

# Environmental Report 2007



# Corporate Profile (as of March 31, 2007)

**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 ven

Number of **Employees**  13,289 (Group)

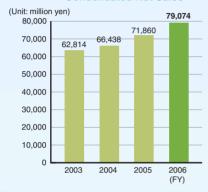
Head Office

5-5, Togoshi 6-chome, Shinagawa-ku, Tokyo 142-8511 Japan

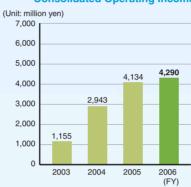
TEL: +81-3-3785-1111 FAX: +81-3-3785-1878 URL: http://www.smk.co.jp/ Major Products

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

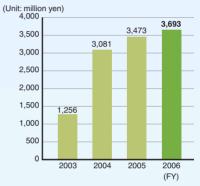
#### **Consolidated Net Sales**



# **Consolidated Operating Income**



# **Consolidated Net Income**



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# **About This Report**

This report presents data for the period Reporting period from April 2006 to March 2007.

#### Scope of totalization

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
ramato Works

Major Subsidiaries
Toyama Showa Co., Ltd.
Showa Denshi Co., Ltd.
Yatsuo Denshi Kogyo Co., Ltd.
Ibaraki SMK Co., Ltd.

Overseas Sites
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 Trading (Shanghai) Co., Ltd.
SMK Electronics Singapore Pte. Ltd.
SMK Electronics (Malaysia) Sdn. Bhd.
SMK Electronics (Phils.) Corporation
SMK Korea Co., Ltd.
EUROPE
SMK Europe N.V.
SMK (U.K.) Ltd.
SMK Hungary Kft.
NORTH AMERICA
SMK Electronics Corporation U.S.A.
SMK Manufacturing, Inc.
SMK Electronica S.A. de C.V.

# **Access to corporate information**

Our website discloses data profiling our company, IR information, product descriptions, and past environmental reports.

# http://www.smk.co.jp/

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

# **Evolution of more activities for global environmental preservation**

Recently, there has been much applause for "An Inconvenient Truth," the movie and book by Mr. Al Gore, the former vice-president of the United States of America. Mr. Gore asserts that the state of the global environment has seriously worsened over the last several years, and that there is an urgent need for countermeasures. He warns us that the very subsistence of human race may be dangerous if the current trend continues. Protection of our green planet is undoubtedly a major task confronting all of humankind.

We at SMK also consider our contribution to resolving environmental problems and conducting our business activities in harmony with the global environment as a corporate duty, and have positioned it as a key management subject. In relation to products, the enforcement of the European Union (EU) directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) in 2006 was followed by that of the Japanese law for the promotion of effective utilities of resources (J-MOSS) and the China RoHS. This trend is tightening requirements for elimination of environment-hazardous substances. Compliance with these laws and regulations is a natural corporate duty. We have built control system enabling proper control of environment-related substances and products, and regularly review it for more effective error-free and efficient control.

In fiscal 2007, we launched the 7<sup>th</sup> medium-term business plan under the slogan "CREATING AN EXCITING FUTURE." The plan targets sales of 100 billion yen in fiscal 2009. We have selected refinement of environmental management as the theme of our environmental activities in this plan, aiming that the expansion of our business is not at the sacrifice of the global environment. We intend that our activities for the global environment preservation should evolve through the further promotion of our prevailing initiatives and renewed approaches to conserve energy and resources, including product assessments.

Aside from these activities on the corporate level, we are prompting each and every one of our employees to be concerned about environmental preservation and do what they can for that (such as turning off lights whenever leaving the workspace). On our premises, we are advocating awareness of personal social responsibility (PSR) in addition to corporate social responsibility (CSR). Even if each person were only to achieve a little, we hope that their cumulative efforts will serve to improve the global environment.

This report sets forth our initiatives for environmental preservation in fiscal 2006. We also do business in many countries all over the world. We describe on activities from a global perspective as many as possible for better understanding of them. We are determined to continue with our measures to preserve the global environment through a concerted companywide effort, and looking forward to your continued advice and support.

August 2007



Terutaka Ikeda
Chairman and
Chief Executive Officer





Tetsuya Nakamura
President and
Chief Operating Officer

Makemor

## SMK Environmental Charter

# 1. Basic Philosophy

The SMK Group pursues 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

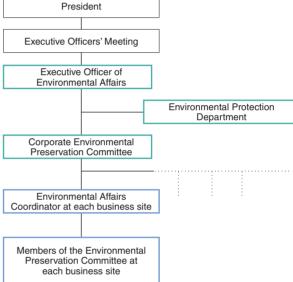
# **Organization to Promote Environmental Preservation**

In SMK, the Group 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 group policies, targets, and initiatives taking locally specific issues into consideration and puts them into practice.

