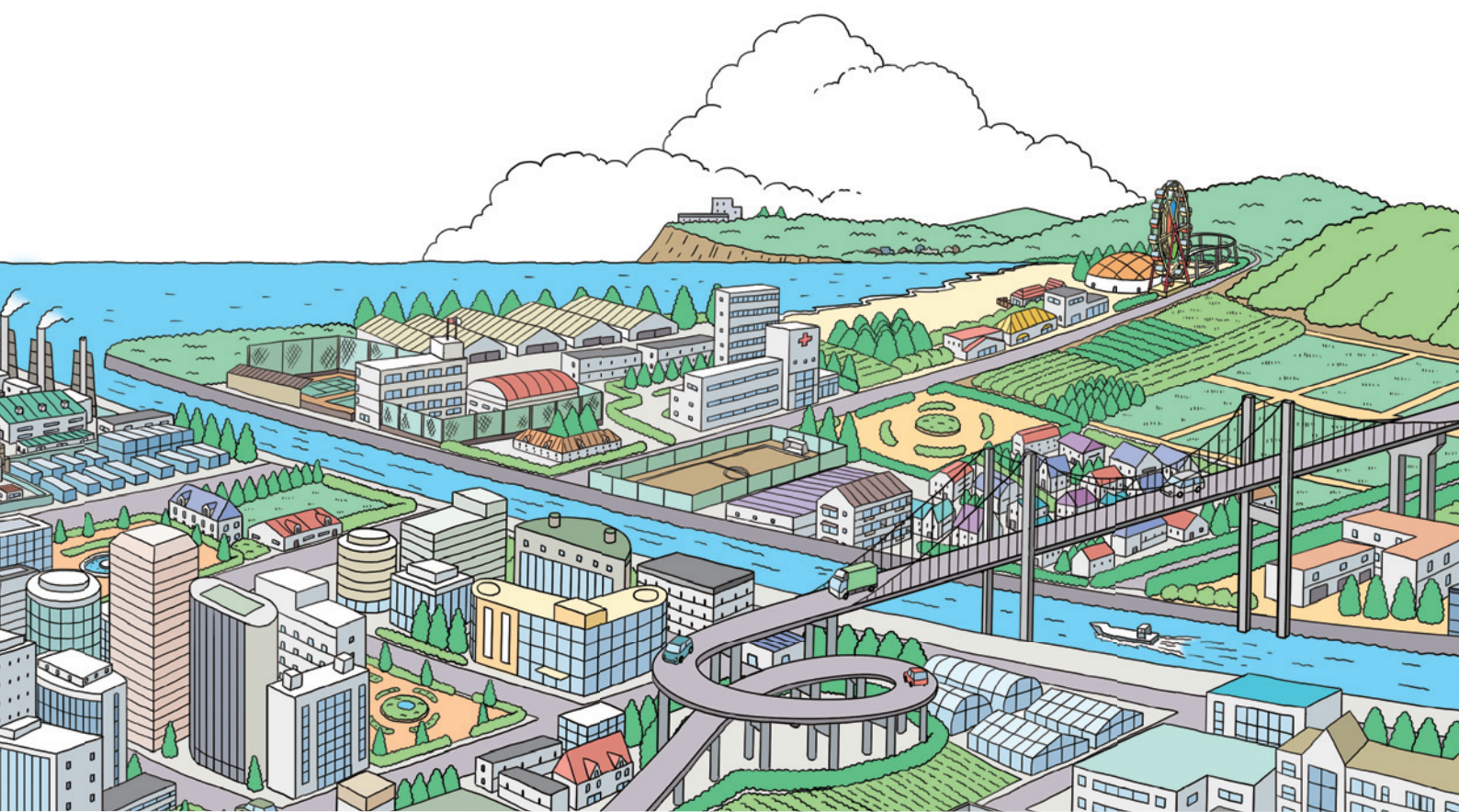


NGK SPARK PLUG Group

CSR Report 2014

CSR Report



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Our Main Products

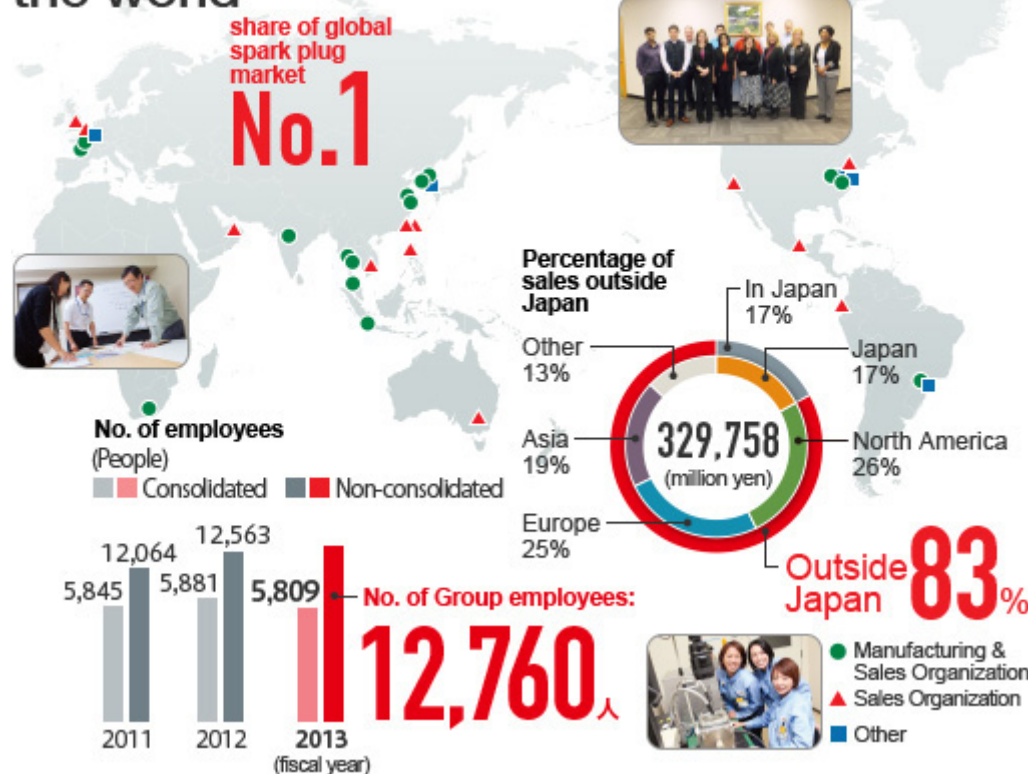
Exhibiting visible effects in unseen places

Even though many of our products are small, they actually make a big contribution to your life, society and the environment.

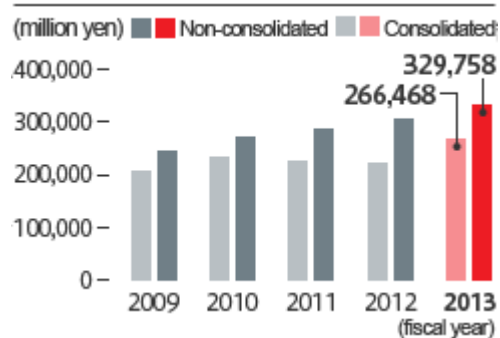


Our Business Activities

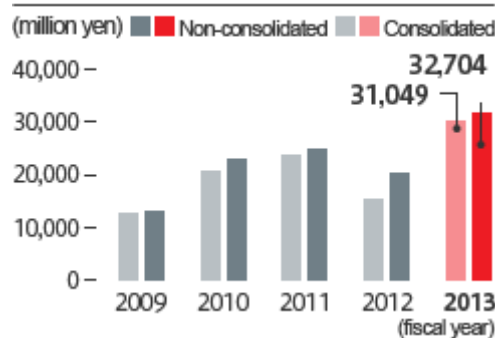
Contributing to local communities and the environment right across the world



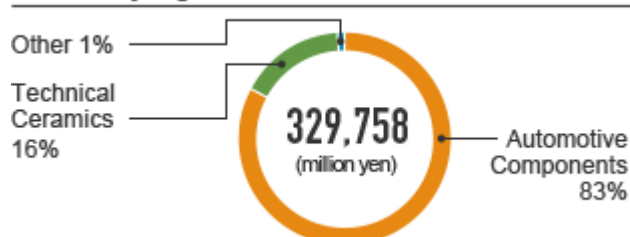
Net sales



Net income



Net sales by segment



▶ [Click here to view detailed information.](#)

Message from the President



NITTOKU SHINKARON (The Evolution of NGK SPARK PLUG)

In fiscal 2010, the NGK SPARK PLUG Group formulated a long-term management plan called NITTOKU SHINKARON (The Evolution of NGK SPARK PLUG), which sets out the vision for NGK SPARK PLUG in 2020. Under this plan, our goal is to become a distinguished manufacturing company, a highly profitable company, a progressive company, and a personnel "assets" company. Having achieved these goals, we will deliver real value to stakeholders around the world.

The Evolution of NGK SPARK PLUG has been broken down into three separate three-year stages called the 1st SHINKA (Delving), 2nd SHINKA (Renovating), and 3rd SHINKA (Evolving). The year 2014 is the second year of the 2nd SHINKA (Renovating) stage, which also represents our sixth medium-term management plan. In the Delving stage that lasted until fiscal 2012 we focused efforts on changing the foundation of the company, or our organizational structure and culture, as well as adopted the corporate officer system and formulated new human resources systems.

For the three-year period of the 2nd SHINKA (Renovating) launched in fiscal 2013 we have adopted a basic policy to fully leverage our management resources to tackle bold challenges in new business domains and fields, with the aim of evolving to the final stage of the long-term management plan. Using the foundation constructed during the three years of the 1st SHINKA (Delving), we now accelerate decision making and execution as well as work on launching new products.

Overview of the New Medium-Term Management Plan



► the Medium-Term Management Plan

The Second Year of the 2nd SHINKA – The Midway Point of The Evolution of NGK SPARK PLUG

In April 2014, we introduced a new human resources system under which we will aim to achieve real human resources development that considers the career paths of individual employees, delivering flexibility to their future with the company, and that can adapt to the changing environment surrounding the NGK SPARK PLUG Group. Additionally, as part of our initiatives for capitalizing on our diverse pool of human resources, first we are developing a framework to promote the active participation of women. To achieve further growth, we will proactively hire people with ambition and a challenging spirit, regardless of gender, nationality, age, or disability.

In the Automotive Components Business, we will aim to further enhance our spark plugs and sensors and toward that end we are diligently working on the next innovation and revolution that will form the foundation of our new manufacturing philosophy. We are also working on building a production system with an eye on 2020 when we expect a large increase in demand from China and other emerging markets. This includes the commencement of operations at Nittoku Spark Tech Tono Co., Ltd.'s Nino head office plant, which will become a production base for spark plug insulators, and the establishment of SparkTec (Thailand) Co., Ltd. as a production base for metal shells. With a responsibility as the top manufacturer of spark plugs and oxygen sensors, we stand fully committed to complying with the stricter environmental regulations of countries around the world and to building a supply system where we can deliver our products in a stable and speedy manner.

With regard to the Technical Ceramics Business, we have established a new fabless business model for organic IC packages through our capital and business tie-up with Eastern Co., Ltd. By combining our miniaturization technologies developed in the packages segment with Eastern's super thin sheet package and manufacturing technologies for memory, we will be able to supply products that can adapt to the evolution of the smartphone and tablet devices.

As a next step in our evolution, we will develop our core technologies for use in fields such as the environment, energy and EV. In addition to the spark plugs and oxygen sensors we supply as ecological products, we will also develop solid oxide fuel cells (SOFC) and hydrogen leak detection sensors for fuel cell vehicles, as well as become actively involved in the joint development of next-generation vehicles. By being the first to develop in-demand ecological products through our core business to realize a low-carbon society, we will be able to contribute to the sustainable society of tomorrow.

Fiscal 2014 represents the midway point of The Evolution of NGK SPARK PLUG. During the second half of our medium-term management plan we will make further progress and strive to deliver real value to stakeholders around the world.

Promotion of CSR Management

In November 2010, we established our CSR Committee and announced a CSR policy for addressing the various risks facing the NGK SPARK PLUG Group and the demands of society. The CSR Committee, with an eye on our CSR policy, takes the lead in establishing targets for initiatives necessary for the continual and sustainable growth of our company, and works to continually make improvements.

Practicing compliance requires continual training to make our philosophy and behavior standards known and instilled in our daily operations. Additionally, the Compliance Committee is leading the way to address various tasks, such as raising awareness about the helpline and fostering a better workplace environment, based on the results of our compliance survey.

We have also carried out a business impact analysis (BIA) for a major earthquake and formulated a business continuity plan (BCP), under which we are making improvements.

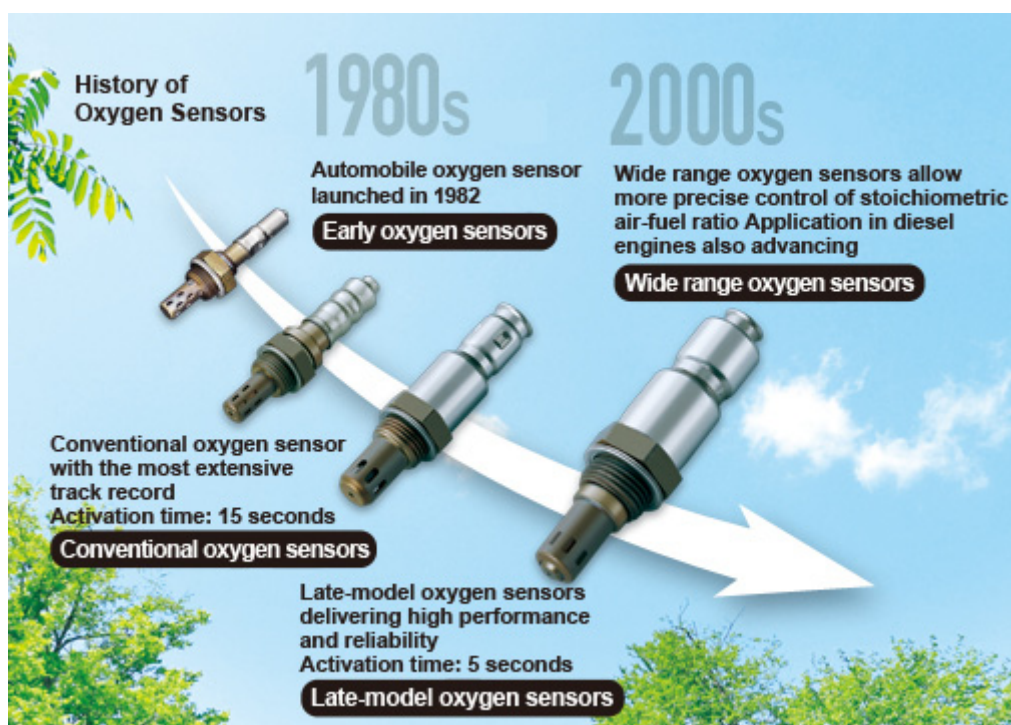
We will further enhance our engagement with individual investors by increasing the number of briefings, making our existential value known to more through information disclosures, and soliciting various feedback.

Under our policy to actively take part in social contribution activities as a good corporate citizen, we held a free family musical in December 2013 at the NTK Hall (Nagoya City), which we obtained the naming rights to in 2012. We invited people displaced by the Great East Japan Earthquake who are currently living in Nagoya and children raised in orphanages as well as other families in the region to attend the fun-filled event. Going forward, we will continue to plan similar events as part of community contributions.

We hereby release CSR Report 2014, which compiles our activities during fiscal 2013.

We would very much appreciate your unreserved comments and opinions.

[Feature 1] 1st SHINKA (Delving) of Automobile Oxygen Sensors



Helping Prevent Atmospheric Pollution by Controlling the Exhaust Gas Cleaning Performance of the Three-Way Catalyst*

*An exhaust gas cleaning device that simultaneously eliminates carbon monoxide (CO), hydrocarbons (HC) and nitrogen oxides (NOx) in exhaust gas through oxidation or reduction.

Voice of our Developer

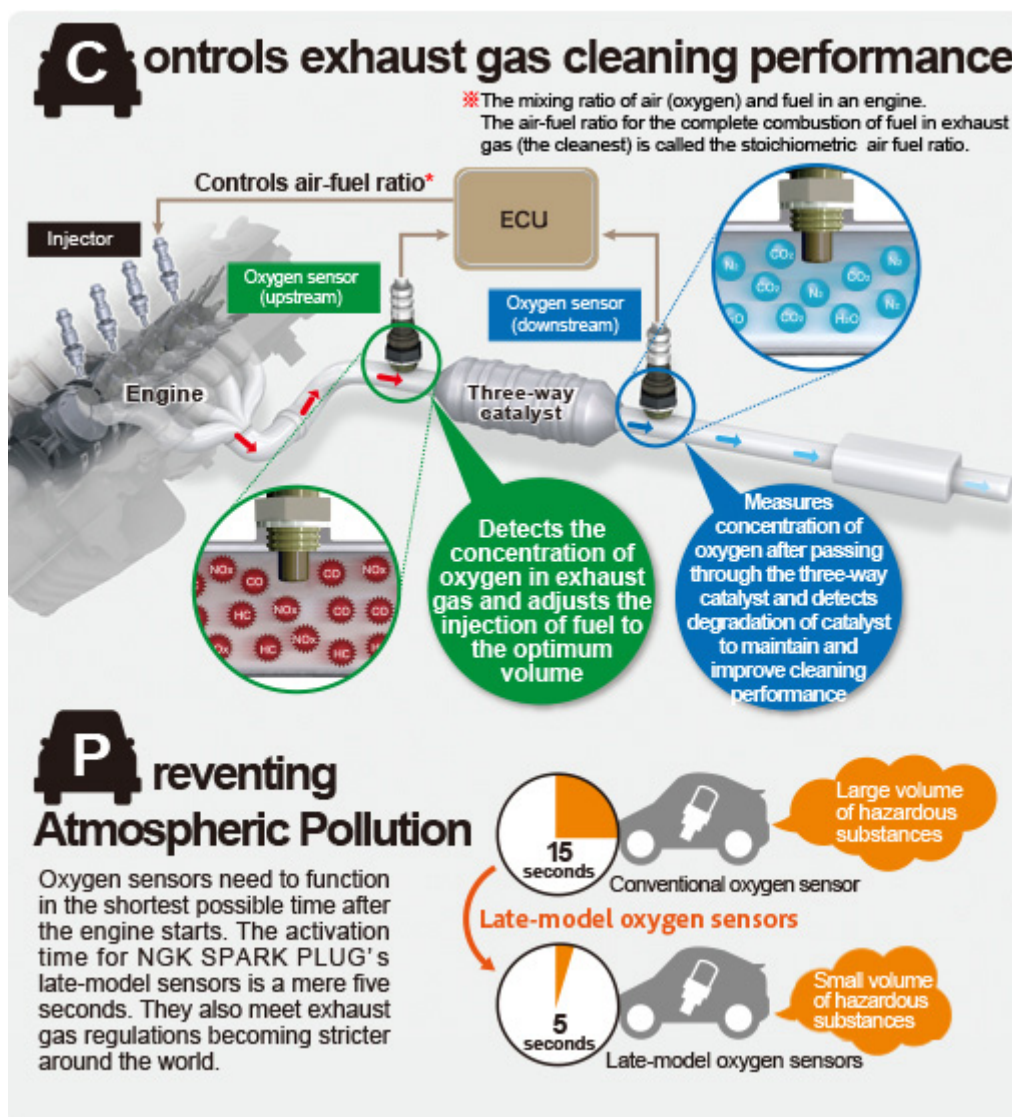


Aiming to establish new elemental technologies

The precious metal platinum is needed to make the elements in oxygen sensors perform their function, but it is an extremely expensive metal, which is a factor in pushing up the cost of sensors. We go to a lot of trouble to identify the minimum amount of platinum required to strike a balance between guaranteeing the functional aspect of the sensor with cost reductions. Oxygen sensors still have a short history relative to the history of the internal combustion engine, and that is why there is still unexplored territory in terms of methods of usage and development goals. We will work to establish elemental technologies in order to handle new areas.

Sensor Engineering Dept. II, Sensor Division,
Automotive Components Group

Daisuke Uematsu



Stricter Automotive Exhaust Gas Regulations Advancing Worldwide

Automotive exhaust gas regulations have been strengthened worldwide from the perspective of environmental conservation, and exhaust gas regulations have been progressively introduced in emerging countries as well following developed countries such as Japan, the United States and Europe.

In particular, for diesel vehicles, regulations on NO_x emissions have become stricter in addition to particulate matter (PM), and exhaust gas regulations are scheduled to be strengthened not only for passenger vehicles and trucks but also for off-road vehicles, including construction and agricultural machinery.

Automotive Exhaust Gas Regulations Worldwide

		2008	2009	2010	2011	2012	2013	2014	2015
Passenger cars	Japan	New long-term		Post new long-term*1					
	United States	Tier2/Bin#8		Tier2/Bin#8*2					
	Europe	Euro4		Euro5*3				Euro6	
Trucks	Japan	New long-term		Post new long-term					
	United States	US'07		US'10					
	Europe	Euro V							Euro VI
Off-road vehicles Construction and agricultural machinery				Japan	Tier 4a level			Tier 4b level	
				United States	Tier4a			Tier4b	
				Europe	Step-3			Step-4	

*1 Post New Long Term: Automotive exhaust gas regulations established by Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in order to further reduce PM and NOx emissions from newly sold trucks, buses and passenger cars.

*2 Tier 2/Bin #5, etc.: Exhaust gas regulations under the jurisdiction of the Environmental Protection Agency (EPA) under the direct control of the federal government of the United States. NOx regulatory values have been graded in all 11 Bins (Bin 1 – Bin 11).

*3 Euro 5, etc.: Exhaust gas regulations introduced in September 2009 and applied to sports utility vehicles (SUVs) and compact commercial vehicles in January 2011.

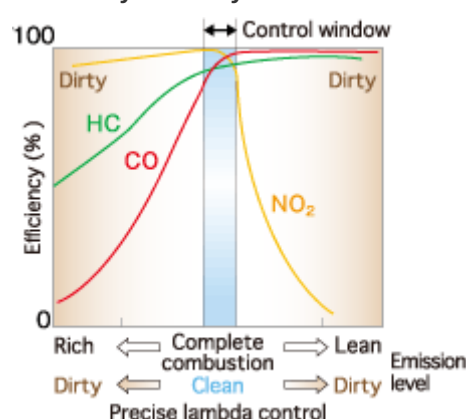
Oxygen Sensors Making Exhaust Gas Cleaning Systems Function Effectively

The three-way catalyst is the device that plays the primary role in cleaning exhaust gas from automobiles (gasoline vehicles). The three-way catalyst simultaneously eliminates the three major hazardous substances (CO, HC and NOx) contained in exhaust gas through oxidation and reduction. As such, the proper balance between the volumes of carbon, hydrogen and oxygen in exhaust gas is required for this process to be carried out successfully.

This balance is termed the stoichiometric air fuel ratio, which is also the condition for the complete combustion of the fuel by air (oxygen).

Oxygen sensors play a key role in the process. Oxygen sensors constantly keep the air-fuel ratio in the region close to the stoichiometric air-fuel point by detecting the concentration of oxygen in exhaust gas and feeding the signal data back to the engine control unit (ECU), allowing the three-way catalyst to perform its function fully.

Efficiency of catalytic converter



Significantly Reducing Activation Time in Step with Strengthening of Exhaust Gas Regulations

Since utilizing its specialist ceramics technology to develop zirconia oxygen sensors in the 1980s, NGK SPARK PLUG has continually evolved products that meet more stringent exhaust gas regulations.

For an oxygen sensor to function, the sensor element needs to be activated by raising it to a certain temperature (300°C). As early oxygen sensors used the heat of the exhaust gas for this, they took several minutes to activate after the engine was started. However, it is necessary to activate the element as quickly as possible to meet stringent exhaust gas regulations. Therefore, in the second half of the 1980s, NGK SPARK PLUG developed the zirconia oxygen sensor that activated in about 20 seconds using its own heat from a built-in heater in the sensor. Subsequently, we have shortened the activation time by improving the heater structure and the element, achieving activation in a mere five seconds after the engine starts for the latest model.

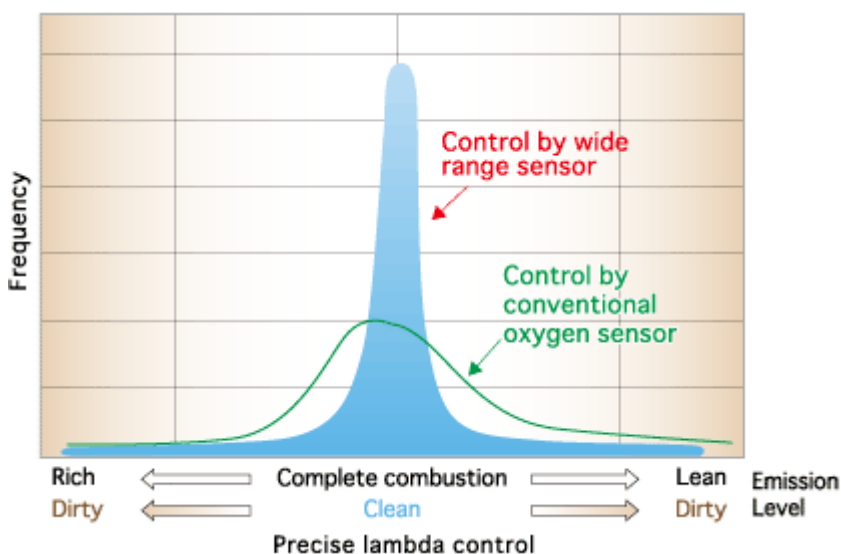
Developing Wide Range Oxygen Sensors that are also Useable with Diesel Vehicles

While evolving zirconia oxygen sensors, NGK SPARK PLUG developed wide range oxygen sensors in 1980s that sense using a completely different and unique mechanism.

