

# SII Group Green Plan **Social and Environmental** Report 2006

Striving for Coexistence with Society and Harmony with the Earth

SII 🥥

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### **About This Report**

the Environment.

- This report is published to provide all stakeholders with easily understandable information about the SII Group's environmental and social activities.
  In preparing this report, we have utilized various guidelines including the Environmental Reporting Guidelines 2003 issued by the Japanese Ministry of
- •Additional detailed data and current information not included in this report are available on the SII website: http://www.sii.co.jp/eco/

### **Scope of This Report**

- This report focuses on efforts and achievements of our ten Japanese sites and seven overseas sites.
  \* The ten Japanese sites include business units,
- affiliated companies and sales offices of Seiko Instruments Inc.
- \* For overseas sites, this report covers production sites which have obtained ISO 14001 certification.
- <Main Changes to the Scope of This Report from Previous Version>

  Due to a sales transfer, the optical fiber
- components business isn't covered in this report.
- The operation of the Narashino Unit was transferred to the Takatsuka Unit.

### Period Covered by This Report

This report covers activities and results from March 2005 through February 2006, and also includes information about prior activities and our future prospects.

### Contact Us at

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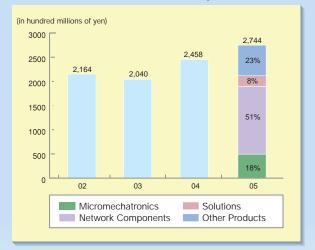


### **Corporate Data**

Corporate name	Seiko Instruments Inc.
Established:	September 7, 1937
Paid-in capital	4,750 million yen
Fiscal year end	End of February
Products:	[Micromechatronics]
	Watches, watch movements, ultrasonic
	motors, HDD components, machine
	tools
	[Network Components]
	CMOS ICs, LCD modules,
	microbatteries, quartz crystals
	[Solutions]
	Order entry systems, data
	communication devices, wireless
	payment system, electronic dictionaries
	[Other Products]
	Compact thermal printers, large format
	printers/plotters, inkjet printer heads,
	analytical and measuring instruments,
	network communication devices, time
	authentication services
Annual sales:	190,800 million yen (FY2005 nonconsolidated);
	274,400 million yen (FY2005 consolidated)
Number of Empl	ovees: 2,796 (nonconsolidated)

14,841 (consolidated)

Consolidated sales for the last four years:



FY2003 refers to 11 months from April to February because SII has implemented an annual accounting systems ending in February.

# Message



Masafumi Shimbo, President

### Evolving corporate policy in response to a rapidly changing environment

The world is changing more rapidly than ever. Expanding Asian economies and accelerating manufacturing in Brazil, Russia, India, and China have increased worldwide energy consumption. Environmental issues, including global warming, are becoming more and more serious year after year. In Japan, the business performance of manufacturers, lead by the automotive and electricaldevice industries, is recovering. The Japanese economy is currently expanding at rates exceeding those of the 1980s bubble-economy years. At the same time, significant business and quality scandals have emerged drawing public attention to companies that unduly focused on immediate gain without considering the impact on society. In order to achieve a sustainable society that provides peace of mind as well as material abundance, we need to pursue our business activities while emphasizing actions that improve the global environment, respect human dignity and coexistent with society.

### Striving for a sustainable society through products and services based on SII's strengths

In addition to reducing the environmental impact of our business activities, we proactively strive to develop products and businesses that support and advance protection of the global environment. These products and services are based on SII's established craftsmanship, micromechatronics, and energy saving know-how. In other words, our highprecision, compact, and low-energy consumption

## **Creating Time - Optimizing Time -Enriching Time**

### technologies. These SII technologies were accumulated through decades of watch manufacturing experience.

For example, eliminating mercury from silver-oxide batteries posed major technological challenges in the past. SII's long years of research coupled with our high-precision machining technologies successfully achieved silver-oxide battery products that are completely lead and mercury free. SII's SEA series of X-ray fluorescence analysis equipment allows rapid, easy detection of hazardous chemical substances that occur in raw materials, soil, electrical and electronic devices, and other products. This series of products supports environmental pollution research and testing including compliance with EU RoHS directives, implemented from July 2006 to restrict the use of hazardous substances. In addition, SII develops products like our ultra-lowvoltage charge-pump ICs that utilize weak energy sources present in daily life, including body heat and sunlight. We are also developing compact, highoutput, passive fuel cells that may eventually serve as power sources for mobile devices. At the same time, we also offer consulting and other services related to environmental analysis and soil pollution cleanup. Based on our strengths, SII strives to support protection of the global environment through our products and services.

### Integrity, Trust, and Appreciation: Our universal values that support SII's business

In order to realize a sustainable society, a company needs to protect the environment while achieving its social responsibilities, including social and economic

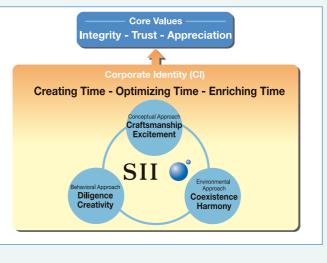
performance. SII's business initiatives are based on our core values: Integrity, Trust, and Appreciation. These core values express our commitment to undertaking our work with integrity, respecting the relationship of trust with society and our customers, and our appreciation and gratitude toward our stakeholders. These principles are the universal values that support our business initiatives. SII's capacity to truly act in accordance with these principles depends on the level of awareness and actions of each of our employees. Each employee serves as our ambassador to society and to our individual clients. This means that all of us need to behave and act in ways that embody SII's core values of Integrity, Trust, and Appreciation. To achieve this, SII has established the SII Group Charter of Corporate Behavior, which represents our commitment to society and to our stakeholders, and the SII Code of Conduct, which represents the norms all employees are expected to meet. Together, they are the foundation of our efforts to implement comprehensive training and compliance for all

### SII Core Values and Corporate Identity

### **CV** Integrity - Trust - Appreciation

We approach all our business activities with integrity, fostering the trust of our customers and society, with a sense of appreciation towards all stakeholders.

**Cl** Creating Time - Optimizing Time - Enriching Time By continuing our pursuit of production efficiency, we help people create time; by developing electronic devices and network devices, we help people optimize their time; and by creating new values, we help people enrich their time.



employees and members of management, both in Japan and overseas, including temporary employees. Based on our solid watch making technological foundations, SII will continuously strive to achieve a sustainable society by proactively fulfilling its social responsibilities.

We welcome your comments and suggestions

We hope that you will find this year's report to be of interest. SII is dedicated to the continuous improvement of our environmental activity and social responsibility. As a company, and as individuals, we will work harder than ever to earn society's trust. We definitely appreciate your continuing cooperation and support, and welcome any comments and suggestions that you may have.

Seiko Instruments Inc.

Masafumi Shimbo Marafumi Shimbo

#### **Conceptual Approach** Craftsmanship - Excitement

By creating new values through a craftsmanship comprising inimitably meticulous skills and techniques, we cherish the sense of excitement gained from delivering these values to our customers.

### Behavioral Approach Diligence - Creativity To reach lofty ideals and goals, we must strive

with diligence for the creation of new values that are innovative enough to be ahead of the times.

### **Environmental Approach** Coexistence - Harmony

As a good corporate citizen, we must seek a constructive coexistence within the international and local communities that are in harmony with the global environment.



### The Dream Project: "Encouraging an inspiring culture"

In July 2005, SII began conducting the Dream Project "Encouraging an Inspiring Culture". The concept of this project is to develop a corporate culture in which employees can openly discuss their dreams and ideas, and these ideas can be refined and conducted without regard to the boundaries between sections. This companywide project enables SII to empower employees. The project team consists of 18 members recruited from throughout the company and headquarters staff support the team. The measures prepared by these team members in the first half of the fiscal 2006 have been approved by the company and are ready to shift to the implementation phase. SII is now ready to make further strides as a result of these measures for enlivening the company, created by the employees themselves.

### Establishment of the SII Group Charter of Corporate Behavior

### Shizukuishi Watch Studio was awarded 2005 Nikkei Monozukuri Award Grand Prize

In November 2005, the Shizukuishi Watch Studio received the 2005 Nikkei Monozukuri Award grand prize, one of Japan's highest craftsmanship awards. The Shizukuishi Watch Studio's approach of focusing on Japanese manufacturing technologies and attempting to pass on and further improve the traditions of Japanese watchmaking technologies has once more earned acclaim. (p. 15)



### Development of Mercury-free Silver-oxide Battery

In August 2005, SII Micro Parts Ltd. (SMP), which develops, manufactures, and sells electronic components including batteries and capacitors, developed a mercury-free silver-oxide battery that uses no mercury or lead. Used primarily to power wristwatches, silver-oxide batteries use silver-oxide cathodes, zinc anodes, and an alkali solution as an electrolyte. The zinc, which acts as the anode, is corroded in the alkali solution, forming a local cell between the zinc and the collector with which it comes into contact. As the zinc is consumed and hydrogen gas is generated, results can include swelling of the battery and leakage of fluid. Traditionally, mercury and lead have been added to these batteries in very small quantities, to prevent corrosion of the zinc.

This mercury-free silver-oxide battery developed by SMP applies SMP's unique precision machining technologies to process the surface of the anode collector with high precision, achieving a level of performance at least equal to that of traditional silver-oxide batteries without using mercury or lead to prevent corrosion of the zinc. In particular, it has successfully achieved major improvements in preventing leakage and in low temperature performance. Eliminating the use of mercury and lead in batteries may also reduce impact on the environment. In October 2005 a new plant building adopting the latest equipment was completed at SMP's headquarters in Sendai. At this facility, SMP manufactures high-quality mercury-free silveroxide batteries, keeping variations in quality to a minimum.



### Seiko Instruments Singapore Pte. Ltd. Celebrated its 30th Anniversary

In March 2006, Seiko Instruments Singapore Pte. Ltd. (SIS) celebrated the 30th anniversary of its founding. SIS officially began operation in 1976 as the first overseas production base for watch movements for the SII Group. Since then, SIS has continued its development as an overseas production facility representing the SII Group. In commemoration, SIS held an anniversary ceremony and invited a number of honorable guests including Singapore's Minister Mentor Lee Kuan Yew. Experimental wristwatch for communicating with Bluetooth<sup>™</sup> mobile phones developed

In March 2006, SII developed an experimental wristwatch using the BT Watch standard for communication via Bluetooth<sup>TM, 1</sup> a technology enabling short-range wireless communication between a watch and a mobile phone. This has made it possible to simulate communication between this experimental watch and existing mobile phones with Bluetooth<sup>™</sup>. using the BT Watch standard established in December 2005 by the Mobile Computing Promotion Consortium (MCPC).<sup>2</sup> This has achieved practical implementation of watch features for notifying the wearer of the receipt of voice and text messages as well as the sender and subject of each text message, using the serial port profile (SPP) because the watch does not support the existing hands-free profile (HFP). By using the watch together with a mobile phone, this experimental watch makes it possible to try out the BT Watch standard in real-life situations such as on board trains and in meetings. At the same time, it promises to enable the synergistic creation of ideas on matters such as new functions and new uses, through experimental use in daily life. This watch includes the basic features envisioned under the BT Watch standard, such as using vibration and sound to notify the wearer of the receipt of voice and text messages by the mobile phone, helping the wearer avoid leaving his or her mobile phone behind, and synchronization of time settings. Based on information obtained using this experimental watch, SII will continue to improve the communication procedures as well as developing and preparing attractive applications for commercial release.



\*1 Bluetooth<sup>™</sup> is the registered trademark of Bluetooth SIG, Inc. \*2 Mobile Computing Promotion Consortium (MCPC) consists of members from communication careers, computer hardware and software manufacturers, and media organizations. In order to enhance and expand the mobile computing system market, this consortium conducts technical and operational issue researches, improvement and joint researches of the issues and awareness promotions.

### -

### Release of the Dr. VOICE neo Multi-Listening Player for Language Learning

In April 2005, SII released the Dr. VOICE neo multi-listening player for language learning, featuring educational texts, audio playback (in MP3 format), and electronic dictionary functions in a single compact body. Focused on listening for language acquisition, Dr. VOICE neo is a versatile audio player with a built-in electronic dictionary, with exchangeable learning content available on SD-format SILUCA blue cards. A single Dr. VOICE neo can be used for all aspects of learning-based listening, making it possible for users to learn effectively at any time and in any place. Available cards feature content such as preparatory materials for the TOEIC<sup>®</sup> exam and for the listening-comprehension sections of the college entrance exams in Japan, as well as conversational English lessons. The user can choose the content and levels best-suited to his or her own needs. In addition, since it can play MP3 audio files the Dr. VOICE neo is useful not just for learning but for entertainment as well.



### Ratio of SII's Green Product Creation Reached 73.2%

In the fiscal 2005, SII Green Products rate to total sales reached 73.2%, surpassing the target ratio of 70%. Consumer products such as data communication cards and electronic components such as semiconductors and quartz crystals had high achievement ratios. We also advanced our efforts in this field by adding hard-disk components to the certification category of green products. (p. 37)

### Management of the SII Group

### Corporate Governance

In order to meet the expectations of our stakeholders, it is important not just to strengthen competitiveness in terms of improving profits, but also to monitor management. In recent years, more and more significance is being placed on corporate governance, aimed at achieving such a monitoring function.

### Basic Corporate Governance Policies

The basic policies of SII's corporate governance are to develop an organizational structure and mechanisms to ensure transparency and fairness in our management, and to strive for increased corporate value, while implementing necessary policy measures and securing the understanding of our stakeholders.

### Corporate Governance System **Corporate Organization**

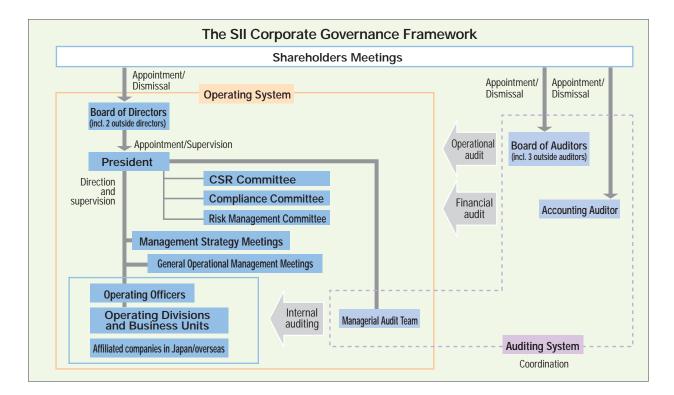
Our board of directors, consisting of six members, supervises management and makes important business decisions for the SII Group based on advice by outside board members and outside auditors. The board of auditors consists of four members and conducts regular audits. In order to ensure efficient audits, the auditors review the audit results and exchange opinions and information.

### Internal Control System Enhancement

We are continuously striving to improve our internal control system in order to ensure thorough compliance and reliability of financial reporting, along with effective and efficient operations with risk assessment. In order to enhance our operation systems, management and business issues are regularly reviewed at the Management Strategy

Meetings. Important issues are reviewed at the Management Strategy Meetings, and the final decisions are approved by the Board of Directors. In 1999, SII's management and operation systems were separated in order to enhance the supervisory power of the Board of Directors, and operating officers were appointed. In addition, business unit structure was introduced, consolidating and simplifying many different business operations. Decision-making authority was delegated to the business unit presidents. This system promotes prompt decision-making and more efficient operation. Within the SII Group, the Managerial Audit Team conducts regular internal audits of the operating divisions and affiliated companies in Japan and abroad, and provides advice for further operational improvement.

The audits monitor our internal control system based on the audit policy and audit plans established by the Board of Auditors. In order to achieve this, auditors attend important meetings including the Board of Directors and the Management Strategy Meetings, assess their performance. The full-time auditors supervise board members performance. They hold monthly meetings with the President to discuss the operation status, and regular meetings with the operating divisions. Currently, three of our four auditors are outside auditors. This system enables objective audits.



## SII Group's CSR(Corporate Social Responsibility)

Appreciation," which demonstrate our basic stance on our relationships with society and our stakeholders.

### Core Values & Corporate Social Responsibility

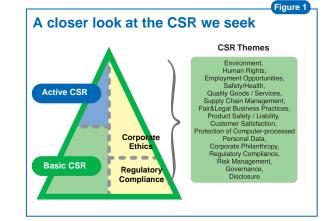
We work with integrity no matter what the job; we respect the relationships of trust we have with society and our stakeholders, as well as we value the feelings of appreciation we have toward every one of our stakeholders. These core values form the fundamental approach we adopt in conducting our business activities, and also form the fundamental perspective we have on SII's CSR. By fulfilling our CSR, we hope to be a company that continues to be needed and trusted by society and our stakeholders, even as the times around us change.

