of greenhouse gases*, which has been authorized by the Central Committee for Environmental Management. Based on these medium- to long-term reduction targets, each business division has set up its specific reduction plan after fiscal 2003, and began reduction activities.

The Graphs here show changes in the emission of greenhouse gases (carbon converted) after fiscal 1990, indicating that the emission in fiscal 2002 was 95 % over fiscal 1990, which corresponds to a slight increase over fiscal 2001. Hereafter, we will strive hard to achieve the targets for fiscal 2005.

* Namely, CO_2, SF_6, HFC and PFC, with which Furukawa Electric has a track record of use.

Energy Conservation Activities

In view of the revision of the Law Concerning the Rational Use of Energy (Energy Conservation Law) in 1993, the Committee for Company-Wide Promotion of Energy Conservation was established in April 1994, thus initiating company-wide activities under the participation of all Works including those that are not designated as an Energy Management Factory. In 1997 the company-wide energy conservation index was changed to energy intensity per unit product (EIPUP) specified in the Energy Conservation Law, and the target was set to "1 % reduction over the previous year in terms of EIPUP".

In fiscal 2002, the production volume of three out of nine Works that are designated as Class 1 Energy Management Factory decreased to 71~91 %, so that the index worsened by 7.5~22 % in EIPUP.

In spite of the EIPUP improvement activities based on quick electric power turning-on and -off together with productivity improvement, the weighted EIPUP average of the nine Works unfortunately worsened by 5.7 % over fiscal 2001. This value corresponds to 77 % over fiscal 1995, meaning a 3.3 % improvement in year average.

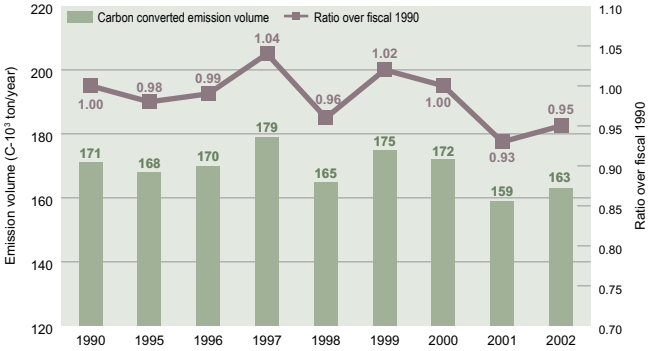
■ Case Examples of Energy Conservation Activities in Fiscal 2002

Major items of energy conservation include: use of high-efficiency transformers, inverter control of cooling water pumps, waste heat recovery in incineration furnaces for waste oil, activation control of compressors, energy conservation-oriented operation of air conditioners and economizing of lighting. These measures resulted in an energy conservation (oil converted) of 5,660 kℓ of oil.

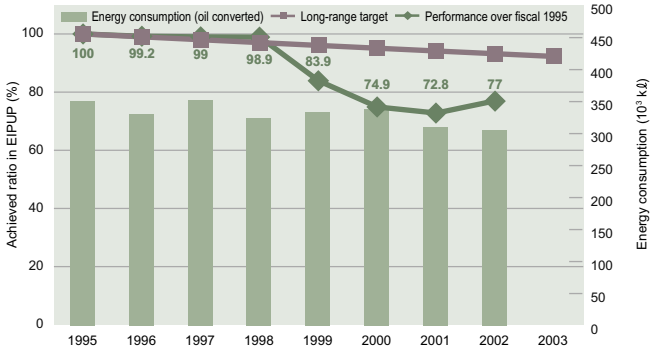
■ Energy Conservation Activities in Future

We will promote various energy conservation activities including development of management standards that are in compliance with the Energy Conservation Law, thereby striving to reduce the EIPUP by 1 % or more in annual average.

Changes in the Emission of Greenhouse Gases



Changes in EIPUPs of nine Works



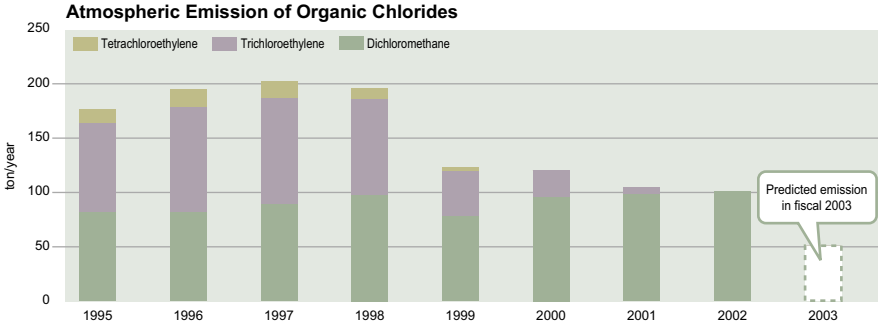
Reduction of Hazardous Substances and Control of Chemical Substances

Reduction of Organic Chlorine Compounds

In an effort to reduce the use of organic chlorine compounds, we have been developing, along with the company's environmental principle and customers' green procurement requirements, pollution-free cleansing techniques that are consistent with required product quality. Fiscal 2002 was the last year targeted for complete elimination of atmospheric emission of organic chlorine compounds. Although tetrachloroethylene and trichloroethylene were completely eliminated as shown in the Graph here, dichloromethane was not eliminated. However, we have developed a novel pollution-free cleansing method for sensitized drums for compact copying machines and laser printers and applied the method to a practical production line, whereby a new ionized alkaline water is used in place of conventional dichloromethane, rendering the new method more than equivalent to the conventional method in terms of cleansing performance and running costs.

In fiscal 2003, we plan to apply the acquired technologies to the other cleansing lines, thereby achieving complete elimination of organic chlorine compounds as soon as possible.

Atmospheric Emission of Organic Chlorides



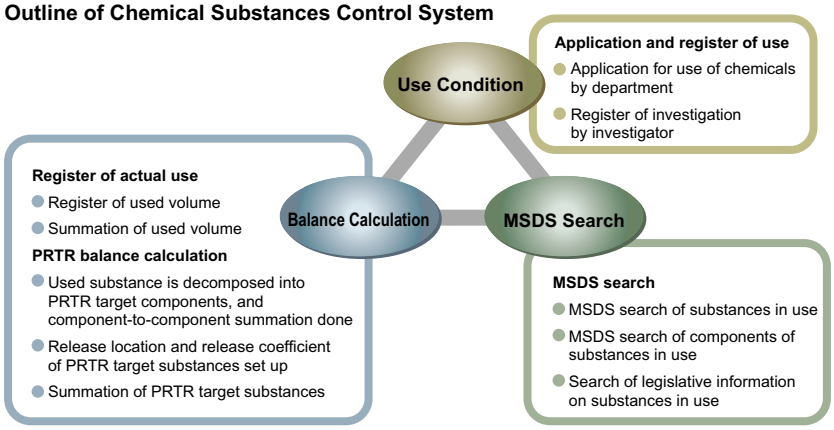
Control of Chemical Substances

Recently, extensive regional pollution such as acid rain, ozone layer depletion, global warming and endocrine disrupters has become a matter of public concern. Recognizing early the importance of controlling chemical substances, Furukawa Electric has long introduced appropriate in-house control on chemical substances, thereby promoting reduction activities against toxic chemical substances including elimination of ozone layer depletion substances and reduction of organic chlorine compounds.

Since fiscal 2001, we have formulated administrative provisions for chemical substances to consolidate the management of chemical substances in company-wide use, whereby a scheme was established for managing the species, handling volume, release and transfer volume of chemical substances used in the entire company, and its supporting system was configured.

Whereas, beginning from fiscal 2001, it became compulsory to report on the release and transfer volume of chemical substances in compliance with the PRTR Law, Furukawa Electric has been actively participating in the PRTR research activities of Japan Federation of Economic Organizations since fiscal 1996, thus acquiring relevant data. The Table here shows the handling, release and transfer volume of main chemical substances in fiscal 2001 and fiscal 2002.

Outline of Chemical Substances Control System



Handling, Release and Transfer Volume of PRTR Targeted Substances (Main substances with an annual handling volume over 100 ton)

Unit: ton/year

Substance No.	Name of substance	Handling volume		Release volume		Transfer volume	
		2001	2002	2001	2002	2001	2002
25	Antimony and its compounds	151	107	0	0	2	3
63	Xylene	406	489	16	24	1	1
67	Cresol	347	322	0	1	0	1
68	Chromium and trivalent chromium compounds	169	175	0	0	17	16
145	Dichloromethane	158	141	99	100	60	37
197	Decabromo-diphenylether	164	130	0	0	7	9
227	Toluene	471	624	295	219	55	12
230	Lead and its compounds	638	1,362	0	0	0	0
311	Manganese and its compounds	1,320	1,513	0	0	25	29

note: PRTR Law: Pollutant Release and Transfer Register Law in japan.

