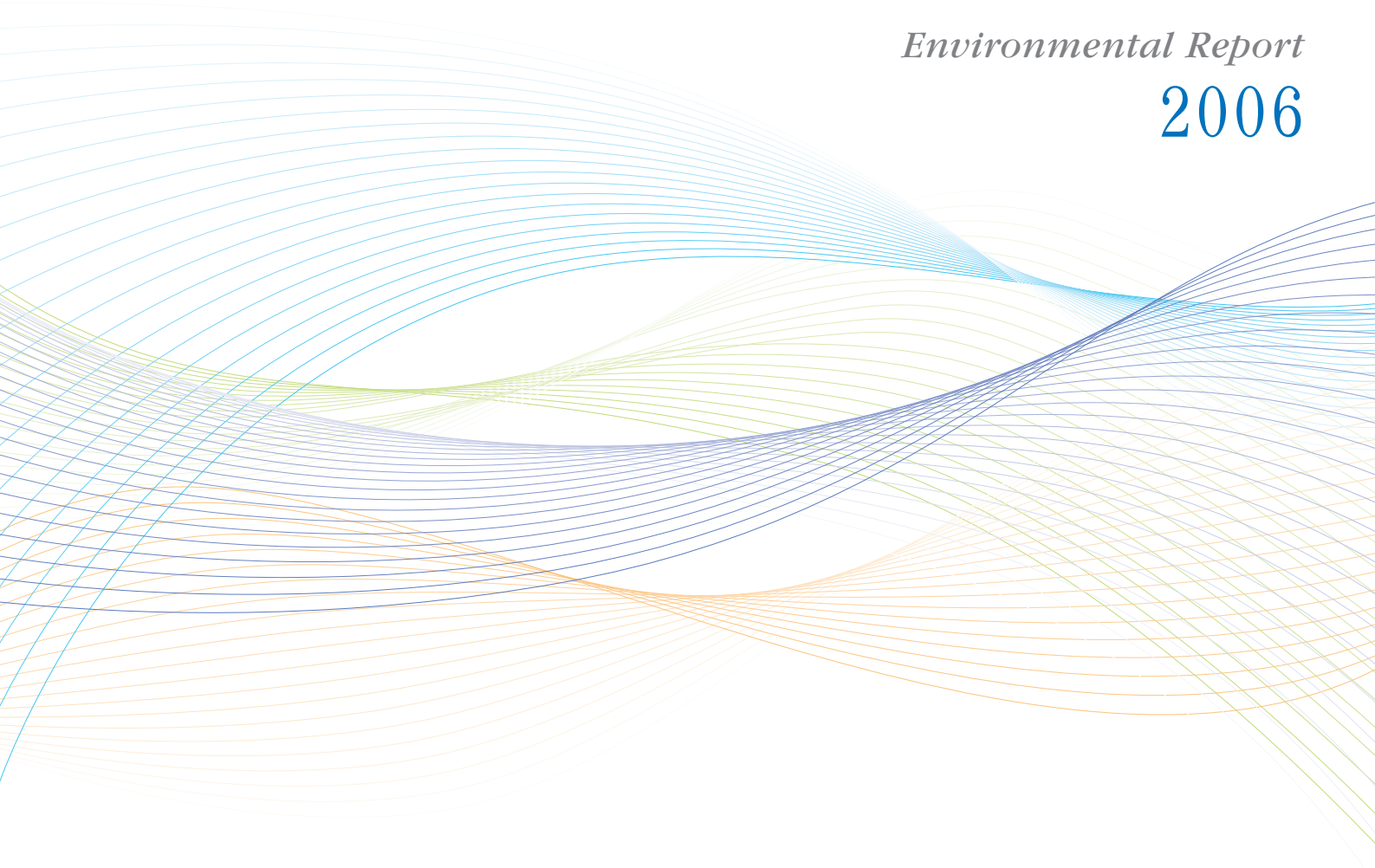
Environmental Report

2006



Corporate Profile (as of 31 March 2006)

Name SMK Corporation

Established April 1925

Registered January 15, 1929

Primary Businesses Manufacturing and sales of electronic components for use in electrical equipment, communications equipment, electronic equipment, industrial machinery, IT equipment and other applications.

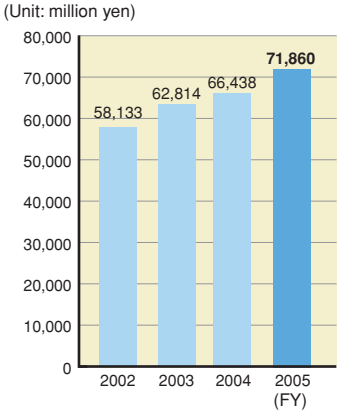
Capital 7,996 million yen

Number of Employees 11,110 (Group)

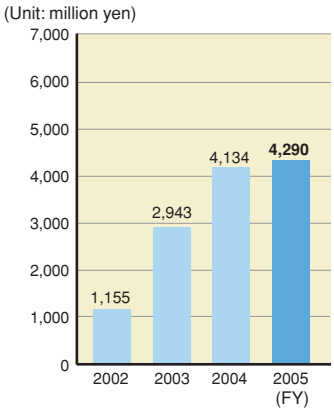
Head Office 5-5, Togoshi 6-chome, Shinagawa-ku,
Tokyo 142-8511 Japan
Tel: +81-3-3785-1111
Fax: +81-3-3785-1878
URL: http://www.smk.co.jp/

Major Products
Switches
Remote control units
Keyboards
Control panel units
Electret condenser microphones
Earphone/microphone assemblies
Camera modules
AC adaptors
Cradles
Antennas
Crimp connectors
FPC and FFC connectors
Board-to-board connectors
RF coaxial connectors
Interface connectors
Card connectors
Power connectors
Metal ferrules
Jacks and pin jacks
DC power supply plugs/jacks
Fuse holders
Resistance sensitive touch panels
Optical touch panels
Bluetooth modules

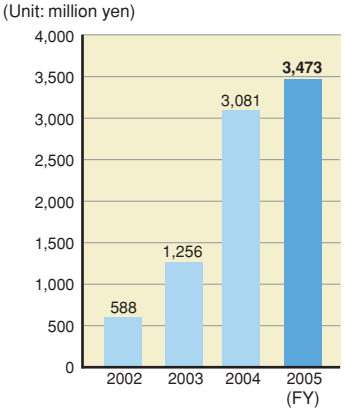
Consolidated Net Sales



Consolidated Operating Income



Consolidated Net Income



Contents

Harmonization with the global environment as a vital corporate duty

Today, we are witnessing increasingly serious changes in the global environment, such as the shrinkage of glaciers and the progress of desertification. In the process, global environmental problems have become issues of top priority for all of humankind. We see it as a vital part of the corporate duty to make a positive contribution to the movement to resolve these problems and harmonize business activities with the global environment.

We at SMK have positioned preservation of the environment as one of our key management tasks, and have built a management setup designed for both corporate growth and environmental preservation. Approaches to preservation of the environment are gathering momentum around the world, as exemplified by the ratification of the Kyoto Protocol last year and the enforcement of European Union (EU) directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) this year. We intend to promptly adapt to these developments and fulfill our social responsibility.

This report sets forth our initiatives for environmental preservation in fiscal 2005. We trust it will give the reader a good idea of our activities on this front. We are determined to continue with our active efforts on behalf of harmony with the global environment together with our transaction partners and surrounding communities, and ask for your advice and support in these endeavors.

August 2006

Terutaka Ikeda
Chairman and Chief Executive Officer

Bearing all types of stakeholder in mind

Tetsuya Nakamura
President and Chief Operating Officer

The importance of environmental concern on the part of each and every employee

– In your remarks to the employees the other morning, you mentioned a TV program that took up the problem of greenhouse gases. We understand that comments concerning the environment are increasingly surfacing in the morning speech given by a director. Is this a part of the efforts to implant awareness of the environment among the employees?

We hear from various sources how modern life exerts an impact on the environment and is destroying it. In SMK, we actively continue to take measures where we can, such as publicity through environmental reports and the "COOL BIZ" program (eliminating the necktie requirement to allow higher settings on air conditioning systems). All of this is reflected in greater concern about the environment and increased mention of it in the morning address. For the future as well, we are going to continue with these activities and see that each and every employee remains concerned about environmental problems.

Three types of "concern"

– So everything starts with concern on the level of individual employees. Does this apply to all aspects of CSR?

Yes. In this connection, I would like to talk about the three types of "concern." This word can be written with three different pairs of Japanese characters, meaning "interest," "joy," and "admiration." The first step is to get employees interested in various problems. The next is to allow them to feel a joy through their work. And the third is the outpouring of admiration over a job well done. These three "concern" are important to performance of any task or work, however trifling or routine. People are bound to feel motivated if they bear the three in mind.

The tale I've mentioned before about the two stonecutters says much about finding meaning in work. A man comes up to two stonecutters on a construction site and asks what they are doing. One stonecutter frowns and replies that he is having a terrible time trying to cut stone. The other smiles and says that he is cutting stone for a magnificent church where many people will come to find solace. The two are doing exactly the same work, but differ in respect of their caring about it. Contemporary society needs stonecutters of the second type. Such employees are capable of giving genuine thought to their own role in CSR.

I also tell our employees that to work ("hataraku") means to benefit those around you. That's why we have the slogan "The next processes are our customers". To increase levels of added value in line with this slogan is also important for fulfilling our CSR.

High morale linked to better PSR and CSR performance

– In our interview with you last year, you talked about "personal social responsibility" (PSR, a term introduced by Mr. Nakamura). Is SMK getting some results in this aspect?

It is hard to say, because PSR performance cannot be measured. But it appears to me that more and more employees are switching from a passive to an active stance, and I therefore believe things are improving.