### SII's Sense of Corporate Social Responsibility

CSR is typically said to be the responsibility that companies have toward the economy, society and environment as they try to expand their business. We believe that CSR is to value the harmony between society and a company, while aspiring for the sustainable development of both. We believe that it is basically to create an economic profit for society, together with complying with the law and striving for ethically correct conduct. After that, it is the creation and provision of new value, through products and services, for stakeholders, including customers, employees and shareholders, and for society at large. In specific terms, we believe that CSR includes improvements of product reliability, and a quality service structure; a comfortable workplace; a fair performance evaluation; and a reduction in environmental impact. We are striving to achieve the CSR as a good corporate citizen, namely, a member of society.

### Basic CSR and Active CSR

We recognize CSR from two viewpoints: basic CSR and active CSR (Figure 1). Basic CSR is the responsibility that should form the very basis of a



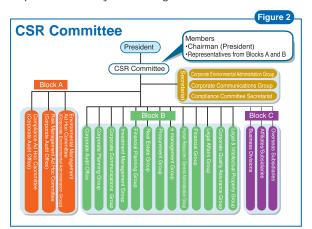
## The SII Group's Corporate Social Responsibility (CSR) is at the very root of our core values, "Integrity, Trust and

company - the responsibility of keeping order and earning trust in a fair manner, through the protection of those things prescribed by law, and through taking actions that are consistent with corporate ethics. Active CSR is not the compliance with law or any such obligation; rather it is the active provision of meaningful value to stakeholders, and the enhancing of satisfaction for each and every stakeholder. We have strived to ensure corporate fairness and trustworthiness by establishing the Compliance Committee and the Risk Management Committee. From now on, our efforts will cover a broader range, covering active CSR in addition to basic CSR, and we aim to enhance the brand image and the corporate value of SII.

### • Activities of the CSR Committee

In January 2005, SII established the CSR Committee to promote company-wide CSR activities. With the President serving as the committee chairman, the CSR Committee comprises representatives from all the operational departments and divisions at our head office. It is structured to implement measures across the whole company under the committee authorization (Figure 2).

The Committee takes initiative on comprehensive and efficient promotion of the CSR with the Compliance Committee, the Risk Management Committee and the environmental management system. In 2005, the Committee reviewed our CSR status and selected 20 new themes to improve. These themes are selected from the fields of corporate governance, compliance, information disclosure, employment, human rights, and social contributions. In addressing these themes, the responsible divisions prepare target values and plans, and the CSR Committee ensures the implementation by monitoring the status.



### SII Group Charter of Corporate Behavior Establishment

In October 2005, we established the SII Group Charter of Corporate Behavior. By clearly demonstrating that social responsibility is a key part of our corporate behavior, this Charter aims to strengthen our stakeholders confidence and a shared commitment to social responsibility among our employees.

This Charter consists of "Core Values", "Offering to Stakeholders and Society" and "Commitments to Stakeholders and Society" based on the SII Core Values and CI, and expresses our determination to incorporate a strong sense of social responsibility into management. The SII Code of Conduct was revised in accordance with this Charter.

### SII Group Charter of Corporate Behavior

The SII group is committed to conducting its affairs ethically and lawfully. This Charter of Corporate Behavior establishes policies and procedures that are intended to secure our position as an entity concerned not merely with pursuing profits but also striving to be a needed and trusted part of society in perpetuity. The SII group is committed to providing value to all stakeholders, as well as society at large, desiring to fulfill its commitments and contribute to the creation of a more sustainable society.

#### <Core Values> Integrity - Trust - Appreciation

We approach all our business activities with integrity, fostering the trust of our customers and society, with a sense of appreciation towards all stakeholders.

#### <Offering to Stakeholders and Society>

Based on our mission and corporate identity "Creating Time - Optimizing Time - Enriching Time," we are committed to creating new value and producing safe, socially useful and high quality products and services through our conceptual approach "Craftsmanship and Excitement" and behavioral approach "Diligence and Creativity," while seeking a constructive relationship with society and nature in accordance with our environmental approach of "Coexistence and Harmony."

#### <Commitments to Stakeholders and Society>

#### Approaching corporate activities with integrity

In conducting our corporate activities with integrity, we comply with all applicable laws and regulations and record/report information accurately and honestly.

• We maintain a sound relationship with governmental and administrative authorities and take a stringent, resolute posture against antisocial forces that pose a threat to our social order or security.

#### Respecting human rights

- We respect the human rights of all employees and keep working conditions comfortable and safe. We facilitate and support the advancement and growth of every employee and accord all employees the respect they deserve as individuals
- · We respect the human rights and individuality of all stakeholders in our business activities.

### Creating harmony with the environment

• In recognition of the fact that environmental issues impact everyone in common, we will focus strongly on resolving such issues independently, so as not to place a burden on the public.

#### Establishing a constructive coexistence with society

- We communicate with society and promote disclosure of company information to become a more open enterprise.
- · As a good corporate citizen, we extensively engage in philanthropic activities.
- Through our business activities on the world stage, we advance corporate management that contributes to the further development of each country pursuant to this Charter.

### Compliance

We believe that doing business in accordance with laws, regulations and rules, as well as social common sense and commercial ethics as corporate citizens and members of society, and implementing compliance activities are linked to improving a company's collective strength, and will lead to a stable and sustainable development of the company.

### • Activities of the Compliance Committee

In order to promote compliance activities within the SII Group, we established the Compliance Committee in 2001 and conduct various education, training and awareness-raising activities.

### • Revision of the SII Code of Conduct

In 2001, we established the SII Code of Conduct as a common standard with which all directors and employees who are engaged in corporate activities in the SII Group are expected to comply.

We reviewed the overall contents of the SII Code of Conduct and revised it on April 1, 2006, in order to make the Code responsive to the Core Values and CI established in 2004, the SII Group Charter of Corporate Behavior established in 2005 and international standards. The revised SII Code of Conduct defines the basic requirements to follow the SII Group Charter of Corporate Behavior and to fulfill the commitments to society and stakeholders. Since the Code was revised in response to international standards, we prepared English and Chinese versions to apply them to the overseas affiliated companies.

### Privacy Protection

We believe that the appropriate protection of personal information is one of our social responsibilities. Since the establishment of our Personal Information Protection Policy, we have been promoting efforts to protect the privacy of personal information. In response to the full enforcement of the Private Information Protection Law from April 1, 2005, we are striving to enhance our private information management system by reviewing and improving our internal regulations and manuals.

#### **Compliance Education**

We actively conduct education programs to enhance our staff's awareness of compliance and to prevent any violation of laws or regulations.

#### General Compliance Education

In order to enhance awareness of compliance, we regularly conduct a compliance guiz for all board members and employees. The guiz covers the SII Code of Conduct, internal rules for security control and personal information management, and other such topics.

#### Personal Information Protection Training

In order to ensure proper personal information management, we hold education programs at each business unit. We also send alerts to prevent the theft or loss of personal information.

### Export Control Training

Export control seminars are held regularly for each operating divisions. These seminars aim to increase awareness and understanding of the importance of export control and the basics of the relevant laws, regulations and company rules, and to ensure that exports are properly controlled in each division and affiliated company.

### Risk Management

We are striving to enhance our risk management system and minimize various corporate risks to achieve a sound business.

### Risk Management System

In order to enhance our risk management system, we established the Risk Management Committee which aims to raise awareness of risk management and to strengthen the risk management system. The Risk Management Committee analyzes and assesses a wide range of risks including serious disasters, product liability, serious quality problems, corporate crimes, information system risks, and environmental risks associated with the business activities of the SII Group. Based on these analyses, this Committee studies and implements risk reduction and prevention measures



### Compliance Consultation Service

Our employees can consult with our compliance consultation service anytime if they detect any violation of laws or rules in the company or suspicious actions of their colleagues.

In addition, we developed internal rules and the helpline by outside lawyers in response to the newly established Whistleblower Protection Act on April 1, 2006



SII's Advice Request form

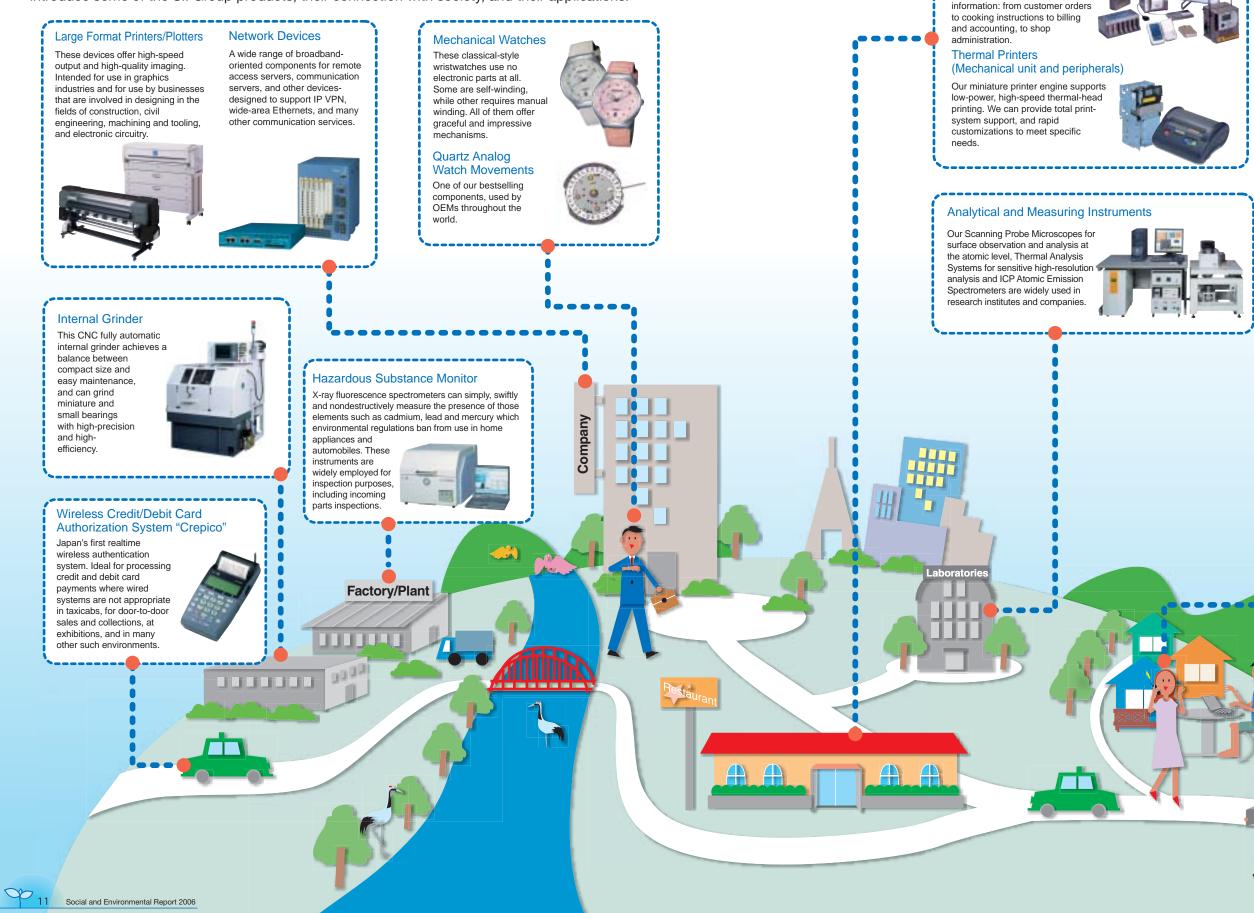
### "10-Minute Rule & 2-Hour Rule"

In case of an emergency, the "10-Minute Rule & 2-Hour Rule" promotes rapid communication between employees and top-level management. This rule requires that any event with potential corporate risk must be notified to the President within ten minutes if it occurs in the head office, or within two hours if it occurs outside the head office. This rule doesn't specify any communication procedure or pre-screenings in the division, since we believe that prompt communication to the top management will minimize the risk. The President has agreed not to apply any blame for any report that is later found to have been in vain. This rule promotes efficient risk management and also creates an open corporate culture with prompt action.

### **SII Group Products Overview**

950

SII Group products appear in many places and at many levels throughout our society. They are used by individuals, and also used in restaurants, taxis, offices, laboratories, and factories. We also manufacture parts that serve as key components in a wide range of goods. Here we introduce some of the SII Group products, their connection with society, and their applications.





**Order Entry System** 

management of all relevant

implements integrated

This popular, widely used system

### LCD Modules, CMOS ICs, Microbatteries, and Quartz Crystal Units

We manufacture key components for mobile phones, digital cameras, and many other devices.

We offer a variety of

devices to support

mobile computing.

Cards are available in

PC, CF, and SD card

communications

sizes.

#### **Data Communications Devices**



Group Products Op

### **HDD** Components

The high-precision processing technologies that we pioneered as a watch manufacturer have also been adopted to the production of components for hard disk drivers. Our fluid dynamic bearings

(FDBs) significantly enhance HDD performance and are in use throughout the world.



### **Electronic Dictionaries**

Available features include Japanese dictionary, English dictionary, Japanese-English dictionary, English-Japanese dictionary, Japanese character dictionary, and more. The device is easy to use, and words are easy to find. We offer a variety of models, some of which provide many

dictionary types, and others intended for more specialized usage



### Making the Future by "SYO" ism

## Highlights

# Craftsmanship, Micromechatronics, and Energy Management

[匠 JTakumi - merging fine craftsmanship and technology to create new value. [小]Micromechatronics - excellence in the creation of minute precision technology. [省] Energy Management - energy management products and production technology. Based on these core competencies, SII is committed to creating new values that contribute to society, using the theme "SYO"ism.

### **Microreactors**

Microreactor technology is used to analyze and examine gases and fluids flowing through tiny chips installed on a palm-sized device also fitted with channels for flowing the substances to be examined, along with sensors, valves, chemical reactors, and other components. Using a microreactor enables high-speed analysis of tiny samples such as a drop of liquid, with less quantity of chemicals

Achieving such technology requires controlling the fluids that flow through the tiny channels with high precision.

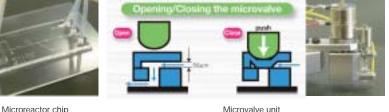
SII conducts development to achieve miniaturization and energy conservation for components such as valves for controlling the flow of



microreactor at extremely low speeds. Combination of micro-electro-mechanical system (MEMS) technologies and the mechanical-design and energy-conservation technologies gained from manufacturing wristwatches takes advantage in these developments.

fluids inside microreactors with high levels of precision

and pumps used to propel fluids through the

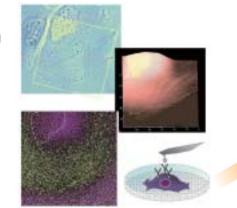


### **Functional Nanoprobe**

As part of fundamental technology research and promotion projects, the New Energy and Industrial Technology Development Organization (NEDO), an independent administrative agency, signed a contract with SII to conduct research into a nano-mapping system for physical and biological information (functional nanoprobe). Development of a new functional nanoprobe based on scanning probe

microscope (SPM) technology will make it possible to provide revolutionary observation and evaluation technologies to the biosciences field and to develop sensing technology for molecular recognition using functional nanoprobe technology, through probe arraying and integration techniques. An example of sought-after applications is observation and functional analysis at the cellular level. A goal of such applications is the replacement of toxicity studies, which have so far relied on animal testing, with

analysis and assessment conducted at the cellular level. Development of such technologies has led to advancement of SPM technologies not just to support research but as a technology utilized widely in industry as well. We are striving to make substantial contributions to society by improving the level of technologies as part of projects based on public funds.



Biological SPM provides a wide range of information unavailable using optical microscopes.



An example of a probe used for observation within fluid. This technology is characterized by a delicate chip structure with a high aspect ratio.

