



Environmental and Social Responsibility Report 2006

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EDITORIAL POLICY

NGK Insulators, Ltd. (NGK) began disclosing information on each year's environmental activities in 1997 by publishing its Environmental Report. Information on the Company's social responsibilities was added in 2004 and the report was put out as the "Environmental and Social Responsibility Report."

In drafting the report, reference was made to the Ministry of the Environment's Environmental Reporting Guidelines (2003) and the Global Reporting Initiative's 2002 Sustainability Reporting Guidelines. Environmental data closely follows the Ministry of the Environment's Environmental Performance Indicators Guideline for Organizations (2002).

The report covers the period from April 1, 2005 to March 31, 2006. Reporting on environmental initiatives and data for Group companies located overseas covers the period from January 1, 2005 to December 31, 2005. The range of companies involved differs with each initiative cited, but is clearly stated with the data. To ensure the reliability of the information contained in the report, independent audits have been conducted since 2005 by Tohmatsu Environmental Research Institute Ltd. A copy of the auditor's report has been included.

A Japanese version of this report is also available. Information is additionally provided on NGK's website at www.ngk.co.jp. Next year's version of this report is scheduled to be published in August 2007.

■ Term covered

The term covered by this report is as follows:

Japan: April 1, 2005 to March 31, 2006

Overseas: January 1, 2005 to December 31, 2005

Note: In this report, the periods described above are referred to as "2005."



Shun Matsushita

Shun Matsushita
President and Chief Executive Officer

Last year, the 2005 World Exposition, Aichi, Japan took place in Aichi, Japan, which happens to be home to our Head Office. All told, the Expo attracted 22 million visitors, a far greater number than initially anticipated. Although the Expo is now over, its resounding success is no doubt fresh in the minds of everyone associated with the event. NGK was an active sponsor of what some have called an “Environmental Expo,” referring to the overarching theme of the event, and took part in the Expo in a variety of other ways. These included participation in the pavilions and the provision of technology used on site. The Expo also provided an invaluable and meaningful opportunity for NGK to communicate directly with Expo visitors. I am proud to say that these actions enabled NGK to fulfill its role as a good corporate citizen by further contributing both to society at large and to the field of environmental technology.

I attended the Expo in person on several occasions, which allowed me to experience the reactions of visitors to the event firsthand. In particular, I found the “Eco-Talk Sessions,” where I spoke to 150 elementary school students on the theme of “People and Water,” personally invigorating, for which I have the children to thank for their straightforward and honest questions and keen awareness of environmental problems. My impression is that the Expo helped heighten environmental awareness among the people of Aichi, and at the same time piqued their interest in what corporations should be doing to fulfill their responsibilities to society.

With the publication of NGK’s Environmental and Social Responsibility Report 2006, we have broken down the Social Section of the report into separate stakeholder categories and added more information.

Our goal here is to facilitate communication with an even more diverse range of stakeholders. The hope is that this new format will deepen readers’ understanding of NGK’s activities.

In the Environmental Section, we felt that the results of our first Five-year Environmental Action Plan, which concluded in March 2006, warranted in-depth coverage. Also, we obtained ISO 14001 or equivalent certification at all major Group companies in Japan and overseas, and put in place an administrative structure for consolidated environmental management. One of our highest priorities is reduction of the unavoidable emission of carbon dioxide from ceramics production. In 2005, we managed both to overcome the tendency of CO₂ emissions to rise alongside higher production volume and also to rein in overall emissions. Furthermore, we attained our goal of “zero emissions” as planned by recycling more than 90% of our production by-products. In the management of chemical substances, we reinforced control of these substances at their point of entry, and succeeded in cutting their release into the atmosphere by 50% more than our own target.

On the basis of these achievements, we formulated a second five-year Environmental Action Plan scheduled to run from 2006 through 2010. NGK will rise to the challenge of achieving these new and stringent targets to realize a greater number of environmental successes by the plan’s end in March 2011.

It is my hope that this report helps facilitate your understanding of our social and environmental initiatives, as well as related policies and achievements. Thank you for your continuing support.

TAKING ON NEW GOALS BASED ON OUR FIRST FIVE YEARS OF ACHIEVEMENT

Achievements of the First Five-year Environmental Action Plan

Since the holding of the United Nations Conference on Environment and Development in 1992, and given momentum by the third United Nations Framework Convention on Climate Change in 1997 and the European Union's Sixth Environmental Action Program, environmental problems have come to be recognized as a major issue on a global scale. NGK has been a part of this movement as well, earning ISO 14001 certification and starting environmental management activities on a full-fledged basis in 1998. In 2001, we formulated our first Five-year Environmental Action Plan, and in 2002, we bolstered our system of environmental management. We have generated a steady stream of results while continuing to be conscious of the need to disclose information about our activities outside the Company.

		First Five-year Environmental Action Plan Targets and Achievements (2001–2005)
Environmental Management	Environmental Management	1) Promote consolidated environmental management ➡ Instituted environmental management at business groups, including Group companies, to complement environmental management at manufacturing plants 2) Establish environmental management system for domestic and overseas Group companies ➡ ISO 14001 (or equivalent) certification acquired at 85% of Group companies by 2005 3) Track environmental performance for domestic and overseas Group companies ➡ Proprietary tracking system implemented (200 items in 16 categories)
	Environmental Accounting	1) Improve utility of environmental accounting ➡ Implemented environmental accounting procedures in accordance with Ministry of the Environment guidelines 2) Implement and disclose environmental accounting at domestic and overseas Group companies ➡ Instruction completed for domestic Group companies
Lifecycle Activities	Reduction of CO ₂ Emissions (NGK)	Make total emissions in 2006 0% of 2003 ➡ 2005 emissions 6% lower than 2003
	Reduction of By-products (NGK)	1) Achieve “zero emissions” by 2005 (outside disposal volume of 1,000 tons or less) ➡ Achieved “zero emissions” in 2005 with 718 tons (1/10 of 2001) 2) Reduce volume generated by 5% in 2005, compared to 2004 ➡ Progressed almost according to plan in 2005
	Chemical Substance Management (NGK)	1) Make atmospheric emission of PRTR solvents 20% or less of 2000 by 2005 ➡ Achieved target with emissions 10% or less of 2000 in 2005 2) Establish integrated management system and the Chemical Substances Safety Committee ➡ Established 3) Process PCB and survey soil and groundwater ➡ Proceeding according to plan
	Lifecycle Assessments (NGK)	Run trial LCA analysis on major products ➡ Completed production process analysis on six major products (insulators, HONEYCERAM®, etc.)
	Green Procurement (NGK)	1) Issue green procurement guidelines ➡ Revised edition issued in 2004 2) Raise awareness of environmental issues among suppliers ➡ Recommended implementation of environmental management system 3) Expand green procurement to office products ➡ 70% in 2005
Environmental Communication	Communications	Enhance information disclosure ➡ Issued Environmental and Social Responsibility Report in Japanese and English Disclosed environmental initiatives on Company website
		Hold community events at manufacturing plants ➡ Held in line with local needs
	Participation in NPO Activities	Participate in Environmental Partnership Organizing Club (EPOC) and Re-STEP ➡ Actively participated

Establishment of the Second Five-year Environmental Action Plan

Based on achievements made under our first Five-year Environmental Action Plan, which was drawn up in 2001, we formulated the Second Five-year Environmental Action Plan to cover the period from 2006 to 2010. The new plan positions Green Management as the second step, clearly lays out a trajectory for expanding consolidated environmental management, and sets a goal of global management, including domestic and overseas Group companies. In the area of environmental performance, we set new, higher targets. We will seek to open the way to an era of Green Management that suits the times in recognition of our corporate social responsibilities.

Item		Second Five-year Environmental Action Plan Targets (2006–2010)
Management	Environmental Management	<ul style="list-style-type: none"> Environmental CSR activities Institute environmental management indicators (CO₂, by-products, environmental efficiency, third-party audits, ratings, etc.)
		<ul style="list-style-type: none"> Promote consolidated environmental management Promote integration of environmental management data
Factories	Environmental Impact	Reduction of CO ₂ emissions NGK: 7% reduction from 1990 Domestic Group: consider domestic Group targets
		Reduction of by-products generated NGK: 25% reduction from 2005 Domestic Group: 15% reduction from 2005
		Reduction of atmospheric emission of PRTR solvents NGK: 10% reduction from 2005 Domestic Group: 10% reduction from 2005
Products	Environmentally Conscious Design	<ul style="list-style-type: none"> Step up level of environmentally conscious design
	Green Procurement and Logistics	<ul style="list-style-type: none"> Reduce the environmental impact of procurement Minimize emissions from logistics
Stakeholders	Citizenship	<ul style="list-style-type: none"> Promote activities that benefit local communities
	Environmental Communication	<ul style="list-style-type: none"> Enhance disclosure and two-way communications
	Education & Awareness-raising	<ul style="list-style-type: none"> Enhance environmental education

UTILIZING PROPRIETARY CERAMIC TECHNOLOGIES

NGK products help reduce environmental impact. Products like NAS[®] batteries, which have drawn attention in the field of clean energy, and diesel particulate filters (DPF) and HONEYCERAM[®], which help purify vehicle exhaust, are especially well regarded.

Contributing to the Stable Supply of Clean Energy NAS[®] BATTERIES

The common belief that electricity cannot be stored is overturned by NGK's NAS[®] batteries. Our power storage system utilizes ceramic material and manufacturing technologies and was the first in the world to be made viable on a practical basis. Moreover, this system helps reduce environmental impact in the field of electric power.

■ NAS[®] Batteries Help Facilitate the Establishment of Wind Power Plants

Power generation by wind power plants has been increasing substantially in recent years, but for electric power utilities the biggest issue is stability. In response to the problem of wind power output fluctuations, the govern-



NAS[®] batteries were included in the new energy system at the Aichi World Expo.

ment is currently considering installing storage batteries capable of diminishing the impact of those fluctuations.

NGK's NAS[®] batteries apply proprietary ceramics technologies to efficiently store electricity. It is expected that when installed together with wind power facilities they will facilitate the stable supply of power from wind-power generators.

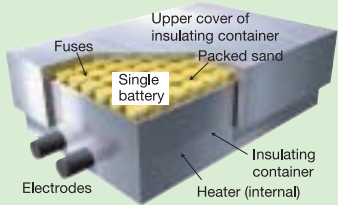
■ NAS[®] Batteries Provide Electric Load Leveling

Power demand varies with the time of day and season, so mechanisms are needed to accommodate these changes in order to reduce the generation of carbon dioxide through effective use of power facilities.

NGK developed a power storage system using NAS[®] batteries that is capable of storing large amounts of power in a compact space. By storing power (recharging) in off-peak hours and releasing that power (discharging) during peak hours, the system serves to level the electricity load. It has been recognized for its efficiency and has already been installed at numerous sites inside and outside Japan.

NAS[®] Battery System— Making Efficient Electric Power Storage a Reality

NAS[®] batteries are long-lasting batteries that function at high temperatures. They use sodium on their negative pole, sulfur on their positive pole, and solid-state electrolyte beta-alumina ceramics with sodium ion conductivity as their electrolyte. The batteries have a high energy density that is some three times higher than lead batteries. There is also no self-discharge, so electricity can be stored stably and efficiently.



Structure of Battery Module



Interest has been mounting in wind power, a source of clean energy.



Vehicle exhaust regulations are becoming more and more stringent in Europe and the rest of the world.

Helping Purify Exhaust

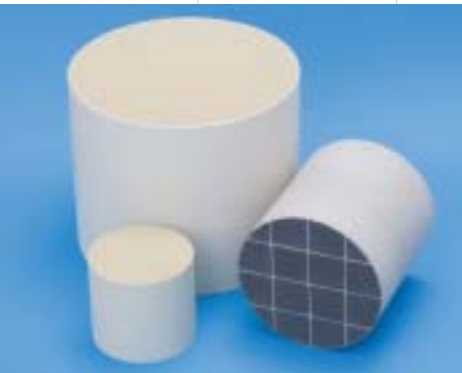
CERAMIC PRODUCTS FOR PURIFYING VEHICLE EXHAUST

An automobile-based society offers convenience and comfort, but in order for it to continue to develop, cars must run cleaner and be more environmentally friendly. Since the 1970s when restrictions on vehicle exhaust first drew the public's attention, NGK has been involved in the development of ceramics for purifying exhaust gases. We have helped lower environmental impact by cleaning automobile exhaust.

■ DPF Filters Clean Diesel Engine Exhaust

In Europe in recent years as diesel engines have gained in popularity because of their good fuel economy and high performance, regulations on black smoke and other exhaust gases have tightened. Leveraging a storehouse of technology accumulated over 30 years in the area of exhaust purification, NGK developed diesel particulate filters (DPFs) for removing black smoke particulate emitted by diesel engines. It supplies the filters to major domestic and foreign automakers. NGK makes two types of DPF filters, each made from a different material. One type is made of cordierite and is primarily used in large buses and trucks, while the other type is made from silicon carbide (SiC) and used in passenger cars.

NGK is the only company to mass-produce diesel particulate filters made from cordierite and silicon carbide.



HONEYCERAM® (front-left) and DPF filters (back-left, and right)

Exhaust regulations for automobiles started with gasoline engines in the 1970s. NGK developed HONEYCERAM®, a ceramic material with a honeycomb structure, in order to accommodate demand from automakers for better performing exhaust filters. As a catalyst carrier that does not interfere with the flow of the exhaust, HONEYCERAM® substantially raised the performance of exhaust filters. In order to comply with tightening exhaust regulations thereafter, we made the walls of HONEYCERAM® thinner by utilizing proprietary ceramic technology.

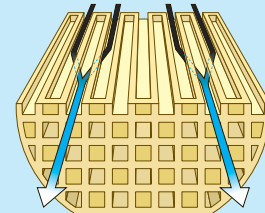
NGK has manufactured a total of over 700 million HONEYCERAM® products and has supplied them to companies around the world. They are supplied from Japan, Belgium, the U.S., Indonesia, South Africa and now China and will continue to play an active part in cleaning exhaust gases throughout the world.

■ HONEYCERAM® Cleans Gasoline Engine Exhaust

DPF Structure—Removes over 90% of Black Smoke Particulate

The ends of the honeycomb ceramic are blocked off on an alternating basis to enable the thin ceramic walls to be used as a filter for removing at least 90% of the black smoke particulate contained in diesel engine exhaust.

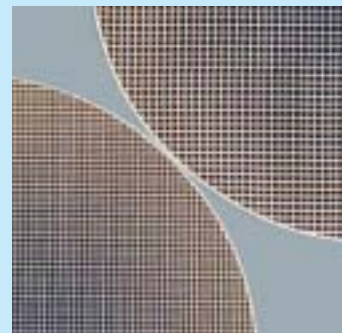
Exhaust containing black smoke particulate



Cleaned exhaust

HONEYCERAM® Features Ultra-thin 0.05 mm Walls

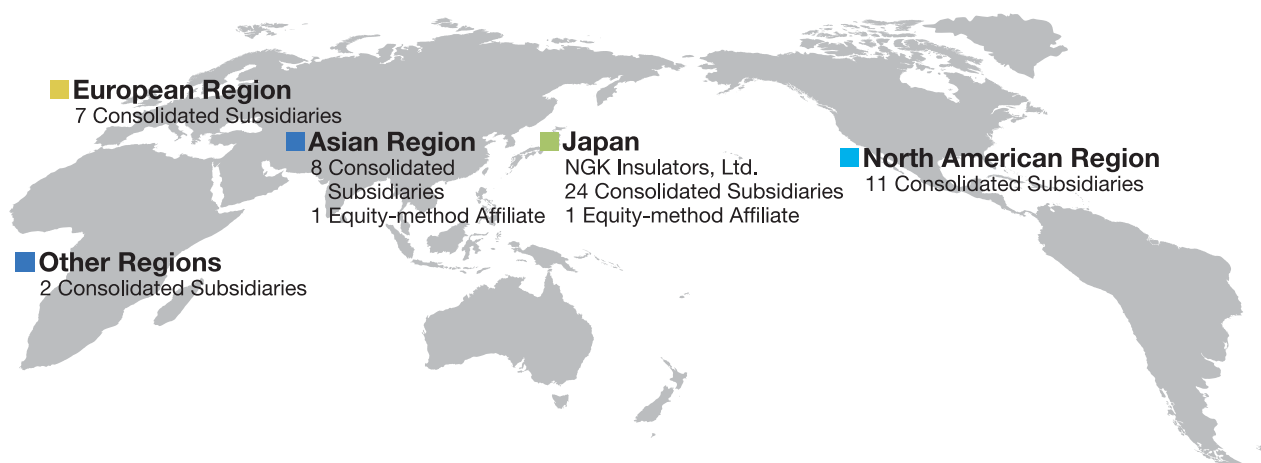
HONEYCERAM® is a catalyst carrier ceramic that purifies the harmful content of vehicle exhaust, including hydrocarbon, carbon monoxide and nitrous oxides. It has a honeycomb structure to facilitate the smooth flow of exhaust gases. The lattice-patterned walls are about the same thickness as one sheet of newspaper, or 0.1 mm. Ultra-thin walls of 0.05 mm have also been put into practical application.



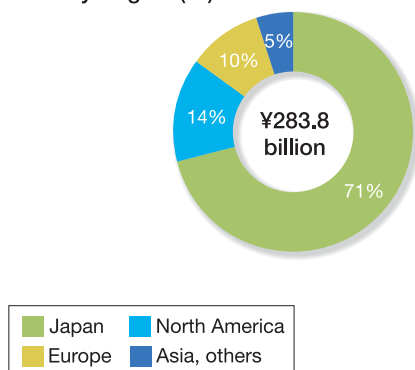
HONEYCERAM® with 0.05 mm thick walls (left) and 0.1 mm thick walls (right)

BUSINESS OVERVIEW

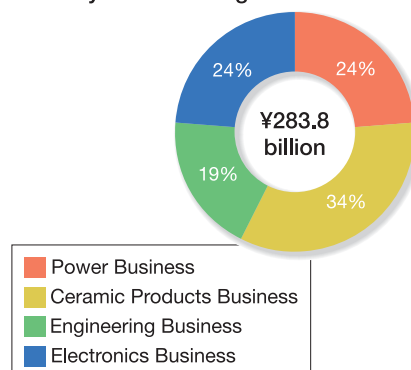
Competition is growing more and more intense on a global scale and changes are taking place with increasing speed. With proprietary ceramic technologies as its core technologies, the NGK Group develops its business operations dynamically and globally based on four principles: speedy management, developmental focus, highly efficient management and green management.



