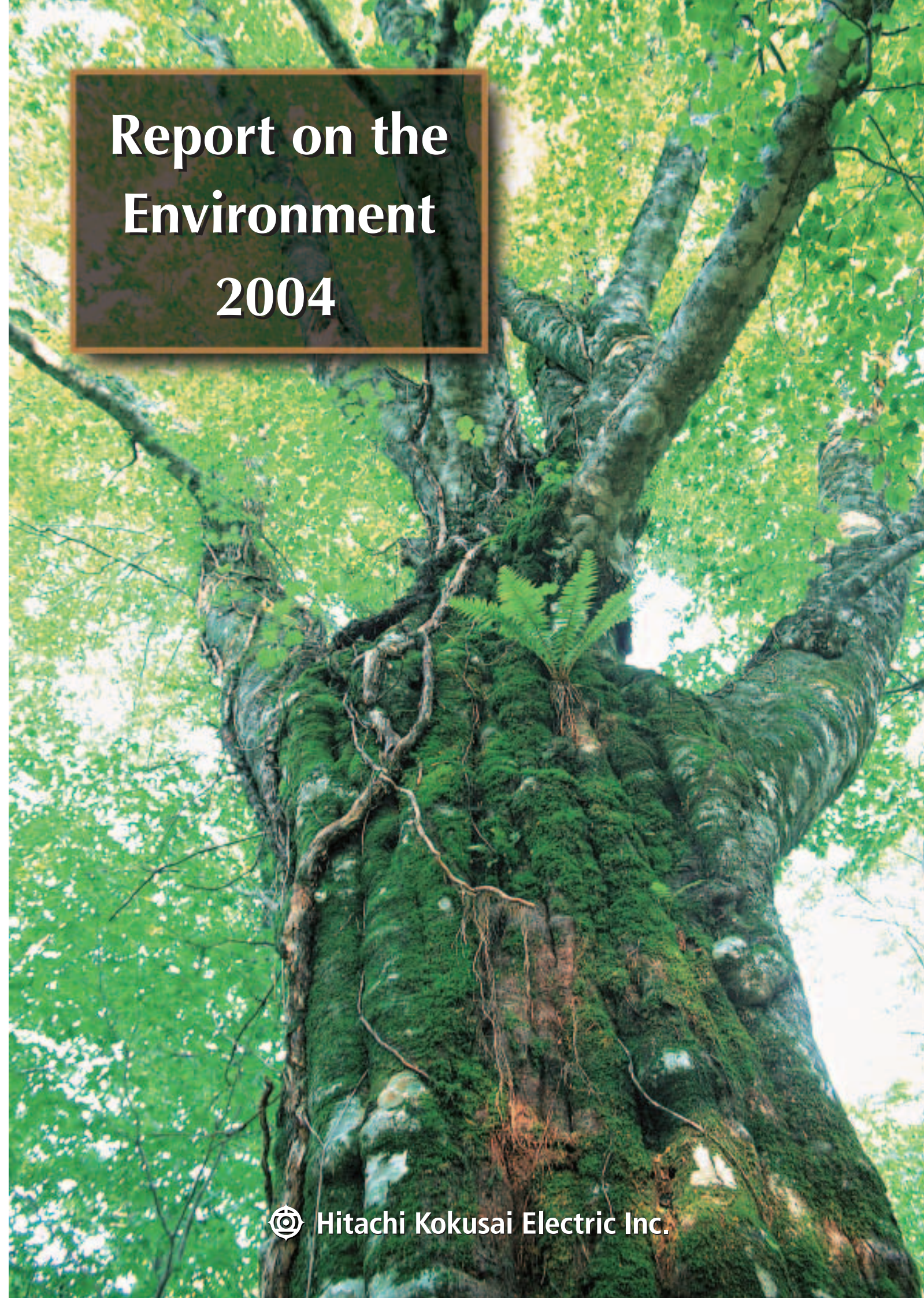


# Report on the Environment 2004



Contact: \_\_\_\_\_

 **Hitachi Kokusai Electric Inc.**  
3-14-20, Higashi-Nakano, Nakano-ku, Tokyo 164-8511, Japan  
**Production Engineering Division**  
**Quality Assurance & Environment Center**  
TEL: 813-3365-9186 FAX: 813-3365-9268  
<http://www.h-kokusai.com/>

 **R100**  
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 **Hitachi Kokusai Electric Inc.**

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Progress of environment preservation activities

- 2003 Meeting for environment promotion by affiliated companies
- 2002 Complete abolishment of Dichloromethane
- 2001 Commencement of issuing Report on the Environment
- 2000 Consolidation of 3 companies, meeting for environment promotion (Kokusai Electric Co., Ltd., Hitachi Denshi, Ltd. and Yagi Antenna Co., Ltd.)
- 1999 ISO 14001 Certificate awarded to Chitose Works
- 1998 ISO 14001 Certificate awarded to Hamura and Omiya Works
- 1997 ISO 14001 Certificate awarded to Koganei Works
- 1996 ISO 14001 Certificate awarded to Toyama Works
- 1995 Total abolishment of 1,1,1-Trichloroethane Product recycling WG
- 1994 Energy consumption control WG
- 1993 Complete abolishment of Freon
- 1992 Complete abolishment of Trichloroethylene
- 1991 Meeting for environmental disaster prevention by affiliated companies
- 1990 Meeting for environmental disaster prevention

Editorial policy

Hitachi Kokusai Electric Inc. has been continuing issuance of Report on the Environment every year, since publishing of the first edition in October 2001. From this fiscal year, we enriched the contents by conducting total review on Report on the Environment with consultation with "Guidelines for Environmental Report (2003 edition)" by Ministry of Environment. Also, as the report concerning the company's social responsibility, we added contents concerning law and regulation compliance, and safety and health. In this connection, in order for broad stakeholders to read, we prepared the report both in Japanese and English languages, as well as releasing it on our home page.