### Ultra-high-density Data Storage Heads using Near-Field Light

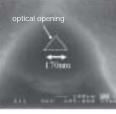
Near-field light refers to a special kind of light that is diffused only within a tiny space smaller than the wavelength of light. Using near-field light opens up the possibility of achieving ultra-high-density recording equipment not possible using ordinary light. Using ultrahigh-density recording technologies can expand the capacity of existing storage media by factors of ten and lead to major advances in reducing the size, weight, and energy consumption of storage devices. SII has the technology to prepare ultrasmall optical openings and generate near-field light, using nano-level machining technologies. These technologies were built up in the process of developing probe microscopes. At present, we are developing near-field light heads with elements for generating near-field light, using these on the head assemblies of today's magnetic storage devices.

### **Development of Miniature Production Systems**

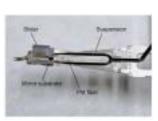
SII produces a number of small, precision components, such as watch components and hard-disk components. To improve the production efficiency, SII develops more advanced, high-performance miniature production systems based on the idea that small components be produced on small equipment. One of these efforts is the ultra-high-precision miniature milling cutter. With a compact vertical shape only 0.5 meters wide by 1.5 meters deep and 1.5 meters high, this machine tool significantly reduces space, energy, and labor than previous equipment while also reducing costs. It has been designed in a way that takes environmental impact into consideration. In addition, by using technologies such as hydrostatic bearings, one of our core technologies, these development efforts seek to develop a machine that can improve quality levels as well. This small machine densely combines new ideas with the

### **R&D** Representative Office established in Singapore

In April 2006, SII established a research and development representative office in Singapore. The office's primarily goal is to pursue joint research with national research institutes under the jurisdiction of Singapore's Agency for Science, Technology and Research. SII expects this organization to contribute to progress in science and technology in Singapore, as well as lead to new SII products in the future. The new research and development office has already concluded three-year basic agreements for joint research with the Data Storage Institute in the area of future fundamental storage technologies and with the Institute of High Performance Computing to improve development efficiency using CAE. In the future, the office plans to promote joint development, including projects in



Results of preparing an optica opening that can localize near field light on the edge of the opening (electron-microscope image)



Highlights

An assembly featuring a near-field light head mounted on a suspension arm and connected to a thin light inducer using fiber optics

craftsmanship SII has built up over the years. SII is making progress step-by-step toward our dream: to produce a single room of a small urban factory, using nanometric ultra-high-precision machine tools, high-

productivity machine tools, and ultra-high-speed miniature assembly equipment, what previously could be produced only in large-scale plants.



Ultra-high-precision miniature milling cutte

partnership with the Singapore Institute of Manufacturing Technology for production process innovation, and with the Institute of Microelectronics for next-generation packaging and sensor technologies. The joint-research activities will be expanded to the field of biotechnology. With the ultimate goal of new business and products creation, SII accelerates its planning and promotion of the concepts on next-generation technologies and improving the efficiency and pace of development itself through public and private partnerships conducted on a global basis. Furthermore, we will strive to enhance our technological development capability by promoting joint research, developing R&D personnel on a global basis, hiring local engineers, understanding technical trends and market needs around the world.

## Highlights

# **A World-class Luxury Mechanical Watch Studio**



SII's wristwatch production facility in Japan, Morioka Seiko Instruments, operates the Shizukuishi Watch Studio, which produces luxury mechanical wristwatches. The concept behind this Shizukuishi Watch Studio is the fusion of history and tradition with advanced technologies and craftsmanship. This Studio strives to be the best watch studio producing specialized luxury mechanical wristwatches in the world.

Achieving Delicate, Lustrous Engraving Engraver, Parts Studio Kiyoshi Terui

> 'Hand of God' holds Ke Watch Adjuster, Assembly Studio Akira Ohira



he Moment a Watch is Brougt to Life Watch Assembler, Assembly Studio Mamoru Sakurada

### Fully-integrated Production by Hand

The Shizukuishi Watch Studio is the only luxury mechanical watch studio in Japan that integrates all aspects of watch production from component manufacture through final assembly - all conducted by hand

### **Certified Watch Technicians with Superior Skills**

The Shizukuishi Watch Studio is staffed by a number of certified watch technicians such as watch assembler Mamoru Sakurada, who has been certified as a master craftsman, engraver Kiyoshi Terui, and watch adjuster Akira Ohira, who boasts a very high skill level. These professionals build watches by hand, one by one.

Among mechanical wristwatches, those with a thin movement (driving apparatus) are the most difficult to make, since the slightest deviation in components or their placement could cause the watch not to function correctly. Assembling such watches requires a high level of skill. Watch assembler Mamoru Sakurada can assemble a watch with an ultrathin 1.98-mm movement by hand with precision, while making sure the gears mesh perfectly and adjusting components in units of 1/100 mm. He has been acclaimed as the industry's leading assembler in his field. In addition, in the spring of 2005 he received one of the Japan's highest medals of honor for craftsmanship last year.

### **Studio Tour**

The Shizukuishi Watch Studio also has a tour in which quests can view watchmaking processes from components to final assembly up close. Since the facility opened in September 2004, this tour has been very popular and more than 2,000 guests have toured the studio.

### The Shizukuishi Watch Studio Developed a 12-beat Movement for Mechanical Wristwatches

Seeking to improve the precision of mechanical wristwatches, the Shizukuishi Watch Studio developed a 12-beat movement that achieved the world's highest frequency in a movement for practical watch use: 12 oscillations/second (43200 oscillations/hour). Mechanical wristwatches, which are powered by springs, function with greater stability and higher precision as their frequency increases. This is because the higher the frequency of the balance, the more difficult it is for the watch to be affected by disturbances (external vibrations and shocks). On the other hand, the higher the frequency (the less affected by disturbances), the shorter the operating time of the movement.

The new 12-beat movement has the same amount of operating time, which is more than 40 hours, as the 8-



A mechanical wristwatch using the 12-beat movement

### Passing on Skills: the Iwate Mechanical Watchmaker Skills Assessment System

In May 2006, Morioka Seiko Instruments, which operates the Shizukuishi Watch Studio, established the regional mechanical watchmaker skills assessment system. This system is intended to spread and improve watchmaking skills and to pass them on to future generations.

Although Japan has a national watch-repair technician certification system, it covers mostly analog quartz watches. The Iwate mechanical watchmaker skills assessment system is intended to function as the highest-level technical assessment system for those seeking to be mechanical watch technicians, by

### Shizukuishi Watch Studio Awarded the Nikkei Monozukuri Award Grand Prize (2005)

In November 2005, the Shizukuishi Watch Studio received second Nikkei Monozukuri Award grand prize, one of Japan's hig craftsmanship awards. This award is presented to business faci in Japan and overseas that adopt the latest technologies and s for creative manufacturing with strong sense of craftsman Document screening and on-site observation were held, and 11 contestants were awarded.

The Shizukuishi Watch Studio received this award in recognition approach of focusing on Japanese manufacturing technologies attempting to pass on and further improve traditional Japan watchmaking technologies.

beat movement most commonly used in highprecision, luxury mechanical wristwatches today. SII's high-level skills and technologies made development of this 12-beat movement possible.

#### Manufacturing Springs and Hairsprings In-house

SII's strength in manufacturing enables the springs and hairsprings that serve as key parts of mechanical wristwatches to be made in-house. Only high-precision parts are used for this movement. Springs are difficult to produce through mass production, so our craftspeople make them by hand.

### **Processing Escapement Wheels with Oil**

Numerous microscopic peaks are created on the special electrolytic plating that covers the surface of the escapement wheel. This makes it difficult for parts to come into direct contact with one another, as oil accumulates in the spaces between these peaks. (Contact surfaces are always lubricated.) This increases the resistance to friction of the escapement and the speed regulator, which operate at high speeds. These function just like oilless bearings.

### **Developing Measurement Devices In-house**

Since this movement operates at much higher frequency than other movements, the precision of its frequency cycles cannot be measured using ordinary measurement devices. SII developed its own specialized precision measurement equipment.

focusing assessment on matters related to mechanical watches. This assessment system has been certified as an official skills assessment certification system by Iwate Prefecture.

The test consists of three levels, and are available to anyone. Candidates must pass tests on watch disassembly and cleaning, precision adjustments, band adjustment, and other practical skills, as well as a written knowledge test.

This system helps to spread and improve mechanicalwatch skills and techniques built up over time and to pass them on to future generations.

	Studio Overview
d the ghest cilities strive nship. of 41 of its	Structure Structure: primary processing, subassembly, movement/final assembly, adjustment/inspection, packing/shipping The desks and cabinets used by watch technicians for assembly operations are made-to-order Iwayado Tansu, a traditional type of furniture specific to Iwate and recognized by the Ministry of Economy, Trade and Industry as a traditional handicraft. Floor area: approx. 1,000 square meters Studio employees: 60 Shizukuishi Watch Studio homepage: http://www.shizukuishi- watch.com/eng/
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anese	

## Highlights

# Seeking to Provide Convenient **Products and Services**

Making the Dictionary Easier to Use

Fourteen years have passed since SII's 1992 introduction of the first full-content electronic dictionary in Japan, the TR-700, which contained nearly the full contents of Kenkyusha's New College English-Japanese Dictionary and New College Japanese-English Dictionary. Over this period, use of electronic dictionaries spread widely throughout Japan, as they have been acclaimed for their portability and for enabling users to look up words quickly. Today they are actively utilized in high schools, colleges, and other educational institutions, and have developed a presence as essential tools for education, business, and a wide scope of other activities.

As a pioneer of electronic dictionaries, SII is working to create electronic dictionaries that enable a more convenient society.



While an electronic dictionary is composed of delicate electronic components, it is also a product that the user carries around with him or her every day. While ensuring strength, lightness, and quality, we also take portability into consideration when designing an electronic dictionary. Beginning with the models introduced in 2005 (the SR-V, E, MV, MK, and U series), we have used the latest magnesium alloys and high-strength aluminum alloys, analyzed everything from internal design to the characteristics of the materials used, and protected the LCD panels inside strong, lightweight cases. This enabled us to reduce damage to LCD panels by at least 60% from previous levels. Taking into consideration the environmental impact of manufacturing LCD panels, I think one could say that improving product quality decreases the burden on the environment. As a designer, I hope people would feel that they can rely on SII to produce reliable products in the future as well.



More Comfortable and Easier to Use

As a pioneer maker of electronic

dictionaries, for approximately 20

are more comfortable and easier to

years, SII has been striving to produce electronic dictionaries that

use. Our dictionaries support

reading, writing, and speaking

use: the PC-like, full-fledged

improvement through a complete

focus on smoothness and ease of

keyboard exclusive to SII that makes

input as smooth as when typing on a

search functions such as text-string

dictionaries simultaneously, a native-

speaker voice feature for checking

the correct pronunciation of words,

easy to see the screen in dark

SII designs all our electronic

dictionaries based on consistent guality standards, while continually making improvements to reflect its

accumulation of design experience

over the years as well as changes in

environments. Our current products come in optimal forms for use as

strong, lightweight portable devices. SII takes advantage of our manufacturing technologies and high

user demographics and usage

standards in these products.

locations.

meeting rooms or other poorly lit

and a backlight feature that makes it

**Reliable Quality Electronic Dictionaries** 

searching and searching multiple

personal computer, full-featured

Yuhei Akatsuka, CP Engineering Section

# **Electronic** Dictionaries

# **High and High School Student**

We actively support the use of electronic dictionaries a contest in which current junior high and high school students use dictionaries to translate the lyrics of western pop songs into Japanese, incorporating their own sensitivities. Prizes are given for superior entries. Following the first contest in 2004, eligibility was extended to junior high students last year, and over 23,000 entries were submitted from across Japan. was impressed to see how the students looked up the meanings of English words and wrote their Japanese translations so seriously" and "studying would be fun if we had activities like this in class every day." In this way, the contest successfully provided the enjoyment of the English language study, translation, and western music to junior- and senior-high students. We will continuously strive to make contributions to



## Being a Good Corporate Citizen

The SII Group conducts a range of activities to provide true benefits to society and to continue developing as a good corporate citizen. We report on our approach to sociability and related challenges.

### Providing Reliable Products and Services

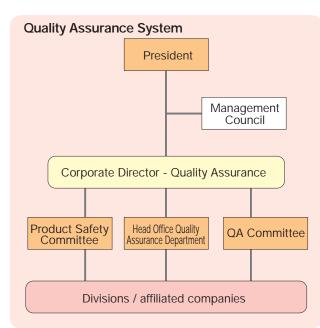
The SII Group provides our customers in both Japan and abroad with a wide range of merchandise from products for consumer use, including watches and electronic dictionaries, to analysis and measuring equipment and IT terminals. We are striving to ensure customer satisfaction by providing products and to contribute to customer's value creation.

### Quality Assurance Activities

"To provide Q (Quality), C (Cost), D (Delivery Period) and S (Product Safety and Services) that create customer value" is our basic quality policy.

SII Group's corporate director of quality assurance is responsible on deploying this policy to the operating divisions and affiliated companies. Then, they establish their quality policy and targets and conduct quality assurance activities.

Our sites and operating divisions in Japan and abroad have obtained ISO 9001 certification, the international standard for quality management systems. In order to improve customer satisfaction, we deploy the basic quality policy based on the continuous improvement, which is the quality management framework, while incorporating customers' opinions.



### Product Safety

Our basic concept for product safety is "to enhance customers' confidence by always providing them with safe products and services" in accordance with all SII Group Product Liability/Product Safety Policy. In order to ensure customer safety we established the Product Safety Committee consisting of members from relevant sections, including the quality assurance, legal and operating divisions.

### Increasing Customer Satisfaction

We deploy "Customer Creation (C2) Activities" by providing products and services that are valuable to customers. SII Group is striving to identify customers needs promptly and to realize them. In order to achieve this, we improve our relationships with our customers on a daily basis and plan and develop products from customer point of view. For promotion of the customer-oriented management, we established the C2 Promotion Committee which consists of salesmanager level members. This Committee discusses and reports the C2 activities.

### SII's Customer Service Center

We established SII customer service center to answer customer inquiries. This customer service center is committed to providing prompt, accurate and honest responses in order to ensure customer satisfaction. Our customers' opinions, requests and complaints are fed back through our coordination with the relevant operating divisions, and will be used effectively in guality and product improvement. In addition, we hold repair service questionnaires to improve the quality of our after-sales service.

### Dalian Seiko Instruments Inc. (China) achieved ISO/TS16949:2002 certification

In September 2005, Dalian Seiko Instruments Inc. (DSI) precision component manufacturing division received the quality management system for the automobile industry certification in accordance with ISO/TS16949:2002. This is an international standard for quality management systems unique to the automobile industry in the USA and Europe. This certification defines the quality system requirements for the design, development, production, installation and service of automotive products. After DSI obtained ISO 9001 certification, the employees of the precision component production division worked together with the Quality Assurance Department and Executive Committee to obtain

### Information Security

Corporate responsibility for information security is becoming more and more important. Both the business information and the systems used to manage this information are considered to be important SII Group assets

We are striving to enhance our system security in order to prevent problems that could affect our business operations.

In order to ensure stable system operation and reliable data protection, we have established development frameworks and basic principles, including an Information Systems Security Policy. In addition, information security rules and guidelines, including Intranet Regulations and Security Control Procedures, are based on this Policy in order to ensure systematic and efficient information security.

### **Data Communication Cards** PC Security Enhancement

We also focus on the information security of the products we offer. A new SII data communication card security function was released in May 2006. With this feature, the card functions as a security key, and the PC remains locked and will not operate unless the card is inserted. Even in cases of PC loss or theft, any leak of information stored in the PC can be prevented as long as the data communication card is separately stored.

The security function software for the data

communication card can be downloaded from our website. We will continue to offer products with a wide range of added values.





ISO/TS16949. DSI will continue its efforts to improve the quality management system and increase customer satisfaction.





DSI staff with the certificat

na Good Corporate

### Enhancing our Intellectual Property

We are enhancing our intellectual property framework based on a mid to long-term policy "to develop a business culture that respects intellectual property." We conduct thorough patent searches before commercializing any new products in order to prevent any violation of other companies' rights. We are also enhancing our patent research. For new application and the acquisition of existing patent rights, we cooperate with the development and strategy divisions to strengthen investigation and acquisition of key technologies, while acquiring patent rights using a patent map.

In order to maximize the benefit from our patents, we choose the best possible way, including licensing to third parties if they are non-critical patents.

### • Working with our Suppliers

For SII's business activities to be successful, our suppliers' cooperation is essential.

In order to build better business partnerships, we regularly hold suppliers meetings. The third meeting took place in November 2005 with 118 supplier companies participating.