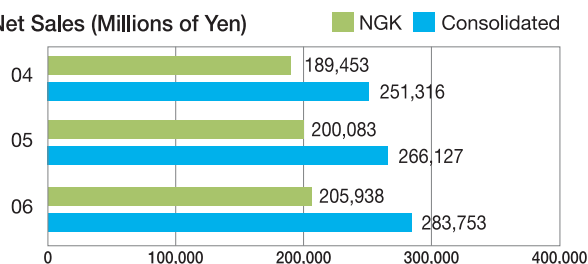
Sales by Region (%) – Consolidated



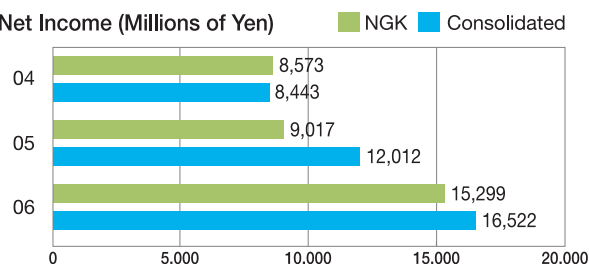
Sales by Business Segment – Consolidated



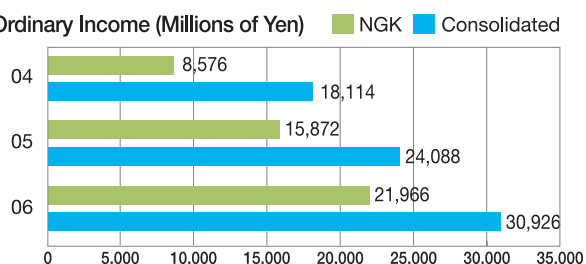
Net Sales (Millions of Yen)



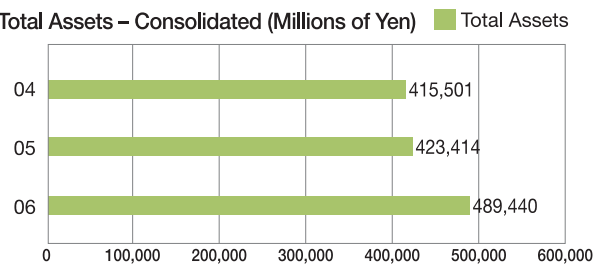
Net Income (Millions of Yen)



Ordinary Income (Millions of Yen)

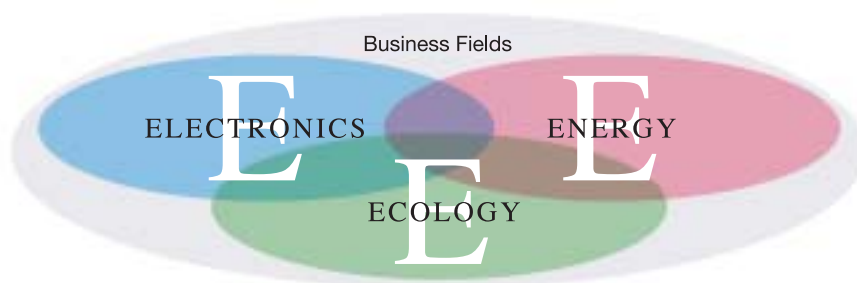


Total Assets – Consolidated (Millions of Yen)



BUSINESS SEGMENTS AND BUSINESS FIELDS

NGK harnesses the strengths of its four business segments, the Power Business, Ceramic Products Business, Engineering Business and Electronics Business, in the business fields of Ecology, Electronics and Energy to manufacture products and develop technologies.



Power Business

NGK offers highly reliable products in the field of power and energy, including insulators and NAS[®] batteries, both of which help facilitate the stable supply of power.

- Insulator and line hardware
- Devices for power supply, transformation and distribution
- Insulator cleaning and safety equipment
- NAS[®] batteries for power storage



Ceramic Products Business

Based on proprietary ceramic technologies, NGK provides cutting-edge products to support the development of various industries.

- Ceramic products for automobiles
- Corrosion-resistant devices for chemical engineering
- Membrane separation equipment for liquids and gases
- Combustion apparatuses and refractories



Engineering Business

Seeking harmony between people and the environment, NGK provides various environmental conservation-related facilities that help protect the environment and people's way of life.

- Water and sewage treatment systems
- Sludge dewatering and incineration equipment
- Noise control equipment
- Waste processing equipment
- Radioactive waste processing systems



Electronics Business

NGK utilizes fine ceramic technologies to provide advanced products in the field of electronics, which continues to undergo dramatic change and growth.

- Beryllium copper rolling and processing products
- Metal molds
- Ceramic products for semiconductor manufacturing equipment
- Ceramic products for the electronics industry

CORPORATE PHILOSOPHY

“NGK products and technology must create new value and contribute to the quality of life.”
Under this philosophy, NGK will proactively fulfill its social responsibilities as a corporation.

A company’s activities are supported by society, so it is essential that a company fulfill its responsibilities in all respects—social, public, common good, and environment.

NGK put its thinking on this matter into writing and publicized it throughout the Group by formulating the NGK Group Guidelines for Corporate Behavior in April

2003. In addition, in order to develop CSR activities on a company-wide level, in July 2005, we established the CSR Committee to promote initiatives in the area of corporate social responsibility. We intend to more proactively ensure compliance with laws and regulations and engage in activities beneficial to society.

CORPORATE PHILOSOPHY

NGK products and technologies must create new value and contribute to the quality of life.

NGK GROUP GUIDELINES FOR CORPORATE BEHAVIOR (EXCERPT)

■ Relationship With Society

In pursuit of more openness from management, NGK Group will improve its communication with society, and, as a good corporate citizen, will increase its contribution to the enrichment of society.

For continuous operation of the Company, NGK Group finds it essential to tackle environmental problems, and will actively deal with such issues.

■ Relationship With Business Activities

NGK Group will develop safe and valuable products to meet any future social demands and satisfy customers all over the world with those products. Throughout its business activities, NGK Group consistently obeys the letter and spirit of the law and conducts its business transactions fairly, transparently, and freely. As a member of the international community, NGK Group respects regional cultures and customs and seeks to coexist with local communities. Profits earned through legitimate business activity are appropriately returned to shareholders.

■ Relationship With Employees

NGK Group will always value people and show respect for basic human rights. All employees must obey labor laws and regulations as well as corporate regulations.

Simultaneously, they must work responsibly and in good faith, and endeavor to enhance their own abilities.

ENVIRONMENTAL PHILOSOPHY

On the basis of the Company's corporate philosophy, NGK focuses on the “Triple-E” areas of Ecology, Electronics, and Energy. Through our work in these areas, we seek to develop solutions to some of the critical challenges facing the next generation.

THREE-YEAR MANAGEMENT PLAN

■ Speedy Management

Together with ground-up revision of the processes for all tasks, NGK is making active use of new information tools and management methods to carry out the management decisions of the globally growing NGK Group even more rapidly.

■ Concentration on Development

With ceramic technology positioned as a key technology, NGK is maintaining investment in research and development within the “Triple-E” business fields at around 6% of sales. The Company is striving to achieve strategic growth through the timely development of new products.

■ Highly-efficient Management

Aiming for a return on equity (ROE) of 10%, NGK is taking thorough steps to slim down assets through such measures as introduction of supply-chain management (SCM) and integration of equipment. The Company is further accelerating the utilization efficiency of management resources (personnel, property and funds).

■ Green Management

In order to fulfill its responsibility to maintain corporate excellence, NGK makes every effort to reduce the impact of its business activities on the global environment through such actions as measures to prevent global warming, recovery of resources from by-products, development of environmentally conscious products, and improvement in the quality of environmental management.

CORPORATE GOVERNANCE

In order to earn the trust of society as a good corporate citizen, NGK is committed to further improving the fairness and transparency of its management and ensuring each and every employee acts on the basis of a strong code of ethics.

The basic foundation of NGK’s corporate governance consists of an organizational structure capable of ensuring the legality of business activities and the transparency of management, and quickly accommodating changes in the operating environment. It further consists of the establishment and maintenance of fair management systems oriented toward shareholders.

We have established the NGK Group Guidelines for Corporate Behavior in order to ensure compliance with the law and corporate ethical standards, and to be well regarded by society in a way that befits an exceptional company as defined by global standards. The guidelines are intended to clarify the intentions of upper management and to be applied to the NGK Group as a whole. Moreover, establishing the CSR Committee will enable us to more proactively ensure legal compliance and contribute to society at large.



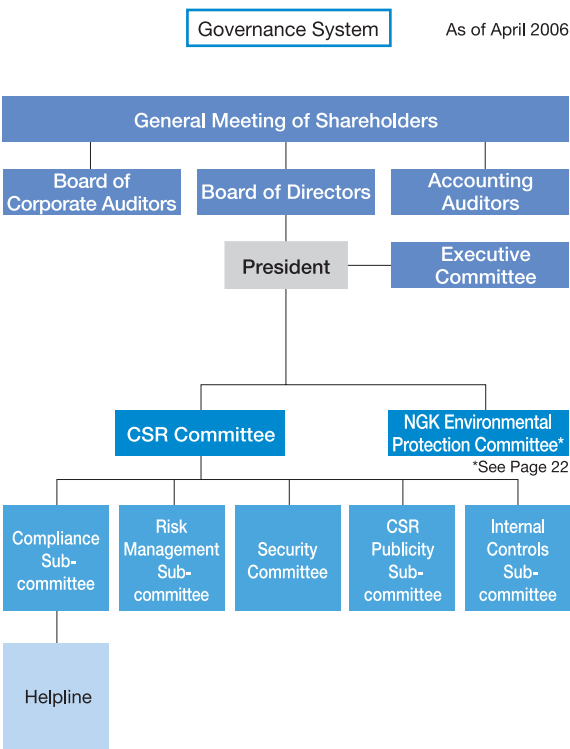
Pamphlet presenting the NGK Group Guidelines for Corporate Behavior

Strengthening Corporate Governance

The responsibility for building and implementing systems of corporate governance belongs to the Board of Directors and executive bodies under the president. We have also established the Auditing Department as a dedicated department for internal auditing. The department conducts audits on the business execution of our operational divisions. The Internal Controls Subcommittee has also been set up as a subcommittee of the CSR Committee. It develops, maintains and improves internal control systems in order to improve the effectiveness of the Company’s governance.

Establishment of the CSR Committee

The CSR Committee was established in July 2005 in order to promote CSR activities on a Company-wide basis. The committee has five subcommittees, for compliance, risk management, security, CSR publicity and internal controls.



[Subcommittee Functions]

Compliance Subcommittee

Matters related to the law and ethics

Risk Management Subcommittee

Handling of incidents and accidents when they occur

Security Subcommittee

Development of preventive measures for incidents and accidents and related awareness-raising activities

CSR Publicity Subcommittee

Preparation and publication of CSR-related and other materials

Internal Controls Subcommittee

Development, maintenance and improvement of internal control systems

COMPLIANCE

■ Compliance

In order to earn the steadfast trust of the public we have instituted a variety of policies for ensuring all employees are fully aware of compliance-related issues and for encouraging greater use of the helpline system. In November 2005, we administered a survey on employee awareness of compliance-related issues targeted at all employees, including those at domestic Group companies. The results were reported in our company newsletter. An informational card on the helpline system was also created and distributed to all employees. The card contains a description of the system and contact information for consultations and reporting. Since January 2006, we have held a liaison meeting on legal compliance every other month to disseminate legal knowledge related to our business and foster a compliance mindset. Going forward, we plan to further enhance training and PR activities in an effort to strengthen the Group's compliance system.



Helpline card

■ Compliance Training

In order to raise compliance-related awareness throughout the Company and ensure business activities are carried out on the basis of this awareness, we conduct compliance training as a part of our position-based training program, which covers new hires, regular employees and middle management. The goal of the training is to provide employees with broad-ranging information, from basic knowledge to practical know-how, through instruction on the NGK Group Guidelines for Corporate Behavior, which are of utmost importance for NGK employees, and on various related laws and regulations.

Additionally, attorneys specializing in compliance-related issues are brought in once a year to give lectures on relevant topics to upper management, all executives, and middle management. In December 2005, a lecture was held on the Antimonopoly Act.



Lecture on the Antimonopoly Act

■ Information Security System

With the advance of information technology, companies have had to institute stronger security measures for information. In March 2005, NGK drew up the NGK Group Basic Policy on Information Security to establish a basic approach to information security, and presented the policy to all relevant parties inside and outside the Company. Based on this policy, we established regulations (company rules) to serve as standards for proper information security management. We also established practical rules for personal information, information systems and other aspects of information security. In addition, we are working to ensure the rules are faithfully followed by regularly conducting position-based training, questionnaires and audits, and ensuring prompt improvements are made when inadequacies are discovered.

Regarding Asbestos Usage

We investigated asbestos usage by the NGK Group and banned new purchases of products containing asbestos. For the buildings and facilities where use of asbestos was confirmed, we are implementing countermeasures, removing the asbestos or replacing it with alternative materials.

WITH OUR STAKEHOLDERS

■ Activities covered:

NGK Insulators, Ltd. Nagoya Plant, Chita Plant, and Komaki Plant

Note: Including some information from overseas Group companies.



Cleanup event in local community



Factory tour



Disaster prevention training



WITH OUR EMPLOYEES

Human Rights and Employment Initiatives

NGK endeavors to employ personnel who are cheerful and eager to take on challenges, based upon our policies of employment stability and equal opportunity employment.

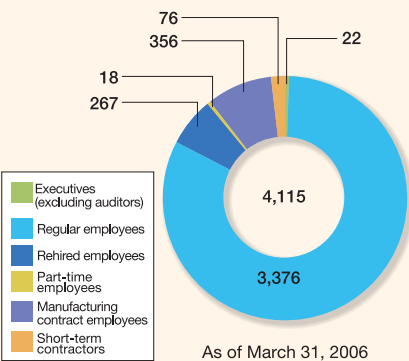
We also encourage independence and autonomy among our employees, and are drawing up an equitable results-based treatment system and a benefit program that lets employees work in comfort and security. We are fully committed to bring these to reality.

■ Employment Stability

NGK's operations cover a broad range, and we are therefore striving to provide a stable employment situation by drawing up personnel plans that focus upon issues such as the restructuring of operations (also within Group companies) and increases in productivity. When hiring new staff members, we carry out a policy of ongoing recruitment from a medium-term perspective, irrespective of whether the potential employees are fresh graduates or are changing employment mid-career.

Furthermore, we are aiming for general employment stability and utilization of personnel, and are making use of temporary staff and outsourcing services in order to support variations such as those that occur when providing personnel to make up for maternity or childcare leave, or for temporary business loads.

Employee Breakdown by Type



■ Employment Diversity and Equal Opportunity

NGK employs personnel without regard for race, belief, gender, or disability, and is striving to achieve an equal-opportunity workplace. In the hiring of women, we make a concerted effort to provide equal opportunities for both men and women, in the spirit of laws pertaining to equal employment. As of March 31, 2006, women accounted for 10.8% of the workforce, and this figure includes five women in management positions. The proportion of disabled employees throughout 2005 fell to 1.74%, due to a slowdown in the overall personnel

decrease. As this figure falls below the legally mandated ratio of 1.8%, we will fully commit ourselves to the spirit of laws covering employment of people with disabilities in the future.

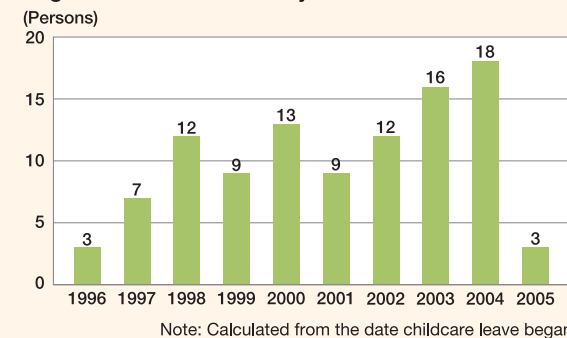
■ System for Rehiring Employees After Retirement

NGK introduced in April 2001, a system for rehiring ordinary, regular employees after their retirement, becoming one of the first companies in Japan to do so. With the exception of those employees with restrictions placed on their work, all applicants are rehired. Contracts are renewed annually, with the upper age limit on hiring set at the age from which the employee begins receiving the fixed portion of their pension. As of March 31, 2006, we had 267 rehired employees, accounting for 6.5% of the total workforce.

■ Helping Balance Work and Home

NGK has established a leave system for employees with child or nursing care responsibilities that allows them to work without undue stress, and is promoting its use. We will continue to work to create an environment hospitable to childcare, in accordance with the spirit of laws to support the raising of the next generation.

Changes in Numbers of Employees Using the Childcare Leave System



■ Measures to Protect the Human Rights of Employees

NGK’s employment regulations clearly prohibit sexual harassment by employees, and the Company takes disciplinary action in response to any violations. We have concluded a labor-management agreement regarding prevention of sexual harassment, and are establishing a grievance reconciliation committee comprising representatives from both labor and management. We are also implementing measures to protect the human rights of employees, such as incorporating a sexual harassment prevention lecture as part of our in-house training program in an effort to raise awareness.

■ Ensuring Employee Health

NGK conducts various health examinations for its employees as part of its employee health maintenance program, and based on the results of such examinations takes measures to protect their health, such as placing restrictions on working hours. For mental health care we have an employee physician contract with a mental health specialist, work to address issues as early as possible, and raise the issue when conducting training specific to position in the company, such as training for newly assigned managers. We also provide separate facilities for smokers and nonsmokers in accordance with the purport of health promotion laws, making efforts to prevent exposure to second-hand smoke.

■ Initiatives to Pass on Skills

The personnel structure at NGK’s manufacturing sites has begun to change substantially, due to such factors as the retirement of experienced engineers, and an increase in the proportion of contract and part-time employees. The importance of not weakening the underlying strength of manufacturing (the capabilities of a production site), smoothly passing on and developing technology and abilities, and training personnel who support the production of world-class products with high levels of added value, has risen to an exceptionally high level. NGK has therefore established manufacturing training centers in each region to pass on production site technology and skills, putting in place a structure where younger employees use actual equipment to learn production floor skills. We also provide education to train leaders at each factory, as well as for the factory managers and other managers who actively support it.