We are moving ahead with systemic preparations such as the establishment of an employee code of conduct, inauguration of the compliance committee, and installation of the SMK ethics "help line." Naturally, however, there is no point in merely erecting systems. Our CSR activities have to be accompanied by performance with the three types of "concern" by each and every employee. This leads to higher motivation and, in turn, improved PSR and CSR activities. A chain reaction of this type is what makes the systems work. To induce it, we must also provide information with an awareness of the concerned parties. This observation also applies to this environmental report, which is one of the tools of such information dissemination. I think we can widen its scope with various stakeholders in mind. By so doing, we could engage in discussion of various CSR aspects and thereby attain higher levels of quality in our CSR activities.

Tasks for the manufacturing industry

– What are the important considerations for SMK as regards the environmental aspect of CSR?

As a component manufacturer, our most important consideration is not to be wasteful in our production. Elimination of defects saves resources and energy, and makes it unnecessary to dispose of the defective goods. It is indispensable for manufacturers to pursue this goal. We launched our Zero Defect (ZD) campaign last year. The quest for zero defects inevitably makes firms more friendly to the environment. To reach and keep zero is nearly impossible, and presents us with an unending challenge. Our goal, nevertheless, has to be zero.

In our approaches to environment-friendly products as well, we should aim for development and proposal ourselves instead of taking a passive attitude. I think we are becoming capable of such action.

A green planet

– Please let us hear your own aspirations for the environment.

One of our astronauts remarked that, from outer space, Japan looks like a beautiful lush green carpet. We want to maintain this greenery through harmonization with nature. In China, desertification has reportedly advanced to the outskirts of Beijing. If developed countries put their egos aside, there are presumably a lot of areas where they can help developing ones. For example, they could provide alternatives that would enable a rise in the quality of life without logging rain forests, or bring equipment into developing countries to lower levels of pollution. I am certain that solutions can be found if people around the world pool their expertise. I hope that each of us will do what we can, however small, and that the sum of these individual efforts will have the effect of improving the environment.

The SMILE badge

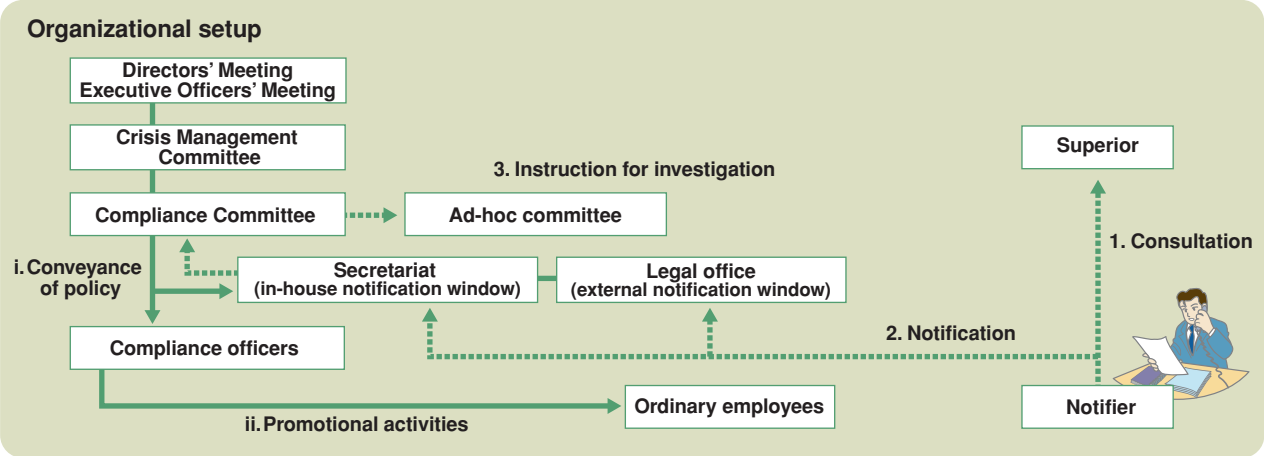
The badge on Mr. Nakamura's left pocket symbolizes the SMK Manufacturing Innovation Leads to ZD (SMILE) Project, a Group-wide undertaking aimed at heightening quality and productivity.
The idea behind the SMILE Project is to attain the industry's highest levels of quality and productivity by initiatives grounded in the essence of manufacturing. The badge is being distributed to all employees (executives, regular employees, and part-time/temp staff) of the SMK Group with a view to encouraging a concerted effort for stronger manufacturing capabilities.

SMK's Setup for Compliance

We promulgated the SMK Group Charter for Corporate Behavior in 1997 (and revised in 2003) to present a model for corporate conduct befitting a society that is truly full and vibrant. To put the Charter into concrete practice, we had our respective divisions prepare and execute action plans.

In April 2006, we drew up the SMK Group Code of Conduct, which sets forth fundamental internal rules to be followed by all executives and employees of the Group.

Meanwhile, in the management aspect, we instated the scheme of executive officers and made a separation between management execution and supervision. We also introduced the scheme of outside directors and auditors to see that our activities are checked by external parties and assure compliance with all pertinent laws and regulations.



Corporate Behavior Charter and Environmental Charter

SMK-Group Charter for Corporate Behavior

SMK-Group, in addition to being economic entity engaged in the pursuit of profit through fair competition, must be useful to society as a whole. For this reason, SMK-Group will adhere to the following nine principles; respect the letter and spirit of all laws, whether domestic or foreign, and of international rules, and behave in a socially responsible manner.

1. For customers' confidence, We will develop and provide superior goods in terms of quality, cost, and safety through our accumulated advanced technology.
2. To be understood/supported by customers, business partners, and shareholders, We will engage in fair, transparent, and free competition, under the spirit of independence, self-help, and self-regulation.
3. We will promote communication with society, by fairly disclosing corporate information, as an open enterprise in the advanced information network age.
4. We will take independent and positive action, fully recognizing the necessity of environment conservation.
5. We will strive to make it possible for employees to lead pleasant and enriched lives, by guaranteeing a comfortable and safe work environment and respecting employees' dignity and individuality.
6. We will stand firm against antisocial forces and organizations that threaten the order and security of civil society.
7. In overseas operations, we will observe international rules, respecting the cultures and customs of the hosting society, and will manage ourselves in a manner that contributes to local development as good corporate citizen.
8. In order to turn the spirit of the Charter into reality, top executives will always listen to the voices within/outside SMK, take the leadership to make all relevant Group people be fully aware of the Charter and to bring corporate systems into line with it, and will endeavor to cultivate corporate ethics.
9. When the Charter is violated, top executives will take the initiative in resolving the problem, endeavoring to clarify its causes and prevent its recurrence, and take necessary action as explain precisely to the society/punish responsible person including themselves.

SMK Environmental Charter

1. Basic Philosophy

The SMK Group pursuits environmental preservation as well as economic development, by integrating its current technological strengths and creating advanced technology. As a good corporate citizen, every one of us will contribute to the promotion of sustainable global development.

2. Action Guidelines

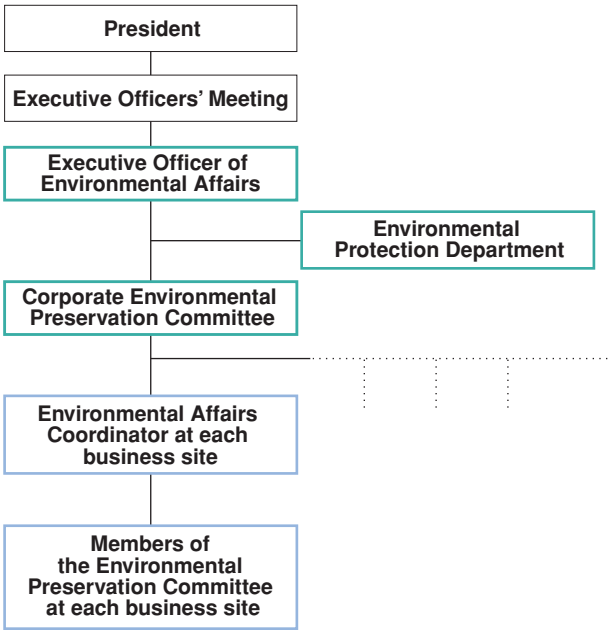
1) Develop environmentally friendly products
2) Reduce waste by using everything to its fullest extent
3) Preserve natural resources and saving of energy
4) Encourage 3R (reduce, reuse and recycle)
5) Realize waste-free procurement and manufacturing

Promotional Organization for Environmental Preservation

In SMK, the corporate policies and initiatives related to environmental preservation is discussed and decided by Corporate Environmental Preservation Committee, which is presided by Executive Officer of Environmental Affairs. Among the policies or initiatives, significant items are also reviewed by Executive Officers' Meeting. After that the policies or initiatives are developed to each business site.

At each business site, local Environmental Preservation Committee decides local policies or initiatives in accordance with corporate policies and initiatives taking locally specific issues into consideration and puts them into practice.

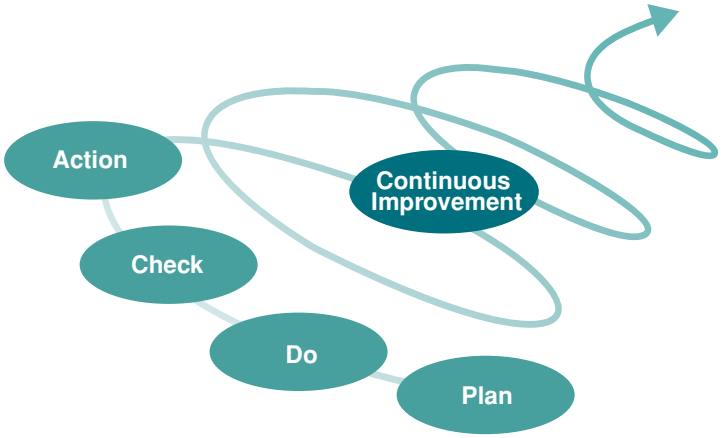
Organization for Environmental Preservation



Environmental Management Systems

SMK's environmental management system is based upon the global standards of ISO 14001. In the system, action plans are established in accordance with the corporate and local policies and they are implemented. The internal audit checks the result of the activity, and indicates the incompleteness to be improved, if any. The corporate management assesses the effectiveness of this environmental management system and issues improvement directives in order to reflect them to the environmental policies or future action plans.

