



The Kurita Group
Environmental Report 2008

For the Year Ended March 31, 2008

Profile

Since its founding in 1949, Kurita Water Industries Ltd. has long been contributing to the development of industry and society as a leading company in the field of water treatment. The Kurita Group is committed to contributing to the solutions to issues concerning water and the environment as its corporate mission, based on its corporate philosophy, "Study the properties of water, master them, and we will create an environment in which nature and man are in harmony." By implementing our corporate vision of being an "advanced water and environmental management company," we will continually respond to the needs of customers and society in general to contribute to further social development.

Corporate Data

Company name: Kurita Water Industries Ltd.
Address: 4-7, Nishi-Shinjuku 3-chome, Shinjuku-ku, Tokyo 160-8383, Japan
 ¥13,450,751,434
Paid-in capital:
Representative (President): Hiroshi Fujino
Date of establishment: July 13, 1949
Fiscal year-end: March 31
Number of employees: 1,453 (parent company); 4,249 (on a consolidated basis)

(As of March 31, 2008)

The Kurita Group

The Kurita Group is composed of the parent company, Kurita Water Industries Ltd., its 42 subsidiaries and one affiliate. Together, they provide customers with a range of water treatment chemicals and systems, relevant maintenance services, and soil and groundwater remediation services.

The Group's business is classified into the water treatment chemicals business and the water treatment facilities business. In the water treatment chemicals business, we manufacture and sell water treatment chemicals and provide relevant maintenance services. The water treatment facilities

business is subdivided into (1) the manufacture and sale of water treatment systems and facilities, and the maintenance services for them; (2) integrated soil remediation services that include surveys on soil and groundwater pollution and the purification of contaminated soil and groundwater; and (3) cleaning services, in which we physically and chemically clean customers' equipment and parts to maintain their productivity and quality. The major Kurita Group companies are shown below.

Major Kurita Group Companies

Water Treatment Chemicals Business

- Kurita Buil-Tech Co., Ltd.
- Kurita BMS Co., Ltd.
- Kurita Chemicals Hokkaido Ltd.
- Kurita Chemicals Tokyo Co., Ltd.
- Kurita Chemicals Kanagawa Co., Ltd.
- Kurita Chemicals Tokai Co., Ltd.
- Kurita Chemicals Kansai Ltd.
- Kurita Chemicals Hyogo Ltd.
- Kurita Chemicals Sanyo Ltd.
- Kurita Chemicals West Japan Ltd.
- Kurita Chemicals Oita Ltd.
- Kurita Analysis Service Co., Ltd.
- Kurita do Brasil LTDA.
- Kurita (Singapore) Pte. Ltd.
- Kurita Water (Malaysia) Sdn. Bhd.
- Kurita Europe GmbH
- Kurita (Taiwan) Co., Ltd.
- Kurita-GK Chemical Co., Ltd.
- Kurita Water Industries (Dalian) Co., Ltd.
- P.T. Kurita Indonesia
- Hansu Ltd.

Composition ratio by business segment Kurita Group, Fiscal 2008

- Water Treatment Chemicals Business: 28.6%
- Water Treatment Facilities Business: 31.3%
- Other: 68.7%

* Total operating income includes corporate items and eliminations.

Water Treatment Facilities Business

Facilities and maintenance

- Kuritaz Co., Ltd.
- Kurita Meiki Ltd.
- Kurita Creation Co., Ltd.
- Kuritec Europe GmbH
- Kurita America Inc.
- Kuritec Singapore Pte. Ltd.
- Kuritec (Shanghai) Co., Ltd.
- Hansu Technical Service Ltd.
- Kurita (Singapore) Pte. Ltd.
- Kurita Water Industries (Suzhou) Ltd.

Soil remediation

- Land Solution Inc.

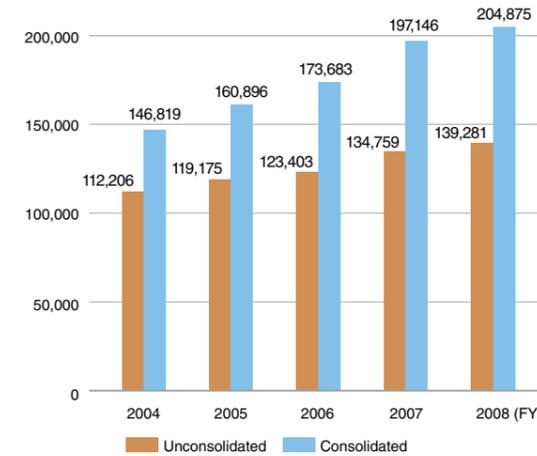
Cleaning

- Kurita Engineering Co., Ltd.
- Miyoshi Industries Co., Ltd.
- Kuritec Service Co., Ltd.
- San-ei Industries Co., Ltd.
- Nippon Fine Co., Ltd.
- Sun Kako Co., Ltd.
- Aoi Industries Co., Ltd.

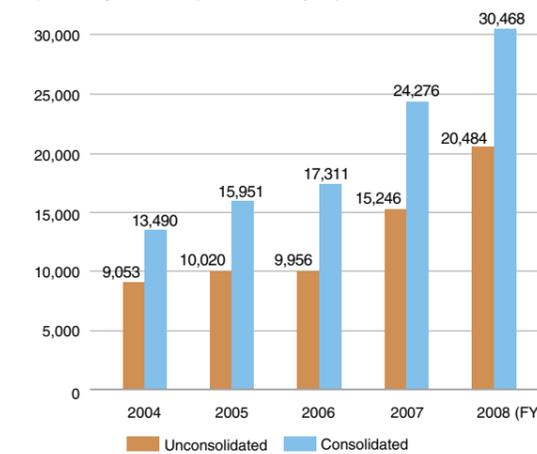
(As of March 31, 2008)

Financial Information for the Year Ended March 31

Net sales (millions of yen)



Operating income (millions of yen)



Net income (millions of yen)

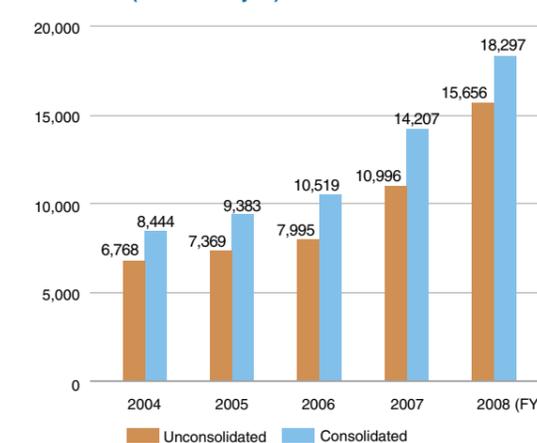


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Editing Policy

We have published this report to help our stakeholders deepen their understanding of the Kurita Group's environmental improvement activities. In the report, we disclose examples and the results of the activities we conducted in line with our three-pronged approach of "responding to customer needs," "changing society," and "changing Kurita" as described in our Basic Environmental Improvement Policy.

In creating the report, we referred to the Japanese Ministry of the Environment's Environmental Reporting Guidelines 2007 and Environmental Accounting Guidelines 2005.

All of the product names listed in this report are registered trademarks or trademarks of Kurita and other companies.

This report is published under the title of Environmental Report, as in the previous years. Kurita has been endeavoring to solve issues concerning water and the environment since its foundation, and the title implies Kurita's intention to help achieve a sustainable society through its business operations, with a strong focus on the environment.

Organizations covered: Kurita Water Industries Ltd. and other domestic Kurita Group companies (19 companies)

Period covered: Fiscal 2008 (April 1, 2007 to March 31, 2008)
 The report also mentions some policies and targets set for April 2008 onwards.

Date of publication: September 2008 (next publication is slated for September 2009)

Company names: "Kurita" refers to Kurita Water Industries Ltd., the "Kurita Group" refers to Kurita Water Industries Ltd. and domestic Kurita Group companies, and "Group companies" refer to domestic Kurita Group companies.

Message from the President ●●●

We Are Creating New Value to Achieve Growth as a Going Concern and to Help Create a Sustainable Society.



Social Responsibility as a Leading Company in Water Treatment

The 21st century has been called the “Century for water and the environment.” At present against the backdrop of global economic growth and increased world population (said to double every 50 years), we are facing a range of issues concerning water and the environment on the planet where we live. These issues include water shortage, water pollution, and global warming caused by greenhouse gases. Under these circumstances, companies, including Kurita, are required to manage themselves in a manner that is well-balanced economically, environmentally and socially in order to pass a better global environment on to the next generations and to ensure their own social sustainability as companies.

For over a half-century since its foundation in 1949, Kurita has contributed to the development of society and industry and to environmental conservation, including the prevention of pollution through its business operations, as Japan’s leading company in the field of water treatment. The Kurita Group is conducting its business operations based on its corporate philosophy— “Study the properties of water, master them, and we will create an environment in which nature and man are in harmony.” In line with that philosophy, I believe it is the social responsibility of the Group to maintain sustainable growth as a company, and to solve the emerging issues concerning water and the environment toward the realization of a sustainable society.

Commitment to a Sustainable Society through Creativity

The first commitment period for the Kyoto Protocol (2008 to 2012) started this year, and the Kurita Group is facing increasing demands from its customers to help them reduce their environmental load. In the Hokkaido Toyako Summit held this July, the environment and climate change were discussed as one of the main themes, and the developed countries reached an agreement to share the long-term target of reducing the emissions of greenhouse gases by half by 2050.

The Kurita Group, to contribute to the achievement of this target, will of course reduce its own greenhouse gas emissions in its business operations and conduct environmental improvement activities in cooperation with its customers, thereby contributing to the reduction of greenhouse gas emissions in the entire society. At present, the reduction of greenhouse gas emissions is regarded as a major approach to achieve a sustainable society, but I believe it is also important to implement comprehensive environmental improvement measures. For example, we must conserve water resources by the effective use and recycling of water. We have to collect valuable materials from wastewater and other waste to recycle them, and reduce our environmental load by minimizing the generation of wastewater and other waste.

Issues concerning water and the environment that we are facing cannot be solved if we are trapped by old values and traditional ideas. We need to have the ability to think flexibly

and the strong will to solve issues. In other words, we must have “Creativity.” By using our Creativity, we will bring about new value that only the Kurita Group can provide, offer the new value thus created to customers and society at large, and solve the issues concerning water and the environment, toward the achievement of a sustainable society.

Employees Should Play a Central Role in the Environmental Improvement Activities

The Kurita Group is promoting environmental improvement activities in its business operations based on its corporate philosophy. We are reducing CO₂ emissions and generation of waste at our offices and other business sites while designing, developing, and manufacturing water treatment chemicals and facilities with higher quality and lower environmental load. We are also making proposals to customers that incorporate these environmental viewpoints.

The Kurita Group’s business operations directly contribute to the environment. I believe it key to its growth and environmental improvement activities for the Group to meet the expectations of customers by appropriately understanding their problems and needs and providing them with optimal solutions through communications. The central roles in these activities should be played by Kurita Group employees, and each and every employee must have innovative ideas to fulfill that role. To this end, I will take various opportunities to communicate with employees in

order to teach them the Group’s basic ethics and its visions concerning safety, quality, and the environment. I would also like to examine the establishment of a system to enable employees to appreciate their own achievements.

To the Readers of Kurita Group Environmental Report 2008

In this report, we will introduce the results that were achieved by Kurita Group environmental improvement activities within the Group as well as at its customers’ factories and other business sites. The Kurita Group has been continually dispatching information about its ideas on environmental improvement activities and on the results of the activities through various media, including corporate brochures and its website. We will continue to disclose relevant information to stakeholders to gain even more trust from them. I hope that this report will help readers understand the Kurita Group’s environmental ideas and measures, and look forward to receiving your frank opinions about the report, which will help us improve the quality of our environmental improvement activities.

September 2008

Hiroshi Fujino
President

Basic Approach to Environmental Improvement Activities

● Message from the Director Responsible for Environmental Improvement Activities

The Kurita Group believes that it can contribute to the realization of a sustainable society by implementing its corporate philosophy. Based on our Basic Environmental Improvement Policy, which was formulated to ensure that all employees of the Group will make concerted efforts to improve the environment, we have been promoting our environmental improvement activities through a three-pronged approach of “responding to customers’ needs,” “changing society,” and “changing Kurita.”