Training for factory managers

■ Human Resource Development

NGK considers personnel development to be an important issue, and in April 2006, established NGK Human Resource Development Co., Ltd., as well as a Company-wide Education Council that serves as a supervisory organization. We also formulated a Basic Policy on Human Resource Development, and in accordance with this policy will expand our structure for personnel development and implement various measures.

Basic Policy on Human Resource Development

Through pursuit of the following human resource development targets, NGK is committed to promoting effective training measures.

1. We will develop personnel who will pass on and develop the traditions and spirit of manufacturing
2. We will develop personnel with the abilities and judgment to support overseas business development
3. We will provide a place for learning and growth for all willing employees at any level

Education Program Structure

	2005	2006	2007
Manufacturing Training	Training for factory managers		
	Training for leaders		
		Basic manufacturing (regular course)	
		Applied manufacturing (regular course)	
Position-based Training	Executive seminars		
	Management seminars		
	e-learning		
		Basic education	
		NBA concept (in-house graduate program)	
Basic courses (for all employees)	CSR (ethics); Environment; Health and Safety; Communication		

■ Labor-management Relations

NGK is building labor-management relations founded on mutual trust where both labor and management, while fulfilling their respective responsibilities, exchange opinions in a relationship of trust. We have also established various consultative bodies to provide opportunities for communication between labor and management, such as the Labor-management Advisory Board, the Office Advisory Board, and the Regular Labor-management Council.



Labor-management Advisory Board

Occupational Safety and Health

Safety and health are the foundation of a company's existence. NGK's goal is to ensure a safe, comfortable workplace environment, and to this end, we are working toward the safety and health of all employees within our facilities, and have put forth a policy espousing this principle.

Safety and Health Policy

Safety and health are the very foundation of a company's existence, and ensuring them is a social responsibility.

Therefore, we are working in line with our Guidelines for Corporate Behavior, for the development and maintenance of a safe and clean work environment. Our aim is to ensure a comfortable workplace.

2006 Safety and Health Slogan

"Develop top-down safety and health activities, and ensure compliance"

■ Safety and Health Activity Plan

NGK has determined specific initiatives for five categories of safety and health management: Safety and sanitation management; External construction safety management; Health management; Education and training; and Traffic safety. These initiatives were carried out in 2005 according to plan.

In 2006, we also plan to concentrate our efforts on these five categories.

Special Activity for 2006

Safety declarations from business office managers, department managers, and related department managers, posted in the workplace

Declarations by business office managers (ensuring compliance and preparations for introduction of Occupational Safety and Health Management System), along with declarations from department managers and other organizational heads will be prominently displayed in the workplace to raise awareness of safety and health among employees.

Company-wide Activities

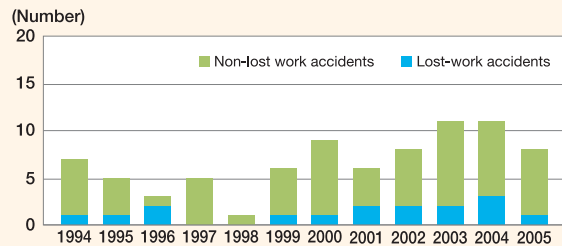
Category	Initiative	Relevant Department
Safety and sanitation management	<ul style="list-style-type: none"> • Prepare for implementation of the Occupational Safety and Health Management System (OSHMS) • Strengthen joint safety and sanitation management with allied manufacturing companies in the same complex • Ensure certified work management 	Personnel Office; Each business site; R&D Safety and Sanitation Committee
	<ul style="list-style-type: none"> • Gradually enhance the "5S" activities • Program to eliminate unsafe activities 	Each business site; R&D Safety and Sanitation Committee
External construction safety management	<ul style="list-style-type: none"> • Ensure the conduct of the safety execution cycle • Improve capabilities of site safety management staff, and ensure thorough site safety management 	External Construction Safety Management Committee; Departments overseeing external construction
Health management	Ensure health management of employees who work many hours of overtime	Personnel Office; Each business site
Education and training	Promote planned acquisition of certifications, and education in eliminating unsafe activities	Personnel Office; NGK Human Resource Development Co., Ltd.
Traffic safety	Education and training for safe driving managers and commercial-vehicle operators	Personnel Office; Each business site

■ Measures to Eliminate Work-related Accidents

The number of work-related accidents during fiscal 2005 declined slightly from 2004, due to such company-wide measures as the 5S program, elimination of unsafe activities, and risk assessment.

During 2006, we will continue to enhance these measures, while at the same time incorporating new measures to eliminate work-related accidents, such as safety declarations from workplace managers, preparation for the introduction of the Occupational Safety and Health Management System, and strengthening of joint measures with allied manufacturing companies in the same industrial complex.

Number of Work-related Accidents



Company-wide Activity Plan for 2006

	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Safety declarations from managers displayed in the workplace												
Safety declaration from the chairman of the Safety and Sanitation Committee in each factory and office is displayed in their respective workplaces to raise awareness		(1)			Follow-ups							
Preparation for the introduction of the Occupational Safety and Health Management System (OSHMS)												
Establishment of implementation organizations, selection of members, plans and preparations for introduction, training			(2)									
Strengthen joint safety and sanitation management with allied manufacturing companies in the same industrial complex												
Establish and conduct safety and sanitation liaison meetings at each business office				(3)								
Ensure certified work management (compliance)												
Promote and manage the planned acquisition of certifications at each worksite (regularly confirm status of compliance)												
Gradually enhance the "5S" activities				(4)								
Program to eliminate unsafe activities												

(1) Safety declarations and display in workplace
 (2) Preparations for establishing organizations, selection of members
 (3) Preparations for organizations
 (4) Planning, preparations
 (5) Planning, preparations

Safety and Sanitation Education Structure

	Training by Position	Training by Job Type	Training by Topic
Managers	Mental health training for newly appointed managers		Industry physical lectures
Supervisors and leaders	Training for newly appointed supervisors Certification training for supervisors and leaders RST education	Industrial robots Low-voltage electricity Oxygen deficiency Airborne particles Pneumonia education Hoses Ventilation inspector	Mental health
General employees	General employee safety reeducation General employee traffic safety education		
New hires	New employee training		

WITH OUR SHAREHOLDERS AND INVESTORS

Investor Relations Activities

NGK seeks in its investor relations activities to provide impartial and fair information to all shareholders and investors, and to foster communication between both sides.

Basic Policy

Communication between a company and its stakeholders is essential to establishing long-term, secure trust from shareholders and investors. NGK provides a range of opportunities for communication in addition to the general meeting of shareholders, and through disclosure of appropriate management information at the appropriate time, seeks to protect the earnings of all shareholders and investors, and receive valuable feedback from them.

Conduct of IR Meetings

NGK holds IR meetings aimed mainly at institutional investors in major cities in Japan at appropriate times. At these meetings the Company releases information regarding its corporate value. We are also proactive about holding IR meetings in overseas locations, in line with our global business development.



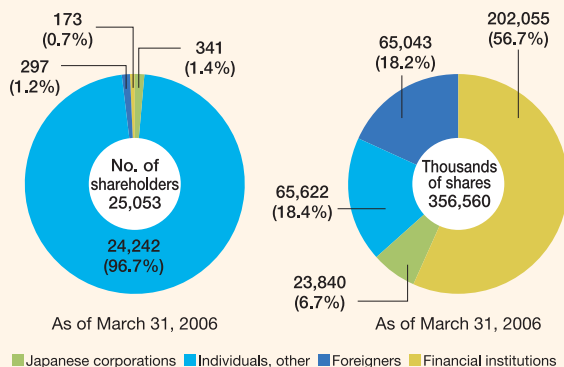
Results presentation meeting

Share Information

Status of Shares (as of March 31, 2006)

Total number of shares authorized:	735,030,000 shares
Total number of shares issued:	356,560,000 shares
Number of shareholders:	25,053

Share Distribution



General Meeting of Shareholders

NGK holds open shareholder meetings that welcome individual shareholders. In the meeting hall at the Company's head office where the meeting is held, we erect booths to explain our new products, and conduct other activities to ensure that more shareholders understand our business.



Shareholders view displays in the lobby following the 139th General Meeting of Shareholders

Information Disclosure

NGK utilizes business reports, annual reports, and a variety of other tools for the timely and accurate disclosure of business information. In recent years, we have upgraded and expanded the IR information available on our website in response to requests by shareholders and investors.

The latest information is made available on NGK's website.

IR Top Page

<http://www.ngk.co.jp/english/ir/index.html>



- 1 IR-related News**
News regarding investment information is disclosed in a timely manner. Information for the previous two years is also available.
- 2 IR Library**
A range of material is available, from securities exchange filings and other legally mandated documents, to voluntarily disclosed materials such as annual reports.

WITH OUR CUSTOMERS

Quality-related Initiatives

Since its foundation, NGK has regarded maintaining and improving quality and reliability as one of its most important missions. Consequently, we have developed systems that emphasize quality and have implemented quality-related initiatives on a company-wide basis.

To ensure that this view of absolute commitment to quality is inherited effectively, we have formulated the quality policy of the NGK Group. We are developing various initiatives and promoting their dissemination throughout the Group.

Quality Policy

To provide quality products that satisfy society and customers in an economical and timely manner

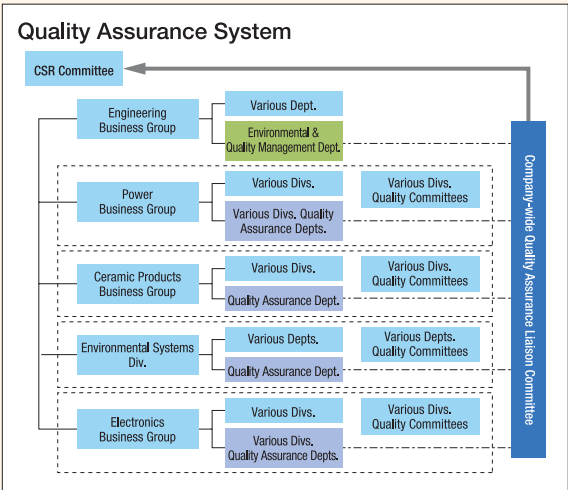
Quality Goals

1. Care for the environment
2. Improve customer satisfaction
3. Encourage development
4. Establish quality systems

Quality Assurance Activities with Customers as the Standard

NGK conducts its business activities through individual business divisions. Accordingly, the quality assurance department in each business division responds swiftly and precisely to customers' requirements while endeavoring to cooperate with related departments.

To enhance the certainty of these measures, we have established optimal quality systems in each business division. In addition, we are striving to ensure that all business divisions acquire ISO 9001 certification and that these systems are subsequently improved constantly in each department. In particular, the Automobile Emission Purification Component Department has acquired QS 9000, an even more rigorous quality certificate.

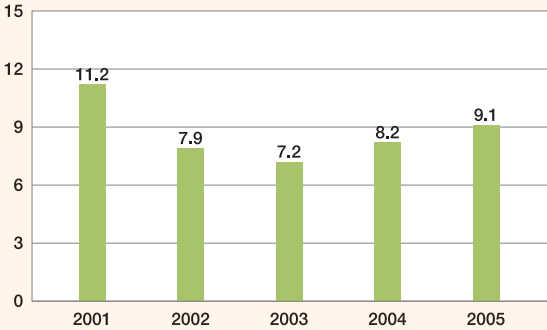


In addition, we have established the Company-wide Quality Assurance Liaison Committee, which deliberates quality measures and exchanges information concerning these measures. It also provides support for quality improvement when required. If a major problem concerning quality arises, the committee reports it to the CSR Committee. In such ways, we are developing a framework that ensures quality assurance with customers as the standard.

Quality Improvement Activities Conducted by Employees

At NGK, we are undertaking QuiC activities centered on two types of quality improvement activities—proposal activities at the individual employee level and small group activities. Proposal activities were launched 50 years ago in 1956, and they have become firmly established in all departments.

Number of Proposals
(thousands)



QuiC activities in 2005 were based on the policy of "improving onsite capabilities." Individual employees acted with the aim of constantly making improvements themselves by performing precise quality evaluations as part of their work operations. In 2006 as well, we aim to carry out more in-depth activities based on the ongoing issue of "improving onsite capabilities."

Activity Name: QuiC Activity

We have revised the name of traditional quality system (QS) activities to express the concept of undertaking innovative activities to enhance quality.

- Q** : Quality (of products and work)
- u** : Up
- i** : Innovation
- C** : Challenge

WITH OUR SUPPLIERS

Initiatives Related to Suppliers

NGK is engaged in four businesses—power, ceramics, engineering, and electronics—and has adopted a basic procurement policy that is centered on three principles: “Open and Fair,” “Partnership,” and “Relationship With Society.” Based on this policy, we are procuring raw materials and components that offer competitive advantages in terms of quality, technology, and cost.

In addition, from the perspective of CSR, we intend to fulfill even greater social responsibility as a company. To that end, in tandem with supplier companies that constitute our supply chain, we are actively ensuring thorough legal compliance, disclosing information, and promoting green procurement.

Basic Procurement Policy
Open and Fair Open, fair and impartial procurement Pursuit of competitiveness and economic benefits
Partnership Mutual prosperity based on mutual trust with suppliers
Relationship With Society Legal compliance Protection of global environment

■ Fair and Impartial Procurement Activities

NGK not only promotes procurement that pursues optimal quality, price, and delivery time, but also the reinforcement of partnerships with suppliers.

To seek better suppliers, we recruit suppliers of materials and components through our website by utilizing the interactive nature of the Internet. This enables us to request the participation of a broad range of suppliers. In addition, based on our fundamental procurement policy, we endeavor to comply with laws and ordinances related to procurement (including export management-related laws and regulations and environmental conservation-related laws and regulations) and to maintain the social environment and order. In our relationships with suppliers, we are entirely committed to fair transactions, in accordance with the spirit of the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors (the Subcontracting Law).

While aiming for effective communication with suppliers, we will continue to observe laws and regulations associated with procurement, and we will promote related initiatives not only by the Purchasing Department, but also on a Company-wide basis.

■ Holding Explanatory Meetings on Business Conditions and Products

In November 2005, we held an explanatory meeting on business conditions and products for major suppliers. At this briefing, NGK’s top executives provided explanations regarding earnings forecasts and general conditions for major products, and appealed for further cooperation from suppliers as well in order to provide better products to society.

Through such events, we are promoting activities that further deepen mutual understanding.



Briefing on business conditions and products

■ Expansion and Permeation of Green Procurement

From the viewpoint of supply chain management, NGK considers such factors as the business characteristics of suppliers, their corporate size, and their track record as suppliers. At the same time, NGK and its suppliers are both aware of the importance of green procurement. In cooperation with suppliers, the Company intends to further deepen communication aimed at promoting green procurement. (See Page 36.)

WITH SOCIETY

Community Activities

NGK is conscious of the need to be a good corporate citizen, and by putting into practice community activities from a global perspective, is working to build a better society.

We have chosen the fields where we carry out our activities from the viewpoints of internationalization, regional contributions, employee participation, and continuity. We are promoting community activities that will make us visible in society.

■Exhibits and Participation at 2005 World Exposition Aichi

Through a pavilion exhibit and environmental technology, NGK participated in the 2005 World Exposition, Aichi, Japan (Expo 2005), which was held from March 25 to September 25. As a company with business in the field of ecology, this was a valuable opportunity for NGK to show off its corporate philosophy and technologies to a large number of people.

While endorsing the theme of “nature’s wisdom” at Expo 2005, NGK presented the NGK Water Lab as a part of the “Mountain of Dreams” joint pavilion, based on the perspective of contributing to society. This was a science show that combined 3D images on screen with a live performance on stage, where experiments were carried out in order to think about the amazing properties and the importance of water. About 910,000 people visited the exhibit. The company donated 12 experimental equipment items related to the amazing properties of water that were used in the performances to the Nagoya City Science Museum after the Expo ended. They are currently being re-used in science shows and as permanent exhibits.

At Expo 2005, there were diverse experiments based on leading-edge technologies, and NGK’s original environmental technologies played an active role.



Joint pavilion “Mountain of Dreams”



Experimental equipment used to show amazing properties of water that was donated to Nagoya City Science Museum

NGK contributed to actual proof of new forms of power supply. The Company participated in the running of the New Energy Plant sponsored by NEDO (New Energy and Industrial Technology Development Organization). Here, NGK provided a NAS[®] battery system that stores electricity generated by fuel cells and photovoltaic cells. In addition, the Company provided a Methane Fermentation System that ferments raw garbage generated at the venue and supplies generated combustible gas to the fuel cells. An experiment involving the recirculation of water in the Lotus Pond within the Nagakute Area after use in the facilities employed a purification system utilizing NGK’s large ceramic membrane filters.



Introducing environmental technologies in the “Backyard Tour”

The Environmental Partnership Organizing Club (EPOC) conducted a “Backyard Tour” to introduce these environmental technologies, and NGK staff were also active as tour staff. In addition, at the Eco-Talk Session in the Seto Area, Aichi schoolchildren talked with top leaders of EPOC companies about the environment. President Matsushita also talked with approximately 150 schoolchildren on the theme of “people and water.”

■ Operation of the NGK Foundation for International Students

Since April 1997, NGK has been providing assistance to international students, mainly in the forms of accommodation and scholarships. In March 1998, we established the NGK Foundation for International Students, and we hope to further develop this foundation.

In providing accommodation, NGK has established the NGK International House, which is exclusively for the use of international students, and which accommodates 40 people. Its priority is to provide a comfortable, safe environment in which students can concentrate on their studies. Individual rooms are relaxing, and all feature baths, toilets, air conditioning, and refrigerators. The shared facilities feature a study room with large desk space, a multi-function hall for parties and other gatherings, and a kitchen with electromagnetic cookers. As of the end



NGK International House

of 2005, the NGK International House has accommodated a total of 215 residents.

Additionally, to create opportunities for interchange between international students supported by the foundation and local residents, classes in Chinese and Korean have been held for local residents at the House since April 2000, with residents there as the teachers. As of the end of 2005, a total of 291 local residents have taken classes.

