

# **Environment Report 2002**



# Contents

<b>President's Message</b> .....	3
----------------------------------	---

<b>Furukawa Electric Basic Environmental Policy</b> .....	4
Basic Concept.....	4
Activity Guidelines.....	4

<b>Environmental Management System</b> .....	4
Progress of Corporate Initiative .....	4
Organization and Structure .....	5
Medium-Range Plan for Environment Preservation Activities.....	5
Acquisition of ISO14001 Certification .....	6
Company-Wide Environmental Monitoring .....	6
Support for Environment Preservation Activities of Affiliated Companies.....	6

<b>Environment Preservation Initiative</b> .....	7
Energy-Conservation and Global Warming Prevention .....	7
Reduction of Organic Chlorides .....	8
Control of Chemical Substances.....	8
Reduction of Industrial Wastes and Zero-Emission Activities.....	9
Situation of Soil and Water Pollution and Countermeasures....	10
Disposition and Storage Situation of PCB .....	10
Green Purchasing .....	10
Initiatives in Logistics .....	11

<b>Data Regarding Environment Preservation</b> ..	12
Entire Company .....	12
Data Regarding Environment Preservation at Each Works .....	12
Environment-Related Accounting.....	13

<b>Environment-Friendly Products and Recycling Technology</b> .....	14
Environment-Friendly Products .....	14
Recycling Technology.....	17

<b>Environmental Communicative Activities</b> .....	17
Environmental Education .....	17
Enlightenment and Publicity Activities .....	18
Alignment with Local Communities .....	18

<b>Outline of the Company</b> .....	19
-------------------------------------	----

## Covered business bases

All the Works and Laboratories of Furukawa Electric

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

## Covered period

From April 1, 2001 to March 31, 2002

## For further information contact

Safety, Environment and Health Promotion Department  
The Furukawa Electric Co., Ltd.  
Tel: +81-3-3286-3090 Fax: +81-3-3286-3598

## President's Message

Corporations exert a number of major influences on the environment. These influences not only are felt in the form of environmental burdens imposed by a corporation's manufacturing activities, but are also manifested significantly in improvements in the global environment --the alleviation of environmental impacts through the products and technologies of the corporation itself and the activities of its employees. These are activities that society expects a corporation to carry out.

Based on this way of thinking, Furukawa Electric is implementing a corporation-wide program of activities aimed at environmental conservation for fiscal 2002, ending March 31, 2003 under the slogan "protecting the environment by harmonization with local communities and by husbanding resources".

One of the objectives of this year's program is active participation in community activities. This stems most obviously from a desire to discharge our responsibilities in the face of the increased expectations of society with regard to environmental conservation. But we also desire, by actively participating in community activities and establishing avenues of communication with the people of local communities, to find out what they desire from the corporation and to obtain their understanding of the approaches that we are taking with regard to the environment.

It is also our hope that these activities will sharpen the environmental awareness of each and every one of our employees, and thereby contribute to preserving the environment of the locality.

For some years now Furukawa Electric has been actively engaged in positioning itself overseas, and is setting up business offices and manufacturing facilities all around the world. In each of these countries we are pursuing our business plans with full attention to environmental preservation so that we may discharge our responsibilities with respect to the environment, and work with local communities there just as harmoniously as we do in Japan.

We are also conscious that we are a corporation with a wide range of manufacturing operations, and we are therefore committed to reducing the burden on the environment by improving our manufacturing technology. At the same time we wish to contribute to improving the global environment through the active development of products that have low environmental impact, and to implement recycling techniques for copper, aluminum, plastics and other materials.

Here we present a report focusing on the approaches adopted by Furukawa Electric during fiscal 2001 to protect the environment. It is our hope that the reader will come to a better understanding of our efforts toward environmental protection, and will feel free to communicate to us your frank opinions and suggestions.



**Junnosuke Furukawa**  
President

# Furukawa Electric Basic Environmental Policy

---

## Basic Concept

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 towards the sustainable development of prosperous and bright society.

## Activity Guidelines

- All activity shall be based on an awareness of its effect on the global environment, and environmental preservation activity shall be continued.
- We shall observe national and local environmental laws and regulations, and when necessary define our own standards and environmental objectives and targets.
- Environmental issues shall be taken into consideration in every phase of our work from the R&D and design stages, and we shall strive to supply environmentally-friendly products.
- In every phase of manufacturing, distribution and installation we shall work to reduce consumption of resources and energy, promote recycling, and reduce waste materials and environmental loading.
- We shall create and maintain organizations as needed to promote environmental preservation activities, such as environmental management system.
- We shall educate all employees regarding environmental preservation issues.  
Moreover we shall work to maintain and improve understanding of this policy and a better awareness of environmental preservation issues.

(Established January 5, 1998)