By repeating this cycle periodically, continuous improvement is to be achieved.



Environmental Education

We implement environmental education as part of the curriculum of layer-specific education and specialized instruction provided throughout the Group. In addition, the business sites each make their own annual plans for it.

In fiscal year 2005, we emphasized education related to the EU RoHS directive and other regulations on product content of substances that burden the environment. Our various business sites have programs utilizing the explanatory materials prepared by the Environmental Protection Department in head office. The Department also dispatches personnel to conduct classes at the sites overseas.

Overseas staff members have given the classes high ratings, commenting that a correct understanding of the purpose and substance of regulations also gave them a better appreciation of the objective of their own activities. We are working for further improvement of our environmental education.

Classes at overseas offices

In SMK, we are striving to develop products with little environmental impact, in order to achieve sustained advancement and economic development while also preserving the environment, as noted in our Environmental Charter.

1. Reduction and exclusion of substances stipulated in the SMK Green Procurement Guidelines
2. Development of products with less environmental impact through product assessment
3. Development of products taking account of needs for energy conservation and recycling

To reduce usage or exclude contents of environment-burdening substances, we check raw materials at the time of design, but provisions must also be made to prevent contamination or admixture when materials are put to use for production. As a part of our green procurement policy, we seek the cooperation of our suppliers in this connection and have erected a scheme for error-free control.

Product assessment

SMK has adopted product assessment to achieve environment conscious product design. The objective is to make a quantitative assessment at the stage of design, inclusive of packaging materials, to ascertain the degree to which the product reflects concern for the environment throughout its life cycle, in order to create products that are gentle to the earth. More specifically, we examine and assess the four items of contents of environment-burdening substances, resource conservation, recycling, and energy conservation.

In checking the contents of chemical substances, we confirm matters such as the absence of prohibited substances and reduced use of controlled substances. Regarding resource conservation, assessments are made of items such as reduction of product size and weight, lengthening of the service life, and simplification of packaging. In the recycling assessment, the focal points are design facilitating disassembly, disassembly procedure sheet, ease of sorting, and use of parts and materials that can be recycled. The assessment with respect to energy conservation considers a decrease in power consumption not only at the time of product use but also during standby.

If the assessment indicates that the product does not meet certain standards, we make a study to determine countermeasures and modify the design accordingly.

Green Procurement Guidelines

In SMK, we have established Green Procurement Guidelines for our suppliers and distribute a document to them, as appropriate. Through the guidelines, we request our suppliers to meet the following requirements.

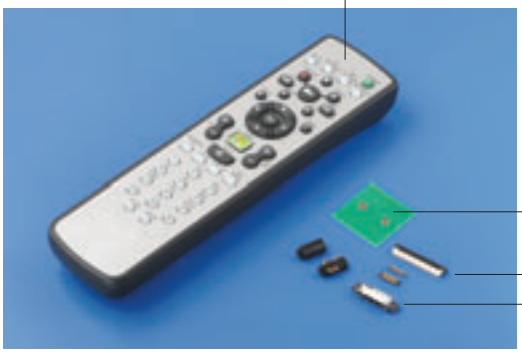
- Instatement of environmental management systems and promotion of activities for preservation of the environment
- Cooperation with examinations to ascertain, and with efforts to exclude, contents of environment-burdening substances We are going to continue working for reduction of environment-burdening substances with the cooperation of our suppliers.

* The guidelines are also disclosed on the SMK website.

Reduction and Exclusion of Environment-Burdening Substances

Halogen-Free Products

Halogen compounds have been applied in covering for cables and as a flame retarder for resins. There are demands to make as little use of them as possible because of the risk of dioxin derivation. The products outlined below naturally do not use bromic flame-retarders (PBB and PBDB) specified on the RoHS list of prohibited substances, and have flame retarders that do not contain halogen.



Remote control unit for computers installed with the Windows® XP Media Center Edition
The thin-wall design reduced the material weight and helped to save materials and resources. In addition, use of materials complying with the RoHS directive and halogen-free parts made a contribution to environmental preservation.

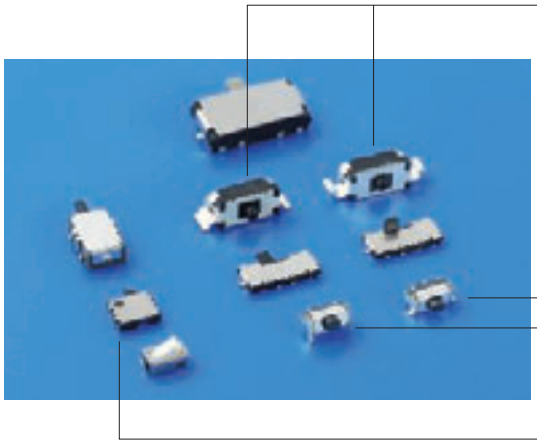
TS-3
This product is a coaxial connector for inspection of RF output with a switching mechanism. It uses Au (gold) plating on the terminals and halogen-free resin materials. It conforms with the RoHS directive and other regulations governing use of hazardous chemical substances. It has a wide range of applications including mobile phones, wireless LAN, and Bluetooth.

FP-03U
This product is a 0.3mm spacing FPC-use connector. It has a slide (ZIF) structure with a high contact dependability. We offer a broad assortment in respect of the pin number, which ranges from 17 to 84, and selected materials that are in conformance with the RoHS directive and do not contain halogen.

DI-5 connector
This product is a coaxial interface connector for mobile telephones. With its insertion-type terminal, it offers a stable coplanarity, and prevents floating off the contact surface and disconnection of the terminal.
To conform with the RoHS directive, we adopted LCP for the molded parts and solderless plating for the stamped parts.

Products in Conformance with the RoHS Directive

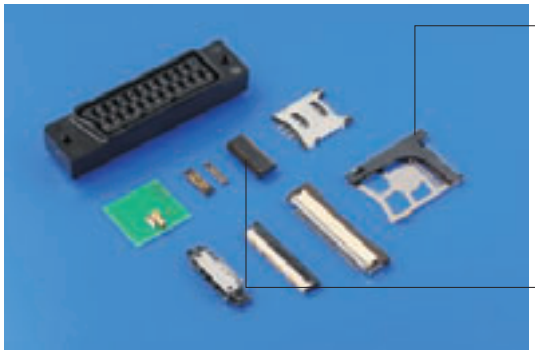
In response to the EU RoHS directive effected in July 2006, we made our own list of prohibited substances including those in the directive and are asking our suppliers to comply with it. In 2002, we initiated design free of all such substances for new products and began modifying the design of those not in conformance. Through this effort, we brought our products in all fields into conformance with the RoHS directive.



Double-action horizontal switch
The adoption of a unique structure made it possible to achieve a double-action function with a horizontal switch. The product is free of FPC, which is needed for the conventional vertical type, and the switch can be attached directly to the board. This arrangement helps to save materials and resources. The switch conforms with the RoHS directive.

Small horizontal MT switch-II
By devising an original structure, we succeeded in reducing the board occupation area required for attachment to a set to the lowest level in the industry. Because this helps to reduce the space required on the set board, it also contributes to reduction of set size and, by extension, use of materials and energy. The switch also conforms with the RoHS directive and assists preservation of the environment.

Detection switch (DSI)
We succeeded in developing an ultra-small-size model that saves materials and resources. The assortment includes a push-off type in which the continuity during switch operation is the reverse of the conventional one. This lowers the power consumption on the set level and helps to conserve electricity. The product is also in conformance with the RoHS directive.

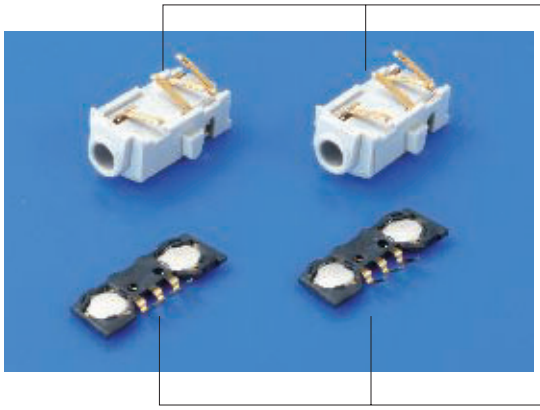


Memory Stick Duo™ connector
This connector was developed for installation in DSCs and mobile phones with a camera function.
Au (gold) plating was used for the contact and plate, and the housing is made from LCP resin with a high heat resistance. The connector features thin walls that take account of the RoHS directive as well as warping and deformation during reflow. The connector height was held to 2.15mm by adjustment of the plate shape. In addition, design concern for the end users is exemplified by the eject stroke in the push-out mode; at 7.0mm, it is among the longest in the industry.
*Momory Stick Duo™ is a trademark of Sony Corporation.

Push B-to-B
This is a one-piece connector for board-to-board connection. The connection is made by pushing the product mounted on one board to the PAD on the other board. As compared to the two-piece type, it is characterized by the following features: ① halving of the amount of solder paste in board mounting, ② decrease in the number of board mounting steps, and ③ elimination of the risk of destruction due to the impact from drops. The product is also in conformance with the RoHS directive.

Solderless Products

We are also developing products that do not need any soldering, by adoption of a spring contact for connection with the board.



2.5mm small jack
This product has a spring terminal with a small-diameter (2.5mm) jack for connection of mobile phone headsets.
The spring contact terminal does not require any soldering and so is solder-free. Furthermore, a stable contact performance is assured by pressing the spring contact terminal onto the board.

