

Environmental & Social Responsibility Report 2007



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Corporate Outline

Company name: NGK INSULATORS, LTD.
Address: 2-56, Suda-cho, Mizuho, Nagoya 467-8530, Japan
Tel: + (81) 52-872-7171
Establishment: May 5, 1919
Paid-in Capital: 69.8 billion yen (As of March 31, 2007)
Employees: 3,356 (As of March 31, 2007)
Business: Manufacture and sale of insulators, electric power equipment, industrial ceramic products, electronic components and special metals products; and plant engineering

Editorial Policy

In drafting this "Environmental and Social Responsibility 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, 2006 to March 31, 2007. Reporting on environmental initiatives and data for Group companies located overseas covers the period from January 1, 2006 to December 31, 2006. The range of companies involved differs with each initiative cited, but is clearly stated with the data.

NGK's environmental equipment business which used to be included in the engineering business has been transferred to a new company in the NGK Group since fiscal 2007.

To ensure the reliability of the information contained in the report, independent audits have been conducted by Tohatsu Environmental Research Institute Ltd.

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 July 2008.

Top Message

NGK Insulators feels that one of its social missions as a company is to make technologies and products to help protect the environment available to as many people as possible, while continuing to lower the environmental burden in its own business activities. Accordingly, we continue to strengthen our measures to prevent global warming and conserve the global environment.

In this sense, fiscal 2006 (ended March 31, 2007) was a year in which the benefits of NGK's environmental products were clearly demonstrated.

Our diesel particulate filters (DPFs) to treat diesel engine emissions have received high marks from major European automakers, which we have followed by increasing production capacity at local plants. Our NAS[®] battery power storage system, which aids the stable supply of natural energy, has been recognized as efficient for wind power, and has been adopted for use in a large-scale wind power generating facility in Japan that is scheduled to begin operations in summer 2008.

The parent company NGK Insulators has made environmental activities one of its priority issues, and has implemented a company-wide effort to limit CO₂ emissions to meet its medium-term goal for fiscal 2006. Despite the increase in production volume, we cut CO₂ emissions by 10,000 metric tonnes each year in the three years since fiscal 2004, nearly achieving our target. We intend to continue to make an energetic effort to reduce CO₂ emissions. Since achieving "zero emissions" in fiscal 2005 we have continued with our efforts to limit the total amount of byproducts generated and to reuse as much as possible, achieving a 5% year-on-year reduction. In our management of chemical substances, our ongoing effort to limit atmospheric emissions of PRTR-listed solvents has resulted in a reduction to half the level of a year earlier. We have also begun studying and implementing our response to the new European law on chemicals, REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), which took effect in June 2007.

Domestic companies in the NGK Insulators Group are also taking action to meet their own targets, and continue to produce results. Each of them will continue to make further efforts to achieve new targets. As our business expands overseas we are also pursuing a consolidated environmental management program in cooperation with overseas group companies in Europe, North America, Australia, and Southeast Asia.

Fiscal 2006 was also the first year of our Second Five-Year Environmental Action Plan, in which we've set even higher targets as part of our CSR program. We have made steady progress toward achieving these goals. In fiscal 2007 we will strengthen our company-wide efforts in order to secure the progress we've made.

NGK also recognizes the importance of human resources development in order to promptly respond to such structural changes as the acceleration of overseas business development and diversification in the personnel structure, as well as the falling birthrate and the aging population. To ensure sustainable growth and development as a corporation, in April 2006 we established NGK Education Service Co., Ltd., a group company specializing in education and training, while also formulating a Basic Policy on Personnel Training. During fiscal 2006, in accordance with this policy we set up a company-wide training structure built around the dual pillars of practical training for production and position-oriented education, and implemented a variety of other measures. Going forward, we plan to step up our efforts to not only help develop the company, but to produce employees who aspire to contribute to international society.

I hope that this report will give you a better understanding of our CSR efforts. Thank you for your continued support of NGK Insulators.



Shun Matsushita
President and Chief Executive Officer

Technology and Products that Protect the Environment and Benefit Society

NGK Insulators helps to protect the environment with its unique ceramics-based products and technologies. This section introduces the latest developments in the fields of exhaust gas purification, new energy, and water purification.



Exhaust Gas Purification

NGK's DPFs help keep European skies clear

P.3



New Energy

NAS® batteries give momentum to the spread of wind power

P.4



Water Purification

Japan's largest ceramic membrane water treatment system begins operating

P.5

[Exhaust Gas Purification]

NGK's DPFs help keep European skies clear

01

NGK's diesel particulate filters to treat emissions from diesel-powered vehicles have achieved a solid record in Europe.



Silicon carbide diesel particulate filters (SiC-DPFs)



Klaus-Peter Biehn
Sales & Marketing
Director
NGK EUROPE GmbH
(Germany)

NGK SiC Diesel-Particulate-Filters (DPF) greatly help car manufacturers to make diesel powered vehicles environmentally friendly.

For European car buyers, diesel powered vehicles find a steadily growing attraction due to low fuel consumption / low CO₂ emission together with high engine performance. NGK SiC DPF products are widely used by European car manufacturers for diesel exhaust

gas purification. By employing NGK SiC DPF technology, car manufacturers are enabled to comply with the tight future emission regulations for diesel powered cars not only in Europe but also on a global basis.

Based on the development of the latest state-of-the-art SiC DPF technology, NGK (Europe) had been successful to conclude long term business contracts with some major European car manufacturers. However, it is a day to day challenge to maintain our leading position in this very competitive market and business environment.

In June 2006 it was our great honour to receive the "Volkswagen Group Award" from Europe's leading car manufacturer as an official recognition of NGK's extraordinary success in the field of diesel-particulate-filters.

NGK SiC DPF represents another impressive contribution to environmental conservation by means of advanced technologies. And we will continue our best efforts to be recognized by the automotive industry as the preferred development partner and supplier for SiC DPF in the future.



Kazunari Akita
NGK Ceramics Polska
SP. Z O.O.

Answering robust demand and helping keep European skies clear

NGK Ceramics Poland is the main production facility for silicon carbide diesel particulate filters (SiC-DPFs) for the European market.

Established in 2003, NGK Ceramics Poland began making shipments from January 2005. Despite such difficulties as weather far colder than in Japan,

and the need to set up the production line in a short period of time, the day of our first shipments of mass-produced products—in the midst of a raging snow storm—is one that I will never forget. The reputation of NGK's DPFs is growing, and our production lines, already operating at a fevered pitch in order to meet the robust demand from prominent European automakers, are being expanded. We have already completed all production lines, making the Poland plant the largest of NGK's production facilities anywhere in the world.

Driving around Poland and other areas of Central and Eastern Europe one unfortunately still sees many vehicles belching black smoke. Every time I encounter such a scene I think to myself that we need to get more vehicles fitted with DPFs as quickly as possible, and protect the natural environment. That sentiment, shared by the more than 1,000 Polish workers and Japanese staff members, is what drives this factory.



NGK Ceramics Poland

[New Energy]

NAS[®] batteries give momentum to the spread of wind power

02



The NAS[®] battery test site at Miura Wind Park

An NGK NAS[®] battery storage system (34,000 kW) has been adopted for use in a 51,000 kW wind power generation facility to be built from summer 2007.



Kazushi Tada

NAS[®] Sales Dept.
Power Business Group

NAS[®] batteries are receiving much attention as a storage system for wind-generated power

The NAS[®] battery storage systems I deal in are large-capacity systems that store previously generated electricity for supply when necessary. Installed in a factory or large-scale commercial facility, they can lower electricity bills by storing energy overnight, when rates are

lower, for use during the day, or provide electricity during times of momentary drops in power. We have already delivered enough NAS[®] batteries to provide 200,000 kW of electricity.

Recently, NAS[®] batteries have been widely used in storage systems to help stabilize output from wind power generators, an effective technology to counter global warming. A 34,000 kW NGK NAS[®] battery system has been adopted for use in a wind power facility with 51,000 kW generating capacity to be built by Japan Wind Development Co., Ltd. in Rokkasho-mura, Aomori Prefecture from the summer of 2007. This project will give a substantial boost to the spread of NAS[®] batteries for wind power generation, and I am looking forward to its completion.

Electricity is often taken for granted in our everyday lives. It's only during an outage that we are able to experience for ourselves its importance. Being in charge of NAS[®] batteries for the power business, which help reduce CO₂ emissions and contribute to the environment, is a source of pride for me.



Tomio Tamakoshi

NAS[®] Sales Dept.
Power Business Group

NAS[®] batteries are one of the successes of NGK's ceramics technology

One of the main concerns about wind-generated power is its instability, since power levels fluctuate greatly with the strength of the wind. Storage batteries are necessary to address this problem, alleviating the fluctuations and allowing for steady power generation. Storage

batteries for wind power stations also need to have an operating life of 15 years or longer. NAS[®] batteries answer these needs, and being highly regarded for their overall cost performance have been adopted for use in the wind power facility to be built in Rokkasho-mura, Aomori Prefecture. A test site has been established in the Miura peninsula of Kanagawa Prefecture, where repeated testing over the next year will determine how well the system responds to extreme fluctuations in wind power, and controls the shifting volume of power generated.

NAS[®] batteries are part of a new system able to store electricity. Electricity storage was little more than a dream when development of the technology began nearly two decades ago, but has now become a reality. I am extremely pleased that NGK, as the sole manufacturer of NAS[®] batteries, is able to contribute to the use of natural energy, which is an effective means of countering global warming. The development of NAS[®] batteries was due originally to NGK's proprietary technologies that allowed ceramics to be finished with the same precision as for metal. I would like to stress that without this technology electricity storage systems would not exist.

A 1,500 kW NAS[®] battery system at the NGK AC Plant



[Water Purification]

Japan's largest ceramic membrane water treatment system begins operating

03

Japan's largest water purification system, using NGK's ceramic membrane filtration system, was completed in November 2006.



The water purification facility utilizes 1,800 ceramic membrane elements



Satoshi Matsumoto

Sales Dept. II, Sales & Marketing Group
NGK Water Environment Systems, Ltd.

NGK's ceramic membrane technology met the needs of the area

The project for which I'm the sales representative, the water purification system for the drinking water supply facility in the Hinogawa district of Fukui Prefecture, was completed in November 2006. This facility supplies 38,900 m³ of drinking water per day to approxi-

mately 53,000 households, the largest membrane filtration system in Japan. NGK's system was chosen from among six new types of water purification systems after performing well in local tests. The most important consideration for any water business is safe and stable supply, so I am pleased that the NGK system was adopted on the basis of its safety, durability, and life cycle cost.

The actual construction was a battle against time. Once winter set in the construction site would be buried in snow, which crews would be forced to continually remove. There were also difficulties coordinating with the other companies to which work was outsourced, such as for civil engineering, construction and electricity. That is why I was filled with emotion when I saw the local residents tasting the water during the opening ceremony in November 2006. I am confident that NGK's reputation will grow as the facility continues to provide safe water over the years. It is my hope that ceramic membranes from NGK—the ceramics professional—will be utilized not only in Japan, but around the world.



Aerial view of the water purification facility



Koichi Murase

Water Treatment Engineering Dept.
NGK Water Environment Systems, Ltd.

We've designed a purification system that adapts to changes in the river ecosystem

The central focus of this recent large-scale water purification system is the optimal water treatment flow designed specifically for the unique features of the Hino River. Rivers are alive. The same river will change moment by moment, just like a person's physical condition. Moreover, water quality varies considerably depending on the source, and the optimal treatment needs to be applied according to the quality. Unless the treatment system removes the algae that produce foul smells, along with the manganese, coli bacillus, and cryptosporidium (pathogenic protozoa) that result in contaminated water, and can be operated safely and at a reasonable cost, it will not only fail to protect the way of life of the local residents, but will be inadequate to the needs of the water facility operator as well. It is also necessary to impose as little as possible burden on the environment. I believe our design for a system that provides a total solution to these issues is what allowed NGK to win the contract.

I felt proud to be involved from the design stage through construction and completion of a project to build one of the social foundations that support the everyday lives of people. It was an extremely rewarding few years. The sixty or so ceramic membrane water purification systems NGK has delivered up to now have already earned it a solid reputation. I hope that

we will continue to confidently provide society with the products and technology to help conserve the environment.



One of the large ceramic membrane elements

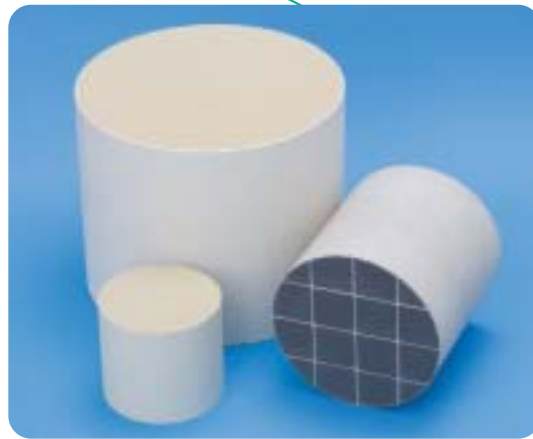
Note: NGK Water Environment Systems is a new internal group company that took over NGK's Engineering Business in April 2007.

Business Fields and Segments

NGK leverages its core ceramics technology in the fields of Ecology, Electronics, and Energy (the “Triple-E” Fields) to develop its Power, Ceramic Products, Engineering and Electronics businesses. Our aim is to protect the environment, and benefit society.

Ecology

In the Ecology field NGK has the Ceramic Products Business, in which proprietary ceramics technologies have led to the development of HONEYCERAM® and diesel particulate filters (DPFs) to clean the exhaust gas of automobiles, and the Engineering Business, which handles water and sewage treatment systems for water purification and sludge processing plants, and the waste recycling plants essential to protecting urban environments.



Ceramic products to purify automotive exhaust

Ceramic Products Business

- Ceramic products to purify automotive exhaust
- Corrosion-resistant devices for chemical engineering
- Combustion apparatuses and refractories



The fine ceramic filter water purifier “C1”



Sewage treatment facility

Engineering Business*

- Water and sewage treatment systems
- Sludge dewatering and incineration equipment
- Waste processing equipment



Waste processing facility



A ceramic membrane water purification system

* The Environmental Equipment Business was transferred to a new internal group company from fiscal 2007.

Energy



NAS® batteries for power storage



Insulators for power lines

In the Energy field, NGK provides a range of insulators, as well as power supply, distribution and transformation systems to help ensure a stable power supply. Our Power Business handles highly reliable products essential to the development of society and industry, such as large-capacity NAS® batteries for power storage, the world's first practical system for storing electricity for use when necessary.

Power Business

- Insulators for power lines and transformers
- Devices for power transmission
- NAS® batteries for power storage

Electronics



Ceramic components for semiconductor manufacturing equipment



Beryllium copper products

In the Electronics field, NGK's wide-ranging Electronics Business handles various electronics components and ceramic components used for semiconductor manufacturing equipment that utilizes cutting-edge ceramics technologies such as micro-actuators for use in inkjet printers, as well as produces beryllium copper rolling and processing products with superior spring properties.