While a zirconia oxygen sensor only determines oxygen volume in the region close to the stoichiometric air-fuel ratio, a wide range oxygen sensor enables highly precise detection of oxygen concentration across a wide range by measuring the magnitude of deviation from the stoichiometric point. As a result, in addition to enabling more precise control of the air-fuel ratio, it was also applicable to diesel vehicles, in which the air-fuel ratio could not previously be controlled using an oxygen sensor.

In light of the worldwide strengthening of exhaust gas regulations in the 2000s, NGK SPARK PLUG also made improvements to its wide range oxygen sensors, developing a product with the activation time reduced to five seconds through integration of the heater and element. NGK SPARK PLUG is contributing to even cleaner exhaust gas.

Histogram of controlled A/F during driving mode



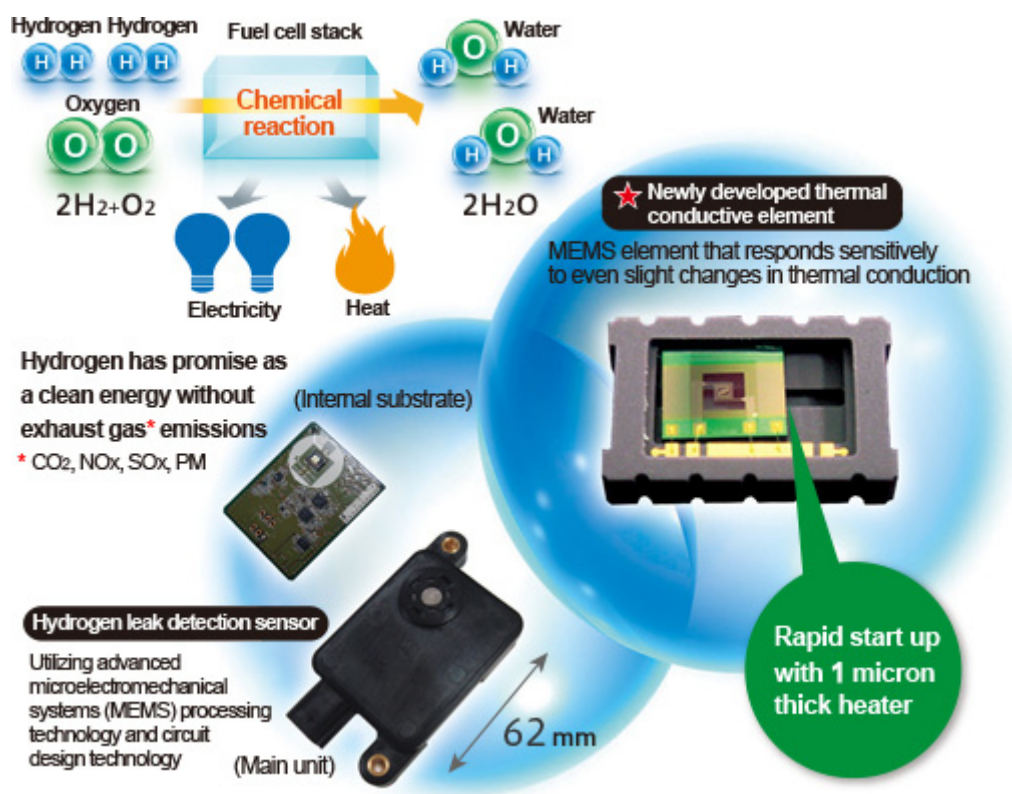
Supplying NOx Sensors to Meet Stringent NOx Regulations

Highly precise control of NOx is needed to meet the stringent NOx regulatory values of recent years.

NOx sensors measure the concentrations of NOx and oxygen in exhaust gas in real time, contributing to energy conservation and clean air by controlling NOx in gasoline direct injection engines and diesel engines.



[Feature 2] 2nd SHINKA (Renovating) for the Advent of the Hydrogen Society



Hydrogen Leak Detection Sensor Developed to Ensure Safety when Using Hydrogen*

*Hydrogen is expected to be used for fuel cell vehicles (cars and forklifts), hydrogen-filling stations, residential fuel cells and other applications.

Voice of our Developer



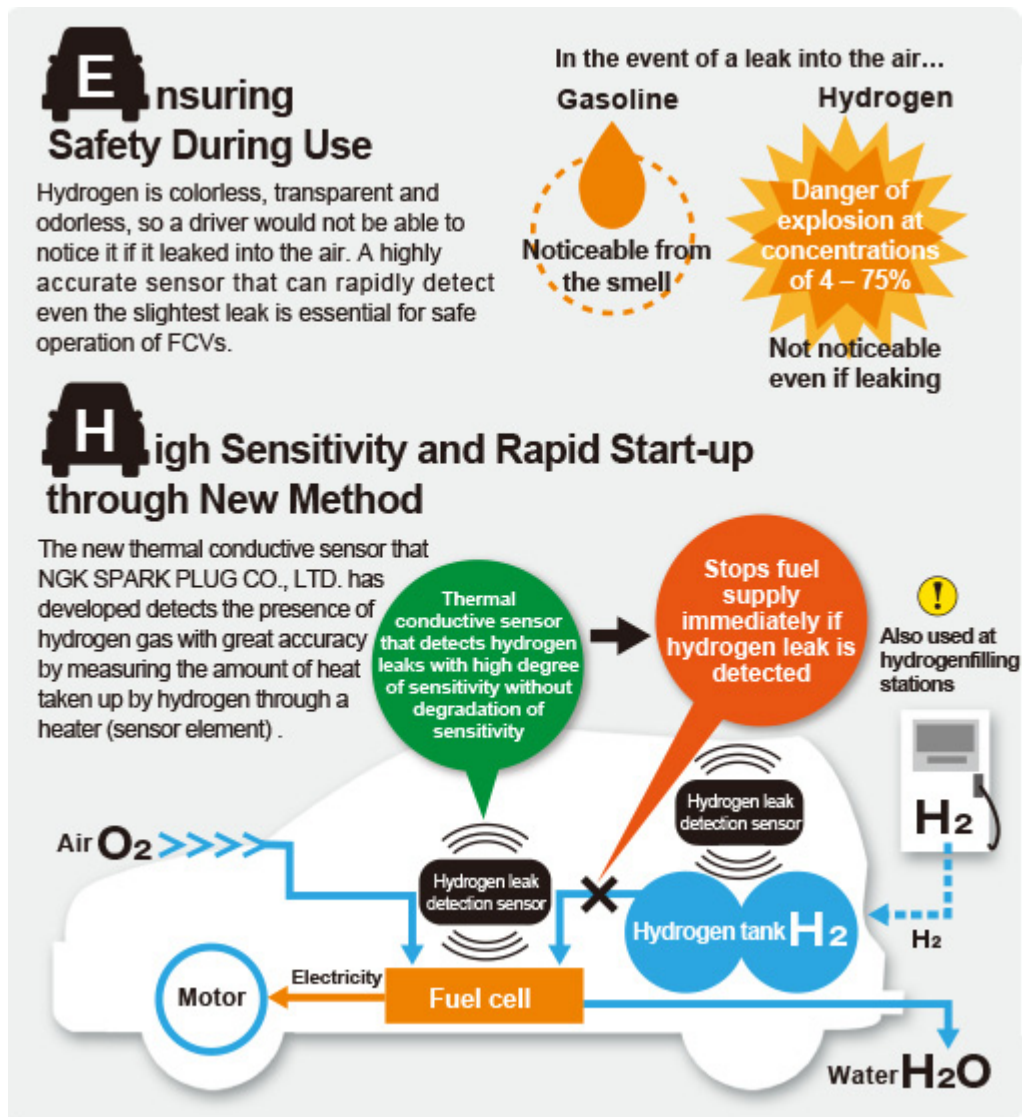
Toward development of non-degrading sensor to maintain FCV safety

Rapid and accurate detection of a hydrogen leak is one of the critical factors for the life of the driver in a fuel cell vehicle (FCV) that runs on hydrogen. Therefore, it is necessary to develop a sensor that is non-degrading at the same time as being highly precise.

NGK SPARK PLUG's hydrogen leak detection sensor is still under development, but we take pride in the facts that it uses a method of detection that is different from those of our competitors and that the durability of the sensor is superior to those of our competitors. First of all, we are aiming to develop a sensor that will be fitted to FCVs for mass production and gain the No. 1 share of the market in this area.

New Business Strategy Dept.,
New Business Advancement Group

Daisuke Ichikawa



Hydrogen's Potential to Solve Energy Problems

Hydrogen has promise as a next-generation energy resource that will play a role in solving energy and environmental problems because it releases hardly any hazardous gases when burnt and can be manufactured from a variety of raw materials including fossil fuels, biomass and water.

The FCV, the classic example of utilizing hydrogen energy, is a clean vehicle that runs on a motor driven by electricity produced using a chemical reaction between hydrogen and oxygen, and it is believed that the spread of FCVs would have a significant effect on preventing atmospheric pollution and global warming. The leading automobile manufacturers are already promoting FCV development, and commercial models are scheduled to go on sale in 2015.

Safety management will thus be critical. Hydrogen is an extremely flammable gas with a danger of fire and explosion if it leaks into the air. Therefore, FCVs are required to be fitted with a device that will detect a hydrogen leak as well as giving an alert to inform the driver and shutting off the fuel supply in the event that a hydrogen leak is detected.

* With some exceptions

Hydrogen Leak Detection Sensor Contributing to Safe Use of Hydrogen

The hydrogen leak detection sensors that are currently in practical use mainly employ the catalytic combustion method. This is a mechanism in which the detector element (heater) is coated with a catalyst such as platinum or palladium and senses a leak via the heat generated by the chemical reaction between the leaking hydrogen and the catalyst. However, this method has the disadvantage that accurate detection is no longer possible once the catalyst degrades or separates from the element.

In contrast, NGK PARK PLUG has developed a new and unique thermal conductive method of detection. This is a method that detects the concentration of hydrogen gas by measuring the amount of heat taken up by hydrogen. The thermal conductivity of hydrogen is extremely high, so the amount of heat escaping from the heater will increase with the presence of hydrogen, and the concentration of hydrogen can be detected through changes in the volume of heat radiation.

Not only is there very little degradation with the thermal conductivity sensor, which does not use a chemical reaction, but start-up and response are also rapid. Moreover, it also withstands vehicle vibrations and impacts. Therefore, NGK SPARK PLUG has been pursuing activities proposing it to automobile manufacturers as the ideal hydrogen leak detection sensor for FCVs that will be in use over long periods.

Taking Part in Development Project for Advanced Electric Vehicles

NGK SPARK PLUG has also widened its approach to the field of electric vehicles (EVs). The Company is gathering and building up technical data leading into research and development on cutting edge EVs through its participation in EV projects at SIM-Drive and FOMM.



The SIM-CEL developed by SIM-Drive

Compact EV under development by FOMM

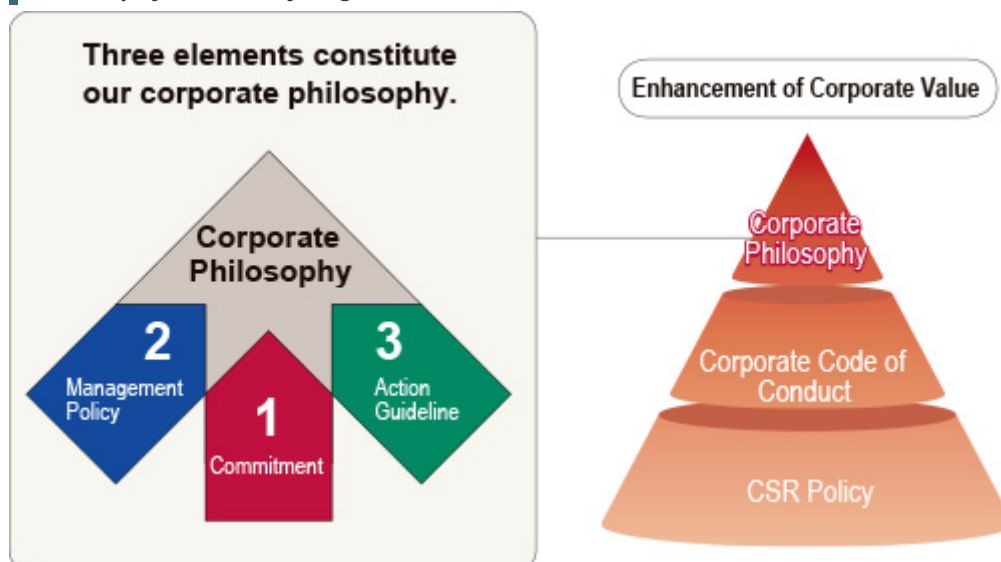


Our CSR

CSR Concept

We view CSR not just as a responsibility but as an opportunity to be accountable through review of the NGK SPARK PLUG Group's economic, environmental and social activities from a global perspective, to enhance corporate value, and to contribute to the sustainable development of society in accordance with our Corporate Philosophy.

Philosophy and Policy Organization



Our CSR activities are wide-ranging, and include the following:

【Examples】

- Offering excellent products to customers
- Disclosing corporate information to shareholders and the broader investor community, in an optimal and easy-to-understand manner
- Collaborating with suppliers for mutual development
- Establishing a safe and employee-friendly working environment
- Participating in and supporting activities in the local community

To provide our Group's action guidelines for fulfilling CSR, in April 2011 our CSR Policy was established, which comprises 10 policies, such as the Compliance Policy and others. In line with the CSR Policy, we intend to review and promote CSR based on a multifaceted approach, into the future.

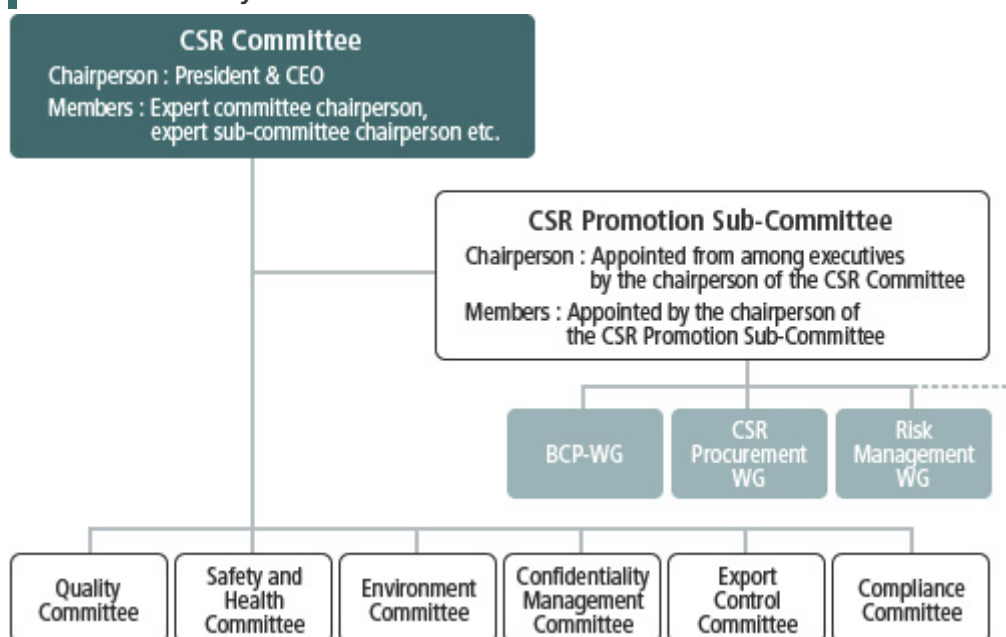
- ▶ Corporate Philosophy
- ▶ Corporate Code of Conduct
- ▶ CSR Policy [21KB] [PDF](#)

CSR Promotion System

The CSR Committee determines the priority themes for each fiscal year, to implement CSR Policy. The Committee also oversees and evaluates CSR-related activities implemented by the respective committees, working groups and divisions, and makes appropriate proposals regarding them, so as to achieve full optimization of CSR activities, thereby strengthening our business foundations.

The CSR Promotion Sub-Committee sets up respective working groups as deemed appropriate, each of which holds discussions on specific themes to develop countermeasures. We have established a company-wide CSR promotion system by securing close coordination between the CSR Committee, the CSR Promotion Sub-Committee and expert committees.

CSR Promotion System



CSR Promotion Activities Targets

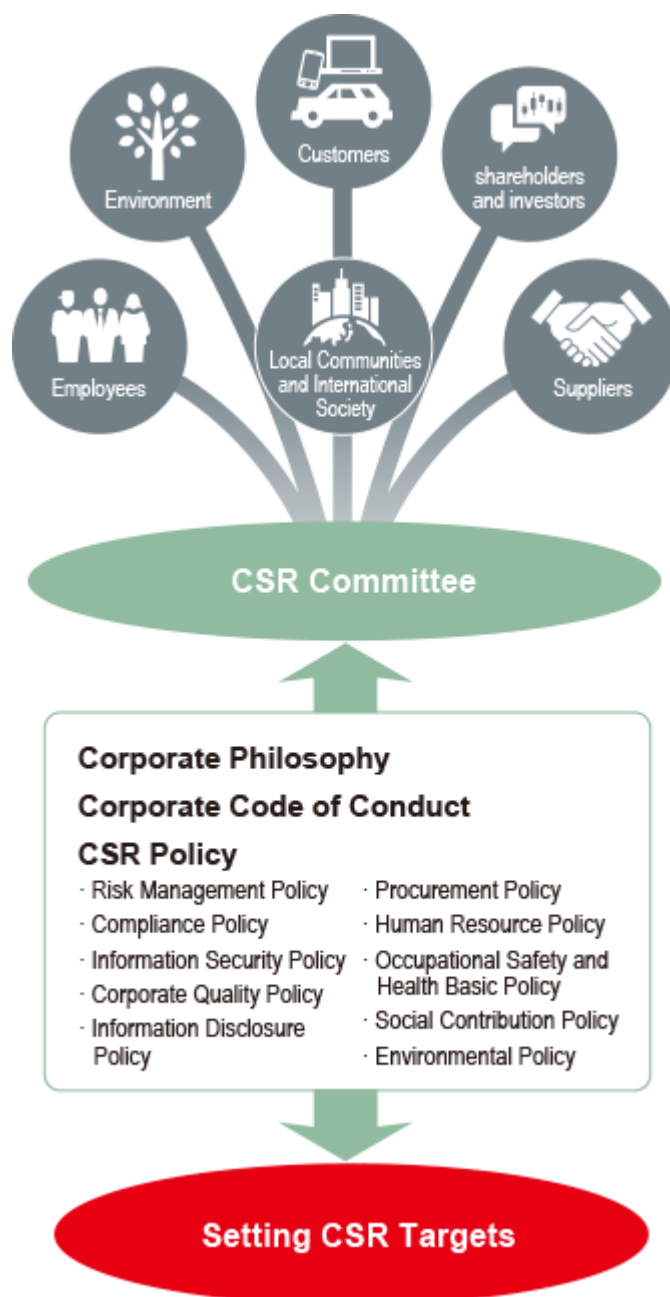
We carry out CSR promotion activities according to the medium-term targets and fiscal year targets.

Our CSR Committee checked the progress for fiscal 2013 and formulated new targets for fiscal 2014 as part of achieving our medium-term targets.

■ We made clear the important social responsibilities of the NGK SPARK PLUG Group.

The NGK SPARK PLUG Group is connected to and supported by customers, shareholders, investors and various other stakeholders. For that reason, for the group to be sustainable in the future, we must aim to grow our business while meeting the expectations and needs of our stakeholders.

When we set our targets for fiscal 2014, first each expert committee and division confirmed the expectations and demands of all our stakeholders. Then they compared them to our corporate philosophy, Corporate Code of Conduct and CSR Policy and drafted targets. Finally, the CSR Committee approved them.



► CSR targets and results [117KB] [PDF](#)

Progress in our CSR

Nov. 1996	Adopted "Corporate Philosophy"
Feb. 1998	Adopted "Corporate Code of Conduct"
Apr. 1998	Established Ethical Committee
Feb. 2003	Adopted "Corporate Ethics Helpline System Operation Guidelines"
Nov. 2004	Revised "Corporate Code of Conduct" Published "Code of Conduct Guidebook"
Apr. 2005	Published "Guidelines on the Handling of Personal Information"
Aug. 2005	Established Export Control Committee Adopted "Export Management Regulations"
Feb. 2007	Adopted "Confidentiality Management Regulations"
Nov. 2007	Published "Confidentiality Management Guidelines"
Sep. 2008	Established Internal Audit Department
Apr. 2009	Prepared "Corporate Protection Manual"
Apr. 2010	Inaugurated CSR Promotion Department
Oct. 2010	Established CSR Committee
Apr. 2011	Adopted CSR Policy
Nov. 2011	Established Compliance Committee
Jan. 2012	Published "Compliance Guidebook"
Mar. 2012	Adopted "Compliance Regulations"
Oct. 2012	Adopted "Emergency Response Plan Regulations" and "Business Continuity Plan (BCP) Regulations"
May 2013	Published "CSR Procurement Guidelines"

Corporate Governance

Basic Philosophy

We believe that it is our foundational and important managerial task to establish and maintain a fair and efficient management system, while securing soundness and transparency in management, in order to enhance corporate value by fulfilling our corporate social responsibilities.

Management Organization

In April 2012, we introduced the corporate officer system and the system for determining officers' remuneration based on assessment of their performance. These systems were introduced because we believe that, to achieve further development in the rapidly changing business climates and global economy, we need speedy decision-making and business execution.

Corporate officers manage corporate affairs based on the policies decided by the board of directors, and at monthly corporate officer meetings, they report on the situation relating to management of corporate affairs and work to improve management efficiency through lateral information sharing and opinion exchanges.

Management Oversight Functions

NGK SPARK PLUG CO., LTD. is a company with a Board of Corporate Auditors, which consists of two standing statutory auditors and two external auditors. These auditors attend the meetings of the Board of Directors and, if necessary, various committee meetings, to grasp the status of important issues. They also supervise directors' execution of duties, through audits of major offices and subsidiaries.

Nominating Outside Directors and Strengthening Corporate Governance

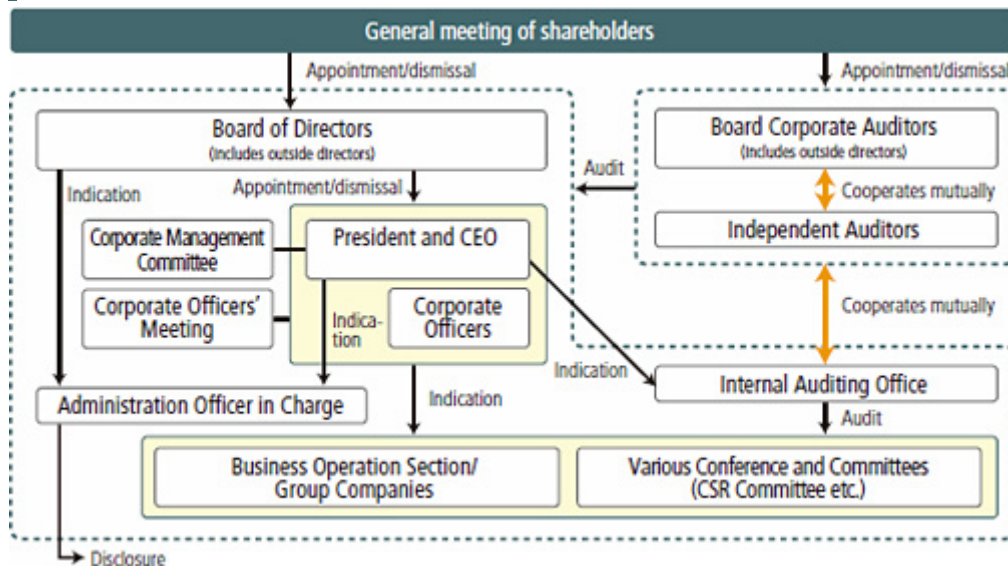
Our company aims to become a true global company and is endeavoring to further strengthen corporate governance. As one aspect of that, in June 2013, we appointed an outside director for the first time. The outside director attend the meetings of the Board of Directors and state their opinions as necessary, based on their great experience at global companies and deep insight.

Internal Audits

The Internal Auditing Office performs audits of NGK SPARK PLUG CO., LTD. and its subsidiaries and affiliates, reports the audit results to management, and makes proposals to correct problems and improve business operations as necessary. A department that receives a proposal for improvement formulates and implements an improvement plan and the Internal Auditing Office investigates and confirms the implementation status.

The department assesses the effectiveness of internal control over financial reporting in accordance with the requirements for the internal control report system pursuant to the Financial Instruments and Exchange Act so as to secure the reliability of the Group's financial reporting, thereby maintaining and improving internal control.