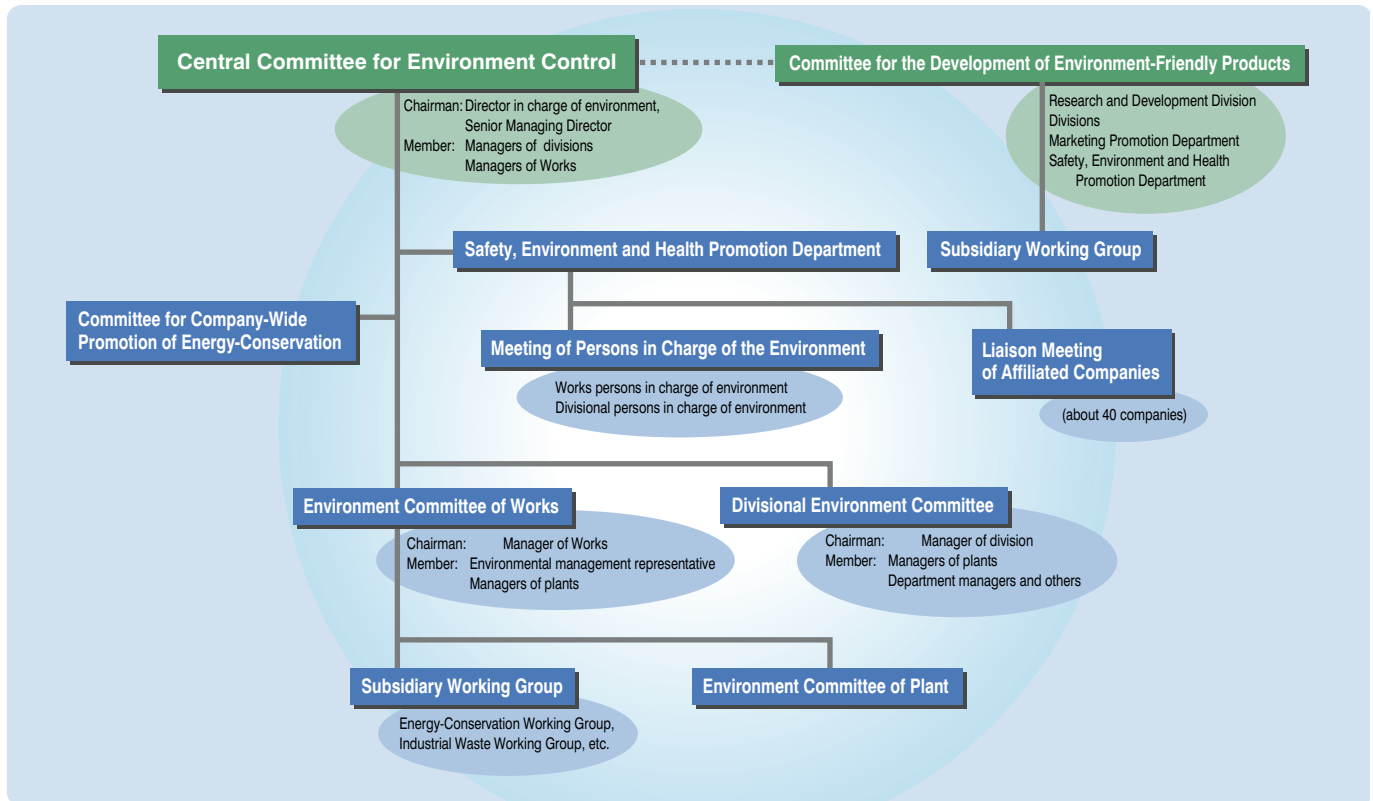
# Environmental Management System

---

## Progress of Corporate Initiative

- |      |  |   |   |
|------|--|---|---|
| 1972 | ● "Company-Wide Regulations for Environmental Pollution Prevention" formulated   | 1998  | ● The Chiba Works acquired ISO 14001 certification<br>● The Mie Works acquired ISO 14001 certification  |
| 1974 | ● Environment Control Department established<br>● Energy-Conservation Team started   | ● "Company-Wide Regulations for Environment Control" formulated revising "Company-Wide Regulations for Environmental Pollution Prevention"                        |   |
| 1989 | ● Team for Use Reduction of Specified CFCs started<br>● Renamed as Team for Use Reduction of Ozone Layer Depletion Substances in 1992  | 1999  | ● Safety, Environment and Health Promotion Department started incorporating Environment Control Department and Safety Control Sections  |
| 1993 | ● "Basic Thinking on the Protection of the Global Environment" formulated<br>(Furukawa Electric's voluntary plan for environment preservation)   | 2000  | ● Environment and Energy Laboratory established<br>● Liaison Meeting of Affiliated Companies established<br>● Environment Report began to be issued   |
| 1994 | ● Committee for Company-Wide Promotion of Energy-Conservation established  | ● Meeting of Persons in Charge of Environment started   |   |
| 1996 | ● Specified CFCs and trichloroethane completely eliminated from the company  | ● The Hiratsuka Works acquired ISO14001 certification<br>● The Kambara Works acquired ISO14001 certification<br>● The Osaka Works acquired ISO14001 certification |   |
| 1997 | ● Promotion Team for the Reduction of Industrial Waste started   | 2001  | ● Medium-Range Plan for Environment Preservation Activities formulated<br>● The Shinagawa Works acquired ISO14001 certification<br>● Environment-Related Accounting started to be disclosed |
| 1998 | ● "Furukawa Electric Basic Environmental Policy" formulated<br>● Central Committee for Environment Control established<br>● Committee for the Development of Environment-Friendly Products established | 2002  | ● The Nikko Works (Kiyotaki District) acquired ISO14001 certification   |

## Organization and Structure



## Medium-Range Plan for Environment Preservation Activities

Based on the Basic Concept and Activity Guidelines, we have formulated the Medium-Range Plan for Environment Preservation Activities 2002. The plan organizes our environmental tasks and sets out specific items of environment preservation activities including targets by the end of fiscal 2002. Furthermore, we evolve the plan into itemized targets and activities in focus for each year, which are incorporated in the Environmental Management System of every Works to be pursued actively.

### Medium-Range Plan for Environment Preservation Activities 2002

- Acquisition of ISO14001 certification by all the Works and their consecutive upgrading
- Emission reduction of toxic substances and strengthening of control against chemical substances
  - \* Complete elimination of the use of chlorinated organic compounds
- Reduction of industrial wastes
  - \* 40 % reduction over fiscal 1995
  - \* Launching actions toward Zero Emission
- Promotion of energy conservation activities
  - \* Annual reduction of 1 % in energy intensity per unit product (EIPUP) based on formulation of mid- to long-range energy conservation plan
- Enrichment of environmental education, promotion of information disclosure and participation in communal activities
- Promotion of development of products with reduced environmental impact

## Acquisition of ISO14001 Certification

In fiscal 2001 the Shinagawa and Nikko Works (Kiyotaki District) acquired the ISO14001 certification for Environmental Management System. For fiscal 2002, the Fukui, Yokohama R&D Laboratories, Oyama, Shiga and Nikko (Sheet Plant) Works are building up the system to acquire the certification, thereby completing the certification acquisition by all the twelve Works and Laboratories.

With respect to the affiliated companies, 13 companies have acquired the certification concerning 18 items, followed by many others that are building up the system.

Year	Works / Laboratories	Agency	Certificate No.
FY 1998	Chiba	DNV	EMSC-1208
	Mie	JACO	EC98J1097
FY 2000	Hiratsuka	DNV	EMSC-1699
	Kambara	JSA	JSAE315
	Osaka	DNV	EMSC-1114
FY 2001	Shinagawa	DNV	00372-2001-AE-KOB-RvA
	Nikko (Kiyotaki District)	DNV	1851-2002-AE-KOB-RvA/JAB
FY 2002	Fukui		
	Yokohama R&D Laboratories		
	Oyama		
	Shiga		
	Nikko (Sheet Plant)		

## Company-Wide Environmental Monitoring

Within the framework of company-wide Environmental Management System, the in-house supervision of all the Works with regard to the achievements in the environment preservation activities and the progress of addressing environmental tasks was carried out twice by the Safety, Environment and Health Promotion Department.

As the results of the supervision, the risk evaluation of environmental tasks at each Works was organized to identify the tasks of large potential risk, and the Works concerned was urged to address avoiding such risks.

## Support for Environment Preservation Activities of Affiliated Companies

It is essential to promote environment preservation activities on an integral basis inclusive of affiliated companies. In accordance with such a view, the Liaison Meeting of Affiliated Companies was founded in June 2000 to be held twice a year. In the meeting, latest environmental regulations are confirmed, environmental activities among the affiliated companies are understood, information on environmental tasks are shared, and environmental technologies are introduced. In fiscal 2001 the meeting was held in August and March.

### Meeting held in August 2001, attended by 35 affiliated companies with 43 representatives

- \* Introduction of Furukawa Electric's environment preservation activities in 2001 and targets of each affiliated company.
- \* Case report on environmental activities: Four companies made a report on case studies, representing all the affiliated companies.
- \* Summary of laws recently issued: Law Concerning Special Measures against PCB, Fluorocarbons Recovery and Destruction Law, etc.

### Meeting held in March 2002, attended by 36 affiliated companies with 45 representatives

- \* Introduction of Furukawa Electric's environment preservation activities in 2001 together with targets and concepts for 2002.
- \* Initiatives among affiliated companies: PCB notification, Green purchasing, Acquisition of ISO14001 certification, Pollutant Release and Transfer Register Law (PRTR Law) and control of industrial wastes, etc.
- \* Case report on environmental activities among affiliated companies: Acquisition of Integrated Quality and Environment Certification.
- \* Summary of environmental laws: Law Concerning Special Measures against PCB, Fluorocarbons Recovery and Destruction Law, Additional wastewater regulation in the Water Pollution Control Law, Trends in the Law against Soil Pollution, COP 7, etc.

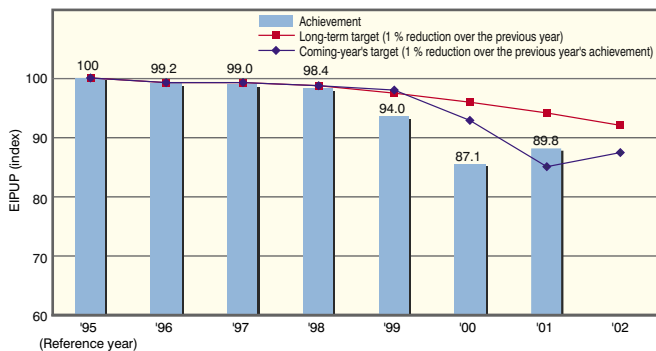
# Environment Preservation Initiative

## Energy-Conservation and Global Warming Prevention

### Progress, Organization and Targets of Energy-Conservation Activity

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 founded in April 1994 initiating company-wide activities under the participation of all plants involving those that are not designated as the energy management factory. In 1997 the company-wide energy conservation index was changed to EIPUP specified in the law, and the target was set to "1 % reduction over the previous year in terms of EIPUP".