(URL <http://www.h-kokusai.com/corp/er.htm>)

Report coverage

Target period : Fiscal 2003 (from April 2003 to March 2004)

Object business institutions : Hitachi Kokusai Electric Inc. and 8 domestic affiliated companies

- |  |  |
|--|--|
| ◆Hitachi Kokusai Electric Inc.   | ◆Hitachi Kokusai Electric Service Inc.       |
| ○ Toyama Works   | ◆Kokusai Electric Semiconductor Service Inc. |
| ○ Yagi-Memorial Information & Communication Systems Research Laboratory* | ◆Kokusai Electric Techno Service Inc.        |
| ○ Hamura Works   | ◆Kokusai Denki Engineering Co., Ltd.         |
| ○ Chitose Works*   | ◆Hitachi Denshi Techno-System, Ltd.          |
| ○ Koganei Works  | ◆Kokusai Electric Alpha Co., Ltd.            |
| ○ Omiya Works  | ◆Yagi Electronics Co., Ltd.                  |
|  | ◆Tohoku Electronics Engineering Inc.         |

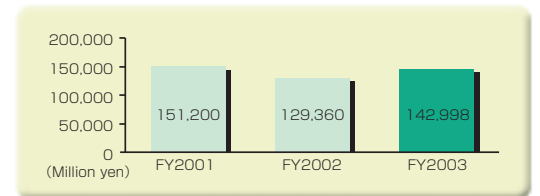
Environmental load and environmental auditing were compiled with the data of business institutions with ○ mark.

\*As to Chitose Works and Yagi-Memorial Information & Communication Systems Research Laboratory (Sendai), consolidated in December 2003, the environmental load data for 9 months up to December was used.

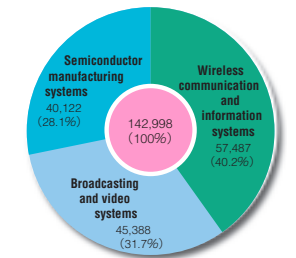
Corporate profile (as of March 31, 2004)

Company name : Hitachi Kokusai Electric Inc.  
 Head office : 3-14-20, Higashi-Nakano, Nakano-ku, Tokyo, Japan-Headquarters  
 Founded : November 17, 1949  
 Capital : 10,058 million-yen  
 Sales : 142,998 million yen (consolidated)  
 Number of employees : 4,769 (consolidated)

Consolidated sales



Consolidated sales by segment



Scope of business

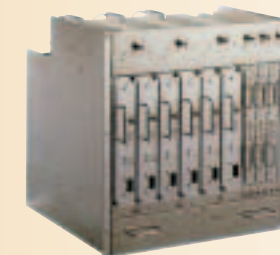
Wireless communication and information systems

Wireless communication systems

- Station equipment for digital cellular and car telephones
- Cellular and car telephones (wireless packet communication systems)
- Disaster prevention information network systems
- Assorted equipment for governmental and public communications
- Intelligent Transport Systems (ITS)
- MCA wireless systems for airport use

Information systems

- Stock-price display boards
- Securities and financial client server systems
- Multimedia information display systems
- Non-contact type IC card readers and writers



W-CDMA Multi-Carrier Power Amplifiers System



Multi-Media Information System

Broadcasting and video systems

Broadcasting systems

- Digital TV cameras
- Editing, recording and broadcasting systems for non-linear transmission
- Television broadcasting equipment
- FM/AM radio broadcasting equipment
- TV and FM radio broadcasting antennas
- Amplifiers, distributors and assorted equipment for TV reception

Image processing and monitoring systems

- Cameras and monitors for industrial applications
- Image recognition systems
- Security monitoring systems
- Wide-area monitoring systems (for road, river and railroad networks)
- Micro-size measuring equipment and assorted examination equipment



Ground-Based Digital Broadcasting Equipment



Terrestrial Digital TV Broadcasting Antennas



Security & Surveillance Systems

Semiconductor manufacturing systems

Semiconductor systems

- Vertical oxidation diffusion/ LPCVD systems
- Vertical QTAT systems
- Vertical SiGe epitaxial growth systems
- Vertical high-temperature anile systems
- Digressive MMT plasma nitriding systems
- Silicon epitaxial single crystal growth systems
- Digressive oxidation/ LPCVD systems
- Ashing equipment



Single Wafer Oxidation & LP-CVD System



Vertical Diffusion & LP-CVD System

We are conducting our activities to reduce the global environmental load, based on the basic policy for environment preservation.

## Pass on the precious earth to the next generation Let's protect our beautiful environment

We are working hard throughout the company with the aim of fitting into the sustainable recycling-oriented society.

### Message from the President



M. Endo  
Dr. Makoto Endo  
President,  
Chief Executive Officer and Director

Hitachi Kokusai Electric is strongly committed to making meaningful contributions to society through advanced technologies and products. But we also have another face: Hitachi Kokusai Electric people. Our people are a corporate family working in harmony toward realizing our dreams. We are a family with a pioneering spirit, with respect for people and nature, and with respect for the principles of conducting business very responsibly.

Our Fiscal 2005 and Fiscal 2010 goals are both clear and attainable. As we move ahead toward the mid-to-long term targets, we are focusing on three key areas: Ecological Products (promotion of environment-friendly products), Ecological Factories (environment-friendly production activities), and Environment Management (enhanced environment management). Here, I personally assess the environmental activities of the company and respond to issues quickly together with environmental management and factory heads.

