

ENVIRONMENTAL REPORT 2004



Corporate Overview

Corporate Profile

Oki Electric Industry Co., Ltd. was founded in 1881 by Kibataro Oki with the wish to produce communications equipment in Japan. Marking the 122nd anniversary of its foundation in 2003, the company is the communications equipment manufacturer with the longest history in Japan. Along with the progress of telecommunications in Japan, our operations now focus on three (3) major business segments: telecommunications systems using IP networks, information systems using computers and electronic devices including system LSIs.

Today, networks are spreading all over the world. On the basis of these networks, an e-society*1) is in the process of being realized. In the e-society, all activities are conducted fairly and safely with the "individual" at the center, breaking down borders between countries and cultures and transcending the limitations of time and space. Under its corporate vision "Oki, Network Solutions for a Global Society", the Oki group provides a variety of business solutions supporting the e-society in order to "deliver satisfaction to our customers".

*1) e-Society: A wide range of information is being exchanged beyond time and space over global networks. This breaks down the boundaries among countries, regions and cultures, enabling individuals to engage in various social activities in an impartial, secure way.

Outline

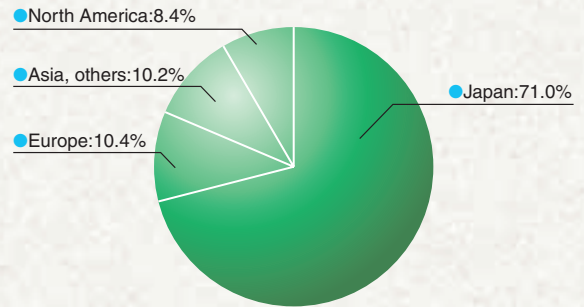
Company name Oki Electric Industry Co., Ltd.
 Foundation January 1881
 Establishment November 1, 1949
 Capital stock JY67.8 billion (as of March 31, 2004)

Number of employees 5,379 (non-consolidated)
 Japan: 15,350 (consolidated)
 Overseas: 5,610 (as of March 31, 2004)
 President & CEO Katsumasa Shinozuka
 Head office 7-12 Toranomon 1-chome, Minato-ku, Tokyo
 Main products Information systems, telecommunications equipment and electronic devices

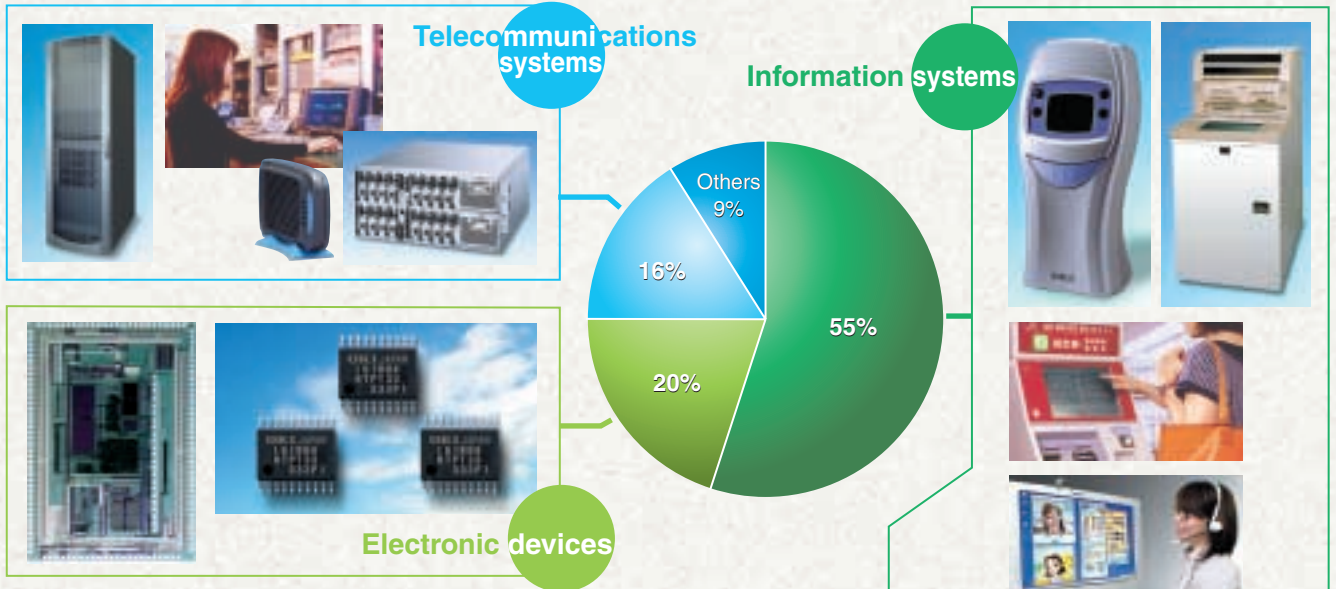
Transition of Sales



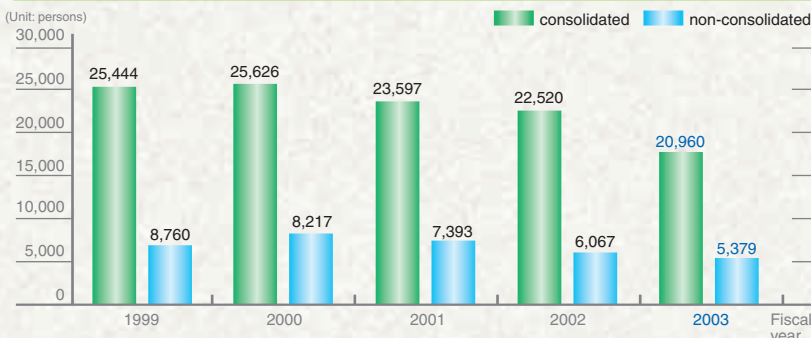
Sales by Market in Fiscal 2003



Consolidated Sales by Business Segment in Fiscal 2003



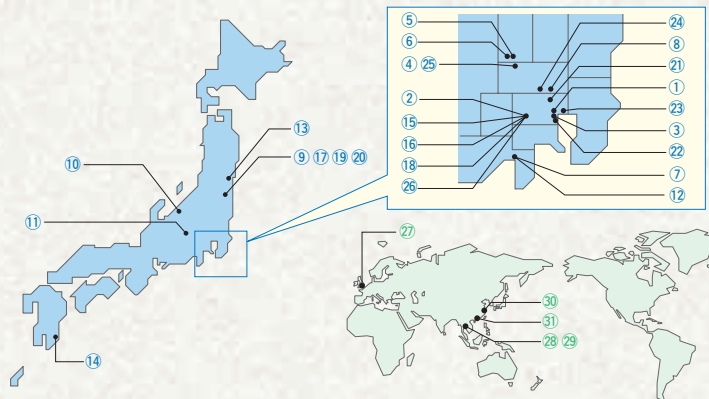
Transition of Number of Employees



Scope of Environmental Data

The Oki group pursues environmental activities on a global scale. The data of fiscal 2003 cover eight sites of Oki Electric in Japan, 18 group companies in Japan and 5 group companies in other countries.

Site	Outline of Operations	Address
① Toranomon district	Head office	7-12, Toranomon 1-chome, Minato-ku, Tokyo 105-8460
② Hachioji district	Development of electronic devices	550-1 Higashi Asakawa-machi, Hachioji-shi, Tokyo 193-8550
③ Shibaura district	Development of telecommunications equipment	Head Office Annex, 10-3, Shibaura 4-chome, Minato-ku, Tokyo 108-8551
④ Horjo district	Manufacturing and contract manufacturing of information and communications equipment	1-1, Ojima-Minami 4-chome, Horjo-shi, Saitama-ken 367-8686
⑤ Takasaki district	Development of information processing equipment	3-1 Futaba-cho, Takasaki-shi, Gunma-ken 370-8585
⑥ Tomioka district	Manufacturing of information terminal equipment	1256-1 Tomioka, Tomioka-shi, Gunma-ken 370-8510
⑦ Numazu district	Development and manufacturing of transport system and acoustic positioning systems	688 Oo-suwa, Numazu-shi, Shizuoka-ken 410-0873
⑧ Warabi district	Software development	16-8, Chuo 1-chome, Warabi-shi, Saitama-ken 335-8510
⑨ Oki Data Corporation (Fukushima district)	Development and manufacturing of printers, facsimile machines and peripherals	1-1, Shono, Tatsuda, Fukushima-shi, Fukushima-ken 960-2196
⑩ Oki Printed Circuits Co., Ltd.	Design and manufacturing of printed circuit boards	1 Fukuda-machi, Joetsu-shi, Niigata-ken 942-0032
⑪ Nagano Oki Electric Co., Ltd.	Design, manufacturing and contract manufacturing of electronic equipment	965-1, Mimitori, Komoro-shi, Nagano-ken 384-0084
⑫ Shizuoka Oki Electric Co., Ltd.	Design and manufacturing of measuring and control equipment	681-1 Oosawa, Numazu-shi, Shizuoka-ken 410-0873
⑬ Miyagi Oki Electric Co., Ltd.	Manufacturing of semiconductor ICLSs	1, Okinodaira, Ohira-mura, Kurokawa-gun, Miyagi-ken 981-3693
⑭ Miyazaki Oki Electric Co., Ltd.	Manufacturing of semiconductor ICLSs	727 Kihara, Kiyotake-cho, Miyazaki-gun, Miyazaki-ken 889-1695
⑮ Tama Oki Electric Co., Ltd.	Inspection of semiconductor ICLSs	8-3 Nakanokami-cho 4-chome, Hachioji-shi, Tokyo 192-0041
⑯ Oki Sensor Device Corporation	Development and manufacturing of electronic components	550-1 Higashi Asakawa-machi, Hachioji-shi, Tokyo 193-8550
⑰ Oki Micro Engineering Co., Ltd.	Development and manufacturing of motor solenoid	1 Sasakino, Tate, Fukushima-shi, Fukushima-ken 960-8057
⑱ Oki Digital Imaging Corporation	Development, manufacturing and sales of LED units and LED heads	550-1 Higashi Asakawa-machi, Hachioji-shi, Tokyo 193-8550
⑲ Oki Power Tech Co., Ltd.	Development and manufacturing of power supply units	1 Sasakino, Tate, Fukushima-shi, Fukushima-ken 960-8057
⑳ Oki Erfolg Co., Ltd.	Manufacturing of parts and dies, chassis manufacturing	1 Sasakino, Tate, Fukushima-shi, Fukushima-ken 960-8057
㉑ Oki Engineering Co., Ltd.	Measurement and analysis	20-16 Hikawadai 3-chome, Nerima-ku, Tokyo 179-0084
㉒ Oki Logistics Co., Ltd.	Physical distribution	Yasuda Shibaura Bldg, No.2, 2-12, Kaigan 3-chome, Minato-ku, Tokyo 108-0022
㉓ Oki Customer Adtech Co., Ltd.	Maintenance and service	Daiichi Bldg., 7-23 Kiba 2-chome, Koto-ku, Tokyo 135-0042
㉔ Oki Communication Systems Co., Ltd.	Design and manufacturing of telecommunications equipment and parts	1, Kamiyamaguchi, Tokorozawa-shi, Saitama-ken 359-1153
㉕ Oki Supply Center Co., Ltd.	Parts management, product recycling	1-1, Ojima-Minami 4-chome, Horjo-shi, Saitama-ken 367-8686
㉖ Oki Environment Technologies Inc.	Design, installation, maintenance and management of environmental facilities	550-5 Higashi Asakawa-machi, Hachioji-shi, Tokyo 193-8550
㉗ Oki (UK) Ltd.	Manufacturing of printer and facsimile consumables	3 Castlecrey Road, Wardpark North, Cumbernauld, Scotland G68 0DA
㉘ Oki (Thailand) Co., Ltd.	Manufacturing of semiconductor ICLSs	Rojana Industrial Park, 1/39 Moo 5, Tambol Kanham, Amphur U-Thai, Ayutthaya 13210
㉙ Oki Data Manufacturing (Thailand) Co., Ltd.	Manufacturing of printers and facsimile machines	Rojana Industrial Park, 1/39 Moo 5, Tambol Kanham, Amphur U-Thai, Ayutthaya 13210
㉚ Changzhou Oki-GEG Telecoms Ltd.	Manufacturing and contract manufacturing of communications equipment	93 Qingtan Road, Changzhou City Jiangsu
㉛ Oki Electric Industry (Shenzhen) Co., Ltd.	Manufacturing of information processing equipment and printers	801, H-1 Building, East Industry Park, Overseas Chinese Town, Shenzhen, P.R.C 518053



Editorial Policy

◆ Purpose

This report was created with the purpose of disclosing information on the Oki group's stance, the goals, achievements and examples of efforts related to environmental activities in a systematic and easily understandable way in order to deepen the understanding of the stakeholders.

◆ Policy

The report is presented in 3 parts: 1. Environmental Management, 2. Environmental Conservation Activities (Products/Business Activities) and 3. Social Activities. The report also contains enhanced information on product-related efforts (including response to overseas regulations) and on environmental solutions, and has incorporated Corporate Social Responsibility (CSR) into the part on social activities. Additionally, we tried to present a variety of achievements and concrete examples for our efforts not only related to our activities in fiscal 2003, but from the whole past.

◆ Target Audience

This report was written for the stakeholders shown in the illustration.

◆ Report Period

Fiscal 2003 (April 1, 2003 – March 31, 2004)

◆ Scope

This report was created based on actual activities related to environmental conservation pursued by Oki Electric and Oki group companies.

◆ Schedule for the Next Report

The next report is scheduled for publication in July 2005.

◆ Reference Guidelines

To create this environmental report, we referred to the following guidelines.

- "Environmental Report Guidelines (2000 Edition)", Ministry of the Environment
- "Environmental Reporting Guidelines with Stakeholder Focus 2001", Ministry of Economy, Trade and Industry
- "Sustainability Reporting Guidelines 2002", GRI
- "Environmental Accounting Guidelines (2002 Edition)", Ministry of the Environment

◆ Stakeholders



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Greeting

Bringing Environmental Activities to a New Phase

In order to reduce environmental impact, Oki Electric established a plan for environmental activities, the “Oki Eco Plan 21”, in 1999. Since then, we have steadily been working for the environment. In fiscal 2003, Oki positioned environmental activities even higher than before as a focus issue for operations. This was done from the aspect of CSR—the social responsibility that a company should fulfill. Specifically speaking, we focused on the control of chemical substances contained in products and on sales of environmental solutions—systemizations of the environmental technology and know-how accumulated at Oki - to the outside. In fiscal 2004, we will promote these efforts with even more power, and aggressively expand environmental activities to new fields. With its environmental activities entering a new phase, Oki Electric is going to continue its contributions to the conservation of the global environment.



K. Shinozuka

President/CEO

Katsumasa Shinozuka

Reinforcing Environmental Activities as CSR

In recent years, much attention has been paid to Corporate Social Responsibility (CSR), and the efforts of corporations are under relentless scrutiny. In light of this situation, Oki Electric has long been aware of the fact that CSR is important to achieve continuous growth as a global company, and has been reinforcing efforts involving the entire group from economical, social and environmental activity aspects. Among these, we regard environmental efforts as particularly important in the corporate activities of Oki Electric, whose mission is to provide products and services to realize a “comfortable and spiritually rich life”. Oki Electric will continue to fulfill its social responsibility through a wide array of environmental activities, including, of course, compliance with laws and regulations, and also the development of eco-friendly products, harmony with the global environment, and environmental volunteer activities by employees.

Controlling Chemical Substances Contained in Products

In January 2003, the EU (European Union) issued the RoHS Directive in a move to regulate chemical substances in electric and electronic products. At this occasion, Japanese companies also started efforts for original regulations on chemical substances contained in their products. In the Oki Eco Plan 21 for fiscal 2003, Oki Electric announced a plan to eliminate the six substances restricted under the RoHS Directive. Oki Electric further established internal systems—for example, for green procurement, rebuilding its information system for chemical substances contained in products. In fiscal 2004, we will continue to promote the management and control of chemical substances contained in our products, so that our customers can use our products with satisfactory.

Extending Environmental Solutions to Customers outside of the Group

In its variety of environmental activities, the Oki group has produced many results. Through this, we accumulated a wide array of environmental technology and know-how that could be useful also for external customers, so we named them “Environmental Solutions” and aimed to put them to use within the group, of course, but also to extend them to customers outside of the group. We can say that, in fiscal 2003, the sales of environmental solutions to external customers took a large step forward. “Extending environmental solutions to external customers” will be one of the pillars supporting our environmental activities in the future, contributing to the conservation of the global environment on a broad scale.

I am hoping that this report helps you understand the environmental activities and achievements of the Oki group, and that it serves as a tool to communicate with you.



Environmental
Slogan for 2003



Oki Electric's Stance on Environmental Activities

To pursue activities that contribute to the environment as the core of its Corporate Social Responsibility (CSR), the Oki group has defined a Basic Environmental Policy, promoting efforts for the realization of the “e-society*1)” to deliver satisfactory to its customers.

*1) e-society: A wide range of information is being exchanged beyond time and space over global networks. This breaks down the boundaries among countries, regions and cultures, enabling individuals to engage in various social activities in an impartial, secure way.

Basic Environmental Policy

■ Environmental Policy

Oki Electric is actively developing global and local environmental conservation activities in all business activities to provide products that contribute to the advancement of the information society.

■ Activity Guidelines

- 1) Provide environmentally friendly products by evaluating environmental impacts in all stages from product development up to disposal in the design and development phase.
- 2) Save resources and energy, and reduce waste by introducing environmental technology in and outside Oki.
- 3) Reduce environmental impact not only by complying with national and local environmental regulations, but also by establishing voluntary improvement activity plans.
- 4) Continually improve the environmental management system and achievements by properly maintaining the PDCA cycle.
- 5) Develop environmental conservation activities as a group, including affiliated companies in and outside of Japan.

Vision and Strategy of Oki Electric

Being a member of a recycling-based society, the entire Oki group promotes “network-type environmental management”, actively and reliably executing the “3 pillars” of our environmental activities.

- ① **Contribution to environmental conservation in business activities: energy and resource saving, zero emissions, reduction of chemical substances, risk management**
- ② **Contribution to the environment through products: environmentally conscious products, products contributing to the environment/environmental solutions, generation of environment business**
- ③ **Contribution to environmental activities of society: environmental volunteer activities, environmental education, support for environmental activities**



[Focus Themes for Fiscal 2003]

In addition to reducing environmental impacts from business activities, we focused on generating products that solve environmental problems, and business reforms.

① [Contribution to environmental conservation in business activities]

Reduction of CO₂ emissions through business reforms
Reduction of CO₂ emissions, waste and chemical substances in production activities, etc.

② [Contribution to the environment through products]

Development of environment-related technologies and expertise (products contributing to the environment/environmental solutions)
Resource recovery of used products
Control of environment-affecting chemical substances contained in products, etc.

③ [Contribution to environmental activities of society]

Stronger cooperation with communities, schools, NPOs/NGOs, etc



Fiscal 2003 Topics

In addition to reducing environmental impacts from business activities, Oki engaged in various efforts to promote the development of products that solve environmental problems (products contributing to the environment), and business reforms. The main topics of these efforts are presented below.

Contribution to the Environment through Products

Reducing environment-affecting chemical substances contained in products

Oki takes a variety of approaches to reduce chemical substances contained in its products.

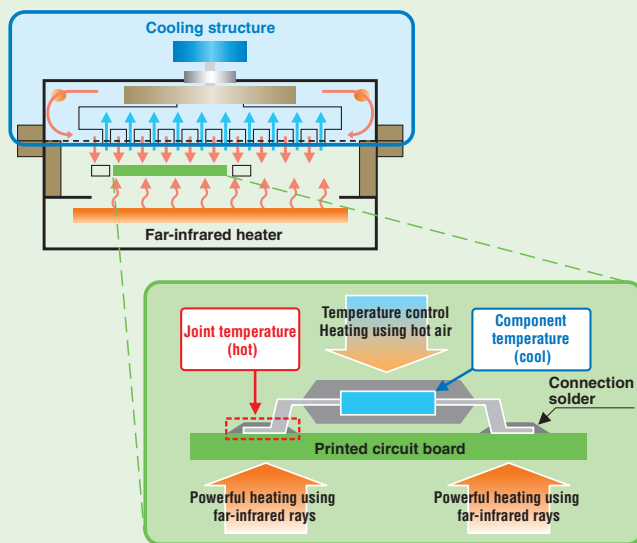
Efforts for Lead-free Solder

Joint development of "new technology for lead-free soldering" with Furukawa Electric Co., Ltd.

Together with Furukawa Electric, we developed "Component Temperature Control Reflow*1) Technology", a new heating technology that allows automatic soldering of heat-sensitive electronic components using ordinary lead-free solder with a high melting temperature. With the new method, old designs and components can be switched to lead-free solder consisting of tin, silver and copper without having to change the manufacturing process and at low cost. Solder made of tin, silver and copper is the most commonly used type at present and well proven in practice.

*1) Reflow: A method of printing semi-fluid solder onto an electronic circuit board, mounting the components, applying heat and then soldering the components to the board. Because of this, automatic heat-soldering equipment is called "reflow furnace".

Structure of a Reflow Furnace with Component Temperature Control



Heating Methods

- ◆ Heating using hot-air → A characteristic of this method is that heat is applied evenly. Since this means that the component temperature rises together with the joint temperature, the method could not be used to solder heat-sensitive components.
- ◆ New heating reflow → thinking the other way round, we combined two different heating methods —hot air and far-infrared rays— and added a cooling structure to the upper heater. Through this, we succeeded in heating the joint and the component to different temperatures, enabling automatic soldering of heat-sensitive components.

Field		New heating reflow of Oki	Hot-air circulation reflow of others
Reflow soldering component	Existing components Heat resistance: 230°C	OK	NG
	Parts supporting lead-free soldering Heat resistance: 250°C	OK	OK
Characteristics		Existing components (components from existing designs) can be used	To use existing components, the following is required. ① Switch to components supporting lead-free soldering ② Manual soldering ⇔ Higher costs and lower quality



● Reflow Furnace (photograph courtesy of Furukawa Electric Co., Ltd.)

Developing Products that Contribute to the Environment

Joint Development of "Cerac α" Heat-releasing Sheets with Ceramission Co., Ltd.

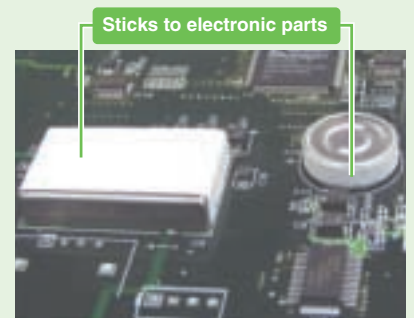
As a new material to release the heat generated during the operation of electric and electronic parts, Oki and Ceramission succeeded in the development of "Stick-It Flexible", a soft sticker-type heat-releasing material that sticks also to curved surfaces and can be cut with scissors. The new product is an application of "Cerac α", a liquid ceramic paint that radiates heat*2) just by applying it, and started to ship in fiscal 2003. Stick-It Flexible is a sheet covered with environment-friendly inorganic paint that can form thin films of 50—150 μm at room temperature while taking advantage of the superior heat-radiating characteristics of ceramics, converting heat into far-infrared rays. The sheet reduces the heat generated during the operation of electric and electronic components by about 5-20%, making it an alternative for conventional heatsinks. Stick-It Flexible is an extremely effective means of suppressing heat even

without a cooling fan, reducing noise and size of the equipment. Since heat loss of components can be kept down, the new product also serves to prolong the life of electric and electronic parts and of the equipment, and helps to give the equipment more advanced functionality and to make it energy-saving.

*2) Heat radiation: The dissipation of heat through conversion of heat energy into electromagnetic waves.



