

## Overview of Consolidated Environmental Activities

Furukawa Electric has strengthened its environmental preservation activities together with affiliated companies as a corporate group. In fiscal 2002, we established the Liaison Meeting of Affiliated Companies and engaged in environmental preservation activities with the slogan, "We, as a corporate group, shall promote environmental preservation activities, aiming for reduction of environmental risks, and thereby contributing to society and improving the evaluation of our activities by society". In fiscal 2003, we established the Liaison Meeting for Consolidated

Environmental Management. This committee is used by the environmental administrators of affiliated companies not only to promote and support environmental activities but also to exchange information. We started compiling group-wide environmental data and reflecting the results of group activities. In addition, group's managers held seminars to improve employees' environmental awareness. Coordinated efforts from all the affiliated companies for environmental preservation helped us achieve encouraging results.

No.	Company Name	ISO14001	Handling volume	System	Soil temperature	Soil	PRTR	Organic chemicals	Industrial waste
1	Access Cable Company								
2	Asahi Electric Works, Ltd.								
3	INOUE MANUFACTURING CO., LTD.								
4	NTEC LIMITED								
5	F-CO CO., LTD.								
6	FCM CO., LTD.								
7	Okano Electric Wire Co., Ltd.								
8	OKUMURA METALS CO., Ltd.								
9	The Kyusyu Furukawa Electric Co., Ltd.								
10	KYOWA ELECTRIC WIRE CO., LTD.								
11	SUNSUNNY INDUSTRY CO., LTD.								
12	SHODENSHA CO., LTD.								
13	SEIWA GIKEN INC.								
14	TOTOKU ELECTRIC CO., LTD.								
15	T.H. FURUKAWA ELECTRIC CO., LTD.								
16	Nikkei Kakoh Co., LTD.								
17	Nippon Foil Mfg. Co., Ltd.								
18	Higashi Nihon Tanzou Co., Ltd.								
19	FURUKAWA ALTEC Co., Ltd.								
20	FURUKAWA INDUSTRIAL CABLE CO., LTD.								
21	FURUKAWA INFONET PRODUCTS CO., LTD.								
22	FITEC Corp.								
23	Furukawa Elecom Co., Ltd.								
24	The Furukawa Electric Engineering Service Co., Ltd.								
25	FURUKAWA AUTOMOTIVE PARTS INC.								
26	FURUKAWA COLOR ALUMINUM CO., LTD.								
27	Furukawa Circuit Foil Co., Ltd.								
28	Furukawa Sangyo Kaisha, Ltd.								
29	Broad Wireless Corporation								
30	FURUKAWA INDUSTRIAL PLASTICS CO., LTD.								
31	Furukawa Precision Engineering Co., LTD.								
32	FURUKAWA ENGINEERING & CONSTRUCTION INC.								
33	The Furukawa Battery Co., Ltd.								
34	FURUKAWA LOGISTICS CORP.								
35	FURUKAWA TECHNO MATERIAL CO., LTD.								
36	FURUKAWA LIFE SERVICE Inc.								
37	MIHARU COMMUNICATIONS INC.								
38	Yamada Keikinzoku Co., Ltd.								
39	Riken Electric Wire Co., Ltd.								
40	Riken Fitel Co., Ltd.								

Names of 40 affiliated companies

Commenced operations in April 2004. Former name: Furukawa C&B

### Environmental Management Activities

..... ISO14001 : Acquiring certification  
 Environmental accounting : Executing environmental accounting and publishing its results in this report  
 System : Establishing an environmental management system

Global warming..... Plans for reducing/eliminating greenhouse gases  
 Industrial waste..... Compiling industrial waste data  
 Organic chlorine compounds.....  
 Plans for reducing/eliminating organic chlorine compounds

PRTR..... Reporting to PRTR / listing chemical substances  
 Soil..... Investigating soil and groundwater pollution

## Common Targets on Consolidated Environmental Management Activities

We have formulated common targets on consolidated environmental management activities and have been collectively pursuing these targets as Furukawa Electric group since fiscal 2003. Of the seven targets we marked in fiscal 2003, we have already achieved three. We will continue working on these activities to attain the other four targets in the coming years.

