

The cover art is a composite image. The upper portion is dominated by a large, vibrant green leaf with detailed vein patterns, curving from the top right towards the center. Below the leaf, a baby with dark hair and a white diaper is sitting on a stylized representation of the Earth's surface, which shows blue oceans and green landmasses. The baby is looking towards the camera with a slight smile. The overall composition is clean and modern, with a white background.

Environmental & Social Report 2007

NGK Spark Plug Group



Corporate profile

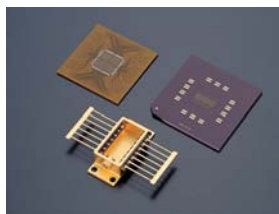
Corporate name	NGK Spark Plug Co., Ltd.
Head Office	14-18, Takatsuji-cho, Mizuho-ku, Nagoya
Foundation	October 26, 1936
Capital	47,869,270,000 yen
Business	(1) Manufacturing and selling spark plugs and related products for internal-combustion engines. (2) Manufacturing and selling new ceramics and applicable products.
Group companies	36 subsidiaries (10 in Japan, 26 overseas), 8 affiliates

[Semiconductor components]

- Ceramic IC packages
- Organic IC packages
- Packages for communication devices
- Antenna Switch Module

[Electronic components]

- Dielectric filters
- Dielectric resonators
- Electronic igniter
- Ultrasonic transducers



[Plugs, related products]

- Spark plugs for automobile and motorcycle
- Spark plugs for marine engines and farm equipments
- Glow plugs for diesel engines
- Igniter plugs for aircraft
- Igniter plugs for rocket
- Resister cable, resister cover

[Sensors]

- Exhaust gas oxygen sensors
- Universal A/F heated exhaust gas oxygen sensors
- Knock sensors

[Other related products]

- Ceramic-based parts for engines
- QGS/QHS

Communication media related area

Semiconductor
Electronic components

Business areas

Ceramic related area

Cutting tool
Applied ceramic technology

Automobile related area

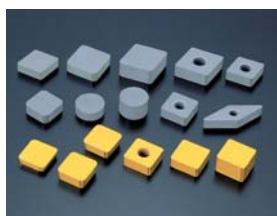
Plug
Sensor

[Cutting tools]

- Ceramic inserts
- Cermet inserts
- Coated chips
- Micro grain carbide chips

[Technical ceramics]

- Ceramic tube for VCB
- Parts for semiconductor manufacturing equipments
- Ceramic heaters
- Silicon rectifier containers
- Ozonizer
- Bio ceramics
- Oxygen concentrator



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Editorial Policy

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

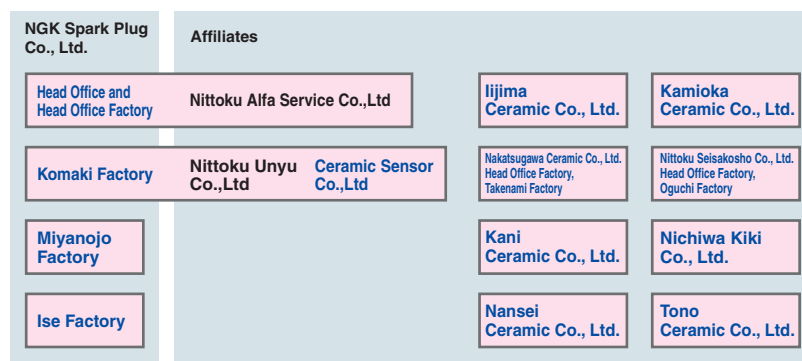
[Reference] "Environmental Reporting guidelines" issued by the Ministry of the Environment of Japan

Reporting scope

Intended readers	All stakeholders including customers, investors, shareholders, residents of neighboring communities, business associates and employees.
Period covered	From April 1, 2005 to March 31, 2007 * Some other very recent activities and cases are also included.
Reporting scope	Environmental aspects : NGK Spark Plug Co., Ltd. and its 11 domestic affiliate companies Social aspects : NGK Spark Plug Co., Ltd.

NGK Spark Plug Group

For the purpose of this report, "NGK Spark Plug Group" represents NGK Spark Plug Co., Ltd. as well as the 11 consolidated domestic subsidiaries and affiliates excluding Tokai Taima Kogu Co., Ltd.



: Region (joint acquisition of ISO14001)

Factories and companies in blue : ① Affiliates issuing site reports

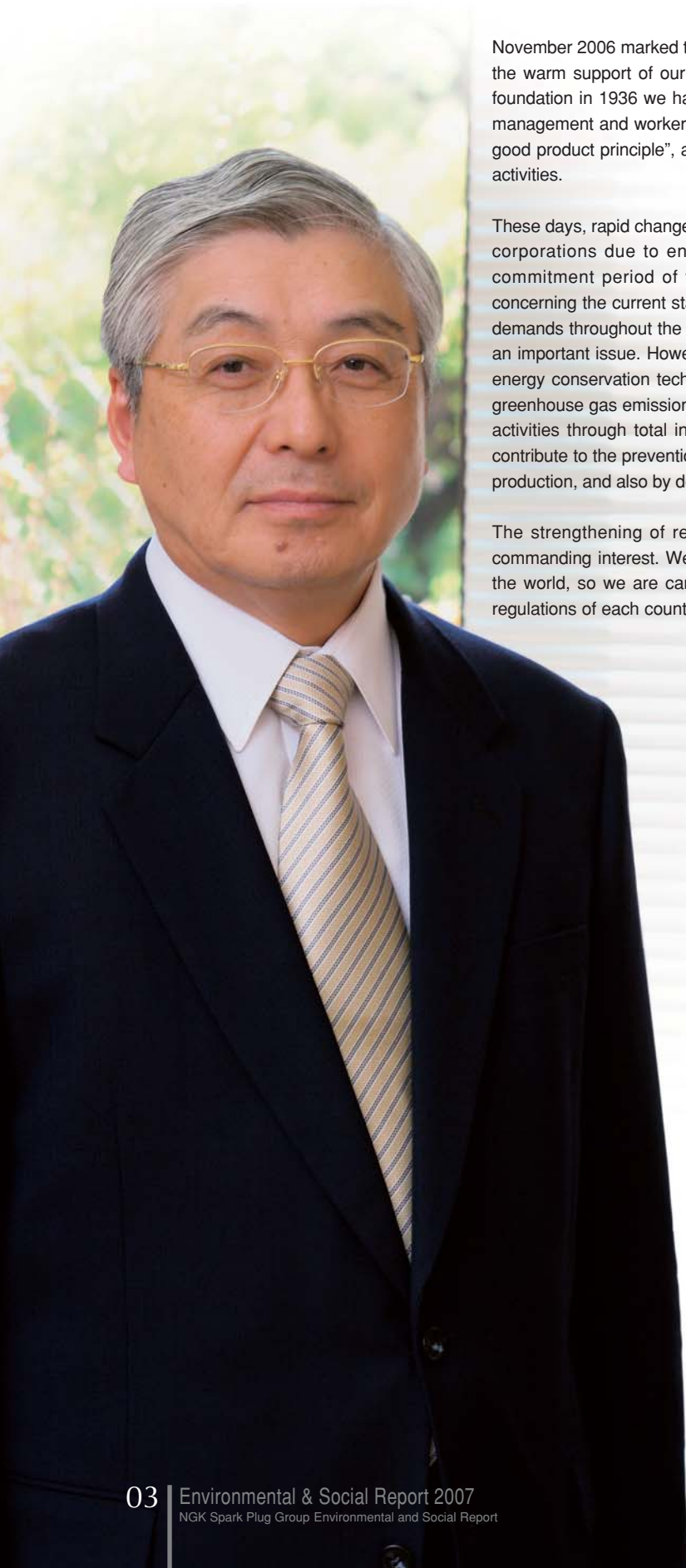
② These subsidiaries are included in the consolidated environmental accounting.

From this report onward, Takenami Factory of Nakatsugawa Ceramic Co., Ltd. will be included in the scope of the report.

* Details of environmental preservation activities are set out in each site report.

Please contact the relevant inquiry desk on p.31.

Manufacturing one step ahead



November 2006 marked the 70th anniversary of our founding. We recognize this as proof of the warm support of our stakeholders, for which we are very grateful. At the time of our foundation in 1936 we had a motto “high quality products at low price, quick delivery, and management and workers as a single entity”. This philosophy is carried over today as “the good product principle”, and “total involvement”, which constitute the basis of our business activities.

These days, rapid changes are occurring in society, and particularly the demands placed on corporations due to environmental issues are changing from day to day. The first commitment period of the Kyoto Protocol is about to start, and along with reports concerning the current status and future predictions of global warming there are increasing demands throughout the world to prevent global warming. We also rank global warming as an important issue. However it is difficult to devise countermeasures through innovation of energy conservation technology and environment technology that can significantly reduce greenhouse gas emissions. For this reason, I think that it is important to develop low-profile activities through total involvement, and I would like us to become a company that can contribute to the prevention of global warming through energy conservation activities during production, and also by developing and popularizing energy saving products.

The strengthening of regulations concerning hazardous chemical substances is also commanding interest. We have a high export ratio, and our products are used throughout the world, so we are carrying out measures with a view to observing the environmental regulations of each country. Particularly, because we manufacture products at our factories throughout the world aiming at achieving a uniform world level of quality, we consider chemical substances contained in products as part of product quality. For this reason, I would like not only the NGK Spark Plug Group but also our suppliers to carry out stringent control of chemical substances.

There are various risks concerning the environment, such as global warming, chemical substances, and waste matter. As a fundamental means of dealing with these issues, I would like to positively cope with changes and aim at manufacturing one step ahead.

This “Environmental and Social Report 2007” covers the situation for fiscal 2006. Like last year’s report, this report complies with the corporate code of conduct. We welcome your candid opinions.

Norio Kato

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

**This report was compiled in
accordance with our 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.



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.

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.

Action Guideline

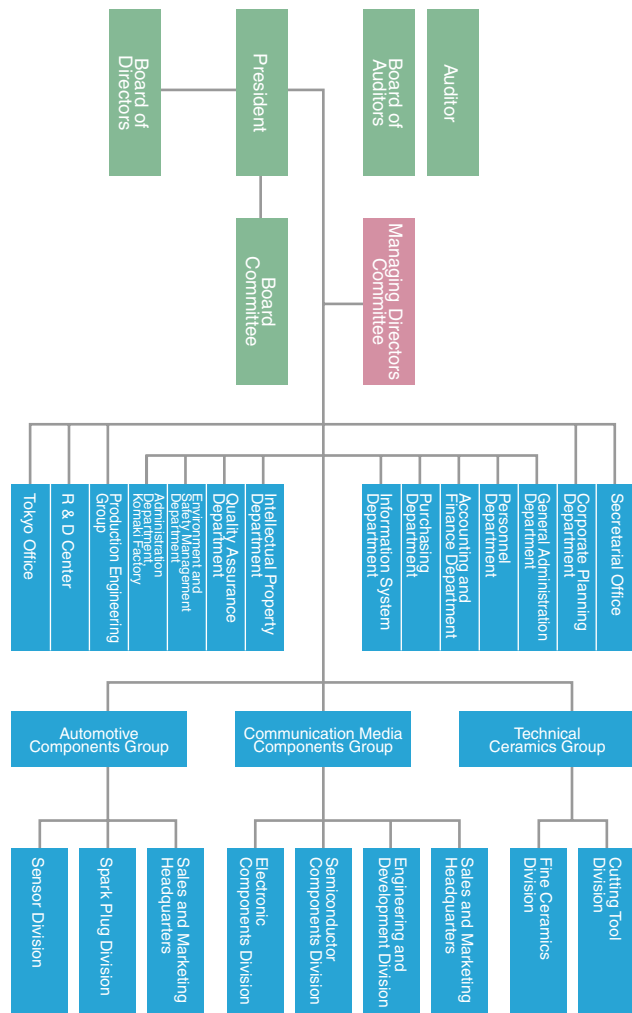
Ever onward! Always mindful of what is the best course, we swiftly put it into action.

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

Organization



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 company, 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 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 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 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 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 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 As a good corporate citizen, we shall actively engage in philanthropic activities and other activities of benefit to society.
- 7 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 We shall reject all contacts with organizations involved in activities in violation of the law or accepted standards of responsible social behavior.
- 9 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 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.

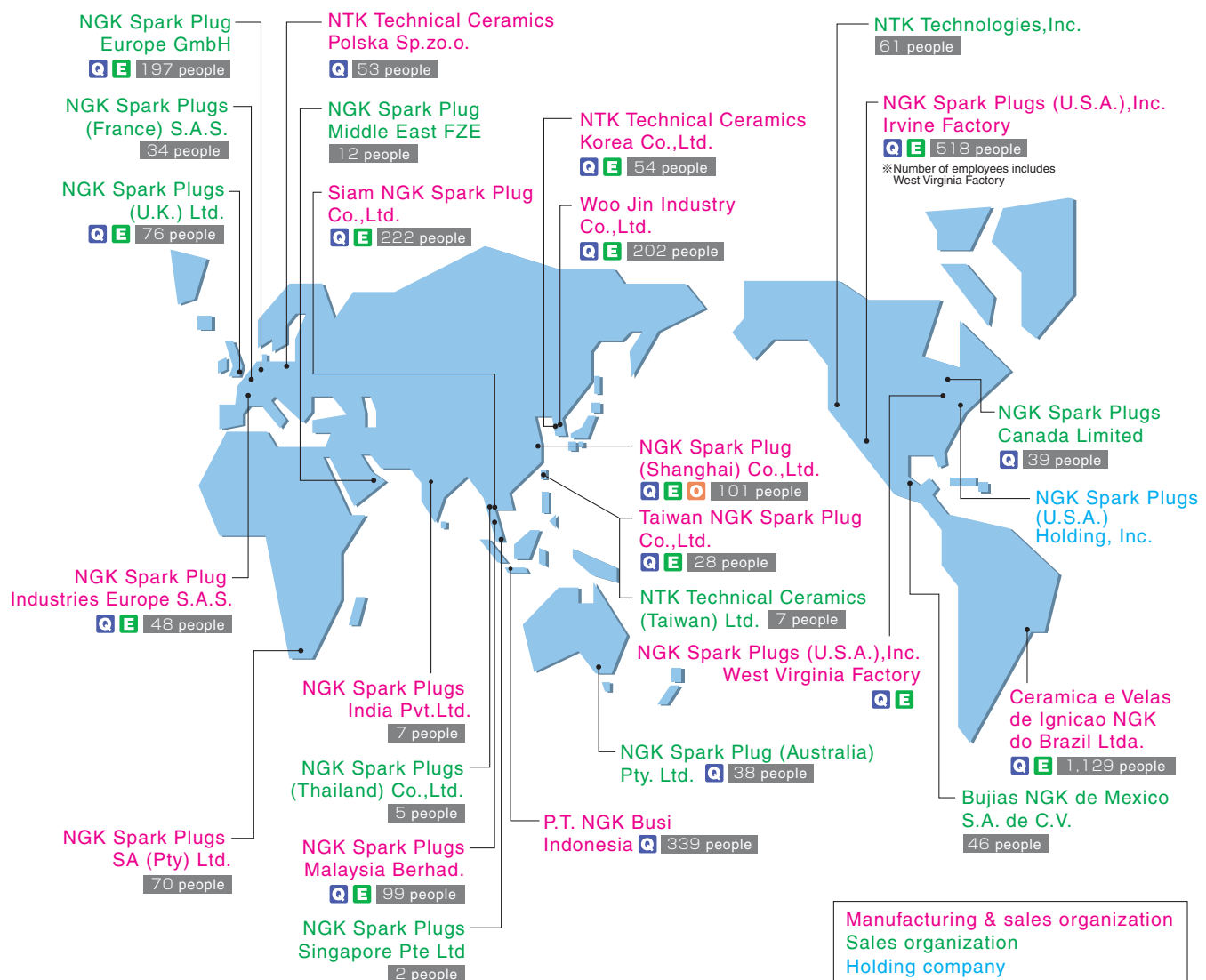
Revised November 2004

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 an export 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.

Overseas Network



QMS/EMS certification status as of the end of May 2007
 Number of employees as of the end of December 2006
 (Note that the number of employees in NGK Spark Plugs SA (Pty) Ltd. applies as of May 2, 2007.)



Environmental Testing Room (NGK Spark Plugs USA Inc.)



Boston Office (NTK Technologies, Inc.)



San Jose Office (NTK Technologies, Inc.)



Tile inspection process (Ceramica e Velas de Ignicao NGK do Brazil Ltda.)



Human letters (P.T. NGK Busi Indonesia)



Inspection process (Siam NGK Spark Plug Co., Ltd.)



Chamfering process (NTK Technical Ceramics Korea Co., Ltd.)



TS16949 acquisition (NGK Spark Plug (Shanghai) Co., Ltd.)



Achievement of 10 billion spark plugs in Japan (Head Office Factory)



Outdoor rest area (Ise Factory)

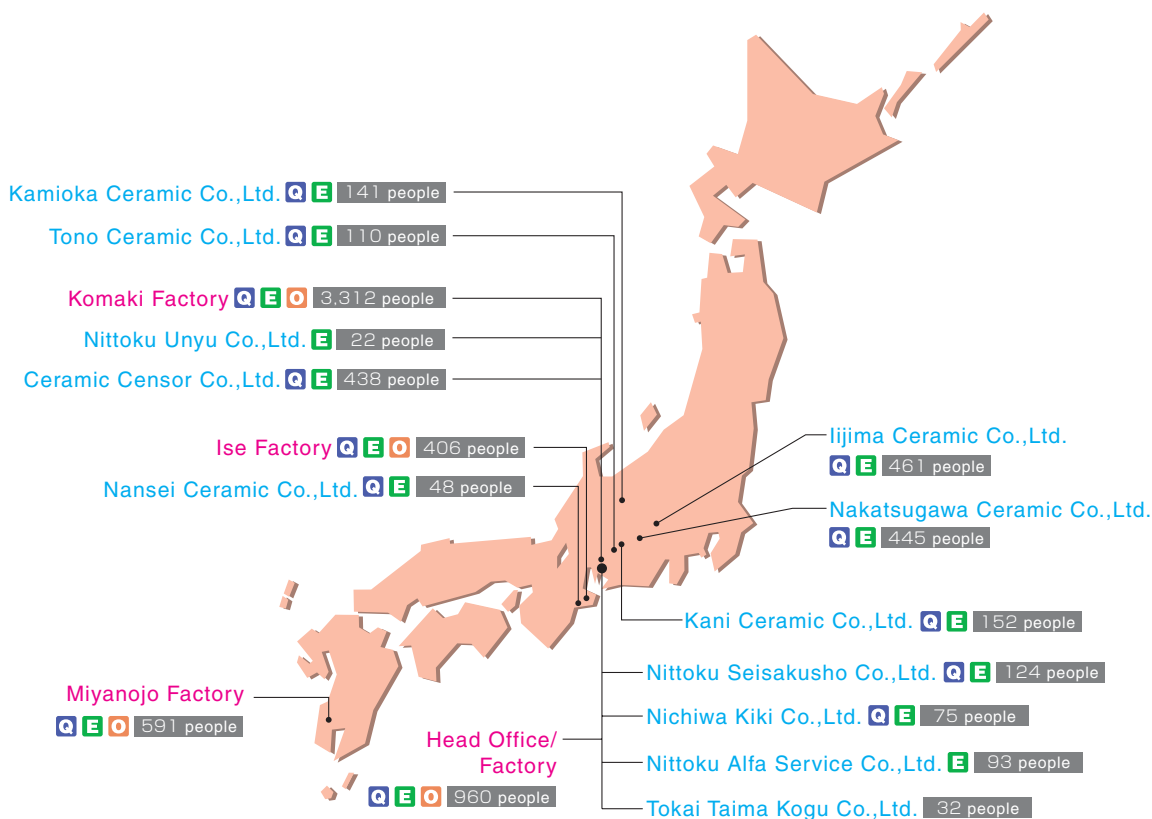


Laser machine (Kani Ceramic Co. Ltd.)