Corporate Governance System



Compliance

Compliance Policy

We acknowledge that our company is a member of society. In the light of this, we enhance corporate ethics, comply with laws and ordinances, international rules, and company regulations, striving to become a company trusted by the international community.

【Action Guidelines】

- We comply with all relevant laws and ordinances, the Corporate Code of Conduct, and company regulations.
- We regularly educate and raise the awareness of all our employees to impart a high-level of ethics and correct knowledge, with which they can act voluntarily to prevent compliance problems.
- Should a problem occur, we will promptly deal with the problem and fulfill our accountability, and will strive to identify the causes and prevent recurrence.

Basic Philosophy

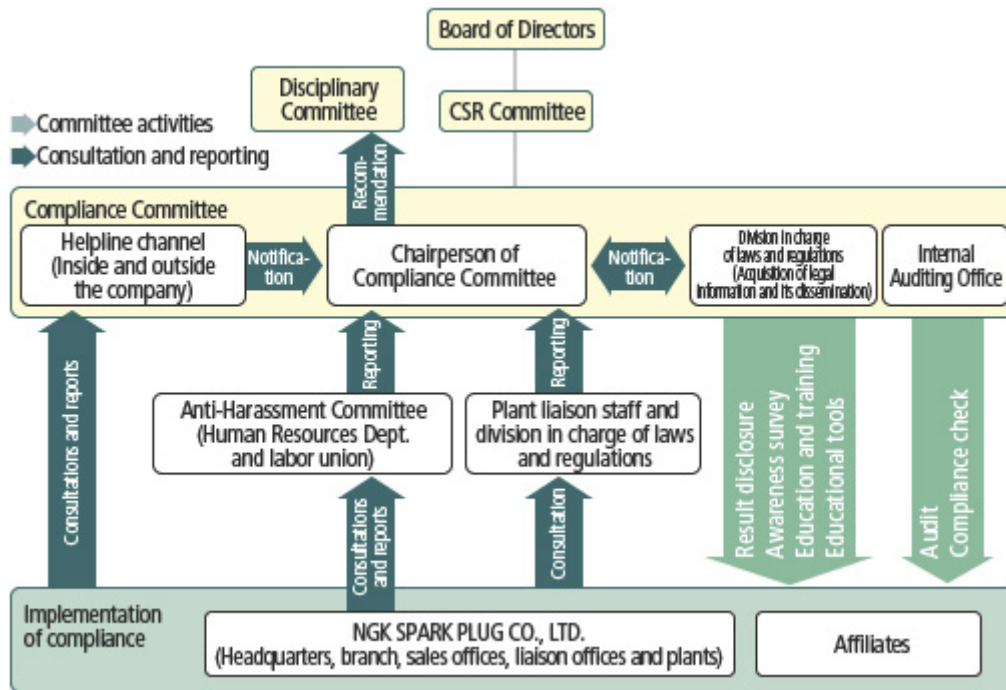
We work to increase awareness among employees regarding compliance to act in a socially sensible manner, helping them to bear in mind that our enterprise is a member of society.

Compliance Promotion System

In August 2013, to promote compliance in the Group's various workplaces, we newly established a structure where the managers of all departments and the Group company presidents are designated "compliance leaders," with "compliance promoters" under their supervision.

Moreover, a Compliance Committee made up of personnel in charge of overseeing compliance with laws and ordinances in various departments and the heads of each division, headed by the officer in charge of General Administration, holds meetings every three months, carrying out inspections and correcting serious problems.

Compliance Promotion System



Education and Awareness-raising

To heighten employee awareness of compliance, in addition to conventional seminars aimed at different levels of the corporate hierarchy, in January 2012 we distributed a Compliance Guidebook to all employees and are making active use of it in workplace training. The guidebook summarizes the Corporate Code of Conduct and the compliance policy and structure, and it includes an explanation of the main laws and regulations to be complied with as well as a Q&A.

Also, every month since August 2013, we have been distributing training materials and case studies to every division and Group company through the corporate intranet to promote education and awareness.

Surveying Each Division on Compliance

To understand companywide compliance issues, in fiscal 2013 we carried out compliance surveys aimed at every employee of the company.

Regarding actual issues, beginning in fiscal 2014 we will update our education and awareness activity plan based on those surveys and work to make improvements.

Corporate Ethics Helpline

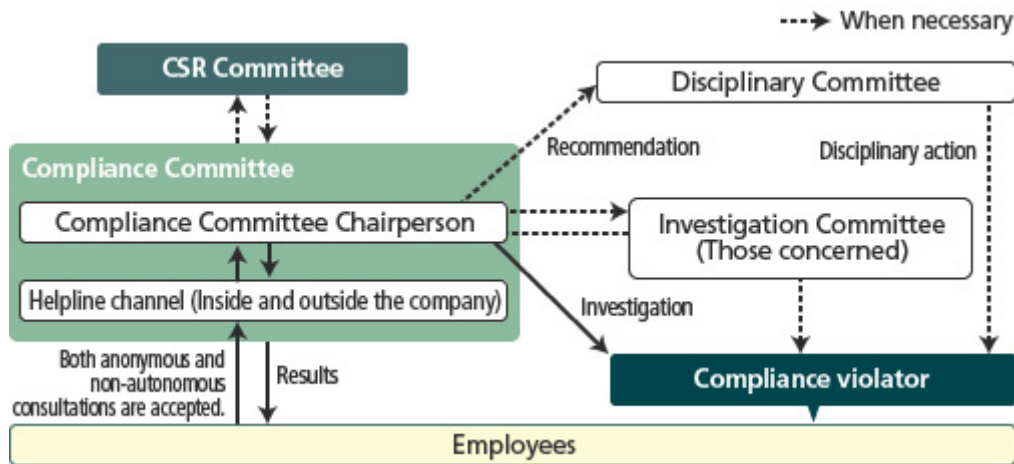
The Corporate Ethics Helpline is a channel for employee consultations regarding compliance.

There are helpline channels inside and outside the company accepting anonymous inquiries.

Regarding consultations and reports received, facts are investigated with discretion so the reporting employee is not identified and does not feel uncomfortable, and as problems are confirmed they are dealt with promptly.

There were 20 consultations or reports in fiscal 2013, and they mostly involved labor, the work environment, and information management. There have also been cases where reports led to reform of company rules.

Flow after report is received via the Helpline



Voice of Our Helpline Operator

We want employees to feel at ease using the helpline.

The Corporate Ethics Helpline is a reporting/consultation channel directly linked to the officer in charge of compliance. Under this system, the identity of the employee making contact, even when a real name is used, is shared with a minimal necessary number of people during fact finding. The privacy of that employee who faithfully made a report is protected and care is taken that he not be disadvantaged by making a report.

We hope employees will make use of the helpline when they feel uncomfortable raising an issue within the workplace.



General
Administration Dept.
Yasuo Mori

Export Controls

Basic Philosophy

To maintain international peace and security, Japan has implemented security export controls in full coordination with the international community, but in recent years more suitable controls have been needed as the international situation has worsened.

To suitably carry out security export controls based on the Foreign Exchange and Foreign Trade Control Law, we have drawn up its own Export Management Regulations and has configured its own in-house export control structure. This will allow us to flexibly deal with regulation revisions.

Furthermore, under the guidance of the authorities we have put in place an aircraft cargo security management system to prevent terrorism and are working to suitably control cargo such as through the introduction of metal detectors at each department involved in distribution.

We will continue to carry out business in compliance with all laws and regulations to fulfill our responsibilities as demanded by the international community and the government.

Holding Regular Briefings on Different Themes

The Export Control Committee secretariat considers it necessary to continue educational activities in order to teach the entire company about security export controls and cargo security management. To that end, we are planning regular, timely briefings on various themes in fiscal 2014.

Themes

1. Cargo security management (Known Shipper/Regulated Agent system)
2. Foreign exchange laws and security export controls
3. Customs law, Authorized Exporters' Program
4. Classification in practice (new)

Voice of Our Export Controls Organizer

Contributing to compliance through easy-to-understand explanations

Because export control is supported by the cooperation of various divisions including technical, sales and distribution divisions, we hold briefings for people in related divisions on laws and regulations that must be paid attention to when exporting.

We will continue to hold briefings under the motto "making difficult laws and regulations easy to understand" while confirming the status of inspections and working to ensure sound compliance with laws and regulations.



General
Administration Dept.
Naoko Tokimoto

Security Control / Information Security

Information Security Policy

We regard our own information assets as one of our management resources. Through the protection and effective use of our information assets, we pursue healthy maintenance and development of our business.

【Action Guidelines】

- We establish information security regulations that clearly define the system and responsibilities to protect all the information assets we keep for our customers, our information assets as information resources, and personal data.
- We comply with laws, ordinances, and regulations regarding information security.
- We educate all executives and employees who handle information assets about the importance of information security, and about specific items to be observed.
- We continuously implement measures necessary to improve the management system and to protect our information assets, keeping pace with a rapidly-changing information society.
- If a problem with the information security system is predicted to occur due to unforeseen circumstances, we will promptly take action to prevent an accident associated with the problem. Should the accident occur, we will strive to minimize the damage and take preventive measures against reoccurrence.

With the development of information and communication technology, it has become more important and more complex for companies to manage confidential information.

We established our Confidentiality Management Regulations as part of our endeavors to properly manage the confidential information of our company, customers and suppliers. We are also working to bring greater efficiency to our work processes by introducing a wireless Local Area Network in our shared spaces while complying with the relevant laws and regulations, not to mention maintaining thoroughgoing security management.

Our privacy policy is available on our website.

▶ Privacy Policy

Education and Awareness Through the Information Security Handbook

We have established security-related rules for our information system users and put them in an Information Security User Guidebook, and we are working to take appropriate measures to manage information security. For the particularly important information, we created an Information Security Handbook that uses illustrations and explanations to communicate as simply as possible and distributed it to all employees of Group companies in Japan in April 2014. We are using it as an educational and awareness tool in all our workplaces.

We will continue our activities to increase awareness of information security and firmly establish it within the company.



Information Security Handbook

Carrying Out Mutual Checks Related to Confidentiality Management

So the confidentiality management rules we enacted do not become rules in name only, it is essential to periodically hold inspections of the status of confidentiality management. In addition to self-checks typically held in each division, the Confidentiality Management Committee will have divisions throughout the company carry out mutual checks to more objectively and effectively inspect the confidentiality situation and make corrections as necessary.

Voice of Our Confidentiality Management Manager

To be thorough in confidentiality management and avoid corporate risk

As a member of the Confidentiality Management Committee secretariat, I am in charge of promoting confidentiality management throughout the company. When confidential matters are leaked, there is not only a degradation of competitiveness in the market and actual damages due to demands for compensation of damages from business partners, but there are the incalculable effects of a damaged image due to a loss of public faith in the company. To prevent these effects, we are working to make the companywide standard confidentiality management rules more suitable, entrench them and expand them to group companies.



General
Administration Dept.
**Tadashige
Maegawa**

Intellectual Properties

Basic Philosophy

To protect its existing and newly developed products, NGK SPARK PLUG CO., LTD. takes steps to actively acquire intellectual property rights and make effective use of them. We investigate the intellectual property rights of third parties in all production processes, from early stages of development to mass production, to avoid the risk of infringing the intellectual property rights of third parties or violating contracts, laws or regulations. We also verify the appropriateness of the intellectual property-related provisions in various contracts. In addition, we are educating employees on the importance of intellectual property. In the future, we will strengthen the management of intellectual property across the Group, as the basis for our continued evolution as a “distinguished manufacturing company.”

Promoting Measures to Stamp Out Counterfeit Goods

Counterfeit NGK spark plug goods are spreading, mainly in emerging nations. To ensure the safety of users and protect our corporate brand, we are working in cooperation with police and customs officials in various countries to expose counterfeiters and destroy counterfeit goods. We will also proactively participate in educational activities to stamp out counterfeit goods in cooperation with government bodies and industry organizations.



A seminar for the controlling authorities (UAE)

Winning International Recognition Related to the Protection of Intellectual Property

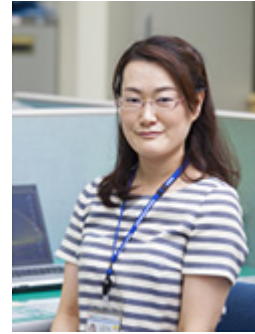
NGK SPARK PLUG CO., LTD. was named one of the Top 100 Global Innovators 2013 chosen by Thomson Reuters. This award is given to companies recognized as being innovative and working to protect intellectual property or as companies that brought about an invention that affects the world. We received the award because, among the four selection criteria relating to innovations determined by Thomson Reuters (success, global, influence and volume), it received high evaluations in global and volume.



Trophy

Voice of Our Intellectual Property Organizer**Aiming to acquire the corporate asset known as Intellectual property rights**

When proactively acquiring intellectual property rights, in addition to protecting our own products, we also work with developers on a daily basis to achieve the effect of holding other companies in check. As part of our intellectual property training, we are also providing lectures for employees inexperienced in matters of intellectual property on the importance of patents and basic knowledge for applying for them.



Intellectual Property
Dept.

Yuko Iwasaki

Risk Management

Highlights

Aiming to Ensure Employee Safety and Early Recovery We are carrying out disaster preparedness training

In November 2013, we carried out companywide simultaneous disaster preparedness training for a major earthquake. Furthermore, in February 2014, as one aspect of Business Continuity Management, we carried out training on how to quickly recover such company infrastructure as electricity, telephone, gas, and water supply as well as important facilities of each division based on a Business Impact Analysis.



Early recovery training



Central Emergency Headquarters receives a report on the results of the training

Voice of Our Training Manager

We are promoting the participation of all Group employees in disaster preparedness activities

In April 2013, we distributed a Workplace Disaster Preparedness Handbook to all employees and we are carrying out workplace education. We also distributed an Earthquake Countermeasures and Survival Card and are focusing on educating employees to respond as instructed on the card in the event of a large earthquake to maintain their own safety.



General
Administration Dept.
Yuki Aida

Risk Management Policy

We are prepared to deal with various possible risks, such as natural disasters, accidents and spread of new infectious diseases. If such a risk should arise, we will act to minimize the impact on our stakeholders. We also work to restore and continue smooth business operations, thereby maintaining trust from our stakeholders.

【Action Guidelines】

- We strive to prevent factors that could affect business continuity.
- We conduct our activities with top priority on the protection of human life.
- We minimize impact on related parties.
- We strive for rapid restoration of business operations and stable supply of products and services.
- We take measures to prevent the recurrence of risks.

Basic Philosophy

In operating business, we face many risks including natural disasters, accidents, terrorism, and the spread of new infectious diseases. If an unforeseen incident occurs, we will act giving top priority to the protection of human life. We have also made contingency plans so that we can smoothly continue our business operation even under such circumstances.

Holding Companywide Simultaneous Disaster Preparedness Training

To allow employees to conduct themselves without confusion if disaster struck, we carried out companywide simultaneous disaster preparedness training for a major wide-area earthquake. This training aimed to let employees practice following the rules of decision-making, division of responsibility, roles and the like and to experience them and improve them to be useful in the event of an emergency.

Many employees participated. We held training in Step 0 evacuation in which a person protects himself, evacuating to a designated primary shelter, quickly replying to the safety confirmation system, water spraying by a self-defense fire brigade and life-saving measures by disaster prevention personnel, as well as in establishing an emergency headquarters and gathering information.



Evacuation training (headquarters)

Adopting Emergency Power Supplies for IT

To be able to safely shut down the main servers when a major disaster cuts off the power supply, we installed dedicated emergency generators in the machine rooms at headquarters and in our Komaki plant.

Creating and Distributing the Workplace Disaster Preparedness Handbook and Earthquake Countermeasures and Survival Card

So that employees can act to ensure their own safety first in the event of a natural disaster or fire, we created a Workplace Disaster Preparedness Handbook and Earthquake Countermeasures and Survival Card and distributed them to all employees in the Group.

The Workplace Disaster Preparedness Handbook is being put to use as educational material for disaster preparedness, including by having all employees read and memorize it, and also by having them keep it nearby so they can browse through it and read it out loud to one another to check it. Also, the Earthquake Countermeasures and Survival Card, which further summarizes the main points, is in an easy-to-carry business card size.

Response to New Infectious Diseases

To protect employee's health from the seasonal influenza every year, we strive to prevent the spread of infection. Particularly regarding group infection at workplaces, which may affect our daily operations, we are ready to cooperate with the relevant divisions to implement immediate and intensive measures. During the flu season, we issue weekly reports so that all employees can share the information and take effective countermeasures. In addition, we are attentive to informations on candidate viruses for novel influenza.

Voice of Our Disease Control Organizer

We will continuously implement preparedness for infectious diseases.

In April 2009, the novel influenza virus H1N1 broke out in Mexico and spread throughout the world. In early 2013, human infection with the avian influenza virus H7N9 was identified in China and infection of humans and birds has since continued. Since no one can predict when a new type of pandemic influenza may emerge, we will make all possible preparations, including the establishment of relevant guidelines and the review of stockpiles for emergencies, while paying attention to the actual situation.



Healthcare
Promotion, Human
Resources Dept.

Shiko Abe

Quality Policy and Implementation Structure

Quality Policy and Implementation Structure

Corporate Quality Policy

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

【Action Guidelines】

- We strive to take a customer-oriented approach to accurately understand a wide variety of customers' needs and provide quality products and services, aiming to ensure greater customer satisfaction.
- We encourage all our employees to be actively involved in quality improvement activities, based on companywide cooperation, and to achieve higher goals by making the best use of their own individual abilities and creativity to address problems and challenging issues.
- Accurately responding to ever changing social/market environments and the diverse needs of customers, we strive to continue improving our systems, processes, products and services, aiming to further grow as an energetic and sound corporation.

Basic Philosophy on Quality

Under the continuously evolving business environment surrounding our Group, customers' quality demand is also becoming stricter and more complex. Against this backdrop, companies are increasingly expected to fulfill their corporate social responsibilities, by sincerely listening to customers' opinions, adequately and promptly responding to a wide variety of requests and issues, and meeting diverse expectations from customers.

To appropriately understand the diverse needs of customers and promptly take necessary actions from the viewpoint of customers, we at NGK SPARK PLUG CO., LTD. are committed to making company-wide efforts to improve our quality assurance system, aiming to provide safe and reliable products that ensure greater customer satisfaction.

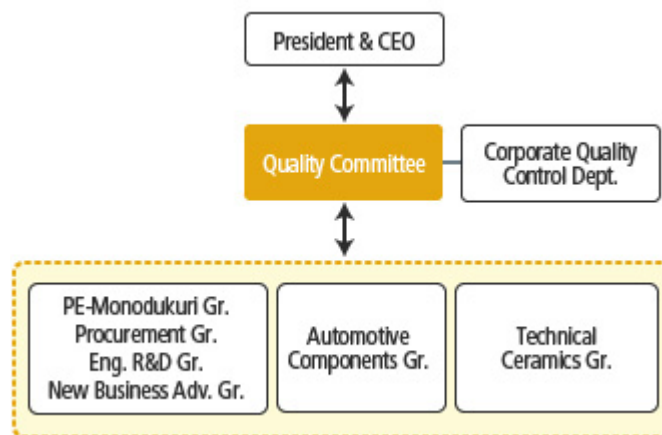
To meet customers' diverse expectations, we also continue actively communicating our products and service information to customers, while at the same time manufacturing products by making the best use of the most suitable technology and our accumulated experience as a manufacturer. Through these efforts, we will work hard to offer new values to society.

Quality Management System

Based on our Corporate Quality Policy, NGK SPARK PLUG CO., LTD.'s divisions have respectively established management systems in conformity with the ISO9000 series or ISO/TS16949 standards, and they are carrying out quality assurance activities.

In addition, with the aim of reinforcing our companywide quality assurance efforts, we have established a companywide system to control and supervise product quality, centered on our Quality Committee, which is chaired by the executive vice president and made up of committee members such as the general managers of groups and divisions. Under this system, the Corporate Quality Control Dept. works, in cooperation with the respective quality assurance departments, to identify and share quality-related risks from a companywide perspective, and it promotes corrective or preventive measures against any identified risks, with the ultimate goal of providing safe and reliable products to customers.

Quality Management System



Voice of Our Quality Control Manager

To instill the 'Nittoku Quality Mind,' we established the Quality Exhibition Room

To visualize the policy of "no compromise on quality" known as "Nittoku Quality Mind," which we inherited from the Morimura-Gumi, and as a place to pass on our distinctive ideas on quality, in February 2014 we opened the Nittoku Quality Exhibition Room (permanently, for in-house education) in our Komaki No. 14 Plant MONODUKURI Education & Training Center.

We aim to hand down to the next generation our belief in letting no quality problem fester, sharing lessons learned, causing no inconvenience to customers, and neither making nor releasing defective products, and we aim to achieve total quality management for outstanding quality.



General Manager,
Corporate Quality
Control Dept.

Toshiki Sawada

Initiatives to Improve Quality

Highlights

Improving Worksite Capacity by SDCA (Standardize, Do, Check & Act) Aiming to Make Superior Manufacturing a Matter of Course

Standardizing our work and operations plays an important role in supporting total quality management (TQM). As a manufacturer, we are promoting the manufacturing worksite SDCA (Standardize, Do, Check & Act) activity to stably and reliably conduct daily management at our manufacturing worksites. We are working to improve the quality of our manufacturing by encouraging awareness of any abnormalities in the worksites and on a daily basis maintaining a worksite without muri, muda and mura (unreasonableness, waste and inconsistency) through good communication.



Manufacturing worksite SDCA activity

Voice of Our Activity Promoter

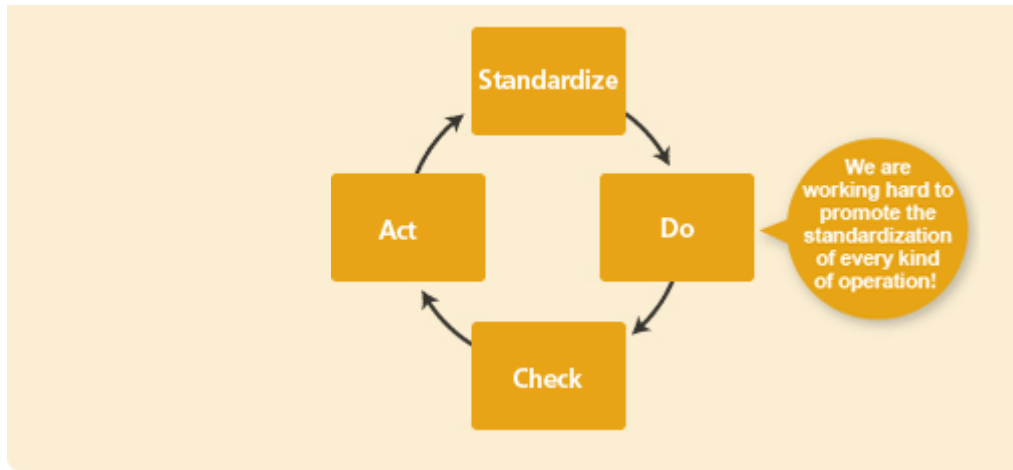
We are endeavoring to standardize our work with the goal of producing superior products through the participation of all employees



SE Production Dept.
NTK Ceramic Co., Ltd.
Sachihiro Murata

In the SE Production Department, to minimize variation in the amount of silicon used in manufacturing of electrostatic chucks, we have established a set amount, where in the past we relied on individuals' intuition or skill. We are also endeavoring to standardize every kind of operation from the arrangement of printing equipment and jigs to the main task.

Through these activities, in addition to increasing the knowledge and abilities of our team members, we are aiming to instill consciousness of the quality necessary at a manufacturing worksite and a culture of kaizen (improvement) in the workplace, as well as aiming to produce superior products through the participation of all employees.



Quality Improvement

NGK SPARK PLUG CO., LTD. is committed to quality management by promoting total quality management (TQM) activities.

- Top-down activities to embody our corporate policy in the policy management.
- Daily management to standardize prescribed operations at each workplace, as well as maintenance and improvement activities.
- Bottom-up activities to foster personnel development and activate workplaces, by encouraging small groups to conduct quality and business improvement activities.

Education

We provide a wide range of QC education and training programs on quality control, management techniques, QC circle activity, quality management systems, measurement management, etc. We also offer practical guidance and support to our employees to ensure that the knowledge gained through these programs is utilized in the workplace. As part of our activities to enhance quality awareness, increase the motivation of our employees and promote quality education, we hold events including quality-related exhibitions and lectures on quality. We also provide practical guidance to our suppliers to promote quality education and solve problems, aiming to encourage them to deliver higher quality parts and materials by implementing continuous quality improvements.

Voice of Our Activity Leader

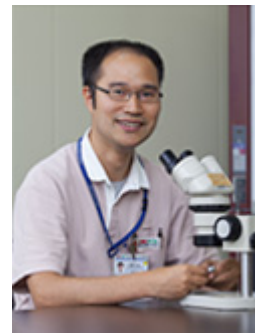
Strengthening high-quality manufacturing through statistical methods

As is often the case, we draw conclusions based on intuitive judgment in daily tasks. For example, when we add further test equipment, we think about the following questions: Did the result change compared with the old one? If we conduct a breaking test, how strong will the design change make the product? Thus, we tend to judge the existence of problems or changes through numerical differences.