(Common targets)

	Item	Target	Target year	Reference page
1	Acquiring ISO14001 certification	Acquiring ISO14001 certification	Fiscal 2005	27
2	Reduction of industrial waste	Zero emissions activities: reducing waste directly disposed at reclamation sites by 50% over fiscal 2000 Reducing industrial waste (except for the recycled portion) by 30% over fiscal 2000	Fiscal 2005 Fiscal 2005	29
3	Reduction of greenhouse gases	Reducing CO2 emissions by 5% over fiscal 2000 Reducing CO2 emissions by 10% over fiscal 2000 Totally discontinuing the use of HFC and PFC, and reducing SF6 atmospheric emissions by 50% over fiscal 2000	Fiscal 2005 Fiscal 2008 Fiscal 2005	29
4	Strengthening control and reduction of chemical substances	Reducing effluence of organic chlorine compounds by 50% over fiscal 2000 Total elimination of effluent organic chlorine compounds	Fiscal 2005 Fiscal 2008	29

(Items for which targets were achieved)

	Item	Target	Performance
1	Indexing the progress of environmental management	Executing environmental accounting (for fiscal 2002)	Introduced environmental accounting on five affiliated companies and reported their results in the Environmental Report 2003.
2	Establishing an environmental management system	Clarifying persons responsible for activities and organization of environmental management, and administrating data	Launched Liaison Meeting for Consolidated Environmental Management Collecting and compiling data for each company (see page 29)
3	Issuing environmental reports	Reporting information of the group's activities in fiscal 2002, in the Environmental Report 2003	Introducing summaries of business and activities of four affiliated companies on the page "Environmental Activities of Affiliated Companies"

## Environmental Accounting

We collected data from eight companies, five of which were listed in fiscal 2003 and have added three other companies this year. Like Furukawa Electric, the environmental accounting of the affiliated companies is also carried out in accordance with Environmental Accounting Guidelines by the Ministry of Environment. Costs and investment amounts for environmental preservation in fiscal 2003 totaled 500 million yen and 160 million yen respectively. Economic effects amounted to 170 million yen.

Scope of data collection	Companies newly included in present data	F-CO, Broad Wireless and FURUKAWA SANGYO KAISYA
	Companies included in previous and present data	TOTOKU ELETRIC, Nippon Foil Mfg. Furukawa Engineering & Construction, Furukawa Battery and Riken Electric Wire
Data collection period from	April 1, 2003 to March 31, 2004	

### Environmental Preservation Cost

Unit: million yen

Category	Major Activities	Costs
(1) Business area costs	Pollution prevention, global environment preservation, resource recycling, etc.	313
(2) Upstream/downstream costs	Retrieval and recycling of containers, packages and plastic products, etc.	78
(3) Administration costs	Establishment and maintenance of environmental management systems, maintenance for environmental preservation and measurement of environmental impact, etc.	83
(4) Research and development costs	Development of environmentally friendly products, etc.	49
(5) Social activity costs	Participation in official events for beautifying the environment, etc.	1
(6) Environmental remediation costs	Repair of corrosion-induced damages to underground wastewater piping	19
Total		543

### Investment and Research Costs

Unit: million yen

Investment and Research Costs	Amount
Environment-related investment	163
Total investment cost	2,000
Total research cost	2,000

### Economic Benefits Associated with Environmental Preservation Activities

Unit: million yen

Content	Amount
(1) Income from recycling	113
(2) Reduction in waste disposal costs through recycling	-24
(3) Reduction in energy costs through energy conservation	74
(4) Reduction in water purchase costs	11
Total	174

### Physical Benefits Associated with Environmental Preservation Activities

Discharge of Substances Having an Adverse Environmental Impact	Unit	Impact on the Environment	Reduction Volume (Change over previous year)
Industrial waste (excluding waste from recycled resources)	ton	902	285
Energy consumed (crude oil basis)	KL	55,598	-2,915
Water consumed	K.ton	980	-47
Emissions of volatile organic compounds	ton	0.4	2.7
CO <sub>2</sub> emissions	CO <sub>2</sub> -ton	87,667	-4,532
SO <sub>x</sub> emissions	ton	22	-4
NO <sub>x</sub> emissions	ton	387	-36
Soot emissions	ton	1.6	0.8