# **Environmental Management Systems**

SMK's environmental management systems are based upon the international standards of ISO 14001. In the system, besides complying with laws and regulations as a matter of course, action plans are established in accordance with the groupwide and office policies as well as complying with laws and regulations. The internal audits check the result of the activities, and indicate the incompleteness to be improved, if any. The corporate management assesses the system, gives directions, and reviews policies and plans, to improve the effectiveness of the entire system. While more details about this area are presented in the section on "SMK's medium-term environmental objectives and measures (on pages 8-10)," which commenced in fiscal 2007, we intend to pursue environmental management from a more globalized perspective. To this end, we are going to tighten the coordination within the entire group while drawing on the environmental preservation activities that have already taken root in our various sites.

# Organization for Environmental Preservation



# **Environmental Education**

SMK implements environmental education as part of the curriculum of layer-specific and professional education provided throughout the Group. In addition, the each business site makes its own annual education plans

At SMK's main production works, these programs incorporate simulation-type drills for readiness in the event of emergencies. Besides promoting the awareness of the concerned personnel, the drills check the suitability of measures to curtail contamination of the surrounding environment to the minimum in times of disaster. SMK regularly provides trainings regarding environment-hazardous substances to personnel assigned to production and sales. The aim is to ensure compliance with RoHS directive in EU, which went into effect in July 2006, and other regulations on such substances in various countries, as well as meeting of the related requirements by customers

Preservation of the global environment demands a stronger environmental awareness among us all. SMK is working for further improvement of our environmental education not only to emphasize the importance of environmental preservation in our business activities but also to enable employees to take action exhibiting concern for the environment in their daily activities on an ongoing basis



Emergency situation training

Environmental education at the Dongguan

# \*

# **Summary of Environmental Preservation Activities in FY 2006**

SMK has made standards to collect and analyze data on environmental burden under the same basis throughout the Group. The global trend of activity achievements including overseas sites for fiscal 2006, for which data were only from sites in Japan for fiscal 2005.

The table below shows the situation as regards attainment of our fiscal 2006 targets. Up until that year, targets were set by each site separately in step with the situation in the country in question based on the groupwide policy. The figures in the table therefore indicate the attainment status only for activities in Japan.

#### Energy Conservation

The efforts to conserve energy in production activities, led to reduction in its average CO<sub>2</sub> emissions per unit of production value by 8 percent, but nevertheless we fell short of the target.

#### Reduction of Waste

For waste, SMK reduced the amount of discharge relative to the production value by 8 percent thanks to decreases in process waste as a result of activities to improve quality and productivity in the production

process, but were not able to reach the target of 14 percent. As for the landfill waste amount, we attained the target and came closer to zero emissions by more thorough presorting adapted to recycling conditions.

#### Reduction of Use of Environment-Hazardous Substances in Products

In addition to RoHS directive in EU, for which SMK has already completed measures for compliance, we made arrangements for compliance with the Chinese law for administrative measures on the control of pollution caused by electric information (China RoHS), which went into effect in March 2007.



Yoshio Sakurai Executive Officer of Environmental Affairs

Colf accomment	A: attainment of targets b	v o wido morain	D: attainment of targets	C: failure to attain targets
Sell-assessment	A. attainment of targets b	y a wide mardin	b. allainment of targets	C. lallure to attain targets

			Self-		
	Item	Target Achievement		assessment	
Energy conservation	Reduction of CO <sub>2</sub> emissions on a production value basis (relative to FY2005)	9% reduction	8% reduction (0.24 tons-CO2/million yen)	С	
Reduction of waste	Reduction of industrial waste discharge on a production value basis (relative to FY2005)	14% reduction	8% reduction (0.0118 tons/million yen)	С	
Reduction in the landfill waste amount (relative to FY2005)		62% reduction	96% reduction (0.636 tons)	Α	
Reduction of use of environment-hazardous substances in products	Response to comply with laws and regulations	Compliance with China RoHS	Completion of preparation of arrangements for compliance with China RoHS	В	

The 7<sup>th</sup> medium-term business plan, which SMK launched in fiscal 2007, contains global targets to be attained through coordinated action by the whole SMK Group. The medium-term activities planned for environmental preservation are presented on pages 8-10 of this report.

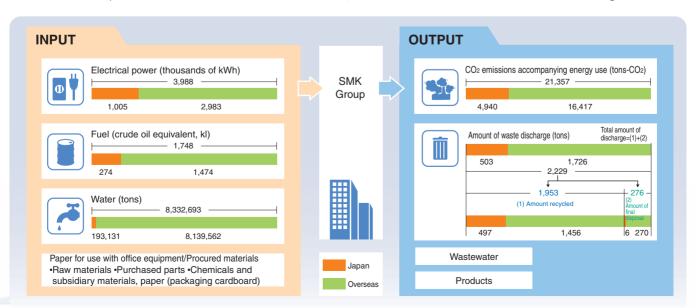


# **Material Balance**

SMK is endeavoring to ascertain and reduce levels of environmental hazard in each process (design & development, production, and sales).