Electronics Business

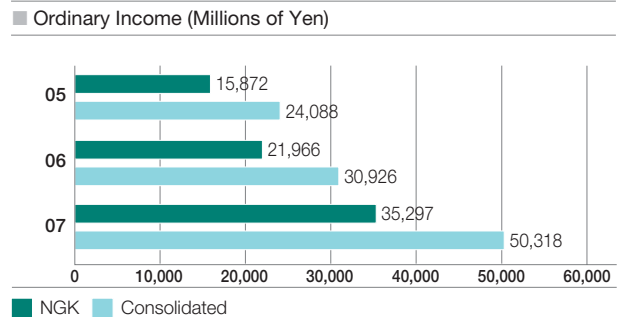
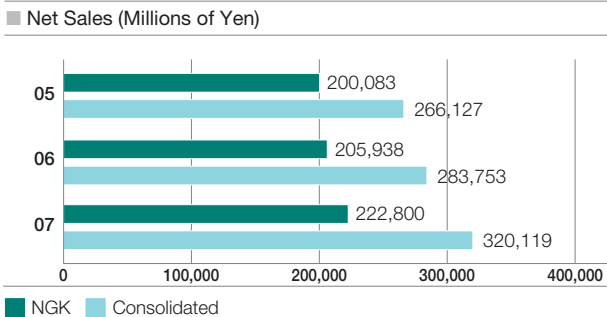
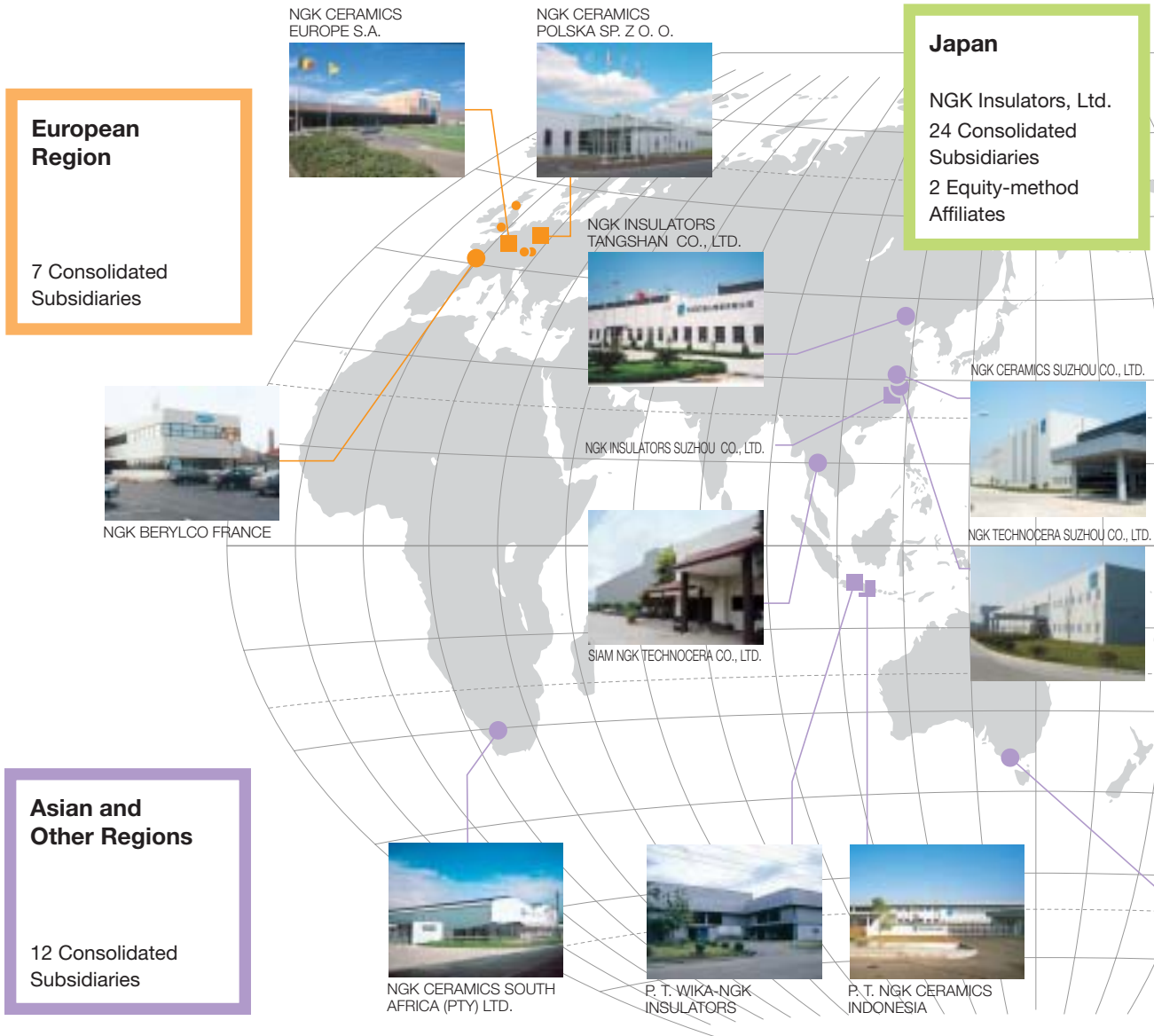
- Beryllium copper rolling and processing products
- Metal molds
- Ceramic products for semiconductor manufacturing equipment
- Ceramic products for the electronics industry

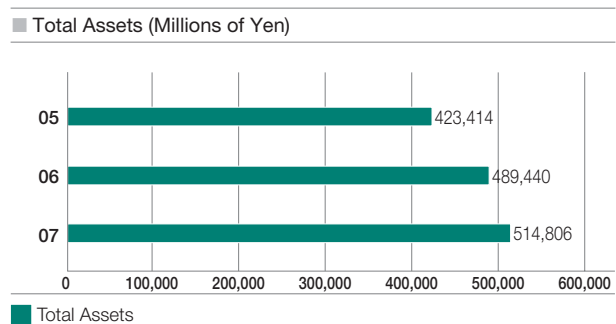
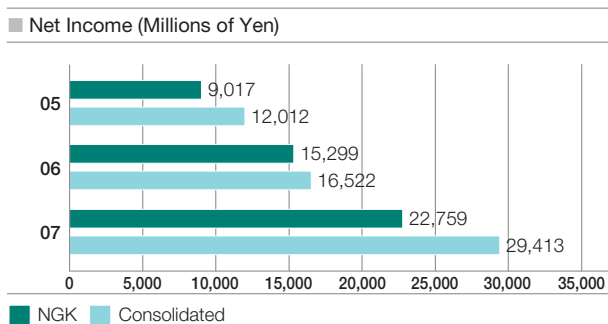
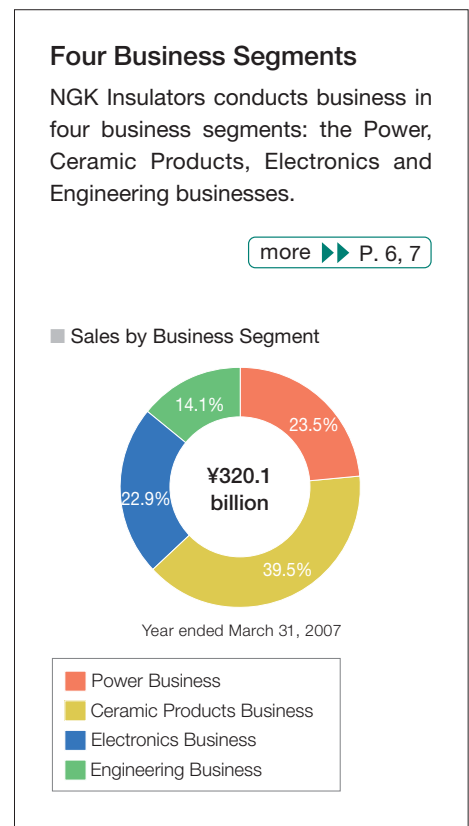
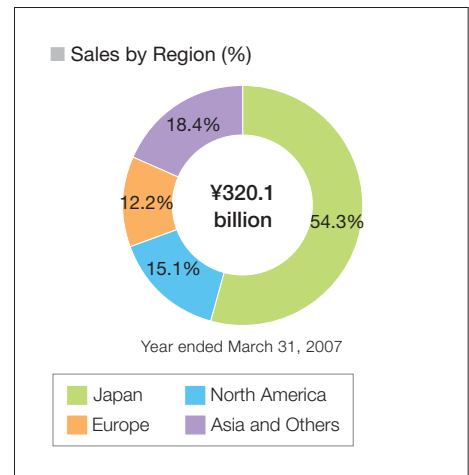


Ceramic components for inkjet printers

Business Overview

Competition is growing more and more intense on a global scale and changes are taking place with increasing speed. With proprietary ceramics 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.





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.

■ 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 group-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 ceramics 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.



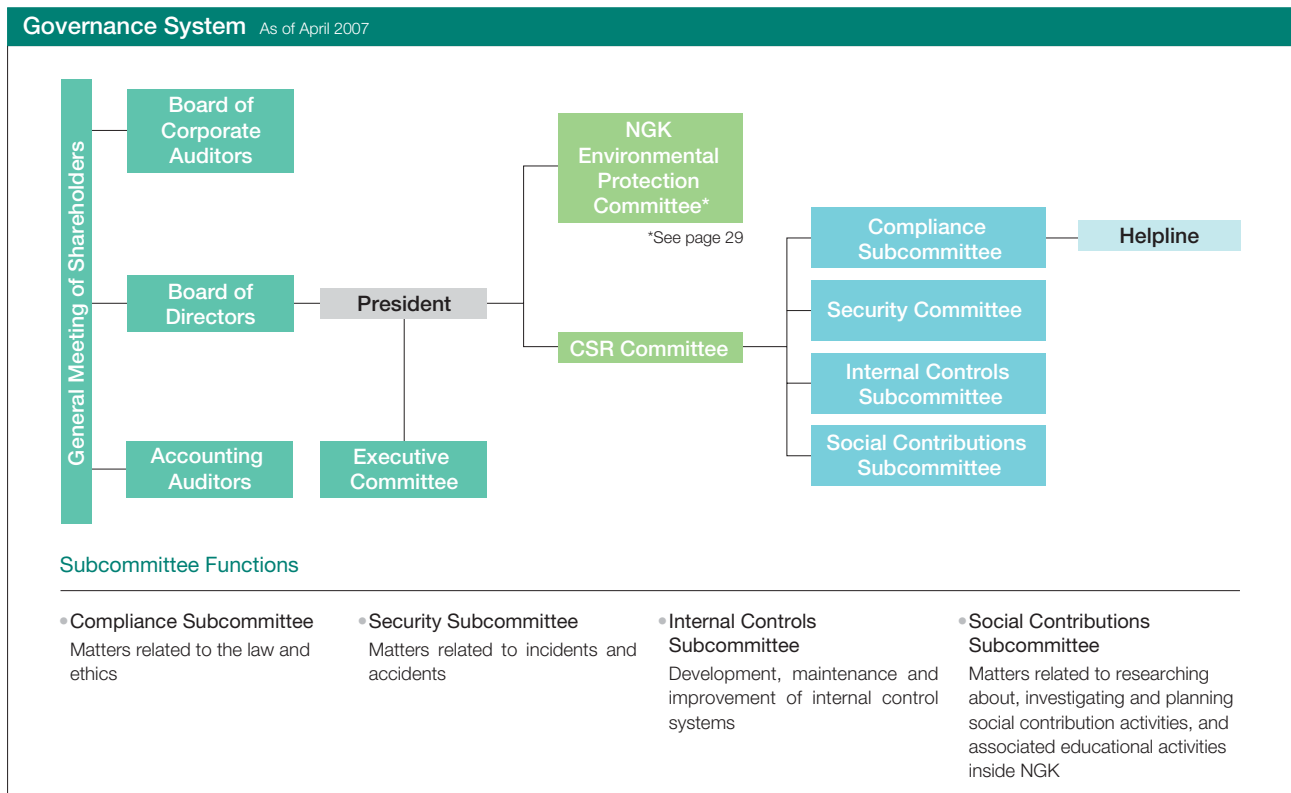
Pamphlet presenting the NGK Group Guidelines for Corporate Behavior

■ Strengthening Corporate Governance

The building of an internal control system is indispensable to strengthening corporate governance. Building and operating internal control systems is the responsibility of the Board of Directors and executive bodies under the president. We have also established an Auditing Department specializing in internal audits, which conducts audits of the business execution of our operational divisions. The Internal Controls Subcommittee has also been established as a subcommittee of the CSR Committee. It is charged with creating, maintaining and improving internal control systems to enhance the effectiveness of corporate governance.

■ Establishment of the CSR Committee

The CSR Committee was established in July 2005 to promote CSR activities on a Company-wide basis. The committee has four specialist subcommittees for compliance, security, internal controls and social contributions.



Compliance

In order to earn the steadfast trust of the public we have instituted a variety of measures for ensuring all employees are fully aware of compliance-related issues and for encouraging greater use of the helpline system.

In October 2006, 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. In fiscal 2006, we increased the frequency of training sessions and significantly expanded the range of employees targeted for each training session, as well as enhancing the sessions themselves.

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 2006 and January 2007, lectures were held on the Antimonopoly Act.



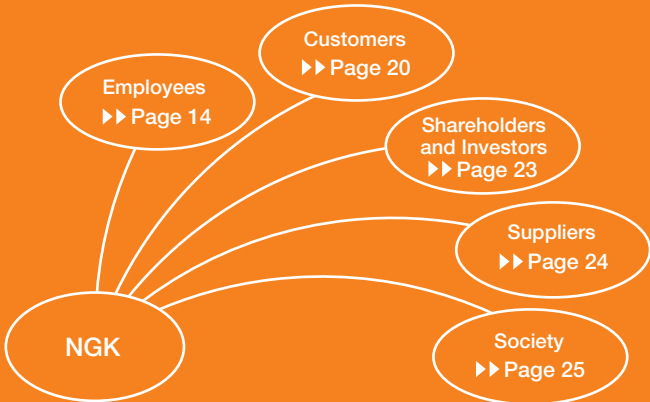
Lecture on the Antimonopoly Act

■ 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.

With Our Stakeholders

The following pages describe NGK's activities associated with the Group's social responsibilities.



Stakeholders with a relationship with NGK

■ **Activities covered:**

NGK Insulators, Ltd.

Nagoya Plant, Chita Plant,
and Komaki Plant

Note: Including some information from overseas
Group companies



Human Rights and Employment Initiatives

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

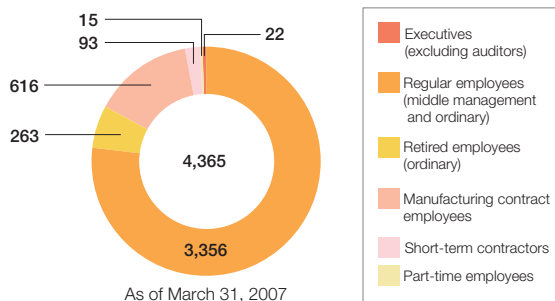
We also encourage independence and autonomy among our employees, and are fully committed to bringing to reality an equitable results-based treatment system and a benefit program that lets employees work in comfort and security.

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, including 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. In manufacturing divisions, we have introduced a manufacturing contract employee system, and at the end of fiscal 2006, there were approximately 600 personnel employed under this system. However, as we aim to ensure employment stability, we plan to hire about 30 of these staff as regular employees in fiscal 2007.

■ Employee Breakdown by Type



System for Rehiring Employees After Retirement

In April 2001, NGK introduced 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, 2007, we had 263 rehired employees, accounting for 6.2% of the total workforce.

Furthermore, NGK has rehired middle management (administrative) staff after retirement on an individual basis for some time, but this system will be implemented on a company-wide basis from fiscal 2007. Going forward, we will make even more active use of the abilities of middle management that wish to be rehired.

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, 2007, women accounted for 10.5% of the workforce, and this figure includes five women in management positions. The proportion of disabled employees throughout 2006 declined to 1.49% due to an increase in the overall number of employees. As this figure falls below the legally mandated ratio of 1.8%, we have fully committed ourselves to implementing the spirit of laws covering employment of people with disabilities in the future.

In particular, hitherto people with disabilities have only been employed at some of our manufacturing facilities. Going forward, we will increase the categories of jobs available for people with disabilities, including office duties.