#### Changes in the Company-Wide EIPUP



Furukawa Electric's production volume decreased substantially last fiscal year. The production volume of eight out of nine Works that are designated as Type 1 Designated Energy Management Factory decreased to 71~94 %. In terms of EIPUP, six Works declined by 1.4~15 %. Although efforts were made to save energy by such measures as improvement in air-mixing ratio for combustion, reduction of queuing time loss and productivity improvement, the weighted average of EIPUP of the entire company degraded by 1.47 % over the previous year. With reference to fiscal 1995, however, the current EIPUP is 89.8 % showing an annual improvement rate of 1.8 % on average.

### Results of Energy-Conservation Activities in Fiscal 2001

Nine Works underwent plant inspection by the field offices of the Regional Bureaus of Economy, Trade and Industry as Type 1 Designated Energy Management Factory. The inspection was carried out for the performance of fiscal 2000, and an evaluation was made respectively as to "improvement in EIPUP", "if it deteriorated, was attribution analysis appropriately done?" and "whether or not energy was used in compliance with the criterion judgement in the Energy Conservation Law?".

As a result, all the nine Works passed the inspection as shown in the table below. We think the implementation of energy conservation measures and the formulation of management standards per each facility were appreciated together with the

use of energy in compliance with such standards.

Some Works failed to achieve an annual reduction of 1 % in EIPUP, because product segmentation changed to increase in energy-intensive products.

Hereafter, we will enrich the items and contents of these standards, thereby making efforts to promote effective use of energy.

Name of Works	Date of inspection	Score		METI Field Office in charge	Notes
		Thermal	Electrical		
Mie	Aug. 2, 2001	80	89	Chubu	
Chiba	Sept. 25, 2001	89	82	Kanto	
Nikko (Sheet Plant)	Oct. 11, 2001	81	92	Kanto	
Osaka	Jan. 10, 2002	92	94	Kinki	
Fukui	Jan. 17, 2002	100	98	Kinki	
Shiga	Jan. 25, 2002	—	99	Kinki	Thermal energy excluded
Nikko (Kiyotaki District)	Feb. 7, 2002	93	94	Kanto	
Hiratsuka	Feb. 14, 2002	—	98	Kanto	Thermal energy excluded
Oyama	Feb. 28, 2002	96	96	Kanto	

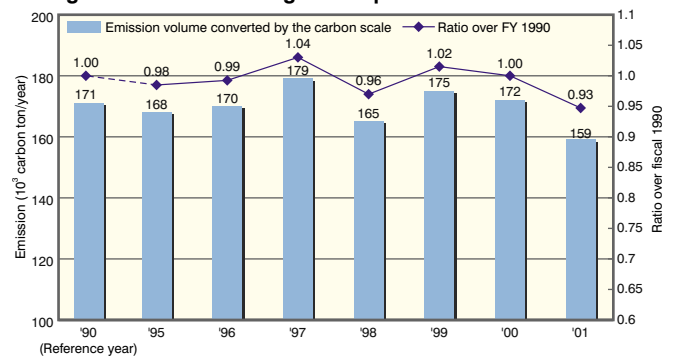
Pass score is 80 point

### Changes in Global Warming Gas Impact

CO<sub>2</sub> emission converted by the carbon scale for fiscal 2001 decreased considerably to 93 % of fiscal 1990.

This is due to the decrease in the energy use caused by production reduction, and to the energy-conserving measures promoted heretofore.

#### Changes in Global Warming Gas Impact



The carbon conversion scale used is the one announced by the Japan Business Federation. The scale for fiscal 2000 is used since a new scale for fiscal 2001 is not announced yet.

### Energy-Conservation Activities in Future

We intend to achieve saving of EIPUP by 1 % or more every year, through promoting energy-conservation activities such as provision of management standards and the like that conform to the judgement of the Energy Conservation Law.



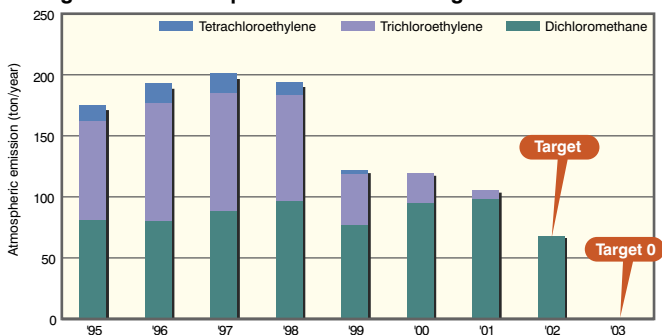
## Reduction of Organic Chlorides

In fiscal 2001, in succession to fiscal 2000, we exercised self-imposed control to reduce the atmospheric emission of organic chlorides by 80 % compared to fiscal 1995.

Replacement of cleaners by their substitutes was delayed due to quality problems, so that the reduction for fiscal 2001 was 40 %, which was insufficient to achieve the target. But trichloroethylene was eliminated in December 2001 following the elimination of tetrachloroethylene in fiscal 2000, leaving only dichloromethane for elimination.

For fiscal 2002, considering the working environment and the importance of environmental influences of using these organic chlorides, reduction activities will be promoted aiming at complete elimination of these substances by the end of the fiscal year, as was scheduled in the initial plan.

**Changes in the Atmospheric Emission of Organic Chlorides**

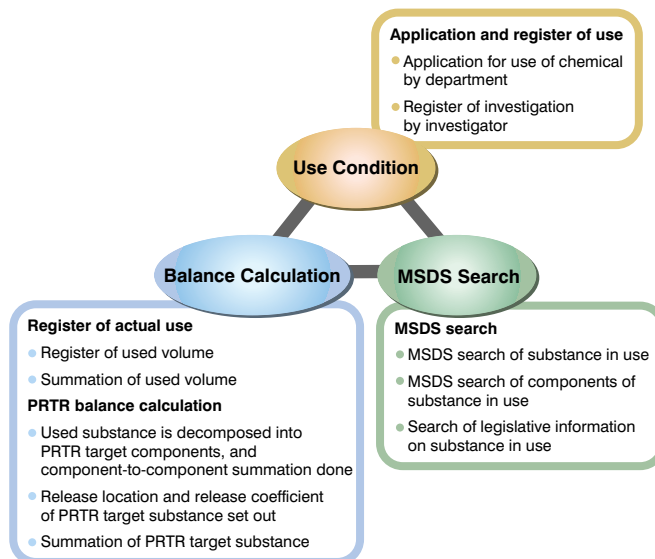


## Control of Chemical Substances

Recently, the extensive regional pollution by chemical substances has become a matter of public concern such as acid rain, ozone layer depletion, global warming and endocrine disrupters. In view of the importance of controlling chemical substances, Furukawa Electric has long introduced appropriate in-house controls on chemicals, thereby promoting toxic chemical substance reduction activities including elimination of ozone layer depletion substances and reduction of organic chlorides.

Beginning in fiscal 2001, we have formulated administrative provisions for chemicals to consolidate the management of the company-wide use of chemicals, whereby a scheme was established for managing the kind, handling volume, release and transfer volume of chemicals used in the entire company, and its supporting system was configured. This made it possible for everyone in the company to search and browse the material safety data sheet (MSDS) of chemicals in use, thus allowing for appropriate treatment of a given substance. Using the component-based management of chemicals enabled by this scheme, in addition to the risk evaluation of chemicals, we will promote further the reduction activities of toxic chemicals.