Cafeteria (Miyanojo Factory)

Domestic Network



Q QMS (ISO 9001, TS 16949, etc.) certified
 E EMS (ISO 14001) certified
 O OSHMS certified
 people Number of employees

QMS/EMS certification status as of the end of May 2007
 Number of employees as of the end of December 2006

Head Office/Factory
 Affiliate

Consumers and clients

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.

Quality Management System

2006 marked the 70th anniversary of the Group's founding. Throughout our history of making products, our basic attitude and concept concerning quality in respect of quality creation and maturation such as "the good product principle", "total involvement", and "worksite principle", which started with the Group's founding, have been maintained coherently to the present as the "Nittoku quality mind".

The corporate quality policy, which was established in February 2006, reflects the "Nittoku quality mind". It expresses a return to the basics of TQM for raising the quality of "people, things, and schemes", and also efforts for "manufacturing one step ahead."



Quality lecture meeting



Quality exhibition

Corporate Quality Policy

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

Customer First

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 share common views on problems and solve them through collective efforts.

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.

Crisis Management

Business activities involve a variety of risks such as natural disasters, serious accidents, and economic downturns. We continuously strive to prevent these risks, but at the same time we make preparations to appropriately respond in the event that an unforeseen situation occurs.



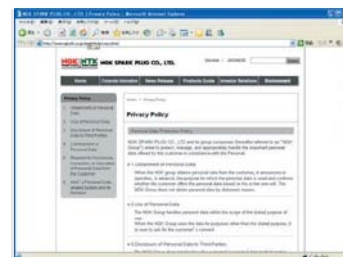
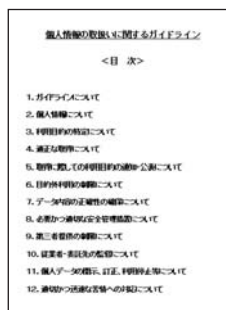
Disaster prevention drill

Action for a major earthquake

We have many factories and offices in the Tokai region centered on Aichi Prefecture. Much of this region is designated as an area in which intensified measures must be taken against an earthquake disaster in the event of a Tokai earthquake. To this end, we have prepared an earthquake countermeasure manual, and take steps to minimize damage to our business activities. Also, we implement a safety confirmation system in order to quickly obtain a grasp of information concerning the safety of our employees.

Protection of Personal Information

Regarding personal information which has been entrusted to us by our customers, we observe the Personal Information Protection Law and other related ordinances, and strive to appropriately protect, control and handle information according to our in-house guidelines. We notify our customers of our personal data protection policy on our website.



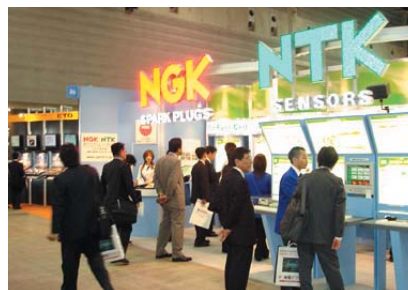
<http://www.ngkntk.co.jp/english/privacy>

Disclosure of Product Information

To inform our customers of the products and the latest technology of the NGK Spark Plug Group, we make presentations at various exhibitions. In fiscal year 2006 as well, we received many visitors at these exhibitions and

were able to respond to their questions and requests. Information concerning our products and technologies is provided on our website and in our catalogs.

Schedule	Exhibition
May 24 - 25, 2006	2006 Automotive Engineering Exposition
October 23 - 26	FISITA2006
December 6 - 8	SEMICON Japan 2006
December 13 - 15	Microwave Exhibition 2006
January 12 - 14, 2007	Tokyo Auto Salon 2007 with NAPAC
February 10 - 12	Osaka Automesse 2007
March 23 - 25	23rd Osaka Motorcycle Show 2007
March 30 - April 1	34th Tokyo Motorcycle Show



2006 Automotive Engineering Exposition

NGK Spark Plugs Plug Studio

There are many different spark plug part numbers, and the type and the necessary quantity differ depending upon the model of the vehicle in which the plug is used. At the Plug Studio, we offer an adaptive search function for spark plugs, plug cords, and power cables, enabling customers to replace their own plugs. The Plug Studio also provides information concerning presentation events and motor sports.

<http://www.ngk-sparkplugs.jp/english>



SEMICON Japan 2006



Automobile components



Communication media components



Technical ceramics

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.

Together with Our Suppliers

The procurement of raw materials, parts, and so on, has various risks concerning not only quality but also the observance of ordinances, environmental measures, information security, and so on. In order to reduce these risks, it is absolutely essential to have a relationship of trust with the supplier as a sound partner. At the corporate policy presentation held in April 2006, we explained our corporate policy and requested the continuation of our good relationships.



Corporate policy presentation

Nittoku Suppliers Associations

The Nittoku Suppliers Association is composed of suppliers who deliver raw materials, equipment, parts, and so on, to the NGK Spark Plug Group. Its purpose is to promote efficient management and improve productivity through the exchange of information between members. The association also organizes lecture meetings, workshops, and sessions for presenting examples of improvement whenever necessary, and aims for the concurrent development of the NGK Spark Plug Group and its suppliers.



Session for presenting examples of improvement

SRI (Socially Responsible Investment)

SRI is based on a comprehensive evaluation that takes into account not only profitability and growth expectation but also social, ethical and environmental aspects such as legal compliance, employment, human rights, and contribution to society and the community, and is aimed at acquiring a steady return. In Japan as well, the number of investors who take into account the environmental aspect or the social aspect when selecting a brand to invest in is increasing.

The NGK Spark Plug Group is included in various SRI indexes and SRI funds, and will continue to strive to be a trustworthy company.

Included in the FTSE4Good Global Index as of March 2007.

The FTSE4Good Global Index is an SRI index which was developed by the UK company FTSE in 2001. Companies are rated on their performance in respect of environmental sustainability, social relations and human rights.



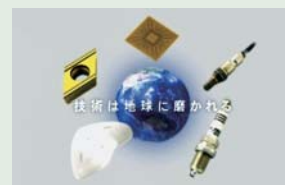
FTSE4good award

Column

Start of a television commercial

Our television commercial first went on air on October 1. This commercial, which has “wisdom acquired from nature” as its main theme, expresses the coexistence of corporate activities and nature.

The commercial is aired during a program, sponsored by us, that covers the environmental activities carried out by corporations.



Column

Communication

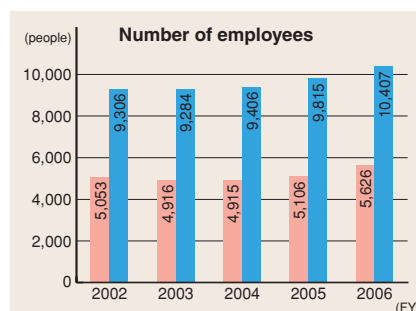
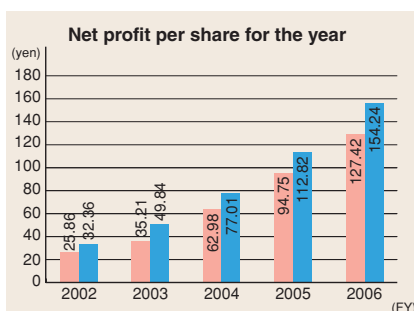
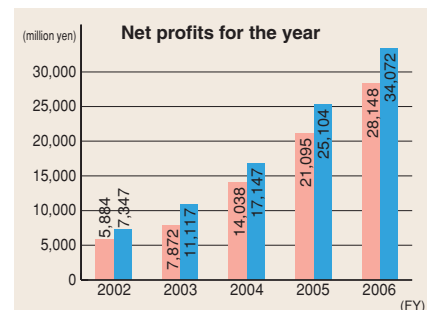
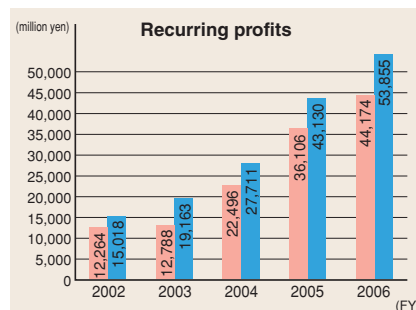
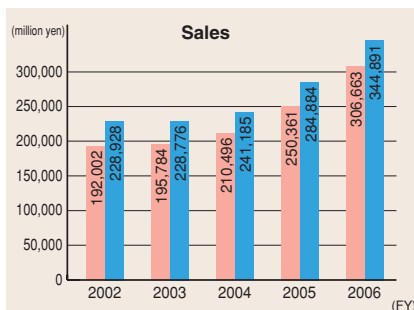
Emphasizing communication not only with our shareholders but also with members of society at large, we shall engage in active and fair disclosure of corporate information through ongoing corporate communications.

- 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 but to a wide range of other stakeholders such as customers, suppliers, employees and local residents, and will therefore deepen mutual understanding by strengthening our PR and communication channels and promoting interactive communication.

Financial Data

	Non-consolidated	Consolidated
Sales (million yen)	306,663	344,891
Recurring profits (million yen)	44,174	53,855
Net profits for the year (million yen)	28,148	34,072
Net profits per share (yen)	127.42	154.24
Number of employees (people)*	5,626	10,407

* Number of employees as of March 2007



Red bar : Non-consolidated
Blue bar : Consolidated

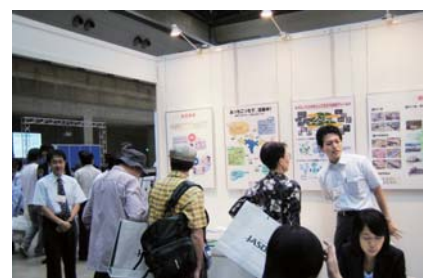
IR Activities

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 their questions. In fiscal 2006, we participated in two events, and received enthusiastic comments and questions from personal investors.

We also periodically hold presentations for analysts and corporate investors in Japan, and give explanations to overseas investors as well.



Nagoya Stock Exchange IR Expo 2006



Nikkei IR Fair 2006 summer STOCK WORLD

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 substances. We also aim to develop, introduce and disseminate innovative technologies, products/services and business models which 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 (revised April 2004)

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.

Environmental Policy (revised April 2004)

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.

Environmental Action Plan and NGK Spark

	Item	Eco Vision 2010
Management	Environmental management system	Sharing of environmental policy by related companies including overseas 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 on 2001)
	Effective use of resources	Efficient use of water resources EPR (extended producer responsibility) operations Achievement of zero emissions by related companies including overseas
		Reduction of waste emissions
		Reduced environmental load due to waste
	Hazardous substances	Total 36 tons of PRTR emissions (80% down on 2002) Control of environmental pollutants
Products	Eco-design	Eco-friendly design and product creation
	Green procurement	Green supplier system of identification and registration of all our business associates
	Distribution	Construction of efficient distribution system
	Eco-business	Development of eco-business
Communication	Disclosure	Disclosure of clear environmental data Continuous issue of CSR reports
	Community	Support for and participation in NGO and NPO activities
	Natural environment	Promotion of nature conservation and social contribution
Mind	Education and instruction	Thorough education of eco-minded employees
		Reflection of environmental performance in business evaluation

Philosophy of Reduction Target

As in the past, we continue to perform control of the overall emission and the basic unit of CO₂, water, and waste, and promote reduction of overall emission and reduction of the basic unit.

In fiscal 2006, we set the “reduction quantities” to be achieved by executing energy conservation measures, and so on, in the targets for CO₂, water, and waste. An issue regarding the targets that were set in terms of the overall emission quantity and basic unit up to now was the fact that it was difficult to obtain a grasp of the degree of achievement of the target through conventional energy conservation and resource conservation activities

because of increases or decreases in product volume, and so on. Accordingly, we set the “reduction quantity” resulting from the combined reduction effect of each countermeasure or improvement, as the target, and controlled it, thus enabling the results of activities to be seen more appropriately. By using the “reduction quantity” as the target, activities were promoted, and in fiscal 2006 more reduction countermeasures than the planned number were implemented for all three items. We will continue to increase the reduction quantity as a target, and control the overall emission quantity and basic unit, aiming to promote activities.

Plug Group Eco Vision 2010

○ : Achieved × : Not achieved △ : Ongoing

Fiscal 2006 target		Results	Page	Fiscal 2007 target
Support ISO14001 certification of overseas automotive related production sites		△	15	Offer assistance in the acquisition of ISO14001 certification through overseas production offices
Formulate NGK Spark Plugs' global environmental declaration and environmental policy		○	—	Develop NGK Spark Plugs' global environmental declaration and environmental policies
Reconfirm relevant legislation centrally and at sites		○	16	—
Revise environmental impact assessment standards (including indirect departments)		○	—	—
Reexamine expert committees and panels and form them into a smoother functioning organization		○	20	—
—		—	—	Examine EMS management categorized by business department
Obtain OSHMS accreditation		○	37	Investigate the joint sharing of goals with QMS
Establish rules for the use of the environmental management information system in the regional secretariats and conduct stable operations		○	—	Offer assistance in the introduction of risk assessment for domestically related firms
Start operating a system of collecting environmental data from overseas offices		×	—	Work to revise and improvement the collection and managerial methods of environmental data for operating organizations
Establish NGK Spark Plugs' environment related standards		△	—	Start operating a system of collecting environmental data from overseas office
Revise NGK Spark Plugs guidelines		○	—	Establish NGK Spark Plugs' environment related standards
Create tool for converting environmental effect to amount of money		○	20	Continue to handle environmental accounting procedures and reporting
Develop and implement GHG reduction program		○	19	Develop and implement GHG reduction program
Reduction targets NGK Spark Plug : 5,700 tons Affiliated companies : 1,891 tons		○	—	Reduction targets NGK Spark Plug : 4,110 tons Affiliated companies : 1,590 tons
Reduction targets NGK Spark Plug : 100,000m ³ Affiliated companies : 13,800m ³		×	23	Reduction targets NGK Spark Plug : 73,000m ³ Affiliated companies : 11,000m ³
Establish methods for recycling used products		△	—	Establish methods for recycling used products
Check current state of industrial waste at overseas manufacturing locations		△	—	Continue to work with data on waste materials and valuables
Reduction targets NGK Spark Plug : 4,744 tons Affiliated companies : 122 tons		×	22	Reduction targets NGK Spark Plug : 3,490 tons Affiliated companies : 110 tons
Promote volume reduction of liquid waste		○	22	—
Study recycle residue of waste from each site that has undergone commissioned treatment		○	22	Examine changes that can be made to processing methods for that ensure a lessening of waste in recycling
Complete HCFC225 substitution		△	24	Investigate the introduction of electronic manifestos
Reduce VOC emissions		×	24	Complete HCFC225 substitution
Carry out uniform control with MSDS at NGK Spark Plug		×	—	Reduce VOC emissions
Establish standards for environmental pollutant auditing		○	—	Carry out uniform control with MSDS at four factories
—		—	—	—
Hold LCA study sessions and LCA evaluation of all departments' products		×	—	Revise hazard rankings
100 companies (expand toward mainly raw material and parts manufacturers)		△	27	Offer the addition of LCA methods for product assessment
Study cooperative transport and modal shift		○	21	300 companies (expand toward mainly raw material and parts manufacture)
—		—	—	Provide a thorough and efficient distribution system that works with the Law concerning the rational use of energy for all cargo owners
Release environmental news items and topics frequently on Internet		○	—	Investigate and analyze environmental duties involved in the profitable operation of business firms
Issue social environmental reports		○	29	Continue to release environmental news items and topics on Internet
Support and participate in NGO and NPO activities		×	—	Issue Environmental & Social Report
Continue to participate in community environmental events, etc.		○	29	Support and participate in NGO and NPO activities
Internally publish environmental education materials that can be used when needed		×	—	Continue to participate in community environmental events, etc.
Build environmental education system		×	—	Revise environmental education programs
Campaign for implementing energy conservation proposals		○	20	—

5 Environmental conservation

Environmental load from business activities

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

the NGK Spark Plug Group, and products, CO₂, waste, and so on, created as a result of these activities, is shown in the figure below.

Material Balance

Business sites in Japan

Input

Type	Category	Business sites in Japan
Energy	Purchased electricity	453,450 kWh
	Gas	5,833 m ³
	LPG	95 kg
	Gasoline	143 kL
Paper	Photocopy paper	6.5 tons
Water	Tap water	3,612 m ³

Output

Type	Category	Business sites in Japan
CO ₂ from energy consumption	Office	165 tons
	Transportation	331 tons
Waste	Recycled waste	13.1 tons
	Landfill/incineration	5.1 tons
Wastewater	Wastewater	3,612 m ³

· Factors used to calculate CO₂

Japan Auto Parts Industries Association (2001)

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

Guideline to Methods of Calculating Emissions of Greenhouse Gases from Business Sites

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

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

INPUT

Energy

Purchased electric power : Quantity used at offices and factories
Gas, Heavy oil A
Gasoline, Diesel oil : Quantity used during testing and transportation
LPG : Amount used at offices and factories, and during testing and transportation

Classification	Non-consolidated	NGK Spark Plug Group
Purchased electricity	238.93 million kWh	364.06 million kWh
Gas	15.37 million m ³	16.26 million m ³
LPG	4,639 tons	10,217 tons
Heavy oil A	1,302 kL	1,302 kL
Gasoline	800 kL	821 kL
Diesel oil	65 kL	154 kL

Water

Tap water : Quantity of service water and industrial water used
Well water : Quantity of underground water used
Recycled water : Quantity of water reused after being purified on the premises

Classification	Non-consolidated	NGK Spark Plug Group
Tap water	909,393 m ³	1,123,438 m ³
Well water	906,959 m ³	1,039,221 m ³
Recycled water	1,307,581 m ³	1,447,466 m ³

Paper

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

Classification	Non-consolidated	NGK Spark Plug Group
Paper	2,466 tons	3,257 tons

Main raw materials

Ceramic materials : Purchased quantities
metal materials
Reused elements : Quantity of reused ceramic material

Classification	Non-consolidated	NGK Spark Plug Group
Ceramic materials	—	14,792 tons
Metal materials	—	22,241 tons
Reused elements	8,770 tons	12,714 tons

Other materials and auxiliary materials

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

Classification	Non-consolidated	NGK Spark Plug Group
Plastic materials	573 tons	2,287 tons
Chemical substances	9,986 tons	13,020 tons
Oils	442 tons	511 tons
Other materials	913 tons	1,213 tons
Other gases	12,532 tons	17,021 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	NGK Spark Plug Group
Offices and factories	135,604 tons	195,932 tons
Testing	1,750 tons	1,750 tons
Transportation	329 tons	612 tons

PRTR law-regulated substances

Atmosphere, water area

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

Classification	Non-consolidated	NGK Spark Plug Group
Atmosphere	14 tons	214 tons
Water area	0.6 tons	1.3 tons

Waste

Recycling

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

Landfill or incineration

Quantity consigned to be buried or incinerated

Classification	Non-consolidated	NGK Spark Plug Group
Recycling	26,912 tons	29,681 tons
Landfill or incineration	129 tons	157 tons

Wrapping/ packaging materials

Plastics, Paper, cardboard

Quantity used by each shipping department (estimated)

Classification	Non-consolidated	NGK Spark Plug Group
Plastics	1,040 tons	1,313 tons
Paper	1,645 tons	1,950 tons
Cardboard	770 tons	1,216 tons

Wastewater

Wastewater

Sewage, Quantity of water discharged to the public water area

Classification	Non-consolidated	NGK Spark Plug Group
Wastewater	1,227,458 m ³	1,531,365 m ³

Product shipment

Product

Quantity of shipped products as cargo owner *1

Classification	Non-consolidated	NGK Spark Plug Group
Product	—	55,758 tons

*1 The counting method was changed in fiscal 2006.