I would like to herein present the report on our activity result for fiscal 2003.

In the ecological product activity, we achieved our target ratio of 60 percent in sales of environment-friendly products. In ecological factory activity, we attained the target for waste reduction, but further effort is needed in global warming prevention (reduction of carbon dioxide emission). We are committed to continue making our efforts for advancing CO<sub>2</sub> reduction. In ecological management, we have worked on consolidated activities for environment preservation including affiliated companies.

In Fiscal 2004, we will consult on creation of environment-friendly products in line with green procurement requirement from our customers. Additionally, we will comply with overseas environmental regulation movements, including European regulations starting with toxic substances.

In our past reports on the environment, we have reported our tasks and results of the environmental activities. From this report on, we added the company's social responsibilities including labor safety and health, compliance with laws and regulations, and social volunteer programs. May I suggest that you read the report for your kind understanding of our activities on environment preservation, and I would like to request your frank opinions and valued advice.

In the future as well, we will further engage in our company-wide efforts aiming at the sustainable recycling-oriented society which you can trust.

June 2004

### 1 Basic policy for environment preservation

Hitachi Kokusai Electric Inc. positions natural environment preservation as one of the highest priority issues of our operations, formulates our global environmental charter and advances reduction of global environmental load, based on the basic philosophy and guidelines for action.

#### Hitachi Kokusai Electric Global Environmental Charter

##### Basic Philosophy

Hitachi Kokusai Electric will enhance the basic spirit of "Respect for humans" and "Pioneer spirit", deeply recognize that we are members of the society, devote ourselves to fair and transparent corporate activities, and also contribute to the society by preserving the global environment and improving the local living environment through our corporate activities.

##### Guidelines for Action

###### 1. Fulfillment of Our Social Obligation

Harmony with the environment is one of our highest priorities. We are committed to solving global environmental issues because we realize they are important issues common to all of humanity.

###### 2. Reduction of Environmental Load

The environmental load caused by research, development, production, distribution, use, and disposal will be reduced to help build a resource recycling society.

###### 3. Complying with Laws and Regulations

International, national, and local environment regulations will be obeyed, and a voluntary control standard will be set up to help prevent environmental pollution and improve the environment management level.

###### 4. Linkage with Local Communities

Efforts will be made to preserve the global environment, improve the local living environment, and give employees a comprehensive environmental education to enhance awareness of the environment.

###### 5. Preparation of Intracompany System

An executive in charge will be appointed to prepare an environment management organization system and help promote continuous activities for the environment, both internationally and nationally.

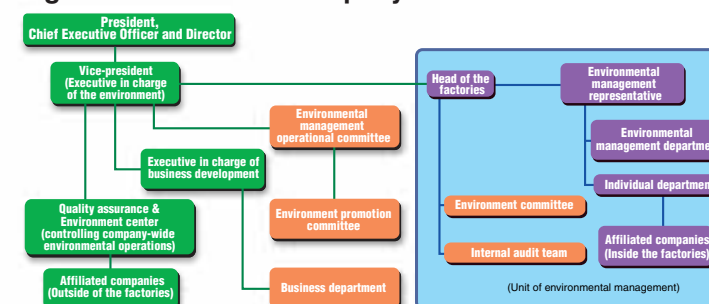
Prepared in March 2001

### 2 Environment management system

The system used to promote the company's environmental activities consists of "the company-wide environmental management organization" led by the executive in charge of the environment and "the factory management organization" established at each factory. In the "company-wide environment management organization", Quality assurance & Environment center is responsible to play the role of controlling and advancing company-wide environmental activities as the executive office.

At the environmental management operational committee meeting conducted twice a year, with the attendance of the President and Executive in charge of the environment as the leader of the committee, heads of the factories participate the committee meeting to discuss and decide the plan for mid-term to long-term environment activity, annual targets and important issues, and implement them at respective factories. Further, affiliated companies, through the meetings conducted twice yearly by persons in charge of the environment, develop group-wide policies and action plans, and carry out activity result reports, information exchange, horizontal development and problem solutions.

#### Organization chart of company-wide environment management system



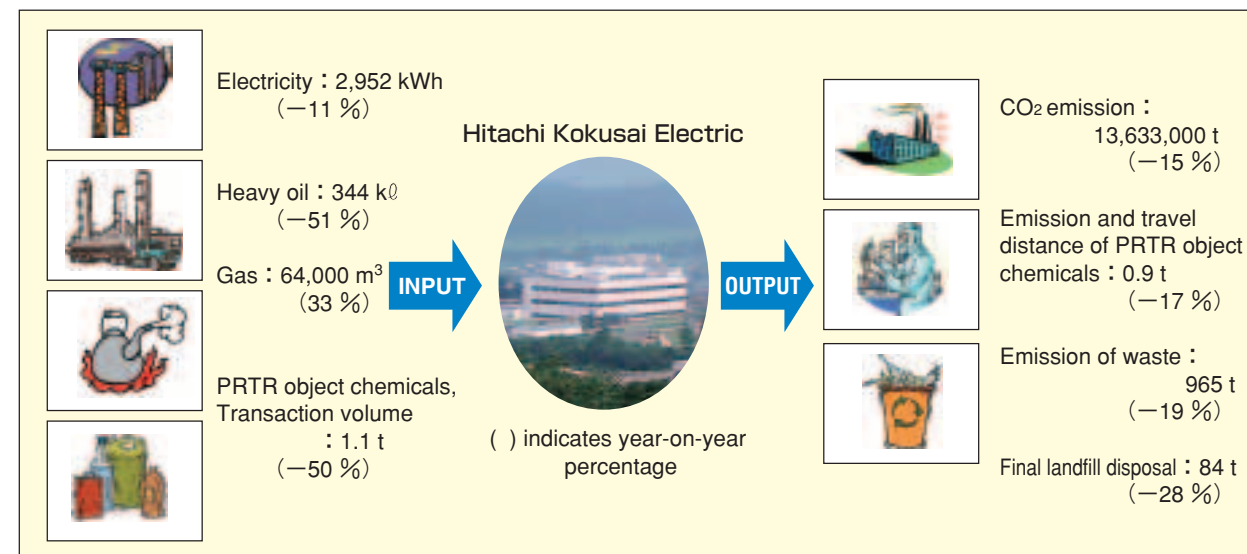
Environmental management operational committee meeting