The figure below shows the material balance of the entire Group in fiscal 2006, both in Japan and overseas. The level of environmental

hazard at overseas sites continues to increase relative to those in Japan. This is because of increase of production value in fiscal 2006. SMK managed to hold the same level of environmental hazard per unit of production value. For the future as well, SMK continues to strive to reduce levels of environmental hazard while advancing our business.



In fiscal 2000, SMK began environmental accounting in accordance with the Environmental Accounting Guidelines published by Japan's Ministry of the Environment. Since fiscal 2004, SMK has been making quantitative determinations and assessments of actual data for all SMK Group sites, including overseas ones.

# **Environmental Preservation Costs and Benefits**

Unit: million yen

			Environmental Preservation Cost			Economic		Environmental Conservation		
	Category	Major Activities	Investment		Expense		Benefits Accrued		Benefit (Materials)	
			Amount	Year-on- Year	Amount	Year-on- Year	Amount	Year-on- Year	Consumption/Output Savings	Year-on- Year
	Pollution prevention costs	Operation and maintenance of facilities used to prevent pollution	3.2	24%	43.6	89%	0.0	_	Reduction of hazardous substances: -1.5 tons	-
s area costs	Global environmental preservation costs	Efficient operation and maintenance of equipment, such as air-conditioners, daily efforts for energy conservation, etc.	71.5	229%	18.2	107%	5.6	436%	CO <sub>2</sub> emissions per unit of production value  0.0196 tons-CO <sub>2</sub> /million yen	456%
Business	Resource circulation costs	Appropriate processing and recycling promotion of industrial waste	0.0	0%	43.8	108%	187.9	233%	Landfill waste amount: -12.7 tons Industrial waste output on a production value basis: -0.0024 tons/million yen	_
	Sub-total		74.7	168%	105.6	99%	193.5	236%		
	Jpstream/ lownstream cost	Green procurement	0.0	_	6.9	103%	0.0	-		
	Administration costs	Education for environmental management Elimination of hazardous substances from products	5.6	9%	200.8	119%	0.0	_		
F	R&D costs	Development of environment-friendly products	0.0	_	39.7	58%	0.0	_		
	Social activity	Initiatives to expand green space of works	0.0	_	8.0	89%	0.0	-		
	Environmental emediation costs		0.0	_	0.0	_	0.0	_		
6	otal environmental ereservation costs		80.3	77%	361.0	100%	193.5	236%		

Overall investment by SMK Group: 6,429 million yen Overall R&D costs borne by SMK Group: 4,474 million yen

# **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 2006 to March 2007.
- 3. Figures for environmental preservation cost, economic benefit (monetary), and environmental preservation benefit (in terms of material quantity) 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 and quantity-reducing effects at all SMK up sites, domestic and foreign.
- 4. The accounting covered all sites, branches, and sales offices in Japan and overseas, and the subsidiaries in Japan (for more details, see the totalization scope on page 1).
- 5. Data for environmental conservation benefits indicated the decrease in amount compared with the previous fiscal year.
- 6. Economic benefits accrued are clearly demonstrable and do not include speculative benefits.
- 7. Rates of change relative to the previous year are not presented for the environmental preservation benefit of reduced use of hazardous substances, reduction in landfill disposal, and level of waste discharge as percentage of production value, because they all increased relative to the previous year.
- 8. For the hazardous substances in the category of environmental preservation benefit, the totalization subjects were the substances regulated under the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management (PRTR: Pollutant Release and Transfer Register).

#### **Environmental Preservation Cost**

The environmental preservation cost in fiscal 2006 came to 80 million yen in investment and 361 million yen in expense. Relative to fiscal 2005, the investments represented a decrease of 24 million yen. Expenses were up slightly by a few million yen, but virtually on a par with those in fiscal 2005.

The investments went mainly for replacement of air-conditioning systems with energy-saving models for more efficient use of electric power. Decrease of the investments is because of decrease in the number of newly installed inspection equipment (XRF units) for heavy metal content relative to fiscal 2005. As for costs, there were big changes in administration costs (up by about 32 million ven) and research and development costs (down by about 29 million yen). The major factor behind this change was compliance with the RoHS directive in EU, which regulates use of lead and other heavy metals, was effected in July 2006. The administration cost increase came because of: 1) the construction and start of operation of a common in-house monitoring system to assure customers of the absence of hazardous substances in products in compliance with the directive, 2) the increase in labor costs due to the start of monitoring using XRF, and strengthened on-site audits of suppliers for materials and parts used in prototype and mass-production. Meanwhile, the research and development cost decrease in 2006, due to the drastically decrease of labor cost related to the selections of materials and parts free from hazardous substances, and the alternative design, which were almost finished in 2005. Investment totaled 77 million yen in Japan and 3 million yen in overseas sites. The corresponding totals for expenses were 259 and 101 million yen. Investment in Japan was up mainly due to the replacement of air conditioning system with energy-saving models in the head-office building. The main factor behind the higher expenses in Japan was the higher levels of personnel expenses in