## Outline of Chemical Substance Control System



The PRTR Law came into force in April 2000, strengthening the control on chemical substances. In fiscal 2001, notification of release and transfer volume of target substances became compulsory. The table below shows the annual summations of release and transfer volume of major substances, covering all the Works. It should be noted that in reality they are controlled for each Works respectively in compliance with the PRTR Law.

**Changes in Handling, Release and Transfer Volume**

Name of chemicals	Handling volume (ton/year)			Release volume (ton/year)			Transfer volume (ton/year)		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
Toluene	674	576	471	400	350	312	1	3	54
Dichloromethane	96	136	158	75	95	99	0	0	60
Trichloroethylene	39	27	9	32	23	6	2	3	0
Xylenes	604	479	406	50	45	16	1	1	1
Others	211	333	3,108	9	9	9	73	56	77
Total	1,624	1,551	4,152	565	521	442	77	63	192

\* The method of summation for fiscal 2001 is different from that of fiscal 2000 and before in that:

1. Summation for fiscal 2000 and before involves 172 substances that the Japan Business Federation defined on a self-imposed basis. For fiscal 2001, 435 substances specified in the law as the first and second kind are involved.
2. Summation for fiscal 2000 and before excludes the transfer volume of industrial wastes that were reused.



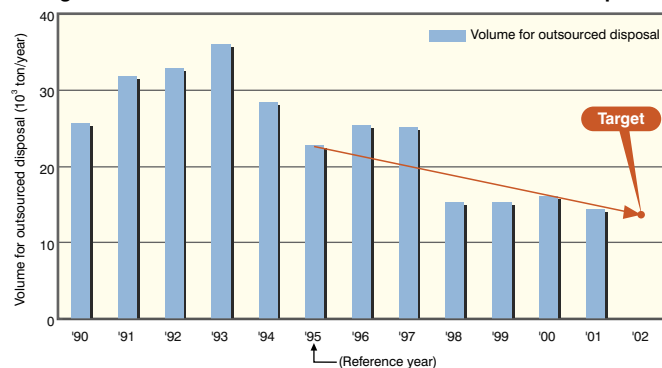
## Reduction of Industrial Wastes and Zero-Emission Activities

### Industrial Wastes

We have been pursuing reduction activities of outsourced disposal of industrial wastes since 1993. In 1996 a strengthened interim goal was formulated to reduce the volume by 40 % with reference to fiscal 1995 by fiscal 2002, and in accordance with this, the target for fiscal 2001 was set as a 35 % reduction.

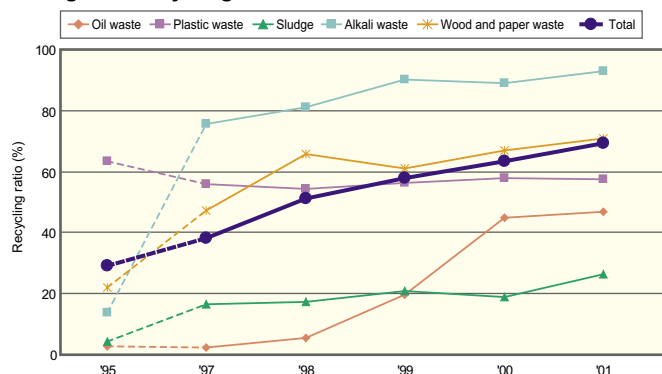
The target for fiscal 2001 has been achieved due to the improved recycling ratio and the decreased production volume. Because the latter factor contributed to the target fulfillment to a great degree, we will promote reduction activities further taking into account possible recovery of production volume in the future.

#### Changes in the Volume of Industrial Waste for Outsourced Disposal



The recycling ratio satisfactorily improved to about 70 % in fiscal 2001, which results from the successful recycling of sludge, alkali waste and wood and paper waste. On the other hand, recycling of oil waste and plastic waste is seeing limited success due to low oil fraction or concern about dioxin production.

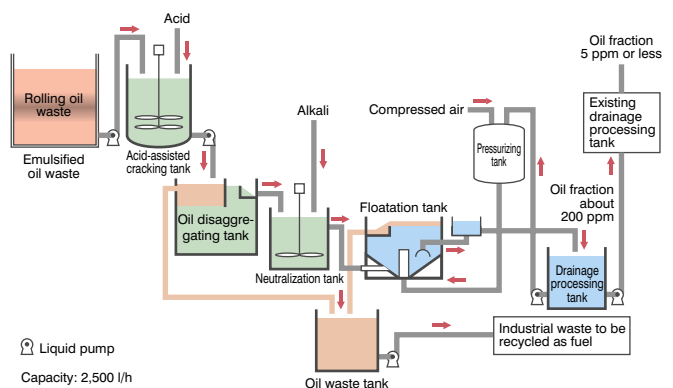
#### Changes in Recycling Ratio



### [Example of Recycling]

Below is described a recycling process for rolling oil.

Because modern high-performance rolling oil for aluminum is excellently emulsified, it hardly separates into oil and water when it is left at rest. Thus, most of the rolling oil waste are usually disposed of as industrial waste. Furukawa Electric has succeeded in developing a process where the emulsified oil waste is disaggregated to yield oil scum using an acid-assisted cracking apparatus that is based on the company's proprietary technology. The process is patented. The separated oil scum is disposed of as industrial waste, on an outsourcing basis, to be recycled as fuel. Hereafter, we plan to refine the oil scum within the company to use it as fuel.



### Zero-Emission Activities

The first stage of Zero-Emission Activities begins from fiscal 2002.

**The first stage of Zero-Emission Activities:**  
**To reduce the volume of industrial waste that is transported from the Works directly to the landfill lots by half with reference to fiscal 2000 by fiscal 2005.**

The following activities were carried out in fiscal 2001 in preparation for launching on the Zero-Emission Activities for fiscal 2002.

- \* Definition of Zero Emission
- \* Target setting of each Works' reduction and that of entire company
- \* Consciousness raising of employees

At the Chiba Works, slogans for the activity are printed on the paper cups used throughout the Works in an effort to raise the consciousness of employees.



Paper cup made of non-wood paper

## Situation of Soil and Water Pollution and Countermeasures

Furukawa Electric has been conducting soil and subsoil water pollution investigations, which are aimed at those Works where heavy metals or organic chlorides had been used before.

As a result, it was found that the soil in the premises of the Nikko Works and its company-owned peripheral areas was polluted by selenium, arsenic, lead and cadmium; and the subsoil water in the Works' premises by selenium, arsenic and lead. These facts have been reported to the public administration, and are under in-depth examination. These cases of pollution evidently remain within the Works premises or its company-owned peripheral lands, having no influence on the outskirts. Moreover, this heavy metal pollution was apparently caused by leakage from the facility for a silver gathering process of copper refinery business that was discontinued in 1988. Therefore, there are no possibilities of new pollution. We will continue to disclose the situation of the pollution at our website.

### Data concerning Soil and Water Pollution at the Nikko Works

Works	Polluted object	Pollutant	Concentration (mg/L)	Ratio over environmental reference (times)	Investigation and countermeasures
Nikko Works	Soil in the premises	Selenium	43	4,300	Under in-depth examination
		Arsenic	1.5	150	
		Lead	0.22	22	
		Cadmium	0.019	1.9	
	Subsoil water in the premises	Selenium	3.5	350	Under in-depth examination
		Arsenic	0.086	8.6	
		Lead	0.015	1.5	
Soil in company-owned lands	Selenium	0.54	54	Under in-depth examination	
	Arsenic	0.08	8		

## Disposition and Storage Situation of PCB

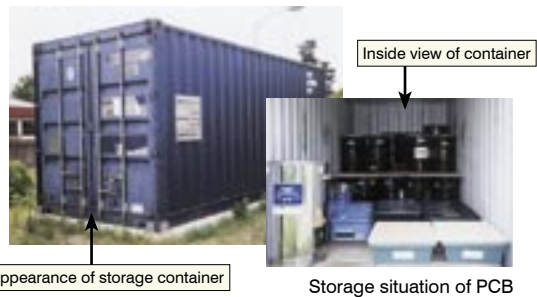
Furukawa Electric has been notifying and storing polychlorinated biphenyl (PCB) waste appropriately in compliance with the law, in which high-temperature incineration has hitherto been the only disposal method approved for the material.