## 3 Goals and results of environmental activities in Fiscal 2003

◎ : Mid-term to long-term target reached ○ : Target reached △ : Efforts in improvement required

Main item	Mid-term to long-term plan	Fiscal 2003 target	Result	Own evaluation
Ecological products	Environment-friendly products Percentage of environment-friendly products: 70% in fiscal 2005	Percentage of environment-friendly product sales: 60% in fiscal 2003	Percentage of environment-friendly product sales: 68% in fiscal 2003	◎
	Lead-free solder Complete abolishment of lead solder in fiscal 2003	Introduction of lead-free soldering equipment Establishment of the production process Application for newly developed products	Equipment introduction completed Application to the newly developed products	○
	Green procurement Complete abolishment of 6 RoHS regulated substances by fiscal 2005	Investigation of environmental safety of main customers Investigation of 6 RoHS regulated substance content	Percentage of responses: 85% Percentage of responses: 54%	△
Ecological factory	Global warming prevention (energy conservation) Reduction of carbon dioxide (CO <sub>2</sub> ) emissions from fiscal 1990 levels 3% reduction by fiscal 2005 7% reduction by fiscal 2010 Reduction of carbon dioxide emissions from 1990 levels 20% reduction by fiscal 2005 25% reduction by fiscal 2010	Reduction of CO <sub>2</sub> emissions from fiscal 1990 levels 1% reduction in fiscal 2003	6% reduced in fiscal 2003	△
		Reduction of CO <sub>2</sub> emissions in production from fiscal 1990 levels 16% reduction in fiscal 2003	17% increased in fiscal 2003	
	Chemical substance management From 2001 levels Chemicals to be reduced 30% reduction by fiscal 2005 Prohibited chemicals Complete abolishment by fiscal 2005	Chemicals to be reduced: 15% reduction in fiscal 2003 Prohibited chemicals: 50% reduction in fiscal 2003	Chemicals to be reduced: 40% reduced in fiscal 2003 Prohibited chemicals: Completely abolished in fiscal 2003	◎
		Waste reduction 85% reduction from 1998 levels by fiscal 2005. Zero emission by fiscal 2010.	81% reduction from 1998 levels	86% reduction from 1998 levels
Environment management	Environmental Audits Implementation of environmental auditing (including factories and affiliated companies)	Implementation of environmental auditing by Headquarters' Environment Management Department ISO14001 periodic inspection	Auditing implemented at 2 factories 5 internal factories investigated 5 affiliated companies investigated	○
	Consolidated operations Promotion of consolidated operations by factory	Assessment of environmental load (type, degree and volume)	Environmental load data obtained	

### Business activity mass-balance



## 4 Details of environmental activities in Fiscal 2003

	Result of fiscal 2003 environmental activities	Participants
<b>April</b>	Environment committee meeting of affiliated companies ● Presentation of fiscal 2003 environmental activity plan	Persons in charge of the environment of respective affiliated companies, Environment Center
<b>August</b>	Environmental management operational committee meeting ● Report on activity results for fiscal 2002 by each factory and fiscal 2003 activity plan	President, Executive in charge of the environment, factory heads, Environment Center
	Internal environmental auditing ● Environmental auditing of Hamura Factory	Factory heads, environment promotion representative, internal audit team, department heads, Environment Center
	Environmental meeting ● Exchange of opinions by persons in charge of the environment of respective factories	Persons in charge of the environment, Environment Center
<b>October</b>	The 5th presentation meeting of environment-friendly design case examples ● Examples at factories: 5 cases	President, Executive in charge of the environment, department heads, factory heads, design divisions, environment departments
<b>December</b>	Environmental auditing of affiliated companies ● Kokusai Electric Engineering Environmental auditing of Akita Factory	Factory head, Executive in charge of environment, department heads, persons in charge of the environment and Environment Center
	The 3rd lead-free subcommittee meeting ● Technology exchange among factories	Lead-free promotion leaders of factories and affiliated companies and Environment Center
<b>February</b>	Environmental management operational committee meeting ● Report on the results of fiscal 2003 activities of respective factories ● Presentation of fiscal 2004 environmental activity plan	President, Executive in charge of environment, Quality assurance & Environment center
	Environmental meeting ● Exchange of opinions among persons in charge of the environment of respective factories	Persons in charge of the environment, Quality assurance & Environment center
<b>March</b>	Environment committee meeting of affiliated companies ● Report on the results of fiscal 2003 activities by respective affiliated companies ● Presentation of fiscal 2004 environmental activity plan	Persons in charge of the environment of respective affiliated companies, Quality assurance & Environment center



Environmental audits at Hamura Works



Presentation meeting for environment-friendly design examples



Kokusai Denki Engineering Co., Ltd. Environmental audits at Akita Works

## 5 Environment management system

Environment management system is the platform for promoting environment management, and all of the company's manufacturing bases (sites) were ISO14001 certified in fiscal 1999. And also all manufacturing sites of the affiliated companies within Japan are scheduled to be certified by fiscal 2005.