● Heat-releasing paint



● Heat-releasing sheet



Fiscal 2003 Topics

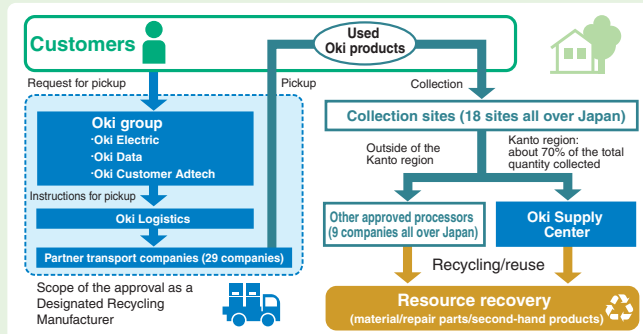
Resource Recovery of Used Products

Acquisition of the approval as "Designated Recycling Manufacturer"

On November 4, 2003, Oki Electric was approved as "Designated Recycling Manufacturer"^{*1)}, a designation defined in the Waste Management and Public Cleansing Law. The approval is given by the Minister of the Environment only to companies that collect, transport and dispose of their used products (industrial waste) with the purpose of recycling and eliminates the need of obtaining waste-processing permissions from the prefectures. This designation enabled Oki to collect used products as waste directly from its customers and recycle them. Oki promotes the resource recovery of used products by utilizing this scheme for the used product recycling system already built.

*1) Designated Recycling Manufacturer: A manufacturer who is able to collect and recycle its own products using the existent logistics system.

Product Recycling System as a Designated Recycling Manufacturer



Contribution to Environmental Conservation in Business Activities

Reducing CO₂ Emissions through Business Reforms

Reduction of 600 tons of CO₂ Emissions per Year from Fiscal 2004 through Server Integration

Intranet servers and common servers used by workplaces doing mainly deskwork use electric power at all times, so they have a significant influence on the reduction of CO₂ emissions. This is where we started reducing power consumption by reorganizing and merging servers all over the company through system integration and restructuring, and through prohibiting the installation of servers dedicated to specific sections. Our aim is to reduce the Oki group's currently 3400 servers by 50% until April 2006. In the initial year (fiscal 2004), we can reduce CO₂ emissions by 600 tons.



Development and Introduction of a Web System for On-demand Catalogs

Oki developed and introduced a web system for catalogs on-demand to realize an elimination of catalog inventories. The system starts operation in fiscal 2004. When a sales representative needs a catalog, he or she types the necessary information into a web form of the intranet. The required number of catalogs is printed, bound, and delivered to the sales representative through the company-internal mail system. The system helps to save 800,000 sheets of paper per year and reduce CO₂ emissions from the energy used for transport and other sources by 70 tons.



Contribution to Environmental Activities of Society

Supporting the NPO "Ecosystem Conservation Society-Japan"

Broadcasting pictures of the school biotope contest from the Iino Hall in Tokyo to sites all over Japan

To support this environmental NPO, which targets children—our next generation—we took advantage of our network solutions. In fiscal 2003, we did a live broadcast of pictures from the school biotope contest of the Ecosystem Conservation Society—Japan from the Iino Hall in Tokyo to sites of Oki Customer Adtech Co., Ltd., a group affiliate in charge of maintenance and service. For the broadcast, we used the live distance learning system "LiveOnAir" via the OKI MediaServer^{®*2)}. The pictures could be seen all over Japan also by people who were unable to participate on the day of the venue. The system is also used for education and new product briefings in the Oki group as part of the business reform, contributing to reductions in CO₂ emissions of 990 tons per year.

*2) OKI MediaServer: A registered trademark of Oki Electric Industry Co., Ltd.



●Preparations for the broadcast to sites all over Japan



●School biotope contest

◆Other topics◆



Field	Topics	See page
Environmental management	Started environmental accounting at production sites in China	08
	Acquisition of ISO14001-certification by all overseas production sites	09
Management and reduction of chemical substances contained in products	Company-wide integration of the aggregation system for chemical substances contained in products	15
Development of environmentally conscious products	Compact ATM for the Chinese market	19
	Cadmium-free mobile PC keyboard	19
	PVC-free eco-cables	19
Developing products contributing to the environment	(Environment solutions)	20
Research and development on environmental conservation facilities	Organic waste liquid bio-recycle system for semiconductor plants	21
	Equipment for wet treatment of toxic gas in semiconductor plants	21
	Ozone deodorization system for incinerator sites	21
	Monitoring system for the density of released chlorine residue for hot spring facilities	21
Environmental education	Establishment of lead-free soldering school (certification)	22
Environmental consulting	Assistance in green procurement surveys on chemical substances	22
	Assistance in aggregating chemical substances contained in products	22
3R Efforts in Business Activities	Effective use of leftover food through raw garbage processors	25
	Introduction of direct silk equipment in electronic circuit board plants	26
Environmental conservation activities of overseas group companies	Awarded "Model Company for Environmental Conservation" in Changzhou city, China.	30
	Expansion of printer consumable recycling to overseas	30
Social activities	Reinforcement of efforts for CSR	31
	Reinforcement of compliance	31
	Active employment of seriously disabled persons	31
Environmental communication	Environmental education in internships	33
	Appearance in the "Warabi Learning College" (lectures to foster trendsetters in town-making)	34





Environmental Management

The main pillar of Oki Electric's environmental activities is the Environmental Management System (EMS). With an eye on our social responsibility, we built an environmental management system that covers our whole group. In addition, we drafted the environmental protection activity program "Oki Eco Plan 21", and are promoting concrete efforts to achieve the targets set in this program.

Environmental Conservation Activity Program "Oki Eco Plan 21" and Achievements

To reduce environmental impacts, Oki has established an environmental protection activity program, the "Oki Eco Plan 21" as the base for its environmental conservation efforts. The targets of the "Oki Eco Plan 21 (2003 version)" are mostly achieved, as the following table shows. In fiscal 2004, Oki will engage in activities based on the "Oki Eco Plan 21 (2004 version)", which has incorporated new measures on the basis of the results achieved in fiscal 2003.

● Oki Eco Plan 21 (2003 version): Targets and Achievements

Category	Activity Item		Mid-term Target		Target for Fiscal 2003		Achievements of Fiscal 2003			
							Results	Evaluation	See page	
Business Activities	Reduction of CO ₂ emissions of production activities	Telecommunications	Basic unit of fiscal 2010 compared to fiscal 1990	-40%	Basic unit compared to fiscal 2002	-2%	13.1% reduction with the increase of shipped products	○	24	
		Electronic devices		-20%		-2%	6.4% reduction with the increase of shipped products			
	Reduction of CO ₂ emissions through business reforms		Reduction of 500 tons-CO ₂ annually (through system integration, e-learning, distribution reforms, etc.)				Reduction of 609 tons-CO ₂ annually	○	06 11 29	
	Reduction of greenhouse gas (PFC gas) emissions		Fiscal 2010: -10% compared to fiscal 1995	Maintain the level of fiscal 2002		Maintained the level at -16%	○	24		
	Resource recycling	Waste reduction	Continue to maintain zero emission (recycling rate of over 99%)				Maintained recycling rate of 99.3%	○	25 26	
Control of environment-affecting chemical substances	Control of handled quantities and emissions of environment-affecting chemical substances		End of fiscal 2005: -5% compared to fiscal 2001		-2% compared to fiscal 2002		5.4% increase	×	27	
Products	Contribution to the environment through products	Reduction of CO ₂ emissions through products		Reduction of 8,000 tons-CO ₂ annually (through development of equipment, systems and semiconductors with low power consumption, etc.)				Reduction of 8,353 tons-CO ₂ annually	○	13 14 19 20
	Control of environment-affecting chemical substances contained in products	Complete elimination of mercury, cadmium, lead, hexavalent chromium, PBB and PBDE in products		Elimination from major products by the end of fiscal 2004		Lead-free solder in 100% of products produced in Japan		Achieved 100% lead-free solder in newly designed products produced in Japan	○	16
	Resource recovery of used products	Increase of the resource recovery rate		Maintain rate of at least 85% (fiscal 2003: approval as "Designated Recycling Manufacturer")				Maintained level of 89.2% (November 2003: approval as Designated Recycling Manufacturer)	○	17 18
Others	Expansion and reinforcement of environmental activities	Expansion of acquisition of ISO14001 Certification		End of fiscal 2004: certification of entire group		Japan: distribution companies Overseas: all production sites		Japan: two companies (one distribution and one maintenance service company) Overseas: one production site in China acquired certification.	○	09





Environmental Management

Environmental Accounting

Oki Electric introduced environmental accounting in fiscal 1999 in order to grasp the efforts of environmental conservation activities on from a cost-effect perspective to pursue its activities in an effective and efficient manner.

Fiscal 2003 Environmental Accounting Records

In fiscal 2003, two manufacturing-related group companies in China (Oki Electric Industry (Shenzhen) Co., Ltd. and Changzhou OKI-GEG Telecoms Ltd.) were added to the scope of environmental accounting. We completed the introduction of the system to Oki Electric and 24 group companies (31 sites, including overseas group companies), with the system now covering almost 100% of the manufacturing and sales sections in terms of turnover. The characteristics of environmental accounting in fiscal 2003 were as follows. The numbers shown in brackets are values for fiscal 2002.

For concrete efforts, please refer to the pages shown in the table and to page 36. Page 36 presents separate data for Oki Electric and each individual group company in and outside of Japan.

- Investments quadrupled compared to fiscal 2002, amounting to 415 million yen (98 million yen) due to the installation of equipment to respond to lead-free solder.
- Costs stayed roughly the same at 2,974 million yen (2,831 million yen).
- The economical effect amounted to 38 million yen (694 million yen). With the increase of the quantity of products shipped, more packaging material was purchased, and the plants consumed more electric power, so that the economical effect shrunk.
- As for the environmental conservation effect, CO₂ emissions slightly increased due to the increase in production, and the quantities of final waste processing slightly decreased due to continued zero-emissions activities.

Environmental Conservation Costs

◇ Investments / Costs

(Unit: million yen)

Category	Key Activity	Investment	Costs	See page
Business area cost	*Pollution prevention cost	104 (33)	1,120 (1,066)	21
	*Global environmental conservation cost	137 (26)	327 (247)	24
	*Resource recycling cost	28 (19)	593 (627)	21, 25, 26
	Sub-total	269 (78)	2,040 (1,940)	—
Upstream/downstream cost	Cost for green procurement (chemical substance surveys), costs for the remodeling of the aggregation system for chemical substances contained in products	20 (0)	118 (213)	13-18
Administration cost	Cost for acquiring certification, and for maintaining and management the environmental management system	0 (0)	693 (565)	09-11, 28
R&D cost	Investments into equipment to shift to lead-free soldering, costs for research and development on lead-free soldering	126 (20)	113 (97)	05, 16, 27
Social activity cost	Cost for the greening of plants, costs for social contribution activities	0 (0)	1 (2)	30-34
Other cost	Cost for reserves to respond to environmental damages	0 (0)	9 (14)	28
	Total	415 (98)	2,974 (2,831)	—

Environmental Conservation Benefit

◇ Economical Benefit

(Unit: million yen)

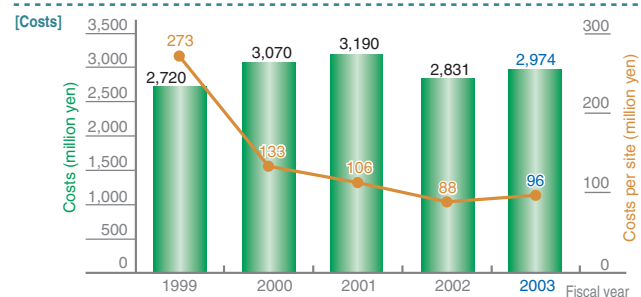
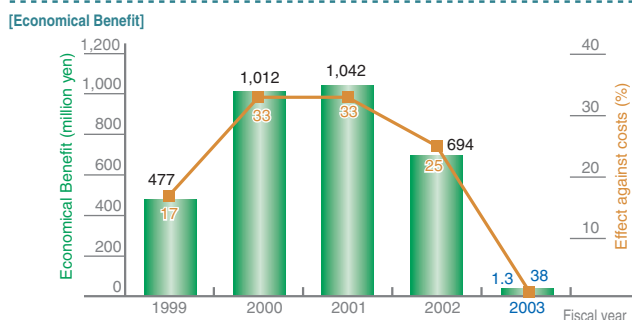
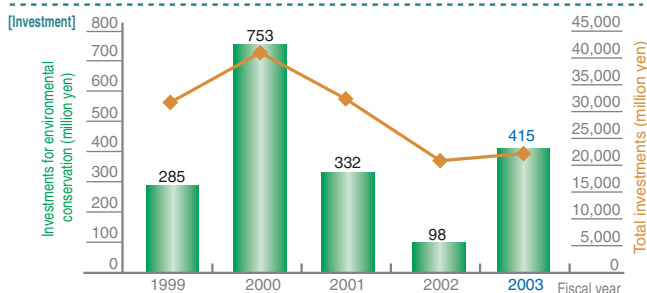
Category	Key Activity	Amount of effect	See page
Cost reduction benefit	Benefit from energy and resource conservation	-130 (539)	24, 26, 29
	Benefit from reduction of processing costs	5 (25)	25, 26
Expense saving benefit	Sale of valuable waste generated in business activities	151 (116)	25, 26
	Sale of valuables from end-of-life products	12 (14)	17, 18
	Total	38 (694)	—

◇ Environmental Conservation Benefit

Environmental impact index	Impact	See page	
CO ₂ emissions (Thousand tons-CO ₂)	303 (297)	24	
Waste emissions	Final waste processing (tons)	72 (77)	25

Transition of Environmental Accounting

Five years have passed since Oki started environmental accounting. The graphs below show the transition in investments, costs and economical effects.



〈Accounting Period〉

April 1, 2003—March 31, 2004

〈Accounting Conditions〉

- (1) The calculation standards are based on the "Environmental Accounting Guidelines (2002 Edition)" published by the Ministry of the Environment.
- (2) A portion of the accounting includes figures relating to affiliated companies located within sites that participated in the environmental impact management.
- (3) In the case of costs where environmental conservation costs overlap with other costs, only the portion of the costs related to environmental conservation was counted.
- (4) The depreciation cost of investments was calculated using the fixed installment method for a period of three years.
The economical effects achieved with these investments were calculated for three years, in line with the depreciation period.
- (5) Personnel costs were calculated by prorating the personnel costs for the total time spent on environmental conservation activities.





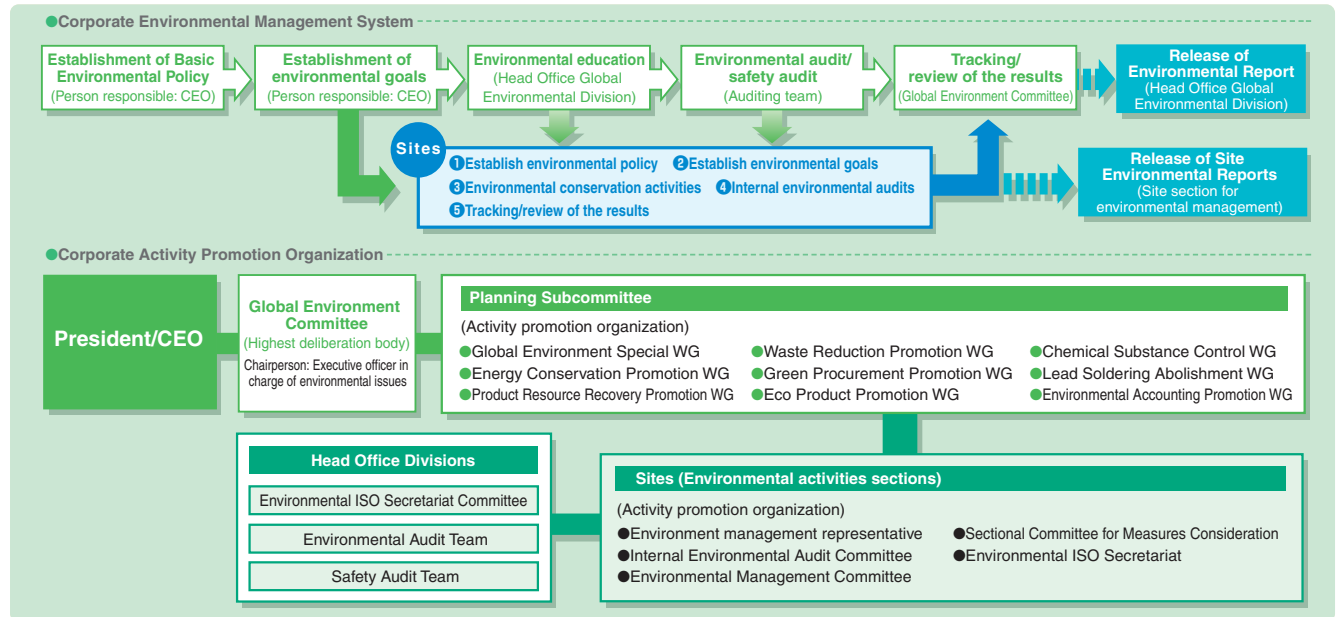
Environmental Management

Environmental Management System Overview

Our corporate policy and activity goals are determined by the activity promotion organization (see the figure below) and then expanded to each individual site. Based on this, each site establishes its own policy and goals to pursue its environmental conservation activities. The status of the implementation is

checked in internal environmental audits conducted by the site itself, and in head office audits to grasp the achievements of the sites' activities, and make revisions.

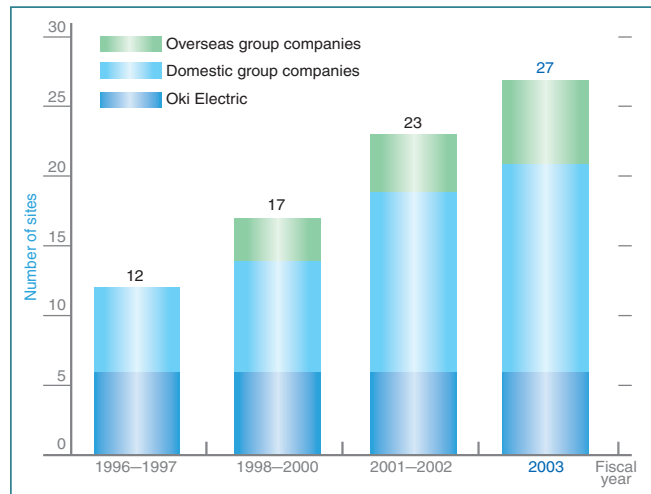
Based on this, the Environmental Conservation Activity Program "Oki Eco Plan 21" for the next fiscal year is drafted.



Acquisition of ISO14001 Certification

To build Environmental Management Systems at the sites, Oki promotes the acquisition of ISO14001 certification. In fiscal 2003, one Japanese group company involved in distribution and one involved in maintenance and services, as well as two overseas group companies involved in manufacturing in China and Thailand acquired certification. This means that all overseas production plants are now certified. As of March 31, 2004, six sites of Oki Electric, 15 group companies in Japan and six overseas group companies have acquired certification. For the future, we will aim acquire integrated certification, building a "network-type environmental management system" that centralizes business processes in the entire Oki group.

Transition of Number of ISO14001-certified Sites (accumulated)



ISO14001-Certified Sites

	Site	Month of Acquisition
Oki Electric	Hachioji district	07/1997
	Takasaki district	11/1997
	Tomioka district	12/1997
	Honjo district	02/1998
	Numazu district	03/1998
	Shibaura/Makuhari district	03/1998
Domestic Group companies	Miyazaki Oki Electric Co., Ltd.	02/1997
	Oki Environment Technologies Inc.	07/1997
	Nagano Oki Electric Co., Ltd.	02/1998
	Miyagi Oki Electric Co., Ltd.	03/1998
	Oki Data Corporation (Fukushima district)	03/1998
	Shizuoka Oki Electric Co., Ltd.	03/1998
	Tama Oki Electric Co., Ltd.	07/1998
	Oki Printed Circuits Co., Ltd.	12/1998
	Oki Communication Systems Co., Ltd.	05/2001
	Oki Power Tech Co., Ltd.	01/2002
	Oki Micro Engineering Co., Ltd.	02/2002
	Oki Erfolg Co., Ltd.	02/2002
	Oki Sensor Device Corporation	03/2002
	Oki Customer Adtech Co., Ltd.	06/2003
	Oki Logistics Co., Ltd.	03/2004
Overseas Group companies	Oki (UK) Ltd.	04/1998
	Oki (Thailand) Co., Ltd	07/1998
	Oki Data Manufacturing	07/1998
	Changzhou OKI-GEG Telecoms Ltd.	10/2001
	Oki Electric Industry (Shenzhen) Co., Ltd.	06/2003
	Oki Precision (Thailand) Co., Ltd.	01/2004



Environmental Management

Environmental Audits

Environmental audits at Oki Electric include internal environmental audits conducted at ISO14001-certified sites, as well as the “corporate environmental audit”, where head office sections audit the sites. The results from the corporate environmental audit in fiscal 2003 were as follows.

Outline and results of corporate environmental audits in fiscal 2003

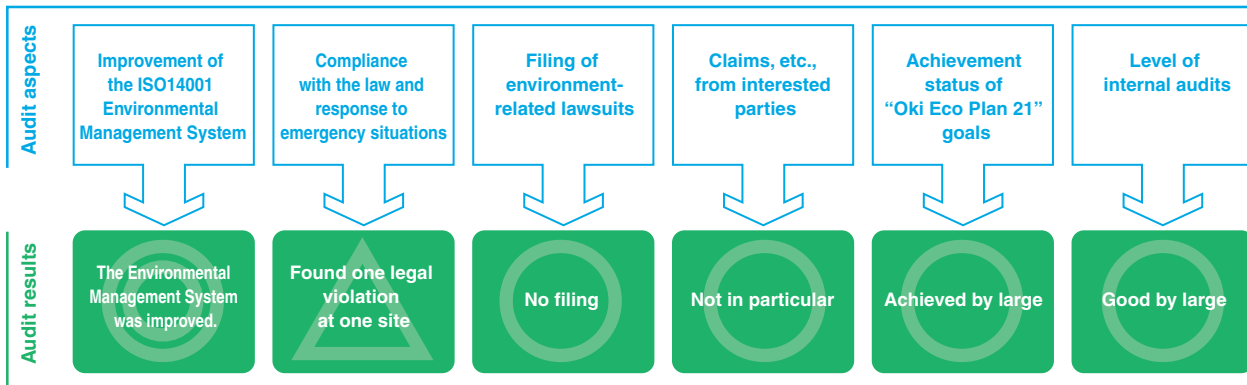
◆Audited Sites:

Four sites of the Oki group in Japan (Numazu district, Miyazaki Oki Electric Co., Ltd., Miyagi Oki Electric Co., Ltd., Oki Printed Circuits Co., Ltd.)

◆Audit Results

At one site, a violation of a legal obligation was found. That site had been measuring and counting substances subject to PRTR, but not submitted the results as required. To respond to this violation, Oki identified an administrator responsible for compliance with laws, including PRTR, and created a management table for the submission of the results.

●Audit Aspects and Results



Environmental Compliance

Also from the aspect of Corporate Social Responsibility (CSR), environmental compliance (adherence to laws and regulations) is important. At present, our efforts focus on the production sections and the design and development sections. In fiscal 2004, however, we will reinforce efforts in the sales sections,

which are the points of contact with our customers. One of the environmental compliance activities for the sales sections is the launch of e-learning on environment-related laws and regulations from July 2004.

