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# ENVIRONMENTAL REPORT 2008 DIGEST VERSION

For the year ended February 29, 2008

STAR MICRONICS CO., LTD.

## FOREWORD

### The Meaning of Corporate Social Responsibility (CSR) for Star Micronics

We believe corporate social responsibility is about establishing and executing road maps and rules for creating added value (in the form of results), and determining how it should be distributed. Such added value is created by making use of capital, labor, management, and society itself, as well as through sincere and fair corporate activities.

To become a worthwhile company that is valued by its shareholders and other stakeholders for its efforts in this regard, we aim to contribute to society through innovative actions and through founding all that we do on the unshakable bedrock of respect for other human beings.

Where our environmental policies are concerned, since 2000 we have been working on environmental management system (EMS) activities. We achieved zero emissions in 2004, and have continued to develop our environmental initiatives globally since then. Looking ahead, we will endeavor to maintain such activities, expanding them further, in order to leave a habitable earth for the next generation.

At the present time, our contribution may be comparatively small, but we will unite all of our employees to continue our steady progress, one step at a time.



**TOSHIHIRO SUZUKI**  
*President and CEO*

## CONTENTS

01	FOREWORD
02	ENVIRONMENTAL ACCOUNTING
03	ENVIRONMENTAL MANAGEMENT
06	PROMOTION OF REDUCTION AND RECYCLING ACTIVITY OF WASTE
07	PROMOTION OF ENERGY/RESOURCE CONSERVATION
09	LOWERING ENVIRONMENTAL CONTAMINATION RISK
10	SOCIAL CONTRIBUTION ACTIVITIES RELATED TO THE ENVIRONMENT

**Range Covered:**

**Domestic/** Company offices (total of 5 locations)  
Subsidiaries (total of 6 companies), Sales agents (2 companies)

**Overseas/** Subsidiaries (2 main production sites)

Coverage centered on Company activities, with some affiliates such as subsidiaries/sales agents also included

## ENVIRONMENTAL ACCOUNTING

### [ Environmental Protection Costs ]

(thousands of yen)

Category		Initiatives	Parent Company		Affiliates	
			Investment	Expenses	Investment	Expenses
Costs within Business Area	Pollution Prevention Cost	Prevention of air/water/ground contamination	1,500	13,325	4,122	1,762
	Environmental Preservation Cost	Energy conservation	1,250	160	2,750	0
	Resource Recycling Cost	Treatment/disposal of waste	0	11,843	0	3,309
Upstream/Downstream Cost		Green procurement difference	0	0	0	0
Management Activity Cost		EMS operation, education, on-site planting	0	33,765	0	7,052
Research & Development Cost		R&D, WEEE/RoHS measures	0	3,807	0	0
Social Contribution Cost		Donations, financial support	0	481	0	0
Environmental Damage Response Cost		Repairs for ground/water contamination	0	0	0	0
Total			2,750	63,381	6,872	12,123

Note: Excludes depreciation expense

### [ Environmental Protection Effects ]

Category			2007		2008		Change at Parent Company	Change at Affiliates	Reference Page	
			Parent Company	Affiliates	Parent Company	Affiliates				
Corresponds to Costs within Business Area	Input	Electricity Usage Volume	1,000 kwh	11,289	6,794	11,689	6,463	400	-331	P8
		Per Unit	1,000 kwh/¥1 million	0.246	—	0.235	—	-0.012	—	
		Heavy Oil Usage Volume	kl	101	3	99	3	-2	0	P8
		Per Unit	kl/¥1 million	0.002	—	0.002	—	0	—	
		LPG Usage Volume	kg	8,305	29,160	8,660	38,511	355	9,351	—
		Per Unit	kg/¥1 million	0.181	—	0.173	—	-0.008	—	
		Measured Substance Usage Volume	l	7,678	—	7,493	—	-185	—	—
		Per Unit	l/¥1 million	0.167	—	0.150	—	-0.017	—	
		Gasoline Usage Volume	l	32,741	21,057	28,241	20,157	-4,500	-900	P8
		Per Unit	l/¥1 million	0.712	—	0.565	—	-0.147	—	
	Light Oil Usage Volume	l	5,052	3,893	4,836	4,110	-216	217	—	
	Per Unit	l/¥1 million	0.110	—	0.097	—	-0.013	—		
	Total Energy Usage Volume	GJ	116,973	69,369	120,676	66,602	3,703	-2,767	P7	
	Per Unit	GJ/¥1 million	2.545	—	2.415	—	-0.130	—		
	Water	Water Usage Volume	m <sup>3</sup>	37,075	6,361	35,329	6,792	-1,746	431	—
	Per Unit	m <sup>3</sup> /¥1 million	0.807	—	0.707	—	-0.100	—		
	Resources	Copy Paper Purchase Volume	1,000 sheets	4,362	495	4,355	604	-7	109	P8
	Per Unit	1,000 sheets/¥1 million	0.095	—	0.087	—	-0.008	—		
	Emissions	Air	CO <sub>2</sub> Emissions	tons	4,760	2,773	4,897	2,676	137	-97
Per Unit			tons/¥1 million	0.104	—	0.098	—	-0.006	—	
Waste		Total Volume	tons	461	378	402	370	-59	-8	P6
		Per Unit	tons/¥1 million	0.010	—	0.008	—	-0.002	—	
		Recycling Volume	tons	457	369	400	369	-57	0	P6
		Unrecyclable Volume	tons	4	9	2	1	-2	-8	
Recycling Ratio	%	99.1	97.8	99.6	99.6	0.5	1.8	P6		