Through the application of statistical methods learned in classroom training, the habit of making judgments and reporting them with a reliable basis is taking hold in group members. These judgments had been intuitive in the past.

Also, with the cooperation of the Corporate Quality Control Dept., we are experimenting with incorporating design of experiments and other statistical methods into actual ongoing work themes. We are beginning to be able to efficiently evaluate matters whose mechanisms had not been clarified because parameters have wide variety and the effects of each are complex. We are also starting to be able to quantify in numbers the degree of effect of each individual parameter.

In the future we expect that we can expand incorporation of deciding the direction of development, design criteria and more by applying these methods.



Spark Plug
Engineering Dept.
Spark Plug Division
Keiji Ozeki

Calibration Skill Training and Company-wide Certification System

Measurement equipment is one of the key factors to produce quality products and adequate calibration skills are essential to have reliable measurement results. Therefore we provide calibration skill training and company-wide calibration certification system as a part of our global educational backup activities.

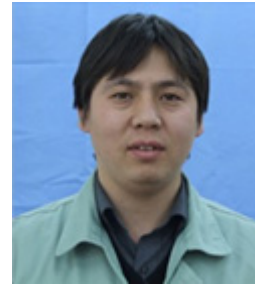
We periodically visit overseas plants to provide calibration skills based on company-wide certification system. In this way, we contribute to produce globally standardized quality products.

Voice of a Quality Control Manager, Overseas Plant

I recognized again the importance of measurement control

I asked for calibration skill training because I recognized again the importance of measurement control in a manufacturing manager meeting. They offer very useful proposals which contribute to quality assurance, such as provision of guidelines for measurement equipment control, certification system for calibration skills, and on-site training.

We keep on making efforts to improve our manufacturing ability with their backup activities.



General Manager
Quality Assurance
Department
NGK Spark Plug
(Shanghai) Co., Ltd.

Zhenying Yu

NQC Activity (Small Group Improvement Activity)

We are implementing Small Group Improvement Activity (QC circle activity) aimed at advancing human resource training and workplace capacity by continually solving problems and issues we face in daily work. We call this activity "NQC activity."

During Quality Control Month every November, the company recognizes successes resulting from NQC activity at a companywide presentation, and the best examples are given the President's Award. Two circles that received the award in fiscal 2013 were evaluated particularly highly because all the members of the circles participated, they achieved their targets in activities based on the 5 Gen principle of carefully observing the worksite, and through their activities they increased members' knowledge of kaizen and improved communication. The 5 Gen are genba (the worksite), genbutsu (the product), genjitsu (reality), genri (principles) and gensoku (fundamental rules). In addition, at the company improvement practice presentation and award ceremony every June, commendations are given to small groups implementing exceptional NQC activity in daily operations throughout the year and overseas affiliates achieving outstanding improvement practices.

We support NQC activity and improve quality by strengthening the organization that promotes them, such as by creating activation teams which Certified QC Circle Trainers etc. participate in and stimulating employees through presentation meetings and training programs outside the company.

Promoting NQC Activity (Small Group Improvement Activity) in Each Department

To activate NQC activity at each worksite, we formed new expert committees at four plants in fiscal 2013. These committees are made up of a Certified QC Circle Trainer and expert advisors (members selected from each division and department). In particular, they aim to give expert advisors knowledge and practical skills related to NQC activity through two years of activities (as internal workshop instructors, promoters and commentators and in external training courses), and after their terms those advisors return to their respective worksites, increasing the number of well-known QC activity advisors available on a daily basis. In this way, we are working to activate NQC activity.

Also, in the realm of management, we aim to create people and workplaces that can find problems and issues and solve them on their own and independently by linking each division's administrative office with the expert committees. Through this kind of continuous improvement of the implementation structure, we will work to activate NQC activity, improve quality and put in place people who can achieve solutions in every area of business activities throughout the company.



Promotion of NQC activity by expert advisors

Voice of Certified QC Circle Trainer

I joined the expert committee as Certified QC Circle Trainer this year

I belong to the Human Resources Dept. As Certified QC Circle Trainer, I became a member of an NQC activity invigoration team known as the expert committee in fiscal 2014. For administrative departments, it can be more difficult to carry out NQC activities, such as theme selection, than for manufacturing departments. Administrative departments may have more trouble selecting themes, grasping the status quo and verifying results.

However, with regard to the distinctive problems and issues facing administrative departments, I would like to contribute to invigorating NQC activity by putting my knowledge, experiences and know-how to use and continually providing guidance and support using flexible and unique thinking.



Human Resources Dept.

Yoko Kato

Support Activities Using Measuring Techniques

Measurement technique plays an important role not only in products quality assurance, but also production equipment reliability improvement. It clearly shows items to be improved and increase our work efficiency by quantifying various phenomena, such as a new equipment performance, deviation from the design, and periodic maintenance results.

For local procurement of production equipment, overseas plants need to verify conforming parts, and it requires proper on-site incoming inspection based on measurement techniques. We would like to support for improving on-site incoming inspection capability by providing training for measurement technical skills.

Voice of a Plant Manager of a Group Company

Encouragement of equipment maintenance activities using measurement techniques

Detailed root cause analysis is very difficult though we can anticipate equipment malfunction by irregular sounds or vibrations. We think data analysis based on adequate measurement is available to know production equipment status.

The time series analysis enables to show the level of equipment deterioration in advance. At the headquarters plant in Nino, data gathering using measuring techniques has begun with the goal of efficient maintenance activities based on condition-based maintenance (CBM).



Plant Manager
Nittoku Spark Tech
Tono Co., Ltd.

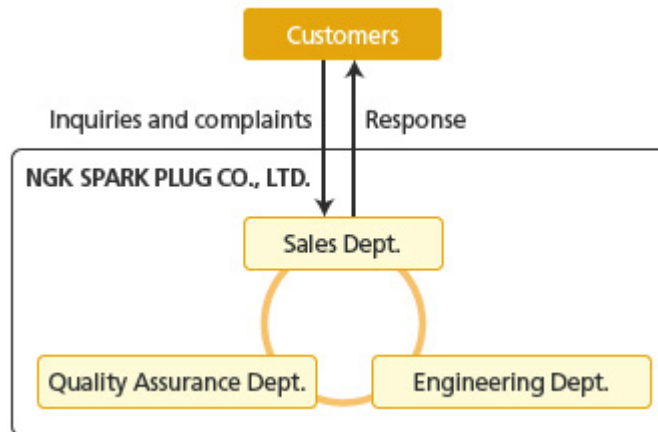
**Toshiyuki
Matsusaki**

Communicating Information to Customers

Responding to Inquiries and Complaints

Inquiries and complaints on our products received from customers are first accepted at our sales division. Then the quality assurance division works together with the technical division to quickly respond and take necessary actions to the inquiries and complaints.

Response to Inquiries or Complaints



Information Dissemination through Websites

Our website named "Plug Studio" disseminates information on spark plugs, exhibitions at events, motor sports, etc. Using our applicable product number searching system, users can find a product number and the number of spark plugs applicable to the respective type/model of automobile.

▶ Plug Studio

Communication through Exhibitions and Events

We use opportunities provided by various exhibitions and auto races to directly communicate with customers at the venue by displaying our products and technologies. In doing so, we are able to keep abreast of the ever-changing needs of our customers.

Responding Product Defects

We make it a rule that any product defect we have detected and found to possibly cause harm to customers be immediately announced to the public through our websites, newspapers, trade journals and other media as appropriate and that we simultaneously implement countermeasures against such defects to protect all users.

With Our Shareholders and Investors

Highlights

Accelerating Communication with Our Shareholders and Investors

We value communication with our shareholders and investors, and are working to accelerate it. We increased the number of briefings for individual investors in the fiscal 2013 and held them not only in major metropolitan areas, but also in regional hubs. We will continue to increase the number of opportunities to directly explain the company and its policies to all our investors.



Briefings for individual investors

Information Disclosure Policy

Aiming to become an enterprise capable of receiving great support and popularity from people around the world, we strive to conduct transparent business operations and fair information disclosure.

【Action Guidelines】

- We disclose any corporate information required to be disclosed by the Financial Instruments and Exchange Act and other laws and regulations, in an accurate and timely manner.
- We actively disclose our corporate information, which is not subject to laws and regulations however deemed to be important for stakeholders, through our daily actions, such as issuance of a press release and updates of our website.
- We focus on enhancing communication with our shareholders, investors and other stakeholders to further promote mutual understanding with them.

Basic Philosophy

We at NGK SPARK PLUG CO., LTD. are well aware that promoting transparent and fair information disclosure is indispensable to having all our stakeholders better understand and evaluate our business operations. To achieve this goal, in addition to meeting the legal standards of information disclosure, we also strive to strengthen information disclosure through various media and promptly post information on our website, with the aim of ensuring stakeholders' greater trust in our business operations.

▶ Investor Relations

Shareholders' Meeting

We hold our Ordinary General Shareholders' Meeting every June, at which we explain the business results of the previous year to our shareholders, who then vote on matters to be resolved. We also answer questions given by them directly.



the 113th general meeting of shareholders

Distribution of Financial Information in Japan and Abroad on a Timely Basis

We were posting the presentation materials that we use at financial results information sessions only on our Japanese website so far. From the results briefing of the fiscal 2013, we post the English version of the presentation materials on our international website at the same time. We are also working to disclose our information in a timely manner on our day-to-day investor relations activities both in Japan and abroad.



English presentation material

Voice of our Investor Relations Representative

We will strive to increase the number of NGK SPARK PLUG fans.

NGK SPARK PLUG has a low profile at this moment, and we strongly believe that our investor relations activities are very important since many investors have interests in our business when we talk with them at briefings. Through our various activities, we will strive to increase the number of NGK SPARK PLUG fans.



Public Relations
Office

Hiromi Kitagawa

Returning Profits to Shareholders

Returning profits to our shareholders is one of the priorities on our agenda, and we aim to maintain consistent and stable payment of dividends. Presently, we seek to achieve a consolidated dividend payout ratio of 20% or more, and intend to continue semiannual payment of dividends. Our dividend payment plan is based on comprehensive financial strategies taking into consideration the following budgets; R&D expenses (as needed for future growth), capital investment (to expand or streamline our business) and internal reserves (for future investments). Dividend per share during fiscal year 2013 was 28 yen.

With Our Suppliers

Highlights

Promoting CSR Procurement by Surveying the State of Suppliers



In May 2013, we established our CSR Procurement Guidelines and posted them on our website, and in July we published an English version. We announced it at our corporate policy conference, and carried out an investigation and analysis using a checklist in order to understand suppliers' status regarding their CSR initiatives.



CSR Procurement Guidelines



Corporate policy conference

Procurement Policy

We aim to realize globally optimal procurement based our quality products principle. To this end, we focus on strengthening cooperation with suppliers and promoting our CSR efforts throughout our supply chain system, while at the same time striving to carry out proper purchasing transactions when procuring materials and parts, based on the following guidelines:

【Action Guidelines】

- We conduct rational transactions based on fair, transparent, and open competition.
- We select a supplier based on comprehensive assessment of its product quality, technology, prices, deliveries, and efforts to continuously make improvements.
- Aiming to become a good corporate citizen, we are engaged in business operations complying with applicable national and international laws and regulations.
- We ensure stable procurement of better quality products at a reasonable cost and an earlier delivery.
- Aiming to procure more eco-friendly products, we strive to promote our green supplier system.
- Aiming to have our suppliers understand our company, we strive to establish mutual trust with our suppliers. Recognizing that we and our suppliers can be good partners for each other, we strive to realize out mutual development.

Basic Philosophy

It is indispensable to establish healthy partnerships with our suppliers to procure better raw materials and parts in a more timely and stable manner. Through our supply chain system, we work hard together with suppliers, aiming at mutual prosperity and further strengthened mutual trust.

Promoting CSR-Oriented Procurement

We promote the following activities for suppliers and our employees respectively, for the purpose of ensuring fair transactions with suppliers and the establishment of mutually beneficial sound partnership with suppliers.

<For suppliers>

- We explain our CSR procurement guidelines on our websites.
- We actively communicate with our suppliers to explain our corporate policy through corporate policy conferences, etc.
- We explain our green procurement guidelines on our websites.
- We provide face-to-face assistance through diverse activities, including 5S workplace improvement activities and seminars.

In particular, we address a wide variety of topics in seminars for our suppliers, including quality, process control, occupational safety, the environment and CSR.

<For our employees>

- We hold seminars for our procurement personnel to ensure their compliance with the Subcontract Act.

Voice of Our CSR Procurement Manager

To Continuously Develop Along With Our Suppliers

Calling for changing "from a cost center to a profit center," our Procurement Group aims not just to engage in conventional cost management, but to build an organization that can closely connect NGK SPARK PLUG with suppliers through purchasing and make proposals and value propositions. CSR is one important element of value that a company can offer. For this reason, last year we created and published our CSR Procurement Guidelines. We will promote CSR together with our suppliers, aiming to link it to everything from mutual development to the continuous development of society.



General Manager
Procurement Group
Hiroyuki Maeda

Sharing Corporate Policy

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

At a conference we held in May 2013, we explained our sixth medium-term management plan and respective departments' policies under the plan, as well as the direction in which we should advance. We also announced our intention to overcome the severe business climate. We demanded responsible measures from suppliers on improving product quality, reducing costs, promoting CSR initiatives and more.



Improving Our Supplier Evaluation System

We already had a system in place for evaluating our suppliers with regard to quality, deadlines and cost, but we improved it to be more fair, impartial and open. Furthermore, we have recognized suppliers that received particularly excellent evaluations at our corporate policy conferences.



Voice of Our Supplier Evaluation Organizer

We perform fair and open evaluations.

Our suppliers are extremely varied and wide-ranging with regard to the scope of our dealings with them, type of product and other factors, so it was not easy to produce a fair and open framework. For our suppliers, the evaluation could also be called a report card, so every day we work with an awareness of that high level of responsibility.

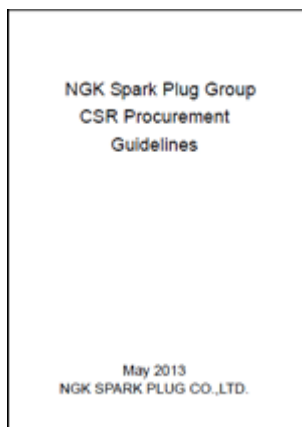


Supplier Relations &
Development
Procurement Group
Naoki Kato

CSR Procurement Guidelines

In May 2013, we released the NGK SPARK PLUG Group CSR Procurement Guidelines, which are based on the Group's procurement policies and a complete picture of the Group, including Corporate Philosophy and CSR Policy.

We are positioning the promotion of CSR as one important element of working for continuous growth of the supply chain as a whole. We ask that suppliers understand this intent and put it into practice.



CSR Procurement Guidelines [484KB] [PDF](#)

▶ Japanese version

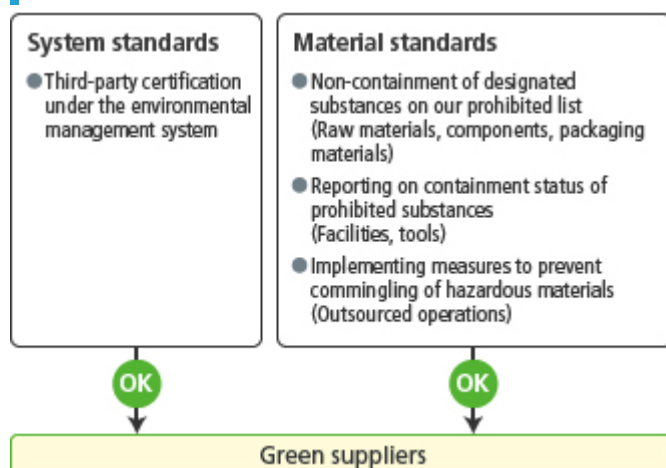
Green Procurement Guidelines

These guidelines explain the basic concepts of our green procurement based on our environmental policies.

We reviewed the list of related chemical substances in June 2014 and released version 8.04 of the guidelines. We ask our suppliers to study the guidelines and cooperate with our green procurement.

▶ Green Procurement Guidelines (Japanese version only)

Certification Standards



Certification

Green Purchasing Requirements

In the purchase of office supplies and appliance, we choose an environmental consideration type product.

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).

Version 2 of our "Green Procurement Guidelines (In-house Use)"

Human Resource Policy

Human Resource Policy

We acknowledge that employees are the most important management resources. In the light of this, we respect the diversity and individuality of our employees and cultivate abundant human resources, striving to promote the further development of our Group as a whole.

【Action Guidelines】

- Respecting the rights of our employees, we eliminate discrimination and harassments in employment, and avoid the use of forced labor or child labor.
- We secure and foster human resources who help pass down our quality products principle to the following generations. To this end, we provide learning opportunities and other programs to support the career development of our employees.
- We establish a personnel evaluation system to ensure that people with different qualities can fully realize their own capabilities.

Basic Philosophy

Employees are the most important management resource. We respect the diversity and individuality of our employees, aiming to cultivate a wide variety of human resources. We also place an emphasis on offering a desirable working environment in which individual employees are encouraged to make full use of their capabilities and potential.

Voice of the General Manager of Human Resources Department

To train and support the employees who will create the future of NGK SPARK PLUG

Things are changing rapidly around our company, such as people's values, markets, increasing influences of developing countries and so on. We, the Human Resources Department, define our mission as "creating foundations to produce 'diverse human resources' to support managerial and business strategies," and we are framing plans that allow us to create a NGK SPARK PLUG with the following environments: [1] one that continues to develop diverse human resources with a can-do spirit and the ambition to create new businesses, products, technologies and markets, [2] one that identifies diverse employees in domestic and overseas units so as to allow them to use their talent and aspirations effectively, and [3] one that spreads the values of globalism, speed and fairness and encourage employees to demonstrate their ambition and talent.

We will take the following measures: [1] firmly establish a new human resources system at NGK SPARK PLUG and expand it to affiliates, [2] establish a recruiting and education management method to allow us to strategically and continuously hire and train diverse human resources, and [3] lay the foundation for training the next generation of global managers.

We will train and support trusted employees with a can-do spirit who can distinguish valuable corporate culture from that which should be changed, who never simply resign themselves to the present situation, who make strenuous efforts to cope with drastic changes and who have an aspiration to realize an innovation.



General Manager
Human Resources
Dept.

Masakazu Mori

Establishing and Putting to Work a New Human Resources System

We began making use of our new human resources system in April 2014. This system was established with the objectives of achieving the ideal NGK SPARK PLUG envisioned for ten years later in our NITTOKU SHINKARON (The Evolution of NGK SPARK PLUG) and correcting problems in our previous human resources system.

We will create a work environment where diverse human resources can grow and flourish, appropriately reward efforts to create value, and when the business situation changes, reallocate human resources in a timely and appropriate manner.

Main human resources systems

- Occupation type, qualification and managerial position systems
- Wage, bonus and retirement money systems
- Annual salary system
- Rating system and objective management system
- Continued employment system



Human Resources System Working Group

Voice of Our Human Resources Organizer

Anticipating challenges that will change the company

This is a big change from our previous human resources system, and people who can truly bring about change are required. We have reformed the system that forms the foundation, so now it is necessary for individual employees to change.



Human Resources Dept.

Tsuyoshi Takahashi

Respecting Diversity

Highlights

Promote the Active Participation of Women as a Management Strategy and Devising and Executing Action Plans



Vice President and CFO Shinji Shibagaki at a lecture meeting for general managers and senior managers

We are promoting the active participation of women as a management strategy from the top down. First, we held training for all managers in fiscal 2013 with the theme "Change your consciousness." We also designated each department manager as a leader, and they formulated action plans and carried them out.

We held training for women in non-managerial positions as well. They were able to build networks that transcend their positions through group discussions, and talking directly to the company president, vice president and senior managing officer gave them the opportunity to deeply understand how serious the company is about promoting the active participation of women.



President and CEO Shinichi Odo at a discussion meeting with female employees with a prospect of promotion



Women Members of DIAMONDO Project

Voice of the Project Leader

We aim to create a company where all employees can play an active role

Our company has many excellent female employees, and not making full use of them is a waste. I want our company to be one where all employees can work comfortably and play an active role.

Etsuko Otsuka (right)

Accounting and Finance Dept.

Percentages of Female Employees with a Prospect of Promotion and Managers



Promotion of Diversity

We promote diversity in our organization as we believe that diversity and inclusion are essential for companies to attain sound growth and ensure happiness for all employees. Here, diversity means an employee-friendly workplace that accepts different personnel "assets" (one in which all people regardless of their gender, age, disability or nationality, enjoy their work) and includes diverse values and ideas that move the company forward.

Work-Life Balance

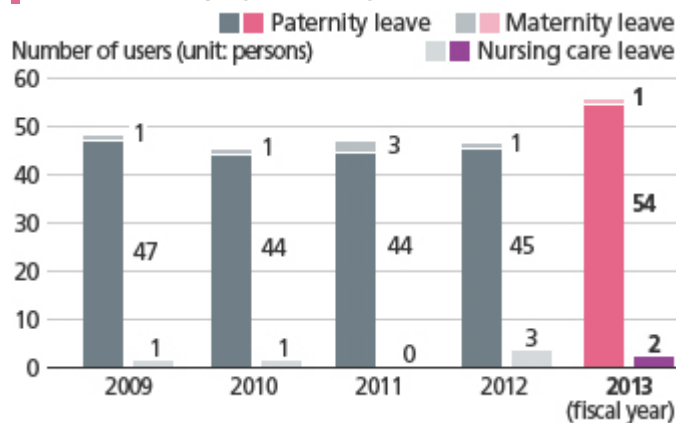
In fiscal 2013, the number of employees in paternity/maternity leave has exceeded 50, and after the leave, almost of them returned to work.

The company offered the opportunity to the employees to spend more time nursing children than before, by extending availability of shorter work day for child rearing beyond the conventional period of the first grade of elementary school to the third grade.

Also, as a measure to shorten working hours, we will continue with designating Wednesdays as "No Overtime Day," and we are encouraging the well-planned use of yearly paid holidays and introducing a system of special "refreshment" vacation.

(Under the refreshment vacation system, employees who have been with the company a fixed number of years are encouraged to take three, five or 10 days of holidays.)

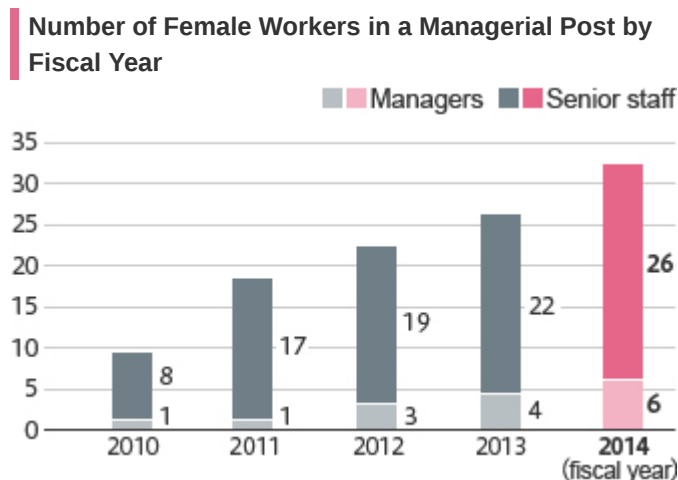
Number of Employees Using the Leave Schemes



Promoting the Active Participation of Women

We launched the "Diamond Project" to promote the empowerment of female employees in June 2013 to give female employees chances to widen their sphere of activity. We are implementing these activities from the top down with the following principles: "changing the corporate culture," "changing consciousness" and "changing the environment."

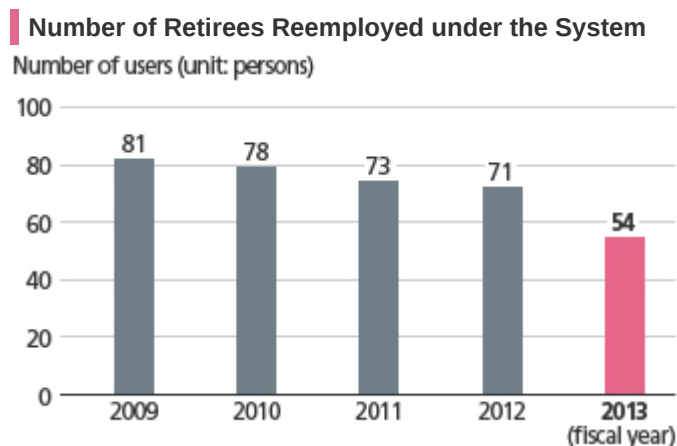
We held a Forum for Female Employees with a Prospect of Promotion and implemented a Program to Empower Female Employees with a Prospect of Promotion to support female employees in building careers and stimulate their ambitions. We also held lectures and workshops for all managerial employees to deepen their understanding of diversity management. Furthermore, in all departments including those of Japanese affiliates, department heads devised and carried out action plans that suit their own departments. We are also expanding systems to create a workplace where female workers derive greater satisfaction from their work.



Post-retirement Reemployment

In 2001, we introduced a post-retirement reemployment system, with the aim of taking advantage of long-accumulated knowledge and expertise of retired employees and also satisfying their desire to stay at work.