Manufacturing sections→Continued efforts

- ◆Implement thorough risk management for environmental pollution accidents, violations of the Waste Management and Public Cleansing Law, violations of obligations of notice, and other assumptions.
- ◆Implement thorough compliance management according to the ISO14001 requirements
- ◆Obtain information on the latest laws and regulations using environment-related official journals, homepages and distribution services
- ◆Check the compliance status in internal audits, corporate audits and third-party examinations.

Design and development sections→Continued efforts

- ◆Implement thorough risk management for environmental pollution accidents caused by products, containment of substances regulated by law, and other assumptions
- ◆Implement thorough compliance management according to the ISO14001 requirements
- ◆Prepare technical standards and design standards related to the environment
- ◆Conduct examinations in environment-related design reviews and product evaluation tests
- ◆Thoroughly implement environment-related education to design and development engineers

Sales sections→Continued efforts (focus efforts)

- ◆Implement thorough risk management for violations of the Waste Management and Public Cleansing Law (including violations of the system for Designated Recycling Manufacturers) and other assumptions.
- ◆Thoroughly communicate the appropriate treatment of used products
- ◆Conduct “environmental compliance education” through e-learning as part of Oki’s CSR activities





Environmental Management

Environmental Education and Activities to Promote Environmental Awareness

To make all employees of the Oki group more aware of environmental conservation, we conduct environmental education for all employees.

■ Oki Month of the Environment

The Ministry of the Environment has established the month of June as the "Month of the Environment". Oki has established an "Oki Month of the Environment" accordingly, using it as an occasion for activities that raise the awareness towards the environment. The environmental slogan is selected through an invitation for proposals throughout the Oki group. During the Month of the Environment, Oki conducts internal broadcasts of messages from the President and puts up environment posters. Each site carries out energy-saving activities or cleanup activities in the community. The results of these activities are publicized in Oki's internal newsletter.



●Poster of Fiscal 2002



●Poster of Fiscal 2003

Excerpt from the Broadcast "Message from the President" of the Month of the Environment 2003

Hello everyone. This is your President Shinozuka speaking. I would like to send you a greeting message for the Month of the Environment.

The Oki group established the Oki Eco Plan 21 in 1999. Since then, we have constantly been active to save energy consumed by production plants and to achieve zero emissions.

To make "contributions to the environment through our products", each in-house company has already started to establish organizations and build operational systems for energy-saving product design, the control of environment-affecting substances contained in products, and for the recovery of the resources in used products. Contributing to the environment through our products is a common issue that I would like to be understood by everyone directly involved in product development, but also by the procurement sections, the manufacturing sections, the quality assurance sections, and sales sections, and others. "The environment is one of our valued customers". I would like to use Month of the Environment 2003 as an occasion to ask every one of you to renew your awareness of the issue of contributing to the environment through our products in your work.

■ Environmental Education and Discussion Meetings for Design and Development Sections

Efforts for more environmentally conscious products will become ever more important in the future. This is why Oki focused on education for the design and development sections in fiscal 2003.

◆In the development sections for information systems, "Lectures on environment-conscious design" were held to share technical information on energy conservation, design of smaller products, design of harm-free products, reuse, and the like for more environmental consciousness.

◆Discussion Meetings on Environmentally Conscious Design were held under participation of designers of information and communications equipment and electronic devices, in order to discuss issues, etc., and to share technical information related to the environment. The contents of the discussion meetings were communicated to all employees of the Oki group through the internal newsletter "OKINEWS".

■ Education for Sales and SE sections

Sales and SE sections are important since they are contact points with customers. These sections require accurate knowledge on the environment.

◆Briefings on the environmental report were held as one of Oki's environmental education activities.

◆In July 2004, we started hands-on environmental compliance education for sales sections using the internal e-learning system. The contents for this education were created in fiscal 2003. The contents of this education assume concrete cases that occur during the actual sales work. They were designed to teach how to adequately react in accordance with the Waste Management and Public Cleansing Law and our role of a Designated Recycling Manufacturer, and in line with Oki Electric's product recycling system. In the future, we will extend this education to related parties at Oki group companies, including dealers, moving to reinforce compliance even more.

The contents of the education were created by Oki Human Network Co., Ltd., a group company in charge of human resource development.



●Contents Example for Environmental Compliance Education

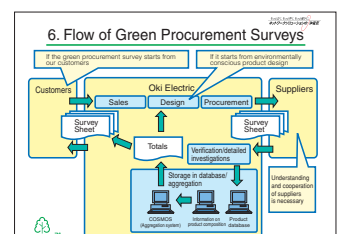
■ Environmental Education to Group Companies

The environmental awareness of the top management in the group companies is important to pursue environmental conservation efforts involving the entire Oki group.

◆Oki conducted lectures in environmental management in the "Oki Group Company Managers' Forum". About 40 presidents and executives of group companies attended the forum and deepened their understanding of issues and efforts related to environmental activities.

■ Education for Major Suppliers (Green Procurement)

For major suppliers of the production sites, Oki conducted briefings to help them understand the "Oki Green Procurement" scheme.



●Contents Example for a Briefing on Green Procurement

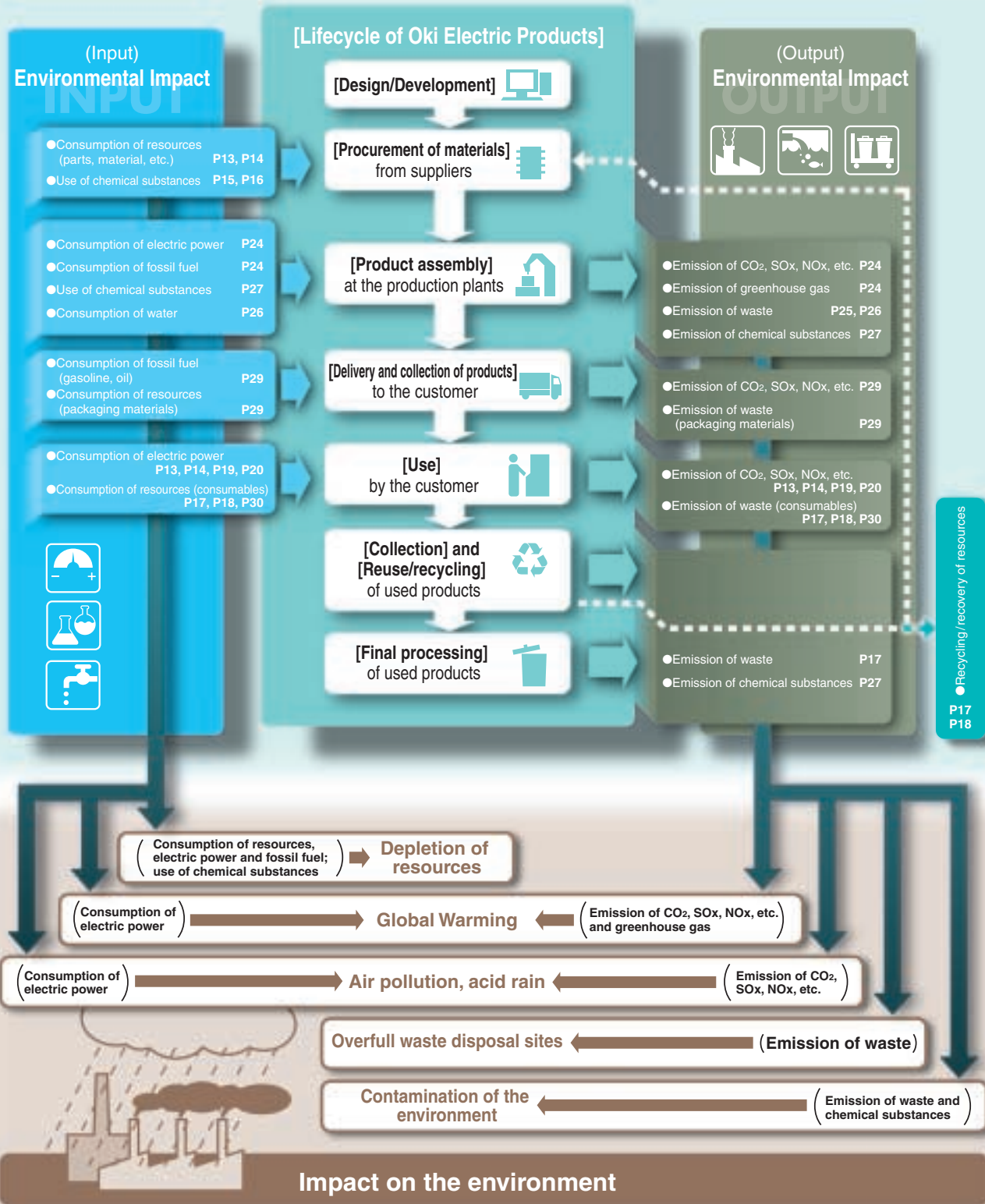


Environmental Management

Environmental Impact and Environmental Conservation Activities of Oki Electric

Factors that have an adverse effect on the environment are called "environmental impacts". For example, the environmental impact "CO₂ emissions" affects the environment in that it "accelerates global warming". "Environmental conservation activities" are activities to reduce environmental impact. The illustration below shows the lifecycle of Oki Electric products

and the environmental impact in each stage of this lifecycle. Oki Electric's environmental management is an environmental conservation activity that aims for the reduction of environmental impact throughout the total lifecycle of our products. For information on the efforts to reduce environmental impact, please refer to the page shown in the illustration.





Environmental Conservation Activities

To ease the impact on the environment, Oki is engaging in a variety of activities. These include reducing the environmental impact from products, and reducing the environmental impact from business activities. Oki also develops products contributing to the environment.

Reducing Environmental Impacts from Products

Efforts throughout the Product Lifecycle

The dimension of the environmental impact of a product is often determined during the design and development phase. To provide products with little impact on the environment, we need to evaluate the environmental impact throughout the lifecycle of a product —such as its potential to save energy

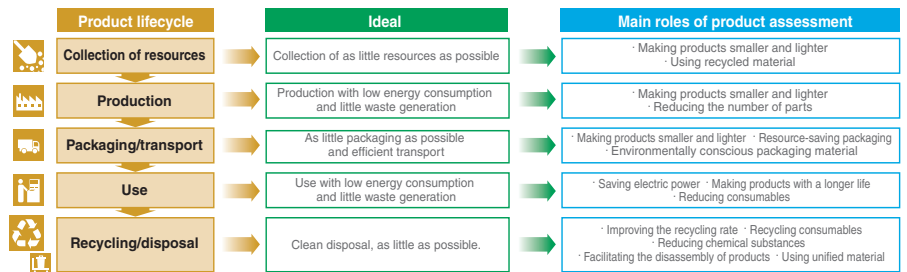
and resources, recyclability, or whether it contains chemical substances— in this phase. The Oki group works to reduce environmental impact from products by implementing product assessment or LCA (lifecycle assessment), and by operating the “Oki Eco Product Certification Program”.

Operation of Product Assessment

Product assessment is a method to reduce the environmental impact of a product by comparing a designed product with a reference product in view of established evaluation items (for example, resource conservation, energy saving, or recyclability), and repeating the design process until the designed model clears the judgment standards. The illustration at the right shows what should be considered in product assessment. The Oki group has been conducting product

assessment since the introduction of the product assessment system in fiscal 1995.

●Points Considered in Product Assessment



Example for the Application to Products

The following presents some information and telecommunications products of the Oki group where environmental impacts were reduced through product assessment.

▣Multimedia Communications Server DISCOVERY01® MCU……

◆Making smaller and lighter products, saving electric power, reducing the number of parts

DISCOVERY01® MCU is a unit to control remote sites in IP network systems that have a DISCOVERY01® at their core. It enables continued telephone services at remote sites in the case of a failure of the DISCOVERY01® or of the IP network. With this device, we used IP functions to integrated functionality and reduced the number of parts used. By designing the device so that it operates in a stand-by status during normal times, the consumption of electric power was also reduced. The results were a 85% smaller and lighter product which uses 74% less electric power. (certified as an Oki Eco Product in fiscal 2003)



●DISCOVERY01® MCU



●DISCOVERY01® (main unit) Type ML, medium to large capacity (right)

●DISCOVERY01® (main unit) Type S, small capacity (above)

*1) DISCOVERY01: A registered trademark of Oki Electric Industry Co., Ltd.

▣VoIP Terminal VC14R-FXS ……………

◆Making smaller and lighter products, saving electric power

The VoIP*2) terminal VC14R-FXS is a VoIP adapter to connect the VoIP service carrier. Based on the existing 2-channel VC12R-FXS, Oki used high-density mounting to realize 4 channels with the same chassis size. Further, the employment of low-power IC chips helped to keep the power consumption down at the same level as the existing 2-channel version. The result was a 50% smaller and lighter product which uses 17% less electric power. (certified as an Oki Eco Product in fiscal 2003)



●VC14R-FXS

*2) VoIP: A communication technology where voice is converted into IP packets and transmitted through the Internet or dedicated IP lines.

▣Printer MICROLINE5300 ……………

◆Reducing consumables

With this printer, Oki reduced consumables by employing limited-color printing, which also contributes to cost reductions at the customer's side. Concretely speaking, this printer allows printing with only a black ink unit, or a black unit and one other color (yellow, magenta or cyan) installed. This enables printing with a limited number of colors.



●MICROLINE5300

Users do not have to purchase unnecessary ink units, which helps not only to improve the cost/performance ratio, but also to reduce waste from consumables.

◆Making smaller and lighter products, saving electric power

Compared to the MICROLINE7300, a printer that offers an equal printing speed, the MICROLINE5300 is smaller and lighter, and uses less electric power. Concretely speaking, Oki reduced the weight by 50%, the volume by 28%, the consumption of electric power in stand-by status by 33%, and the average power consumption during use by 20%. Toner cartridges and image drum units were also made smaller and lighter.

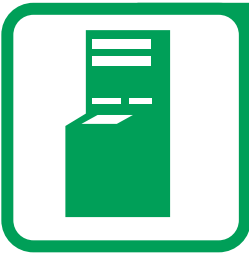
▣Other Examples: Merging of Molded Parts ……………

◆Reducing the number of parts

Reducing the number of parts leads to a reduction in the time needed to assemble the product, energy conservation, and to a reduction of waste due to a reduction in packaging material for parts. Oki Electric is undertaking efforts to merge multiple molded components in its products into one.



●Integrated Molded Component



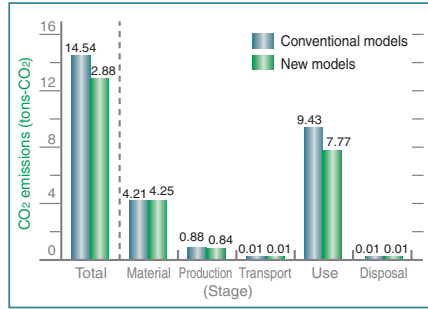
Environmental Conservation Activities

Efforts for Lifecycle Assessment

Product assessment is employed in many companies since the evaluation is easy. However, product assessment does not analyze the question what stage of the product lifecycle has the largest environmental impact. This leads to the problem that effective countermeasures are difficult to find. To solve this problem, we are promoting the implementation of another evaluation method: LCA (lifecycle assessment). LCA is a method of evaluating impacts on the environment by comprehensively quantifying flows of material and energy throughout the lifecycle of a product or service from the production up to the disposal. It is an effective technique to grasp the environmental impact of the entire product lifecycle. Up to now, we have applied LCA for automatic teller machines (ATM), telecommunications equipment and printer products, and utilized the results for product design.

Okii will continue to utilize LCA as a tool for environmentally conscious design.

● LCA Results for ATM



● ATM

Okii Eco Products Certified by Okii's Certification Program for Environmentally Conscious Products

To provide customers with environment-conscious products, Okii Electric has been operating the Okii Eco Product Certification Program since fiscal 2001. This is an internal program to certify products that satisfy Okii Electric's original environment standards as "Okii Eco Products". The program also provides the customer with environmental information on the product. Certified products bear a symbol mark in catalogs or user manuals, and are published in the Internet together with the certification standards. Products that satisfy the standards common to all products (common corporate standards) and the individual standards that incorporate characteristics specific to each product (product family standards) are certified as "Okii Eco Products".

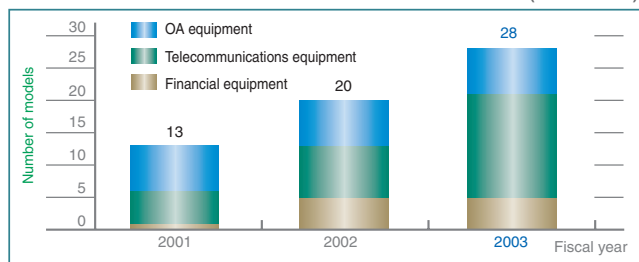
● Flow of Okii Eco Product Certification



Transition in Okii Eco Product Certifications

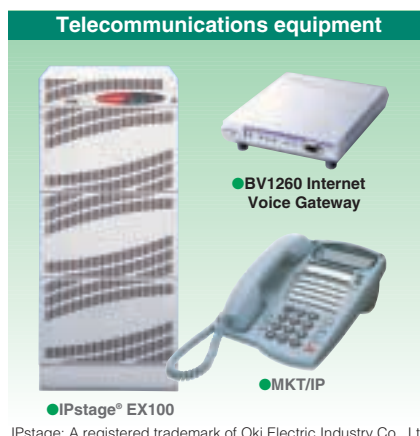
Based on the "Okii Eco Product Certification Program", which was launched in fiscal 2001, the number of certified products is increasing every year, as the graph on the right shows. In fiscal 2003, 8 models were newly certified as Okii Eco Products, bringing the number of certified products to a total of 28. In the future, Okii will continue to increase the number of Okii Eco Product certifications of environment-conscious products.

● Transition of Number of Models with Okii Eco Product Certification (accumulated)



Examples for Okii Eco Products

The following shows some typical examples for Okii Eco Products.





Environmental Conservation Activities

Reducing Environmental Impacts from Products

Control and Reduction of Chemical Substances Contained in Products

Although chemical substances are indispensable for our daily life, they can have a grave effect on the environment if they are not used and controlled in an adequate way. The Oki group is well aware of this effect and therefore working to control and reduce chemical substances, to promote green procurement, and to completely eliminate the substances subject to the RoHS directive.

Control of Chemical Substances

Oki designates chemical substances in products that have a grave effect on the environment and controls them by classifying them into three types: prohibited substances, restricted substances and voluntarily controlled substances. 292 substances are controlled this way. The controlled substances include the six substances subject to the RoHS directive (the EU (European Union) regulations for the restriction of hazardous substances contained in electric and electronic equipment): lead, hexavalent chrome, cadmium, and others.

Control Criteria for Chemical Substances

Classification	Number of Substances	Designation Criteria
Prohibited substance	97	·Substances prohibited for manufacturing by laws and regulations ·Substances requiring manufacturing licenses by laws and regulations ·Voluntarily prohibited substances
Restricted substance	94	·Substances that a reduction (for example, a schedule for production prohibition) is already decided by laws and regulations ·Voluntarily restricted substances
Voluntarily controlled substance	101	·All substances not included in "prohibited substances" and "restricted substances".

Promotion of Green Procurement (Reduction of Chemical Substances in Purchased Articles)

Oki Electric has implemented green procurement, purchasing preferably parts and materials that contain only small quantities of chemical substances affecting the environment. Based on the "Green Procurement Standardization Guidelines" created by the Conference on the Standardization of Green Procurement, Oki established a new "Oki Green Procurement Standard", which has

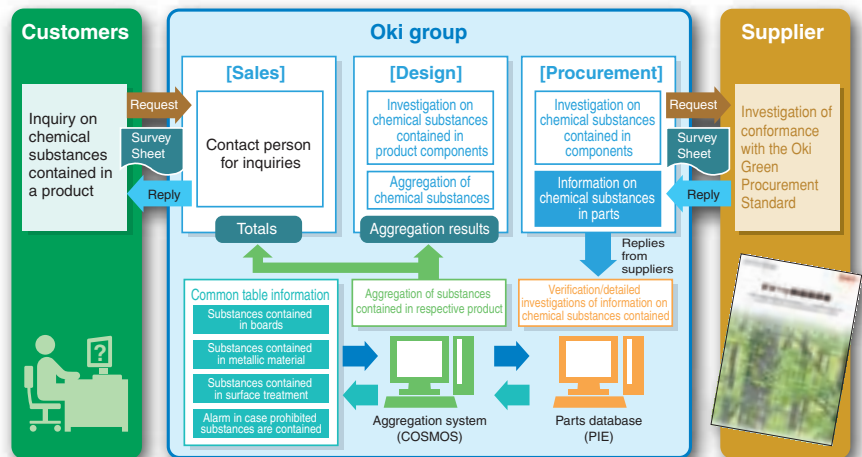
been in use since fiscal 2002. The "Oki Green Procurement Standard" contains two documents: one that is applied to electronic parts and mechanical parts purchased by sections that produce information and telecommunications equipment, and one that is applied to material, etc. purchased by the sections that produce semiconductors. The two standards are published on our website.

Expanding the Information System for Chemical Substances Contained in Products (Internally Called "COSMOS") to the Entire Oki Group

The information system for chemical substances contained in products was expanded to the whole Oki group. In its new form, it will start operation in fiscal 2004. For this purpose, the existing system was remodeled in fiscal 2003. To eliminate designated substances from our products, we need to investigate whether these substances are contained in each individual component, and replace components with alternatives that are free of these substances as necessary. Oki Electric's parts database has already accumulated a huge quantity of information on substances contained in parts. Thanks to the expansion of the system to the entire group, the data on substances contained in parts that were collected in green procurement surveys can now be shared by the whole group. This reduces the time needed to aggregate the chemical substances contained in a product model from several days to a few hours, also enabling us to provide fast answers to our customer's requests. And since the system aggregates the data on chemical substances in each component to entire products, we can identify not only regulated substances, but also other valuable material, such as gold, silver, or palladium. The system

also enabled us to reduce the manhours needed to disassemble and recycle collected used products, thus reducing cost. COSMOS is also storing data on heat-resistance of parts needed for lead-free soldering, and base data for LCA (lifecycle assessment). We will further enhance its contents as a tool for a comprehensive evaluation of the environmental impact of a product.

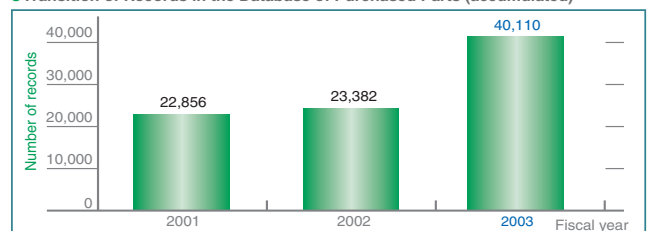
Chemical Substance Survey Flow in Green Procurement and the Information System for Chemical Substances Contained in Products

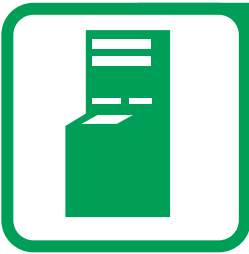


Transition of Green Procurement Database Records

The accumulation of aggregated data of environment-affecting substances contained in procured parts is making progress. By the end of March 2004, the number of records was at about 40,000. This is a significant increase of 72% compared to the previous year. In the future, Oki will continue to accumulate data for a further enhancement of the green procurement database.