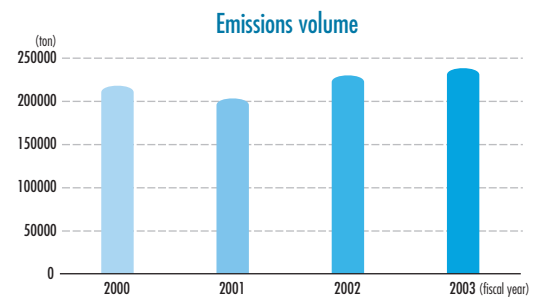
# Environmental Impact Data of Affiliated Companies

(affiliated companies: 40 [63 sites])

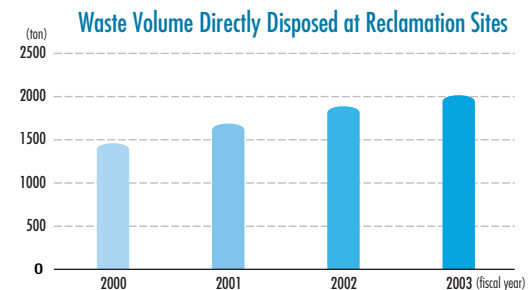
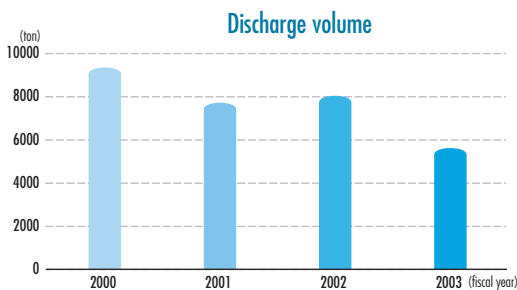
In fiscal 2003, we compiled data on the reduction of environmental impact generated by the activities of the Furukawa Electric group semi-annually. Environmental administrators from affiliated companies met to report progress and exchange information regarding environment improvement activities. The companies discussed trends regarding the environment in Japan and overseas and the latest revision of laws and regulations, ensuring compliance with these laws.

Furukawa Electric group has set common targets for the reduction of environmental impact. We have successfully reduced organic chlorine compounds such as trichloroethylene by 60% in fiscal 2003 compared to fiscal 2000. Unfortunately, volatile organic solvent waste volume directly disposed at reclamation sites and emissions of greenhouse gases are having an increasing trend in affiliated companies compared to Furukawa Electric where reduction of these pollutants progressed smoothly. This was mainly due to an increase in operations owing to economic recovery in Japan. Another reason is the shift of operations from Furukawa Electric to the affiliated companies. Thus, we believe that we should manage and improve the overall environmental preservation activities of the group.

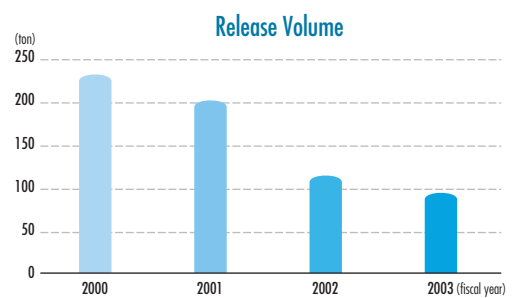
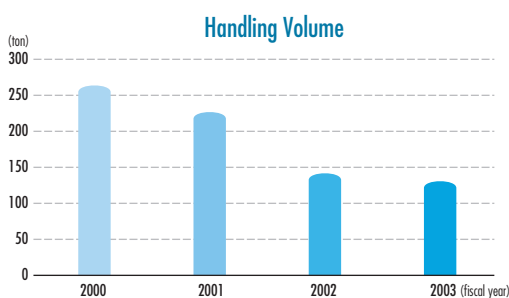
## Emissions of Greenhouse Gases