For the first aspect of the approach, “responding to customers’ needs,” we are providing customers with solutions to reduce their environmental load through our technologies, products and services, thereby supporting them in their environmental improvement activities. In this report, we will describe the environmental benefits (estimates) brought to the customers by the products and services we delivered to them during the period from April 2007 to March 2008. In fiscal 2008, we made efforts to build a mechanism/system to collect data regarding the environmental improvement results achieved by our products. We will continue to increase the number of our products that support our customers in their environmental improvement activities and will make even more environmental improvement proposals to them.

For the second aspect of the approach, “changing society,” we are creating new technologies and products to solve the environmental issues that cannot be solved by existing technologies as a means to contribute to the creation of a sustainable society. In this report, we will describe the environmental benefits (estimates) brought to our customers’ factories and other business sites by the use of new technologies and products that we created in and before fiscal 2007. The Kurita Group will continue to develop new technologies and products to solve environmental issues at a higher pace.

For the third aspect of the approach, “changing Kurita,” all the business sites of the Kurita Group are conducting activities to reduce their environmental load. In fiscal 2008, due to business expansion, CO₂ emissions from the sites increased by 0.5% and waste generation by 3.6% compared with the

previous fiscal year. Nevertheless, we were able to reduce CO₂ emissions and waste generation per sales of ¥1 million by 3.3% and 0.3%, respectively, compared with the previous fiscal year levels, as a result of making enhanced energy conservation and recycling efforts. I think it is necessary for the Group to take new measures for further reduction of its CO₂ emissions and to strengthen its activities for “three Rs—recycle, reuse and reduce.”

The Kurita Group, by taking the aforementioned three-pronged approach in its environmental improvement activities, will make further progress to achieve more growth as a company and to contribute to the creation of a sustainable society.

September 2008



Tetsuo Saeki
 Director responsible for environmental improvement activities
 Managing Director and General Manager,
 Corporate Planning Division
 Kurita Water Industries Ltd.

● Basic Environmental Improvement Policy

Corporate Philosophy

(Established in July 1989)

“Study the properties of water, master them, and we will create an environment in which nature and man are in harmony.”

Basic Environmental Improvement Policy

(Established in March 2004)

By carrying out our business operations in accordance with our Corporate Principle, and by continuing to create new environmental businesses, we will vigorously strive for solutions to environmental issues threatening planet Earth.

Responding to customers’ needs

Through the provision of products, technologies and services, we aim to contribute to our customers’ environmental and conservation efforts.

Changing society

We will work to find unique solutions to environmental issues through the development of new products, technologies and businesses. Furthermore, we will focus on developing new technologies that anticipate future needs in the area of environmental sustainability.

Changing Kurita

Each of our operations centers will implement a program based on the “three Rs—recycle, reuse and reduce.”

Kurita Group’s Activities to Promote Environmental Sustainability

Realization of a sustainable society

Environmental improvement activities for customers

Changing society
 Develop new technologies and products to contribute to environmental improvement

Responding to customers’ needs
 Help customers reduce their environmental load by proposing and selling environmental technologies and products

Environmental improvement activities within the company

Changing Kurita
 Reduce the environmental load of its business operations

Environmental Management

Organizational system for promoting environmental improvement activities

The Kurita Group's environmental improvement activities are supervised by the Environmental Improvement Promotion Committee, which comprises members from across the entire company.

The Environmental Improvement Promotion Committee is chaired by the Kurita director responsible for environmental improvement activities. The Committee sets the targets, policies, and measures, and formulates action plans for the entire Group's environmental improvement activities, based on which the Environmental Improvement Promotion Committee of Kurita's head office divisions and the environmental improvement facilitators of Kurita's business sites and of other Group companies are leading the activities. In addition, the Group regularly holds an Environmental Improvement Activity Promotion Meeting to check and follow up on the progress toward the achievement of the predefined targets.



PDCA cycle for environmental improvement activities

In order to promote environmental improvement activities, the business sites of Kurita as well as other Kurita Group companies formulate annual action plans and set specific targets and measures for the activities at the beginning of each term. The Kurita Group has established a survey team within the Group Environmental Improvement Promotion Committee with the aim of identifying the environmental improvement activities actually conducted within the Group and measuring the progress toward the achievement of the predefined targets. The team regularly conducts onsite surveys and implements corrective measures based on the survey results on a continual basis. At the end of each year, it identifies problems in reference to the results of the activities conducted within the Group and incorporates the findings into the plans to be made for the next year, with an eye to improving the activities.



The Environmental Improvement Activity Promotion Meeting

In order to facilitate and strengthen the entire Group's environmental improvement activities, the Kurita Group has been holding its Environmental Improvement Activity Promotion Meeting since fiscal 2007. The Meeting is held biannually to check the progress and results of the environmental improvement activities conducted by each business site of Kurita and by each Group company.

At the Conference, we set the targets, policies, and measures to facilitate even more effective environmental improvement activities, and evaluate and review the past results to ensure the successful implementation of the PDCA cycle.



Environmental management and promotion officers attending the Conference from all over the country

The Kurita Group's Environmental Activity Results and Targets

By taking the three-pronged approach for the environment, the Kurita Group achieved the following results in fiscal 2008 and set the following targets for fiscal 2009.

Responding to customers' needs Results in fiscal 2008

Item	Results in fiscal 2008		Ref. page
	Benefit indicator	Fiscal 2008	
Expansion of environmental benefits to customers	<Environmental benefits to customers>		13-14
	CO ₂ emission reduction	29,000 t*	
	Waste reduction	42,000 t*	
	Reduction of substances of concern	1,200 t	
	Wastewater treatment	12,000,000 m ³	
	Remediation of contaminated soil	860,000 m ³	
Treatment of air pollutants	14,000,000 m ³		

* Includes environmental benefits to customers (through new technologies and products) in the aspect of "Changing society."

Changing society Results in fiscal 2008

Item	Results in fiscal 2008		Ref. page
	Benefit indicator	Fiscal 2008	
Development of new technologies and products that contribute to environmental improvement	Number of new technologies and products developed to contribute to environmental improvement: 12		21
Expansion of environmental benefits to customers (through new technologies and products)	<Environmental benefits to customers (through new technologies and products)>		
	CO ₂ emission reduction	4,900 t	
	Waste reduction	440 t	

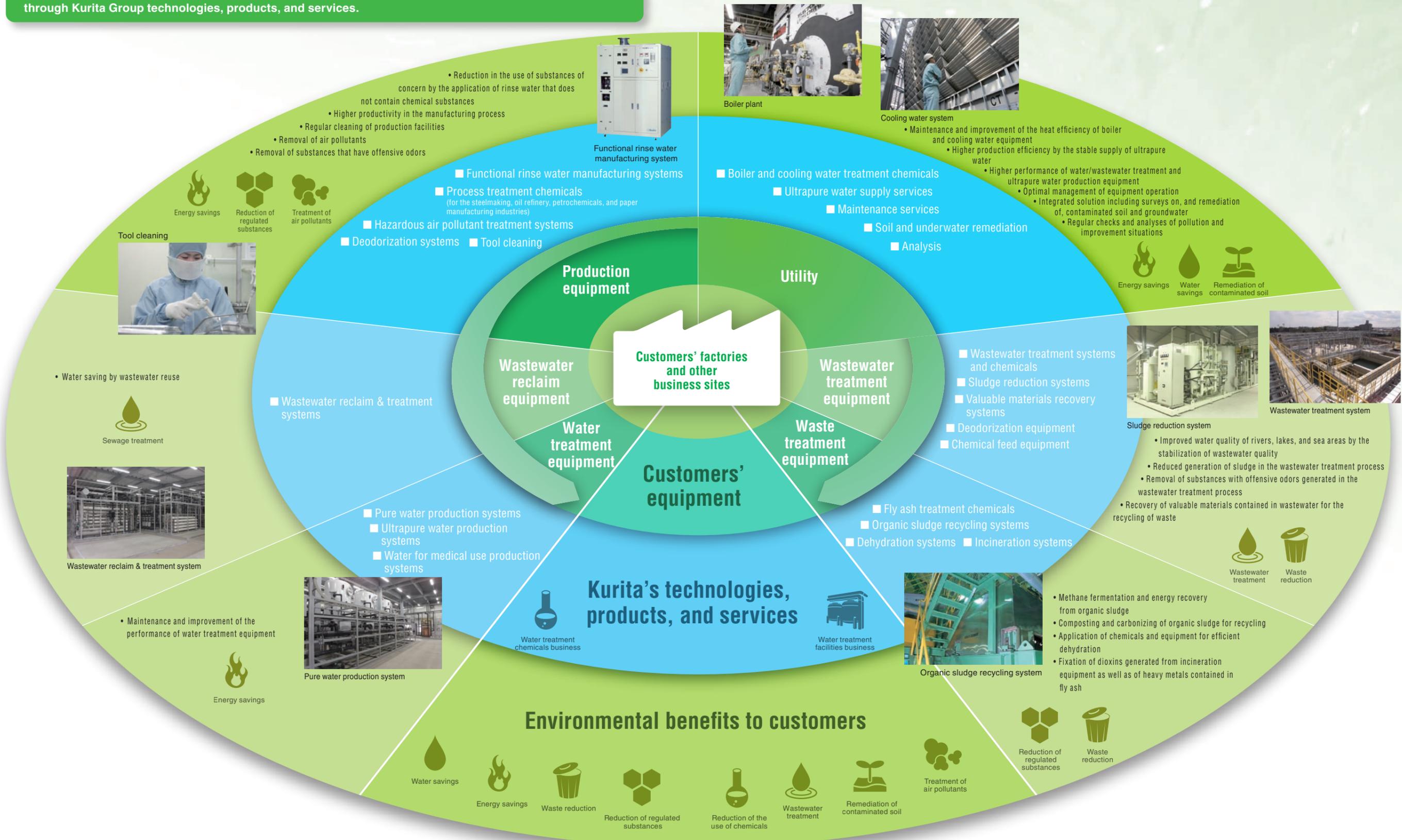
Changing Kurita Results in fiscal 2008 and targets for fiscal 2009

Item	Fiscal 2008		Fiscal 2009		Ref. page	
	Target	Result	Target	Target		
CO ₂ emission reduction	Compared with emissions per sales of ¥1 million in fiscal 2007	0.1% reduction	3.3% reduction (109.8 kg/¥1 million)	Compared with emissions per sales of ¥1 million in fiscal 2008	2.0% reduction	27
Waste reduction		6.8% reduction	0.3% reduction (131.3 kg/¥1 million)		1.0% reduction	28
Failsafe management of chemical substances	Appropriate management of chemical substances at each business site (cases of noncompliance with the Poisonous and Deleterious Substances Control Law: 0)	Cases of noncompliance with the Poisonous and Deleterious Substances Control Law: 0	Appropriate management of chemical substances at each business site (cases of noncompliance with the Poisonous and Deleterious Substances Control Law: 0)		29	

Responding to Customers' Needs

Environmental Benefits to Customers through Kurita's Technologies, Products, and Services

In responding to customers' needs, we help them make environmental improvements at their factories and other business sites. In the following, we will introduce the environmental benefits to our customers through Kurita Group technologies, products, and services.



Special Topic

Reduction of Environmental Load in Cooperation with Customers

Kurita appropriately understands the needs and issues of its customers through communication with them, and gives technical consulting services and makes improvement proposals to the customers to support them in their environmental improvement activities. As an example, we will introduce a case at the Oye Plant of the Nagoya Aerospace Systems of Mitsubishi Heavy Industries, Ltd. in the following two pages.

Reducing Environmental Load by Devising a Solution for the Recovery of Steam Condensate

The Oye Plant of the Nagoya Aerospace Systems of Mitsubishi Heavy Industries manufactures the main wings of large passenger airplanes using composites of carbon fiber and resin. The Plant uses steam to keep the temperature and humidity of the manufacturing site at certain levels, and Kurita has long been providing the Plant with the water treatment chemicals that are used for the efficient operation of steam-generating boilers.