Transition of Records in the Database of Purchased Parts (accumulated)



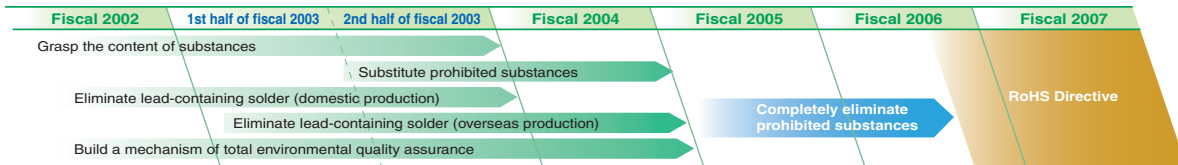


Environmental Conservation Activities

Complete Elimination of Substances Subject to the RoHS Directive

According to the RoHS Directive (the EU (European Union) regulations for the restriction of hazardous substances contained in electric and electronic equipment)*1, products that contain any of the 6 designated substances (lead, hexavalent chromium, cadmium, etc.) will be prohibited for sale in the EU from July 2006. Oki Electric has set up a schedule for the complete elimination of the substances designated in the RoHS Directive and is promoting activities on the basis of this schedule.

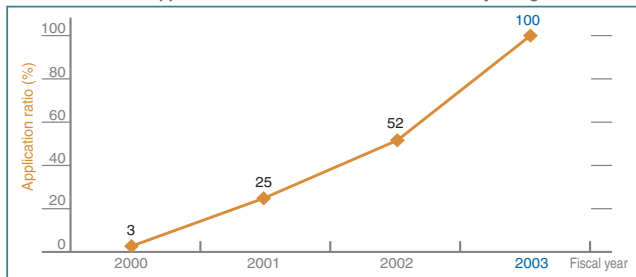
*1) RoHS Directive: A directive of the European Parliament and the European Commission on restricting the use of specific hazardous substances contained in electric and electronic equipment.



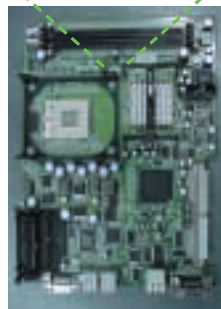
100% Lead-free Solder in Domestically Produced Boards of Newly Designed Products

Efforts for the elimination of lead from printed circuit boards started in fiscal 1998 with the development of the technology. We then aimed to expand the application of this technology. In fiscal 2003, the technology was applied to all domestically produced boards for newly designed products (information equipment). For fiscal 2004, we will aim for the complete elimination of lead in boards produced overseas.

● Transition in the Application Ratio of Lead-free Solder in Newly Designed Products



● Oki Electric Logo for Lead-free Solder

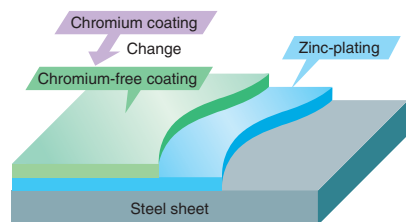


● Example for a Product Using Lead-free Printed Circuit Boards
CM21 (General Cash Management System)

Employment of Chromium-free Steel Sheets

Zinc-plated steel sheet is used in Oki Electric's main products, such as ATM (automatic teller machines) and other information and communications products. To improve antirust performance, the chromium-coating of zinc-plated steel sheet contains very small quantities of hexavalent chromium, a substance subject to the RoHS

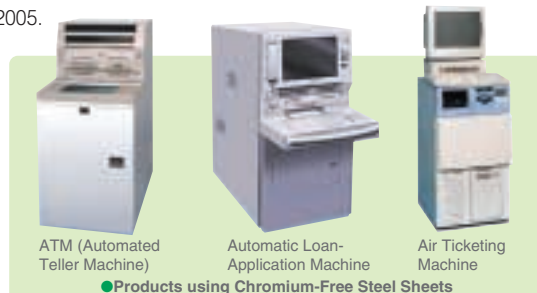
directive. At the end of fiscal 2002, Oki Electric completed the substitution of these steel sheets with chromium-free steel sheets that do not contain hexavalent chromium for domestic production. For overseas production, we are working to finish the complete substitution by the end of March 2005.



● Structure of Chromium-Free Steel Sheets



● Mechanical Part using Chromium-free Steel Sheet



● Products using Chromium-Free Steel Sheets

Efforts for Printer Products

For Oki Data Corporation, a group company that develops and manufactures printers and facsimile machines, etc., the EU is a major market. Because of this, Oki Data has established working groups for the RoHS Directive consisting of members from design and sales sections, etc., to develop activities in the three production plants in Japan, Thailand and China. Apart from the introduction of lead-free solder on printed wiring boards, they work for a complete elimination of hexavalent chromium contained in screws and steel sheets.

Efforts for Electronic Components

For semiconductor packages, we succeeded in the development of a technology to eliminate lead from pin plating and solder balls in fiscal 2002. In fiscal 2003, we aimed to expand the application of this technology to our products. On the other hand, Oki Sensor Devices Corporation, a group company that develops and manufactures switch parts, introduced new equipment for lead-free soldering in a move to respond to trends in environmental measures of their customers—automobile and home

appliance manufacturers—as fast as possible. Efforts for a complete elimination started in fiscal 2004. We promote the development of lead-free products to respond to the needs of our customers.



● Switch Part Supporting Lead-free Solder





Environmental Conservation Activities

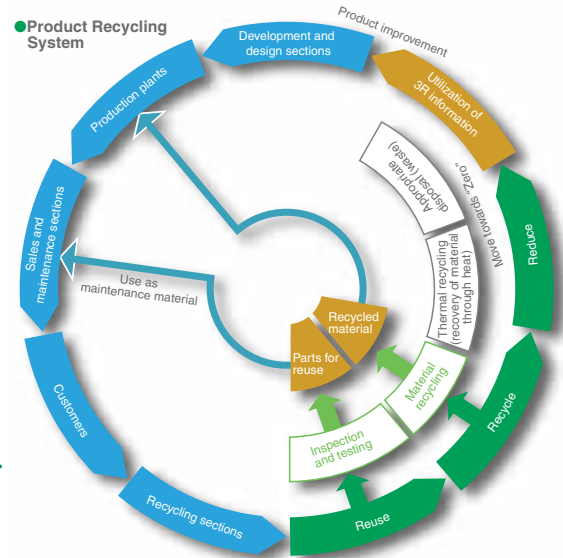
3R-Activities for Used Products

[Product Recycling System]

To build a recycling-based society, we need to use resources in an effective way and reduce waste. For this purpose, the Oki group promotes "3R Activities" for used products. As for "reuse"—Oki Customer Adtech Co., Ltd., a group company in charge of maintenance and service, has been conducting functional tests, diagnosis, stress tests, maintenance and overhauling of reusable products and selling supplementary material for maintenance and used products since fiscal 1995. As for "recycle"—Oki Electric established a testing and demonstration plant (currently the recycling center of Oki Supply Center Co., Ltd.) at the Honjo production plant in July 1999. Here, Oki products are disassembled and recycled. As for "reduce" (control of waste generation), we strive to develop, manufacture and sell "environment-conscious products" through product assessment. For this, we utilize information from, for example, the recycling sections. We are also operating individual recycling systems for home computers, used printer consumables and small rechargeable batteries. For details, please see page 18.

[Approval as a Designated Recycling Manufacturer]

On November 4, 2003, Oki Electric was approved as a Designated Recycling Manufacturer. Before, we had been recycling used Oki products traded in as waste from the customers, but now that we are approved, we can directly pick up the old products as waste from our customers and recycle them. Oki promotes the reuse and recycling of used products (including business computers) by utilizing this scheme for the used product recycling system already built. For details, please see page 6.



Concrete Recycling Efforts

Disassembly of ATMs

To increase efficiency, large equipment such as ATMs is disassembled in three phases: disassembly into large parts, disassembly into medium parts, and disassembly into small parts. To accelerate the speed, we installed air screwdrivers and air nippers to reduce the working time. When disassembling small units (3-50 kg), we try to maximize efficiency by using rotating work tables and special tools so that the disassembly can easily be done by one person.



Disassembly of ATM into Large Parts

- 1 [Disassembly into large parts]
The work of taking large units from the inside of the equipment (card reader unit, etc.) out of the chassis.
- 2 [Disassembly into medium parts]
The work of sorting material while disassembling units from the disassembly into large parts (such as card readers) into components.
- 3 [Disassembly into small parts]
The work of disassembling and sorting components made of multiple materials.

Preventing Data Leakage and Destroying the Functionality of PC Hard Disks, etc.

Data, etc. left on PC hard disks are completely erased and destroyed. In the work process, the printed circuit boards and the mechanical parts of hard disks, etc. are always exposed to shock to destroy their functionality and to prevent data from leaking out.

- ◆ We destroy data using a hard disk-crusher that destroys the magnetic surface with a powerful magnet.
- ◆ Floppy disks, CD-ROMs and other media are destroyed in shredders.

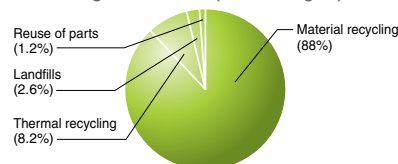


Complete erasure and destruction of PC hard disks, etc

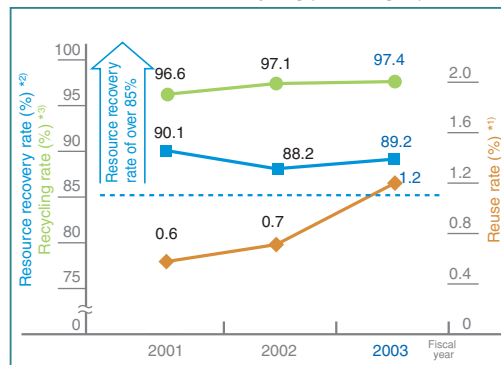
Results of used product recycling

Through the above efforts, we collected 2,155 tons of used products, mainly ATM (automated teller machines) equipment, in fiscal 2003. The resource recovery rate in the Kanto region, where a large quantity of used products is collected, reached 89.2%, clearing the goal of 85%. The collected quantities of printer consumables increased by 35% compared to fiscal 2002. We will continue to promote our efforts for even more efficiency in the recovery of resources.

Processing in Fiscal 2003 (in Kanto region)

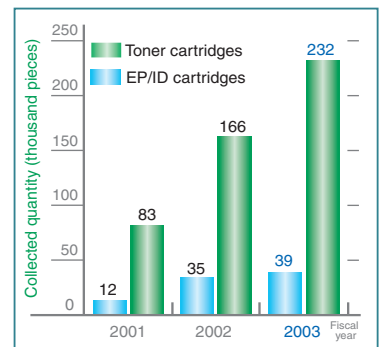


Transition in Used Product Recycling (Kanto Region)



- * 1) Reuse rate: The ratio of reused products to collected used products (in weight).
- * 2) Resource recovery rate: The ratio of material recycling and reuse to collected used products (in weight).
- * 3) Recycling: The ratio of material recycling, thermal recycling and reuse to collected used products (in weight).

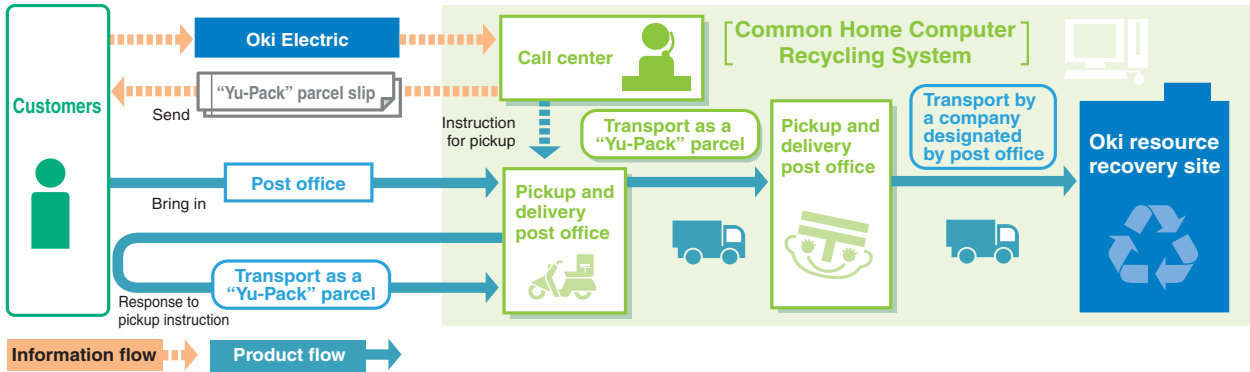
Transition in the Quantity of Collected Printer Consumables



Environmental Conservation Activities

■ Home Computer Recycling System

Based on the Law for Promotion of Effective Utilization of Resources, we started PC recycling in October 2003, collecting and recycling used PCs from homes. In doing so, customers and manufacturers work together to reduce waste and promote the efficient use of resources by recovering the resources of used PCs. Oki Electric participated in the construction of a common scheme promoted by the PC 3R Promotion Committee of JEITA (Japan Electronics and Information Technology Industries Association), which uses the services of Japan Post.

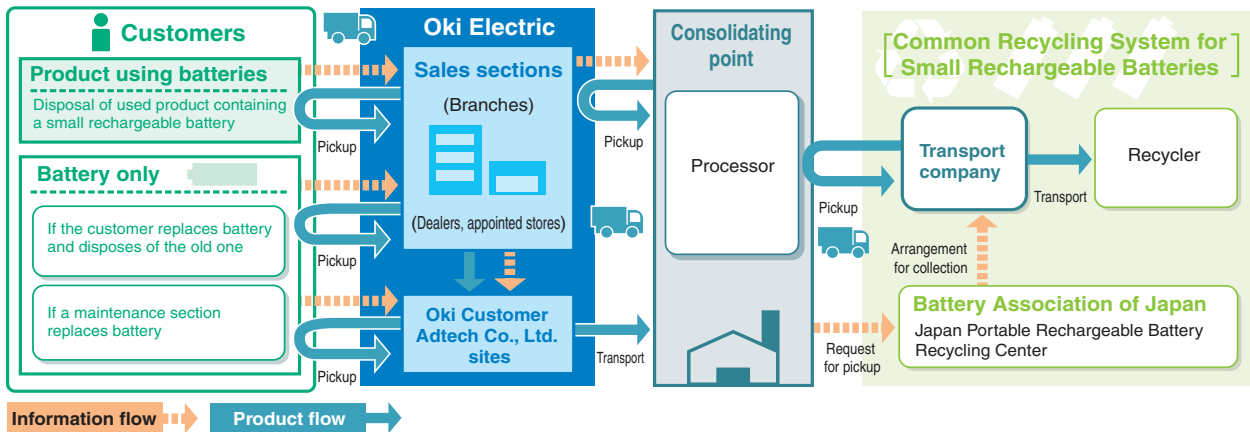


■ Recycling System for Small Rechargeable Batteries

According to the "Law for Promotion of Effective Utilization of Resources", manufacturers of small rechargeable batteries (sealed accumulators) and manufacturers of equipment using small rechargeable batteries have the obligation to "collect and recycle used small rechargeable batteries" as designated recyclers. This came into effect in April 2001. Oki Electric, a manufacturer of equipment using small rechargeable batteries,

obtained the "approval regarding the voluntary collection and recycling of used designated recycling products" from the Ministry of the Economy, Trade and Industry and the Ministry of the Environment in July 2001, and has since been collecting and recycling together with the "Japan Portable Rechargeable Battery Recycling Center*1)" of the Battery Association of Japan.

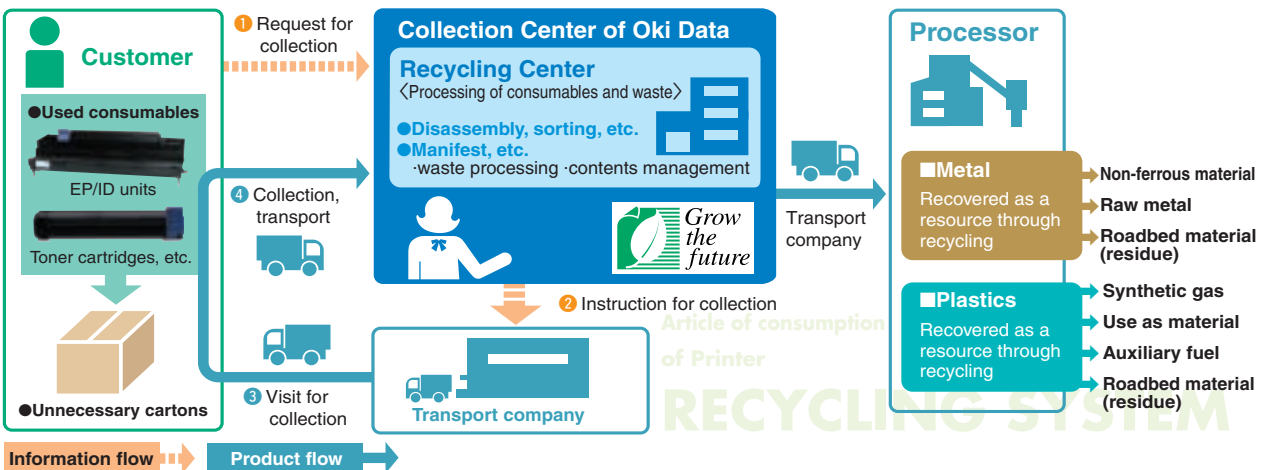
*1) Japan Portable Rechargeable Battery Recycling Center: Changed to "JBRC" on April 1, 2004.



■ Recycling System for Used Printer Consumables

Oki Data Corporation, a group company developing and manufacturing printers and facsimile machines, etc., is working on recovering resources in consumables such as toner cartridges or EP/ID units*2), aiming to ensure an effective use of resources.

*2) EP: Electro Photographic, ID: Image Drum





Environmental Conservation Activities

Environmentally Conscious Products

Oki Electric contributes to the reduction of environmental impact through environmentally conscious design and manufacturing. Here are some examples of Oki's environmentally conscious products that have not been presented yet.

■ Development of a Compact-size, Large-capacity ATM for the Chinese Market

We developed an ATM (Automated Teller Machine) for the Chinese market — the ATM21S. For this machine, we leveraged the technology nurtured in Japan to realize the largest capacity for banknotes in the industry while retaining a slim appearance. The machine also allows paying in and taking out Chinese banknotes at high speed. Currently, cash dispensers which offer mainly cashing functions are the mainstream in the Chinese market. In recent years, however, the number of ATMs that allow users also to deposit banknotes is steadily increasing. The demand for ATMs that are compact and allow an efficient use of capital is expected to grow further. With the ATM21S, Oki realized a capacity of up to 14,000 banknotes for the first time in the industry to improve operability, and also facilitated the replacement of existing machines by giving the new machine the same width as a cash

dispenser (470 mm). This compact size saves space, and contributes to reducing environmental impacts by saving resources and energy, also during transport.



●ATM21S
(Automated Teller Machine)

■ Development of Cadmium-free Mobile PC Keyboards, Acceleration of Strategy for China

We established a manufacturing process for mobile PC keyboards that are free of cadmium, a substance restricted in the RoHS directive. We also developed a technology to make thinner and lighter keyboards without any sacrifices in functionality. In the future, Oki will aim for overseas expansion, mainly to China, in the mobile PC keyboard field, where customers demand thinner, lighter and environmentally conscious products. Since this keyboard is a product that offers high quality while giving consideration to the environment, we even received a letter of appreciation from one of our customers.



●Mobile PC Keyboard

■ Eco-cables: Development of PVC-free Flat Cables

Oki Electric Cable Co., Ltd., a group company developing and manufacturing communications cables, etc., started the production of "Eco-OKIFLEX" cables, environmentally conscious flat cables that offer superior flame resistance, refringency and flexibility without using PVC. Most communications cables, etc. use PVC in their covering material. PVC, however, contains lead additives to maintain performance, and lead is one of the substances restricted in the RoHS Directive. Also, because one of the main elements of PVC is the halogen substance chlorine, toxic substances such as dioxin may be generated when PVC is

burned. "Eco-OKIFLEX" cables contain uniquely treated polyethylene material to improve their self-extinguishing ability, realizing a flame resistance that is equal to conventional PVC.



●Oki-ECOFLEX Flat Cable

■ Commercialization of Energy-saving LSIs (SOI Technology)

Development of the First One-chip LSI for Radio Wave Watches in the World Using SOI-CMOS Technology

Oki Electric was the first in the world to succeed in mass production of LSIs utilizing complete depletion SOI (Silicon on Insulator)-CMOS technology. The LSIs were employed for radio wave solar watches. LSIs utilizing SOI-CMOS technology boast high-speed performance while realizing an electronic power consumption of less than one third of conventional products. The combination with a solar cell allows building innovative watches that do not require battery replacement, so that this LSI is wildly popular in the solar radio wave watch market as an energy-saving, environmentally conscious product. We further succeeded in developing the radio wave receptor LSI "ML6190A" and the RTC*1) "ML6191", which has an additional auto-correction function. Especially the "ML6191" is under attention as a one-chip LSI that incorporates radio wave reception and real time clock functions for the first time in the industry. In the future, we expect that these

LSIs will be applied for time-correction also in audio-visual equipment, home appliances, PCs and clocks in cars.

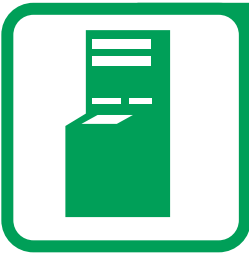


●Development LSIs Using SOI Technology



●A Radio Wave Solar Watch Containing the Commercialized LSIs (photograph courtesy of Casio Computer Co., Ltd.)

*1) RTC: Real Time Clock



Environmental Conservation Activities

Developing Products Contributing to the Environment/Environmental Solutions

In addition to reducing environmental impacts from business activities, Oki Electric positioned the development of products that solve environmental problems as a focus theme to reduce environmental impact further. We provide our customers with environmental solutions through, for example, “products

contributing to the environment (energy-saving or resource-saving system products, environmental conservation equipment)” and “environmental education”, and “environmental consulting”. The following shows some examples.

Products Contributing to the Environment

Energy-saving and Resource-saving Products

To reduce environmental impact through business reform, and for other purposes, Oki Electric is developing energy-saving and resource-saving systems. The following shows some examples.

VICS Traffic Information and Communication Systems

VICS is a system to communicate traffic information. It is deployed all over Japan as part of ITS (Intelligent Transport Systems).

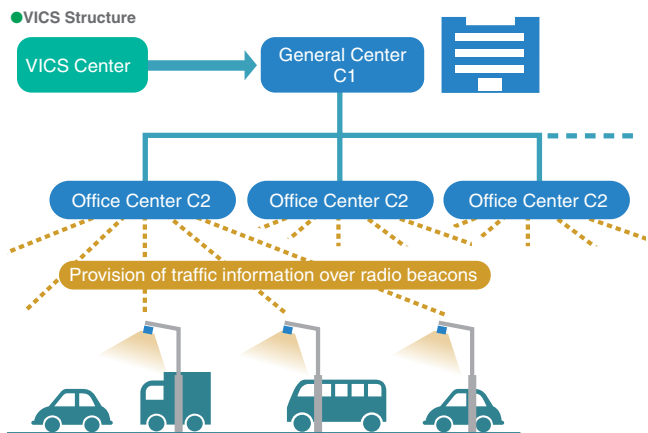
Through beacons or FM multiplex broadcasting installed on the roadside, drivers are provided with necessary information (such as traffic jams, traffic regulations, routes or parking space) over their on-board equipment (car navigation system). The deployment of VICS all over Japan promises to reduce traffic jams, exhaust gas and wasted fuel energy. Oki Electric offers communications control equipment for VICS centers and the roadside radio beacons installed at the road side.



Radio Beacon



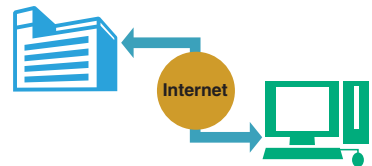
Server at an Office Center



Electronic Document Delivery System

On April 1, 2001, the “IT Document Summary Law” came into force, and the delivery of official documents as electronic files using, for example, the Internet became possible. “Electronic Document Delivery Systems” are systems that transmit documents to customers, etc. in the form of electronic files over the Internet. In fiscal 2003, we expanded the “Electronic Document Delivery Services” we are providing to financial institutions. We increased the documents that can be delivered over the Internet to five types so that the system can now handle all documents required for the

sale of investment trust products. By enhancing security functions, we have also improved management functions such as the delivery history. We expect that the utilization of this system will reduce the resources consumed for paper, and energy for transport.