## **Economic Benefits**

The economic benefits in fiscal 2006 reached about 194 million yen, for a substantial increase (by 136 percent) from fiscal 2005. The main factors behind this increase were the savings of about 6 million yen due to the effect for reducing use resulting from the newly installed energy-saving air conditioning system, and the jump in the transaction value for non-ferrous metals due to the resource

shortage accompanying economic growth in China, leading to increased profit on sales of unneeded waste (non-ferrous metal scrap, scrap iron, and plastic scrap) to 188 million yen (up 133 percent from fiscal 2005).

Benefits totaled 29 million yen in Japan and 164 million yen in overseas sites. The amount overseas was higher mainly because of the higher (relative to domestic sites) discharge of unneeded waste from expanded production overseas and sales profit increased along with this trend.

Benefits not included in the scope of economic benefits may be due to the SMILE Project, which SMK began in fiscal 2005, for improving the production process. The productivity of the entire SMK Group increased again, which reduced the part and material loss associated with defective products by about 250 million yen.

#### **Environmental Conservation Benefits**

Figures for the environmental conservation benefits due to reduced material, the table shows an increase of 1.5 tons in use of hazardous substances, a reduction of 0.0196 tons of CO<sub>2</sub> equivalent per million yen of production value as indicator of energy consumption, and increases of 0.0024 tons of industrial waste output per million yen of production value and 12.7 tons in landfill waste.

The increases in use of hazardous substances, waste discharge relative to production value, and landfill disposal resulted from the increase in amounts of waste and chemical substances used because of the shift from outsource to in-house for production and processing of materials and parts in some overseas works. The decrease in average energy consumption in CO2 terms per unit of production value was due to the production improvement under the SMILE Project, in addition to the energy-saving air condition system.

#### **Future Policies**

In fiscal 2006, SMK is 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 sites, which was limited to Japanese sites in fiscal 2005.

SMK is also striving for a better environmental accounting

conformance among all sites (including overseas ones); higher accuracy through totalization alignment; organized evaluation and analysis of environment-related investment, expenses, and benefits; and uses their results for more effective environmental management systems throughout the Group.

SMK is bolstering initiatives to raise energy efficiency and promoting energy conservation. To reduce waste, SMK is aiming for "zero emissions" and constructing a system for resource recycling.

Scope of Data Compilation

All works, branches, and sales offices in Japan and overseas sites, and subsidiaries in Japan (for more details, see the totalization scope on page 1).

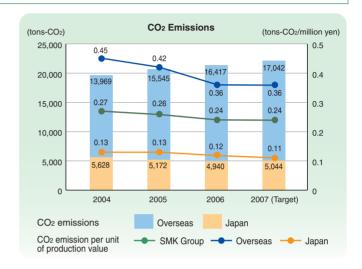
Period

Fiscal years extend for the year-long period beginning on April 1 of the year in question to March 31 of the next one.

# **Energy Conservation Initiatives**

	(vs. FY2005)	
	Japan	Whole SMK Group
CO <sub>2</sub> emissions per unit of production value	93%	93%
CO <sub>2</sub> emissions	96%	103%

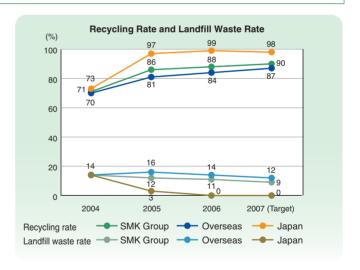
SMK is pursuing energy conservation activities using the level of CO<sub>2</sub> emissions on a production value basis as an indicator. In fiscal 2006, our overseas CO<sub>2</sub> emissions increased along with the expansion of overseas production. SMK managed to reduce the average CO<sub>2</sub> emissions per unit of production value by improving production processes and equipment.

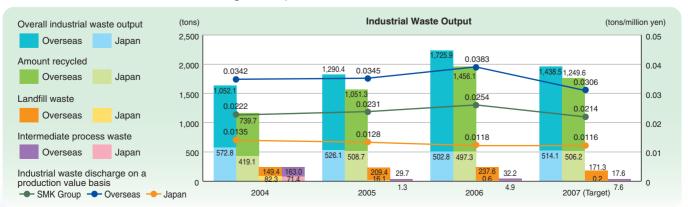


# **Resource Conservation Initiatives**

	(vs. FY2005)	
	Japan	Whole SMK Group
Industrial waste output on a production value basis	93%	110%
Industrial waste output amount	96%	123%
Recycling rate	102%	102%
Landfill waste amount	4%	106%

SMK is working toward the "zero emissions" goal of eliminating the need for off-site waste disposal by landfill. Waste overseas increased along with the rise in the share of all production occupied by overseas works, and all indicators consequently worsened. Although the trend of waste discharge in Japan stayed almost flat, most of the waste was recycled; almost none of it was taken to landfill sites. At overseas works, in contrast, recycling partners are still being developed, and some of the waste continues to be taken off premises for disposal by landfill. In fiscal 2007, SMK is endeavoring to improve process shortcomings, develop recycling destinations, and reduce the amounts of discharge and disposal.