Although it is possible to recover steam condensate from boilers for energy conservation, the condensate pH is acid influenced by carbon dioxide gas and the condensate decomposes the inside surface of the pipes, and the resulting rust might cause serious troubles to the boilers. To recover and reuse condensate, it is therefore necessary to raise the pH by the use of condensate treatment agent or to protect the inside surface of the pipes by coating.

The Plant had been recovering condensate by the use of a condensate treatment agent, thereby reducing the use of boiler fuels and makeup water. The Plant, however, faced the problem of "odor from the steam and pain in the eyes of workers due to the odor" and made a decision to suspend the recovery of condensate. The condensate treatment agent provided by Kurita was suspected to be a cause of the problem, and Kurita was facing the risk of losing the trust of the Plant. Due to the problem, the Plant might no longer be able to recover condensate to reduce its environmental load.

Takeshi Okada, who was engaged in boiler sales activities in the Chubu region for Kurita's Chemical Division, promptly visited the Plant with Hitoshi Moriyama, an engineer working in the same business section with Okada, to search for the cause and solve the problem.

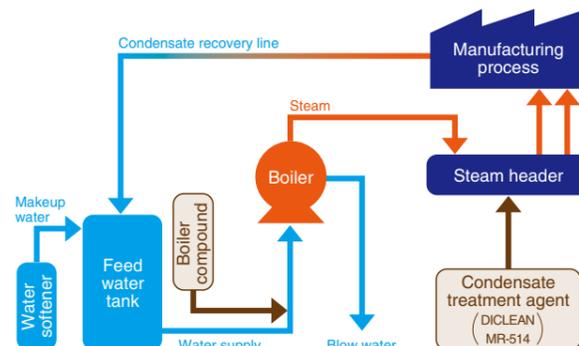


Mitsubishi Heavy Industries' Nagoya Aerospace Systems manufacturing the main wings of airplanes using composite materials

Environmental benefits to customers

Type of benefit	Benefit indicator	Environmental benefits to customers
CO ₂ emission reduction	Reduced gas consumption	140,845 m ³ /year
	Reduced water consumption	15 t/year

Flow of boiler water treatment



From right to left: Masayoshi Kondou and Hiroyuki Kanekura of the Oye Plant, the Nagoya Aerospace Systems of Mitsubishi Heavy Industries, and Takeshi Okada, in charge of sales at Kurita

Resuming the Recovery of Condensate as a Result of Cooperation between the Salesperson and the Engineer

Okada and Moriyama visited the site where the odor was said to have been generated. Moriyama, who is certified to perform environmental measurement, immediately discovered that the odor had not been caused by the condensate treatment agent, but by combustion gas. In response, Okada proposed that the Plant conduct an analysis of the steam to check if the components of the condensate treatment agent and the combustion gas were contained in the steam.

As a result of the analysis, it was quantitatively proved that the odor had not been caused by the condensate treatment agent. Moreover, as Moriyama pointed out, it was revealed that the steam contained a component of the combustion gas. In cooperation with the customer, the two Kurita employees inspected the boiler equipment and identified the point where the fuel gas was interfused into the steam line. The problem was thus solved in a short time.

Thanks to the early onsite detection of the cause and the responsive measures taken by Okada and Moriyama, the Plant was able to resume the recovery of condensate. It is estimated that the consumption of gas as fuel will decrease by 294 t and water supply by 15 t annually due to the recovery of condensate, and these figures are highly evaluated by Nobuhito Yamada, Manager of the Plant Engineering Section of the Plant. Masayoshi Kondou of the same section also said, "We can rely on Kurita with an easy mind, because it has special know-how." Hiroyuki Kanekura in the same section expressed his expectation for Kurita by saying, "I want Kurita to cooperate with us as a partner to get the condensate recovery process back on track."



Engineer, Hitoshi Moriyama

Expecting Kurita to Support the Plant not only for Boilers but also for Wastewater Treatment Facilities



Nobuhito Yamada
Manager, Plant Engineering Section,
Oye Production Department,
Nagoya Aerospace Systems,
Mitsubishi Heavy Industries, Ltd.

The Plant manufactures main wings, one of the most important parts of airplanes, using composite materials, and we are committed to high-quality manufacturing. As an ISO 14001-certified plant, we must constantly make energy conservation and water saving efforts. To help us achieve these two targets at the same time, Kurita has made a range of proposals to us. In the past, boiler pipes were damaged due to the suspension of the use of condensate treatment agent. We want to recover the pipes to their "healthy" conditions without suspending our production activities. To this end, I expect that chemicals provided by Kurita will play an important role. I would like Kurita to make appropriate proposals and continue their "health checkups" on our boiler pipes.

The quality standards for wastewater have been becoming stricter year by year. To meet these standards, we will actively make investment in our plant facilities. Kurita frequently sends its employees to our Plant, and they give appropriate advice to us. We therefore trust the company. I expect that Kurita will continue to support us in ensuring our wastewater treatment meets the ever-higher quality standards.

Fiscal 2008 Environmental Benefits to Customers

The Kurita Group, through its business operations, helps its customers reduce their environmental load on a continual basis, thereby contributing to the creation of a sustainable society.

Environmental Benefits to Customers

In the first aspect of its three-pronged approach, "responding to customers' needs," the Kurita Group helps its customers reduce the environmental load at their plants or other business sites by providing them with the Group's technologies, products and services. The Group has been measuring the environmental benefits thus brought to customers as a unique environmental benefit indicator of the Group. We plan and implement the next year's environmental activities in reference to the results we have achieved in the aspect of "responding to customers' needs."

For fiscal 2008, we estimated the environmental benefits (deemed effect) we had brought to the customers who had given orders to us during the period from April 1, 2007 to March 31, 2008. The calculations were done to get the difference between the environmental load before and after the introduction of Kurita products based on the environmental load reduction that we had estimated in our specifications and the proposals presented to these customers at the time of their orders.

Type of benefit	Benefit indicator	Environmental benefits to customers (estimates)		
		Results for fiscal 2008	Results for fiscal 2007	
CO ₂ emissions reduction*	Water savings	15,000,000 m ³	24,000,000 m ³	
	Energy savings	Electricity reduction	11,700 MWh	8,900 MWh
		Heavy oil reduction	4,100 kℓ	5,100 kℓ
		Gas reduction	1,600,000 m ³	900,000 m ³
		CO₂ emission reduction (total)	29,000 t	35,000 t
Waste reduction	Sludge reduction	41,000 t	53,000 t	
	Recycled waste	310 t	75 t	
	Fly ash reduction	440 t	6 t	
	Waste reduction (total)	42,000 t	53,000 t	
Reduction of substances of concern	Reduction of regulated substances	Heavy metals	100 t	130 t
		Dioxins	86 g	94 g
	Reduction of substances of concern	Chemicals reduction	1,100 t	5,600 t
		Reduction of substances of concern (total)	1,200 t	5,700 t
Water pollution prevention	Wastewater treatment	12,000,000 m ³	26,000,000 m ³	
Remediation of contaminated soil and groundwater	Remediation of contaminated soil	860,000 m ³	460,000 m ³	
Air pollution prevention	Treatment of air pollutants	14,000,000 m ³	—	

* CO₂ conversion factors: 0.381 kg-CO₂/kWh for electricity; 0.58 kg-CO₂/m³ for tap water (industrial water); 2.8 kg-CO₂/ℓ for class-A heavy oil; 2.1 kg-CO₂/Nm³ for gas (city gas)
 * CO₂ emission reduction of 1,427 t (estimate), which customers achieved by the use of our Eco Shuttle returnable container recovery system in fiscal 2008, is included in the total CO₂ emission reduction of 29,000 t.

Calculation of Environmental Benefits to Customers (Examples)

CO₂ emission reduction

Reduction in the use of fuel, such as heavy oil, achieved by the application of water treatment chemicals that improve the boiler concentration ratio and drain recovery rate is converted into CO₂ emission reduction. In addition, reduction in power consumption achieved by the inverter control of revolving machines is converted into CO₂ emission reduction to calculate the environmental benefit to customers.

Waste reduction

Reduction in the generation of sludge dewatered by the use of a dehydrating agent is calculated as an environmental benefit to customers. In addition, for those customers to whom we delivered organic sludge recycling systems, the total amount of organic sludge is calculated as an environmental benefit to customers.

15,000,000 m³ of water saved per year
Approximately 47,000 households/year

One household (of four members)

A four-member household is said to consume 320 m³*1 of water per year on average. A 15,000,000 m³ saving of water is therefore equivalent to the total amount of water consumed by approximately 47,000 households in one year.

CO₂ emissions reduced by **29,000 t** a year
Approximately 3,500 households/year

One household (of four members)

A four-member household is said to emit approximately 8,400 kg of CO₂ per year*2. The CO₂ reduction of 29,000 t is equivalent to the total amount of CO₂ emitted by approximately 3,500 households in one year.

Waste reduced by **42,000 t** a year
Approximately 26,000 households/year

One household (of four members)

A four-member household is said to generate approximately 1,590 kg of waste per year*3. The waste reduction of 42,000 t is equivalent to the total amount of waste generated by approximately 26,000 households in one year.

Generation of dioxins reduced by **86 g** a year
Approximately 25%/year

Japan

The reduction of 86 g of dioxins is equivalent to approximately 25% of the total amount of dioxins (approximately 290 to 320 g*4) that is estimated to be generated on an annual basis in Japan.

12,000,000 m³ of wastewater treated annually
Volume of approximately 7,100 swimming pools

Swimming pools

The standard size of a swimming pool is 50 m in length, 20 m in width, and 1.7 m in depth, and its volume is 1,700 m³. The 12,000,000 m³ of wastewater treated is therefore equivalent to the total volume of water from approximately 7,100 pools.

860,000 m³ of contaminated soil remediated annually
Approximately 155,000 truckloads

10-ton trucks

The remediation of 860,000 m³ of contaminated soil (1 m³ of soil weighs 1.8 t) is equivalent to approximately 155,000 10-ton truckloads.

*1. 2006 survey on water utilization in daily life conducted by the Bureau of Waterworks, Tokyo Metropolitan Government
 *2. Data on greenhouse gas emissions in Japan from April 1, 1990 to March 31, 2007 announced by the Greenhouse Gas Inventory Office of Japan on May 16, 2008
 *3. *Annual Report on the Environment and the Sound Material-Cycle Society in Japan 2007*, released by the Japanese Ministry of the Environment on June 6, 2007
 *4. Press release on the emissions inventory of dioxin by the Japanese Ministry of the Environment on December 18, 2007

Examples of Initiatives That Brought Environmental Benefits to Customers

The following shows examples of initiatives that brought environmental benefits to our customers.

Tokyo Heat Energy Co., Ltd.

Type of benefit	Benefit indicator	Environmental benefits to customers
CO ₂ emissions reduction	Energy savings	10% reduction in heat release from water surface*

* Actual results of comparison made in a water tank under the same conditions

Improved corrosion resistance and energy saving by the application of water surface covering material

Tokyo Heat Energy Co., Ltd. is operating and managing district heating and cooling (DHC) facilities in Hibiya, Tokyo. At present, the company supplies thermal energy for heating and cooling to seven buildings in the district. At the facilities, to ensure long-term stable supply of energy and longer equipment life, it was considered effective to control the oxygen content of cold and hot water in the 6,400 m³ heat storage tank and improve the corrosion resistance of the heat source equipment that forms the core of the facilities. The water in the tank, however, is to be used as emergency water in case of disaster, so the use of chemicals in the tank was considered undesirable.

Kurita proposed that the company use its hemispherical water surface covering polyethylene material, named "Fine Ball," as a solution. Fine Ball would cover approximately 90% of the water surface, thereby preventing oxygen absorption by the water in the heat storage tank, and the product would also prevent heat energy from being transferred from the water surface to the air. A verification test confirmed that the amount of heat released from the water surface of the heat storage tank in which hot water was stored was reduced by 10% through the use of Fine Ball.