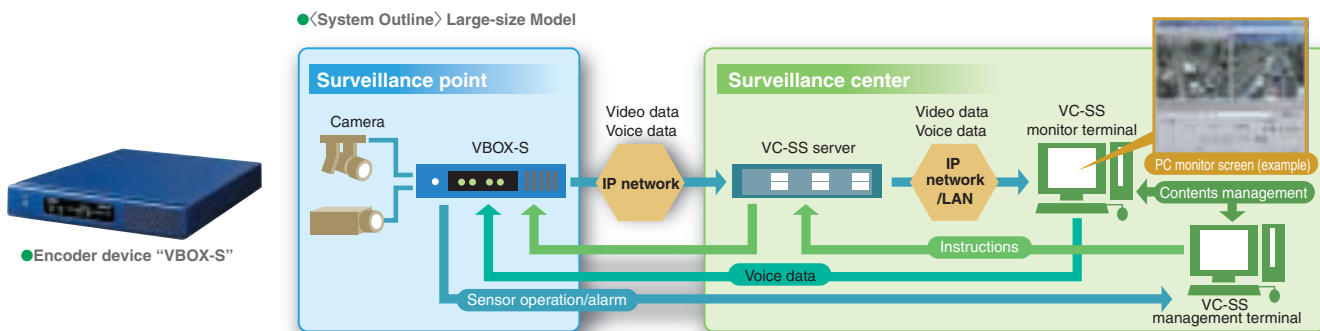
Real-time Security Surveillance System Capable of Live Video Streaming

OWith the spread of broadband networks, live video streaming systems that store, deliver and replay videos or sound in real time are being more and more used. A higher awareness of crisis management further requires highly reliable video streaming systems that offer a wide variety of functions to support surveillance work. This is where Oki developed VisualCast[®]SS, a real-time security surveillance system that can deliver live videos from over 200 locations. Energy and time required to move from one location to another can be reduced by utilizing, for example,

the live video surveillance function, which works in connection with the individual sensors, and the bi-directional voice communication function. The encoder device “VBOX-S”, which was newly developed for this system, was reduced to less than half the size of conventional devices by concentrating the encoder for the encoding of video signals to one chip. Video surveillance also starts up only when the sensor responds to something. With these and other features, the device promises to save resources and electric power.

*1) VisualCast[®]: A registered trademark of Oki Electric.

(System Outline) Large-size Model





Environmental Conservation Activities

■ Environmental Conservation Equipment

The Oki group is conducting research and development of environmental conservation equipment to measure or reduce environmental impacts generated by, for example, production plants. The following shows some examples.

▣ Bio-Recycling System for Organic Waste Fluids of Semiconductor Plants

Miyagi Oki Electric Co., Ltd., one of our semiconductor manufacturing sites, developed a system for highly efficient treatment of waste using microorganisms. Using this system, they were able to reduce the waste from organic waste fluids emitted during the manufacturing process by 70% (1,980 tons) compared to the conventional method. The treatment with microorganisms is a safe method where microorganisms decompose organic substances into carbon dioxide and water, so that the final waste is reduced and no hazardous substances are generated. The new system improved the conventional method to treat various kinds of composite organic waste fluids generated during the semiconductor manufacturing process together for each plant building to a method using separate distribution pipes for each type of organic waste fluid of the whole plant. Because the system uses the most suitable microorganisms for each type of organic waste fluid and keeps the water at a temperature that is optimal for the respective microorganism to be active, the decomposition efficiency improved 1.5 times. To control the water temperature, waste heat from air conditioning boilers, etc. is used to save energy and cost. Thanks to this system, 97% of the organic waste fluids can now be treated within the plant premises. Treating the waste fluid mostly within the premises also reduces the environmental risk of accidental leakage during transport. For the future, we aim to treat 100% of the organic waste fluids with microorganisms.



● Bio-recycling System Installed at a Waste Water Treatment Site

▣ Wet Treatment Equipment for Toxic Gas in Semiconductor Plants

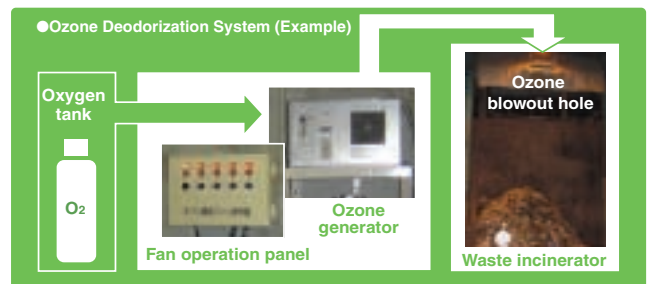
Oki Engineering Co., Ltd., a group company engaged in the design of environmental systems, etc., developed wet treatment equipment for toxic gas generated in, for example, the semiconductor manufacturing process. With this equipment, toxic gas is not treated centrally in "bulk", but in a distributed form by small treatment units installed at each site where the gas is generated. In the units, the gas is decomposed by being showered with large quantities of water. The components are then diluted in circulating water, detoxified, and emitted as waste water. The equipment uses an original technology where the generated gas is not fixed in the reactor when it reacts with the water. Before the installation, the generated gas is measured and analyzed in detail. Because in this way, the system is tailored to the conditions of gas, reliable and efficient treatment of very small quantities of gas are possible, and maintenance is required only once every year. The types of gas that can be treated were also increased from a few to about 30, which means that we can handle almost any gas generated in the semiconductor manufacturing process. In the future, we will aim to expand sales to our customers based on the expertise accumulated with the installation of the system within the Oki group.



● Equipment for Wet Treatment of Toxic Gas

▣ Ozone Deodorization System for Incinerator Sites

Oki Environment Technologies Inc., a group company engaged in the design and installation of environmental facilities, developed a system that decomposes the odor generated by waste using ozone. The system was experimentally installed in the waste incinerator facility of a treatment site for industrial waste in Miyazaki prefecture. This incinerator faced the issue that foul odor generated from the waste brought in spread into the surrounding region. This odor, however, can be significantly reduced with ozone. The system generates ozone using oxygen from a tank and deodorizes the waste in the incinerator by directly blowing the ozone onto the waste with fans. The mechanism of the deodorization is that ozone molecules (connections of three oxygen atoms) react with the molecules that cause the odor to decompose the odor. After the decomposition, the ozone returns to oxygen so that there is no influence on the environment. For the future, we aim to expand sales for waste incinerators, kitchens, meeting halls, meat processing sites and other facilities all over Japan.



▣ Monitoring System for the Density of Released Chlorine Residue for Hot Spring Facilities

Oki Environment Technologies Inc. developed a system that automatically measures the density of chlorine residue in the bathtubs of hot spring facilities around the clock, keeping the density to a certain level. In bathtubs that circulate hot water for repeated use, there are risks of, for example, mass infections with legionnaire's disease, and chemicals containing chlorine are used for disinfection. However, the chlorine density of has to be kept at a certain level, which is difficult to maintain because the density of chlorine decreases when the number of bathers increases. This system can collect samples of hot water from each bathtub for measurements in intervals of 3 to 5 minutes to control the quantity of chlorine injected into the bathtub when the chlorine density is too low and bring the chlorine density close to the preset value. For the future, we aim to expand sales to hot spring facilities and swimming pool facilities all over Japan.



● Monitoring System for the Density of Released Chlorine Residue for Hot Spring Facilities

▣ Other Environmental Conservation Facilities

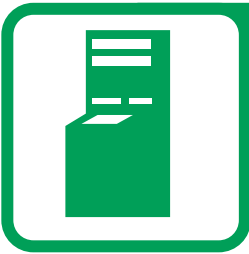
The following are examples of other equipment we worked on up to now.



● Conservation of Water Resources Using a Recycling System for Surface Active Agents (Example from Fiscal 1998)



● Water Quality Control Using the "Mizumonban" (Example from Fiscal 2001)



Environmental Conservation Activities

Environmental Education

Lead-free Soldering School: Accelerating the Fostering of Technicians for Environmentally Friendly Manufacturing

To realize lead-free products, Oki was the first in the industry to introduce a "Lead-free Soldering Skills Certification System". Lead-free soldering requires a higher level of technical expertise of technicians than conventional soldering, because the melting temperature is high and soldering needs to be done at this high temperature and within a short time. This leads to a higher risk of breaking heat-sensitive parts or bad soldering. This is where we evaluate lead-free soldering skills with regards to fifty items and certify the technicians on five levels based on the total score. The introduction of this internal system helps to foster specialists who are well familiar with the special technology needed for lead-free soldering of products, reinforcing our capability of environmentally friendly manufacturing. Oki Human Network Co., Ltd., a group company in charge of human resource development, operates the "Oki Soldering School", a certified school and also a certification test site of the Japan Welding Engineering Society. For the future, we plan to commercialize also the "Lead-free Soldering Skills Certification System" and to open a school.



● Students Attending the Lead-free Soldering School



Outline of the Lead-free Soldering Skills Certification System

Target: Employees of companies involved in soldering, and individuals

Certification period: 2 years

Certifications: Top, Superior, Intermediate, Beginner, Basic

(Ranking based on the outcome of actual soldering work)

Certification institute: Oki Human Network Co., Ltd.

Evaluation items: basic theory, practical skills

(insertion and mounting technology, surface mounting technology, lead), 50 items each

Environmental Consulting Business

Assistance in Chemical Substance Surveys for Green Procurement

To reduce substances with a strong impact on the environment or the 6 substances (lead, hexavalent chromium, cadmium, etc.) subject to the RoHS directive (regulations of the EU (European Union) to restrict the use of hazardous chemical substances in electric and electronic equipment) used in products, surveys on the chemical substances contained in each part making up a product are necessary. Surveys on chemical substances contained in parts are indispensable also for green procurement. Oki Engineering Co., Ltd., a group company in charge of measurement and analysis, does not only investigate the existence of chemical substances, but also shows customers how to solve problems. Taking advantage of the know-how in reliability evaluation, Oki Engineering calculates how much and where chemical substances exist, and then makes a proposal as to why a chemical substance was mixed into the part, and what process needs to be improved to eliminate the chemical substance in question.



Information System for Chemical Substances Contained in Products: Assistance in Aggregation

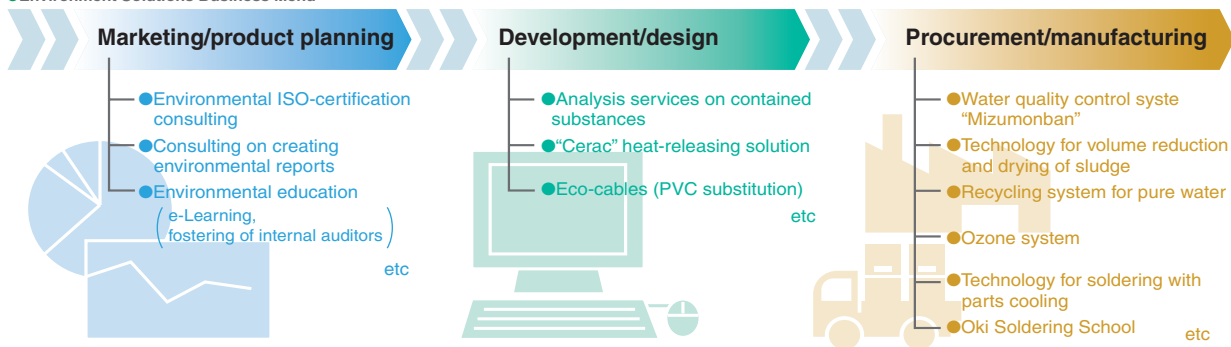
Oki built a company-wide system to instantly grasp the quantities of chemical substances contained in products. It connects the parts database with design systems that have information on what parts a product consists of, to aggregate the total quantities of substances in products. Users can easily look up in what part(s) of the product the aggregated quantity of a substance exists. This means that we can easily grasp, for example, the substances subject to the RoHS directive, which are prohibited for use in products, and substitute them with other parts that do not contain the substance in question in the design phase. We are now also able to respond rapidly to inquiries of customers that implement green procurement. In the future, we plan to expand sales of this system as a tool for the comprehensive evaluation of the environmental impacts of a product. For details, please see page 15.



Environment Solution Business

The Oki group is engaged in a variety of environment solution businesses, leveraging the know-how on environmental measures accumulated up to now. In fiscal 2004, we will aim to enhance our environment solution business by establishing an environment business team. (Inquiries: Environment Business Team, Global Environment Division, Phone +81-3-3581-2330)

Environment Solutions Business Menu





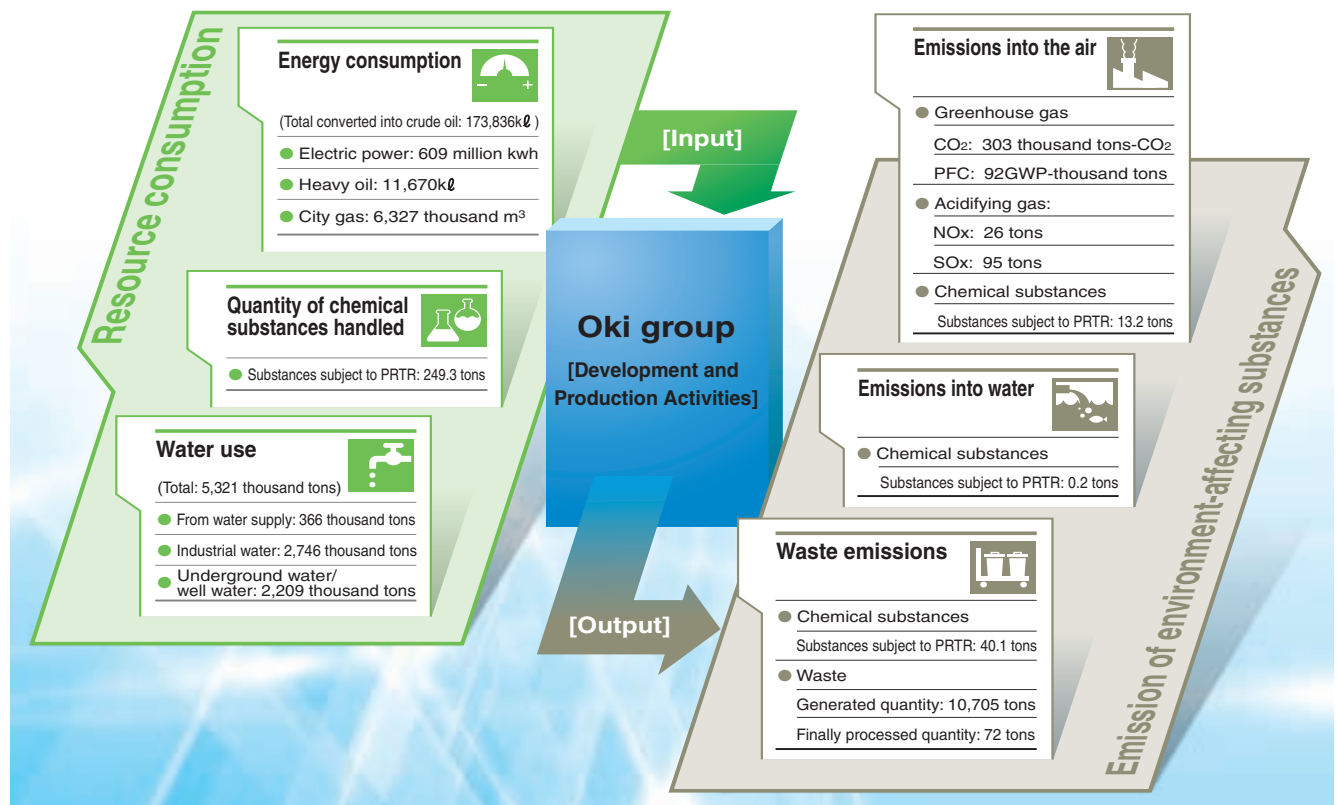
Environmental Conservation Activities

Reducing Environmental Impacts of Business Activities

In our everyday business activities at the production plants and offices, we consume resources and emit substances that affect the environment. Oki Electric keeps track of these environmental impacts and implements measures to reduce them. Since fiscal 2002, we have further been assessing the effect that this environmental impact has on the environment, and utilizing the results for our environmental activities.

Reduction of Environmental Impact of Development and Production Activities

As "input", we consume resources such as energy, chemical substances and water to conduct the business activities "development" and "production". Then, as "output", we emit environmental impacts on the air, water and waste.



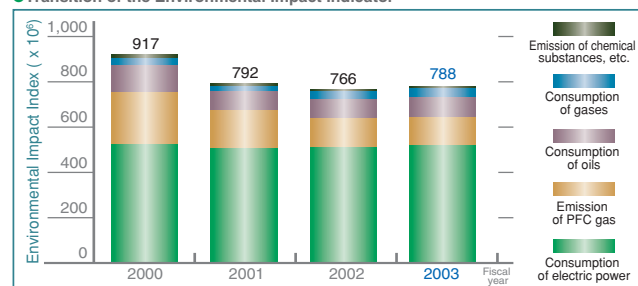
Assessing the Environmental Impact from Development and Production Activities

Environmental impacts generated by a company include, for example, the emission of CO₂ or waste. Because the degree of the influence that these environmental impacts have on the environment cannot be treated based on the same standards, we used to evaluate the influence onto the environment separately for each environmental impact. With this method, it was difficult to conduct an overall evaluation, and we needed to make a judgment as to what impact should be addressed with priority. This is why, in fiscal 2003, we used an integration method*1 for environmental impacts to bring the degree of influence on the

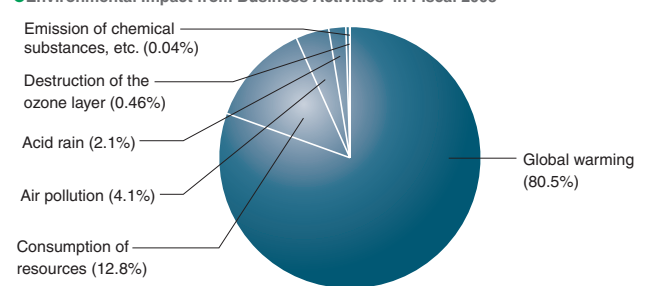
environment from multiple environmental impacts to one standard, and evaluated the total influence on the environment from environmental impact using one indicator (environmental impact indicator). The graphs show the results of the integrated evaluation of the environmental impact from the Oki group's business activities. The influence on the environment from consumption of electric power represents 65% of the total, so that this is where we are going to focus our measures on.

*1) Method of integration of environmental impacts: From the "LCA Public Test Database" (as of February 2004), Japan Environmental Management Association for Industry (2003)

● Transition of the Environmental Impact Indicator



● Environmental Impact from Business Activities in Fiscal 2003





Environmental Conservation Activities

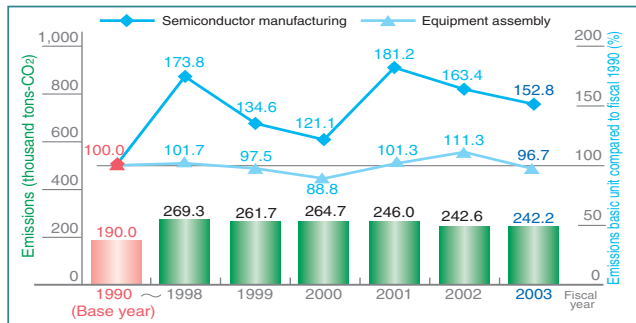
Efforts to Reduce Greenhouse Gas Emissions

The most significant environmental impact from Oki Electric's production plants and offices is the emission of CO₂ and other greenhouse gases. For this reason, we have implemented energy-saving measures, mostly at semiconductor production plants, which use most electric power. We have put up a goal for emissions of CO₂ originating from energy (through the consumption of electric power or fossil fuel) and for emissions of PFC gases used in the semiconductor manufacturing process.

CO₂-Emissions Originating from Energy and Efforts for Reduction

The total quantity of CO₂ emissions originating from energy of the Oki group (including overseas production plants) was 303 thousand tons, which is about the same as the emissions of fiscal 2002. The CO₂ emissions (basic units*) by section at the major production sites improved by 6.4% compared to fiscal 2002 in the semiconductor (electronic devices) sections, and 13.1% in the equipment (information and telecommunications) assembly sections. The improvements were the results of energy-saving activities, improved productivity and a growth in sales. Concrete efforts in fiscal 2003 were as follows. * 1) Basic unit: CO₂ emissions / net sales

● Transition of CO₂ Emissions (Major Production Sites of the Oki Group)



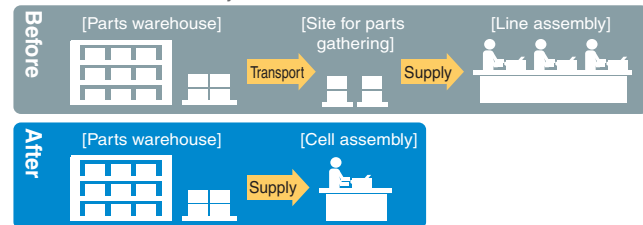
Energy-saving Efforts at Semiconductor Production Plants..... Modularization of Clean Room Air Conditioning Operation

Air conditioning facilities in clean rooms used to be operated for whole floors. With this method, energy is wasted when only part of the production line is relocated. This is where we tried to reduce wasted energy by operating air conditioning facilities in modules for each production line.

Energy-saving Efforts in Equipment Assembly Sections..... Layout Revision at Production Plants

Oki Electric's production plants introduced JIT (Just In Time) production in their manufacturing processes for improved rates of equipment operation, and to save space and energy. In fiscal 2003, JIT was introduced at Oki Data Corporation (Fukushima district), a group company developing and manufacturing printers and facsimile machines.

● "Promotion of Cell Assembly" and "Shift of Work Areas Closer to Parts Warehouses"



PFC-Gas Emissions and Efforts for Reduction

In the manufacturing process for semiconductors, perfluoro compound (PFC), which has an effect on global warming, is used and partly emitted into the air. Because of this, the World Semiconductor Council (WSC) proclaimed the goal to reduce the emissions by 10% (as converted into global warming potential*) by 2010 in comparison with 1995. The Oki group is working to reduce emissions by shifting to gases with a smaller impact on the environment, the installation of waste gas treatment equipment or by improving processes, and first achieved the goal of a 10% reduction compared to 1995 in 2002.

*2) Global warming potential: a numerical indicator that converts the impact on global warming into quantities of CO₂.

Energy-saving at Operational Sites.....

To prepare for situations where the electric power supply cannot meet the demand, the entire Oki group established an Energy Conservation Month in summer 2003, reinforcing efforts for energy-saving activities.



● Energy Conservation Poster

Other Efforts

The following are examples of other energy-saving efforts we worked on up to now.