Note: "Per Unit" denotes "per million yen of parent company sales"

### [ Financial Impact Resulting from Environmental Protection Measures ]

(thousands of yen)

Category		Parent Company	Affiliates
		Impact	Impact
Earnings	Gains from sales of marketable waste from business activities	46,824	15,372
Expense Reductions (year on year)	Total energy expense (electricity/heavy oil/LPG/measured substances/gasoline/light oil) reductions	-3,463	-600
	Reductions in water/well water usage expense	-976	-10
	Reductions in copy paper purchase expense	-549	-98
	Reductions in waste disposal expense	-165	4,627
	Others	0	0
Total		41,681	19,291

## ENVIRONMENTAL MANAGEMENT

### Progress toward ISO 14001 Certification

We have acquired ISO 14001 certification for all five of our domestic plants, all six domestic subsidiaries, two domestic sales agents and two key production sites at our overseas subsidiaries.

In conjunction with our affiliates, we will continue activities to strengthen our overall promotion of environmental activities.

#### [ DOMESTIC ]

Company Plants		
Special Products	Ihara Factory	Acquired March 2001
Components	Ihara Factory	Acquired March 2001
General Administration Headquarters, R&D	Head Office Factory	Acquired September 2001
Precision Products	Fujimi Factory	Acquired February 2002
Machine Tools	Kikugawa Factory	Acquired March 2002

Subsidiaries	
Toshin Seiki Company	Acquired April 2006
Micro Fujimi Company	Acquired September 2006
Micro Takemi Company	Acquired October 2006
Micro Sapporo Company	Acquired March 2007
Micro Kikugawa Company	Acquired March 2007
OS Metal Company	Acquired March 2007

Sales Agents		
C.M.I. Company	Head Office/Osaka Office	Acquired January 2006
Move Company		Acquired January 2006

#### [ OVERSEAS ]

Subsidiaries (Key Production Sites)	
Star Micronics Manufacturing Dalian Co., Ltd. (Dalian, China)	Acquired May 2002
Shanghai S&E Precision Co., Ltd. (Shanghai, China)	Acquired February 2003

### Environmental Audits

#### [ Internal Environmental Audits ]

Internal environmental audits are conducted regularly each year at domestic plants and affiliates to confirm that environmental management systems are adequate and effective, and that environmental management programs are appropriate and legally compliant. We also conduct skills enhancement seminars for internal environmental auditors to improve the expertise of people conducting internal audits.

A comprehensive environmental audit report is created listing items that fall below the expected standards, and the report is submitted to management as data for use in compiling the end-of-year environmental review. Thus audits contribute to improvements in the following fiscal year.



Training for auditors

[ External Environmental Audits ]

Domestic plants and affiliates that have acquired ISO 14001 certification are subject to environmental audits (environmental management system inspection) by an external inspection authority. Certification maintenance inspections take place once a year, while renewal inspections are conducted every three years.

The results of these inspections are submitted to management as data for use in compiling the end-of-year environmental review, thereby contributing to improvements in the following fiscal year.



Conducting an environmental audit

Environmental Training

Star Micronics and its domestic affiliates believe that to maintain, and further improve, the level of our environmental activities, we need to change the mindset of every single employee. We therefore offer training opportunities for all employees from new hires to management. Training comprises four core categories: general, rank-based, leader-oriented, and specialist.

