

Environmental & Social Report 2010

NGK Spark Plug Group



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NGK Spark Plug Group

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【Period covered】 From April 1, 2009 to March 31, 2010

Some other very recent activities and cases are also included.

【Covered Organization】

●Environmental aspects : NGK Spark Plug Group

• NGK Spark Plug Co., Ltd. (excluding the sales offices and sales branch offices)

• 9 consolidated domestic subsidiaries and 1 affiliate.

●Social aspects : NGK Spark Plug Co., Ltd.

However, this report may also cover activities of subsidiaries and affiliates inside and outside Japan. In such cases, specific company names are indicated.

【Publishing Director】 Norio Kato, President

【Editor in Chief】 Yukashi Ukai,

General Manager of CSR Promotion Department

【Published】 October 2009

(The next report is planned to be published in September 2011.
/The previous report was published in September 2009.)



Corporate Profile

Corporate Name	NGK Spark Plug Co., Ltd.
Head Office	14-18 Takatsuji-cho, Mizuho-ku, Nagoya
Foundation	October 26, 1936
Capital	47,869,270,000 yen
Business	(1) Manufacturing and selling spark plugs and related products for internal-combustion engines. (2) Manufacturing and selling technical ceramics and applicable products.
Group Companies	35 subsidiaries (9 in Japan, 26 overseas), 6 affiliates

Editorial Policy

Easily Understood

This report has been prepared based on our corporate code of conduct (page 9) with the aim of clearly describing the concepts, mechanisms, and results of our activities.

Importance and Completeness

We have given consideration to the importance and completeness of the content of this document giving reference to the "Environmental Reporting guidelines (2007 version)" and "GRI Sustainability Reporting Guidelines (Version 3)" issued by the Ministry of the Environment of Japan.

Trustworthy

We have worked to improve the trustworthiness of the document by undergoing third party examination, and verifying items including the correctness, neutrality, and verifiability of the content.

Application of Website

Places where you can look up more detailed information on our website are marked with this mark: [Web](#). Please view the website data as well. Information not marked with a URL within this document can be viewed in the Environmental and Social Report at our download corner.

<http://www.ngkntk.co.jp/english/environment/ecoreport.html>

Business Areas

Our scope of business extends to products used in various fields, such as transportation and information, in order to meet social needs.

We are constantly making efforts to be on the cutting edge of the information and communication fields, including motorization, which will be the core industry of 21st-century society. We are also making vigorous efforts in the medical field in order to adapt to the super-aging society to come, based on the application of our ceramics-centered techniques. Furthermore, the object of our vigorous activities includes the environmental field.

Primary Products

Automotive Components Group

- Spark Plugs, Related Products
- Glow Plugs
- Sensors

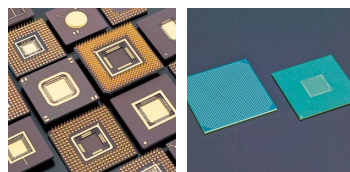


Spark Plugs for Automobile

Exhaust Gas Oxygen Sensors

Communication Media Components Group

- Semiconductor Components



Ceramic IC Packages

Organic IC Packages

Technical Ceramic Group

- Medical Products
- Industrial Components
- Cutting Tools ● Electronic Components



Bone Filling Materials

Ceramic Inserts

Domestic and Overseas Network

Web <http://www.ngkntk.co.jp/english/company/network.html>

Japan

NGK Spark Plug Co., Ltd.

Affiliated Subsidiaries	9
Equity Method Affiliates	1
Affiliates not applicable to the equity method of accounting	1

Europe

Affiliated Subsidiaries	5
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Americas

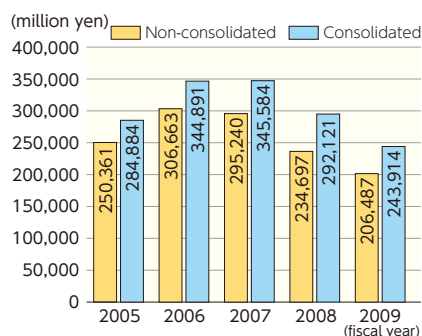
Affiliated Subsidiaries	6
Non-affiliated Subsidiaries	1

Asia, Australia, Other

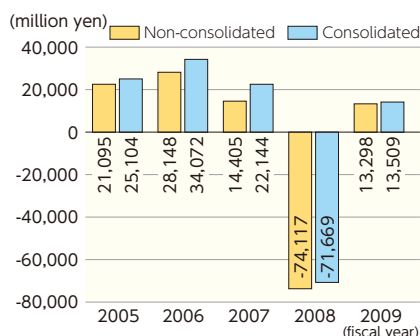
Affiliated Subsidiaries	14
Equity Method Affiliates	1
Affiliates not applicable to the equity method of accounting	3

Financial Data

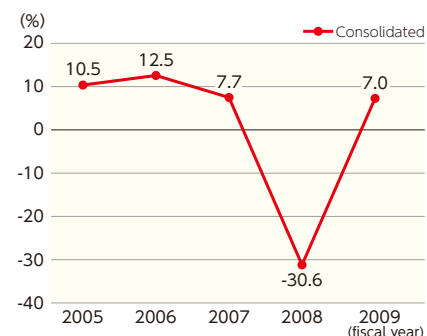
Net sales



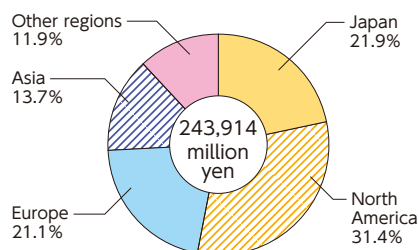
Net income



Return on Equity (ROE*)

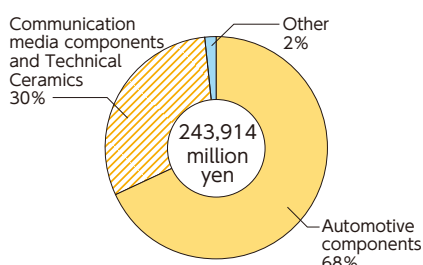


Sales Composition by Region



Foreign sales are sales in regions and countries other than Japan by NGK Spark Plug Co., Ltd. and affiliated subsidiaries.

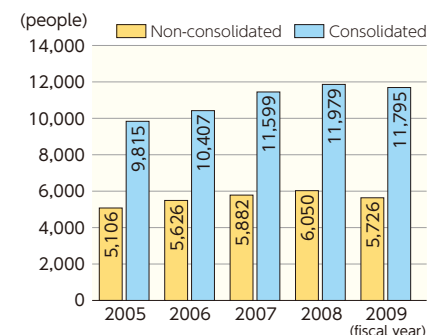
Sales Composition by Industry Segment



$$ROE = \frac{\text{Net Income}}{\text{Shareholders' Equity}}$$

ROE ROE is one indicator of a company's profitability. ROE reveals how effectively shareholder equity is being used; higher ROE means higher profitability.

Number of Employees



Message from the President



Norio Kato

President, Chief Environment Administrator
NGK Spark Plug Co., Ltd.

A handwritten signature in black ink that reads "Norio Kato".

September 2010

Toward the Achievement of the Medium-term Management Plan

This fiscal year we have started to implement the 5th Medium-term Management Plan, of which commencement was postponed for one year, since we finally began to see a sign of improvement in our business environment that had been hostile until then. Under the Plan, we regard the three years from fiscal 2010 to 2012 as a preparatory period to strengthen the foundation for the business, and to plant the seeds for further development in light of the NGK Spark Plug Group's vision 10 years ahead into the future.

In retrospect, the start-up of our company as an automotive component manufacturer dates back to the prewar period. Since there were many competitors making products similar to ours in Japan, our future prosperity was never promising at that time. We then accumulated efforts for improvement while exerting our originality and ingenuity. I believe that such steady endeavors have enabled our company to successfully grow into an enterprise that can obtain continued support and patronage from our stakeholders. This should be recognized anew by everyone in our group, and we should go back to the basics, by such means as strengthening our business structure and capability to collect information ahead of other companies. In so doing, we strive "To Go a Step Further in Manufacturing."

On the other hand, the research and development (R&D) outcomes that can take the lead in the next generation cannot be obtained overnight but can be brought about only by diligent efforts. We work to accelerate new product development by improving the R&D system to develop new technologies, and actively promoting human and technological interactions. At the same time we will strategically enhance our organizational capability through effective use of human resources. We are determined to continue group-wide efforts to address various tasks with vivacity and tenacity, which represent our strengths, to achieve goals of our management plan, in keeping with the quality-oriented and full-participation principles passed on to us from the foundation of the company.

Action for the Change

Next year, NGK Spark Plug Co., Ltd. will celebrate its 75th anniversary. The company, which started as a manufacturer of spark plugs, has expanded its scope of business to cover automotive sensors, IT-related components, electronic components and medical products, always meeting customers' needs of the time sincerely and swiftly. In the automotive industry, competition has been accelerating among manufacturers in developing electric cars, in order to address the depletion of fossil fuels and to contribute to a low-carbon society. Some manufacturers have started to sell electric vehicles for general users.

In response to these changes, our company has undertaken the development of small-size, high-power solid oxide fuel cell (SOFC) by integrating our long-accumulated technologies of ceramic packages for MPU and those of automotive oxygen sensors. SOFC features an effective power generation methodology comparable to that of solar and wind power generation. Since SOFC generates power where it is used, transmission power loss can be reduced. For this reason, we are convinced that SOFC will greatly contribute to the realization of a smart grid (a distributed power supply-demand network) in the future. Currently we are working to develop SOFC for household use. We will continue to vigorously develop technologies with the aim of creating a next-generation product that will replace the internal-combustion engine. Moreover, we will further refine our technologies used for communication media components and medical products, so as to cope in a timely manner with the needs of ever-changing times and thereby propose new values to society.

Environmental Conservation and CSR Initiatives

Our high-performance automotive plugs and various sensors help improve fuel efficiency and reduce exhaust gases, contributing to global environmental conservation and reduction of greenhouse gas emissions. The IC packages, the mainstay products in our Communication Media Components Group, are the integral

components of personal computers. Our products are used in cell phones, various office automation machines, automotive components and the like, and many of our products are not directly seen by people in general. However, we are confident that our products play important roles in people's everyday life, supporting social infrastructures and contributing to social development.

This year, the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP10) is being held in Nagoya, attracting more attention to environmental efforts extended by each company. NGK Spark Plug Group also reaffirms the importance of biodiversity and augments our environmental measures. In 2004, we stipulated Eco Vision 2010, under which we set the goal of reducing overall greenhouse gas emissions. Despite our daily efforts, including production process review and streamlining, regrettably we fell slightly short of the reduction goal for fiscal 2009. This year, which is the final year of our Eco Vision 2010 initiative, we will continue working hard to achieve the goal, while coping appropriately with the changes in management environment.

As my personal creed, I have been committed to "refining my sensitivity and building up my endurance" since before I was appointed President. I believe that it is very important to have a certain interest in or to question about even little things in daily life. I also have an idea that we can create new values only after overcoming difficulties confronting us when we try to achieve something.

I believe that our corporate social responsibility (CSR) activities provide us with a great opportunity to reform the corporate culture of the entire Group. If individual employees take an interest in CSR, it will lead to their voluntary actions, which will in turn engender trust among employees and generate a synergistic effect. By cultivating such a sound and strong corporate culture, we aim to grow as an enterprise that can contribute to the development of a sustainable society.

We hereby release our Environmental and Social Report 2010 which compiles our activities during fiscal 2009. I look forward receiving to your unreserved comments and opinions.

Toward Achieving a Low-carbon Society and a Smart Grid

Fuel cells have drawn public attention as an essential component for realizing a low-carbon society and a smart grid (a distributed power supply-demand network). NGK Spark Plug Co., Ltd. is working on the development of SOFC, as they are easy to introduce at home and expectations are high for their high efficiency.



Engineering R&D Group, Komaki Factory

Fuel Cells in a Low-carbon, Smart Grid-based Society

As global warming issues are becoming increasingly serious, the world today is looking for the emergence of a new energy source to reduce greenhouse gas emissions such as carbon dioxide (CO₂). In such a situation, one such source that has received attention is the fuel cell, as a next-generation, environmentally friendly power generation system. Fuel cells have two prominent features.

The attention-getting primary feature of fuel cells is their use of an environmentally friendly power generation methodology. Unlike disposable dry batteries or rechargeable batteries that store electricity, fuel cells generate power via a chemical reaction between hydrogen and oxygen. This process produces only electricity, water and heat, basically involves no CO₂ emissions,

believed to be a cause of global warming, and therefore contributes to the realization of a low-carbon society.

The secondary feature is that, using the existing infrastructure, such as utility gas, the generation method is a waste-cutting technology. We are developing fuel cells that take hydrogen from utility gas or other fuels, and thereby enable stable power generation without being affected by natural conditions, unlike solar or wind power.

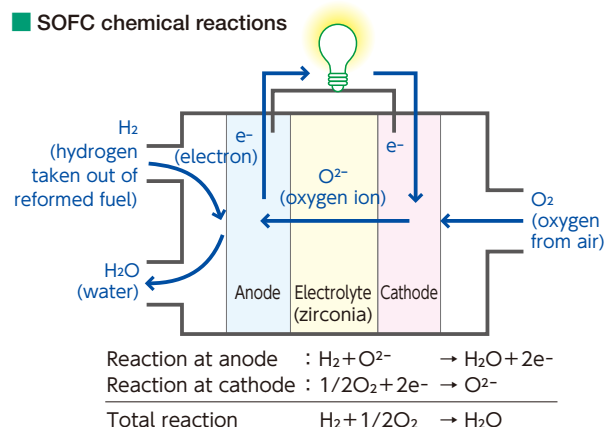
Moreover, fuel cells generate power close to where it is used, such as in the home, and therefore are free of the problem of transmission power losses inherent in power sent from power stations. As such, fuel cells are essential for achieving next-generation efficient power utilization, as exemplified by the smart grid (distributed power supply-demand networks).

High-Efficiency, Easy-to-Install System Readily Compatible with Existing Infrastructure

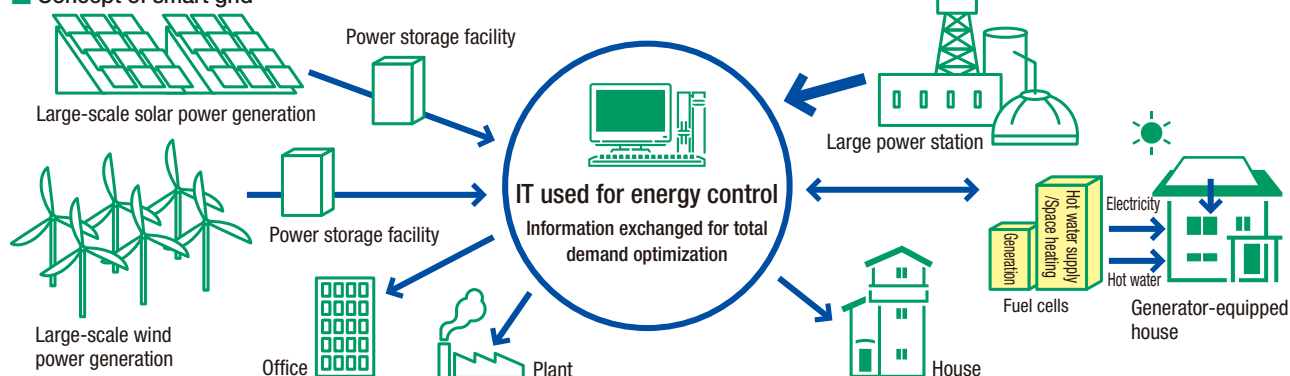
Fuel cells fall into several types including direct methanol fuel cell (DMFC), which are anticipated to be used in personal digital assistants, and polymer electrolyte fuel cell (PEFC), which are already on the market. We are working on the development of solid oxide fuel cell (SOFC) among other types of fuel cell.

The SOFC boasts 45% to 55% power efficiency for output under 1,000 kW. This means that, in home-use and other small generation systems, SOFC demonstrates high power efficiency. Moreover, they are fueled with utility gas, eliminating the need for additional infrastructure. Thus, expectations are high for SOFC as fuel cells that achieve high efficiency and are easy to install at home.

SOFC chemical reactions



Concept of smart grid



Recovers and Reuses Heat from Power Generation

Fuel cells are known to be environmentally friendly not simply due to high power efficiency; with fuel cells, it is possible to recover heat generated during power generation and to use the recovered heat for hot water supplies and space heating.

Heat generated at conventional large power stations is difficult to transport to residential areas. In contrast, fuel cells installed at home enable heat from power generation to be used immediately in the home. Specifically, SOFC operates at high temperatures of approximately 700°C and generate much heat, which can be readily used for hot water supplies and space heating.

Home SOFC gas cogeneration systems are expected to substantially contribute to reducing CO₂ emissions in the residential sector, because, in addition to high power efficiency, they achieve high energy efficiency through the use of heat.

Achieves High Levels of Both Power Density and Efficiency

Our SOFC features high power density and efficiency.

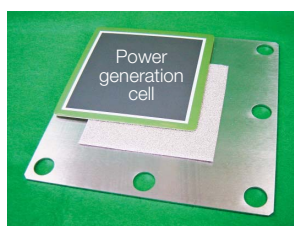
The power density refers to power generation per unit of fuel cell area (W/cm²). Higher power density values enable smaller and higher power fuel systems.

Our SOFC has achieved a power density of 1.3 W/cm² (SOFC developed in 2009). The power density at the world's highest level has enabled the reduction of cells required for 1 kW of output (a rating for home SOFC cogeneration systems) to only 18 planar cells (effective generation area: 100 cm²). Since conventional systems incorporate 30 to 40 planar cells or 100 to 200 micro-tubular cells, reduced cells have enabled the miniaturization of cell stacks.

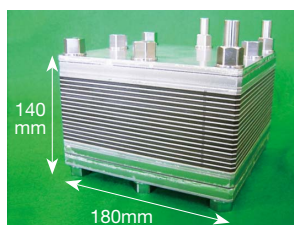
This significant reduction of cells has led to reduced variations in fuel distribution to each cell. This has resulted in substantially improved power efficiency.

Power efficiency is an indicator of how much of the fuel's energy is efficiently converted to electricity. Higher (better) power efficiency implies higher performance.

Our SOFC gas cogeneration system (developed in 2009) achieves power efficiency of



SOFC cell



Fuel cell stack

45%LHV (Lower Heating Value) or more at 700 W output, which is also the world's highest level of efficiency.