5 Environmental conservation Management

Environmental Management System

The NGK Spark Plug Group has constructed an environmental management system (hereafter called EMS) based on ISO14001, and is engaged in environmental protection activities. Acquisition of ISO14001 certification started in 1999 with the Head Office Factory. This was followed by the

Acquisition of ISO 14001 certification

	Name of factories and companies	Timing of certification	Certification organization
NGK Spark Plug	1 Head Office/Factory	'99.8	TÜV Rheinland Japan Ltd.
	2 Komaki Factory	'00.12	
	3 Miyanojo Factory	'00.12	
	4 Ise Factory	'00.12	
Domestic	5 Nittoku Seisakusho Co.,Ltd.	'04.1	TÜV Rheinland Japan Ltd.
	6 Nittoku Unyu Co.,Ltd.	'00.12	
	7 Nichiwa Kiki Co.,Ltd.	'04.1	
	8 Kamioka Ceramic Co.,Ltd.	'04.1	
	9 Kani Ceramic Co.,Ltd.	'02.12	
	10 Iijima Ceramic Co.,Ltd.	'02.12	
	11 Nittoku Alfa Service Co.,Ltd.	'99.8	
	12 Nakatsugawa Ceramic Co.,Ltd.	'02.12	
	13 Tono Ceramic Co.,Ltd.	'04.1	
	14 Nansei Ceramic Co.,Ltd.	'02.12	
	15 Ceramic Censor Co.,Ltd.	'00.12	

combined acquisition by four factories and 11 consolidated companies in Japan by January 2004. We have constructed an integrated management system for the entire Group in Japan, and carry out communication of aims and targets and also control of information. We are also promoting the acquisition of ISO14001 certification of overseas consolidated companies as well, and by April 2007 eleven companies had acquired certification. In the future, we are aiming to unify codes of behavior and also opinions in order to promote environmental protection activities on a global basis.

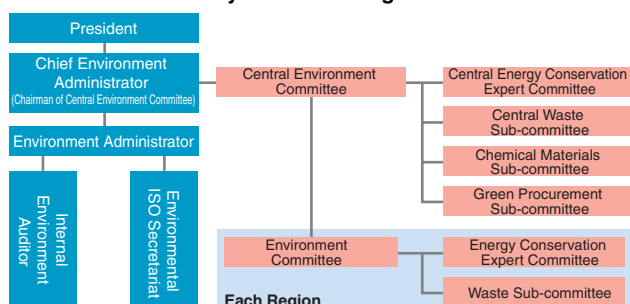
	Name of factories and companies	Timing of certification	Certification organization
Overseas	16 NGK Spark Plugs (U.S.A.),Inc. WV Factory	'00.7	TUV Rheinland of North America, Inc.
	17 NGK Spark Plugs (U.S.A.),Inc. IRV Factory	'01.8	BSI (British Standard Institute)
	18 NGK Spark Plugs (U.K.) Ltd.	'01.12	SGS
	19 Taiwan NGK Spark Plug Co.,Ltd.	'06.4	AFAQ
	20 NGK Spark Plug Industries Europe S.A.S.	'00.5	ISO(International Standard Certification)
	21 NTK Technical Ceramics Korea Co.,Ltd.	'06.4	ABS Quality Evaluations
	22 Ceramica e Velas de Ignicao NGK do Brazil Ltda.	'01.12	TÜV Industrie Service GmbH
	23 NGK Spark Plug Europe GmbH	'04.11	SGS
	24 NGK Spark Plug (Shanghai) Co.,Ltd.	'07.4	SIRIM QAS
	25 NGK Spark Plugs Malaysia Berhad.	'06.3	RWTÜV Thailand Ltd.
	26 Siam NGK Spark Plug Co.,Ltd.	'02.11	kfq (Korean Foundation for Quality)
	27 Woo Jin Industry Co.,Ltd.	'05.4	

System Operation

The NGK Spark Plug Group has constructed an EMS which is based on overall participation, and implements a PDCA (Plan-Do-Check-Action) cycle throughout the entire Group and each region (factories).

We intend to establish a central environment committee as the highest decision-making organization of the EMS, and also regional committees, and check the progress of the aims and targets as well as related issued, in order to carry out continual improvement. During the annual internal environmental audit, we check the system construction, operation situation, and observance of the regulations and voluntary standards. We also strive to raise the awareness of the internal environmental auditors and have the regions carry out exchange with each other by going to other regions and carrying out audits there.

Environmental Activity Promotion Organization

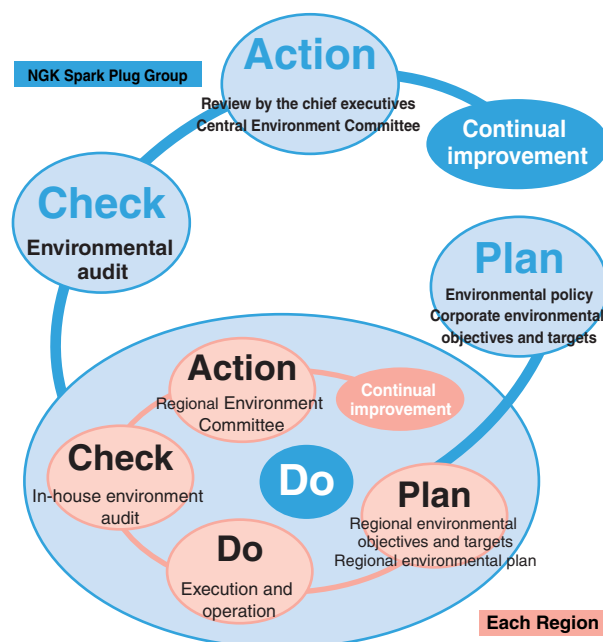


For the definition of each region, refer to p.2.

Number of ISO14001 auditors

(people)

	NGK Spark Plug	Affiliates
ISO14001 assistant examiners	7	1
ISO14001 Internal auditors	282	174



Internal auditor training



In-house environment audit

Environmental Risk

In order to prevent environmental pollution, it is necessary to determine the various environmental risks that lurk within business activities, and control them. We strive to carry out appropriate control on a daily basis in order to reduce environmental risks, such as by concluding pollution

Soil survey

Based on the Soil Contamination Countermeasures Law, we implement soil surveys according to a written standard when disposing of regulated equipment and also when changing the soil on the factory premises, for example. In fiscal 2006, we carried out a soil survey along with the renewal of the underground tank at the Head Office Factory. No contamination or abnormalities were found, and the work was carried out appropriately.

We will continue striving to carry out appropriate soil control and also prevent pollution.



PCB control

The Head Office Factory, Komaki Factory and Nittoku Seisakusho, store waste materials containing PCBs. We will promote correction of the treatment procedure based on the Law concerning Special Measures for Promotion of Proper Treatment of PCB Wastes, and also carry out stringent control of such materials.

*PCB: PolyChlorinated Biphenyls



prevention agreements with local governments concerning air pollution, water pollution, and so on, and also establishing voluntary regulations values that are more stringent than the regulation values.

Asbestos

In 2006, various laws were amended, and the regulations pertaining to asbestos were strengthened. We have been engaged in appropriate treatment in order to prevent harm due to asbestos. We remove asbestos that had been used in manufacturing facilities, and also promote appropriate treatment of asbestos contained in the insulation of buildings.

Drills for emergency situations

We hold drills to prevent environmental pollution based on the assumption of an emergency situation arising due to an earthquake, fire, or other disaster.



Compliance

It is absolutely essential to observe the environmental laws and regulations in order to maintain business activities. To this end, it is important to acquire a correct understanding of the purpose of the environmental regulations. In fiscal 2006, we held a seminar concerning regulations which was given by a lecturer from outside the company, re-confirmed the relevant regulations, and had the employees acquire a deeper understanding of them.

NGK Spark Plug Co., Ltd.

	2004	2005	2006
Violations	0	1	0
Complaints	4	0	0 *

※ There were no violations or complaints caused directly by our activities, however during the construction of the new factory on the premises of the Komaki Factory we received 34 requests to carry out improvements concerning noise, and so on, and devised countermeasures.

The NGK Spark Plug Group checks the situation regarding observance of the regulations using a scheme that is linked to the ISO14001 system, and strives on a daily basis to prevent violations of the regulations and complaints. Despite this, in fiscal 2006, three violations of the regulations and one complaint arose. We took appropriate action against violations and complaints and strive to prevent a reoccurrence.

Affiliates

	2004	2005	2006
Violations	7	1	3 ※1,※2
Complaints	1	0	1 ※3

※1 The regulation value of noise was exceeded at the Nakatsugawa Ceramic Takenami Plant and Kani Ceramic, so we are devising countermeasures.

※2 The COD value at the Ceramic Sensor production line temporarily exceeded the value in the agreement concluded with Komaki City, and we have now completed countermeasures.

※3 Nittoku Seisakusho received a request to carry out improvement concerning noise, and countermeasures have now been completed.



Exhaust gas treatment equipment



Sewage pipe reinforcement work

5 Environmental conservation Management

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, the NGK Spark Plug has been carrying out environmental accounting, and in 2003 its scope was increased to cover the entire Group.

The cost of environmental maintenance for fiscal 2006 was 9,758 million yen on a non-consolidated basis, and 10,456 million yen for the Group. This was an increase of approximately 7% compared to fiscal 2005. Also, the environmental protection effect was 388 million yen on a non-consolidated basis.

Environment preservation cost

(Unit: million yen)

Items			Non-consolidated				NGK Spark Plug Group ※			
Classification		Major efforts	Investment		Expense		Investment		Expense	
			2005	2006	2005	2006	2005	2006	2005	2006
Costs within the business area	Pollution prevention cost	Air/water pollution prevention and noise reduction	204	121	757	1,136	222	148	932	1,352
	Global environmental conservation cost	Global warming prevention, energy conservation	25	72	256	405	77	195	304	449
	Resource circulation cost	Effective resource utilization, industrial waste treatment/disposal	58	47	525	484	63	56	724	685
	Sub-total		287	240	1,537	2,025	363	398	1,960	2,487
Upstream & downstream cost		Recycling of products, etc., green purchase differences	0	0	5	2	0	0	5	2
Management activity cost		Employee environmental education, EMS construction and operation	6	10	343	287	8	11	407	354
R&D cost		R&D of products promoting environment preservation	994	1,386	5,898	5,632	994	1,386	5,898	5,632
Social activity cost		Nature protection, afforestation, environmental ads	0	0	132	165	0	0	142	175
Environment damage correction cost		Repair of soil contamination, disrupted nature	0	0	9	9	0	0	9	9
Other costs		—	0	0	1	1	0	0	1	1
Total			1,287	1,636	7,925	8,122	1,365	1,796	8,421	8,660

※ Excluding Nittoku Unyu and Nittoku Alpha Service

Effect of environment conservation measures shown in yen (Unit: million yen)

Area of recognized effect		Non-consolidated
Revenue	Revenue generated from the recycling of waste generated in operations or used products	208
	Energy cost saving achieved from energy conservation efforts	121
Cost saving	Reduction of water expenses through water saving	10
	Waste disposal cost saving achieved by resource conservation and recycling efforts	49
Total		388

Calculation concept

The environment preservation cost is classified according to the guidelines of the Ministry of the Environment, and is calculated using a proportional division method according to rules drawn up by the Group, based on the direct equipment investments and costs.

Environmental conservation effect measurements

Classification		Non-consolidated			NGK Spark Plug Group		
Effect measured in the business area	Types of effect	2005	2006	Difference from the previous fiscal year	2005	2006	Difference from the previous fiscal year
Effect measured with respect to resource input into operations	Energy consumption						
	Purchased electricity (10,000 kwh)	21,171	23,893	2,722	32,967	36,406	3,439
	Gas (10,000 m ³)	1,428	1,537	109	1,513	1,626	113
	LPG ※1 (tons)	4,228	4,630	402	8,894	10,208	1,314
	Heavy oil A (KL)	1,883	1,302	-581	1,883	1,302	-581
	Water consumption						
	Tap water (tons)	801,684	909,393	107,709	994,442	1,123,438	128,996
	Well water (tons)	935,164	906,959	-28,205	1,067,387	1,039,221	-28,166
Effect measured with respect to environmental load and waste from business activities	P RTP law-regulated substance consumption (tons)	603	673	70	840	1,031	191
	CO ₂ emission from energy consumption (tons)	124,189	135,604	11,415	179,310	195,932	16,622
	Recycled plant wastewater ※2 (tons)	1,150,196	1,307,581	157,385	1,288,728	1,447,466	158,738
	Waste						
	Recycled mass (tons)	21,168	26,912	5,744	23,678	29,681	6,003
	Landfill, incineration (tons)	121	129	8	401	157	-244
PRTR law-regulated substances released into air and water (tons)		13	14	1	131	215	84

※1 The quantity of LPG used in transit is excluded in consideration of the relationship with the environment preservation cost.

※2 Definition of recycled plant wastewater: Recycled water is defined as water that is reused after treatment of waste water.

Environmental Management

Eco-efficiency (environmental effectiveness)

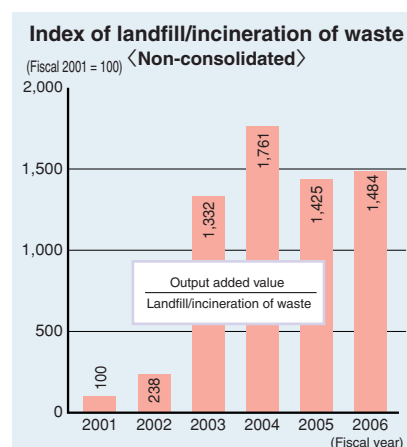
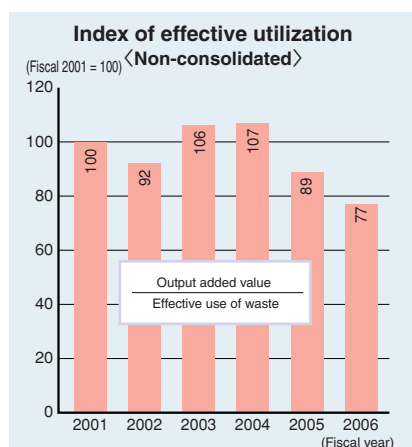
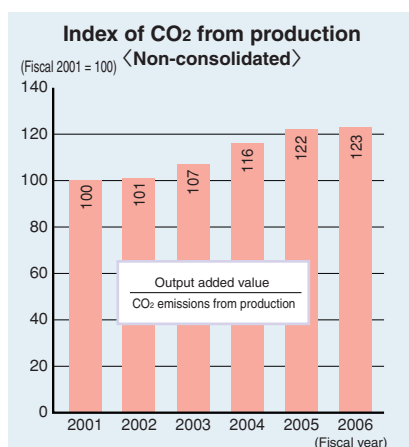
Increasing economic value while reducing the environmental load leads to ongoing corporate development. NGK Spark Plug Group evaluates the quantity of CO₂ emission, the quantity of waste generated, and so on, as the environmental effectiveness, and is promoting environmental management. In fiscal 2006, the quantity waste generated increased greatly due to the increase in the production of semiconductor components, and the eco-efficiency of effective utilization fell.

Eco-efficiency

This is an indicator of the ratio of the created economy value to the environmental load accompanying business activities. The higher the value the better is the efficiency.

$$\text{Eco-efficiency} = \frac{\text{Output added value}}{\text{Environmental load}}$$

※ The added value production amount is the turnover from when the cost of materials and subcontracting costs have been subtracted.



※ See P.19 for the quantity of CO₂ emitted, and see P.22 for the quantity of waste generated and also the definition of effective use.

Material flow cost accounting

Material flow cost accounting (MFCA) is a tool for calculating the cost of materials and energy used to make a product which will become waste, and also for simultaneously realizing improved environmental management and cost

reduction.

In September 2006, NGK Spark Plug Co., Ltd. implemented in-house training by an outside consultant, aiming at adopting and developing MFCA.

History of environment conservation

Feb. 1973	Safety and Environment Section (present Environment & Safety Management Dept.) was established. Safety and Health Committee and Antipollution Committee were established.	Jun. 2001	The first environment convention was held.
Mar. 1974	Antipollution agreement was concluded between Komaki Factory and Komaki City.	Jul. 2001	Cogeneration plant was installed in Miyanojo Factory.
Apr. 1980	Antipollution agreement was concluded between Miyanojo Factory and Miyanojo Town. Energy Conservation Expert Committee was established.	Sep. 2002	Miyanojo Factory achieved zero emission.
Nov. 1980	Miyanojo Factory introduced a closed wastewater treatment system to its plating plant.	Dec. 2002	Combined ISO14001 certification covering NGK Spark Plug and affiliates (Iijima Ceramic, Nakatsugawa Ceramic, Kani Ceramic and Nansei Ceramic)
Nov. 1993	Antipollution agreement was concluded between Ise Factory and Ise City.	May. 2003	Voluntary soil survey and soil improvement was performed on the company premises and reported to Nagoya City. Head Office/Factory and Komaki Factory achieved zero emission.
Apr. 1994	Ise Factory introduced a closed wastewater treatment system to its plating plant.	Sep. 2003	Ise Factory achieved zero emission.
Apr. 1999	Environment declaration was announced.	Jan. 2004	Combined ISO14001 certification covering NGK Spark Plug and affiliates (Kamioka Ceramic, Nittoku Seisakusho, Nichiwa Kiki and Tono Ceramic)
Jun. 1999	Reorganization of Antipollution Committee into Environment Committee. Environmental management system was reviewed and Energy Conservation Expert Committee was organized.	Oct. 2004	Nittoku Seisakusho achieved zero emission.
Aug. 1999	Head Office/Factory obtained ISO14001 certification.	Mar. 2005	Nansei Ceramic achieved zero emission.
Oct. 1999	Waste Sub-Committee, Green Procurement Sub-committee, and Chemical Materials Sub-committee were established.	Sep. 2005	Nichiwa Kiki achieved zero emission.
Sep. 2000	The first edition of ECO report was issued.	Dec. 2006	Received the Minister of Economy, Trade and Industry Prize at the 19th Chunichi Industrial Technology Awards. (Universal A/F heated exhaust gas oxygen sensor)
Dec. 2000	Combined ISO14001 certification covering the company's entire operation sites (Head Office/Factory, Komaki, Miyanojo and Ise)	Jan. 2006	Received the Chairman Prize at the ECCJ's 16th Energy Conservation Grand Prize. (Oxygen concentrator for medical use)
		Mar. 2006	Nakatsugawa Ceramic, Kani Ceramic and Kamioka Ceramic achieved zero emission.
		Oct. 2006	Iijima Ceramic achieved zero emission.
		Mar. 2007	Tono Ceramic achieved zero emission. (Achieved by all regions.)