Zero-Emission Activities

Reduction of Industrial Waste

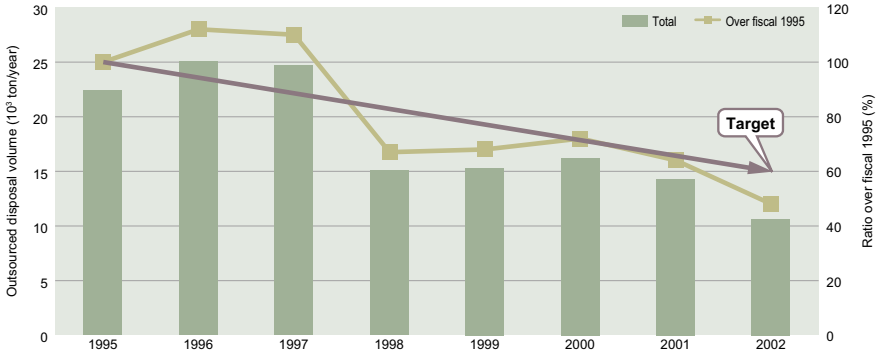
We have pursuing reduction activities of outsourced industrial waste disposal since 1993, and in 1996 we set up a medium-term target of "reducing outsourced industrial waste disposal by 40 % over fiscal 1995 in fiscal 2002". As a result, in fiscal 2002, we achieved a reduction of 57 % over fiscal 1995, which by far outstrips the initial target of 40 %, and the success is probably attributable to the recycling activities at every Works and also to the significant decrease in the production volume under the influence of IT-industry depression since the year before last.

On the other hand, the recycling ratio in fiscal 2002 remained at about 70 % --almost the same as the previous year, in which the increase in waste oil and sludge balanced the decrease in waste alkalis.

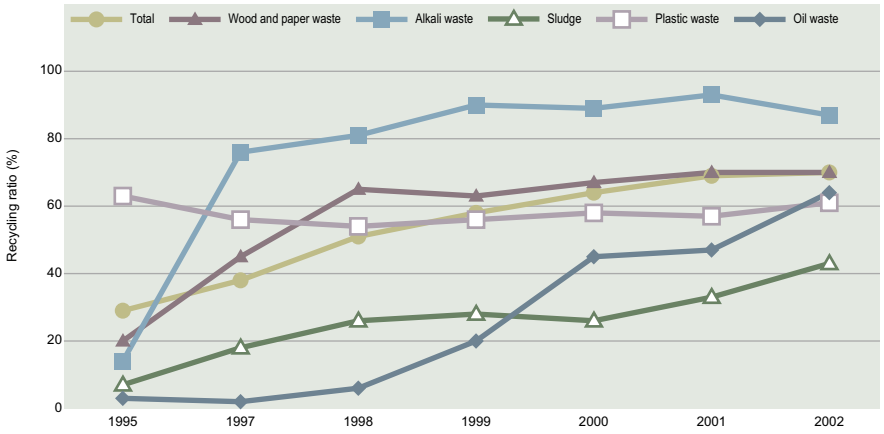
Whereas disposal of waste oil has been outsourced heretofore, it has recently become possible to carry out in-house decomposition, thus enabling recycling.

The recycling ratio of waste plastics does not show significant changes during these several years. This is caused by the fact that optical fiber cable waste from the production line, retrieved cable waste from installation sites and cable waste from affiliated companies account for the major portion of the waste plastics. Optical fiber cable waste is expected to increase in future as much as optical fiber waste, imposing an important task to be tackled in promoting further waste recycling.

Changes in Outsourced Disposal Volume of Industrial Waste



Changes in Recycling Ratio



Zero-Emission Activities

In fiscal 2001, as the first-step of zero-emission activities, Furukawa Electric formulated the definition of zero-emission activities, and set up the reduction targets for each Works as well as the entire company.

In fiscal 2002, while all the Works have achieved acquisition of ISO14001 certification, they incorporate zero-emission activities into the targets of their environmental management systems. Thus zero-emission activities have been promoted, whereby sludge with a high ratio of landfill disposal has been successfully recycled.

In fiscal 2003, we intend to pursue recycling of waste plastics with a high ratio of landfill disposal, thereby promoting zero-emission activities further.

Definition of Zero-Emission Activities of Furukawa Electric

Activities to reduce the industrial waste commissioned to outsourced disposition that is transported from the Works directly into landfill spots for final disposition.

First-Step Target of Zero-Emission Activities

To reduce by fiscal 2005 the volume of industrial waste that is outsourced for final disposition by 50 % over fiscal 2000.

Green Procurement and Green Logistics

Green Procurement

Furukawa Electric is promoting green procurement based on material classification, whereby the goods to be purchased are classified into two categories: “general commodities” of non-manufacturing-oriented materials such as utensils and “purchased products” of manufacturing-oriented materials that are related with products and manufacturing processes. Thus within the framework of Medium-Term Plan for Environment Preservation Activities 2005, green procurement is to be promoted toward the two targets.

Medium-Term Plan for Environment Preservation Activities 2005

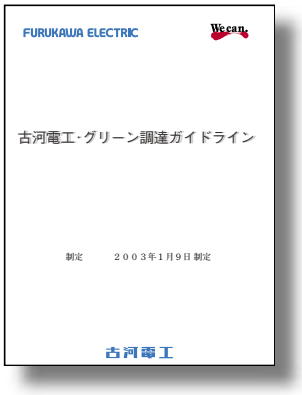
Achievement ratio for general commodity including stationery	100 % in fiscal 2005
Achievement ratio for purchased products from major vendors	100 % in fiscal 2004

In fiscal 2002, the measures mentioned below were carried out.

1) Development of guidelines for green procurement
2) Development of a list of environmental impact substances
3) Discussion on a support system for environmental investigation

Hereafter, the measures mentioned below will be implemented to achieve Medium-Term Plan for Environment Preservation Activities 2005

1) General commodities: Commodities in conformity with green procurement will be specified clearly to be incorporated into the purchasing system, so that purchasers may easily choose a commodity in conformity with green procurement.
2) Purchased goods: A support system for environmental investigation will be constructed.



Furukawa Electric’s Guidelines for Green Procurement

Green Logistics

We are also pursuing rationalization of logistics, while securing for reduction of environmental impact and energy conservation.

■ Reduction of Packaging Materials

A wood work center has been set up in the Fukui Works, whereby retrieved skids are repaired to permit reuse. Similarly in Kyushu Furukawa Electric, a drum assembling house was erected to repair retrieved drums for reuse. These measures enable reduction of the volume of wood used. Moreover, package-free of drum-wound products and bundled products is being promoted so as to reduce the use of packaging paper and wood.

Wood work center

Drum assembling house

■ Promotion of Reusable Drum Programs

TEPCO LOGISTICS CO., LTD., an affiliated company of Tokyo Electric Power Company (TEPCO), has established an environment-conscious recycling system. In the system, cable drums used in the delivery of aerial power distribution wire and cable were changed from conventional wooden drums to plastic drums made of recycled sheathing material of retrieved wire. TEPCO LOGISTICS also operates a rental business of reused drums that comprises this recycling system, and Furukawa Electric and its affiliated companies support the drum rental business in terms of the development of recycled material as well as its operational aspects including the manufacture, delivery, retrieval, repair and keeping of drums. An environment-conscious cable delivery drum named “Kantan-kun” can be disassembled after use. When disassembled the drum decreases to one-fifth its original volume permitting single-handed carrying and handling together with efficient storage and keeping. It may be said that this drum is, like the plastic drum mentioned above, a new type that can contribute to resource and energy conservation.

■ Shared Transportation and Delivery

The Japanese Electric Wire & Cable Makers’ Association (JCMA) has introduced a joint transportation and delivery program of cable aimed at large-scale construction sites in the core metropolitan areas, in which we participate to reduce the number of delivery vehicles to the sites.

We also participate in the joint transportation program that is promoted by JCMA using ships directed to Hokkaido, thus being engaged in contributing to non-highway transportation as well as energy conservation.

■ Improvement of Loading Efficiency

To improve loading efficiency, expansion of mixed loading and use of large-sized cars is promoted to reduce the number of delivery vehicles, whereby reduction of NOx emission volume of product delivery vehicles is targeted at.

Eco-Design Activities

Environment-Friendly Products

Furukawa Electric recognizes that "the 21st century is the century of the environment", and in response to the needs of society and our customers, is actively working to develop environment-friendly products and technologies. Our aim is to develop a range of commercially viable "environment-friendly" products --products that at every stage, from materials selection, manufacture and use to distribution and disposal, will be of low environmental impact. Moreover, we have established a company-wide organization of Committee for Development of Environment-Friendly Products, in which company-wide strategies are formulated to promote the development of products and technologies.

Toward Reduction of Environmental Impact

We are developing products that do not create environmental problems when they are used, but further, they do not emit toxic by-products when they are eventually disposed of by incineration or in landfills, thus reducing environmental impact.

Toward Prevention of Ozone Layer Depletion

We are developing devices and processes that do not use CFCs, together with products adapted to CFC substitutes.

Toward Realization of Recycle-Oriented Society

We are moving to develop products that reuse waste materials, products that feature common materials to facilitate recycling and products that are biodegradable and thus do not leave residual waste products.

Toward Prevention of Global Warming

We are developing products that contribute to global warming prevention and energy conservation, such as products with improved efficiency and lightweight as well as clean energy systems.

Toward Reduction of Environmental Impact

■ ECO Electrical Wire (Halogen-Free Wire)

These wires and cables use no halogens such as PVC, permitting easy disposal by incineration. ECO-ACE general cables for indoor use, ECO-BEAMEX wires for electrical appliances and power cords together with highly flame-retardant optical cables are already in practical use.