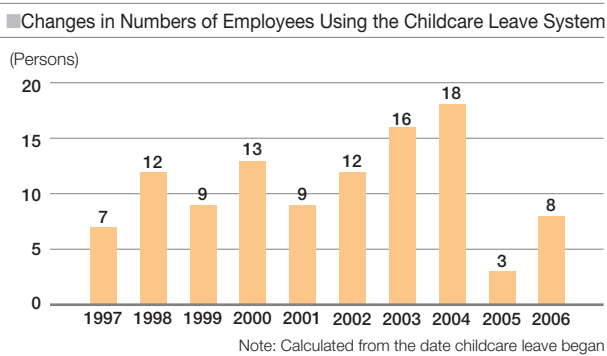
Enhancing Motivation through Optimal Job Allocation

To foster autonomy among employees and enhance their motivation to work, NGK operates the internal Free Agent (FA) system, an internal job application system, a career tracking system and a follow-up system for younger employees.

The internal FA system enables employees to publicize the experience and skills that they have acquired themselves, and register for positions and duties that they desire. In fiscal 2006, there were applications for seven positions based on this system. Based on the internal job application system, the Company discloses to employees the positions that it requires and appoints those applicants that are suitable for these positions. In fiscal 2006, three positions were advertised. The career tracking system supports the improvement of employees' skills, and the follow-up system for younger employees comprehensively supports new employees until their fourth year in the Company. We are steadily implementing these systems.

Helping Balance Work and Home

In tandem with the aging of society and the declining birth rate, employees are increasingly required to become actively involved in childcare and nursing care. NGK has therefore 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 and nursing care based on the spirit of laws to support the raising of the next generation.



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 we have established 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 through such measures as arranging visits and consultations for employees, and raise the issue when conducting training specific to positions 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.

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 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

VOICE

“I feel at ease giving birth and caring for my child.”



Jyunko Ohya

Public Relations
Office

In preparation for having a baby this summer, I took leave for childbirth and childcare.

I had previously found out through preparing articles for the Company newsletter that many of my more senior female colleagues had effectively combined childbirth and childcare with work. I therefore thought that NGK was a company that appropriately understood the requirements for childbirth, childcare, and returning to work after having a baby, and I was not uneasy about leaving my job to have a baby. In fact, when I applied for leave, my supervisor asked me when I would be returning to work, which made me feel happy.

I think that combining childcare and a job after returning to work is really hard. However, when I see the attitudes of my more senior colleagues who are caring for their children and doing their jobs by using systems such as the one that allows shorter working hours for employees, I can see that they are not only making a big effort, but also receiving warm support from those around them. We are fortunate to have an environment where we can combine having children with work, and I will also do my best while taking advantage of this situation.

Human Resource Development Initiatives

NGK considers personnel development to be one of the most important issues in responding to changes in the personnel structure at workplaces in Japan, such as employees who are more diverse, are older or who have fewer children. Personnel development is also important in terms of developing and expanding business worldwide. In April 2006, NGK formulated a Basic Policy on Human Resource Development, and in accordance with this policy we 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.

Systemization of Education

Human resource development is a very important for NGK, as we provide products and technologies that contribute to the environment, based on our original ceramics technology.

Above all, we believe that human resource development is important in terms of overcoming the "2007 problem" associated with a change of generation, reliably handing down and inheriting skills and technologies at manufacturing sites, enhancing the sense of unity in the workplace amid the increasing diversity of employees, and raising the motivation of every single employee.

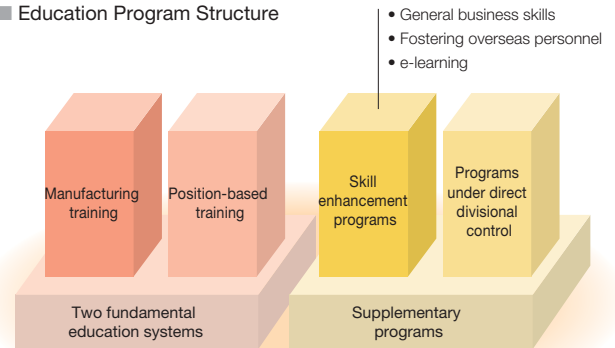
Based on an awareness of these problems, NGK simultaneously and intensively reinforced its systems to promote human resource development as well as related software (education and training programs) and hardware (training facilities) in fiscal 2006.

First, in relation to promotion systems, we established a Company-wide Education Council composed of top management executives that serves as a supervisory organization for personnel development. In addition, we fully over-



Comprehensive Education and Training Guidebook

Education Program Structure



hauled our education system and restructured it into two new major educational systems that revolve around manufacturing training and position-based training.

As another initiative, we established NGK Human Resource Development Co., Ltd., a specialist company that promotes the planning and operation of actual education and training. Then, in July 2006, we distributed the "Comprehensive Education and Training Guidebook," which summarizes our various new educational programs, to all employees in an effort to disseminate the significance and curriculum of the new educational systems.

Aiming to Bolster On-site Capabilities

The objective of manufacturing training, one of the two major education programs, is to strengthen manufacturing on-site capabilities by steadily passing down NGK's original skills and technologies in the area of manufacturing.

"Standard-raising training," which is one type of manufacturing training, emphasizes practical experience relating to basic manufacturing technologies. It is a program that deepens participants' interest in manufacturing and enables them to really experience that interest. With that aim, in October 2006, NGK brought together manufacturing facilities and equipment that were actually being used and established a training center that reproduced an actual site of manufacturing inside the Nagoya Works as a practical training location. At this center, highly experienced technicians provide guidance to young employees in each subject, such as molding, firing and drying, and maintenance.



On-Site Capability Reinforcement Training: Report Council in Second Year of Leaders' Training

In addition, “On-site capability reinforcement training” puts priority on training personnel that the Company expects to become the “core” at actual manufacturing sites, and they are selected from managers and leaders in manufacturing divisions. Through training and practice over a period of one year in a tense atmosphere that resembles a *dojo* (hall for martial arts training), we develop core personnel that will be able to promote reforms at manufacturing sites. The training program is severe and highly densely structured, and those that complete training take back to their respective workplaces confidence as core personnel and the feeling that they have achieved something.



Hands-on Training at a Manufacturing Dojo

Invigorating Internal Communication

“Position-based training” is aimed at employees that have newly joined the Company to middle management (supervisory personnel) and focuses on stimulating and enhancing role awareness and motivation according to the respective job position. In addition, it comprises a multilayer combination of such educational programs as compliance, environmental issues, human rights issues, safety and mental health, which are indispensable in today’s corporate activities.

In fiscal 2006, we introduced training to enhance communication skills across all job positions. Amid the increasing number of middle managers concerned about providing guidance to their subordinates and young employees who tend to avoid contact with others and intervention, communi-

cation is essential to the invigoration of the corporate culture. Furthermore, we bolstered compliance training, doubled the number of training opportunities compared to the previous fiscal year, and endeavored to thoroughly ensure awareness of compliance. These activities make employees recall what they have learned when they undergo promotion and at certain particular age levels, and it is always necessary to input the latest information.

Opening of Toba General Training Center

In March 2007, NGK opened the Toba General Training Center on a plateau looking down on to Toba harbor in Toba, Mie Prefecture as a venue for various kinds of education and training. It is equipped with 30 accommodation rooms, training rooms, and seminar rooms and we will utilize it as a venue not only for employees in Japan, but also for global training, including employees at overseas Group companies.



External View of Toba General Training Center



Training Session at Toba General Training Center

VOICE

“I completed the ‘on-site capability reinforcement’ training and gained confidence.”



Koji Fukumoto

Casting Group,
New Metals Division

From June 2006 to February 2007, I undertook leaders’ training as part of on-site capability reinforcement training aimed at operation managers and section chiefs. There were twenty trainees. At first, I was shocked that the training was too rigorous, and I ended up having a negative reaction both physically and mentally (he laughs). What I mean is that I had naturally carried out my work earnestly as the person responsible for the solution line at the metals plant before my training as well, and I also had experience as a section chief. Therefore, although I undertook the training with that sense of pride, its rigorousness made my confidence disappear.

However, once I realized that the company and I would not grow if we maintained the status quo, I ended up undertaking the training with a

forward-looking view and a sense of crisis. I learned methods designed to achieve goals, including various improvement tools such as safety measures and implemented them during the training. Then by repeating this cycle of learning, implementing and presenting the results, I gained confidence. When I returned to the workplace as well, I ended up taking responsible action as a leader of twenty workers.

Now that I think back, the training itself was actually hard, and it sometimes felt like a really tough kind of close-knit team-based sports activity. However, thanks to the training, I became more conscious of my colleagues while training in a cross-divisional team, and I myself became motivated, serious and persevering.

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 foundation of a company's existence, and ensuring them is a social responsibility.

Therefore, while observing laws and regulations and based on cooperation with our workers, we are endeavoring to prevent industrial injury through activities in accordance with our Occupational Safety and Health Management Systems (OSHMS)*.

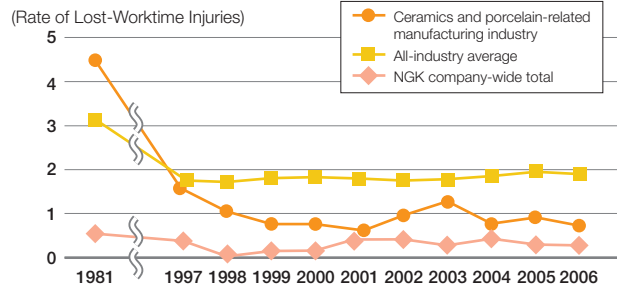
Measures Implemented in Fiscal 2006

NGK's safety and health activities in fiscal 2006 focused on the preparation of the Company's Occupational Safety and Health Management Systems (OSHMS). We determined the specific implementation details for five categories of safety and health management: Safety and sanitation management; External construction safety management; Health management; Education and training; and Traffic safety. During the year, we systematically promoted initiatives in these areas. At the same time, we revised our Safety and Health policy in association with the introduction of the OSHMS. Furthermore, as fiscal 2007 will mark the first year of the OSHMS, we plan to concentrate our efforts on the five categories above, with the core focus on the expansion of the OSHMS. In fiscal 2006, the special activity that we carried out was safety declarations from department managers and related department managers, which were posted in the workplace. We will continue this activity in fiscal 2007 as well.

Introduction of OSHMS

NGK has steadily expanded safety and health activities for a long time, with the main focus on its facilities in Nagoya, Chita and Komaki. As a result, the operational environment has significantly improved, and this includes a reduction in the number of labor accidents. Compared with around 1981, when the most accidents occurred, the number has decreased to about a quarter of that level. However, during the past ten years, the number has remained flat at around ten. Moreover, there have been changes in the form of employment, such as an increase in non-regular employees at manufacturing sites, and a large number of veteran employees with expertise in safety and health management have also left the Company. Consequently, to achieve zero work-related accidents, it has become necessary to find a new way to systematically and continuously implement safety and health activities.

Changes in Rate of Lost-Worktime Injuries



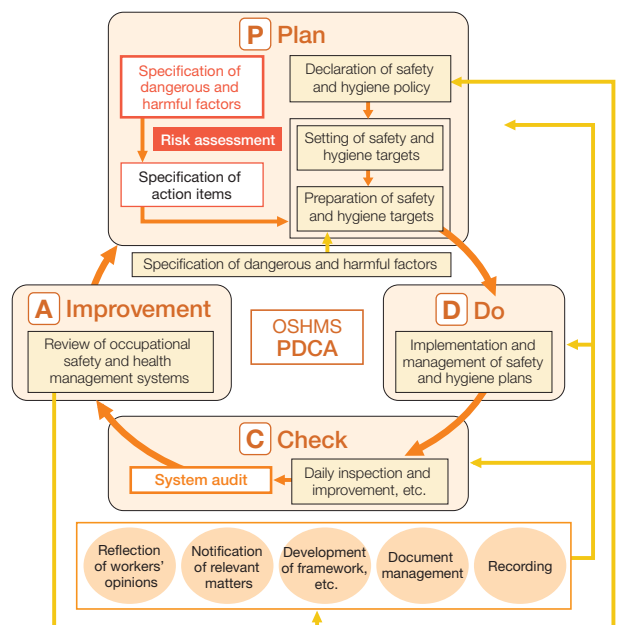
* Rate of lost-worktime injuries: One safety indicator showing the rate of occurrence of labor accidents, which is calculated based on the formula below.
Rate of lost-worktime injuries = No. of lost-worktime injuries / total actual working hours x 1,000,000 hours

Changes in Work-related Accidents



Accordingly, in fiscal 2006, NGK decided to introduce the OSHMS, and as part of the preparation for its introduction, the company provided external training for secretariat members and educational activities for management executives and middle management. In fiscal 2007, we will introduce the OSHMS simultaneously at three facilities and assess whether the PDCA cycle of Plan, Do, Check, Act is operating effectively. In addition, we have reviewed risk assessment, which is a core activity of OSHMS.

Structure of Occupational Safety and Health Management Systems



* OSHMS: These are safety and hygiene management systems that aim to contribute to a rise in the level of safety and hygiene at factories and offices by endeavoring to reduce the potential risk of labor accidents, promote the health of workers, and encourage the formation of a comfortable workplace environment.

■ Company-wide Activities

Category	Fiscal 2006 Safety and Hygiene Activities		Fiscal 2007 Safety and Hygiene Activities
	Targets	Actions Implemented	Targets
Safety and sanitation management	• Prepare for implementation of the Occupational Safety and Health Management System (OSHMS)	OSHMS education (300 trainees) Training for risk assessment staff (400 trainees)	• Implement OSHMS
	• Strengthen joint safety and sanitation management with allied manufacturing companies in the same complex	Carried out contractor liaison meetings and strengthened cooperation	• Ensure daily activities are carried out (KY*, Hi-yari Hat (near-miss accidents), safety proposals, patrols, 5S, etc.)
	• Ensure certified work management	Prepared lists showing assignment of certified persons and displayed them in workplace	• Ensure management of certification operation
	• Gradually enhance the "5S" activities • Program to eliminate unsafe activities	Carried out individual activities at each business office	• Strengthen joint safety and sanitation management with allied manufacturing companies in the same complex
Health management	• Ensure health management of employees who work many hours of overtime	Carried out interviews and lectures by industrial physicians	• Prevent damage to health caused by overwork • Strongly promote mental health care
Education and training	• Promote planned acquisition of certifications, and education in eliminating unsafe activities • Safety and hygiene follow-up education for manufacturing contract employees	Increase in number of special education and divisional trainers (total of 16 sessions; 400 trainees)	• Promote systematic acquisition of certification • Reinforce safety and hygiene education (systematization and narrowing of aims)
Traffic safety	• Education and training for safe driving managers and commercial-vehicle operators	Carried out traffic supervision and training seminars	• Education and training for safe driving for managers and commercial-vehicle operators • Implementation of traffic KY*

* KY: Risk prediction

New Risk Assessment Measures

NGK introduced risk assessment in fiscal 2001. In fiscal 2006, however, with the aim of attempting to reduce risks in the workplace more effectively, we partly revised our action policies and risk level evaluation criteria and made them more specific and easier to understand.

■ Action Policies

1. In risk reduction measures, priority shall be placed on ensuring essential safety and engineering measures when the risk level is high.
2. In the case of responses in terms of "software," including the provision of information, education, and personal protection, the unsafe activities of people and human error shall be taken into account, and the risk evaluation level shall not be lowered.
3. All workplace risks, without any omission, should be actualized, and when the risks are high, and risk reduction measures have not been implemented, the risks shall be managed as residual risks and information shall be shared throughout the entire workplace.