# **SMK's Medium-Term Environmental Objectives and Measures**

SMK is engaged in activities for fulfilling our social responsibilities on a global scale, and has positioned environmental preservation as a key priority. SMK has also presented specific targets and measures in the 7<sup>th</sup> medium-term business plan, which runs for the three-year period from fiscal 2007 to fiscal 2009.

The targets in the previous plan (fiscal 2002–2005) covered only the sites in Japan, because many overseas sites have been building up their environmental management system. At that time, SMK collected data for overseas sites as well, but their accuracy was not enough to allow handling on the same footing as data for sites in Japan, and standards were necessary for aligned totalization.

Thereafter, the overseas sites completed to install environmental management systems based on ISO 14001, and the data collected also have become more accurate. As a result, SMK has decided to set targets and promote activities on the common basis of global data beginning with the new medium-term plan.

As the share of our business activities occupied by overseas sites rises, SMK intends to heighten the level of the Group as a whole by bolstering the exchange of information and coordination of activities within the group.

The table below shows the items and action targets in the new medium-term plan.

Objectives		Targets (FY2007–FY2009)
Reduction of CO <sub>2</sub> emissions	Energy conservation	10% reduction relative to FY 2005 of CO <sub>2</sub> emissions per unit of production value <sup>11</sup> in FY 2009 (0.23 tons-CO <sub>2</sub> /million yen)
Reduction of waste	Reduction of industrial waste discharge	15% reduction relative to FY 2005 of industrial waste discharge on a production value basis 2 in FY 2009 (0.0196 tons/million yen)
neduction of waste	Reduction of landfill waste	50% reduction relative to FY 2005 in the landfill waste amount in FY 2009 (112.75 tons)
Control of environment- hazardous substances contained in products	Reinforcement of the control system for elimination of contents of prohibited substances	Construction of a supply chain free from prohibited substances
Strengthening of environment-friendly design	Product assessment	Expansion of the scope of product assessment

 $<sup>^{\</sup>star}1~\text{CO}_2$  emissions per unit of production value: CO<sub>2</sub> emissions divided by production value

#### The 7th medium-term business plan Slogan (Unit: million ven) 120.000 **Creating an Exciting Future** 102,500 6,700 Vision 100,000 15,200 1. Realize sales growth with fair 79,074 profitability 80.000 2. Build a value-creating model for 9,661 continuous growth 43,300 60.000 3. Nurture a corporate culture that encourages taking proactive actions 30,325 40.000 9,400 6,815 SMK held a meeting by 20,000 connecting five domestic 27,900 25.262 and seven overseas business bases 0 FY 2006 Result FY 2009 Target Mar. 2007 Mar. 2010 Audio-visual Telecommunication Audio electronic Information Electronic parts and Others parts

<sup>\*2</sup> Industrial waste discharge on a production value basis: Industrial waste discharge divided by production value



# SMK's Medium-Term Environmental Objectives and Measures

Fiscal 2007 is the first year of the medium-term environmental plan. This section outlines the plan.

#### **Reduction of CO<sub>2</sub> Emissions**

Use of energy is accompanied by CO<sub>2</sub> emissions. SMK is actively promoting activities to save energy including replacing equipment for works and offices with energy-saving type and improving manufacturing processes. SMK is also conducting campaigns to save energy in daily activities in the office.

As an indicator, the plan adopts CO<sub>2</sub> emission level per unit of

production value, which is commonly used by the electric and electronics industries. The target is to reduce this by 10 percent relative to fiscal 2005 by the end of fiscal 2009, the final year of the medium-term plan. To this end, we are promoting mainly the following measures.

- Promote Zero Defect (ZD) campaigns\* to eliminate defects and thereby reduce energy consumption due to wasteful production
  - · Reduce further surplus inventories through closer coordination between production and sales functions
  - · Continue to replace equipment with energy-saving type
- · Provide education and stage events to deepen the environmental awareness of employees



# \* ZD campaigns in the SMILE Project

On June 2005, SMK launched the SMK Manufacturing Innovation Leads to ZD (SMILE) Project to improve levels of quality and productivity throughout the Group on a global scale. The Project proceeds from our aspiration to attain the industry's highest levels of quality and productivity by initiatives grounded on the essence of manufacturing. It revolves around the following themes.