At the meeting, we presented an analysis of the market and competitive environment facing the SII Group, our current situation and procurement activities. The need for proactive cooperation with our business initiatives was reviewed with the suppliers. Our aim is to ensure the continued growth of both our suppliers and the SII Group.



Suppliers meetin

# Social Contribution

Social Repor

The SII Group conducts social contribution activities as a good corporate citizen.

### Participation in "Think the Earth"

"Think the Earth" is a nonprofit project that creates opportunities for people to think about and be inspired by the Earth during the course of their daily lives. The basic theme of the project is "ecology and economy in coexistence." The concepts behind its activities are to provide mechanisms by which businesses can contribute to society, and to initiate opportunities in which businesses and individual people across the world can participate, and in which they can individually think about the Earth. The project also has a global aspect, and is utilizing the full potential of the Internet to link the voices of local people. The project receives a portion of the revenues generated by sales of related products and services, and uses these funds to support its own operations and to contribute to NGOs and NPOs. We are pleased to have developed the project's kickoff product: the "wn-1 Earth Watch," a domeshaped watch with a three-dimensional model of the northern hemisphere as its face. We have also produced a southern-hemisphere version, the "ws-1". We hope that these Earth Watches will motivate to think about environmental protection. The Think the Earth Project displayed these Earth watches

at the Eco Products Exhibition held in December 2005.



he "Earth Watch" sports a 24-hour dial and an impressive 3D model of the northern hemisphere (model wn-1) and the southern hemisphere (ws-1). "Think the Earth Watch" is special in that it conveys two meaningful messages : "Watch" the Earth; and "Watch" of the Earth.

Visit the Think the Earth website at: http://www.thinktheearth.net

Think of the Earth

### Kids' Homepage "Let's Learn about Time"

June 10 is "Time Day" in Japan, and on this day in 2000, the three Seiko Group companies launched "Let's Learn about Time" as a homepage concept where children can start to think about "time"; and parents, teachers and other adults can have fun with children. The site is updated every month and contains fun and easy-to-understand segments, such as Mystery Quiz, Time & People, and Time & Life. In the future, we will continue conveying to children, who will

lead this 21st century, about the great meaning and value of our limited "time"



Website "Let's learn about time' http://www.kodomo-seiko.com/

### Christmas illumination of the SII Head Office Building

In December 2005, we held a Christmas illumination display on our head office building in Makuhari for the first time after four years. This was our Christmas present to the community.

This illumination display design was selected from employees contest as part of our "encouraging an inspiring culture". The winning design, "Christmas Tree in Snow," was lit up on the external wall of the head office building by opening/closing 1,200 window blinds. People could see the illumination even from a distance and driving cars since the head office building is located right beside one of the major expressways in the region. As part of our environmental protection initiatives, the amount equivalent to the cost of the electricity consumed by the illumination was donated to a local foundation, the Chiba Environmental Foundation.



Christmas illumination "Christmas Tree in Snow

### Foundation Advanced Technology Institute (ATI)

The Foundation Advanced Technology Institute was established in 1993 with a grant from SII. The mission of the ATI is to contribute to the progress and welfare of human society, by contributing to the development of new generation science and technology. In particular, the research activities of the ATI are focused on the area of nanoscience and nanotechnology. Activities of the ATI include focused research committees composed of academic researchers, the provision of assistance to promising young researchers in the form of grants, and organizing international forums, public lectures and other workshops and seminars. Through these activities, the ATI is contributing to the development of new generation science and technology.

ATI website: http://www.ati.or.jp/eg/



### **Local Cleanup Activities**

The SII Group regularly holds local cleanup activities at all units. SII Micro Parts Ltd. (SMP) holds cleanup activities twice a year with all employees participated. In April 2005, the president and about 200 employees participated in the cleanup activity and collected 200 kg of waste.



Waste collected by SMP employees

We provide plant tours, field-study program and internship for students.

### Environmental Education Support: Plant Tours and the Eco Exp

The Miyakubo Unit in Chiba Prefecture cooperates with the Eco Expedition activities of the local Ohsu Junior High School. The Eco Expedition is a group of volunteer students who are enthusiastic about environment-related activities, and is led by one of their teachers, Mr. Shinichi Takezawa. The Miyakubo Unit hosted a group of 10 students in 2005, and toured the manufacturing processes and environmental facilities. In addition, the unit held Q&A sessions that inspired them to consider the environmental issues, and SII's environmental initiatives on manufacturing



Students of the Eco Expedition

In addition to these activities, we also make efforts to contribute to society and to the local community: fundraisings, blood donations, guiding school children across neighborhood pedestrian crossings, opening parking lots, providing parking spaces for shuttle buses and space for group exercise session organized by the local children's association.

### The Environmental Advertisement Activity on the World Environment Day

a Good Corporate

Dalian Seiko Instruments Inc. (DSI) participated in the Environmental Advertisement Activity organized by Dalian City on June 5, 2005, the World Environment Day. The theme of this activity was "let's create a home of green all together". In Xinghai Square in Dalian, DSI exhibited a panel describing its environmental activities and 50 of DSI employees addressed their commitment to the activities, which encouraged people to protect environment.



Environmental commitment by DSI employees

### Site Tours and Work-study Programs

### Cooperation with Field Study

In October 2005, our Tochigi Unit cooperated with the integrated study class, "Let's Feature Our School District", from Tochigi No. 5 Primary School. This program consists of visits, interviews and photography by school children at the plants, public facilities and shops in the school district. Seven children visited and studied about the Tochigi Unit with enthusiasm.



Students at the Tochigi Unit

### Employee Support and Safe Workplace Environment

The SII Group respects the individual personality and aims to improve working environment for them

# Adoption of a performance-based Personnel System

In 2003, we introduced a remuneration system by which individuals were rewarded in recognition of individual performance. In order to improve employees understanding to the system and their motivation, we organize trainings for all the managerial staff to promote understanding to the wage system and fair evaluations. In addition, trainings focused on target setting and coaching skills are held for all managerial staff in order to develop skills and performance of their subordinates.

### Standardization of the Personnel System in the Group Companies

In 2003, we shifted from the traditional wage-based system to the performance-based evaluation system which is based on the capability and performance of employees. This concept has been developed and shared in the SII Group companies in Japan. This concept deployed to our overseas affiliated companies, and the optimum personnel system for each company in accordance with the local culture and laws was developed. Since April 2005, six of our affiliated overseas companies have adopted the new system. The commitment of local employees and their motivation to work in the SII Group have been increased since we conduct the personnel system based on the same concept in Japan and abroad. We also hold managerial trainings for local staff to enhance their target setting skills to encourage capacity building of their subordinates. The SII Group actively promotes personnel development of our overseas companies who support our global deployment.

### Career Development Support for Employees

We are enhancing the development of personnel, who are independent and self-responsible, and who can contribute to SII by building their own careers and setting their own missions. We have been developing the HR support system to assist employees in developing their own careers. The system consists of two parts The first is employees supports for their independent career design, providing training and recreation leave to employees every five years from 28 to 48 years old. Such leaves at certain ages assist employees in developing themselves independently and in ways for which they are responsible. The second is inhouse career development supports by our employees themselves to achieve their own career development in SII. We have the following systems in place to broaden employees, career options: the Free Agent System, the Inhouse Recruitment Program, and the Open Study Abroad Program SII continues to support our workers who increase their own worth through active career development.

### • Establishment of the Professionals Scheme

The Professionals Scheme was established with two objectives in mind. First is to recognize as professionals, those employees who possess a high level of expertise that will contribute to SII's sustainable development. And second is to ensure those skills and techniques were nurtured and passed down to junior employees. The scheme comprises Specialists, who are experts in such fields as intellectual property, law, development and design; and Meisters, who specialize in manufacturing operations such as processing and assembly. The senior professionals are also conferred honors of gold and silver.

### Child and Family Nursing Care Support

We support employees who are raising children or caring for family members. We have in place a child and family nursing care system designed for the advancement of the company and society. We have been creating an easy-to-work environment by allowing employees who have preschool-age children, and employees who are caring for family members to utilize leaves of absence, shorter working hours and shift work.

### Senior Employment

In order to pass on the valuable techniques and skills that our employees cultivated in SII to the next generation, we have been rehired our employees on a contract-basis after their retirement at the age of 60. The scope of this reemployment policy was expanded in April 2005. In addition, we have also established Seshika Ltd. to reemploy senior personnel in order to support operations within the SII Group. Together with senior employees, we promote passingon of the knowledge, techniques and know-how while continuously providing work opportunities to senior personnel utilizing their experience.

### Employees Health Management

We provide various health checks and healthenhancing activities for all our employees, in order to protect their health and to prevent diseases. Lifestylerelated disease prevention seminars, walking campaign promotions, and conducting physical fitness measurements are held as part of our healthenhancing activities. In order to prevent health problems caused by overwork, labor hours are closely monitored. Employees who work a lot of overtime are obliged to consult with our industrial physician. In addition, our industrial physician visits overseas units every two years to consult with employees stationed abroad.



The health enhancement seminar

### The Automated External Defibrillator Briefing

Previously, only medical doctors, nurses and emergency life guards were allowed to operate the Automated External Defibrillator (AED). Now, anyone may operate it after taking the specified course. The AED is a helpful emergency life saving device, and local governments are promoting introduction of this device. In order to introduce this device to our employees, we held the AED briefing session.

With cooperation of the ambulance group of the local fire station, the briefing session was held after the SII Makuhari building general emergency drill program, consisting of three drills: notification, initial fire fighting and evacuation.

We also promote introduction of AEDs in our units and assist employees to take life-saving courses.



### Workplace Environment Improvements and Health & Safety

We have established worksite rules, various health and safety regulations, and an accident-prevention manual. At the same time, we have organized a groupwide health and safety management system. All of these efforts are designed to prevent workplace accidents and to promote a comfortable working environment. Each business unit, actively separate smoking areas, installs air purifiers in smoking areas, and entrenches smoking rules, such as the establishment of non-smoking zones on floors with reception areas.

### Invention Incentive System

In order to encourage inventions and to improve our technological competitiveness, we established rules and standards, including the invention management regulations, and have operated the incentive system since 1965. In response to Article 35 of the Amended Japanese Patent Law, we introduced a new incentive system in April 2005. This incentive system is designed to be attractive to individual inventors which motivate them to obtain upper-level patents.

Also, in order to increase employees' motivation regarding intellectual property, we conduct education on intellectual property rights in our company.



The AED briefing meeting

## Environmental Management by the SII Group

At the SII Group, we have drawn up and implemented the SII Green Plan for environmental management, which is based on the "three greens" :green process, green products, and green life.

### SII Group Environmental Policy

### **Environmental Concept**

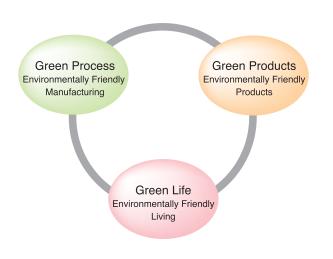
As a good corporate citizen, the SII Group will continue to harmonize its corporate activities with the global environment, protect and improve the environment, and contribute to the establishment of a sustainable society that can coexist with all nature.

### **Environmental Activity Guidelines**

We will

- 1. Continually strive to implement and enhance our environmental management system.
- 2. Observe all of laws, rules, regulations and agreements relevant to the environment, and prevent environmental pollution.
- 3. Provide products and services that enable state of the art environmental protection research, monitoring and compliance.
- 4. Continually reduce the environmental impact through the following actions:
- (1) Provide products and services that, throughout their lifecycles, minimize their impact on the environment.
- (2) Save energy and contribute to the reduction of global warming.
- (3) Conserve resources and practice the 3 R's: Reduce, Reuse and Recycle.
- (4) Reduce environmental risks from chemical substances and promote the elimination of harmful substances use.
- 5. Promote SII GREEN PURCHASING and purchase eco-friendly products, parts, materials and services.
- 6. Enforce internal audits to improve corporate environmental management system.
- 7. Contribute to society through our unique environment preservation activities.
- 8. Provide seminars and training to all employees to elevate their environmental consciousness, and encourage them to protect the environment in their personal life.
- 9. Proactively and openly disclose information about the implementation state of our environmental management system.

### Conceptual Green Plan Scheme



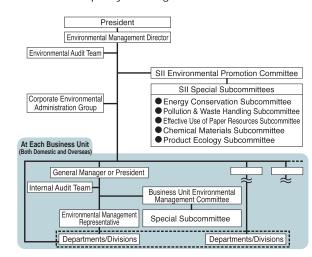
### Environmental Management System

The SII Group carries out environmental management at the Group level and within each of our business units. We follow a "Plan – Implement – Check – Review" (PDCA) cycle to continuously reduce our environmental footprint.We begin with the SII Group Environmental Policy, from which we set intermediate activity targets and annual Group-wide environmental targets. These various targets are then worked out through the environmental management system at each of our business units. These units regularly report their results back to the head office,which oversees the Group's overall environmental management system.



### System Organization

Our environmental management system operates both at the Group level and within each of our business units. Ultimate responsibility rests with our Environmental Management Director, who reports to the President of Seiko Instruments Inc. The SII Environmental Promotion Committee implements toplevel decision-making. General environmental issues, such as energy conservation, are promoted by Grouplevel subcommittees under the coordination of the head office's Environmental Administration Department. In order to promote Group-wide environmental management, we hold SII Global Environmental Promotion Committee since 2004, and share the environmental policy and targets with overseas units.



### ISO 14001:2004 Certification

Our major sites in Japan and abroad have obtained ISO 14001 certification. In fiscal 2005, each of our sites completed to obtain ISO 14001:2004 certification.

ISO 14001 Certification List

	Certified Units and Subsidiaries	Location	Month/Year	
1	Takatsuka Unit	Matsudo-shi, Chiba	11/96	
2	Miyakubo Unit	Ichikawa-shi, Chiba	3/97	
3	SII Microtechno Inc.	Daisen-shi, Akita	4/97	
4	Morioka Seiko Instruments Inc.	Iwate-gun, Iwate	4/97	
5	Tochigi Unit (Former SII Quartz Techno Ltd.)	Tochigi-shi, Tochigi	2/98	
6	Oyama Unit	Sunto-gun, Shizuoka	8/98	
7	SII Micro Parts Ltd.	Sendai-shi, Miyagi	2/99	
8	Ohno Unit	Ichikawa-shi, Chiba	3/99	
9	Sukagawa Precision Co., Ltd.	Sukagawa-shi, Fukushima	9/01	
10	Makuhari Head Office Chiba-shi, Chiba		10/01	
11	Western Japan Business Base	Osaka, Nagoya	9/02	
	Western Japan Busiless Base	Fukuoka, Hiroshima, Toyama		
1	Seiko Instruments Singapore Pte. Ltd.	Singapore	5/97	
2	Dalian Seiko Instruments Inc.	Dalian, China	6/01	
3	Seiko Instruments (Thailand) Ltd.	Thailand	3/02	
4	Instruments Technology (Johor) Sdn. Bhd	Malaysia	10/02	
5	Guangzhou Seiko Instruments Ltd.	Guangzhou, China	7/03	
6	Guangzhou SII Watch Co., Ltd.	Guangzhou, China	3/05	
7	Seiko Instruments (H.K.) Ltd.	Hong Kong	3/05	

### • Environmental Auditing

Environment auditing is essential not only for maintaining our environmental management system but also for achieving continuous improvements in its performance. All of our major business units undergo an internal audit at least one each year, carried out by auditors from that unit working in concert with auditors from other units and from SII headquarters. This use of auditors from various units is intended to ensure effective auditing, promote a synergistic exchange of information across units, and achieve consistent implementation of the Group policy and targets.

#### Internal Audits for 2005

		TT addits at To units
Number of Issues Identified:	Minor disparities	40 issues (63)
247	Observations	207 issues (280)
The greatest number of identified issues refers to our 24 issues operational control		

(): Number of issues for FY2004

11 audite at 10 unit

To help ensure reliability, we carry out regular training of our internal auditors. We have also set up SII's Environmental Auditor Certification system, as a means of raising the level of our auditing. SII certified auditors and publicly accredited auditors both participate in internal audits, improving the audit quality and providing on-the-job training for the internal auditors working with them. We also receive regular audits from outside certification agencies, whose objective evaluations help to ensure that we are always moving in the right direction.