Heat storage tank (on the underground floor) into which Fine Ball has been introduced

Customer's voice

We highly evaluate the proposal from Kurita, because it has helped us achieve the initial target of improving the corrosion resistance of the heat source equipment through non-chemical treatment. In addition, the adoption of the proposal has improved the heat insulation of the heat storage tank and resulted in higher energy saving performance. Although it is difficult to evaluate the energy-saving effect of Fine Ball quantitatively by actual measurement because the conditions of the heat storage tank vary every day, we were able to confirm the effect of Fine Ball by comparing the performance of the tank both with and without the use of the product under almost similar temperature conditions.



Toshiaki Ohmachi

We expect Kurita to proactively continue to make improvement proposals to us, thereby giving us more help in achieving stable operation and energy saving.

Fine Ball Water Surface Covering Material

Fine Ball is a product that is placed into a water tank to minimize water surface contact with the air. After its introduction into the tank, this maintenance-free product can be used semi-permanently.

Most of the conventional covering materials for water surfaces are spherical. This only allows covering of 20 to 30% of the water surface by these materials, because their parts with the largest diameter are above the water surface. Fine Ball is hemispherical and composed of a spherical upper part, a hollow center part in the shape of a cylinder, and a thick and heavy bottom part. By simply inputting the balls through a manhole, the water surface is covered by their largest diameter parts in an orderly manner.

The product can cover approximately 90% of the water surface*, which is three



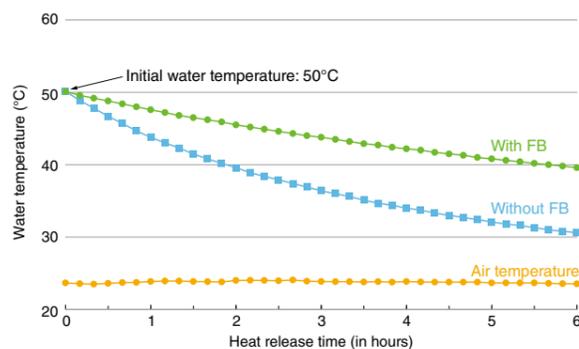
Application of Fine Ball to a heat storage tank

to four and a half times the area that can be covered by conventional products.

Use of Fine Ball gains benefits such as (1) control of heat energy lost from water surface, (2) control of corrosion on the metal portion of pipes and other equipment caused by dissolved oxygen, and (3) keeping odor from transpiration.

* Varies depending on the form and structure of the tank

Heat-retaining effect of Fine Ball (FB)



Fuji Electric Device Technology Co., Ltd., Matsumoto Branch

Type of benefit	Benefit indicator	Environmental benefits to customers
CO ₂ emissions reduction	Water savings	220 m ³ /day

Saving water by expansion of wastewater reclamation systems

Fuji Electric Device Technology Co., Ltd. is manufacturing electronic devices such as semiconductors as a Fuji Electric Group company. The company is committed to reducing the environmental load of its business activities and products based on its own fundamental environmental protection policies. Recently, the company has been reducing its environmental load by focusing on (1) resource conservation by reducing water consumption and wastewater generation; (2) energy saving by the recovery of heat sources, etc.; and (3) reduction in the use of chemicals and generation of waste.



Wastewater reclamation systems

Kurita proposed an environmental improvement measure to the Matsumoto Branch

of the company, to help this plant reduce both the use of water (well water) and the discharge of wastewater to outside its premises through the recovery and reuse of water wasted by the production processes conducted in its 5-2C building. We delivered wastewater recovery equipment to the plant after identifying the types of wastewater that could be recovered based on surveys on the properties of the water wasted by its various production processes. Installation of equipment that treats wastewater mainly by the membrane filtration method made it possible for the plant to recover 42% of the wastewater from its 5-2C building (approximately 220 m³/day), which in turn reduced the total use of water by the plant.

Customer's voice

The proposal made by Kurita was in line with the priority measures taken in our environmental improvement activities. The proposed equipment was indeed effective, and we are quite satisfied with it.



Yoshiaki Furuhashi Tadataka Izumitani

Due to expanded production, the amount of water wasted by the production processes also increased, and the capacity of our wastewater treatment facilities were approaching its limit. The recovery equipment delivered by Kurita has reduced the burden imposed on the operation of the wastewater treatment facilities. Moreover, in recognition of the substantial reduction in the use of water per unit of production thanks to wastewater recovery and reuse, we received a prize for innovative production from the president of our company.

In the future, we expect Kurita to expand the target of research to identify other wastewater types that can be recovered at our plant. Kurita has expertise not only in water treatment facilities, but also in water treatment chemicals, so we expect the company to advise us on reducing our total use of chemicals.

Ube Industries, Ltd., Ube Aluminum Wheel Factory

Type of benefit	Benefit indicator	Environmental benefits to customers
Waste reduction	Reduction of waste	100 t/year (reduced by at least 25% compared with the past)

Reducing waste by the additional installation of a drier for wastewater treatment

Ube Industries, Ltd., an Ube Group company, is manufacturing aluminum wheels for automobiles. It is also promoting environmental improvement activities based on its basic environmental and safety principles. As for waste, the company has set numerical targets to reduce the amount of final disposal. The Ube Aluminum Wheel Factory has been examining measures to reduce the amount of water wasted by the process of cooling aluminum wheels. The wastewater contains black lead and should be treated as industrial waste.

Initially, Kurita examined the combined use of the coagulation-sedimentation method with the activated carbon filtering method for the wastewater treatment, but this combined method was found to be unrealistic due to its high running cost. Kurita eventually proposed that the factory dry and reduce wastewater efficiently by the installation of the compact disk drier. As a result of the installation, the factory was able to reduce waste by 100 t a year, or by at least 25% compared with the past. In order not to increase CO₂ emissions, surplus steam in the factory was used for heating.



Compact disk drier

Customer's voice

The compact disk drier is quite compact compared with other driers used for wastewater treatment. It is easy to use and has an excellent structure. Because of the properties of the wastewater, however, we are still not able to reuse it as a combustion improver for steam residues.



Noriyasu Nishimura

We would like Kurita to support us in solving this issue. We are able to use surplus steam for the compact disk drier, but because of recent soaring fuel prices, we expect Kurita to make proposals on wastewater treatment by the use of chemicals as well. Our factory is committed to continually reducing its environmental load and we expect Kurita to give us more advice toward this end.

Kao Corporation, Wakayama Plant

Type of benefit	Benefit indicator	Environmental benefits to customers
Waste reduction	Reduction of sludge	60 t/year (19% reduction compared with the past)

Reducing waste from inorganic coagulants by optimizing coagulation-sedimentation treatment

Kao Corporation, a manufacturer of detergents, cosmetics, food and chemicals, is promoting continuous and effective environmental conservation activities. It is setting numerical targets for energy savings, waste reduction, and other environmental items based on its philosophy and principles on the environment and safety.

Kurita has been commissioned with the treatment of wastewater at Kao's Wakayama Plant since July 2001, and has been committed to the stable treatment of wastewater, energy savings, resource conservation, and waste reduction at the plant. In 2007, in order to improve the method used to control the injection of chemicals, Kurita introduced its newly developed coagulation sensor named "Kuripitari" into the plant's coagulation-sedimentation equipment. Kuripitari has enabled the plant to monitor the state of coagulation on a continual basis, which in turn makes it possible to optimize the use of inorganic coagulants. As a result, the plant is now able to reduce waste from inorganic coagulants by 60 t a year, or by 19%, compared with the past.



Coagulation-sedimentation tank for which Kuripitari controls the injection of chemicals

Customer's voice

Kurita made a proposal to us based on its new technology. Thanks to the introduction of the proposed sensor, we are now able to control the injection of inorganic coagulants in an appropriate manner, thereby reducing our environmental load, with which we are quite satisfied. In the past, our operators manually adjusted the amount of inorganic coagulants to be injected in response to changes in the wastewater treatment load. Such manual adjustment has now become unnecessary, thanks to Kuripitari. This has also led to labor saving, which we highly evaluate.



Hidetoshi Wada

In the future, water wasted by our plant will become more concentrated due to changes in the products to be manufactured, and we expect Kurita to continue to give us technical support for the stable treatment of wastewater.

Kuripitari Coagulation Sensor

With Kuripitari, you can directly measure the degree of clarification between coagulation flocs by the light scattering method. Equipped with a function to clean the tip section of the sensor with air, you can measure the degree of clarification continuously in a stable manner.

Kuripitari can be installed directly inside the coagulation-sedimentation tank or the pressure floatation tank, and you can identify changes in wastewater quality in real time based on the state of coagulation inside the tank. By linking Kuripitari with the coagulant injection pump, you can optimize the use of coagulants.

The application of Kuripitari enables (1) the stabilization of wastewater treatment and dehydration; (2) Reduction in the use of chemicals and generation of sludge from chemicals due to optimization of the amount of chemicals to be injected; and (3) labor saving in the management of facilities.



Tip section of the sensor



Control part of the Kuripitari

Kuraray Co., Ltd., Saijo Plant

Type of benefit	Benefit indicator	Environmental benefits to customers
Waste reduction	Reduction of sludge	675 t/year*

*Sludge reduction estimated under the conditions specified at the time of the order in comparison with aerobic wastewater treatment plant of a similar size

Reducing waste by the application of anaerobic wastewater treatment facilities

Kuraray Co., Ltd., which manufactures chemical products and synthetic fibers, is committed to reducing the environmental load of the entire Kuraray Group. The company has set numerical targets for CO₂ emission reduction and has achieved zero waste emission* at all its plants in fiscal 2007. At its Saijo Plant, where the generation of wastewater is predicted to increase due to expanded production, efficient treatment of highly concentrated wastewater was regarded as a challenge to be met for the reduction of its environmental load.

In response, Kurita proposed that the plant install anaerobic wastewater treatment facilities as a means to achieve space saving, energy saving, and sludge reduction. The proposed Super Biosaver keeps granulated anaerobic sludge of high content in a stable manner inside the reaction tank using Kurita's unique technology, thereby enabling high-load wastewater treatment. The plant was able to reduce the generation of sludge by the installation of this equipment.

*The Kuraray Group defines zero waste emission as "reducing the final landfill waste to 1% or less of generated waste through recycling."



Super Biosaver

Customer's voice

We decided to adopt the proposed facilities because it would satisfy the requirement of "efficient treatment" and because it had already proved effective at other plants of our company. The facilities were delivered and experimentally operated, and now we are fully operating it with 100% load without any troubles.



Hideki Mishou

In the future, we would like Kurita to continue to provide us with after-sale maintenance services and to make more improvement proposals. Because we have no problems with the existing facilities, it is rather difficult for us to identify anything to be further improved. We expect Kurita to make improvement proposals based on onsite examinations of the plant. In addition, we would like to receive information about the initiatives that Kurita has taken at other companies and about its new technologies and products.

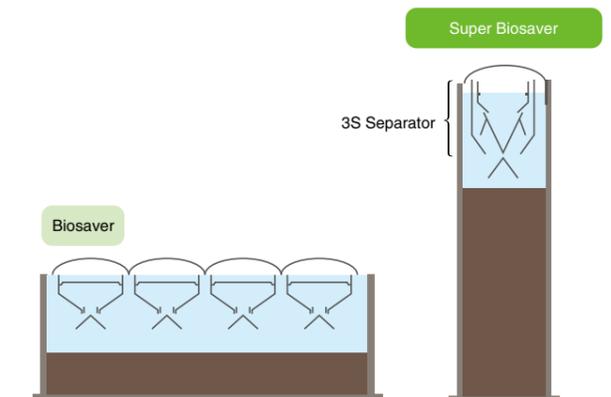
Super Biosaver Ultra High-Load Anaerobic Wastewater Treatment System

Super Biosaver has a vertical reaction tank, unlike conventional anaerobic wastewater treatment systems with horizontal reaction tanks. It has a large storage capacity for highly concentrated anaerobic sludge, which enables the system to treat two to three times the amount of wastewater that can be treated by conventional products. The reaction tank can be as high as 15 meters, occupying only one-fifth of the space occupied by a system with a conventional horizontal reaction tank.