Prevention of Global Warming

Basic philosophy



Shigeyasu Yamada,
Managing director
Chairman of the Central
Energy Conservation
Expert Committee

The importance of preventing global warming is increasing worldwide, and measures are being demanded. The NGK Spark Plug Group is a manufacturer of ceramics. The manufacture of ceramics requires many firing processes which constitute sources of emission of greenhouse gases, so we are engaged in energy conservation activities with a view to conserving energy. We think that it is important to reduce the overall quantity of greenhouse gas, and have set an overall reduction target under "Eco Vision 2010."

In April 2006, the Act concerning the Rational Use of Energy and the Law Concerning the Promotion of the Measures to Cope with Global Warming were amended as part of the policy for preventing global warming, and the necessity for taking action is increasing. The NGK Spark Plug Group takes appropriate measures such as the creation of a system for computing, reporting on, and publicizing the quantity of greenhouse gases emitted, and energy conservation activities in logistics, and so on.



Energy conservation patrol

Results with respect to fiscal 2006 target

In fiscal 2006, we established reduction of emission as a target in order to evaluate the effectiveness of energy conservation measures in visible form. Compared to the reduction target of 7,591 tons for the NGK Spark Plug

Group, the actual reduction achieved was 9,221 tons, indicating that we were able to clear the target. In fiscal 2007 as well, we will continue to carry out thorough control of reduction quantity.

	Fiscal 2006 target	Fiscal 2006 results
NGK Spark Plug Co., Ltd.	Reduction of 5,700 tons	5,926 tons
Affiliates	Reduction of 1,891 tons	3,295 tons
Total	Reduction of 7,591 tons	9,221 tons

Main countermeasure examples

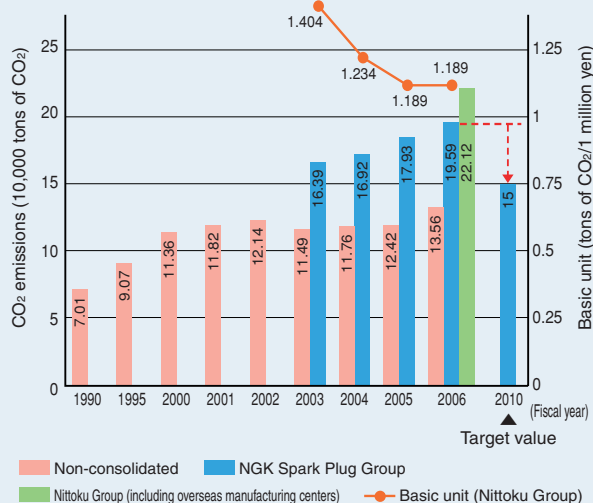
- Effective utilization of heat by changing the furnace heater
- Utilization of waste heater in plug furnace
- Energy conservation by rationalization of compressor set pressure

Total CO₂ emission and Eco Vision 2010

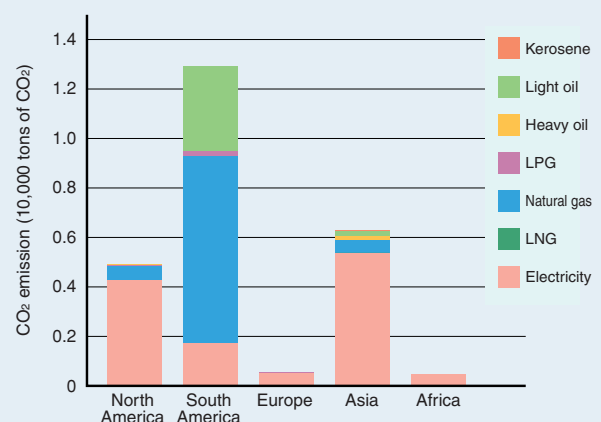
The NGK Spark Plug Group holds up the reduction of total CO₂ emission in Eco Vision 2010, and carries out activities aimed at achieving this. In fiscal 2006, we achieved the CO₂ reduction target, however the total emission increased due to increased production, and on a non-consolidated basis it rose 93% compared to fiscal 1990. For each basic unit, we obtained an improvement, however we intend to reduce

energy consumption further, aiming at an overall reduction. Also, in fiscal 2006 we started to consolidate CO₂ emissions at overseas manufacturing centers. The total CO₂ emission for all domestic and overseas manufacturing centers was 220,000 tons. As a global enterprise, we intend to promote activities aimed at preventing global warming at our overseas offices and factories as well.

Transition of CO₂ emission (offices and factories)



CO₂ emission for overseas manufacturing plants in each region[※]



[※]Regarding the CO₂ emission from purchased electricity, we use the Each country's GHG protocol coefficient. Regarding fuel, we use the same coefficients as in Japan. (See P.13.)

Promotion of energy conservation activities

■ Re-evaluating the energy conservation organization setup

Regarding energy conservation activities, we created a setup that enables each division to carry out activities easily, and in order to increase its effectiveness we re-evaluated the organization of the central and regional energy conservation expert committees. We selected personnel in the department manager class who were in charge of energy control in the division as members of the central committee, in order to strengthen the promotion of energy conservation activities in each department.



Central energy conservation expert committee

■ Energy conservation diagnosis

We underwent an energy conservation diagnosis in order to find improvement points so that we could carry out energy conservation activities. Between May 16 and 18, the Head Office Factory was subjected to a factory diagnosis by an energy conservation diagnostic officer, and between November 13 and 17 the Komaki Factory was subjected to a factory diagnosis under the NEDO energy conservation countermeasure adoption business.



Energy conservation diagnosis

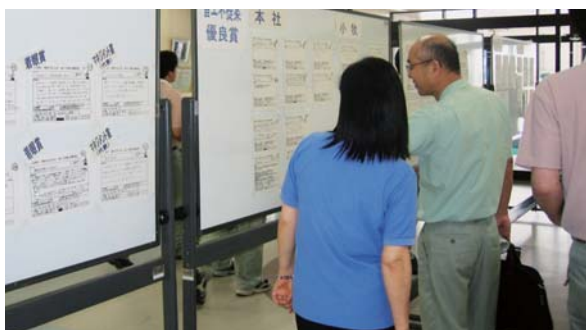
We received comments and proposals from the energy conservation diagnostic officer, and implemented countermeasures aiming at improving the situation. Also, we held a briefing session for reporting on the results of the diagnosis. This briefing session was also attended by many employees of departments that were not directly involved in the diagnosis, hence there was an increased awareness of energy conservation in these departments as well.



Energy conservation diagnosis briefing session

■ Energy conservation proposals

In order to collect proposals concerning energy conservation from a variety of sources and improve the awareness of energy conservation among the employees, we asked for energy conservation proposals in fiscal 2006. As a result, we received a total of 4001 proposals, and gave awards for particularly excellent proposals at an environmental meeting. We also posted 123 other excellent proposals on the notice board, thus helping to raise the awareness of energy conservation.



■ Energy conservation diagnosis of affiliates

In order to check the energy conservation situation at affiliates and promote energy conservation, an energy conservation diagnosis was carried out by the chairman of the central energy conservation expert committee. Between April and May, we audited seven companies, and found improvement points that could lead to energy conservation in the factories. By pointing out these improvement points and promoting energy conservation activities, we were able to promote energy conservation activities throughout the entire Group.

■ Revising improvement proposals

We implemented an improvement proposal setup in order to promote individual initiative and the creation of original ideas. In fiscal 2006, we revised the setup, aiming at promoting proposals concerning energy conservation. We added a method of converting environmental improvement into monetary amount and changed the scoring criteria, in order to correctly evaluate action intended mainly for environmental protection.

5 Environmental conservation

Factory/Office

Clean energy

In November 2006, we installed our third solar-powered generating system at the Head Office Factory. In fiscal 2007 we are planning to install a solar-powered generating system on the roof of the new factory under construction at the Komaki Factory, and also at the Ise Factory. The system to be installed at the new factory at Komaki has a capacity of 107 kW, and that to be installed at the Ise Factory has a capacity of 30 kW. In this way we are promoting the effective use of natural energy.



Solar-powered generating system

Logistics

As a result of the Act concerning the Rational Use of Energy which was enacted in April 2006, it has become mandatory to adopt energy conservation measures in the transportation field. In fiscal 2006, the quantity of cargo that we as a cargo owner transported, including products and waste, was 50.50 million ton kilometers, and we were designated as a specified consigner. The NGK Spark Plug Group has been purchasing low pollution vehicles and implementing modal shifts, and so on. We intend to continue carrying out energy conservation activities in the transportation field as a specified consigner.



Nittoku Unyu

Results of computing greenhouse gases according to the system for computing, reporting on, and publicizing the quantity of greenhouse gases

Along with the amendment of the Law Concerning the Promotion of the Measures to Cope with Global Warming, business owners who generate large quantities of greenhouse gases are required to compute the emission quantity and report to the national government. As a result of computing the gases concerned, we confirmed that the

total quantity of gas when converted into carbon dioxide did not exceed 3,000 tons at any factory, so there was no need to issue a report. In the future as well, we will continue to compute the quantity of greenhouse gases each year, and strive to take appropriate measures to prevent global warming.

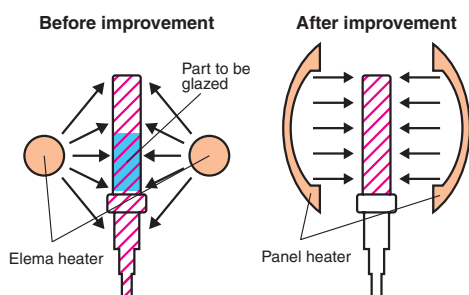
(tons CO₂)

		Head Office/Factory	Komaki Factory	Miyanojo Factory	Ise Factory	Total
Non-energy-based carbon dioxide	CO ₂		3.5			3.5
Methane	CH ₄	17.5	102.7	4.4	14.3	138.9
Nitrous oxide	N ₂ O	5.5	55.6	5.8	4.7	71.6
Hydro-fluorocarbon	HFC	4.3	7.4	2.5	1.0	15.1
Perfluorocarbon	PFC		1,700.2		97.2	1,797.4
Sulfur hexafluoride	SF ₆	0.1	3.9	1.4	4.8	10.1
Total		27.3	1,873.4	14.1	121.9	2,036.7

Case example

■ Use of a panel heater for heating the glaze baking furnace

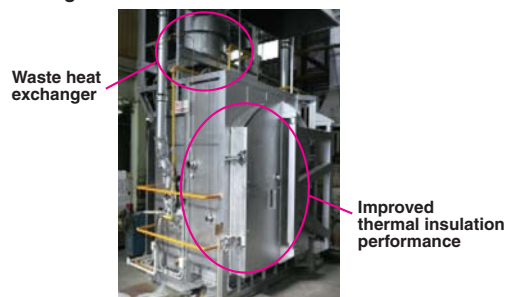
The manufacture of spark plugs includes the process for baking the glass on the ceramic part of the plug. In order to utilize the heat of the glaze baking furnace in this process more efficiently, we re-studied the heater used in the furnace, and adopted a panel heater which can direct the heat only at the part where it is required. We also changed the heat insulation material to reduce the heat dissipated from the furnace. As a result of these measures, we were able to reduce the consumption of electricity by 26%.



■ Energy saving by increasing the number of products placed in the furnace

When renewing the baking furnace for ceramic products, we strove to reduce the emission of CO₂ resulting from the baking process. We changed over to a large capacity furnace, enabling a greater number of products to be baked at the same time. In this way, we were able to reduce the amount of energy consumed per product. In addition, we improved the thermal insulation performance and added a waste heat exchange function, thus further reducing energy consumption. As a result, the quantity of CO₂ emitted per year fell by 122 tons.

Baking furnace



Waste Material

Basic philosophy

The NGK Spark Plug Group handles waste material in the following priority sequence in order to make maximum effective use of resources.

①Reduce ②Reuse ③Recycle ④Landfill and incineration

During fiscal 2006, the Group achieved zero emissions in all regions. In fiscal 2007, we will continue to reduce waste material and also make efforts to reduce the residue remaining after waste material has been treated.

Definition of effective use

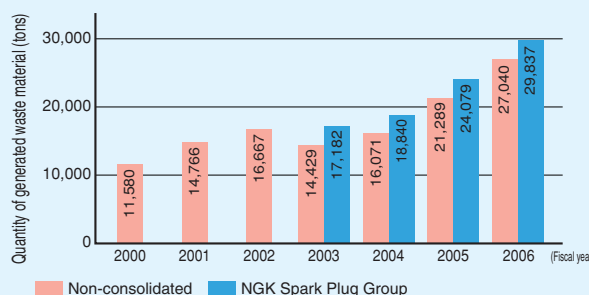
We reuse and recycle the valuable parts of the waste generated from our factories (including the recovery of heat). This includes waste materials sold as valuable resources.

Definition of zero emission

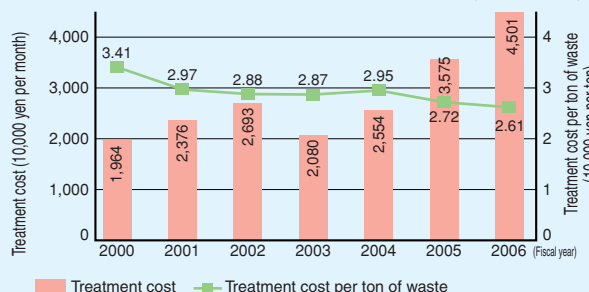
We define zero emission as the state in which the recovery rate of waste, including both industrial waste and general waste from our operations, is at least 98%.

$$\text{Recovery rate} = \frac{(\text{Reused or recycled amount})}{(\text{Reused, recycled, or landfilled/incinerated amount})} \geq 98\%$$

Trend of quantity of generated waste material



Trend of cost of treating waste material (Non-consolidated)



Results with respect to the fiscal 2006 target

In fiscal 2006 we aimed to devise measures in order to achieve a target reduction of 4,744 tons at NGK Spark Plug Co., Ltd. and a target reduction of 122 tons at our affiliates. Unfortunately, due to a major delay in

	Fiscal 2006 target	Fiscal 2006 results
NGK Spark Plug Co., Ltd.	Reduction of 4,744 tons	2,594 tons
Affiliates	Reduction of 122 tons	269 tons
Total	Reduction of 4,866 tons	2,863 tons

implementing highly effective measures, the Group as a whole was unable to achieve the target. We will continue to strive to reduce waste in fiscal 2007 by implementing the measures that we were unable to complete.

Case examples of main measures

- Installation of waste liquid concentration system
- Installation of sludge dewatering system
- Reuse of ceramic scrap

On-site confirmation of waste material treatment contractor

To ensure that waste material consigned to be treated by a processing contractor specified by the Group was being appropriately treated, we carried out an on-site check at the interim treatment plant and also at the final disposal site. We also investigated the amount of residue generated during the waste material treatment process, not only to ensure that the waste material was being treated properly, but also to further reduce the load on the environment due to the waste.

	NGK Spark Plug Co., Ltd.	Affiliates
Number of waste treatment contractors	32	17
Total number of visitors	81	26



Case example

■ Installation of waste liquid concentration system

A lot of developing fluid and separation liquid was discharged during the organic package production process, and constituted a large percentage of the total waste. In order to reduce the quantity of this waste liquid, we installed a waste liquid concentration system. As a result, the amount of waste liquid was reduced to about one half, thus reducing the overall volume of waste.



Water Resources

Basic philosophy

The NGK Spark Plug Group carries out its various activities by using tap water or well water. In order to protect water, which is a precious resource of the earth, we strive to reduce consumption of water.

Results with respect to the fiscal 2006 target

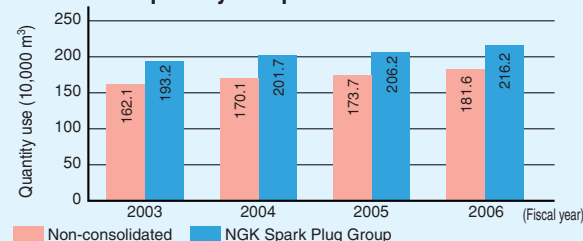
In fiscal 2006, we set a water reduction target of 100,000 m³ for NGK Spark Plug, and a target of 13,800 m³ for our affiliates, that is, a total reduction of 113,800 m³. Since the initial plan was drawn up, many measures were implemented, but the reduction attained for the whole Group was 111,857 m³, which is less than the target.

	Fiscal 2006 target	Fiscal 2006 results
NGK Spark Plug Co., Ltd.	Reduction of 100,000m ³	84,058m ³
Affiliates	Reduction of 13,800m ³	27,799m ³
Total	Reduction of 113,800m ³	111,857m ³

Case examples of main measures

- Re-studying the quantity of water supplied to the washing equipment
- Installing steam drain recovery equipment
- Reducing the quantity of cooling water along with a change in the operating temperature of the cooling tower

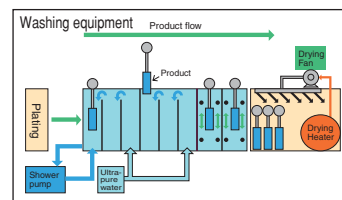
Trend of the quantity of tap water and well water used



Case example

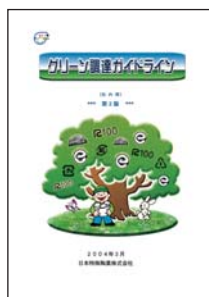
Reduction due to re-studying the quantity of water supplied to the washing equipment

During the ceramic package production process, the plated product is washed in ultra-pure water. In order to reduce the quantity of water consumed and also save energy, we re-studied the operating conditions existing when the product is in standby. By reducing the flow volume of pure water by half when the product is in standby, we were able to reduce the quantity of water used in one year by 6,000 m³. Also, by reducing the amount of electricity used when the product is in standby, we were able to reduce the emission of CO₂.



Green Purchasing

Use of eco-friendly office supplies



In order to increase the awareness of environmental protection at each workplace and promote activities that take into account energy saving, and so on, the Group actively selects products that are kind to the environment when purchasing or using products related to daily work activities.

Version 2 of our "Green Procurement Guidelines (In-house Use)," published in March 2004, specifies that eco products should meet all or some of the following requirements:

- ① Have less environmental impact during use.
- ② Have a significant effect on environmental improvement during use.
- ③ Have less environmental impact during the disposal stage after use.
- ④ Comply with relevant laws, standards, regulations, etc. in terms of quality and safety.
- ⑤ Be preferably priced the same or lower than similar products (in consideration of longevity).

Eco-car

When we renew our vehicles, we make a point of purchasing eco-cars.

In fiscal 2006, the Komaki Factory purchased compressed natural gas vehicles (CNG vehicles), which run on natural

gas and generate little NO_x or CO₂.

We will continue to make efforts to reduce the load on the environment in our logistics and marketing activities.