		NL	mber of People
ļ	SII Certified Environmental Auditors		27
	Completed Environmental Auditor Training		489
	Official Environmental Auditors (CEAR* Accredited environmental auditors)	Lead auditors	7
		Auditors	3
		Provisional auditors	6

\*Center of Environmental Auditors Registration

### Dalian Seiko Instruments Inc. won the Model Environmental Protection Business Prize

In June 2005, Dalian Seiko Instruments Inc. was awarded the "Model Environmental Protection Business Prize" by the Dalian Environment Protection Office in appreciation of their sustained environmental activities over a long period, based on the environmental policy of "ensure compliance, strive to reduce the emission of pollutants, and continuously deploy environmental activities ". We will continue our efforts in the future.



Plate of the Award

### Environmental Education

Success of our environmental activities rests on the meaningful and informed participation of all of our employees. The SII Group offers various types of education designed to provide employees with the awareness, knowledge, and skills necessary to support these activities and produce continuous improvements.

### Company-Wide Education

We run a wide variety of training, from courses sponsored and held by SII headquarters to training that is planned and implemented by each of our units. In fiscal 2005, 169 employees attended the courses held by the headquarters, bringing the total number of employees who have passed through these courses to 2,007.

General Education			
Participants			
New employees			
Mid-level staff			
Managers			
Salespersons			

#### **Special Education**

Theme	Participants
Waste management	Employees who handle chemicals and wastes
Chemical management	Operators of environment- related equipment
Energy saving	Manufacturing and production engineers
Product design assessment	Product development personnel

#### Training for Internal Qualification

	0	
	Theme	Participants
	Training to become an internal environmental auditor	Candidates from
	Training to become an environmental-risk communicator	each business unit

### Practical Education with Experience

We strive to design practical programs by combining experience with lectures: Environmental Internal Auditor Training Course includes audit role playing; Environmental Risk Communicator Training Course includes communication role playing between the company and local residents; Eco-friendly Product Course provides LCA practice with model products; and Chemicals Control Course provides site tour where chemicals are actually used, and workplace environment measurements experience. Energy-saving Course by outside expert conducted practical education, including environmental facility tour of a model unit and discussing its specific

problems. Our programs are continually improved by incorporating the results of questionnaire survey by participants after the programs.



Energy-saving course

### Raising Awareness through Our Intranet

The Eco-Town bulletin board on the SII intranet offers a wide variety of useful information about environmental issues and activities. Employees can visit this site to learn about environmental terminology, to view information about current laws and statutes, and to access a wide range of other information. The site also offers "Eco-Quiz" pages that challenge, educate, and amuse all at the same time.

### Training for Emergencies

Each unit creates its emergency procedures, including actions and communications, and conducts periodic drills. These drills are intended to ensure that the procedures are effective, and that employees will be ready to act promptly to prevent the spread of environmental contamination. Furthermore, we also conduct joint trainings in cooperation with outside contractors who work on SII premises, such as tank truck operators who fill our tanks.



Instruments Technology (Johor) Sdn. Bhd (Malaysia) conducted a training program for its Chemical Spillage Emergency Response Team and employees whose work require chemical handlings. This training aimed to train them basic actions to be taken in case of chemical spillage. The training consists of three phases. The first phase is the video session and participants learned chemical spillage measures in manufacturing industry. The video also explains how important it is to contain chemical spillage, step-by-step procedure to control it properly and other related issues. Training continues with a briefing session by the trainer. Then, the trainer demonstrates spill containment procedures, and participants have a practical training. This training enables the team and the employees to prepare for the case of chemical spillage.





Absorbent mats were used to absorb chemical spillage. Later the trainer gave advices, such as not to stand on the spilled chemical.

Water poured to initiate spill response procedu



In the production of environmentally-friendly products, we must pay close attention to the eco-friendliness of the materials and components that we use. From production inputs to office supplies, the SII Group is fully committed to green purchasing.

### Supplier Certification System

We implement a Supplier Certification System that places great emphasis on the environmental control systems of our suppliers. The system utilizes our group-wide Supplier Certification Standards, and it requires that all suppliers must maintain environmental protection systems that meet or exceed specified levels. This certification system will be expanded to the overseas suppliers.

### Green Purchasing by the SII Group

Since 1999, our departments of development, design, quality, and procurement have worked together closely, and we have been actively engaged in green purchasing activities. We place considerable emphasis on making purchases of eco-friendly products from environmentallyconscious suppliers, rather than making decisions merely on quality and price. The whole SII Group, including our overseas units, are committed to green purchasing.

### Green Purchasing of Production Inputs

When reviewing potential purchases of production inputs, we use the SII Group Green Purchasing Standards, and we make decisions as a whole based on Quality + Price + Delivery Time + Environment.

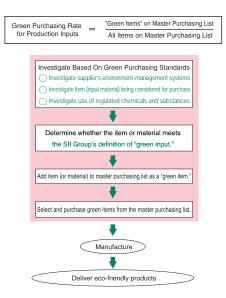
In fiscal 2003, we improved and revised the standards by incorporating overseas regulations on chemical substances.

### Definition of "Green Items"

An input material or component is qualified as a green item if it meets all of the following criteria. • The supplier's environmental protection system meets

SII's Green Purchasing Standards. • Its manufacture does not involve the use of banned substances or materials.

· Its products contain no banned substances or materials.





### Green Purchasing Efforts

We purchase office supplies using Benrinet, the online procurement system by Net Kokuyo Co., Ltd. This system enables us paperless purchasing. In order to promote green purchasing, we have registered Eco-mark products and other eco-friendly products that conform with Law on Promoting Green Purchasing in priority. In addition to the office supplies, office automation equipments and supplies are added to our Benrinet purchasing list. In the future, we will expand this system to enable our production site purchase eco-friendly consumables supplies.

### Green Purchasing Audits

In order to enhance compliance and to confirm the level of green purchasing activities, the procurement department of the head office conducts green purchasing audits of the procurement sections within the SII Group. In fiscal 2005, we held the audits to review their purchasing status, identified issues and provided advice. In February 2006, follow-up audits were conducted to assess improvement status.

### The RoHS Directive Briefing for Southern China Suppliers

Both Guangzhou SII Watch Co. Ltd. (GSW) and Seiko Instruments (H.K.) Ltd. (SIH) are dependent on watch components produced by suppliers in the Sourth China region. The cooperation of these suppliers is essential to achieve our business and environmental goals.

In September 2005, together with GSW and SIH, we held a briefing meeting with the suppliers to explain the RoHS Directive requirements. 80 companies from China, Hong Kong and Japan attended the meeting. The SII Group Environmental Policy, required guidelines for watch-related products were explained in Japanese and Cantonese. We also demonstrated the chemical analysis processes using SII's X-ray fluorescence spectrometer.

The need for proactive compliance with the SII Group regulations and environmental initiatives was reviewed with the



### **Environmental Results and Future Plans**

### FY2005 Results

As a result of our efforts made during fiscal 2005, our product-related targets were almost achieved. On the other hand, most of the units in Japan or overseas couldn't achieve their set targets. Our environmental management was improved: the environmental performance management, including overseas production units, has been established, and the site reports from our Japanese bases are posted on our web site.

Environmental Performance Indicators Rating(@:Achieved @:Not /					
	Action Item	FY2005 Target	FY2005 Result	Rating	See page
Creation of Eco- Friendly Products	Increase sales ratio of SII Green Products.	70%	73.2%	8	P37~
Total Elimination	Eliminate cadmium, hexavalent chromium, mercury and lead (RoHS substances) from products.	Complete elimination	91% <sup>*1</sup>	8	- P44
Substances	Eliminate polyvinyl chloride from products	Complete elimination	77%	<b>(</b> )	
Action against Global Warming	Reduce CO <sub>2</sub> emissions.	69,318 tons of CO <sub>2</sub> -0.5% from FY2004	72,425 tons of CO <sub>2</sub> +4% from FY2004	8	P41~
Reduce Waste and Promote Recycling	Reduce total waste generation	2,506 tons -3% from FY2004	2,938 tons +14% from FY2004	€0	P43~
Reduction Control of Chemical Substances	Reduce emissions of reportable (PRTR) chemical substances.*2	6.2 tons -3% from FY2004	6.1 tons -5% from FY2004	8	P44~
Water Use Reduction	Reduce water use.	870,000 m <sup>3</sup> -1% from FY2004	984,000 m <sup>3</sup> +12% from FY2004	<b>(</b> )	P43
Action against Global Warming	Reduce CO <sub>2</sub> emissions.	39,148 tons of CO2 -1% from FY2004	42,479 tons of CO <sub>2</sub> +7.4% from FY2004	8	P41~
Waste Reduction/ Recycling	Reduce total waste generation.	3,223 tons -3% from FY2004	3,732 tons +12% from FY2004	Ø	P43~
Paper Use Reduction	Reduce office paper use.	49.4 tons -3% from FY2004	44.4 tons -13% from FY2004	۲	P44
	Creation of Eco- Friendly Products Total Elimination of Chemical Substances Action against Global Warming Reduce Waste and Promote Recycling Reduction Control of Chemical Substances Water Use Reduction Action against Global Warming Waste Reduction/ Recycling	Action Item           Creation of Eco- Friendly Products         Increase sales ratio of SII Green Products.           Total Elimination of Chemical Substances         Eliminate cadmium, hexavalent chromium, mercury and lead (RoHS substances) from products.           Action against Global Warming         Eliminate polyvinyl chloride from products           Reduce Waste and Promote Recycling         Reduce total waste generation           Reduction Control of Chemical Substances         Reduce emissions of reportable (PRTR) chemical substances.*2           Water Use Reduction         Reduce water use.           Action against Global Warming         Reduce CO2 emissions.	Action ItemFY2005 TargetCreation of Eco- Friendly ProductsIncrease sales ratio of SII Green Products.70%Total Elimination of Chemical SubstancesEliminate cadmium, hexavalent chromium, mercury and lead (RoHS substances) from products.Complete eliminationAction against Global WarmingReduce CO2 emissions.69,318 tons of CO2 -0.5% from FY2004Reduce Waste and Promote RecyclingReduce total waste generation2,506 tons -3% from FY2004Reduction Control of Chemical SubstancesReduce emissions of reportable (PRTR) chemical substances.*26.2 tons -3% from FY2004Water Use ReductionReduce CO2 emissions.39,148 tons of CO2 -0.5% from FY200439,148 tons of CO2 -0.5% from FY2004Water Use Reduction/ Reduce cO2 emissions.Reduce emissions of reportable (PRTR) chemical substances.*239,148 tons of CO2 -1% from FY2004Maste Reduction/ Reduce CO2 emissions.39,148 tons of CO2 -1% from FY20043,223 tons -3% from FY2004	Action ItemFY2005 TargetFY2005 ResultCreation of Eco- Friendly ProductsIncrease sales ratio of SII Green Products.70%73.2%Total Elimination of Chemical SubstancesEliminate cadmium, hexavalent chromium, mercury and lead (RoHS substances) from products.Complete elimination91%*1Action against Global WarmingEliminate polyvinyl chloride from productsComplete elimination77%Action against Global WarmingReduce CO2 emissions.69,318 tons of CO2 -0.5% from FY200472,425 tons of CO2 +4% from FY2004Reduce Waste and Promote RecyclingReduce total waste generation2,506 tons -3% from FY20042,938 tons +14% from FY2004Reduction Control of Chemical SubstancesReduce emissions of reportable (PRTR) chemical substances.*26.2 tons -3% from FY20046.1 tons -5% from FY2004Water Use ReductionReduce water use.870,000 m3 -1% from FY2004984,000 m3 +12% from FY2004Action against Global WarmingReduce CO2 emissions.39,148 tons of CO2 -1% from FY200442,479 tons of CO2 +7.4% from FY2004Water Use Reduction/ Reduce total waste generation.3,223 tons -3% from FY20043,732 tons +12% from FY2004Action against Global WarmingReduce total waste generation.3,223 tons -3% from FY20043,732 tons +12% from FY2004Action against Global WarmingReduce total waste generation.3,223 tons -3% from FY20043,732 tons +12% from FY2004	Action ItemFY2005 TargetFY2005 ResultRatingCreation of Eco- Friendly ProductsIncrease sales ratio of SII Green Products.70%73.2%Image: Complete eliminationTotal Elimination of Chemical SubstancesEliminate cadmium, hexavalent chromium, mercury and lead (RoHS substances) from products.Complete elimination91%*1Image: Complete eliminationAction against Global WarmingReduce CO2 emissions.Complete elimination77%Image: Complete eliminationReduce Waste and Promote RecyclingReduce total waste generation2.506 tons -3% from FY20042.938 tons +14% from FY2004Image: Complete eliminationReduction Control of Chemical SubstancesReduce emissions of reportable (PRTR) chemical substances.*26.2 tons -3% from FY20046.1 tons -5% from FY2004Image: Complete eliminationWater Use ReductionReduce water use.870,000 ma -1% from FY2004984,000 ma +12% from FY2004Image: Complete eliminationAction against Global WarmingReduce total waste generation-3% from FY2004-5% from FY2004Image: Complete eliminationWater Use ReductionReduce water use.870,000 ma -1% from FY2004984,000 ma +12% from FY2004Image: Complete eliminationWaste Reduction/ Global WarmingReduce total waste generation.3.223 tons -3% from FY20043.732 tons +12% from FY2004Image: Complete eliminationWaste Reduction/ Reduce total waste generation.3.223 tons -3% from FY20043.732 tons +12% from FY2004Image: Complete elimination<

\*1:Completed elimination by the end of May 2006 for EU products. \*2:In addition to chemicals covered by the PRTR statutes, these figures also include HFCs, PFCs and SF6.

### Mid-term Plan

#### **Environmental Performance Indicators**

_	Action Item	Mid-term Target	FY2006 Target
Related	Creation of Eco-Friendly Products	Increase sales ratio of SII Green Products to 90% or more by the end of fiscal 2006.	90%
Product R	Comploete Elimination	Eliminate use of cadmium, hexavalent chromium, mercury and lead from non-EU and non-RoHS products by the end of fiscal 2006.	Complete elimination
Pro	of Chemical SUbstances	Eliminate polyvinyl chloride from products by the end of fiscal 2006. *1	Complete elimination
	Action against Global	Reduce CO <sub>2</sub> emissions to 69,803 tons or less.	Less than 69,803 tons of CO2
c	Warming	Although we have achieved our initial FY2010 target for the greenhouse gasses, including HFC, PFC and SF <sub>6</sub> , excluding CO <sub>2</sub> , our actions are ongoing.	I
Japan	Waste Reduction / Recycling	By the end of FY2010, reduce total waste generation by 50% from FY2000. 4,322 tons 2,161 tons	2,832 tons -4% from FY2005
Units in	Reduction and Control of Chemical Substances	Reduce emissions of reportable PRTR substances and VOC (volatile organic compound). Targets will be set in FY2007.	Figure out the amount
	Water Use Reduction	Reduce water use by 1% every year.	974,000 m <sup>3</sup> -1% from FY2005
ts	Action against Global Warming	Reduce CO <sub>2</sub> emissions by 1% every year.	42,054 tons of CO2 -1% from FY2005
as Units	Waste Reduction / Recycling	Reduce waste generation by 3% every year.	3,620 tons -3% from FY2005
Overseas	Paper Use Reduction	Reduce office paper use by 3% every year.	43.1 tons -3% from FY2005
0	Water Use Reduction	Reduce water use by 1% every year.	637,000 m <sup>3</sup> -1% from FY2005

\*1: Except those used within the safety standards or difficult to be substituted.

#### **Environmental Management Indicators**

	Action Item
Environmental	Manage environmental performance using a consolidated approach that includes overseas units.
Management System	Promote operation-based themes.
Community and Social Contribution	Promote environmental activities that employees can participate in for community and society.

### **Environmental Accounting**

### Results

In fiscal 1999, SII Group introduced an environmental accounting system which assesses the cost and effect of environmental activities. We established the SII Environmental Accounting Guidelines based on the guidelines of the Ministry of the Environment in order to conduct this system. The end-of-year result for fiscal 2005 showed that total investment was approximately 168 million yen (approximately 65 million yen increase from 2004), and the total expenses was approximately 1,512 million yen (approximately 152 million yen decrease from 2004). The capital investment increase was due to the investment in pollution prevention and research and development. Total expenditure decreased, while upstream and downstream costs and research and development costs increased. This indicates that our product-related activities made progress. Comparing to FY2004, we couldn't make significant improvement for the environmental protection result, except for general waste reduction, due to the production increase.

