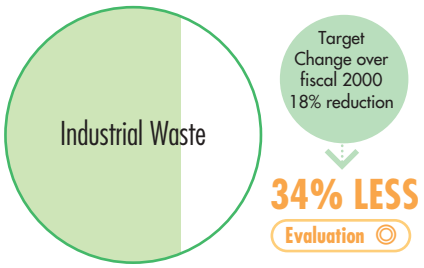
Performance in Fiscal 2003 and Targets in Fiscal 2004

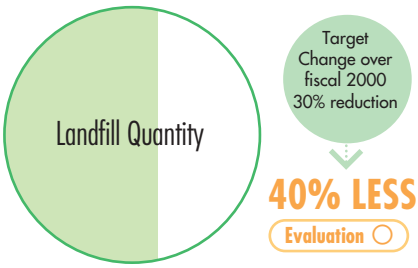
Targets and achievement report for the Medium-Term Plan for Environmental Preservation Activities in fiscal 2003 are shown as follows.

Priority Environmental Preservation Activity Targets and Performance in Fiscal 2003



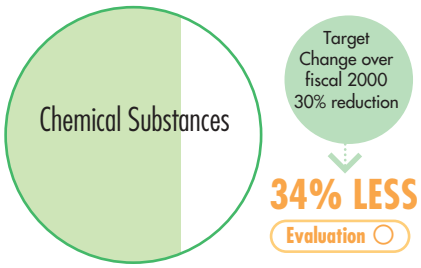
Reduction of industrial waste P 8

34% reduction over fiscal 2000



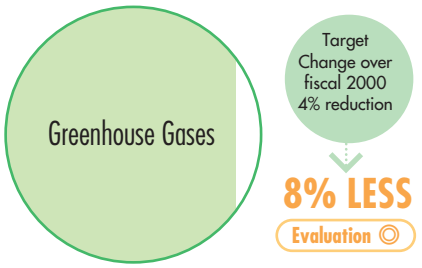
Zero-emission activities P 8

40% reduction of landfill quantity over fiscal 2000



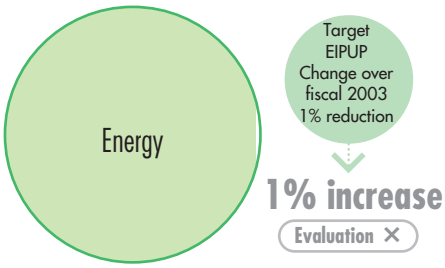
Effluent reduction of chemical substances P 9

34% reduction over fiscal 2000



Reduction of greenhouse gases P10

8% reduction over fiscal 2000



Promotion of energy-conservation activities

1% increase over the previous year in EIPUP P10

Evaluation standards

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

Promotion of procuring green products and supplies

Target	Performance	Evaluation
• Designing evaluation measures • Establishing a system for procuring green products and supplies • Enhancing response to customers	• Set standards and revised regulations and rules • Established a system for procuring green products and supplies • Already responded to customers	○ ○ ○

Promotion of consolidated pro-environmental management

Target	Performance	Evaluation
• Establishment of promotion framework	• Co-sharing of information and promotion of education	○

Eco-design activities

Target	Performance	Evaluation
• Development of environmentally friendly products • Investigation of LCA case examples	• Attained 39% new product sales ratio • Completed investigation of industry cases and existing LCA tolls	○ △

Reinforcement of environmental management organizations

Target	Performance	Evaluation
• Establishment of environmental management organizations	• Promotion of environmental education for management	○

Priority Environmental Preservation Activity Targets for Fiscal 2004

The table here shows activity items and targets for fiscal 2004 of the revised Medium-Term Plan for Environment Preservation Activities 2005. Individual business bases will adopt these targets into their environmental management activities and plan to promote their own activities.

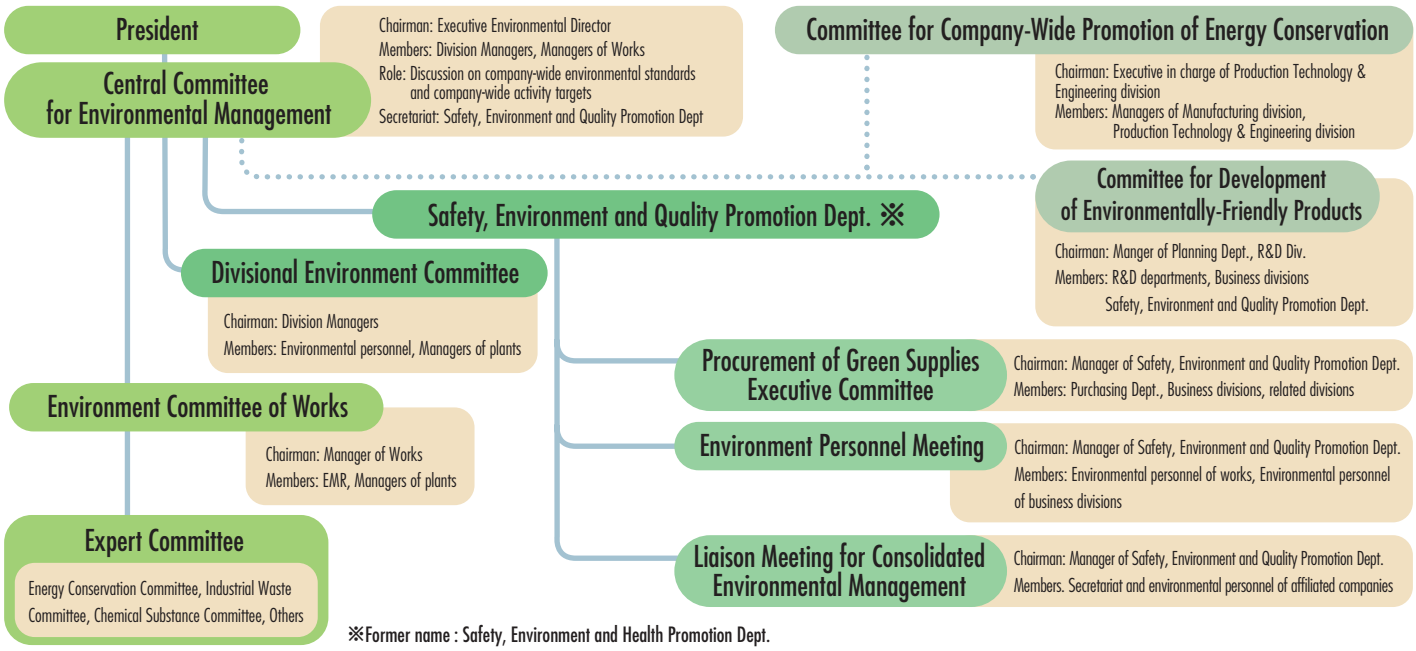
Priority Environmental Preservation Activity targets for fiscal 2004

- **Reduction of industrial waste**
  40% reduction over fiscal 2000
- **Zero-emission activities**
  50% reduction over fiscal 2000
- **Promotion of procuring green products**
  Promotion of procuring of 23 general commodity items including stationery
  Attained 100% of investigation on purchased products from major vendors in fiscal 2004
- **Reduction of greenhouse gases**
  Greenhouse gases emission: Attained the same performance as the previous year
- **Energy-conservation activities**
  EIPUP : 1% reduction over the previous year
- **Effluent reduction of chemical substances**
  52% reduction over fiscal 2000
- **Reinforcement of consolidated environmental management**
  Formulating and activating policies for group activities
- **Eco-design activities**
  Development of models towards introduction of LCA

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 the Director in charge of the environment comes in as Chairman, has been set up to carry out environmental management under direct control of the President, thereby promoting environmental preservation activities of the entire company.



※Former name : Safety, Environment and Health Promotion Dept.

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 this goal in fiscal 2002. Hereafter, we will proceed to improve our environmental performance. Moreover, we will support the environmental management of affiliated companies, thus promoting preservation of the global environment from the standpoint of consolidated environmental management.