ECO-BEAMEX

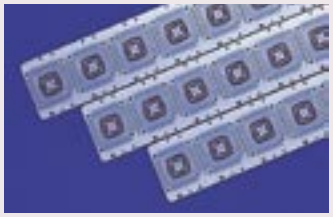
ECO-ACE

■ Indoor Cable-Protection Conduit Made of Flame-Retardant Resin "ECO-PLAFLEKY"

Since these cable conduits contain no halogen-based flame-retarding agents, they do not emit dioxins nor halogenous gases when combusted, permitting easy recycling.

■ Lead-Free Plating for Electronic Components

Lead-free plating for the leads of ICs, capacitors, connectors, printed circuit boards, etc. has been achieved by using a tin-bismuth alloy instead of the tin-lead material used previously, so that elimination of lead from customers' mounting process can be much improved.



Toward Prevention of Ozone Layer Depletion

■ CFC-Substitute Compatible Magnet Wire "HPWR II"

These heat- and refrigerant-resistant magnet wire are now in use in the compressor motors of air-conditioning and refrigerating systems using CFC-substitute refrigerants (HFC-R407C, R410A, R134a).

■ Copper Tube for Use with CFC-Substitutes Furukawa Multi-Grooved Tube "FMGT", "Furukawa SuperClean Tube"

These are heat exchanger copper tubes for use with CFC-substitute refrigerants to reduce the ozone layer depletion. They have reduced oil residuals in the tube's inner surface and are internally multi-grooved to improve heat-exchanging performance.

■ Nitrogen-Atmosphere Reflow Oven "SALAMANDER"

This reflow oven carries out the reflow soldering process during the mounting of electronic components in a nitrogen atmosphere. This eliminates the need to cleanse completed circuit boards, obviating the use of CFCs.

■ Functional Resin-Coated Aluminum Sheet "FUSCOAT"

These functional resin coated aluminum sheets provide enhanced formability, corrosion resistance, scuff- and fingerprint-resistance, resistance to chemicals, electrical conductivity, ease of printing, and anti-bacterial and anti-mold properties. They are also self-lubricating, so that disposal of the lubricants and cleansers formerly used in the stamping process is eliminated.

Product	Use	Feature
ECO erectrical wire (ECO-ACE, ECO-BEAMEX)	Home appliances, Power distribution, Communication	Halogen-free, lead-free
Halogen-free wire harness	Automobile	Halogen-free, lead-free
Lead-free plating for electronic Components	Automobile	Lead-free
Lead-free plated parts for electronic equipment	Electronic parts	Lead-free
ECO bus duct	Power distribution	Halogen-free
Indoor cable-protection conduit made of flame-retardant Resin (ECO-PLAFLEKY)	Indoor electrical wire laying	Halogen-free, lead-free
CFC-substitute compatible magnet wire (HPWR Ⅱ)	Home appliances, automobile	Compatibility with CFC substitutes
Copper tube for use with CFC-Substitutes (FMGT / Furukawa SuperClean Tube)	Home appliances	Compatibility with CFC substitutes
Nitrogen-atmosphere reflow oven (SALAMANDER)	Electronic equipment	Elimination of CFCs
Functional resin-coated aluminum sheet (FUSCOAT)	Electronic equipment	High lubrication, elimination of cleansing
Recycled aluminum can stock	Cans	Recycling
Recycled aluminum distribution wire	Electrical wire	Recycling
Biodegradable resin foam (BIO ACE)	Packaging material	Biodegradability
Underground cable duct made of cable waste (KOHTA KUN)	Electrical wire laying	Reuse of material
Recyclable pallet	Conveyance	Reuse of material
Weed barrier sheet	Sheet	Reuse of material
High-reflectivity foamed sheet (MCPET)	Lighting	Energy conservation
High-Performance heat-exchangers material	Automobile	Lightweight, energy conservation
Rainwater recycling system	Emergency reservoir	Effective use of sunshine and rainwater
Micro heat-pipe	Electronic equipment	Energy conservation
Solar photovoltaic system	Electric power	Clean energy
Deep sea solidification of CO_2	Electric power plant	Reduction of CO_2

Toward Realization of Recycle-Oriented Society

Recycled Aluminum Can Stock

The use of can stock made from used beverage cans contributes to promoting aluminum recycling.

Biodegradable Resin Foam “BIO ACE”

When these foamed sheets used in packaging and wrapping are disposed of in landfills, they are completely broken down by the action of microorganisms in approximately one year. We have developed an environment-friendly foaming process based on our proprietary technology.

Underground Cable Duct Made of Cable Waste “KOHTA KUN”

This underground cable duct with multiple bores makes effective use of plastic waste. The product has acquired the ECO mark. “KOICHI KUN” duct for information box use is also highly reputed.

Toward Prevention of Global Warming

High-Reflectivity Foamed Sheet “MCPET”

Furukawa Electric is the first in the world to succeed in the commercial-scale production and marketing of white sheets made of extra-fine foamed polyethylene terephthalate (PET). Bubble diameter is so small that optical performance is outstanding, with a total reflectivity of 99 % or more.

High-Performance Heat-Exchangers Material

We have developed aluminum radiator and air-conditioner materials for automotive applications that are lighter in weight, promoting better fuel economy and reducing CO_2 emissions.

Rainwater recycling system

This system aims at making effective use of sunshine and rainwater, blessings bestowed by nature. It is useful as an emergency reservoir against disasters and suppression of rainwater flooding in watershed areas.

Micro Heat-Pipe

Furukawa Electric’s micro heat-pipe provide a solution to the problems of heat-dissipation and cooling of electronic equipment, making possible greater availability of computing power along with energy conservation.

Eco-Design Activities

Recycling Technologies

■ Recycling System of Electric Wires and Cables

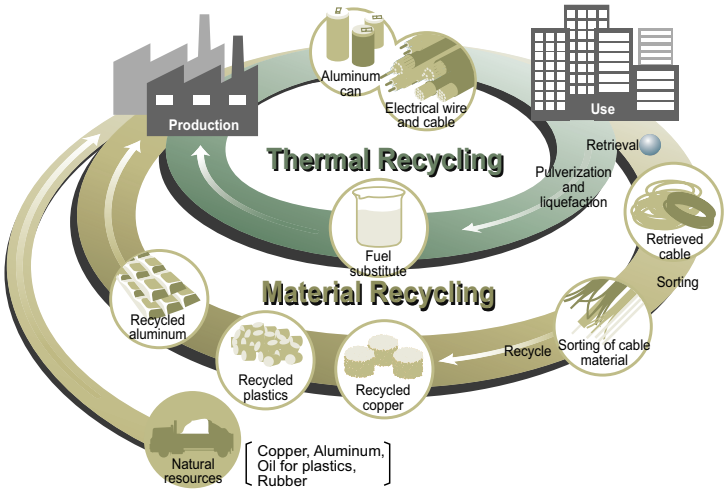
Recycling systems of used power cables and communication cables from customers have been established, enabling almost 100 % recycling of copper and aluminum conductors. Covering materials are reused in cables as recycled plastics, or as fuel.

■ National Project for the Development of Recycling Technology

With respect to the recycling technology of sheathing material for electric wire, thermal recycling through the development of liquefaction and pulverization was studied, under the aegis of the Ministry of International Trade and Industry (currently the Ministry of Economy, Trade and Industry), jointly by the Japan Electric Cable Technology Center (JECTEC) and cable manufacturers. Material recycling technology for cross-linked polyethylene was also developed under the aegis of the New Energy and Industrial Technology Development Organization (NEDO).

With respect to aluminum, funding from NEDO made it possible for the Japan Research and Development Center for Metals (JRCM) and seven manufacturers of aluminum rolled products to develop technology to promote aluminum recycling.

Recycling Technology Aimed at Recycling-Oriented Society

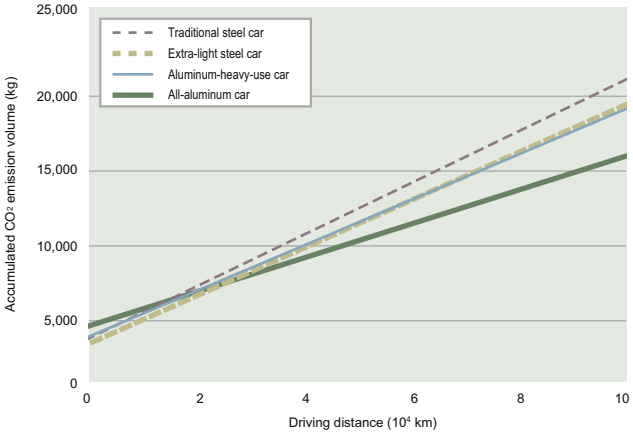


■ LCA (Life Cycle Assessment)

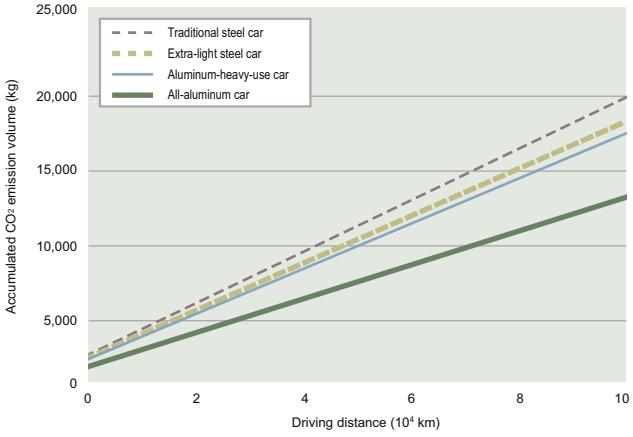
Furukawa Electric is implementing life cycle assessment (LCA) of aluminum products participating in the activity of Japan Aluminium Association.