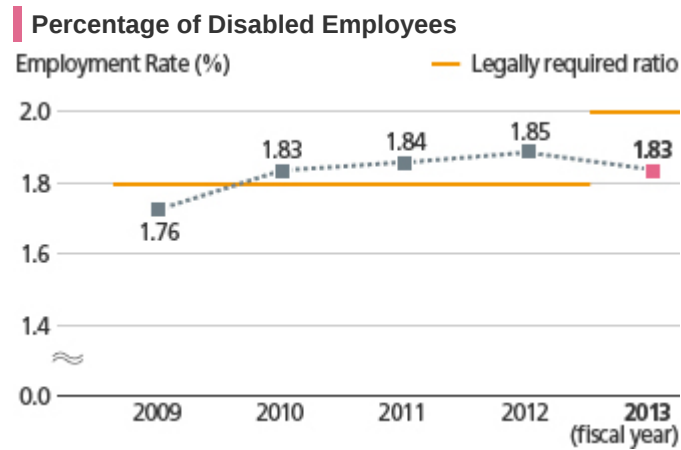
Employment of the elderly population is an important issue for our society, as the national pension system has been reformed, deferring the starting age of recipients, and the demographic shift into aging society is quite rapid. We are working hard to prepare an environment that meets the needs of older workers, our company and the worksite and use it in a way that takes into consideration the aptitudes, motivation and abilities of senior employees.



Employment of the Disabled

The ratio of disabled employees at our company was 1.83% at the end of fiscal 2013. The legally required ratio was raised to 2.0% in April 2013, and we unfortunately did not meet that requirement.

We expanded our recruitment to target mid-career candidates in addition to new graduates, and in addition to hiring two new graduates, we hired two mid-career workers. We also have been conscious of the need for safety and are endeavoring to create a workplace where they can do their jobs safely.



Human Resource Development

Basic Philosophy

We aim at the development of those who can communicate the company's traditional attitude of emphasizing quality-oriented principle to younger employees, and also those who are dependable and have the ability to cope with changes inside and outside the organization and follow through reforms. To this end, we implement diverse education and training programs systematically, based on our corporate Human Resources Development Concept, with the aim of ensuring continuous capacity building of employees.

Education/Training Programs

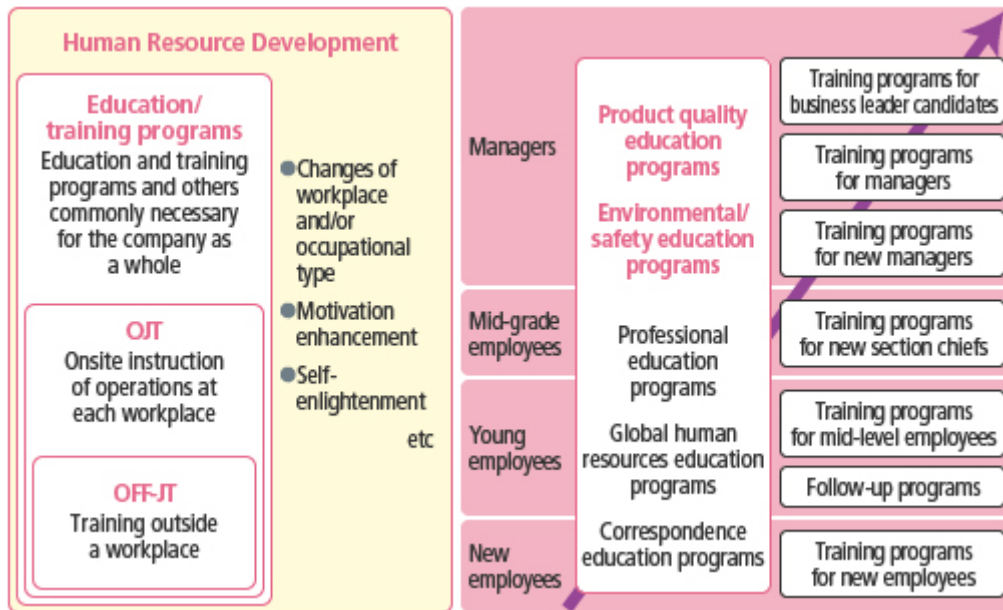
Our education and training activities consist mainly of OJT (on-the-job-training), through which employees are trained to acquire skills and knowledge in their normal working situation. We also have OFF-JT (off-the-job-training), providing employees with learning opportunities outside their respective workplaces. We have a wide range of OFF-JT programs that include training by organizational level and role to provide necessary knowledge and skills, product-quality education, environment and safety education, manufacturing education, education in global business and career improvement support. During fiscal 2013, 6,223 employees participated in OFF-JT programs.

In fiscal 2013, we have completely changed our training organization to allow employees to carry out "expected roles" in each workplace and job in order to achieve the ideal NGK SPARK PLUG envisioned for ten years later in our NITTOKU SHINKARON (The Evolution of NGK SPARK PLUG)



Education and training

Ability Training System Diagram (OFF-JT)



Labor-Management Relations/ Compliance with Labor Law

Labor-Management Relations

Labor-management relations should be oriented to the combined employer-employee effort to contribute to society through the provision of good products and services. At NGK SPARK PLUG, both labor and management understand their respective responsibilities and strive to improve the work environment through mutual trust and cooperation.

Labor-Management Conferences

Labor-management conferences are held three to four times a year on individual workplace and companywide bases, providing communication opportunities. These are chances to discuss various topics including the company's situation and how to improve the labor environment, and opportunities for employees to have their opinions heard.

Reduction in Working Hours

We have a "no overtime day" once a week. On this day, labor union members and management representatives patrol all workplaces to get all employees to leave at the designated time.

Anti-Harassment Measures

The company management and the labor union are working together to prevent any harassment and to protect the human rights of all employees.

Work Rules explicitly prohibit all sorts of behavior that constitute harassment, and we have an anti-harassment committee responsible for the prevention of such behavior through the company newsletter and provide level-specific training programs.

Also, all plants have an advisor, who is designated jointly by the company management and the labor union, to create an environment where it is easy for employees to voice concerns. A total of eight cases of power or sexual harassment were handled in 2013.

Greeting Campaign

We have been continuing our "greeting campaign" since September 2008, encouraging employees to say "good morning" with a smile at the start of each day and "goodbye" when leaving work. Once a month, in the morning and after work, representatives of the labor union and the management stand on the sidewalks at the premises to greet employees.

Group Response to Domestic Labor Laws

Individual affiliates need to respond to frequently updated labor laws. Even if a single company in our group does not comply with a law, the responsibility lies with the entire group. Therefore, we always keep our eyes on potential risks to prevent noncompliance. An exchange meeting is held every quarter between general managers of our affiliates, where problems that they face are discussed and information is shared. The entire group continues to join hands in compliance.

Voice of Our Human Resources Organizer

Deepening our own understanding and passing it on to affiliates

We have greatly reformed our traditional human resources system, completely changing the system, which forms a foundation for the company. Now individual employees are required to change on their own. In fiscal 2013, to achieve proper recognition of harassment and the management of working hours, we explained the basic rules and philosophy to affiliate companies once again. Insufficient understanding of labor standards may very well lead to violations of laws and regulations, so we are endeavoring on a daily basis to deepen our own understanding and working exhaustively to ensure our affiliate companies understand as well.



Human Resources
Dept.

Kenji Takagi

Examples from Overseas

Human Rights in US Employment

The United States is a melting pot; a very diverse and culturally vibrant country. Due to this diversity, many employment laws have been enacted to protect against discrimination and to provide equal employment opportunities to all individuals qualified to work in the USA. The major laws that protect against discrimination are Title VII, Pregnancy Discrimination Act, Equal Pay Act, Age Discrimination in Employment Act, American with Disabilities Act, and The Genetic Information Nondiscrimination Act. These, and other employment laws, assure equal employment opportunity without regard to race, ethnicity, age, color, religion, sex, national origin, pregnancy, ancestry, sexual orientation, disability, economic circumstance, marital status, and military or veteran status. Protections are afforded to all personnel actions, including recruitment, evaluation, selection, promotion, transfer, compensation, benefits, training, and termination.

NGK Spark Plugs (USA), Inc. is committed to providing a professional work environment free of discrimination. We realize this commitment and comply with the laws mentioned above by ensuring that our processes for recruitment, retention, compensation, etc. are based solely on the requirements of the position and performance of the individual. We provide training to all managers on interviewing techniques, as well as what questions are legal to ask during an interview. All questions asked must be directly related to the position or company; no personal questions, such as family status, children, age, or medical conditions/disability, can be asked during any step of the recruitment process. Even resumes in the USA do not include personal information, other than name, address, education, work history, and professional affiliations. The resume and interview process is structured in such a way to ensure the decision to hire, promote or transfer is made based on an individual's qualifications and fit, rather than personal characteristics.

Occupational Safety and Health Basic Policy

Occupational Safety and Health Basic Policy

We strive for occupational safety and health as the starting point of business activities on the basis of respect for human life and dignity.

【Action Guidelines】

- Observe laws and self-standards relating to occupational safety and health.
- Reduce risks and elimination of work-related accidents through sustainable improvement in occupational safety and health management system and performance.
- Prevent health hazards and promote the physical and mental health of employees.
- Publicize this policy among all the employees, promote consciousness through training and enlightenment, and expand toward the overall participation in labor safety and health activities.

Basic Philosophy

Occupational safety and health is the most familiar theme for employees in their daily duties. It is the most important theme for enterprises as well in their efforts to provide a working environment in which employees are encouraged to do their best in operations. We are well aware that offering a secure and safe workplace is our important corporate responsibility.

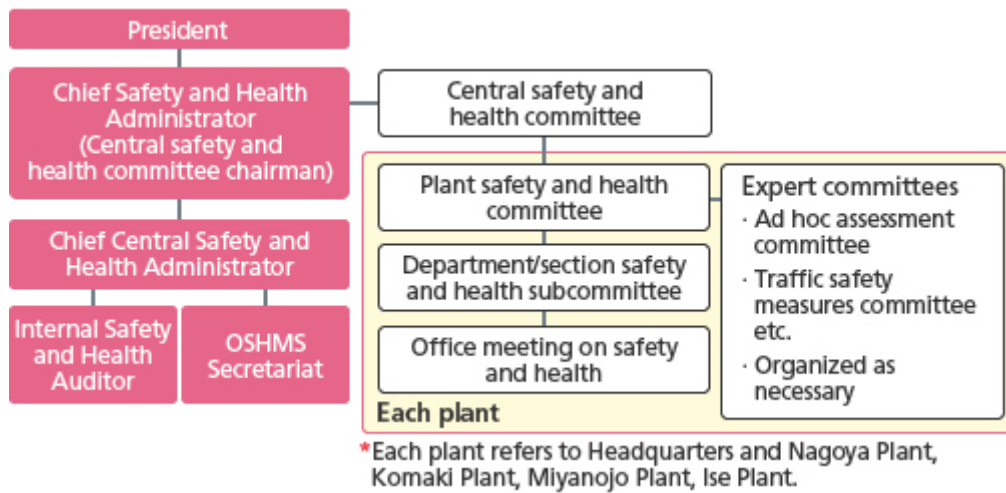
To this end, we established our occupational safety and health management system in 2006, aiming to realize "zero accidents" and secure safety at all workplaces. We will continue strengthening our safety and health management activities at a company-wide level, aiming to establish a corporate culture of "safety first."

OSHMS

With the aim of eliminating on-the-job accidents and creating a comfortable, safe work environment, we have established an in-house occupational safety and health management system (OSHMS). We are accredited as complying with JISHA OSHMS Standards.

Each plant and office set safety goals and safety plans in accordance with our OSHMS guidelines, aiming to conduct OSHM activities based on a "total involvement" principle. To attain a step-by-step improvement of our safety status, the progress and results of such OSHM efforts are verified by our internal safety and health auditors as well as the plant safety and health committee and the central safety and health committee.

Safety and Health Promotion Organization



Targets & Results for Fiscal 2013

Evaluation standards achieved: ○ Not achieved: ×

	Fiscal2013			Fiscal2014
	Target	Result	Evaluation	Target
1. Elimination of work-related accident	Promotion of skill assessments	• Departments were behind on devising structures and understanding work	×	Reinforcement of chemical substance control
	Promotion of new risk assessment (in the workplaces concerned)	• Were able to implement in the manufacturing departments (with some delays).	○	Promotion of full understanding of hazard sources (workplaces developing new risk assessments)
	Examination and revision of irregular working procedures	• Irregular work was insufficiently incorporated into standards.	×	Reinforcement of safety and health patrols (action and equipment)
2. Improvement of work environment	Improvement of the work environment (safety and health) in workplaces	• We were mostly able to improve the work environment, but some workplaces using lead did not reach the target values when we measured the work environment. However, we were able to reduce the number.	○	Improvement of the workplace environment (health)

	Fiscal2013			Fiscal2014
	Target	Result	Evaluation	Target
3. Promotion of health	Guidance on the self-management and the prevention of health by the help of medical examinations	• Met almost all health targets (except for some areas). • Promotion of a no smoking policy, exercise and specific health guidance. • Holding health lectures and health promoting events • Effective use of the Self-Care Handbook	○	Promotion of self-management of health
	Self-care and line care for mental health	• Management of overtime working hours (less than 80 hours per month) • Instruction through in-house education and company newsletter		Workplace checks for personnel with suspected health problems
4. Enhanced of education, training and enlightenment	Creation of an annual education program and implementation of education	• Education in OSHMS fundamentals • Special training (organic and chemical substances, dust, etc.) • Education by organizational level • Education of internal inspectors, etc.	○	Implementation of safety and health education and training, use of education through experience
	Implementation of safety and health patrols (with importance to activities)	• Safety and health committee inspection tour (monthly) • Industrial physician inspection tour (monthly) • Safety and health patrols focusing on behavior (monthly) and other workplace inspection tour activities		Promotion and establishing of pointing and calling
	Reading over of the safety and health rules and check in workplaces	• Reading out loud safety and health rules (four times per month or more) • Reading out loud safety and health rules and inspecting the workplace (implementation rate 100 percent)	○	Implementation of troubleshooting skill evaluation and, as required, risk prediction

Occupational Safety Activities

Highlights

We are Using Simulation-based Training for Improving Safety Awareness



We provide simulation-based safety training with equipment that allows trainees to experience the terror of getting caught in moving equipment and the importance of pointing and calling methods.

In fiscal 2013, we additionally installed new equipment so that trainees can learn about the other types of dangers that trainees can learn about the other types of dangers. We also established a risk prediction training space to remind of hidden dangers by showing dummies with unsafe position that may lead to accidents in worksites.



Simulation of being caught in a machine



Risk prediction training with dummies

Voice of Training Manager

Keep colleagues from dangers and create a safe workplace

I always say the above words to trainees in our safety training. Through our training, we expect all members to acquire a keen sense of hidden dangers and risks in their worksites and to find solutions to create safe work environments.



State of Education



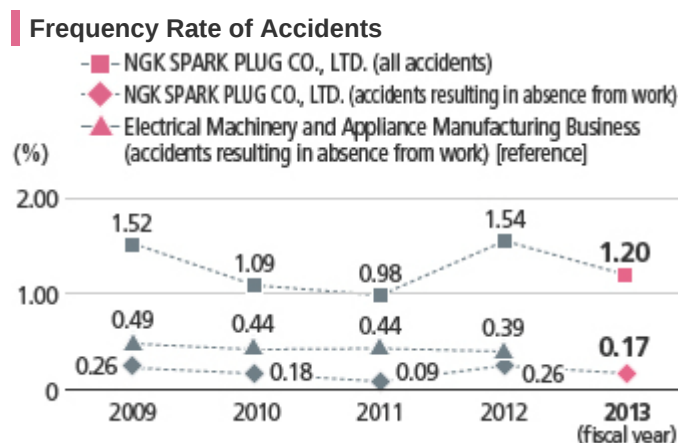
MONODUKURI Ability Enhancement Dept.

Junichi Tanabe

Elimination of Occupational Accidents

In fiscal 2013, we achieved zero accidents at the Headquarters Plant for the first time in 13 years and at the Ise Plant for the third year in a row. The total frequency rate fell to 1.25 from 1.49, and the results of labor and management's joint safety and health activities are becoming apparent little by little.

However, more than half of accidents that occurred were due to mishandling during troubleshooting of equipment, and preventing equipment accidents, which tend to be major, is an issue. That is why in fiscal 2014, we have set the goals of promoting new risk assessment, carrying out on-the-spot Kiken-Yochi (risk prediction) and entrenching the use of pointing and calling to advance our accident prevention activities.



Enriching Education and Awareness

We are working to stimulate everyday safety and health activities in the workplace by carrying out safety and health education appropriate to each organizational level, including new employees, third-year employees, leaders, subsection chiefs and managers.

We distribute "the Handbook for Safety and Health Management" to all employees in the workplace as a daily activity tool and ensure that each employee takes safety action as a member for creating a safe environment at NGK SPARK PLUG. Supervisors are actively managing safety and health in the workplace through such activities as workplace patrols, Kiken-Yochi (risk prediction) training and sharing examples of Hiyari-Hatto (near misses). The status of these daily workplace activities is confirmed through internal audits and other means.

The Safety and Health Committee contributes to building safe and secure workplaces through conducting inspection tours of the other departments and equipment, and pointing out issues that are difficult to notice through voluntary inspections by one's own department, making use of the merits of cross-departmental activities.

Safety and Health Committee Activities with Workers in the Workplace

As one activity to create a safe and secure workplace, the Safety and Health Committee conducts workplace inspection tours. Committee members from other departments visit each workplace and carry out improvement activities such as exposing danger areas, taking permanent countermeasures and reexamining health management. Inspection tours by committee members from other departments allow each department to share its initiatives and culture and raise the consciousness of occupational safety and health.

Main inspection items

- Exposing hazards
- Installation of protective covers
- Installation of area sensors
- Harmful substance exposure prevention
- Status of local exhaust ventilation installation
- Work environment checking



Implementing monthly safety and health inspection tours conducted jointly by labor and management

Voice of the Safety and Health Committee Secretariat Organizer

We conduct inspection tours to help form a safety culture

Committee members wearing green vests conduct inspection tours to increase safety consciousness. During the tours, committee members not only point out problem areas, they also listen to employees' concerns and then cooperate with employees to find solutions.



Environment and Safety Management Dept.

Makoto Tagahara

Improvement of Working Environment

We conduct working environment measurements in accordance with the Industrial Safety and Health Act, targeting workplaces that handle chemical substances (organic solvents and specified chemical substances) and workplaces subject to significant dust pollution or severe noise. Plants and operational sites that have been classified in the second or third management category are especially encouraged to implement effective solutions so that they can be reclassified in the first management category. We also take measures to prevent cases of heat stroke in the summer by measuring the WBGT (Wet-Bulb Globe Temperature used as a heat index) in hot workplaces, encouraging an adequate intake of water and salt, providing cooling gear and the like, holding seminars on preventing heat stroke, and installing oral rehydration solution vending machines.

In our offices, we measure the level of lighting and CO₂ concentrations to ensure that the work environment is always acceptable. In winter, we install humidifiers in our offices to help prevent the spread of colds and influenza.

Health Promotion

Health Promotion

Our industrial physicians, general practitioners and public health nurses follow up with employees who have abnormal results in their health checkups and refer them to medical institutions when necessary. These coordinated efforts allow employees to maintain and improve their own health.

We also include health information in the company newsletter to raise employees' health consciousness and promote self-management of health.

Health Checkups

Our industrial physicians, general practitioners and public health nurses follow up with employees who have abnormal results in their health checkups and refer them to medical institutions when necessary. These coordinated efforts allow employees to maintain and improve their own health.

We include health information in the company newsletter every month to raise employees' health consciousness and promote self-management of health.

Strengthening Mental Health Care

We arrange in-house and external training programs for managers in observing workers' mental health. We also provide employees with a Self-Care Handbook and encourage them to use the stress check sheet in the handbook to increase their awareness of the importance of self-care. We hold in-house lectures to teach about disease prevention and self-health management. We have also established a hotline that employees can call for counseling when they are worried about their mental state.



The Self-Care Handbook
(Japanese only)

Efforts by NGK SPARK PLUG Health Insurance Society

Working together with the company and the labor union, the health insurance society provides a wide variety of programs to support the mental and physical good health of member workers and their families.

Specifically, health management and disease prevention efforts conducted by the health insurance society include: metabolic syndrome improvement/prevention programs; subsidies for flu vaccination; and other health management promotion programs such as walking tours and bus-hiking tours. The health insurance society also operates three clinics at our domestic plants, as well as a resort facility for member employees in the Gokasho Bay area located in Minami-Ise, Mie Prefecture.

With Local Communities and International Society

Highlights

We Conveyed the Importance of Traffic Safety and Environmental Conservation



As a company involved in the automobile industry, NGK Spark Plug (Shanghai) Co., Ltd. wants to reduce the number of traffic accidents and promote awareness of environmental issues. Based on these desires, our employees visited schools for children of migrant workers and taught classes in traffic safety and environmental conservation. Hundreds of students at five schools took the classes.



During class



Creating and distributing textbook with plentiful illustrations



General
Administration
Dept., NGK Spark
Plug (Shanghai)
Co., Ltd.

Donghui Jiang

Voice of Social Contribution Organizer

We are continuing our activities to ensure the safety of children

In 2013, we began traffic safety and environmental conservation education at schools for children of migrant workers. We expect children to become more careful about traffic safety and to learn the importance of environmental conservation. We increased the number of schools by two in 2014 and when they have time left over, our staff tries to work as crossing guards near the schools and make sure the children return home safely.



After class

Social Contribution Policy

As a good corporate citizen, we at the NGK SPARK PLUG Group aim to contribute to society through the effective use of management resources.

【Action Guidelines】

- We focus on the following activities:
 - Activities closely related to our business fields and also to local communities
 - Activities that respect the cultures of individual countries and local communities, as well as activities that contribute to society such as traffic safety education programs
 - Activities that contribute to the next generation society, focusing on environmental conservation, science, and education, as well as cultures to be bequeathed to the next generation, etc.
- We strive to create a corporate culture that encourages executives and employees to participate together in social contribution activities as a social citizen. We also respect and support their active involvement in society.

Expanding our Locally Rooted Philanthropic Activities both in Japan and Abroad



NGK SPARK PLUG CO., LTD.

Held a musical event and invited families displaced in the 2011 Great East Japan Earthquake and currently living in Nagoya, as well as children from the local areas.



NGK SPARK PLUG CO., LTD.

Komaki Plant

Obtained the naming rights to the pedestrian bridge in front of the plant and named it Nittoku Iwasakihara Omoiyari (Compassion) Pedestrian Bridge in the hope of preventing accidents.



NGK SPARK PLUG CO., LTD.

Ise Plant

Received students on social studies field trips from neighboring elementary schools, gave them an overview of the plant and showed them the manufacturing process of the knock sensors.



NGK SPARK PLUG CO., LTD.

Miyanojo Plant

At a tag rugby tournament aimed at elementary school students in the town, held a rugby school put on by some of the rugby team members.



Bujias NGK de Mexico S.A. de C.V.

Donated food and drinks to people affected by flooding due to Hurricane Ingrid and Hurricane Manuel.



NGK Spark Plugs SA (Pty) Ltd.

Because inadequacy of the educational infrastructure is a cause of unemployment and poverty in South Africa, we are investing in education and training programs.



NGK SPARK PLUG CO., LTD.

Komaki Plant

As members of a company involved in the automobile industry, we regularly stand in the street and hold up placards encouraging drivers and pedestrians to practice traffic safety.



NGK Spark Plugs Malaysia Berhad.

Employees regularly engage in cleaning to maintain the environment around the company and the plant.



NGK Spark Plugs (UK) Ltd.

Provide clothing and products to a Motocross Challenge Project that supports young riders.

Eco Vision 2015

Environmental Policy

We positively promote actions for environmental conservation through all business activities to contribute to construction of a sustainable society with the participation of everyone concerned.

【Action Guidelines】

- Environmental management: We will abide by all laws, regulations, protocols, and voluntary standards relating to environmental conservation to prevent environmental pollution. We also aim to manage both environmental conservation and business growth by continually trying to enhance our environment management system (EMS) and environmental performance from a global point of view.
- Business operation: We will promote environmentally friendly business activity to contribute to prevention of global warming, resource recycling, and biodiversity conservation throughout the entire life cycle of our products from procurement of the materials to disposal.
- Cooperation with society: We will try to disclose information and to enhance communication for improving the trust of our stakeholders and deepening cooperation with society. We also try to enhance environmental consciousness by positively enforcing participation of all the employees in environmental conservation activities.

Basic Philosophy

Environmental issues are a common challenge for all mankind. Every member of the NGK SPARK PLUG Group will work towards reducing environmental burdens from our business activities as much as possible and developing and providing products and technologies that contribute to improving the environment. We will also endeavor to communicate in greater depth with our stakeholders including our local communities so that we may all work together to contribute to creating a sustainable society.