With regard to these revisions, we reflected the results of trials at a model workplace and we carried out a training course unique to NGK, based on guidance from the Japan Industrial Safety and Health Association. Workplace leaders, including middle management (managerial staff), undertook half-day training sessions four times, and foreman class staff undertook one-day training sessions eight times. A total of 400 staff members participated and they undertook the training with enthusiasm.



Risk assessment training

VOICE

"I am aiming to achieve zero risks."



Masato Okada
No. 1 Manufacturing Group,
Komaki Plant
Manufacturing Department,
Electrical Insulator Division

From January to February 2007, I undertook risk assessment training. Although we had been carrying out activities aimed at ensuring zero accidents at our manufacturing site, I relearned ways of looking at risks and considering them, and so I realized that our safety activities so far contained some blind spots. I brought back the knowledge I had gained from my training to the workplace, and we all carried out risk assessment by using new evaluation indicators. As all employees participated, we managed to identify risks that had previously been overlooked.

What distinguishes our revised risk assessment is the fact that human measures alone have not ended up reducing the level of risk. Moreover, as the subjects of this risk assessment are all the workers, I believe this also raises the safety awareness of all the workers, so the activities become more effective. The first step in achieving zero accidents or disasters is to reduce risks. In fiscal 2007, I will take solid steps to reduce risks, in accordance with the results of the latest assessment.

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 this view of absolute commitment to quality is inherited effectively, we have formulated the quality policy and objectives of NGK. We are developing various initiatives and promoting their dissemination throughout NGK. For example, based on our quality assurance system, we are developing quality-related activities, carrying out quality-related education, and improving our quality improvement activities.

Initiatives Implemented So Far

The quality that is demanded of companies has expanded from quality that is natural to customers, in other words, quality cost delivery (QCD), to attractive quality that combines differentiation from competitors in technical service and other areas. Furthermore, as society at large has generally adopted a more rigorous stance on quality, it is necessary to have a greater awareness of the importance of quality based on safety and hygiene and environmental conservation, or what is called corporate social responsibility (CSR). In other words, we live in an age when the ability to provide “corporate quality,” which encompasses all of these elements, to society and customers is evaluated. To cater for this requirement, NGK revised its company-wide quality policy in April 2007. We have developed a framework that responds to the changes of the age.

Corporate Quality Policy

NGK is dedicated to quality and committed to providing valuable products and services that are trusted by our customers and respected by society

Corporate Quality Objectives

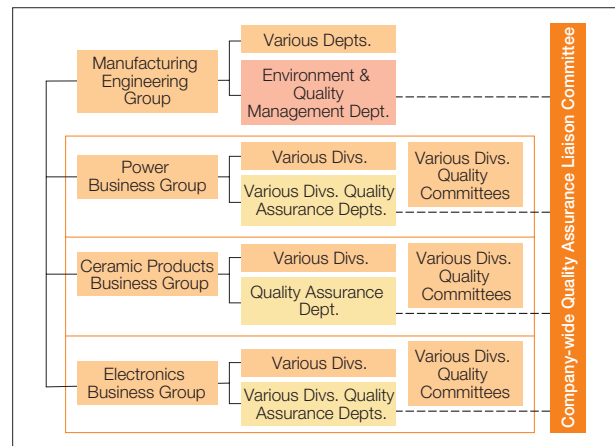
Striving for Zero Customer Defects while driving continuous improvement

Quality problems can take away the trust that a company has earned through efforts over a long period of time. We believe we should deal with this issue by caring about our customers and eliminating customer complaints in order to establish more solid respect in the market. Accordingly, we adopted “Striving for Zero Customer Defects while driving continuous improvement” as our company-wide quality objective from fiscal 2007.

Quality Assurance Activities

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. We have developed a quality assurance system with customers as the standard, and if a particularly significant quality problem arises, it is reported to the CSR Committee.

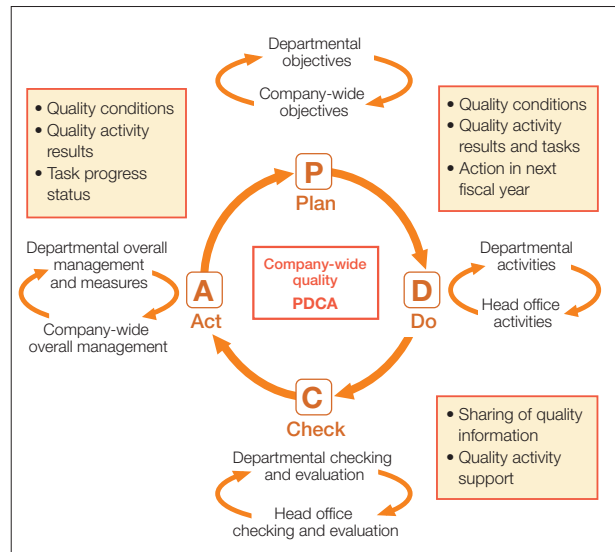
Quality Assurance System



Note: As the Engineering business was spun off from NGK, the quality assurance system of the Environmental Systems Division was also spun off.

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, a department associated with automobile emission purification components has acquired TS 16949, an even more rigorous quality certificate.

Structure of Company-wide Quality Activities



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.

Thus, quality activities at NGK are based on a Plan, Do, Check, Act (PDCA) cycle at a company-wide level, where business departments and head office departments cooperate and act in an integrated manner.

We have also introduced a system of policy management aimed at middle management (managerial staff) and responsible officials. The aim of this system is to achieve management objectives reliably and efficiently by formulating plans, regularly checking them, working to achieve goals while following up, and reflecting the results and the lessons learned each fiscal year in the activities of the next fiscal year.

Quality-related Education

NGK carries out activities that put priority on the customer in all kinds of areas. Furthermore, based on the principle that every employee should carry out their job better by adopting the customer's viewpoint for aftersales processes, we are conducting quality education and training through our "Manufacturing training" and "Position-based training" programs.

In quality-related education that forms part of manufacturing training, leaders in manufacturing departments learn improvement steps such as approaches to the improvement of defects through onsite practice, and by carrying out training where they implement these steps in their own workplace, they enhance the effectiveness of measures aimed at quality improvement.

In the case of quality-related education that forms part of position-based training, NGK provides quality training that includes quality management methods corresponding to each job position level.

Quality Improvement Activities

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 carried out by teams.

In fiscal 2006, company-wide manufacturing training was launched on a full scale. In response, while also incorporating

new methods in QuiC activities, we expanded activities aimed at strengthening onsite capabilities, with the main focus on improvement activities in the Group.

For fiscal 2007, NGK has adopted the activity policy of "further enhancing improvement capability" and the activity slogan of "Let's learn improvement methods in order to produce results." In addition, to further invigorate QuiC activities, we will promote training to support quality improvement activities. This training will consider problems that occur onsite as tasks and entail actually resolving these problems. Through this process, the training will become even more centered on actual sites in accordance with onsite conditions.

Proposal Activities

Proposal activities are a system that works as follows. Employees themselves record on a form what they have "improved" in order to do their jobs better, and then they submit these forms. Through the evaluation and recommendation of these results, they measure the contribution to the Company.

In fiscal 2006, as this system marked its 50th anniversary, we expanded activities based on the target of 100% participation. As a result, non-manufacturing departments were unable to achieve their target, but manufacturing departments achieved their target. In addition, as part of the 50th anniversary commemoration ceremony, NGK published the "Proposal-Making Book." This book covers the subject of learning the basis of proposals, including how to write proposals and the fact that communication is important in issuing proposals, and it will help to invigorate proposals going forward.



Proposal-Making Book

Activity Name: QuiC Activity

We have revised the name of traditional quality system (QS) activities

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

■ Small Group Activities

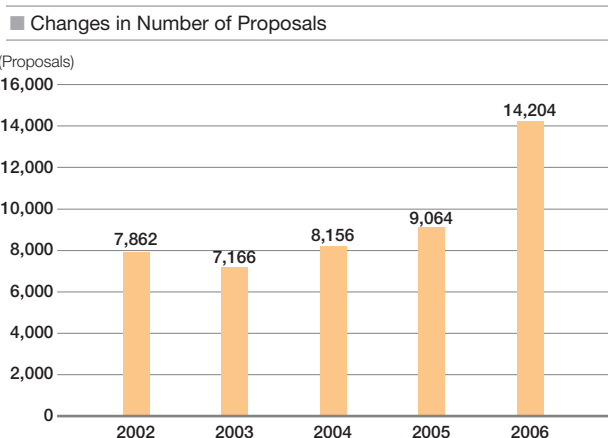
Small group activities are activities where teams improve the quality of products, services, and work by making use of the rationale and methods of quality control. They aim to enhance the abilities of each person, achieve self-realization, and foster team work. NGK holds company-wide presentations conducted by teams selected from each department twice a year.

At the QuiC Activity Results presentation held in May 2006, 12 case-studies were presented, and the better ones were given an award. The award-winning cases were all superior in terms of their understanding and rationale regarding QC and the way they made the PDCA cycle run smoothly. They also achieved concrete results in terms of improving

onsite capabilities. In November, we also held a company-wide QuiC activity presentation, where actual examples of Group improvement activities and the best proposal examples were announced.



Fiscal 2006 QuiC Activity Results Presentation



VOICE

“I gained a new awareness of connections with people.”



I received the top evaluation in the Young Persons Division for proposal activities, and in November 2006 I went to Singapore for a week to take part in overseas ship-based training. Probably because the NDF plant is a new plant, there were no other people around me who had taken part in ship-based training, and so I was very anxious before taking part. Once I took part in the training program, I found that the participants were varied in terms of companies, age, and job positions. As we were split up into groups and given a lot of tasks to deal with, we naturally had close contact with each other, and it was a good opportunity to realize again that everything is based on connections between people. I still stay in contact with many of those people even now. What's more, through this training I also managed to take a new

look at myself.

On this occasion, I took part in the ship-based training because, when we expanded the plant due to business growth, I made many improvements aimed at creating a better workplace and I endeavored to ensure that they remained visible. However, many were just small things such as improving the efficiency of operations or prolonging the life of components. Therefore, going forward, I intend to focus my efforts on larger improvements in the area of machinery and to develop equipment that can constantly continue to make good products.

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 regularly 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.

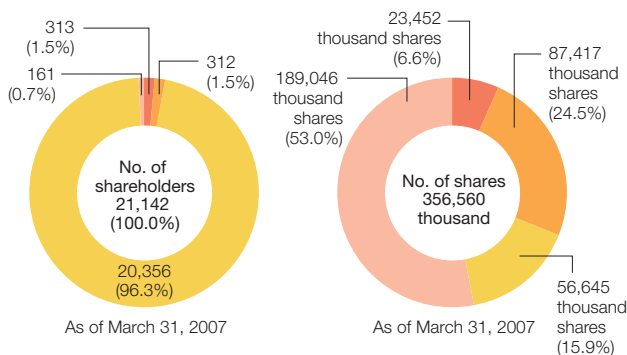


Results presentation meeting

Status of Shares (as of March 31, 2007)

Total number of shares authorized:	735,030,000 shares
Total number of shares issued:	356,560,000 shares
Number of shareholders:	21,142

Share Distribution



■ Japanese corporations ■ Foreigners
■ Individuals, other ■ Financial institutions

Share information

General Meeting of Shareholders

NGK holds open shareholder meetings that welcome individual shareholders. In fiscal 2007, we are endeavoring to arrange even more welcoming proceedings for shareholders by employing the services of a female narrator and other measures. In the entrance lobby of 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/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 earnings results presentations to shareholders' meeting materials, business reports and annual reports.

3 Electronic Disclosure

Balance sheets and income statements are made available on NGK's website.
<http://www.ngk.co.jp/ir/kessan>

Balance sheets and income statements are made available on NGK's website:

<http://www.ngk.co.jp/ir/kessan>

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 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 Results

We hold explanatory meetings on NGK’s business results and purchasing policy for major suppliers. At these meetings, NGK’s financial and materials managers provide explanations regarding earnings forecasts and points about procurement initiatives from a CSR viewpoint (environmental and legal aspects). These meetings deepen the suppliers’ understanding of NGK, and we appeal for further cooperation from suppliers as well in order to provide better products to society.



Briefing on business results (held in May 2007)

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 43.)

* NGK’s environmental equipment business which used to be included in the engineering business has been transferred to a new company in the NGK Group since fiscal 2007.

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.

Operation of the NGK Foundation for International Students



Foreign culture interchange class

Since April 1997, NGK has been providing assistance to international students, mainly accommodation and scholarships. In March 1998, we established the NGK Foundation for International Students, and have been developing the operations of 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. As of the end of 2006, the NGK International House has accommodated a total of 237 residents. Additionally, to create opportunities for interchange



International students who have received NGK Scholarship Certificates

between international students supported by the foundation and local residents, non-Japanese language classes have been held for local residents at the House since April 2000, with international students as the teachers. As of the end of 2006, a total of 351 local residents have taken classes. In addition to non-Japanese language classes, cross-cultural interchange classes were also launched in 2006. As international students present their own country's culture and national costume, for example, the House has become a venue that is further deepening interchange with local residents.

Scholarships of 120,000 yen per month per undergraduate and 160,000 per month per graduate are provided to 20 students every year. At the end of 2006, a total of 126 students had received these scholarships. In fiscal 2006, NGK launched a website that serves as an interchange forum for international students that have returned to their own countries and international students that are currently staying in Japan. Various kinds of messages were communicated through the site.



NGK International House

VOICE

"It was just like living as an international student in my own house."



Itsuel Bastos
From Mexico
2nd year of doctoral course
Nagoya University,
Graduate School of Medicine

NGK International House is very clean and comfortable to live in. It was very convenient to have four washing machines on each floor. When I am busy with my research and my laundry has piled up, I do my laundry quickly by using two washing machines at the same time. I was happy to serve as a teacher and talk

about Mexico in interchange regarding foreign cultures with local residents. I remember when I came back to the House for the first time after going out, I felt I was in my own home when I heard the caretaker say "Welcome back!" It's fantastic to have such a house and I am very grateful to NGK.

"I'm grateful to have an ideal environment for study."



Karnan Shibusundaran
From Sri Lanka
3rd year of doctoral course
Nagoya City University,
Graduate School of Medical Sciences

NGK International House is just like a metropolis for study. It has study rooms where you can concentrate on studying and computers connected to the Internet, and there is a caretaker to enable international students to live in safety. The caretaker also acts as an advisor to the students in the House, understands our

daily lives, and caters for our requirements by communicating with the foundation. I have had the good fortune to be here for two years, and I believe I have grown both academically and mentally.

Holding Factory Tours

NGK has been holding factory tours for locals and students in order to help them deeply understand the art of manufacturing and environmental conservation activities. In fiscal 2006, the Nagoya Plant held ten factory tours mainly comprising junior high school students, senior high school students, and university students, for a total of 164 people. At the Chita Plant, five factory tours involving 143 people were held, including one for the residents in the vicinity of the plant conducted in November 2006. The Komaki Plant also held 14 factory tours for a total of 215 people in fiscal 2006.



Local junior high school students touring the Nagoya Plant

Support for 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.

Since fiscal 2006, NGK has been storing emergency supplies for local residents in its facilities at the request of the Mizuho Ward Office in Nagoya.

Conservation of Regional Environment

Employees at each of NGK's plants have been actively participating in cleanup activities in local communities, and are carrying out voluntary activities to protect the environment surrounding each plant.

In fiscal 2006, 433 employees from the Nagoya Plant took part in three activities. In addition, 180 employees from the Chita Plant participated in six activities while 150 employees



Cleanup event

from the Komaki Plant were involved in three activities. Thus, a total of 763 NGK employees took part in 12 activities to conserve the environment surrounding each plant.