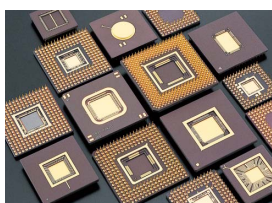
Making the Best Use of our Technical Expertise Developed through Ceramic Package and Automotive Sensor Production

One key to the high values achieved for both power density and efficiency is our expertise developed through years of experience of developing ceramic materials. Fundamental to NGK Spark Plug Co., Ltd. are the assessment, design and manufacturing technologies applied to ceramic MPU packages and various automotive sensors. Evolving these technologies, we have addressed the challenge of developing SOFC. The result is the small yet high-power SOFC developed through the optimization of anode pore size and the porosity of the power generation cell that is the smallest constitutional unit of SOFC.

NGK Spark Plug Co., Ltd. views it an important engineering challenge to conduct research and development for building a society that uses hydrogen as an energy source, as with fuel cells. We make vigorous efforts to develop various related technologies and to explore and create next-generation products that can serve as post-internal combustion engines.

The home SOFC gas cogeneration system is a forerunner of our business envisioning a hydrogen society. We will reinforce our technical development efforts to achieve further miniaturization and higher power.

■ Creating next-generation products by making the best use of our expertise



Ceramic MPU package



Zirconia oxygen sensor



SOFC gas cogeneration unit

Engineering R&D Group Established

In July 2009, we established the Engineering R&D Group in response to radical changes in our business climate, the rising need to mitigate global warming being one of such changes. Unifying departments engaged in research & development, intellectual property, production engineering, production support engineering and environment & safety management into an organizational unit,

the Group functions to ensure cross-departmental communications regarding engineering within the Company.

The Engineering R&D Group is committed to developing a scheme for effectively demonstrating the strength of engineering divisions, to providing support to production divisions, and to creating future business and products including SOFC.

Aiming to Become a Corporation Liked and Loved by the People of the World

Ceramica e Velas de Ignicao NGK do Brasil Ltda. is the largest of the overseas subsidiaries of NGK Spark Plug Co., Ltd. Of total sales, overseas sales account for about 80% in our business, which became full-fledged 50 years ago when NGK Spark Plug Co., Ltd. first advanced into Brazil.



Overall view of the current factory

Ceramica e Velas de Ignicao NGK do Brasil Ltda. Marks Its 50th Anniversary

In 1959, Ceramica e Velas de Ignicao NGK do Brasil Ltda. (NGK do Brasil Ltda.) was established as the first overseas production site of NGK Spark Plug Co., Ltd. It was the first time for us to establish a factory outside Japan, although we had already started exporting products overseas. Moreover, at that time there were still few Japanese companies expanding their business overseas. The Ministry of Foreign Affairs of Japan reported that Brazil's automotive market was promising, though the market was still in its infancy. Since NGK Spark Plug had not yet acquired any customers in Brazil, it was a great challenge for us to set up a factory in that country.

However, thanks to the valiant efforts of our predecessors, NGK do Brasil Ltda. has gradually gained recognition from local automotive manufacturers, growing into an enterprise trusted and loved by the Brazilian people. Today the NGK Spark Plug brand has so deeply penetrated into Brazil that it holds an 80% share of the Brazilian market.

On August 1, 2009, NGK do Brasil Ltda. commemorated the 50th anniversary of its foundation. We are pleased to have been able to continue business operations in Brazil, located half a world away from Japan, for over 50 years. This fact rests as proof that we have obtained generous support from customers, residents in local communities and employees in that country.



Factory at the time of founding



Plugs first produced in Brazil

Spark Plugs and Mosaic Tiles

Needless to say, we had to go through much trial and error in our first overseas expansion. Partly for this reason, NGK do Brasil Ltda. bears the following two features, which derive from its founding history.

① NGK Spark Plug Group's sole overseas production

subsidiary carrying out integrated production of spark plugs

A spark plug comprises metal and insulator parts. The manufacture of insulators entails firing techniques. Since NGK do Brasil Ltda. was jointly established by NGK Spark Plug Co., Ltd. and a tile manufacturer, the Brazilian subsidiary was in possession of the firing techniques that serve as the basis of spark plug production. Such an advantage enabled NGK do

Brasil Ltda. to realize integrated production of spark plugs by applying its firing techniques from early on.

② NGK Spark Plug Group's sole subsidiary that produces tiles

Since its foundation, NGK do Brasil Ltda. has produced mosaic tiles, taking over the business of the tile manufacturer. NGK do Brasil Ltda. therefore boasts unique tile techniques that NGK Spark Plug Co., Ltd. in Japan does not possess. Taking advantage of this strength, NGK do Brasil Ltda. offers distinct designs that satisfy customer needs, and is highly acclaimed in the industry.



Photo of the present reception counter (backed by a mosaic-tiled wall)

The Natural Environment is Not an Asset of a Company but is an Asset to be Shared by All the People

NGK do Brasil Ltda. believes that the natural environment is not an asset of a company but is an asset to be shared by all the people. Since no one could survive in the future without the natural environment, NGK do Brasil Ltda. hopes to pass a rich natural environment on to future generations. As such, the company has focused on reducing effluents, exhaust gases, noises and the like that cause environmental contamination.

In 1973, NGK do Brasil Ltda. installed factory effluent processing systems and improved the filter to reduce the amount of dust released into the atmosphere. Meanwhile, the company has taken environmental measures making effective use of plants. Water hyacinths (*Eichhornia crassipes*), which are said to absorb nitrogen and phosphorus in the water, are grown in the pond within the factory premises, to help purify non-industrial wastewater discharged from the entire factory.

Since an early stage, NGK do Brasil Ltda. has worked on environmental preservation for the next and future generations. To ensure continuous improvement of its environmental activities in the future, the company's Cocuera Factory established an environmental management system, obtaining ISO 14001 certification in 2001.

This accreditation has further expanded the scope of the company's environmental activities. For instance, the company is working to reduce water and power consumption, increase the use of rainwater for production processes, achieve zero waste landfill, and promote recycling of waste materials.

Recent years have seen strengthened hazardous chemical substance regulations around the world. All the NGK Spark Plug Group companies follow these regulations, according to internationally unified standards. Our spark plugs were already compliant with the relevant regulations even before they took effect, by such means as changing from hexavalent to trivalent chrome plating used in the plugs' metal portion, and applying a lead-free glaze to the insulators.



Pond in which water hyacinths are grown



ISO14001 certification

Nittoku Quality Mind

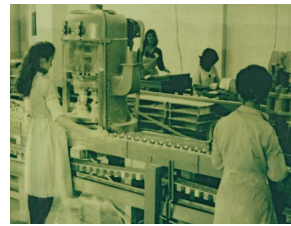
Since its founding in 1936, NGK Spark Plug Co., Ltd. has coherently maintained its basic stance and philosophy to the present as the "Nittoku quality mind." Also at NGK do Brasil Ltda., which boasts a 50-year history since its establishment, the "Nittoku quality mind" has been passed down unbroken from those who worked to establish the company to present workers.

In quality control that requires continuous improvement, the most effective method is to make use of opinions from employees, who are engaged in daily production and who can experience problems firsthand. To ensure that all the employees can work for quality improvement, in 1975 NGK do Brasil Ltda. introduced a QC circle system, which had been proving effective in many Japanese companies at that time.

The QC circle activity system provides a venue for free exchange of views among employees, regardless of their positions and technical levels. The QC circle activities have been widespread and developed at NGK do Brasil Ltda. Some employees expressed the effects of the QC circle activities in the following manner: "The QC circle system helps us to open our hearts and minds"; "It encourages us to willingly acquire knowledge, do research, and come up with an idea"; "Through the QC circle activities, we become aware that we can gain nothing if we only complain about something"; and "These activities encourage us to look at things in perspective, compelling us to be actively involved in quality control."

On the other hand, the company has made constant efforts to optimize production, eliminate waste, and maintain better working environments, by introducing quality control techniques, including the promotion of continual improvement, total productive maintenance (TPM), and the so-called "5S's" principle, which comprises seiri (orderliness), seiton (neatness and tidiness), seiso

(cleaning), seiketsu (cleanliness), and shitsuke (good manner). Currently, NGK do Brasil Ltda. has obtained ISO/TS 16949 certification for its spark plugs, cables and sensors. The company's ceramic and tile segments have acquired ISO 9001 certification. NGK do Brasil Ltda. continues to produce and market products of world-class quality.



Production line in the past (assembly)



QC circle

As a Core Base of NGK Spark Plug Group

NGK do Brasil Ltda. is a key base located in South America, with much growth potential. Except for several workers on loan from Japan, almost all those working at the company are locally hired employees and executives, who support the company's business operations. As part of our efforts to improve local staff's motivation and technological levels, a training program is implemented in which they are dispatched to Japan to obtain expertise and techniques required to continue producing world-class products, while actually operating equipment.

As mentioned above, we not only attach importance to human resource development, but also always keep in mind that our employees are constituent members of their local communities.

Previously, production in Brazil was carried out at both the Flaviano Factory and the Cocuera Factory, but in January 2007, all production facilities were moved to the Cocuera Factory. Since the site of the former Flaviano Factory was favorably located, it was regarded as having potential for contributing to the development of the local city of Mogi. We therefore donated the former factory site to Mogi City, in the hope of its effective use for the city. Furthermore, NGK do Brasil Ltda. gives Christmas gifts to various organizations, and has contributed motorcycles to the city police. Through such activities, NGK do Brasil Ltda. works to fulfill its role as a community-based company.



Donation of Christmas gifts

Message from President

Ceramica e Velas de Ignicao NGK do Brasil Ltda. marked its 50th anniversary in 2009. Expressing our gratitude to all those concerned who had supported the company over its 50-year history, we were pleased to embark on a new chapter of the company. This year we set a new goal, aiming to incorporate eco-friendly designs into equipment that will be introduced for the first time by the Group, while obtaining support from the Japanese branch. In addition, the site of the former Flaviano Factory mentioned above was subsequently renovated as Mogi City's general bus terminal. At the opening ceremony held on May 1, 2010, I joined the Mayor in cutting the ribbon, in the presence of many citizens. These are examples of activities we are conducting based on our corporate philosophy, which upholds "contribution to the world." In keeping with the philosophy, we will continue our efforts year by year in the future.



Opening ceremony of the bus terminal



Kyohei Hayashi
President of Ceramica e
Velas de Ignicao NGK do
Brasil Ltda.

Toward CSR Management

Corporate Philosophy / Corporate Code of Conduct

Corporate Philosophy

**Aiming to become a proposal-making corporation,
we continue to present new values to the world.**

With global views and ideas, we pursue new values linking technology and people.



1 | Commitment

With full use of the most suitable technology and our accumulated experience, we continue striving to offer new values to the peoples of the world.

2 | Management Policy

We offer a working environment in which each one of us is encouraged to make full use of his or her personality and capability. With all our power we are dedicated to pursue management based on trust and confidence.

3 | Action Guideline

Ever onward! Always mindful of what is the best course, we swiftly put it into action.

[Slogan] With established trust and confidence inside and outside the Corporate, we aim to contribute to the peoples of the world by creating and putting at their disposal new values for the future.

(Adopted in November 1996)

Corporate Code of Conduct

At NGK Spark Plug Co., Ltd., in order to make the corporate philosophy expressed in our slogan, "With established trust and confidence inside and outside the Corporate we aim to contribute to the peoples of the world by creating and putting at their disposal new values for the future" an everyday reality, we undertake to conduct ourselves in a socially responsible manner in accordance with the following 10 principles.

1. Compliance

We shall respect human rights and observe both the spirit as well as the letter of all laws and regulations applicable to our activities throughout the world.

2. Consumers and Customers

We shall develop and provide socially beneficial and safe goods and services by making full use of the most suitable technologies and our accumulated experience and shall strive to earn the confidence of our consumers and customers, while taking necessary measures to protect personal data and customer-related information.

3. Fair Dealing

We shall promote fair, transparent, free competition and sound trade. We shall also ensure that our relationships and contacts with government agencies and political bodies are of a sound and proper nature.

4. Communication

Emphasizing communication not only with our shareholders but also with members of society at large, we shall engage in active and fair disclosure of corporate information through ongoing corporate communications.

5. Environmental Conservation

Recognizing that a positive involvement in environmental issues is a priority for all humanity and an essential aspect of our activities and a prerequisite for our very existence as a company, we shall approach these issues voluntarily, proactively, and speedily.

6. Social Contribution

As a good corporate citizen, we shall actively engage in philanthropic activities and other activities of benefit to society.

7. Employees

We shall strive to respect the diversity and individuality of our employees and foster a safe and excellent working environment where they can realize their full potential.

8. Civil Society

We shall reject all contacts with organizations involved in activities in violation of the law or accepted standards of responsible social behavior.

9. Cultural Respect

We shall respect the cultures and the customs of local communities where we do business and strive to manage our activities throughout the world in such a way as to promote and contribute to the development of local communities.

10. Ethics

Management shall exercise leadership in making the letter and spirit of the Code of Conduct integral to everyday business practice, thoroughly implementing the Code of Conduct throughout the Company and inculcating it throughout the Group and its supply chain. To this end, management shall continually improve internal systems while striving to cultivate ethics.

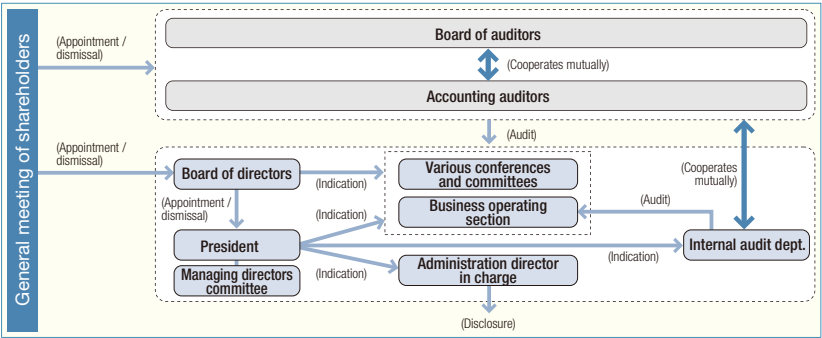
(Revised November 2004)

Corporate Governance^{*1}

Basic Philosophy

We believe that it is a foundational and important operational issue that we construct and maintain a fair and effective management system by preserving the health and transparency of our management to increase the value of our corporation by meeting our complete social responsibility.

We seek to improve and maintain internal control regarding financial reporting, receiving oversight from auditors while implementing effective evaluation of internal controls for financial reporting to conserve the trustworthiness of financial reports based on the Internal Control Report System^{*2} of the Financial Instruments and Exchange Act.



Management Organization

The board of directors oversees the condition of business operations of each executive in addition to deliberating and determining items determined by law or bylaw and other important items to the management of the business.

In order to rapidly gain understanding of situations and react to environmental change we have created bodies such as the managing directors committee planned by the executives as places for active discussion.

Management Oversight Functions

Our board of auditors consists of four auditors (two of whom are external auditors). These auditors oversee business operations of the executives through methods including their presence at the meetings of the board of

directors and, as needed, at the various committees to understand the state of important issues, and through audits of major offices and subsidiaries.

Internal Audits

The internal audit department offers opinions for the improvement or correction of points of issue as needed, and reports to the management the results of inspections through business auditing covering both NGK Spark Plug Co., Ltd. and our affiliates. This division also attempts to

have close cooperation with the auditors and accounting auditors by exchanging information such as auditing principles, auditing plans, and auditing implementation status.

CSR^{*3} Activities

The NGK Spark Plug Group aims to grow as an enterprise that contributes to society and has the trust of all its stakeholders. To realize this goal, we strive to strengthen our CSR management by promoting environmental conservation, complying with laws and regulations, and establishing corporate ethics, as well as engaging in social contribution and risk management. In April 2010, we set up the CSRPromotionDepartment to systematically promote all CSR activities, and make them known to everyone involved in the Group.

Steps towards CSR

Nov. 1996	Adopted "Corporate Philosophy"
Feb. 1998	Adopted "Corporate Code of Conduct"
Apr. 1998	Established Ethical Committee
Feb. 2003	Adopted "Corporate Ethics Helpline System Operation Guidelines"
Nov. 2004	Revised "Corporate Code of Conduct"
	Published "Code of Conduct Guidebook"
Apr. 2005	Published "Guidelines on the Handling of Personal Information"
Aug. 2005	Established Export Control Committee
	Adopted "Export Management Regulations"
Jan. 2007	Published "Confidentiality Management Guidelines"
Feb. 2007	Adopted "Confidentiality Management Regulations"
Sep. 2008	Established Internal Audit Department
Apr. 2009	Determined our "Corporate Protection Manual"
Apr. 2010	Inaugurated CSR Promotion Department

*1 Corporate Governance

Refers to the process or systems by which a business operator oversees to ensure that the enterprise is being appropriately and healthily engaged in.

*2 Internal Control Report System

Publicly traded companies must publish internal control reports prepared by oversight from a chartered accountant or auditing firm each business year based on the 2006 revision of the Financial Instruments and Exchange Act to improve the trustworthiness of financial reporting. The name of the Financial Instruments and Exchange Act prior to revision was the Securities and Exchange Act.

*3 CSR

Corporate Social Responsibility

1 Compliance

We shall respect human rights and observe both the spirit as well as the letter of all laws and regulations applicable to our activities throughout the world.

- NGK Spark Plug Group is a global corporation with a foreign sales ratio of 80% and production and sales organizations worldwide. To maintain the trust of international society, we will “respect human rights and abide by all laws and international rules as well as the spirit of the law, whether in Japan or overseas,” namely the respect of human rights and compliance, as the basis of our actions.
- To earn respect and popularity from the people of the world, each employee of our group will behave in accordance with our code of conduct and with social decency.

*1 Compliance

This refers to compliance with laws and regulations; the fair operation of a business in accordance with the rules governing it.

Compliance*1

We work to increase employee understanding of compliance to act in sound social judgment not forgetting that our enterprise is also a member of society.

Education and Awareness-raising

As part of our compliance education efforts, we deliver onsite lectures regarding business and legal affairs, upon the request of each workplace. These lectures are designed to encourage employees to consider why written contracts should be signed, or to check if there is any illegality when concluding a contract. Through such processes, employees can become aware of the importance of business and legal affairs and take an interest in them. This will result in reducing not only risks to individual employees, but also risks to their company. We also hold compliance lectures during the training

programs for new employees and level-specific training programs for newly appointed management. Training for employees shortly after joining the company or employees promoted to higher levels is designed to include the content required for their respective positions. Our company also promotes activities to raise compliance awareness regarding export controls and trade-related business. The Export Control Committee organizes seminars and Internal Auditor training sessions for the respective divisions of NGK Spark Plug Co., Ltd. and its subsidiaries.

Corporate Ethics Helpline

We have a corporate ethics helpline as an internal communications system to resolve issues related to corporate ethics early and prevent illegal activities. In addition to places of contact within and outside the company for the provision of information or counseling for employees, etc., that become aware of illegal activities

that have taken place or may take place, we have ensured that the environment makes it easy to discuss issues by making it clear that the identity of any informant is protected. We also sincerely work to support individual themes related to legal or ethical issues.