New detoxifying disposal methods other than the high-temperature incineration method were approved afterward, followed by the enforcement of the Law Concerning Special Measures against PCB in July 2001, whereby it became compulsory to detoxify and dispose of PCB waste in fifteen years.

From December 2001 through February 2002, the Chiba Works detoxified, under permission of the authorities concerned, 1,500 liter of PCB insulation oil that had been stored in the Works using a new chemical process. The chemical process is called "Ontario Hydro Technologies' Sodium Dispersion method" (OSD method) and is held by Nuclear Fuel Industries, Ltd., an affiliated company of Furukawa Electric. It does not emit any wastewater nor waste gas associated with the treatment, thus giving low environmental impact. The PCB waste in the other Works will be properly stored and controlled until facilities for disposal are ready.



Full view of PCB disposal facility at Chiba Works



Storage situation of PCB

## Green Purchasing

Green purchasing is being implemented in the three fields as follows:

1. With respect to the raw material, parts and subsidiary material which constitute major environmental impacts in the framework of the Environmental Management System of each Works, we ask the supplier of these materials reduction of toxic substances, simplification of packages, improvement in recyclability and strengthening environmental management.
2. In order to purchase and use such raw material, parts and subsidiary material with reduced environmental impact, Furukawa Electric has been implementing process improvement and product development such as:
  - \* Fuel for melting furnace or boiler has been shifted from heavy fuel oil to diesel oil
  - \* Detergents for metal products have been changed from organic chlorides to hydrocarbon detergents or ionized alkaline water
  - \* Offer of products using recycled plastics or halogen-free plastics
3. We are promoting vigorous purchase of the 150 procurement items specified in the Law on Promoting Green Purchasing.

## Initiatives in Logistics

We are addressing the issue of upgrading logistics in view of reducing environmental impact and energy conservation.

### Promotion of Recycling and Reuse

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 plastics 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.

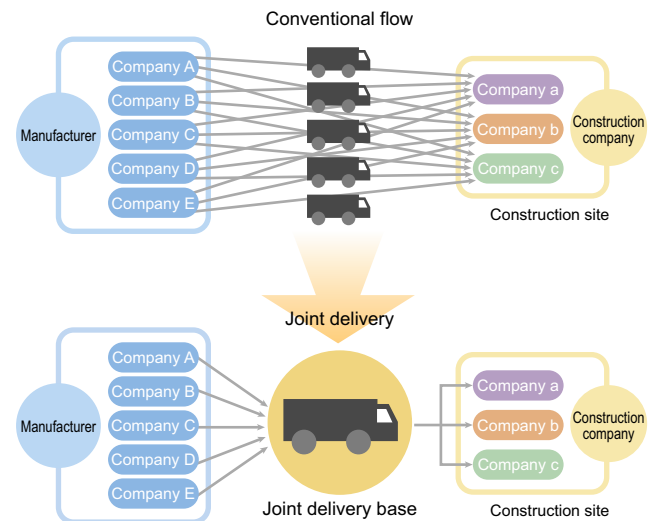
Furukawa Electric has developed further an environment-conscious cable delivery drum named "KANTAN KUN". The drum is designed essentially based on the concept of 3Rs, i.e., Recycle --steel is used to permit easy recycling of resource; Reuse --ease of assembly and disassembly enables repeated use; and Reduce --being comprised of minimal parts, the drum can reduce space in keeping and transportation when disassembled after use. More specifically, the cable drum reduces to one fifth of its original volume when disassembled, permitting single-handed carry and ease of transportation and handling together with efficient storage and keeping. Thus it may be said this cable drum is, along with the plastic drum mentioned above, a new type of drum that can contribute to resource and energy conservation.

### Joint Transportation and Delivery

The Japanese Electric Wire & Cable Makers' Association (JCMA) has introduced a joint transportation and delivery program of cable aimed at large-scaled construction sites in the core metropolitan areas, in which we participate to reduce the number of delivery vehicles to the sites. In fiscal 2001, we covered five sites including ongoing ones mainly in the Tokyo area, and it is estimated that the number of delivery vehicles was saved by 40~50 % compared to conventional cases. Major sites covered include "Marunouchi Building" and "Shiodome D Minami-Gaiku Mansion".

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

### Improvement in Transportation of Electrical Wire



### Improvement of loading efficiency

Expansion of mixed loading and use of large-sized cars is promoted to reduce the number of delivery vehicles by upgrading loading efficiency. In this program, a target is set to reduce the NOx emission volume due to product transportation cars in terms of ton-by-kilometer by 10 % in fiscal 2002 with respect to the first half of fiscal 2001.

### Reduction of Packaging Material

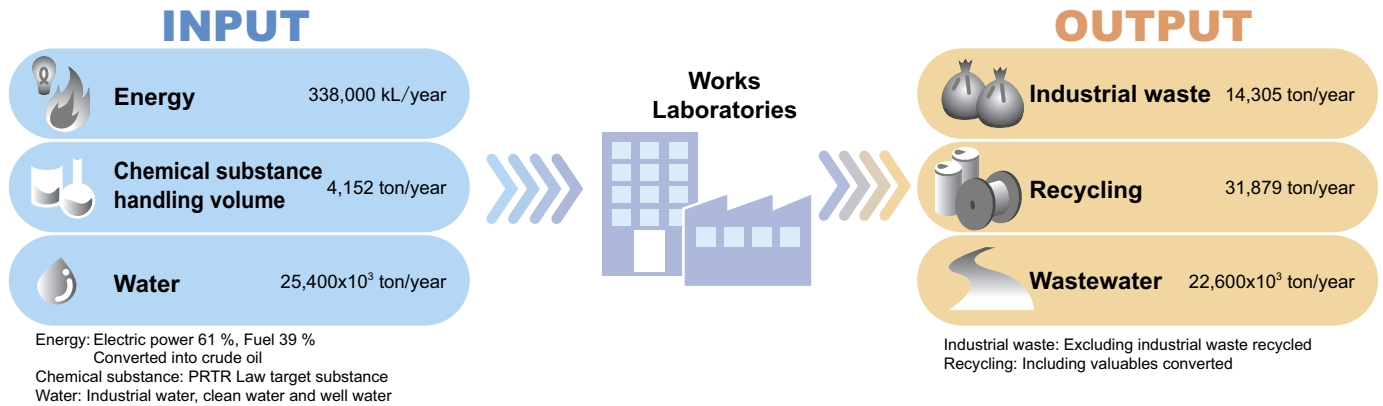
Packaging-less delivery of products at the logistics center in the form of drum or bundle is promoted to reduce the volume of packaging paper and wood.



Reusable cable delivery drum made of recycled cable material

# Data Regarding Environment Preservation

## Entire Company



## Data Regarding Environment Preservation at Each Works

Below is presented the data for atmospheric emission and wastewater quality of seven Works that are notified as designated works, including NO<sub>x</sub>, SO<sub>x</sub> and dust for the former, and pH, COD (or BOD), SS and n-h (mineral oil) for the latter.