Disaster Relief Activities

In fiscal 2006, NGK contributed 5 million yen through the Japan Red Cross Society to help relieve the damage caused by a major earthquake that struck the central part of Java Island in Indonesia. NGK's local subsidiary P.T. NGK Ceramics Indonesia also contributed 100 million rupiah (about 1.2 million yen) to help relieve the damage caused by the same earthquake.

Overseas Community Activities

In fiscal 2006, NGK Ceramics USA, Inc. (ACU) contributed \$20,000 (about 2.26 million yen) to a non-profit organization that raises funds mainly for supporting children's success and promoting health and wellness, a local school district, the YMCA, and other organizations.

In July 2006, NGK Ceramics South Africa (Pty) Ltd. donated 100,000 rand (about 1.8 million yen) as activity funds to local non-profit organizations that are promoting self-support activities of the residents of poverty-stricken areas as well as giving guidance and assistance to prevent the spread of the AIDS virus (HIV).



Support for a non-profit organization (NGK Ceramics South Africa)

Environmental Activities

A Report on NGK's Environmental Activities

Highlights of 2006 Environmental Activities

1 Inauguration of Second Five-year Environmental Action Plan

In order to fulfill our corporate social responsibility, we commenced activities based on a new Environmental Action Plan aimed at realizing higher targets.

2 Introduction of Environmental Management Indicators

We introduced the domestic consolidated basic unit as an indicator for CO₂ emissions. In addition, as an environmental CSR initiative, we applied for a waste and recycling governance rating, under the supervision of the Ministry of Environment, Trade and Industry, and became registered in the Gold Governance category.

3 Achievement of Medium-Term Target in CO₂ Reduction Plan

Amid business expansion and an increase in production volume, we endeavored to reduce CO₂ emissions on a company-wide basis. As a result, we achieved our target for CO₂ reduction over a three-year period from 2004.

4 Launch of Measures to Reduce Total Volume of By-Products

Having achieved zero emissions of by-products in 2005, we launched measures to cut the total volume of by-products generated. We achieved a 5% reduction compared to 2005.

5 Management of Chemical Substances

We reduced atmospheric emissions of solvents covered by the PRTR Law by about half. We initiated investigations and actions to respond to the Registration, Evaluation and Authorization of Chemicals (REACH), the new European chemicals regulation that came into force in June 2007.

■ Activities Covered

(NGK Insulators and manufacturing companies among its 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

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.

Environmental 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.

Environmental Action Guidelines

- a) Strive towards the development, design, and manufacture of products that are environmentally friendly, and that have a low impact on the environment.
- b) 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.
 - 1) Promote energy conservation in processes and equipment, and work towards curbing CO₂ emissions.
 - 2) Promote resource savings and recycling, and work towards the reduction of by-products.
 - 3) Reduce risks through the appropriate usage and management of chemical substances.
 - 4) Give priority to the procurement and purchasing of environmentally friendly materials, parts, products, and equipment. Furthermore, strengthen partnerships with suppliers.
- c) Enhance environmental management systems from a global viewpoint, and implement continuous reforms in order to reduce the impact on the environment.
- d) Strictly adhere to laws, regulations, and other requirements. Furthermore, establish voluntary standards, and work towards increased environmental conservation.
- e) 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.



Takeyuki Mizuno
Director and Senior Vice President
Chairman of Environmental
Protection Committee

Further Improvement Toward Achievement of Next Targets

In 2006, the first year of the Second Environmental Action Plan, we generally achieved our targets through the efforts of each department. However, to achieve the high-level targets set out in the Second Environmental Action Plan, we will concentrate the awareness and actions of our employees and step up our efforts even further.

NGK is promoting measures aimed at cutting CO₂ emission volume by 7% in 2010 compared to 1990. In 2006, we aimed for a target of 163,000 tons, equivalent to the level in 2003, and even though production volume increased, we managed to keep emissions down to 166,000 tons. In addition, we established basic unit per sales value of production as an indicator for domestic consolidated accounts as well, including domestic Group

companies. Based on a new approach and concepts, we are proactively working to curb emissions from the varied viewpoints of manufacturing sites, technologies, and equipment.

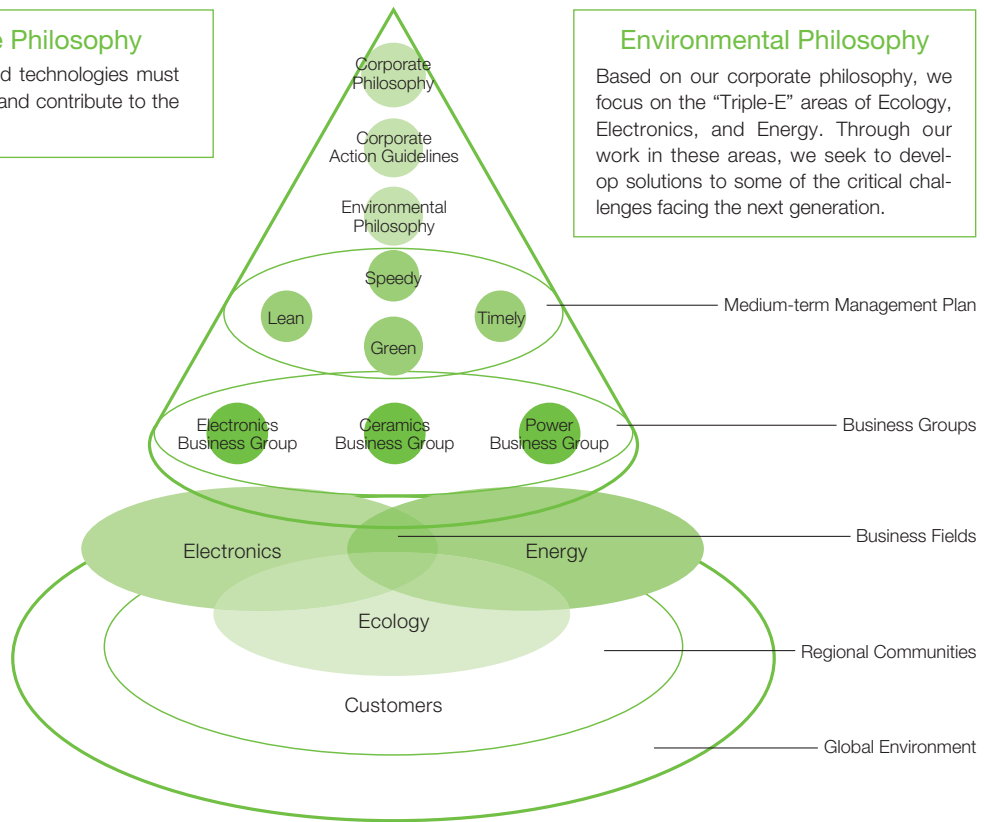
As regards curbing the generation of by-products, in 2006, we initiated measures to reduce total volume generated while maintaining zero emissions.

In the management of chemical substances, we achieved our reduction target for atmospheric emissions of PRTR-listed solvents. We will continue to reinforce our endeavors in this area.

Environmental load is projected to rise in tandem with business expansion. However, we aim to make further improvements toward the achievement of targets leading up to 2010.

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

Environmental Philosophy
 Based on our corporate philosophy, 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.

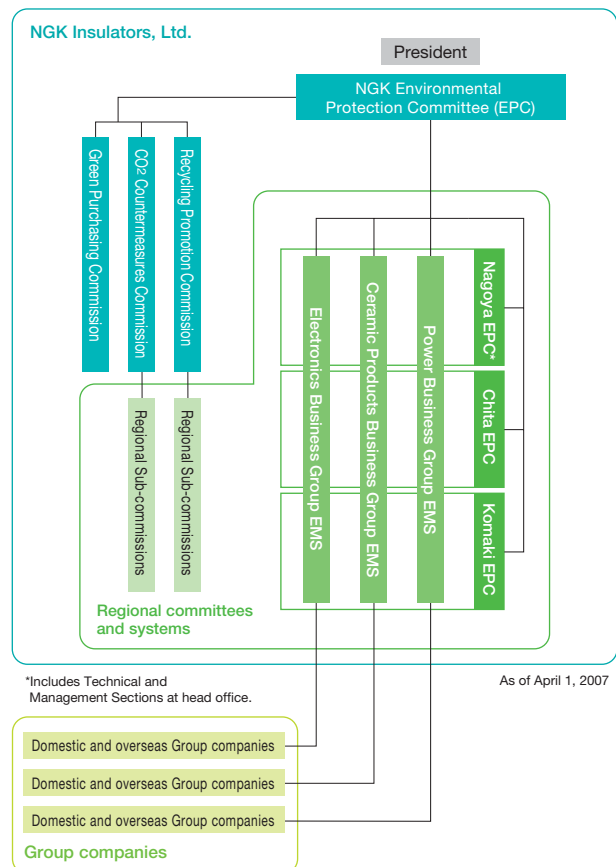


Promoting Environmental Activities

NGK promotes initiatives related to environmental issues through its original environmental management framework comprising the Nagoya, Chita, and Komaki plants as well as through 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, based on both the business group-based environmental management system and the manufacturing plant-based system, we plan to protect the environment surrounding local communities and further enhance initiatives for helping the global environment.

The Environmental System Business Group, which handles the Engineering Business, was spun off from NGK from 2007 and transferred to a Group company. Consequently, it was excluded from the promotion system.



Second 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. From April 2001 until the end of March 2006, based on our first Five-year Environmental Action Plan, which is designed to further improve the quality of Green Management, we made steady progress in carrying out environmental activities and strengthening environmental management, including at Group companies both in Japan and overseas. From 2006, based on our Second

	Item	Targets of Second Five-year Environmental Action Plan (2006 to 2010)	2006 Environmental
			Target
Management	Promote environmental management (compatibility of business and environment)	<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"> • Environmental CSR activities Investigate institution of environmental management indicators Introduce environmental ratings
		<ul style="list-style-type: none"> • Promote consolidated environmental management • Promote integration of environmental management data 	<ul style="list-style-type: none"> • Support environmental management of overseas Group companies • Investigate introduction of environmental management database
Factory	Reduction of environmental load	<ul style="list-style-type: none"> • Reduction of CO₂ emissions NGK: 7% reduction from 1990 Domestic Consolidated: Basic unit per sales value of production (note 2) 7% reduction from 2005 	<ul style="list-style-type: none"> • Reduction of CO₂ emissions NGK: 0% increase from 2003 (2003 emission volume: 163,000 tons)
		<ul style="list-style-type: none"> • Reduction of by-products generated NGK: 25% reduction from 2005 Domestic Consolidated: 15% reduction from 2005 	<ul style="list-style-type: none"> • Reduction of by-products generated NGK: 5% reduction from 2005 Domestic Consolidated: 2% reduction from 2005
		<ul style="list-style-type: none"> • Reduction of atmospheric emission of PRTR solvents NGK: 10% reduction from 2005 Domestic Consolidated: 10% reduction from 2005 	<ul style="list-style-type: none"> • Reduction of atmospheric emission of PRTR solvents NGK: 2% reduction from 2005 Domestic Consolidated: 2% reduction from 2005 • Step up level of chemical substance management Establish work flow for management system
Products	Provision of environmentally friendly products	<ul style="list-style-type: none"> • Step up level of environmentally conscious design 	<ul style="list-style-type: none"> • Promote provision of environmentally friendly products and products with low environmental load (1) Establish and disseminate methods to design and develop environmentally friendly products and products with low environmental load (2) Develop human resources associated with design and development of environmentally friendly products
	Promotion of Green Procurement and Logistics	<ul style="list-style-type: none"> • Reduce the environmental impact of procurement • Minimize emissions from logistics 	<ul style="list-style-type: none"> • Expand green procurement • Acquire data corresponding to shippers under revised Energy Conservation Law Establish system and collect data
Stakeholders	Promotion of citizenship	<ul style="list-style-type: none"> • Promote activities that benefit local communities 	<ul style="list-style-type: none"> • Take part in local cleanup activities • Hold summer festivals • Take part in industry fairs, etc.
	Improvement of communication	<ul style="list-style-type: none"> • Enhance disclosure and two-way communications 	<ul style="list-style-type: none"> • Hold factory tours and informal social gathering • Participate in EPOC environmental partnership
	Education and Awareness-raising	<ul style="list-style-type: none"> • Enhance environmental education 	<ul style="list-style-type: none"> • Provide job position-based environmental education

Note 1: Evaluation standards for self-evaluation: O Target achieved △80% or more of target achieved X Less than 80% of target achieved

Note 2: Consolidated basic unit per sales value of production: (1) Establishment of domestic consolidated targets that were under consideration from 2005 and (2) CO₂ emissions (tons) / domestic sales (excluding non-manufacturing divisions) (hundreds of millions of yen). We have excluded the Environmental Systems Business portion from sales because we adopted manufacturing business domains for the scope of application.

Five-year Environmental Action Plan, we initiated measures aimed at the realization of higher targets in order to fulfill our corporate social responsibility.

Furthermore, in 2006, we established domestic consolidated targets relating to the curbing of CO₂ emissions, which we had been considering in 2005. In 2007, we will launch activities on a full scale.

Action Achievements		2007 Targets	Reference Page
Achievement	Self-Evaluation (note 1)		
<ul style="list-style-type: none"> Investigated introduction of environmental efficiency relating to CO₂ and by-products Certification and registration of by-product and recycling governance rating Third-party audit of environmental and social report 	○	<ul style="list-style-type: none"> Environmental CSR activities <ul style="list-style-type: none"> (1) Establish environmental management indicators (CO₂, by-products) (2) Ratings (implement Nikkei survey, investigate Eco-Fund survey and Sustainable Management participation) 	P.32,33
<ul style="list-style-type: none"> Implemented audits of overseas Group companies <ul style="list-style-type: none"> (1) Evaluated environmental management status (2) Evaluated environmental risk, implement improvement guidance Formulated overall database plan 	○	<ul style="list-style-type: none"> Promote consolidated environmental management <ul style="list-style-type: none"> (1) Evaluate overseas environmental load estimates (CO₂, by-products) (2) Propose system for overseas consolidated management Promote integration of environmental management data <ul style="list-style-type: none"> (1) Develop and introduce database 	P.32,33
<ul style="list-style-type: none"> Reduction of CO₂ emissions NGK: 2% increase from 2003 (Average emission volume during 2004–2006: 161,000 tons/year) 	△	<ul style="list-style-type: none"> Reduction of CO₂ emissions NGK: 5% or less increase (175,000 tons) in emissions from 2006 Domestic Consolidated: Basic unit per sales value of production 2% decrease or more from 2005 	P.36,37
<ul style="list-style-type: none"> Reduction of by-products generated NGK: 5% reduction from 2005 Domestic Consolidated: 2.5% reduction from 2005 	○	<ul style="list-style-type: none"> Reduction of by-products generated NGK: 10% reduction from 2005 Domestic Consolidated: 5% reduction from 2005 	P.38,39
<ul style="list-style-type: none"> Reduction of atmospheric emission of PRTR solvents NGK: 44% reduction from 2005 Domestic Consolidated: 13% reduction from 2005 Completed work flow creation for all applications of Chemical Substances Safety Committee and implemented operation 	○	<ul style="list-style-type: none"> Reduction of atmospheric emission of PRTR solvents NGK: 4% reduction or more from 2005 Domestic Consolidated: 2% reduction or more from 2005 Investigate response to REACH regulations 	P.40,41
<ul style="list-style-type: none"> Promoted provision of environmentally friendly products and products with low environmental load <ul style="list-style-type: none"> (1) Joined network to support development of products that create environmental added value and researched trends at other companies (2) Participated in external courses 	○	<ul style="list-style-type: none"> Promote provision of environmentally friendly products and products with low environmental load <ul style="list-style-type: none"> (1) 3 business division-based survey of current status (2) Research courses (3) Specialized technology training (LCA, environmental function development, etc.) 	P.42
<ul style="list-style-type: none"> Revised list of prohibited substances accompanying legal revisions Reflected these in green procurement standards (Revision 1) Established system to collect data corresponding to shippers Collected data → Became special shipper based on transportation of 30.04 million ton-kilometers (note 3) 	○	<ul style="list-style-type: none"> Expand green procurement (continued) 1% reduction in basic unit for energy consumption 	P.43
<ul style="list-style-type: none"> Carried out Jingu Higashi Park (Nagoya) and Ohyama River (Komaki) cleanup activities Held Komaki Plant summer festival Took part in industry fairs, etc. 	○	<ul style="list-style-type: none"> Carry out cleanup activities in various areas Hold summer festivals 	P.26
<ul style="list-style-type: none"> Conducted factory tours for residents in region of Chita and Komaki plants Took part in Eco Campus Festival and conducted overseas factory tours Commenced soil contamination countermeasures at Chita Plant 	○	<ul style="list-style-type: none"> Enhancement of environmental and social reports and EPOC 	P.26,44
<ul style="list-style-type: none"> Enhanced environmental education 	○	<ul style="list-style-type: none"> Enhancement of environmental education <ul style="list-style-type: none"> (1) Review job position-based training (2) Start up departmental environmental education 	P.16,33

Note 3: Shipment transportation amount (ton-kilometer) = Shipment weight (tons) X Shipment distance (kilometers)

Promotion of Environmental Management

Within the Second Five-year Environmental Action Plan, NGK aims to further promote environmental management. As part of this endeavor, NGK acquired a Gold Governance registration for the Nagoya, Chita, and Komaki plants in March 2007. This is the highest rating based on the guidelines of the Ministry of Economy, Trade and Industry related to Waste and Recycling Governance (WRG), a system for the management of waste and recycling.