*2 Unfair Competition Prevention Act

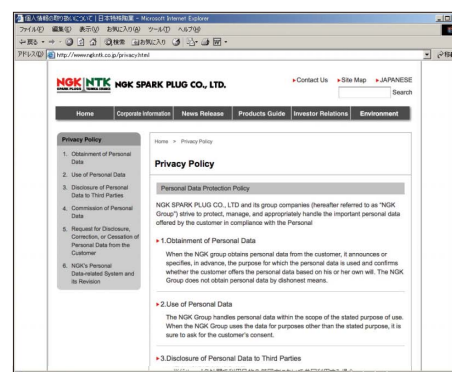
This law is intended to ensure fair competition between business operators. It prohibits activities such as improper gathering of confidential information, and the improper use or publication thereof, as well as preserving the trust and confidentiality of businesses.

*3 Act on the Protection of Personal Information

While considering the usefulness of personal information this law seeks to preserve the individual's profit rights. It regulates such things as passing on personal information without notifying the person.

Security Control / Information security

With the advance of legal systems such as the Unfair Competition Prevention Act*2 and the Act on the Protection of Personal Information*3, we must work hard to prevent any leaks of private information. We endeavor to appropriately handle private information, establishing security control regulations to maintain and develop the health of our business, thoroughly managing issues related to confidential information about our company, our customers, and our suppliers. Our privacy policy is available on our website.



Privacy Policy
<http://www.ngkntk.co.jp/english/privacy.html>

Export Controls

In order to preserve international peace and safety Japan has placed legal regulations on trade that would assist the expansion or outbreak of conflicts. Recent years in particular have seen progressive strengthening of regulations domestically and internationally. In August 2005 NGK Spark Plug Co., Ltd. established an export controls committee to ensure thorough compliance with export regulations by enacting export controls.

We were recognized as an Authorized Exporter in June 2008 based on the Authorized Exporter Declaration

System*¹ after verification of our efforts establishing security management and compliance systems.

We recognize ourselves as an enterprise with a high export ratio and so we strive to maintain export management in compliance with laws while effectively operating our export business.

*1 Authorized Exporter Declaration System

Under this system, Customs recognizes exporters with exceptional compliance as Authorized Exporters and gives them favorable treatment. This is intended to speed up paperwork at Customs and strengthen security measures. Receiving recognition as an Authorized Exporter makes a definite improvement in speed passing through Customs which we expect will have effects including reduced logistics costs and lead time.

Intellectual Property

To protect its existing and newly developed products, NGK Spark Plug Co., Ltd. takes measures to actively acquire intellectual property rights. We investigate and confirm third party intellectual property rights in all production processes from the early stages of development to mass production, to avoid the risk of

infringing the intellectual property rights of third parties or violating laws and ordinances. Furthermore, level-specific training programs on intellectual property rights are held, mainly for engineers and technicians of our company in order to raise employees' awareness.

Risk Management

We face many risks including natural disaster, accidents, terrorism, and the spread of new contagious diseases. We have taken steps to ensure the smooth continuity of our operations should some unfortunate circumstance occur.

Preparing Response to Large-scale Earthquakes

The NGK Spark Plug Group's operation are primarily located in Aichi Prefecture at the center of the Tokai region, which has been designated as a strategic earthquake disaster prevention region in relation to the foreseen Tokai Earthquake*². We have therefore created an earthquake disaster prevention strategy manual setting out measures to protect the safety of people's lives, to avoid damage to facilities, to prevent secondary disaster, and to enact rapid restoration. We also operated a personal safety verification system to rapidly gather information related to the safety of employees.



Drill by the in-house fire-fighting unit

*2 Strategic Earthquake Disaster Prevention Region in Relation to the Foreseen Tokai Earthquake

Because there is the possibility of major damage from an earthquake in the event that a large-scale earthquake occurs, this is a designated region requiring stronger measures related to earthquake disaster prevention. This region includes Nagoya, Ise, Nakatsugawa, and Iijima.

Preparing a Response to New Flu Infections

A new form of the influenza A (H1N1) virus broke out at the beginning of 2009 and ran rampant in various countries around the world.

Our company was quick to establish an influenza pandemic task force, to gather information on a real-time basis and initiate a rapid initial response by such means as sending flu masks to all sites in overseas areas where infections were widespread.

Subsequently, the flu epidemic spread in Japan. However, the entire NGK Spark Plug Group worked in concert to

prevent infection and to mitigate the risk of infection spread by providing disinfectant at workplaces and taking measures to curb group infection. As a result, we were able to minimize the impact.

Recognizing the importance of our response to new contagious diseases, we have made ready plans to minimize the effects and prevent the spread of contagion when it occurs, determining our strategy on the basis of severity.

2 Consumers and Customers

We shall develop and provide socially beneficial and safe goods and services by making full use of the most suitable technologies and our accumulated experience and shall strive to earn the confidence of our consumers and customers, while taking necessary measures to protect personal data and customer-related information.

- The corporate philosophy (commitment) of NGK Spark Plug Group declares, “With full use of the most suitable technology and our accumulated experience, we continue striving to offer new values to the peoples of the world”.
- To put this philosophy into practice, we will develop and manufacture innovative products to satisfy the demands of various customers and achieve our mission of providing products with the same level of safety and quality from any production site in the world.
- From this fundamental standpoint, we will provide accurate and appropriate information on our products and services and handle and protect individual data and customer data related to our business activities in a proper manner.

Basic Policy



Junichi Kagawa
Senior Managing Director
Chief Quality Officer

General customers have taken an increasingly critical view of product quality. In terms of CSR, it is taken for granted that companies are obliged to listen to customer voices, address quality problems, and take swift and appropriate action to resolve them.

We are committed to providing our customers with safe and reliable products that will not cause trouble to customers but will afford them even greater satisfaction. To this end, our company inspects whether there are any problems with our product quality and our quality assurance system from the viewpoint of customers. We will make companywide efforts to achieve continuous quality improvement.

Quality Policy and System

Corporate Quality Policy

We continue to supply Quality Products to the society with emphasis on “Customer First”, “Total Involvement” and “Continuous Improvement”.

● Customer First

Our customers determine the quality of our products and services. In order to provide products and services that satisfy our customers, we strive to understand their continuously changing needs from their point of view, and make proposals exceeding their expectations according to the philosophy of “quality first”.

● Total Involvement

People are fundamental elements of a company and the most important management resource. While respecting the individuality of employees and enhancing each one’s ability, autonomy and creativity, we pool our abilities to solve problems and overcome the tasks we face fully engaging our individual roles with a shared understanding of the problem space.

● Continuous Improvement

The development of a company requires swift and suitable responses to the changing social environment, market conditions and customer demands. For this purpose, we are continuously improving the effectiveness and efficiency of all management resources including our organization, system, processes, products and services.

Since its establishment in 1936, NGK Spark Plug Co., Ltd. has maintained the “Nittoku quality mind,” which represents our basic quality concept. This mind is reflected in the corporate quality policy revised in 2006. In line with our corporate quality policy, each division has established an appropriate quality management system in conformity with the ISO9000 series and ISO/TS16949 standards, and has implemented quality assurance activities.

In addition, we set up the Quality Committee and the Quality Control Division to promote the establishment of a system to oversee and control product quality throughout the company, by strengthening coordination with the quality assurance sections of respective business divisions. Under this system, we identify quality risks from a companywide perspective and promote activities to address and prevent such risks, so as to offer safe and reliable products that satisfy our customers.

Toward Quality Improvement

NGK Spark Plug Co., Ltd. is committed to quality management through the promotion of total quality management (TQM^{*1}) activities.

- Top-down activities embodying company management through policy management.
- Bottom-up activities for workplace activation and human resource development through small-group activities for quality and business improvement and other activities.
- Business standardization and maintenance management as well as improvement activities determined at each workplace by daily management.

■ NQC Activities (Small Group Activities)

We promote what we call “NQC Activities,” which refer to QC circle activities^{*2} aimed at developing human resources and improving workplace capabilities, by continuously addressing various problems and issues. During “Quality Month” every November, the results of NQC activities are announced at the central presentation meeting, and the President Award is granted in recognition of best practices. Commendation is also given to small groups implementing excellent NQC activities in daily operations. By encouraging employees to participate in training programs outside the company and in presentation meetings, we enhance their motivation and encourage small group activities.



NQC activity central presentation meeting

■ Education / Training

We provide QC education and training by establishing education and training programs related to quality control, control technology processes, QC circle activities, quality management systems, measurement management, etc. To ensure that knowledge gained through these programs can be applied in the workplace, we also offer practical guidance and support to our employees. As part of our activities to enhance quality awareness, motivation, education and training, we hold such events as process patrol by the President, quality exhibitions and quality lectures.



Process patrol by the President



Quality exhibition

*1 TQM

Total Quality Management is an operational method and management technique that contributes to the improvement of operational quality in an enterprise.

*2 QC Circle Activities

QC stands for quality control. Small groups are formed within the workplace with the goal of autonomous handling of issues including safety measures, reduction of faulty product, and improvement and quality control of production.

Communication regarding Products and Services

We consider that it is our responsibility to provide customers with correct and appropriate information regarding our products and services. To fulfill this responsibility, we have established various systems.

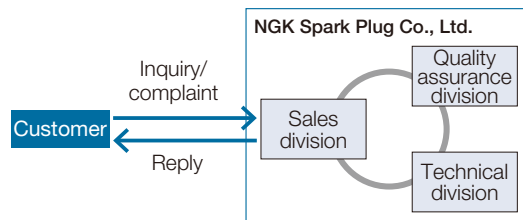
■ Plug Studio

Since the product number and the number of spark plugs to be used differ according to the type of automobile, we offer a system for searching the applicable product number on the website. The website also posts information on exhibition events and motor sports.

Plug Studio
<http://www.ngk-sparkplugs.jp/english/index.html>

■ Responding to Inquiries and Complaints

Inquiries and complaints from customers about our products are first accepted by our sales division. Then the quality assurance division works together with the technical division to quickly resolve these inquiries and complaints.



Important Notice Released in Japan

Regarding Room Type Humidity/Temperature Detectors and Room Type Humidity Detectors

We have found that some of the Room Type Humidity/Temperature Detectors and the Room Type Humidity Detectors which were sold from 1987 to 2007 may cause thermal damage to equipment. We will therefore take preventive measures free of charge for affected users in the construction and air-conditioning industries.

※NGK Spark Plug Co., Ltd. has received no accident reports regarding products sold by the Company (as of the end of June, 2010). However, several accidents have been reported with regard to similar products sold by other companies. Upon hearing such reports, we have decided to take protective measures to ensure our customers' safety.

3 Fair dealing

We shall promote fair, transparent, free competition and sound trade.

We shall also ensure that our relationships and contacts with government agencies and political bodies are of a sound and proper nature.

- We believe that a business environment based on the rules of “fair, transparent and free competition” both in Japan and overseas is the key for NGK Spark Plug Group and its products to gain the trust of worldwide consumers and customers. NGK Spark Plug Group will also proactively develop such “fair, transparent and free competition”.
- It is important to establish healthy partnerships with our consistent suppliers who are vital for our business activities, and we will therefore build mutual trust with a long-term perspective and carry out proper purchasing transactions.
- To achieve optimal procurement worldwide, NGK Spark Plug Group will perform transactions based on fairness, transparency, free competition and rationality on the international stage, too. We will also maintain transparent relations with governments and public administrations and avoid actions which may raise doubts of collusion, etc.

Procurement Policy

We aim to realize globally optimal procurement in keeping with our quality-oriented principle. To this end, the material division strives to strengthen cooperation with suppliers as well as technical and production divisions to deepen understanding of mutual needs. We procure materials and parts based on the following principles:

- With a foundation of fair, transparent, and free competition, we trade rationally.
- We engage in business complying to the related laws, domestically and internationally.
- By procuring better (quality), cheaper (cost), faster (deadline), and more friendly to the earth (environment), we contribute to the benefit of company.

With Our Suppliers

It is indispensable to establish healthy partnerships with our suppliers in order to procure better raw materials and parts in a more timely and stable manner. We have improved mutual trust with our suppliers through activities aimed at achieving mutual prosperity by working hard together, with a sense of tension maintained through the supply chain.

Sharing Our Corporate Policy

We hold a corporate policy seminar inviting our main suppliers, offering them an opportunity to deepen their understanding of the present situation of our company and our goals.

At the seminar held in 2009, explanation was given about our corporate policy including our business performance and reforms, as well as a major structural change. We also showed the direction to be taken by our company, and reaffirmed that our company would work with its suppliers to overcome the difficult circumstances. In addition, we sought the cooperation of our suppliers in taking responsible action for appropriate control of environmentally hazardous substances, quality improvement and cost reduction, and further promotion of CSR activities.



Corporate policy seminar

Revision of the Basic Contract Document

Recently we have seen significant changes in social circumstances, laws and regulations, social responsibilities, and other circumstances surrounding enterprises. Such changes require enterprises to implement CSR procurement. In response, in March 2010 we completely revised the basic contract document for the first time in 10 years, with the objective of implementing CSR procurement through the supply chain.

Activities to Support Suppliers' Staff Education

We believe that developing the human resources of our suppliers will help improve our quality and cost competitiveness in the future. We therefore carry out activities to support suppliers in improving their staff members' technical skills by holding lectures on TPM^{*1} and the Seven QC Tools^{*2} for them.



Activities to support suppliers' staff education

Green Procurement and Green Purchasing

We promote green procurement by establishing a green supplier system, in order to reduce environmental burdens through the supply chain.

⇒ See page 27.

In selecting office supplies and equipment, we actively employ products that are kind to the environment (Eco-products).



Green Procurement Guidelines (In-house use)

*1 TPM

Total Productive Maintenance is a method for establishing a system and mechanism to continuously carry out human resource development and work/equipment improvements, in order to build up a corporate structure that can ensure sustainable profits.

*2

Seven QC Tools

QC stands for quality control. The Seven QC Tools are graphs, check sheets and other items used for quality control. There is also another set of items called “New Seven QC Tools.”

Web

Green purchasing requirements
Number of vehicles owned

4 Communication

Emphasizing communication not only with our shareholders but also with members of society at large, we shall engage in active and fair disclosure of corporate information through ongoing corporate communications.

- To enhance our credibility in Japan and overseas, we seek to practice “transparent management” by disclosing information on our business and financial performance as well as other everyday actions, including environmental activities, via our website and other media.
- In order to respond to the trust of our stakeholders in the capital market, such as our shareholders and investors, we endeavor to increase our market value and provide information on our management, including our growth strategy, through IR activities in a timely and proper way.
- We are aware of our social responsibility not only to our shareholders and investors but to a wide range of other stakeholders*1 such as consumers, customers, employees, suppliers and local residents, and will therefore deepen mutual understanding by strengthening our PR and communication channels and promoting interactive communication.

W Disclosure of Information

In order to have timely and appropriate disclosure of financial information, we supply information using various tools in addition to meeting the legal disclosure standards. In particular we attempt to sufficiently publish on our website information that a broad range of our stakeholders can view.

Investor Relations

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

We additionally publish corporate information and environment and social reports to have reader better understand the NGK Spark Plug Co., Ltd. and our activities as part of our efforts at information disclosure. We endeavor to communicate information about our latest technology and products through booths at various exhibitions.



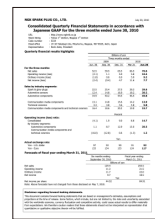
To All Our Investors
(Japanese only)



Annual Report



Tokyo Motor Show



Financial Reports

*1 Stakeholders

Shareholder, customer, employee, local resident and other concerned parties.

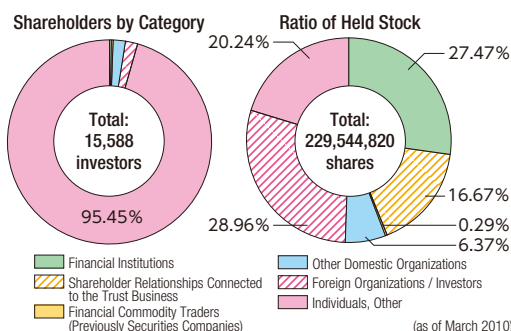
General Meeting of Shareholders

Each June, we hold our Regular General Meeting of Shareholders, at which we explain the business developments of the previous year to our shareholders, who then vote on the matters to be resolved. The stock distribution of NGK Spark Plug Co., Ltd. is shown in the pie-chart on the right.



Regular General Meeting of Shareholders

● Stock Distribution



IR Activities*2

The NGK Spark Plug Group provides business information such as business content, performance and stock prices to shareholders and investors, and also holds IR events to directly answer any enquiries. In July 2009, we participated in the Nagoya Stock Exchange IR Expo, and received enthusiastic comments and questions from personal investors. We also periodically hold presentations for analysts and institutional investors in Japan, and give explanations to overseas investors as well.



Nagoya Stock Exchange IR Expo

*2 IR Activities

Investor Relations involves communicating detailed information about our management, finances and results.

5 Environmental Conservation

Recognizing that a positive involvement in environmental issues is a priority for all humanity and an essential aspect of our activities and a prerequisite for our very existence as a company, we shall approach these issues voluntarily, proactively, and speedily.

- To contribute to the battle against global warming and the establishment of a recycling-oriented society, we are committed to measures such as energy saving, zero waste discharge, recycling and enhanced chemical control.
- For the simultaneous pursuit of environmental conservation and economic growth, we will strive to reduce environmental impact and risk in all business activities through the improvement of productivity, enhancement of resource and energy efficiency, and development and use of alternative materials. We also aim to develop, introduce and disseminate innovative technologies, products/services and business models that can contribute to solutions for environmental problems.
- We will proactively deal with environmental issues, based on our corporate philosophy (or action guidelines): "Ever onward! Always mindful of what is the best course, we swiftly put it into action."

Environmental Declaration

NGK Spark Plug Group will strive for harmony with society and the global environment while serving the people of the world, offering new value based on the principle of high quality throughout the entire life cycle of our environmentally friendly NGK spark plugs and NTK new ceramic products. To achieve this, we have formulated an environmental action plan based on our environmental policy as a way of accepting our social role and responsibility as a trusted corporation. With the participation of everyone concerned, we will pursue the development of a sustainable society and business operations.

(revised April 2004)

Environmental Policy

Management We will abide by all laws, regulations, protocols and voluntary standards relating to environmental conservation. We also aim to increase our environmental efficiency by continually trying to enhance our environmental management system (EMS) and performance.

Factory / Office We will remain constantly aware of the need for environmental harmony, working to prevent air, earth and water pollution, use energy and resources more effectively, and reduce waste materials.

Products We will work towards the development, design, procurement, manufacture, sale, distribution and disposal of environmentally friendly products.

Communication We will promote communication with stakeholders through clear disclosure of information. We will also contribute not only to local communities but to the wider society through consideration for the natural environment as well as participation and support for environmental conservation activities.

Mind We will strive to raise awareness of environmental conservation through environmental education and publicity activities as well as the dissemination of these policies among all our employees. We will also seek the understanding and cooperation of our business associates.