The LCA with regard to weight-reduction effects of structural members for automobiles reveals that, when virgin metal is used entirely, an aluminum-dominant car can reduce the accumulated CO_2 emission after a driving distance of 14 thousand km, and an all-aluminum car after 16 thousand km, in comparison with a conventional steel car. When recycled aluminum is used entirely, an aluminum car can reduce CO_2 emission in whatever driving distance.

Relationship between accumulated CO_2 emission volume and distance driven (in case where virgin aluminum is used entirely)



Relationship between accumulated CO_2 emission volume and distance driven (in case where recycled aluminum is used entirely)



Excerpt from "Aluminum", May/June, 2001

Environmental Accounting

Costs, relevant economic benefit, and physical benefit of activities for environmental preservation are described below. These are tabulated in conformity with the environmental accounting guidelines published by the Ministry of the Environment. Also for environmental accounting of our affiliated companies, which appears on this brochure anew, please see page 22.

Covered business bases: All the business bases of Furukawa Electric
Covered period: From April 1, 2002 to March 31, 2003

Environmental Conservation Cost

Unit : million yen

Category	Major contents	Amount of cost*
(1) Cost to reduce environmental impact caused by the production or service activities of business, generated within the business area (Business area cost)	Pollution prevention, global environmental preservation, resource recycling, etc.	2,602
(2) Cost to suppress environmental impact caused by the production or service activities of business, generated within the upstream and downstream of business area (Up- and down-stream cost)	Retrieval and recycling of containers, packaging, drums, etc.	529
(3) Cost of environmental management activities (Administration cost)	Establishment, maintenance for environmental management systems; maintenance for environmental preservation; measurement of environmental impact	537
(4) Cost of pro-environmental research and development activities (Research and development cost)	R&D of environment-friendly products, research in substitutes for toxic substances, R&D of environmental impact reduction in manufacturing processes, etc.	887
(5) Cost of pro-environmental social activities (Social activity cost)	Publication of information, greening, etc.	9
(6) Cost of remediation (Environmental remediation cost)	Assessment for environmental impact, inquiries and measures for soil contamination and groundwater, etc.	189
	Total	4,753

* The amount of cost excludes investment cost

Investment and Research Costs

Unit : million yen

Investment and Research Costs	Amount
Environment-related investment	806
Entire investment cost	11,900
Entire research cost	14,200

Economic Benefit Associated with Environmental Preservation Activities

Unit : million yen

Content	Amount
(1) Income gained by recycling	125
(2) Reduction in waste disposal costs through recycling	-122
(3) Reduction in energy costs through energy conservation	514
Total	517

Physical Benefit Associated with Environmental Preservation Activities

Environmental harm material to discaharge		Amount	Reduction (Difference from last year)
Industrial waste (excluding waste from recycled resources)	ton	10,657	3,648
Energy consumed (crude oil basis)	kℓ	325,355	12,662
Emission of volatile organic chemicals	ton	101	5
CO_2 emission	C-ton	162,945	-3,659
SOx emission	ton	92	-18
NOx emission	ton	987	-106
Soot emission	ton	60	3

V Environment-Oriented Communications

Occupational Safety and Health Activities

Organization for Safety and Health Activities

The occurrence of a grave accident in 1999 has led to form a new organization in which the responsibility lies, just like business responsibility, with the managers of business divisions, not with the managers of Works as was conventional. At the same time, the Safety, Environment and Health Promotion Department consisting of experts in safety, health and environment has been established to be under direct control of President. The Central Committee for Safety and Health has also been established, in which a Director in charge of safety and health takes office as the Chairman and managers of business divisions as the members, thereby company-wide policies and measures are discussed in order to promote safety activities in a definite and comprehensive manner. Moreover, experienced visiting lecturers are invited to all the Works to reform employees' environmental consciousness through such educational courses for safety and health and safety investigation of plants to improve, on-the-spot and on-the-object, facilities, work environment and work method. In fiscal 2002, the fourth year of the new regime, look-ahead safety measures are being pursued.

Priority Environmental Activities for Fiscal 2002

■ Training of In-House Safety and Health Instructor

Training of safety and health instructor was carried out six times aimed mainly at supervisors of workplace, and 166 in-house safety and health instructors were trained. These instructors are now educating individual employees.

■ Look-Ahead Safety Measures against Dangerous Work

Safety check of plant facilities and machines is being pursued thoroughly in their third-year plan aiming at possible improvements, together with safety check for dangerous or hazardous work.

Required and prohibited practices are defined against dangerous or hazardous work, and thorough "point and call" practice is pursued everyday on an actual-place and actual-material basis.

■ Rechecking and Maintenance of Standards

A-, B- and C-ranked specifications of facility safety design standards in conformity with ISO12100 were drawn up by the facility design department.

Safe work standards against residual risks that cannot be covered with facility improvements have been drawn up at the Oyama, Chiba and Osaka Works.

A-ranked specification: Fundamental safety matter
B-ranked specification: Common safety matter
C-ranked specification: Facility-specific safety matter

Mental Health Care

To prevent employees' mental stress caused by rapidly changing business structure, we have set up a three-year program of mental health promotion as one of the Priority Safety and Health Measures. In fiscal 2002, the program started with a declaration of "introduction of mental health program" by a Director in charge. Mental health education has been conducted all the while to the managers, supervisors and general employees, and in fiscal 2003, the program is extended to all employees.

An outside institution for employee assistance program (EAP) contracted to provide consulting windows, supporting preemptive moves for maintaining mental health. Moreover, traveling service of medical specialists is under way.

Medical Check-Up

Since fiscal 2002, medical check-up was shifted to a company-wide common practice in order to standardize the check-up work and to improve the daily life. This enables us to unify the management of health information and to compare the data from diversified viewpoints. Thus, health conditions ranging from a group to individuals can be grasped to be developed into guidelines for a better daily practice, thereby reforming the health consciousness of all employees.

Mental health education by nursing staff

User card for outside EAP advice to be carried by employees

Working Conditions Measurement

The results of measurements in fiscal 2002 indicate that 98 % of the special workplaces designated by the law (dealing with organic solvent, dust, specialized substance and lead) belong to the Class-1 Control Category. Workplace improvement initiatives are being implemented to improve the working conditions of workplaces corresponding to the Class-2 and Class-3 Control Categories.

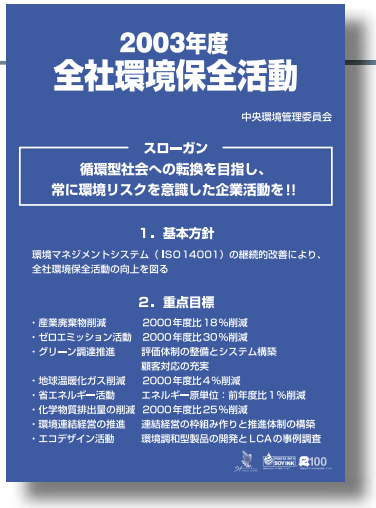
Class-1 Control Category: Working condition which is assessed to be appropriate.
Class-2 Control Category: Working condition which is assessed to allow some scope for improvement.
Class-3 Control Category: Working condition which is assessed to be inappropriate.

Enlightenment and Publicity Activities

Enlightenment Activities

To raise the environment consciousness of the employees, we have put up an environmental campaign poster at all the Works, Laboratories and Branch Offices in succession to the last year. The poster contains a slogan about environmental preservation activities, Basic Environmental Policy and major activity targets for fiscal 2003.

In June, which is designated as the month of environmental preservation, the chairman of the Central Committee for Environment Management delivered a message to all the Works about the significance of the month of environmental preservation, offering encouragement of energetic activity. Each Works, in response to this message, carried out diversified activities such as distribution of a leaflet informing the environmental preservation month, installation of notice boards, call for a catchphrase concerning the environment, implementation of the 5S activity in and around the Works' premises together with nighttime patrols.



Environmental campaign poster

Publicity Activities

We positively disclose the information on our environment-friendly products and environmental preservation activities through our website together with active participation in exhibitions and communal activities, thus making efforts to communicate with our customers and local communities.

■ Information Disclosure on Website

On our website, under the title of "Environmental Preservation Activities" we disclose how Furukawa Electric is promoting its environmental preservation initiatives, and present, since fiscal 2000, previously published environmental reports in PDF. The environmental report on the website is upgraded every year by December.

Furukawa Electric's website
http://www.furukawa.co.jp/english/index.htm

Environmental Preservation Activities
http://www.furukawa.co.jp/enviro/english/index.html

■ Communal Activities

Since fiscal 2002, the Chiba Works actively participates in "Eco-Fair Ichihara" that is held in the Ichihara Citizen Hall.

Eco-Fair Ichihara
Planter boxes made of recycled wooden drums are exhibited.

Eco-Fair Ichihara
Organic fertilizer made from garbage from the company cafeteria is exhibited and delivered at no charge.

Eco-Fair Ichihara
Disposition of PCB is exhibited and illustrated using a VTR.

Enlightenment and Publicity Activities

■ Exhibitions

Furukawa Electric's products and technological information including environment-friendly products are exhibited at major exhibitions around the country.