Waste and recycling governance is a newly established registration system that is aimed at strengthening corporate waste disposal systems. At the first registration, five companies, including NGK, and 29 organizations, were registered. There are three classes of registration—gold, silver, and bronze—according to the degree of difficulty in registration content.

Waste and recycling governance registration certificate



Measures to Acquire ISO 14001 Certification

We work to acquire ISO 14001 or equivalent certification, such as Eco Stage, in order to systematically and continually

develop environmental protection activities in line with our Core Policy on the Environment. NGK's three plants, all of NGK's 13 Group companies and 15 sites in Japan, as well as 12 out of 16 Group companies overseas had obtained certification by March 2007, meaning that 88% of the entire 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	5 sites
	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 their third update audits for environmental systems from January to February 2007. No major issues were cited.

In addition, to enhance the reliability of the environmental performance data in this report, Tohatsu Environmental Research Institute Ltd. carried out a third party audit relating to the accuracy of NGK's 2006 environmental data. (See page 45.)

History of NGK's Environmental Activities

April	1972	Environmental Protection Committee and Environmental Preservation Office (currently, Environmental & Quality Management Dept.) established	October	2000	Chemical Substances Safety Committee established; Chemical Substances Management System introduced
June	1992	Waste Countermeasures Commission established	March	2001	First Five-year Environmental Action Plan established
March	1993	NGK's Voluntary Plan for Environmental Conservation established	April	2001	Compilation of environmental performance data for domestic Group companies started
December	1994	Chlorofluorocarbons (CFCs) and 1,1,1-trichloroethane abolished	October	2001	Operating of Recycling Yard begun
February	1995	Internal environmental audit conducted	January	2002	Compilation of environmental performance data for overseas Group companies started
April	1996	NGK's Core Policy on the Environment established	April	2002	New "Green Management" three-year management plan instituted
December	1996	CO ₂ Countermeasures Commission established	April	2003	Moves made toward a full business group environmental management system; "Waste Countermeasures Commission" renamed "Recycling Promotion Commission," and "wastes" renamed "by-products"
March	1998	NGK's three production bases (Nagoya, Chita and Komaki) simultaneously received ISO 14001 certification	March	2004	Three-year and long-term plans for reduction of CO ₂ emissions instituted
March	1999	Environmental Report published	March	2005	RetBP-M30 Company-wide medium-term plan for the reduction in by-products established
April	1999	Environmental accounting introduced	April	2005	Environmental Action Guidelines revised; Green Procurement Guidelines revised
October	1999	Green Purchasing Commission established	April	2006	Second Five-year Environmental Action Plan established
November	1999	Environmental surveys of domestic group companies started			
February	2000	Environmental Partnership Organizing Club (EPOC) established and active participation therein begun			

Environmental Audits of Overseas Group Companies

In 2006, NGK exchanged opinions with 11 overseas Group companies in Europe, North America, and Southeast Asia regarding the status of consolidated environmental management and individual measures to reduce environmental impact going forward. This exchange was based on environmental impact data on each company.

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 the 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 2006, we ran drills on emergency responses 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 their own personal environmental declaration on the card, which serves to further raise awareness.

In March 2007, NGK invited external lecturers and conducted lectures in order to provide special training regarding environmental laws and regulations. About 150 people attended, including directors concerned with environmental matters as well as heads of departments that are promoting environmental management systems and those in charge of promotion at each division. The participants learned about matters in the latest trends concerning issues that companies are tackling, primarily environmental protection and chemical substance management.



Special training regarding environmental laws and regulations

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.

■ Number of Certified Persons

As of March 31, 2007

Name of Qualification	No. of Certified Persons	Name of Qualification	No. of Certified Persons	
Senior pollution control managers	3	Energy managers	16	
Pollution control managers	Dioxins	Certified environmental measurers	5	
	Vibration	Heat managers	8	
	Water quality 1	Persons responsible for control of industrial waste subject to special management	12	
	Water quality 2			
	Water quality 4	Managers of final disposal locations for industrial waste	4	
	Noise	38	Managers of intermediate treatment facilities for industrial waste	4
	Atmosphere 1	55		
	Atmosphere 3	2		
Dust	3			

Overall Perspective of Environmental Impact

The Power Business, Ceramic Products Business, and Electronics Business constitute the pillars of NGK's business activities.

The diagram below shows inputs and outputs in business activities conducted by NGK itself at the stage of product development and design, the stage of procurement, including raw materials and components, the stage of product manufacturing, and the stage of sales and transportation. It shows resources and energy input as well as manufactured products and services, and substances that are discharged into the environment, including those output into the atmosphere and into water.

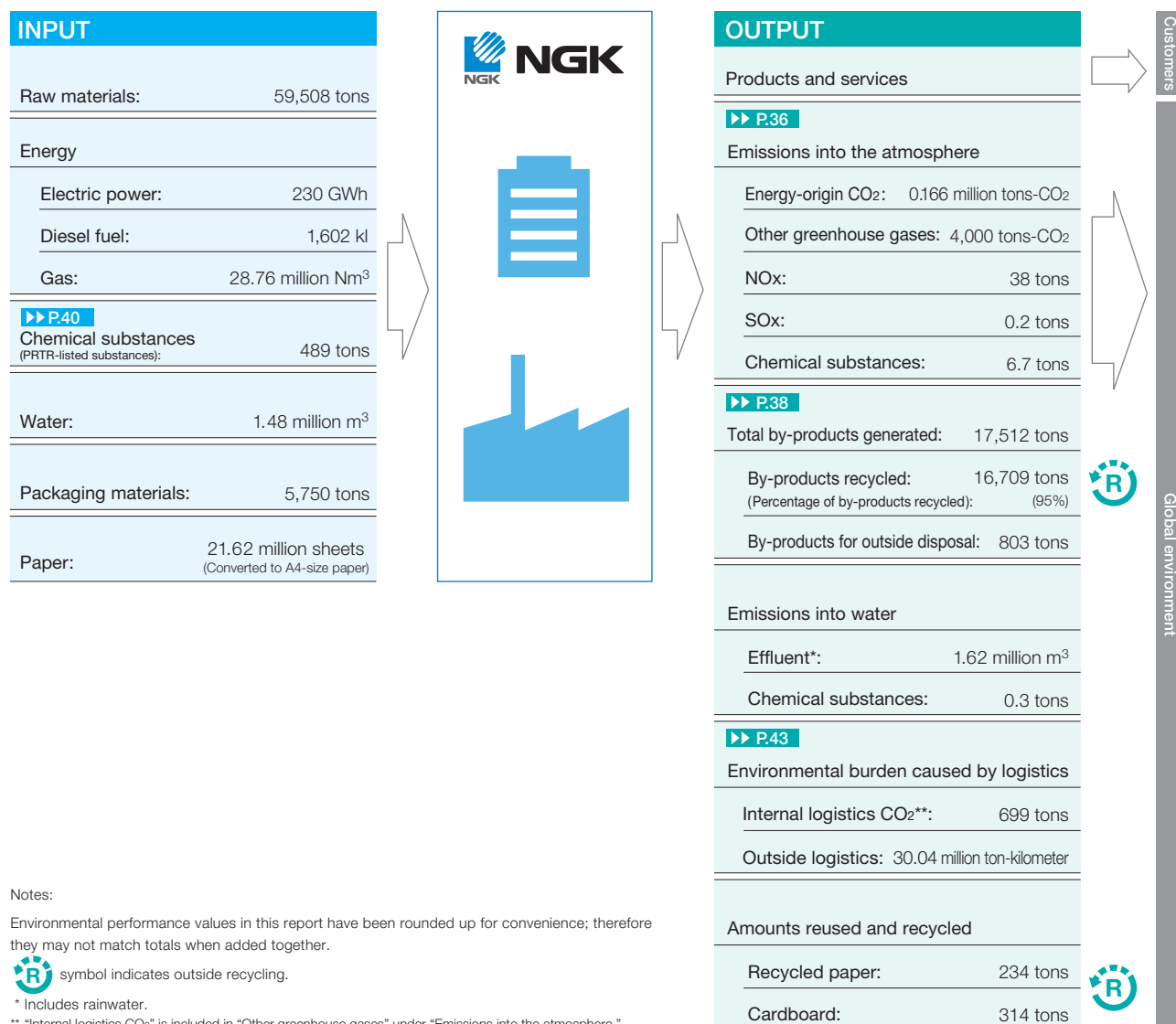
Input Overview

In terms of inputs, the main constituents are raw materials, chemical substances, and energy that are required in business activities. Other constituents include water and consumable items. To reduce the use of energy, such as electricity, and the amount of input of chemical substances in production activities, we are promoting such measures as the installation of energy-saving equipment and the recovery of discharged heat.

Output Overview

Outputs include products and services, as well as CO₂ emissions and factory wastewater from production activities, and we actively engage in initiatives to cut or reduce outputs. In addition, we are promoting the recycling of by-products and maintaining zero emissions for external disposal volume. We have also launched measures to cut total volume generated.

Input and Output of NGK's Three Plants



Notes:

Environmental performance values in this report have been rounded up for convenience; therefore they may not match totals when added together.



symbol indicates outside recycling.

* Includes rainwater.

** "Internal logistics CO₂" is included in "Other greenhouse gases" under "Emissions into the atmosphere."

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. In 2006, on a domestic consolidated basis, NGK's environmental investment (capital investment plus costs) increased 13% over 2005, while economic effects increased 17%, and investment efficiency improved 3%.

Results of Calculations

On a domestic consolidated basis, NGK's environmental costs for 2006 increased ¥0.49 billion over 2005 to total ¥4.28 billion, including ¥1.23 billion in capital investment and ¥3.05 billion in expenditures. The increase in expenditure resulted from a rise in development costs for low environmental impact processes aimed at the prevention of global warming, as well as increased maintenance and management costs for environmental protection facilities associated with higher production of new products, such as diesel particulate filters (DPFs), and environmental remediation costs.

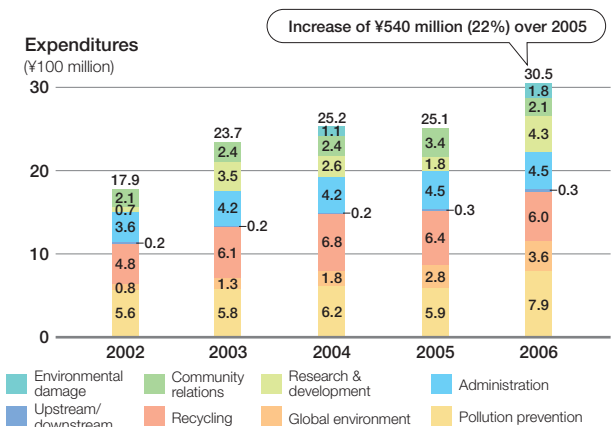
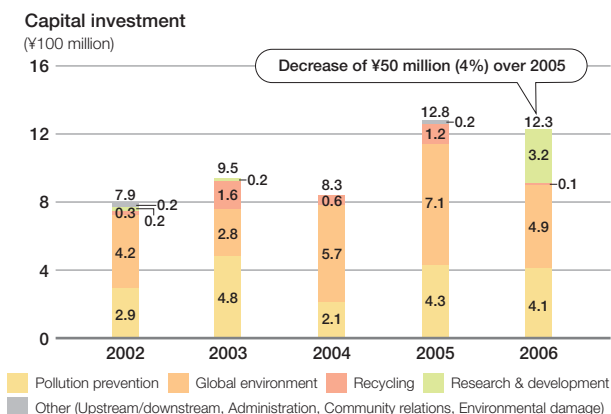
Benefits are calculated and disclosed in terms of environmental conservation effects and economic effects. With respect to environmental conservation effects on a domestic consolidated basis, we met standards related to pollution control and did not have any violations. CO₂ emissions decreased by 15,000 tons from 2005 to 231,000 tons, as we were able to cut emissions despite increased production volume. In terms of outside disposal volume of by-products, NGK itself maintained the zero emissions achieved in 2005.

The direct economic effects of our environmental protection measures on a domestic consolidated basis totaled ¥1.02 billion, with a considerable portion of this total accounted for by energy savings and gains on the sale of by-products. This represented an increase of ¥150 million, or 17.2%, from 2005.

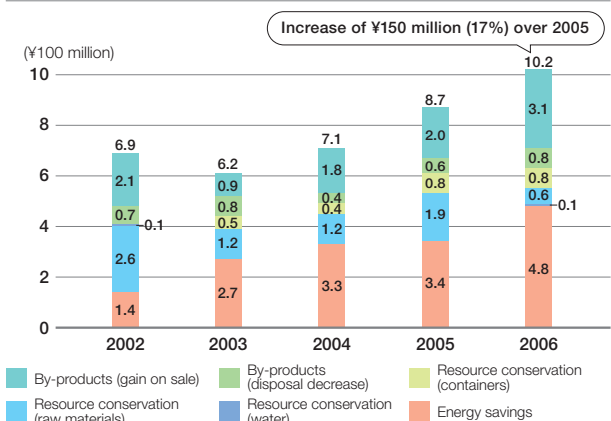
Initiatives Going Forward

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 2007, 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 (domestic consolidated)

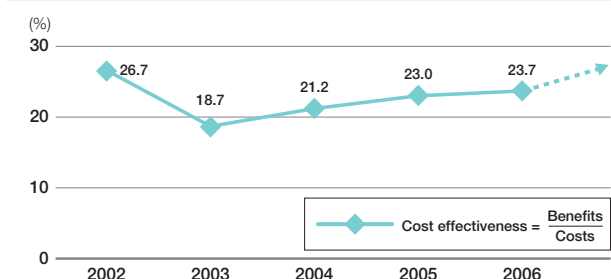


Environmental accounting—Economic effects (domestic consolidated)



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 (domestic consolidated)



Curbing CO₂ Emissions



Satoshi Kaneko
General Manager, Environmental & Quality Management Dept.
Corporate Manufacturing Engineering Division

Global warming, which is caused by an increase in the volume of greenhouse gas emissions, is a crucial environmental problem that is related to humankind's survival in the present and future. NGK, whose main business is the manufacture of ceramic products, is unable to avoid CO₂ emissions in the sintering process. To counter these emissions, we moved promptly to promote the use of gas fuel, and strove to develop an efficient sintering process as well as systems to recover and use exhaust heat. In addition, through EMS activities that the whole company undertakes on a unified basis, we have promoted efficient production and improvements in energy use.