(revised April 2004)

Environmental Action Plan and NGK Spark Plug Group

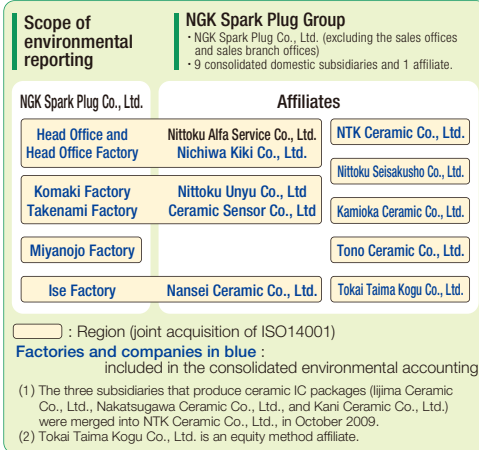
Item		Eco Vision 2010	
Management	Environmental Management System	Sharing of environmental policy by related companies including overseas companies	
		Construction of total management system (QMS, EMS, OSHMS)	
	Environmental operations	Centralization of environmental management data control	
		Promotion of CSR management	
	Environmental accounting	Integration of environmental accounting and management accounting	
Factory / Office	Prevention of global warming	Total greenhouse gas emissions in Japan of 150,000 tons or less (10% down from 2001)	
	Effective use of resources	Efficient use of water resources	
		EPR (extended producer responsibility) operations	
		Reduction of waste emissions	
Products	Hazardous substances	Reduced environmental load due to waste	
		Total 36 tons of PRTR*1 substances released (80% down from 2002)	
	Eco-design	Eco-friendly design and product creation	
		Green supplier system of identification and registration of all our business associates	
Communication	Distribution	Construction of efficient distribution systems	
	Eco-business	Development of eco-businesses	
		Disclosure of clear environmental data	
	Community	Continuous issue of CSR reports	
Mind	Education and instruction	Support for and participation in NGO and NPO activities	
		Promotion of nature conservation and social contribution	
	Education and instruction	Thorough education of eco-minded employees	
		Reflection of environmental performance in business evaluation	

Regarding Targets for Carbon Dioxide, Waste, and Water

Fiscal 2010 is the final year of the NGK Spark Plug Group Eco Vision 2010, which set our long-term targets stipulated in fiscal 2004.

As for carbon dioxide, in fiscal 2009 we started to set our reduction target in terms of total emission volume. We also reviewed and altered our target management mechanism to enable each division to carefully manage their CO₂ emissions on a total volume basis as well as on a per-unit basis.

Regarding waste and water, since fiscal 2006 we have continued setting our target values as “reduction volumes,” i.e., the volumes of reduction achieved through the implementation of energy saving measures and so on. Since we can evaluate how far we have achieved the targets without being greatly affected by variations in production, we are better able to track the effects of our energy- and resource-saving activities. This encourages us to further promote efforts to reduce waste emissions and water consumption.



Eco Vision 2010

Achieved : ○ Not achieved : ×			
Fiscal 2009 targets	Results	Page	Fiscal 2010 targets
—	—	—	— *6
Research sufficient environmental education in domestic business sites	○	—	Implement sufficient environmental education in domestic business sites
Research the effectiveness of combined audits	×	—	— *6
Research integrating QMS and EMS	○	—	Promote integrating EMS and QMS documents
—	—	—	Improve environmental impact assessment systems
Work to revise and improvement the collection and managerial methods of environmental data for operating organizations	○	—	Work to revise and improvement the collection and managerial methods of environmental data for operating organizations
—	—	—	Improve significant environmental aspects (emergency situations) and prepare for emergency situations [Zero environmental accidents]
Use environmental accounting as an evaluation item for our methods	×	—	— *6
Total group emissions of carbon dioxide under 169,000 tons	×	23	Total group emissions of carbon dioxide under 176,000 tons
Reduction targets : NGK Spark Plug : 11,527 m ³ Affiliated companies : 874 m ³	○	26	Group's water reduction target: 9,755 m ³
Establish methods for recycling used products	×	—	— *6
Reduction targets : NGK Spark Plug : 228 tons Affiliated companies : 26 tons	○	25	Group's waste reduction target: 794 tons
Incorporate a low environmental burdens disposal method	○	—	Incorporate a low environmental burdens disposal method
Reduce VOC*2 released	○	26	Promote control (recovery, etc.) of VOC released
Carry out uniform control with MSDS*3	○	—	— *7
Research environmental burden management systems	○	—	— *7
Offer the addition of LCA*4 methods for product assessment	○	—	Introduce LCA methods into the product assessment
500 companies (expand toward equipment, tool, and auxiliary material manufacturers)	○	27	— *7
Transport efficiently (efficient load ratio and conveyance count)	○	23	Efficiently transport products and waste (Reduce volume of cargo shipment by 1% from previous year)
Support internal ELV*5 material analysis and establish other green procurement related material analysis methods.	○	28	— *7
Differentiate web and printed matter with regards to information disclosure	○	—	— *7
Issue Environmental & Social Report	○	—	— *7
Support and participate in NGO and NPO activities	×	—	— *6
Continue to participate in community environmental events, etc.	○	30	Continue to participate in community environmental events, etc.
Create a system for implementing environmental education for all employees	○	21	Continue to implement environmental education
Research a system to evaluate the level of contribution of environmental activities in the work of employees	×	—	— *6

*6 : We set no specific targets for FY 2010, but will continue and enhance our efforts within the scheme of our next-term Eco Vision that covers FY 2011 and onwards.

*7 : As of the end of FY 2009, we have achieved all targets that were set in our Eco Vision 2010. Therefore, we did not set any specific targets for FY 2010.

*1 PRTR (Pollutant Release and Transfer Register)

System of tracking volume of emissions to the environment of designated chemical substances and the reporting thereof.

*2 VOC (Volatile Organic Compounds)

The source of photochemical oxidants and suspended particulate that pollute the atmosphere.

*3 MSDS (Material Safety Data Sheet)

This sheet contains information about the level of danger of a chemical substance and precautions for its handling.

*4 LCA (Life Cycle Assessment)

A method of assessing the total environmental burden including the manufacturing of a product, its use, and its disposal.

*5 ELV (End of Life Vehicle) Directive

Effected in the EU in 2002; regulates designated regulated substances and recyclable ratio of a used automobile.

Environmental Load from Business Activities

Web.....
Material balance of
domestic business sites

The first step in performing environmental protection activities is to know what kind of load one's activities impose on the environment. The tables below show the amount of resources and energy used in the business

activities of the NGK Spark Plug Group (input) and the products, waste and so on created as a result of these activities (output).

Input

Energy

Purchased electric power, Gas, Heavy oil A

: Quantity used at offices and factories

Gasoline : Quantity used during testing and transportation

LPG, Diesel oil : Amount used at offices and factories, and during testing and transportation

Classification	Non-consolidated	Group
Purchased electricity	218.40 GWh	330.21 GWh
Gas	12.83million m ³	14.39million m ³
LPG	3,700 tons	8,312 tons
Heavy oil A	36 kL	36 kL
Gasoline	592 kL	622 kL
Diesel oil	54 kL	135 kL

Water

Tap water : Quantity of service water used

Well water : Quantity of underground water used

Recycled water : Quantity of water reused after being purified on the premises

Classification	Non-consolidated	Group
Tap water	751,864 m ³	938,113 m ³
Well water	570,580 m ³	850,653 m ³
Recycled water	887,816 m ³	1,072,367 m ³

Paper

Paper : Quantity of copy paper and wrapping paper used (estimated)

Classification	Non-consolidated	Group
Paper	2,491 tons	3,262 tons

Other materials and auxiliary materials

Plastic materials, chemical materials, oils, other materials, other gases : Quantity used by each department (estimated)

Classification	Non-consolidated	Group
Plastic materials	326 tons	2,419 tons
Chemical materials	4,976 tons	10,053 tons
Oils	352 tons	417 tons
Other materials	750 tons	1,049 tons
Other gases	3,314 tons	7,236 tons

Main raw materials

Ceramic materials, Metal materials : Purchased quantities

Reused elements : Quantity of reused ceramic material

Classification	Non-consolidated	Group
Ceramic materials	—	12,720 tons
Metal materials	—	21,897 tons
Reused materials	9,046 tons	11,851 tons

Output

CO₂ from energy consumption

Offices, factories, testing, transportation

: Emission of CO₂ generated by the use of electricity, gas, and so on

Classification	Non-consolidated	Group
Offices and factories	116,078 tons	170,853 tons
Testing	1,313 tons	1,313 tons
Transportation	231 tons	512 tons

Wastewater

Wastewater : Sewage, Quantity of water discharged to the public water area

Evaporation, Other : Volume other than wastewater (e.g. evaporated coolant)

Classification	Non-consolidated	Group
Wastewater	1,050,742 m ³	1,301,556 m ³
Evaporation, Other	271,702 m ³	487,210 m ³

Waste

Recycling : Quantity of matter that is consigned to be recycled (including items sold)

Buried or incineration : Quantity consigned to be buried or incinerated

Classification	Non-consolidated	Group
Recycling	12,839 tons	16,026 tons
Buried or incineration	98 tons	111 tons

Atmosphere

SOx : Emissions from incineration facilities, etc.

Classification	Non-consolidated	Group
SOx	0 tons	0 tons

Wrapping/packaging materials

Plastics, Paper, cardboard : Quantity used by each shipping department (estimated)

Classification	Non-consolidated	Group
Plastics	478 tons	735 tons
Paper	1,557 tons	1,782 tons
Cardboard	892 tons	1,412 tons

PRTR law-regulated substances

Atmosphere, water area

: Quantity of matter released to atmosphere and the water area, concerning which notification is made in each region

Classification	Non-consolidated	Group
Atmosphere	6.3 tons	130.4 tons
Water area	0.2 tons	0.2 tons

Product shipment

Product

: Quantity of shipped products as consigner *1

Classification	Non-consolidated	Group
Product	—	42,858 tons

Factors used to calculate CO₂

Japan Auto Parts
Industries Association
(2001)

	CO ₂ conversion factor
Purchased electricity	0.33kg-CO ₂ /kWh
Gas	2.558kg-CO ₂ /m ³
LPG	3.007kg-CO ₂ /kg
Heavy oil A	2.712kg-CO ₂ /L

Guidelines from the ordinance regarding calculation of emission volume of greenhouse gas emissions resulting from the business activities of designated emitters

	CO ₂ conversion factor
Gasoline	2.32kg-CO ₂ /L
Diesel oil	2.62kg-CO ₂ /L

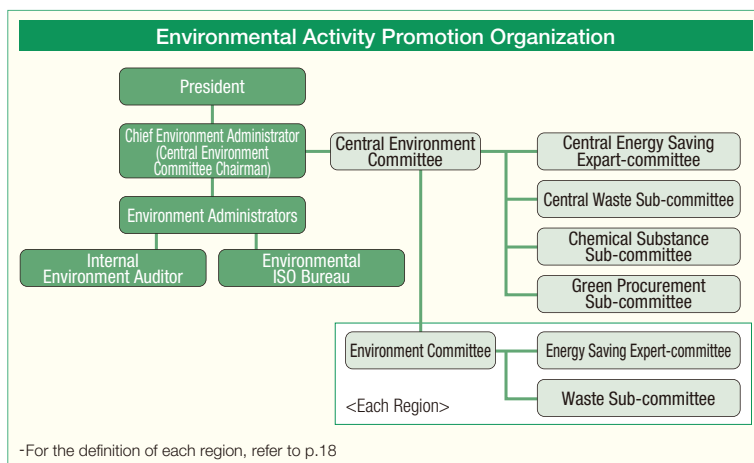
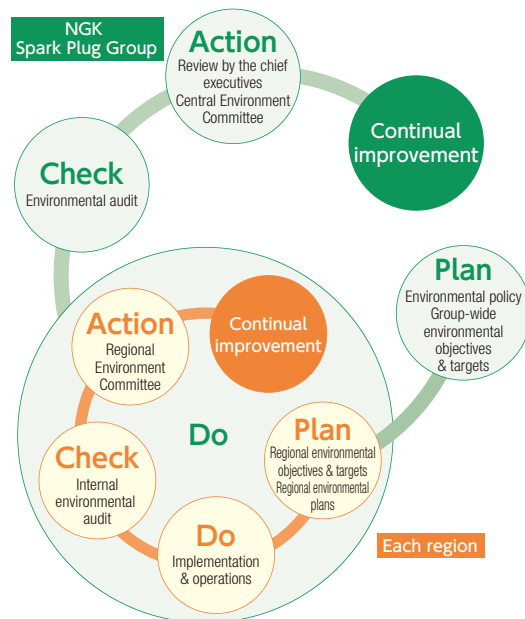
- Not including energy consumption and CO₂ emissions due to transportation outsourcing.
- For some operation sites that have no installations to measure the volume of water discharged, the wastewater volume is taken as the combined volume of tap water and well water.

*1 The counting method was changed in fiscal 2006.

Environmental Management

Management System

In order to advance environmental conservation activities in a systematic and effective manner, throughout the Group we have established an Environmental Management System and fulfill the activities thereof with full participation. With our shared environmental policy in every part of the NGK Spark Plug Group, each division and region sets goals, implements activities to meet them and evaluates progress and results. Our ongoing improvement is also connected to review and verification of issues and promotion of activities. Each year we host an environmental committee meeting in each region four times, and a central environment committee meeting twice chaired by the Chief Environment Administrator, the highest level of management for the environment.



Education for internal environmental auditors



Central Environment Committee Meeting

Conditions for the Establishment of a System

NGK Spark Plug Group has integrated ISO14001*1 certification across the Group. In fiscal 2009, the scope of the integrated certification was expanded to include the Satsuma Factory of Nittoku Seisakusho Co., Ltd. and NTK Ceramic Co., Ltd., which was established in October.

As for overseas subsidiaries/affiliates, 11 of 12 production companies and 2 of 11 sales companies have obtained ISO 14001 certification as of the end of March 2010. This means that 97% of our global workforce has been ISO 14001-certified.

ISO14001 Certified Companies

	Companies
NGK Spark Plug Co., Ltd.	1
Affiliated companies	10
Overseas consolidated companies	13



ISO External Auditing

[Web](#).....
ISO14001 certified locations

*1 ISO14001

An international standard related to environmental management systems. Business locations that have established systems in accordance with the standard can receive certification from external organizations.

Environmental Management

Web.....
Numbers of official
qualification holders and
internal auditors

Web.....
Data on atmosphere,
water quality, noise and
vibration

***1**
**Accounting
standards relating to
asset retirement
obligations**

It became mandatory that items required by law to be removed when buildings or other tangible fixed assets are disposed of, be accounted for as liabilities. Examples include expenses for the treatment of asbestos, soil surveys, and decontamination.

***2**
**Soil Contamination
Countermeasures Act**
The purpose of this Act is to apprehend situations of soil contamination and to prevent harmful effects on human health by such contamination. In April 2010, the Act underwent a substantial revision, involving the addition of provisions regarding the apprehension of situations and actions to be taken, requiring notification to be given when the character of land of 3,000 m² or more in area is about to be changed.

***3**
**PCB
(Poly Chlorinated
Biphenyls)**
Widely used as an insulating oil due to good insulation properties and chemical stability, however PCBs are highly toxic to people and are presently prohibited from production and use.

***4**
Asbestos
A mineral fabric that has been widely used as an insulator. It is dangerous as inhalation may result in lung cancer or mesothelioma tumors.

Environmental Education

In order to promote environmental conservation activities with full participation, the NGK Spark Plug Group is working to have sufficient environmental education. Based on environmental education in the workplace, we work to improve the knowledge and understanding of employees through efforts such as tiered education from new employee training to training for newly appointed management, making our environmental policies widely known by distribution of environment cards to all employees, and supplying environmental information via

our company newsletter or internal electronic announcement system. We also implement an annual Health, Safety and Environment Conference and we conduct lectures about the environment, or health and safety, and panel exhibitions. In fiscal 2009, the Komaki Factory worked on environmental education activities with the theme "See, Feel and Think about ECO." These activities included holding panel exhibitions as well as various hands-on exhibitions of LED lighting, thermography, etc.



Environment card



Health, Safety, and Environment Conference

Environmental Risk Management

Risks including environmental accidents, pollution and the violation of legal regulations are all present when engaged in business activities. NGK Spark Plug Group has identified these kinds of risks and works to reduce risk and actively prevent these issues.

Soil Survey

We have clarified our soil surveying method, auditing period, and evaluation standards to prevent soil or underground water pollution resulting from our business activities. In fiscal 2009, respective factories and affiliates investigated the history of use of designated hazardous substances, took measures to meet the accounting standards relating to asset retirement obligations*¹, and made preparation to comply with the revised Soil Contamination Countermeasures Act*² coming into effect in April 2010.

PCB*³ Management

The Head Office Factory, Komaki Factory and Nittoku Seisakusho, store waste materials containing PCBs. We carry out stringent control of such materials, until the day that they can be properly disposed of.

On-site Confirmation of Waste Material Treatment

To ensure that waste material consigned to be treated by a processing contractor specified by the Group was being appropriately treated, we carry out annual on-site checks at the interim treatment plant and also at the final disposal site. In 2009, we visited 35 companies and were satisfied that disposal was taking place without problems.

Chemical Leak Prevention

The NGK Spark Plug Group manufacturing processes include processes that use chemicals that are toxic. To prevent pollution of soil or water from chemical leaks, we prevent leaks by double layering storage tanks and moved pipes above ground to identify leaks early.

Asbestos*⁴ Response

To prevent harm from asbestos we have taken steps for its appropriate disposal. The removal of asbestos from facilities has been completed. However, some asbestos still remains as an insulator in buildings, and we continue to take appropriate control measures.

Drills for Emergency Situations

In order to prepare for emergency situations such as unforeseen accidents, we implement regular drills to prevent the spread of pollution beyond our company. We have projected accidents for each department and are prepared for any scenario.



A Drill for an Emergency Situation

Legal Violations and Complaints

In order to ensure compliance with environmental regulation, the NGK Spark Plug Group is working to prevent violations of legal regulations and complaints through efforts as part of our management system. We have also endeavored to prevent environmental pollution by setting more rigorous standards than those required by law, joining in cooperation with local governments and

other such initiatives.

In fiscal 2009, there were no cases of violating legal regulations such as deviation from regulated limits, although we have had four cases of complaints. In each complaint case, we appropriately responded and attempted to prevent a reoccurrence.

■ NGK Spark Plug Co., Ltd.

(cases)

	2007	2008	2009
Violations	0	0	0
Complaints	2	8	2

■ Response to Complaints and Violations in Fiscal 2009

The Komaki Factory received requirements to take measures against dust spreading from the parking lot, and damage caused by bird droppings from the electric wires that prevent television interference. We addressed the former problem by sprinkling the parking lot with water to prevent dust accumulation. As for the latter problem, measures were taken to prevent birds from landing or perching on the electric wires.