In addition, the highly concentrated sludge granulated by Kurita's unique technology is moved by upflow wastewater, which promotes the contact of bacteria with wastewater, leading to higher treatment efficiency. Furthermore, the separation performance of methane gas, sludge and water at the upper part of the reaction tank has been substantially improved due to the adoption of the 3S Separator and the Floating Sludge Crushing System. This makes it possible to keep the sludge at high concentration and stabilize the quality of treated wastewater even at higher flow speeds.

Compared with conventional anaerobic wastewater treatment systems, Super Biosaver is compact, which means that smaller amounts of materials are required for its construction. Because the system can treat a greater amount of wastewater, the water to be circulated into the acidogenic tank for the pre-treatment process can be increased, which in turn makes it possible to reduce the use of chemicals (NaOH).

Comparison between reaction tanks of Super Biosaver and the conventional anaerobic wastewater treatment systems (Biosaver)



Special Topic

Achieving Higher Efficiency in Nitrogen Removal through New Microbial Reactions

The Anammox process represents a new technology to remove nitrogen by the use of a microorganism that converts ammonia and nitrous acid into nitrogen gas. In fiscal 2007, Kurita's first full scale plant in Japan using the Anammox process began operation, and it proved to be a technology that helps customers make environmental improvements. This time, the Kurita employees engaged in the development of the process met to look back on how they had developed this unique technology. They also discussed what environmental benefits the process had brought to customers and talked about the initiatives that Kurita would take in the future.

Search for the Microorganism, Collecting Soil and Water Samples across Japan

Wakita: We paid attention to the biotreatment technology using anaerobic ammonium oxidization (anammox) bacteria in around 1998.

Tokutomi: Yes, that's true. A paper on the detection of a new microorganism that converts ammonia and nitrous acid (or nitrite) was reported in 1995 by a research group of the Netherlands. Three years after that, Kurita started R&D activities on it.

We thought that a new nitrogen treatment process which consumes less energy and generates less solid waste than the conventional nitrification-denitrification process could be possible by utilizing anammox bacteria.

Wakita: At present, anammox bacteria can be found around the world and it is said that much of the nitrogen circulation on the Earth is accomplished by the bacteria. Initially, however, the existence of the microorganism itself was doubted.

Tokutomi: We, however, started to search for it, saying, "If such a microorganism does exist, it should exist also in Japan."

At present, the existence of anammox bacteria can be easily confirmed from soil and water samples by applying the gene analysis

technology, but at that time, we had to cultivate the bacteria for over three months to confirm its existence. Our group collected samples from a range of places and eventually found anammox bacteria in samples from two locations.

It took us two years to cultivate the identified bacteria to a certain level of concentration.

Wakita: So you had much difficulty in cultivating anammox bacteria.

Tokutomi: To use the identified anammox bacteria for wastewater treatment, the bacterial concentration had to be increased by 10,000 to 100,000 times. In the cultivation process, some of them unfortunately died, but we were finally able to verify their nitrogen removal reaction as expected.

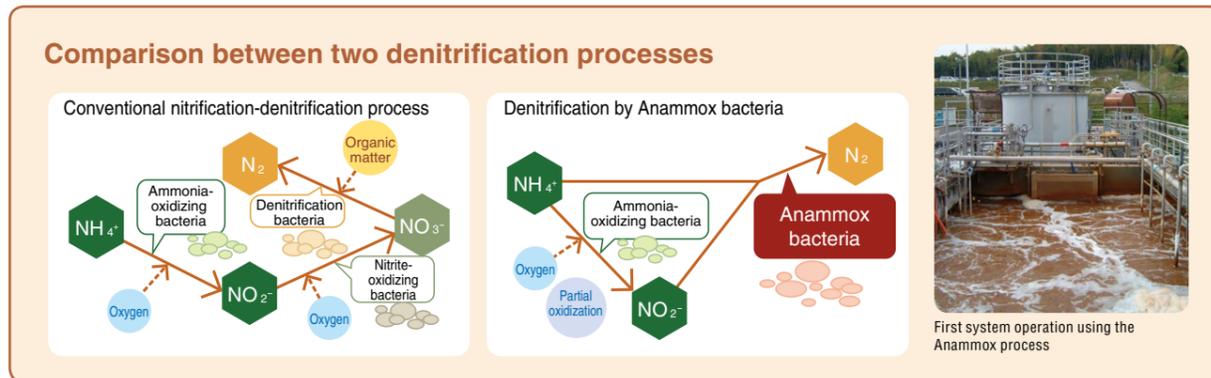
At the time, it was unclear whether the bacteria could be put into practical use, but the company let us engage in the development on a long-term basis, for which I am really grateful.

Wakita: The technological feasibility was indeed quite uncertain, but in the market the need for technologies to reduce the environmental load of wastewater treatment was increasing, and we were sure that we would be able to meet this need if the technology was put into practical use.

Tokutomi: The discovery of the anammox bacteria is said to be a great discovery that can be made only once in every 10 to 20 years in the field of biological water treatment. I feel that it was quite lucky for me to have encountered this research theme.



Takaaki Tokutomi
Plant Section, R&D Department,
Facilities Division



Substantially Reducing the Environmental Load, Space, and Disposal Cost

Wakita: After confirming the nitrogen removal effect of the bacteria, how did you proceed with the development?

Tokutomi: Toward the practical use of the Anammox process, we made efforts to enhance the functions of the system using the process and develop peripheral equipment. We also formed a technical partnership with Paques of the Netherlands and skillfully utilized existing technologies to shorten the lead time. The system is based on Kurita's own developed technologies, nitrification process and granulation of anammox bacteria, and compared with the conventional nitrification-denitrification process, the volume of the bacterial reaction tank can be reduced to approximately one-fourth.

Wakita: We introduced the first system using the process in 2006, which became the first Anammox system to be used for semiconductor wastewater treatment in the world.

Nishiyama: The system was introduced for the Yokkaichi Operations of Toshiba Corporation, where we were implementing measures to stabilize the treatment of wastewater containing nitrogen. In the semiconductor manufacturing process conducted at the plant, ammonia-containing fluid is used



Kimiharu Nishiyama
General Manager,
Marketing Dept. 2, 1st Plant Group,
Facilities Division

for cleaning wafers, and the water wasted by the process contains nitrogen. Kurita was making proposals to the plant to improve the existing equipment through the concerted effort of its maintenance and equipment departments, in order to help the customer improve its productivity through capacity enhancement and non-stop operation. In making such proposals, we presented the Anammox process under development to the plant. Those at the plant highly evaluated the process and began examinations for its introduction.

Tokutomi: The system was delivered to the plant as the first practical system using the Anammox process, and Kurita's employees in charge resided at the site in rotation during the three-month startup period to adjust the operating conditions and others. We faced unexpected problems during that period, but patiently solved them one by one, and it finally became possible for the plant to operate the system in a stable manner.

Wakita: The system enabled the plant to treat wastewater while meeting the quality standards on discharged water without fail. The system was also beneficial to the plant in terms of cost.

Nishiyama: At the plant, power consumption was reduced by approximately 50% and waste generation was reduced to one-third or one-fourth. In particular, the customer was surprised at the compactness of the system. The installation area was reduced to one-third of the space required for conventional biotreatment equipment.

Responding to Social Needs through Cooperation between Related Departments

Nishiyama: The sales department regards the Anammox process as one of its "priority sales promotion products." At present, there are only four units that practically use this technology in operation in the world, and much attention is paid to them. Many facilities need this technology, such as chemical factories, and we would like to help more customers solve their issues by providing it.

Tokutomi: The development department will proceed with further R&D for wider application of the Anammox process. The microorganism seems to have properties that have yet to be clarified, and I look forward to seeing how these properties can be applied.

Nishiyama: In conducting daily business operations, I feel that the needs of our customers and society are greatly changing. Recently, in addition to the needs for higher productivity and quality, the environmental needs for CO₂ emission reduction and

waste reduction are steadily increasing.

Wakita: The development of the Anammox process we have discussed today represents our initiatives in the aspect of "changing society"—namely, the initiatives to create new technologies that meet customer needs and contribute to our customers' environmental load reduction. We would like to develop more environmental improvement technologies and products in response to the diversified needs of customers through cooperation between related departments, including the development, sales, and maintenance departments.



Masaaki Wakita
General Manager,
R&D Strategy Department,
Research & Development Division

Contribution through New Technologies and Products

In the aspect of "changing society," we are creating new technologies and products that contribute to the solution of environmental issues faced by our customers. We are committed to developing the technologies that help them make effective use of water resources, reduce CO₂ emissions, and reduce waste, based on the water-related technology that we have accumulated over a half-century.

Development Situation

For the Kurita Group, whose business activities directly contribute to environmental improvement, the development of new environmental technologies and products represents one of the most important measures it can take to ensure its corporate growth.

In fiscal 2008, we focused on the development of water treatment chemicals and facilities that respond to the present needs of customers, including the needs for water treatment chemicals that contribute to the reduction of CO₂ emissions as well as the needs for the technology to realize a resource-saving process such as reclamation of wastewater and valuable substances, and to render hazardous substances harmless. Moreover, we are striving to develop an innovative anaerobic digestion process to produce green energy as well as the technologies for fuel cells, which are expected to be next-generation clean energy.

The Kurita Group will continue to press forward with the development of new technologies and products that help its customers solve their environmental issues.



Kurita Global Technology Center, which serves as the development base for new technologies and products

Identification of Results in the Aspect of "Changing Society"

The Kurita Group evaluates its results in the aspect of "changing society" based on the number of developments made by the Group and on the environmental benefits that its customers received by the adoption of the Group's products.

In fiscal 2008, we improved the method used to select the products for which we calculate the environmental benefits to customers from among our newly developed technologies and products. We also bettered the system to collect actual data of environmental benefits for the selected products. We then calculated the number of developments and environmental benefits to customers as follows.

● Number of developments made

The number of development themes for which the R&D process

New technologies/products developed in fiscal 2008 for environmental improvements

CO₂ emission reduction and water saving

- Silica-based scale inhibitor for cooling water used at industrial complexes
- A heat-exchanger fouling prevention technology for petroleum preheating process (using our antifouling chemicals and diagnostic systems)

Water recovery, resource conservation, and recycling

- Operation support system for large-scale wastewater reclamation facilities (using remote monitoring and predictive diagnosis technologies)
- Process to recover water and valuable materials from rinse water to be used in the steel cold rolling process
- Incinerated ash washing system to remove chlorine and reclaim the ash

Prevention of water and soil pollution

- High performance fluidized-bed bioreactor for wastewater treatment
- Heavy metals stabilizer in the fly ash to prevent ash landfill pollution

Recovery of energy

- Innovative anaerobic digestion process to produce green energy

was completed within fiscal 2008 is calculated as the number of developments made.

● Environmental benefits brought to customers through new technologies and products

As for water treatment chemicals, we have estimated the environmental benefits brought to customers by the new products that we released in fiscal 2008, based on the calculation method set for each product.

For water treatment facilities, targeting the products that we developed five years ago or less and for which the first orders were placed in fiscal 2008, we have estimated their environmental benefits also, based on the calculation method set for each product.

New Technologies and Products

The following shows the new technologies and products that we have developed to help our customers make environmental improvements.

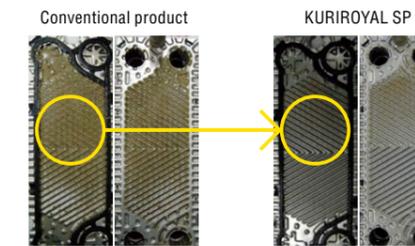
KURIROYAL SP Series Silica-Based Scale Inhibitor

In recent years, an increasing number of industrial complexes have been using cooling water with a higher concentration of total dissolved solids (TDS) and other impurities with an eye to decrease their water consumption and environmental load. Nevertheless, in districts where industrial water contains a high concentration of silica it is difficult to use cooling water with a higher TDS concentration, because it will cause the problem of silica-based scale.