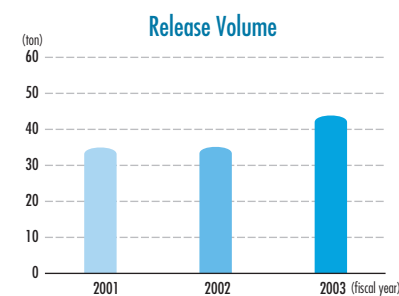
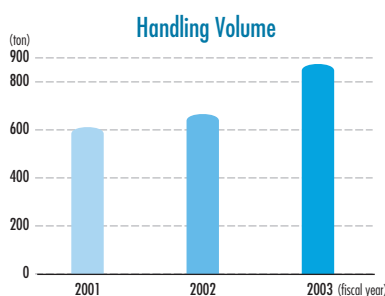
## Discharge of Industrial Waste



## Reduction of Organic Chlorine Compounds (target substances: trichloroethylene, Tetrachloroethylene, Dichloromethane)



## Reduction of Specific Chemical Substances (volatile organic solvents) (target substances: Xylene, Toluene)



## Activities of Affiliated Companies

The followings are initiatives for environmental preservation taken by companies related to Furukawa Electric.

### Nippon Foil Mfg. Co., Ltd.

#### History

Since its establishment in 1933 as a comprehensive metal foil maker, Nippon Foil Mfg. has manufactured and sold aluminum and copper foil products and other products made out of foils.

Our aluminum foil products are used as packaging materials in the food and pharmaceuticals industries. Miscellaneous goods mainly kitchen utensils, building and electronic materials are also manufactured from foils. In addition, our copper foil products are also used for batteries and shielding materials.

The plants are located in Nogi, Tochigi and Kusatsu, Shiga. We adopt every possible measure for water treatment at Shiga plant, particularly because Lake Biwa, the reservoir for the Kinki region, is located downstream from the plant.

#### Environmental Preservation Activities

Company Wide Environment Committee, which is a company wide organization, formulates environmental policies for the whole company and follows up all environmental activities. Each plant of Nippon foil Mfg also has an environmental committee, which engages in activities and sets its targets based on the company's policies.

We promote environmental activities focusing not only on compliance with laws and regulations, but also on reduction of industrial waste, energy conservation, sales of environmentally friendly products and environmental education.

The Shiga Plant acquired ISO14001 certification in October 1999 and the Nogi Plant acquired it in June 2000.

A Combined audit of the two plants is scheduled to take place in 2004.

#### Sales of Products with Reduced Environmental Impact

We are selling packaging materials, using ECOCE, a Biomas Film Composite.

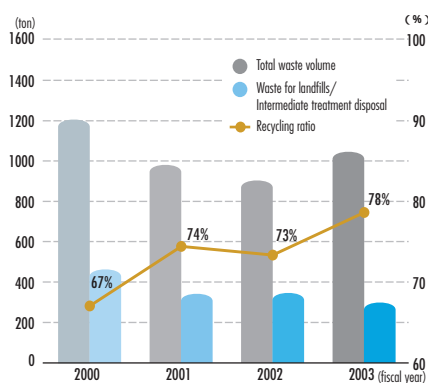
We are also promoting chloroethylene-free and toluene-free products and are shifting to water based ink.

#### Reduction of Waste

Discharge of industrial waste increased temporarily due to the elimination of incinerators at the two plants, but we reduced the amount of waste discharged at reclamation sites and from intermediate disposal treatment as a result of sorting and retrieval of waste and selection of destination for recycled resources, attaining a rise in the recycling ratio from 67% in fiscal 2000 to 78%.

Cleansing liquid is one of the items in which we have made an improvement from fiscal 2003 and have changed the type of cleansing liquids. We have also generated reusable resources by sorting aluminum trash and paper trash attached to plastics.

#### Waste volume/Reusable resources volume



#### Reduction of waste at user level

Reduction measures at user level

- 1 Discontinue cardboard packaging and reuse pallets by promoting group packaging
- 2 Plastic core wrappers are promoted instead of conventional core wrappers to promote reuse.

Through the above measures, we help to reduce waste disposal at user level. Use of plastic cores, in particular, for 21 items, has reduced waste by around 36 tons per year.



Deodorizing treatment equipment

#### Examples of Energy Conservation and Improvement of VOC Treatment Facilities

VOC emission will be restricted due to a revision of the Clean Air Act but we have long strived for the air emitted from the plant to be free of harmful agents and for this purpose we have used a direct incineration method to process organic solvents discharged in the printing process and others, since 1976.