With our business forecast to continue to expand, from 2006 to 2010 we will undertake measures to further improve our manufacturing technologies, develop new technologies, and introduce fuel cells that use exhaust heat, in order to achieve a reduction in CO₂ emissions. By striking a balance between a reduction in environmental impact and an improvement in productivity, and providing products that are environmentally friendly, we will continue to contribute to a reduction in the impact on the overall global environment.

2006 Targets and Results (non-consolidated)

Target: Total CO₂ Emissions: 0% increase over 2003
Result: Total CO₂ Emissions: 2% increase from 2003

CO₂ Reduction Targets

Total CO₂ Emissions (energy-origin)

NGK

2010 Target: 7% reduction from 1990

Domestic consolidated

2010 Target: 7% reduction in basic unit per sales value of production from 2005

CO₂ Emissions

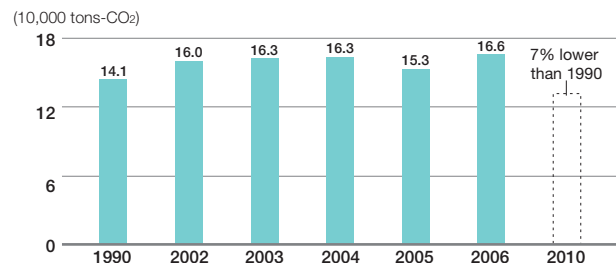
On a non-consolidated basis, NGK's total CO₂ emissions in 2006 amounted to 166,000 tons, a 2% increase from 2003. However, as the average emission volume over the three-year period from 2004 was 161,000 tons, we managed to keep emissions within the target of the medium-term plan (a reduction to 163,000 tons a year, the same level as in 2003). This resulted from endeavors to curb CO₂ emissions on a company-wide basis while business was expanding and production volume was increasing. Furthermore, basic unit per sales value of production improved by 5.8% in 2006 from 2005.

CO₂ emissions by domestic Group companies totaled 65,000 tons, an increase of 1,000 tons from 2005. CO₂ emissions from Group companies overseas amounted to 308,000 tons, an increase of 74,000 tons over 2005. This increase resulted from higher production of diesel DPFs for the European market.

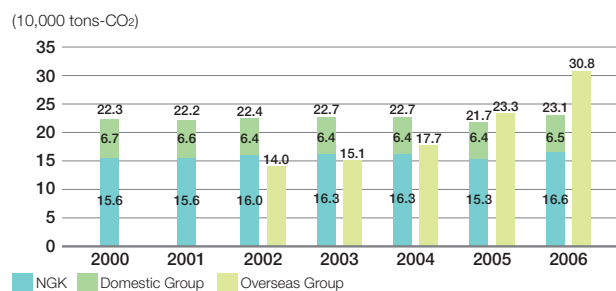
Establishment of Domestic Consolidated Targets and Results

In 2006, NGK established a 7% reduction in the basic unit per sales volume of production in 2010 over 2005 as its domestic consolidated target for a reduction in CO₂ emissions. As we will combine the management indicator of sales with emission reduction activities that will lead to the enhancement of production efficiency, we believe that the connection between management and the environment will be strengthened and we will be able to undertake measures to achieve our target. In 2006, the basic unit per sales value of production showed a substantial improvement of 5.9% over 2005.

■ Energy-origin CO₂* emissions (NGK)



■ Energy-origin CO₂ emissions



■ Basic unit per sales value of production (domestic consolidated)

Target	Result	
2010	2005 (base)	2006
110	119	112

(ton-CO₂/¥100 million)

Reduction in Greenhouse Gas Emissions**

The two gases of carbon dioxide and sulfur hexafluoride (SF₆) account for nearly 100% of greenhouse gases emitted by NGK. In the case of SF₆, we have installed equipment to recover SF₆ in the production process, and we are reinforcing

management on a daily basis. We are also striving to curb emissions of gas for special applications by using alternatives.

In 2006, we purchased 1.8 million kWh of green energy generated by wind power. This power was used to reduce CO₂ emissions at the Komaki Plant, where business is expanding. The CO₂ that we managed to reduce was equivalent to 756 tons. (See page 43.)

Initiatives Going Forward

To achieve its medium- and long-term targets for reducing total CO₂ emissions, NGK will analyze existing technologies and equipment from a new perspective and investigate the introduction of new energy-saving equipment.

At Group companies in Japan, we will work to reduce greenhouse gas emissions under unified targets while promoting 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.

* 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 (L) 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 (fiscal 1990 actual figures), Ministry of the Environment. Some factors have been calculated independently by NGK. However, 2006 energy-origin CO₂ emission volume for NGK on a non-consolidated basis is 173,000 tons when using the CO₂ conversion factor provided by the Law Concerning the Promotion of Measures to Cope with Global Warming (revised in April 2006).

** 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.

TOPICS

Reducing CO₂ emissions by changing fuel for insulator sintering kiln

The insulator sintering kiln at the Komaki Plant previously carried out firing with the use of diesel fuel, but as we changed to city gas from October 2006 and improved the burner nozzles, we simultaneously enhanced fuel efficiency while changing from kerosene to city gas. We managed to cut the volume of CO₂ generated by 20%.

As a result of this measure, we were able to reduce the volume of CO₂ generated by 790 tons on an annual basis in 2006. Moreover, in 2007, when the effects of the reduction will appear on a full-year basis, a reduction of 2,100 tons is projected.



Insulator sintering kiln



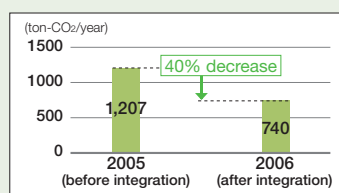
Toshinari Ohinata

Manufacturing Group 1
Komaki Plant
Manufacturing Division,
Insulator Division

When changing the fuel for the sintering furnace to city gas, we initiated a start-up trial by using the tunnel kiln at the Chita Plant, which had already converted its fuel, as a reference. However, as the shape of the products we produce are different from those at the Chita Plant, it was necessary to modify the flame characteristics of the burner. Over a period of three months, we experimented with 12 types of burner nozzle shapes, and managed to find the ideal flame characteristics.

Reducing CO₂ emissions by integrating NAS[®] Battery Inspection Processes

We used a large amount of electricity in the inspection process of NAS[®] batteries at Komaki Plant. By improving on the quality of cells, we were able to integrate the cell inspection and the module inspection into the final inspection. This integration of the inspection processes reduced CO₂ emissions by 40%, that is 470 tons reduction in 2006.



Shigeo Nishioka

Manufacturing Department
NAS[®] Battery Division

In April 2005, we started this activity with Engineering Dep., Production Technology Dep. and Quality Assurance Dep. While verifying the quality in each step, we carried out a series of investigations and managed to integrate the inspection processes.

Through this activity, we achieved a reduction in CO₂ emissions and also built good relationship with related departments.

Recycling and Reducing By-products

Recycling and reducing by-products is an important issue in making effective use of precious natural resources and alleviating environmental impact.

In 2005, NGK succeeded in achieving zero emissions by keeping outside disposal volume down to less than 1,000 tons a year. In our second Five-year Environmental Action Plan, to further promote the effective use of resources following the achievement of zero emissions, we aim to curb the total volume of by-products. Based on this plan, domestic Group companies have also set uniform targets and are working to reduce the generation of by-products.

2006 Target and Result (NGK)

Target: Total volume	5% reduction from 2005
Result: Total volume	Target achieved with 5.5% reduction from 2005

By-product Reduction Targets

Total By-products Generated

NGK

2008 Target: 15% reduction from 2005
2010 Target: 25% reduction from 2005

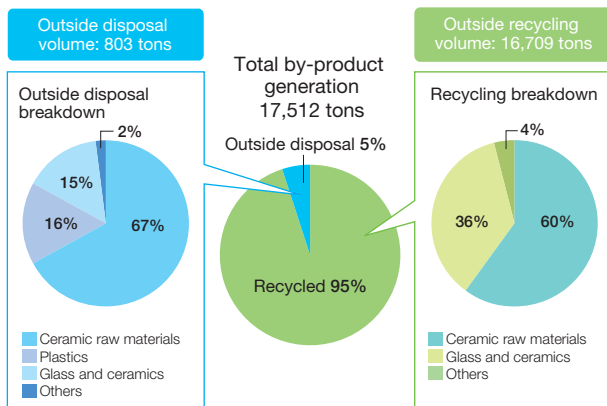
Domestic Group

2010 Target: 15% reduction from 2005

By-product Generation and Recycling (NGK)

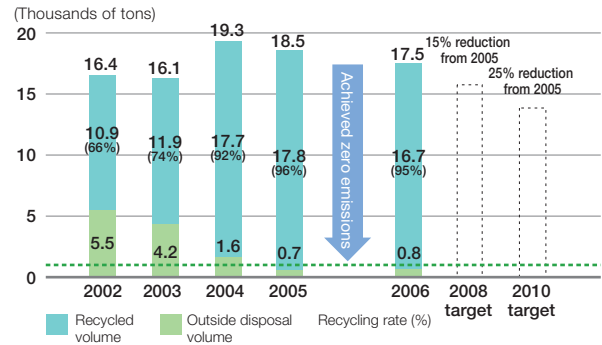
In 2006, the total volume of by-products generated by production processes at NGK amounted to 17,512 tons. This was 1,013 tons less than in 2005, and we achieved our target of a 5% reduction. Despite expanding business operations, this result reflected the effects of measures to reduce the generation of ceramic raw materials generated by diesel particulate filter (DPF) and HONEYCERAM® production processes, insulator cement sludge derived from insulator production, metal cleaning solutions and other by products.

Recycling and Outside Disposal (NGK)



In addition, outside disposal volume was 803 tons, we maintained zero emissions from 2005, and we recycled by-products at a rate of 95%.

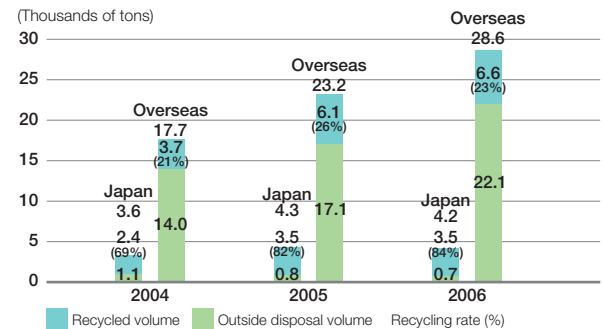
By-product Volume and Targets (NGK)



By-product Generation and Recycling (Domestic and Overseas Group Companies)

Group companies in Japan produced a total of 4,212 tons of by-products in 2006, a decrease of 108 tons from 2005, and the recycling rate was 84%, roughly the same as in 2005. Group companies overseas produced a total of 28,618 tons, a 23% increase from 2005.

By-product Generation (Domestic and Overseas Group Companies)



Initiatives Going Forward

In 2007, production volume is projected to continue to increase. Therefore, by raising production yields, improving production technologies, and reviewing the design of production processes, we will promote measures aimed at a 25% reduction in total by-product volume in 2010, compared to 2005. We have set a unified goal for domestic Group companies of a 15% reduction in total by-product volume by 2010, compared to 2005.

TOPICS

Curbing generation of metal pickling waste liquid

At the metals factory of the Chita Plant, we have endeavored to reduce the usage volume of acid solutions used in the acid cleaning process for beryllium copper sheeting and also reduce waste solutions since 2003.

In 2005, we attempted to reduce the volume of acid solutions by reusing waste solutions generated in continuous pickling processes in batch pickling processes, and we recycled all waste solutions. Then, in 2006, by improving liquid removal (dewatering) in the rinsing process, we avoided the transportation of cleaning liquid and curbed the degradation of acid solutions. As a result, we were able to achieve a reduction in the volume of acid solutions used and a reduction in the generation of waste solutions. In the case of waste solutions, in particular, we managed to halve the volume generated compared to 2005.

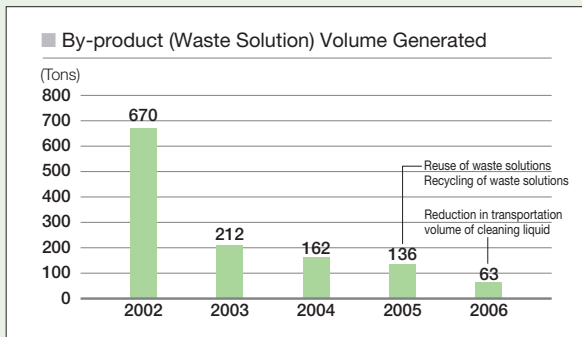


Yukitoshi Kamiishi
Strip Processing Section
New Metals Division
Metal Business Group

It is possible to modify manufacturing equipment only during the long holidays at the end of the year, when processes can be suspended. Consequently, we thoroughly carried out investigations beforehand and verification tests, with the aim of making doubly sure of the modifications. As a result, we were able to reduce the generation of by-products and cut costs by reducing the volume of chemical solutions used and curbing the generation of pickling waste liquid. Going forward, we aim to achieve further reductions by applying this measure to other production lines.



Kenji Nimura
New Metals Division
Metal Business Group

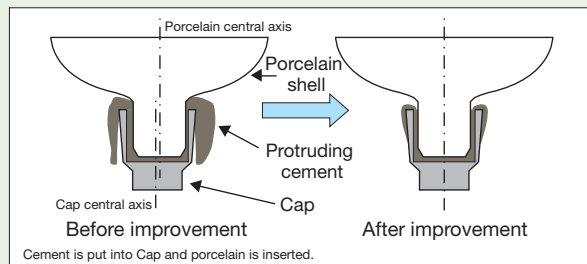


Reducing generation of protruding cement when insulators are assembled

At the insulator factory in the Komaki Plant, since 2003 we have been pursuing a reduction in outside disposal volume by starting to recycle cement that protrudes when insulators are assembled.

As a step further, in 2006 we carried out measures to reduce cement that protrudes when insulators are assembled. By changing from the previous mechanical method to a robot method for the assembly of the porcelain and the Cap, we were able to enhance the assembly precision of the central axes of both and carry out cement filling in the Cap using a smaller quantity of cement than before. As a result, we managed to reduce the amount of cement used by 10%.

In addition, by raising the dewatering efficiency of the protruding cement and reducing the percentage of water content, we were able to reduce the amount taken outside for disposal.



Manabu Watanabe
Manufacturing Group 2
Komaki Plant
Manufacturing Division Insulator Division

Over a period of one year from May 2006, we successively increased the number of adapted product items while verifying the optimal conditions and quality for each product item. We took trouble to ensure quality and safety, but we were able to contribute to the effective use of resources.

Management of Chemical Substances

NGK observes applicable laws and regulations governing the appropriate management of chemical substances. The Company has introduced a chemical substances management system, and has registered and strictly manages approximately 7,000 chemical substances, including those covered by the PRTR Law*.

In 2006, NGK stepped up measures to control atmospheric emissions of PRTR-listed solvents, which it had continuously undertaken from 2001. Moreover, in order to rapidly comply with new chemical substance regulations in Europe, we initiated investigations and actions in response to the REACH regulations** that will come into effect from June 2007. As another initiative, we promoted measures based on uniform control goals for atmospheric emissions of solvents for all domestic Group companies.