Electrical Construction Equipment and Material Fair 2002

Fiber Optics Expo 2003

Automotive Engineering Exposition 2002

Thermal Solution Technologies in Techno-Frontier Week 2002

Name of exhibition	Exhibited products
Electrical Construction Equipment and Material Fair 2002 (at INTEX OSAKA)	Compact optical fiber fusion splicer, Cable connecting materials including CellPack, Eco-Bus duct, Flexible conduit of plastics (ECO-PLAFLEKY), Underground cable duct made of cable waste (KOHTA KUN), Eco-cable (ECO-ACE), Terminating materials for high-voltage cable, Fire-preventive products (NIJIKAN Series), etc.
INTERNEPCON JAPAN (at Tokyo Big Sight)	Nitrogen-atmosphere reflow oven "SALAMANDER"
Fiber Optics Expo 2003 (at Tokyo Big Sight)	Network equipment, Compact optical fiber fusion splicer, OFS specialty fiber
IEEE/PES T&D 2002 Asia Pacific (at PACIFICO YOKOHAMA)	Eco-material wire and cable, Recyclable drum, Cable jointing material
Automotive Engineering Exposition 2002 (at PACIFICO YOKOHAMA)	36-V car battery, Wire harness for roof modules, PCB joint box, Flat speaker, EV connector, Optical fiber, Optical connector
Thermal Solution Technologies in Techno-Frontier Week 2002 (at Makuhari Messe)	Heat-dissipating cabinet, Heat exchanger, HeatPlaner, Heat sink, Micro heat pipe, TM sheet, HeatKicker, etc.

Environmental Initiatives of Business Bases

Chiba Works

Location: 6, Yawatakaigandori, Ichihara-shi, Chiba-ken
Number of employees: 1,724
Lot area: 737,605 m²

The Chiba Works was established in 1961 in the city of Ichihara, the hometown of "JEF UNITED ICHIHARA" which belongs to the J. League, and now develops and manufactures energy and information transmission media such as raw materials for electrical wire, power cables, communications cables, electrical wire for electronic equipment as well as large-capacity communications equipment. The Works acquired ISO14001 certification in June 1998 going ahead of the entire company. Striving to be an "environmentally advanced Works", it always addresses many challenging tasks. Under the slogan of "Toward an environment-friendly Works", it consistently pursues three major themes of environmental preservation: zero-emission activity, law-abiding activity and communal activity.

Environmental area patrol

Explanation of environmental activities is given to the visitors

Zero-Emission Activities

Through complete separation of the waste generated in the Works, the volume of waste disposed of in landfills in fiscal 2002 significantly decreased by 62.5 % over fiscal 2000, and the total volume of waste by 51 %. Now the activity extends to daily-life features such that paper cups at vending machines are recycled and that garbage from the company cafeteria is being turned into compost.

Paper cup with environmental catchphrase

Law-Abiding Activity

In response to the fact that "Stop Idling" became compulsory by the Environmental Preservation Ordinance of Chiba Prefecture, members of the EMS Promotion Committee distributed leaflets on "Stop Idling", positively pursuing enlightenment activities.

Members of EMS Promotion Committee distributing leaflets

Communal Activities

We actively participate in various communal activities, whereby, at the Yawata Coastal Area Fair and the Eco-Fair Ichihara held every year in May and June, we present environmental preservation activities of the Chiba Works, sell wood planters brought about by recycling promotion activities, and deliver at no charge organic fertilizer made from raw garbage from the company cafeteria, thus acquiring a favorable reputation.

Eco-Fair Ichihara

Yawata Coastal Area Fair

Environmental Initiatives of Business Bases

Mie Works

Location: 20-16, Nobono-cho, Kameyama-shi, Mie-ken
Number of employees: 959
Lot area: 540,216 m²

The Mie Works was established in 1971 in the superb natural surroundings at the foot of the Suzuka mountain range as a business base of Furukawa Electric in the Chukyo and Kansai areas. The Works manufacture not only nonferrous materials such as copper products, copper wire and magnet wire, but also optical fiber cable, automotive products and plastic products, thus consolidating its position as a backbone business base both in name and reality. The Works is actively communicating with the local communities through such activities as summer evening festivals and factory tours inviting near neighbors.

Aerial photograph of Mie Works

A scene of summer evening festival

Presentation of a booth at the environmental fair sponsored by Mie Prefecture

Environmental Preservation Activities

After it acquired ISO14001 certification in November 1998, the Mie Works is pursuing reduction activities of environmental impact on a Works-wide basis such as

1) Reduction of PRTR-targeted chemical substances
2) Promotion of energy conservation and reduction of greenhouse gas
3) Reduction of waste (Promotion of zero-emission)
4) Purification of wastewater and flue gas

Automatic monitoring equipment for wastewater

Analysis room for wastewater

Because it is located in an inland area, the Mie Works is carrying out environmental preservation activities placing special emphasis on wastewater quality control, whereby stringent voluntary levels are set up and an automatic supervisory and alarming system for control items is installed to quickly detect any abnormalities in wastewater quality. Moreover, in view of the Fifth Immutable Weight Control against Wastewater Quality to be applied in April 2004, an automatic analyzer for total phosphorous and total nitrogen in wastewater has been installed to enable full-time monitoring using the automatic supervisory and alarming system. In addition, an empty reservoir for emergency use is provided in case of water quality eventualities.

In terms of purification of atmospheric emission, a dust collector has been installed for a copper melting furnace that is designated as a specific facility in the Air Pollution Control Law. The installation has reduced the dust concentration down to less than one tenth the level before the installation. Thus at the end of fiscal 2002, the emission volume of dust of the entire Mie Works was reduced by 90 % over fiscal 1997, contributing a great deal to pollution reduction in the Works as well as in the neighboring areas.

In future, we intend to continue conventional activities including wastewater- and atmospheric emission-countermeasures, simultaneously placing emphasis on global warming prevention including energy conservation as well as waste reduction, which constitute important policy of Mie Prefecture.

VI Environmental Activities of Affiliated Companies

Overview of Consolidated Pro-environmental Management Activities and Environmental Accounting

Activities on Consolidated Pro-environmental Management

In June 2000, we established the Liaison Meeting for Consolidated Environmental Management together with our affiliated companies. Through this Group, we have studied environment-related laws and regulations; monitored the situation of environmental preservation activities at affiliated companies; and engaged in other related activities.

In October 2002, we issued, to affiliated companies, a declaration on environmental activities, which includes the following slogan: "We, as a corporate group, must promote environmental preservation activities; reduce environmental risks; and thereby contribute to the society and make the society enhancing its appreciation to our activities."

The 40 affiliated companies as objects of consolidated pro-environmental management, as well as items of their environmental activities, are shown here.

(Items of Environmental Management Activities)

note-1: the mark "O" indicates that the company execute the activity item taken the mark.
note-2: Details of 8 items are as follows.

ISO14001:
achieving an certification
Environmental accounting:
executing environmental accounting, and showing its results on this publication
System:
established an environmental management system
Global warming:
having the plan for reducing/eliminating greenhouse gases
Industrial wastes:
having the compiling data on industrial wastes
Organic chemicals:
plan for reducing/eliminating organic chlorine compounds
PRTR:
reporting to PRTR/listing chemical substances
Soil:
investigating soil/groundwater pollution

40 affiliated companies

No	Name of business establishment/company	ISO14001	Environmental accounting	System	Global warming	Industrial wastes	Organic chemicals	PRTR	Soil
1	Access Cable	O		O	O	O	O	O	O
2	ASAHI ELECTRIC WORKS	O		O	O	O	O		O
3	INOUE MANUFACTURING	O		O	O	O	O	O	O
4	NTEC			O	O	O			
5	F-CO	O		O	O	O		O	
6	FCM	O		O	O	O	O	O	O
7	OKANO ELECTRIC WIRE	O		O	O	O		O	
8	OKUMURA METALS	O		O	O	O	O	O	O
9	Kyusyu Furukawa Electric	O		O	O	O	O	O	O
10	KYOWA ELECTRIC WIRE	O		O	O	O	O	O	O
11	SUNSUNNY INDUSTRY			O	O	O			
12	SHODENSHA	O		O	O	O	O	O	O
13	SEIWA GIKEN	O		O	O	O			
14	TOTOKU ELECTRIC	O	O	O	O	O	O	O	O
15	TOHOKU FURUKAWA ELECTRIC	O		O	O	O		O	
16	Nikkei Kakoh			O	O	O	O	O	O
17	Nippon Foil Mfg.	O	O	O	O	O		O	
18	Higashi Nihon Tanzou	O		O	O	O			
19	FURUKAWA ALTEC			O	O	O			
20	Furukawa Industrial Cable			O	O	O	O	O	O
21	Furukawa Infonet	O		O	O	O			
22	Furukawa Information Technology			O	O	O			
23	Furukawa Elecom			O	O	O			
24	Furukawa Electric Engineering Service	O		O	O	O			
25	FURUKAWA AUTOMOTIVE PARTS	O		O	O	O	O	O	O
26	Furukawa Color Aluminum	O		O	O	O		O	O
27	Furukawa Circuit Foil			O	O	O		O	O
28	FURUKAWA SANGYO			O	O	O			
29	Furukawa C&B	O		O	O	O			
30	Furukawa Industrial Plastics	O		O	O	O		O	O
31	Furukawa Precision Engineering			O	O	O	O	O	
32	Furukawa Engineering & Construction	O	O	O	O	O			
33	Furukawa Battery	O	O	O	O	O	O	O	O
34	FURUKAWA LOGISTICS	O		O	O	O			
35	Furukawa Techno Material			O	O	O	O	O	O
36	Furukawa Life Service			O	O	O			
37	Miharu Communications			O	O	O			
38	Yamada Keikinzoku	O		O	O	O			
39	Riken Electric Wire	O	O	O	O	O		O	
40	Riken Fitel			O	O	O			

Overview of Consolidated Pro-environmental Management Activities and Environmental

Activity Items and Target Values for Consolidated Pro-environmental Management

Outline of activites in the consolidated pro-environmental management is written under. We established, as for the period from fiscal 2003 to fiscal 2005, concrete item and target values shown in the table at the right, and put into operation.