In 2003, we rebuilt our treatment equipment to utilize a heat storage incineration method, as one of the energy conservation measures. As a result, while electric power consumption slightly increased, we reduced gas consumption dramatically, thereby reducing energy costs by around 60 million yen per year.

#### Nippon Foil Mfg. Co., Ltd.



Osaka head office : 1-1 Nishinakajima 4-Chome, Yodogawa-ku, Osaka City, Nishin Food Products building  
Tokyo head office : 8-3 Higashi-Nihonbashi 2-Chome, Chuo-ku, Tokyo  
Higashi-Nihonbashi green building

Number of employees : 270

URL : <http://www.nihonseihaku.co.jp/>

Enquiries  
Company Wide Environmental Committee Secretariat  
TEL +81-3-5835-2071 FAX +81-3-3865-3457

## Furukawa Automotive Parts Inc.

### History

The company was established in 1946 as a subcontractor of Furukawa Electric and manufactures cotton wrapping wires, bind wires and insulated cables and was reorganized as Oumi Electric Wire Co.,Ltd. in 1950.

The Company joined Furukawa Electric in 1960 in a technical alliance to produce wire harnesses for automobiles. Since then the company has developed into a leading manufacturer of wire harnesses for the automotive industry. In 2000, the company changed its name to Furukawa Automotive Parts INC.

### Environmental Preservation Activities

The Company acquired ISO14001 certification in September 2002.

It is located east of Lake Biwa, at the so called "east-lake" area. This area requires special environmental preservation consideration to protect Lake Biwa.

Under the environmental policy of "We shall incorporate environmental preservation initiatives into every phase of corporate activity, to contribute to a sustainable, happy and prosperous society", we engage in environmental management activities at all three of our business establishments, the head office, Toyosato factory and Hatasho factory, to achieve environmental targets.

### Priority Items

#### 1 Environmentally Friendly Products

Each of our customers, the automobile manufacturers, demands we stop using substances with adverse environmental impact and develop alternatives for these substances. We were able to meet these requirements by discontinuing the use of these substances and using alternative substances, thus producing halogen-free polyvinyl insulated cables.

#### 2 Energy Conservation and Recycling

We engage in energy conservation activities by targeting electric power, crude oil and

kerosene, and in recycling activities by mainly targeting copy papers.

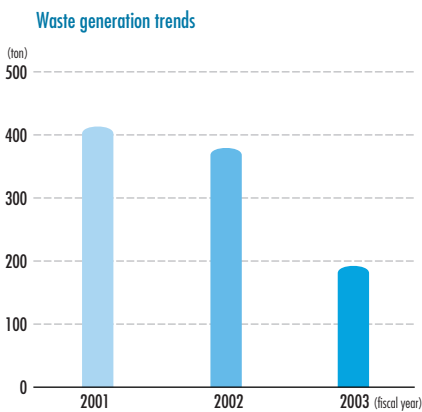
We are saving energy, by temperature control of air conditioners and heaters, encouraging turning off of PCs and lightings when they are not used. We also applied insulation coating on the roof of the head office, and shifted some compressors to inverters.

We are also striving to reduce the amount of copy papers by using the unused side of used papers and encouraging double sided copying.

#### 3 Reduction of Industrial Waste

We reduced industrial waste by around 54% over three years by curtailing waste generation in the manufacturing process and administrative work as much as possible, and recycling papers, metals and cardboard through thorough sorting.

The chart below shows our performance of reduction in industrial waste.



Echi Clean-up Activities : events at Hatasho town.

#### 4 Contributions Activities to Local Community and Society

Every March, Inukami River Cleaning Activities are carried out in the town of Koura where our head office is located. In May Uso River and Street Clean-up Activities are carried out in the town of Toyosato where Toyosato factory is located. In August, Echi Refreshing Activities are carried out in the town of Hatasho where the Hatasho factory is located to keep the local area clean. We participate in these events, assist in local activities and interact with the local people.

### Our Future Activities

We will further improve the environmental management system as well as promote environmental preservation by continuing the already, ongoing activities.