### Status of ISO14001 certification (as of March 31, 2004)

	Sites certified	Date certified	Scope of business
Internal factories	Toyama Works	October 1996	Semiconductor manufacturing equipment systems
	Koganei Works	June 1997	Broadcasting systems, image processing and monitoring systems
	Hamura Works	February 1998	Data processing systems and wireless communication systems
	Omiya Works	December 1998	CATV systems and antennas
	Chitose Works	April 1999	Wireless communication systems
Main domestic affiliated companies	Tohoku Electronics Engineering Inc.	June 1997	Electric appliances, communications and image systems, measuring devices and medical equipment
	Kokusai Denki Engineering Co., Ltd.	July 2000	Wireless communications equipment, beacon equipment, electrical equipment, mobile radio equipment, microcomputer application devices and computer peripherals
	Kokusai Electric Semiconductor Service Inc.	March 2001	Maintenance and installation of semiconductor manufacturing equipment and semiconductor manufacturing equipment
	Hitachi Kokusai Electric Service Inc.	October 2002	Maintenance and services of Hitachi Kokusai Electric products (excluding semiconductor manufacturing equipment)
	Kokusai Electric Alpha Co., Ltd.	February 2003	Data processing systems and equipment, semiconductor manufacturing equipment and ultrasonic application devices



Registration Certificate for Kokusai Electric Alpha Co., Ltd.

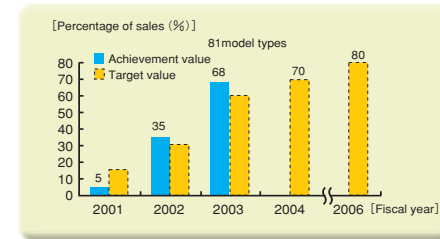
# Ecological Products

We assess environmental load at the stage of designing products and are working on creation of environment-friendly products.

## 1 Environment-friendly products

We are developing products by introduction of "assessment of environment-friendly designs" adopting the concept of environment-friendly design, so to minimize lifecycle environmental load, which products cause to the environment at each stage of the product lifecycle (material, production, distribution, usage, recovery, resolution and proper disposal). Assessment is made by product and the superior products which can obtain more than 2 points of the score out of 5 standard points in each category, as well as more than 3 points in the general average score are defined to be environment-friendly products.

### Change in percentages of sales of environment-friendly products



### Assessment items for environment-friendly designs

Category	Life Cycle Stage	Assessment Criteria
Resource reduction	Selection of component materials, production, distribution	Resource conservation, compactness, lightweight, conformity, high yield, standardization
Product longevity	Usage	Upgradability, ease of repair and maintenance, durability, reliability
Resource recycling	Reuse, distribution	Reusability, conformity of component materials, use of recycled materials, promotion of resource recycling, labeling of materials
Ease of disassembly	Disassembly	Ease of disassembly, selection of component materials, ease of sorting, labeling of materials
Ease of processing	Production, distribution, disassembly	Crumbing, fragmentation, disassembly and separation, ease of processing
Environmental safety	Selection of component materials, production, distribution, usage, disassembly, disposal	Potential toxicity, potential harmfulness, explosiveness, potential for implosion, potential hazard
Energy conservation	Usage, production	Energy conservation, longer durability, energy efficiency
Provision of information	Usage, disassembly	Provision of information regarding processing, provision of information regarding product disposal

## 2 Examples of environment-friendly products

### Semiconductor manufacturing systems



300 mm wafer LPCVD systems  
Product name: Z-7 (C)

- Power consumption: 27 % reduced
- Hours for assembly: 27 % shortened
- Mass: 12 % lowered

LPCVD : Low Pressure Chemical Vapor Deposition



Epi-SiGe deposition equipment  
Product name: V-V (SE)

- Power consumption: 43 % reduced
- No. of parts: 37 % reduced
- Capacity: 35 % reduced



Batch-type ALD equipment  
Product name: ALDINNA

- Power at activation: 37 % reduced
- Power at hold time: 27 % reduced
- Capacity: 35 % reduced

ALD : Atomic Layer Deposition

### Communication and Information systems



Amplifier for the 3rd generation cellular phone station  
Product name: MCPA

- Power consumption: 5 % reduced
- Mass: 17 % lowered
- Capacity: 7 % reduced
- Noise reduction: 8 dB reduced



Digital portable radio  
Product name: EUM-01 DN/ET

- Power consumption: 15 % reduced
- Capacity: 43 % reduced
- Mass: 40 % lowered



Digital receiver  
Product name: ECF-8601

- Lead-free solder adopted for print-circuit board
- Absolutely no assembly screws (simple assembly and maintenance)

### Broadcasting and video systems



Full multimode FPU  
Product name: FRO55-ZX2

- Capacity: 37 % reduced
- Mass: 28 % reduced

FPU : Field Pick-up Unit



Outdoor camera platform all-in-one type camera  
Product name: HC-240

- Power at hold time: 95 % reduced
- Power at activation: 23 % reduced
- Mass: 38 % reduced
- Capacity: 26 % reduced



Ground-based digital broadcasting UHF preamplifier  
Product name: PAU-250A

- Capacity: 47 % reduced
- Mass: 28 % reduced
- Noise factor: Reduced to less than 2.2 dB
- UHF output level: 90 dB $\mu$  (wave 7)

## 3 Green procurement

It is important to procure materials or parts with less environmental load in order to produce products with less environmental load.