■ Affiliates

(cases)

	2007	2008	2009
Violations	2	1	0
Complaints	0	1	2

■ Response to Complaints and Violations in Fiscal 2009

1. Nittoku Seisakusho Co., Ltd. received a requirement to control noise. Among the countermeasures taken were replacing equipment parts and ensuring that the soundproof doors were always closed during nighttime.
2. Tono Ceramic Co., Ltd. received a requirement to take measures against an offensive odor problem. Together with the government agency concerned, the company investigated the cause of the odor. Although the cause could not be identified, the company voluntarily carried out chimney improvement work to prevent the spread of smoke and the offensive odor. Through such efforts, we continue to maintain and manage communication with local communities.

W Environmental Accounting

In order to more efficiently promote environmental management, it is important to obtain a quantitative grasp of the cost and effectiveness of environmental protection. Since 1999, NGK Spark Plug Co., Ltd. has been carrying out environmental accounting, and in 2003 its scope was increased to cover the entire Group.

Environmental preservation costs for fiscal 2009 totaled 6,110 million yen on a non-consolidated basis, and 6,682 million yen for the Group. This was a decrease of 34% compared to fiscal 2008, due to business downsizing. Also, the effect of environment conservation measures

was 284 million yen on a non-consolidated basis.

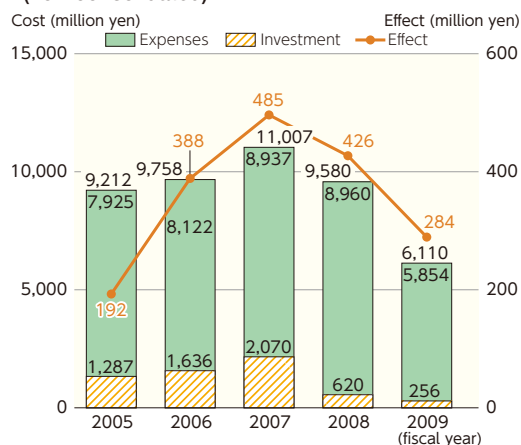
Calculation Concept

To calculate environmental preservation costs, items are categorized in conformity with the Guidelines issued by the Ministry of Environment of Japan. The costs are also proportionately divided according to the rules of the NGK Spark Plug Group, which were established based on the direct investment and expenses actually used for environmental activities.

Web

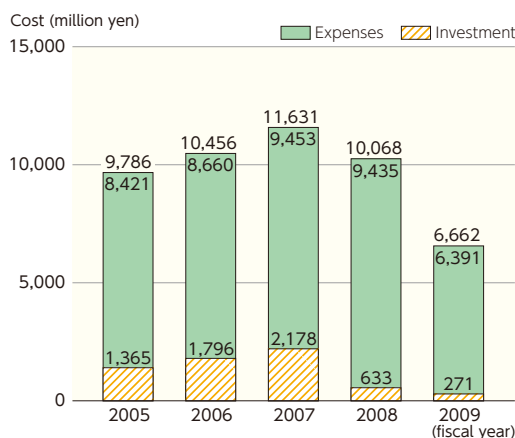
Environmental conservation costs
Environmental conservation effective value
Environmental conservation effective volume
Eco efficiency

● Environmental Preservation Costs and Effect of Environment Conservation Measures (non-consolidated)



● Environmental Preservation Costs (group-wide)

※Not including Nittoku Alpha Service



Prevention of Global Warming

Basic Policy

*1 Global Warming

Phenomenon of increasing average temperatures of the earth's near-surface air and ocean caused by increasing concentrations of greenhouse gases that trap heat in the atmosphere and heat the surface of the earth.



Takao Hamada
Director and Chairman of
the Central Energy Saving
Expert-committee

We are promoting measures to stop global warming*1 measures which we consider to be necessary for human beings to survive the 21st century and also maintain the integrity of ecosystems into the future. During fiscal 2009, in the middle of the global economic slump, we worked especially hard to save energy consumption with particular focus on a type of energy to be used for fixed non-production purposes. As a result, our total carbon dioxide (CO₂) emissions have declined from the previous fiscal year, although the target was missed by a narrow margin. Fiscal year 2010 is the final year of our Eco Vision scheme, and we are further enhancing our energy-saving efforts and specifically aim to decrease our CO₂ emissions to 150,000 tons or less. Also, we have established the Energy Conservation Promotion Section in July 2010 for the purpose of further promoting our CO₂ emission-reduction activities based on a long-term vision covering 10 years ahead. We will reinforce our energy-saving activities to contribute to the prevention of global warming.

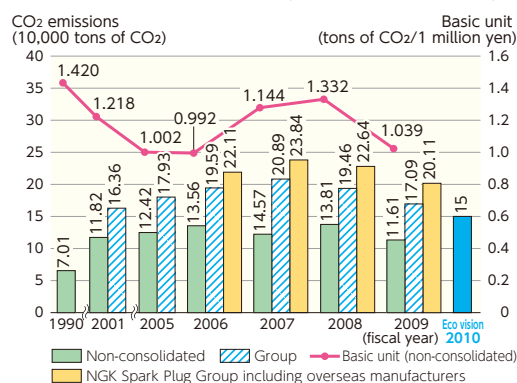
2009 Targets and Results

During fiscal 2009, the NGK Spark Plug Group emitted a total of 171,000 tons of CO₂ equivalent. This volume was slightly in excess of the target of 169,000 tons, but down 12% from the previous fiscal year's emissions. In terms of emissions intensity, our emission reduction performance has improved: despite the fact that our production volume has actually increased from the previous fiscal year, we have reduced CO₂ emissions in real terms (emissions per unit of production) through the reorganization of business

● Fiscal 2009 target & results

	Target (Emissions)	Results
Group	169,000 tons or less	171,000 tons

● Transition of CO₂ emission (offices and factories)



units and integration of plants and facilities.

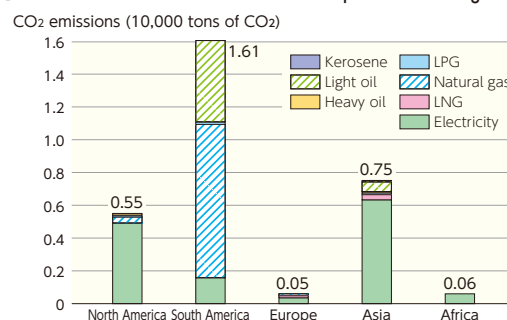
Taking into consideration our actual emission control performance up to the present and our production plans, we have set an emission target of 176,000 tons for fiscal 2010. We will continue our efforts to reduce total CO₂ emissions as well as emission intensity.

Also, as a company engaged in international operations, we will promote our anti-global warming initiatives extensively in collaboration with our overseas divisions.

■ Major successful efforts

- Energy saving through the introduction of the on/off control function to vacuum pumps (See "Example of Our Achievement" on P.24)
- Energy saving through the renovation of a pure water feed system (See "Example of Our Achievement" on P.24)
- Energy saving through the modification of the plated tank heating method

● CO₂ emission for overseas manufacturers plants in each region*



*Regarding the CO₂ emission from purchased electricity, we use each country's GHG protocol coefficient. Regarding fuel, we use the same coefficients as in Japan. (See P.19)

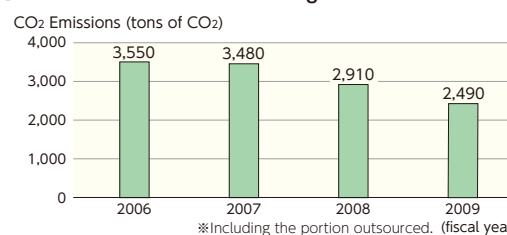
Logistics

We are a designated cargo owner under the Act on the Rational Use of Energy.*2

As part of our efforts to reduce greenhouse gas emissions cause by our transportation activities, we reviewed the energy-saving performance of outsourced operators such as waste treatment agents and freight carriers during fiscal 2009. The total volume of transportation made by us during fiscal 2009 was 38.69 million ton-kilometers, including commercial products and waste. And, the total volume of CO₂ emissions which we were responsible for as a cargo owner during fiscal 2009 was 2,490 tons,

down 14% from the previous fiscal year.

● Transitions in CO₂ as a Consigner



*2 The Act on the Rational Use of Energy

Law concerning energy saving. Under this law, those businesses that transported, by themselves or via contract carriers, a total of 30 million ton-kilometers or more of cargo are required, as a designated cargo owner, to promote energy saving measures intensively to reduce CO₂ emissions.

Web Greenhouse Gasses*1 other than CO₂ from Energy Sources

In fiscal 2009 the total volume of greenhouse gasses other than CO₂ from energy sources converted to CO₂ was 1,825 tons, a 43% reduction from the previous year. These emission volumes are not covered by the Law Concerning the Promotion of the Measures to Cope with

Global Warming*2 but we are working to prevent global warming through ongoing calculation of greenhouse gasses.

Clean Energy*3

NGK Spark Plug Group has been promoting the utilization of solar energy as a "clean energy." Our Head Office Factory is equipped with three solar power generation units and a solar heat-utilizing water heater. Our Komaki Factory is equipped with a large-sized solar power generation facility with a capacity of 107 kW. During fiscal 2009, these facilities collectively generated

168,000 kWh of power, which contributed to a significant reduction in CO₂ emissions amounting to 55 tons.



Solar Panels

Green Curtain*4

At the Miyanojo factory, efforts have been made towards a curtain of green since 2008. By reducing the warming of temperature inside, cultivating vegetables on the southern wall of the office building, reducing the electricity used by air conditioning during the summer months.



Green Curtain



Bitter Gourd

Web.....
Results of computing greenhouse gasses according to the system for computing, reporting on, and publicizing the quantity of greenhouse gasses

*1
Greenhouse Gas
Gasses that cause global warming. The Kyoto protocol covers carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

*2
Law Concerning the Promotion of the Measures to Cope with Global Warming
Under the system for computing, reporting on, and publicizing the quantity of greenhouse gasses, business places emitting more than 3,000 tons are made responsible for the reporting of emissions. In the report for fiscal 2009 we report on a per-business unit.

*3
Clean Energy
Energy use associated with low carbon dioxide emissions. This includes solar, wind, hydro, and biomass energy.

*4
Green Curtain
A natural curtain cultivated by vine-like vegetation in front of windows. The absorption of the direct sunlight and transpiration by the vegetation has a cooling effect to reduce indoor heating.

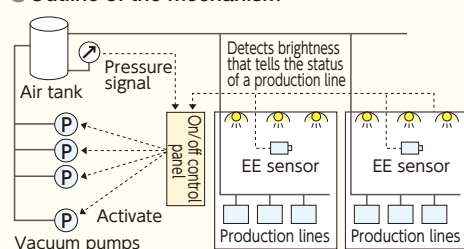
Example of Our Achievement

Energy saving through the introduction of the on/off control function to vacuum pumps

Iijima Factory of NTK Ceramic Co., Ltd. has several vacuum pumps. Traditionally, the factory had been making energy-saving efforts by means of partial shutdown of the pump system. But recently, they have taken up a new approach that introduces a control mechanism.

Previously, pumps were always in operation even when the production lines were out of service, to maintain the state of decompression in a piping system or a production line. In order to eliminate energy waste attributable to full-time operation, an on/off control mechanism has been introduced to the pump system through the installation of an EE sensor, which is sensitive to brightness, so that pumps can be activated when the room light is turned on. The room light is always on when a production line is in service, and the light is off when there are no production activities. Thus, the pump operation is interlinked with the room light status. This mechanism contributes to a 53 ton reduction in CO₂ emissions per year.

Outline of the mechanism



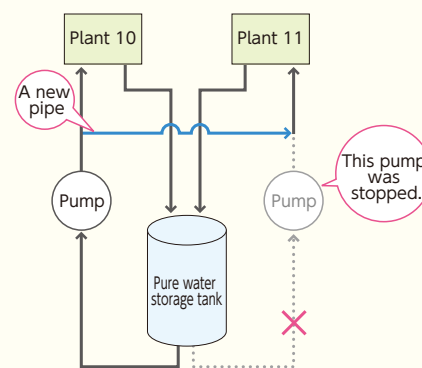
Example of Our Achievement

Energy saving through the renovation of the pure water feed system

Komaki Factory of NTK Ceramic Co., Ltd. has successfully created an energy-saving mechanism through the renovation of the water system that feeds pure water to production lines for semiconductor parts.

Before the renovation, separate loops were used to feed pure water to Plant 10 and Plant 11 respectively, with each having a pump, although, in fact, Plant 11 did not need much pure water. Through the renovation, a new pipe has been installed to integrate the loops, and the pump for Plant 11 was stopped. We have confirmed that the pump shutdown did not cause any flow problems. This renovation contributes to a 17 ton reduction in CO₂ emissions per year.

Outline of the renovation



Waste Material

Basic Philosophy

The NGK Spark Plug Group takes measures to eliminate waste emissions volumes first in order to make maximum effective use of resources, and works to recycle what waste is emitted.

Results with Respect to Fiscal 2009 Targets

During fiscal 2009, the Group worked to reduce waste by 254 tons. As a result of these efforts, measures were implemented resulting in a reduction of 467 tons, achieving our target.

Fiscal 2009 target & results

	Reduction Target*1	Results
NGK Spark Plug Co., Ltd.	228 tons	388 tons
Affiliates	26 tons	79 tons
Total	254 tons	467 tons

Examples of successful efforts

- Reuse of dust generated through the granulation process (See "Example of Our Achievement")
- Reducing waste through the improvement of yield rate*2
- Reducing sludge through the renovation of a wastewater treatment system

*1
Reduction targets
See P. 18 for specific targets.

*2
Yield rate
Ratio of acceptable outputs to the entire input.

Web
Volumes of waste generated at respective offices and factories

Our definition of "recovered" waste
We define "recovered" waste as that generated through our operations and later reused or recycled (including that recycled thermally) or sold as a valuable resource.

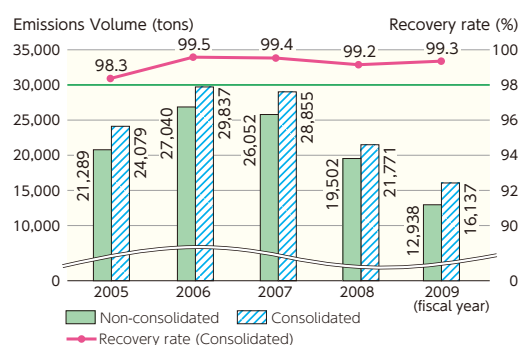
Definition of "zero emission"
Any waste, either industrial waste or general waste generated at our offices, shall be categorized into "zero emission" waste, if recovered at a rate of 98% or more.
Recovery rate = $\frac{\text{Reused} + \text{recycled}}{\text{reused} + \text{recycled} + \text{disposed of to landfill} + \text{incinerated}} \geq 98\%$

Volume of Waste Generated and Recovery Rate

The total volume of waste generated by the NGK Spark Plug Group during fiscal 2009 was 16,137 tons, down 26% from the previous fiscal year. The substantial reduction is attributed to the successful integration of our semiconductor parts manufacturing plants.

We are also working hard to attain our "zero emission" goal, which aims to reduce the waste to be incinerated or disposed of as landfill, by increasing the recovery rate to 98% or more. Since fiscal year 2005, we have been successful in attaining this goal every year.

Transitions in Waste Emission Volume



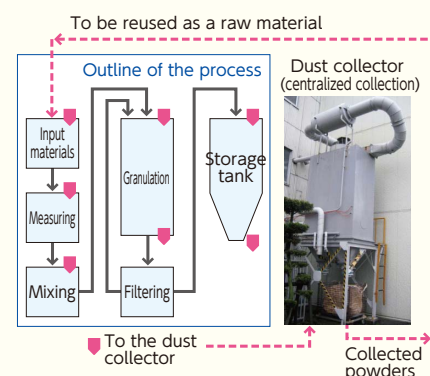
Example of Our Achievement

Reuse of dust generated through the granulation process

In our ceramics granulation process (in the production of spark plug parts), we have successfully reduced waste by introducing an in-house recycling mechanism that enables the reuse of ceramic dust generated through the process.

Before the introduction of this mechanism, ceramic powders collected by our dust collector went to outside waste treatment agents for recycling. We have analyzed the quality and state of mixture of these powders and confirmed that they are good enough, in terms of quality, to be reused in our operation as a raw material.

Then, we have started the recycling, resulting in waste reduction of about 3.5 tons per year.

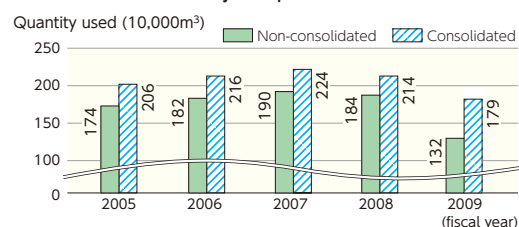


Water Resources

Basic Philosophy

At the NGK Spark Plug Group, we believe water is an important resource and we are taking measures to reduce the amount of tap and well water used in our business activities.

Transitions in the Quantity of Tap Water and Well Water Used



Results with Respect to the Fiscal 2009 Targets

In fiscal 2009, we set a water reduction target^{*1} of 12,401m³ for NGK Spark Plug Group and implemented measures to reach it. As a result of these activities we reduced group-wide water use by 16,790m³, achieving our goals.

● Fiscal 2009 target & results

	Reduction Target	Results
NGK Spark Plug Co., Ltd.	11,527m ³	16,340m ³
Affiliates	874m ³	450m ³
Total	12,401m ³	16,790m ³

■ Major successful efforts

- Water saving through the installation of a rain sensor with the sprinkler (See "Example of Our Achievement")
- Water saving through the improvement of a cleansing method for our de-iron filter
- Water saving through the improvement of yield

***1**
Reduction targets
See P.18 for specific targets.

E xample of Our Achievement

Water saving through the installation of a rain sensor with the sprinkler

Miyanojo Factory sprinkles water over its building roof for cooling purposes, with the ultimate goal of reducing CO₂ emissions caused by the operation of air conditioners.

Before the installation of the sensor, the sprinkler was timer-controlled and automatically activated every day,

even on rainy days. We have introduced a rain sensor so that the sprinkler would not be activated on a rainy day.

This resulted in an about 2,100m³ saving of water.



Sprinkling water

Hazardous Substances

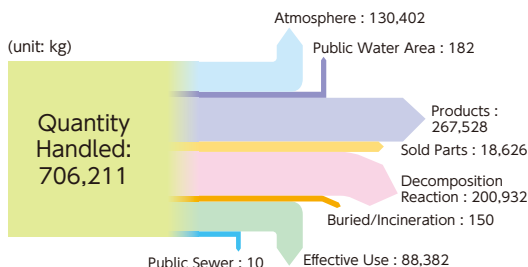
Web Control of PRTR Substances

We are striving to reduce the amount of PRTR^{*2} law-regulated substances discharged from our facilities into the environment, by setting a target of 80% reduction from fiscal 2002 to 2010 (or limiting the annual amount of discharge to 36 tons or less by the end of fiscal 2010). We are also setting annual goals and undertaking activities to reduce VOC^{*3}.