### Chiba Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (Nm <sup>3</sup> /h)	Boiler	0.45	82 (ppm)	71 (ppm)	80 (ppm)
	Melting furnace	1.77	63 (ppm)	28 (ppm)	30 (ppm)
	Heating furnace				
SO <sub>x</sub> (Nm <sup>3</sup> /h)	Boiler	0.502	58 (ppm)	32 (ppm)	46 (ppm)
Dust (g/Nm <sup>3</sup> )	Boiler	0.05	0.01	0.003	0.007
	Melting furnace	0.39	0.065	0.018	0.018

Both NO<sub>x</sub> and SO<sub>x</sub> are under control by immutable weight, but daily management is done on ppm basis

### Mie Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	180	140	37	37
	Melting furnace	180	140	14	20
	Heating furnace	180	140	5	6
SO <sub>x</sub> (Nm <sup>3</sup> /h)	Boiler	0.6	0.5	0	0
	Melting furnace	41.6	33.3	0	0
	Heating furnace	2.2	1.8	0	0
Dust (g/Nm <sup>3</sup> )	Boiler	0.3	0.24	0.0015	0.002
	Melting furnace	0.3	0.24	0.002	0.002
	Heating furnace	0.2	0.16	0.0015	0.002

### Nikko Works (Kiyotaki District)

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	180	180	80	80
	Melting furnace	200	200	15	15
	Dryer furnace	300	250	18	20
SO <sub>x</sub> (K value)	Boiler	17.5	17.5	0.62	0.62
	Melting furnace	17.5	17.5	2.01	2.08
	Dryer furnace	17.5	17.5	0.13	0.17
Dust (g/Nm <sup>3</sup> )	Boiler	0.3	0.3	0.002	0.002
	Melting furnace	0.2	0.2	0.001	0.001
	Dryer furnace	0.5	0.2	0.011	0.018

### Osaka Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	150	120	11	12
	Melting furnace	200	160	10	14
	Heating furnace	170	144	12	12
SO <sub>x</sub> (K value)	Boiler	1.17	1.17	0	0
	Melting furnace	1.17	1.17	0	0
	Heating furnace	1.17	1.17	0	0
Dust (g/Nm <sup>3</sup> )	Boiler	0.1	0.08	0.004	0.006
	Melting furnace	0.2	0.16	0.016	0.027
	Heating furnace	0.25	0.2	0.008	0.014

### Fukui Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	120	110	81	99
	Melting furnace	120	110	82	120
	Heating furnace	120	110	40	63
	Dryer furnace	110	100	23	38
SO <sub>x</sub> (ppm)	Boiler	380	50	5	5
	Melting furnace	160	130	24	57
Dust (g/Nm <sup>3</sup> )	Boiler	0.1	0.05	0.005	0.005
	Melting furnace	0.2	0.16	0.008	0.014
	Heating furnace	0.12	0.1	0.005	0.005
	Dryer furnace	0.12	0.08	0.013	0.02

### Nikko Works (Sheet Plant)

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	230	230	54	74
	Melting furnace	180	150	56	59
	Heating furnace	200	160	17.5	17.5
SO <sub>x</sub> (K value)	Boiler	17.5	14.5	0.47	0.59
	Melting furnace	17.5	14.5	0.17	0.27
	Heating furnace	17.5	14.5	0.04	0.04
Dust (g/Nm <sup>3</sup> )	Boiler	0.25	0.25	0.03	0.04
	Melting furnace	0.3	0.25	0.03	0.05
	Heating furnace	0.25	0.25	0.05	0.05

### Oyama Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	150	120	100	101
	Melting furnace	180	180	168	173
	Heating furnace	130	120	117	130
SO <sub>x</sub> (K value)	Boiler	7	1	0.03	0.03
	Melting furnace	7	1	0.1	0.11
	Heating furnace	7	1	0.07	0.07
Dust (g/Nm <sup>3</sup> )	Boiler	0.3	0.1	0.007	0.011
	Melting furnace	0.2	0.1	0.016	0.02
	Heating furnace	0.2	0.1	0.003	0.004



## Wastewater Quality



### Chiba Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.0 ~ 9.0	5.0 ~ 9.0	7.9	8.2
COD (mg/ℓ)	15	15	6.1	9.6
SS (mg/ℓ)	20	20	3.9	3.9
n-h (mineral oil) (mg/ℓ)	2	2	0.2	0.2

### Mie Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.5 ~ 8.5	7.3	8.2
BOD (mg/ℓ)	10	4	2	4.1
SS (mg/ℓ)	25	6	1	4.5
n-h (mineral oil) (mg/ℓ)	1	0.7	0.2	0.6

### Nikko Works (Kiyotaki District)

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.0 ~ 8.5	7.2	7.4
BOD (mg/ℓ)	25	16	1.9	2.5
SS (mg/ℓ)	50	20	2.7	9.5
n-h (mineral oil) (mg/ℓ)	5	0.5	0.4	0.5

### Osaka Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.7 ~ 8.7	5.7 ~ 8.7	7.5	7.9
BOD (mg/ℓ)	300	10	4.6	8
SS (mg/ℓ)	300	50	13	32
n-h (mineral oil) (mg/ℓ)	5	2	1.6	2

### Fukui Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.0 ~ 9.0	5.5 ~ 8.8	7.5	8.6
COD (mg/ℓ)	600	250	50	110
SS (mg/ℓ)	600	250	26	128
n-h (mineral oil) (mg/ℓ)	5	4.5	0.3	2

### Nikko Works (Sheet Plant)

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.5 ~ 8.5	7.6	8.3
BOD (mg/ℓ)	25	10	1.5	2.3
SS (mg/ℓ)	50	25	less than 0.1	less than 0.1
n-h (mineral oil) (mg/ℓ)	5	2.5	less than 1	less than 1

### Oyama Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.0 ~ 8.0	7.3	7.4
BOD (mg/ℓ)	25	20	2.9	4.9
SS (mg/ℓ)	50	30	9.8	16.4
n-h (mineral oil) (mg/ℓ)	5	2	0.5	0.5

## Environment-Related Accounting

### Cost of Environment Preservation

Unit : million yen

Category	Major contents	Amount of cost*
(1) Cost of environment preservation to suppress environmental impact caused by the production or service activities of business, generated within the business area (In house cost)	Pollution prevention, global environment preservation, resource recycling, etc.	3,194
(2) Cost of environment preservation 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.	421
(3) Cost of environment preservation associated with management activities (Management cost)	Construction, maintenance and management of environmental managing system, maintenance of environment preservation, measurement of environmental impact, etc.	791
(4) Cost of environment preservation associated with 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.	992
(5) Cost of environment preservation associated with social activities (Social activity cost)	Publication of information, greening, etc.	19
(6) Cost of environment preservation dealing with environmental impact (Environmental impact cost)	Assessment for environmental impact, inquiries and measures for soil contamination and groundwater, etc.	88
<b>Total</b>		<b>5,505</b>

\* The amount of cost excludes investment cost

### Investment and Research Costs

Unit : million yen

Environment-related investment	4,320
(Entire investment cost)	48,800
(Entire research cost)	17,100

### Economic Effects Associated with Environment Preservation Measures

Unit : million yen

Content	Amount
(1) Income gained by recycling	121
(2) Reduction in waste disposal costs through recycling	-59
(3) Reduction in energy costs through energy conservation	1,114
<b>Total</b>	<b>1,175</b>

### Physical Effects Associated with Environment Preservation Measures

Environmental impact	Amount	Reduction (over previous FY)
(1) Industrial waste (ton) *	14,305	1,907
(2) Energy thrown in (converted into crude oil) (kL)	338,000	28,000
(3) Emission of volatile organic chemicals (ton)	106	10
(4) CO <sub>2</sub> (C-ton)	159,286	12,803
(5) SO <sub>x</sub> (ton)	74	-13
(6) NO <sub>x</sub> (ton)	881	424
(7) Dust (ton)	63	42

\* Excluding industrial waste recycled



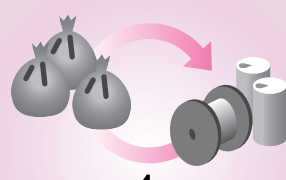
# Environment-Friendly Products and Recycling Technology

## Environment-Friendly Products

To protect the environment and contribute to the realization of a sustainable society, 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-harmonized" products--products that at every stage, from materials selection, manufacture and use to distribution and disposal, will be non-toxic and of low environmental impact.