Double-dome switch
The switch is of the spring contact type; the terminal is pressed onto the printed circuit board for attachment to the set.
This eliminated the need for soldering for attachment to the set. The product also contributes to the environment because it is lead-free.

Environmental Preservation Activities

Summary of Activities in FY2005

In SMK, we set medium-term targets for environmental activities and take action to attain them. Table 1 presents the status of attainment for the main targets in fiscal 2005.

The head office obtained ISO 14001 certification for its environmental management system as targeted. With this development, such certification had been acquired by all of the sites, including domestic offices and all overseas manufacturing sites in other countries.

To conserve energy, we strove to improve processes and achieved reductions in excess of the targets. For waste, we expanded recycling and greatly decreased quantities for buried disposal. The amount of waste derivation was lower than in fiscal 2004, but we failed to attain the target because of an unscheduled amount of waste derived due to a readjustment of our business. Through our activities to reduce use of environment-burdening substances, we brought all of our product categories into conformance with the RoHS directive in 2005.

Yoshio Sakurai
Executive officer of Environmental Affairs

Table 1 Achievement in FY2005 Self-assessment A: attainment of targets by a wide margin B: attainment of targets C: failure to attain targets

	FY2005		Self-assessment
	Target	Achievement	
TN deployment of environmental management systems	Acquisition of ISO 14001 certification for the Head Office	Completion of certification for the Head Office (certification of all establishments in Japan)	B
Energy conservation	3% reduction of energy consumption on a production value basis relative to FY2004 (0.077 kl/million yen)	5% reduction (0.075 kl/million yen)	A
Reduction of waste	7% reduction of industrial waste output on a production value basis relative to FY2004 (0.0125 t/million yen)	5% reduction (0.0128t/million yen)	C
	9% reduction in the landfill waste volume relative to FY2004 (75 t)	80% reduction (16 t)	A
Reduction of use of environment-burdening substances in products	Conformance with the EU RoHS directive	Completion of conformance with the EU RoHS directive in all product fields	B

Summary of Activities Under the Medium-Term Plan (FY2002–2005)

As shown in Table 2, we made fairly steady progress toward the medium-term targets up to and including fiscal 2005, and managed to achieve a waste reduction in excess of the target. In the category of energy conservation, where the target was not met, we are going to aim for higher levels of efficiency in manufacturing processes and even more effective use of energy.

We are currently preparing the next medium-term plan in correspondence with the objectives of the management plan.

Table 2 Achievement of the medium-term plan

	Medium-term plan (FY2002–FY2005)		Self-assessment
	Target	Achievement	
TN deployment of environmental management systems	Acquisition of ISO 14001 certification by the head office and four overseas manufacturing sites	Acquisition of certification as targeted	B
Energy conservation	Reduction in energy consumption on a production value basis by 8% relative to FY2001(0.068 kl/million yen)	1% increase (0.075 kl/million yen)	C
Reduction of waste	20% reduction of industrial waste output on a production value basis relative to FY2001(0.0145 t/million yen)	30% reduction (0.0128 t/million yen)	A
	20% reduction in the landfill waste volume relative to FY2001(95.3 t)	87% reduction (16 t)	A
Reduction of use of environment-burdening substances in products	Achievement of lead-free solder and plating Complete elimination of hexavalent chromium Reduced use of halogen compounds	Completion of conformance with the EU RoHS directive in all product fields	B

Environmental Accounting

To get a quantitative grasp of our environmental preservation activities as a major priority, in fiscal 2000, we began environmental accounting in accordance with the Environmental Accounting Guidelines published by Japan's Ministry of the Environment. In fiscal 2004, we started to compile data for overseas sites as well. Beginning with this report, we are disclosing actual data for environmental preservation cost and economic benefit (effect) for all sites in the SMK Group.

Totalization Procedure

1. SMK's environmental accounting practices adhere to the Environmental Accounting Guidelines 2005 published by Japan's Ministry of the Environment.
2. Data were collected for the period from April 2005 to March 2006.
3. Figures for environmental preservation cost and economic benefit (monetary) are based on data for all expenses (including depreciation cost) and equipment investment required for the preservation activities, and the benefit accrued from them in monetary terms, at all SMK Group companies, domestic and foreign.
4. Figures for the environmental preservation benefit (in terms of material quantity) are based on data for quantity-reducing effects in domestic Group sites.
5. The accounting covered all works, branches, and sales offices in Japan and other countries, and the five Group companies in Japan. The names of the domestic and foreign works and Group companies covered are as follows.
<Domestic> SMK: Head Office, Gate City Office, Toyama Works (including Hokuriku Sales Office), Hitachi Works (including Ibaraki Sales Office), Yamato Works (including Kanagawa Sales Office), Osaka Branch, Nagoya Branch, and Fukuoka Sales Office
Subsidiaries: Toyama Showa Co., Ltd., Showa Denshi Co., Ltd., Yatsuo Denshi Kogyo Co., Ltd., Ibaraki SMK Co., Ltd., SMK R&D Co., Ltd.
<Foreign> For the scope of overseas sites covered, see the SMK Networks of overseas production and sales locations on page 18.
6. Data for environmental conservation benefits indicated the decrease in volume compared with the previous fiscal year.
7. Economic benefits accrued are clearly demonstrable and do not include speculative benefits.
8. Depreciation on equipment investments was calculated at a climbing rate based on the preceding five years.
9. The table posts a figure of 60 million yen in investment in the category of administration costs and 1 million yen for benefit accrued in that of global environmental preservation costs. Figures are not provided for the rate of change relative to the previous year because the corresponding fiscal 2004 amounts were zero.
10. A figure is not presented for the rate of reduction in CO_2-equivalent emissions per unit of production value relative to the previous year because of the increase in the fiscal 2004 level.

Environmental Preservation Costs and Benefits

Unit: millions of yen

Category		Major Initiatives	Environmental Preservation Cost				Economic Benefits Accrued		Environmental Conservation Benefit (Materials)	
			Investment		Expense					
			Amount	Year-on-Year	Amount	Year-on-Year	Amount	Year-on-Year	Consumption/ Output Savings	Year-on-Year
Business area costs	Pollution prevention costs	Operation and upkeep of processing facilities used to prevent pollution	13.6	49%	49.1	92%	0.0	—	Reduction of toxic substances: 3.2 tons	49%
	Global environmental preservation costs	Maintenance, inspection and efficient operation of energy conservation equipment, air-conditioners, etc.	9.1	169%	39.0	154%	1.3	—	CO_2 emissions per unit of production value 0.007 t - CO_2 kl/million yen	—
	Resource circulation costs	Appropriate processing and recycling of industrial waste	0.0	0%	40.6	97%	80.7	85%	Landfill waste by weight: 66.0 tons Industrial waste output on a production value basis: (0.0007 tons/million yen)	58%
	Sub-total		22.7	68%	128.7	107%	82.0	86%		
Upstream/ downstream cost		Green procurement	0.0	—	6.7	152%	0.0	—		
Administration costs		Education for environmental management; acquisition of ISO 14001 certification; auditing and assessment of environmental impact	60.1	—	169.2	198%	0.0	—		
R&D costs		Development of environmentally friendly products	0.0	—	68.4	70%	0.0	—		
Social activity costs		Initiatives to expand use of green space of manufacturing works	0.0	—	9.0	145%	0.0	—		
Environmental remediation costs			0.0	—	0.0	—	0.0	—		
Total environmental preservation costs			82.8	247%	381.9	122%	82.0	86%		

Overall investment by SMK Group: 3,678 million yen
Overall R&D costs borne by SMK Group: 4,407 million yen

Environmental Preservation Cost

The environmental preservation cost in fiscal 2005 came to 83 million yen in investment and 382 million yen in expenses. Relative to fiscal 2004, these figures represented respective increases of 49 million yen and 68 million yen.

These increases derived mainly from the expanded installation of in-house inspection equipment (XRF units) to verify heavy metal content for customers in preparation for effectuation of the EU RoHS directive, and the increase in labor costs required for content inspection and measurement for purchased materials and parts for use in prototypes and mass-produced goods accompanying this expanded installation. Administration costs were up 84 million yen from fiscal 2004 as a result. Meanwhile, the task of selecting materials and parts free of controlled substances and design of alternatives at the stage of product design and development came to a head in fiscal 2004 and was basically finished in fiscal 2005. For this reason, research and development costs fell by 29 million yen against fiscal 2004.

Investment totaled 16 million yen in Japan and 66 million yen in overseas works. The corresponding totals for expenses were 273 and 109 million yen. The higher investment overseas was due to the expanded installation of the (XRF) inspection equipment for heavy metal content, which centered around overseas works. The main factors behind the higher expenses in Japan were the increase in environmental preservation activity man-hours because operations are led by the headquarter departments, and the higher levels of personnel expenses in Japan.

Economic Benefits

At 82 million yen, the economic benefits in fiscal 2005 were down 14 percent from fiscal 2004 due to the decline in effects as a result of the efforts to reuse idle production facilities.

Benefits totaled 23 million yen in Japan and 59 million yen in overseas works. The amount in other countries was higher mainly because of the profit on sale of unneeded waste (scrap iron, non-ferrous metal scrap, and plastic scrap), which accounted for about 78 percent of the benefit total, and the higher (relative to domestic locations) derivation of unneeded waste accompanying expanded production overseas.

Benefits not included in the scope of economic benefits may be exemplified by the rise in production yield due to the promotion of activities at domestic and foreign works under the SMILE Project, which was launched in fiscal 2005 for the purpose of improving production processes. This reduced the part and material loss associated with defects by about 67 million yen.

Environmental Conservation Benefits

Figures for the environmental conservation benefits due to reduced material input are based on data for domestic sites.

The table shows reductions of 3.2 tons in use of hazardous substances, 0.007 tons of CO_2 equivalent per million yen of production value as indicative of energy consumption, 0.0007 tons of industrial waste output per million yen of production value, and 66.0 tons in landfill waste quantities.