C	Costs of Environmental Protection         Scope: 10 sites in Japan;3/1/05 to 2/28/06         (in millions of yen)							
Catagony		Content	Inves	tment <sup>*1</sup> Change		Expense <sup>*2</sup>		Change
	Category	Content	FY2005	FY2004	<b>(</b> '05-'04 <b>)</b>	FY2005	FY2004	('05-'04)
(1)	nternet Costs (within each operational area)							
ЧW	1.Anti-Pollution	Water, atmosphere, noise, vibration	74.2	35.0	39.2	426.1	500.5	-74.4
Breakdown	2.Global Protection	Measures related to global warming, ozone-layer depletion.	39.2	41.0	-1.8	109.6	155.3	-45.7
Bre	3.Resource Efficiency	Resource saving, reduction and recycling of waste, procurement management.	20.2	13.9	6.3	341.6	372.4	-30.8
• •	Upstream and Downstream Costs	Development of eco-friendly products, recycling of products and packaging.		0.0	0.0	130.2	78.4	51.8
	Administrative Activities Costs	Environment training, information releases, running of Environment Management System.	0.0	0.0	0.0	316.6	391.7	-75.1
(4)	R&D Cost	Environmental research and development	34.7	13.2	21.5	185.4	163.5	21.9
(5)	Social Activities Costs	Support for environmental protection groups, communities.		0.0	0.0	3.0	2.6	0.4
(6)	Reclamation Costs	Reclamation of contaminated soil.	0.0	0.0	0.0	0.0	0.0	0.0
	Totals			103.1	65.2	1,512.5	1,664.4	-151.9

\*1.Investment amounts are for FY2005 only. In case where we judge that total outlay covers purposes in addition to environmental protection, we have counted only the portion deemed to apply to environmental protection. \*2.Expenses include depreciation for investments through FY2004. (Equipment investment and facility investment are depreciated over 5 and 10 years, respectively, in equal yearly increments.) In case where we judge that total outlay covers purposes in addition to environmental protection, we have counted only

the portion deemed

Environmental Protection Results			Economies Achieved from Environmental Protection Activities (in millions of yer		
Environmental Impact	ronmental Impact Quantity of Reduction (FY2004-FY2005)		Content of Actual Savings	Amount of Each Actual Savings	
CO <sub>2</sub>	-2,759 tons-CO2		Expense reduction attributable to energy conservation	-98.0	
Water	-105,000 m <sup>3</sup>		Reduced cost by water use savings	-17.6	
Paper Resources	-3 tons		Reduced cost by paper use savings	-0.4	
Industrial Waste	-366 tons		Income from sale of salable materials	-11.6	
General Waste	12 tons		Savings from reduction in purchasing of inputs, etc.	12.9	
New Material Purchasing Reduction <sup>3</sup> 661.1 tons			Reduced cost by new material purchasing reduction <sup>*4</sup>	412.4	
*3 The total amount of recycled and reused waste oil and waste plastics has been calculated as New Purchases Reductions		Actual Savings	297.7		

New Material Purchasing Reduction <sup>3</sup>	661.1 tons
--	------------

ics has been calculated as New Purchases Reductions \*4 Reduced cost by new material purchasing reduction is calculated by converting amount of the new purchases reduction.



mated Savings from Risk Reduction	Savings Estimate
ance of stoppage due to air or water pollution, etc.	324.0
lance of penalties for illegal dumping, etc.	63.9
Estimated Savings	387.9
l Savings	685.6

### **Industrial Activities and Environmental Impact**

Our manufacturing operations utilize many input materials and large amounts of energy, and also output CO<sub>2</sub> and many different types of waste. In order to develop effective environment policies, it is essential to understand the environmental impact based on the entire life cycle of our products. The following is an overview of our environmental impact for FY2005, including data about overseas production sites. We shall continue to expand the scope of coverage as we move ahead, so that we can understand our actual impact and take appropriate actions to mitigate it.

INPUTS OUTPUTS Plan & Design Into Atmosphere **Materials** CO2: 72,425 tons-CO2 Raw materials: 2,307 tons (2,210 tons) (69,666 tons-CO2) Packaging: 457 tons (296 tons) Purchase Materials NOx: 5.8 tons (6.1 tons) Office paper: 72 tons (69 tons) SOx: 1.6 tons (1.8 tons) and Components (n 28 Chemicals: 5.8 tons (6.1 tons) Chemicals Into Water 72 tons (70 tons) Waste water: 649 thousand m<sup>3</sup> (580 thousand m<sup>3</sup>) Chemicals: 0.2 tons (0.3 tons) Energy COD: 1.4 tons (2.1 tons) Manufacture (from p.41) BOD: 4.0 tons (2.8 tons) Electricity: 144,000 thousand kWh (138,000 thousand kWh) Overseas Gas CO<sub>2</sub>: 42,479 tons -CO2 Municipal: 2,565 thousand m<sup>3</sup> (2,499 thousand m<sup>3</sup>) LP: 295 thousand m<sup>3</sup> (252 thousand m<sup>3</sup>) Waste Fuel Kerosene: 3,507 kl (3,374 kl) Transport\*1 General (non-industrial) Heavy: 82 kl (170 kl) (p.41) Amount generated: 676 tons (687 tons) Recycling rate: 75% 508 tons Overseas (79% 544 tons) Industrial Electricity: 102,000 thousand kWh Amount generated: 2,262 tons (1,896 tons) 106 thousand m<sup>3</sup> Gas: Usage by 1,253 kl Recycling rate: 95% 2,149 tons Heavy: customers\*2 (94% 1,787 tons) (from p.37) Into Landfill Water 0.4% 12 tons (0.4% 11 tons) Overseas 984 thousand m<sup>3</sup> (879 thousand m<sup>3</sup>) Amount generated:3,732 tons (including resalable waste of 1,928 tons) Energy for Internal Transport\*1 **Collect and Recycle** Transport-based Discharge into Atmosphere<sup>\*1</sup> Gasoline: 93 kl (61 kl) Light oil: 67 kl (61 kl) 395 tons-CO<sub>2</sub> (303 tons-CO<sub>2</sub>) CO<sub>2</sub>: Usage-based Discharge into Atmosphere\* Energy Consumed by Green Products\*2 Discard CO2: 24,476 tons-CO2 Electricity: 64,752 thousand kWh

\*1 Transportation among SII Group companies in Japan \*2 Based on estimated use of SII green products during FY2005

### INPUT

· Figures for FY2004, where available, are shown in parentheses.

Materials:	Metals, plastics, glass, and other such materials used in production
Packaging:	Plastics and paper that can be recycled in accordance with packaging recycling statutes
Office Paper:	Paper for printers and copiers
Chemicals:	PRTR chemicals, HFCs, PFCs, SF <sub>6</sub> (PRTR: Pollutant Release and Transfer Register)
Electricity:	Power purchased from electric companies
Gas:	Municipal gas, LP gas
Fuel:	Kerosene, heavy oil
Water:	Tap water, industrial water, groundwater

Activities and Environ

### OUTPUT

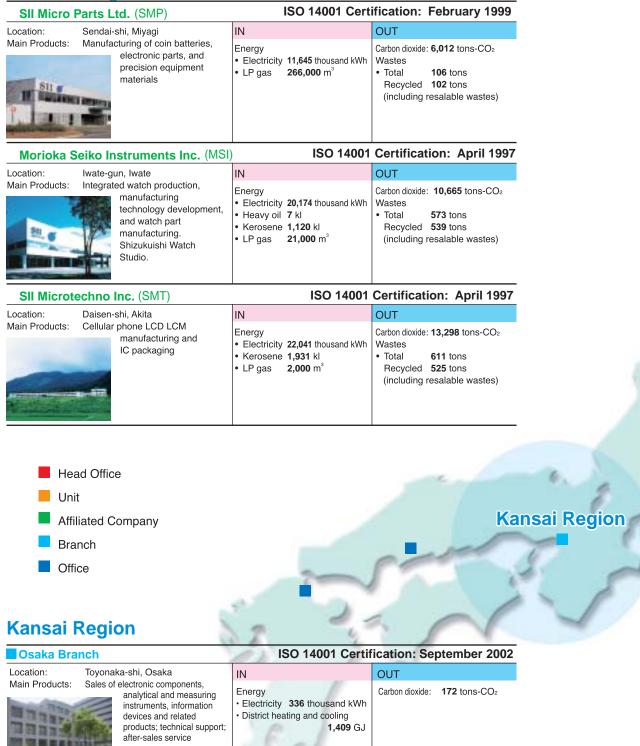
CO2:	From use of electricity, gas, oil, etc.
NOx:	From use of gas, oil, etc.
SOx:	From use of oil, etc.
	* NOx and Sox figures are limited to those business units that have soot and smoke emitting facilities installed, as prescribed by the Air Pollution Control Law.
Chemicals:	PRTR chemicals, HFCs, PFCs, and SF6 discharged into atmosphere and water
Waste Wate	r: Released into rivers and sewerage
COD:	Chemical oxygen demand pollution load Limited to those business units subject to the regulations in the Water Pollution Control Law on total pollution amount
BOD:	Biochemical oxygen demand pollution load Limited to those business units that have installed a special facility as prescribed by the Water Pollution Control Law
General Waste:	Paper waste and household-type waste generated by or attendant on industrial operations
Industrial Waste:	Waste oil, waste acid, waste alkali, waste plastics, ash, sludge, and other materials generated by industrial operations
Final landfill rate:	A proportion of landfill disposal amount to the total waste generation amount

# Business Units and Environmental Impact < Japan >

The following is a profile of the 10 business units in Japan involved in environment-related activities. This profile describes each unit's main business operations and lists its environment-related inputs and outputs.

### **Tohoku Region**

Environmental Repor



Business Units covered: Osaka branch, Nagoya branch, Toyama office, Hiroshima office, Fukuoka office

			BUSITESS OTTO
1			
Kanto Region	Inc	cludes the Sendai, Omiya	a, Mito, Tachikawa and Yokohama office.
Makuhari Unit (SII Head Office)		ISO 14001 Ce	rtification: October 2001
Location: Chiba-shi, Chiba Main Operations: SII Group headquarters; development sales of watches, electronic dictionaries, and IT devices; of electronic components.	• Electricity • Municipal gas	9,110 thousand kWh 3 31,000 m <sup>3</sup> ating and cooling 18,667 GJ	OUT Carbon dioxide: <b>4,130</b> tons-CO <sub>2</sub> Wastes • Total <b>204</b> tons Recycled <b>155</b> tons (including resalable wastes)
Takatsuka Unit Includes the Mito office an	nd the Tsukuba office.	SO 14001 Certi	fication: November 1996
Location: Matsudo-shi, Chiba Main Operations: Development and manufacturing semiconductors and electronic components; development of microtechnologies and electronic devices; development, design an production technology of micromechatronics	Energy     Electricity     Heavy oil     Municipal gas	<b>54,372</b> thousand kWh <b>49</b> kl <b>2,327</b> thousand m <sup>3</sup>	OUT Carbon dioxide: 26,346 tons-CO <sub>2</sub> Wastes • Total 794 tons Recycled 698 tons (including resalable wastes)
Ohno Unit	·	ISO 14001 C	ertification: March 1999
Location: Ichikawa-shi, Chiba Main Operations: Manufacturing and sales of cr tools, jigs, precision p and small auto parts;	oarts, electricity	<b>7,073</b> thousand kWh <b>187,000</b> m <sup>3</sup>	OUT Carbon dioxide: <b>3,137</b> tons-CO <sub>2</sub> Wastes • Total <b>326</b> tons Recycled <b>326</b> tons (including resalable wastes)
Miyakubo Unit	·	ISO 14001 C	Certification: March 1997
Location: Ichikawa-shi, Chiba Main Operations: Manufacturing of motors, flexible boards, and inkjet print	IEnerov	<b>4,120</b> thousand kWh <b>7,000</b> m <sup>3</sup>	OUT Carbon dioxide: <b>1,588</b> tons-CO <sub>2</sub> Wastes • Total <b>90</b> tons Recycled <b>90</b> tons (including resalable wastes)
SII NanoTechnology Inc. (Oyama	a Unit)	ISO 14001 Co	ertification: August 1998
Location: Sunto-gun, Sizuoka Main Operations: Development and manufactur of analysis and measurement equipr and acoustic devices	ment, e Heavy oil	4,960 thousand kWh 14 ki 451 ki 4,000 m <sup>3</sup>	OUT Carbon dioxide: <b>3,093</b> tons-CO <sub>2</sub> Wastes • Total <b>77</b> tons Recycled <b>72</b> tons (including resalable wastes)



**Tohoku Regio** 

Kanto Region

Location: Tochigi-shi, Tochigi Main Operations: Manufacturing of quartz crysta



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RP

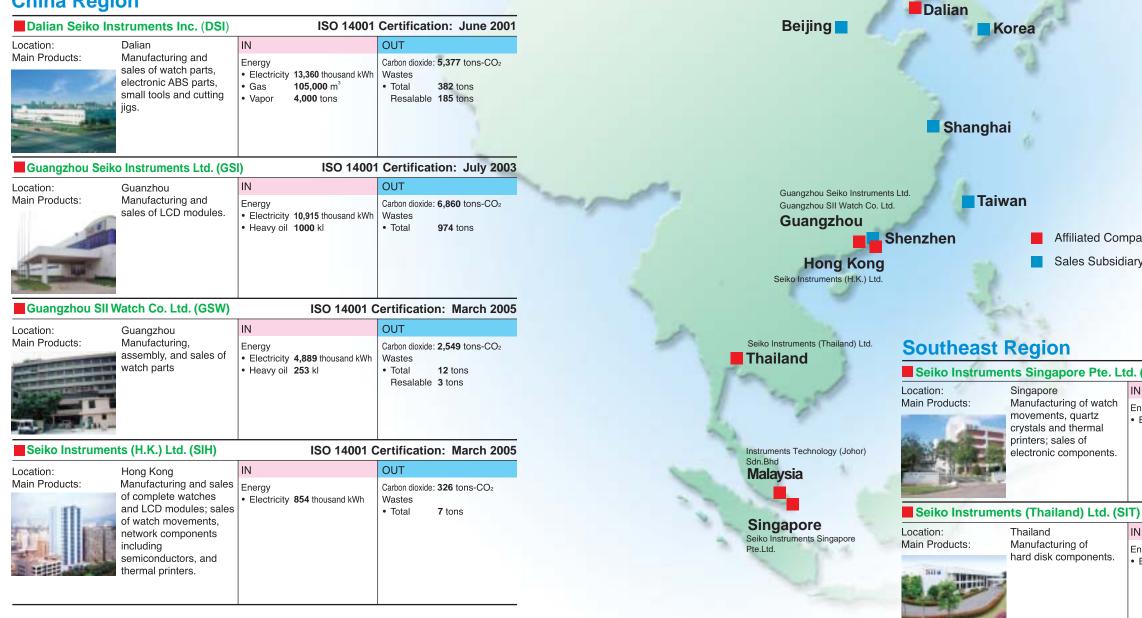
	I	ISO 14001 Cert	ification:	February 1998
	IN		OUT	
als	Energy • Electricity • Kerosene • LP gas	10,095 thousand kWh 5 kl 3,000 m <sup>3</sup>	Wastes <ul> <li>Total</li> <li>Recycled</li> </ul>	: <b>3,880</b> tons-CO <sub>2</sub> <b>126</b> tons <b>126</b> tons resalable wastes)



## Business Units and Environmental Impact < Overseas >

The following is a profile of the seven overseas units involved in environment-related activities. This profile describes each unit's main business operations and lists its environment-related inputs and outputs.

### **China Region**



Instruments Technology (Johor) Sdn. Bhd (INTECH)

Dalian Seiko Instruments Inc.



Assembly and manufacturing wa movements; and





assembly of therm printers.