Environmental Action Plan

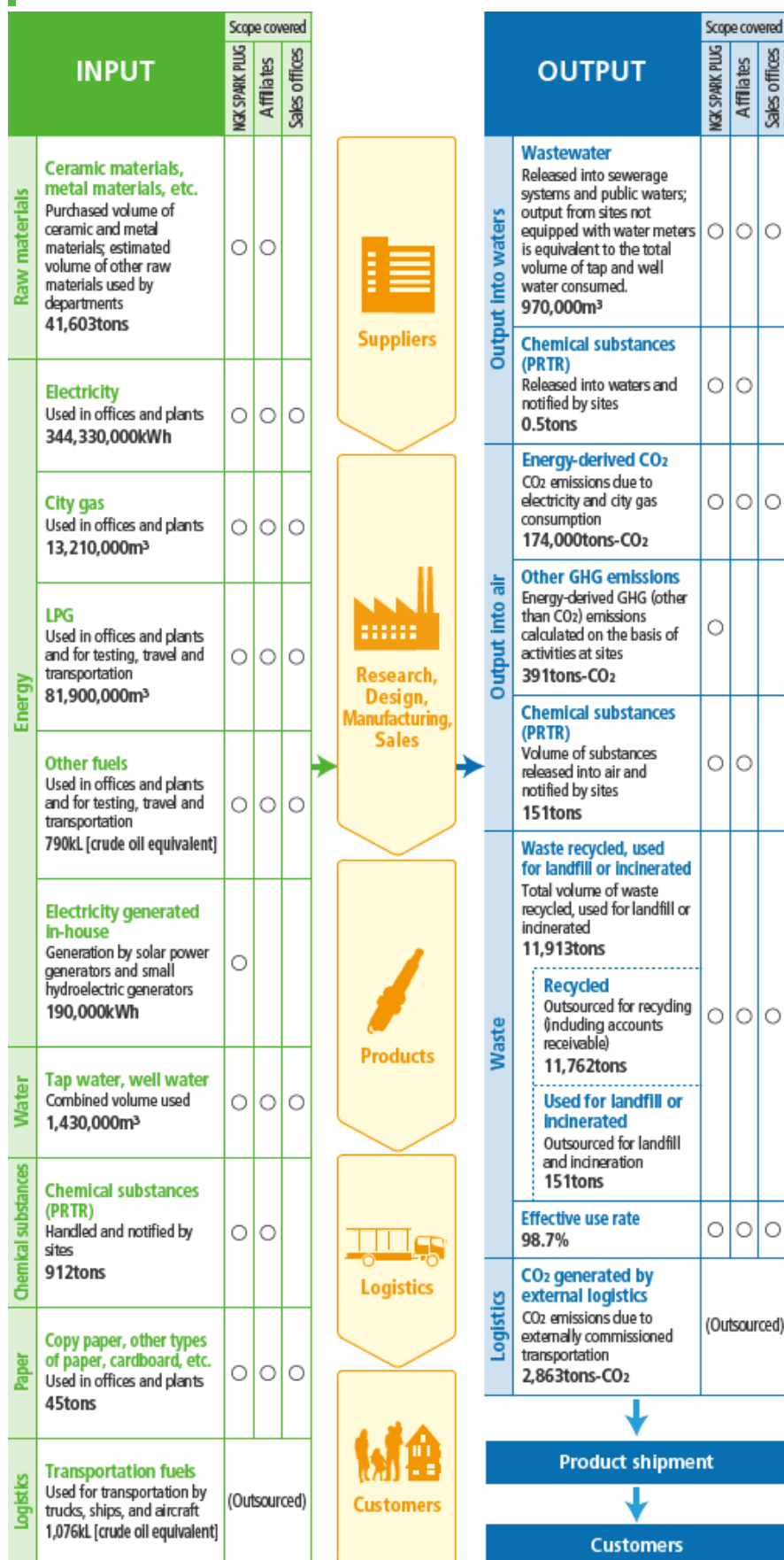
Environmental Action Plan

	Item	Fiscal 2015 Target
Environmental Management	Promotion of globally united actions	Formulation of global ecological vision.
	Promotion of environmental activities relating to corporate management	Transparentization of energy and waste cost and construction of system to promote actions for reducing the costs
Business Activities	Reduction of CO ₂ emissions	Emissions: down 10% from 2007 Per unit production: down 8% from 2007
	Reduction of disposal of wastes and valuable materials	Per unit production: down 30% from 2007
	Reduction of water use	Per unit production: down 8% from 2007
	Reduction in PRTR emissions	Emissions: down 80% from 2007
	Development of environmentally friendly products	Expansion of LCA to all the company's operation sites
	Enhancement of the management of chemical materials	Construction of a management system on chemical materials including supply chains
	Promotion of green procurement	Expansion of the green supplier system
	Recycling of post-consumer products	Establishment of recycling technology for products and packaging materials
	Reduction of CO ₂ emissions in physical distribution	Domestic distribution energy per unit production: down 8% from 2007
	Environmentally friendly sales activities	Promotion of environmentally friendly sales activities
Social Cooperation	Improvement of disclosing information	Improvement of disclosing global environmental information
	Enhancement of communication	Enhancement of communication with communities
	Enhancement of social contribution	Enhancement of social contribution to communities
	Enhancement of actions for biodiversity preservation	Enhancement of actions for biodiversity preservation
	Enhancement of environmental consciousness	Enhancement of environmental education

► 2013 Targets and Results [126MB] [PDF](#)

Environmental Burdens from Business Activities

Environmental Burdens from Business Activities



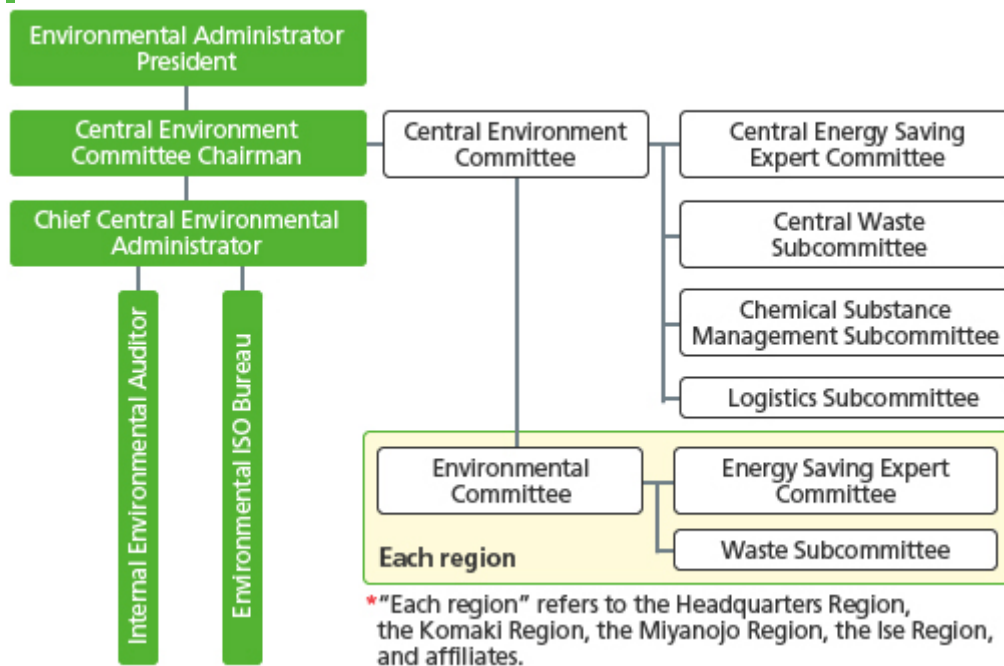
Environmental Management

Basic Philosophy

Our environmental management system, operating on the environmental policy shared by the entire Group, ensures systematic and effective environmental preservation activities. Under this system, all Group companies strive to achieve the Eco Vision.

The status of system operation is confirmed through internal audits. At the same time, the central and regional environment committees check progress towards achieving our goals and endorse challenges for each group, division, region, and department to facilitate continuous improvement.

Environmental Activity Promotion Organization



The Establishment Status of our Environmental Management System

We received ISO 14001 consolidated certification for NGK SPARK PLUG CO., LTD. and 10 domestic affiliates.

Overseas group companies are also undergoing the ISO 14001 certification process. In fiscal 2013, Changshu NGK Spark Plug Co., Ltd., obtained the certification. As of the end of fiscal 2013, 16 overseas Group companies are ISO 14001 certified. As a result, 98% of the entire worldwide Group employee body works at ISO-14001 certified sites.

► ISO 14001 Certified Locations [80MB] [PDF](#)

Voice of an Administration Department Organizer at a Group Company

Having obtained the ISO 14001 certification, we will work to make our company sustainable

Beginning in September 2013, we began our preparations with the Administration Department as the contact point. At the end of March 2014 we passed the inspection by the examining body and were able to obtain the ISO 14001 certification. This is a foundation for corporate development and a symbol of us raising the level of our environmental management, so it was a very important and worthwhile activity.

I believe that through more sustainable management activities, Changshu NGK Spark Plug Co., Ltd. will develop and thrive more and more.



Administration Department
Changshu NGK Spark Plug Co., Ltd.

Min Dai (third from left in the front row)

Environmental Risk Management

Inherent in business activities are various risks including environmental incidents and pollution. NGK SPARK PLUG Group identifies these risks and endeavors to reduce and/or prevent them.

PCB Control

In June 2013, 90 percent of the waste material containing PCBs being stored at the Komaki Plant was properly disposed of. The remaining 10 percent at the Komaki Plant and the waste material containing PCBs being stored at the Headquarters Plant and Nittoku Seisakusho Co., Ltd., will continue to be carefully stored and controlled.

On-site Confirmation of Waste Material Treatment

We regularly visit our waste disposers to confirm that consigned waste materials are being processed in accordance with our agreement. In fiscal 2013, we visited 41 companies.

Preventing Chemical Leaks

To avoid the pollution of soil or water from chemical leaks, we take various measures at our facilities including double-layering storage tanks to prevent leakage and running pipes aboveground for prompt detection of leaks, and conduct regular inspections based on the Water Pollution Control Act. In addition to equipment aspects, we will also simultaneously enhance the operational and management aspects of our chemical substance handling.

Drills for Emergency Situations

We hold regular drills for emergency situations to prepare for unforeseen accidents, etc. Each department identifies potential environmental accidents to prevent associated adverse environmental impacts.

In fiscal 2013, we held drills based on the scenarios of waste liquid leaking from drums and chemicals leaking during a plating process.



A waste liquid leak scenario drill

Handling of Asbestos

We have been taking appropriate measures to prevent health hazards from asbestos. All asbestos used in our facilities has been completely removed. Some asbestos is still present in buildings as insulators, and we will continue to adhere to stringent control measures.

Compliance Status

To ensure compliance with environmental laws and regulations as well as agreements with local municipalities, etc., we set stringent voluntary standards to prevent violations and complaints.

In fiscal 2013, in Japan, there were three cases of requests for noise-related improvement. These cases were promptly dealt with to prevent recurrence.

There were no violations of regulations at our overseas production bases in fiscal 2013.

▶ Data on Air, Water Quality, Noise and Vibration [397KB] [PDF](#)

Numbers of Violations and Complaints

(cases)

Fiscal year	Violations			Complaints		
	2011	2012	2013	2011	2012	2013
NGK SPARK PLUG CO.,LTD.	0	1	0	3	2	0
Affiliates (Domestic)	1	1	0	1	1	0
Affiliates (Overseas)	—	1	0	—	—	0

Handling Violations and Complaints in Fiscal 2013

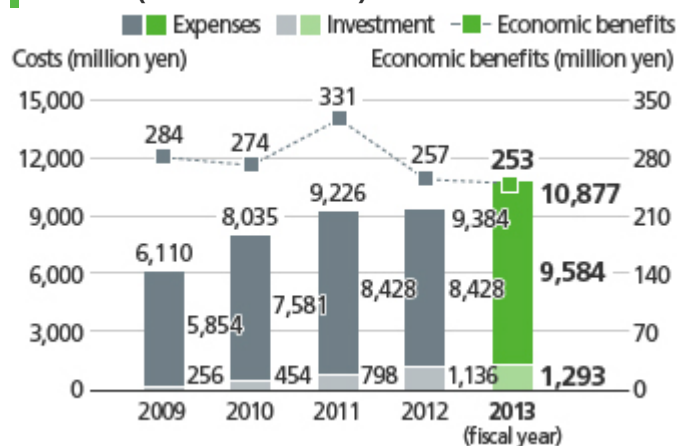
Classification	Plant/Company	Situation	Countermeasures
Complaints	NGK SPARK PLUG CO., LTD. Komaki Plant	Noise occurred after we installed equipment on the west side of the No. 13 Plant and we received a request for improvement.	We installed soundproof walls to surround the source of the noise.
Complaints	NGK SPARK PLUG CO., LTD. Komaki Plant	Noise occurred after we installed equipment on the north side of the No. 14 Plant and we received a request for improvement.	We installed soundproof walls to surround the source of the noise.
Complaints	NGK SPARK PLUG CO., LTD. Komaki Plant	Noise occurred because of an equipment malfunction on the rooftop of the research building and we received a request for improvement.	We replaced out all the malfunctioning parts in the equipment causing the problem.

Environmental Accounting

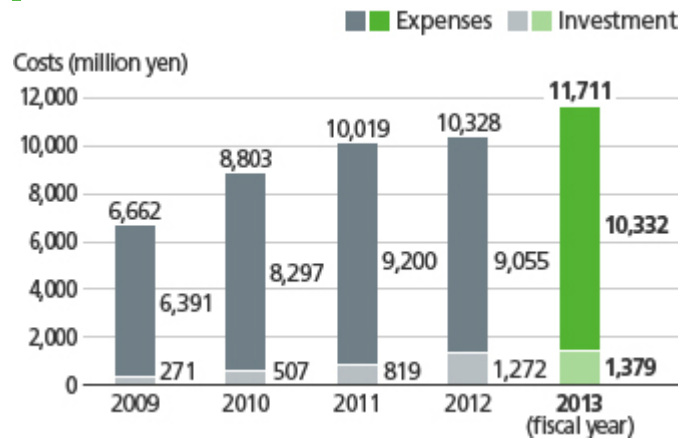
What is important in promoting environmental management is to gain a grasp of the costs and effectiveness of environmental preservation activities. We have been adopting environmental accounting since 1999, and in 2003 the accounting scope was expanded to include the entire Group.

Our environmental conservation costs were 10,877 million yen on a non-consolidated basis, and 11,711 million yen for the Group, an increase of 13.4% over the previous fiscal year. The economic benefit associated with environmental conservation activities totaled 253 million yen on a non-consolidated basis.

Environmental Conservation Costs and Economic Benefits (non-consolidated)



Environmental Conservation Costs (Group)



► Environmental Accounting [116KB] [PDF](#)

Eco-efficiency

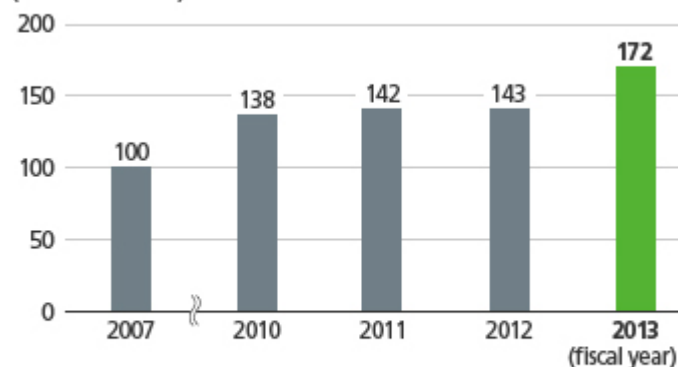
We calculate eco-efficiency by determining net sales per unit of CO₂ emissions and generated waste, and endeavor to improve it.

Fiscal 2013 saw an increase in both the CO₂ index and the waste index compared to the previous fiscal year.

Eco-efficiency (Group)

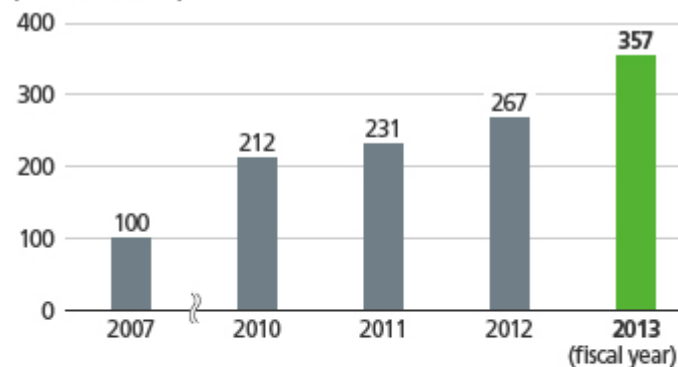
CO₂ Index

(Fiscal 2007 = 100)



Waste Index

(Fiscal 2007 = 100)



$$\text{CO}_2 \text{ Index} = \frac{\text{Net sales}}{\text{CO}_2 \text{ emission volume by production}}$$

$$\text{Waste Index} = \frac{\text{Net sales}}{\text{Volume of waste}}$$

Environmental Education

Environmental education is conducted to raise the employees' environmental awareness. In fiscal 2013, courses on the basics of environmental preservation, environmental burden calculation methods, and the environment management system were held a total of 61 times in all regions, and a total of 920 people attended courses.

Environmental education will be continued after fiscal 2014 to improve the overall level of the environmental consciousness of the Group employees.



Environmental education

Voice of the Organizer

I would like to fulfill my social responsibility through environmental activities

My environmental consciousness so far had been limited to trying not to create garbage. To stay in business, a company makes profits its top priority, but I have been able to gain a new understanding of how environmental activities are an important factor from the standpoints of both making a regional contribution and fulfilling a social responsibility.

As one individual participating in business and organizational activities, I would like environmental activities to be part of my contribution and self-actualization as a member of society.



General Affairs Dept.
Ceramic Sensor Co.,
Ltd.

**Tsuyoshi
Matsuyama**

Support for Suppliers

We offer our suppliers environmental education and support for establishing environmental management systems to acquire a third party certification. So far there have been applications for assistance from 42 companies, and 38 of them have obtained ISO 14001 or Eco-Action 21 certification. We continue to provide assistance to four companies configuring environmental management systems.

Environmental Management Classes Held

Topic	No. of Companies Attending	No. of People Attending
ISO 14001	8	9
Eco-Action 21	5	57

EMS Third-Party Certification Support Implementation Result

Topic	No. of Companies Attending
Eco-Action 21	4

Products

Basic Philosophy

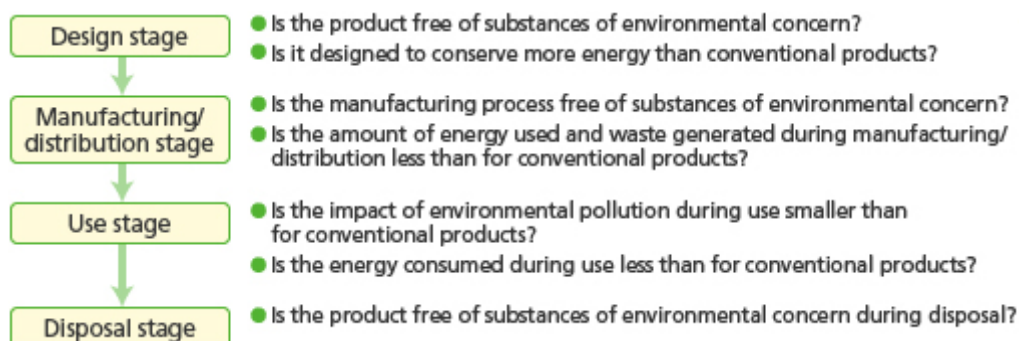
The NGK SPARK PLUG Group aims to contribute to improving the global environment through its products by making efforts to reduce the environmental burden throughout the lifecycle of its products, from raw material procurement to product disposal.

Aside from efforts to reduce CO₂ emissions and waste during the manufacturing and distribution processes, we are also endeavoring to produce environmentally friendly products by controlling the amount of energy involved in using and disposing of the product by customers and ensuring that they do not contain substances of environmental concern.

Product Assessment

To reduce the environmental burden from procuring of raw materials and using and disposing of products, it is important to predict the environmental impact at the design stage, and to take prompt countermeasures when any negative impact is foreseen. To ensure this, we conduct product assessments when we develop new products or change the specifications of existing products.

During a product assessment, the existence of substances of environmental concern, the amount of energy used, etc. are confirmed at each of the design, manufacturing/distribution, use, and disposal stages. If the assessment determines that there is a significant environmental impact, countermeasures will be taken before development is continued.



Reducing Environmental Burden throughout the Lifecycle

To reduce the environmental burden throughout the entire lifecycle of a product, we conduct an LCA (life cycle assessment) on our key products.

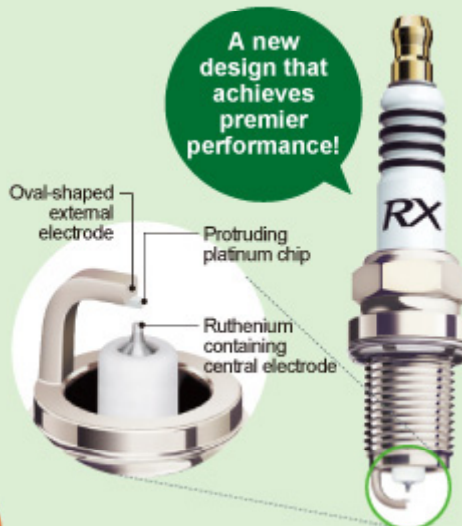
LCA is a method of providing an objective assessment on the impact on global warming and resource depletion throughout the entire lifecycle of a product.

In fiscal 2013, we completed LCAs for model products in each of our divisions. In the future, we intend to review our product assessment framework so as to better reflect assessment results in product designs and to promote consideration for the environment throughout the product lifecycle.

Developing Environmentally Friendly Products

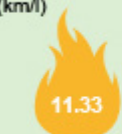
Energy-Efficient, Environmentally Friendly Premium RX Spark Plugs

Using a first-of-its-kind central electrodes containing ruthenium and an oval shaped external electrodes with protruding platinum chip, this spark plug achieves outstanding ignitability and low fuel consumption. It is a next-generation premium plug with outstanding overall performance, including environmental performance.



Improved Fuel Efficiency

JC08 mode fuel efficiency (km/l)



Conventional spark plug



Premium RX Spark Plug

Fuel efficiency up 2.2% (compared to NGK SPARK PLUG's conventional plugs)

Test vehicle: 2,400 cc
Gasoline used: regular

Through outstanding ignitability and fuel efficiency, it achieves a 2.2 percent improvement in fuel efficiency compared with conventional plugs even in the new standard JC08 mode. In addition, it uses 1.9 percent less gasoline than conventional plugs when idling at stoplights or when stuck in traffic.

Reduced CO₂ Emissions

Premium RX Spark Plugs reduce CO₂ emissions and are environmentally friendly.

Compared to conventional spark plugs, they reduce CO₂ emissions by the amount two Japanese beech trees would absorb in a year.

※Basis for calculation: Driving 5,000 km per year/ carbon dioxide emission factor 2.31 kg- CO₂/ L gasoline (Environmental Agency's "Report on Survey of Carbon Dioxide Emissions")/ amount of CO₂ absorbed by a Japanese beech tree in a year 11 kg CO₂/ year (calculated by the Forestry and Forest Products Research Institute).

Substances of Environmental Concern

Basic Philosophy

We have a three-step management system for handling substances of environmental concern : 1. Answering requests from customers, 2. Handling within the Group, and 3. Procurement from suppliers.

Naturally we ensure compliance with laws and fulfill customer requests. More than that, we aim to reduce the use and emission of substances of environmental concern so as to minimize their effect on the environment and human health.

Answering Requests from Customers

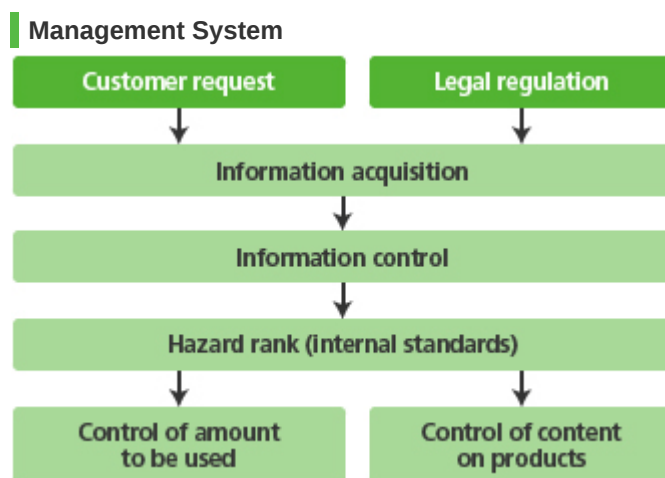
With the reinforcement of regulations on chemical substances contained in products, requests from customers in the automobile, electrical and electronics industry regarding improved compliance are increasing. The REACH Regulation of the EU has triggered an increase in the status of chemical substances contained in products; we are taking all the appropriate measures including submission of Non-Containing Declarations, submission of various data with IMDS, AIS, etc., and handling investigations and audits regarding our management systems.

Handling within the Group

We conduct non-containment management for products and control the use of certain substances of environmental concern in our plants.

■ Soundly managing chemical to comply with the international regulations of different countries

To satisfy customer requests and regulation such as the ELV Directive, RoHS Directive and REACH Regulation of the EU, we assign hazard ranks to substances of environmental concern. With handling standards for each rank, we carefully manage non-containment and reduce their use.