The reduction in the use of hazardous substances was driven by the action for conformance with the RoHS directive. We managed to reduce use of lead dramatically as compared to fiscal 2004. The buried disposal quantity was much lower than in fiscal 2004 because, at Toyama Works, we found a way to recycle compound parts and materials containing glass, which had been disposed of by burial, and were able to curtail the derivation of sludge in wastewater treatment by improving the treatment process.

Extension to Overseas Works and Future Policies

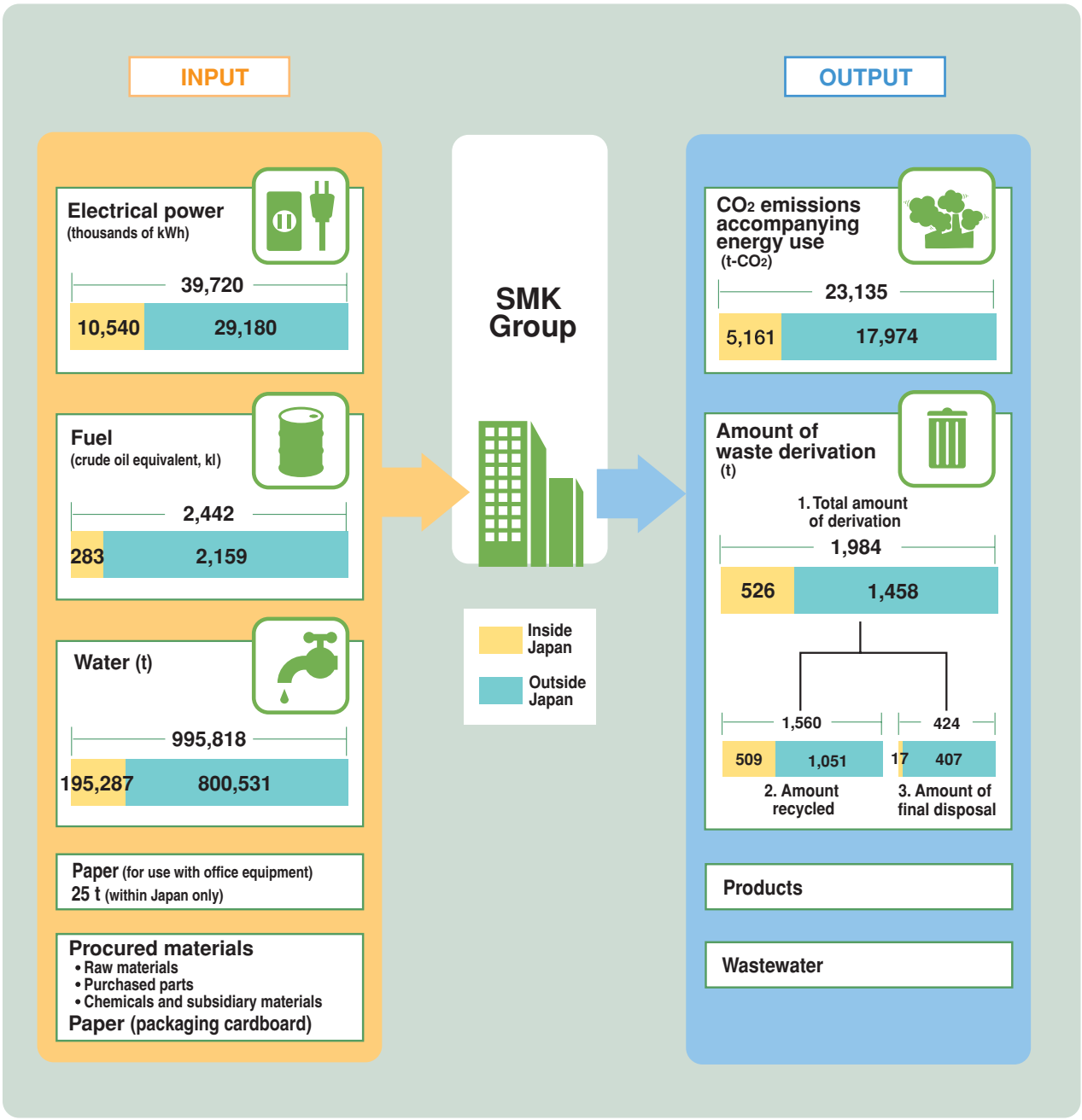
In fiscal 2005, we were able to collect environmental accounting data and disclose the results for environmental preservation costs and economic benefits for the Group as a whole, including overseas works. We intend to extend the accounting for environmental conservation benefits to overseas works. We are also striving for a better environmental accounting conformance among all works (including overseas ones); higher degrees of accuracy; organic evaluation of environment-related investment, expenses, and benefits throughout the Group; and construction of more efficient environmental management systems.

Material Balance

At SMK, we are endeavoring to ascertain and reduce levels of environmental burden in each process (design & development, manufacture, and sale).

As shown in the figure below, the level of environmental burden at our overseas locations is higher than that in Japan. This trend is deepening along with the increase in the share of our total production occupied by these locations.

Up to and including fiscal 2005, we had each site (domestic and foreign) prepare plans and execute activities to mitigate burden. For the future, we hope to induce the spread of activities that proved to be effective to other sites and further lower levels of environmental burden in the Group as a whole.



In SMK, we are bolstering initiatives to raise energy efficiency and promoting energy conservation. To reduce waste, we are aiming for “zero emissions” and constructing a system for resource recycling.

Scope of Data Compilation

SMK: Head Office, Gate City Office, Toyama Works (including Hokuriku Sales Office), **Hitachi Works** (including Ibaraki Sales Office), **Yamato Works** (including Kanagawa Sales Office), **Osaka Branch, Nagoya Branch, and Fukuoka Sales Office**
Five domestic subsidiaries: Toyama Showa Co., Ltd., Showa Denshi Co., Ltd., Yatsuo Denshi Kogyo Co., Ltd., Ibaraki SMK Co., Ltd., SMK R&D Co., Ltd.

Period

Targets: **FY2006 (April 2006–March 2007)**
Actual achievements: **FY2005 (April 2005–March 2006), FY2004 (April 2004–March 2005), FY2003 (April 2003–March 2004), and FY2002 (April 2002–March 2003)**

Energy Conservation Initiatives

	(vs. FY2004)
• Energy consumption on a production value basis	95%
• Energy consumption	92%

- We are pursuing energy conservation activities using the level of energy consumption on a production value basis as an indicator. We took approaches to conservation of energy on the company-wide level through activities such as conformance with ISO 14001 and the Team Minus 6% program associated with the Kyoto Protocol. As a result, in fiscal 2005, we reduced our energy consumption on a production value basis by 5% relative to fiscal 2004.

Resource Conservation Initiatives

	(vs. FY2004)
• Industrial waste output on a production value basis	95%
• Industrial waste output by volume	92%
• Recycling rate	132%
• Landfill waste rate	21%

- Towards our goal of “zero emissions”, we are conducting a campaign against waste derivation and discarding. We apply the amount of derivation as percentage of production value as the indicator for reduction. In fiscal 2005, this amount was 5% less than in fiscal 2004.
- Through our ISO 14001 activities, we worked to increase the waste recycling rate. As a result, in fiscal 2005, we attained a recycling rate of 97% (up 32% from fiscal 2004) and landfill waste rate of 3% (down 79% from fiscal 2004).
- Hitachi Works achieved “zero emissions” for the fifth consecutive year since fiscal 2001.

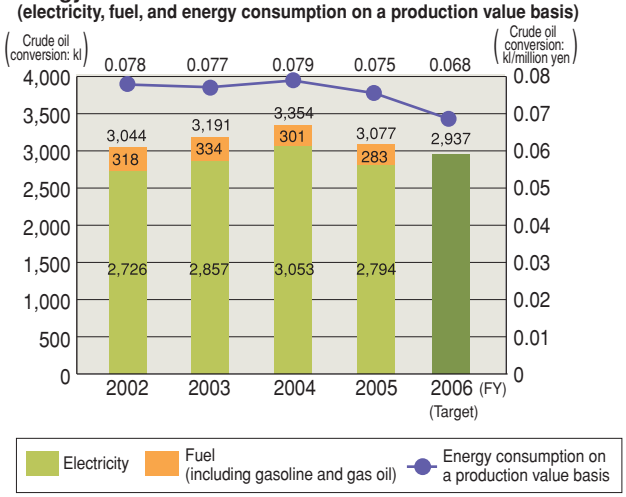
Energy consumption on a production value basis: Volume of energy consumed (kl) measured per million yen of production value.

Industrial waste output on a production value basis: Amount of industrial waste output volume (tons) measured per million yen of production value.

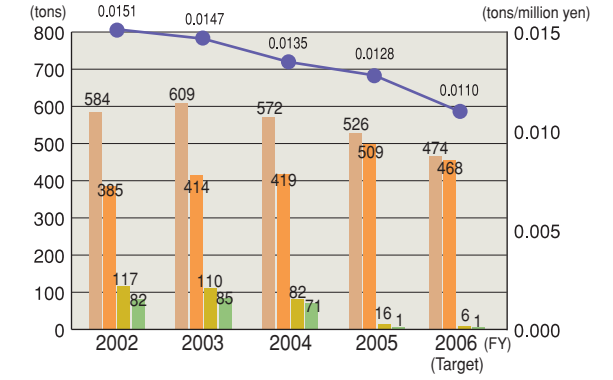
Zero emissions: Elimination of industrial waste through recycling and reuse of materials.

Intermediate processing waste: Waste that is crushed, separated or subjected to a process such as thermal processing, chemical fusion, chemical neutralization or chemical detoxification. Intermediate processing is conducted for recycling purposes. (Industrial waste is categorized as recycling waste, intermediate processing waste or landfill waste.)