### Affiliated Company Sales Subsidiary, Representative Office

Pte. Lte	d. (SIS) ISO 1400 <sup>-</sup>	1 Certification: May 1997
	IN	OUT
watch z nal nents.	Energy <ul> <li>Electricity 17,155 thousand kWh</li> </ul>	Carbon dioxide: <b>6,542</b> tons-CO₂ Wastes • Total <b>216</b> tons Resalable <b>112</b> tons

Ltd. (Sl	T) ISO 14001 (	ISO 14001 Certification: March 2002				
	IN	OUT				
nents.	Energy • Electricity <b>44,691</b> thousand kWh	Carbon dioxide: <b>17,042</b> tons-CO <sub>2</sub> Wastes • Total <b>1,997</b> tons Resalable <b>1,564</b> tons				

ISO 14001 Certification: October 2002						
	IN	OUT				
atch nal	Energy • Electricity <b>9,922</b> thousand kWh	Carbon dioxide: <b>3,784</b> tons-CO <sub>2</sub> Wastes • Total <b>143</b> tons Resalable <b>66</b> tons				

iness Units and Environmental

qqp



### **Environment-conscious Products**

As a manufacturer, we recognize our responsibility to create and supply eco-friendly products. We consider eco-friendliness through all stages of production and use: from planning and design to product use and disposal.

### The SII "Green Product" Label

To raise public awareness of our Group's eco-friendly products, we introduced our SII Green Product Label in December 2001. This is a Type II environmental label as defined under ISO 14021, meaning that it represents a self-declared environmental claim. To determine whether a product qualifies for this label, we evaluate it using our own "green product standards." Specifically, we assign a score of 1 to 5 for each of 19 evaluation parameters. Products that receive an average score of 3.5 or better are classified as "green products" and carry the Green Products label.



### Concept of Eco-friendly Products

Our eco-friendly products standard specifies 19 items: energy saving, resource saving and the elimination of hazardous substances as critical items, and the product life cycle items including the product life, packaging, the production process, and information disclosure. In order to confirm the effectiveness of the system, SI Green Product Standards are reviewed and revised every two years.

In fiscal 2005, all the product standards were reviewed. We will continue to develop products while aiming to be an industry leader with regard to the environment.

#### **Environmental Compatibility Factors for** SII Green Product Standards

No	Parameter
1	Power consumption during use
2	Power consumption during standby
3	Weight of product
4	Use of reused parts and recycled materials
5	Recyclability of used products
6	Longer-lasting products
7	Reduction of the use of containing avoidance substances* in goods
8	Reduction of the use of containing abolition substances* in goods
9	Prohibition of the use of containing prohibition substances* in goods
10	Smaller and more lightweight packaging
11	Reduction of the use of foam materials in packaging
12	Avoidance of the use of polyvinyl chloride and heavy metals in packaging
13	Energy conservation in the manufacturing process
14	Resource conservation in the manufacturing process
15	Reduction of the use of use avoidance substances* in the manufacturing process
16	Prohibition of the use of use prohibition substances* in the manufacturing process
17	Easy disassembly
18	Easy sorting of materials
19	Information disclosure in user/instruction manuals, and other related documents

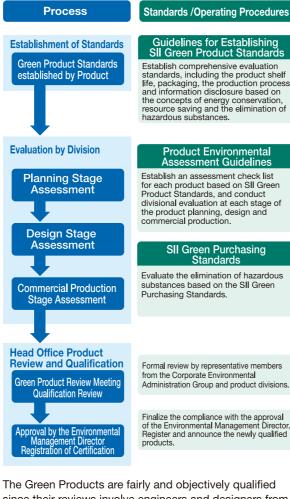
\*Based on SII Group standards.

### Recap of FY2005

- We achieved an SII Green Products sales ratio of 73.2%. which was well in excess of the 70% target.
- We set a new mandatory requirement for SII Green Product certification, that none of the five chemical substances, which are targeted for complete elimination, are to be used in new products manufactured from January 2005. (The five chemical substances are: cadmium, hexavalent chromium, mercury, lead, and PVCs.)
- We increased the number of our LCA (life cycle assessment) trials.

### Green Product Certification Process

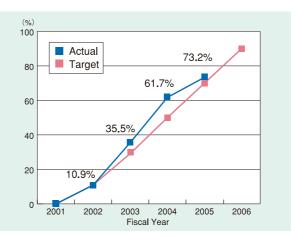
The SII Green Product Standards and Product Environmental Assessment Checklist have been established covering the 19 items. Sll Green Products are certified according to the following process:



since their reviews involve engineers and designers from all divisions. In addition, these reviews enhance communication and shared understanding between divisions. In fiscal 2005, the evaluation standard for the product development stage was improved. We plan to further improve the level of our products environmental compatibility by thorough implementation of these initiatives in fiscal 2006.

### Results of FY2005

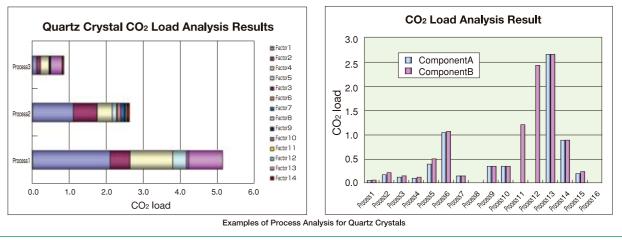
In fiscal 2005, we successfully exceeded the target turnover rate of 70% for SII Green Products by achieving a level of 73.2%. In particular, results for consumer products such as data communication cards and electronic parts such as semiconductors, guartz crystals and LCD modules reached high level of around 90%. We couldn't achieve the targets in large-size machine tools and analysis/measuring devices. Though, we further advanced our initiatives to improve environmental compatibility, as HDD components acquired Green Product status.



### <LCA Example: Setting Suitable Goals and Scopes for Products>

We have been holding LCA analysis by setting appropriate goals and scopes based on product's characteristics. • Watch movements: the environmental impacts were compared among drive systems and functions including analog quartz, digital quartz, mechanical watches, low-priced mass production models and high-priced high performance models, in order to utilize the results for product strategy planning.

- analyze old and new product models and compare the results.
- Electronic parts such as semiconductors and quartz crystals: the environmental impact was analyzed at each enabled us to improve them and to reduce environmental impacts. We will continue to utilize LCA analysis results for the new products development in order to provide products with less environmental impact.



\*: Life Cycle Assessment (LCA) is a technique to assess the environmental impact over the whole life cycle of a product.

### Disclosure of Environment Information **Related to Green Products**

nt-conscious

-

The following website introduces our green product line and provides environmental information about our products.

http://www.sii.co.jp/eco/greenproducts.html

A CONTRACTOR OF A CONTRACTOR	

### LCA Trials

We began running life-cycle assessment (LCA) trials in 2001, carrying out inventory analyses of various components and mechanisms-including watch and thermal printer mechanisms. We used the experiences and results of these efforts as the basis for drafting our LCA Guidelines, released in March 2003. These guidelines, in turn, now serve as the basis for extending our LCA activities to other products. We have now deployed LCA trials to virtually all of our products, and our next step shall be to implement LCA-based guantitative evaluations for our new products.

• Electronic dictionaries and data communication cards: old and new product models were compared and the results were used as a guideline of parts and structure selection in order to reduce environmental impacts. • Large-sized products like machine tools: the assessment supported to identify specific factors in product life cycle, parts materials or production processes which caused significant environmental impacts. We improved these factors and significantly reduced environmental impacts. In order to assess improvement level, we also

production process since its assessment would be difficult after start using them. This assessment results

### Collection and Recycling

To promote effective use of resources, we are involved in efforts to collect and recycle discarded products and consumables.

### Collection of Ink Cartridges

Used ink cartridges and bottles are sent to our collection center, where they are separated according to their constituent materials and then recycled. Plastics are crushed and reused to produce plastic products or components. Metals are reused as raw materials. This procedure enables approximately 90% of all cartridges collected to be recycled.

### **Collection of Data Communication Devices**

We participate in the mobile recycling network that has been jointly established by the Telecommunications Carriers Association and the Communications and Information Network Association of Japan.



Mobile Recycling Network

### Indications on Boxes

Product boxes include the recycling network marking illustrated above, which urges users to recycle their old products. The boxes also indicate that they are printed with soy ink.



**Recycling of Rechargeable Batteries** 

We also participate in efforts of the JBRC (Japan

Portable Rechargeable Battery Recycling Center) to collect and recycle small rechargeable batteries.



### Collection of Packaging

We consign collection and recycling tasks to the Japan Containers and Packaging Recycling Association

### FY2006 Prospective

- · We will promote Green Products sales toward the target ratio of 90%, while developing a system to achieve higher level of environmental compatibility.
- We will establish LCA quantitative evaluaction to develop eco-friendly products.

### Examples of SII Green Products

### Highly Precise, Highly Efficient Internal Grinder

### SIG03

In order to respond to the recent trend of increasing size of parts, this grinder helps bearing grinding with an outer diameter of up to 100 mm while maintaining traditional high standards of precision and efficiency. The grinder performs various grinding processes involved in ball bearing manufacture which require high precision machining.



#### **Eco-Friendly Features**

This grinder made a remarkable contribution to energy, resource and space saving: 25% less than our conventional product in electric power consumption, 28% reduction in product weight and 36% reduction in floor space.

### **Data Communication Card**

### AX420S

Energy

aving

8%

reduction

in electric

power

consumption

The Compact Flash Type I has a slim, light body. This card can be used in wider range of PCs and PDAs than the older models since the Type I is compatible with the Type II Slot.

#### **Eco-Friendly Features**

This card achieved 8% reduction at 693 mW in operation electric power consumption (at 3.3 V, compared with our conventional product). We also achieved the complete elimination of five designated

harmful substances from the product. Any foaming agents, polyvinyl chloride or heavy metals are not used in our packaging materials. Packages and manuals are printed with sov ink. As a member of a mobile recycling network, we promote material recycling with dealers.

\*These ratios are made in comparison to SII's earlier models

### **Network Components**

With our "craftsmanship" skills and spirit, we provide design and development solutions for cutting-edge mobile phones and compact mobile devices.

#### **Eco-Friendly Features**

The Ultra-Small Package High-Precision Voltage Detector S-1000 series features top-level industry specifications: a minimum operating voltage of 0.95 V, a consumption current of 350 nA, and the new, small SNT4A package. The RA141, TFT LCD module (of 128 x 160), saves

energy with its power consumption of only 4.2 mW (main panel). The TS414H Rechargeable Battery has a super long life of over 100 cycles under 100% chargedischarge conditions. The SSP-T7-F Quartz Crystal has been miniaturized and weighs only 28 mg. All the terminals and circuit boards of the above products are lead-free and we have achieved a complete elimination of the harmful substances that we have targeted.



### **HDD** Components

In fiscal 2005, hard disk drive (HDD) components were added to the SII Green Product. We established the environmental compatibility assessment standards to rate the bearing, pivot and motor parts used for hard HDDs. These HDD components were assessed and reviewed, and many of them were qualified as our Green Products.

### **Eco-Friendly Features**

90% of the used products can be recycled. We achieved the complete elimination of five harmful substances specified by SII from these products. Any foaming agents, polyvinyl chloride or heavy metals are used for packaging materials. The status of chemical use is disclosed to our customers. These products conform to the RoHS Directive.



Pivots

Bearings



### **Electronic Dictionary**

SR-V7130 Series

Stylish and slim PC-like keyboard enables swift inputting. In addition, dictionaries can be added later with SII's original contents card, SILCA.

### **Eco-Friendly Features**

We realized low electric power consumption, light weight and slimness by installing a phonetic function for the ceramic speaker. The new damper shell structure made of magnesium alloy enhanced its lightness, thinness and strength. For packaging material, we don't use any foaming agents, polyvinyl chloride or heavy metals use. The easy-to-dismantle/set-up structure saves energy on the production process. This system and material names indication on all plastic parts

more than 5 g in weight improve their separate disposal. These efforts contribute to the top-level energy- and resource-savings of the electronic dictionaries equipped with a liquid crystal QVGA display (possible display area: 240 x 320 dots), equivalent to 4.8 inches.



### Compatibility with Japan's Green Purchase Promotion Law

We offer printers, plotters, and paper supplies that comply with the requirements of the Law on Promoting Green Purchasing.

### Network **Multifunction Plotter**

LP-1010 Series

Able to accommodate A0-size paper, this new plotter measures 1,150 mm wide and 552 mm deep, making its compact design equivalent to an A1 plotter, and reducing the space required for installation

Thanks to the latest in speed and durability of the print engine, the plotter boasts fast printing speeds of 6.2 A1-size prints/min., and 3.4 A0-size prints/min. Despite this outstanding performance, we have achieved a low power consumption for the plotter of less than 1,440 W at 100 V. This means that the plotter can be powered by the ordinary power supply available in offices (15 A). We also offer a wide variety of paper sizes for the plotter, and our 100% recycled paper is eco-E friendly in compliance with Japan's Green Purchase Promotion Law.



### **Environmentally-friendly Manufacturing**

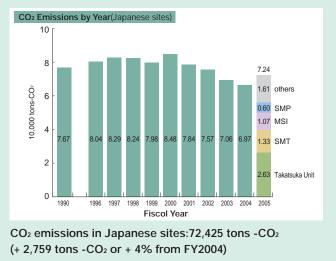
In manufacturing our products, the SII Group consumes some of the world's limited natural resources and contribute to the stress on the environment. Aware of this fact, we are engaged in promoting a number of initiatives to reduce our environmental impact, including the important issues of halting global warming, our "3R" approach, and chemical materials control.

### Initiatives Related to Global Warming

Since the Kyoto Protocol came into force, we have been required to further promote strategies to stop global warming. We are making efforts company-wide to do our part to halt global warming, by conserving energy at our plants and offices, and by incorporating energy saving into our products.

### Recap of FY2005

We couldn't achieve the FY2005 targets for CO<sub>2</sub> emissions in Japanese or overseas sites due to the production increase.



### Improving of the Air Conditioning Facility

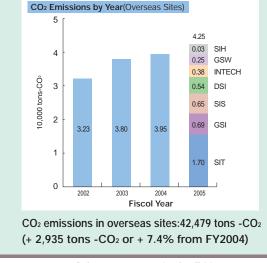
Seiko Instruments (Thailand) Ltd. (SIT) is involved in efforts to reduce the electric consumption for air condition system by 5% annually by replacing the coolant in the air conditioner compressors. SIT Plant had about 50 compressors, each of which needed to be filled with 10 kg of hydrochlorofluorocarbon (HCFC22) to achieve the high pressure required, thus using a huge amount of electricity. After testing different coolants, SIT decided to change the type of coolant used which can reduce annual electric power consumption by 5%. The new coolant does not contain any chlorine, and each compressor can be operated at a lower pressure than before since only 4 kg is needed per compressor. SIT is going to replace the coolant in all the compressors within one year. In addition, instead of the central electric meter used for all systems, including air conditioners and machinery, SIT has installed individual meters so that electric power consumption by the air conditioning facility can be measured independently. This enabled more precise energy control.

### Improving of the Negative Air Pressure Supply System

Dalian Seiko Instruments Inc. improved its negative air pressure supply system. Before, negative air pressure was supplied to each workplace using two



Power-saving Vacnnm pump



Refer to page 33, 35 and 36 for official company names.

vacuum pumps. After the supply system review, introduction of a new power-saving vacuum pump enabled the same-level air supply. This led to 67% energy saving annually.

### Logistical Efforts

Logistics is an essential process of production but also creates diverse environmental impacts. In order to reduce environmental impacts, SII Group strives to improve logistics, including packaging, cargo handling, transportation and storage.

### Improving Transportation

In order to optimize transportation system, the logistic division of the Oyama Unit changed its method for the repair and inspection of parts from chartered service to consolidated service in December 2005. This should reduce CO<sub>2</sub> emissions by 21.4 tons annually.

### Improving Packaging

The packaging materials used for parts transportation are reused wherever possible. The Oyama Unit has reused about 1,600 pcs. per year of corrugated boxes used to dispatch parts for repair. Also, Morioka Seiko Instruments Inc. reuses about 3,000 pcs. per year of watch movement trays. These efforts also lead to reduce waste

### Energy-saving Efforts at the Tochigi Unit

The Tochigi Unit continuously strives to save energy. One of the Unit's advantages is that its facilities division has sufficient knowledge of the production process and quality conditions of the products. Based on the

knowledge, the unit conducts energy-saving activities in the production process while maintaining the quality level of the products.

The Tochigi Unit received the Kanto Bureau of Economy,

Trade and Industry Director General's Award and the Good Energy Management Plant Award by the Kanto Area Electricity Use Rationalization Committee for excellence in energy management in 2005.