- · Transnational (TN) deployment of ZD campaigns for improvement of quality
- · Renewal of our challenge of manufacturing excellence

ZD campaigns are aimed at reducing customer complaints, which means the deficiencies that become apparent after delivery, to zero. SMK sets subthemes related to on-site tasks, organizes working groups around each subtheme, and are working for quality improvement. Although SMK was regrettably unable to attain ZD in fiscal 2006, we realized the effects of the activities, which reduced the number of complaints by 50 percent from fiscal 2005. In fiscal 2007, SMK is going to strengthen these activities and strive to attain the ZD goal.

#### **Reduction of Waste**

Waste is generated in corporate activities in a variety of forms, such as crating and packaging materials from incoming materials, fractional materials in production, spent oil and solvents, in-process defectives, and product inventory that can no longer be sold. SMK has targeted a reduction of waste discharge. SMK promotes recycling and has also targeted a reduction of landfill waste, as well. In Japan, SMK has lowered disposal as landfill waste by widening usage of waste output, such as turning electronic components and

substrates back into resources, using waste glass as road bed materials, and promoting thermal recycling of plastic by using it as fuel.

The 7<sup>th</sup> medium-term business plan targets reductions of 15 percent in the waste discharge amount relative to the production value and 50 percent of the disposal, compared to fiscal 2005. The specific actions are as follows.

- · Deploy measures that succeeded in Japan to overseas sites
- Promote ZD campaigns and reduce surplus inventory
- Develop new recycling methods in cooperation with recycling businesses

# Control of Environment-Hazardous Substances Contained in Products

SMK has been reducing use of environment-hazardous substances through the promotion of green procurement.

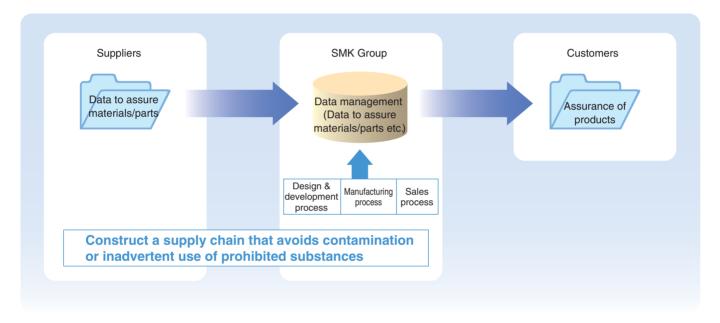
SMK has made system to prevent products from containing substances prohibited by the customers, including substances restricted by RoHS directive in EU. One key point is checking data at the design stage to ensure that no such substances are contained in materials and parts selected. To this end, SMK has made a data base of information on chemical substances contained in purchased materials and parts. In SMK, the design engineers look up the relevant data in order to select

materials and parts that are free of substances restricted by the customer.

Another key point is the prevention of contamination and inadvertent use of prohibited substances throughout the supply chain. For this purpose, SMK excludes factors of contamination and inadvertent use by visiting processes and having measures implemented not only in the manufacturing processes in SMK but also in outsourced processes to outside SMK.

For the future, SMK is going to take approaches to the following tasks.

- Building system for compliance with the newly effected EU regulations; the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Tightening further of coordination with manufacturers of materials and parts
- · Review databases for improvement of information services for customers



# **Strengthening of Environment-Friendly Design**

SMK has adopted product assessment at the stage of design and development to curtail their environmental impact to the minimum. This assessment takes up items including contents of environment-hazardous substances, resource conservation, recycling, and energy conservation. SMK makes adjustments and modify designs

if the criteria are not met. The assessment was instated as a regular part of the routine in fiscal 2006, and we are working to have the related activities take deep root and to raise the assessment level.

# **Energy and Resource Conservation Topics**

# **SMK Group/Head Office**

# Replacement of the air-conditioning system

In December 2006, SMK began the work of replacing all air-conditioning equipment in the building housing our head office in Togoshi. Some 24 years had passed since the building's construction, and the air-conditioning system, too, had deteriorated.



Outdoor units installed on the roof

The replacement job was a big one covering 15 outdoor units and 146 indoor ones. The construction took place only on weekends, and was finished in late April 2007, about five months after its start. It is anticipated to deliver the following two benefits.

# 1) Reduction of energy use

- Reduction of electric power consumption by 26,000 kWh/year (35%) (Decrease in air conditioning power consumption from the former 177,000 kWh to 151,000 kWh)
- Reduction of kerosene use by 11 kl (100%) (Decrease in kerosene use for heating from the former 11 kl to zero)

#### 2) Reduction of CO<sub>2</sub> emissions

 Decrease by 46 tons-CO<sub>2</sub>/year (49%)
 (Decrease in air-conditioning system emissions from the former 93 tons-CO<sub>2</sub> to 47 tons-CO<sub>2</sub>)

The figures presented here are only projections. SMK is participating in Team Minus 6% movement again in fiscal 2007, and are striving to reduce emissions by even more than in these projections.