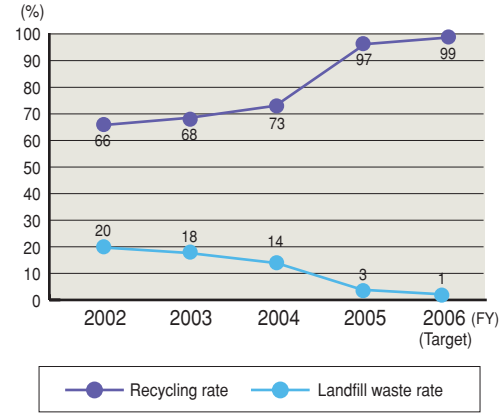
Energy Use
(electricity, fuel, and energy consumption on a production value basis)



Industrial Waste Output



Recycling Rate and Landfill Waste Rate



SMK Group/Head Office

ISO 14001 certification acquired by our Head Office and other offices

In 1996, we decided to instate an environmental management system based on ISO 14001 for systematic activities of environmental preservation. By the end of fiscal 2004, we had obtained ISO 14001 certification for all of our production locations in Japan and other countries.
In fiscal 2005, we also obtained ISO 14001 certification for our Head Office and other offices (including both sales and logistics locations) in Japan. As this evidences, environmental preservation activities are taking hold among our offices, which had been lagging somewhat behind the production locations in this respect.
Thus far, we have set goals and targets on the Group level, but activities to reach them were implemented in the context of the ISO 14001 systems operated at each production location.
Now that we have had the Head Office certified under ISO 14001, we plan to unify orientations throughout the Group and exercise Head Office capabilities in the interest of fuller activities of environmental preservation.

An employee listens to a question from an external examiner (at left).

Team Minus 6%

The SMK Group is participating in Team Minus 6%, a national program for mitigation of global warming, and involved in the “COOL BIZ” and “WARM BIZ” campaigns for higher air conditioner settings in summer and lower ones in winter. These activities are not confined to Japan; we are calling upon our establishments overseas to join us in them for a Group-wide effort.
We have also produced and distributed a pamphlet about prevention of global warming for employee households.

Notice to customers at the Head Office reception desk about our cooperation with the “COOL BIZ” campaign

Yamato Works

Switch to a high-efficiency air conditioning system

In July 2005, the Yamato Works replaced its air conditioning system, which had been used for more than 20 years since the building was opened in 1983. The former system operated at a fixed speed, and was replaced with an inverter type that consumes less power and therefore offers savings on power bills. The new system uses CFC-free refrigerant, and has a regenerative capability to conserve energy and enable use of nighttime power, which is supplied at lower tariff rates. It therefore curtails the contracted power supply and lowers environmental burden.
Because it uses the cheaper nighttime power, the regenerative system is an economical one. The regeneration tank stores cold water and ice in the cooling mode and hot water in the heating mode at night, and makes use of this stored thermal energy during the day. The cold water and ice used for cooling in summer can be produced more efficiently at night than during the hot daytime, and the yearly power consumption is lower as a result. The heat source can also be made smaller by an amount commensurate with that of regeneration, and this leads to a corresponding decline in the contracted power supply and basic service rate.
The electricity serving as the heat source is generated by hydropower, thermal power, and nuclear power plants. Electric power companies generate power mainly with nuclear power plants for the load at night, when the demand is lower, and with thermal power plants fired with fossil fuels such as oil and gas for the extent of increase during the day, when the demand is higher. The installation of a regenerative air conditioning system utilizing nighttime power generated by nuclear plants also contributes to preservation of the global environment because it is linked to prevention of global warming due to the accompanying decrease in carbon dioxide (CO_2) emissions, as well as prevention of air pollution and acid rain due to that in nitrogen oxides (Nox) and sulphur oxide (Sox) emissions.

Regeneration tank (right) and outdoor unit containing a compressor (left)

Toyama Group

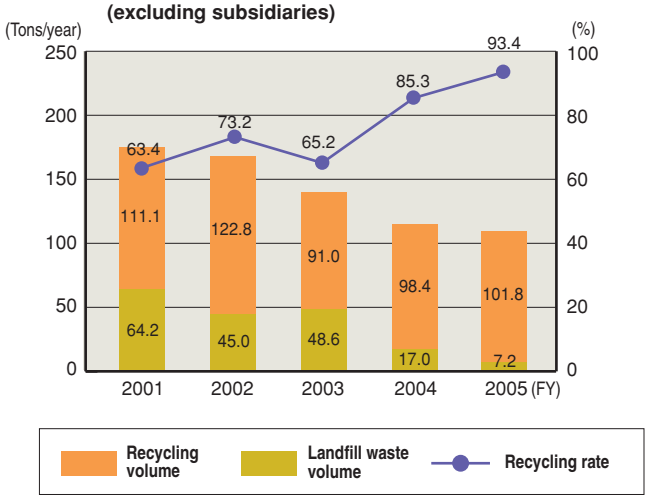
Toyama Works*, Hokuriku Sales Office*, Toyama Showa Co., Ltd.*, Showa Denshi Co., Ltd.*, and Yatsuo Denshi Kogyo Co., Ltd.*

* Asterisks indicate sites that have received ISO 14001 certification.

FY2006 - targeted attainment of "zero emissions"

Various types of waste are derived in the manufacture of electronic structural components. We have conducted repeated campaigns for improvement to reduce waste volumes and increase the recycling rate. While we achieved results with these activities every year, the sludge derived in treatment of wastewater from the manufacturing process continued to be disposed of by burial. In fiscal 2005, however, we established a process for reducing the sludge disposal quantity, and succeeded in recycling the entire quantity by the end of the year. As such, we expect to attain the goal of "zero emissions" in fiscal 2006.

Trend of the industrial waste output and the recycling rate at the Toyama Works (excluding subsidiaries)



Commendation for excellent energy management plants

In fiscal 2005, the Toyama Group was commended as an "excellent energy manager" by the Hokuriku Electric Association of the Japan Electric Association for its long-standing efforts to rationalize use of power at its plants and their results.

Note: The commendation covered Toyama Works, Hokuriku Sales Office, Toyama Showa Co., Ltd. and Showa Denshi Co., Ltd., all of which are on the Toyama Group grounds.

The commendation ceremony

Hitachi-Ibaraki Group

Hitachi Works*, Ibaraki Sales Office.*, and Ibaraki SMK Co., Ltd.*

* Asterisks indicate sites that have received ISO 14001 certification.

ISO 14001 - 2004: acquisition of certification

In September 2005, six years had passed since the Hitachi-Ibaraki Group was certified under ISO 14001 in September 1999. In response to a request for conformance with the 2004 version of the standard, the Group set about the tasks of reviewing and revising manuals, standard sheets, and procedural sheets in preparation for the follow-up screening, beginning in March 2005. It passed the screening and was certified under the 2004 standard in August 2005.

Participation in community clean-up activities

In its environmental policy, the Hitachi Works states that all of its employees shall be aware of corporate citizenship, and aim for sustainable advancement and protection of the global environment in all of their business activities. In line with this policy, the employees actively participate in community campaigns for cleaning up beaches while also beautifying the grounds of the plant. The number of participants from the Hitachi-Ibaraki group has been steadily rising, and reached a record-high 126 in fiscal 2005.

Attainment of zero emissions for five consecutive years

While reducing waste output, we have been taking action focusing on recycling all amounts of waste derived. As a result, the Group has held the amount of landfill waste to zero for five consecutive years since fiscal 2001.

Overseas works

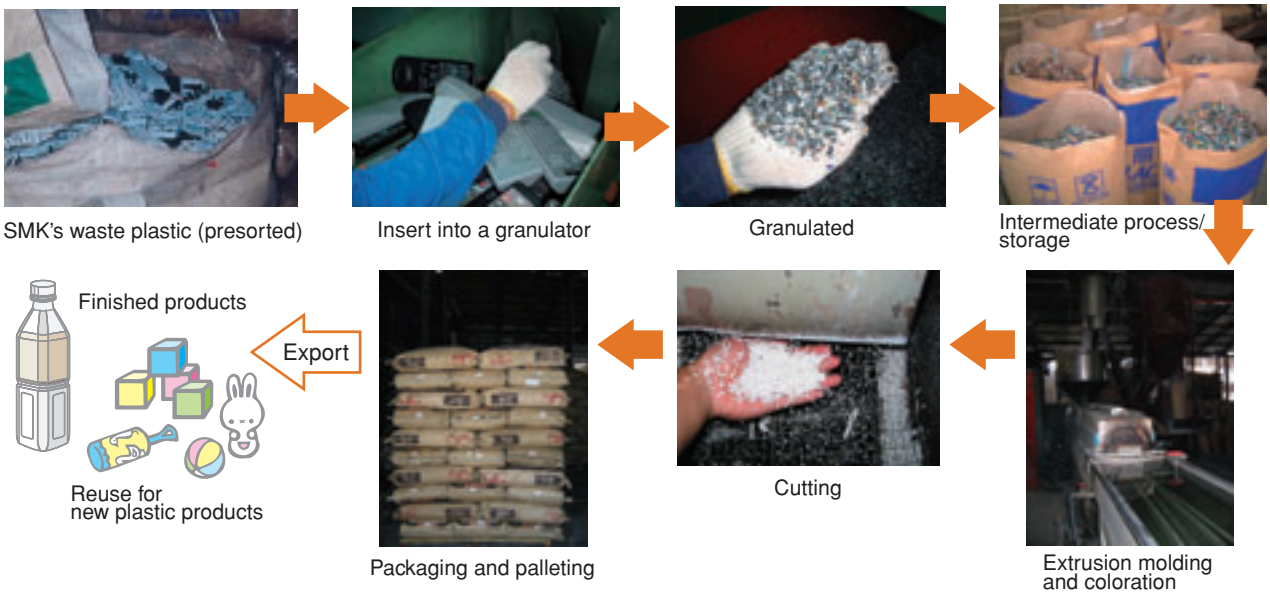
SMK Electronics (Malaysia) Sdn. Bhd

100% recycling of waste plastic

SMK Malaysia commenced recycling activities in 2001 and has been working endlessly with the help of scrap dealers, to improve on processes and sorting methods.