"Guidelines for Green Procurement" was handed out at the suppliers meeting, and we requested them to provide information on the items related to reducing environmental load, such as environment preservation activity, resource conservation of procured goods, energy saving, recycling and the items concerning the content of substances, for which Hitachi Group performs voluntary management.

In fiscal 2003, we received information from 411 companies covering main model types in connection with environment preservation activities, and commenced our research giving priority to substance content investigation by Restricting the use of Hazardous Substances (RoHS) Directive 6 of European Union.



Suppliers meeting



Guidelines for Green Procurement

# Ecological Factory

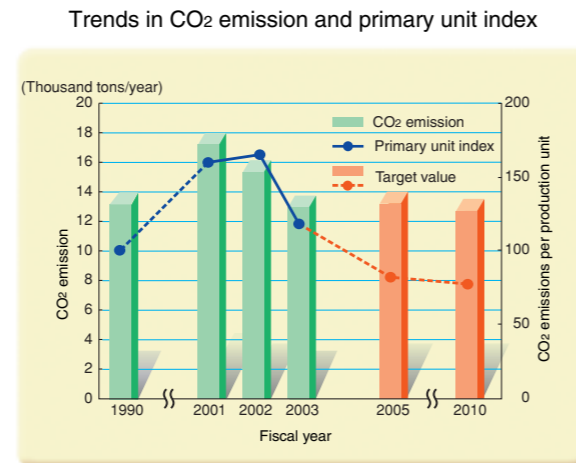
We are working on our Ecological Factory theme by controlling and minimizing environmental load at each of our factories.

## 1 Global warming prevention (energy conservation)

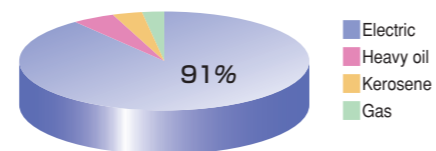
We have set ourselves the goal of reducing our primary unit of carbon dioxide emission in the production by 25% and carbon dioxide emission by 7%, from the 1990 levels by fiscal 2010. Carbon dioxide emission was reduced by 6% due to the consolidation of factories, while our primary unit of carbon dioxide in the production in fiscal 2003 increased by 17% from fiscal 1990 levels. The amount of carbon dioxide emission by use of electricity accounts for more than 91% of the total, and we are now engaged in upgrading energy-saving equipment and introducing ESCO business.

### <Major energy saving measures taken in fiscal 2003>

1. Upgrading of air-cooling equipment
2. Review of heat exhaust system application
3. Enhancing efficiency of lighting fixtures



Usage breakdown of electric and various types of fuel (CO<sub>2</sub> conversion)

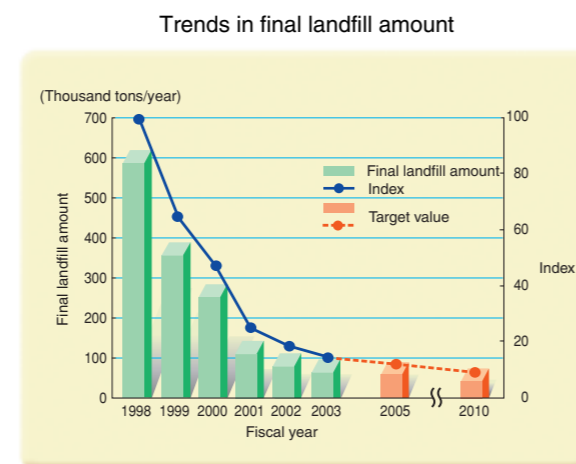


## 2 Waste reduction

We have set ourselves the goal of reducing our final landfill amount by 90% from the fiscal 1998 levels by fiscal 2010, and are working on further reduction of waste to achieve our goal of zero emissions. We reduced our final landfill amount in fiscal 2003 by 86% from the fiscal 1998 levels. In addition, we are engaged in our efforts for waste control measures to ultimately reduce our final landfill amount to zero.

### <Major waste reduction measures taken in fiscal 2003>

1. Thermal recycling (RDF) of waste plastics
2. Thermal recycling (RPF) of vinyl and paper waste
3. Recycling of personal computers



### ■ Illegal dumping prevention (law compliance)

As to the status of disposal, we confirm the manifest (control manifest for industrial waste), periodically inspect waste disposal plants and confirm that waste disposal is properly performed.



Inspection of industrial waste disposers

## 3 Prevention of soil and ground water pollution

Soil and ground water is one of the natural environment having close relations with our lives. Anti-Soil Pollution Law was enacted in February 2003. Out of the object substances of this law, Trichloroethylene which is a volatile organic compound was completely abolished in 1992 and 1,1,1-Trichloroethane in 1996, Dichloromethane in 2002, respectively. Also, we implemented voluntary inspection of soil and ground water, and to date no contamination has been found. Further, the investigation was conducted based on the law due to the sale of a factory, and confirmed no contamination.



Collecting samples for underground water survey

### ■ Result of soil investigation at Yagi-Memorial Information & Communication Systems Research Laboratory (in Sendai)

Object substance	Maximum amount detected (extraction)	Standard amount	Maximum amount detected (content)	Standard amount
Fluorine and its compound	Less than 0.13 mg/l	0.8 mg/l	Less than 400 mg/kg	4000 mg/kg
Lead and its compound	Less than 0.005 mg/l	0.01 mg/l	Less than 15 mg/kg	150 mg/kg

### ■ Result of surface gas investigation at Yagi-Memorial Information & Communication Systems Research Laboratory (in Sendai)

Object substance	Maximum amount detected (extraction)	Standard amount
1,1-Dichloroethylene	Less than 0.1 ppm	0.1 ppm
Sis-1,2-Dichloroethylene	Less than 0.1 ppm	0.1 ppm
1,1,1-Trichloroethane	Less than 0.1 ppm	0.1 ppm
Trichloroethylene	Less than 0.1 ppm	0.1 ppm

## 4 Survey results for substances covered under the PRTR law social report

Based on the "Law Concerning Assessment of the Amounts of Specific Chemical Substances Released into the Environment and Promotion of Management Improvement (PRTR Law)" enacted in April 2001, it is required to report chemicals handled in the amount more than 1 ton in fiscal 2003. Out of 354 substance groups subject to reporting, the substances we handled in the amount of more than 100 kg were 4 substance groups, totaling 1,050 kg, which represented the reduction by 55% year-on-year. By introducing no lead solder, we reduced the use of lead and advanced reduction planning of the amount released, and it was found that there were no object substances to be reported to the government.