### Environment-Friendly Products




**1**  
Toward Realization of  
Recycle-Oriented Society

Product	Use	Feature
■ Recycled aluminum can stock	Cans	Recycling
■ Recycled aluminum distribution wire	Electrical wire	Recycling
■ Underground ducts (C.C. Box, Information Box)	Cable laying	Reuse of material
■ Environment-conscious cable delivery drum (KANTAN KUN)	Cable delivery	Reuse
■ Biodegradable foamed material (BIO ACE)	Packaging material	Biodegradability
■ Recyclable pallet	Conveyance	Reuse of material
■ Weed barrier sheet	Sheet	Reuse of material




**2**  
Toward Reduction of  
Environmental Impact

Product	Use	Feature
■ ECO wires (ECO-ACE, ECO-BEAMEX)	Home appliances, Power distribution, Communication	Halogen- and lead-free
■ Lead-free electrical wire	Automobile	Lead-free
■ Lead-free plated parts for electronic equipment	Electronic parts	Lead-free
■ ECO bus duct	Power distribution	Halogen-free
■ Indoor conduit of flame-retardant resin (ECO-PLAFLEKY)	Indoor electrical wire laying	Halogen- and lead-free



**3**  
Toward Prevention of  
Ozone Layer Depletion

Product	Use	Feature
■ CFC-substitute compatible magnet wire (HPWR II)	Home appliances, automobile	Compatibility with CFC substitutes
■ Nitrogen-atmosphere reflow oven (SALAMANDER)	Electronic equipment	Elimination of CFCs
■ Aluminum sheet coated with high-performance resin (FUSCOAT)	Electronic equipment	High lubrication, elimination of cleansing
■ Copper tube compatible with CFC substitutes (FMGT / Furukawa SuperClean Tube)	Home appliances	Compatibility with CFC substitutes



**4**  
Toward Prevention of  
Global Warming

Product	Use	Feature
■ High-reflectivity foamed sheet (MC-PET)	Lighting	Energy conservation
■ High-performance heat-exchanging material	Automobile	Lightweight, energy conservation
■ Application products of micro heat-pipe	Electronic equipment	Energy conservation
■ Solar photovoltaic system	Electric power	Clean energy
■ Deep sea solidification of CO <sub>2</sub>	Electric power plant	Reduction of CO <sub>2</sub>

### [Product Development in Future]

In future, new product development must take account of the environmental impact over the whole life of the product, and life cycle assessment (LCA) is a technique that is gaining wide acceptance. Furukawa Electric has already begun conducting

life cycle assessments in relation to the development of insulated cables and aluminum heat exchangers. The results will be applied for material selection and manufacturing.

## 1 Toward Realization of Recycle-Oriented Society

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

### Recycled Aluminum Can Stock

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



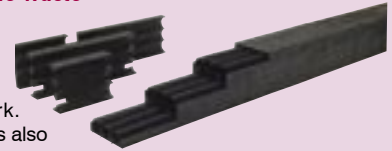
### Environment-Conscious Cable Delivery Drum "KANTAN KUN"

This is an environment-conscious cable delivery drum using steel to make resource recycling easy. It can be easily disassembled after use, and thus is reusable through assembly and disassembly.



### 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.



### 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.



### Vegetation Net for Civil Engineering Work "F-MAC SHEET"

This is a vegetation net for civil engineering work using ECO material. It comprises "TERRAMAC"™ of YUNITIKA LTD. and a sheet that contains seed and fertilizer. TERRAMAC is a poly-lactic-acid fiber made from vegetable resources of corn and the like through a chemical synthesis process based on lactic fermentation.



## 2 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.

### ECO Electrical Wire

These wires and cables use no halogens such as PVC, permitting ease of 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-ACE

ECO-BEAMEX

### Lead-Free Electrical Wire

No lead compounds are used as stabilizer for the insulation resin, eliminating concern about lead pollution when disposed of in landfills. They are already in use for automotive wire.



### 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.



### Environment-Friendly 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.





## 3 Toward Prevention of Ozone Layer Depletion

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

### CFC-Substitute Compatible Magnet Wire "HPWR II"

These heat- and refrigerant-resistant windings are now in use in the compressor motors of air-conditioning and refrigerating systems using CFC-substitute refrigerants (HFC-407C, R410A, R134a).



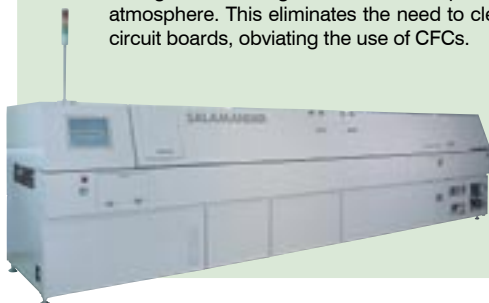
### Copper Tube for Use with CFC-Substitutes "FMGT", "Furukawa SuperClean Tube"

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.



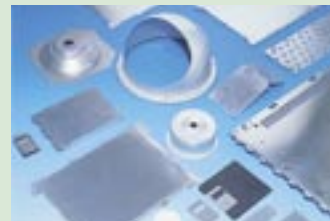
### Nitrogen-Atmosphere Reflow Oven "SALAMANDER"

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.



## 4 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.

### Solar Photovoltaic System

This clean distributed power generating system uses solar batteries to convert the sun's rays directly into electricity.



### 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 conservations.



### High-Reflectivity Foamed Sheet "MC-PET"

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<sub>2</sub> emissions.



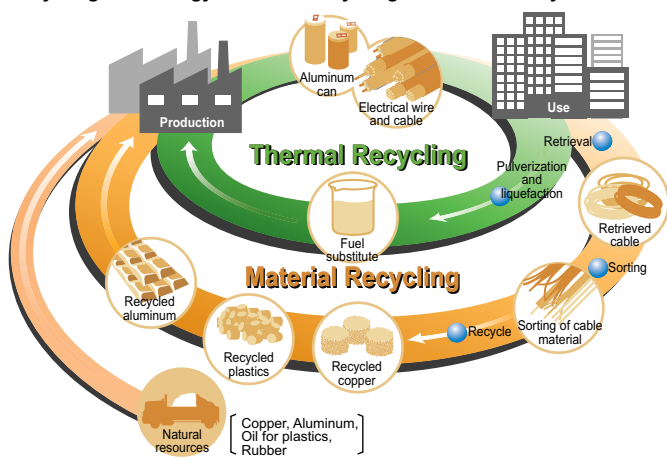
## Recycling Technology

### Recycling System of Electric Wire and Cable

Recycling systems of used power cables and communication cables from customers have been established, thus enabling reuse of conductors mainly.

Recycled cables are disassembled and separated material to material, and subsequently reused. Copper and aluminum from conductors are 100 % reused, while covering materials are reused as recycled plastics and fuel achieving a considerable degree of reusability.

### Recycling Technology Aimed at Recycling-Oriented Society



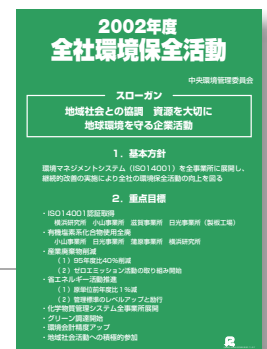
### National Project for the Development of Recycling Technology

As a member of the electrical wire and cable industry as well as the light metal rolled products industry, Furukawa Electric participates in the national projects, thereby promoting the development of recycling technologies in terms of electric wire sheathing material and aluminum, respectively. 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 (JRMC) and seven manufacturers of aluminum rolled products to embark in 1993 on a 10-year project to develop technology to promote aluminum recycling.

Furukawa Electric manufactures a broad range of products and related technologies, from electrical wire and cable to electronic parts and plastic and metallic materials, and we will mobilize all of our expertise to advance solutions to problems of the environment.