In response, Kurita has successfully developed the KURIROYAL SP Series. The products in the Series have a functional group that adheres to silica in cooling water and are therefore highly effective to prevent silica-based scale, which poses a problem when using cooling water with a higher TDS concentration. By using the KURIROYAL SP Series, you can substantially reduce the amount of scale attached to the high temperature part of a heat exchanger, which leads to a reduction in the use of makeup water and in the generation of wastewater (blow water).

The combination ratio of phosphorous and zinc is set at 2/3 for the Series, which is the same ratio as set for conventional products. Customers who use cooling water with a higher TDS concentration have reduced the total amount of phosphorous and zinc contained in the wastewater from their factories to one-third by the use of the Series. The products are therefore highly evaluated as meeting the sixth total emission control criteria for water quality to be imposed in Japan in 2009 and onwards.

■ Reduction of silica-based scale (example)



Attachment of scale is reduced to one-fourth or less

Developer's voice

We developed the KURIROYAL SP Series in close cooperation with the sales department. The products are now actually used by our customers in the Chiba district to help them reduce their environmental load. This is the first application of the Series in a district where industrial water contains silica at a high concentration, and room still remains for making improvements in the products. We would like to continue our efforts toward the perfection of the products while sharing issues with the customers.



Kazuhisa Fujita
Cooling Water Treatment,
Heavy Industries
Department No.2,
Chemicals Division

Phosphoric Acid Recovery System

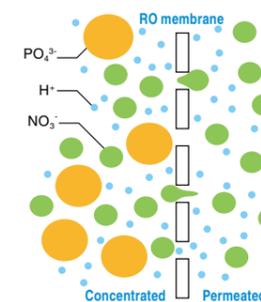
Regarding phosphoric acid used in the manufacture of liquid crystal displays, there are worries that phosphorous, the material for the acid, will be depleted in the future. It is therefore becoming necessary to efficiently recover and recycle this resource.

In response to such needs, Kurita developed a system to separate and recover phosphoric acid from wastewater by the use of membrane technology. The system not only separates phosphoric acid from wastewater, but also concentrates it to 50% by evaporative concentration, thereby making it possible to recover phosphoric acid and directly reuse it as material for chemical fertilizers as well as other chemicals made by Kurita.

After phosphoric acid is separated from wastewater, it can be reused as pure water, enabling the circulative use of both phosphoric acid and water. At a certain customer's plant, it is estimated that use of the system can recover at least 90% of the phosphoric acid (about 2,000 t/year) from wastewater and that it can reduce the generation of sludge (waste) and the use of chemicals by 90% or more compared with the conventional treatment for phosphoric acid. The system will substantially help our customers reduce their environmental load.

■ Phosphoric acid recovery mechanism

Phosphoric ions (PO₄³⁻), which are large in molecular size, are blocked by the reverse osmosis (RO) membrane, while hydrogen (H⁺) and nitrite ions (NO₂⁻), which are small in molecular size, filter through it.



Developer's voice

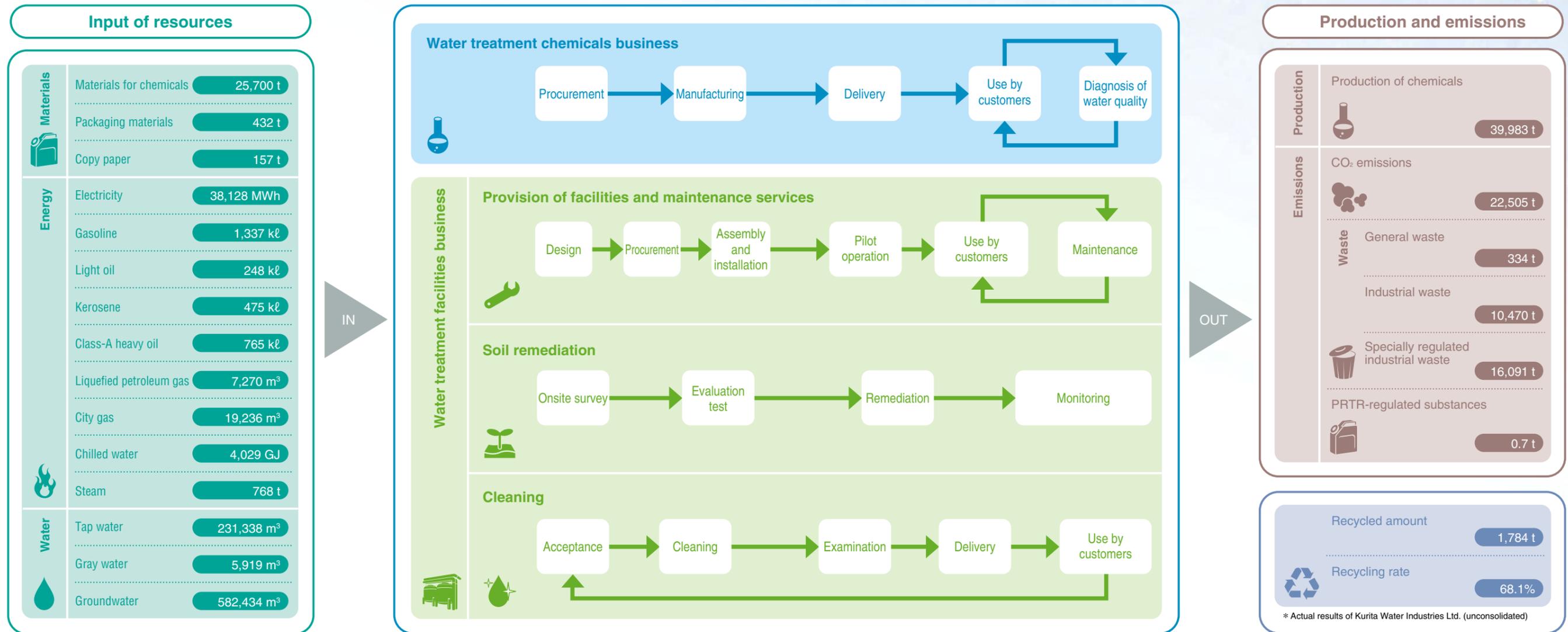
We developed this recovery system to reduce the environmental load of wastewater recovery systems used at LCD manufacturing plants. In applying the RO membrane, we had issues regarding clogging, slime, and durability, but were able to solve them one-by-one through long-term onsite testing. We would be pleased if this technology contributes to the circulative use of phosphorous, which is a resource that is in threat of depletion.



Nobuhiro Orita
Waste Water Section,
R&D Department,
Facilities Division

The Kurita Group's Total Environmental Load

The following material flow diagram shows the total environmental load of the Kurita Group in fiscal 2008. In the aspect of "changing Kurita," we are focusing our efforts on CO₂ emission reduction, waste reduction, and the appropriate management of chemical substances.



* Actual results of Kurita Water Industries Ltd. and other domestic Group companies (19 companies) are totaled. The amount of materials used in manufacturing water treatment facilities is not shown in the above table because it is difficult to collect numerical data on these materials.

* Actual results of Kurita Water Industries Ltd. and other domestic Group companies (19 companies) are totaled. The production volume of water treatment facilities is not shown in the table above because it is difficult to collect numerical data on it.

Special Topic

Continuous Reduction of CO₂ Emissions and Waste Generation in Business Operations

The Shizuoka Plant is a base for the design and manufacture of water treatment facilities, which represents one of the main products of the Kurita Group. The plant is also a base for the refinement of ion-exchange resins. The Plant has set numerical targets for the reduction of CO₂ emissions and waste generation, and has been implementing measures to achieve these targets.

Reducing Environmental Load of the Production Process

The Shizuoka Plant has an environmental load due to (1) power consumption for air conditioning and operation of the plant facilities and machines; (2) use of packaging materials for manufactured components of water treatment systems and the generation of waste metal and plastic from the manufacturing process; and (3) wastewater and resin waste from the refinement of ion-exchange resins.

In manufacturing water treatment systems, the plant is promoting the reduction of CO₂ emissions and waste generation by the modularization of systems composed of a range of devices. Specifically, it is striving to curtail the use of materials by reducing the size and weight of the devices, to reduce the use of fuel for transportation and to cut power consumption by shortening the time required for manufacturing.

As for ion-exchange resins, an important material on which the performance of pure water facilities depends, the plant is refining them on behalf of customers, thereby helping them reduce their environmental load, while reducing the plant's own environmental load by minimizing the use of chemical substances through efficient refinement and reuse of wastewater from the refining process.



Manufacturing water treatment systems through modularization



Ion-exchange refining tower



Recovering and reusing wastewater from the ion-exchange resin refining process

Actual environmental load data (Shizuoka Plant)

	Fiscal 2007	Fiscal 2008	Year-on-year change
CO ₂ emission	1,784 t	1,901 t	+6.6%
Waste generation	319 t	314 t	-1.5%

Reducing CO₂ Emissions by Introducing More Energy-Saving Facilities

The number of employees working at the Shizuoka Plant has been increasing in recent years due to the transfer of the design and engineering work departments to the plant. Specifically, the total number of employees increased from 310 in fiscal 2006 to 480 in fiscal 2008, which resulted in greater power consumption there.

At the plant, electricity accounts for about 70% of the energy used, most of which is consumed for air conditioning. To cut CO₂ emissions in consideration of this fact, the plant has replaced its 41 outdoor and 107 indoor air conditioning units with more energy-saving ones.

In addition, the plant stopped using paper-based reference materials at the major meetings held within the plant, and has since been promoting paperless meetings by the use of OA machines such as PCs and projectors. For fiscal 2009, the plant plans to reduce its annual use of paper by about 400 kg.

Recovering 97% of Waste Metals as Valuable Resources and Recycling 83% of Waste Resins

The plant implemented measures to reduce the generation of waste by promoting the recovery of waste as a valuable resource. As for metal waste from the water treatment system manufacturing process, the plant drastically sorted it from other waste and recovered 18.0 t as valuable resources, which accounts for 97% of the total waste metal (18.3 t).



Wastes are strictly sorted for valuable resource collection and recycling



Shizuoka Plant is a base for designing and manufacturing water treatment facilities and refining ion-exchange resin

The plant also fostered the recycling of resin waste from the ion-exchange resin regeneration process that was no longer able to be refined. In the past, waste resins were disposed of as sludge, but in fiscal 2008, 64.0 t of waste resins were recycled as cement material, which accounts for 83% of the total waste resins of 77.1 t.

Employees are voluntarily conducting environmental improvement activities, being well aware of the importance.

I believe that employees should conduct environmental improvement activities voluntarily, instead of being forced to do so, based on their deep understanding of the importance of these activities. To encourage them to do so, I ask them to take on environmental problems at their workplace as if they were their own problems at home. In recent years, many employees have been transferred to the plant, and I think it necessary to enhance our environmental education to help all employees at the plant understand the concept and approaches of our environmental improvement activities.



Masahiro Arima
General Manager of
the Shizuoka Plant

The Shizuoka Plant opened in 1996, and 12 years have already passed since then. Now we have more risks concerning environmental incidents due to the aging of the plant equipment. To prevent any environmental incidents, we will formulate a medium- to long-term repair plan and steadily implement it.

Reduction of CO₂ Emissions

The Kurita Group is committed to reducing its CO₂ emissions by implementing a range of energy saving measures, including the reduction of power consumption at its offices and other sites.

CO₂ Emissions and Reduction Measures

In fiscal 2008, the Kurita Group's total CO₂ emissions came to 22,505 t, up 0.5% from the fiscal 2007 level, but its CO₂ emissions per unit of sales (¥1 million) decreased by 3.3% year on year to 109.8 kg. The total emissions increased because of an increase in its consumption of electricity, gasoline, and heavy oil due to the expansion of its business.

In fiscal 2008, in order to reduce power consumption, which accounted for roughly 65% of our total energy consumption, we promoted the replacement of lighting equipment with inverter-type fluorescent lamps and of air conditioning equipment with more power-saving models. In addition, we changed our air conditioner temperature settings in implementing our "cool biz" and "warm biz" campaigns, which we launched in fiscal 2006.