Scholarships of 120,000 yen per month for undergraduates and 160,000 yen per month for graduates are provided to 20 students every year. In April 2005, a certificate presentation ceremony was held for the students who had been selected to receive the scholarships that year. This was also attended by staff both from the universities at which they were enrolled and from the foundation. At the end of 2005, a total of 113 students had received these scholarships.



International students who have received NGK Scholarship Certificates

■ Holding Factory Tours

NGK has been accepting locals and students for factory tours in order to help them deepen understanding of the fascination and importance of the art of manufacturing and of environmental conservation activities.

The Nagoya Plant accepted a factory tour mainly comprising university students and junior high school students in the prefecture. The tour introduced NGK's products and connection to daily life, as well as its environmental measures.

At the Chita Plant, seven factory tours involving 157 people were held in 2005. For example, in November 2005, a tour was conducted for the mayor of the region in the vicinity of the factory and the officials of the neighborhood association.

In addition, the Komaki Plant conducted 13 factory tours for a total of 479 people in 2005.



Local residents touring the Chita Plant



104 people a year in 8 tours visited the Nagoya Plant

■ Acceptance of JICA Trainees

In February 2006, the Environmental Partnership Organizing Club (EPOC) Exchange Promotion Committee held exchange meetings for overseas trainees at the NGK headquarters and Nagoya Plant. Participants in the exchange meeting comprised eight people that included a Romanian administrative officer and engineers participating in the Japanese International Cooperation Agency (JICA) training program, and 20 people that included EPOC international exchange members. On the day, lively exchange took place, and included a tour of the factory and a question and answer session.



JICA trainees touring the Nagoya Plant

■ Cooperation With Local Disaster Prevention Activities

In 1998, NGK concluded a regional assistance agreement with the city of Nagoya to actively cooperate with localities in firefighting and relief work in the event of disasters such as earthquakes.

In 2005, the Company fire brigades at the Nagoya Plant and the Komaki Plant participated in disaster prevention training held in the region and thereby contributed to the creation of safe and secure regional communities. The Chita Plant also took part in a local disaster-prevention competition, where it unveiled fire-fighting and lifesaving technologies.



Group disaster prevention training held at the Nagoya Plant in March 2006

■ Ensuring Regional Environmental Conservation

Each of NGK's plants is actively participating in cleanup activities in local communities, and is carrying out voluntary activities to protect the surrounding environment. In September 2005, about 30 NGK employees from various sections of the Komaki Plant took part in the "2nd Oyama River Cleanup" event involving the cleanup of the Oyama River adjoining the Komaki Plant. They cleaned areas beside the river as well as the embankments.



Oyama River cleanup event

■ Disaster Support Activities

As a good corporate citizen, NGK is carrying out support activities in order to contribute to society. In 2005, the NGK Group contributed a total of about 10 million yen in relief aid and reconstruction funds in relation to Hurricane Katrina, which struck the southern United States in August 2005. NGK also contributed 3 million yen in relief aid and reconstruction funds in relation to the earthquake that occurred in northern Pakistan in October 2005.

■ Overseas Community Activities

In April 2005, a local branch of the United Way granted the 2004 Platinum and Bronze Awards to NGK Ceramics USA, Inc. (ACU). The United Way is a non-profit organization established to raise funds mainly for supporting children's success and promoting their health and wellness. The award was in recognition of ACU's activities in making donations to the United Way during 2004.

In addition, at a ceremony to celebrate the start of operations at NGK Ceramics Polska Sp. z o.o. (ACP) on April 19, 2005, ACP presented personal computers to two local high schools.



ACP's Chairman Taro Kato hands catalogs to two high school principals

ENVIRONMENTAL ACTIVITIES

■Activities Covered (Manufacturing companies among our consolidated subsidiaries)

NGK Insulators, Ltd. Nagoya Plant, Chita Plant, and Komaki Plant

Domestic Group Companies (13 manufacturing companies)

Energy Support Corporation Akechi Insulators Co., Ltd. Ikebukuro Horo Kogyo Co., Ltd. NGK Filtech, Ltd. NGK Adrec Co., Ltd. NGK Kilntech Corporation Heisei Ceramics Co., Ltd. NGK Optoceramics Co., Ltd. NGK Printer Ceramics Co., Ltd. NGK Okhotsk, Ltd. Soshin Electric Co., Ltd. NGK Mettex Corporation NGK Fine Molds, Ltd.

Overseas Group Companies (16 manufacturing companies)

Locke Insulators, Inc. NGK-Locke Polymer Insulators, Inc. P.T. WIKA-NGK Insulators NGK Insulators Tangshan Co., Ltd. NGK Stanger Pty, Ltd. NGK Ceramics USA, Inc. NGK Ceramics Europe S.A. NGK Ceramics Polska Sp. z o.o. P.T. NGK Ceramics Indonesia Siam NGK Technocera Co., Ltd. NGK Ceramics Suzhou Co., Ltd. NGK Technocera Suzhou Co., Ltd. NGK Ceramics South Africa (Pty) Ltd. FM Industries, Inc. NGK Metals Corporation NGK Berylco France

HONEYCERAM®



Nagoya Plant

ENVIRONMENTAL VISION

NGK's Core Policy on the Environment

Recognizing the fact that protecting the environment is one of the world's most pressing issues, NGK formulated its Core Policy on the Environment in April 1996 in order to bring its corporate activities into harmony with the environment. On the basis of this policy, we carry out activities in the "Triple-E" business fields of Ecology, Electronics and Energy, work to reduce the environmental impact of business activities, and actively strive

to help protect the environment through developing products and technologies to that end. In April 2005, we revised the policy, adding information on enhancing environmental management on a global basis, strengthening partnerships with suppliers, ensuring compliance with the law, deepening relationships with all stakeholders, and enhancing social contribution activities.

Philosophy

NGK's positive approach to the environment begins with its basic corporate philosophy: "NGK products and technologies must create new value and contribute to the quality of life." In particular, we focus on the "Triple-E" areas of Ecology, Electronics, and Energy. Through our work in these areas, we seek to develop solutions to some of the critical challenges facing the next generation.

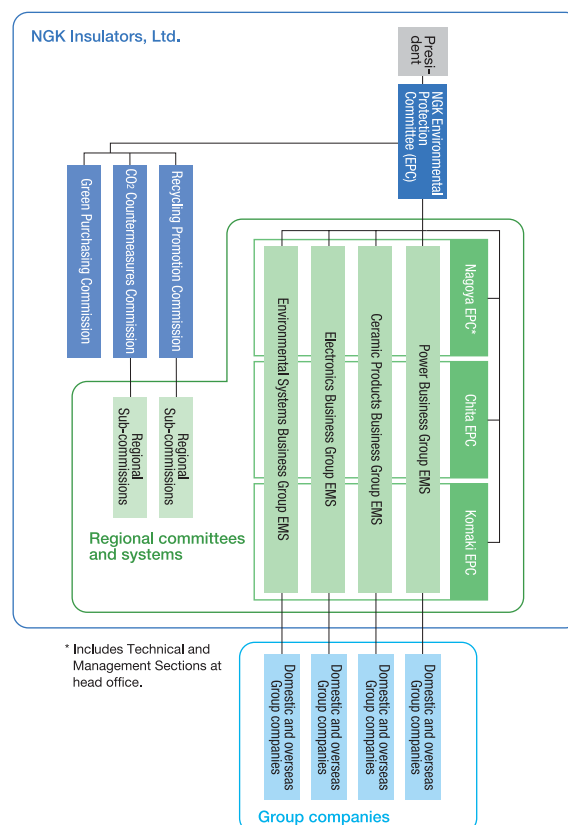
Action Guidelines

- Strive towards the development, design, and manufacture of products that are environmentally friendly, and that have a low impact on the environment.
- Work towards decreasing the environmental impact of our business activities.
Use design review methods to scientifically study and evaluate the environmental impact of our business activities.
 - Promote energy conservation in processes and equipment, and work towards curbing CO₂ emissions.
 - Promote resource savings and recycling, and work towards the reduction of by-products.
 - Reduce risks through the appropriate usage and management of chemical substances.
 - Give priority to the procurement and purchasing of environmentally friendly materials, parts, products, and equipment.
Furthermore, strengthen partnerships with suppliers.
- Enhance environmental management systems from a global viewpoint, and implement continuous reforms in order to reduce the impact on the environment.
- Strictly adhere to laws, regulations, and other requirements. Furthermore, establish voluntary standards, and work towards increased environmental conservation.
- Disclose environmental information to outside the Company, and continue discussions with all interested parties.
Actively develop community relations activities. Furthermore, carry out training and publicity activities in order to increase employee awareness of environmental issues.

Promoting Environmental Activities

NGK promotes initiatives related to environmental issues through environmental management by the Nagoya, Chita and Komaki plants and environmental management by each business group. The business group-based environmental management system addresses the issues of reducing carbon dioxide emissions caused by business groups procuring materials and developing, manufacturing, distributing and selling products, reducing and recycling by-products, and strengthening management of chemical substances. The reach of the system extends to Group companies in Japan and overseas as well as partner companies.

Going forward, we plan to further strengthen both the business group-based environmental management system and manufacturing plant-based system, protect the environment surrounding local communities, and further enhance initiatives for helping the global environment.



ENVIRONMENTAL MANAGEMENT SYSTEM

Activities related to ISO 14001

We work to acquire ISO 14001 or equivalent certification in order to systematically and continually develop environmental protection activities in line with our Core Policy on the Environment. Our three main manufacturing plants in Japan simultaneously acquired certification in March 1998, and as of March 2006, certification has been earned at 13 companies and 15 sites in Japan and at 11 out of 16 companies overseas, meaning that 85% of the Group has been certified.

ISO 14001 Certification Status

Business Site		Certified
NGK		3 sites
Japan Group	Power Business	2 sites
	Ceramic Products Business	5 sites
	Electronics Business	8 sites
Overseas Group	Power Business	4 sites (1 site)
	Ceramic Products Business	6 sites (1 site)
	Electronics Business	1 site (1 site)

Note: Numbers in parentheses represent business sites where certification is pending.

Environmental Audits

The Nagoya, Chita and Komaki plants underwent external audits in 2005 for the updated ISO 14001 (2004 version) certification. No major issues were cited.



External audit by JIC Quality Assurance

In addition, since 2005, we have had the accuracy of the environmental data included in this report audited by an independent party in order to raise the reliability of our environmental performance. (See Page 43.)

Environmental Risk Management

In accordance with our Core Policy on the Environment, we work to prevent water and air pollution, regularly review our environmental management system and prevent accidents. We also take extra precautions by holding emergency response drills to prepare for the event of an accident.

Compliance With Laws and Regulations

In line with our Core Policy on the Environment, we comply with related laws, regulations and agreements with governing authorities, and also work to prevent environmental pollution on a voluntary basis in accordance with standards that are more stringent than those prescribed by laws and regulations. These efforts are rooted in pollution control agreements signed with local governments in the areas where our business sites are located.

Emergency Response Drills

Potential emergency situations are anticipated and drills are conducted according to a yearly plan in order to minimize the spread of pollution. In 2005, we ran drills on emergency response to an abnormality at a water treatment plant, emergency response to an abnormality at an acid-cleaning wastewater processing facility, and for emergency response to the occurrence of photochemical smog.

Education and Awareness Raising

In order to protect the environment, it is crucial that all employees deepen their understanding of environmental issues and engage in environmental conservation activities with that awareness. NGK's Core Policy on the Environment includes in its Action Guidelines training and publicity activities for raising the environmental awareness of employees, and we are involved in a variety of environmental education and awareness-raising activities on an ongoing basis.

Environmental Training

Business sites conduct training on the environmental management system in order to ensure employees understand and are conscious of the intentions and substance of each site's environmental policies. Environment Cards listing environmental targets for each operating division are distributed to employees. The employees also write in their own personal environmental declaration on the card, which serves to further raise awareness.

Promoting Certification

In order to continually improve our environmental protection activities in line with our Core Policy on the Environment, we work to train employees to become legally certified in ways that are needed by each business site. Certifications include those for pollution control managers, energy managers and certified environmental measurers.

First Five-year Environmental Action Plan

Over the years, NGK has strengthened its environmental initiatives in the “Triple E” areas of Ecology, Electronics and Energy by establishing a Voluntary Plan for Environmental Conservation in March 1993 and its Core Policy on the Environment in April 1996.

In order to further improve the quality of Green Management, we formulated our first Five-year Environmental Action Plan in March 2001 and on the basis of it made steady progress in carrying out environmental activities and strengthening environmental management, including at Group companies both in Japan and overseas (see Page 2). The term of the plan ended in March 2006.

Item			2005 Environmental Action Achievements		Self-Evaluation
			Target	Achievement	
Internal Environmental Activities	Environmental Management	Environmental Management	1. NGK 1) Legal compliance: no violations in external audits 2) Strengthen environmental management in Head Office 3) External audits: no major issues 4) Continue internal environmental education, awareness raising and communication 2. Domestic and overseas Group companies 1) Initiatives for business group-based environmental management 2) Environmental performance analysis and issue definition	1. NGK 1) Legal compliance: no violations 2) Acquired ISO 14001:2004 certification; 24 positive evaluations at Head Office 3) No major issues in ISO 14001 external audit; corrective measures applied to minor issues 4) Conducting internal training 2. Domestic and overseas Group companies 1) Conducted environmental performance survey of domestic Group companies; interviews on environmental subjects held by operating divisions 2) Uniform targets established for domestic Group companies 3) Conducted environmental performance survey of Group companies overseas	○
		Environmental Accounting	1. Improve utility of environmental accounting 1) Calculate and track data for each operating division 2) Implement internal environmental accounting procedures 2. Expand scope of environmental accounting Expand to Group companies in Japan and overseas	1. Improved utility of environmental accounting 1) Calculated costs and benefits for each operating division 2) Surveyed internal environmental accounting procedures 2. Expanded scope of environmental accounting Costs and benefits calculated for domestic and overseas Group companies	○
	Lifecycle Assessments	Lifecycle Assessments	Continue to expand scope of trials	1. Considered incorporation into environmentally conscious design 2. Instructed Group companies	○
		Carbon Dioxide	1. Implement total emissions reduction plans 2. Investigate and implement processes with low environmental impact 3. Improve energy management for buildings and specified facilities	1. Implemented total emissions reduction plans 1) Total CO ₂ emissions: 153,000 tons (down 6% from 2004) 2) Volume of CO ₂ reduced: 11,000 tons 2. Investigated and implemented processes with low environmental impact Installed tunnel kiln heat recovery technology at headquarters and Chita Plant 3. Strengthened energy management for buildings and specified facilities 1) Improved management of buildings at business sites (internally disclosed energy performance at all sites; internally disclosed reasons for increases or decreases at headquarters site) 2) Increased the number of facilities subject to energy management	◎
		By-products	1. Achieve “zero emissions” (Outside disposal volume of 1,000 tons or less) 2. Promote recycling Recycling rate of at least 85% 3. Curb total volume generated 5% reduction in 2005 (from 2004)	1. Outside disposal volume: 718 tons; 861 tons less than 2004; achieved “zero emissions” 2. Recycling rate of 96% to achieve target 3. 4% reduction in 2005 (from 2004); nearly achieved target	◎
		Chemical Substances	1. Make atmospheric emission of PRTR solvents 20% or less of 2000 2. Strengthen management Improve efficiency of chemical substance management Review implementation of green procurement standards	1. Total atmospheric emission of solvents reduced 94% from 2000 to achieve target 2. Initiated workflows for the Chemical Substance Safety Committee 3. Raised awareness of the guidelines inside the Company; started following them in the Chemical Substances Safety Committee; confirmed that prohibited substances were not used in the Company	◎
		Green Procurement	1. Issue Green Procurement Guidelines 2. Increase number of green suppliers 3. Expand green procurement to office supplies	1. Distributed Green Procurement Guidelines to all suppliers 2. Administered questionnaire to suppliers; ascertained their level of management 3. Increased green purchasing items · Green products purchase ratio increase from 50% in 2004 to 69% in 2005 · Continued use of green power (2 million kWh annually)	○
	Environmental Communication	Communications	1. Improve Environmental and Social Responsibility Report 2. Maintain communication lines between manufacturing plants and local communities	1. Changed name of report to CSR Report · Started disclosing information on Group companies overseas · Included second Five-year Environmental Action Plan 2. Communication between manufacturing plants and local communities · Community events (introduced environmental initiatives, gave factory tours, held summer festival that attracted 2,000 participants, etc.) · Local volunteer clean-up events held four times during the year	○
		Participation in NPO Activities	Promote activities of EPOC's Exchange Promotion Committee 1) Participate in Expo planning, hold eco-talk sessions, hold “backyard” (behind-the-scenes) tours 2) Interact with local communities (Nagoya, universities, etc.) and with overseas research students	1) Held eco-talk sessions at the Expo (held workshop on people and water for two elementary schools in Nagoya); participated as tour guides in “backyard” (behind-the-scenes) tours; visitors totaled 4,780 2) Participated in campaign for the development of safe, secure, comfortable communities; participated in Eco Campus Festival Speech Contest; held social events with overseas trainees from Romania at the Nagoya Plant's AC factory; conducted activities to promote and raise awareness of recycling	○

Notes: 1. The Environmental Action Plan only covers NGK on a non-consolidated basis, centering on its three manufacturing plants in Nagoya, Chita and Komaki. “Environmental Management” in the table includes Group companies in Japan and overseas.
2. Self-evaluation grades: ◎ – significantly exceeded target; ○ – achieved target; △ – same level as the previous year; X – worse than the previous year.

Results of First Five-year Environmental Action Plan (Overview)

■ Enhancement of Environmental Management System

We constructed a business group-based environmental management system to complement environmental management by NGK's three manufacturing plants in Nagoya, Chita and Komaki.

Before the plan was implemented, between NGK and its domestic and overseas Group companies involved in manufacturing, only NGK's three manufacturing plants and three of its domestic Group companies had acquired ISO 14001 certification. As a result of promoting certification, all 13 domestic Group companies have now acquired

ISO 14001 or equivalent certification. Overseas, 11 of 16 Group companies have also been certified. Our certification rate improved from 10% to 85% and we established mechanisms for carrying out a common management system that meets global standards. Moreover, in order to promote Green Management for the NGK Group as a whole, we created a system for uniformly tracking environmental performance for 200 items in 16 categories to assess the status of environmental management at Group companies in Japan and overseas.