In 2008, we conducted environmental training

seminars on the following topics: general environment-related (introductory/writing environmental reports), the environmental manual, environmental impact evaluation, environmental law, waste products, internal auditor development/skills enhancement, thermal recycling, and the 2007 environmental report. We also conducted environmental accounting briefings, and participated in external seminars and lectures related to the environment.

[ Environmental Training Structure ]

Training Category	Personnel Eligible	Internal/External Seminars Offered
General training	Regular employees	Introductory seminar, general seminar, waste product separation
Rank-based training	Managers	Managers' seminar
	Top management	Top management seminar
Leader-oriented training	Environmental leaders	Environmental manual seminar (including document management)
Specialist training	Environmental survey team	Environmental impact evaluation seminar
	Internal environmental auditors	Auditor development seminar (internal/external)*
	Personnel in charge of environmental law	Environmental law seminar*
	Public-sector environmental experts	Qualification seminar/test based on laws and regulations
	Personnel in charge of procurement	Green procurement seminar
	Personnel in charge of waste products	Waste products seminar
	Harmful substance handler	OJT by personnel with public-sector environmental qualifications
Noise measurement personnel	OJT by certified internal environmental experts	

\*Certified internal environmental experts



Environmental law seminar



Auditor development seminar

## [ Public, Environmental Qualified Person Related to Environment ]

Name of Qualification	Number of Persons Qualified (number of persons qualified in 2008)	Name of Qualification	Number of Persons Qualified (number of persons qualified in 2008)
Environmental management system inspector	<b>1 (0)</b>	Dangerous substance handler	<b>65 (0)</b>
Safety manager	<b>4 (0)</b>	Manager in charge of handling of toxic and harmful substances	<b>3 (0)</b>
Public health manager	<b>16 (2)</b>	Manager in charge of X-ray operations	<b>1 (0)</b>
Pollution prevention manager	<b>17 (0)</b>	Manager in charge of organic solvent operations	<b>31 (1)</b>
Manager in charge of industrial waste requiring special management	<b>18 (1)</b>	Manager in charge of specific chemical substance operations	<b>7 (2)</b>
Fire prevention manager	<b>11 (0)</b>		

Note: For the parent company only. Excludes domestic affiliates.

## Emergency Response

Every year, Star Micronics and its domestic affiliates plan and conduct emergency-related training of relevant parties and disaster prevention drills, as well as simulation-based drills for individuals and entire facilities based on manuals, which are evaluated as part of the process. These drills anticipate every conceivable accident or emergency (earthquake, typhoon, explosion, fire, blackout, leak, airborne hazard, etc.).

In 2008, there was one incident that could have triggered an environmental problem in all of our plants

and affiliates. Around noon on September 6, 2007, there was an accident at our Fujimi Factory where about 25 liters of diesel leaked from a transportation contractor's truck. There were strong winds and heavy rain caused by a typhoon on that day, but leakage outside the premises was prevented by spreading a neutralizing agent and laying oil-absorbing mats, during which the skills obtained through our simulation-based drills proved useful. We issued a severe warning to the contractor.

### [ Simulation-based Drills ]



Oil leakage response drill (Kikugawa Factory)



Salt bath leakage response drill (Head Office Factory)

### [ Disaster Prevention Drills ]



Evacuation drill (Ihara Factory)



Hosing drill (Head Office Factory)

## Status of Legal Compliance

Star Micronics and its domestic affiliates have stipulated internal regulations for the application of environment-related laws, and compliance with these laws is evaluated in accordance with a list of specific items to be monitored and measured.

Legal compliance is confirmed by checking that results measured are in line with management figures, and the data is stored as an environmental record. When installing, introducing, changing, or disposing of facilities and equipment, we conduct an assessment of the facilities and equipment to evaluate legal compliance.

In 2008, the Kikugawa City Fire Department conducted an on-site inspection of subsidiary Micro Kikugawa Company's fire prevention equipment and issued an improvement notice. As a result, improvements were made immediately.

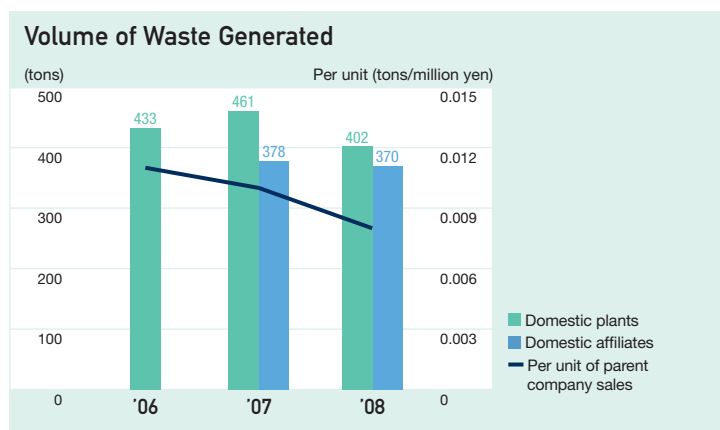
As a result of efforts to comply with environmental laws and emission standards, there were no rules violations or complaints received from local residents at any of our domestic plants or affiliates.