Works	Date of Acquisition	Certifying Organization	Certification Number
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 R&D Laboratories	June 14, 2002	DNV	1849-2002-AE-KOB-RvA
Oyama Shiga	September 27, 2002	DNV	00583-2002-AE-KOB-RvA
Nikko (Sheet Plant)	March 14, 2003	DNV	Expansion of Nikko Works

Education and Training

❶ Education of Internal Auditor

Educational courses for internal auditors were given in June and August and we trained a total of 40, 23 and 17 employees of Furukawa Electric and affiliated companies, respectively.

❷ Skill Upgrade Seminar for Internal Auditor

We invited lecturers from outside and held a two-day skill-upgrade seminar for Internal Auditor to operate environmental management system more effectively in March. 17 staff from our facilities attended the seminar to enhance their skill.

❸ Environmental Education

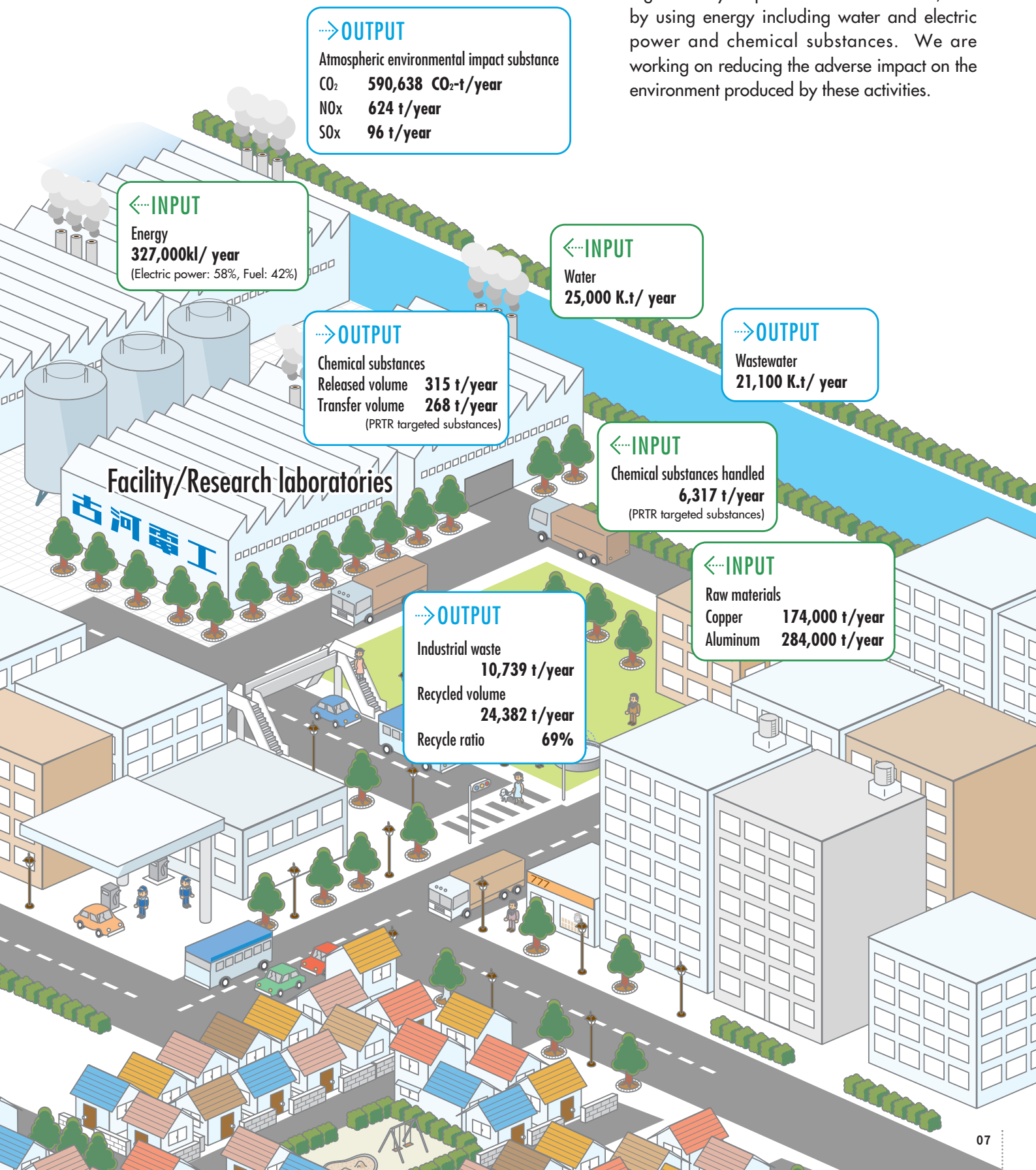
Company-wide education was given to 30 new recruits in April, to 41 second-year administrative employees in June and to a total of 122 second year technical employees over three sessions from October to December. In addition, general and special environmental education was provided for all employees at their works and worksites.

❹ Educational Support for Affiliated Companies

Education of ISO standards, environment related registration and others was provided to 57 management level employees of affiliated companies in August and November. The request for management education was made by affiliated companies.

Impact on the Environment by Furukawa Electric

Furukawa Electric provides products by procuring a variety of parts and raw materials, and by using energy including water and electric power and chemical substances. We are working on reducing the adverse impact on the environment produced by these activities.

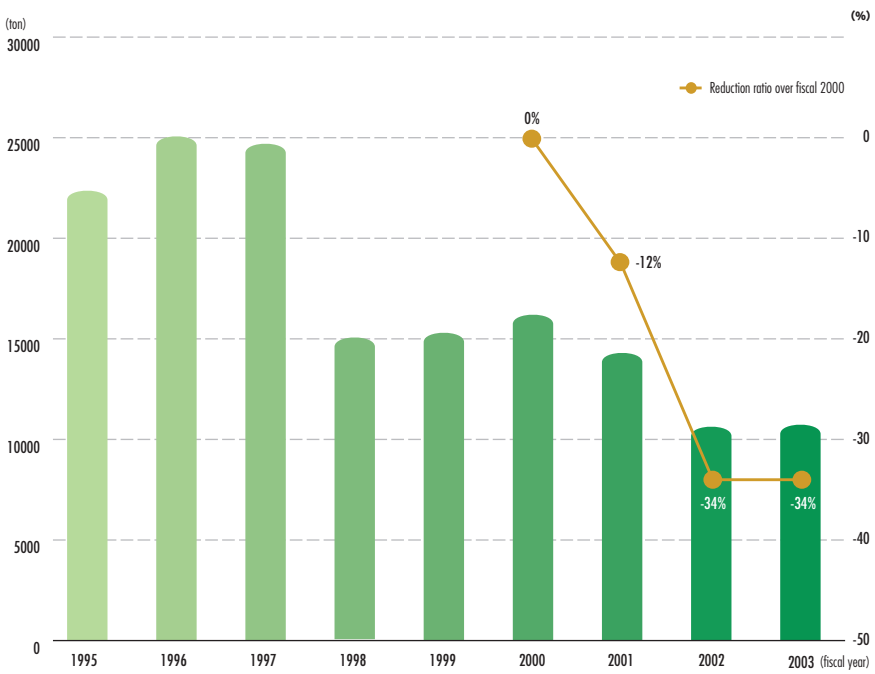


Reduction of Industrial Waste and Zero-Emission Activities

Reduction Activities of Industrial Waste

We began activities to reduce outsourced industrial waste disposal in 1993. Since then we have been continuously pursuing reduction activities, and consequently made great progress in recycling and reduction of oil, plastic and alkali wastes, sludge, wood and paper waste, and reduced outsorced industrial waste disposal.
In addition, we set up a medium term target of "reducing industrial waste by 30% over fiscal 2000 in fiscal 2005" in fiscal 2002. Based on this target, plants, which are maufacturing bases, established their environmental purpose and target, and are pursuing these activities.
We have already attained our target of reduction of outsourced industrial waste disposal by 34% over fiscal 2000 in fiscal 2003. This was partly affected by a slowdown in operations due to the sluggish economy. We will continue reducing waste in the process of manufacturing and recycling, ensuring that outsourced industrial waste disposal volume exceeds the target, even after the recovery of operations.