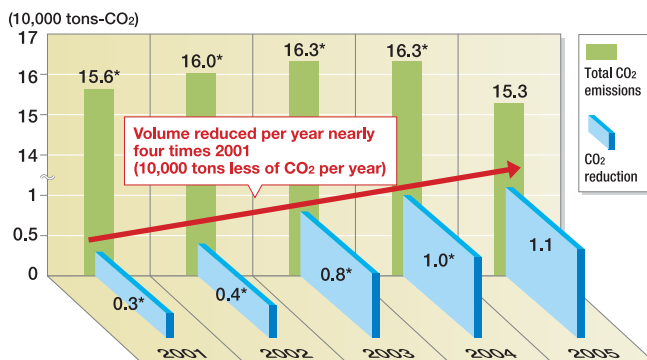
■ Improved Environmental Performance (NGK)

Reduced CO₂ Emissions

We reduced CO₂ emissions in 2001 by 3,000 tons per year, but the Company came together and tackled measures to cut energy usage, which resulted in reductions in 2004 and 2005 of 10,000 tons, almost four times the amount cut in 2001.

As a result, despite growth from new businesses, our CO₂ emissions in 2004 were flat with the previous year and dropped significantly in 2005, decreasing by 10,000 tons over 2004.

CO₂ reduction

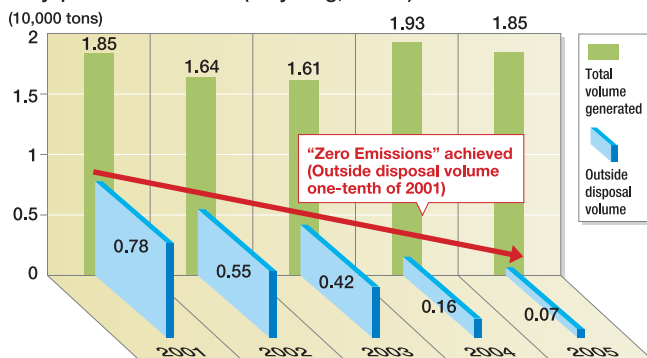


Reduced By-products

We were able to dramatically cut outside disposal of by-products discharged from manufacturing processes to one-tenth of the level in 2001, reducing the amount from 7,800 tons in 2001 to 700 tons in 2005. As a result, we successfully achieved our target of "zero emissions," which is defined as keeping annual outside disposal volume to 1,000 tons or less.

The recycling rate for by-products also improved, climbing from 58% in 2001 to 96% in 2005.

By-product reduction (recycling, waste)

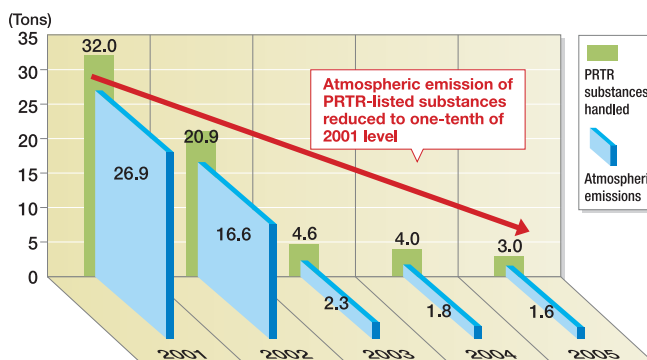


Chemical Substance Management

We established guidelines for the management of chemical substances and instituted integrated management of them on a Company-wide basis. We also established a mechanism whereby the cross-divisional Chemical Substance Safety Committee audits the purchase and use of designated chemical substances to strengthen management of such substances at the point they enter the Company.

By strengthening management of chemical substances in this way, we were able to reduce atmospheric emissions of solvents subject to the PRTR Law to less than one-tenth the level of five years earlier. Solvent emissions dropped from 27 tons in 2001 to two tons in 2005.

Chemical substance reduction



Overall Perspective of Environmental Impact

The Power Business, Ceramic Products Business, Engineering Business and Electronics Business constitute the pillars of NGK's business activities. These businesses involve developing and designing products, procuring materials and parts, and manufacturing and selling products. The diagram at right shows resources and energy consumed by business activities, substances discharged into the environment, and products produced.

■ Input Overview

In terms of inputs, many resources and much energy is committed to production activities, the majority of which is used in the production of ceramic products. Efforts to reduce CO₂ emissions are essential in order to prevent global warming, so since 2004, we have been advancing initiatives aimed at meeting medium- and long-term targets for greenhouse gas reduction.

The handling of chemical substances, which account for a large proportion of inputs, is managed in

a strict, appropriate manner. We strive to reduce usage volumes and have made steady progress in this regard. With respect to the use of fossil fuels in logistics as well, we endeavor to reduce environmental impact by utilizing an efficient operating system.

■ Output Overview

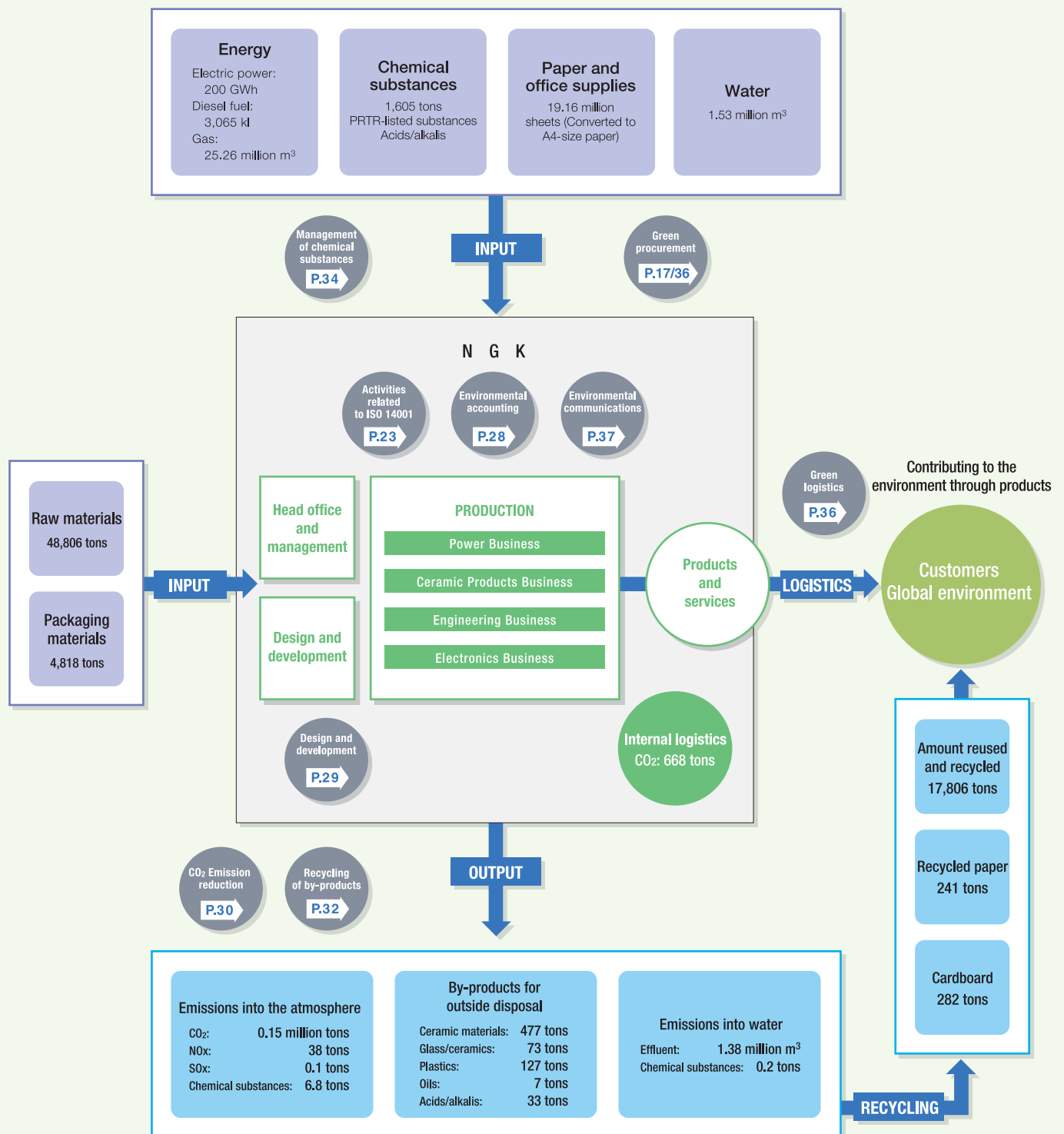
We actively engage in initiatives to cut or reduce outputs, which include CO₂ emissions and factory wastewater from production activities. The reduction and recycling of by-products like ceramic raw materials that do not become products is a major issue specific to NGK, but in 2005 we successfully achieved "zero emissions."

Many NGK products and technologies help reduce the environmental impact of society as a whole, so the development of environmentally conscious technologies will continue to be an important mission for us. Additionally, we appropriately implement a Company-wide environmental management system and promote environmental conservation activities that cut across all business activities in order to reduce environmental impact.

Highlights of 2005 Environmental Activities

- 1 Establishment of Second Five-year Environmental Action Plan** P.03
 We established a new Environmental Action Plan that facilitates global environmental initiatives that encompass Group companies in Japan and overseas.
- 2 Environmental Management System Certification at More Group Companies** P.23/25
 Two more domestic affiliates and three more overseas affiliates acquired certification for their environmental management systems.
- 3 Two Consecutive Years of Reducing Total CO₂ Emissions** P.25/30
 Despite business growth and increased production volume, we prevented an increase in CO₂ emissions for the second straight year through measures that included improving production technologies and raising the efficiency of facilities. We reduced total emissions by 10,000 tons-CO₂ compared to 2004.
- 4 Achievement of "Zero Emissions"** P.25/32
 We cut outside disposal of by-products from 1,579 tons in 2004 to 718 tons in 2005, achieving "zero emissions" (defined as outside disposal volume of 1,000 tons or less).
- 5 Communication of Green Procurement Guidelines to Suppliers** P.17/36
 We revised our Green Procurement Guidelines in 2004, and in 2005 requested that suppliers participate in chemical substance management. We also established a collaborative system for supplier awareness-raising and environmental management.

Note: Highlights of fiscal 2005 environmental activities include data from NGK's three manufacturing plants in Nagoya, Chita and Komaki, as well as from some Group companies in Japan and overseas.



Notes: 1. Data on this page is from NGK's Nagoya, Chita, and Komaki plants.
2. Environmental performance values in this report have been rounded up for convenience; therefore they may not match totals when added together.

Environmental Accounting

NGK introduced environmental accounting in 1999 as an important indicator for environmental management and as a tool for quantitatively tracking and managing environmental activities. The scope of its application has been extended from NGK to encompass domestic Group companies involved in manufacturing. During the five-year period from 2001 to 2005, NGK's environmental investment (capital investment plus costs) increased 79% over 2000, economic effects increased 284%, and investment efficiency increased 120%.

Results of Calculations

On a non-consolidated basis, NGK's environmental costs for 2005 totaled ¥3.10 billion, including ¥980 million in capital investment and ¥2.12 billion in expenditures. This represents an increase of ¥300 million over 2004. The increase in capital investment resulted from augmenting environmental facilities in conjunction with higher production of new products like DPFs.

Benefits are calculated and disclosed in terms of environmental conservation effects and economic effects. With respect to environmental conservation effects on a non-consolidated basis, we met standards related to pollution control and did not have any violations. CO₂ emissions decreased by 10,000 tons from 2004, as we were able to cut emissions despite increased production volume. Outside disposal volume of by-products was 718 tons, enabling us to achieve "zero emissions" status. The direct economic effects of our environmental protection measures totaled ¥730 million, with a considerable portion of this total accounted for by energy savings and resource conservation.

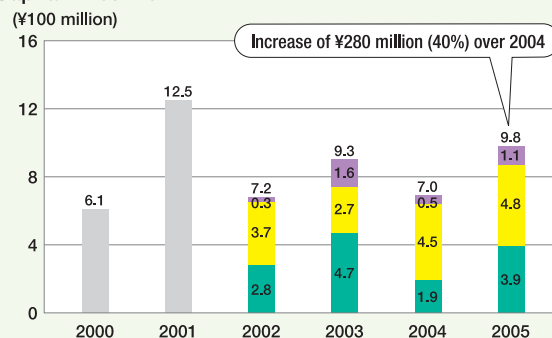
Capital investment by Group companies in Japan amounted to ¥290 million, an increase of ¥160 million over 2004. This was the result of investments in energy efficiency, like switching the type of fuel used in firing kilns. Economic effects totaled ¥95 million, a decrease of ¥2 million from 2004 caused by less processing of by-products. The reduction in CO₂ emissions was 420 tons.

Initiatives Going Forward

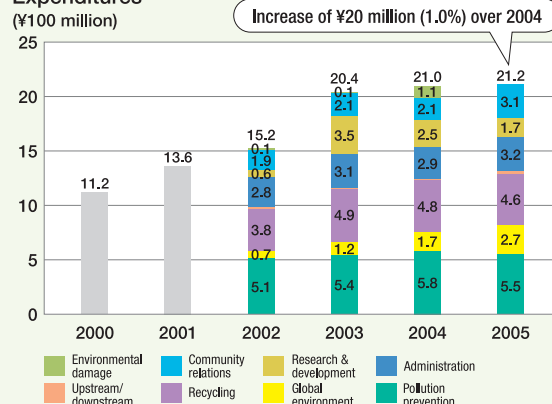
Environmental accounting is an important indicator for the ongoing promotion of Green Management by the NGK Group and for the fulfillment of the Company's environmental responsibilities to society. In 2006, we plan to further raise the usefulness of environmental accounting and continue calculating and disclosing costs and benefits for Group companies inside and outside of Japan.

Environmental accounting—Costs (NGK)

Capital investment

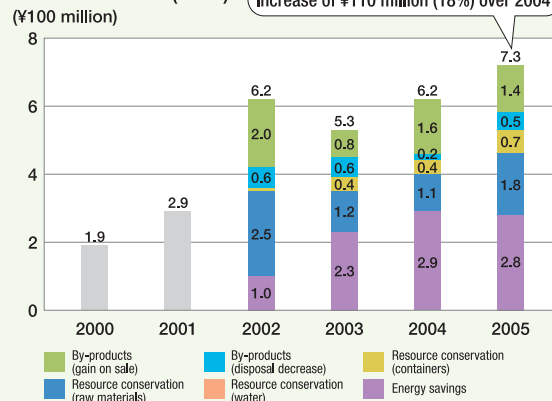


Expenditures



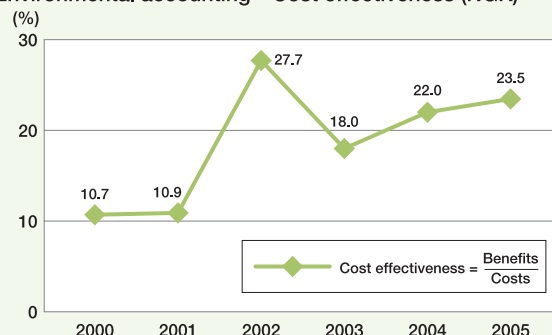
Environmental accounting—

Economic effects (NGK)



Notes: 1. Unit costs for energy, water and by-product disposal use baseline figures from 2001.
2. Cost increases have not been offset.

Environmental accounting—Cost effectiveness (NGK)



DEVELOPMENT AND DESIGN INITIATIVES

NGK has used design reviews (DR) since 1998 to promote product design, manufacturing processes and equipment installations that serve to reduce environmental impact as much as possible.

In addition, we have started research on lifecycle

assessments for reducing the environmental impact of manufacturing processes and products. Along with working to reduce environmental impact in these areas, we are also making progress in developing ecology-related businesses.

Development of Low Environmental Impact Processes for Ceramics

Ceramics is an industry that requires a substantial amount of energy. A large amount of carbon dioxide is generated when energy is consumed in degreasing and sintering processes in particular. When degreasing, energy is consumed by a burner used to heat the product and also by an afterburner that removes the smoke and odor. Sintering requires that the temperature inside the kiln, including implements, be heated to over 1,300°C. With thin, porous, light, or small products like alumina substrate or honeycomb structures, the ratio of the weight of the product to the weight of the implements is small, so energy efficiency decreases. Energy efficiency in the sintering process is less than 25%, though it differs somewhat depending on the product. Moreover, the sintering temperature must be high in order to bring out the functions of fine ceramics, so energy efficiency tends to progressively decline.

In order to use energy effectively, it is essential that heat given off by the kiln in the sintering process is utilized. The kiln, an indispensable piece of equipment for the production of ceramics, is sometimes fitted with a compact boiler or generator that reuses the exhaust heat. Also, instead of using an attached direct heat burner for deodorizing, catalysts are used to deodorize with the heat given off by the kiln, or a regenerative thermal oxidizer is used. When the energy from exhaust heat is reused in fuel cell generators to supplement factory power it

potentially leads to lower manufacturing costs. With such a system, the efficiency of fuel cells (molten carbonate type) is estimated to increase dramatically, by 50 to 60%. Moreover, when this system is combined with NAS[®] batteries, it serves to level the electricity load.

Ceramics currently consist of four processes: forming, drying, degreasing, and sintering. When exhaust heat recovery is added as a fifth process in the future, it will not only serve to promote energy conservation in existing processes but also improve overall energy efficiency. This will translate into lower CO₂ emissions and lower costs—a new technological concept.

As can be seen here, NGK is not only focused on reducing fuel usage, we are also engaged in bringing about new forms of energy, going beyond energy conservation through fully effective usage.



System combining fuel cells (front) and NAS[®] batteries (rear).

* RTO: Regenerative Thermal Oxidizer

Reducing CO₂ Emissions

With the Kyoto Protocol going into force in February 2005, reducing emission of greenhouse gases has become an extremely important agenda for corporations. In order to produce a variety of ceramic products, NGK must use a sintering process that burns fossil fuels like city gas and oil, so CO₂ is inevitably emitted. In addition, CO₂ emissions tend to rise as business expansion brings about increases in production volume or development. Given this, in order to do our part in the fight against global warming, since 2004, we have carried out initiatives to cut energy via a Company-wide, cross-divisional system that is rooted in a medium- to long-term plan for reducing total CO₂ volume. These efforts have enabled us to successfully curtail CO₂ emissions.