## PROMOTION OF REDUCTION AND RECYCLING ACTIVITY OF WASTE

Star Micronics and its domestic affiliates have created and implemented internal waste management regulations in order to properly dispose of waste produced

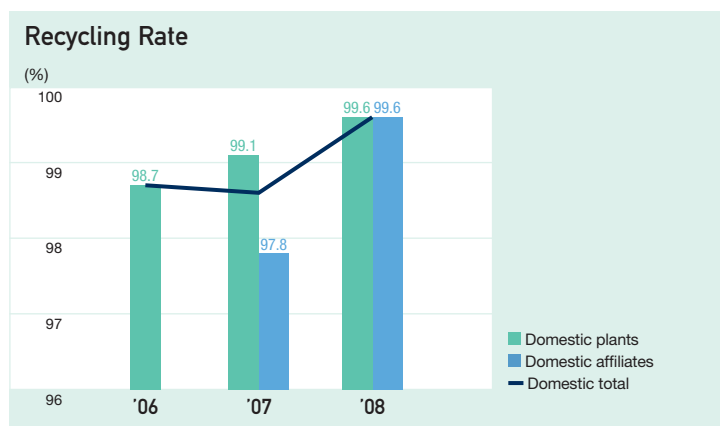
from corporate activities in line with the requirements of the Waste Disposal Law and to promote voluntary activities.

### Volume of Waste Generated and Recycling Rate



▶ We reduced our waste volume produced by 12.8% year on year at domestic plants (total volume 59 tons), and also achieved a 20% reduction on a per unit basis.

The main reason for the reduction in total volume was the absence of 2007's machine disposals in the Machine Tools business and items disposed of in preparation for relocation in the Special Products business.



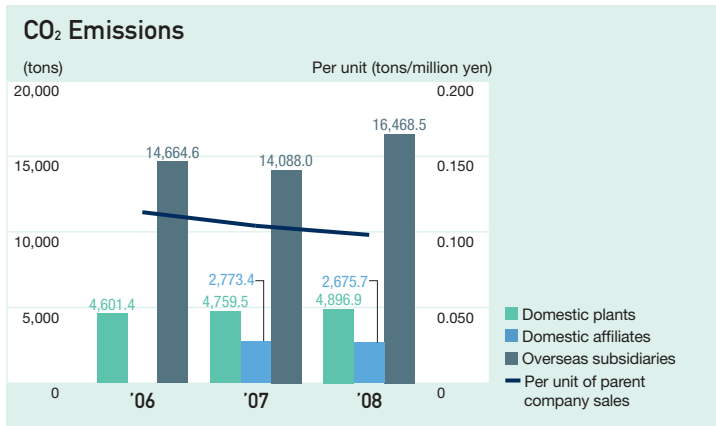
▶ We achieved a recycling ratio at the parent company of 99.6% (99.1% in previous year). The overall recycling ratio, including domestic affiliates, also reached 99.6%.

The main reason was because we recognized thermal recycling as a form of recycling for the first time from 2008.

Regarding landfill garbage, we conducted on-site instruction regarding dismantling/separation to improve recycling.

## PROMOTION OF ENERGY/RESOURCE CONSERVATION

### Changes in CO<sub>2</sub> Emissions

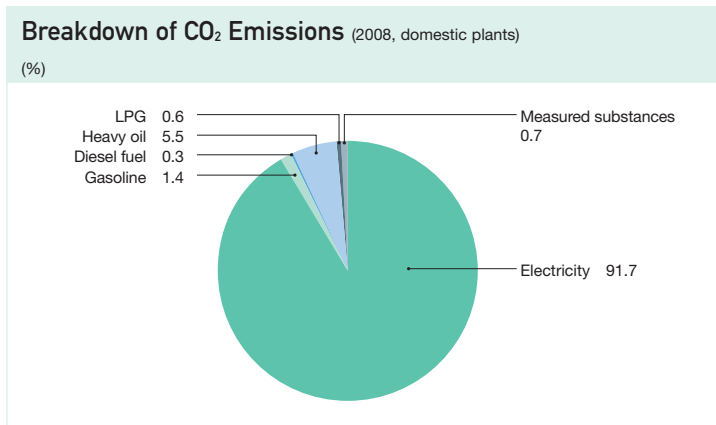


▶ CO<sub>2</sub> emissions at our domestic plants increased 2.9% year on year (total volume 137 tons), but were reduced 5.8% on per unit basis.