Hazard Rank

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

Voice of Our Controls Organizer

Incorporating regulations and customer desires into our work plans

We are incorporating within our department information on regulations from the Environment and Safety Management Department and requests from customers related to regulated substances to help configure plans for making environmentally friendly products.

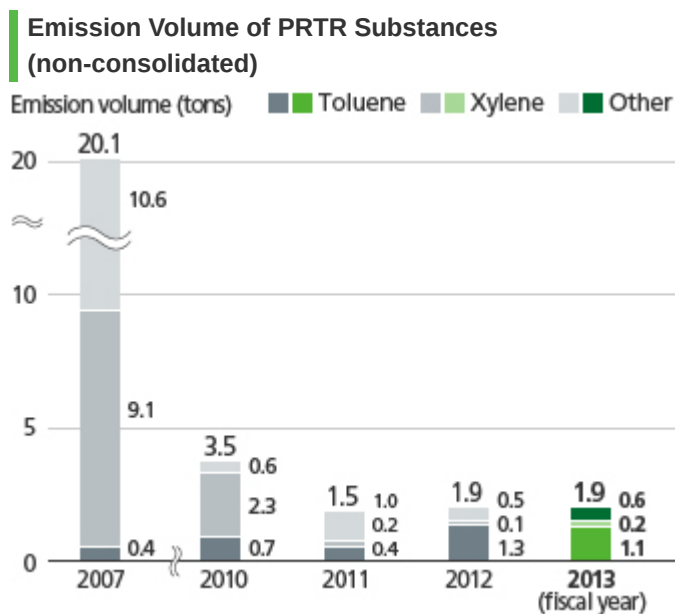


Engineering Dept.1
Semiconductor Div.

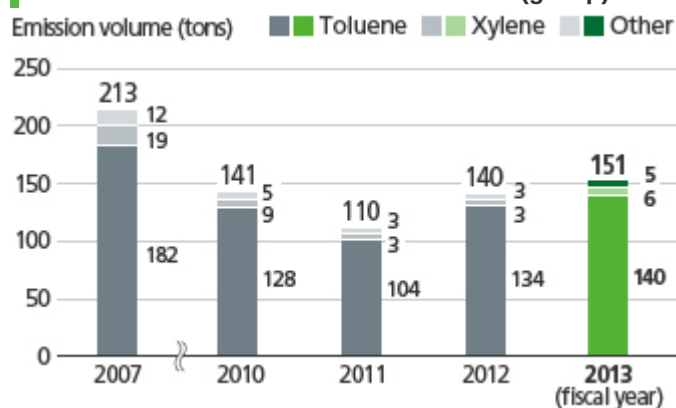
Keiji Sekido

■ Managing use in plants

Our plants aim to reduce emissions of PRTR substances. Eco Vision 2015 aims for emission reduction of 80% from 2007 (43 tons or less).



Emission Volumes of PRTR Substances (group)



▶ PRTR data for Each Business Site [98KB] [PDF](#)

Procurement from Suppliers

To manage chemical substances contained in products appropriately, it is imperative that we gain the cooperation of our suppliers. For this reason, we request in our Green Procurement Guidelines that our suppliers not use substances of environmental concern banned by NGK SPARK PLUG.

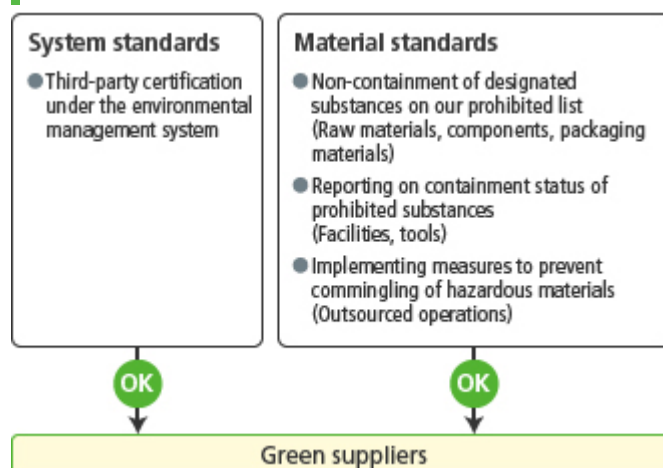


Green Procurement
Guidelines
(Japanese Only)

The green supplier system

Under this system, we designate suppliers who meet our system and material standards as Green Suppliers and given them priority in our order placements.

Certification standards



Global Warming

Highlights

A New, Environmentally Friendly and Energy Efficient Plant Has Been Completed



Work began at the Nittoku Spark Tech Tono Co., Ltd. Nino Headquarters Plant in April 2014. This plant was designed to be energy-efficient, under the concept "a plant that is friendly to people and the environment." We incorporated into the design measures to benefit the environment and save energy including adopting a monitor roof that lets light in while allowing heat to escape, reducing the electricity used in air conditioning by introducing a vaporization-type blower and reducing the load on indoor air conditioners by using outside air for dust collection and venting. It also leases its rooftop for the installation of mega solar panels and has other features that take the environment into consideration.

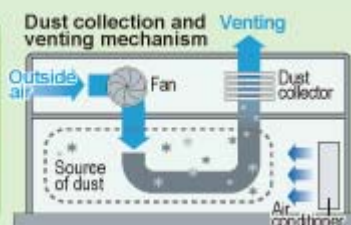


Production items

Insulators for spark plugs

Production capacity

13.5 million per month
(Phased increases in production capacity)



Voice of the Organizer

Making a factory friendly to people and the environment

In the past when we created environmentally friendly facilities, it often resulted in complex systems, placing a burden on employees. This time we chose equipment and systems that are easy for employees to maintain, aiming for both energy efficiency and ease of maintenance.

Production Support
Engineering Dept.

Yuki Morishita

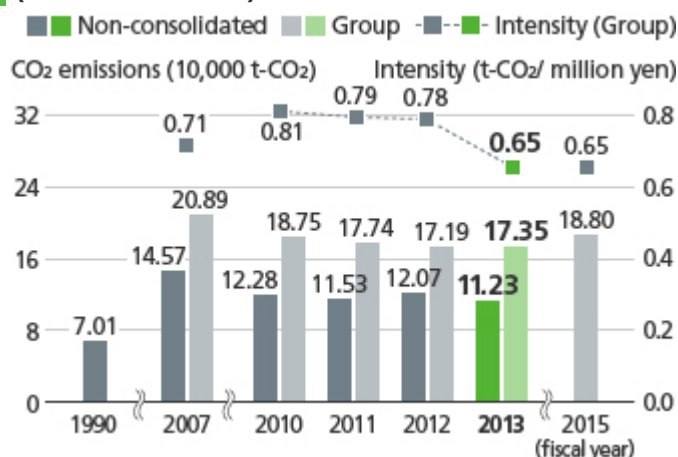
Basic Philosophy

Major climate change could hinder the establishment of a sustainable society. To contribute to the alleviation of climate change, Eco Vision 2015 sets CO₂ emission reduction targets for long-term efforts led by the Energy Conservation Promotion Office.

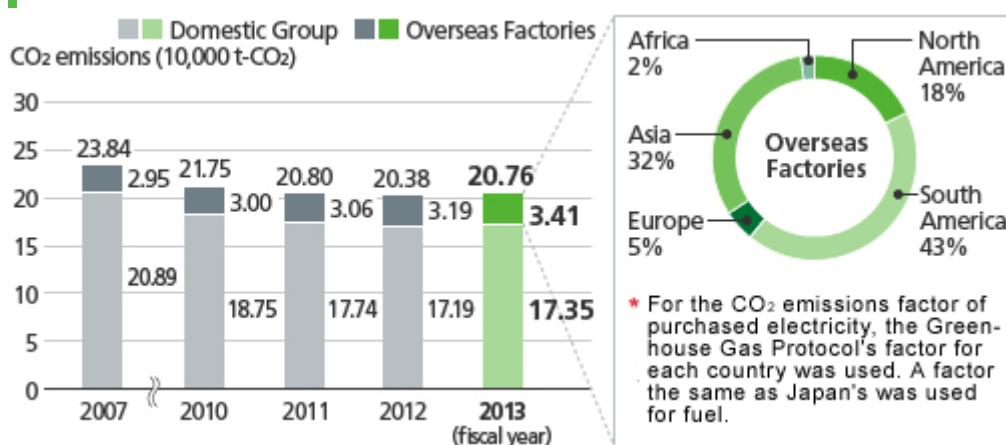
Meeting Our Target for Reducing CO₂ Emissions

In fiscal 2013, our CO₂ emissions figure was 173,500 tons, meeting our fiscal 2013 target of 182,000 tons. The target was attained through energy transformation in the manufacturing process, updating of facilities (for energy efficiency) and achieving an energy-savings effect by revising our manufacturing conditions.

Transition of Emission Volume of Energy-Origin CO₂ (Offices and Plants)



Trend in CO₂ Emissions

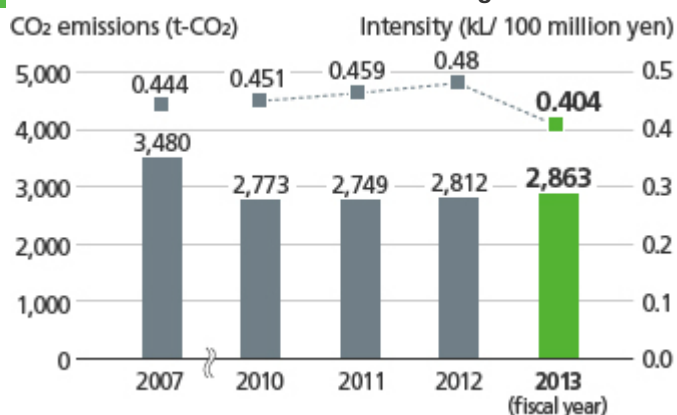


Energy Conservation during Transportation

As a Specified Consigner designated under the Act on the Rational Use of Energy, we endeavor to reduce CO₂ emissions during transportation. In fiscal 2013, our energy use intensity was 0.404 kL/100 million yen, which fell below the target of 0.417 kL/100 million yen.

This is attributable to Transportation Department measures including reducing packaging weight by revising package shapes and methods and saving fuel through the use of trucks appropriate to the load.

Transition of CO₂ Emissions as Consigner



※ Includes portion outsourced to freight carriers

Energy Conservation in the Office

We implement daily energy-saving measures in our workplaces, including turning off lights and computers during breaks and keeping office air conditioning at moderate levels, 28°C in summer and 20°C in winter, to which we adjust by dressing lightly or adding layers of clothing.

We are also creating green curtains, installing arched sunshades and thermally insulating the outdoor units of air conditioners to reduce power consumption for air conditioning in the summer.

Use of Natural Energy

We promote the use of natural energy.

We installed three solar power generation units and one solar water heater at our Headquarters Factory. The Komaki Plant has a large-scale solar power generator unit that can generate a maximum of 107 kW of electricity, and small hydro-electric power equipment. In fiscal 2013, we generated a total of 190,000 kWh, equivalent to a reduction of 62 tons of CO₂.

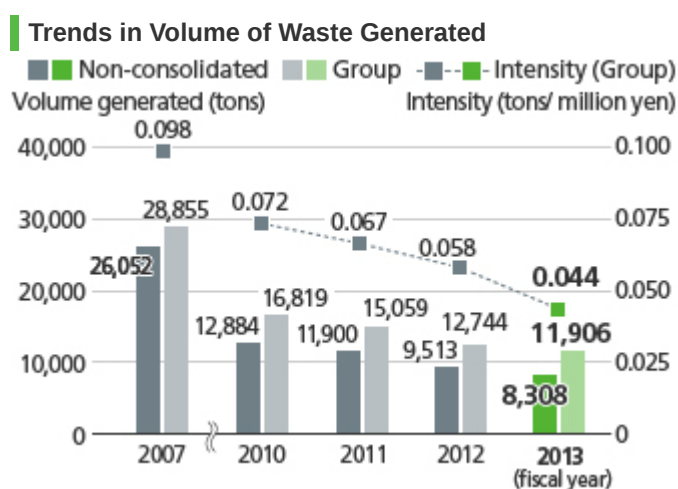
Waste

Basic Philosophy

The NGK SPARK PLUG Group works to reduce the volume of waste generated, and to recycle what is generated.

Trends in Waste Generated

In fiscal 2013, the waste intensity was 0.044 tons/million yen. By reducing the amount of ceramic sludge produced in our manufacturing process and increasing manufacturing process yield, we have lowered the waste intensity 55% compared with the fiscal 2007 level.



► Volumes of Waste Generated at Each Business Site [165KB] [PDF](#)

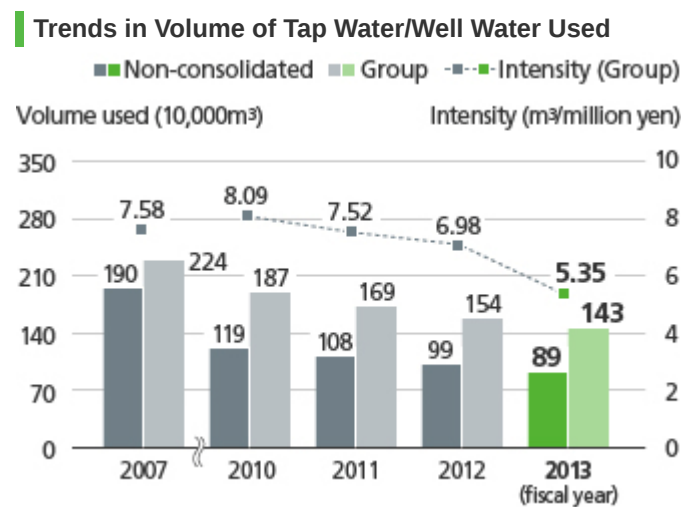
Water Resource

Basic Philosophy

The NGK SPARK PLUG Group recognizes that water is an important resource, and is making efforts to reduce the volume of tap water and well water used in our business activities.

Reducing the Amounts of Tap and Well Water Used

In fiscal 2013, the water use intensity was 5.35 m³/million yen. In the manufacturing process, we conserved water by using recycled water, adjusting the number of units operating and changing manufacturing conditions, achieving a 29% improvement over the fiscal 2007 level.



Environmental Communication

Basic Philosophy

For The NGK SPARK PLUG Group to continue its business operations, it is essential to improve our coordination with local communities and build trust with society. We feel that the best way to build this trust is to provide information on the Group's environmental activities, and we are endeavoring to disclose information in an accurate and easy-to-understand way to improve communication.

Observing Environmental Activities

We accept plant tours for observation of our environmental efforts and facilities. A deeper understanding of our Group's activities and better communication are achieved by seeing our facilities firsthand and engaging in question and answer sessions. In fiscal 2013, we held nine tours and welcomed 301 visitors at our plants.

Environmental Meeting

We host environmental meetings with local residents as a venue for communication. At these meetings, we explain our daily environmental activities as well as hear opinions and comments from participants on how we can improve things. In fiscal 2013, we hosted seven such meetings, with a total of 18 participants.

Local Clean-up Activities

We regularly hold clean-up activities to preserve the local environment. We also continue to participate in beautifying activities hosted by local municipalities, etc. In fiscal 2013, a total of 908 people participated in such activities.



Clean-up activity (Komaki Plant)



Clean-up activity (Ise Plant)

▶ Participation in clean-up activities by each business site [87KB] [PDF](#)

Conservation of Biodiversity

The preservation of biodiversity is becoming increasingly important around the world. For the NGK SPARK PLUG Group as well, it is one of our environmental themes as important as the recycling of resources and global warming control. In April 2013, we published the Biodiversity Action Guidelines, which indicate our policy and action plan regarding biodiversity. The Guidelines have been drawn up to contribute to preserving biodiversity through environmentally responsible actions, including conserving energy and resources and reducing the output of environmental burdens throughout the product lifecycle, in consideration of the possible impact of our business activities on biodiversity.

Based on these Guidelines, we are continuing to carry out environmental activities to save energy and natural resources, conscious of their connection to preserving biodiversity.



Biodiversity Action
Guidelines
(Japanese Only)

Third-Party Review

Third-Party Review



Mr. Tomohiro Tokura
Verification Specialist
Sustainability Service Division
SGS Japan Inc.

Fiscal 2013, which is the fiscal year covered by this report, is the first year for the 2nd SHINKA (Renovating) phase of the long-term management plan for the organization – NITTOKU SHINKARON (The Evolution of NGK SPARK PLUG).

In the Message from the President, some information was provided on the initiatives in fiscal 2014 leading to the vision of what NGK SPARK PLUG CO., LTD. should be in 2020 as a distinguished manufacturing company, a highly profitable company, a progressive company, and a personnel “assets” company. Although some of these initiatives were mentioned, notably “responding to telecommunications products through a fabless business model,” “solid oxide fuel cell (SOFC)-related development” and “participating in development of next-generation vehicles,” it was difficult to understand the specific relevance to the report, including the online version. I think that the overall cohesion of the report would be strengthened by providing detailed information about content that is mentioned in the Message from the President in the body of the report after the Message from the President.

Moreover, in the Message from the President for fiscal 2012’s report, content that included “business reorganization and optimal resource deployment” and “intensifying our efforts to develop new products with the SOFC Project playing a central role” was reported as being initiatives for fiscal 2013 – the inaugural year of the 2nd SHINKA (Renovating) phase. Although I confirmed in our interview that these particulars of the report are currently under implementation so have yet to reach a stage at which they can be reported, I believe that the report needs to show more consideration to stakeholders by being more aware of continuity in content to enable an assessment of the status of progress relating to the content of the report in the previous fiscal year.

A strong awareness of the risks accompanying compliance and business continuity was communicated from the content of Promotion of CSR Management in the Message from the President. In relation to compliance, initiatives for fostering a better workplace were mentioned, and I confirmed in our interview that various concrete measures have been implemented. Moreover, in relation to business continuity plans, in addition to the response to large-scale disasters in the report, I confirmed that measures to prevent epidemics within the organization due to new infectious diseases have been put in place and that the preparation of themes for other business continuity risks is scheduled for the current fiscal year. A more detailed activity report on these measures and challenges that the organization focuses on is desirable and is expected in the future.

This year’s report covered targets and achievements regarding the areas that the NGK SPARK PLUG Group needs to address in its CSR activities as “CSR Promotion Activities Targets,” making it easy to understand the challenges and overall shape of the organization’s CSR activities. In addition, each of the detailed reports related to the digest

version were complemented by publication of the online links, so I can give a high rating to efforts on information disclosure.

I can imagine that for the NGK SPARK PLUG Group, which has a high proportion of its sites, employees, and sales outside Japan, there are also risks that are inherent at its overseas sites in proportion to business volume. I also think that there would be risks that accompany communications with headquarters and challenges due to cultural differences.

Regarding initiatives in the NGK SPARK PLUG Group aimed at becoming a company with valuable human resources, I confirmed in our interview that responding to these challenges has been considered and that the risks accompanying overseas sites have been included in the preparation of themes for compliance and business continuity risks. Nevertheless, these initiatives for overseas sites do not seem to have been covered adequately in this report.

Although I raised this issue in my review last year, I expect relevant activities related to overseas sites to be reported in detail given the importance of CSR activities at overseas sites for a global corporation.

On Receiving the Third-Party Review

This is the second time following last year that Mr. Tokura has provided the third-party review for us. I would like to express my gratitude for his assessment of our CSR Report 2014 and his precious feedback on our activities.

CSR Report 2014 primarily covered the achievements of the NGK SPARK PLUG Group's initiatives focused on CSR targets in fiscal 2013. We have featured the areas that we consider of particular importance as the highlights of each page in the digest version. We have also enhanced our website and made efforts to link the digest version with the website.

Fiscal 2013, which is the reporting period for this report, is the first year for the 2nd SHINKA (Renovating) phase of NITTOKU SHINKARON (The Evolution of NGK SPARK PLUG). Going forward, we will continue to take initiatives related to compliance and business continuity, which we focused on during the three years of the 1st SHINKA (Delving) phase and to report on progress.

Meanwhile, we once again recognize the challenges relating to the cohesion of the Message from the President with the content of the report and continuity with the previous year's report identified by Mr. Tokura. We also recognize that the global deployment of our CSR policies and reporting about this remain a challenge, and we hope to phase in enhancements of the content while giving priority to important areas.

CSR Report 2014 has been edited to give our various stakeholders an understanding of the CSR activities implemented by the NGK SPARK PLUG Group. Sincerely responding to the review we have received, we will continue to further promote our CSR activities while making efforts to provide reports that are even easier for everyone to understand.

Yukashi Ukai
General Manager, CSR Promotion Office
NGK SPARK PLUG CO., LTD.

Environmental Action Plan

Fiscal 2013 Targets and Results

Evaluation standards ○ : achieved × : Not achieved

	Item	Fiscal 2013 Target	Fiscal 2013 Results	Evaluation	Fiscal 2014 Target
Environmental Management	Promotion of globally united actions	Analysis of EMS operational state in overseas plants	Conducted the questionnaire survey and identified EMS operational state	○	Drawing up a framework of Global Eco Vision
		Verification of environmental performance data in overseas plants	Conducted the questionnaire survey and verified the method for calculating environmental performance data	○	
	Promotion of environmental activities relating to corporate management	Application method examination of material flow cost accounting	Coordinated with some divisions, but no conclusion reached	×	Application method examination of material flow cost accounting
Business Activities	Reduction of CO ₂ emissions	Emissions: 182,130 tons (down 12.8% from FY 2007) Intensity: 0.716 tons/million yen (down 5.4% from FY 2007)	Emissions: 173,546 tons (down 17.6% from FY 2007) Intensity: 0.649 tons/million yen (down 8.3% from FY 2007)	○	Emissions: 175,115 tons Intensity: 0.650 tons/million yen Strengthen initiatives to reduce upstream
	Reduction of disposal of wastes and valuable materials	Intensity: 0.057 tons/million yen (down 41.8% from FY 2007)	Intensity: 0.044 tons/million yen (down 55.1% from FY 2007)	○	Intensity: 0.039 tons/million yen (down 10% from previous fiscal year)
	Reduction of water use	Intensity: 6.19 m ³ /million yen (down 18.4% from FY 2007)	Intensity: 5.349m ³ /million yen (down 29.4% from FY 2007)	○	Intensity: 4.863m ³ /million yen (down 10% from previous fiscal year)
	Reduction in PRTR emissions	Reexamination of recycling equipment	Recycling equipment was not re-examined	×	Reexamination of recycling equipment
	Development of environmentally friendly products	Implementation of LCA to model products	Implemented LCA to model products in all divisions	○	Construction of development system which takes LCA into consideration when designing products
	Enhancement of the management of chemical materials	Storing data for chemical management software	Completed entry of component master and legislation master, but data on contained substances not accumulated	×	Enhancement of management system on chemical materials when designing products
	Promotion of green procurement	Renewal audit implementation of the suppliers certified in 2009	Implemented renewal audit of the suppliers certified in 2009 on schedule	○	—
	Recycling of post-consumer products	Examination of products recycling technology	Product recycling technologies were not examined.	×	Examination of products recycling technology
		Implementation of package materials reuse	Only implemented in some divisions	×	Implementation of package materials reuse
	Reduction of CO ₂ emissions in physical distribution	Intensity: 0.417 kL/100 million yen (down 6% from 2007)	0.404kL/100 million yen	○	Intensity: 0.413 kL /100 million yen (down 7% from 2007)
	Environmentally friendly sales activities	Proposal of environmentally friendly sales strategies	Sales of environmentally friendly products were expanded.	○	Planning environmentally friendly sales strategies
		Enrichment of PR relating to environmental efficiency of products	Implemented PR for environmentally friendly products in expos and catalogs	○	Enrichment of PR relating to environmental efficiency of products
Social Cooperation	Improvement of disclosing information	Disclosure of state of law abidance in overseas plants	Published in CSR report	○	Disclosure compliance state in overseas plants
		Disclosure of global material balance	CO ₂ emissions only published in CSR report	×	Disclosure of global material balance
		Disclosure of CO ₂ , waste and water reduction cases in overseas plants	There were no examples that could be disclosed.	—	Disclosure of CO ₂ , waste and water reduction cases in overseas plants
	Enhancement of communication	Continual implementation of the environmental conferences	Implemented environmental conferences	○	Continual implementation of the environmental conferences
		Acceptance of visitors to factories by stakeholders	Implemented interaction with local residents	○	Acceptance of visitors to factories by stakeholders
		Continual participation in EPOC international exchange subcommittee meetings	Continual participation in EPOC international exchange subcommittee meetings	○	Continual participation in EPOC international exchange subcommittee meetings
	Enhancement of social contribution	- Continual implementation of the clean-up activities - Enhancement of beautification activities around factories - Participation in a variety of environmental activities	- Held periodic clean ups around plants - Conducted landscaping, including installation of flower beds, at each plant - Took part in environmental programs run by local governments	○	- Continual implementation of the clean-up activities - Enhancement of beautification activities around factories - Participation in a variety of environmental activities
	Enhancement of activities for biodiversity preservation	Examination of activities for <i>Satoyama</i> (planted/managed natural woodlots) preservation activities and cooperation with NPO/NGO and governments	Collected information, but did not participate	×	Participate in activities for biodiversity preservation
	Enhancement of environmental consciousness	Enhancement of level-specific training in the domestic groups	Expanded those eligible for level-specific training and provided training	○	Enhancement of level-specific training in the domestic groups
		Establishment of system which implements environmental education for employees transferred to overseas subsidiaries	Provided training, but did not formulate framework	×	Establishment of system which implements environmental education for employees transferred to overseas subsidiaries

Conditions for the Establishment of a System

ISO 14001 Certified Locations

Certification covering multiple units

Country	Name of factories and companies		Certified initially in:	Certification organization
Japan	NGK SPARK PLUG CO., LTD.	Headquarters and Nagoya Plant	'99. 8	JQA
		Komaki Plant, Miyanojo Plant, Ise Plant	'00. 12	
		Takenami Plant	'07. 1	
	Nittoku Alfa Service Co., Ltd.		'99. 8	
	Nittoku Unyu Co., Ltd.		'00. 12	
	Ceramic Sensor Co., Ltd.		'00. 12	
	NTK Ceramic Co., Ltd.	Komaki Plant	'00. 12	
		Nakatsugawa Plant, Iijima Plant, Kani Plant	'02. 12	
	Nansei Ceramic Co., Ltd.		'02. 12	
	Kamioka Ceramic Co., Ltd.		'04. 1	
	Nittoku Seisakusho Co., Ltd.	Head Office Plant, Oguchi Plant	'04. 1	
		Satsuma Plant	'09. 12	
	Nichiwa Kiki Co., Ltd.		'04. 1	
	Nittoku Spark Tech Tono Co., Ltd.		'04. 1	
	Tokai Taima Kogu Co., Ltd.		'09. 1	

Certification obtained individually

Country	Name of factories and companies		Certified initially in:	Certification organization
U.S.A.	NGK Spark Plugs (U.S.A.), Inc.	WV Plant	'00. 7	TUV
Mexico	Bujias NGK de Mexico S.A. de C.V.		'12. 11	FS
Brazil	Ceramica e Velas de Ignicao NGK do Brazil Ltda.		'01. 12	ABS QE
France	NGK Spark Plugs (France) S.A.S		'00. 5	AFAQ
U.K.	NGK Spark Plugs (U.K.) Ltd.		'01. 12	BSI
Germany	NGK Spark Plug Europe GmbH		'04. 11	TUV
Thailand	Siam NGK Spark Plug Co., Ltd.		'02. 11	TUV NORD
	NGK Spark Plugs (Thailand) Co., Ltd.		'12. 10	SGS
South Korea	Woo Jin Industry Co., Ltd.		'05. 4	KFQ
	NTK Technical Ceramics Korea Co., Ltd.		'06. 4	ISC
Malaysia	NGK Spark Plugs Malaysia Berhad		'06. 3	SIRIM QAS
China	NGK Spark Plug (Shanghai) Co., Ltd.		'07. 4	SGS
	Changshu NGK Spark Plug Co., Ltd.		'14. 3	SGS
Indonesia	P.T. NGK Busi Indonesia		'07. 10	Bureau Veritas
India	NGK Spark Plugs (India) Pvt. Ltd.		'10. 12	ASR
South Africa	NGK Spark Plugs SA (Pty) Ltd.		'08. 4	Bureau Veritas

Compliance Status

Data on Air, Water Quality, Noise and Vibration

We measure regularly the air, the water, the noise, the vibration, and manage them to observe laws and regulations.