- ◆ Introduction of a co-generation system
- ◆ Introduction of new air conditioning facilities: Eco-Ice, free cooling (outdoor air cooling)
- ◆ Upgrade to highly efficient equipment: transformer, substation (incoming transfer facility (system))
- ◆ Change to inverters: lighting, fans, pumps
- ◆ Others: automatic switch-off of lighting, switch-off of beverage vending machines during night hours, installation of remote operation panels for air conditioning equipment, insulation of buildings, double roofs for production plants, review of operation conditions for manufacturing and equipment

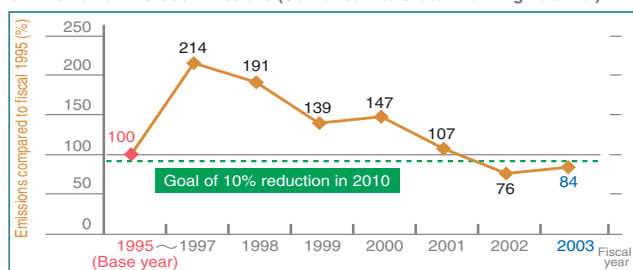


● Installation of a Co-generation System (Example from Fiscal 2000)



● Installation of "Eco-Ice" (Example from Fiscal 2002)

● Transition of PFC Gas Emissions (Converted into Global Warming Potential)





Environmental Conservation Activities

3R Efforts in Business Activities

The environmental impacts of production plants and offices include the consumption of resources and the emission of waste. To reduce these environmental impacts, we pursue 3R (Reduce, Reuse, Recycle) activities. The production plants are pursuing zero waste emission activities to

minimize the processing of waste in landfills by promoting the control of waste generation and recycling, and they are also working to use water resources efficiently. Our offices are also actively working on reducing mainly copying paper.

Reduction and Appropriate Processing of Waste

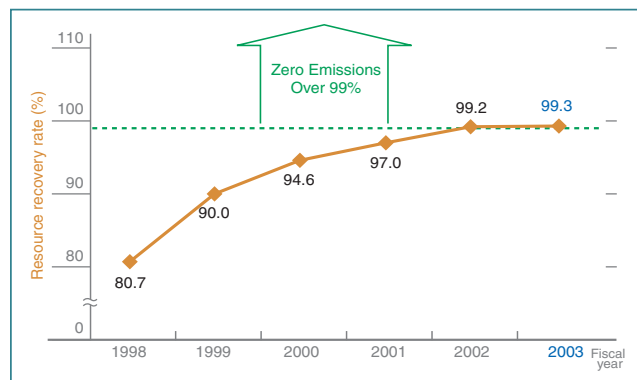
Recycling Achievements (Zero Emissions)

Oki Electric's waste reduction activities have been pursued by the group as a whole since the first establishment of a goal for waste reduction in 1993. In fiscal 1996, we created the Second Waste Reduction Plan, and in fiscal 1999, the resource recovery rate*¹⁾ had improved to 90% (average of all sites). In fiscal 2000, we started zero-emission efforts*²⁾ in our major production plants. With the Waste Reduction Promotion WG at the center of the activities, we aimed to share know-how on common examples—such as the recycling of wastepaper— between the sites, and for issues specific to production plants, such as the treatment of industrial waste, the plants proceeded with individual activities. The result was that all major production sites of the Oki group in Japan achieved zero emissions in fiscal 2002, two years ahead of the plan. In fiscal 2003, we focused on efforts at group companies in addition to continuing the efforts from before.

*1) Resource recovery rate: Quantity of recovered resources / (quantity of recovered resources + finally processed waste) x 100

*2) Zero emission: The Oki group defines this as a resource recovery rate of more than 99% for normal waste and industrial waste.

Transition of the Resource Recovery Rate (Major Production Sites of the Oki Group)



Sites that Achieved Zero Emissions

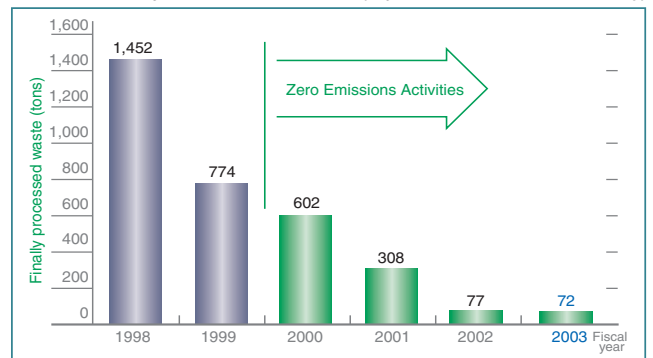
Fiscal Year of Achievement	Site
Fiscal 2001	Miyazaki Oki Electric Co., Ltd.
	Nagano Oki Electric Co., Ltd.
	Honjo district
	Miyagi Oki Electric Co., Ltd.
	Oki Data Corporation (Fukushima district)
Fiscal 2002	Hachioji district
	Takasaki district
	Tomioka district
	Numazu district



Results for Finally Processed Waste

The quantity of finally processed waste stemming from the industrial waste emitted from production plants, and normal waste emitted from offices, etc. was 72 tons in fiscal 2003. This is a 6.5% reduction compared to 2002. Compared to fiscal 1995, this is a 95% reduction.

Transition of Finally Processed Waste Quantities (Major Production Sites of the Oki Group)



Efforts for Resource Recovery of Office Waste

Effective Use of Leftover Food through Raw Garbage Processors

Miyazaki Oki Electric Co., Ltd, a site for semiconductor manufacturing, had been giving an average of 2,000 kg (including water) of leftover food from the canteen to a waste processor every month for incineration. In September 2003, they installed raw garbage processors and started treating leftover food by themselves. In these processors, leftover food is mixed with Uchishiro -bacteria*³⁾ and rice bran. Through high-temperature fermentation, decomposition and drying, the food is turned into soil conditioner. The soil conditioner generated here is distributed to employees, etc. for effective use of resources.

*3) Uchishiro-bacteria: a type of heat-resistant bacteria that is under new spotlight because it is very powerful in recycling raw garbage.





Environmental Conservation Activities

Efforts for Resource Recovery of Waste at Semiconductor Production Plants

Semiconductor plants emit large quantities of waste oil, waste acid, waste alkali and sludge. They work to suppress the generation, regenerate or recover the resources for this kind of waste. They also strive to reduce waste by, for example, introducing a recycling system for surface active agents, or upgrading the sludge dehydration equipment.

Semiconductor Plants: Examples for Resource Recovery of Waste

Waste Category	Type of Waste	Usage of Recovered Resources
Waste oil	Acetone	Recycling and reuse or conversion into fuel
	Ethanol	Recycling and reuse or conversion into fuel
	Isopropyl alcohol	Conversion into fuel
Waste acids	Sulfuric acid	Recycling and reuse
	Phosphoric acids	Conversion into raw material for fertilizers
	Etching fluid	Recovery of molten metal
Waste alkalis	Developer	Conversion into auxiliary fuel
	Developer	Conversion into fuel
Sludge	Inorganic sludge	Conversion into raw material for cement
	Organic sludge	Conversion into raw material for fertilizers

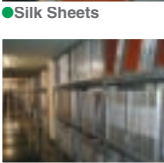
Efforts for Waste Reduction at Production Plants of Electronic Circuit Boards

Reduction of Silk Sheets/Film and Ink through the Installation of Direct Silk Equipment

Oki Printed Circuits Co., Ltd., a group company that designs and manufactures electronic circuit boards, introduced direct silk equipment for the silk printing process, where parts numbers, etc. are printed onto the board. Conventional silk printing equipment prints by applying ink on top of a silk sheet, which generates wasted ink due to printing errors, which happen when too much ink may be applied and because advanced technology is required for the setup. Direct silk equipment blows ink directly onto the board based on data, which improves precision and eliminates the need of sheet management or expert technology. The equipment proved very effective from both quality and environment aspects. The huge number of silk sheets and the film needed to produce the sheets become unnecessary, so that waste could significantly be reduced. Thanks to the effective use of ink and the improved print quality, we were also able to reduce the quantity of ink used.



Old Silk Printing Equipment



Silk Sheets



The Newly Introduced Direct Silk Equipment

Efficient Use of Water Resources

In fiscal 2003, the use of water was at 5,321 thousand tons, which is a slight increase of 6% compared to fiscal 2002. To reduce the use of water, we are aggressively promoting the recycling of water within our production plants. Especially the semiconductor manufacturing process uses large quantities of water, so that we have been operating closed purified water systems since the plants were built. The recovery rate of water has reached a level of more than 95%. Other efforts include the reuse of water with the introduction of freshwater treatment equipment for waste fluids of wafer cutting water.

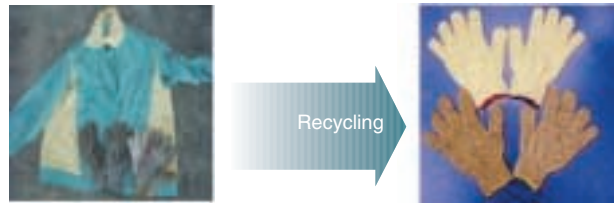


Water Reuse with the Introduction of Freshwater Treatment Equipment for Waste Fluids of Wafer Cutting Water (Example from Fiscal 1998)

Efforts for Waste Recycling at Device Assembly Plants

Recycling of Work Suits and Gloves

Unwanted work suits and gloves from the assembly plants are recycled into gloves. The used items are given to a laundry company, then passed on to another company for they are cut, returned into fiber and then into yarn. The recycled gloves are then returned to the original site.



Examples for Other Efforts

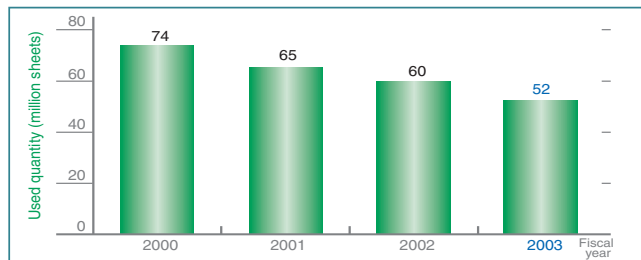
The following are examples of other efforts we worked on up to now. Introduction of equipment to reduce the volume of waste plastic

- ◆ Introduction of equipment to compress polystyrene foam
- ◆ Conversion of PVC into fuel
- ◆ Recycling of cases for electronic parts
- ◆ Simplification of packaging material for delivered materials
- ◆ Revision of waste plastic separation methods
- ◆ Thorough separation through JIT
- ◆ Recycling of soldering board chaff
- ◆ Making solder with a longer life
- ◆ Reuse of packaging and cushioning material

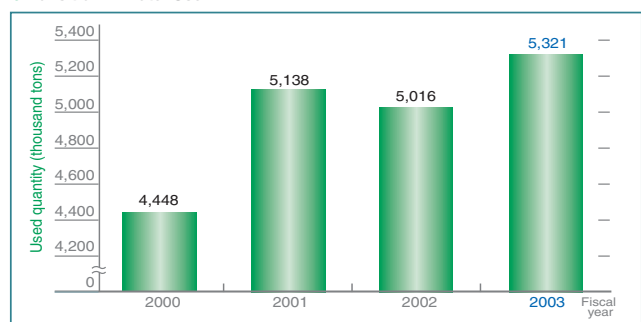
"Less Paper" Activities at Offices

The offices (clerical sections) are working to protect forest resources by green purchasing of office articles, or activities to reduce copying paper. In particular, they try to reduce the quantity of paper for copies, using duplex printing, printing on the reverse side of paper as much as they can, or using networks, such as by changing to electronic approvals of documents, or EDI (electronic data interchange) with business partners. This resulted in a 13% (8 million pages) reduction of paper used compared to the previous year. For copying paper, catalogs/pamphlets, business cards, toilet paper, etc., for in-house use, we further conduct green purchasing in the whole Oki group, and use recycled paper with a high content of recycled material.

Transition in the Use of Copying Paper (Converted into A4-size Pages)



Transition in Water Use





Environmental Conservation Activities

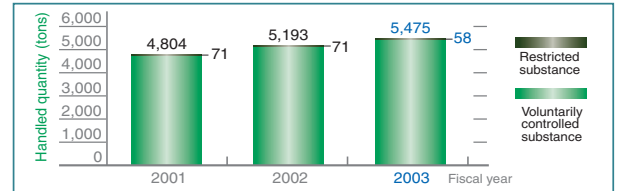
Control and Reduction of Chemical Substances Used at Production Plants

One of the environmental impacts of production activities is the emission of chemical substances. Although chemical substances are indispensable for production activities, they can have a grave effect on the environment if they are not controlled in an adequate way. The Oki group is well aware of this effect and therefore working to control and reduce chemical substances.

Control of Chemical Substances

Among the chemical substances used at production plants, we identify those with a serious effect on the environment and control them by classifying them into three types: prohibited substances (95 substances), restricted substances (92 substances) and voluntarily controlled substances (389 substances). The quantity of chemical substances handled in fiscal 2003 slightly increased by 5.4% compared to fiscal 2002 due to increases in production, but the quantity of restricted substances could be reduced by 18.3%.

Transition in the Quantities of Chemical Substances Handled



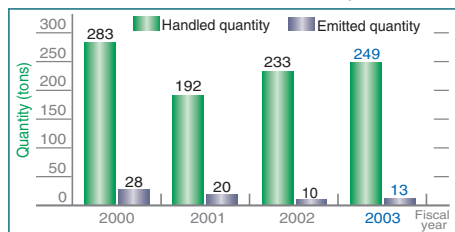
Efforts for the PRTR System

The PRTR (Pollutant Release and Transfer Register) system is one of the methods to track the emission of substances with a serious effect on the environment. A law concerning the implementation of PRTR was enforced in July 1999, and reporting became mandatory in April 2002. Ahead of the law, the Oki group started efforts for the PRTR system in fiscal 1997, following the "PRTR Guidelines" issued by four organizations in the electric equipment and electronics field. The quantities of substances subject to PRTR handled and emitted in fiscal 2003 increased due to an increase in production mainly in the semiconductor production plants. We will go on to work for the reduction in the future.

PRTR Results of Fiscal 2003 (Major Production Sites of the Oki Group in Japan)

Chemical Substance	Handled quantity	Emitted quantity				Transferred quantity	
		Air	Public water	Soil of operational sites	Sub-total	Transferred to the sewage system	Brought outside of the operational site
Hydrogen fluoride and its water-soluble salt	161.10	0.02	0.17	0.00	0.19	0.00	0.00
2-aminoethanol	23.97	4.17	0.00	0.00	4.17	0.00	18.99
Xylene	22.44	4.27	0.00	0.00	4.27	0.00	17.35
Nickel compounds	10.69	0.00	0.06	0.00	0.06	0.00	1.73
Boron and its compounds	6.77	0.00	0.00	0.00	0.00	0.00	0.20
Lead and its compounds	5.82	0.00	0.00	0.00	0.00	0.00	0.00
Toluene	5.37	4.46	0.00	0.00	4.46	0.00	0.72
Pyrocatechol	4.15	0.03	0.00	0.00	0.03	0.00	0.15
1,1-dichloro-1-fluoroethane	3.49	0.00	0.00	0.00	0.00	0.00	0.00
Formaldehyde	3.06	0.00	0.00	0.00	0.00	0.00	0.00
Acetic acid 2-ethoxyethyl	1.25	0.22	0.00	0.00	0.22	0.00	0.98
Copper water-soluble salt (excluding complex salt)	1.15	0.00	0.00	0.00	0.00	0.00	0.02
Total	249.27	13.17	0.23	0.00	13.40	0.00	40.14

Transition of Quantities of Substances Subject to PRTR



Efforts for the Reduction of Chemical Substances at Semiconductor Production Plants

When newly employing a chemical substance, we evaluate its effect with respect to safety, disaster prevention and the environment. We have built a mechanism where substances that do not pass the standards of employment cannot be purchased. We further built a system to understand how much of the chemical substances put into the manufacturing process are ultimately emitted in waste gas, waste water, or waste material. Based on these data, we work to reduce their use through improvements of the manufacturing process, to change to substitutes with a lower environmental impact, or to eliminate their use completely. Until fiscal 2002, we also built a mass production system for lead-free soldering.

Efforts for the Reduction of Chemical Substances at Printed Circuit Board Production Plants

Oki Printed Circuits Co., Ltd., a group company designing and developing electronic circuit boards, is working for a complete employment of solder-free boards and lead-free boards. In fiscal 2003, they reduced the use of chemical substances contained in the fluids for chemical copper treatment and for B/O treatment^{*1}. In the future, they will continue their activities to reduce the used quantities through improvements of the production process and other measures.

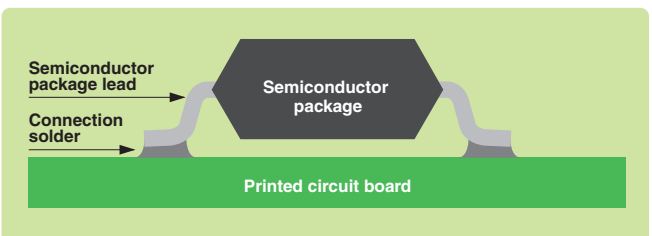
*1) B/O Treatment: B/O is short for Black Oxide. A treatment of roughening a copper surface by creating a layer of copper oxide.

Efforts for Lead-free Solder at Board Assembly Plants

In fiscal 2003, we installed new flow soldering equipment and reflow furnaces with component temperature control, which were developed together with Furukawa Electric Co., Ltd. This completed the development of lead-free solder manufacturing technology. Manufacturing lines at our production sites, including major group companies, built mass production systems for lead-free soldering and achieved the complete elimination of lead from connection solders used at the production plants. For fiscal 2004, we will aim to expand this to overseas group companies.



Lead-free soldering equipment (Example from Fiscal 2001)



Sectional view of a printed wiring board



Environmental Conservation Activities

Environmental Risk Management / Safety Management

Environmental risks can be defined as “the seriousness and the probability of environmental effects”. Apart from engaging in activities to reduce the emission of environmental pollutants, we conduct regular measurements and maintenance of our facilities and emergency drills, striving to reduce environmental risks, to prevent air pollution, water

pollution and other environmental pollution in advance. Headquarter safety audits confirm and evaluate whether risk management with respect to the environment, disaster prevention and health and safety is effectively functioning, and then implement countermeasures and conduct follow-up in an effort for maintenance and management.

Environmental Risk Management

Efforts at Production Plants

At semiconductor manufacturing plants and other sites that use large quantities of chemicals, we implemented the following preventative measures to reduce environmental risks.

Main Methods to Prevent Environmental Risks

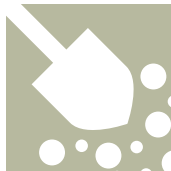
Potential Disaster Cause	Assumed disaster	Prevention method	Examples for implementation of preventative measures
General	Environmental pollution in general	Proper response in disasters	Employee education and drills
Natural disasters/errors	Environmental pollution wrong operation of a facility Environmental pollution through tilting over or falling down of facilities and articles	Auto-stop	Chemicals supply facilities
		Fixing	Facilities and equipment
		Neatness and cleanliness	Restrictions on the quantity and height of stored articles
Incorrect operation of facilities	Environmental pollution wrong operation of a facility	Early discovery	Centralized monitoring of alarm facilities, installation of pipes above the ground, regular maintenance
		Elimination of the source	Prohibition of the use of environmental pollutants, elimination of incinerators, elimination of underground tanks
		Secondary disaster prevention	Installation of basins to prevent liquid from chemical tanks, etc. from flowing out



● Installation of Pipes above the Ground (Example from Fiscal 2001)

Underground Water and Soil Pollution

Underground water is observed on a regular basis at all production sites, including group companies, and appropriate measures are taken as necessary. As for soil, we found some pollution in the soil during a soil pollution investigation conducted on the basis of law following the abolishment of legally designated facilities at Shibaura in Tokyo and the sale of land. Following the instructions of the competent authority, we will complete the replacement of the polluted soil during fiscal 2004, together with the building dismantling works.



Penalties and Claims

No penalties related to the environment were given to Oki in fiscal 2003. However, we received two claims from residents of the neighborhood, one being about the noise from remodeling works of a production plant, and one about the cutting of trees. In any of these three cases, we isolated the cause and implemented measures to solve the problems. The claims we received were appropriately processed.

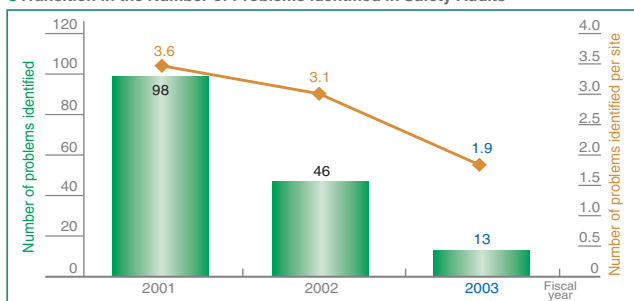


● A Chimney Refurbished for Noise Reduction (Example from Fiscal 2001)

Safety Management

With regards to safety management, each site is pursuing activities with an organization and system created based on the rules from the headquarters. To confirm and evaluate whether safety organizations and systems are effectively functioning and properly processed based on relevant laws and regulations, as well as on our internal rules, we have been conducting headquarter safety audits since fiscal 2001. The audits cover all production sites, including overseas group companies. The audits are conducted with respect to three fields: environment, disaster prevention and health and safety. The scope of the audits encompasses the status of safety management with regards to risks of lawsuits, criticism in the press, suspension of operation, etc. due to “company faults” such as environmental pollution, injury accidents, fire/explosion, etc., or “natural disasters” such as earthquakes and thunderstorms, etc..

Transition in the Number of Problems Identified in Safety Audits



New Establishment of a “Liaison Meeting for Safety Management Information”

To develop and share information on safety management, we established a “Liaison Meeting for Safety Management Information” at the production sections of the Oki group in fiscal 2003. As a concrete effort, the meeting reviewed earthquake measures based on lessons learned in the strong earthquake experienced by the semiconductor manufacturing site Miyagi Oki Electric Co., Ltd. The results of the review were then communicated and implemented in the Oki group.

Results of the Headquarter Safety Audits in Fiscal 2003

In fiscal 2003, audits were conducted not only for the production sites, but for the whole Oki group, including clerical sections and software sections.

On-site Inspection Results

Safety management at the Oki group is kept in a good state.

- ◆ No serious problems were found in the organization for safety management, education and training, everyday management and accident response at the audited sites.
- ◆ The acquisition of ISO14001 -certification and the penetration of safety audits raised the level of safety management, and the number of problems identified per site decreased compared to fiscal 2002.

Follow-up

We confirmed that measures to address the identified problems were implemented. The results will be reflected in the audits of fiscal 2004.





Environmental Conservation Activities

Reducing Environmental Impacts of Logistics

Roughly spoken, logistics has two environmental impacts: the environmental impact from packaging, and the environmental impact from transport. Oki Logistics, Co., Ltd., a group company engaged in logistics, is working to reduce these environmental impacts from logistics.

Efforts Related to Packaging

Environmental impacts of packaging are, for example, the consumption of resources for the packaging material or the emission of packaging material waste. To reduce these impacts, we are striving to design packaging in consideration of the 3R keywords "reduce, reuse and recycling", as well as to replace packaging materials with ones that are more eco-friendly.

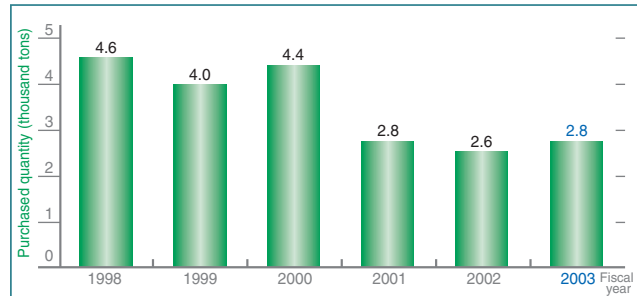
Promotion of Resource-saving Packaging

To reduce the quantity of packaging material, we work for resource-saving packaging. The "simple packaging method", for example, means that products are packed into only a polyethylene bag to shut out dust. During transport, we affix protective materials to the products to prevent scratches. This way, we can maintain a transport quality of the same level as for products packed in corrugated boxes.