■ Outline of Activities

(i) Establishing environmental targets and promoting related activities
(ii) Supporting and managing activities
(iii) Exchanging information and publishing the situation of activities
(iv) Reflecting these activites on the strategy of the company of our group

	Item	Target value etc.	Target year
1	Achieving ISO14001 certification	Achieving ISO14001 certification	fiscal 2005
2	Reducing industrial wastes	Zero emission: reducing wastes, directly disposed at reclamation sites, by 50% from 2000	fiscal 2005
		Reducing industrial wastes (except for the recycled portion) by 30% from 2000	fiscal 2005
3	Reducing greenhouse gases	Reducing CO_2 emission by 5% from 2000	fiscal 2005
		Reducing CO_2 emission by 10% from 2000	fiscal 2008
		Totally discontinuing the use of HFC and PFC; reducing SF_6 emission into the air by 50% from 2000	fiscal 2005
4	Of chemical substances, enhancing the control and also reducing	Reducing the emission of harmful organic chlorine compounds by 50% of the value in 2000	fiscal 2005
		Totally eliminating the emission of harmful organic chlorine compounds	fiscal 2008
5	Indexing the progress of pro-environmental management	Executing environmental accounting (for 2002) (*)	fiscal 2003
6	Establishing an environmental management system	Making the organization and responsible person definete, controlling data related	fiscal 2003
7	Issuing an environmental report	Starting to inform about member of our group on our "Environmental Report" from 2003 (on activities in 2002)	fiscal 2003

* Environmental accounting will be introduced to the following companies: TOTOKU ELECTRIC, Nippon Foil Mfg., Furukawa Engineering & Construction, Furukawa Battery, Riken Electric Wire

Data on Consolidated Pro-environmental Management, Environmental Accounting

This year, we started compiling environmental data on five relatively large affiliated companies. As in the case of Furukawa Electric, the compilation has been made according to the guidelines on environmental accounting, published by the Ministry of the Environment. The following are data for fiscal 2002, comprising costs of environmental preservation, economic effects resulting from measures for environmental preservation, and corresponding effects as measured in terms of physical quantities.

Object companies: TOTOKU ELECTRIC, Nippon Foil Mfg., Furukawa Engineering & Construction, Furukawa Battery, Riken Electric Wire
Object period: from April 1, 2002 to March 31, 2003

Environmental Conservation Cost

Unit : million yen

Category	Major contents	Amount of cost*
(1) Cost to reduce environmental impact caused by the production or service activities of business, generated within the business area (Business area cost)	Activities for preventing pollution, conserving the global environment, recycling resources.	370
(2) Cost to suppress environmental impact caused by the production or service activities of business, generated within the upstream and downstream of business area (Up- and downstream cost)	Withdrawal and recycling of containers, packages and plastic articles	41
(3) Cost environmental management activities (Administration cost)	Establishment, maintenance for environmental management systems; maintenance for environmental preservation; measurement of environmental impact	56
(4) Cost of pro-environmental research and development activities (Research and development cost)	Development of ecologically safe products	33
(5) Cost of pro-environmental social activities (Social activity cost)	Participation in official events for environmental purification	1
(6) Cost of remediation (Environmental remediation cost)	Repair of corrosion-induced damages to underground wastewater piping	1
	Total	501

* The amount of cost excludes investment cost

Investment and Research Costs

Unit : million yen

Investment and Research Costs	Amount
Environment-related investment	663
Entire investment cost	1,741
Entire research cost	1,601

Economic benefit Associated with Environmental Preservation Activities

Unit : million yen

Content	Amount
(1) Income gained by recycling	89
(2) Reduction in waste disposal costs through recycling	14
(3) Reduction in energy costs through energy conservation	19
Total	121

Physical Benefits Associated with Environmental Preservation Activities

Environmental harm material to discaharge		Amount	Reduction (Difference from last year)
Industrial waste (excluding waste from recycled resources)	ton	1,053	78
Energy consumed (crude oil basis)	kℓ	44,107	6,545
Emission of volatile organic compounds	ton	3	-1
CO_2 emission	C-ton	21,101	2,429
SOx emission	ton	18	-5
NOx emission	ton	907	91
Soot emission	ton	32	-8

Initiatives of Affiliated Companies

OKANO ELECTRIC WIRE CO., LTD.

Head office / factory: 1-5-28 Fukaminishi, Yamato-shi, Kanagawa-ken
Number of employees: 202
URL: http://www.okano-cable.co.jp/

Head office / factory

Since starting the manufacture of telephone cords in 1928, Okano Electric Wire has provided various communication cables to various industries. In cooperation with related companies, Okano Electric Wire is expanding its business to such fields as optical fiber cables and connectors; optical components; and the manufacture and assembly of information/communication equipment. Recently, the Company has begun contributing to the conservation of the global environment by starting an environmental business - the sale of equipment for raw garbage recycling. In December 1999, the Company achieved ISO14001 certification; it has also passed the first audit for renewing certification. Currently, Okano Electric Wire is pursuing its business under the 2nd Mid-term 3-year Plan, which started in fiscal 2002.

Environmental Preservation Activities

Okano Electric Wire's "basic philosophy" runs as follows: "We must work toward the better conservation of the environment, based on the perception that the protection of the global environment is the most important element of a company's effort to fulfill its social responsibilities. By so doing, we must contribute to the realization of a happy and affluent society, which promises safety to all people." We adhere to this philosophy in our environmental preservation activities.

In our present business activities, we do not use materials or equipment that can have a significant environmental impact on air, water or soil. Accordingly, we emphasize the following three items in our environmental preservation activities:

(i) Efforts for manufacturing electric wire in consideration of environment-friendly mind and ecologically safe

(ii) Efforts for reducing greenhouse gases by energy and resources conservations

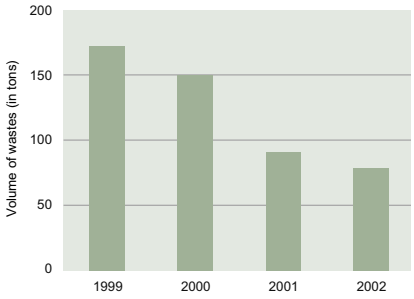
(iii) Reduction of wastes resulting from business activities

(Note) "Wastes" include those which are treated at some costs.

The Graph here shows the achieved reduction of wastes, as an example of the results of our activities. Wastes generated at the manufacturing process have decreased to 54 % of the volume at 2000 in three years.

Regarding efforts for manufacturing ecologically safe electric wires, we have worked for the dehalogenation of sheath materials. As a result, we completed the shift to halogen-free materials for our main products by the end of fiscal 2002. This move has satisfied the demand of many of our customers. As for the saving of energy and paper, the consumption of electricity was reduced by 15 %, and the volume of purchased paper by 40 %, in three years from fiscal 1999 to fiscal 2002.

Achieved Reduction of Wastes



■ Remodeling Shipping Bobbins into Packages Easy to Scrap and Dispose

To make the frames of bobbins for the shipment of optical cables, we now use recycled corrugated cardboard, instead of conventional paper tubes that cannot be recycled. Also, we have adopted a new bobbin design that makes scrapping and disposal easier, and permits an approx. 50 % weight reduction.

■ Recycling of Garbage, and Sale of Recycling Equipment

In 2000, we introduced equipment for recycling garbage, generated at the dining room of our office, as compost. This step has been welcomed by our employees, who can receive resulting compost upon request and free of charge. This recycling equipment is Bio-Runner manufactured by NTT-ME.

(Left) A paper bobbin using recycled corrugated cardboard for its frame
(Right) A bobbin after taking to pieces

As our environmental business, we became the agent of NTT-ME to start saling this type of machine 2001. November in 2002, we participated in an environmental symposium and an industrial exhibition held in Yamato City. At these events, we demonstrated the recycling of garbage as useful compost, and provided samples. The demonstration proved highly popular among local citizens.

Our exhibit at the Yamato Industrial Exhibition

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Quality System Dept.
TEL: +81-46-261-7512 FAX: +81-46-260-2952

Initiatives of Affiliated Companies

TOTOKU ELECTRIC CO., LTD.

Head office: 1-3-21 Okubo, Shinjuku-ku, Tokyo
Number of employees: 493
Works:
Ueda Factory / 300 Ohya, Ueda-shi, Nagano-ken
Electronic and Material Div. Factory 1 / 238 Kamimaruko, Maruko-cho, Chiisagata-gun, Nagano-ken
Electronic and Material Div. Factory 2 / 1788 Kamimaruko, Maruko-cho, Chiisagata-gun, Nagano-ken
Nagaoka Factory (Totoku Nagaoka) 1-2-1 Higashitakami, Nagaoka-shi, Niigata-ken
URL: http://www.totoku.co.jp/

Front entrance of the Ueda Factory

In 1940, Totoku Electric was established as a manufacturer of resistance wires and various electric wires. Since then, the Company has actively expanded its business into such fields as magnet wires, processed electric wires, electronic parts and electronic apparatus, and optics-related products.