The total volume of release of PRTR-designated chemical substances which we were responsible for during fiscal year 2009 was 131 tons, down 14% from the previous fiscal year. Although we are aware of difficult problems existing and affecting our efforts to attain the fiscal 2010 goal at this moment, we will continue to promote our

countermeasures including the collection of toluene and replacement of xylene.

● INPUT-OUTPUT of PRTR law-regulated substances

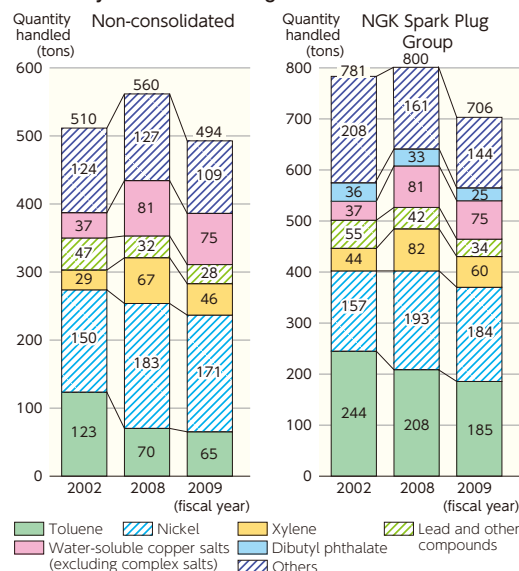


Web.....
Per-region PRTR data

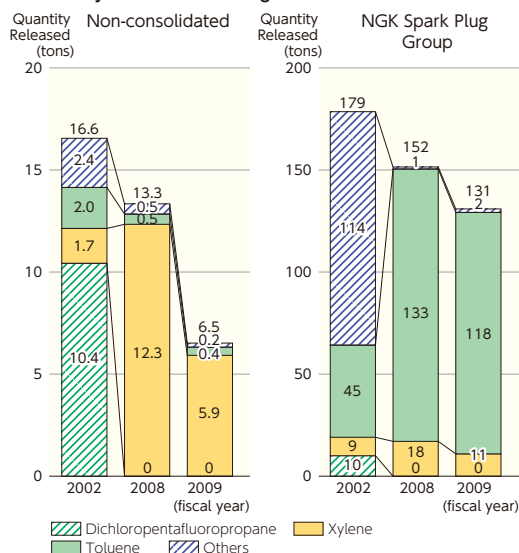
***2**
PRTR
(Pollutant Release and Transfer Register)
Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management. System of tracking volume of emissions to the environment of designated chemical substances and the reporting thereof.

***3**
VOC
(Volatile Organic Compound)
The source of photochemical oxidants and suspended particulate that pollute the atmosphere.

● Quantity of PRTR Law-Regulated Substances Handled



● Quantity of PRTR Law-Regulated Substances Released



Control of Hazardous Substances

Basic Philosophy

In recent years, control measures over the use of chemical substances for products have been strengthened internationally. In order for us to observe legal requirements such as the ELV Directive*¹, the RoHS Directive*² and REACH Regulations*³, we need to implement strict control practices. Our control mechanism, which aims to

ensure appropriate observance of rules and requirements and avoid any environmental pollution caused by our products, consists of the following three areas: (1) Addressing customers' requests; (2) In-house treatment of chemicals; and (3) Procurement from suppliers.

***1
ELV Directive**
End-of-life Vehicles Directive. Implemented in 2002 in the EU to regulate specified substances and recycling rate for used vehicles.

***2
RoHS Directive**
Restriction of Hazardous Substances Directive covering electric and electronic devices. Implemented in the EU in 2006.

***3
REACH Regulations**
Registration, Evaluation, Authorization and restriction of Chemicals. Implemented in 2007 in the EU comprehensively regulating hazardous substances for substances included in products and substances manufactured or imported.

***4
IMDS**
This system gathers information on included substances and materials for parts for nearly 30,000 components comprising a vehicle.

***5
JGPSSI**
Japan Green Procurement Survey Standardization Initiative. This association takes measures to share surveys of chemical substances included as parts and materials and brings together electric and electronic equipment manufacturers on a voluntary basis.

***6
AIS**
This sheet is for supplied by JAMP (Joint Article Management Promotion consortium) to transmit information related to chemical substances included in products.

***7
EcoAction 21**
One Environmental Management System. This system is designed for small- to mid-sized businesses and features lower costs than ISO14001 accreditation, and allowing inspections and consultation.

Level

① Customers

Customers are placing more stringent requirements as the regulations on hazardous substances included in our products are made stronger. We work to appropriately support the demands of our customers including the submission of a non-

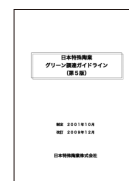
inclusion certificate for prohibited substances as indicated by our customers, submission of product chemical substance data including IMDS*⁴ and JGPSSI*⁵ data sheets and AIS*⁶, and support for inspection or oversight of control systems.

Level

③ Suppliers

The cooperation of our suppliers is essential for use to appropriately control the hazardous substances contained in our products and prevent inclusion of regulated substances. The NGK Spark Plug Group has gained this cooperation including procurement of items with Green Procurement Guidelines, submission of chemical substance inclusion data of purchased materials, and a non-inclusion certificate for substances we prohibit. In fiscal 2009, we revised our "Green Procurement Guidelines" to add new rules that we need to follow to ensure our observation of the laws and

regulations concerning hazardous chemical substances. These revised Guidelines serve as a comprehensive guide for our environment-friendly operations.



Green Procurement Guidelines
(Japanese Only)

■ Green Supplier System

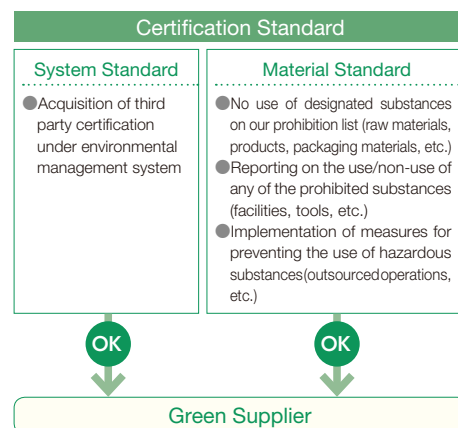
We have established a green supplies system, certifying suppliers that have actively taken environmental measures as green suppliers. During fiscal 2009, we have expanded the list of those "green suppliers" to include supplementary materials, facilities, outsourced processing works, and construction works. To be qualified as a "green supplier," they are required to meet our system and material criteria. As of today, our list has a total of 327 green suppliers.



Certificate

■ Supporting our suppliers

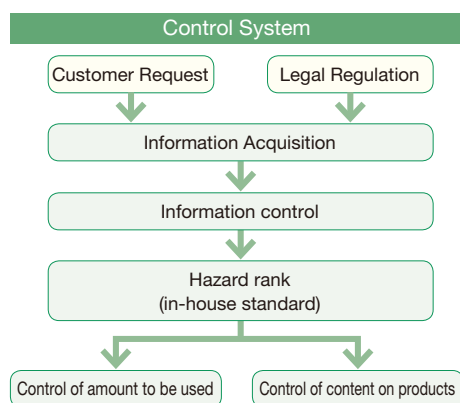
In order to promote environmental conservation activities with our suppliers we support the establishment of environmental management systems. We have received assistance requests from a total of 34 suppliers so far, 29 of which



have successfully acquired the ISO14001 certification or have been certified as being in conformance with EcoAction 21*⁷. We will continue our support for the remaining five suppliers.

② NGK Spark Plug Group

We set “hazard ranks” at NGK Spark Plug Group in order to control environmentally hazardous substances used in our processes or contained in our products. During fiscal 2009, we reviewed all listed substances to ensure that our Hazard Rank system conformed to legal requirements and customer needs, and also improved the control mechanism. Specifically, we have introduced stricter criteria for “prohibition” and “restriction” for products and processes respectively, in preparation for the upcoming expansion of legally controlled substances. We will continue to strengthen and improve our control mechanism over environmentally hazardous substances, to prevent any of our products from using these substances.



■ Hazard Rank

Hazardous substances are divided into prohibited, restricted, and monitored, depending upon the degree of danger or toxicity. Also, a handling standard is established for each rank.

Hazard rank	Handling standard	Substances covered
Prohibited substances	Use is prohibited.	Substances prohibited from use or strongly restricted by regulations.
Restricted substances	Safer substitutes will be sought, while making efforts to reduce the use of current substances.	Hazard level and toxicity are equivalent to prohibited substances, but an immediate changeover is impossible due to its special characteristics.
Monitored substances	Supplies need to be examined to find existence/non-existence of applicable substances.	Those not prohibited or restricted but that require monitoring.

■ Information control

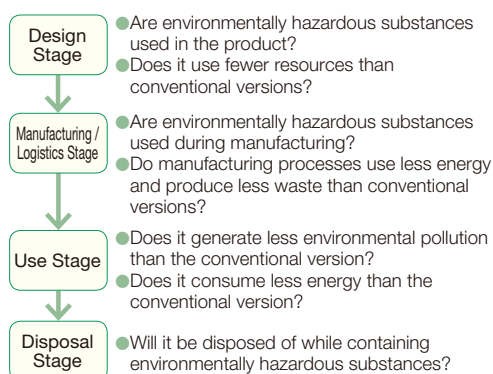
Information concerning acquired legal regulations and customer requests have been arranged into a list in such a way that it can be perused using an intranet within our shared internal web site.

Case No.	Category	Item Name	Version	Update Date
0602	高圧ガス保安法		4	
0604	毒物及び劇物取締法		5	
0605	労働安全衛生法		12	
0606	特定化学物質の排出量の把握及び管理改善促進法(化管法)		4	
0701	特定工場における公害防止組織の整備に関する法律		4	
0703	公害健康被害の補償に関する法律		7	
0704	人の健康に関する公害犯罪の処罰に関する法律		9	

List of Legal Regulations

■ Product Assessment

We have implemented product assessment during the development of new products and any changes in specification. Verifying the conditions of inclusion of hazard rank substances, we examine the environmental load caused during each stage from design and manufacturing/logistics, to use and disposal, to proactively prevent environmental pollution in our products.



■ Internal Analysis of Environmentally Hazardous Substances

In order to verify the state of inclusion of environmentally hazardous substances in the product, we perform partial analysis of the presence of these substances in our products at

our internal analysis center. By establishing analysis methods for hazardous substances and submitting trustworthy data to customers, we prevent the shipping of noncompliant products.

Development of Eco-products

Basic Philosophy

We are aiming to reduce the environmental burden through the entire product lifecycle in accordance with our environmental product policy: "We will work towards the development, design, procurement, manufacture, sale, distribution and disposal of environmentally friendly products." We deliver a wide range of products around

the world. Many of these products are simply components that a consumer will never see, but we continue development to create products that contribute to society and the environment into the future.

Solid Oxide Fuel Cell (SOFC)

We are working on the development of SOFC. See the Feature Article 1 (p. 5).

Air Quality Sensor

 <http://www.ngkntk.co.jp/english/product/sensors/>

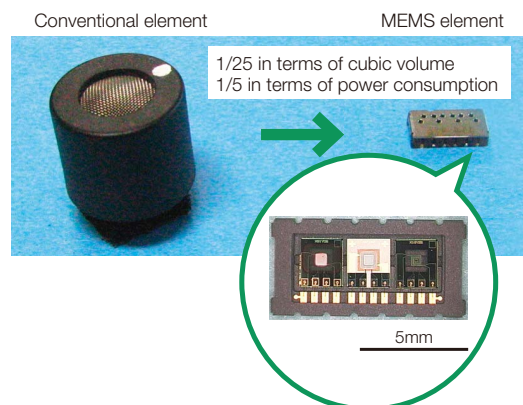
An air quality sensor is an exhaust gas detector used with the auto-ventilation system*1 of an air conditioner to be installed in an automobile.

Our Air Quality Sensor is characterized by its use of a micro-heater (a core MEMS*2 technology) as a detection element. It results in substantial downsizing and energy saving when compared to conventional sensors using a layered ceramic element. Besides, this Sensor not only helps reduce total power consumption but also achieves simplification of packaging and the control circuit, contributing to comprehensive resource saving.

This MEMS technology can be applied extensively to diverse areas, and is expected to contribute significantly to our environmental protection efforts. We hope to effectively utilize the technology for various products and diverse purposes, including innovations for the cultivation

of new markets and combined use with our existing technologies in our strong field.

● Air quality sensor element



IC Packages

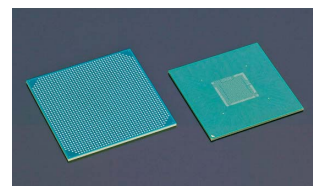
 <http://www.ngkntk.co.jp/english/product/semi/>

An IC package consists of a MPU (micro-processing unit which constitutes the heart of a computer) and a board to carry a chipset that assists the MPU.

We have developed an innovative wiring technology and special design for the MPU-chipset integration, enabling a single package to carry multiple signal processors. We are now mass-producing those multi-chip module package units. This innovation contributes significantly to resource saving and space saving, and helps reduce the environmental burdens of our products.

Regarding the use of environment-friendly materials, we

are promoting the use of halogen-free materials and lead-free solders in our mass-produced products. Currently, desktop computers and note-type computers are typical destinations, but we are going to expand the application to server-related products as well.



Organic IC Package for MPU

"Sansomate-5F" oxygen concentrator for medical use

 <http://www.ngkntk.co.jp/english/product/medical/>

Oxygen concentrators serve those patients with chronic respiratory disorders who need to receive oxygen therapy at home.

Facing the increase of the elderly population and the growing welfare needs of our society, oxygen concentrator manufacturers are aware of the rising interest in the energy-saving performance of medical equipment. Our 5F series of oxygen concentrator, which we have developed based on our existing technology applied to the 3E series of 2005, is characterized by its excellent energy-saving performance. Starting in fiscal 2010, the

new series is being distributed in the market.

● Sansomate-5F

Flow rate settings of respiratory minute volume	Power consumption reduction rates (when compared to the conventional 5L series)
5L/per minute	Down 15%
3L/per minute	Down 43%
1L/per minute	Down 59%



Sansomate-5F

*1
Auto-ventilation system
Used with air conditioners for automobiles, this system enables an automatic switchover between "internal recirculation" mode and "outside air ventilation" mode.

*2
MEMS
MEMS stands for Micro Electro Mechanical System. It is characterized by their micro structure with mechanical parts, sensors, electronic circuits, etc., integrated on a board.

Communication

Web Basic Philosophy

As part of our efforts to raise the level of people's awareness and understanding about our organization-wide commitment to environmental conservation, we promote communication with people and local communities. Specifically, we publish Environmental & Social reports and site-specific environmental reports^{*1},

and invite people to our factory tours and opinion exchange meetings as well. We will continue those efforts, ensuring that our explanation and the information we disclose to the public are accurate and easy to understand.

Environmental Meeting

We have implemented environmental meetings as a place for exchange of views with the people of the region. This is both an opportunity to improve, as well as gain understanding of NGK Spark Plug Group environmental conservation activities.

Meetings

Local Citizens, etc.	8 Meetings, 30 Attendees
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Accepting Visitors at Environmental Factories

Through hosting factory tours at NGK Spark Plug Group, we work to deepen exchange with the local community while allowing the people of the region connected with the Group to understand our environmental activities. During fiscal 2009, a total of 128 persons in five groups visited our plants.

Tours

Local Citizens/Municipal Governments/suppliers	5 Tours, 128 Participants
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Factory Tour

Cooperation with Local Communities for Environmental Conservation

The Miya River in Ise City, where our Ise Factory is located, is well known for its clear limpid stream and has actually received the Japan's Cleanest River award several times. Our Ise Factory is one of the participants in the "Coordinated Miya Watershed River Check" carried out by the Miyariver Watershed Renaissance Assembly, and is working with local residents to conduct water quality

examinations on all tributaries of the River on a monthly basis. The Factory also sends volunteers to Miya River clean-up activities.



Local residents cleaning the Miya River

Donation to Tree Planting Projects

With a desire to promote a harmonious relationship between human beings and the natural environment, we donated a part of our profits earned during the spring "Change to an Eco Plug" campaign (held from April to June 2009) to a tree planting project implemented in Moshiri, Horokanai-cho, Uryu-gun, Hokkaido. This project aims to restore a forest that has been destroyed by natural

disasters or other reasons. Our donated fund was used for a hundred Sakhalin spruce trees, which were planted in the project site by the hands of Hokkaido University researchers and engineers. We will continue our commitment to such efforts to conserve forest ecosystems.

Turn-off-lights Campaign

In alignment with the "turn-off-lights" campaign initiated by the Ministry of the Environment, we unplug our billboards from time to time.

In fiscal 2009, we turned off the lights of our signboards and billboards intensively on June 21 and July 7. In a total of 15 sites, our signboards and billboards installed at our plants and offices, as well as at our customer retailers, were disconnected from power sources during these two days. We will continue this promotion as part of our

energy-saving activities.



Usual view of our signboard



Light turned off

Web.....
Site-specific
environmental reports
(Japanese only)

^{*1}
Site-specific
environmental reports
They are issued by four
factories of NGK Spark
Plug Co., Ltd. and its
affiliates respectively (not
including Nittoku Alfa
Service Co., Ltd. and
Nittoku Unyu Co., Ltd.)

6 Social contribution

As a good corporate citizen, we shall actively engage in philanthropic activities and other activities of benefit to society.

- We are always keen to join social contribution initiatives such as fund raising by the general business community for the urgent support of victims of large-scale natural disasters.
- In areas where our production sites are located, we are committed to various types of social contribution activities whose aim is to enhance communication with the local communities and establish a more comfortable society.
- We will maintain an environment for encouraging employees to get voluntarily involved in social contribution.

Web
Cleaning activities in
each region
participation status

Commitment and Assistance to Local Communities

■ Safety Seminar for Bikers at Mizuho

In June 2009, a safety seminar for elderly bicycle users was held in Mizuho-Ward, Nagoya City, Aichi Prefecture where our headquarters are located. The seminar aims to improve bikers' understanding and observance of traffic rules and manners, and was hosted by local police stations and support organizations, including ourselves. During the seminar, all participants were enthusiastic about learning safety tips. The seminar was concluded by a speech by our representative, the general manager of the General Administration Department of NGK Spark Plug Co., Ltd., who called for people's cooperation and enhanced efforts in preventing traffic accidents. The seminar proved very worthwhile.



Participants learning how to safely use a bicycle

■ Opening our Tennis Court to the Public

The tennis court in our Ise Factory, which was renovated in 2007, is open not only to our employees but also to local citizens.