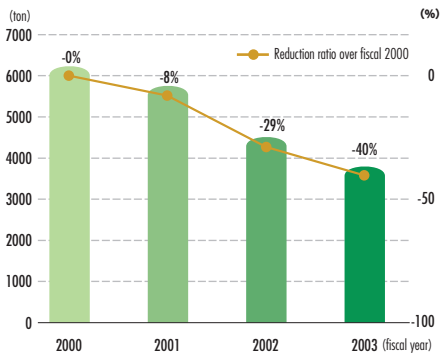
Changes in Disposal of Outsourced Industrial Waste



Zero-Emission Activities

In fiscal 2001, as the first-step of zero-emission activities, Furukawa Electric formulated the definition of zero-emission activities, and established reduction targets for each plant, as well as the entire company.
In fiscal 2002, while all the plants have acquired ISO14001 certification, they incorporate zero-emission activities into the targets of their environmental management systems. As a result of promotion of zero-emission activities, we have successfully reduced industrial waste by 40% over fiscal 2000, in fiscal 2003. We intend to develop this across the board, using the Chiba plant as a role model for the rest of the company,as its zero-emission activities are the most advanced, in order to further pursue zero-emission activities.

Changes in Direct Landfill Disposal Volume



Definition of Zero-Emission Activities of Furukawa Electric

Activities to reduce the industrial waste commissioned to outsourced disposition that is transported from plants 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.

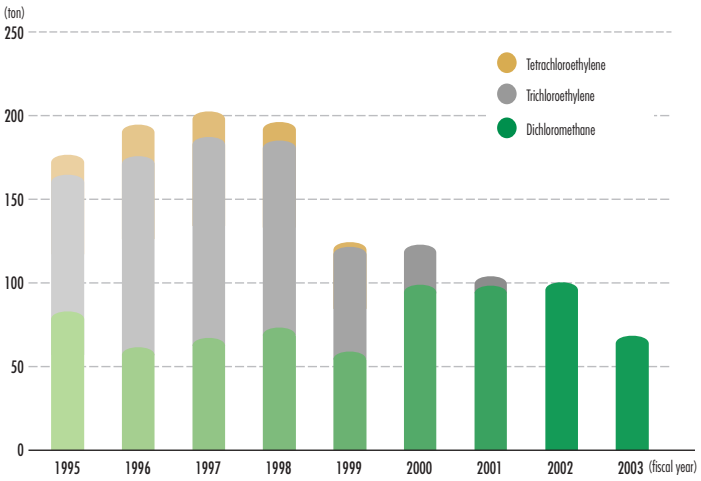
Reduction of Organic Chlorine Compounds and Reduction of Chemical Substances

Reduction of Organic Chlorine Compounds

In an effort to reduce the use of organic chlorine compounds, we, along with the company's environmental principle and customers' green procurement requirement, have been developing pollution-free cleansing techniques that are consistent with required product quality. At the initial stage, we planned, in fiscal 2002, to completely eliminate atmospheric emission of organic chlorine compounds.

Tetrachloroethylene and trichloroethylene were completely eliminated in fiscal 2002 as planned. Although dichloromethane was still used at two works at the beginning of fiscal 2003, we eliminated it at one of the works in the first half of fiscal 2003 and at two out of three facilities of the other works within the closing of fiscal 2003. However, dichloromethane was still used at one facility for cleansing products with special shapes and we have delayed complete elimination partly because of the customers' strict requirement of production operations. We have postponed our elimination plan to fiscal 2004 and plan to apply the acquired cleansing technologies, thereby achieving complete elimination of organic chlorine compounds.

■ Atmospheric Emission of Organic Chlorides



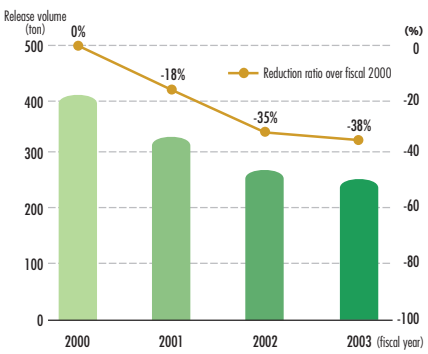
Reduction of Chemical Substances

In addtion to reducing organic chlorine compounds, we have long been pursuing activities to reduce use and emission of ozone layer depletion substances. We have greatly succeeded in reduction of these substances.

In fiscal 2003, we planned to reduce additional chemical substances, focusing on PRTR※ targeted substances with large emission volume. We have set a target of reducing four substances such as toluene, xylene, ethylbenzene and trimethylbenzene by 40% over fiscal 2000 in fiscal 2005 in the Medium-Term Plan for Environmental Preservation Activities, and pursuing reduction by shifting to water based paints, recovering volatile solvents and disposal by incineration. From fiscal 2004, we have again revised our target to 54% reduction, due to changes in operations deriving from the move of part of the wrought copper division to China.

※ : Pollutant Release and Transfer Law in Japan.

■ Changes in Released Volume of Chemical Substances



Substances targeted for reduction

Four substances such as toluene, xylene, ethylbenzene and trimethylbenzene

■ Handling, Release and Transfer Volume of PRTR Targeted Substances

(ton/year)

Substance No.	Name of substance	Handling volume	Release volume	Transfer volume	Neutralized Volume
25	Antimony and its compounds	191.7	0.0	3.6	0.0
40	Ethylbenzene	8.0	7.2	0.1	0.4
63	Xylene	362.3	22.4	8.8	202.8
67	Cresol	321.0	0.9	1.1	319.0
68	Chromium and trivalent chromium compounds	72.7	0.0	6.7	0.0
69	Hexavalent chromium compounds	6.7	0.0	0.0	0.0
108	Inorganic cyanide compounds	5.5	0.0	0.0	5.5
145	Dichloromethane	77.8	64.3	13.5	0.0
172	N,N-dimethyl formamide	69.3	0.7	0.2	68.5
197	Decabormo-diphenylether	143.9	0.0	10.1	0.0
224	Trimethylbenzene	21.9	19.1	1.1	0.2
227	Toluene	591.1	199.3	205.5	66.5
230	Lead and its compounds	3,166.9	0.0	0.0	0.0
231	Nickel	9.6	0.0	0.0	0.0
232	Nickel compounds	5.5	0.0	0.1	0.0
253	Hydrazine	15.7	0.0	0.0	15.7
266	Phenol	193.2	0.4	0.3	192.5
272	Bis (2-ethylhexyl) phthalate	11.9	0.0	0.0	0.0
283	Hydrogen fluoride and its water-soluble salts	16.4	0.1	13.1	2.2
308	Polyoxyethylene-octylphenylether	1.6	0.0	1.6	0.0
311	Manganese and its compounds	1,116.7	0.0	1.4	0.0
312	Phthalic anhydride	3.8	0.0	0.0	3.4

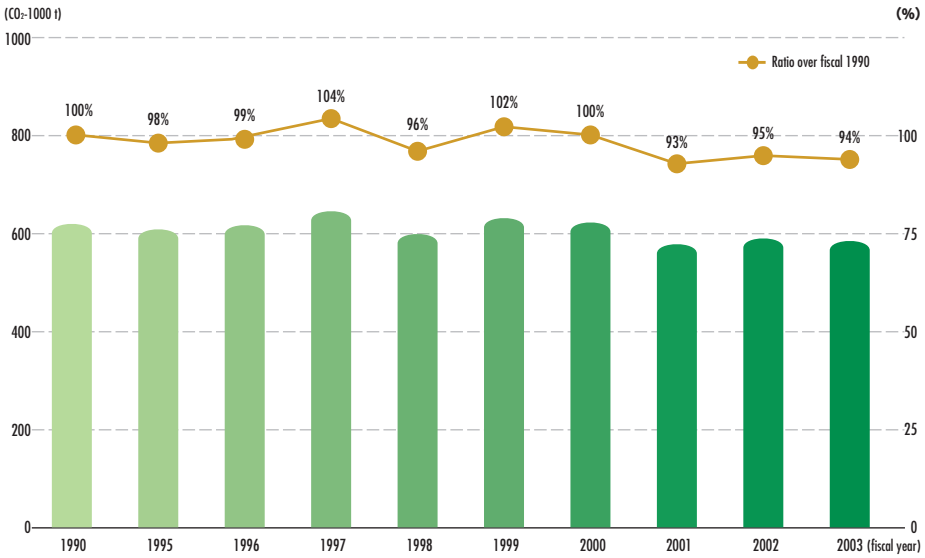
※Targeting substances of handling volume of above 1 ton at plants (more than 0.5 ton for specific substances)