The growing public interest in global environmental problems has led us to recognize that for a company, environmental preservation activities represent its social responsibility. In December 1999, we achieved ISO14001 certification for our four business establishments: the Ueda Factory; the 1st and 2nd Office of the Electronic Material Department; and Totoku Nagaoka. In December 2002, we passed the triennial audit for renewing certification. With renewed vigor, we pursue our activities in the current fourth year from the first certification.

Audit for ISO certification renewal
(at the Electronic Material Business Department)

Environmental Preservation Activities

Totoku Electric engages in environmental preservation activities, aimed at reducing environmental impact. In these activities, we strive to control adverse effects on the environment, which may result from our business. To that end, we carefully monitor and control elements which may cause such effects.

In fiscal 2002, we defined our main management policy with the motto: "Environment-friendly Management for Society." We, all are making concerted efforts to realize this ideal.

Our main activities include the following:

(i) Reducing the consumption of energy (electricity) to prevent global warming
(ii) Reducing and recycling wastes
(iii) Expanding our services to society and local communities
(iv) Promoting the design and development of environment-friendly products
(v) Securing green tracts and promoting tree planting
(vi) Green procurement

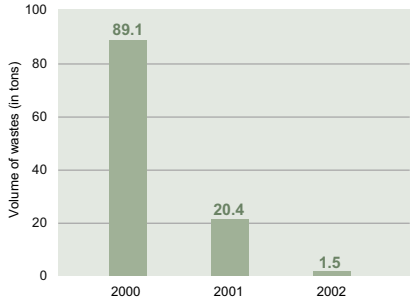
We, as an example, reports here about our environmental activities, which are wastes reduction and contribution to local communities under taken in fiscal 2002. In this year, "Zero Emission (see note)" was achieved at our Ueda Factory. Our goal for fiscal 2003 is to achieve the same at our other than Ueda Factory. Also, we regard compliance with environmental laws and regulations as the minimum requirement for us. We thoroughly control our business activities to fulfill this requirement.

We are determined to continue our efforts for harmonizing our business with the life of local citizens; and realizing a management style friendly to the environment.

(Note) According to our definition, "Zero Emission" refers to a state in which a recycling ratio of 98 % or greater has been achieved.

Cleaning a street along the national highway near the Ueda Factory
Such services have been institutionalized as regular events in all districts near the Factory.

Change in the Volume of Wastes (to be disposed to landfill) from the Ueda Factory



Contact:
Environmental Management Committee
TEL: +81-268-34-5211 FAX: +81-268-34-5558

Initiatives of Affiliated Companies

Furukawa Engineering & Construction Inc.

Head office: 4-3-1 Haneda, Ota-ku, Tokyo
Number of employees: 411
URL: http://www.fecon.co.jp/

History

The predecessor of Furukawa Engineering & Construction was founded in 1947. In 1973, this company was renamed to bear the present designation. It has continually developed as a general engineering company, affiliated to a corporate group headed by Furukawa Electric. In 1995, Furukawa Engineering & Construction listed its stocks at the Tokyo Stock Exchange (2nd Section).

Business Categories

Design, installation, maintenance and control of overhead/underground power transmission lines; information communication lines/equipment; various electric equipment (receiving, transforming and distributing equipment; wiring; lighting etc.); various equipment (for air conditioning, water supply, drain, sprinkling etc.); thermal systems; solar power systems; design and supervising of various manufacturing equipment, and civil engineering and construction works

Environmental Preservation Activities

In December 2000, Furukawa Engineering & Construction achieved ISO14001 environmental management system certification.
Considering the fact that ours is a general engineering company, we have singled out the following four items as important management items in our activities for environmental management.

(i) Energy conservation

We strive to reduce the consumption of electricity and fossil fuels at our business establishments. Also, we have installed a demand controller at our head office building; this measure has enabled us to reduce the consumption of electricity by about 10 % per year, which represents a cost reduction by about 1 million yen.

(ii) Recycling, weight reduction and appropriate treatment of byproducts from construction works

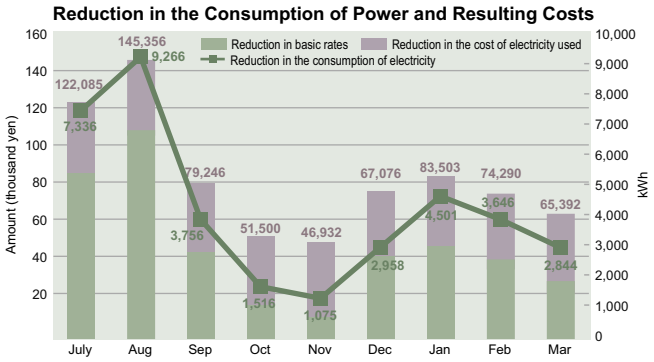
In compliance with the Waste Management and Public Cleansing Law, and other related laws and regulations, we promote the recycling, weight reduction and appropriate treatment of byproducts from construction works.

(iii) Control of noise and vibration at equipment installation

For the installation of various equipment, we have adopted a number of machines and methods that do not cause significant noise or vibration. This measure has been introduced even to areas to which regulations on noise/vibration do not apply.

(iv) Proposal and installation of systems that lighten environmental impact (through energy conservation, use of new energy or reduction of harmful substances)

We design, propose and install systems that lighten environmental impact. These systems incorporate such features as demand controllers; lighting appliances/equipment designed for energy conservation; and halogen-free, ecologically safe electric wires. In addition, we actively pursue the design, installation and maintenance of solar power systems, wind power generation systems, and other new energy systems that are effective in preventing global warming.



Effects of the demand controller, installed at the head office building, in reducing electricity demand: a reduction of 40 kW/month on average (over a period from July 2002 to March 2003)

A 30 kW solar power system, installed by us on the roof of the Zushi Municipal Office (installation completed in February 2003)

Contact:
Environmental and Quality Control Dept.
TEL: +81-3-5737-8208 FAX: +81-3-5737-8269

Initiatives of Affiliated Companies

The Furukawa Battery Co., Ltd.

Head office: 2-4-1, Hoshikawa, Hodogaya-ku, Kanagawa-ken
Number of employees: 766
Works: Imaichi General Service & Facility Administration
597 Otorozawa-Aza-Uehara, Imaichi-shi, Tochigi-ken
Iwaki General Service & Facility Administration
23-6 Joban-Shimo-Funao-cho Kuidesaku, Iwaki-shi, Fukushima-ken
URL: http://www.furukawadenchi.co.jp/

Furukawa Battery, a manufacturer of various batteries, was founded in 1951 in consequence of the move of Furukawa Electric to spin off its battery department. Furukawa Battery achieved ISO14001 certification at its Iwaki General Service & Facility Administration (GSFA) in March 1999, and at its Imaichi GSFA in June 1999. This means that all production centers of the Company have been ISO14001-certified. As a result of a change in audit procedure in March 2002, the Iwaki and Imaichi GSFAs now form a unit with regard to ISO14001 certification.

Environmental Preservation Activities

The production centers of Furukawa Battery are located in the beautiful nature of Tochigi and Fukushima Prefectures. Given this fact, we strictly observe environmental regulations and related agreements with local governments. In addition, we pursue environmental preservation activities, stressing the following items:

(i) Energy conservation for preventing global warming
(ii) Promoting the reduction and recycling of wastes, for the effective use of resources and the lightening of environmental impact
(iii) Promoting the saving of resources for environmental preservation, through the effective use of main materials including lead, cadmium, sulfuric acid and caustic soda
(iv) Developing products using smaller amounts of environmental pollutants than conventional products, in order to reduce environmental impact

An example of our environmental activities is the reduction of drainage from our plants. We succeeded in reducing the volume of drainage by 34 % in three years from fiscal 1998 (the year in which we commenced our ISO14001-related activities) to fiscal 2001.

Facility for emergency treatment of rainwater

■ Support of an "Economy-run Race" of Electric Vehicles

We support "Economy-run race" of electric vehicles, held in Ogata Village, Akita Prefecture; the SUGO Circuit in Miyagi Prefecture; and other locations. Through this support, we contribute to the development of solar cars, electric vehicles and other vehicles using clean energy; as well as to the encouragement of engineers specializing in such vehicles.

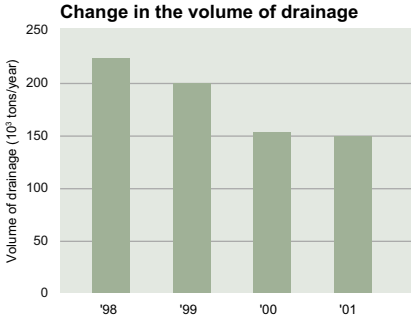
■ Promotion of Automobile Battery Recycling

To promote the recycling of reusable resources, we participate in a program of the Battery Association of Japan for recycling used lead batteries for automobiles.