2006 Targets and Results (NGK)

Target: Reduce atmospheric PRTR-listed solvent emissions by 2% over 2005
Result: 44% reduction

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

** REACH Regulations: Registration, Evaluation, Authorisation and Restriction of Chemicals

Handling of PRTR-Listed Chemical Substances

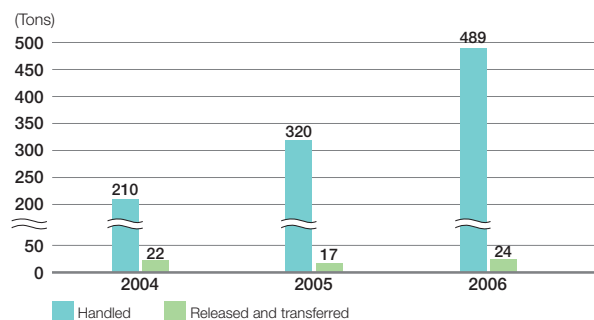
The PRTR Law specifies 354 Class-1-designated chemical substances. Of this group, NGK handled 61 chemical substances in its Company-wide operations in 2006, for a combined total of 489 tons, a 170-ton or 53% increase from 2005. The overall increase in the amount of chemical substances handled can be attributed to an increase in production volume associated with business expansion. The released and transferred amounts totaled 24 tons, up 42% from 2005.

Among the PRTR-listed chemical substances handled by NGK, the Company reduced its atmospheric emissions of toluene, xylene, and dichloromethane, and other solvents to 0.54 tons, substantially below its target of 0.94 tons.

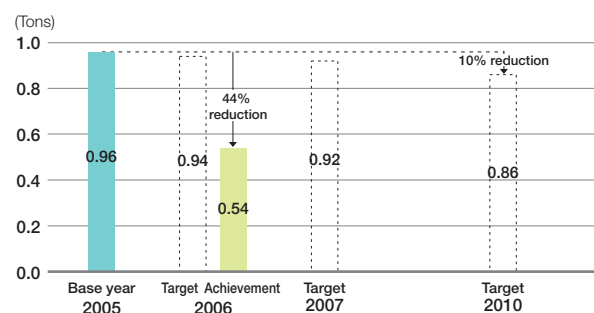
Owing to an improvement in production yields and the use of substitutes, the total amount of PRTR-listed chemical substances handled by the domestic NGK Group in 2006 was 100 tons, a decline of 10 tons from the previous year. Ten domestic NGK Group companies provided notification to the government for a total of 16 PRTR-listed

chemical substances, while the total amount handled was 100 tons, and the released and transferred amount was 22 tons. In addition, atmospheric emissions of PRTR-listed solvents in 2006 amounted to 4.8 tons, marking a reduction of 13% from 5.5 tons in 2005.

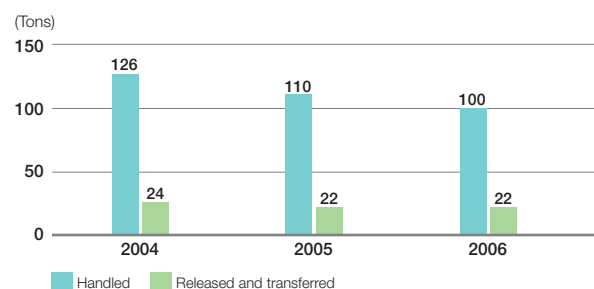
■ Amounts of PRTR-listed substances handled, released, and transferred (NGK)



■ Progress of atmospheric emission reduction plans for PRTR-listed solvents (NGK)



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



Within the Welfare Facility Site of the Chita Plant Results of Voluntary Survey of Soil and Groundwater and Countermeasures

As part of the welfare facility site of the Chita Plant is included in a public road construction plan, NGK voluntarily surveyed the soil of the projected zone in advance of its sale. As a result, soil and groundwater containing harmful substances (fluorine, boron, and lead) that exceeded legal standards were confirmed. In August 2006, we therefore voluntarily reported this situation to the Handa Municipal Government in Aichi Prefecture, immediately carried out emergency countermeasures,

and explained the situation to nearby residents. In addition, the Aichi Prefectural Government carried out a water quality survey of nearby wells, and it was confirmed that all items were below the legal standards.

After the contamination of soil and groundwater had been revealed, we took emergency measures to prevent the dispersal of soil and the underground permeation of rain water. We spread out a waterproof sheet, established pumping wells in parts where underground water was contaminated, and prevented the discharge of the contamination.

We are currently engaged in two permanent countermeasures: (1) excavating the soil and replacing it with clean soil; and (2) replacing and purifying the underground water. We are appropriately treating the excavated soil at a soil treatment facility outside the Company. In addition, we are transferring the pumped up underground water to a terminal wastewater treatment facility at the Chita Plant, where it is treated appropriately and then discharged.

The site concerned was operated by a company that manufactures raw materials for glazes and enamels (a business site handling specific harmful substances) from 1968 to 1985.

However, after NGK purchased the site, the Company used it as a welfare center and parking lot, and the harmful substances within the site were not used.

Initiatives Going Forward

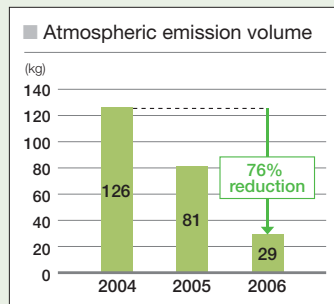
NGK will make further efforts to reduce the amount of PRTR-listed substances released and transferred. In particular, to curb atmospheric emissions of solvents, we will endeavor to achieve reduction targets by studying and introducing substitutes. Domestic Group companies will also promote measures to reduce atmospheric emissions of PRTR-listed solvents. Going forward, to respond to the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulations in Europe, we will develop systems to strengthen the management of harmful chemical substances, including procurement activities, and further enhance their effectiveness.

TOPICS

Reduction in Atmospheric Emissions of PRTR-listed Solvents through the Use of Substitutes

In the process of manufacturing ceramic components for semiconductor manufacturing equipment at the Chita Plant, wax is used to keep products fixed at the time of machining. After they are machined, it is necessary to use solvents to remove the wax attached to products because it can cause stain defects in the post-process. Previously, we used an organic solvent that contains a PRTR Class-1-designated chemical substance, but from August 2005 we changed to an organic solvent that contains no PRTR Class-1-designated chemical substances.

Through this measure, we managed to reduce atmospheric emissions of PRTR Class-1-designated chemical substances by 76% in 2006, compared to that in 2004.



Kenji Adachi
Production Group 1
Production Department
HPC Division

As ceramic components for semiconductor manufacturing equipment are produced in high mix and low volume, the color and surface conditions of each product tend to vary. Moreover, since the solubility of wax of the new solvent is lower than that of the old one, we used it for representative products first, confirming the quality in the post-process, and then expanded the use to other products. This has enabled us to reduce atmospheric emissions of PRTR Class-1-designated chemical substances. Going forward, we also plan to consider using other solvents for some processes where the new solvent cannot be used in terms of solubility.



Masahiko Funabashi
Production Group 1
Production Department
HPC Division

Development and Design Initiatives

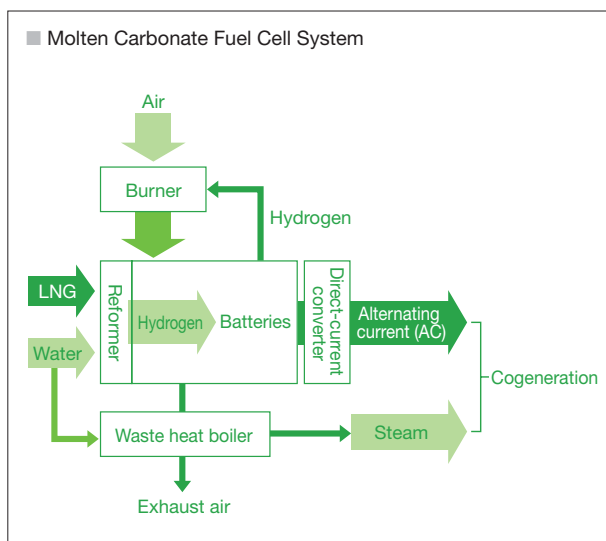
Based on the perspective of life cycle assessment (LCA), NGK is promoting product design, manufacturing processes and equipment installations that serve to reduce environmental impact, such as CO₂ emissions, as much as possible. When manufacturing ceramic products, in particular, it is impossible to avoid energy-origin CO₂ emissions because firing processes are involved. Therefore, NGK is promoting initiatives aimed at the establishment of low environmental impact process technologies that will reduce CO₂ emissions in firing processes and substantially reduce the lifecycle CO₂ of products.

Using Exhaust Heat to Reduce CO₂

As fuel cell systems hold great promise as a next-generation clean energy, NGK has installed one at the Nagoya Plant and started to evaluate the battery performance and practical utility of these systems.

The installed system is a co-generation system (combining the production of electricity and steam) that is able to recover waste heat from fuel cells as steam from a waste heat boiler. It has a rated power generation output of 250kW and the capacity to generate steam at a rate of 120 kg per hour. The fuel cells are the molten carbonate type (MCFC), and city gas (LNG) and water are converted into hydrogen through the use of a reformer inside the fuel cells. The hydrogen then reacts with air and generates electricity.

Molten carbonate fuel cells are regarded as highly efficient batteries among industrial-use fuel cells, but NGK is reusing the waste heat from kilns in power generation by fuel cells and is working to further enhance system efficiency.



Through co-generation power generation by molten carbonate fuel cells, we are able to reduce CO₂ emissions by approximately 10% compared to the case when power is only purchased. However, by applying waste heat usage technology, we aim to further reduce CO₂ emissions.

Promoting CO₂ Reductions on a Company-wide Basis

At NGK, we are working to promote reductions in CO₂ emissions on a company-wide basis. While collaborating among our business groups, the Construction & Maintenance Dept., and the Environmental & Quality Management Dept., we are aiming to achieve the CO₂ emission reduction target stipulated in the Kyoto Protocol (a reduction of 6% in 2008–2012, compared to 1990.) When improving existing equipment and introducing new equipment, we carry out a comprehensive investigation that includes such factors as energy efficiency and costs and then propose optimal equipment.

Going forward, we will study the use of unused energy, such as low-temperature waste heat at a level of 300°C or less, which has been difficult to use so far.



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

Environmental Activities Related to Procurement and Logistics

To reduce the impact of its 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 has issued its Green Procurement Guidelines to support compliance regarding particular chemical substances specified in European chemical regulations. In 2006, in tandem with the revision of the Occupational Health and Safety Law, we revised the asbestos procurement standards in our Green Procurement Guidelines, distributed them to suppliers and sought their understanding. We also ensured their thorough dissemination by publishing them on our website.

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. As NGK qualified as a special shipper based on its performance in 2006, the Company has established a system to pinpoint its energy use for transport and developed a framework to enable the submission of regular energy use reports to the authorities from April 2007.

* Shipment transportation amount (ton-kilometer) = Shipment weight (tons) X Shipment distance (kilometers)

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

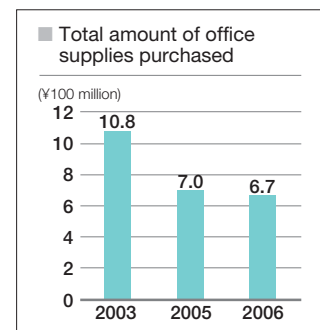
*¹ Modal shift: shifting away from the use of trucks to more efficient rail and sea transportation for main routes to decrease the environmental impact of distribution.

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

Promoting Effective Use of Office Supplies

NGK is thoroughly ensuring the effective use of office supplies and the elimination of wasteful use as far as possible, in an attempt to reduce costs and make effective use of natural resources.

In 2006, we kept office supplies held by individuals and departments to the minimum possible level, collected surplus inventory at departments, and expanded the scope of centralized management to the whole Company. In addition, we endeavored to further cut costs and save resources by introducing a Web purchasing system on a Company-wide basis.



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. In 2006, we purchased 1.8 million kWh of wind-generated electric power. As the basic unit of CO₂ emissions from wind-generated electric power is 0, this had the effect of reducing CO₂ emissions by 756 tons.



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

Environmental Communications

To establish partnerships with the various stakeholders surrounding NGK, the Company is communicating information regarding its environmental impact and environmental activities, but also seeking the opinions of each stakeholder while striving to deepen mutual understanding and acceptance. We believe this will lead to protection of the environment.

Participation in EPOC

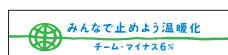
NGK is actively supporting activities as a member of the Environmental Partnership Organizing Club (EPOC), which was established to create a recycling-based society through cooperation among more than 300 companies in the Chubu region of Japan.

In December 2006, EPOC held the “Global Warming and Energy Saving Subcommittee Meeting Seminar” to present the latest information regarding global warming and leading-edge actual examples of energy saving. At the seminar, speakers presented actual cases of energy saving in manufacturing activities and announced achievements concerning the potential for the intraregional use of low-temperature waste heat based on heat transport networks.



A lecture at the seminar

Participation in Team Minus 6%



In the Kyoto Protocol, which was determined through cooperation around the world for the purpose of preventing global warming, a phenomenon that is becoming severe, Japan promised to reduce greenhouse gas emissions by 6%. To realize this target, a citizens' project called Team Minus 6% was established. It aims to reduce CO₂ emissions and allows participation and promotion by companies, organizations, and individuals. NGK also joined the project in 2005. Employees and their families were also taking part in activities, but in order to promote activities and raise awareness further, we surveyed by means of an internal questionnaire how the six actions proposed by Team Minus 6% were being carried out. Based on the results of this survey, we will further develop awareness-raising activities.

■ Rate of implementation of the six actions proposed by Team Minus 6%

- | | |
|---|-----|
| 1. Reducing global warming by regulating temperature: | 50% |
| 2. Reducing global warming by using water efficiently: | 44% |
| 3. Reducing global warming by using cars efficiently: | 40% |
| 4. Reducing global warming by choosing products in the right way: | 42% |
| 5. Reducing global warming through shopping and garbage: | 37% |
| 6. Reducing global warming by using electricity efficiently: | 31% |

(Effective number of respondents: 188)

Disclosure on the NGK Website

Through our corporate website and the publication of our Environmental and Social Responsibility reports, we provide the latest information on our environmental protection activities and our social contribution activities. In the case of the website, we make public past Environmental and Social Responsibility reports, and we continually strive to broaden our level of disclosure and to include more information than is in the reports.

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



Disclosing Environmental Information during Factory Tours

Every year, the Chita Plant conducts factory tours combined with information briefings for local residents. These are designed to provide a general overview of environmental impact at our business sites and to disclose information regarding our environmental protection activities.

In November 2006, when the 23rd factory tour was held, the general manager of the plant mentioned that NGK greatly valued communication and cooperation with city and town residents, and aimed to be a company that develops in tandem with local residents. He also asked for further understanding and cooperation concerning the activities of NGK and the Chita Plant.



A factory tour of Chita Plant by local residents

GRI Guidelines Content Index

GRI Guidelines Content Index

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EC8. Total sum of taxes of all types paid broken down by country	—
EC9. Total sum of taxes of all types paid broken down by country	—
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LA2. Net employment creation and average turnover segmented by region/country	—
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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	
LA5. Practices on recording and notification of occupational accidents and diseases, and how they relate to the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases	P18
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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	P15
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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	P14-15
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SO1. Description of policies to manage impacts on communities in areas affected by activities, as well as description of procedures/programs to address this issue, including monitoring systems and results of monitoring	P25-28
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SO3. Description of policy, procedures/management systems, and compliance mechanisms for managing political lobbying and contributions	—
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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	P20
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PR2. Description of policy, procedures/management systems, and compliance mechanisms related to product information and labeling	P20
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* are additional indicators.



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Plate making:

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