Number of low-emission company vehicles

Category	(No. of cars)		
	NGK Spark Plug Head Office/ Factory	Sales offices	Affiliates
Total number of company vehicles	100	93	23
New☆☆☆☆ (75%-decreased level in the exhaust gas standards in 2005)	13	29	4
New☆☆☆ (50%-decreased level in the exhaust gas standards in 2005)	8	15	3
☆☆☆ (75%-decreased level in the exhaust gas standards in 2000)	16	31	7
☆☆ (50%-decreased level in the exhaust gas standards in 2000)	12	8	1
☆ (25%-decreased level in the exhaust gas standards in 2000)	9	10	1
Others (Exempted from exhaust gas regulations)	42	0	7

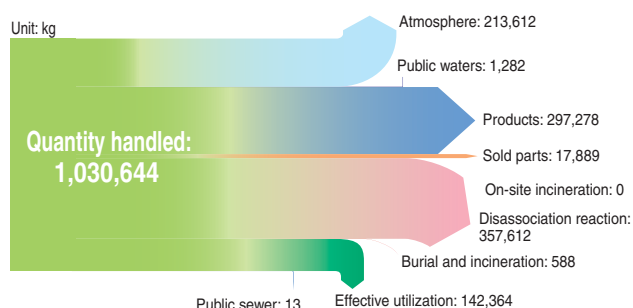


Eco-car (CNG vehicle)

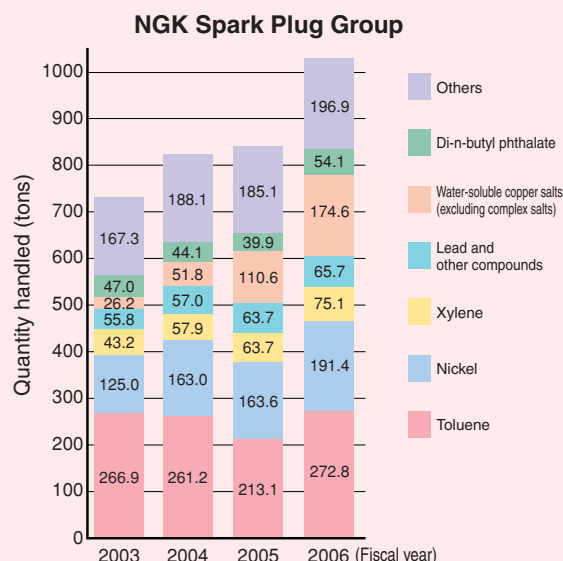
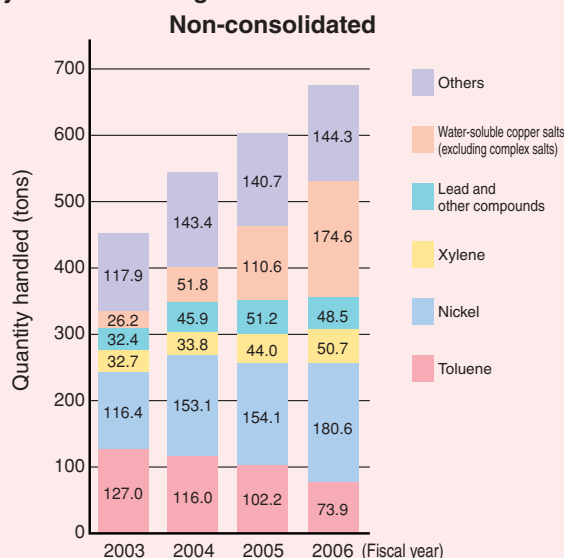
Hazardous Substances

We are striving to reduce the discharge of PRTR law-regulated substances to the atmosphere or water by 80% of the figure for fiscal 2002, by fiscal 2010. Also, because of the amendment of the Air Pollution Control Law in 2004, we set the reduction of volatile organic compounds (VOC) as an annual target, and carry out reduction activities. The way is now clear for completing the changeover from dichloropentafluoropropane (HCFC225) to an alternative substance, which is our target for fiscal 2006. Also, regarding the reduction of the emission of VOC, the emission of toluene increased greatly because of the increase in semiconductor production, and we were unable to meet the target. In fiscal 2007 as well, we are holding up VOC reduction as a target, and are making preparations aimed at recovering and treating VOC in order to reduce emission.

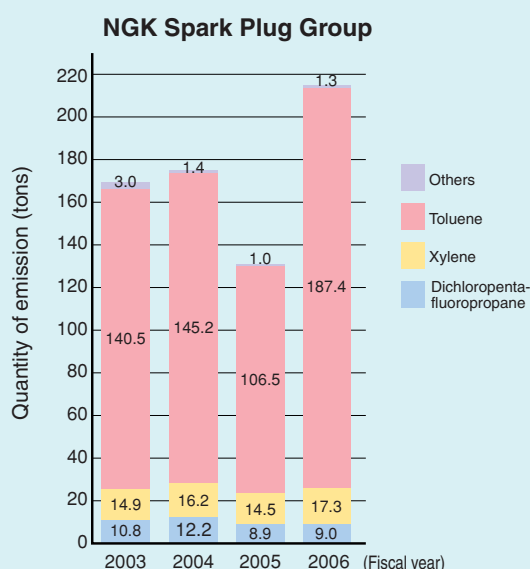
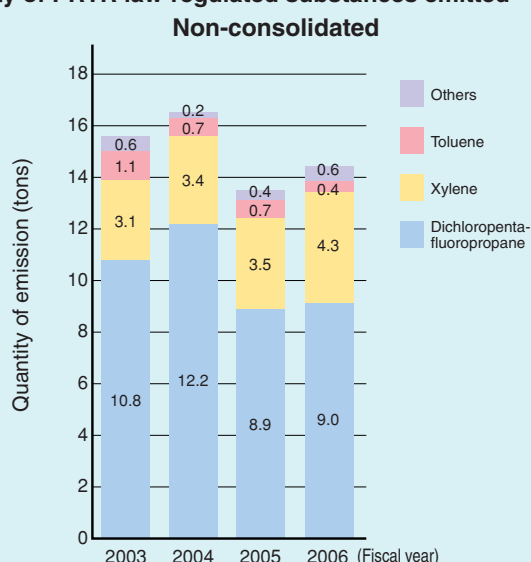
INPUT-OUTPUT of PRTR law-regulated substances



Quantity of PRTR law-regulated substances handled



Quantity of PRTR law-regulated substances emitted



*Substances concerning which notification must be made by each office or factory (if the amount handled exceeds 1 ton) are indicated above.

Environmental considerations in new factory

We constructed a new factory on the premises of the Komaki Factory to cope with the expansion of production in the semiconductor component business. We are making efforts to protect the environment by installing equipment that consumes less energy and also devising ways to use energy more efficiently.



Raising the efficiency of the air conditioning heat source

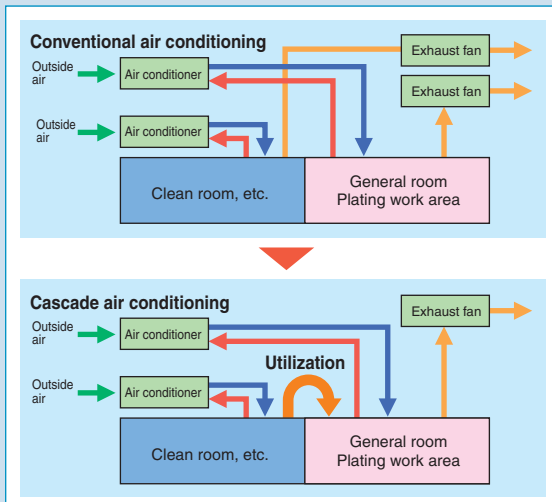
We installed a turbo chiller that is more efficient than the chiller installed at the existing factory. Also, we combined a highly efficient type with a type that contains an injector in order to cope with load fluctuations and realize more efficient operation. In winter, the chiller is stopped, and cold water is made using low temperature outside air by means of the cooling tower, in order to further reduce energy consumption. As a result of these measures it is estimated that the amount of CO₂ generated can be reduced by 2,400 tons in a year.



Turbo chiller

Use of air conditioning air cascade

During the manufacture of semiconductors, which are adversely affected by dust and other foreign matter, we use a clean room to keep dust out, and also perform stringent control of temperature and humidity. The exhaust air from the clean room which is thus kept clean and maintained at a constant temperature is used in the material storage area, plating work area, and so on, in order to reduce the amount of energy used for air conditioning. As a result of these measures it is estimated that the amount of CO₂ generated can be reduced by 203 tons in a year.

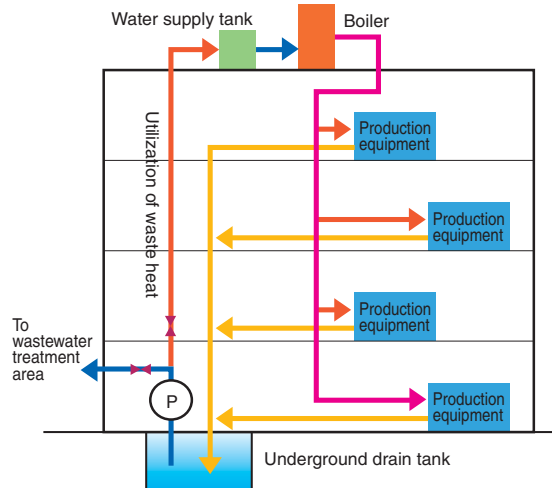


Column

Utilization of waste heat from the steam drain

The production steam drain water, which is at a temperature of approximately 80°C, is returned to the water supply tank, enabling the consumption of fuel by the boiler to be reduced. If any abnormality is found in the quality of the drain water, the flow path is automatically changed over to send the water to the waste water treatment area. It is estimated that this measure enables the amount of CO₂ generated to be reduced by 327 tons each year.

Production steam flow



High efficiency operation of compressed air supply equipment

The compressed air supply equipment consists of a combination of a turbo compressor, which is suitable for a constant load condition, and a screw compressor, which withstands load fluctuations. This ensures efficient operation and also reduces energy consumption. It is estimated that this measure reduces the amount of CO₂ generated by 260 tons a year.



Turbo compressor



Screw compressor

Products

Development of Eco-products

We give consideration to the environment through our products such as spark plugs that contribute to better fuel economy, and cutting tools that do not require oil, and also research and develop new products that can contribute to environmental protection, aiming at the next generation. Utilizing our ceramics technology, which is our strong point, we have successfully developed fuel cells,

hydrogen manufacturing modules, and MEMS heat transmission type hydrogen sensors used in fuel cells. We intend to carry out further development of technology for fuel cells which are expected to help prevent global warming.

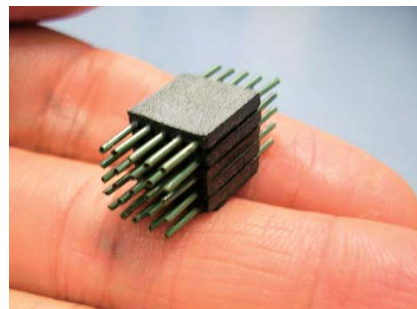
※ MEMS (Micro Electro Mechanical Systems)

Development of fuel cell

Fuel cells are receiving attention because they can efficiently generate electricity and impose little load on the environment. Particularly, solid oxide fuel cells (SOFC) which use ceramic materials are the most efficient type of fuel cells and also have high long-term stability.

We developed an ultra-miniature high output density SOFC jointly with the National Institute of Advanced Industrial Science and Technology, and obtained a high output of at least 2 W per 1 cm³ at a lower operating temperature than that of a conventional SOFC. We were able to integrate small diameter cylindrical type SOFC using manufacturing technology that is based on the assumption of mass production, so we intend to utilize this technology and promote further performance improvement and technical development with a view to extending the applications of

SOFC to small automobile auxiliary batteries, domestic power supplies, and so on.



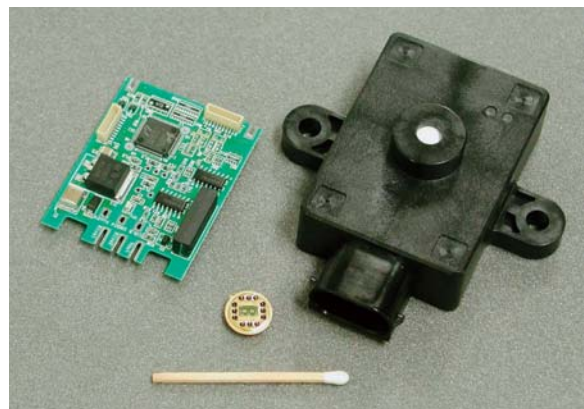
SOFC cube cell

Development of MEMS heat transmission type hydrogen sensors

Hydrogen is used as the fuel for a fuel cell, so it is important to ensure safety in the event of leakage and also to control the concentration for highly efficient electricity generation. A hydrogen sensor functions to detect hydrogen leakage and also to detect the concentration of hydrogen. Previously, there was an issue of durability due to the composition of the gas in the gas tubes of the fuel cell. The MEMS heat transmission type hydrogen sensor which we newly developed overcomes this issue, and can be used for a wide range of applications including gas tubes. We intend to widen the range of applications of this sensor to include various power supplies and fuel cell automobiles.



Hydrogen detector element



Overall hydrogen sensor

Development of a hydrogen manufacturing module

It is expected that technology for manufacturing hydrogen from natural gas can be used to make hydrogen stations for fuel cell automobiles and also hydrogen manufacturing equipment for fuel cells.

We succeeded in jointly developing a catalytic integrated hydrogen manufacturing module with Tokyo Gas Co., Ltd. This module can manufacture high purity hydrogen from hydrocarbons. It is expected that it can be used as hydrogen manufacturing equipment for hydrogen stations, and so on. Previously, miniaturization and cost reduction were issues associated with hydrogen manufacturing equipment for hydrogen stations, however as a result of this technology it is now possible to reduce the size to between

1/5 and 1/6 of conventional equipment and also to aim for a price that is competitive with the price of gasoline. We intend to promote further development aiming at a practical scale.



Hydrogen manufacturing module

Control of Hazardous Substances

Basic philosophy

Regulations on hazardous substances, as represented by the ELV directive and the RoHS directive, are becoming stronger worldwide, and control of chemical substances contained in products is being demanded. Also, in June 2007, the REACH regulation were implemented, and as a result it is necessary to control a wider range of chemical

substances. In order to prevent products from contaminating the environment, we have constructed and are implementing a control setup consisting of three stages, ① meeting the customer's demands, ② handling control within the Group, and ③ procurement from suppliers.

1 Customer

Along with the strengthening of regulations related to chemical substances contained in products, customers (manufacturers) are placing increasingly strong demands on products.

The NGK Spark Plug Group meets various demands by for example submitting certificates stating that our products do not contain substances that load the environment, submitting data concerning chemical substances obtained using a JGPSSI tool or IMDS, filling in the customer's survey sheet, and undergoing an audit

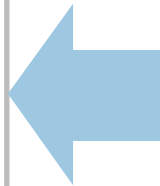
by the customer.

※ IMDS (International Material Data System)

This system is intended to collect information on materials and the chemical substances that they contain, for the approximately 30,000 parts used in an automobile.

※ JGPSSI (Japan Green Procurement Survey Standardization Initiative)

This is a council consisting of volunteer electrical and electronic equipment manufacturers who are engaged in communization of chemical substances contained in parts and materials.



3 Supplier

In order to obtain an appropriate grasp of, and control, information concerning chemical substances contained in materials that we purchase, we request our suppliers to submit a written declaration stating that their materials do not contain any substances that are prohibited by us, analysis data, and also data concerning chemical substances contained in the materials. We have adopted a green supplier system under which we evaluate our suppliers from the aspects

of their environmental protection activities and material control.

In fiscal 2006 we carried out a survey of 95 partner companies, and from the replies that we received and audits that we performed we selected corporations that could be certified as green suppliers. Also, in April 2007, we explained our green supplier system to 300 suppliers (including partner companies), and requested their cooperation.

Green supplier system

Certification criterion

The certification criterion for green suppliers is that both the system criterion and the material criterion be satisfied. As necessary, we request our suppliers to submit material data and also control system check sheets for chemical substances, and carry out control of chemical substances contained in products.

System criterion

- Acquisition of third party certification under environmental management system

Submission of system criterion survey sheet

Material criterion

- Non-inclusion of lead, mercury, hexavalent chrome, cadmium, PBB, and PBDE

Submission of non-inclusion certificate and analysis data

※ PBB: Polybrominated biphenyl
PBDE: Polybrominated diphenyl ether

Support system

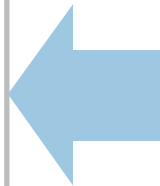
We constructed a system for supporting the environmental activities of our suppliers, and in fiscal 2007 we will provide support and hold seminars as necessary.

On-site practical support

We provide long-term support for the construction of a system for carrying out environmental improvement activities, aiming at acquiring certification for an environmental management system.

Seminars

We carry out guidance for an environmental management system such as ISO14001 or Eco-action 21.



2 NGK Spark Plug Group

In order to appropriately control chemical substances contained in products manufactured by the Group, and also substances used during the manufacturing process, we obtained information concerning customer requests and legal regulations, and established a "hazard rank." We control the quantities of substances coming under this hazard rank, and also control the situation concerning the substitution and reduction of prohibited or restricted substances.

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.

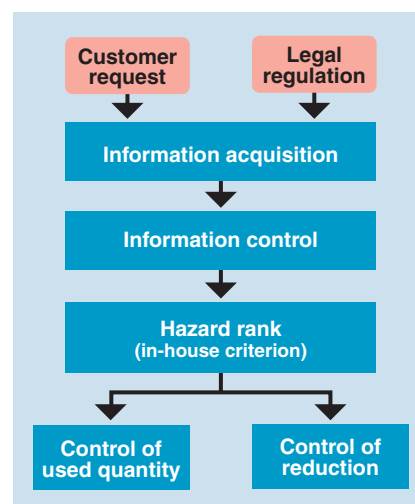
The screenshot shows a web-based interface with a table of legal regulations. The table has columns for 'Regulation Name', 'Effective Date', 'Status', and 'Remarks'. It lists various regulations related to chemical substances, such as 'RoHS Directive' and 'REACH Regulation'.

List of legal regulations

Hazard rank

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

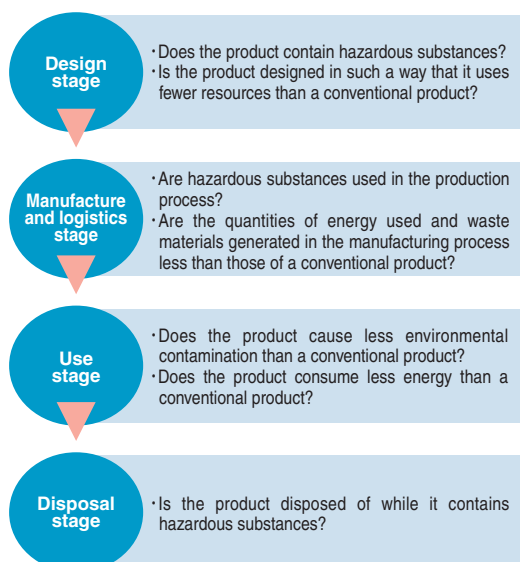
Hazard rank	Handling standard	Substances covered
Prohibited substances	Use is prohibited.	Substances prohibited from use or strongly restricted by regulations
Restricted substances	A substitution program shall be proposed and the substances switched.	Hazard level and toxicity are equivalent to prohibited substances, but an immediate changeover is impossible due to its special characteristics.
Controlled substances	Emission into the environment and transportation upon use are controlled.	Mainly substances subject to PRTR Law



Control system

Product assessment

When developing a new product or changing the specifications, we carry out a product assessment. We check the situation regarding the existence of hazard rank substances, and perform an environmental load check at each of the design, manufacture, logistics, use, and disposal stages, in order to prevent contamination of the environment by the product.