The main reasons for the increase in total emissions volume were the startup of a new manufacturing wing for the Machine Tools business and increased production.

▶ Breakdown of CO<sub>2</sub> emissions is: electricity 91.7%, heavy oil 5.5%, and gasoline 1.4%.

For further details, please refer to Changes in Energy Usage Volume (Key Categories) below.

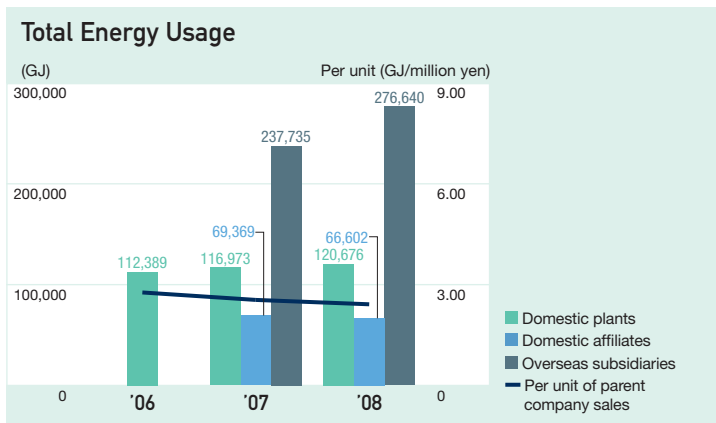


▶ The basic principle of CO<sub>2</sub> emission reductions is to reduce total emissions volume, but decreasing production to achieve emissions reductions would be pointless. It will therefore be crucial to improve the efficiency of operations as a reduction method.

▶ Now that we are shifting our production sites abroad, we believe that reductions in CO<sub>2</sub> emissions for the Star Group overall from a global perspective will be needed.

### Changes in Energy Usage Volume (Key Categories)

#### [ Total Energy Usage ]



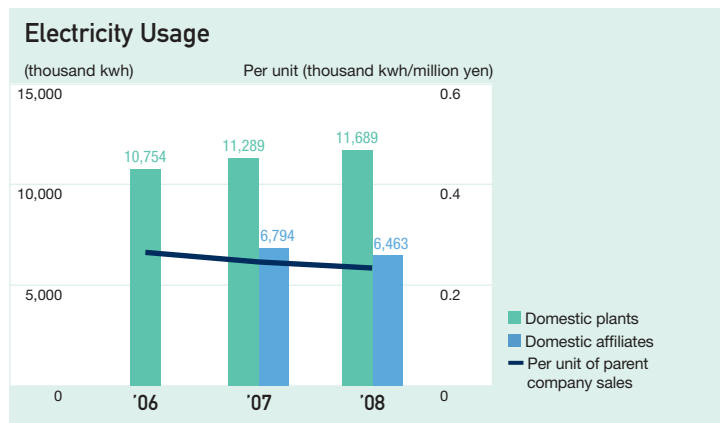
▶ Total energy usage at our domestic plants increased 3.2% year on year (total volume 3,703 GJ), but was reduced 5.1% on a per unit basis.

(Note)

- August 2004: Precision Products business closes/consolidates Senagawa Factory
- September 2005: Machine Tools business starts up new manufacturing wing (to be occupied by Toshin Seiki Company from November) and increases production
- March 2006: Components business starts up Quality Technical Center
- January 2007: Senagawa plant dismantled
- November 2007: Components business moves Naka-yoshida Factory to Ihara Factory site



[ Electricity Usage ]

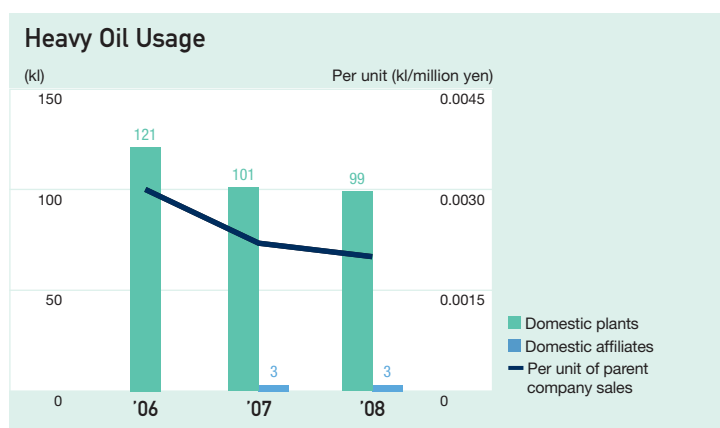


▶ Electricity usage increased 3.5% year on year (total volume 400,000 kwh), but was reduced 4.9% on a per unit basis.