## Environmental Communicative Activities



## Environmental Education

Active commitment of all the employees is essential for environment preservation activities of a corporate to be successful. We carry out, therefore, a systematic education program as shown below that is designed to be suitable for the role of each employee. The employees are also encouraged to actively take part in the community-based environment preservation activities so that they acquire a broad range of information on environment preservation.

Content of education	Intended employee	Frequency
Education based on ISO14001		
General education	All employees	Once a year
Special education and training	Employee engaged in special work	At needs
New employee education	New employee	Once a year
Core employee education	Core employee	Once a year
Qualification course for internal supervisor	Candidate for internal supervisor	Three times a year
Qualification course for internal supervisor at affiliated company	Candidate for internal supervisor at affiliated company	Once a year
Level-up course for internal supervisor	Internal supervisor	Once a year
EMS regular seminar	EMS promoter	Once a year

## 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 environment preservation activities, Basic Environmental Policy and major activity targets for fiscal 2002.

In June, which is designated as the month of environment preservation, the chairman of the Central Committee for Environment Control delivered a message to all the Works about the significance of the month of environment 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 environment 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 a night patrol to confirm environmental influences on the surrounding areas.

### Publicity Activities

#### ●Furukawa Electric's Web-Site

Furukawa Electric presents the company's initiatives about the environment in the form of "Environment Preservation Initiative" (in Japanese) and "Environmental Actions" (in English), in addition to this "Environment Report 2002" and other environmental reports in PDF.

#### ●Exhibitions

Major exhibitions for fiscal 2001 we participated in are as follows:

Exhibition	Environment-related exhibits
INTERNEPCON JAPAN	Nitrogen-atmosphere reflow oven (SALAMANDER)
Automotive Engineering Exposition 2001	Environment-conscious products, Weight reduction technology of wire harness for electric vehicles
Sign and Display Show	High-reflectivity foamed sheet (MC-PET)
Electrical Construction Equipment and Material Fair	Information Box, C. C. Box, Weed barrier sheet, Halogen-free electrical wire (ECO-ACE, ECO-BEAMEX, EM-EEF), Halogen-free insulating tape (Non-halo F-CO), Splicing material for ECO material cables
SEMICON Japan 2001	UV-curable adhesive tape for semiconductor manufacturing (Halogen-free UV tape)
Motor Show	Halogen-free electrical wire (ECO-ACE), State of charge sensor (for engine idling suppression), Aluminum electrical wire (for weight reduction and fuel efficiency improvement)



Electrical Construction Equipment and Material Fair



SEMICON Japan 2001

## Alignment with Local Communities

In order to promote coexistence with local communities, we actively participate in such festivities as ECO fair and industry fair that are held under the sponsorship of local governments, and we offer them occasions of free access to our playgrounds.

Furthermore, considering that coexistence with the local communities is an important issue for enterprise, we include a theme of "active participation in the local communities' activities" as one of the major targets of company-wide environment preservation activities for fiscal 2002, thereby promoting such activities.



Free access to the playgrounds is offered (Hiratsuka Works)



Planter using recycled cable drum is exhibited at the Yawata coastal area fair (Chiba Works)



Scavenging the street in peripheral areas (Yokohama R&D Laboratories)

# Outline of the Company

(As of March 31, 2002)

Name The Furukawa Electric Co., Ltd.  
 Founded 1884, reorganized 1920  
 Capital 59.2 billion yen  
 Net Sales 465 billion yen, fiscal 2001  
 Employees 8,240  
 Head Office 6-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8322, Japan  
 Tel: +81-3-3286-3001

## Outline of Facilities Addressing the Acquisition of ISO14001 Certification

Name	Place, Phone	Major products
Chiba Works	6, Yawatakaigandori, Ichihara-shi, Chiba Pref., 290-8555 Tel: +81-436-42-1601	Copper wire, power cable, optical fiber cable, telecommunications cable, electronic appliance wire, erbium-doped optical fiber amplifiers, optical devices, optical semiconductor devices, MT connector, optical fiber fusion splicers
Mie Works	20-16, Nobono-cho, Kameyama-shi, Mie Pref., 519-0292 Tel: +81-5958-5-1111	Copper and copper alloy strip, copper wire rod, copper wire, magnet wire, optical fiber cable, automotive components
Hiratsuka Works	1-9, HigashiYawata 5-chome, Hiratsuka-shi, Kanagawa Pref., 254-0016 Tel: +81-463-21-8201	Magnet wire, insulated wire, power cable equipment, communications equipment, optical equipment, optical network systems, plastic products
Nikko Works (Kiyotaki District)	500, Kiyotaki-machi, Nikko-shi, Tochigi Pref., 321-1493 Tel: +81-288-54-0501	Copper products, contact materials, superconductive products
Nikko Works (Sheet Plant)	1 Kiyotakisakuragaoka-machi, Nikko-shi, Tochigi Pref., 321-1443 Tel: +81-288-54-0567	Aluminum alloy plate / strip / forged products, memory disk materials
Osaka Works	6, Doicho 7-chome, Amagasaki-shi, Hyogo Pref., 660-0083 Tel: +81-6-6411-7800	Copper and copper alloy pipe / strip, sheathed copper tube, finned tube, heat-pipes
Kambara Works	5446, Kambara, Kambara-cho, Ambara-gun, Shizuoka Pref., 421-3203 Tel: +81-543-85-4175	Overhead transmission wire, condenser tube materials
Shinagawa Works	13-14 Higashishinagawa 4-chome, Shinagawa-ku, Tokyo, 140-0002 Tel: +81-3-3474-0681	Design, manufacturing, installation and maintenance of power cable with accessories and water supply pipes
Fukui Works	21-1, Kurome, Mikuni-cho, Sakai-gun, Fukui Pref., 913-8588 Tel: +81-776-82-5840	Aluminum sheet of large width / can stock / foil / PS sheet / high-precision sheet / automotive panels / polished skin sheet
Oyama Works	560, Doto, Oyama-shi, Tochigi Pref., 323-0812 Tel: +81-285-23-2111	Aluminum extruded shapes, aluminum pipe / rod / wire, aluminum casting / forging
Shiga Works	172, Chofukuji-machi, Omihachiman-shi, Shiga Pref., 523-0021 Tel: +81-748-38-1300	Aluminum extruded shapes
Yokohama R&D Laboratories	4-3, Okano 2-chome, Nishi-ku, Yokohama-shi, Kanagawa Pref., 220-0073 Tel: +81-45-311-1211	Support for generic technologies, development of leading-edge technologies and new products

## Overseas Representative Offices

London Representative Office	3rd Floor, Newcombe House, 43-45 Notting Hill Gate, London W11 3FE, United Kingdom	Tel: +44-20-7313-5324	Fax: +44-20-7313-5310
Beijing Representative Office	2301, China World Tower No.1, Jian Guo Men Wai Avenue, Beijing 100004, P.R.China	Tel: +86-10-6505-4608/5485	Fax: +86-10-6505-4609
Shanghai Representative Office	Room 2009, Ruijing Building, No.205, Maoming South Road, Luwan Dist., Shanghai 200020, P.R.China	Tel: +86-21-6466-8145/4930	Fax: +86-21-6467-7943
North America Representative Office	900 Lafayette Street, Suite 506, Santa Clara, CA 95050, U.S.A.	Tel: +1-408-248-4884	Fax: +1-408-249-3094





## **Environment Report 2002**

# **THE FURUKAWA ELECTRIC CO., LTD.**

**Safety, Environment and Health Promotion Department**

6-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8322 Japan

Tel: +81-3-3286-3090 Fax: +81-3-3286-3598

<http://www.furukawa.co.jp/>



- 100% recycled paper is used.
- Soy-bean oil printing ink is used.