### Improving the Clean Room Air Supply Fan

In order to maintain the cleanliness of the clean room used for the wafer washing/sputtering processes, the indoor pressure needs to be kept positive. The

air supply fan of the outdoor air conditioner was operated at 100% of its capacity and the air supply volume was regulated by a damper. Now, this air supply fan of the outdoor air conditioner can be controlled by an inverter. By monitoring the chamber



### We will continue to participate in various campaigns, promoted by the Ministry of the Environment, for the halt of global warming.

(1)We participate in the national project known as "Team Minus 6%," which is designed to help achieve the targets of the Kyoto Protocol.

### (2)We staged our own "lights down" event

From June 16-18, 2006, we participated in the Ministry of the Environment's "Lights Down Campaign", in which we dimmed the lights on our rooftop and street-level billboards at the Makuhari Headquarters Bldg.

### (3)We are carrying on the COOL BIZ campaign.

We cooperate with the Ministry of the Environment's "COOL BIZ" campaign, promoting our very own "Cool Biz" (June-September)

We have long set our air conditioning systems to 28 in the summer season as part of energy conservation efforts, but at this time, in addition to this, we have called for our employees to dress according to the "Cool Biz" style so that they can be comfortable even at this temperature.



pressure inside the clean room with a sensor, and using its output to control the air supply fan, the air supply volume can be adjusted to the required level. This enabled the air supply fan operation to be reduced to 30%.

In addition, the air conditioner load was decreased by mixing incoming air with the superfluous air from the clean room instead of discharging it to the outside. These efforts resulted in an energy saving of 160, 000 kWh per year.

### **Comment from the Promotion Secretariat**

As the main energy-saving activities, we focused on air conditioner systems, including reduction of air conditioner power consumption by reusing clean room ventilation and by renovating the air conditioning facility, and load reduction of the air conditioner's outdoor radiator by use of a shading net. In addition, we tried to improve employee awareness of energy saving by conducting the switching on/off campaign for lights and

computers, a change to high efficiency lighting and the human movement sensors introduction. All the member of our unit will continuously deploying activities based on the action plans against global warming.



Etsuo Serizawa, Kazumi Oaku Quartz Control Section Manager Quartz Control Section

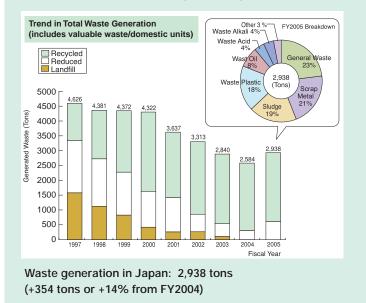


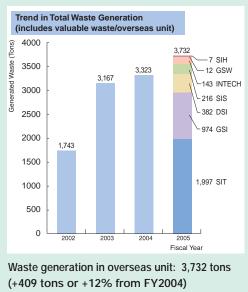
### Our "3R" Approach (Reduce, Reuse, Recycle)

We believe that one of the very important missions for manufacturers is to conserve our precious resources. SII Group makes every effort to effectively utilize resources in all the processes. In our Japanese sites, we are focusing on to reduce waste generation after achieving "zero emissions".

### Recap of FY2005

We couldn't achieve the FY2005 target of waste generation reduction in Japanese or overseas sites due to the production increase.





We couldn't achieve the water use target in Japan. Water use in Japan: 984,000m<sup>3</sup>(+105,000m<sup>3</sup> or +12% from FY2004)

### Efficient Use of Water

A huge amount of water is used on the manufacturing process. We are making efforts to reuse water and to make the most efficient use of water resources.

#### SII Microtechno Inc. (SMT)

In order to respond to the increasing demand of pure water use, SMT reuses waste water which was used to

be discharged. Its newly introduced waste water recovery system filters the waste water to reuse as pure water in the manufacturing process. As a result, SMT saves clean water consumption of 19,200 m<sup>3</sup> per year.



Water recovery system

#### Seiko Instruments (Thailand) Ltd. (SIT)

SIT conventionally used pure water as washing water in its barrel process. Now, the company reuses pure water that is

used in other processes. SIT confirmed that quality can be adequately maintained even when reusing water in the barrel process, then installed a new tank for recovering and storing the pure water used in other processes. This enables to ensure stable



Pure water storage tank

supply of water for the barrel process. This initiative started in November 2005 and water usage was reduced by 1,306 m<sup>3</sup> during the subsequent five months.

Refer to page 35 and 36 for official company names.

### Reduction of Plastic Waste

Seiko Instruments Singapore Pte. Ltd. makes continuous efforts to reduce the plastic waste. All runners generated from the injection mould machines are crushed into small chips. These chips are filtered to remove the plastic powder which may clog the mould set, and automatically pumped into the mixer. The mixer proportionally mixes 90% of recycled material with 10% of virgin material. Then they are poured back into the injection mould machine again. Only purged material and plastic powder are not recyclable.

This approach enabled the plastic waste reduction by 33% from previous year.





Crushing the runner Fil

Filtering Mixing with virgin material.

### Efficient Use of Paper Resources

### Makuhari Unit

In November 2005, in order to make the most efficient use of its paper resources, the Makuhari Unit commissioned an agency to recycle paper which was usually non-recyclable. Paper wastes are recycled into toilet paper and used at the Makuhari Unit.



Recycled toilet paper

### Chemical Substance Control

SII Group considers safety and appropriate handling of chemical materials an important issue for risk management. We therefore carry out integrated management of these materials at every stage, including purchase, use, storage, and disposal. In addition, we make efforts to achieve total elimination of hazardous substances from our products.

### Recap of FY2005

We achieved 91% of the total elimination of hazardous chemical substances from products. (Completed elimination form EU products by the end of May 2006.) We reduced emission levels for reportable PRTR substances by 6.1 tons or -5% from the previous year, achieving our FY2005 target.

### Chemical Substance Control

We have always worked to achieve the total elimination of substances such as certain chlorofluorocarbons. Drawing up our SII Chemical Materials Guidelines, we have strived to improve awareness and controls on chemical substances in all areas and aspects of our business.

### Reduction of Organic Solvent Usage

We encourage voluntary reductions in chemical use. The semiconductor division of our Takatsuka Unit (Chiba Prefecture) makes efforts to reduce the volatile organic solvent used as cleaning fluid in the inspection process. As a result of cooperation between the inspection division and the technology division, the unit successfully reduced its usage by approximately 21%.

These efforts will be continued in future.

## Complete Elimination of Hazardous Chemicals from Products

The Restriction of the use of certain Hazardous Substances (RoHS) Directive <sup>(\*1)</sup> of the EU, which prohibits

substances (ROHS) Directive <sup>(\*)</sup> of the EU, which prohibits the sale of products containing hazardous substances after July 2006, and similar restrictions have been enhancing worldwide. SIH centralized its paper purchase from operating divisions to the corporate control section. SIH fixed the target (uppermost limit) on paper use for the whole company, and introduced a system that each division declares its purchasing while the section in charge controls the overall framework. As a result, awareness of paper use has been raised and paper usage has been reduced by 18%, compared to the previous year.

### Reusing the Oil

The Ohno unit (Chiba Prefecture) continuously makes efforts to reuse the oil. The oil that sticks to the chips generated in the production process is filtered using chips processing equipment. Over 30% of the cutting oil and over 22% washing oil are reused every year.

In order to respond to the RoHS Directive, we selected substances such as lead, hexavalent chromium, mercury, and polyvinyl chloride (<sup>(2)</sup> and made efforts to achieve complete elimination since June 2003. Total elimination of these substances from parts such as electronic components in our end products was almost achieved by the end of February 2006. As for industrial products consisting of several tens of thousands of parts, such as large-sized printers and networking equipment, we have also made them RoHS compliant by replacing parts and materials, and changing substrates designs We have not yet achieved the complete elimination of polyvinyl chloride that we specified voluntary, because of their wide use and the unstable quality of the available substitutes. We will continue to promote the complete elimination while striking a balance between guality, cost, delivery, safety and environment.

- \*1: RoHS Directive (Restriction of the use of certain Hazardous Substances) EU Directives of 2003. As of July 2006, the following six types of materials will be banned from electric and electronic devices placed on the EU market: cadmium, hexavalent chromium, mercury, lead, PBBs (polybrominated biphenyls) and PBDEs (polybrominated diphenyl ethers).
- \*2: SII has independently determined to abolish the use of polyvinyl chloride.



### Results on PRTR

FY2005 results on PRTR efforts are as follows.

The volume of relevant hazardous chemical substances handled by SII increased 1.4 tons from FY2004, but we successfully reduced emissions by 0.4 tons. In addition to substances specified under the PRTR, we have also achieved reductions in substances that SII voluntarily controls, namely HFCs, PFCs, and SF<sub>6</sub>, in the amount of 0.3 tons.

		Emitted			Transported		Recycled	Consumed	Eliminated	
Substance	Amount Handled	1. Discharged into air	2. Discharged into public water	3. Discharged into earth at business unit	4. Landfill- processed at business unit	5. Wastewater transported to sewage system	<ol> <li>Waste matter transported out of business unit</li> </ol>	7. Reusable material transported out of business unit	8. Transported as product, etc.	<ol> <li>By decompositio chemical reactio etc.</li> </ol>
2-aminoethanol	4,950	990	0	0	0	0	3,713	0	0	247
Antimony and its compounds	1,356	0	0	0	0	0	0	1,085	271	0
Ethyl benzene	524	152	0	0	0	0	372	0	0	0
Xylene	15,593	1,467	0	0	0	0	14,125	0	0	1
Chrome/three-value chrome compounds	10	0	0	0	0	0	3	0	7	0
2-ethoxyethyl acetate	847	528	0	0	0	0	319	0	0	0
Inorganic cyano compounds (excluding complex salts and cyanates)	600	8	0	0	0	0	227	0	0	365
Dichloropentafluoropropane (HCFC-225)	167	147	0	0	0	0	20	0	0	0
Mercury and its compounds	261	0	0	0	0	0	10	0	251	0
1.3.5-trimethyl benzene	512	16	0	0	0	0	486	0	0	10
Toluene	2,984	1593	0	0	0	0	1,391	0	0	0
Lead and its compounds	146	0	0	0	0	0	0	110	36	0
Nickel compounds	2,905	0	68	0	0	0	1,082	794	961	0
Phenol	977	146	0	0	0	0	782	0	0	49
Hydrogen fluoride and its water-soluble salts	34,867	608	53	0	0	0	7,870	0	0	26,336
Boron and its compounds	140	0	118	0	0	0	9	8	5	0
Poly (oxyethylene) = nonylphenyl ether	65	0	0	0	0	0	0	32	0	33
Manganese and its compounds	3,961	0	0	0	0	0	1,956	0	2,005	0
Molybdenum and its compounds	115	0	0	0	0	0	11	0	104	0
Total	70,980	5,655	239	0	0	0	32,376	2,029	3.640	27.041

\*: PRTR:(Pollutant Release and Transfer Register) : This system is designed to asses, gather and disclose data on volume of chemical materials handled, amounts released into the environment, and volume transferred in waste materials to points outside of plant locations. Companies collect data on the relevant substances and report them to the appropriate government agency once a year.

### Environmental Protection at our Production Sites

The SII Group takes risk-prevention measures based on simulated emergencies at our production sites to protect environment of the sites.

### Leakage Prevention of Underground Pipes

In order to prevent chemical pollution, our Tochigi Unit dug out existing underground pipes and replaced them with new pipes in specially made ditches. This enables the early detection of any pipe ruptures and prevents soil pollution.



Side ditch

### Plant Noise Reduction

In order to reduce noise for the neighboring residential area, Guangzhou Seiko Instruments Ltd. installed sound insulation walls covering a wider area than just the noise-emission source and improved the exhaust and air-intake systems. These efforts successfully reduced the noise level by approximately 6 dB.



Sound insulation wall



### **Timelines:Company History and Environmental Activities**

Compa	ny History	Envir	onmental Activities
1881	Kintaro Hattori established K. Hattori & Co., Ltd. (presently Seiko Corporation), a watch and clock retail store.		
1892	K. Hattori & Co., Ltd. established Seikosha Co., Ltd. (presently Seiko Clock Inc. and Seiko Precision Inc.) and began production of clocks.		
1937	Daini Seikosha Co., Ltd. (presently SII) was established as the watch manufacturer for the SEIKO Group.		
1964	Reflecting its rapid progress in enhancing the accuracy and reliability of timekeeping instruments, SEIKO products were selected as the official timekeeping instruments for the Tokyo Olympics.		
1967	SEIKO products captured all higher awards in the wrist chronometer class of the Observatoire Cantonal de Neuchatel contest held in Switzerland.		
1969	The SEIKO Group introduced the world's first quartz watch.		
1970	The Company launched its product diversification activities.	]	
1983	Daini Seikosha Co., Ltd. officially changed company name to Seiko Instruments & Electronics Ltd.		
1985	Completed the world's top automated assembly system for multipurpose, small-lot production of outer watch parts.		
1987	Seiko Instruments & Electronics Ltd. officially renamed Seiko Instruments Inc.		
1988	Completed the world's first automated assembling system for multipurpose, small-lot production of watch movements.	Dec.	Established "Fluorocarbon Countermeasures Promotion Committee."
1990	Introduced new corporate trademark SII • for the Seiko Instruments Group.		
1992	SII Group eliminated use of chlorofluorocarbons. SEIKO products were selected as the official timekeeping instruments for the Barcelona Olympics.	Aug. Dec.	Abolished usage of CFCs. Established Environmental Administration Office (now called the Corporate Environmental Administration Group).
1993	Completed the SII Makuhari Building and transferred head office, sales, and development operations to the new building.	Apr. Aug. Nov.	Established Environmental Protection Plan,"SII Green Plan." Introduced the "Clean Arrow" used-paper collection truck. Abolished usage of trichloroethane.
1994	SEIKO products were selected as the official timekeeping instruments for the Lillehammer Olympics.	Apr.	Began monthly management of energy, paper use, and waste.
1995		Aug.	Executive council kicked off on Environmental Management System (based on ISO 14001).
1996		Aug. Nov.	Started publication of our annual Environment Report. Takatsuka unit (Chiba) became the first SII Group business unit to receive ISO 14001 certification.
1997	Sun Street retail complex opened in Kameido, Tokyo	Dec.	Began our "Idling Stop" campaign.
1998	SEIKO products were selected as the official timekeeping instruments for the Nagano Olympics.	Feb.	Published our "SII Chemical Management Guides."
1999		Mar. Oct.	Completed acquisition of ISO 14001 certification for all of our 11 major business units in Japan. Abolished the use of chlorine solvents (trichloroethylene, methylene chloride). Issued "SII Group Green Purchasing Standards."
2000		Feb. Nov.	Began environmental accounting. Ohno unit achieved Zero Emissions.
2001		Oct. Dec.	Makuhari head office (Chiba) earned ISO 14001 certification. Introduced SII "Green Products" labeling system.
2002	SEIKO products were selected as the official timekeeping instruments for the Salt Lake City Olympics.	Jun. Sep.	Prepared the "SII Green Gas Reduction Scenario." Western Japan sales office earned the office's first ISO14001 certification.
2003		Jul. Oct.	Guangzhou Seiko Instruments Inc. (Guangzhou, China) earned ISO14001 certification. Major domestic sales offices including western Japan office earned ISO14001.
2004	The company's official Japanese name was changed to "Seiko Insutsuru Kabushiki Kaisha."	Mar. Oct.	Major business units in Japan achieved Zero Emissions. Lead solder was completely abolished.
2005		Mar.	Guangzhou SII Watch Co. Ltd. (Guangzhou, China) and Seiko Instruments (H.K.) Ltd. earned ISO14001 certification.

### Environmental Awards

- Oct. 1996 6 Chiba Keiyo business units received Recycling Promotion Committee's Chairman's Award for paper recycling activities.
- Jun. 1998 SII Microtechno Inc. received Akita Prefecture's "Best Environmental Activities" award.
- Jun. 1998 Morioka Seiko Instruments Inc. received Iwate Prefecture's award for "Excellence in Environmental Protection."
- May 2000 Makuhari head office received the Chairman's Award from the Chiba City Building Conference.
- Feb. 2005 Tochigi Unit received the Chairman's Prize for Excellence from the Kanto Region Electric Power Rationalization Committee.
  - Morioka Seiko Instruments Inc. received the Chairman's Award from the Tohoku Seven-Prefecture Electric Power Promotion Committee.
- Feb. 2006 Tochigi Unit received the Kanto Bureau of Economy, Trade and Industry Director General's Award from the Kanto Region Electric Power Rationalization Committee.