Tennis Court of Ise Factory

■ Cleanup activities

The NGK Spark Plug Group is actively involved in community-based environmental conservation efforts, including local cleanup activities. Our factories and offices not only participate in community-initiated cleanup programs in their respective areas but also take the initiative in carrying out cleanup activities on a regular basis. During fiscal 2009, a total of 891 employees in our Group participated in cleanup activities near our plants, and 79 employees took part in community-initiated cleanup programs.



Cleanup activity hosted by a local community (Komaki Factory)



Employees in a town-cleaning activity (Kanioka Ceramic Co., Ltd.)

■ Accepting interns

Every summer, Ceramic Sensor Co., Ltd. accepts high school students as interns and provides them with hands-on work experience. Through such opportunities, we assist local young people in developing their understanding of occupations and their attitudes toward work.



Internship

Participation in and Support for Community-based Activities

■Komaki Sangyo Festa

Every year, we participate in Komaki Sangyo Festa (an industrial festival) held at Park Arena Komaki, as one of the sponsors. We provide publicity through our corporate booth and operate diverse programs such as flea markets, recreational events and food services, attracting both adults and children.



Komaki Sangyo Festa

■Green Fund Activities

Since 2007, Ise Factory has been participating in Green Fund activities to urge people to donate to the national land afforestation promotion campaign. As an appeal for donation, employees of the Factory hand out green feathers to people on the street every year.

■Satsuma Town Summer Festival

Satsuma Town, home of our Miyanojo Factory, hosted the Satsuma Town Summer Festival in August 2, 2009. The festival featured around 1,000 people dancing in time with the booming beat of Miyanojo Itsutsu Taiko (traditional Miyanojo five drums). A row of approximately 133 people from the Miyanojo Factory participated, dancing and livening up the festival.



Satsuma Town Summer Festival

Traffic Safety

As a corporation that is involved with the automobile industry, traffic safety is fundamental. In addition to raising the awareness of safe operation among our employees, we also urge persons travelling in the vicinity of our office or factory to observe traffic safety. We are also actively involved in traffic safety education programs conducted by the local police and community-based support organizations.



Street Observation



Girls in yukata participating in a traffic safety campaign

Support for Foreign Students

■Nittoku Asia Foreign Student Scholarship Public Trust

NGK Spark Plug Group is developing business in production and sales hubs around the world and especially in Asia, including Malaysia, Thailand, Indonesia, Taiwan, Korea, Singapore, China, India and the Philippines.

We established a scholarship fund for students from Asian countries attending universities and graduate schools in Aichi prefecture celebrate the 70th anniversary of the foundation of the company in November of 2006. In fiscal 2009, the third year of the program, we supported eight students.



Investiture

7 Employees

We shall strive to respect the diversity and individuality of our employees and foster a safe and excellent working environment where they can realize their full potential.

- Based on our corporate philosophy (Management policy) that “We offer a working environment in which each one of us is encouraged to make full use of his or her personality and capability”, we will place emphasis on the cultivation of unique and cooperative human resources.
- We acknowledge that employees are the most important management resource, and will secure nondiscrimination and equal opportunities in employment, provide fair working conditions and establish a personnel system to ensure that people with different qualities can fully realize their own capabilities.
- We will consider the safety and health of employees and provide a comfortable working environment. We will never get involved in the use of forced labor or child labor in any way.

Employment / Human Rights

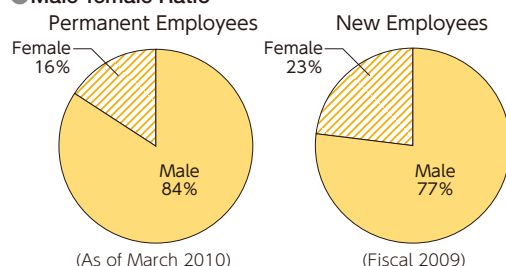
Diversity and Equal Opportunity

We are working to thoroughly eliminate discrimination based on race, sex, age, beliefs, disability and so on in our recruiting and employment.

■ Increasing Roles of Female Employees

As of March 2010, the ratio of women among full-time employees in our Group was 16%, with the percentage of women among new employees being 23%. Although the proportion of women to the entire workforce is far less than that of men, we are providing our female employees with more and more important roles and responsibilities including managerial positions and posts at overseas divisions. We will continue to promote the expansion of opportunities for women with motivation and ability.

● Male-female Ratio



■ Employment of the disabled

We have been promoting the employment of disabled workers. In fiscal 2009, however, we failed to reach the legally required employment rate for the disabled, with a rate of 1.76%, slightly below the legal requirement of 1.8%.

When assigning duties to disabled employees, we engage in sufficient discussion with them to ensure their safety and eliminate any anxiety they may feel. We will continue our efforts to create attractive, safe work environments for them and make our workplaces more open to the disabled.

● Percentage of Employees who are disabled

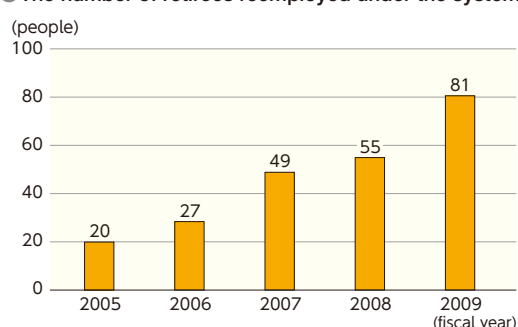


■ Post-retirement Reemployment System

In order for us to take advantage of the long-accumulated knowledge, skills and expertise of retirees and also provide them with the opportunity to continue working, we have introduced a post-retirement reemployment system since 2001.

During fiscal 2009, 81 retirees were reemployed under the system. Up to the present, a total of 373 persons have used the system.

● The number of retirees reemployed under the system



■ Appropriate placement

For the purpose of expanding opportunities for highly motivated employees to play an active part in our operations, we have introduced diverse new personnel systems including an invitation of in-house applications for specific positions and repositioning to new fields of specialty. We have also started to authorize female employees to take late-night shifts.

Our employees are allowed to file a placement request with their superior (in a managerial position) during a “merit rating” interview that takes place twice a year. The interview provides employees with the opportunity to discuss their goals, career course, work environment, etc., with their superior.

We carefully assign duties to each employee, taking into consideration each employee’s abilities, qualifications, attitude and desires to ensure that employees’ contributions to our operations can be maximized.

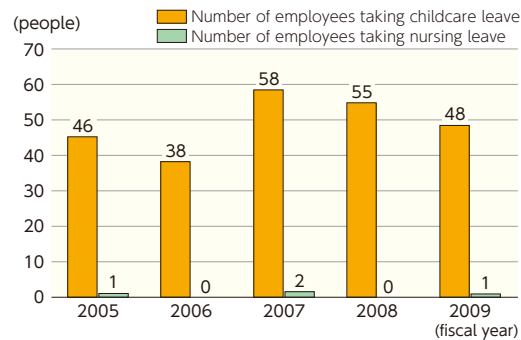
Work-Life Balance

In order to have employees work healthily and happily, it is important to work with a balance between work and home life. We have distributed a Working Hour Management Handbook to all our employees to promote taking vacation and working shorter work hours to reduce the total work hours per-year. We also allow employees to work flextime if appropriate for their duties, so that they can optimize their work-life balance.

In addition, various support systems are available to our employees, especially for those who are parents of small children, or need to take care of elderly parents requiring nursing, or desire to engage in volunteer work. During fiscal 2009, a total of 48 employees took childcare leave. We will continue to assist our employees in improving

their work-life balance by creating a better work environment for our next-generation workers.

●Number of People Using the Leave Schemes



●Available programs

Program name	Term	Outline
Childcare leave	Until child becomes 1 year old	Available for parents of newborn babies
Childcare leave extension	Until child becomes 2 years old	Available for those whose child is on waiting list for admission to a day nursery
Special leave	Until child enters elementary school	Available, up to 5 days per year, when the child needs care due to sickness or injury
Short-time work	Until 1 month passes after child enters elementary school	Available for those who want to leave early for childrearing reasons, as far as reduction in daily working hours is limited to 2 hours
Nursing care leave	1 year maximum	Available for those who need to take care of elderly parents/relatives requiring nursing
Social service leave	2 years and 4 months maximum	Available for those who engage in social service

Labor and Management Relations

An important mission of labor and management is to contribute to society at large by offering superior products and services. We endeavor to ensure that both labor and management discharge their responsibilities in an atmosphere of mutual trust and cooperation, and create a better workplace where employees are more eager and active.

■Labor and Management Conferences

In order to have open communication between labor and management we host regular labor and management conferences. Sharing corporate information, labor time reductions, and other issues are discussed and responded to.

■Responding to Harassment

In order to protect the rights of employees we are taking action to prevent harassment with coordination between labor and management. Sexual harassment has been banned by the work rules and we are endeavoring to establish a Sexual Harassment Committee to suppress and prohibit sexual harassment. Furthermore we have established sexual harassment advisory centers in each factory to create an environment which encourages discussion.



Our in-house magazine explaining sexual harassment

■Greeting Action

In order to begin the day with a good hearty welcome and return home with a smile, the labor union has engaged in a Greeting Action. Management and executives also participate, speaking with employees as part of this Greeting Action.



Greeting Action

■Work hour reduction

We have a "No Overtime Day" once a week. On this day, labor union members patrol all floors to ensure that no one works overtime.



No Overtime Day

Human Resource Development

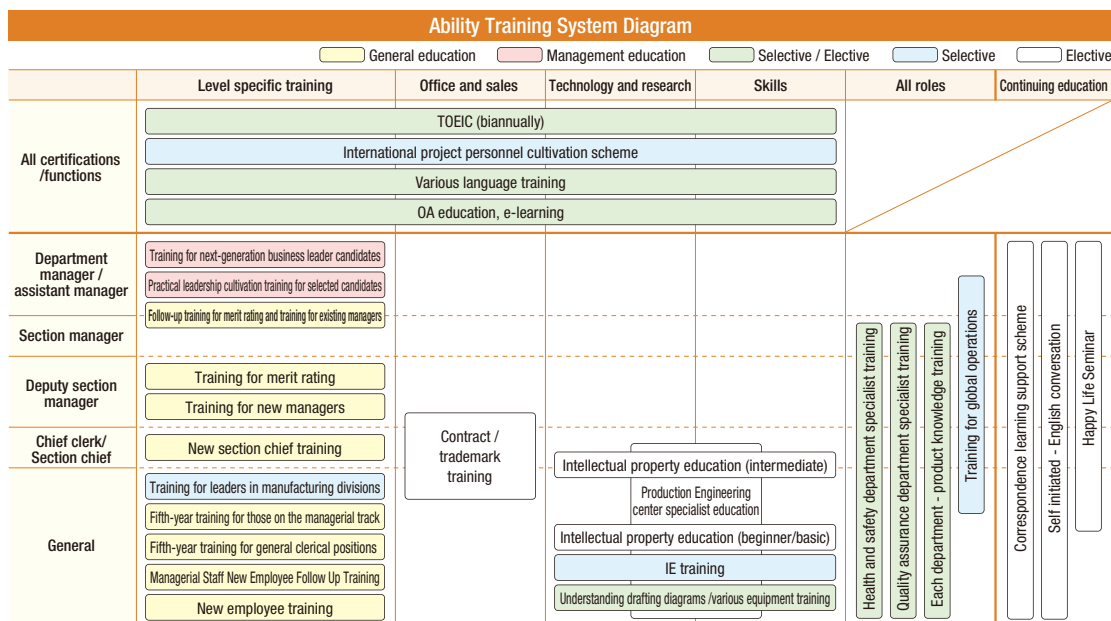
Professional Development Concept

Professional Development Concept

Creating employees that advance their work with independent desire to grow, to state their own opinion, and positive awareness of being a member of the Nittoku family.

Human Resources Development Programs

The development of human resources can be viewed as an accumulation of intangible assets, which are skills and abilities developed in employees through diverse training programs. We improve our training programs continuously to ensure that effective learning opportunities are made available to our employees.



Education for Next-generation Leader Candidates

This program is designed for next-generation leader candidates who need to acquire leadership and special knowledge for the supervision of operations. In order for them to obtain practical abilities, we provide them with lessons to learn the diversity of people's senses of value and ways of thinking, as well as the significance of preemptive actions and decision making.

Education Designed for Each Rank

The type of knowledge, knowhow and problem solution approach that you need to learn depends on your rank. All employees from new employees to those in a managerial post are respectively provided with optimal training programs for each rank. In particular, those in managerial posts learn their crucial mission to develop the

abilities of their subordinates. Repeated learning and practical training enable them to acquire leadership and the ability to put theory into practice.

Technical Education

This program, consisting of lectures and hands-on training, enables employees to efficiently study and acquire basic knowledge about products, drawings, etc.

Lifelong Education and Self-enlightenment

It is important for all employees to continue autonomous learning appropriate for their career design throughout all work stages. We provide diverse learning opportunities and assist each employee in pursuing lifelong learning.



Happy Life Seminar

Foreign Language Studies and Training for Global Operations

For the purpose of assisting employees in smoothly pursuing international operations, we provide diverse education programs such as English lessons, training for English language skills, seminars on foreign cultures, studies of Japanese culture, lessons for logical thinking, etc. Also, financial studies and debate programs are available for employees responsible for supervising foreign affiliates.



English conversation class



Practical studies on engines



Darwin Program



Fifth-year training for general clerical positions



Training for new section chiefs

Occupational Safety and Health

Basic Policy



Kazuo Kawahara
Executive Vice President
Chief Safety and
Health Administrator

Occupational safety and health management measures are supposed to cover all employees regardless of the type of their duties. During fiscal 2009, a total of 18 employees suffered on-the-job accidents. An accident affects not only the direct victims but also their families and coworkers in terms of mental impact. We are well aware that it is an important corporate responsibility to secure safety at all workplaces to keep any physical and mental damage away from employees.

Since 2006 when we established our occupational safety and health management system, we have been making continuous efforts to improve our safety status. Although we are still in the process of seeking effective ways to decrease on-the-job accidents substantially, we will continue our organization-wide efforts toward “zero accidents” by carefully eliminating potential dangers one by one.

Principle and Basic Policy

Principle

(Set in April 2005)

To position occupational safety and health as the starting point of business activities with respect for people as a foundation in our activities.

Occupational safety and health policy

(Set in April 2005)

- Observe laws and self-standards relating to occupational safety and health.
- Reduce risks and eliminate work-related accidents by sustained improvement of our occupational safety and health management and performance.
- Promote employee understanding of policy, and awareness through training and enlightenment, and widely expand overall participation in occupational safety and health activities.

Action Guideline

(Set in April 2008)

Come to work in good physical and mental health, and go home at the end of the day with a smile on your face!

Slogan for Fiscal 2010

(Set in April 2010)

- Say hello in a lively voice on all occasions!
- Be aware of the important role of communications in daily safety & health management activities, and improve safety status by ensuring that your actions are free from any potential danger!

Our OSHM Mechanism

With the aim of eliminating on-the-job accidents and creating a comfortable, safe work environment, we have established an in-house occupational safety and health management system. We are accredited as complying with JISHA OSHMS Standards*1 (Japan Industrial Safety & Health Association's Standards for Occupational Safety & Health Management Systems).

We are making organization-wide efforts to promote our safety & health management, where each plant and office

sets safety goals and makes safety plans in accordance with OSHMS guidelines.

We seek to attain a step-by-step improvement of our safety status.

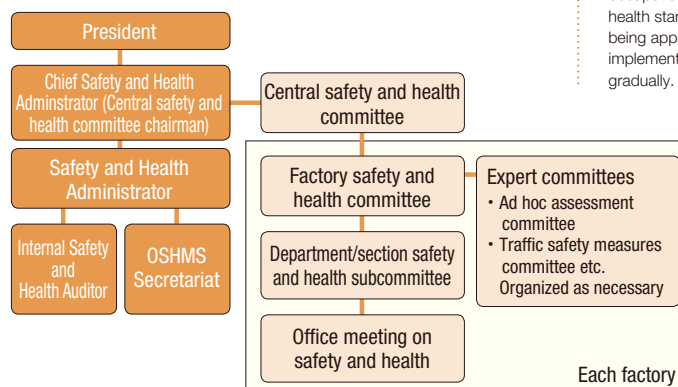


Internal Auditor Training

● Stepwise improvement of safety and health standards



● Safety and Health Promotion Organization



※ Each factory refers to the Head Office Factory, Komaki Factory, Miyanojo Factory, Ise Factory

*1 JISHA OSHMS Standards

Established and Published by JISHA (Japan Industrial Safety and Health Association). This standard determines whether OSHMS is appropriately introduced based on the Occupational Safety and Health Management System of the Ministry of Health, Labor and Welfare, and whether the occupational safety and health standards are being appropriately implemented to improve gradually.

Targets and Results

During fiscal 2009, we worked hard toward the tough goal of putting an end to occupational accidents and eliminating all workplace problems (especially those classified under the third management category). Some of our plants have successfully attained the goal, but we still see some problems remaining in our workplaces. We have to admit that we failed to identify some potential dangers and that the implementations of some countermeasures were too late.

We are going to strengthen our risk assessment activities in fiscal 2010 to achieve “zero accidents.” Also, as a priority measure, we will improve our safety education programs especially for low-experienced employees, by taking into consideration actual accident data. Regarding our countermeasures against workplace problems, we will continue to focus on those classified under criticality level III.

	Fiscal 2009 Target Results		Fiscal 2010 Targets
1. Elimination of occupational accidents	1) Elimination of crushing and striking accidents	×	Hazard elimination related to machines, facilities and chemical substances
	2) Elimination of accidents caused by chemical handling	×	Enhanced efforts to identify potential dangers in non-regular operations
	—		Sufficient awareness of any residual risks
2. Improvement of working environment	1) Elimination of workplaces in the third management category and reduction of workplaces in the second management category	×	Elimination of workplaces in the third management category and reduction of workplaces in the second management category
3. Health promotion	1) Improved health management awareness	○	Improved health management awareness
	2) Enhanced mental health care	○	—
4. Enhanced education and enlightenment	1) Promotion of safety and health education	○	Improvement of safety education for repositioned employees and young employees
	2) Reinforcing safety and health patrol	○	Reinforcing safety and health patrol
	3) Promoting voluntary activities at the workplace	○	Promotion of training for raising the level of awareness of potential risks and reporting of the discovery of any risky spots
	—		Promotion of activities to improve safety & health management

1. Elimination of Occupational Accidents

1) Elimination of “crushing” and “striking” accidents

We had a total of 18 occupational accidents, including minor ones which we call “*akachin* accidents”^{*1}. Among them, five were “crushing” and three were “striking” accidents. Taking seriously the fact that many accidents actually occurred during non-regular operations including maintenance work on machines, we are currently working on a thorough review of all workplaces for risk assessment, in order to detect unidentified potential dangers, if any.