Prevention of Global Warming and Energy Conservat

Prevention of Global Warming

In response to the ratification of the 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 developed its own specific reduction plan after fiscal 2003, and begun reduction activities. The graphs here show changes in the emission of greenhouse gases (CO_2 basis) after fiscal 1990, indicating that the emission in fiscal 2003 was 94% over fiscal 1990. Emission volume after fiscal 2000 reduced due to declines in production volume. We will further strengthen our activities whereby emission is reduced even upon recovery of production volume.

Changes in Emission of Greenhouse Gases



Energy Conservation Activities

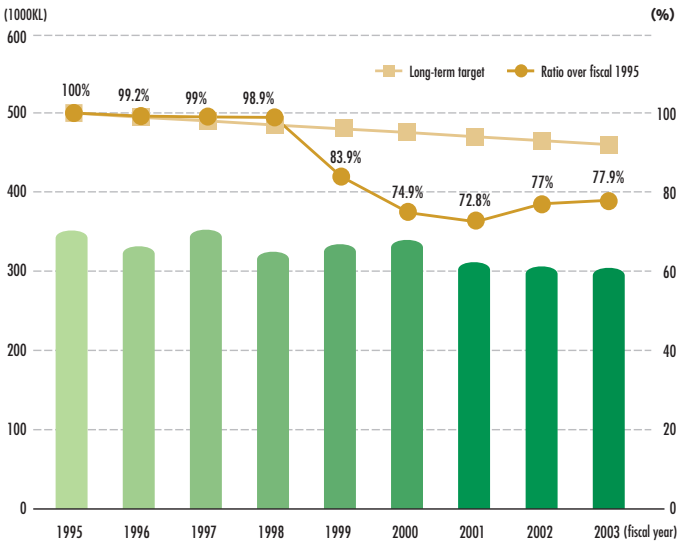
❶ Progress of Energy Conservation Activities, Organization and Targets

In view of the revision of the Law Concerning the Rational Use of Energy (Energy Conservation Law) in 1993, a Committee for Company Wide Promotion of Energy Conservation was established in April 1994, thus initiating company-wide activities with 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 2003, the production volume of two of the eight works that are designated as "Class 1 Energy Management Factories" fell to a range from 74 to 91% total production,and the resulting EIPUP index registered levels between 4.6 and 17.2% .

For Energy Conservation, we improved EIPUP, focusing on "enhancing efficiency" and "reducing waste". In spite of the activities, the weighted EIPUP average of the eight works worsened by 1.2% over fiscal 2002. This value corresponds to 77.9% over fiscal 1995 in terms of the previous index, representing a 2.7% improvement in yearly average.

Changes in EIPUPs of Eight Works



❷ Case Examples of Energy Conservation Activities in Fiscal 2003

Major items of energy conservation include: regenerative burner of melting furnace, inverter control of cooling water pumps, dispersion of boilers, conservation oriented operation of air conditioners, energy saving of lighting, improvement in gas emission of scrubber, suspension of use or sealing of facilities, and improvement in yield. These measures resulted in energy conservation (crude oil basis) of 5,310kl/year.

❸ Energy Conservation Activities in the 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 on average annually.

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Prevention of Global Warming and Energy Conservation - Case Examples

Environmental Improvement and Energy Conservation Through Changing Fuels to LNG in the Nikko Sheet Plant

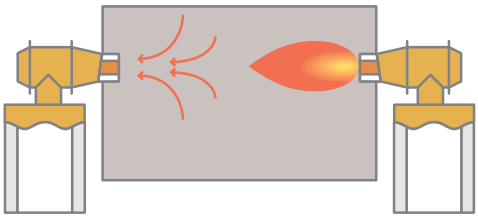
Nikko Works (Sheet Plant) has long used grade C crude oil as fuel for the casting process and treated SOx in emission gases by smoke-extraction desulphurization equipment. The equipment has deteriorated significantly as a result of use over the long period and is in need of renewal. Meanwhile, we have received complaints from neighboring residents about odor, smoke and soot deriving from extracted smoke from the equipment.
Therefore, rather than simply renewing the equipment, upon discussion, we have decided to carry out measures which meet the following conditions in order to solve the problem fundamentally.

❶ Emit clean gases to meet environmental conditions

❷ Control CO_2 emission and reduce running costs through energy saving.

❸ Implement measures with minimum CAPEX

Consequently, we have decided to adopt LNG as fuel, which is pollution-free and is significantly effective in CO_2 reduction, and regenerative as a burner for incineration, which is more effective for energy saving.
Construction for replacing fuel and incineration equipment commenced in fiscal 2003 and is scheduled to be completed in fiscal 2005.



Regenerative burner

Smoke-extraction desulphurization equipment

Affiliating Hydraulic Power Generation Station in the Nikko District

Furukawa Nikko Power Generation Inc. is a hydraulic power generation company that previously belonged to Furukawa Co., Ltd. one of Furukawa group companies but was transferred to be an affiliated company of Furukawa Electric in September 2003.
Construction of the power station began in 1906, and the station provided electricity to Nikko works (Kiyotaki District) and Ashio District that had the Ashio copper mine, contributing to development of the region. With transfer of the business to Furukawa Electric, the station now also supplies power to the Nikko Works(Sheet Plant).

Furukawa Nikko Power Generation Inc. maintains four hydraulic power stations that use natural water falls including Kegon-no-taki water fall that runs down from Lake Chuzenji and other surrounding water falls as water supply sources. By utilizing this feature, there is no concern of water volume fluctuation, thus enabling efficient and stable power generation. The four power stations are located from upstream to downstream in sequence, using the water supply efficiently.
The stations that generate power using natural forces, do not emit any greenhouse gases. Furukawa Electric intends to make the most of clean energy resources and maintain power generating facilities located in the national park without harming the environment.

Green Activities and Green Logistics

We are pursuing environmental preservation activities by promoting "green procurement" in which we purchase environmentlly friendly parts and materials together with the cooperation of customers.

Green Activities

Furukawa Electric has been promoting green procurement since enforcement of the Green Purchasing Law in April 2001. From August 2002, customer's demands to cooperate on green procurement suddenly increased. Therefore, we took a position to respond to the customer's demands on product inspections and internal audits as the most important objective.

Responding to Customers' Demands for Green Activities

It has become clearer that Japanese customers require us to correspond with the EU regulations which enforce total exclusion of toxic substances in products. As Furukawa Electric provides a wide range of parts and materials used in a variety of industries, it has not been so easy to have a comprehensive labeling of product greenness, in regard to substances that have an adverse impact on the environment (such as toxic chemical substances), so that we had initially responded to customer's demands individually.

Since fiscal 2003, we have developed a company wide environmental information management system in order to respond to customers across the board comprehensively. Divisions of the entire company such as materials procurement, manufacturing and marketing divisions promote activities and expand the range of activities beyond the company, to customers and suppliers. The environmental Promotion division of Furukawa Electric responded to customers who are related to several business divisions and bases. The following are case examples of responses to customers on green activities in fiscal 2003 .