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.

#### Attainment of "zero emissions" in fiscal 2006

Toyama works has promoted various repeated campaigns for improvement and is achieving results in the efforts to reduce waste and increase recycling rates. In fiscal 2006, the works finally reached the goal of "zero emissions."

Yatsuo Denshi Kogyo Co., Ltd., one of SMK's cooperating plants, has been conducting a high-powered campaign for waste recycling over a short period, and this made it possible for the entire Toyama Group to attain "zero emissions."

Toward the goal of manufacturing without waste, SMK is promoting a continued concerted effort by not only the manufacturing division but also the development, design, and purchasing divisions.

# Vigorous investment for energy-saving facilities

In fiscal 2006, Toyama works vigorously invested in equipment under the banner of energy conservation. Toyama works substantially decreased consumption of power by steps such as replacement to inverter-driven models for air compressors, air-conditioning systems, and pumps for drinking water and drainage, and painting plant roofs with a coating for insulation against solar heat.

In fiscal 2007, Toyama works has already made plans for a lot of investment in energy-saving equipment, and are continuing with endeavors to better the environment.

# 10th year since ISO 14001 certification

Toyama works was certified under ISO 14001 in March 1998, and successfully underwent its third inspection for renewal of this certification in March 2007. As this year is the tenth since its first certification, it revised its environmental policy on April 1 and adopted the new slogans "We will be compatible with environment and economy and make the sustainable society with our hands." The work is joining with the employees in efforts to construct an even better system for environmental management.





Rooftop after application of the coat for insulation against solar heat.



Painting work

# Hitachi-Ibaraki Group

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

\*Asterisks indicate sites that have received ISO 14001 certification

# Registration of Ibaraki eco business establishments

In Ibaraki Prefecture, there is a citizen movement under way for actively promoting practical approaches to environmental preservation in various venues, including the office, home, and community. The aim is to deepen understanding of the environment by each and every citizen, toward solution of environmental problems such as global warming, waste issues, and deterioration of water quality on rivers and lakes. As a part of this movement, a scheme was instituted for registration of eco business establishments in the prefecture, for recognition of those which are actively taking environment-friendly measures.

In Hitachi works, a check was made of activities to conserve energy and resources, reduce use of environment-hazardous substances, and practice the 3Rs in keeping with our environmental policy. It also used the Ibaraki Eco Check Sheet to check the "eco life" activities at employee households over a period of two months. As a result, high ratings were

given to environmental preservation activities in both the offices and homes. The Hitachi works was consequently awarded a rank of AAA-L, the highest, on December 28, 2006, and Ibaraki SMK Co., Ltd., one of AA-L on April 2, 2007. The two were registered as Ibaraki eco business establishments at the same time.

Hitachi works is going to continue with our promotion of environment-friendly corporate activities and energy-saving practices in the home.



## **Overseas Works**

# SMK Dongguan Gaobu Factory (In the city of Dongguan, Guangdong Province, China)

SMK Dongguan factory in China initiated and set in motion a project for reducing utilities costs in fiscal 2006, for the purpose of saving water and energy. Members of the project team, who were selected from each division, put together measures to this end in their respective divisions and made reports on them in conferences. They played the role of promoting the conference determinations in their divisions. The main activities in fiscal 2006 were as follows.

- Reduction of energy consumption through adoption of energysaving fluorescent lights etc.
- Rigorous management of air-conditioning settings at no lower than 26 degrees centigrade
- Change in the mode of using heat treatment electrical furnaces Through these activities, we reduced the amount of power use by about 12,500 kilowatt-hours (HKD10,000) per month.



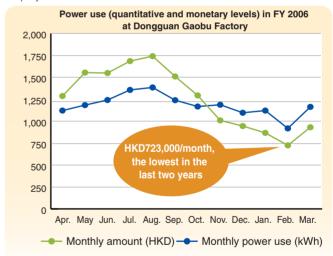
Thermometer for temperature control

Municipal power (receiving) transformer



In addition, we installed more receiving transformers for the municipal supply of power to curtail use of the on-site generators as far as possible. This reduced consumption of kerosene by 67 kiloliters (about HKD300,000) per month.

At the plating plant on the grounds of the Dongguan factory, we initiated action to reduce the use of water in fiscal 2005. This action consisted of rigorous control of hydraulic pumps and reduction of spillage. In fiscal 2006, the amount of wastewater was reduced from the former 40 cubic meters per day to 30. We are going to continue working to reduce water and energy use with the cooperation of all employees.



# Passing the first certification test for environmental specialists (eco test)

Twelve SMK employees took and passed the first eco test held by the Tokyo Chamber of Commerce and Industry.