2) Elimination of accidents caused by chemical handling

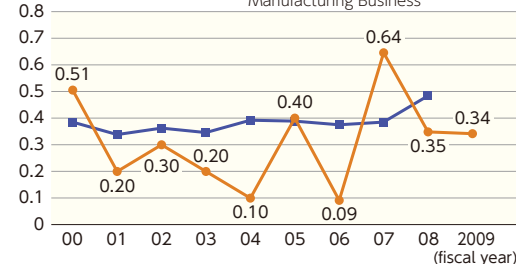
We had three chemical-related accidents. Through safety education, employees are learning the importance of appropriate use of protective tools, and we require full attention even for short-time simple operations.

● Number of Accidents Resulting in Absence from Work (Number of Accidents)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
5	2	3	2	1	4	1	8	4	4

● Frequency Rate^{*2} of Absence from Work

Frequency Rate of Absence from Work
 —●— NGK Spark Plug Co., Ltd.
 —■— Electrical Machinery and Appliance Manufacturing Business



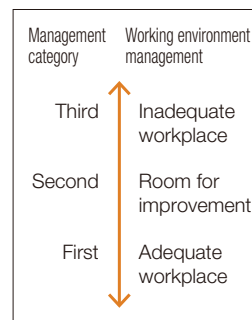
2. Improvement of working environment

1) Elimination of workplaces in the “Third Management Category” and reduction of workplaces in the “Second Management Category”

Targeting those divisions which use organic solvents or specified chemical substances as well as those workplaces subject to dust pollution or severe noises, we conduct working environment measurement^{*3} in accordance with the Industrial Safety and Health Act. Those divisions identified as having severe problems and thus classified under “Third Management Category” or “Second Management Category” are especially encouraged to take specific actions to identify the root causes of the problems through safety reviews, and find effective solutions to ensure workplace safety.



Noise Assessment



*1 Akachin Accident

Accidents not requiring a break from work, such as a small cut requiring only disinfectant.

*2 Frequency Rate

The frequency of accidents. Calculated with the following formula.

$$\text{Frequency Rate} = \frac{\text{Number of Accidents}}{\text{Actual Hours of Extended Labor}} \times 1 \text{ million}$$

*3 Working Environment Measurement

In order to preserve the health of laborers and conserve an appropriate workplace, we measure the level of harmful factors in the work environment and what level of harm is caused to workers. The results are evaluated into first, second, or third categories.

3. Health Promotion

1) Improved health management awareness

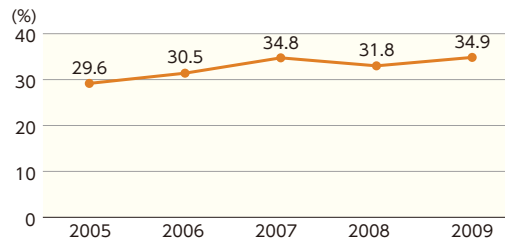
So that all our employees can work with healthy bodies we have set goals to reduce the number of employees with abnormal findings in general health checkups. Thanks partially to the recent social trend of enhancing measures against “metabolic syndrome,” our employees are increasing their interest in the significance of taking proactive measures to prevent lifestyle-related illness. We also encourage overweight employees to undergo detailed checkups or receive special health guidance, so that they can remain healthy through early detection and early treatment.

2) Enhanced mental health care

We provide employees with opportunities to learn mental health, through training, lectures by industrial physicians*1, and information provision via the “Self-care Handbook” and in-house magazines. We especially focus on “line care” (the practice of superiors’ paying attention to the mental health of their subordinates) and “self-care” (the practice of understanding one’s own mental stress so as to cope with it).

Also, targeting those employees whose on-duty hours are found to be especially long, we arrange consultation with a doctor. In addition, as part of efforts to ensure early detection or prevention of any mental disease, we have established a hotline outside our organization so that employees who feel any undesirable mental condition can make a call and receive consultation from an outside specialist.

Ratio of Employees with Abnormal Findings as a Result of a General Health Check



*The increased number of persons with abnormal findings is due to the expanded targets for blood tests, which started in FY 2006.



Information provision via in-house magazine



Self-care Handbook



Lecture by an industrial physician

***1 Industrial Physician**
A doctor who is involved in managing the health of laborers in workplaces. The Industrial Safety and Health Act mandates companies over a certain threshold hire an industrial physician for the workplace.

4. Enhanced Education and Enlightenment

1) Promotion of safety and health education

Our safety education is structured systematically for each career stage. New employees, third-year employees, group leaders, section chiefs and managers respectively have their own training menus. Also, special education is prepared for each field of specialty. In addition, we provide safety training for low-experienced employees, including young employees and repositioned employees, to practically learn how to prevent occupational accidents through hands-on experience-based lessons.

In additions, we provide safety lessons for contractors and agents who join our operations on our premises.



Safety training with the use of a machine for virtual experience

2) Reinforcing safety and health patrol

We regularly implement a patrol involving the safety and health committee, industrial physician and the health supervisor. We rapidly improve



Patrol

situations revealed to have problems with their safety or health aspects.

3) Promoting voluntary activities at the workplace

All of our employees are given a copy of the Handbook for Safety and Health Management which we have prepared as a comprehensive safety guide explaining our overall policy and the practices that need to be followed. We encourage employees to meet and read it out together for collation, for the purpose of improving their level of knowledge and the attitude of each member toward safety and health management.

Also, we oblige new employees to wear a special cap for the first year. This enables employees to tell who is a low-experienced freshman, and enables senior employees to provide attentive guidance to such freshmen, thereby contributing to the prevention of occupational accidents.



Employees reading out the “Graduation from Special Cap” Handbook together for collation ceremony (Miyanojo Factory)

8 Civil Society

We shall reject all contacts with organizations involved in activities in violation of the law or accepted standards of responsible social behavior.

- We will take a strict stance on pressure from violent civil intervention, and decisive steps in cooperation with law enforcement agencies.

Corporate Security

In order to smoothly operate our corporate activities, preventing illegal activities or undue claims from antisocial forces, we set a Corporate Protection Manual.

In response to sophisticated methods, we strengthen corporate protection by increasing the problem-solving ability and knowledge of each individual employee.

9 Cultural Respect

We shall respect the cultures and the customs of local communities where we do business and strive to manage our activities throughout the world in such a way as to promote and contribute to the development of local communities.

- We will perform our overseas business activities based on mutual trust with our customers, suppliers, employees, etc., and not only comply with the laws of each country but also respect its culture, customs and history.
- We will train to utilize local employees and suppliers in order to be a trustworthy company and a part of local society.

Respect for Local Cultures and Customs

In all regions and countries where we operate our business activities, we respect local cultures and customs and are making efforts to be a reliable member of the respective communities.

■ NGK Spark Plug Middle East FZE

In Dubai, where our Middle East unit is located, Indian citizens comprise the majority of the population. A music festival featuring Indian classical music and dance is held annually there, and NGK Spark Plug Middle East FZE has been playing an active role in the festival since fiscal 2008 as a main sponsor, contributing to the promotion of exchanges with local residents.



Musical Festival in Dubai

Promoting a Friendly Relationship with Local Communities in the World

About 80% of our product sales come from exports to foreign markets. Furthermore, we have as many as 26 overseas units in a total of 20 countries around the world. As a global company, we hope to contribute in some way to the development and vitalization of local communities in those foreign countries. Here are some examples of our efforts to attain such a goal.

■ NGK Spark Plugs (U.S.A.), Inc.*1

The West Virginia Factory of NGK Spark Plugs (U.S.A.), Inc. has invited local elementary school students to see our spark plug manufacturing facilities. This has successfully improved the awareness of local residents about our business operations.



Students attending a factory tour

■ NGK Spark Plug Europe GmbH (Germany)*2

The large number of trees and flowers planted on the premises of NGK Spark Plug Europe GmbH demonstrates the attitude of the employees toward the conservation of the natural environment and landscapes. German people are known for their high-level consciousness toward the protection of nature and landscapes, which is apparent from the practice of the company.



Many plants in the parking lot

*1
NGK Spark Plugs (U.S.A.), Inc.
The company manufactures and sells spark plugs and sensors for automobiles.

*2
NGK Spark Plug Europe GmbH
Sales company of auto parts, telecommunication devices and ceramic products.

■ Ceramica e Velas de Ignicao NGK do Brasil Ltda.*1

To celebrate the 50th anniversary of the foundation of our Brazil unit, we have invited local elementary school students to see a play, and also held a seminar and workshop for their teachers to learn the mechanisms of voice production and body language. This educational program was carried out as part of our “human resources development” project designed for local communities.



Elementary school students visit a theater

■ Woojin Industry Co., Ltd. (South Korea)*2

We participated in a workshop renovation competition (for safety and environment management) which is held annually by the Ministry of Labor of the Republic of Korea. We received the award for best performance and were bestowed an award certificate by the Labor Minister. We will continue our efforts as a safety-conscious, environment-friendly company.



Award certificate

***1**
Ceramica e Velas de Ignicao NGK do Brasil Ltda.

The company manufactures and sells auto parts and ceramic products.

***2**
Woojin Industry Co., Ltd.

The company manufactures and sells auto parts.

10 Ethics

Management shall exercise leadership in making the letter and spirit of the Code of Conduct integral to everyday business practice, thoroughly implementing the Code of Conduct throughout the Company and inculcating it throughout the Group and its supply chain. To this end, management shall continually improve internal systems while striving to cultivate ethics.

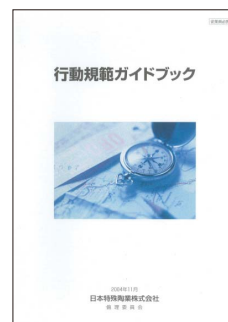
- Our top management will lead by example in the group's code of conduct, and take the initiative in cultivating, establishing and spreading a corporate culture of encouragement for ethical actions.
- Through the enrichment of opportunities for direct communication with employees, etc. and the expansion of in-house education, our top management will strongly encourage each member of NGK Spark Plug Group to be aware of and practice the code of conduct.
- Our ultimate target is the creation and establishment of a united organization with an ethical corporate culture based on the participation of all employees.

Corporate Code of Conduct

NGK Spark Plug Co., Ltd. desires to be a company that has the trust of all stakeholders, as in our catch phrase, “a corporation liked and loved by the people of the world.” To realize this goal, we must having all directors and employees understand and correctly practice the components of our corporate philosophy, namely “Commitment”, “Management Policy” and “Action Guideline.”

In order to accomplish this we set our Corporate Code of Conduct to indicate our basic stance in 1998. In November 2004 we published the Code of Conduct Guidebook, clarifying our standards of appropriate action and

decision-making. We also work to increase knowledge of ethics through internal training for executives and employees. We will endeavor to cultivate ethics through implementation and permeation of the code of conduct.



Code of Conduct Guidebook

Message from a Stakeholder

This Environmental & Social Report enables us to learn many new aspects of the NGK Spark Plug Group. The special feature on SOFC is informative, and I can feel the passion and profound vision for the future. The Group's organizational reform is powerful, and its plans and actions, based on scientific grounds, are preemptive and proactive. Looking at its global view as well as its attentiveness to individual customers and local communities, I see a sense of dignity as a global company.

Located in my town in Kagoshima Prefecture, Miyanjo Factory of NGK Spark Plug Co., Ltd. is actually making tremendous contributions to the local society. They visit local high schools to give lectures, assisting schools in promoting the development of specialists. We benefit substantially from their commitment to the development of intellectual assets in society and their efforts to create an environment-conscious society. I hope to see NGK Spark Plug Group, which is a big company in our small town, further contribute to the development of our society through continuing assistance and guidance.

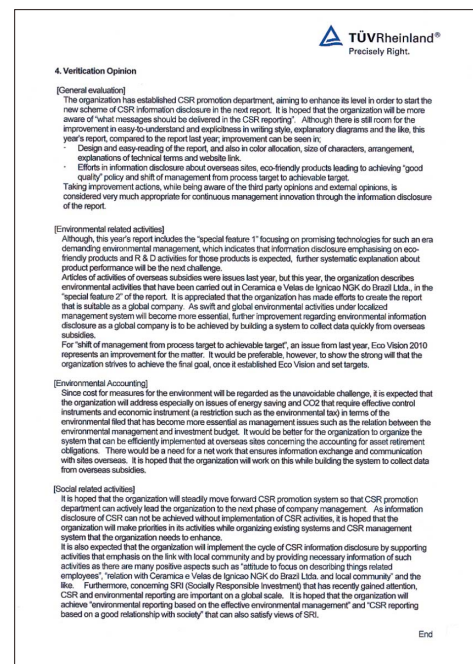
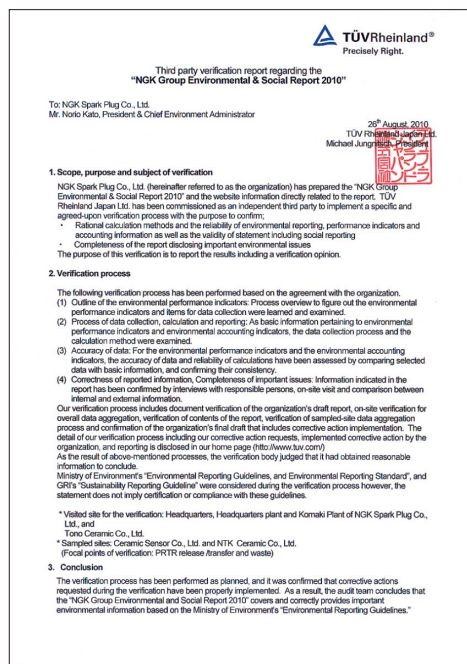


Shuichi Higashi
Superintendent of Schools
Satsuma Town
Board of Education

Third Party Examination

"Easy-to-understand messages" and "correct information" are the keywords in our project of publishing this Environmental & Social Report 2010. In order for us to verify the conformance of this Report to the said policy, we have asked TÜV Rheinland Japan

Ltd. to examine the report to see if all the important information is sufficiently covered by the report and if the disclosed information is correct and based on appropriate measurements and calculations, and is consistent with source materials.



The Results of the Examination

With the ambition to make this Environmental & Social Report 2010 a foundation for a CSR report which we plan to issue in the future, we included in this report several special feature articles, such as the news about our development of SOFC (solid oxide fuel cell) and the 50-year history of our Brazil unit. TÜV regards these articles highly, stating that they enable readers to better understand our environment-friendly products and overseas divisions, which we actually wanted to realize with this report. Also, the use of different types of prints, colors, notes on technical terms and indicated linkages with websites were highly evaluated. On the other hand, TÜV suggested that we should improve our explanations about our overseas activities and business goals in our next report. In response to these suggestions, we have already corrected misprints and insufficient explanations. However, there are several

things yet to be improved, including those requiring structural reform, which will need time to achieve a satisfactory improvement. We will keep working on such pending items, and greatly appreciate your understanding.



Editorial meeting



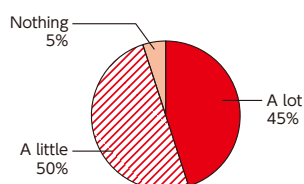
Third-party examination

Results of questionnaire concerning Environmental and Social Report 2009

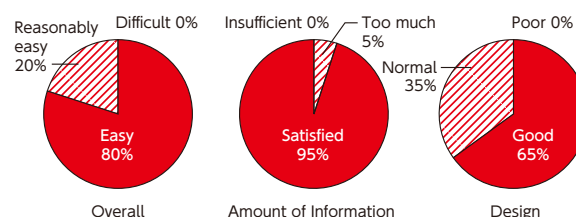
Thank you for sending us all your answers to the questionnaire in
“Environmental and Social Report 2009” published in fiscal 2009.

We take your opinions seriously and are working to implement even more thorough information disclosure.

Q1 Before reading our Environmental and Social Report 2009, how much did you know about NGK Spark Plug Group's environmental policy or activities?



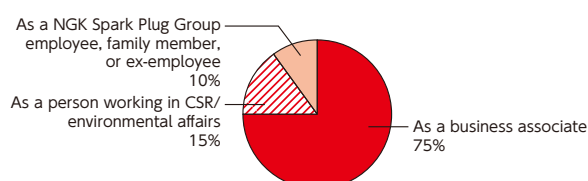
Q2 How did you find our Environmental and Social Report 2009?



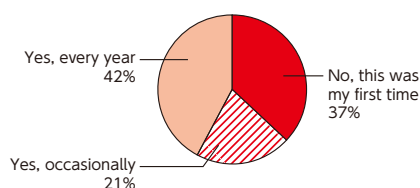
Q3 What did you find particularly interesting? (Top six)

- Message from the President
- 5. Environmental Conservation
 - Environmental declaration, environmental policy, environmental action plan
 - Environmental load from business activities
 - Management
 - Products
- 6. Social Contribution

Q4 Please check the box or boxes that best describe your situation and position.



Q5 Have you read any of our previously issued reports?



Q6 If you have any other comments or requests regarding our environmental activities, please write them here.

- More and more people say that we need to reduce our dependence on fossil fuels. Do you have any products or technologies that can cope with this trend?
(Answer) See our feature article on the development of SOFC (solid oxide fuel cell).
- I am concerned about the fact that the NGK Spark Plug Group failed to meet noise requirements.
(Answer) We have already introduced effective countermeasures and have successfully reduced noise levels to meet requirements. We will continue to implement appropriate noise control measures to ensure that we will not cause disappointment again.

Request to answer the questionnaire

Thank you for reading through our Environmental and Social Report 2010. For the further improvement of this report, we kindly ask you to fill in the foldout questionnaire.

Fax: +81 52-872-9980

e-mail: csr@mg.ngkntk.co.jp

<Personal information protection policy> We will only use your personal information to delivery next year's report to you. Even when we publish the results of this questionnaire, we will not show it in a form in which the respondents can be identified.



Environmental & Social Report 2010

During the preparation of this report

The purchase of the materials (paper, ink, etc.) comprising this report, and also editing and printing related to this report, were carried out by an ISO14001-certified company. Also, the materials (paper, ink, etc.) used do not contain cadmium, lead, hexavalent chromium, mercury, polybrominated biphenyl (PBB), or polybrominated diphenyl ether (PBDE).

Plate making: A CTP (Computer To Plate) method was used. As a result, film and also developing fluid and fixing fluid accompanying the manufacture of the film were rendered unnecessary, thus reducing the consumption of resources and also waste.

Ink: Ink that does not contain VOC (Volatile Organic Compound) was used to minimize the generation of VOC. This ink also conforms to the "voluntary regulations (NL regulations) concerning ink", which are voluntary regulations of the printing ink industry joint association.

Paper: We used paper approved by FSC (Forest Stewardship Council). This contributes to the conservation of the world's ongoing forestation.

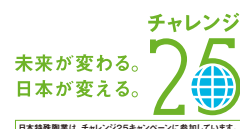
Printing: We incorporated a printing method that does not use dampening solutions. No volatile organic compounds (isopropyl alcohol) were used.



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