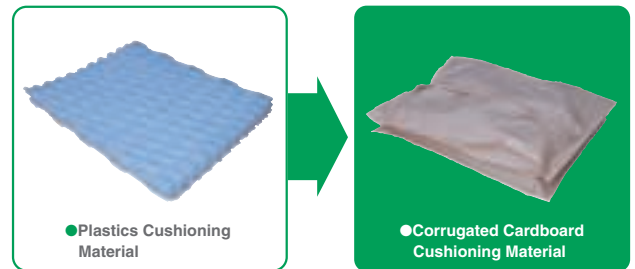
● Simple Packaging of an ATM (Automated Teller Machine)

Transition in the Quantity of Purchased Packaging Materials



Switchover to Eco-friendly Packaging Materials

We are promoting the replacement of polystyrene foam and other plastic cushioning materials with cushioning materials containing recycled paper, such as cushioning material made of corrugated cardboard.



Utilization of Palettes made of Corrugated Cardboard

Palettes are platforms to load things on for transport with forklifts, etc. The wooden palettes we used before were heavy and inconvenient to handle. Recycling these palettes was also difficult. To substitute these palettes, we are promoting the employment of palettes made of corrugated cardboard.



● Palette Made of Corrugated Cardboard

Efforts Related to Transport

Environmental impacts of transport are, for example, the consumption of fossil fuels such as the diesel oil used by trucks, or the emission of CO₂, NO_x or SO_x in the exhaust gas. As measures to reduce these impacts, we are, for example, switching over to low-pollution alternative fuel, or implementing "eco-driving" by eliminating idling. We are further promoting a modal shift to railroads and sea transport, as well as logistics reforms such as an improvement of loading efficiency or the operation of consolidated cargo delivery services.

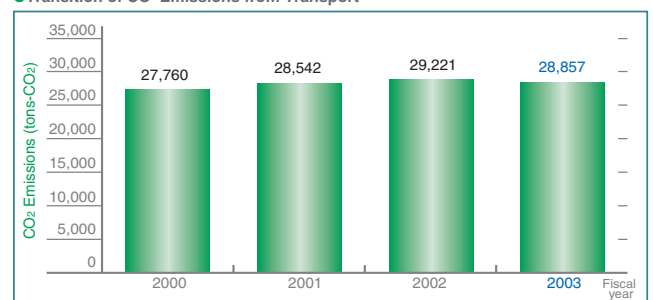
Reducing CO₂ Emissions with a Modal Shift

The main environmental impact in logistics in the Oki group in Japan is from truck transport. Oki Logistics Co., Ltd. has for a long time been promoting the introduction of a modal shift from truck transport to railroad transport, which has less impact on the environment. For transports from the Kanto region, where the manufacturing sites are located, to the distant regions Hokkaido, Tohoku, Chugoku, Shikoku and Kyushu, the modal shift is already completed. Now, we are working on the Chubu and Kansai regions. As for truck transport, we organize social gatherings with our transport outsourcing partners, trying to bring our awareness with respect to enforcing the use of eco-friendly cars and zero idling to the same level to promote ecological driving.

Reduction of CO₂ Emissions through Shortening of Air Transport Routes

The semiconductor sections have a relatively high portion of overseas production. Semiconductor products produced in and outside of Japan used to be collected at the logistics base in Hachioji, Tokyo and then transported to locations in and outside of Japan. With the recent increase in overseas sales, the waste of time and logistics cost as well as the environmental impacts became too big. For this reason, we established logistics points within each overseas production plant, changing logistics routes so that products are now sent from the production plants directly to customers all over the world. This helped to shorten the air transport distance, and thus to reduce CO₂ emissions.

Transition of CO₂ Emissions from Transport





Environmental Conservation Activities

Environmental Conservation Activities of Overseas Group Companies

The Oki group produces and sells products in China, Thailand, Europe, North America, and in other regions of the world. Our overseas production sites have also acquired ISO14001 certification and are working to reduce environmental impacts. The following shows some examples.

Efforts in China

◆Oki Electric Industry (Shenzhen) Co., Ltd., a group company manufacturing information processing equipment and printers, acquired ISO14001 certification in June 2003. They have set up goals for energy conservation, resource conservation, reduction and control of chemical substances and others, and are working to achieve these goals. They are further striving to reuse packaging material as much as possible in cooperation with their vendors. They also conducted fire drills as part of the training for emergency situations.



●Poster with an Announcement for the Safe Use of Chemical Substances



●Fire Fighting Drill

◆Changzhou OKI-GEG Telecoms Ltd., a group company manufacturing communications equipment, acquired ISO14001 certification in fiscal 2001. For continual improvement, educational activities for employees on the environment are important. This is where this group company puts up environmental information within the company and conducts "environment awareness contests" among employees. They also promote a greening movement of the neighborhood. All these efforts for environmental conservation were highly evaluated, and Changzhou city recognized them by giving them an award as a "Model Company for Environmental Conservation".



●Employee Contest on Environment Awareness
The president is also attending (left).



●Greening of the Neighborhood



●Award Certificate from Changzhou City, China.

Efforts in Thailand

◆Oki Data Manufacturing (Thailand) Co., Ltd., a group company manufacturing printers and facsimile machines, acquired ISO14001 certification in 1998 and is working on efforts for reuse. They donate used equipment to schools and public facilities in Thailand. For example, they recycled work tables into desks and other tables for a school in Ayutthaya city. The blank reverse sides of paper from test printing of printers and facsimile machines are recycled into notebooks. They have already donated more than 10,000 of these. Oki Data Manufacturing (Thailand) has also opened a recycling shop for wooden pallets to promote recycling and diversion.



●Recycled Desks in Use at a Primary School in Ayutthaya City



●Making Notebooks Using Blank Reverse Sides of Paper

◆Oki (Thailand) Co., Ltd., a group company manufacturing semiconductors, acquired ISO14001 certification in fiscal 1998. Semiconductor manufacturing plants use a wide variety of chemical substances. Oki (Thailand) works to reduce chemical substances, and also prepares for emergency situations by regular drills under the assumption that a chemical substance leaked out.



●Drill for a Leakage of a Chemical Substance

Efforts in the U.K.

Oki (UK) Ltd., a group company manufacturing consumables of printers and facsimile machines, acquired ISO14001 certification at the same time as the production site in Thailand. They cleared the rigid environmental conservation standards in the European countries and have established a production system that gives thorough consideration to the environment. As part of the environmental conservation program, Oki (UK) also participates in forest regeneration programs.



●Participation in a Forest Regeneration Program

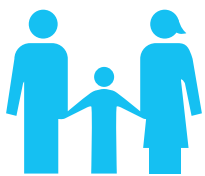
Efforts in Northern America / Europe

Oki Data Corporation, a group company developing and manufacturing printers and facsimile machines, launched the "Oki Data America Eco Program" for the free collection and recycling of consumables of overseas products in December 2003, starting the collection of toner cartridges in the USA and in Canada. In April 2004, they launched the program also in Europe. The plan for fiscal 2004 is to collect 20% of the printer and facsimile consumables sold in fiscal 2003 (in items). This promises to bring about annual reductions of 11 tons of CO₂ emissions compared to the case where no recycling is conducted.



●Toner Cartridge





Social Activities

Society is closely watching companies for Corporate Social Responsibility (CSR). To achieve sustainable growth, companies need to fulfill their CSR by focusing not only on economic perspectives but also environmental and social considerations.

Expanding CSR Initiatives Across the Group

Oki regards CSR as a high management priority and is working even more actively than in the past to implement a variety of group-level initiatives. We aim to increase our corporate value while building relationships of trust and satisfaction by fulfilling our corporate responsibilities towards our diverse of stakeholders – including our customers, shareholders and investors, suppliers, local communities, and employees – from a wide variety of aspects: providing products and services to realize a comfortable and affluent life, and social aspects such as harmony with the environment, respect of human dignity, compliance with laws and regulations, corporate ethics and social codes, and social contribution. To realize the e-society^{*1)}, we have been working to fulfill our CSR in various forms, including ① the provision of safe and secure products and services that are people-friendly and allow for universal design and the environment, ② the proposal of a

comfortable space for the users of the system, ③ efforts for environmental protection, ④ revitalization of employees and enhanced education, ⑤ the creation and maintenance of good workplace environments, ⑥ active employment of severely disabled workers, ⑦ social contribution activities for the local communities in alliance with the company and employees, ⑧ risk management, ⑨ compliance, ⑩ reinforcement of public and investor relations activities. To reinforce this kind of activities as concerted CSR promotion activities by the entire group, we will prepare new systems to pursue all our corporate activities in good faith as a corporate citizen, increase transparency by proactively disclosing information, and deepen our communication with all our stakeholders one step further.

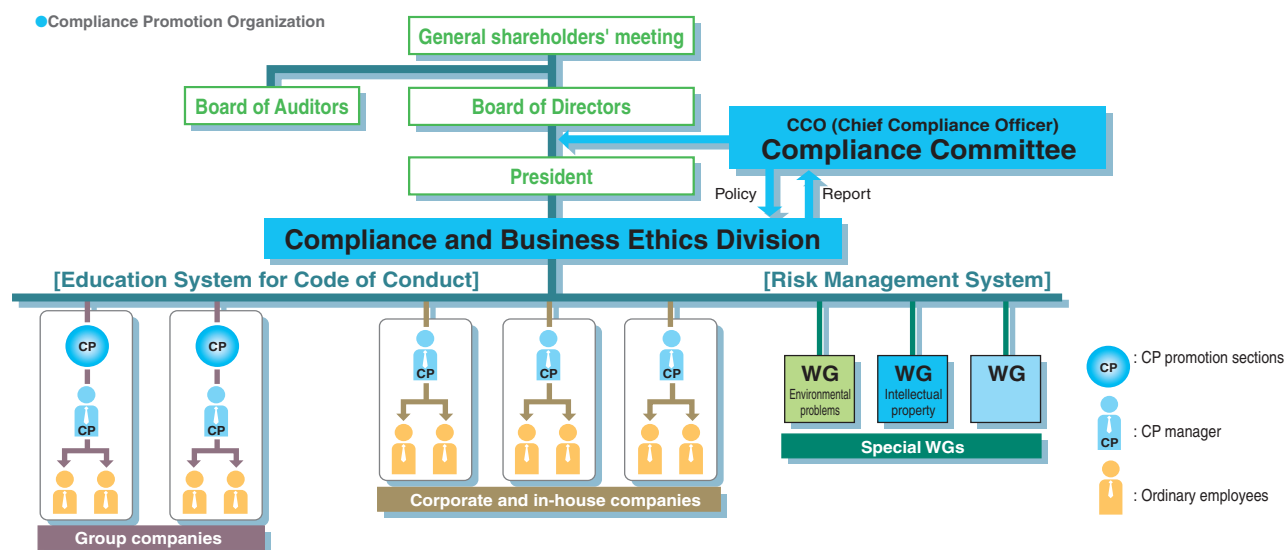
*1) e-society: A wide range of information is being exchanged beyond time and space over global networks. This breaks down the boundaries among countries, regions and cultures, enabling individuals to engage in various social activities in an impartial, secure way.

Strengthen Compliance System

Oki seems compliance as a comprehensive concept encompassing not only legal compliance but also observation of corporate ethics and social norms, and good behavior by all employees, to assure all members of society that it is a good corporate citizen. In 2002, Oki adopted the "Oki Code of Conduct" which was designed to ensure that these perceptions would be shared by all associated with Oki both inside and outside of the group and provide confidence and assurance to all shareholders. We will place compliance as the foundation store for CSR activities and from the year ending March 2005 onwards the

entire Oki group will make the "Oki Code of Conduct" a core element in employee training and provide specialist training on legal requirements and other aspects relating to specific job areas.

Oki will also strengthen the systems used to monitor the implementation of these policies. Toward these ends, a Chief Compliance Officer (CCO) will be appointed to oversee this plan. Oki has formed Compliance Committee, which will deliberate on Oki's group-wide basic policies relating to compliance, as well as a Compliance and Business Ethics Division to plan and facilitate related measures.



Active Employment of Severely Disabled Workers

Oki has actively supported teleworking for workers with severe disabilities since 1988. The Oki Networkers, a team of talented teleworking IT technicians, had a total of 13 members at the end of March 2004. They use their excellent IT skills and vast experience to perform tasks ranging from Web design and program development to poster creation. They also participate in consulting business such as Web accessibility and universal design, and are involved in a wide range of activities.

In April 2004, Oki established Oki WorkWel Co., Ltd., a special subsidiary whose mission is to promote increased employment opportunities for people with disabilities. The Oki Networkers have been transferred to Oki WorkWel, and the company plans to

employ more disabled workers, including people with mental and visual disabilities.



● Oki Networkers



Social Activities

Social Contribution Activities (Relation with Society, Communities and Citizens)

The basic philosophy of Oki Electric is to “think, act, and practice sympathy-winning social contribution activities for the realization of a really rich society as a good corporate citizen.” A dedicated division (Social Contribution Promotion Office) established in fiscal 1996 is at the center of our social contribution activities related to the environment or social welfare. Apart from supporting various volunteer activities by our employees, we have developed the “Oki 100-Yen Fund of Love” (Oki ai no 100-en bokin) on a group-wide basis as an activity that large number of employees can easily take part in.

Efforts for the Environment

We are pursuing environmental conservation activities in cooperation with a wide variety of citizen groups and environmental protection groups. Together with Sompō Japan Insurance, Inc., we launched an environmental Internet book “Ecology Life of the Sunflower Family” (“Himawarisan-chi-no ecorojiraifu”, <http://www.ohn.co.jp/ecolife/index.asp>).

Community Cleanup Campaigns

In Tohoku, Chubu, Chugoku, Shikoku, Kita-kanto, Numazu, Miyazaki and other districts, our employees, sometimes together with citizen groups, are working in cleanup campaigns of the community.



●Cleanup Campaign in the Kita-kanto (Tomioka) District

Environmental Conservation Activities

In cooperation with environmental protection groups, our employees participate in volunteer activities (tree-thinning, twig-cutting, bottom weed cutting).



●Tree thinning in Naka Izu



●Bottom-weed Cutting at Ura-Takao



Social Welfare Efforts

Oki has been supporting the blood donation activities for the Japan Red Cross Society since it was the first company to conduct group blood donations in fiscal 1964. Apart from co-sponsoring the homepage, we pay the same amount as the amount collected in the “Oki 100-Yen Fund of Love” every year to donate, for example, cars for the transport of blood. Our employees further participate in blood donations at each operational site every year, and since fiscal 2001, we have also been organizing sessions for donor registration in the bone-marrow bank. In addition, we contribute items to bazaars held at social welfare institutions, etc. or participate as volunteers.



“Oki 100-Yen Fund of Love” Activities

The fund from the 100 yen donated by the participating employees every month is utilized for a variety of social contribution activities. Apart from the donation of cars for blood transport to the Japan Red Cross, we pursue the following activities.

- Payment of domestic and overseas shipping costs related to the support activities of giving used clothes to refugee camps, etc.
- Support for the “SOHO Support Project” (project for home work of seriously disabled persons) of the social welfare corporation “Tokyo Colony”
- Support of volunteer groups with relations to employees or the Social Contribution Promotion Office



●Laotian Picture Book Locally Published together with an International Cooperation NGO



●Support Activities with Used Clothes for Refugee Camps, etc. (Nagano Prefecture)



●Donation of a Car for Blood Transport (Red Cross Blood Center of Yamagata Prefecture)

Support of Volunteer Activities of Employees

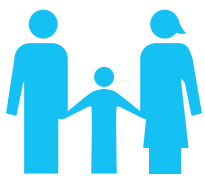
Oki Electric does not only offer a system for volunteer leave or a free volunteer insurance upon request, but also provides various volunteer information over the Intranet to support volunteer activities of employees. These activities are, for example, PC volunteer activities at social welfare institutions, participation in exchange event organized and held by the residents of Miyake Island evacuated in Tokyo, or participation in the “Children, Dreams, Future Festival” (Kodomo-yume-mirai fesutibaru).



●PC Class at an Aid Institution



●Employees Participated in the Taketonbo Toy-Making Corner at the Seventh Meeting with Residents from Miyake Island.



Social Activities

Environmental Communication

It is important for an environmental management system to publish environmental information in a proactive manner, obtain opinions and feedback from people inside and outside of the company, improve the system and pursue environmental conservation activities based on this. For this, the Oki group publishes environmental information in various ways.

■ Publication of Environmental Information

To respond to the requests of a variety of people, the Oki group publishes environmental information using the following means.

● Means of Publication of Environmental Information

Name	Oki Environmental Report	Site Environmental Reports	Oki Technical Review (Numbers with special features on the environment)	Environment Website	Social Contribution Website	Annual Report	Business Report
Publisher and manager	Head Office Global Environmental Division	Site section for environmental management	Head Office PR Division	Head Office Global Environmental Division	Head Office Social Contribution Promotion Division	Head Office PR Division	Head Office General Affairs Division
Frequency of publication	Once a year	Once a year	Once in three years	As required	As required	Once a year	Once a year
Contents	Environmental activities of the Oki group in general	Environmental activities of the site	Matters related to environmental technology	Information related to environmental activities	Social contribution activities	Environment-related topics	Environment-related topics
Means of publication	Booklet, web	Web	Booklet, web	Web	Web	Booklet, web	Booklet, web

■ Publication of the Oki Electric Environmental Report

Every year, we release an Environmental Report in order to introduce Oki Electric's efforts for environmental conservation to people inside and outside of the company. A Japanese version and an English version provide mainly information on the results of Oki Electric's environmental conservation activities. The reports are also published on our website (<http://www.oki.com/en/eco/>). Since the first edition in fiscal 1999, we have already released five Environmental Reports up to the edition for fiscal 2003.



●Fiscal 1999 ●Fiscal 2000 ●Fiscal 2001 ●Fiscal 2002 ●Fiscal 2003

■ Release of Site Environmental Reports

We are publishing "Site Environmental Reports" on our website (<http://www.oki.com/en/eco/>). These reports summarize the results of the detailed environmental measures and efforts unique to each site. The reports introduce environmental impact data in response to local regulations or unique environmental efforts of each plant in detail to the residents of the region or to local communities, to obtain their understanding. In fiscal 2003, Nagano Oki Electric Co., Ltd., a group company designing and manufacturing electronic equipment, published a site report for the first time, so that now, a total of 9 sites publish site environmental reports.

● Site Environmental Reports available

Fiscal 2001	Fiscal 2002	Fiscal 2003
<ul style="list-style-type: none"> ◆Hachioji district ◆Tokyo/Makuhari district ◆Takasaki district ◆Honjo/Tomioka district ◆Numazu district 	<ul style="list-style-type: none"> ◆Miyazaki Oki Electric Co., Ltd. ◆Miyagi Oki Electric Co., Ltd. ◆Oki Data Corporation (Fukushima district) 	<ul style="list-style-type: none"> ◆Nagano Oki Electric Co., Ltd.



● Site Environmental Report of the Hachioji District (Example)

■ Concrete Efforts for Environmental Communication

Aiming to enhance environmental communication, we engage in various efforts. The following shows some examples.

□ "Saitama Prefecture 'Sai-no-Kuni' Eco-Up Declaration" in Honjo City

Our Honjo district, which is in charge of manufacturing and contract manufacturing of information and communications equipment, has made a "Sai-no-Kuni Eco-Up Declaration" (a program to reduce environmental impact) based on an ordinance on environment measures of Saitama prefecture. Concretely speaking, they declared that they will prevent global warming, use global resources in an effective manner, reduce waste and continually improve their environmental management system, working to reduce environmental impact.

□ Cooperation with Hachioji City

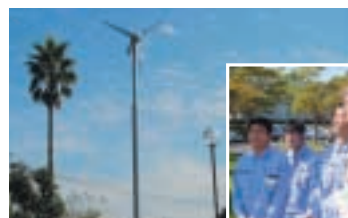
Our Hachioji district, which is in charge of developing electronic devices, accepted trainees for the environmental system from the city office and conducted trainings on the basics of ISO14001, Oki Electric's environmental conservation activities and health and safety. They further gave speeches at environmental seminars held by Hachioji City, and attended conferences on the basic environmental program of Hachioji City, maintaining a close relationship to the community in their environmental efforts.

□ Environmental Education in Miyazaki Oki Electric Internships (Junior High and High Schools)

Miyazaki Oki Electric Co., Ltd., a group company manufacturing semiconductors, conducted internships for local junior high and high school students as part of their local social contribution activities. In program seminars and visits of the production plants, Miyazaki Oki Electric explained its efforts, etc. for the environment to deepen the interest in activities to reduce environmental impact.



● Explanation of Environmental Equipment



● Visit of Co-generation, Wind-power Generation and Other Equipment on the Premises



● Presentation Panel for Wind-power and Solar-power Generation



Social Activities

Participation at Local Events

Participation at the Environment Fair in Takasaki City

The Environment Fair held by Takasaki City on the occasion of the Day of the Environment is an event with exhibits from local companies and a recycling bazaar by citizen groups. Oki Electric also participates in this event. In fiscal 2002, Oki Information Systems Co., Ltd., a group company developing and designing information processing equipment, exhibited a printer that can repeatedly use the same special paper (Ecopri).



● Ecopri

Environment-related Exhibit at a Flea Market Venue in Numazu City

On a corner of the Flea market sponsored by Numazu City at the KIRAMESSE NUMAZU (multipurpose hall), our Numazu district, which is in charge of developing and manufacturing traffic and acoustic positioning systems, showed panels on their environmental activities.



● Exhibition on Environmental Activities the Flea Market Venue

Giving Speeches at Lectures

Appearance in the Warabi Learning College

Our Warabi district, which is in charge of software development, introduced Oki Electric's and the Warabi district's environmental conservation efforts under the title "Town-making Through the Eyes of a Company" at the Warabi Learning College (lectures to foster trendsetters in town-making), to deepen the understanding of local residents, NPOs and others towards our environmental activities.



● Warabi Learning College

Speech by Miyagi Oki Electric on a "Seminar on Measures to Save Energy and Environmental Management"

On the "Seminar on Measures to Save Energy and Environmental Management" held by Tohoku Electric Power, Miyagi Oki Electric Co., Ltd., a group company manufacturing semiconductors, gave a speech titled "Total Environmental Engineering — Necessity and Efforts".



● Seminar on Measures to Save Energy and Environmental Management

Support for External Organizations (Environmental NPOs/NGOs)

Oki Electric supports environmental NPOs/NGOs:

Green Earth Center

Morizukuri (Forestation) Forum
(award from the Governor of Miyazaki Prefecture)

Nippon Environment Club

Nature Conservation Society of Japan (Foundation)

Ecosystem Conservation Society-Japan (Foundation) (co-sponsorship in All-Japan School Biotope Contest)

External Recognitions (External Awards)

Oki has received numerous awards in recognition of the group's environmental conservation efforts. In fiscal 2003, Miyazaki Oki Electric Co., Ltd., a group company manufacturing semiconductors, was awarded the "Governor of Miyazaki Prefecture Award for Excellent Operational Sites" in the Sixteenth Miyazaki Prefecture High Pressure Gas Safety awarding ceremony. The award was given in recognition of their remarkable success in disaster prevention and safety involving high pressure gas.