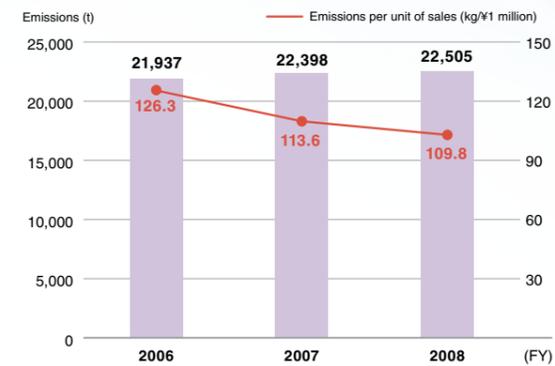
Furthermore, to reduce the use of gasoline by automobiles possessed by Group companies, which accounts for the second largest percentage (14%) of our total energy consumption, we promoted the introduction of hybrid cars. We located parking lots to shorten employee driving distances and encourage their use of public transportation facilities.

Major Initiatives in Fiscal 2008

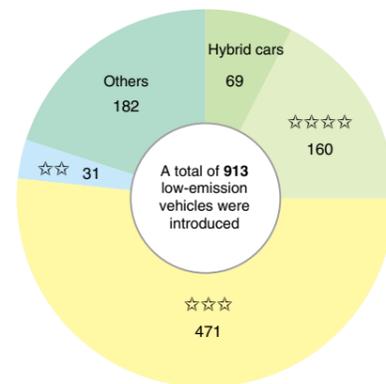
Reducing power consumption by office integration

As one of its CO₂ emission reduction measures, Kurita integrated its head quarter and branch office by reviewing the layouts of the head quarter floors and reducing the volume of paper documents and number of cabinets used to store them. As a result, the head quarter's power consumption was reduced by at least 30% compared with the previous fiscal year.

CO₂ emissions



Breakdown of low-emission vehicles introduced in fiscal 2008



* ☆☆☆, ☆☆☆, and ☆☆ respectively mean the vehicles that are certified to emit 75%, 50%, and 25% less NO_x, PM, and other hazardous substances than the 2000 exhaust gas emission levels. The relevant calculations are made based on the technical guidelines on exhaust gas from low-emission vehicles and the outline of the certification of low-emission vehicles, both of which are released by the Japanese Ministry of the Environment.

Reduction of Waste

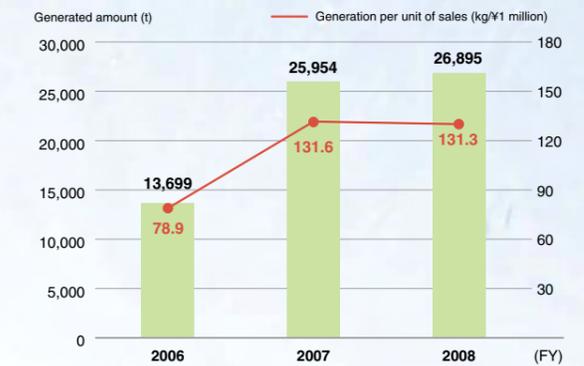
The Kurita Group is reducing the generation of general waste (e.g., office furniture) from its offices and industrial waste from its water treatment chemicals manufacturing plant by promoting the "three Rs—recycle, reuse and reduce."

Waste Generation and Reduction Measures

In fiscal 2008, the Kurita Group generated 26,895 t of waste, up 3.6% from the fiscal 2007 level, but its waste generation per unit of sales (¥1 million) was reduced by 0.3% year on year to 131.3 kg. The total waste increased because of the business expansion of Kuritec Service Co., Ltd., which generates waste that accounts for 89% of the Group's total. To reduce waste, the Group encouraged the recycling of dewatered sludge and the recovery and reuse of effluents.

At the Egawa and Ako Factories, where water treatment chemicals are manufactured, waste has been appropriately managed by the use of electronic manifests since fiscal 2008. Moreover, in order to meet the requirements for the manifest reporting to be mandated in fiscal 2009, Kurita has improved its waste management system to ensure that all its bases can use electronic manifests.

Waste generation



Major Initiatives in Fiscal 2008

Kuritec Service Co., Ltd. began to reuse liquid chemicals used in its production process as part of its measures to reduce the generation of waste. Specifically, the company separated solid and liquid substances from wastewater that had previously been disposed of to extract liquid chemicals from it for reuse in the production process. In fiscal 2009, the company will reduce the use of its liquid chemicals by 40% from the fiscal 2007 level by using this method.

Kurita Analysis Service Co., Ltd., which is engaged in the environmental analysis of water, air, and soil as a Kurita Group company, recycled 10,000 analysis sample containers (weighing 650 kg in total) as plastic material. Large amounts of these containers had been treated as waste after the analysis process was completed.



Kurita Analysis Service crushes sample containers for recycling

Drastic Management of Chemical Substances

The Kurita Group mainly stores and uses chemical substances at its water treatment chemicals manufacturing bases and R&D bases as well as at its ion-exchange resin refining bases. To ensure the safety of employees and compliance with laws and regulations regarding these chemical substances, the Group is committed to their appropriate management.

Management of Chemical Substances

At our bases where chemical substances are managed and used, facilitators of environmental improvement activities and internal auditors regularly examine the management of these substances to check how they are stored and used. According to the examination results, the bases make necessary improvements regarding the storage of the substances, and they also conduct emergency drills.

The in-house committee in charge of examining the safety of chemicals assesses the safety of chemical substances to be newly chosen for the development of new water treatment chemicals or for the development of substitutes for existing products at the following three stages, in order to decide whether to actually use them or not in view of environmental impact: manufacturing, use (transportation and handling), and after-use stages.

Major Initiatives in Fiscal 2008

Implementing measures to prevent furniture from toppling

The Kurita Global Technology Center is dealing with a variety of chemical substances to develop new technologies and products.

In fiscal 2008, the center implemented reinforcement measures to prevent toppling of cabinets storing chemicals and laboratory tables, which might cause chemicals to scatter and injure employees or flow outside the center and cause environmental pollution. Specifically, the cabinets storing

chemicals and laboratory tables in one of its laboratory rooms were firmly fixed to the walls and floor, and managers in charge of each laboratory room, using this room as a model to be followed, implemented the same reinforcement measures across the center.

We will continue to implement similar improvement measures to ensure the appropriate management of chemical substances across the Group.

Management of Class I Designated Chemical Substances

The Kurita Group is dealing with 15 chemical substances used for water treatment that are grouped as Class I Designated Chemical Substances under the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (hereinafter "PRTR Act"). We are appropriately managing these substances by collecting data on their annual use, release, and transfer, and reducing their release and transfer.

The table on the right shows the release and transfer of these PRTR regulated substances in fiscal 2008.

Release and transfer of Class I Designated Chemical Substances

Release	Release into the air	74.8 kg
	Release into public waters	-
	Release into soil at the site	-
	Landfill disposal at the site	-
Transfer	Transfer to the sewage system	325.7 kg
	Transfer to outside the site	257.8 kg

Conducting surveys on the actual management of chemical substances at 55 bases

In fiscal 2008, the Environmental Improvement Promotion Committee conducted surveys on the actual management of chemical substances at 55 bases of the Kurita Group. The results revealed that some of the surveyed bases had problems concerning the manual on the management of chemical substances to be formulated as in-house rules or regarding the storage of material safety data sheets (MSDS). These bases have already been told to implement corrective measures.

In fiscal 2009, we will conduct these surveys at 24 bases.



Confirm the appropriate management of chemical substances in surveys

Environmental Accounting

We introduced environmental accounting in fiscal 2005 to collect data on our environmental conservation costs, identify their effects, and improve our environmental efficiency.

Environmental conservation costs

Field of activity	Main initiatives	FY2008		FY2007	
		Investment (million yen)	Expenses (million yen)	Investment (million yen)	Expenses (million yen)
1. CO ₂ emission reduction	Replacement of old equipment with more energy-saving equipment	130.6	27.6	48.3	32.2
2. Waste reduction	Introduction of equipment for waste reduction	102.7	128.1	15.0	123.5
3. Measures for chemical substances	Personnel expenses for the management of chemical substances and cost of joining outside organizations	0	16.8	0	18.4
4. Air conservation	Introduction of exhaust equipment to improve the working environment	111.0	25.6	53.0	22.3
5. Water conservation	Enhancement of wastewater treatment systems following the expansion of business	159.1	201.1	8.1	192.1
6. Soil conservation	Improvement of drainage ditches	2.6	4.2	0.8	0.8
7. Others	Cost of disclosing environmental information, donation to the Kurita Water and Environment Foundation, and cost of ISO renewal inspections	0	77.4	4.9	71.4
Total		506.0	480.8	130.1	460.7

Environmental benefits

			Environmental load			Environmental benefit
			FY2008	FY2007	Year-on-year change	CO ₂ emission reduction
CO₂ emissions		t	22,505	22,398	+0.5%	-107
Breakdown	Electricity	MWh	38,128	37,241	+2.4%	
	Gasoline	kℓ	1,337	1,370	-2.4%	
	Light oil	kℓ	248	207	+19.8%	
	Kerosene	kℓ	475	456	+4.2%	
	Class-A heavy oil	kℓ	765	835	-8.4%	
	Liquefied petroleum gas	m ³	7,270	6,594	+10.3%	
	City gas	m ³	19,236	22,557	-14.7%	
	Chilled water	GJ	4,029	4,933	-18.3%	
	Steam	t	768	747	+2.8%	
	Tap water	m ³	231,338	297,854	-22.3%	
	Gray water	m ³	5,919	5,468	+8.2%	
	Groundwater	m ³	582,434	473,128	+23.1%	
Copy paper	t	157	167	-6.0%		

Waste		t	26,895	25,953	+3.6%	-942
Breakdown	General waste	t	334	299	+11.7%	
	Industrial waste	t	10,470	10,121	+3.4%	
	Specially regulated industrial waste	t	16,091	15,533	+3.5%	

Recycling		t	1,784	2,052	-13.1%	-268
Breakdown	Waste acid and chemicals	t	1,239	1,517	-18.3%	
	Wastepaper	t	171	181	-5.5%	
	Plastic and metal waste	t	267	279	-4.3%	
	Other	t	107	75	+42.7%	
Recycling rate		%	68.1	67.6	-	

Economic benefits

Amount (million yen)	
Expense reduction	-45.3

Reduction in treatment expenses	-63.0
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Income from recycling	0.9
Total	-107.4

Notes

- (1) The recycled amounts are calculated targeting only Kurita Water Industries, Ltd.
- (2) The recycling rate is calculated based on the weight of waste generated from Kurita Water Industries (3,034 t in fiscal 2007 and 2,618 t in fiscal 2008).
- (3) Waste is broken down into (1) general waste; (2) industrial waste; and (3) specially regulated industrial waste, and waste recycled as a valuable resources commodity is not included in the total amount of waste.
- (4) Waste collected by waste disposal companies for recycling is counted as waste.
- (5) Economic benefits are calculated by multiplying emission reductions by unit prices as of March 2008.

Summing of environmental accounts

Summing period: April 1, 2007 to March 31, 2008

Summing range: Environmental conservation costs: Kurita Water Industries, Ltd., Kuritec Service Co., Ltd., and Kuritaz Co., Ltd.
Environmental and economic benefits: the Kurita Group

Summing method:

1. Summing is performed according to the Environmental Accounting Guidelines (2005 edition) of the Japanese Ministry of the Environment.
2. Environmental conservation expenses include depreciation of environmental investments made in previous years (on environmentally conscious equipment), and personnel expenses necessary for environmental improvement activities.
3. Items whose environmental effects are difficult to quantify directly are evaluated by estimating the proportion that serves for environmental improvement.

Higher Environmental Awareness, ISO 14001 Certification, and Legal Compliance

The Kurita Group is continually providing employees with education and training to increase their environmental awareness and expecting them to play a central role in its environmental improvement activities. In addition, the Group is committed to complying with environmental laws and regulations.

Initiatives for Higher Environmental Awareness

Dispatching information on environmental improvement activities

We launched an in-house magazine on environmental improvements in October 2007, with the aim to increase the environmental awareness of employees and facilitate their environmental improvement activities. This magazine, which can be accessed through the electronic bulletin board on the internal LAN, is published online once a month.