In the future, we will develop green procurement schemes which Furukawa Electric is currently promoting. In addition, we aim to establish a system for implementation and management of IMDS (International Material Data System) and LCA (Life Cycle Assessment) as requested by automobile manufacturers under instruction of the Safety, Environment and Quality Promotion Department and the Automotive Products Division.

### Furukawa Automotive Parts Inc.



Head Office :  
1000 Amago, Koura Town, Inukami County, Shiga  
Number of Employees : 635  
Factory : Toyosato Factory  
380 Takanose, Toyosato Town, Inukami County, Shiga  
Hatasho Factory  
416 Higashide, Hatasho Town, Echi County, Shiga  
U R L : <http://www.furukawaap.co.jp/>

Enquiries  
Head office ISO Promotion Department  
(EMS Secretariat)  
TEL +81-749-38-4817 FAX +81-749-38-4180

## Activities of Affiliated Companies

### Riken Electric Wire Co.,Ltd

#### History

We started operations under the name of Riken upon the acquisition of a license to use patents concerning enameled insulated wires in 1934. Since then we have developed businesses centering on magnetic wires, various cables, stainless steel wires, processing of coils and solder plated wires. We are currently developing products that meet this age's demands, such as optical electronics components and electronics components. We have exhibited solid performance in home appliances, electronics and information equipment, communication equipment and their infrastructure business.

#### Environmental Preservation Activities

We develop our business, with the recognition that preservation of the global environment is the most important aspect in our society and



Commemorative planting to acquire incentives on use of patents



Planting lawn on the parking area in front of the main gate of Shirane Factory

engage in environmental preservation activities. The basic aim is that we use resources effectively for improvement of current life standards of mankind and its future, with the vision of making the company an environmentally friendly company.

Ichikawa Factory, Shirane Factory and Ichijima Factory acquired ISO14001 certifications in March 2000, August 2000 and February 2004, respectively. For external issues, we have concluded an environmental agreement with local governments and received certification of green procurement from customers. We are pursuing improvement in the following areas at each site and product level.

#### Priority Items

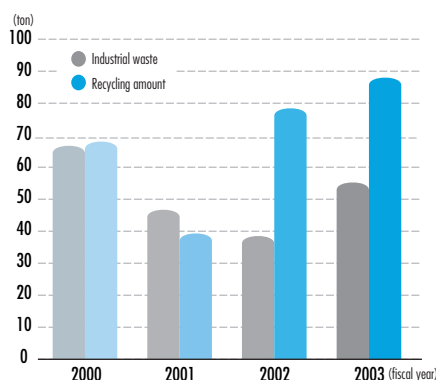
##### 1 Energy Conservation

We installed a cogeneration system at the Shirane Factory, which provides around 70% of total electric power from 1989. We also use steam, generated from boilers, for ventilation inside the factory. In this system, steam is used as a cooler using an absorption chiller in the summer and as a hot water heater in the winter.

##### 2 Reduction of Waste and Promotion of Recycling

We have pursued reduction of waste and promoted recycling in all factories, which resulted in waste reduction by around 15% and attained 130% in recycling rate in actual achievement for the past three years.

#### Yearly Trends of Waste Amount and Recycling Amount



##### 3 Eco-Product Development

In the cable division, we have shifted almost 100% to NF, succeeding in eliminating lead in almost all products. In addition, we have realized high quality and low price in solder-plated wires for electronic components through a hot-solder-dipped coating method which is our own development. We are also the first to commercialize lead-free solder plated wires, attaining almost a 70% shift to NF.



Lead-free solder-plated wires

### Riken Electric Wire Co.,Ltd



Head Office : 12-22 Tsukiji 1-Chome, Chuo-ku, Tokyo

Number of employees: 294

Factory : Shirone Factory

840-1 Kamihachimai, Shirone City, Niigata

Ichikawa Factory

17-12 Shiohama 3-Chome, Ichikawa City, Chiba

Ichijima Factory

387-1 Aza Tsujinokai, Chokushi, Ichijima Town, Hikami County, Hyogo

Electronics Components Division

357 Oaza Kosudo, Kosudo Town, Nakanbara County, Niigata

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