The examinees came from a diversity of areas (i.e., sales, design, quality, production technology, and administration).

The large number underscored the high level of interest in the environment among the employees.

In SMK, environmental approaches begin with a rise in the awareness of each employee instead of being handed down from the top. In line with this policy, the company paid all of the examination fees and transportation costs. SMK intends to continue backing employees who want to take this test.

# Comments by employees who passed the test

I heard about the eco test from my boss and decided to take it as I have long been interested in the environment. The official text for the test was quite comprehensible, and I read it mainly on the train to and from work. While I have been involved



in environmental activities on the job through ISO 14001 for some time, taking the test gave me a good opportunity for obtaining a wider range of information and rethinking environmental problems. As you might expect, I was nervous taking the test, and was delighted to pass it. I hope the eco test makes further inroads and breeds more and more eco people.

# **Creation of Environment-Friendly Products**

SMK has instated an environmental management system based on ISO 14001, the international standard, at all of the works around the world and all sites in Japan. Throughout the entire cycle from material use to disposal of waste, SMK makes thorough reviews from the standpoint of environmental preservation and is promoting development and design premised on the 3Rs of "reduce," "reuse," and "recycle."

# **Halogen-Free Products**

# **OPB-4A** and PB-4B series of 0.4 mm spacing board-to-board connectors

These are series of 0.4-millimeter spacing board-to-board connectors for mobile telephones, digital cameras, and other small carry-around devices. With their low heights and small sizes, they save space for board mounting and assist development to make sets shorter and smaller (the height of the socket and plug coupling is 0.8 millimeters, the lowest in the industry, in the PB-4A series and 1.2 millimeters in the PB-4B series). The original lock structure has excellent features for improving the insertion snugness, bolstering the ejection force, and raising twisting performance. SMK offers selected materials that are in conformance with the RoHS directive and do not contain halogen.

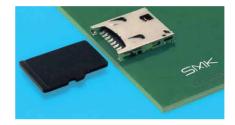




## Omicro SD™ card connector

These are connectors for micro SD™ cards, the ultra-compact memory cards coming to the fore as recording media for mobile telephones and other small carry-around devices. The one-piece structure for the contact and housing and the unique shield cover enabled us to create connectors of the smallest class in the industry (with a physical volume 78 percent lower than our mini SD™ card connectors). SMK offers selected materials that are in conformance with the RoHS directive and do not contain halogen.

\* micro SD™ and mini SD™ are trademarks of SD Associattion.



# **OUSB** cable for mobile telephones

USB cable is used for data communications between mobile telephones and personal computers. It can handle high-speed (480 Mbps) transfer under the USB2.0 standard, and is ideal for forwarding large loads of image and audio data.

The selected materials are in conformance with the RoHS directive and do not contain halogen. For the cable, we use non-PVC material.



# Products for saving resources and recycling

# Remote control units for air-conditioning systems

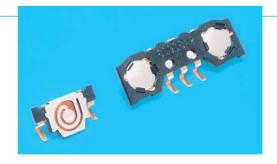
In these units, the molded components are made thinner and weigh 12 percent less. The units weigh 9 percent less than the conventional ones and consequently save resources. In terms of total weight, 65.6 percent of the parts can be recycled.



# **Solderless Products**

# ODome switches

SMK's dome-switches, "Double-dome switch" and "Single-dome switch," apply the spring contact type, whereby the switch is fixed in place by pushing the set enclosure against it. This eliminates the need for soldering for attachment to the set, which is consequently solder-free. The product also contributes to the environment because it is lead-free.



# **Products saving energy and resources**

# **OAC** adapters for mobile telephones

Reduction of the size and weight of the main unit makes these adapters 40 percent lighter than the conventional ones and saves resources. They also save energy, because the standby power consumption was reduced from 100 to 20 milliwatts.



#### **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.



# **EUROPE**

SMK Europe N.V.

SMK Europe N.V., U.K. Branch

SMK Europe N.V., France Branch

SMK Europe N.V., Munich Office

SMK Europe N.V., Dortmund Office

SMK (U.K.) Ltd.

SMK Hungary Kft.

## **NORTH AMERICA**

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., Chicago Office SMK Electronics Corporation U.S.A., Guadalajara Office

SMK Manufacturing, Inc.

SMK Electronica S.A. de C.V.

#### **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 Trading (Shanghai) Co., Ltd.

SMK Electronics Int'l Trading (Shanghai) Co., Ltd.

SMK Electronics Trading (Shanghai) Co., Ltd. Beijing Office

SMK Electronics Singapore Pte. Ltd.

SMK Electronics (Malaysia) Sdn. Bhd.

SMK Electronics (Phils.) Corporation

SMK Korea Co., Ltd.

SMK Korea Co., Ltd. Seoul Office