\* PRTR : Pollutant Release and Transfer Register

■ The list below shows the substances handled in the amount of more than 100 kg in total by the entire company (Unit: kg/year)

Chemical	Amount handled	Amount consumed	Amount recycled	Amount transferred	Amount released
Hydrogen fluoride and its soluble salt	410.00	0.00	0.00	390.00	20.00
Toluene	254.28	1.56	0.00	57.04	195.68
Lead and its compound	203.41	23.67	179.25	0.49	0.00
Xylene	181.58	12.33	0.00	12.90	156.35

## 5 Reduction of the environmental load from chemical substances

To reduce the amount of chemicals released into atmosphere, water, soil, etc. and to cut down environmental load, we are exercising our voluntary management on approximately 1,400 chemical substances by categorizing them into 3 types; "to be prohibited", "to be reduced" and "to be managed". Especially, for the substances "to be prohibited", we have set ourselves the goal of making the amount released to the environment be "zero" by fiscal 2005, and for the substances "to be reduced", reducing by 30% (from fiscal 2000 levels) by fiscal 2005 in the amount released into the environment. In fiscal 2003, we completely abolished the substances "to be prohibited", and for the substances "to be reduced" we achieved, ahead of the schedule, our goal of 40% reduction from fiscal 2000 levels by reducing the usage and switching to alternate substances, etc.

## 6 Prevention of odors

In cases where there are no regulations or restrictions concerning odors, we have voluntarily set our own control standard and periodic inspections are implemented not to cause inconveniences to residents in the local community.



Collecting samples for voluntary investigations

We are involved in an endeavor to continuously improve our environmental activities and to enhance the activity level.

Each employee of the company observes laws and is making every effort to contribute to the society in line with the corporate standard of conduct "to do the rate thing".

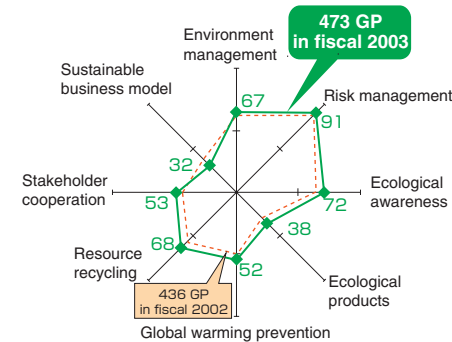
## 1 GREEN 21 operation (Ver. 2)

GREEN 21 operation is the activity to continuously improve the environmental activities as Hitachi group and to enhance the activity level, based on certain evaluation criteria. We evaluate 53 items in 8 categories and distribute in order for the perfect score of each category to become 100 green points (hereinafter called GP), 800 GP in total.

● Target points :

Fiscal year	2002	2003	2004	2005
Green point	436	473	533	640

(Note 1) Achieved points are listed for fiscal 2002 and 2003.



### ■ Evaluation items (53 items in 8 categories)

No	Category	Main evaluation item
1	Environment management	Environment management, environment activity planning, and environmental accounting
2	Risk management	Strict observance of laws and ordinances, setting of independent standards, strict observance of independent standards
3	Ecological awareness	General training of employees, specialized training, education, and training of internal monitors
4	Ecological products	Creating environment-friendly products, and planning and achieving green procurement
5	Global warming prevention	Achieving energy conservation
6	Resource recycling	Reducing waste production and managing chemicals
7	Stakeholder cooperation	Information disclosure, communication activities, and community activities
8	Sustainable business model	System and planning, recovery of products, recycling, and environmental restoration activities

■ Result report The average green point for fiscal 2003 reached 473 GP, advancing by 37 GP from 436 GP of the benchmark year. In the category of Ecological products, environment-conscious designing made progress, but low evaluation was received due to the delay in green procurement. We will further make continuous improvement together with other improvement items.

## 2 Environmental accounting

Based on "Hitachi environmental accounting guidelines", we have engaged in developing the system to make quantitative assessment of costs and effects related to environmental activities since fiscal 2000. As for costs, in addition to the capital investment connected with environmental activities, research and development costs, and operation and administration costs of maintenance equipment are also covered. Further, in the aspect of effects, we compute economic effects recognized by substantiated basis.