Since 2001,we have sold waste to several scrap dealers. Initially, our selection criteria solely depended on selling prices and recovery rates. But with the recent environment problems and increased oil prices, purchasing price alone is no longer a sufficient criteria. As a result, the company is now making selection based on quality, cost and delivery (QCD), emphasizing more on quality. In connection with quality, we check the processes undergone by the waste after sales and its conformances with laws and ISO standards. SMK Malaysia concludes a one-year contract with scrap dealers therefore reviews for renewal is done annually. The content of the contract includes provisions for fines, supervisions and cautions.

SMK Malaysia recycling process



SMK Electronica S.A. de C.V. (Mexico)

Handling of chemical waste and improvement of treatment

At SMK Mexico, chemical waste is derived in forms such as cloth used to wipe away coating residue and liquid used for cleaning containers. Since January 2006, we have been working to curtail this derivation to the minimum. Through these activities, it also hopes to reduce the cost required for waste treatment by a substantial 20 percent. The main activities are as follows.

● Disclosure of quantitative data on waste derivation

For the purpose of analyzing the status quo and raising employee awareness, the company inputs the quantity of waste derivation into a data base every month for each work area, and makes this information available to the public.

● Reduction of waste cloth used to wipe away coating and other residue

Formerly, employees took new cloth from the supplies shelf themselves and used it to clean compounding containers.
The situation has improved under the new arrangement, in which a distinction is made between new and used cloth, and employees are issued one or the other type, depending on the purpose. This prevents needless use of new cloth and reduces chemical waste.
In addition, the level of management was raised by clearly designating people responsible for managing articles such as ink, solvent, and fixtures.

● Heightening of employee awareness

We prepared a manual reflecting the aforementioned improvements. This manual is put to use in employee education, to reconfirm the importance of proper handling of chemical substances.
We are also conducting market surveys and taking other steps to identify points requiring improvement at the firms where it outsources waste treatment while making further improvements toward its goals.


Solvent management room

Measures to improve quality

Timely supply of products that are trusted by consumers and satisfy their needs is a key responsibility of a manufacturer. To this end, we in the SMK Group have accorded top priority to quality, cost, and safety. We have made it the first article of our Charter for Corporate Behavior "to develop and provide superior goods in terms of quality, cost, and safety through our accumulated technology," and thereby to respond to the trust placed in us by our customers.

Drawing on the vast store of know-how we have built up over many years, we harness 3D CAD systems and computerized simulation to optimize design and production. Similarly, we apply all sorts of assessment facilities and test devices to control quality. Right from the design stage, our production technology, manufacturing, and quality control divisions participate in design reviews. In addition, designs are assessed under conditions that are tougher than those in actual use. Through arrangements such as these, we are able to speedily furnish our customers with highly reliable products. For environmental preservation as well, we assess products at the design stage and create ones that impose little burden through green procurement of parts and materials.

Approaches to higher CS: CS questionnaire survey

Each year since 2000, we have implemented a questionnaire survey with our customers inside and outside Japan to determine their degree of satisfaction with our goods and services.

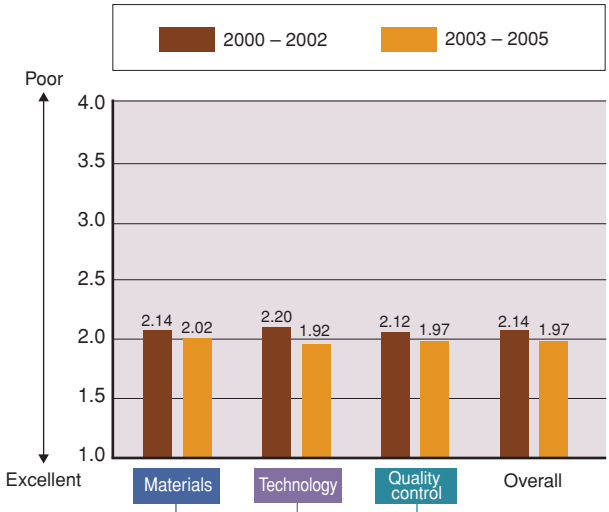
The purpose of the survey lies in heightening the quality of goods and services required by customers and thereby further securing our status as a good transaction partner.

By dividing survey items into the three categories of materials, technology, and quality control, the annual survey is carried out in cycles consisting of three years each, with about 300 leading customers in terms of transaction value. The two cycles implemented over the periods 2000−2002 and 2003−2005 gave us frank views from an extended total of more than 600 companies.

In content, the survey has a wide-ranging coverage spanning the areas of sales, design, development, production, and quality. While totalizing and analyzing the findings, we also convey points considered important to the concerned units, which collaborate in promptly addressing specific problems mentioned by the customer. The survey is a vital means of collecting information needed for improvement of our products and services. The recent findings indicate that ratings of SMK are gradually rising, and our activities consequently appear to be taking some effect.

Improvement of goods and services is an endless task. We are committed to performance of further activities for improvement while using the CS survey as a barometer of our rating.

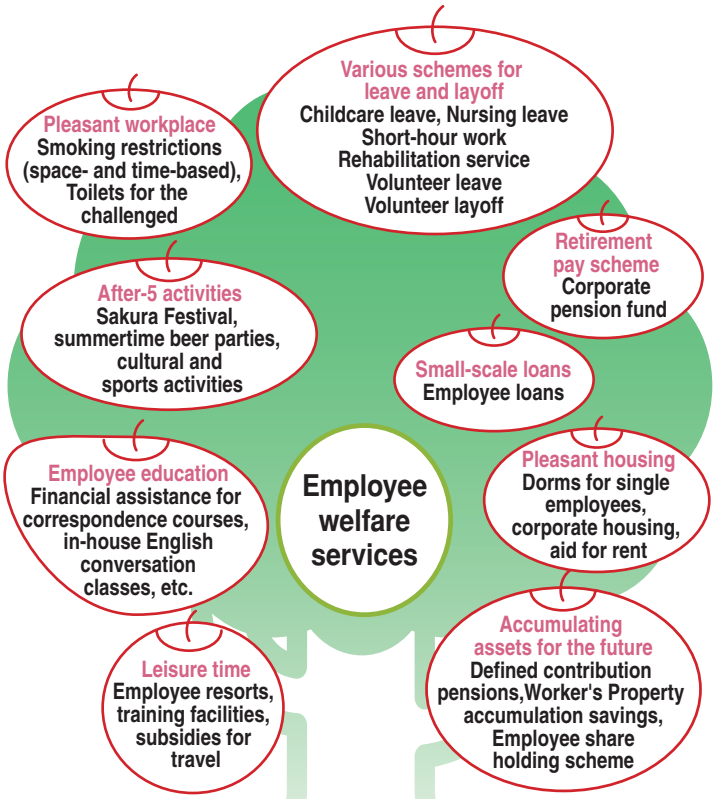
Overall rating



	Materials	Technology	Quality control
Sample survey items	Cost-effective response for mass-produced goods	Frequency of visits by engineers	Reports on complaints and elucidation of fundamental causes
	Price competitiveness of mass-produced goods	Overseas siting of R&D capabilities	Abilities for test and analysis of product quality
	Initial development cost	Technical response/speed	Speed of handling of quality complaints
	Frequency of visits by technical personnel	Reliability as a partner in collaboration	Measures to prevent quality complaints
	Degree of response to requests for shorter delivery time	Abilities for development and proposal of technical products	Data reliability
	Degree of satisfaction with lead time	Response to complaints about design quality	Environmental approaches

Employee Welfare

To increase levels of employee comfort and fulfillment, we are also working to improve provisions for welfare. Arrangements are being bettered as regards both schemes (e.g., "flex holidays" that can be freely set by employees, leave for childcare and nursing, and short-hour work) and facilities (e.g., dorms for single employees, corporate housing, employee resorts, and employee cafeterias).



Our scheme for childcare leave has a long history; we instated it in 1974. As of March 2006, it had been used by a total of 131 employees. We provide support so that each and every employee can have both a fulfilling job and rewarding personal life.

Teaching Japanese in Canada using the volunteer leave scheme

Sachie Noguchi
Business Administration Department, CS Division

In July 2004, I took a year off to serve as a volunteer teacher in Canada and spread knowledge of Japanese culture. I taught from September 2004 to June 2005 at Centennial C.V.I. in the city of Guelph, which is located about 100 kilometers southwest of Toronto, Ontario.

My purpose was twofold: to stimulate interest in Japanese culture and to give the students some familiarity with Japanese, which differs completely from English. I believe I attained it, because the students were able to read sentences and answer questions in simple Japanese by the end of the term. In a country that is the second-largest in the world and has a multicultural character, I had countless eye-opening experiences that could not have occurred in a small island country.

I am really grateful to the company for approving my leave and giving me this precious opportunity.

With the students in the Japanese class

Safety and Health

Approaches in the Head Office

In SMK, we hold fire drills once a year at domestic and foreign works in order to heighten employee awareness of safety and disaster prevention.

At the Head Office, we have organized a company fire brigade to fight fires in the initial stages and lead evacuation in cooperation with the local fire department in the event of fires and other emergencies in the neighborhood and on the company grounds. Each year, we select a representative from new employees to organize the brigade and lead the drills. We report on the results of the drills at the Self defence fire fighting examination association held by the Ebara Fire Station and the Ebara Fire Prevention Management Society.

Activities at overseas plants

Each year, our plant in Dongguan, China plans and executes activities to increase levels of safety and health. In fiscal 2005, the major activities were a disaster-prevention drill, safety patrols, and a safety inspection by an external auditors.