● Award Ceremony of the High Pressure Gas Safety Contest

Month/year	Recipient	Award name (sponsor)	Reason for the award
10/1998	Miyagi Oki Electric Co., Ltd.	President's Award, The 17th National Plant Greening Promotion Assembly (Japan Greenery Research and Development Center)	Production plant location with consideration the natural environment and maintenance of seasonal trees
02/1999	Miyazaki Oki Electric Co., Ltd.	Director's Award, Superior Energy Control Plant category, Kyushu Bureau of the Ministry of International Trade and Industry	Remarkable results in the rationalization of plant energy usage
02/1999	Miyagi Oki Electric Co., Ltd.	Director General's Award, Superior Energy Control Plant category, Agency of Natural Resources and Energy	Remarkable results in the rationalization of plant energy usage
10/1999	Honjo district	Certificate of Appreciation for Greening Efforts (Honjo City)	Contributions to the creation of "Honjo, city of green and health"
10/1999	Hachioji district	President's Award, High Pressure Gas Safety Institute of Japan	Compliance with laws and regulations, education and drills, day-to-day operation, accident-free record, etc.
02/2000	Hachioji district	Highest Award, Kanto Region Electricity Usage Rationalization Committee	Outstanding records in electrical power usage rationalization activities
02/2000	Nagano Oki Electric Co., Ltd.	Director's Award, Superior Energy Control Plant category, Chubu Bureau of the Ministry of International Trade and Industry	Remarkable results in the rationalization of plant energy usage
05/2000	Miyazaki Oki Electric Co., Ltd.	Superior Award, High Pressure Gas Safety Institute of Japan	Contribution to disaster prevention and safety assurance through the promotion of voluntary safety activities for high pressure gas
11/2000	Honjo district	Certificate of Appreciation for Greening Efforts (Honjo City)	Contributions to the creation of "Honjo, city of green and health"
02/2001	Hachioji district	Highest Award, Kanto Region Electricity Usage Rationalization Committee	Outstanding records in electrical power usage rationalization activities
01/2002	Miyagi Oki Electric Co., Ltd.	Minister's Award, Superior Energy Control Plant category, Ministry of Economy, Trade and Industry	Remarkable results in the rationalization of plant energy usage
01/2002	Miyazaki Oki Electric Co., Ltd.	Director General's Award, Superior Energy Control Plant category, Agency of Natural Resources and Energy	Remarkable results in the rationalization of plant energy usage
11/2002	Honjo district	Certificate of Appreciation for Greening Efforts (Honjo City)	Contributions to the creation of "Honjo, city of green and health"
01/2003	Changzhou OKI-GEG Telecoms Ltd.	Model Company for Environmental Conservation (Changzhou City, China)	Efforts for environmental conservation in Changzhou City
10/2003	Miyazaki Oki Electric Co., Ltd.	Superior Award, High Pressure Gas Safety Institute of Japan, Miyazaki Prefecture (General) Award of the Governor of Miyazaki Prefecture (Award for Excellent Manufacturing Sites)	Remarkable success in disaster prevention and safety involving high pressure gas



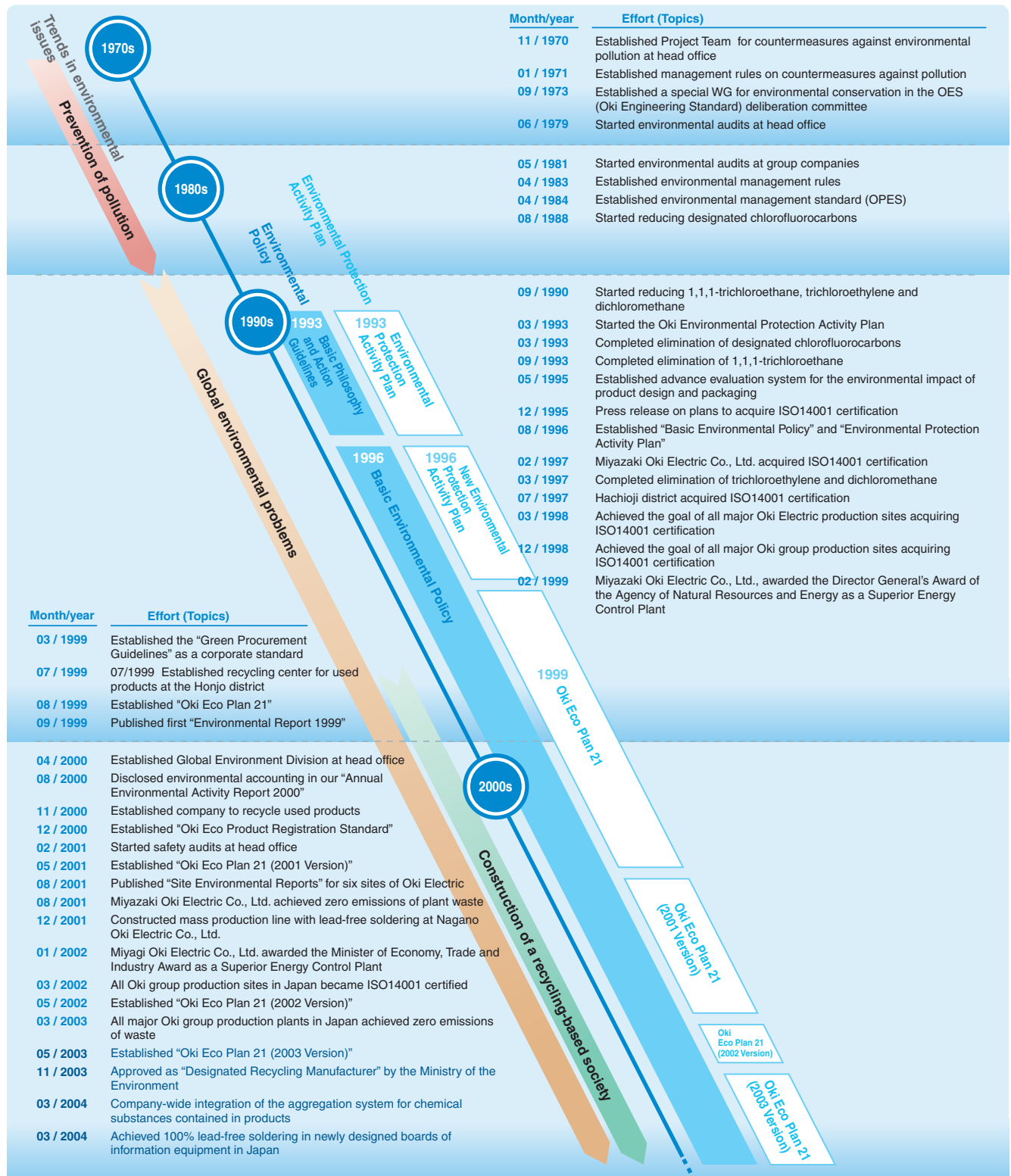


Reference Material

Progress of the Oki Group's Environmental Activities

The Oki group has been working on environmental conservation activities since pollution became a problem in the 1970s. Environmental issues change with the times, and we are continually revising our environmental management system to stay ahead of the needs of society. Concretely speaking, we revise our environmental activity plans to realize our environmental policy and pursue our environmental conservation

efforts accordingly. In fiscal 2003, we created the "Oki Eco Plan 21 (2003 Version)", which is an upgraded version of the "Oki Eco Plan 21 (2002 Version)". The goals in this plan were set one step higher. In particular, we focused on contributing to the environment through our products and worked, for example, on the control of environment-affecting substances contained in our products, and on resource recovery of used products.





Reference Material

Environmental Data Sheet

The Oki group manages its data on environmental impacts to use them for its environmental conservation activities. Using environmental accounting, the aggregation system for chemical substances and other means, we keep track of a variety of environmental impact data from each site and aggregate these data on a company wide basis. Some typical data of fiscal 2003 are shown below.

Detailed Environmental Accounting Data of Oki Electric and Its Group Companies

The tables below present separate environmental accounting data for Oki Electric and its group companies in Japan and overseas.

Environmental Conservation Costs

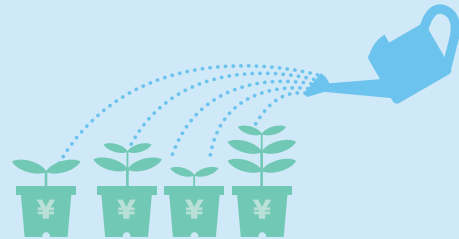
(Unit: thousand yen)

Category	Investment				Costs				
	Oki Electric	Group Companies		(Consolidated) Total	Oki Electric	Group Companies		(Consolidated) Total	
		Japan	Overseas			Japan	Overseas		
Business area cost	·Pollution prevention cost	13,841	90,245	0	104,086	586,694	519,691	13,736	1,120,121
	·Global environmental conservation cost	37,432	99,908	0	137,340	62,488	264,398	95	326,981
	·Resource recycling cost	1,824	26,158	0	27,983	219,787	303,382	70,306	593,475
	Sub-total	53,097	216,311	0	269,408	868,969	1,087,472	84,136	2,040,577
Upstream/downstream cost	20,385	0	0	20,385	30,726	86,945	506	118,177	
Administration cost	0	0	0	0	415,285	268,090	9,405	692,780	
R&D cost	16,000	109,464	0	125,464	39,491	69,968	3,595	113,054	
Social activity cost	0	0	0	0	60	943	324	1,327	
Other cost	0	0	0	0	1,082	7,492	0	8,574	
Total	89,482	325,775	0	415,257	1,355,613	1,520,910	97,966	2,974,489	

Economical Benefit

(Unit: thousand yen)

Category	Oki Electric	Group Companies		(Consolidated) Total	
		Japan	Overseas		
Cost reduction benefit	Benefit from energy and resource conservation	112,543	-217,559	-25,068	-130,084
	Benefit from reduction of processing costs	7,982	-3,411	1,097	5,667
	Sub-total	120,525	-220,970	-23,971	-124,416
Expense saving benefit	Amounts from sales of valuables	43,285	81,161	38,083	162,529
Total	163,810	-139,809	14,112	38,113	



Energy consumption

We use various kinds of energy. The following table shows data by type of energy.

Energy Type	Use	
Electric power:	Electric power (kwh)	609,390,540
Oil	Benzine (kℓ)	838
	Kerosine (kℓ)	118
	Diesel oil (kℓ)	65
	Heavy oil (kℓ)	11,670
	Total	12,691
Gas	Liquefied petroleum gas (LPG) (tons)	281
	Liquefied natural gas (LNG) (tons)	0
	Total	281
	City gas (km ³)	6,327
Water	City water (tons)	366,292
	Industrial water (tons)	2,745,656
	Well water (tons)	2,208,935
Total	5,320,844	

Major Environmental Conservation Activities

The following shows the investment, cost and economical effects aggregated in environmental accounting for major activities.

Category	Activity	Amount
Investment	Installation of equipment related to lead-free soldering	118,220
	Outside air conditioner for energy saving	81,000
	Installation of additional acid scrubbers at semiconductor production plants	27,500
	Installation of additional waste water tanks at semiconductor production plants	20,100
	Refurbishing works of air conditioning and other facilities at semiconductor production plants	17,200
	Expansion and reinforcement of waste liquid and waste water equipment at semiconductor production plants	13,556
	Reorganization of the aggregation system for chemical substances contained in products to be shared throughout the company	11,956
	Shift to treatment of organic waste liquid of semiconductor production plants at the premises	9,400
	Installation of measuring equipment related to lead-free soldering	8,244
	Costs	Maintenance and management cost for electricity/boiler facilities
Maintenance and management cost of waste water treatment facilities		264,064
Co-generator maintenance and management cost		204,000
Maintenance and management cost of waste gas treatment facilities		131,840
Amounts paid to contractors for waste processing		77,255
Research and development cost for lead-free soldering (including depreciation cost for test equipment)		76,870
Economical Benefit	Saving of energy through forced intermittent operation of outdoor units of air conditioning equipment	41,527
	Increase of amounts from sales of waste ICs due to increased production	31,174
	Increase of sales of valuable waste from the recovery of precious metals in rhodium plating fluid	27,071
	Saving of electric power through revision of production form	15,705
	Reduction of waste processing cost by starting to treat organic waste liquid on the premises	13,689
	Reduction of purchasing cost for treatment liquid through measures to eliminate causes for unevenness in plating	12,964
	Increase of sales of valuable waste from the recovery of precious metals in gold plating fluid	12,393

CO₂ emissions

The data scope of the aggregations made in the main part of this report covers only a limited number of sites. Here, we present separate data for this limited number of sites and others.

Category	CO ₂ emissions (tons-CO ₂)	Site
Major Production Sites of the Oki Group	242	Hachioji district, Miyazaki Oki Electric Co., Ltd., Miyagi Oki Electric Co., Ltd., Honjo district, Tomioka district, Numazu district, Takasaki district, Shibaura district
Other sites	61	Other sites within the scope of this report as described on page 2, except for the above
Total	303	All sites within the scope of this report as described on page 2





Questionnaire Survey Results

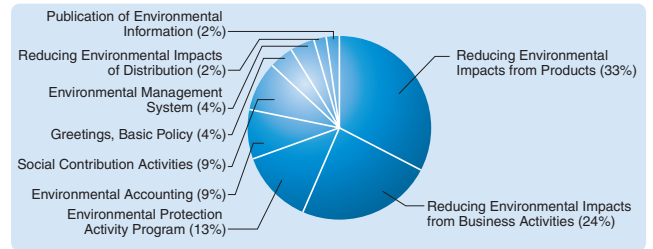
We conducted questionnaire surveys to our customers and the Oki Electric employees. We would like to use the information collected in this way for the future environmental conservation activities and environmental reports of the Oki group .

Customer Voices on the Environmental Report 2003

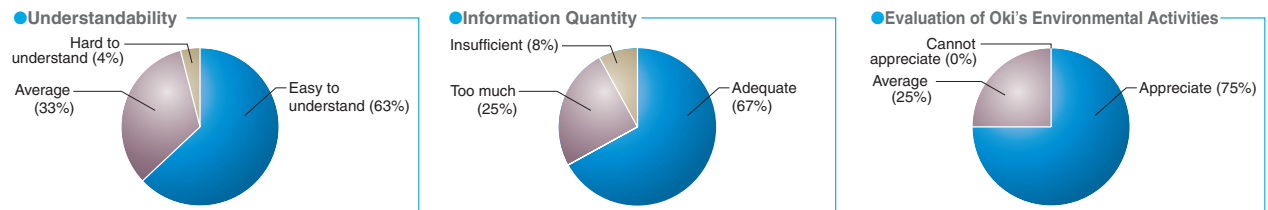
We conducted a survey on the Environmental Report 2003, to reflect the results in the Environmental Report 2004 for continual improvement. As for topics that our customers found interesting, more than half replied either "reducing environmental impacts from products" or "reducing environmental impacts from business activities". Next was the "Environmental Protection Activity Program." As for how easy the report was to understand, the quantity of information and the evaluation of our environmental activities, most replies were positive, but on the other hand, some pointed out that the report "contains too few concrete descriptions", "is not distinctive" or that "quantitative evaluations of the effects of the reduction of environmental impacts are not sufficient." We further learned that half of the stakeholders reading our environmental report are from the

manufacturing and construction field and from the research and development field, but generally speaking, our stakeholders are from a wide range of fields with respect to both industry and job type.

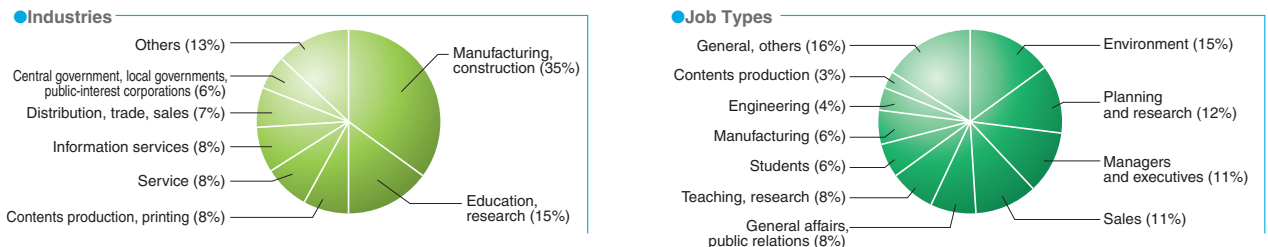
[Topics that readers found interesting].....



[Environmental Report Evaluation]

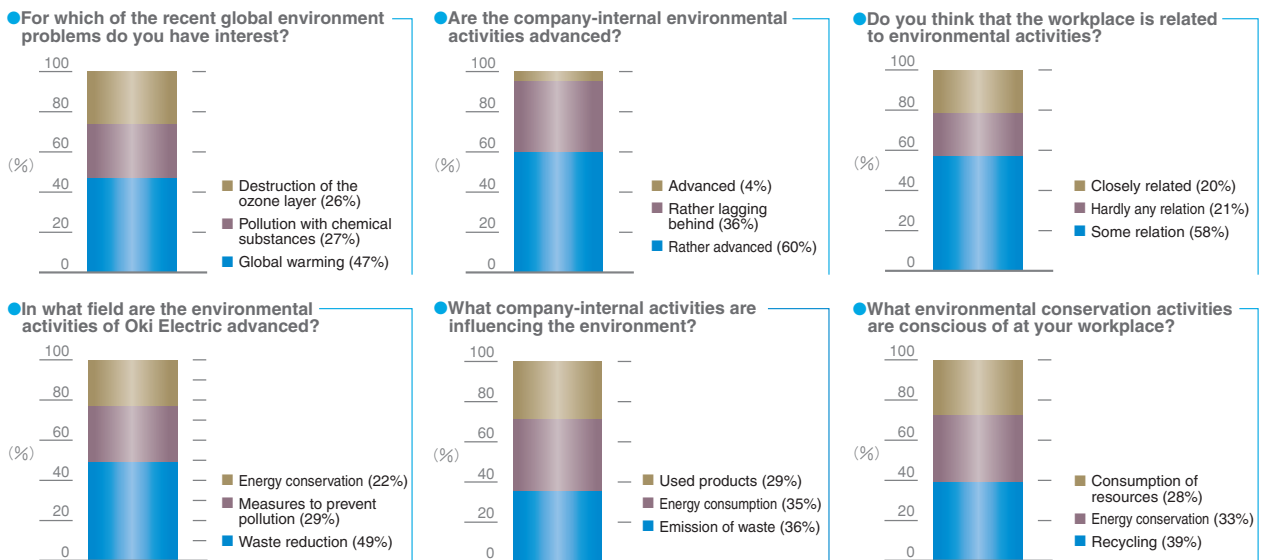


[Breakdown of Readers]



Voices of Oki Electric's Employees 2003

The following shows the top 3 replies of the results of the global environment awareness survey of Oki Electric employees. The survey was conducted on the occasion of the Oki Group Month of the Environment (June). We will use the results for our future environment conservation activities.





Issues for Fiscal 2004

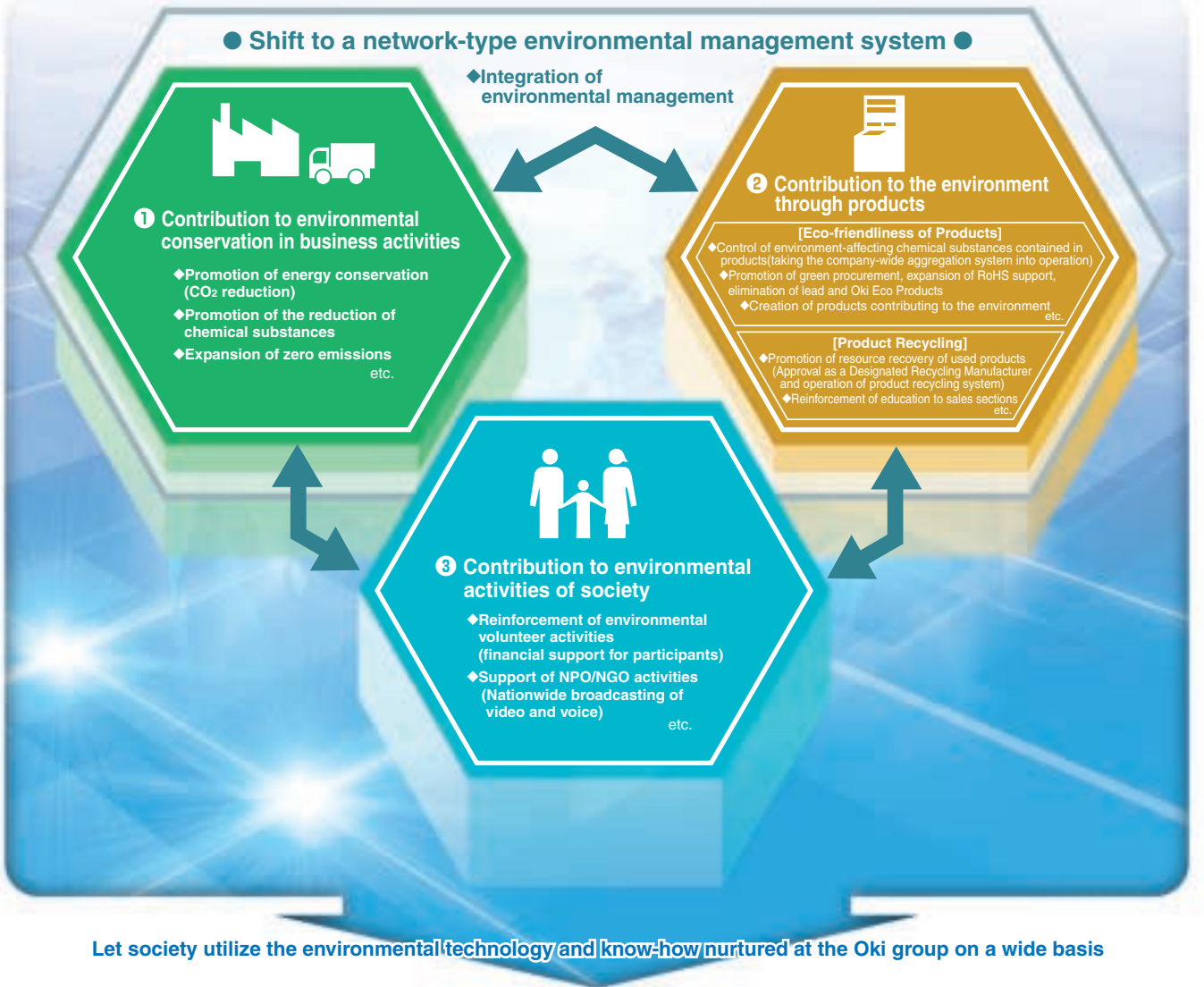
In fiscal 2003, we focused on contributing to the environment through our products and worked, for example, on the control of environment-affecting substances contained in our products, and on resource recovery of used products. We were able to achieve some good results from our efforts. For example, we integrated the company-wide aggregation system for the environment-affecting chemical substances contained in products. We also achieved the goal of switching to lead-free soldering (for newly designed domestic products) as part of our response to the RoHS directive. For the resource recovery of used products, we were approved as a Designated Wide-Range Industrial Waste Recycler and prepared a system to promote "Reuse, Recycling

and Resource Recovery" of used products. In fiscal 2004, we will continue to aim for the realization of the "e-society" by focusing on continual improvement of "①Contributions to environmental conservation in business activities" and "②Contributions to the environment through our products", while also aggressively working for "③Contributions to the environmental activities of society" — in other words, by aggressively and steadily promoting the "3 pillars" of our environmental activities. In fiscal 2004, we will put special emphasis on the following topics, positioning them as focus themes.

*1) e-society: A wide range of information is being exchanged beyond time and space over global networks. This breaks down the boundaries among countries, regions and cultures, enabling individuals to engage in various social activities in an impartial, secure way.

- Shift to a network-type environmental management system
- Contribute to the environment through providing environmental solutions

Focus Activities for Fiscal 2004 (Framework)



● Contribute to the environment through providing environmental solutions ●

- “Marketing/product planning” ➔ Consulting on environmental ISO certification, consulting in environment report production, environmental education, etc.
- “Development/design” ➔ Substance content analysis services, heat-releasing solutions, eco-cables, etc.
- “Procurement/manufacturing” ➔ Water quality control systems, ozone systems, technology for soldering with parts cooling, etc.





Thank you very much for reading the Oki group's Environmental Report 2004.

· Please feel free to contact us for any opinions or inquiries.

OKI

Oki Electric Industry Co., Ltd.

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