1. For Fujitsu, 8 divisions made an agreement on submission of a Non-Inclusion Guarantee Statement corresponding to the EU regulations and promotion in activities for total elimination of hazardous chemical substances.
2. For Sony, corresponding to Sony Green Partner Environmental Quality Approval, an environmental audit was carried out in 10 plants and 2 affiliated companies of the 7 divisions which supply products to Sony, and an agreement was concluded.
3. We have responded to many customer's demands on green procurement inspections.

Yokohama R&D Laboratories Analysis Technology Center

Analysis technology center supports the business activities of Furukawa Electric group with evaluation technologies. The center has a long history and has high analysis technologies fostered through tireless efforts for improving them. The center evaluates even the smallest amount of contamination of environmental impact substances in the Furukawa Electric products precisely. It also applies the analysis technology for developing environmentally friendly products.

Green procurement / development of ECO products ⇔ Development evaluation method

- Designing products using substitute environmentally friendly substances
- Complying environment usage with required specifications
- Certifying non-inclusion of hazardous chemicals in ECO products

We are examining prior processing methods to determine the most suitable method for each specimen in order to quantify data precisely.

Promotion of Green Activities

1 Promotion of green procurement for "general commodities"

In the category of "general commodities" of non-manufacturing-oriented materials such as office supplies, in order to utilize a new purchasing system aiming for efficient procurement, we have registered products that meet green procurement requirements in the master database system.

2 Promotion of green procurement for "purchased products"

In the category of "purchased products" which are used as materials in the process of manufacturing products, we have developed regulations and guidelines to evaluate commodities. We have also established a support system for environmental investigation on green procurement. Through these actions, we could standardize investigation and compile a database, realizing unbiased and efficient inspection.

Green Logistcs

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

Reduction of Packaging Material

We reduce the use of packaging paper and wood by promoting package-free of drum-wound products and bundled products.

Promotion of Reusable Drum Program

TEPCO LOGISTICS Co., LTD., an affiliated company of Tokyo Electric Power Company (TEPCO) has established an environment-conscious recycling system for drums used in the delivery of aerial power distribution wire and cable. In this system, conventional wooden drums are replaced by plastic drums made of recycled sheathing material of retrieved wire. We support their rental business of reused drums that comprises the recycling system, in terms of developing the recycled material, as well as operational aspects including manufacture, delivery, retrieval, repair and maintenance of drums.

Recycling of Disposed Drums

680 tons of retrieved wooden drums and skids in the distribution centers are disposed without being reused. We have realized 99.85% recycling of such unused materials, by producing fuel-use wood chips and bedding materials for cattle, we are aiming for effective utilization of limited resources.

Shared Transportation and Delivery

We have participated in the project introduced by the Japanese Electric Wire & Cable Makers' association (JCMA) to support environmental preservation. We have participated in a joint transportation (delivery) program of cable to large scale construction sites in the metropolitan areas, aiming to reduce the number of delivery vehicles. We also participate in the joint transportation program using ships directed to Hokkaido, thus being engaged in contributing to a modal shift to coastal shipping transportation, as well as energy conservation.

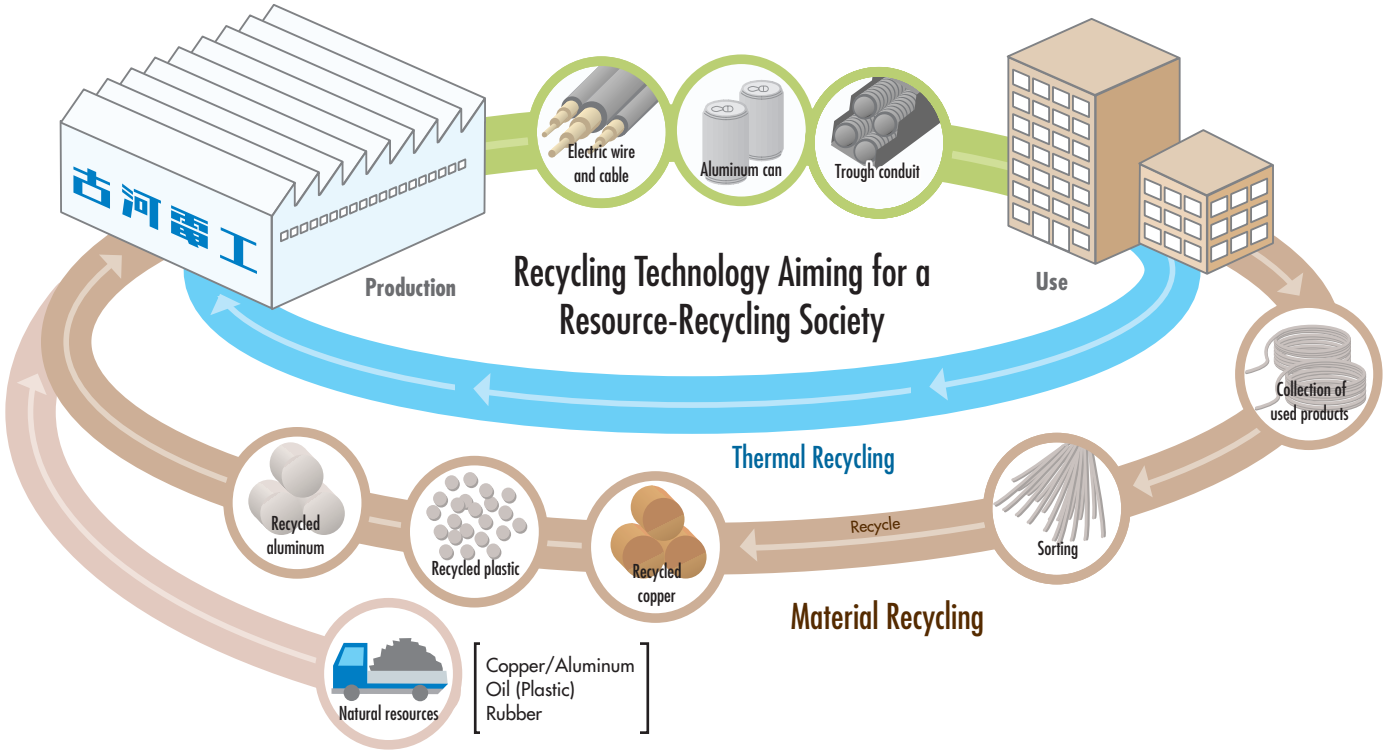
Reduction in NOx Emission Through Improvement of Loading Efficiency

In order to improve loading efficiency, we have promoted reducing the number of delivery vehicles, by expanding mixed loading and the use of large-sized vehicles, achieving 4% reduction in NOx emission volume related to product delivery vehicles in the first half of fiscal 2001. Our target is 6% reduction in NOx emission in fiscal 2004.

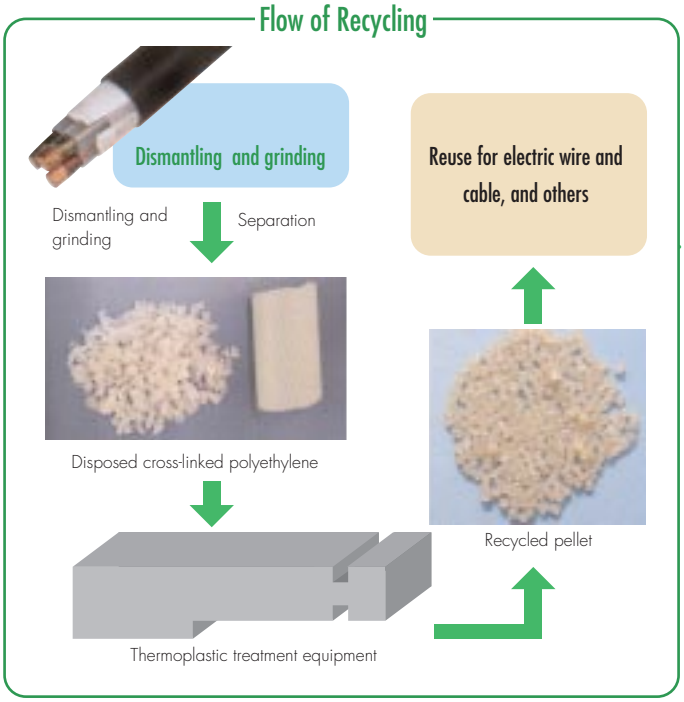
Eco-Design Activities

Recycling Technologies

In the material recycling area, we are not only developing various recycling technologies but also developing and commercializing products using disposed plastics, aiming at recycling of disposed plastics using our technologies built up through the development of polymer products.