CO₂ Reduction Targets

Total CO₂ Emissions

NGK 2006 Target: 0% increase over 2003
2010 Target: 7% reduction from 1990

CO₂ Emissions

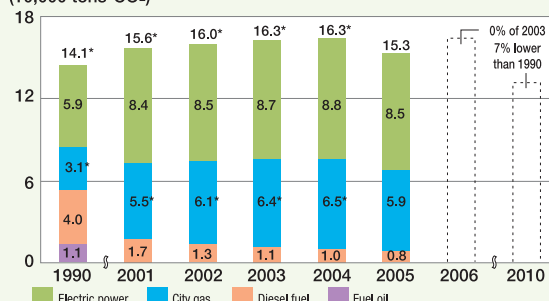
On a non-consolidated basis, NGK's total CO₂ emissions in 2005 amounted to 153,000 tons, as we were able to reduce emissions by 10,000 tons compared to 2004. This was the result of various measures started in 2004 taking effect, which included installing manufacturing facilities and technologies to reduce CO₂, improving manufacturing processes, and making management improvements to promote CO₂ reduction. 2005 was the first year since 1990 that we were able to substantially reduce emissions while undergoing business expansion.

CO₂ emissions by domestic Group companies totaled 64,000 tons, equivalent to 2004. CO₂ emissions from Group companies overseas amounted to 234,000 tons, an increase of 57,000 tons over 2004.

Emissions of Greenhouse Gases** (NGK)

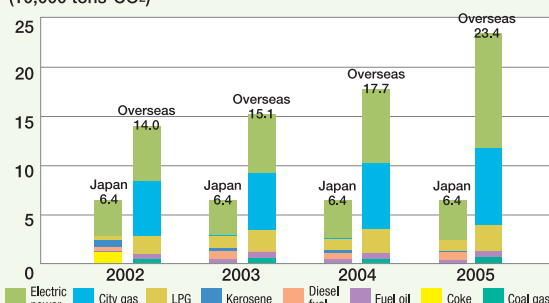
Carbon dioxide and two types of sulfur hexafluoride (SF₆) account for nearly 100% of greenhouse gases emitted by NGK. Sulfur hexafluoride is used as an insulating gas in the production process for power-related products, specifically gas bushings. We have worked to curb emission of the gas and help prevent global warming by installing recovery equipment.

CO₂ emissions (NGK)
(10,000 tons-CO₂)



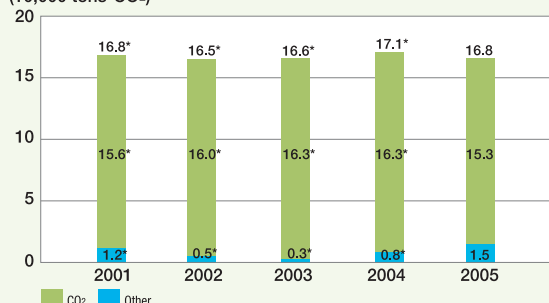
Note: Figures with asterisks represent emission volumes that have been revised in light of improvements to the precision of city gas meters.

CO₂ emissions (domestic and overseas group companies)
(10,000 tons-CO₂)



Note: Data for 2002–2004 excludes NGK Europe for the sake of comparison with 2005.

Greenhouse gas emissions (NGK)
(10,000 tons-CO₂)



Notes: 1. Figures with asterisks represent emission volumes that have been revised in light of improvements to the precision of city gas meters, as well as those of engine tests.
 2. Greenhouse gases are gases that trap thermal radiation reflected from the surface of the Earth, resulting in a greenhouse effect in which the overall temperature of the Earth rises. Carbon dioxide (CO₂), methane (CH₄), dinitrogen monoxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) are designated as greenhouse gases. The greenhouse effect of SF₆ is approximately 24,000 times as strong as that of CO₂.

Initiatives Going Forward

To achieve its medium- and long-term targets for reducing total CO₂ emissions, NGK will continue to make improvements in production technologies, starting with increasing the energy efficiency of production facilities, and will lend additional strength to its energy management activities. At Group companies in Japan, we will work to reduce greenhouse gas emissions under unified targets while considering consolidated emissions management in Japan, including at NGK. At Group companies overseas, we plan to set targets for the reduction of greenhouse gases from a global perspective and work toward their reduction.

Note: CO₂ conversion factors (kg-CO₂/unit) used in calculating CO₂ emissions are as follows. Units are indicated in parentheses.
 Purchased electric power (kWh): 0.42 Fuel oil (L): 2.677 Diesel fuel (L): 2.64 Kerosene (L): 2.49 City gas (Nm³): 2.347 LPG (kg): 3.007 Gasoline (L): 2.322
 Sources: Federation of Electric Power Companies of Japan, Ministry of the Environment. Some factors have been calculated independently by NGK.

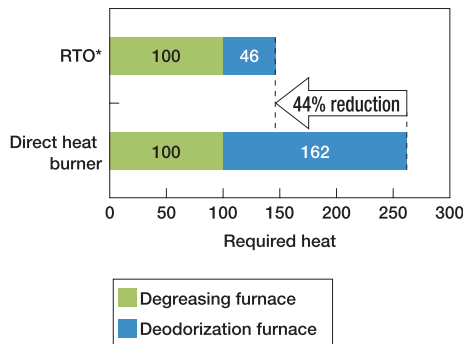
TOPICS

Cutting CO₂ Emissions With Deodorizing Furnaces

In forming ceramics, clay ingredients and organic binders are used to lend plasticity and aid in shape retention. Sintering a compact that contains organic binders requires preprocessing in the form of degreasing to thermally decompose, oxidize and render harmless the organic binders. Degreasing uses the combination of a degreasing furnace and a deodorization furnace. Direct heat burners are normally used for deodorization furnaces. However, regenerative thermal oxidizers (RTO), which feature high thermal efficiency, are effective in reducing total thermal energy loss. It has been shown that they reduce CO₂ by 44% over conventional methods.

We are currently planning to install RTO-type deodorization furnaces at the Nagoya Plant.

Heat required by deodorization furnace
(With degreasing furnace set at 100)



*RTO: Regenerative Thermal Oxidizer

Reducing CO₂ by Improving Sintering Kiln Production Efficiency

The Nagoya Plant uses sintering kilns when manufacturing catalytic converters for purification of vehicle exhaust gases. In 2005, we were able to increase the number of the products sintered per rack by improving the shelving used when sintering and sintering conditions. More efficient production resulted in less energy used and served to reduce CO₂ emissions by 2,500 tons, or 12%, compared to the previous setup.



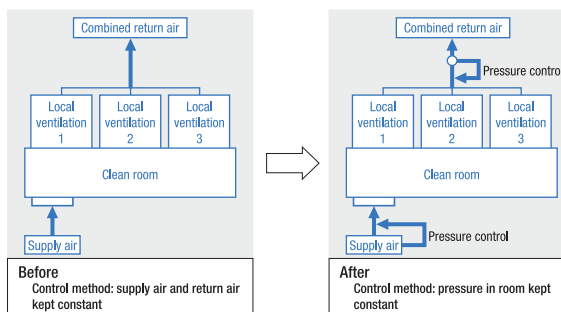
Employee filling sintering racks

Clean Room CO₂ Reduction

The research and development wing of the Nagoya Plant is carrying out initiatives to reduce energy connected with clean rooms and other air conditioned facilities. In 2005, in order to reduce heat loss from hot and cold water pumps used by the research wing, controls were implemented for the number of pumps in use. Optimizing the number of pumps in operation in line with usage conditions served to raise pump efficiency and reduce heat loss.

In addition, supply fans were linked with local ventilation dampers so that the air pressure in the rooms would be constant. Precisely controlling the amount of return

air reduces heat loss from the return air. This measure served to cut CO₂ by 290 tons.



REDUCING AND RECYCLING BY-PRODUCTS

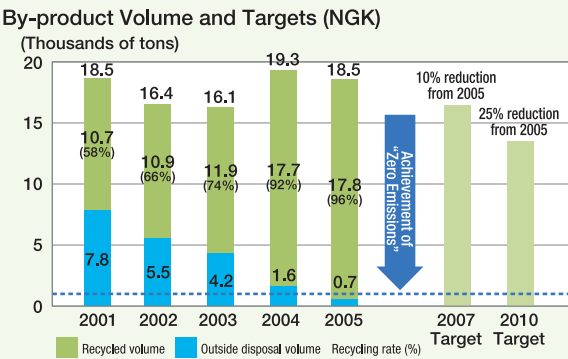
Reducing by-products generated by business activities is an important issue in bringing about a recycling-based society.

In order to produce ceramics and other products, NGK generates a substantial amount of by-products in the form of ceramic raw materials, glass and ceramics not used in products. “Zero emissions” is defined as keeping the volume of by-products that cannot be recycled and are disposed of outside the Company (solids sent to landfills and waste fluids rendered harmless) to 1,000 tons or less per year, and we work to reduce by-products to achieve this goal. In 2005, outside disposal volume amounted to 718 tons, so we successfully achieved “zero emissions.” Our second Five-year Environmental Action Plan also set uniform targets for the domestic Group.

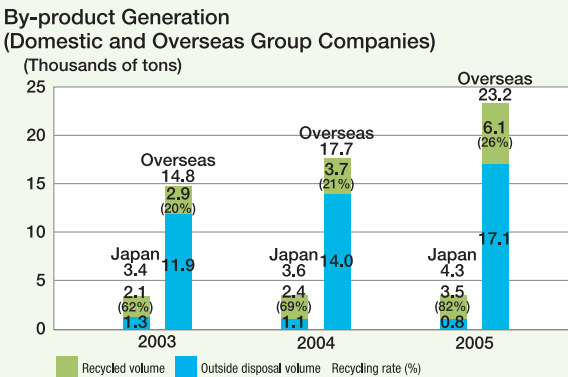
2005 Target	
“Zero Emissions” (Outside disposal volume of 1,000 tons or less)	
By-product Reduction Targets	
Total By-products Generated	
NGK	2007 Target: 10% reduction from 2005 2010 Target: 25% reduction from 2005
Domestic Group	2010 Target: 15% reduction from 2005

■ By-product Generation and Recycling (NGK)
In 2005, the total volume of by-products generated by production processes at NGK amounted to 18,525 tons, which was 733 tons less than in 2004. Outside disposal volume was 718 tons. Despite increased production of diesel particulate filters (DPFs) and NAS[®] batteries, we were still able to achieve a reduction of 861 tons compared to 2004.

We were able to substantially reduce outside disposal volume by recycling ceramic raw materials generated by production processes for DPFs and HONEYCERAM[®], insulator cement sludge derived from insulator production, metallic cleaning solutions and other by-products. In 2005, we recycled by-products at a rate of 96%.

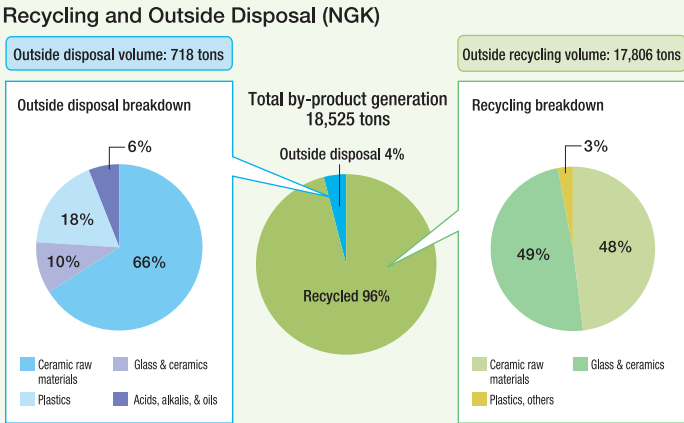


■ By-product Generation and Recycling (Domestic and Overseas Group Companies)
Group companies in Japan produced a total of 4,320 tons of by-products in 2005, while Group companies overseas produced a total of 23,248 tons. Domestic Group companies made progress in recycling from 2004, as their recycling rate improved from 69% to 82%.



Note: Data from 2003–2004 excludes NGK Europe for the sake of comparison with 2005.

■ Initiatives Going Forward
Under a by-product reduction plan, we will seek to establish production technologies and systems that curb the generation of by-products and to utilize the full value of by-products in an effort to make progress toward the next level of “zero emissions.” We have set a unified goal for domestic Group companies of a 15% reduction in total by-product volume by 2010, compared to 2005. Going forward, we plan to focus on reducing the generation of by-products in Japan.

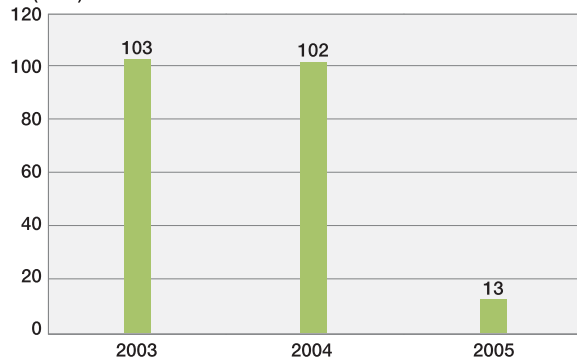


TOPICS

Reducing Alkali Waste Fluid

At the Komaki Plant, alkali solutions are used to clean parts. In the past, alkali waste fluids discharged from the factory were directly processed, but reduced pressure distillation equipment has been installed to reduce their volume, which has resulted in a drop of 87%, from 102 tons in 2004 to 13 tons in 2005. This has also saved us ¥2.8 million per year on processing costs.

Alkali Waste Fluid Discharge
(Tons)



Reduced pressure distillation equipment

Benefits of Streamlining Production at the Nagoya Plant

At the Nagoya Plant's AC factory, all the divisions—manufacturing, production technology, and elemental technology development—are working together to use raw materials effectively. The manufacturing division streamlined the factory and improved production, the production technology division made sweeping improvements to production processes, and the elemental technology division engaged in the development of groundbreaking technologies.

Through

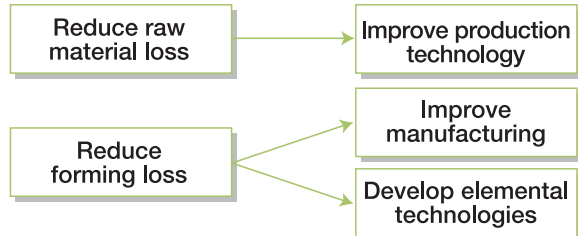
- 1) effectively using raw materials by reusing them in other processes,
- 2) reducing raw material loss when switching setups, and
- 3) optimizing manufacturing conditions and developing recycling outlets,

the plant substantially reduced outside disposal of ceramic raw materials in 2005. Disposal volume decreased by 87% to 26 tons, compared to 2004.

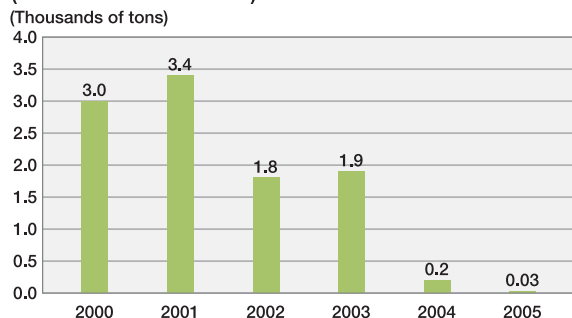


Inside the Nagoya Plant's AC factory

Measures to streamline production



Outside disposal volume of by-products (Ceramic raw materials)



MANAGEMENT OF CHEMICAL SUBSTANCES

NGK observes applicable laws and regulations, such as the PRTR Law*, governing the appropriate management of chemical substances. Utilizing a chemical substances management system introduced in 2000, the Company has registered and strictly manages approximately 7,000 chemical substances, including those covered by the PRTR Law. In addition, the Company is continuing its measures to minimize the environmental impact caused by chemical substances. These measures include the thorough control of emissions into the environment, the development and application of technologies for stabilization and detoxification of those substances, and the substitution of harmful chemical substances with less dangerous ones. We are focusing especially on controlling atmospheric emissions of PRTR-listed solvents. During the year, we established new uniform control goals for atmospheric emissions of PRTR-listed solvents for all domestic Group companies.

Reduction Target for Chemical Substances

2005 target: Reduce atmospheric PRTR-listed solvent emissions to 20% or less of 2000 (24.5 tons)

Reduction Target for Chemical Substances

Atmospheric PRTR-listed solvent emissions

NGK 2010 goal: 10% reduction compared with 2005
Domestic Group 2010 goal: 10% reduction compared with 2005

* PRTR Law: The Pollutant Release and Transfer Register Law

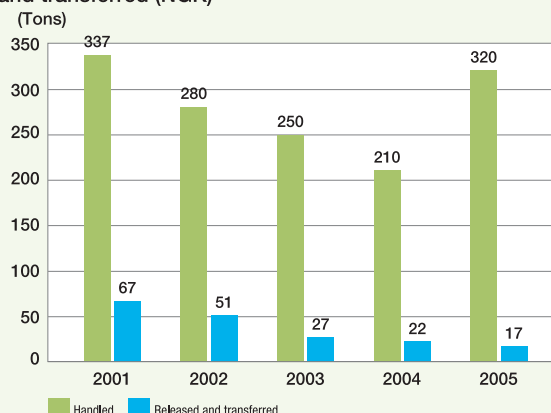
■ Handling of PRTR-Listed Chemical Substances

The PRTR Law specifies 354 Class-1-designated chemical substances. Of this group, NGK handled 64 chemical substances in its Company-wide operations in 2005, for a combined total of 320 tons, a 110-ton or 52% increase from 2004. The overall increase in the amount of chemical substances handled can be attributed to the impact of a temporary increase in production. However, the released and transferred amounts totaled 17 tons, down 26% from 2004.

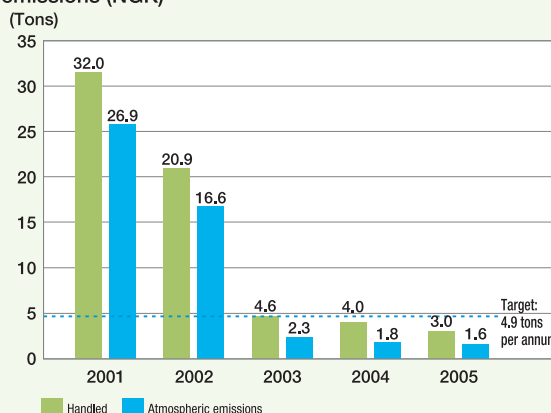
Among the PRTR-listed chemical substances handled by NGK, the Company reduced its atmospheric emissions of toluene, xylene, and dichloromethane, and other solvents to 1.6 tons, substantially below its target of 4.9 tons.