In fiscal 2008, we focused on one type of environmental benefit (e.g., CO₂ emission reduction) we have brought to our customers as the theme of the month in each issue of the

electronic magazine. We introduced general keywords for the theme and specific examples of such benefits, thereby helping employees understand the relationship between the Group's business operations and environmental improvement activities.

In fiscal 2009, which is the first year of the first commitment period of the Kyoto Protocol, we will dispatch information mainly on the Protocol to help employees understand more about environmental issues.

Training for employees

Targeting a total of 240 managers, Kurita's Facilities Division held meetings to explain its environmental improvement activities from October to December 2007.

The Chemicals Division also held training sessions on

environmental improvement activities for new employees in February 2008, with 17 people participating.

The following table shows environmental education provided at Kurita in fiscal 2008.

Environmental education provided in fiscal 2008

Name of the session	Number of participants	Period	Target
Education & training for abnormal situations	200	Apr. 2007 to Jan. 2008	Kuritec Service Co., Ltd.
Environmental education on ISO 14000 certification	15	Jun. 2007	Yamaguchi Plant, Kurita Water Industries Ltd.
Briefing on environmental improvement activities	240	Oct. 2007 to Dec. 2007	Facilities Division, Kurita Water Industries Ltd.
Training for emergency	31	Dec. 2007	Kurita Engineering Co., Ltd.
Training review for the year (environmental improvement activities)	17	Feb. 2008	Chemicals Division, Kurita Water Industries Ltd.

Acquisition of ISO 14001 Certification

As part of their environmental improvement activities, some of Kurita's business sites and some of other Group companies have acquired ISO 14001 certification in consideration of their high environmental load. They are operating the environmental management systems that they have built in compliance with ISO 14001 standards.

Company name	Site location	Name of certification body	Date of certification
Kurita Water Industries Ltd.	Egawa and Ako factories	JCQA	Mar. 24, 1997
	Shizuoka, Yamaguchi, and Toyoura plants	LRQA	July 1, 1998
Kuritz Co., Ltd.		LRQA	Feb. 25, 2000
Kuritec Service Co., Ltd.		JSA	Feb. 14, 2003
Kurita Buil-Tech Co., Ltd.		JSQA	Mar. 25, 2002
Kurita Chemicals Oita Ltd.		JACO	June 26, 2002

Compliance with Environmental Laws and Regulations

The Kurita Group is committed to complying with environmental laws and regulations and regularly checks information about them.

In fiscal 2008, we received no environment-related fines or penalties, and had no serious incidents that would have great influence on people outside the Group.

Major environmental laws that govern the business activities of the Kurita Group

• Water Pollution Control Law	• Act on the Rational Use of Energy	• Sewage Law
• Noise Regulation Law	• Vibration Regulation Law	• Poisonous and Deleterious Substances Control Law
• Air Pollution Control Law	• Waste Management and Public Cleansing Law	• Fire Service Law

Social Contribution Activities

As a corporate citizen, the Kurita Group is supporting research activities that contribute to society and is contributing to local community activities.

Accepting Study Visits at the Kurita Global Technology Center

To fulfill its role as a corporate citizen, the Kurita Global Technology Center is accepting study visits by local elementary and junior high school students. On February 8, 2008, 22 students of Nogi Junior High School in Nogi Town, where the center is located, visited the center to learn about the social system and the meaning of work as part of their comprehensive learning class.

The students observed the clean room, laboratory rooms, and wastewater treatment facilities at the center and learned about Kurita's business and history. They commented, "I was surprised to hear that Kurita is expanding its business overseas through its water- and environment-related

technologies," and "I was able to understand how difficult it was to purify water."

The center will make the study tour of its facilities even more substantial as a means to build closer relationships with local communities.



Students listening to the explanations about the center

Cleanup Activity by the Moriokahigashi Plant of Kuritaz Co., Ltd.

Commissioned by Morioka City, the Moriokahigashi Plant is managing the operation of Yuppies, a health promotion center that uses surplus heat from the incineration of waste at the Morioka Municipal Clean Center. In November 2007, the plant conducted a cleanup activity on nearby roads in cooperation with the local community. The plant asked the staff of the Clean Center, users of Yuppies, and groups of local inhabitants, children, and the elderly to participate in the activity. On that day, as many as 64 locals participated in the activity and cleaned the roads vigorously.

The Moriokahigashi Plant will continue similar activities to contribute to the local community.



Participants in the cleanup activity

Supporting a Total of 49 Research, Study, and International Exchange Projects through the Kurita Water and Environment Foundation

The Kurita Water and Environment Foundation was established to contribute to the creation of rich water environments and better local environments via the promotion of science and technology. Kurita has been supporting this foundation in conducting its grant program, in which grants are awarded to selected scientific research, study, and international exchange projects on water and the environment. In fiscal 2008, 49 projects were selected from among 370 applications, and the foundation gave research grants to the projects.

In fiscal 2008, the Kurita Water and Environmental Awards were initiated. Awards are given to researchers who have achieved excellent results in their research activities, and the winners are chosen from among the researchers who had

received research grants from the foundation. In the first year, five researchers were selected as winners.

At the award ceremony, President Fujino of Kurita Water Industries expressed his expectation by saying, "I would like the researchers to achieve more results as early as possible to contribute to the creation of a sustainable society" and promised that the company would continue to support the foundation.

Also in fiscal 2008, the foundation launched research on water and the environment in foreign countries, with the aim of building an information network for water- and environment-related research that reaches beyond national boundaries.

Third-Party Opinion Comments

To ensure the disclosure of highly reliable information on a continual basis and to improve the quality of our environmental management, since fiscal 2005 we have been asking the Institute for Environmental Management and Accounting (IEMA), as a third party, to give us their opinion concerning our environmental activities.

Environmental Management Evaluation Report



To: Kurita Water Industries Ltd.

July 29, 2008

Institute for Environmental Management and Accounting

國部克彦

Katsuhiko Kokubu (Professor, Kobe University Graduate School/Director)

梨岡 英理子

Eriko Nashioka (Director/CPA& Certified Public Tax Accountant)

1. Purpose of this evaluation report

As a third party, independent of Kurita Water Industries Ltd, we herein state our opinions with the aim of enhancing the credibility of Kurita Environmental Report 2008, through an evaluation of the environmental management efforts described in the report.

2. Implemented procedures

To examine how the Kurita Group's environmental management activities are planned and executed, and how environmental performance data resulting from these activities (which serve as a basis for publicly disclosed information) are evaluated and utilized, we conducted an interview with Hiroshi Fujino, president of Kurita Water Industries, and relevant responsible personnel at the company's head office, and inspected its Yamaguchi Plant. We also visited some of the company's corporate customers to which it had brought about environmental benefits by Kurita Water Industries. At the head quarter and Yamaguchi Plant, we conducted a basic examination to verify that work is conducted according to defined systems in relation to source documentation for publicly disclosed data, using methods in accordance with financial auditing practices, as necessary.

3. Evaluation and comments

In its environmental management focusing on water and the environment, Kurita Water Industries has established a system to evaluate the environmental improvements it has achieved through the development of new technologies and products; environmental improvements made within the company; and environmental benefits that it has brought about to its customers. In fiscal 2008, the company expanded its environmental improvement activities to include other Group companies and enhanced the system to evaluate the achievements of the entire Group based on the environmental performance data collected from each company. The basis for Kurita Water Industries' environmental improvement activities seems to have been established in fiscal 2008, which is highly appreciable. In fiscal 2008, the company achieved almost all its environmental targets, although some were not achieved due to the expansion of its business activities. In the future, the company will have to take on the challenge of conducting even more advanced environmental management activities to further strengthen its brand image as an "environmental company." To this end, it would be necessary for the company to closely link its environmental and business targets and build a mechanism in which the achievement of environmental targets leads to higher business performance. The company should eventually have a new environmental management system in place—a system that can respond to the future expansion of business and changes in the business environment. It is also important for the company to identify the environmental benefits achieved by its activities without fail and incorporate the findings into its business operation in a systematic manner. We expect that the company will examine these challenges in the formulation of its new medium-term management plan to be launched in fiscal 2010. Within the scope of our basic examination, conducted in accordance with the procedures described above, we found no serious discrepancies with the calculation of environmental performance data.

<The Kurita Group's environmental improvement activities>

In fiscal 2008, we visited the Yamaguchi Plant, where we interviewed the employees in charge about their environmental improvement activities and checked the results of these activities. Those at the plant had been making efforts to curtail CO₂ emissions and waste generation and to appropriately manage chemical substances and wastewater, and we confirmed that they had achieved almost all the predefined targets and were successfully operating their environmental management system (EMS) based on ISO 14001. In order for the Kurita Group to improve its environmental improvement activities further, it is necessary for all the members of the Group to make a concerted effort to achieve even higher targets. We also hope that all Group companies will endeavor to raise their employees' environmental awareness.

<Contributing to reducing the environmental loads of customers>

We visited a corporate customer of Kurita Water Industries to interview about the company's technologies and products. Through this interview, we have been assured that Kurita Water Industries is evaluated highly by the customer and indeed contributing to society through its business operations. Kurita Water Industries is thus helping its corporate customers reduce their environmental loads by the provision of its products and technologies. The company quantitatively identifies and publicly discloses the environmental benefits that it has brought to customers. Evaluation of such environmental benefits is an advanced initiative and is highly appreciated. As a premise for such evaluation, however, the company needs to collect information about these environmental benefits in a more reliable and encompassing manner. In fiscal 2008, the results for many of the environmental items were below the results of the previous fiscal year. This seems to be due to the fact that environmental improvement data were collected upon request from employees. For improving these results, the company has to link the environmental benefits to its customers with its business targets and educate Group employees more about the related matters. By steadily implementing these measures, we expect that the company will achieve higher performance.

● Professor Kokubu and President Fujino talked about the Kurita Group's environmental improvement activities.



On July 22, 2008, Professor Katsuhiko Kokubu talked with President Hiroshi Fujino of Kurita Water Industries. Professor Kokubu teaches at Kobe University's Graduate School of Business Administration and also serves as a director of the Institute for Environmental Management Accounting, which performed a third-party assessment of the Kurita Group's environmental improvement activities.

At the meeting, they exchanged opinions focusing on the following three themes: roles that the Kurita Group should play toward the creation of a sustainable society; overview and evaluation of the Group's environmental improvement activities in fiscal 2008; and future initiatives to be taken by the Group. Professor Kokubu highly evaluated the Kurita Group's environmental improvement activities by saying, "The business model of contributing to environmental improvement through water- and environment-related business operations is easy to understand and has a great influence on society." He also proposed that the Group enhance its system to collect data on the environmental benefits to its customers; link its business plans with its environmental improvement activities, and build a system in which employees can recognize the relevant results and be rewarded fairly to have high motivation to take further actions.

In response, President Fujino answered, "We have been endeavoring to establish a system and framework to press forward with our environmental improvement activities by taking a three-pronged approach. In the future, based on the established system and framework, we will execute our PDCA cycle without fail. We will also provide customers with more environmentally beneficial products and proposals to help them conduct environmental improvement activities."

The Kurita Group will continue to improve its environmental improvement activities, proactively accepting opinions from outside the Group.

* For future policies, please see "Message from the President" on page 3-4 of this report.



Institute for Environmental Management and Accounting (IEMA)

IEMA is a venture company originating from universities and established for the purpose of supporting the environmental management of corporations. This venture is mainly engaged in research, development, and consulting regarding state-of-the-art technologies for environment- and CSR-oriented management. It also provides consulting services to assist companies in creating environmental and CSR reports.



Professor Katsuhiko Kokubu
Professor at Graduate School of Business Administration, Kobe University and IEMA director

Profile

Professor Katsuhiko Kokubu received a Ph. D in business administration from Osaka City University. He has been a professor at the Graduate School of Business Administration, Kobe University since 2001, and in 2003 established the Institute for Environmental Management Accounting, a vehicle for utilizing research achievements. Professor Kokubu chaired a committee of the Ministry of Economy, Trade and Industry on development and promotion of material flow cost accounting and served as a member of a committee of the Ministry of the Environment on environmental reporting guidelines.



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