In the fire drill, which was staged in November 2005, the 3,088 plant workers assembled below the sign of their own department in the yard within just 6 minutes after the start of the exercise. The drill included a demonstration of initial fire-fighting with extinguishers and the use of hoses to put out fires.

Evacuation by 3,088 workers

Fighting fires in the early stages with extinguishers

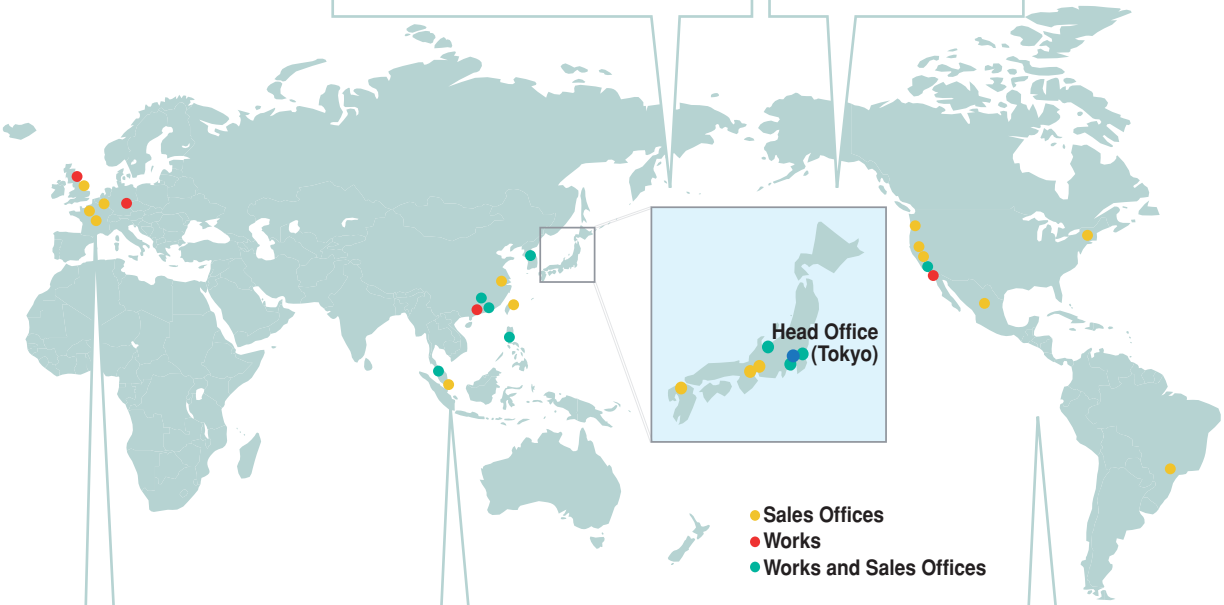
SMK Networks

Sites in Japan

Head Office (Togoshi)
Gate City Office (Osaki)
Osaka Branch
Nagoya Branch
Kanagawa Sales Office
Ibaraki Sales Office
Hokuriku Sales Office
Fukuoka Sales Office
Toyama Works and
Toyama Technology Center
Hitachi Works
Yamato Works

Major Subsidiaries in Japan

Toyama Showa Co., Ltd.
Showa Denshi Co., Ltd.
Yatsuo Denshi Kogyo Co., Ltd.
Ibaraki SMK Co., Ltd.
SMK R&D Co., Ltd.



EUROPE

SMK Europe N.V.
SMK Europe N.V., U.K. Branch
SMK Europe N.V., France Branch
SMK Europe N.V., German Office
SMK (U.K.) Ltd.
SMK Hungary Kft.

ASIA

SMK High-Tech Taiwan Trading Co., Ltd.
SMK Electronics (H.K.) Ltd.
SMK Trading (H.K.) Ltd.
SMK Dongguan Gaobu Factory
SMK Electronics (Shenzhen) Co., Ltd.
SMK Electronics (Shanghai) Trading Co., Ltd.
SMK Electronics Singapore Pte. Ltd.
SMK Electronics (Malaysia) Sdn. Bhd.
SMK Electronics (Phils.) Corporation
SMK Korea Co., Ltd.
SMK Electronics Int'l Trading (Shanghai) Co., Ltd.
(Established on Feb. 22, 2006)

NORTH AMERICA

SMK High-Tech Taiwan Trading Co., Ltd.
SMK Electronics Corporation U.S.A.
SMK Electronics Corporation U.S.A., East Office
SMK Electronics Corporation U.S.A., San Jose Office
SMK Electronics Corporation U.S.A., Los Angeles Office
SMK Electronics Corporation U.S.A., Seattle Office
SMK Electronics Corporation U.S.A., Guadalajara Office
SMK Manufacturing, Inc.
SMK Electronica S.A. de C.V.

SOUTH AMERICA

SMK São Paulo Indústria Eletrônica Ltda.

Editor's Postscript

Thank you for taking the time to read our Environmental Report 2006.

For this edition, we composed the report with awareness of a wider circle of stakeholders. Data for overseas sites are becoming more accurate, and the numerical values were reflected in environmental accounting. SMK activities are not confined to Japan; they are global in scale, and include other Asian countries as well as North America and Europe. For this reason, although there are some items for which we have not yet obtained data for the whole operation, we are endeavoring to get the ability to report even on overseas data trends.

We hope that this report will be of some help in communication with our readers. We want to make it even better, and would be grateful to receive your opinions and thoughts on it.

Shigeo Maeyama
General Manager,
Environmental Protection
Department

About This Report

Reporting period This report presents data for the period from April 2005 to March 2006.

Scope of data This report presents data for the SMK Group and its major affiliates.

Guidelines applied for this report The preparation of this report made reference to the Environmental Reporting Guidelines 2003 and the Environmental Accounting Guidelines 2005 published by Japan's Ministry of the Environment.

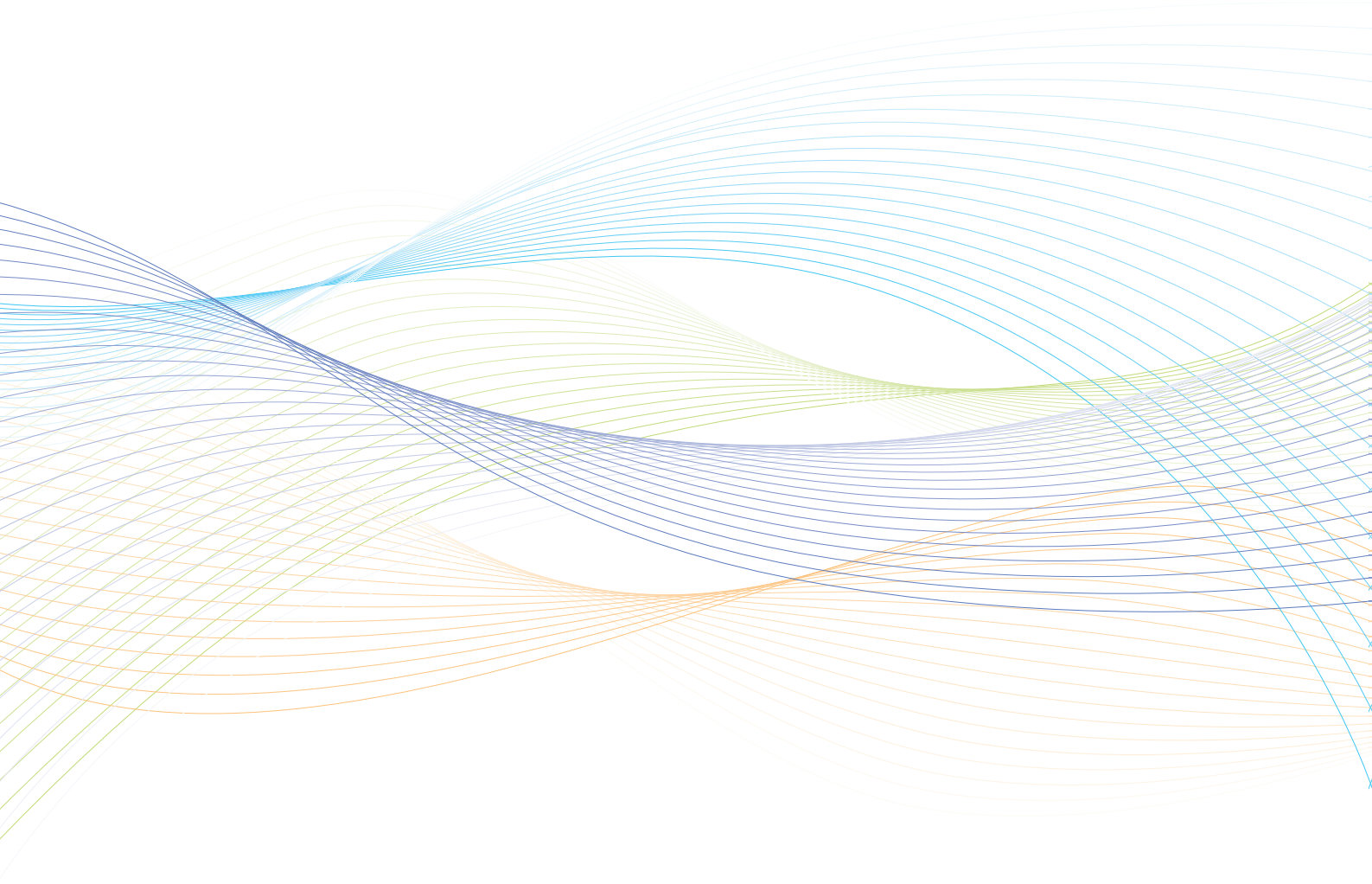
Access to corporate information

SMK website http://www.smk.co.jp/

Information on environmental preservation http://www.smk.co.jp/eco_e/

IR information http://www.smk.co.jp/smke/financial/report.html

Contact: Environmental Protection Department, SMK Corporation TEL.+81-3-3785-5058 FAX.+81-3-3785-2904



SMK Corporation

Published in August 2006.