Assisted by the use of substitutes and other measures, the total amount of PRTR-listed chemical substances handled by the domestic NGK Group in 2005 was 110 tons, declining 16 tons from the previous year. The released and transferred amounts also benefited from various reduction measures, decreasing by 2 tons from 2004. Eight companies provided notification to the government for a total of nine PRTR-listed chemical substances.

Amounts of PRTR-listed substances handled, released, and transferred (NGK)

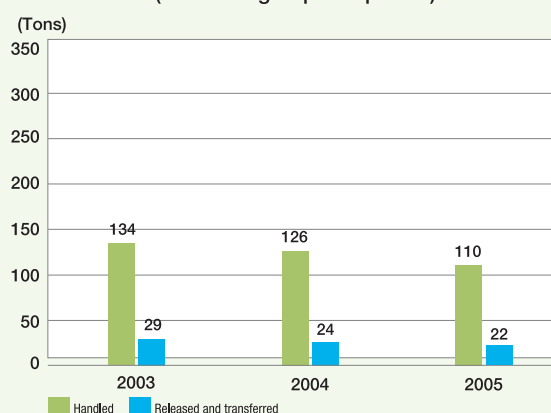


Quantities of solvents* handled and atmospheric emissions (NGK)



* Solvents include toluene, xylene, and dichloromethane, and others.

Amounts of PRTR-listed substances handled, released, and transferred (domestic group companies)



■ Initiatives Going Forward

NGK will continue its efforts to reduce the amount of PRTR-listed substances released and transferred. We have commenced working on a uniform set of control goals for our domestic companies for atmospheric emissions of PRTR-listed solvents.

To achieve compliance from 2006 with the Restriction of Hazardous Substances (RoHS) Directive, which

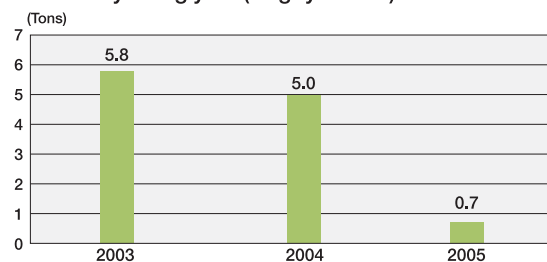
regulates the use of certain chemical substances in Europe, we established a procurement system that effectively utilizes our revised green procurement guidelines, which were updated in 2004. Through such measures, we are building an organization that can deal with chemical substance regulations on a global scale, with positive results steadily emerging.

TOPICS

Reduction in Use of Ethylene Glycol

A PRTR Class-1-designated chemical substance, ethylene glycol is used as a coolant for temperature controllers in production facilities. In the past, we used to remove the coolant from the supply pipe and have it processed by third parties whenever we reset the system. Our efforts to reduce use of ethylene glycol, therefore, were focused on overall measures, such as revision of the supply pipe design or renewal of the distribution pumps. In 2005, we changed to a sealed type-pump, reducing the use of ethylene glycol at the Nagoya Plant from 5 tons in 2004 to 0.7 tons, a large reduction of 86%.

Use of ethylene glycol (Nagoya Plant)



Plans for Handling Equipment Containing PCBs

In 2001, the Japanese Government enforced the Law Concerning Special Measures against Polychlorinated-biphenyl (PCB) Waste. This law requires the appropriate handling and management of PCBs, as well as reporting of handling status to local governments. Under the law, companies are obligated to carry out appropriate disposal of PCBs until July 2016.

In 2001, NGK completed an investigation into the holding of PCBs at its Nagoya, Chita, and Komaki plants and at its domestic and overseas Group companies. Among the measures taken at the time, we established guidelines regarding both the loss of equipment and the prevention of leakage or dispersal and carried out thorough storage management of equipment containing PCBs, including high- and low-PCB concentration equipment, fluorescent ballasts, and PCB oil. We also established a centralized storage facility.

In 2005, the Toyoda Office of the Japan Environmental Safety Corporation, a government-owned corporation involved in PCB disposal, began operations. As a result, we decided to dispose of the high-voltage capacitors and PCB oil stored at the Chita Plant, and drew up concrete plans to process them.



Storage facilities for equipment using PCBs (Chita Plant)

ENVIRONMENTAL ACTIVITIES RELATED TO PROCUREMENT AND LOGISTICS

To reduce the impact of our business on the environment, NGK not only carries out proactive measures within its own business sites, but also promotes environmentally friendly procurement. Purchases are made in line with our Green Procurement Policy, which covers all products and services involved in our business. The range of purchases includes raw materials and parts, services, manufacturing equipment, and office supplies.

Green Procurement Policy

- 1. NGK conducts green procurement of all materials, components, manufacturing equipment, office supplies, and services.**
- 2. After considering quality, price, and delivery periods, NGK gives preference to companies that provide products and services in an environmentally friendly manner.**

Expanding the Practice of Green Procurement

NGK completed revisions on its Green Procurement Guidelines at the end of 2004, to support compliance regarding particular chemical substances specified in European chemical regulations. In 2005, we proceeded to thoroughly familiarize suppliers with these standards. We also conducted a survey of the environmental activities of our suppliers. In addition to checking on the status of the environmental activities of our suppliers through the survey, we also used the opportunity to inform them of NGK’s environmental policies. In the future, we plan to communicate with each of our suppliers on an individual level to build a cooperative relationship regarding green procurement.

In the years ahead, we will be required to support even more stringent chemical substance management. Not confining our efforts to the NGK Group, we are putting in place a framework that can positively respond to customer requirements by increasing the levels of awareness and management of the environment among our suppliers.

Energy Conservation Measures for Shippers Accompanying the Revised Energy Conservation Law

According to the April 2006 revisions of the Energy Conservation Law, shippers (special shippers) transporting 30 million ton-kilometer or more annually now have special obligations to submit energy conservation plans or regularly report on their energy use for commissioned transport. Because NGK could be considered a special shipper, we have developed a system to enable us to pinpoint our energy use for transport, and will be able to submit regular energy use reports to the authorities starting in April 2007.

Purchase of Green Electric Power

In September 2001, NGK signed a contract with the Japan Natural Energy Co., Ltd. for a Green Power Certification System. Based on the contract, the Company is purchasing 2 million kWh of wind-generated electric power per year. The basic unit of CO₂ emissions from wind-generated electric power is less than 10% that of power from fossil fuels. Replacing 2 million kWh of fossil fuel-derived electric power with wind-generated electric power will prevent the release of 806 tons-CO₂ annually.



Noshiro Wind Station, one of Japan’s wind power generation bases.

Current Status and Targets for Green Logistics

At NGK, we are researching a returnable logistics system and efficient transportation systems for the purpose of reducing CO₂ emissions in logistics activities and by-product generation from packaging.

NGK’s Green Logistics

Aim of research	Concrete measures
Reduction of CO ₂ emissions	Modal shift*1
	Use of Green Energy
	Increase in loading efficiency
Reduction of volume of packaging materials	Returnable packaging*2
	Improvement of packaging efficiency

*1 Modal shift: shifting away from the use of trucks to more efficient rail and sea transportation for main routes to decrease the environmental impact of distribution.

*2 Returnable packaging: packaging that can be returned and reused to reduce resource and energy usage.

ENVIRONMENTAL COMMUNICATIONS

To earn the trust of society as a Company that develops its business with the environment in mind, we need to actively disclose information about our environmental activities. We also believe that establishing environmental communications with a wide range of age groups in our role as a good corporate citizen leads to protection of the environment.

■ Participation in EPOC

In July 2005, NGK President Shun Matsushita participated in "Eco-Talk Sessions" held during the 2005 World Expo, Aichi, Japan sponsored by the Environmental Partnership Organizing Club (EPOC). During the sessions, President Matsushita talked with 150 elementary school children from Nagoya on the topic of "People and Water." President Matsushita stated during the discussions his desire to contribute to the preservation of the world's water environment by developing an innovative water purification technology to deliver safe and clean water.



President Matsushita talks with children

■ Participation in Re-STEP

In July 2004, we started to participate in the Reciprocal Study System for Environmental Promotion (Re-STEP). NGK has registered the Nagoya and Komaki plants in the program. In 2005, there were two tours of our plants, and NGK participated in three tours of the plants of other companies.

■ Disclosure on the NGK Website

On our corporate website, we provide the latest information on our activities as well as making public our Environmental and Social Responsibility reports and disclosing information about our environmental and social contribution activities. We continually strive to broaden our level of disclosure and to include more information on the website than is in the reports.



The NGK Environmental Activities Website
<http://www.ngk.co.jp/english/environment/index.html>

■ Participation via the Environmental and Social Responsibility Report Reader's Questionnaire

We received responses to the questionnaire provided with the 2005 Environmental and Social Responsibility Report. Readers of the Japanese version indicated that the presentation of environmental data by plant and by Group company in an easy-to-compare format made it easy to gauge progress. In addition, readers said that the content and numbers were clear. Another comment was "I would have liked to see some information on how your products impact positively on the environment." We also received responses to our questionnaire for the English version of the report from North American readers stating that they thought the report represented fair disclosure, was easy to read, and contained adequate disclosure information.

We will continue to seek feedback from our readers, and look forward to your comments and suggestions.

■ PFI Business Awarded Minister of Agriculture, Forestry and Fisheries Prize and Aichi Environmental Prize

In February 2006, Green Site Japan and the city of Tahara were awarded the Minister of Agriculture, Forestry and Fisheries Prize, the top prize among the commendation awards for utilization of biomass co-presented by the Ministry of Agriculture, Forestry and Fisheries and others. Green Site Japan and the city of Tahara were also awarded the Gold Prize, the top-ranking prize of the 2006 Aichi Environmental Awards, sponsored by Aichi Prefecture. Green Site Japan is a private finance initiative (PFI)* company formed by NGK and four other companies to operate the Tahara Recycle Center, Tanseikan, which processes waste in Tahara, Aichi Prefecture. The Tahara Recycle Center is the first PFI that NGK has participated in.

PFI Method:*
a method for promoting the building of public sector facilities or services where the private sector provides the capital, management capabilities, technology, and other assets, operating the facilities or services under contract from the government.



NGK President Shun Matsushita (left) and Aichi Prefecture Governor Masaaki Kanda (right) at the environmental prize award ceremony.

Awards Received

(2005)

Date	Award	Granted for	Sponsor
May	The Ceramic Society of Japan Awards 2004), Technology Prize	NAS® batteries	The Ceramic Society of Japan
July	Safety Award First Place	NGK METALS CORPORATION	Copper Development Association
October	2005 Chubu Commendation for Invention, the Japan Patent Attorneys Association Chairman's Incentive Award	Home-use water purifier (C1)	Japan Institute of Invention and Innovation
February	Biomass Utilization Commendation Awards, the Minister of Agriculture, Forestry and Fisheries Prize	Tahara Recycling Center Charcoal Making Building	Ministry of Agriculture, Forestry and Fisheries
February	2006 Aichi Environmental Awards, Gold Prize	Tahara Recycling Center Charcoal Making Building	Aichi Prefecture

DATA

Environmental Activities by Plant

Environmental Activities at the Nagoya Plant



Nagoya Plant

- **Address:** 2-56, Suda-cho, Mizuho-ku, Nagoya
- **Major products:** HONEYCERAM®, NAS® batteries, others

Measures to Prevent Global Warming

Medium-term Greenhouse Gas Control Target

3% reduction from 2003 level by 2006

In 2005, we attained our targets for reductions in greenhouse gases. Measures contributing to this achievement were increased efficiency in packing products into firing kilns and other improvements in production technology, effective utilization of the heat emitted by firing kilns, and energy conservation activities, such as appropriate use of air conditioning in clean rooms and office facilities. We will continue to make efforts to further improve results.

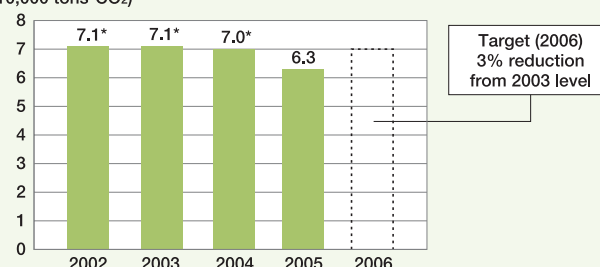
Measures for Control of By-product Generation

Generation Target

10% reduction from 2005 level by 2007

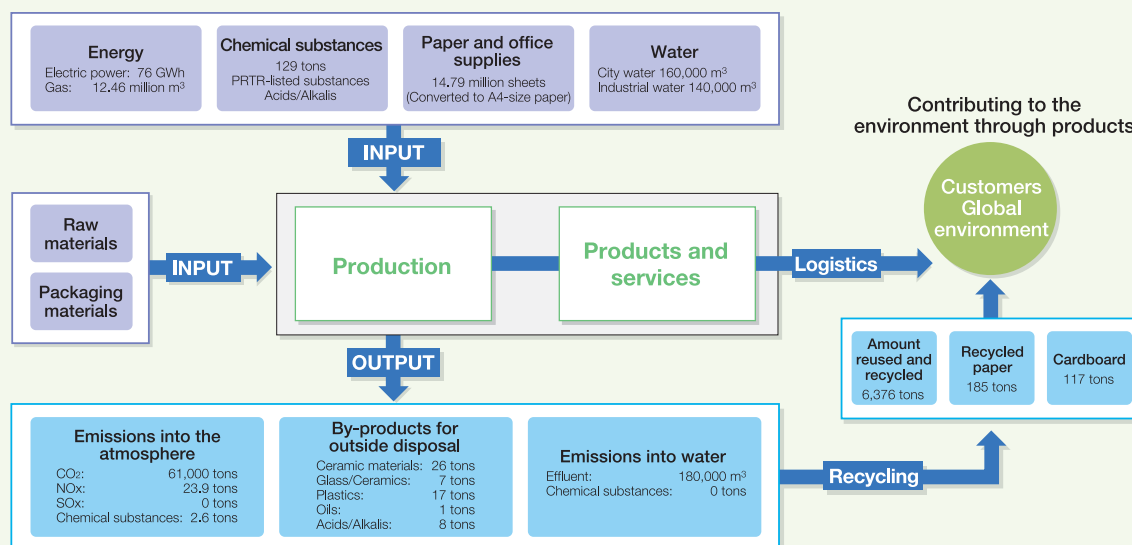
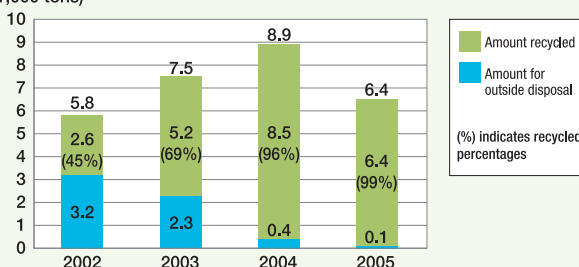
During 2005, we carried out thorough separation of production by-products, and proceeded with efforts to develop recycling channels outside the Company. We made particular progress with the recycling of different grades of plastic, which had not been recycled up to 2004. By taking steps to control the generation of by-products through rationalization of production processes, we substantially reduced the amount of by-products that had to be externally processed. In 2006, we will continue to maintain "zero emissions" by expanding our recycling of resources while also controlling generation of by-products through improvements in productivity.

Actual and planned greenhouse gas emissions (10,000 tons-CO₂)



Note: Figures with asterisks have been revised to reflect improvements in precision of city gas meters.

Generation of by-products (1,000 tons)



Environmental Activities at the Chita Plant



Chita Plant

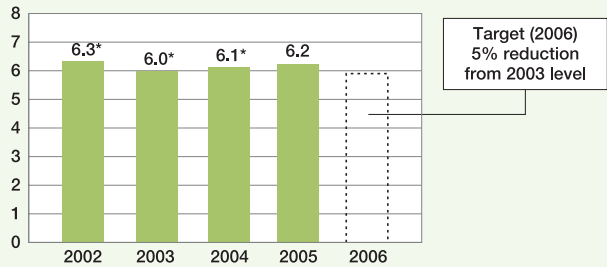
- **Address:** 1, Maegata-cho, Handa, Aichi Prefecture
- **Major products:** Insulators, electrical transmission and distribution equipment, ceramic products for the chemical industry, beryllium-copper strips, ceramic components for semiconductor manufacturing equipment, and others.

Measures to Prevent Global Warming

Medium-term Greenhouse Gas Control Target
5% reduction from 2003 level by 2006

In 2005, the plant's emission of greenhouse gases increased because of higher production volumes. However, we endeavored to control the growth in greenhouse gas emissions through effective utilization of the heat emitted by firing kilns, shorter firing periods, increased efficiency in packing firing kilns, and effective use of excess heat from metal melting furnaces. We will continue to strive for reductions in greenhouse gases through improvements in production processes and facilities.