Economy-run race

Ecology-minded battery car

Change in the volume of drainage



Data on Environmental Impact

■ Air Pollution

Item	Works	Regulatory target	Actual measurement (average)	Measurement frequency
SOx (Nm^3/h)	Iwaki	6.0	K value: 0.016	Thrice/year
	Imaichi	14.5	K value: 0.250	Twice/year
Dust (g/Nm^3)	Iwaki	0.10	0.0046	Thrice/year
	Imaichi	0.15	0.0010	Twice/year

■ Noise/Vibration

No standard value exceeded

■ Water Pollution

Item	Works	Regulatory target	Actual measurement (average)	Measurement frequency
pH	Iwaki	6.0~8.2	7.0	Every day
	Imaichi	6.0~8.0	7.1	Every day
BOD (mg/ℓ)	Iwaki	15	1.33	Once/month
	Imaichi	10	2.20	Twice/month
Lead (mg/ℓ)	Iwaki	0.1	0.012	Every day
	Imaichi	0.1	0.020	Every day
Cadmium (mg/ℓ)	Iwaki	0.07	0.010	Every day

■ Odor

No use of object substances

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TEL: +81-45-336-5091 FAX: +81-45-333-2534

VII Environmental Preservation Performance Indicators

Atmospheric Indicators

Below is presented the data for atmospheric emission and wastewater quality of six Works that are notified as designated works, including NOx, SOx and dust for the former, and pH, COD (or BOD), SS and n-h (mineral oil) for the latter.

		Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
Chiba Works Both NOx and SOx are under control by immutable weight, but daily management is done on ppm basis		NOx (Nm^3/h)	Boiler Melting furnace	0.45 1.77	82(ppm) 63(ppm)	44(ppm) 21(ppm)	49(ppm) 23(ppm)
		SOx (Nm^3/h)	Boiler	0.502	58(ppm)	44(ppm)	49(ppm)
		Soot (g/Nm^3)	Boiler Melting furnace	0.05 0.39	0.01 0.065	0.004 0.019	0.007 0.024
Mie Works		NOx (ppm)	Boiler Melting furnace Heating furnace	180 180 180	140 140 140	54 20 12	54 27 18
		SOx (Nm^3/h)	Boiler Melting furnace Heating furnace	0.6 41.6 2.2	0.5 33.3 1.8	0 0 0	0 0 0
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace	0.3 0.3 0.2	0.24 0.24 0.16	0.005 0.007 0.005	0.005 0.013 0.005
Nikko Works	Kiyotaki District	NOx (ppm)	Boiler Melting furnace Dryer furnace	180 200 300	180 200 250	68 25 21	78 36 21
		SOx (K value)	Boiler Melting furnace Dryer furnace	17.5 17.5 17.5	17.5 17.5 17.5	0.51 0.58 0.17	0.62 0.86 0.19
		Soot (g/Nm^3)	Boiler Melting furnace Dryer furnace	0.3 0.2 0.5	0.3 0.2 0.2	0.002 0.001 0.005	0.002 0.001 0.008
	Sheet Plant	NOx (ppm)	Boiler Melting furnace Heating furnace	230 180 200	230 150 160	51 66 21	52 117 29
		SOx (K value)	Boiler Melting furnace Heating furnace	17.5 17.5 17.5	14.5 14.5 14.5	0.03 0.27 0.07	0.03 0.55 0.07
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace	0.25 0.3 0.25	0.25 0.25 0.25	0.01 0.03 0.02	0.01 0.08 0.06
Osaka Works		NOx (ppm)	Boiler Melting furnace Heating furnace	150 200 170	120 160 144	6 7 6	7 8 7
		SOx (K value)	Boiler Melting furnace Heating furnace	1.17 1.17 1.17	1.17 1.17 1.17	0 0 0	0 0 0
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace	0.1 0.2 0.25	0.08 0.16 0.2	0.002 0.001 0.001	0.002 0.001 0.001
Fukui Works		NOx (ppm)	Boiler Melting furnace Heating furnace Dryer furnace	120 120 120 110	110 110 110 100	83 87 49 19	94 101 63 34
		SOx (ppm)	Boiler Melting furnace	380 160	50 130	5 31	5 65
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace Dryer furnace	0.1 0.2 0.12 0.12	0.05 0.16 0.1 0.08	0.005 0.019 0.005 0.007	0.005 0.051 0.005 0.013
Oyama Works		NOx (ppm)	Boiler Melting furnace Heating furnace	150 180 130	120 180 120	90 93 40	99 138 43
		SOx (K value)	Boiler Melting furnace Heating furnace	7 7 7	1 1 1	0.03 0.09 0.07	0.03 0.09 0.07
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace	0.3 0.2 0.2	0.1 0.1 0.1	0.005 0.008 0.001	0.006 0.017 0.001

Water Quality Indicators

		Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
Chiba Works		pH	5.0 ~ 9.0	5.0 ~ 9.0	7.8	8.1
		COD (mg/ℓ)	15	15	5.6	9.3
		SS (mg/ℓ)	20	20	3.9	3.9
		n-h (mineral oil) (mg/ℓ)	2	2	0.2	0.2
Mie Works		pH	5.8 ~ 8.6	6.5 ~ 8.5	7.5	8.2
		BOD (mg/ℓ)	10	4	1.9	8
		SS (mg/ℓ)	25	6	1.4	4.5
		n-h (mineral oil) (mg/ℓ)	1	0.7	0.1	0.4
Nikko Works	Kiyotaki District	pH	5.8 ~ 8.6	6.0 ~ 8.5	7.6	7.7
		BOD (mg/ℓ)	25	16	3.2	5.2
		SS (mg/ℓ)	50	20	3.9	24
		n-h (mineral oil) (mg/ℓ)	5	0.5	0.4	0.5
	Sheet Plant	pH	5.8 ~ 8.6	6.5 ~ 8.5	7.4	7.9
		BOD (mg/ℓ)	25	10	1.3	2.3
		SS (mg/ℓ)	50	25	0.3	2.5
		n-h (mineral oil) (mg/ℓ)	5	2.5	< 1	< 1
Osaka Works		pH	5.7 ~ 8.7	5.7 ~ 8.7	7.5	8.1
		BOD (mg/ℓ)	300	10	3.9	8.5
		SS (mg/ℓ)	300	50	13	15
		n-h (mineral oil) (mg/ℓ)	5	2	1.4	2
Fukui Works		pH	5.0 ~ 9.0	5.5 ~ 8.8	7.6	8.5
		COD (mg/ℓ)	600	250	39	92
		SS (mg/ℓ)	600	250	23	96
		n-h (mineral oil) (mg/ℓ)	5	4.5	0.6	4.6
Oyama Works		pH	5.8 ~ 8.6	6.0 ~ 8.0	7.2	7.4
		BOD (mg/ℓ)	25	20	3.1	4.9
		SS (mg/ℓ)	50	30	14	30
		n-h (mineral oil) (mg/ℓ)	5	2	0.5	0.6

Ⅷ Progress in Pro-environmental Management; Editor's Note

1972	“Company-Wide Regulations for Environmental Pollution Prevention” formulated
1974	Environment Control Department established Energy-Conservation Team started
1989	Team for Use Reduction of Specified CFCs started
1992	Renamed “Team for Use Reduction of Specified CFCs” as “Team for Use Reduction of Ozone Layer Depletion Substances”
1993	“Basic Thinking on the Protection of the Global Environment” formulated (Furukawa Electric's voluntary plan for environment preservation)
1994	Committee for Company-Wide Promotion of Energy Conservation established
1996	Specified CFCs and trichloroethane completely eliminated from the company
1997	Promotion Team for the Reduction of Industrial Waste started
1998	“Furukawa Electric Basic Environmental Policy” formulated Central Committee for Environment Management established Committee for the Development of Environment-Friendly Products established Chiba Works acquired ISO14001 certification Mie Works acquired ISO14001 certification “Company-Wide Regulations for Environment Management” formulated revising “Company-Wide Regulations for Environmental Pollution Prevention”
1999	Safety, Environment and Health Promotion Department started incorporating Environment Control Department and Safety Control Sections
2000	Environment and Energy Laboratory established Liaison Meeting of Affiliated Companies established Environmental Report began to be issued Meeting of Environmental Personnel started Hiratsuka Works acquired ISO14001 certification Kambara Works acquired ISO14001 certification Osaka Works acquired ISO14001 certification
2001	Medium-Term Plan for Environment Preservation Activities 2002 formulated (for 2001~2002) Shinagawa Works acquired ISO14001 certification Environmental Accounting started to be disclosed
2002	Nikko Works (Kiyotaki District) acquired ISO14001 certification Fukui Works acquired ISO14001 certification Yokohama Laboratories acquired ISO14001 certification Oyama and Shiga Works acquired ISO14001 certification Green Procurement Preparation Committee started
2003	“Furukawa Electric Basic Environmental Policy” revised Medium-Term Plan for Environment Preservation Activities 2005 formulated (for 2003~2005) Green Procurement Executive Committee started All Works including Nikko (Sheet Plant) acquired ISO14001 certification

Editor’s Note

In fiscal 2002, the last year of the Furukawa Electric Medium-Term Plan for Environment Preservation Activities 2002, all the Works acquired ISO14001 certification, which had been the greatest task for us.
In this fourth publication, we made efforts to enrich the Environmental Report 2003 by embracing new contents such as safety and health activities and the activities of affiliated companies. We would be most grateful if many readers could find this brochure reader-friendly.
We intend to expand the scope of this brochure, with the cooperation of many divisions involved, toward advanced information disclosure in consideration of corporate responsibility which is expected to be growingly required globally. Please do not hesitate to give your opinions and suggestions to us.

We can.

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