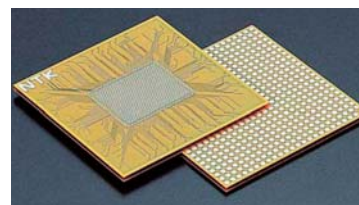


Measures for hazardous substances contained in the product

In order to meet the legal regulations due to the ELV directive and the RoHS directive and also customer demands, we are promoting the use of less hazardous substances in products, such as by substituting hexavalent chrome with trivalent chrome, changing over to lead-free solder, and using halogen-free materials.



Spark plug



IC package

Disclosure

Issuing an environmental report

The NGK Spark Plug Group has been issuing an "ECO report" since 2000, and also a "Site report" since 2003. The contents of the "ECO report", as an "Environmental and Social Report", have been changed since 2006 in order to give more coverage to the social aspect. We will continue to disclose information to enable the environmental and social activities of the Group to be understood.

Environmental and Social Report	<ul style="list-style-type: none"> • 4000 Japanese copies and 1000 English copies published, along with online version. • Reporting the environmental and social activities of NGK Spark Plug and the environmental conservation activities of eleven domestic affiliates.
Site reports	<ul style="list-style-type: none"> • Published by each of the four NGK Spark Plug factories and nine affiliates. • Reporting the environmental conservation activities of each business site.



Accepting visitors at environmental factories

To let people understand our environmental conservation activities, we accept visitors to our environmental factories.

We strengthen collaboration with other corporations and also with the regional society, and participate as a member of the overseas exchange sectional committee of the Environmental Partnership Organizing Club (EPOC) for the purpose of constructing an environmental society and carrying out exchange concerning the environment, and accepting factory visits. In October 2006, we accepted overseas trainees from the Japan International Cooperation Agency (JICA), and introduced them to our environmental activities.

Number of visits

Local residents, schools and local governments	29
Companies and organizations	2



Factory visit (Komaki Factory)

Community

Local cleaning activities

In order to maintain the environment surrounding our offices and factories and also the local environment, we periodically carry out cleaning activities and also participate in cleaning and

beautification activities held by the local community. At the Miyanojo Factory, a total of 250 persons participated in restoration activities after the Kagoshima Prefecture torrential rain disaster.

Head Office and Head Office Factory May 2006 (42 persons) November 2006 (42 persons)	Komaki Factory Other than April and June (total of 234 persons) every month	Miyanojo Factory August 2006 (30 persons) March 2007 (27 persons)	Ise Factory August 2006 (33 persons) March 2007 (14 persons)	Nichiwa Kiki September 2006 (22 persons) March 2007 (17 persons)	Nittoku Seisakusho June 2006 (24 persons) September 2006 (30 persons) December 2006 (25 persons) March 2007 (32 persons)	Nansei Ceramic June 2006 (17 persons) September 2006 (18 persons) December 2006 (16 persons) March 2007 (16 persons)
Iijima Ceramic August 2006 (18 persons) December 2006 (17 persons)	Nakatsugawa Ceramic September 2006 (15 persons) March 2007 (22 persons)	Kani Ceramic June 2006 (17 persons) November 2006 (18 persons)	Kamioka Ceramic May 2006 (27 persons) October 2006 (27 persons)	Ceramic Sensor September 2006 (8 persons) March 2007 (10 persons)	Tono Ceramic Each month (total 148 persons)	

Cleaning activities held by the local residents

Date	Participation area	Event name	Held by	Location
May 22, 2006	Iijima Ceramic	Environmental picnic	Ina Techno-valley Regional Center of the Nagano Prefecture Techno Foundation	Tenryu River
October 15, 2006	Komaki Factory	Cleaning activities in the vicinity of the Komaki Civic Hall	Komaki City	Vicinity of Komaki City Civic Hall
October 15, 2006	Ceramic Sensor	Mt. Komaki beautification activities	Komaki City	Mt. Komaki
February 17, 2007	Kani Ceramic	Kani River mass cleanup	Kani City	Kani River
March 18, 2007	Nittoku Seisakusho	Oguchi Town cleanup activities	Oguchi Town	Aise River



Cleaning activities (Head Office Factory)

Environmental conferences

We hold conferences mainly with representatives of the local residents to enable them to understand our environmental conservation activities and also to obtain their opinions.

Conferences

Fiscal 2006	16 conferences, 101 persons
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Cleaning activities (Komaki Factory)

Natural Environment

Promotion of factory greening

Some NGK Spark Plug Group offices and factories are located in areas surrounded by greenery. We are continuously weeding, pruning, and planting in order to protect this abundant greenery. Also, in fiscal 2006 we greened a total of 1,080 m² of the roof of the No.1 factory and also the roof of the welfare wing at the Komaki Factory.



Biotope (Ise Factory)



Roof greening (Komaki Factory)

Education and Enlightenment

Safety/health and environmental convention

We have organized an environmental convention every year since fiscal 2001, and also a safety/health and environmental convention since fiscal 2004 for the purpose of making all employees of the NGK Spark Plug Group deeply aware of environmental issues. In fiscal 2006, under the slogan "Let's raise energy conservation effectiveness through rationalization of work and equipment!" we gave lectures and held panel exhibitions concerning energy conservation. We also organized sessions in various factories and affiliates featuring improvement examples as the central theme, to which we invited local residents as well.



Lecture



Panel exhibition

Promotion of acquisition of public qualifications

In order to observe the laws and voluntary regulations related to environmental preservation, we train employees to have specialized knowledge and also promote the acquisition of public qualifications, according to the business contents of each factory or affiliate.



Waste water quality check

Numbers of officially qualified employees

	NGK Spark Plug	Affiliates
Pollution control manager	Air	39
	Water	66
	Noise	41
	Vibration	28
Energy manager	43	6
Specialty controlled industrial waste manager	36	16
Environment measurement engineer	2	0
Work environment measurement engineer	7	1

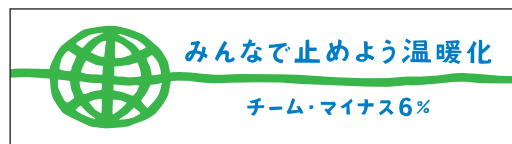
Environment card

We distribute environment cards to all employees of the NGK Spark Plug Group so that they understand and are aware of our environmental policy. The employees write the "organizations objectives and goals" and "my individual efforts" on the environment cards to ensure that they remain aware of environmental conservation.



Participation of Team Minus 6%

NGK Spark Plug Co., Ltd. and our affiliates participate in Team Minus 6%, which is a national campaign for realizing a 6% reduction of greenhouse gases. We have a stronger awareness of preventing global warming and intend to continue our energy conservation activities.



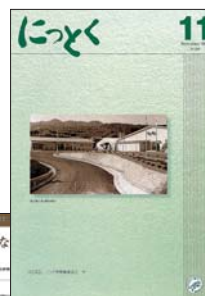
Health, Safety and Environmental News

To educate and enlighten our employees, we periodically issue "Health, Safety and Environmental News", which provides information on items such as ISO14001-based activities, rules and measures concerning health and safety, and various related events. We commenced issuing an English language version in fiscal 2005 to cover our overseas offices and factories.



Employee magazine "Nittoku"

Our monthly employee magazine "Nittoku" includes pages devoted to the environment. To help raise an environmental awareness among our employees, this magazine covers items such as environmentally related events and topics both in Japan and overseas, and the impact of environmentally related regulations on our activities.



PRTR

(kg)

		Cabinet order No.	Name of applicable chemical substance [Substance for which a report must be issued]	Quantity handled	Quantity discharged			Quantity moved			Quantity removed and treated	Quantity taken out
					Air	Public water area	Soil	Public sewer	Burial and incineration	Effective utilization		
NGK Spark Plug	Head Office/ Factory	40	Ethyl benzene	5,495	0						5,494	
		63	Xylene	26,805	1				0		26,803	
		68	Chromium and trivalent chromium compounds	5,047				1	0	787		4,259
		108	Inorganic cyanogens compounds (except complex salts and cyanate)	1,126				12			1,111	
		144	Dichloropentafluoropropane (also called HCFC-225ca)	3,000	3,000							0
		224	1,3,5-trimethylbenzene	2,871	0						2,870	
		227	Toluene	61,841	93				0		61,748	
		231	Nickel	48,270						797		47,473
	299	Benzene	2,064	1						2,063		
	Komaki Factory	19	3-amino-1H-1,2,4-triazol (also called amitrol)	1,442							1,428	14
		24	Linear alkyl benzene sulfonic acid and its salts (limited to salts whose alkyl base has a carbon number between 10 and 14, and mixtures thereof)	1,327								1,327
		25	Antimony and its compounds	3,684							1,130	2,554
		30	4,4'-isopropyliden diphenol and 1-chloro- 2,3-epoxypropane polycondensates (also called bis-phenol A type epoxy resin) (limited to liquid resin)	10,806								10,806
		40	Ethyl benzene	2,709	26						875	1,807
		63	Xylene	21,057	1,858						9,757	9,441
		100	Cobalt and its compounds	3,127					2	395		2,730
		108	Inorganic cyanogens (excluding complex salts and cyanates)	9,132						68	2,870	6,194
		144	Dichloropentafluoropropane (also called HCFC-225)	2,473	2,473							
		207	Water-soluble copper salts (excluding complex salts)	173,625		78				3,683	169,864	
		227	Toluene	12,028	318					24	11,686	
		230	Lead and its compounds	1,170					87	201		882
		231	Nickel	13,588					29	51		13,508
		232	Nickel compounds	17,534		41				5,410	12,082	
		299	Benzene	1,153	5						1,147	
		304	Boron and its compounds	19,380		368			180	2,412		16,419
		309	Poly (oxyethylene) = Nonylphenyl ether	3,751						3,626	126	
		310	Formaldehyde	15,492						15,337	155	
		311	Manganese and its compounds	7,352		66				7,236		50
		346	Molybdenum and its compounds	2,113						107		2,006
	Miyanajo Factory	68	Chromium and trivalent chromium compounds	2,056					0	1,966		90
		108	Inorganic cyanogens compounds (except complex salts and cyanate)	3,037						36	3,000	
		144	Dichloropentafluoropropane (also called HCFC-225ca)	3,499	3,499							
		231	Nickel	118,695								118,695
	Ise Factory	304	Boron and its compounds	4,810						190		4,614
		30	4,4'-isoproyliden diphenol and 1-chloro- 2,3-epoxypropane polycondensates (also called bis-phenol A type epoxy resin) (limited to liquid resin)	3,750							3,665	86
		43	Ethylene glycol	2,224						2,224		
		63	Xylene	2,883	2,404					479		
		207	Water-soluble copper salts (excluding complex salts)	1,009						1,009		
		230	Lead and its compounds	47,296						12,365		34,931
		310	Formaldehyde	2,208						2,208		
Affiliates	Iijima Ceramic	311	Manganese and its compounds	1,663						1,398	0	265
		63	Xylene	9,150	6,685					2,465		
		68	Chrome and trivalent chromium compounds	4,148						1,892		2,256
		108	Inorganic cyanogens	3,906		1				2,967	229	709
		227	Toluene	39,965	39,965							
		230	Lead and its compounds	6,384						527		5,858
		231	Nickel	2,098								2,098
		270	Phthalic acid di-n-butyl	17,384						4,896	12,487	
	346	Molybdenum and its compounds	3,841						840		3,001	
	Nakatsugawa Ceramic (Head Office Factory)	63	Xylene	14,161	5,257						8,715	
64		Silver and its compounds	3,325									3,325
68		Chromium and trivalent chromium compounds	10,335						4,870		5,466	
227		Toluene	90,824	90,425					399			
230		Lead and its compounds	5,827						1,221		4,606	
270		Di-n-butylphthalate	24,818						9,521	11,977	3,321	
272		Phthalic acid bis (2-ethylhexyl)	4,358						3,689	271	399	
346		Molybdenum and its compounds	2,679						574		2,106	
Nakatsugawa Ceramic (Takenami Factory)	68	Chrome and trivalent chromium compounds	1,490					44	262		1,184	
	227	Toluene	68,176	56,555					11,621			
	230	Lead and its compounds	3,987						709		3,278	
	270	Phthalic acid di-n-butyl	9,664					212	1,281		8,171	
	272	Phthalic acid bis (2-ethyl hexyl)	3,649						593		3,056	
	346	Molybdenum and its compounds	1,060					34	170		856	
Kani Ceramic	63	Xylene	1,046	1,046								
	270	Phthalic acid di-n-butyl	2,253						1,104	1,150		
Nansei Ceramic	230	Lead and its compounds	1,052							1,052		
	Nittoku Seisakusho (Oguchi Factory)	231	Nickel	8,721								8,721
Ceramic Sensor	253	Hydrazine	8,961						7,795	1,166		
	283	Hydrofluoric acid and its water-soluble salt	2,466		217			0	0	2,249		
	304	Boron and its compounds	2,323		511							1,812
Total				1,030,644	213,621	1,282	0	13	588	142,364	357,612	315,167

Waste

	Office or factory	Volume of emissions (tons)	Volume effectively used (tons)	Volume of landfill and incineration (tons)	Recovery rate (%)
NGK Spark Plug	Head Office/Factory	880.7	875.5	5.2	99.4
	Komaki Factory	19,767.7	19,693.6	74.2	99.6
	Miyanajo Factory	3,425.8	3,387.6	38.2	98.9
	Ise Factory	2,965.9	2,954.8	11.1	99.6
	Iijima Ceramic	1,052.0	1,039.4	12.6	98.8
Affiliates	Nakatsugawa Ceramic	434.0	426.5	7.6	98.3
	Kani Ceramic	64.4	63.8	0.6	99.1
	Nansei Ceramic	17.3	17.2	0.1	99.6
	Kamioka Ceramic	58.4	57.9	0.5	99.1
	Nittoku Seisakusho	239.6	237.6	2.0	99.2
	Nichiwa Kiki	6.7	6.6	0.1	98.5
	Tono Ceramic	81.3	80.2	1.1	98.7
	Ceramic Sensor	843.5	840.0	3.5	99.6
	Total	29,837.4	29,680.8	156.7	99.5

For inquiries

	Office or factory	Contacts for inquiries (Dept. name/tel)
NGK Spark Plug	Head Office/Factory	Environment and Safety Management Dept. 052-872-5980
	Komaki Factory	Environment and Safety Management Dept. 0568-76-1544
	Miyanajo Factory	Environment and Safety Management Dept. 0996-53-2211
	Ise Factory	Environment and Safety Management Dept. 0596-39-1534
	Iijima Ceramic	General Administration Dept. 0265-86-5211
Affiliates	Nakatsugawa Ceramic	General Administration Dept. 0573-68-5484
	Kani Ceramic	General Administration Dept. 0574-63-2511
	Nansei Ceramic	General Administration Dept. 0599-65-3366
	Kamioka Ceramic	General Administration Dept. 0578-82-1112
	Nittoku Seisakusho	General Administration Dept. 052-811-3921
	Nichiwa Kiki	General Administration Dept. 052-382-0511
	Tono Ceramic	General Administration Dept. 0574-63-1031
	Ceramic Sensor	General Administration Dept. 0568-76-5400

Air, water, noise

	Item	Type		Unit	Regulation value	Voluntary standard value	Average	MAX	
Head Office/ Factory	Atmosphere	Soot and dust	Boiler (No.12)	mg/Nm³	50	40	<2	<2	
			Firing furnace (PR-2)	mg/Nm³	150	120	6.0	6.0	
		NOx	Boiler (No.12)	ppm	150	120	48	48	
			Firing furnace (PR-2)	ppm	180	144	47	63	
	Drain (sewer)	pH			5.0~9.0	5.4~8.6	6.8	7.2	
		SS			mg/l	600	480	14	30
		BOD			mg/l	600	480	16	69
		n-hexane extract			mg/l	30	24	1.5	5.6
		Cyanogen			mg/l	1	0.8	0.23	0.4
		Total chromium			mg/l	2	1.6	0.05	0.13
		Hexavalent chromium			mg/l	0.5	0.4	<0.04	<0.04
		Zinc			mg/l	2	1.6	0.58	1.10
		Lead			mg/l	0.1	0.1	<0.02	<0.02
		Nitrogen			mg/l	120	96	25.2	37
		Phosphor			mg/l	16	12.8	0.4	1.6
		Fluorine			mg/l	8	6.4	0.15	0.4
		Boron			mg/l	10	8	<1	<1
		Noise	Morning	R spot	dB	70	68	61.1	61.1
			T spot	dB	65	63	*1 65.8	*1 65.8	
	Daytime		R spot	dB	70	68	60.6	60.6	
			T spot	dB	65	63	*1 66.1	*1 66.1	
	Evening		R spot	dB	70	68	67.3	67.3	
			T spot	dB	65	63	*1 66.1	*1 66.1	
	Night		R spot	dB	65	64	57.0	57.0	
			T spot	dB	55	54	*1 64.9	*1 64.9	
	Komaki Factory	Atmosphere	Soot and dust	Boiler (No.1-5)	mg/Nm³	200	160	<2	<2
			Firing furnace (No.9-10)	mg/Nm³	200	160	7	7	
NOx			Boiler (No.1-5)	ppm	250	200	20.5	24	
			Firing furnace (No.9-10)	ppm	200	160	40.5	50	
Drain (public water area)		pH			6.0~8.0	6.2~7.8	7.4	8	
		SS			mg/l	30	24	2.0	4.0
		BOD			mg/l	25	20	5.7	23
		COD			mg/l	—	—	5.3	13
		n-hexane extract			mg/l	5	4	0.55	0.9
		Cyanogen			mg/l	0.5	0.4	<0.1	<0.1
		Total chromium			mg/l	1	0.8	<0.04	<0.04
		Copper			mg/l	1	0.8	0.04	0.2
		Zinc			mg/l	2	2	0.23	0.57
		Lead			mg/l	0.1	0.08	<0.02	<0.02
		Nitrogen			mg/l	120	60	6.96	11
		Phosphorus			mg/l	16	8	0.42	0.96
		Nickel			mg/l	—	—	0.20	0.4
		Manganese			mg/l	10	8	0.12	0.4
		Fluorine			mg/l	8	6.4	0.52	0.7
		Boron			mg/l	10	8	1.17	3
		Noise	Morning	Fifth spot	dB	65	63	54.1	54.1
Daytime			Fifth spot	dB	70	68	52.4	52.4	
Evening			Fifth spot	dB	65	63	52.3	52.3	
Night			Fifth spot	dB	60	58	50.6	50.6	
Miyanojo Factory		Atmosphere	Soot and dust	Absorption heater/chiller Generator (No.2)	mg/Nm³	300	240	7	7
				mg/Nm³	100	80	14	14	
	NOx		Absorption heater/chiller Generator (No.2)	ppm	180	144	73	73	
			Generator (No.2)	ppm	950	900	670	670	
	SOx	Generator (No.2)	Nm³/h	3.9	3.0	1.4	1.4		
	Drain (public water area)	pH			6.0~8.0	6.5~7.8	7.6	7.9	
		SS			mg/l	35	28	6.9	17
		BOD			mg/l	20	16	7.3	14
		n-hexane extract			mg/l	5	4	3.4	3.4
		Cyanogen			mg/l	1	0.8	<0.05	<0.05
		Hexavalent chromium			mg/l	0.5	0.4	<0.05	<0.05
		Copper			mg/l	3	2.4	<0.05	<0.05
		Zinc			mg/l	2	1.4	0.08	0.08
		Lead			mg/l	0.1	0.1	<0.01	<0.01
		Fluorine			mg/l	8	6.4	<0.2	<0.2
		Boron			mg/l	10	8	1	1
		Coli bacteria			counts/cm²	3000	2400	95	95
		Noise	Morning		dB	60	55	45.4	48.7
			Daytime		dB	65	60	50.5	51.8
	Evening			dB	60	55	47.4	49.2	
	Night			dB	50	50	44.1	45.4	
	Ise Factory	Atmosphere	Soot and dust	Firing furnace	mg/Nm³	250	100	5.5	6.0
			NOx	Firing furnace	ppm	180	140	42	48
			pH			5.8~8.6	6.0~8.4	7.6	8.1
		Drain (public water area)	SS			mg/l	30	24	1.08
BOD					mg/l	10	8	1.17	2
COD					mg/l	15	12	1.83	6
n-hexane extract					mg/l	5	2.5	<1	<1
Cyanogen					mg/l	1	0.5	<0.1	<0.1
Total chromium					mg/l	2	1	<0.04	<0.04
Hexavalent chromium					mg/l	0.5	0.3	<0.04	<0.04
Copper					mg/l	1	0.5	<0.02	<0.02
Zinc					mg/l	2	1.0	<0.005	<0.005
Lead					mg/l	0.1	0.05	0.01	0.01
Nitrogen					mg/l	120	60	3.35	19
Phosphorus					mg/l	16	8	0.27	0.85
Manganese					mg/l	—	—	0.05	0.05
Fluorine					mg/l	8	4	<0.1	<0.1
Boron					mg/l	10	5	0.07	0.24
Coli bacteria					counts/cm²	3000	1500	11	11
Noise		Morning		dB	55	55	50.6	50.6	
		Daytime		dB	60	58	49.4	49.4	
		Evening		dB	55	55	50.2	50.2	
		Night		dB	50	50	49.7	49.7	
Iijima Ceramic		Atmosphere	Soot and dust	Firing furnace	mg/Nm³	250	250	<5	<5
				Absorption heater/chiller	mg/Nm³	100	100	<5	<5
	NOx		Firing furnace	ppm	180	180	<10	<10	
			Absorption heater/chiller	ppm	150	150	34	35	
	Drain (public water area)	pH			5.8~8.6	6.0~8.0	7.2	7.4	
		SS			mg/l	50	10	2.6	7
		BOD			mg/l	30	25	1.8	2.9
		COD			mg/l	30	30	4.0	6.2
		n-hexane			mg/l	5	5	<1	<1
		Phenols			mg/l	5	5	<0.02	<0.02
		Cyanogen			mg/l	0.5	0.2	<0.01	<0.01
		Copper			mg/l	2	2	0.04	0.05
		Zinc			mg/l	3	3	<0.05	<0.05
		Lead			mg/l	0.1	0.1	<0.005	<0.005
		Ammonia			mg/l	500	500	10	10
		Fluorine			mg/l	15	15	0.18	0.2
		Boron			mg/l	50	50	0.5	0.5
		Coli bacteria			counts/cm²	3000	3000	79.2	120
		Noise	Morning	First spot	dB	65	65	44.8	44.8
	Daytime		First spot	dB	65	65	45.8	45.8	
	Evening		First spot	dB	65	65	49.5	49.5	
	Night		First spot	dB	55	55	48.8	48.8	