Actual and planned greenhouse gas emissions
(10,000 tons-CO₂)



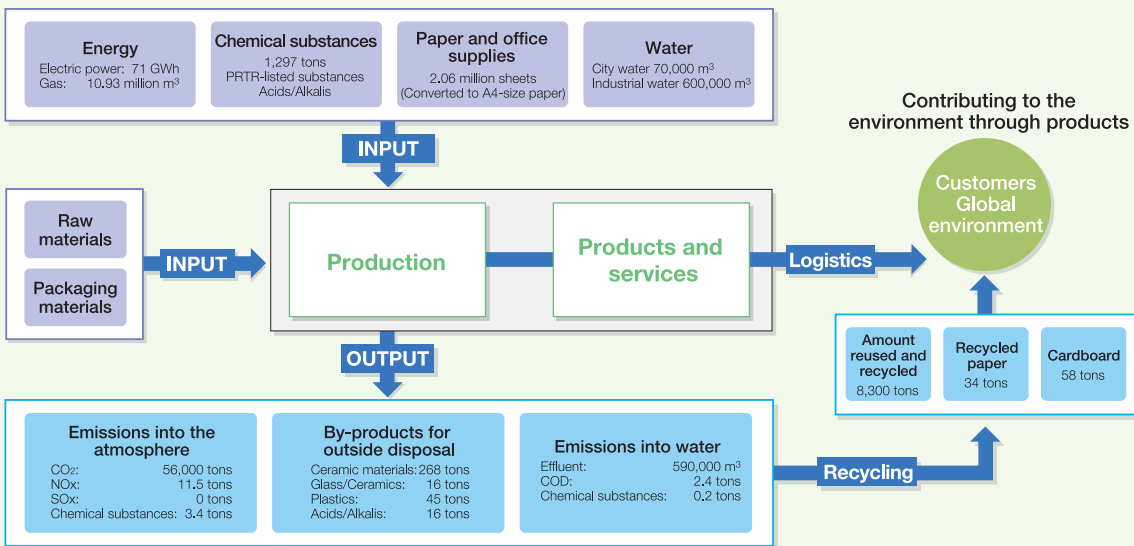
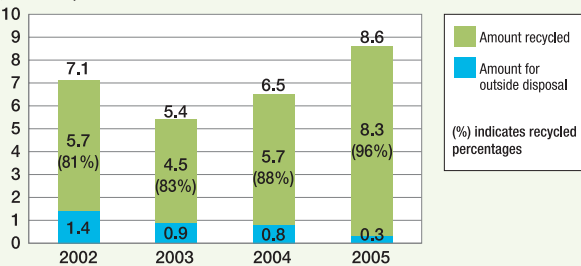
Note: Figures with asterisks have been revised to reflect improvements in precision of city gas meters.

Measures for Control of By-product Generation

Generation Target
10% reduction from 2005 level by 2007

During 2005, we pushed forward with thorough separation of ceramic material by-products, a process we had had difficulty with until 2004, and developed recycling channels outside the Company. These measures allowed us to achieve significant reductions in the amount of by-products that had to be processed by third parties. In 2006, we will continue these efforts, and will work to strengthen our zero emissions structure. We also will control the generation of by-products through improvements in productivity.

Generation of by-products
(1,000 tons)



Environmental Activities at the Komaki Plant



Komaki Plant

● **Address:** 1155, Tagami, Futaebori, Komaki, Aichi Prefecture

● **Major products:** Suspension insulators for electrical transmission, equipment for electrical transformation and distribution, HYCERAM®, and others. Since 2003, the Komaki Plant also operates plants producing NAS® batteries and SiC diesel particulate filters (DPFs).

Measures to Prevent Global Warming

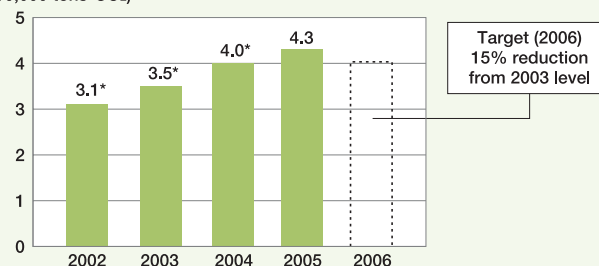
Medium-term Greenhouse Gas Control Target

15% reduction from 2003 level by 2006

Although greenhouse gas emissions rose in 2005 because of higher production volumes, we worked to reduce greenhouse gas emissions by shortening firing periods, achieving increased efficiency in packing firing kilns, and energy conservation measures, such as adjusting methods for heating the firing kilns. As a result, we held the growth in greenhouse gas emissions to approximately 8.3% compared with 2004. We will continue to strive for reductions in greenhouse gases through improvements in production processes and facilities.

Actual and planned greenhouse gas emissions

(10,000 tons-CO₂)



Note: Figures with asterisks have been revised to reflect improvements in precision of city gas meters.

Measures for Control of By-product Generation

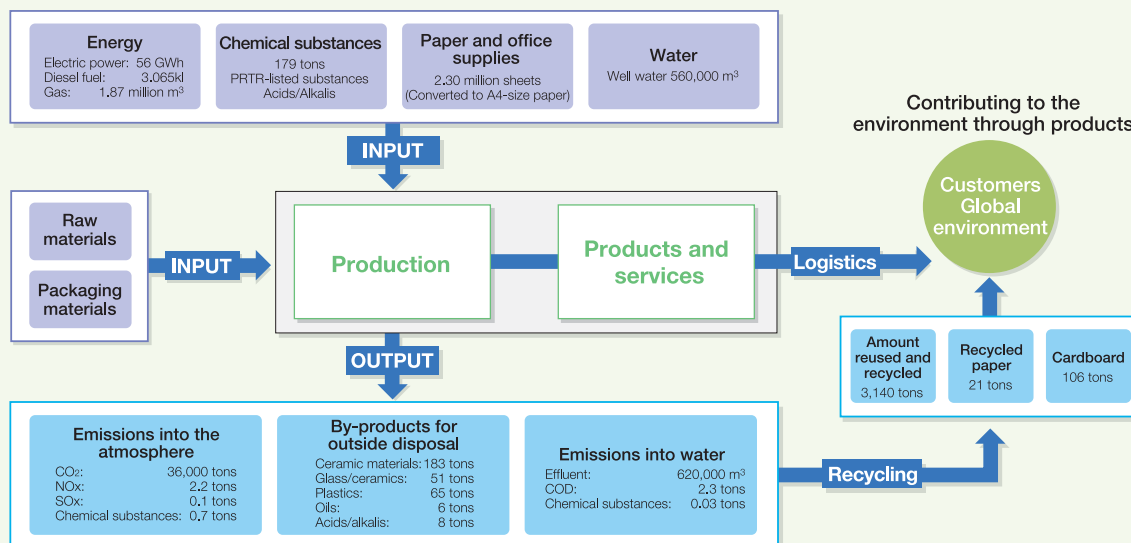
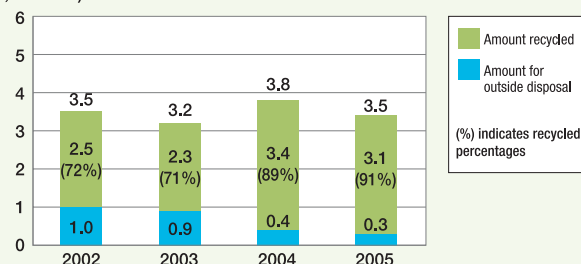
Generation Target

10% reduction from 2005 level by 2007

During 2005, our production of NAS® batteries and SiC DPFs expanded. Nevertheless, we made progress with controlling the generation of by-products by increasing our recycling and improving productivity. During the year, we endeavored to develop external channels for recycling insulator cement and the plastic generated by DPF plants, but were unable to make an impact on recycling performance in 2005. However, in 2006, we will pursue "zero emissions" through the use of recycling channels developed in 2005 and strive to control the generation of by-products through improved productivity.

Generation of by-products

(1,000 tons)



Environmental Data by Plant

Actual values for exhaust gases, noise, vibration, pumped underground water, and effluent for all three plants met all relevant laws, regulations, and voluntary standards.

Standard Values (Under Laws and Agreements) and Actual Values

Category	Item	Units	Nagoya Plant		Chita Plant		Komaki Plant	
			Standard	Actual Value	Standard	Actual Value	Standard	Actual Value
Exhaust gas	Sulfur produced in combustion	%	0.1 ^{*9}	(Shifted to LNG)	0.5 ^{*7}	(Shifted to LNG)	—	0.0003~0.08
	SOx emissions	Nm ³ /Hr	—	—	—	—	8.14 ^{*8}	N.D.
	NOx concentration	ppm	144 ^{*5}	N.D.~88	150 ^{*7}	4~47	170 ^{*5}	6.2~77
	NOx volume	g/Hr	24,023 ^{*2}	22,184	—	—	—	—
	Soot and dust	g/Nm ³	0.08 ^{*1}	N.D.~0.016	0.2 ^{*7}	N.D.	0.2 ^{*8}	0.002~0.009
	Be total output	g/day	—	—	10 ^{*7}	0.017~0.7	—	—
	Be atmospheric concentration in residential areas	μg/m ³	—	<0.0001 ^{*13}	0.01 ^{*7}	0.00004~0.00028	—	—
	Fluorine and its compounds	mg/Nm ³	10 ^{*10}	N.D.~7.0	—	—	—	—
Noise	Day	dB	70 ^{*2}	53~67 ^{*6}	65 ^{*7}	45~63 ^{*6}	65 ^{*5}	50~64 ^{*11}
	Night	dB	60 ^{*2}	46~60 ^{*6}	65 ^{*7} (60 ^{*7-12})	40~63 ^{*6} (54 ^{*12})	55 ^{*5}	49~54 ^{*11}
Vibration	Day	dB	70 ^{*2}	45~59	70 ^{*7}	45 or less	65 ^{*5}	18~19
	Night	dB	65 ^{*2}	45~59	70 ^{*7}	45 or less	60 ^{*5}	—
Pumped underground water		m ³ /day	—	—	—	—	4,213 ^{*5}	1,545
Effluent	pH	—	5.0~9.0 ^{*4}	6.8~7.6	5.8~8.6 ^{*7}	6.8~7.1	5.8~8.0 ^{*8}	6.5~7.4
	SS	mg/l	600 ^{*4}	8~46	30 ^{*7}	3~7	80 ^{*8}	N.D.~8
	BOD	mg/l	600 ^{*4}	2.2~28	—	—	17 ^{*8}	0.9~8.8
	COD	mg/l	—	—	20 ^{*7}	2.7~6.9	—	—
	Total COD emissions	kg/day	—	—	53.1 ^{*5}	6.5	83.3 ^{*5}	6.2
	Oil	mg/l	5 ^{*4}	N.D.~1.2	2 ^{*7}	N.D.~0.5	2 ^{*8}	N.D.~1.1
	Copper	mg/l	3 ^{*4}	N.D.~0.01	1 ^{*7}	0.02~0.03	3 ^{*3}	N.D.~0.02
	Zinc	mg/l	5 ^{*4}	0.02~0.04	1 ^{*7}	0.03~0.1	3 ^{*8}	0.04~2.2
	Soluble iron	mg/l	10 ^{*4}	N.D.	0.5 ^{*7}	N.D.	10 ^{*3}	0.07~0.16
	Soluble manganese	mg/l	10 ^{*4}	—	10 ^{*3}	0.1~1.0	10 ^{*3}	0.01~0.02
	Cadmium	mg/l	0.1 ^{*4}	N.D.	0.1 ^{*3}	N.D.	0.1 ^{*3}	N.D.
	Cyanide	mg/l	1 ^{*4}	N.D.	1 ^{*3}	N.D.	1.0 ^{*3}	N.D.
	Lead	mg/l	0.1 ^{*4}	N.D.	0.1 ^{*3}	N.D.	0.1 ^{*3}	N.D.
	Hexavalent chromium	mg/l	0.5 ^{*4}	N.D.	0.5 ^{*3}	N.D.	0.5 ^{*3}	N.D.
	Total mercury	mg/l	0.005 ^{*4}	N.D.	0.005 ^{*3}	N.D.	0.005 ^{*3}	N.D.
	Total chromium	mg/l	2 ^{*4}	N.D.	2 ^{*3}	N.D.	2 ^{*3}	N.D.
	Fluorine	mg/l	8 ^{*4}	N.D.~0.1	15 ^{*3}	0.2	8 ^{*3}	N.D.~0.4
	Nitrogen content	mg/l	—	—	20 ^{*10}	2.2~7.8	20 ^{*10}	2.2~7.9
	Phosphorus content	mg/l	—	—	1 ^{*10}	0.03~0.14	1 ^{*10}	0.09~0.55
	Tri-chloroethylene	mg/l	0.3 ^{*4}	N.D.	0.3 ^{*3}	N.D.	0.3 ^{*3}	N.D.~0.003
	Tetra-chloroethylene	mg/l	0.1 ^{*4}	N.D.	0.1 ^{*3}	N.D.	0.1 ^{*3}	N.D.
	1, 1, 1-trichloroethane	mg/l	3 ^{*4}	N.D.	3 ^{*3}	N.D.	3 ^{*3}	N.D.

*1. Air Pollution Control Law

*4. Sewerage Law

*7. Pollution control agreement with Handa

*10. Self-imposed control

*2. Nagoya Regulations

*5. Aichi Prefecture Regulations or Guidelines

*8. Pollution control agreement with Komaki

*11. Adjacent to the road (includes background noise)

*3. Water Pollution Control Law

*6. Including background noise**

*9. Pollution control agreement with Nagoya

*12. West side of plant

*13. Voluntary measurement

**Background noise: Total volume of noise from unverifiable sources. Because plant noise and human activity are generally lower at night, foreground noise decreases and background noise becomes more conspicuous. (Foreground noise is noise from verifiable sources.)

pH: Concentration of hydrogen ions

SS: Suspended Solids

BOD: Biochemical Oxygen Demand

COD: Chemical Oxygen Demand

N.D.: Not Detected

Be: Beryllium

Note: Items indicated by “—” fall outside the scope of pollution control laws, pollution control agreements, and self-imposed controls.

Environmental Data for Group Companies (Production)

Domestic Group Companies (Production)

Plant		CO ₂ emissions (energy source) t-CO ₂ /year	By-products	
			Total generation t/year	Outside disposal t/year
Energy Support Corporation Production and sale of power-distribution equipment		1,967	115	83
Akechi Insulators Co., Ltd. Production of ceramics for insulators, etc.		14,071	2,063	142
Ikebukuro Horo Kogyo Co., Ltd. Production of anticorrosion equipment		2,369	19	18
NGK Filtech, Ltd. Design and production of membrane filtration system		98	12	11
NGK Adrec Co., Ltd. Production of refractories and ceramic membrane filters		10,579	1,035	399
NGK Kiltech Corporation Production and sale of kilns Production of far-infrared equipment		61	1	1
Heisei Ceramics Co., Ltd. Production of refractories		2,881	83	9
NGK Optoceramics Co., Ltd. Production of electronic parts		10,278	237	55
NGK Printer Ceramics Co., Ltd. Production of electronic parts	Komaki Plant			
	Yamanashi Plant	6,842	147	2
NGK Okhotsk, Ltd. Production of electronic parts		2,429	197	0
Soshin Electric Co., Ltd. Production and sale of electronic parts	Asama Plant	9,501	149	1
	Chikuma Plant			
	Miyazaki Plant			
NGK Mettex Corporation Processing of beryllium-copper strips		467	9	2
NGK Fine Molds, Ltd. Production and sale of metal molds		1,467	207	31

Note: The NGK Printer Ceramics Co., Ltd. Komaki factory and NGK Optoceramics Co., Ltd. are separate companies; however, these are calculated as the same site for environmental management purposes.

Overseas Group Companies (Production)

Plant		CO ₂ emissions (energy source) t-CO ₂ /year	By-products	
			Total generation t/year	Outside disposal t/year
Locke Insulators, Inc. Production of insulators		19,683	2,973	2,973
NGK-Locke Polymer Insulators, Inc. Production of polymer insulators		4,638	619	452
P.T. WIKA-NGK Insulators Production of insulators		5,841	84	81
NGK Insulators Tangshan Co., Ltd. Production and sale of insulators		20,303	2,878	2,851
NGK Stanger Pty. Ltd. Production and sale of electric power distribution equipment		336	0	0
NGK Ceramics USA, Inc. Production of ceramics for automobiles		50,673	7,558	7,553
NGK Ceramics Europe S.A. Production of ceramics for automobiles		19,433	3,849	27
NGK Ceramics Polska Sp. z o.o. Production of ceramics for automobiles		39,618	1,895	0
P.T. NGK Ceramics Indonesia Production of ceramics for automobiles		26,682	950	837
Siam NGK Technocera Co., Ltd. Production and sale of refractories		2,736	2	2
NGK Ceramics Suzhou Co., Ltd. Production and sale of ceramics for automobiles		13,525	1,848	1,833
NGK Technocera Suzhou Co., Ltd. Production and sale of firing kilns for electronic ceramics and kiln tools for firing electronics components		1,384	56	41
NGK Ceramics South Africa (Pty) Ltd. Production and sale of ceramics for automobiles		17,494	159	159
FM Industries, Inc. Processing and module assembly of metal components for semiconductor production equipment		1,504	8	8
NGK Metals Corporation Production and sale of beryllium copper		9,331	222	196
NGK Berylco France Production and sale of beryllium copper		383	150	135

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EN34.* Significant environmental impacts of transportation used for logistical purposes	P36

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Labor Practices and Decent Work	
LA1. Breakdown of workforce, where possible, by region/country, status (employee/non-employee), employment type (full time/part time), and by employment contract (indefinite or permanent/fixed term or temporary). Also identify workforce retained in conjunction with other employers (temporary agency workers or workers in co-employment relationships), segmented by region/country	P12
LA2. Net employment creation and average turnover segmented by region/country	—
Labor/Management Relations	
LA3. Percentage of employees represented by independent trade union organizations or other bona fide employee representatives broken down geographically OR percentage of employees covered by collective bargaining agreements broken down by region/country	—
LA4. Policy and procedures involving information, consultation, and negotiation with employees over changes in the reporting organization's operations (e.g., restructuring)	—
Health and Safety	
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LA6. Description of formal joint health and safety committees comprising management and worker representatives and proportion of workforce covered by any such committees	P14
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Human Rights	
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HR5. Description of freedom of association policy and extent to which this policy is universally applied independent of local laws, as well as description of procedures/programs to address this issue	P13
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HR6. Description of policy excluding child labor as defined by the ILO Convention 138 and extent to which this policy is visibly stated and applied, as well as description of procedures/programs to address this issue, including monitoring systems and results of monitoring	—
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HR7. Description of policy to prevent forced and compulsory labor and extent to which this policy is visibly stated and applied as well as description of procedures/programs to address this issue, including monitoring systems and results of monitoring	P12
HR9.* Description of appeal practices, including, but not limited to, human rights issues	P13
Community	
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S02. Description of the policy, procedures/management systems, and compliance mechanisms for organizations and employees addressing bribery and corruption	
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S03. Description of policy, procedures/management systems, and compliance mechanisms for managing political lobbying and contributions	—
Customer Health and Safety	
PR1. Description of policy for preserving customer health and safety during use of products and services, and extent to which this policy is visibly stated and applied, as well as description of procedures/programs to address this issue, including monitoring systems and results of monitoring	—
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PR2. Description of policy, procedures/management systems, and compliance mechanisms related to product information and labeling	P16
Respect for Privacy	
PR3. Description of policy, procedures/management systems, and compliance mechanisms for consumer privacy	P10

* are additional indicators.



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