The main reasons for the increase in total usage volume were the startup of a new manufacturing wing for the Machine Tools business and increased production.

▶ We are seeing reductions due to the implementation of energy conservation guidelines, and the introduction of “cool biz” and “warm biz” initiatives from 2005.

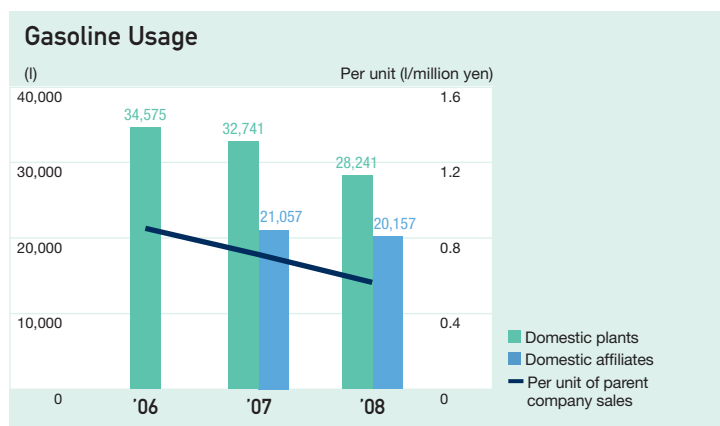
[ Heavy Oil Usage ]



▶ Heavy oil usage increased 2.0% year on year (total volume 2 kl), but was reduced 9.1% on a per unit basis.

(Note)  
In August 2005, the Special Products business changed its air conditioning facilities to air-cooled equipment (powered by electricity, rather than heavy oil).

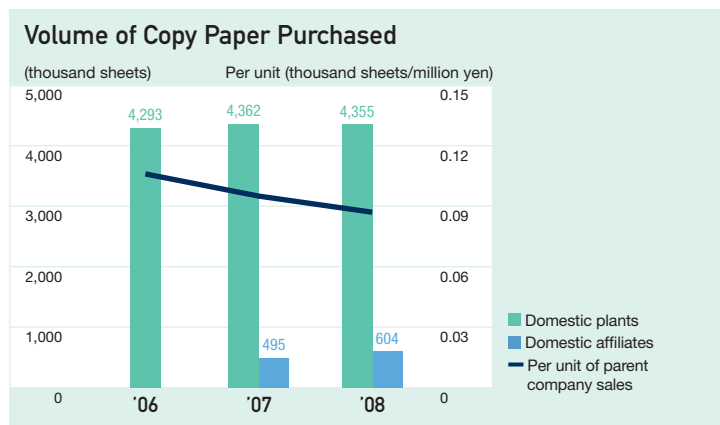
[ Gasoline Usage ]



▶ Gasoline usage decreased 13.7% year on year (total volume 4,500 l), and was also reduced 20.6% on a per unit basis.

▶ In order to reduce gasoline usage by company cars, we are introducing hybrid mini/eco-cars, reducing the number of company cars owned, and encouraging drivers to turn engines off when stationary.

Changes in Volume of Copy Paper Purchased



▶ Copy paper purchases decreased 0.2% year on year (total volume 7,000 sheets), and were also reduced 8.4% on a per unit basis.

▶ As a result of investigating paperless work practices, Star Micronics enacted improvements such as shifting to online administrative processes, reducing documents distributed, and better utilizing the LAN.

## LOWERING ENVIRONMENTAL CONTAMINATION RISK

### Managing Chemical Substances

Star Micronics and its domestic affiliates have created and implemented internal regulations for the management of harmful substances in order to ensure proper, safe management of chemical substances and dangerous materials handled by the Company. These

internal regulations, based on the relevant laws and statutory regulations, are designed to ensure that the environment is taken into account in the purchasing, storage, use and disposal of such substances.