	Item	Type		Unit	Regulation value	Voluntary standard value	Average	MAX		
Nakatsugawa Ceramic (Head Office Factory)	Atmosphere	Soot and dust	Firing furnace(NN-1)	mg/Nm³	50	20	6	6		
		SOx	Firing furnace(NN-1)	ppm	—	—	0	0		
	Drain (sewer)	pH		—	5.8~8.6	6.2~8.6	7.5	7.7		
		SS		mg/l	50	35	2.3	5.0		
		BOD		mg/l	15	13	2.2	5.2		
		COD		mg/l	40	30	7.3	10.0		
		n-hexane extract		mg/l	5	4	<0.5	<0.5		
		Nitrogen		mg/l	10	10	2.8	4.7		
		Phosphorus		mg/l	3	2.5	0.06	0.15		
	Noise	Coli bacteria		counts/cm²	3000	1000	19.3	92.0		
		Morning		dB	60	58	47.5	48		
		Daytime		dB	65	63	52	53		
		Evening		dB	60	58	48.5	51		
		Night		dB	50	50	47	48		
Nakatsugawa Ceramic (Takenami Factory)		Drain (public water area)	pH		—	5.8~8.6	5.8~8.6	6.4	7.1	
			SS		mg/l	200	100	3.9	12	
	BOD			mg/l	160	130	5.6	14		
	COD			mg/l	160	80	13.3	17		
	n-hexane extract			mg/l	5	4	<0.5	<0.5		
	Nitrogen			mg/l	120	120	74	89		
	Phosphorus			mg/l	16	16	7.7	9.5		
	Noise	Coli bacteria		counts/cm²	3000	2000	2.5	8		
		Morning	Fourth spot	dB	50	50	49.5	#2 54		
		Daytime	Fourth spot	dB	55	55	50.5	55		
		Evening	Fourth spot	dB	50	50	#2 50.5	#2 54		
		Night	Fourth spot	dB	45	45	#2 49	#2 53		
		Kani Ceramic	Atmosphere	Soot and dust		mg/Nm³	100	90	9	9
				NOx		ppm	150	135	130	130
Drain (sewer)	pH			—	5.8~8.6	5.9~8.5	7.1	7.1		
	SS			mg/l	200	180	1.6	1.6		
	BOD			mg/l	160	144	17	17		
	COD			mg/l	160	30	7.6	7.6		
	n-hexane extract			mg/l	5	4.5	1	1		
	Morning		First spot	dB	50	50	#2 52.6	#2 53.2		
	Daytime		First spot	dB	60	60	52.4	53.7		
Noise	Evening		First spot	dB	50	50	#2 51.4	#2 52.0		
	Night		First spot	dB	45	45	#2 51.7	#2 52.0		
	Nansei Ceramic		Drain (public water area)	pH		—	5.8~8.6	7.1	7.1	
SS					mg/l	—	90	14	20	
BOD					mg/l	20	20	12	14	
COD				mg/l	—	40	9.67	12		
n-hexane extract				mg/l	—	5	<1	<1		
Lead				mg/l	—	0.1	<0.01	<0.01		
Nitrogen				mg/l	—	100	9.63	12		
Noise		Phosphorus		mg/l	—	16	0.87	0.99		
		Coli bacteria		counts/cm²	—	1000	17.3	29		
		Morning	North	dB	55	55	48.4	48.4		
		Daytime	North	dB	60	60	58.4	58.4		
		Evening	North	dB	55	55	47.1	47.1		
		Night	North	dB	50	50	46.1	46.1		
		Kamioka Ceramic	Drain (public water area)	pH		—	5.8~8.6	6.2~8.2	7.7	7.9
SS				mg/l	200	50	5.15	9.1		
BOD				mg/l	160	40	13.8	27		
COD				mg/l	160	40	8.85	17		
n-hexane extract				mg/l	5	2.5	<0.5	<0.5		
Coli bacteria				counts/cm²	3000	300	<30.0	30.0		
Noise	Morning			Fourth spot	dB	60	60	47	47	
	Daytime		Fourth spot	dB	65	65	47	47		
	Evening		Fourth spot	dB	60	60	47	47		
	Night		Fourth spot	dB	50	50	47	47		
	Nittoku Seisakusho (Head Office Factory)		Drain (sewer)	pH		—	5.0~	5.8~9.0	7.3	7.3
				SS		mg/l	600	300	97	97
				BOD		mg/l	600	300	220	220
Noise			n-hexane extract		mg/l	50	25	3.7	3.7	
		Morning		dB	60	60	#1 64	#1 64		
		Daytime		dB	65	65	64	64		
		Evening		dB	60	60	#1 61	#1 61		
Nittoku Seisakusho (Oguchi Factory)	Drain (public water area)	pH		—	5.8~8.6	6.0~8.0	7.2	7.2		
		SS		mg/l	30	30	3	3		
		BOD		mg/l	25	20	5.9	5.9		
		n-hexane extract		mg/l	5	4	<1	<1		
		Nitrogen		mg/l	120	60	0.6	0.6		
		Phosphorus		mg/l	16	8	0.04	0.04		
		Morning		dB	55	55	54	54		
	Noise	Daytime		dB	60	60	57	57		
		Evening		dB	55	55	52	52		
		Night		dB	50	50	45	45		
Nichiwa Kiki	Drain (sewer)	pH		—	5.0~	6.0~8.0	7.3	7.5		
		n-hexane extract		mg/l	50	40	<1	<1		
		Daytime		dB	65	63	61.9	61.9		
Tono Ceramic	Atmosphere	Soot and dust		mg/Nm³	—	200	22	22		
		NOx		ppm	—	400	38	38		
	Drain (public water area)	pH		—	5.8~8.6	7.2	7.2			
		SS		mg/l	—	200	8.5	8.5		
		BOD		mg/l	—	160	62	62		
		n-hexane extract		mg/l	—	5	<0.5	<0.5		
	Noise	Morning		dB	50	50	49	49		
		Daytime		dB	60	60	57	58		
Evening			dB	50	50	49	49			
Night			dB	45	45	44	44			
Ceramic Sensor	Atmosphere	Soot and dust		mg/Nm³	200	100	0.1	0.1		
		NOx		ppm	—	150	28	28		
	Drain (public water area)	pH		—	6.0~8.0	6.0~8.0	7.2	7.4		
		SS		mg/l	18	14.4	9.5	16		
		BOD		mg/l	18	14.4	5.5	9		
		COD		mg/l	18	14.4	12.3	#2 21		
		n-hexane extract		mg/l	2	1.6	1	1		
		Nitrogen		mg/l	30	24	11.9	16		
		Phosphorus		mg/l	4	3.2	0.3	0.65		
		Fluorine		mg/l	8	8	2.0	3.5		
		Boron		mg/l	10	10	2.2	3.1		
		Noise	Daytime		dB	70	70	59.8	62.2	
	Night			dB	60	60	57.8	55		

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.

Traffic Safety

Traffic safety training

As a corporation that is involved with the automobile industry, we carry out traffic safety activities. In addition to raising the awareness of safe operation among our employees, we also urge persons passing the vicinity of our office or factory to observe traffic safety.



Traffic safety risk map

At the Komaki Factory where there are many employees who commute by car, we collect information concerning traffic accidents in the vicinity of the factory, and urge the employees to be more careful at dangerous places.



Award for contribution to traffic safety

Vice president Hashimoto received an award for carrying out traffic safety activities over many years, from Aichi Prefecture and also the Aichi Prefecture Traffic Safety Promotion Council.



Contribution to Local Communities

Donation of AED training kits

An AED (Automated External Defibrillator) is a medical appliance that is used to apply an electric shock to the heart when cardiac failure has occurred, in order to restore the normal rhythm. AEDs are being installed in an increasing number of places such as stations and public facilities, so we donated six training kits to Nagoya City in which our Head Office is located.

We also held a course for our employees to enable them to use an AED in the event that the necessity arises.



Donation of AED



AED training session

Coexistence with other cultures

It is essential that foreigners living in Japan know the laws and life-style of Japan from the viewpoint of living in safety and peace of mind. Accordingly, Komaki City where the Komaki Factory is located, Komaki Police Station, and corporations in the city where foreign workers are employed established the Komaki International Problem Liaison Council, and held a "Safety and Peace of Mind Lecture" for the first time.

About 120 Brazilians of Japanese extraction working at the Komaki Factory attended this lecture, and learnt traffic rules, the method of putting out garbage, and the pension and taxation systems.



Commemorating the 70th Year of Our Foundation

We were able to reach the 70th year since our foundation thanks to the understanding and support of the regional society. We express our appreciation in a variety of ways.

Donation of vehicles

As a token of our appreciation for reaching our 70th year since our foundation we donated vehicles to the communities in which our four factories are located.

Nagoya City	: Earthquake simulation vehicle1
Komaki City	: Earthquake simulation vehicle1
Satsuma Town	: Public vehicle (fire prevention vehicle)	3
Ise City	: Public vehicle (hybrid car)2



Earthquake simulation vehicle



Inside of earthquake simulation vehicle



Donation ceremony

Establishment of the “Nittoku Asia Foreign Student Scholarship” public trust

We have manufacturing centers in 12 countries and sales centers in 24 countries throughout the world. Particularly, in Asia, we are developing businesses in Malaysia, Thailand, Indonesia, Taiwan, South Korea, Singapore, China, and India. In order to express our appreciation for the support and cooperation we received when we developed businesses in various countries in Asia up to

now, we established a scholarship fund for students from various countries in Asia enrolled at universities or graduate schools in Aichi Prefecture on the occasion of our 70th year in business. We hope that we can foster promising human resources who will maintain friendly relations between Japan and various Asian countries.

Completion of the office and welfare wings at the Miyanojo Factory

We held a ceremony to commemorate the completion of the office wing which was opened in February 2007 and the completion of the welfare wing which was opened in July, a ceremony to commemorate the 70th year since the founding of the company, and a ceremony to commemorate the 60th anniversary of the formation of a

labor union, on the same day. A total of 600 persons, including the mayor of Satsuma Town and related persons, employees, and their families participated in the event, which also included a tour of inspection of the factory and rice-cake making.



Completion ceremony



Tour of inspection of the factory by the families of employees



Rice-cake making

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 health and safety 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.

Personnel system

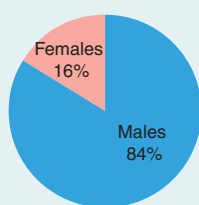
Equal Opportunity

We are working to eliminate discrimination according to race, sex, beliefs, handicap, and so on, during the recruiting process and in the workplace in order to ensure equality of opportunities. As of the end of March 2007, females account for 16.2% of permanent employees, but account for 27.5% of new employees in fiscal 2006, so it is expected that the percentage will gradually rise.

We have increased the choices for motivated employees by establishing a job switching system, and also by establishing a system that enables women to work midnight shifts. At present our employment rate of handicapped persons is less than 1.8% which is designated by law, so we will endeavor to promote employment of handicapped persons in the future.

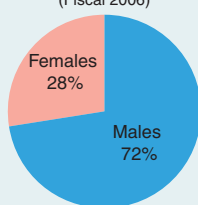
Male-female ratio

Permanent employees

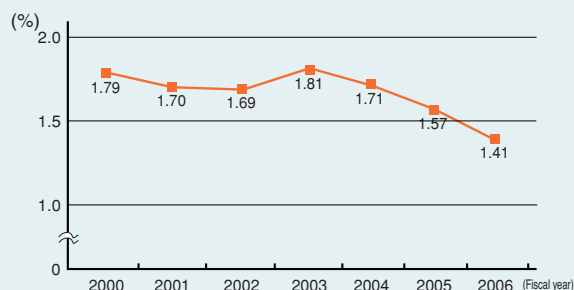


(As of end of March 2007)

New employees (Fiscal 2006)



Percentage of employees who are handicapped



Supporting Ability Development

We provide level-specific training, function-specific training, and continuing education to employees, according to their work content and business environment, so that they can acquire knowledge and skills and pass them on to future generations.



New section chief training



New staff training

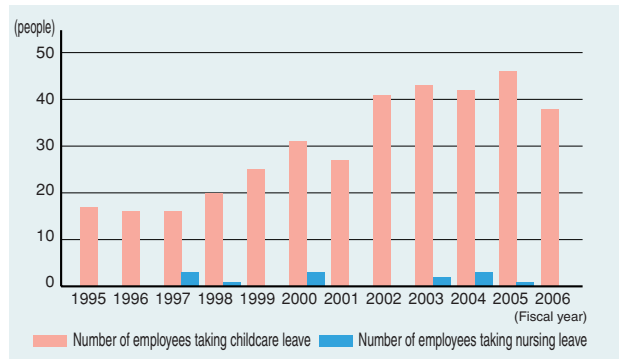
	Level-specific training	Function-specific training				Continuing education
		Skills and technologies	Sales	Globalization	Specialized training	
Department manager	Management simulation training					
Assistant manager						
Section manager	Evaluation training					
Deputy section manager	New staff training					
Section chief	New action plan training					
General staff	10to15 years					
	3to7 years					
	Less than 3 years					
	New employee					
		Product training for sales skill				
		Technical training				
		Supervisor training				
		Leader training				
		General training				
		Training for acquiring special qualifications				
		Safety training				
		International project personnel cultivation scheme				
		In-house language school				
		In-house OA school (e-learning)				
		TQM education				
		Intellectual property education				
		Correspondence learning scheme				
		Happy Life Seminar				
		New employee introductory training				

Supporting Simultaneous Pursuits

To help employees who are raising children and caring for family members, the NGK Spark Plug is striving to establish a suitable system and a work environment that allows the simultaneous pursuit of childcare/nursing care and work.

Schemes to support childcare

Childcare leave scheme	To the age of 1 year	It is possible to take leave in order to raise children.
Childcare leave extension scheme	To the age of 2 years	It is possible to extend the leave period when no nursery school is available, for example.
Special leave scheme	Until entrance to elementary school	It is possible to acquire nursing leave for up to 5 days a year to nurse a sick or injured child.
Short-time work scheme	Until the end of the month after entering elementary school	It is possible to shorten the working hours per day by 2 hours.



Management of Working Hours

To ensure proper management of working hours and prevent excessive work and unpaid overtime, we have adopted a working hour management system using employee IC cards.

We also develop enlightenment activities by distributing our "Working Hour Management Handbook" to all employees, and in cooperation with the labor union ensure that Wednesday is observed as a no-overtime day.



"Today is a no-overtime day"



Labor and Management Relations

An important mission of labor and management is to contribute to society at large by offering good products and good service (doing good work). To ensure that both labor and management discharge their responsibilities in an atmosphere of mutual trust, and create a better workplace, we periodically hold labor and management gatherings and also labor and management conferences, and deal with a variety of issues. In January 2006, the labor union reached the 60th year of its formation.



Central labor and management gathering



60th anniversary of founding

After Mandatory Retirement

Re-employment system for ex-employees

In 2001, the NGK Spark Plug introduced a system of re-employing retirees of retirement age in order to effectively utilize the knowledge and skills they cultivated throughout their careers. Along with the enforcement of the revised Law concerning the Stabilization of Employment of Elderly Persons in April 2006, we will extend the period of re-employment in phases to age 65.

Happy Life Seminar

Since 1994 we have held Happy Life Seminars (overnight stay with spouses) for employees who have reached the age of 50 or more. This seminar gives them opportunities to think about their life aims in the second phase of their life as well as their health and finances, through lectures and group discussions.



Happy Life Seminar

	(people)	
	Fiscal 2006	Total
Re-employed ex-employees	27	184
Participants in the Happy Life Seminar ※	85	1032

※ Excluding spouses

7 Employees Occupational safety and health

Philosophy and Basic Policy

Philosophy

Based on respect for human dignity, we position occupational safety and health as the starting point of our corporate activities.

Occupational safety and health policy

- We will comply with the law and our voluntary standards related to occupational safety and health.
- We will reduce risks and eliminate occupational accidents through the continual improvement of our occupational safety and health system and performance.
- We will acquaint all employees with this policy, encourage self-awareness through education and enlightenment, and broadly develop occupational safety and health activities across the organization.