Flow of Recycling



❶ Recycling System for Electric Wires and Cables

We established a recycling system in which used power and communication cables are retrieved from customers and almost 100% of copper and aluminum used in cables is recycled. Covering materials are also recycled as cables, recycled plastics or fuel.

❷ National Project for Development of Recycling Technology

Material recycling technology of cross-linked polyethylene was put to practical use under the support of the New Energy and Industrial Technology Development Organization (NEDO).
It has been difficult to recycle cross-linked polyethylene but we developed the recycling technology in which cross-linked polyethylene is plasticized with the appropriate thermal treatment and shearing. It is then reused for electric wire insular as recycled pellets using a similar molding process as polyethylene before the cross-linkage.

❸ LCA Assessment

Furukawa Electric implements life cycle assessment (LCA) for electric wires and cables, and metal materials and in the future will also implement LCA for other products.

Environmentally Friendly Products

Furukawa Electric recognizes that "the 21st century is the century of the environment" and is actively working on development of environmentally friendly products and technologies by consultation and collaboration with customers.
We develop a range of commercially viable products under the name of "environmentally friendly products (environmental logo: ECOLINK)" that, at every stage, from materials selection, manufacture, use, distribution and disposal, will be safe and of low environmental impact.
In addition, we have established a company-wide organization, Committee for Development of Environmentally Friendly Products, in which company-wide strategies are formulated to promote the development of products and technologies.

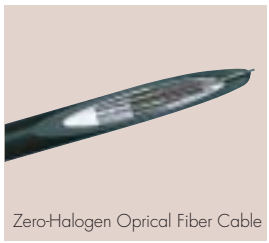
1 Products for Reduction of Environmental Impact

We are developing and commercializing products that do not create environmental problems when they are in use and do not discharge any toxic by-products or leave residual waste products during biodegradation, incineration treatment or landfill disposal after they are discarded.

Product	Use	Feature
●ECO Electrical Wire (ECO-ACE.ECOBEAMEX)	Home appliances, Power distribution and Communication	Halogen-free, lead-free
●Halogen-free Wire Harness	Automobile	Halogen-free, lead-free
●Zero-Halogen Optical Fiber Cable	Communication	Halogen-free, lead-free
●Lead-Free Plating for Electronic Components	Electronic components	Lead-free
●Biodegradable Resin Foam (BIO ACE)	Packaging material	Biodegradability
●Indoor Cable-Protection Conduit Made of Flame-Retardant Resin (ECO-PLAFLEKY)	Indoor electrical wire laying	Halogen-free, lead-free

ECO Electrical Wire

These wires and cables do not use any toxic substances such as PVC or lead, permitting recycling and disposal by incineration. ECO ACE, general cables for indoor electricity supply, ECO-BEAMX, wires for electronics and electric equipment, ECO wires for automobiles and highly flame retardant optical cables are already in practical use.


Zero-Halogen Oprical Fiber Cable


Halogen Free Wire Harness


ECOBEAMEX

Lead-Free Plating for Electronic Components

We have eliminated the use of lead by shifting from Sn-Pb plating, which was used as electrode-use solder for ICs, capacitors, connectors, printed circuit boards, etc., to Sn-Bi plating.
We promote measures to eliminate the use of lead from customers' mounting processes.

Biodegradable Resin Foam (BIO ACE)

BIO ACE is broken down into water and CO_2 by the action of microorganisms in the environment. CO_2, an environmentally friendly substance, is used as a foaming agent and the product is lightweight, has excellent machinability and buffering feature (foam expansion ratio: 10-15X). Combustion heat of BIO ACE is only half of that of polyethylene and thus less damaging during incineration.

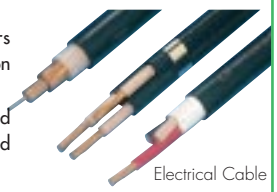
2 Products for Realization of Recycle-Oriented Society

We are developing and commercializing recycling-conscious products which, reuse industrial waste materials, use recyclable materials, reduce the variety of materials, reduce the number of parts and are easily degradable.

Product	Use	Feature
●Insulated Wire and Cable Using Recycled PVC	Electrical wire	Recycling
●Recycled Aluminum Can Stock	Can	Recycling
●Underground Cable Duct Made of Cable Waste (KOHTA KUN.KOICHI KUN.Green Trough)	Electrical wire Laying	Reuse of materials/Lightweight
●Protective Casing Using Recycled Plastics		
●Weed Barrier Sheet	Sheet	Reuse of materials

Insulated Wire and Cable Using Recycled PVC

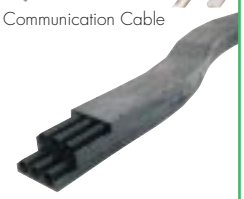
Most of the copper and aluminum conductors used for electric power cables and communication cables are retrieved and recycled.
Plastic insulators such as polyvinylchloride and polyethylene resin are also recycled as insulated electrical wire and cable sheath.
We are seeking to use recycled cross-linked polyethylene, which was previously disposed of only by incineration.


Electrical Cable


Communication Cable

KOHTA KUN

KOHTA KUN is a synthetic resin cable duct with multiple bores that use recycled plastics. The product is light in weight and high in strength, most suitable for underground laying. This product contributes to energy conservation during construction and shortens construction periods. The product acquired the ECO certification mark.



Green Trough

The product is made of plastic waste from electrical wires and cables with reinforcing materials. Compared to conventional concrete troughs, this product has higher strength and lighter weight (around a quarter of the weight of a conventional trough), permitting easy transportation and construction.


Examples where green trough is used as railway cable trough

Protective Casing Using Recycled Plastics

This is the product developed in cooperation with NTT, in which retrieved optical cables are recycled. The product contributes to energy saving for construction of shared trenches of electrical wires.

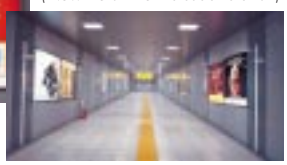
3 Products for Prevention of Global Warming

We are developing and commercializing products that contribute to energy conservation such as products of lightweight and higher energy-efficiency, and products and systems in which clean energy is commercially viable.

Product	Use	Feature
●High-Reflectivity Foamed sheet (MCPET)	Lighting	Energy saving
●Rainwater Recycling System (HYDROSTAFF)	Rainwater recycling	Resource saving
●Micro Heat Pipe	Electronic equipment	Energy conservation
●Solar Photovoltaic System	Electrical power	Clean energy
●Partial-stripe Precious Metal for Electric Components	Electronic components	Resource and energy saving
●Aluminum alloys for Vehicles	Automobiles	Lightweight and energy saving

High-Reflectivity Foamed sheet (MCPET)

MCPET has excellent light reflectivity resulting in extremely bright sheet surface. this product has a total reflection rate of 99%, diffused reflection rate of 96% and reflects light with uniform optical wavelengths. It is effective to enhance brightness or conserve energy and provides a solution to unbalanced brightness.



Construction site of the passage-way to Tokyo Opera City (New Keio Line Hatsudai Station)

Rainwater Recycling System (HYDROSTAFF)

The system aims at making effective use of sunshine and rainwater, which are gifts of nature. It serves to provide an emergency reservoir against disasters and to suppress rainwater flooding in watershed areas.

Micro Heat Pipe

Furukawa Electric's micro heat pipe is a heat dissipation/cooling device for electronic equipment such as computers. This helps reduce the size of equipment and saves energy.