### ■ Costs

Item	Cost (in million yen)			Main content
	Fiscal 2001	Fiscal 2002	Fiscal 2003	
1. Costs within the factory area	134.6	144.3	153.1	Costs for maintenance and management of environmental load reduction facilities
2. Upstream and downstream costs	0.1	0.3	0.3	Costs for green procurement and recycling
3. Management activity costs	137.9	104.8	76.3	Personnel expenditures for environment management and maintenance costs for environment management system
4. Research and development costs	348.3	447.3	3803.8	Costs for research, development, and design of products that reduce the environmental load
5. Social activity costs	4.1	3.9	1.7	Costs for environment improvements (e.g., greening and landscaping), PR, and publicity
6. Costs related to environmental damage	0	0.2	0.2	Environment-related compensation, contributory money, and surcharges
<b>Total cost</b>	<b>625.0</b>	<b>700.8</b>	<b>4035.4</b>	
<b>Total investment</b>	<b>64.6</b>	<b>254.6</b>	<b>63.7</b>	Investments in direct environmental load reduction facilities (e.g., energy conservation facilities)

### ■ Effects

Item	Value of effect (in million yen)			Main content
	Fiscal 2001	Fiscal 2002	Fiscal 2003	
1. Effect on real income	0.8	0.4	1.0	Profit on sale of recycled waste, etc
2. Expenditure reduction	1.4	1.9	3.4	Power cost reduction due to energy conservation, etc.
3. Material cost reduction	59.1	52.0	43.0	Resource cost reduction due to resource saving, etc.
<b>Total</b>	<b>61.3</b>	<b>54.3</b>	<b>47.4</b>	

■ Result report The total cost went up 476% year-on-year in fiscal 2003 due to the increase of development cost for environment-friendly products, while the reduction of resource cost by resource conservation did not make good progress, and the result of economic effect slipped down by 13%.

## 1 Compliance

The company deeply recognizes to be a member of the society and has the basic philosophy of continuing the progress together with the society. In this endeavor, the management and all employees of the company have been taking the initiative in complying with laws and in promoting fair business operation.

### ● Establishment of compliance division

For the purpose of promoting compliance with laws, Compliance Division was set up in June 2002. The division engages in activities around the committee composed of directors of all divisions as committee members. In order to fulfill compliance with laws and to act conforming to the corporate ethics, it is essential to realize right knowledge and social obligations of the company. Compliance Division is working on providing education, training and information for that purpose. Training is conducted as an institutional program for management executives and all employees. Also, compliance auditing has been implemented to verify if laws and internal basic rules are strictly observed at all workplaces. We are carrying out our endeavor to build the workplace with the strong awareness of strict observation of laws and internal rules set up by the company, and further according to our conscience not to do any act contradicting conventional wisdom.

### ● Adopt committee system

In June 2003, we transferred the committee, etc. to a created company and introduced the business administration organization composed of the Board of Directors that executes basic decisions related to business administration, directs operations and conducts auditing, and operating officers executing business and affairs. With the aim of fair business operations as well as management efficiency, we are advancing above all fair business management by the commission system mainly composed of outside directors. To execute business and affairs, by appointing an operating officer in charge of ethics and by making the internal control organizations such as Compliance Division work, we are proceeding in an endeavor to comply with laws and execute business and affairs.

### ● Establishment of internal reporting system

To keep fairness and transparency, we considered it essential for the management and employees to build communications based on much deeper trust. For that purpose, "Hitachi Kokusai Electric Group Helpline" was opened in October 2003 as the internal reporting system. In the committee operating this helpline system, an attorney from outside plays the role as a committee member to define fair and transparent tasks. This system quickly responds to any problem suspected of contradicting laws or conventional wisdom.



## 2 Safety and health of employees and positive health programs

We make every effort to secure safety and health by positioning the concept of "safety and health first" to be our basic stance.

### Industrial safety and health management system

Toyama Works considered that establishing and maintaining a safe, healthy, better workplace is the basics of human dignity and that it is essential for productivity improvement and contribution to the local community through business activities, and developed the industrial safety and health management system based on OHSAS 18001. For their efforts, the certificate was awarded to them in June 2001.

Also, not only manufacturing sites, but also our affiliated company, Kokusai Electric Semiconductor Service Inc. that engages in installation and related services was certified in July 2003.



Registration certificate of Toyama Works



Registration certificate of Kokusai Electric Semiconductor Service Inc.



### Campaign activity for zero industrial disasters

We make continuous improvements to reduce safety and health-related risks and to aim at zero industrial disasters. Centering on manufacturing sites, safety related activities are being implemented including safety diagnosis by Central Disaster Prevention Association, implementation of safety patrol, safety inspection at the time of equipment introduction, pre-test of chemical substances before introduction.

No disaster record

- Type 4 no-disaster record [23.7 million hours]  
Hamura Works (January 1994)
- Type 1 no-disaster record [7 million hours]  
Koganei Works (April 2002)  
Toyama Works (September 2003)  
Omiya Works (October 2003)



The memorial tree planted to celebrate Hamura works' no-disaster record for 23.7 million hours



Safety diagnosis by Central Disaster Prevention Association

### Mental health care

Mental health care program has been implemented as mental health is also of our great concern together with physical health.

- Enhancement of the counseling setup of Outside Employee Assistance Program (EAP)
- Continuously implementing training by level to enhance mental health care awareness
- Supporting for self findings and early-stage problem solution



Seminar on mental health



Employee Support Program literature

## 3 Communication with local communities

As a business enterprise, and through individual activities of each employee, we have built a partnership with the government and local communities.

### Toyama Prefecture Eco Factory certification

Toyama Works was certified as 2003 Toyama Prefecture Eco Factory.

This is a system, by which Toyama Prefecture certifies factories aggressively engaging in environment-conscious business activities including waste control and recycling.

Measures taken by Toyama Works

- Resource recycling by waste sorting
- Promotion of green procurement by on-line system ordering



Certificate of Eco Factory (ecological factory)

### Communication with local community

Hitachi Kokusai Electric aims at harmonious coexistence with local communities, and each of our factories is involved in various social action programs, cooperating with local governments and various organizations in the community.



Flower campaign across the city of Hamura



Participated in general disaster prevention training in Kodaira City



Captured a championship of League 1 in Muzuho-cho rubber ball-baseball spring series