Slogan

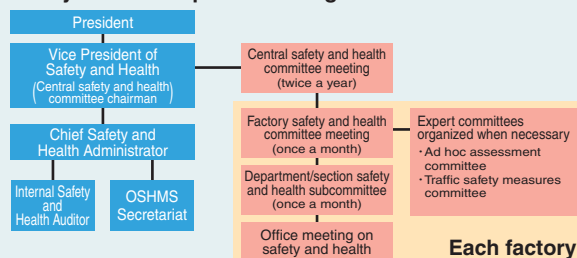
Reduce risks and build a physically and mentally healthy work environment!

(Adopted in April 2005)

Vice President of Safety and Health
Genjiro Hashimoto,
Executive Vice President



Safety and health promotion organization

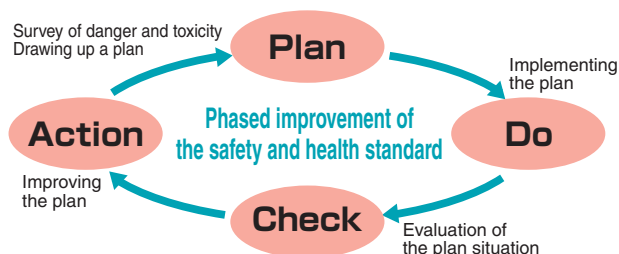


Occupational Safety and Health Management System

To eliminate occupational hazards and create a comfortable working environment, we are seeking to establish an occupational safety and health management system (OSHMS). As a result of having this system subjected to an examination in December 2006, it was confirmed that the system conformed to the OSHMS standard of JISHA (Japan Industrial Safety and Health Association) based on the Occupational Health and Safety Management System of the Health, Labor and Welfare Ministry, and we acquired certification of eligibility.

Situation concerning acquisition of certification of eligibility

Factory name	Date of approval
Head Office and Head Office Factory	December 11, 2006
Komaki Factory	December 11, 2006
Miyanojo Factory	December 25, 2006
Ise Factory	December 11, 2006



Examination



Approval certificate conferment ceremony



Approval plate

Target and Results

In fiscal 2006, we established the targets shown in the table below and set out to achieve them, however many items could not be achieved. For the results of each target, please see the next page.

Fiscal 2006 target results

1. Elimination of occupational accidents	1 Elimination of crushing accidents	×
	2 Elimination of accidents caused by scattering of chemicals	×
	3 Promotion of safety and health training	○
	4 Promotion of safety and health enlightenment activities	○
2. Improved health control awareness	1 Reduction of number of employees with abnormal findings in general health checkups	×
	2 Fecal blood test and stomach examination rate of 100%	×
	3 Promotion of separation of smoking areas from rest areas	○
	4 Mental health care examination rate of 100%	○
3. Improvements in the working environment	1 Reduction of the number of workplaces in the third management category	×
	2 Reduction of the number of workplaces in the second management category	×

When setting the targets in fiscal 2007, we checked the contents of accidents that occurred in fiscal 2006, and selected striking accidents and also accidents caused by scattering of metal, and so on, as the target.

Fiscal 2007 target

Elimination of occupational accidents	Elimination of crushing and striking accidents Elimination of accidents caused by scattering
Improvement of working environment	Reduction of workplaces in the third and second management categories
Health promotion	Improved health management awareness Enhanced mental health care
Enhanced education and enlightenment	Promotion of safety and health education Reinforcing safety and health patrol Promoting voluntary activities at the workplace

1. Elimination of occupational accidents

1 Elimination of crushing accidents

The total number of accidents including minor accidents was 19, of which 6 were accidents involving crushed fingers.

2 Elimination of accidents caused by scattering of chemicals

There were 2 accidents due to scattering of chemicals. In both cases, the accident occurred due to the tube coming away while the chemical was being handled.

3 Promotion of safety and health training

We educate employees in line with their experience and position such as new employee, third-year employee, foreman, assistant manager or executive, and also give education on organic solvents, dust and forklifts depending on their job descriptions.

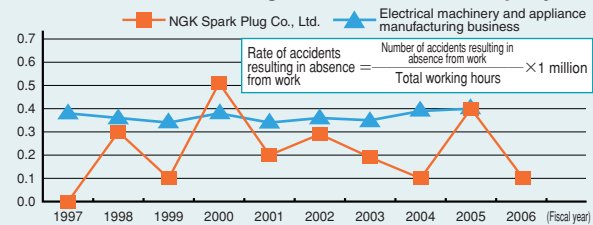
4 Promotion of safety and health enlightenment activities

We give awards to workplaces that have had no accidents for a certain period of time※. (※18 to 36 months)
Also, we continue to periodically carry out periodic safety and health patrols.

Number of accidents resulting in absence from work

(Number of accidents)										
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
0	3	1	5	2	3	2	1	4	1	

Rate of accidents resulting in absence from work per year



Safety and health education



Inspection by an occupational health physician

2. Improved health control awareness

1 Reduction of number of employees with abnormal findings in general health checks

To ensure that all employees maintain physical health, we aim to reduce the number of employees with abnormal findings in general health checks. In fiscal 2006, the number of persons who were given a blood test increased, and also the average age of the employees increased, resulting in an increased ratio of persons with abnormal findings.

2 Fecal blood test and stomach examination rate of 100%

Employees over a certain age have stomach examinations and fecal blood tests. In fiscal 2006, 92.2% of employees had stomach examinations, and 90.7% had fecal blood tests. These figures indicate a significant increase over last fiscal year.

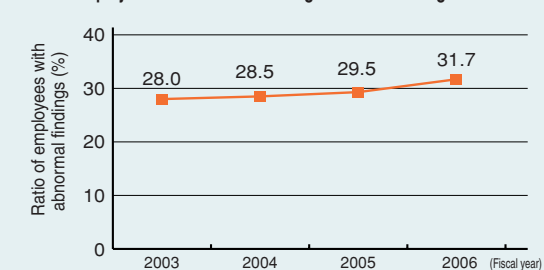
3 Promotion of separation of smoking areas from rest areas

We have been constructing smoking rooms and outdoor smoking areas in order to promote separation of smoking areas, and by the end of fiscal 2006 we had completed separation of smoking areas from most rest areas. We will continue this work in order to separate smoking areas from the remaining rest areas.

4 Mental health care examination rate of 100%

To prevent health hazards caused by overwork, we have medical advisors interview employees who work many overtime hours with interviews and give them advice. In fiscal 2006 as well, all such employees received advice and confirmed that they had no problem with their physical or mental health.

Ratio of employees with abnormal findings as a result of a general health check



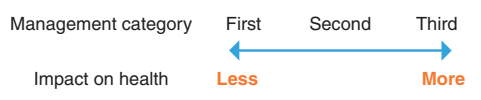
Completely non-smoking cafeteria

3. Improvements in the working environment

1 Reduction of the number of workplaces in the third management category

2 Reduction of the number of workplaces in the second management category

Workplaces that handle organic solvents and specified chemical substances or generate significant noise implement work environment measurement based on the Occupational Safety and Health Law. Concerning the viewpoint of measurement of noise in the work environment, there are workplaces judged to be in the third and second management categories, and we have been trying to make improvements, however we were unable to realize any noticeable improvement.



Specific chemical substance work environment measurement

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.

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.

Siam NGK Spark Plug Co., Ltd.

In December 6, 2006, we held the opening ceremony for the new factory. The ceremony started with a reading of the sutras by 9 Buddhist priests in accordance with Thai custom. Prayers were offered for further prosperity during the ceremony which was attended by all of the employees and persons concerned with the construction work.



NGK Spark Plugs India Pvt.Ltd.

Following on from the opening of the new factory in Thailand, we held a ground-breaking ceremony for a new factory in India on December 8, 2006. At the ceremony, which followed the Hindu



custom, prayers were offered to the earth as the mother of the beginning of all things, for the safety of the work and the prosperity of the new company.

At the center of the construction site, a hole of 1 m diameter was dug, and good luck talismans were offered in time with the priest's reading of the sutras.

NTK Technical Ceramics Polska Sp.z o.o.

March 8 has been designated by the United Nations as International Women's Day. At NTK Technical Ceramics Polska Sp.z o.o., flowers were presented to female employees as a token of thanks for their ongoing cooperation, in accordance with local custom.



Ceramica e Velas de Ignicao NGK do Brazil Ltda.

Previously, production in Brazil was carried out in the Mogi Factory and the Cocuera Factory, but in January 2007 all production was moved to the Cocuera Factory.

The site of the old Mogi Factory was seen by Mogi City, which engages in large-scale commercial activities, as having potential so we donated the site to Mogi City.



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.

Activities for CSR

We believe that one of the most important management issues for fulfilling our corporate social responsibility is to establish and maintain a fair and efficient management system while ensuring healthy and transparent management.

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"
Feb. 2005	Published "Guidelines on the Handling of Personal Information"
Jan. 2007	Published "Secrecy Management Guidelines"

As our basis stance for having all directors and employees understand and correctly practice the components of our corporate philosophy, namely "Commitment", "Management Policy" and "Action Guidelines", we have established a "Corporate Code of Conduct" which enhances awareness of legal and ethical compliance.

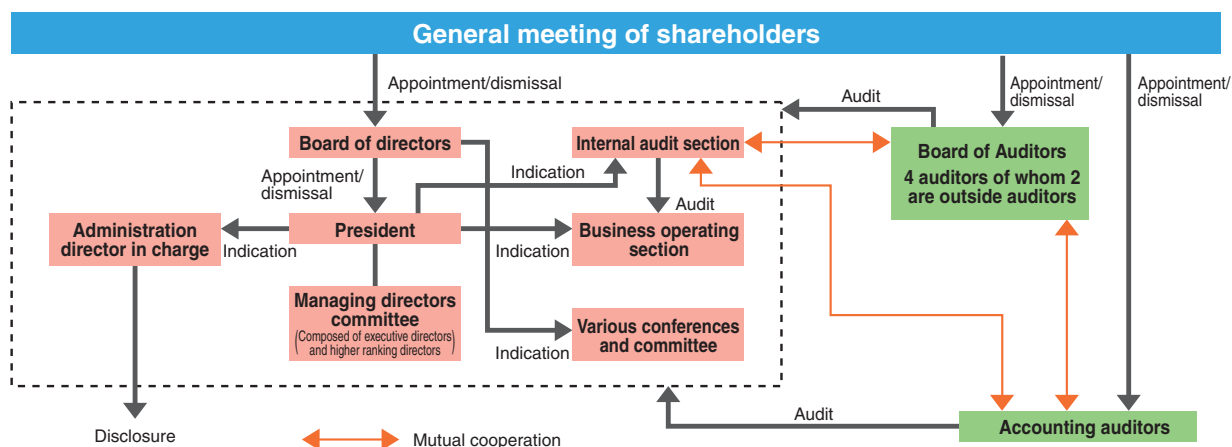


Code of Conduct Guidebook

Corporate Governance

Board of directors meetings are held (on a regular and as-needed basis) to discuss and make decisions on items specified by laws and bylaws and other important issues related to management, as well as to supervise the performance of business operations. In addition, a managing directors committee composed of executive directors and higher ranking directors holds a monthly meeting, and we have constructed a system to enable a

prompt grasp of the situation to be obtained and also changes in the environment to be dealt with. A board of auditors provides appropriate advice on a timely basis, sometimes from an external point of view. Although we have designated no external board members ※, we believe that the auditors can play a full role in governance. (※As of June 2007)



Acquisition of “A” environmental ranking

The NGK Spark Plug Group received an “A” evaluation for the 2006 “environmental ranking” from the Tohatsu Evaluation and Certification Organization Co., Ltd..

This ranking was implemented based on the environmental reports and information disclosed on the websites concerning 505 corporations which issued environmental reports. Our ISO14001 integrated certification, third party examination of our environmental report, and so on, were evaluated, and we obtained “A” for the first time.

Evaluation criteria

- 1 Issuing environmental report
- 2 Score card
- 3 Scope of activities
- 4 Activities for reducing greenhouse gases
- 5 Activities to counter soil pollution
- 6 Reliability and transparency of the contents of activities
- 7 Acquisition of ISO14001 certification

Environmental ranking

- Implemented for 505 companies
- Announced only for A or higher ranking corporations

AAA : 2 companies
AA : 11 companies
A : 25 companies

Message from a stakeholder



Mr. Masanori Okubo

Manager of the General Policy Planning Section of the Economic Policy Division, The Yokohama Chamber of Commerce and Industry

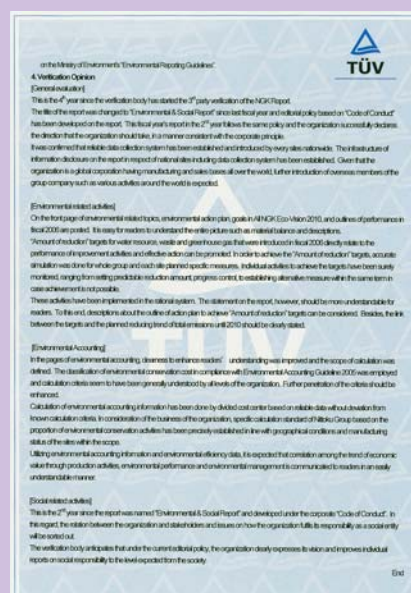
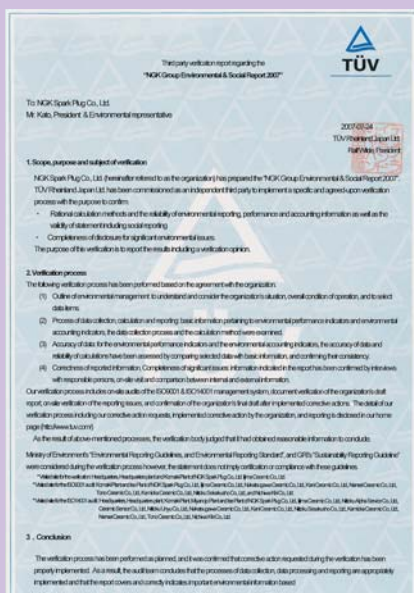
First, my overall impression is that this report gives due consideration to the stake holders at each level. It has been edited following the corporate code of conduct, and there are activity reports for each index. Consequently, it is possible to obtain an accurate grasp of data that one wishes to know, and the contents of the report can be readily understood by persons engaged in other areas of business as well.

Next, I would like to suggest that you include in the next report a digest article concerning a round table discussion with the top management concerning the environment and society for the purpose of making the report more readable to the general consumer. I think that this will enable you to project a friendlier image of the overall Group.

Third party examination

The NGK Spark Plug Group prepares this report based on our policy of conducting information disclosure in an easily understandable manner. Environmental & Social Report 2007 underwent a third party examination by TÜV Rheinland Japan, which also examined last year's report.

The examination was made by verifying whether or not important environmental information is comprehensively disclosed, whether or not the disclosed data is accurately measured or calculated, and whether or not the described information is consistent with the supporting materials.



Undergoing a third party examination

This is the second report that we have put out in the form of an “Environmental and Social Report.” We have received highly favorable opinions concerning the activities report based on the corporate code of conduct. We also received opinions from people to the effect that they look forward to greater enhancement of the social aspect in future reports. Also, regarding the environmental aspect, we received an evaluation saying that we have prepared a highly reliable system as the scheme for collecting data from domestic Group companies. On the other hand, we received requests to devote more space to descriptions of activities at our overseas factories and offices as an issue for the future. We have corrected the erroneous entries and inadequate expressions

pointed out to us during the examination. We will continue to steadily improve those parts where immediate improvement was not possible due to the inadequacies of our system.



Editorial meeting



Third party examination

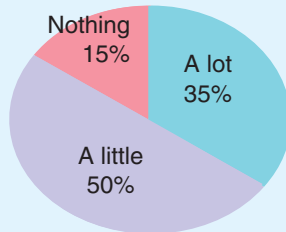
Results of questionnaire concerning Environmental and Social Report 2006

Thank you for sending us all your answers to the questionnaire in "Environmental and Social Report 2006" published in fiscal 2006. We take your opinions seriously

and are working to implement even more thorough information disclosure.

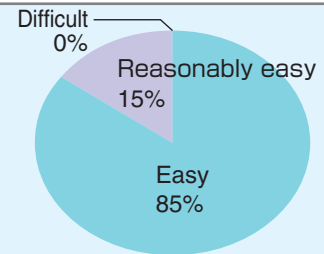
Q1

Before reading our Environmental and Social Report 2006, how much did you know about NGK Spark Plug Group's environmental policy or activities?



Q2

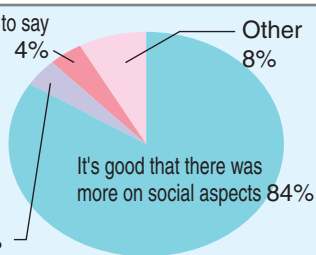
How easy did you find our Environmental and Social Report 2006 to understand?



Q3

What did you think about our compiling two aspects of our corporate conduct in parallel in the Environmental and Social Report 2006?

It would have better to describe only environmental aspects 4%



Q4

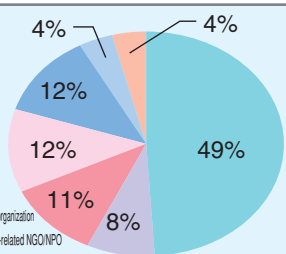
What sections of our Environmental and Social Report 2006 were particularly impressive or interesting for you? (You may select more than one.)

Environmental load from business activities
Basic philosophy on environment
Factory/Office
Social contribution

Q5

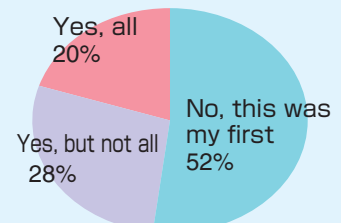
Please check the box or boxes that best describe your situation and position.

Business associate
Shareholder or investor
Working in environmental affairs
NGK Spark Plug Group employee or family member



Q6

Have you read any of our previously issued ECO Reports?



Q7

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

I would like to see more articles concerning the point of contact with society.

I would like you to carry out activities that go past compliance.

I would like you to carry out environmental conservation on a worldwide scale.

Request to answer the questionnaire

Thank you for reading through our Environmental and Social Report 2007. For the further improvement of this report, we kindly ask you to fill in the questionnaire.

Please return the completed questionnaire to us by fax or e-mail. ⇒ **FAX +81 52-872-5942**
⇒ **e-mail : eco@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.

Conclusion



Various environmental issues such as global warming, depletion of resources, and the loss of biodiversity have become serious, and corporations are becoming strongly aware of the necessity of developing environmental activities on a day-to-day basis. We have published this "Environmental and Social Report 2007" as a medium that widely publicizes our environmental activities and social activities. Following on from last year, we have edited this report in accordance with the corporate code of conduct which consists of 10 articles. We have set out our basic stance

and also the contents of our activities.

This year as well, we underwent an examination by a third party organization, aiming at maintaining the trust of our customers. Regarding issues that became manifest during the editing and examination of this environmental and social report, we intend to carry out continuous improvement, and ask for your kind understanding.

Michio Obara, Senior Managing Director
Director in charge of the Environment and Safety Department



Environmental & Social Report 2007

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[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, polybromide phenyl (PBB), or polybromide 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.

Dampening solution : VOC-reduced dampening solution and washing solution that does not contain isopropylalcohol (IPA) was used. Also, printing was carried out using a printer with a dampening solution circulating unit in order to minimize the occurrence of waste.

Paper : Thinned wood printing paper made primarily from thinned wood was used in order to make effective use of timber resources and conserve the forests.