#### [ Response to PRTR Law ]

The PRTR (Pollutant Release and Transfer Register) Law is a means of obtaining, collating and disclosing emission and transfer volume data for harmful chemical substances. Businesses that handle 1 ton or more per year of Type 1 designated chemical substances (of which there are 354 substances) or 0.5 tons or

more per year of special Type 1 designated chemical substances (of which there are 12 substances) must obtain and report emission and transfer volumes.

The results of PRTR reporting by domestic plants and affiliates are shown in the table below.

#### ■ PRTR Reports for all Domestic Plants and Affiliates

(Unit: kg/year)

	Substance No.	Chemical Substance Name	Use	Emissions Volume			Transfer Volume		
				Air	Public Drainage Areas	Ground within Plant	Landfill within Plant	Washed into Sewage	Waste within Plant
2007	145	Dichloromethane	Chroming	1,000	0	0	0	0	250
	232	Nickel Compound	Chroming	0	0	0	0	2	420
	63	Xylene	Paint	1,500	0	0	0	0	74
	227	Toluene	Paint	1,800	0	0	0	0	1,200
2008	145	Dichloromethane	Chroming	1,500	0	0	0	0	250
	232	Nickel Compound	Chroming	0	0	0	0	1	500
	227	Toluene	Paint	1,500	0	0	0	0	770

### Response to EU Environmental Regulations

Environmental regulations in the European Union (EU) have had a significant impact not only within the EU region but also in various countries around the world, and many Japanese manufacturing industries have been forced to respond in some way.

For our products that fall under WEEE and RoHS

directives, we are operating based on our internal regulations for management of substances that burden the environment and on green purchasing guidelines. We are also studying how to respond to REACH regulations and the EuP directive.

#### ■ Waste Electrical and Electronic Equipment (WEEE) Directive

EU member countries are required to promulgate laws for the recovery/recycling of electrical and electronic equipment. Manufacturers and sellers of designated

electrical and electronic equipment are required to recover/recycle used products shipped on or after August 13, 2005.

#### ■ Restriction of Hazardous Substances (RoHS) Directive

New electrical and electronic equipment manufactured or sold in the EU region on or after July 1, 2006 must not contain the following six chemical

substances: 1) lead, 2) mercury, 3) cadmium, 4) hexavalent chromium, 5) polybrominated biphenyl, and 6) polybrominated diphenyl ether.

#### ■ Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulations

From June 1, 2007, businesses that manufacture or import 1 ton or more of chemical substances per year in the EU region have been required to register information about the substances' characteristics and

dangers prior to sale. If pre-registration is completed between June 1 and December 1, 2008, formal registration can be completed within the next 11 years.

### ■ Energy-using Products (EuP) Eco-design Directive

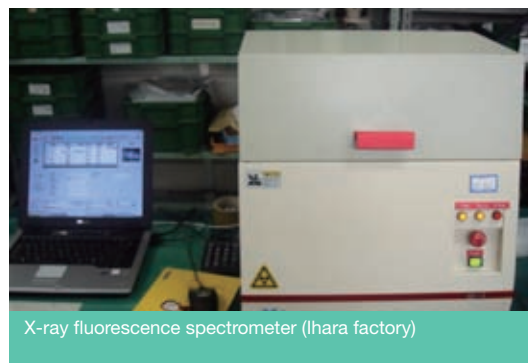
Energy-using products with sales in the EU region exceeding 200,000 units per year must meet environmentally friendly design conditions, or cannot be sold

in the future (CE marking is assigned to products meeting standards). Studies into implementation procedures are currently under way.

### [ Introduction of X-ray Fluorescence Spectrometers ]

We introduced X-ray fluorescence spectrometers to measure levels of chemical substances contained in components of our printers that fall under the WEEE and RoHS directives, as well as to conduct inspections on receipt of the components.

Our machine tools do not fall under these directives, but we have taken aggressive measures such as introducing X-ray fluorescence spectrometers to measure the composition of components with a view to reducing harmful substances. Components used in the actual machines in our key products are 99.3% RoHS-compliant, excluding certain NC control equipment.



X-ray fluorescence spectrometer (Ihara factory)

## SOCIAL CONTRIBUTION ACTIVITIES RELATED TO THE ENVIRONMENT

### Promotion of Social Contribution Activities

#### [ Basic Policy for Social Contribution Activities ]

We are actively involved in contributing to society as part of our corporate social responsibility (CSR) activities, as declared in our Star Micronics Charter of Corporate Conduct. We intend to continue contributing

in a manner suited to our place in society, strengthening our involvement in local and global communities through participation in local clean-up activities and assistance for NGOs/NPOs.