Partial-stripe Precious Metal for Electric Components

Precious metal plating strips with high connection reliability are used for electrical contact materials or connectors.
Furukawa Electric manufactures and sells precious metal stripe plating strips that reduce use of precious metals, keeping in mind the impact on the environment.

4 Products for Prevention of Ozone Layer Depletion

We develop and commercialize devices and processes that do not use CFCs, together with products compatible with CFC substitutes.

Product	Use	Feature
●CFC-Substitutes Compatible Magnet Wire (HPWR Ⅱ)	Home appliances, automobiles	Compatibility with CFC substitutes
●Copper Tube for Use with CFC-Substitutes (Furukawa Multi-Grooved Tube (FMGT), Furukawa Super Clean Tube)	Home appliances	Compatibility with CFC substitutes
●Nitrogen-Atmosphere Reflow Oven (SALAMANDER)	Electronic equipment	Elimination of CFCs
●Functional Resin-Coated Aluminum sheets (FUSCOAT)	Electronic equipment	High lubrication, elimination of cleansing

CFC-Substitutes Compatible Magnet Wire (HPWR Ⅱ)

These heat- and freeze-resistant magnet wires are compatible for use with refrigerating systems using CFC-substitute refrigerants (HFC-R407C, R410A and R134a). They are used for the compressor motors of air-conditioning and refrigerating systems.

Copper Tube for Use with CFC-Substitutes (Furukawa Multi-Grooved Tube (FMGT), Furukawa Super Clean Tube)

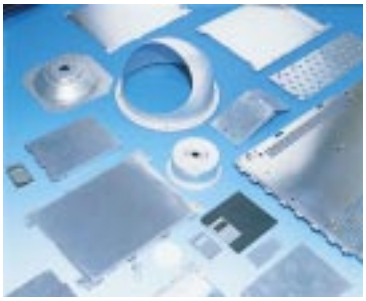
These are copper tubes compatible with CFC-substitute refrigerants to reduce the depletion of the ozone layer. These tubes reduced oil residuals in the tube's inner surface and have internal grooves to improve heat exchange performance.

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 system eliminates the need to cleanse completed circuit boards, obviating the use of CFCs.

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 are eliminated.



Environmental Risk Management

Countermeasures Regarding Pollution of Soil and Groundwater

We have been conducting soil and groundwater pollution investigations at Facilities that have a history of use of toxic substances. We promptly take actions against the pollution of soil and groundwater that are found during investigations, to secure the health and safety of the local community.
We also report to the administration about the environmental conditions and measures to be adopted to clean the environment and disclose the information to local residents, related institutions and media according to the content.
In fiscal 2003, we have formulated **"Soil Environmental Risk Management Guidelines"** in order to restrict and thoroughly control handling of specific toxic substances that cause pollution of soil and groundwater, and we are carrying out activities according to these guidelines.

Outline of Soil Environment Risk Management Guidelines

1) We shall restrict handling of specific toxic substances specified in Soil Contamination Countermeasures Law.

Construction of new storage facilities and piping shall be positioned above the ground in principle when they are newly installed. Underground construction shall be prohibited.

2) We shall thoroughly manage use, storage and disposal of hazardous substances and seek to shift to substitute substances.

(1) For specific hazardous substances which are currently used, spots with possible risk of leakage of these hazardous substances into soil and groundwater shall be checked and recorded.
(2) We shall review processes where hazardous substances are used and seek to reduce usage volume of such substances. We shall also shift to substitute substances.

3) We shall implement investigation of the usage record of specific hazardous substances at all Plants and Facilities.

(1) We shall investigate the record of usage of specific hazardous substances tracking back to around 30 years ago and shall continue monitoring the usage of hazardous substances.
(2) The record of usage of specific hazardous substances shall be investigated according to written materials and shall record the periods and volume of purchase, use, storage, and disposal. The locations where each of these processes is carried out shall be recorded on a diagram or others and these records shall be stored.

Situation and Countermeasures Regarding Pollution of Soil and Groundwater

❶ Situation and Countermeasures at Furukawa Electric — Nikko Works

It was discovered that the soil on the premises of the works and company owned peripheral areas was contaminated with selenium, arsenic, lead and cadmium; and the groundwater on the Works' premises was contaminated with selenium, arsenic and lead. Investigations, however, found that groundwater, in areas near the border of the premises and company owned peripheral areas, was not polluted.
The copper refinery business which apparently caused this heavy metal contamination was discontinued in 1988 and thus 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 in March 2003 for local residents about the countermeasures adopted. After installation work for purification of the facilities was carried out in April and May, we started the decontamination work in June. We applied the method in which the polluted soil is transported out of the premises and is cleansed.
Cleansing work for the entire company owned areas is scheduled to be completed in 2007.

❷ Situation and Countermeasures at Affiliated Companies of Furukawa Electric

Furukawa Electric advises its affiliated companies to respond appropriately to local residents, the government administration and other parties involved.
Affiliated companies of Furukawa Electric that were found to have water and soil pollution in fiscal 2003 and their contamination situations are as follows.

① TOHTOKU ELECTRIC (Disclosure: December 2003)

Contaminant	PCB/dioxin
Location	Former Nagato Works (Nagato Town, Chiisagata County, Nagano)
Situation	Soil and ground water pollution on the premises of the company.
Countermeasures	Drilling and storage of contaminated soil, monitoring of groundwater

② KYOWA ELECTRIC WIRE (Disclosure: January 2004)

Contaminant	Pb/cyanogens/B/F/dichloromethane
Location	Former Osaka Works (Neyagawa City, Osaka)
Situation	Soil and ground water pollution on the premises of the company
Countermeasures	Pumping and purifying groundwater

③ FURUKAWA COLOR ALMINUM (Disclosure: March 2004)

Contaminant	Cr (hexavalent)/F
Location	Main Works (Utsunomiya City, Tochigi)
Situation	Soil pollution on the premises of the company, groundwater in the company owned areas and near-border areas
Countermeasures	Pumping and purifying groundwater

Furukawa Electric's Safety, Environment and Quality Control Department and relevant divisions support affiliated companies so that they can take actions against contamination promptly, from planning of pollution investigation to developing countermeasures.

Storage of PCB

Concerning PCB, which had been used as insulation oil for electrical equipment, transformers, electrical capacitors and stabilizers for fluorescent light, volume is controlled and managed at each works of Furukawa Electric.
The table here shows the status of use and storage of PCB at each works and it remained unchanged from fiscal 2002.

PCB Storage Status

■ PCB Storage Status

Unit: Number of equipment

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

Compliance with Laws and Regulations

We are regularly confirming laws and regulations to be observed, making efforts for compliance by patrolling sites to check implementation status.
We keep track of revisions of laws and regulations, by closely following the latest information in government gazettes. There was one case of infringement of prefectural ordinances at Hiratsuka Works, and we immediately remedied the situation.

Environmental patrol

Ammonia Gas Treatment at Hiratsuka Works

Ammonia gas concentration at the emission outlet for some plastics manufacturing equipment is restricted by "Ordinances concerning safety of living environment of Kanagawa prefecture". We regularly measured gas concentration at the outlet and found that gas concentration sometimes exceeded the limits, depending on some manufacturing conditions. Upon reporting the case to the administration, we were advised to improve and we devised measures to improve the situation.
We have decided to reduce gas concentration by installing ammonia gas treatment equipment and submitted the "Proposals of Ammonia Gas Treatment" to the administration. The proposal was accepted and thus we commenced construction of gas treatment equipment in October 2003. It is scheduled to be completed in the first half of 2004.
Furthermore, we measured ammonia gas concentration levels at near-boundary locations of the works' premises. No traces of ammonia were detected near the boundary and no impact to the surrounding areas of the works was found.

Environmental Preservation Performance Indicators

Below, the data for atmospheric emissions and wastewater quality including NOx, SOx and soot for atmospheric emissions, and pH, COD (or BOD), SS and n-h (mineral oil) for wastewater quality; of six Works that are registered as specialized plants are presented.