**Basic Policy for Social Contribution Activities** (from Star Micronics Charter of Corporate Conduct)

**We, as "Good Corporate Citizens," Will Actively Engage in Philanthropic and Other Societal Activities for the Benefit of the World's People.**

- (1) We will play close attention to our relationship with society, and conduct business activities that are socially useful.
- (2) We will co-operate in regional development and revitalization of communities through participation in local events and social contribution activities.
- (3) We will support our employees' voluntary contributions to society.

#### [ Assistance for NGOs/NPOs ]

We became a corporate member of OISCA (The Organization for Industrial, Spiritual and Cultural Advancement International) in September 2006, at the same time establishing the Chubu branch of OISCA's Shizuoka Prefecture office.

OISCA is an international NGO that has been

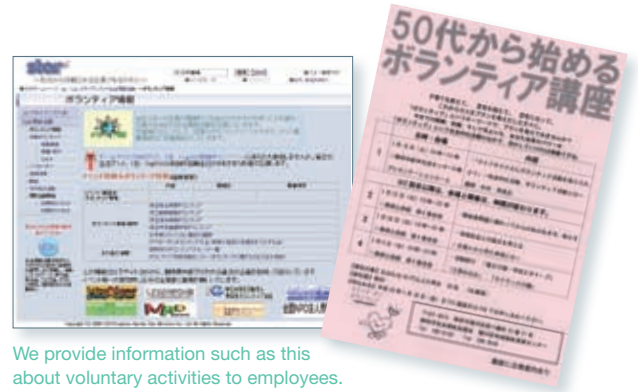
involved in human resource development, agricultural development, and global environmental problems, mainly in the Asia-Pacific region, since 1962. Its activities have been praised by international organizations and governments of numerous countries, and it has been awarded the UN Earth Summit Award.

#### [ Supplying Volunteer Information ]

As part of our efforts to support employees in their voluntary social contribution activities, we became a corporate member of the Shizuoka Prefecture Volunteer

Association in November 2006. This supplemented our existing membership of the Shizuoka Social Welfare Conference.

From November 2006, we started using our intranet to supply information on voluntary activities in the Chubu region to employees and other individuals who would like to try a specific activity, or who are interested but don't know how to begin. The information, including requests for volunteers and information on events, is provided by the Shizuoka Prefecture Volunteer Association and the Shizuoka Social Welfare Conference, among other organizations.



We provide information such as this about voluntary activities to employees.

## Contributing to Communities and Society at Large

CSR activities at Star Micronics entail an active role in contributing to society with the co-operation of our employees. We will strengthen our social involvement

on a local and global scale, continuing to contribute through participation in local clean-up activities and assistance for NGOs/NPOs.

### [ Clean-up Activities at Mihomasaki Beach ]

On Saturday, June 2, 2007, clean-up activities hosted by the Shizuoka Association for Environmental Safeguards were conducted at Mihomasaki Beach, with a total of 28 participants from Star Micronics (20 employees and 8 family members). A total of 930

people from 62 member companies participated on this day, with 510 kilograms of combustible garbage and 240 kilograms of non-combustible garbage collected in about one hour.



Participants from Star Micronics



Clean-up activities

## Activities to Prevent Global Warming

As the global warming problem becomes more serious, companies are expected to conserve energy as one of their responsibilities to society.

At Star Micronics, we regularly conduct energy conservation activities such as No-Car and Lights-Down campaigns.

### [ No-Car Campaign ]

In 2008, we designated the weeks of June 4–8 and October 15–19 as No-Car weeks, and implemented a No-Car campaign for employees commuting by car to our plants in Shizuoka City.

#### Implementation Report

**Period:** Monday, June 4–Friday, June 8, 2007  
Monday, October 15–Friday, October 19, 2007

**Participants:** 81 individuals

**Total days:** 186 days

**Eco-commute distance:** 2,986 km

**CO2 reduced:** 686 kg (calculated based on fuel consumption of 10 km/l)

**Measured in 2-liter PET bottles:** 175,163 bottles

### [ Lights-Down Campaign ]

In response to a call from the Ministry of the Environment, we co-operated with a Lights-Down Campaign that encourages turning off lighting and neon signs.

During three days from Monday, June 22 to

Sunday, June 24, 2007, we turned off our rooftop neon logo signs at 8 p.m. at the Head Office, the Ihara Factory, and the Fujimi Factory. The signs are usually illuminated until 11 p.m.

For enquiries regarding this environmental report, please contact the CSR Promotion Group within the General Affairs Office:

Tel: +81-54-263-1302 Fax: +81-54-263-1330