Atmospheric Indicators

		Item	Equipment	Legal Standards	Self-imposed Standards	Average Value	Maximum Value
Chiba Works		NOx (Nm^3/Hr)	Boiler Melting furnace	0.45 1.77	82 (ppm) 63 (ppm)	50 (ppm) 24 (ppm)	66 (ppm) 25 (ppm)
		Soot (g/Nm^3)	Boiler Melting furnace	0.05 0.39	0.010 0.065	0.004 0.020	0.009 0.026
Mie Works		NOx (ppm)	Boiler Melting furnace	180 180	140 140	54 9	54 9
		SOx (Nm^3/Hr)	Boiler Melting furnace	0.6 41.6	0.5 33.3	0 0	0 0
		Soot (g/Nm^3)	Boiler Melting furnace	0.3 0.3	0.24 0.24	<0.005 <0.003	<0.005 <0.003
Nikko Works	Kiyotaki District	NOx (ppm)	Boiler Melting furnace Dryer furnace	180 200 300	180 200 250	81 32 28	110 44 29
		SOx (K value)	Boiler Melting furnace Dryer furnace	17.5 17.5 17.5	17.5 17.5 17.5	0.51 1.2 0.18	0.62 1.7 0.18
		Soot (g/Nm^3)	Boiler Melting furnace Dryer furnace	0.3 0.2 0.5	0.3 0.2 0.2	0.003 0.003 0.002	0.006 0.012 0.016
	Sheet Plant	NOx (ppm)	Boiler Melting furnace Heating furnace	230 180 200	230 150 160	51 46 74	52 47 89
		SOx (K value)	Boiler Melting furnace Heating furnace	17.5 17.5 17.5	14.5 14.5 14.5	0.03 1.10 0.10	0.03 2.00 0.11
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace	0.25 0.30 0.25	0.25 0.25 0.25	0.005 0.007 0.009	0.006 0.012 0.016
Osaka Works		NOx (ppm)	Boiler Melting furnace Heating furnace	150 200 170	120 160 144	2.0 2.0 2.0	2.0 2.0 2.0
		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	0.10 0.20 0.25	0.08 0.16 0.20	0.002 0.001 0.001	0.002 0.002 0.001
Fukui Works		NOx (ppm)	Boiler Melting furnace Heating furnace Dryer furnace	120 120 120 110	110 110 110 100	74 74 31 30	87 85 50 50
		SOx (ppm)	Boiler Melting furnace	380 160	50 130	5 23	5 76
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace Dryer furnace	0.10 0.20 0.12 0.12	0.05 0.16 0.10 0.08	0.005 0.019 0.005 0.007	0.006 0.047 0.006 0.009
Oyama Works		NOx (ppm)	Boiler Melting furnace Heating furnace	150 180 130	180 120 120	70 115 56	78 155 65
		SOx (K value)	Boiler Melting furnace Heating furnace	7 7 7	1 1 1	0.03 0.08 0.07	0.03 0.10 0.07
		Soot (g/Nm^3)	Boiler Melting furnace Heating furnace	0.3 0.2 0.2	0.1 0.1 0.1	0.004 0.021 0.003	0.006 0.035 0.003

Water Quality Indicators

		Item	Unit	Legal Standards	Self imposed Standards	Average Value	Maximum Value
Chiba Works		pH		5.0~9.0	5.0~9.0	7.9	8.2
		COD	(mg/l)	15	15	5.5	9.3
		SS	(mg/l)	20	20	4.4	9.2
		n-h (mineral oil)	(mg/l)	2	2	0.2	0.2
Mie Works		pH		5.8~8.6	6.5~8.5	7.4	7.8
		BOD	(mg/l)	10	4	2.0	9.0
		SS	(mg/l)	25	6	0.9	1.9
		n-h (mineral oil)	(mg/l)	1	0.7	0.1	0.3
Nikko Works	Kiyotaki District	pH		5.8~8.6	6.0~8.5	7.4	7.8
		BOD	(mg/l)	25	16	3.4	5.1
		SS	(mg/l)	50	20	1.4	4.8
		n-h (mineral oil)	(mg/l)	5	0.5	0.2	0.2
	Sheet Plant	pH		5.8~8.6	6.5~8.5	7.2	7.6
		BOD	(mg/l)	25	10	1.1	1.6
		SS	(mg/l)	50	25	2.8	9.5
		n-h (mineral oil)	(mg/l)	5	2.5	<1	<1
Osaka Works		pH		5.7~8.7	5.7~8.7	7.6	7.8
		BOD	(mg/l)	300	10	2.5	3.5
		SS	(mg/l)	300	50	12	28
		n-h (mineral oil)	(mg/l)	5	2	1.4	2.0
Fukui Works		pH		5.0~9.0	5.5~8.8	7.5	8.1
		COD	(mg/l)	600	250	42	118
		SS	(mg/l)	600	250	29	89
		n-h (mineral oil)	(mg/l)	5	4.5	0.5	1.2
Oyama Works		pH		5.8~8.6	6.0~8.0	7.3	7.7
		BOD	(mg/l)	25	20	3.0	4.9
		SS	(mg/l)	50	30	11	17
		n-h (mineral oil)	(mg/l)	5	2	<0.5	<0.5

Environmental Accounting

We compiled 'environmental preservation costs', "economic benefits associated with environmental preservation measures" and "physical benefits associated with environmental preservation measures" for fiscal 2003 to grasp the results of environmental costs and benefits quantitatively. The data is collected in conformity with the environmental accounting guidelines published by the Ministry of the Environment. (Please see the other page for environmental accounting of our affiliated companies.)
Environmental preservation costs in fiscal 2003 were: expenses of 6.2 billion yen and CAPEX of 600 million yen. Economic benefits were 400 million yen. Expenses increased by 1.5 billion yen from fiscal 2003, due to increases in soil pollution treatment costs and development costs for environmentally friendly products.

Scope of data collection: All the works of Furukawa Electric Period of data collection: From April 1, 2003 to March 31, 2004

Environmental Preservation Costs

Unit: million yen

Category	Major Contents of Activities	Amount	Change over the previous year
(1) Business area costs	Pollution prevention, global environmental preservation, resource recycling, etc.	2,648	46
(2) Upstream/downstream costs	Retrieval and recycling of containers, packaging, drums, etc.	429	-100
(3) Administration costs	Establishment, maintenance for pro-environmental management systems; maintenance for environmental preservation, measurement of environmental impact	598	61
(4) Research and development costs	R&D of environmentally friendly products, research in substitutes for toxic substances, R&D of environmental impact reduction in manufacturing processes, etc.	1,503	616
(5) Social activity costs	Disclosure of information, greening, etc.	14	5
(6) Environmental remediation costs	Assessment for environmental impact, investigation and measures for soil and groundwater pollution, etc.	1,046	857
Total		6,238	1,485

Investment and Research Costs

Unit: million yen

Investment and Research Costs	Amount	Change over the previous year
Environment-related investment	649	-157
Total investment costs	11,600	-300
Total research costs	11,900	-2,300

Economic Benefits Associated with Environmental Preservation Activities

Unit: million yen

Content	Amount	Change over the previous year
(1) Revenues gained by recycling	142	17
(2) Reduction in waste disposal costs	26	148
(3) Reduction in energy expenses	175	-339
(4) Reduction in water purchase costs	29	-36
Total	372	-210

Physical Benefits Associated with Environmental Preservation Activities

Discharged amount of environmentally harmful materials	Unit	Impact on the environment	Reduced amount (Change over the previous year)
Industrial waste (excluding waste from recycling)	ton	10,739	-82
Energy consumed (crude oil basis)	KL	327,000	-1,645
Water consumed	K.ton	25,000	2,700
Emission of volatile organic chemical compounds	ton	67	34
CO_2 emission	CO_2-ton	590,638	6,394
SOx emission	ton	96	-4
NOx emission	ton	624	363
Soot emission	ton	44	16