Name of factories and companies	Item	Type		Unit	Regulation value		Voluntary standard value	Average	MAX
					Low/Local regulation	Agreement with the city			
Head Office/ Plant	Air	Soot and dust	Boiler (No.10)	mg/Nm ³	50	—	40	5	5
			Boiler (No.11)		50	—	40	4	4
			Firing furnace (PR-2)		150	—	120	4.0	6.0
		NOx	Boiler (No.10)	ppm	150	—	120	25.0	25.0
			Boiler (No.11)		150	—	120	55.0	55.0
			Firing furnace (PR-2)		180	—	144	46.0	57.0
	Drain (sewer)	pH		—	5.0~9.0	—	5.2~8.8	7.2	7.9
		SS		mg/l	600	—	480	9.0	29.0
		BOD		mg/l	600	—	480	6.90	49.0
		n-hexane extract		mg/l	30	—	24	0.74	1.60
		Cyanogen		mg/l	1	—	0.8	0.11	0.2
		Total chromium		mg/l	2	—	1.6	0.05	0.09
		Hexavalent chromium		mg/l	0.5	—	0.4	<0.04	<0.04
		Zinc		mg/l	2	—	1.6	0.27	0.6
		Lead		mg/l	0.1	—	0.08	<0.02	<0.02
		Nitrogen		mg/l	120	—	96	11.7	36.0
		Phosphor		mg/l	16	—	12.8	0.19	0.74
		Fluorine		mg/l	8	—	6.4	0.18	0.80
		Boron		mg/l	10	—	8	1.0	2
	Noise	Morning	F spot	dB	60.0	—	58.0	59.7	59.7 *1
		Daytime	F spot	dB	65.0	—	63.0	67.3	67.3 *1
		Evening	F spot	dB	60.0	—	58.0	57.6	57.6
		Night	F spot	dB	50.0	—	49.0	57.9	57.9 *1
	Vibration	Daytime	F spot	dB	65.0	—	60.0	45	45
		Night	F spot	dB	60.0	—	55.0	49	49
Komaki Plant	Air	Soot and dust	Boiler (No.1-6)	mg/Nm ³	100	100	80	<2	<2
			Firing furnace (No.9-10)	mg/Nm ³	200	200	160	5.5	6
		NOx	Boiler (No.1-6)	ppm	150	—	120	14	14
			Firing furnace (No.9-10)	ppm	200	—	160	55	56
		SOx	Boiler (No.1-6)	Nm ³ /h	5.889	—	4.711	3.4	3.4
			Firing furnace (No.9-10)	Nm ³ /h	5.889	—	4.711	<2.5	<3
	Drain (public water area)	pH	East	—	6.0~8.0	6.0~8.0	6.2~7.8	7.5	7.7
			West					7.2	7.4
			North					No drainage	No drainage
		SS	East	mg/l	30	—	24	2.5	6.0
			West					0.8	5.0
			North					No drainage	No drainage
		BOD	East	mg/l	25	—	20	3.5	6.2
			West					1.6	2.8
			North					No drainage	No drainage
		COD	East	mg/l	—	—	—	4.5	6.6
			West					2.7	5.0
			North					No drainage	No drainage
		COD (total)	Komaki Plant total	kg/day	109.86	—	—	9.1	25.2
		n-hexane extract	East	mg/l	5.0	5.0	4.0	<0.5	<0.5
			West					<0.5	<0.5
			North					No drainage	No drainage
		Cyanogen	East	mg/l	0.5	0.5	0.4	<0.1	<0.1
			West					<0.1	<0.1
			North					No drainage	No drainage
		Total chromium	East	mg/l	2.0	1.0	0.8	<0.04	<0.04
			West					<0.04	<0.04
			North					No drainage	No drainage
		Copper	East	mg/l	1.0	1.0	0.8	0.03	0.05
			West					0.06	0.16
			North					No drainage	No drainage
		Zinc	East	mg/l	1.8	1.8	1.6	0.13	0.23
			West					0.03	0.12
			North					No drainage	No drainage

*1 These values apply to the background noise level. The background noise level is the noise when machines, and so on, are not operating. It is affected by traffic noise, noise from adjacent factories, and so on.

Compliance Status

Data on Air, Water Quality, Noise and Vibration

Name of factories and companies	Item	Type		Unit	Regulation value		Voluntary standard value	Average	MAX
					Low/Local regulation	Agreement with the city			
Komaki Plant	Drain (public water area)	Lead	East	mg/l	0.1	—	0.08	<0.02	<0.02
			West					<0.02	<0.02
			North					No drainage	No drainage
		Nitrogen	East	mg/l	120	—	60	6.79	9.10
			West					4.03	8.30
			North					No drainage	No drainage
		Nitrogen(total) Komaki Plant total		kg/day	91.91	—	—	14.32	29.4
		Phosphorus	East	mg/l	16	—	8.0	0.44	0.92
			West					0.27	0.52
			North					No drainage	No drainage
		Phosphorus(total) Komaki Plant total		kg/day	9.013	—	—	0.78	3.7
		Nickel	East	mg/l	—	—	—	0.03	0.20
			West					<0.03	<0.03
			North					No drainage	No drainage
		Manganese	East	mg/l	10	—	8	<0.1	<0.1
			West					0.01	0.10
			North					No drainage	No drainage
		Fluorine	East	mg/l	8	—	6.4	0.53	0.9
			West					0.82	1.2
			North					No drainage	No drainage
		Boron	East	mg/l	10	—	8	0.6	2.0
			West					<1	<1
			North					No drainage	No drainage
	Noise	Morning	First spot	dB	65	—	63	57.9	57.9
			Second spot	dB	65	—	63	54.4	54.4
			Third spot	dB	65	—	63	52.7	52.7
			Fourth spot	dB	65	—	63	54.2	54.2
			Fifth spot	dB	65	—	63	52.8	52.8
			Sixth spot	dB	65	—	63	49.1	49.1
			Seventh spot	dB	65	—	63	50.6	50.6
		Daytime	First spot	dB	70	—	68	54.8	54.8
			Second spot	dB	70	—	68	54.7	54.7
			Third spot	dB	70	—	68	54.2	54.2
			Fourth spot	dB	70	—	68	51.2	51.2
			Fifth spot	dB	70	—	68	53.3	53.3
			Sixth spot	dB	70	—	68	50.8	50.8
			Seventh spot	dB	70	—	68	51.4	51.4
		Evening	First spot	dB	65	—	63	55.6	55.6
			Second spot	dB	65	—	63	53.5	53.5
			Third spot	dB	65	—	63	49.8	49.8
			Fourth spot	dB	65	—	63	50.4	50.4
			Fifth spot	dB	65	—	63	48.0	48.0
			Sixth spot	dB	65	—	63	47.4	47.4
			Seventh spot	dB	65	—	63	50.8	50.8
		Night	First spot	dB	60	—	58	52.7	52.7
			Second spot	dB	60	—	58	51.7	51.7
			Third spot	dB	60	—	58	48.3	48.3
			Fourth spot	dB	60	—	58	46.5	46.5
			Fifth spot	dB	60	—	58	51.9	51.9
			Sixth spot	dB	60	—	58	49.1	49.1
			Seventh spot	dB	60	—	58	47.8	47.8
	Vibration	Daytime	First spot	dB	70	—	68	<45.0	<45.0
		Night	First spot	dB	65	—	63	<45.0	<45.0
Takenami Plant	Drain (public water area)	pH		—	5.8~8.6	5.8~8.6	5.8~8.6	7.0	7.1
		SS		mg/l	200	200	100	5.5	6.0
		BOD		mg/l	160	160	130	27.0	34.0
		COD		mg/l	160	160	80	7.5	7.9
		n-hexane extract		mg/l	5	5	4	<0.5	<0.5
		Nitrogen		mg/l	120	120	120	3.6	4.2
		Phosphorus		mg/l	16	16	16	0.19	0.23
		Coli bacteria		counts/cm³	3000	3000	2000	4.5	9.0

Compliance Status

Data on Air, Water Quality, Noise and Vibration

Name of factories and companies	Item	Type		Unit	Regulation value		Voluntary standard value	Average	MAX
					Low/Local regulation	Agreement with the city			
Takenami Plant	Noise	Morning	Fourth spot	dB	50	50	50	39.1	40.0
		Daytime	Fourth spot	dB	60	55	55	41.9	44.0
		Evening	Fourth spot	dB	50	50	50	40.5	42.0
		Night	Fourth spot	dB	50	45	45	40.0	42.0
	Vibration	Daytime	Fourth spot	dB	65	55	55	15.0	15.0
		Night	Fourth spot	dB	60	50	50	15.0	15.0
Miyanojo Plant	Air	Soot and dust	3T water boiler	mg/Nm ³	100	—	80	<0.006	<0.006
		NOx	3T water boiler	ppm	150	—	120	68.0	68.0
	Drain (public water area)	pH		—	6.0~8.0	6.0~8.0	6.5~7.8	7.4	7.6
		SS		mg/l	35	35	28	<4	4.0
		BOD		mg/l	20	20	16	4.5	13.0
		COD		mg/l	160	—	128	10.0	10.0
		n-hexane extract		mg/l	5	≤5	4	<2.5	<2.5
		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	0.07	0.07
		Lead		mg/l	0.1	—	0.08	<0.01	<0.01
		Fluorine		mg/l	8	—	6.4	<0.2	0.2
		Boron		mg/l	10	—	8	1.2	1.5
		Coli bacteria		counts/cm ³	3000	—	2400	0	0
	Noise	Morning	A spot	dB	60	—	55	43.5	45.6
			B spot	dB	60	—	55	45.2	49.5
			C spot	dB	60	—	55	45.9	48.6
			D spot	dB	60	—	55	46.7	48.6
			E spot	dB	60	—	55	44.4	46.3
			F spot	dB	60	—	55	45.6	47.9
			G spot	dB	60	—	55	45.3	47.5
		Daytime	A spot	dB	65	—	60	46.0	48.7
			B spot	dB	65	—	60	47.6	49.8
			C spot	dB	65	—	60	52.4	53.8
			D spot	dB	65	—	60	51.7	52.3
			E spot	dB	65	—	60	49.5	50.6
			F spot	dB	65	—	60	53.8	55.8
			G spot	dB	65	—	60	50.8	53.6
		Evening	A spot	dB	60	—	55	42.4	44.8
			B spot	dB	60	—	55	44.5	48.1
			C spot	dB	60	—	55	46.8	51.3
			D spot	dB	60	—	55	47.4	49.7
			E spot	dB	60	—	55	45.9	49.5
			F spot	dB	60	—	55	49.3	52.0
			G spot	dB	60	—	55	46.1	50.4
		Night	A spot	dB	50	—	50	42.4	44.9
			B spot	dB	50	—	50	42.8	46.8
			C spot	dB	50	—	50	44.0	45.3
			D spot	dB	50	—	50	46.7	48.2
			E spot	dB	50	—	50	43.4	46.0
			F spot	dB	50	—	50	44.7	45.1
			G spot	dB	50	—	50	44.2	47.4
	Vibration	Daytime		dB	60	—	52	31.0	31.0
		Night		dB	55	—	48	32.5	32.5
Ise Plant	Air	Soot and dust	Firing furnace	mg/Nm ³	250	—	100	<5	<5
	Drain (public water area)*2	COD		mg/l	160	—	128	9.0	9.0
		Lead		mg/l	0.1	—	0.08	<0.01	<0.01
	Noise	Morning	East	dB	55	—	55	41.8	41.8
		Daytime	East	dB	60	—	58	47.5	47.5
		Evening	East	dB	55	—	55	40.8	40.8
		Night	East	dB	50	—	50	39.0	39.0
	Vibration	Daytime (all directions)		dB	65	—	60	<50	<50
		Night (all directions)		dB	60	—	55	<50	<50

*2 We revised the items measured in conjunction with a reduction in the drain volume.

Compliance Status

Data on Air, Water Quality, Noise and Vibration

Name of factories and companies	Item	Type		Unit	Regulation value		Voluntary standard value	Average	MAX
					Low/Local regulation	Agreement with the city			
NTK Ceramic Co., Ltd. (Iijima Plant)	Air	Soot and dust	Firing furnace: YA-5, 6	mg/Nm³	250	—	250	<5	<5
			Firing furnace: YA-7, 8					<5	<5
			Absorption heater/chiller: FGL		100		100	<5	<5
			Absorption heater/chiller: FGDL					<5	<5
		NOx	Firing furnace: YA-5, 6	ppm	180	—	180	<10	<10
			Firing furnace: YA-7, 8					<10	<10
			Absorption heater/chiller: FGL		150		150	33.0	36.0
			Absorption heater/chiller: FGDL					33.0	35.0
	Drain (public water area)	pH		—	5.8~8.6	5.8~8.6	6.0~8.0	7.4	7.5
		SS		mg/l	50	50	—	2.48	7.0
		BOD		mg/l	30	30	25	1.70	9.1
		COD		mg/l	30	30	—	3.49	6.4
		n-hexane extract		mg/l	5	5	5	<1	<1
		Cyanogen		mg/l	0.5	0.5	0.2	<0.01	<0.01
		Copper		mg/l	2	2	2	0.06	0.08
		Zinc		mg/l	3	3	3	<0.05	<0.05
		Lead		mg/l	0.1	0.1	0.1	<0.05	<0.05
		Fluorine		mg/l	15	15	15	0.35	0.70
		Boron		mg/l	50	50	50	0.80	1.10
		Phenols		mg/l	5	5	5	<0.02	<0.02
		Ammonia		mg/l	500	500	500	9.1	10.0
		Coli bacteria		counts/cm³	3000	3000	3000	7.3	29
	Noise	Morning	First spot	dB	65	65	—	45.8	45.8
		Daytime	First spot	dB	65	65	—	46.7	46.7
		Evening	First spot	dB	65	65	—	48.1	48.1
		Night	First spot	dB	55	55	—	52.9	52.9
NTK Ceramic Co., Ltd. (Nakatsugawa Plant)	Air	Soot and dust	Firing furnace(NN-1)	mg/Nm³	50	50	20	6	6
		SOx	Firing furnace(NN-1)	Nm³/H	—	—	—	0	0
	Drain (public water area)	pH	Factory 1&2	—	5.8~8.6	5.8~8.6	6.2~8.6	7.4	7.9
			Factory 3					7.7	8.5
		SS	Factory 1&2	mg/l	50	50	35	2.8	5.0
			Factory 3					2.5	5.0
		BOD	Factory 1&2	mg/l	15	15	13	3.2	7.4
			Factory 3					6.4	9.9
		COD	Factory 1&2	mg/l	40	40	30	7.9	15.0
			Factory 3					12.5	18.0
		n-hexane extract	Factory 1&2	mg/l	5	5	4	<0.5	<0.5
			Factory 3					<0.5	<0.5
		Nitrogen	Factory 1&2	mg/l	10	10	—	6.7	9.6
			Factory 3					7.0	9.4
		Phosphorus	Factory 1&2	mg/l	3	3	2.5	0.16	0.37
			Factory 3					0.48	1.10
		Coli bacteria	Factory 1&2	counts/cm³	3000	3000	1000	164.8	430.0
			Factory 3					0.0	0.0
	Noise	Morning	First spot	dB	60	60	58	51.0	51.0
			Second spot	dB	60	60	58	48.0	48.0
			Third spot	dB	60	60	58	48.5	50.0
			Fourth spot	dB	60	60	58	49.5	50.0
		Daytime	First spot	dB	65	65	63	48.5	49.0
			Second spot	dB	65	65	63	48.5	50.0
			Third spot	dB	65	65	63	51.0	53.0
			Fourth spot	dB	65	65	63	49.5	50.0
		Evening	First spot	dB	60	60	58	49.5	50.0
			Second spot	dB	60	60	58	49.0	49.0
			Third spot	dB	60	60	58	51.8	52.0
			Fourth spot	dB	60	60	58	47.5	49.0
		Night	First spot	dB	50	50	50	48.5	49.0
			Second spot	dB	50	50	50	48.0	49.0
			Third spot	dB	50	50	50	48.0	49.0
			Fourth spot	dB	50	50	50	45.0	46.0
	Vibration	Daytime	Fourth spot	dB	65	—	63	23.0	23.0
		Night	Fourth spot	dB	60	—	58	19.0	19.0

Compliance Status

Data on Air, Water Quality, Noise and Vibration

Name of factories and companies	Item	Type		Unit	Regulation value		Voluntary standard value	Average	MAX
					Low/Local regulation	Agreement with the city			
NTK Ceramic Co., Ltd. (Kani Plant)	Air	Soot and dust		mg/Nm ³	100	—	90	9	9
		NOx		ppm	150	—	135	49	49
	Drain (sewer)	pH		—	5.8~8.6	—	5.9~8.5	8.5	8.5
		SS		mg/l	200	—	180	3.0	3.0
		BOD		mg/l	160	—	144	2.3	2.3
		COD		mg/l	160	—	30	5.4	5.4
		n-hexane extract		mg/l	5	—	4.5	1.0	1.0
	Noise	Morning	First spot	dB	50	—	50	48.2	48.2
		Daytime	First spot	dB	60	—	60	48.5	48.5
		Evening	First spot	dB	50	—	50	48.6	48.6
		Night	First spot	dB	45	—	45	44.6	44.6
Nansei Ceramic Co., Ltd.	* Relocated inside the site of the Ise plant								
Kamioka Ceramic Co., Ltd.	Drain (public water area)	pH	①	—	5.8~8.6	—	6.2~8.2	7.7	7.8
			②					7.8	7.8
			③					7.1	7.4
		SS	①	mg/l	200	—	50	3.5	5.8
			②					5.7	8.8
			③					5.8	7.2
		BOD	①	mg/l	160	—	40	2.1	3.8
			②					3.6	4.0
			③					17.0	25.0
		COD	①	mg/l	160	—	40	3.4	5.9
			②					9.2	12.0
			③					35.0	38.0
		n-hexane extract	①	mg/l	5	—	2.5	0.6	0.8
			②					1.4	2.4
			③					1.4	1.9
		Coli bacteria	①	mg/l	3000	—	300	<30	<30
			②					47	62
			③					<30	<30
	Noise	Morning	Fourth spot	dB	60	—	60	45.0	45.0
		Daytime	Fourth spot	dB	65	—	65	45.0	45.0
		Evening	Fourth spot	dB	60	—	60	45.0	45.0
		Night	Fourth spot	dB	50	—	50	45.0	45.0
Nittoku Seisakusho Co., Ltd. (Head Office Plant)	Drain (sewer)	pH	① Office building	—	More than 5.0	—	5.8~9.0	7.6	7.6
			② Head factory					8.1	8.1
			③ West factory					7.4	7.4
		SS	① Office building	mg/l	—	—	600	2.7	2.7
			② Head factory					55	55
			③ West factory					4.7	4.7
		BOD	① Office building	mg/l	—	—	600	1	1
			② Head factory					86	86
			③ West factory					2.0	2.0
		n-hexane extract	① Office building	mg/l	50	—	50	—	—
			② Head factory					0.6	0.6
			③ West factory					<0.5	<0.5
	Noise	Morning	Second spot	dB	60	—	60	62	62 *1
		Daytime	Second spot	dB	65	—	65	62	62
		Evening	Second spot	dB	60	—	60	62	62 *1
	Vibration	Evening	Second spot	dB	65	—	65	54	54
		Night	Second spot	dB	60	—	60	55	55

*1 These values apply to the background noise level. The background noise level is the noise when machines, and so on, are not operating. It is affected by traffic noise, noise from adjacent factories, and so on.

Compliance Status

Data on Air, Water Quality, Noise and Vibration

Name of factories and companies	Item	Type		Unit	Regulation value		Voluntary standard value	Average	MAX
					Low/Local regulation	Agreement with the city			
Nittoku Seisakusho Co., Ltd. (Oguchi Plant)	Drain (public water area)	pH	Oguchi ①	—	5.8~8.6	—	5.8~8.6	7.4	7.4
			Oguchi ②					7.1	7.1
		SS	Oguchi ①	mg/l	—	—	200	4.0	4.0
			Oguchi ②					17.0	17.0
		BOD	Oguchi ①	mg/l	—	—	160	4.4	4.4
			Oguchi ②					9.4	9.4
		n-hexane extract	Oguchi ①	mg/l	5	—	5	<1	<1
			Oguchi ②					<1	<1
	Noise	Morning	First spot	dB	55	55	55	55	55
			Second spot	dB	55	55	55	51	51
			Third spot	dB	55	55	55	51	51
			Fourth spot	dB	55	55	55	50	50
			Fifth spot	dB	55	55	55	51	51
			Sixth spot	dB	55	55	55	52	52
		Daytime	First spot	dB	60	60	60	56	56
			Second spot	dB	60	60	60	54	54
			Third spot	dB	60	60	60	58	58
			Fourth spot	dB	60	60	60	58	58
			Fifth spot	dB	60	60	60	55	55
			Sixth spot	dB	60	60	60	52	52
		Evening	First spot	dB	55	55	55	53	53
			Second spot	dB	55	55	55	52	52
			Third spot	dB	55	55	55	52	52
			Fourth spot	dB	55	55	55	48	48
			Fifth spot	dB	55	55	55	53	53
			Sixth spot	dB	55	55	55	53	53
		Night	First spot	dB	50	50	50	50	50
			Second spot	dB	50	50	50	49	49
			Third spot	dB	50	50	50	49	49
			Fourth spot	dB	50	50	50	48	48
			Fifth spot	dB	50	50	50	50	50
			Sixth spot	dB	50	50	50	49	49
	Vibration	Daytime	First spot	dB	65	60	60	49	49
		Night	First spot	dB	60	55	55	51	51
Nittoku Seisakusho Co., Ltd. (Satsuma Plant)	Drain (public water area)	pH		—	—	—	—	6.8	6.8
		SS		mg/l	—	—	—	12	12
		BOD		mg/l	—	—	—	61	61
		n-hexane extract		mg/l	—	—	—	5.0	5.0
		Coliform bacteria count		counts/cm ³	—	—	—	1600	1600
	Noise	Morning	First spot	dB	50	—	50	64	64 *1
		Daytime	First spot	dB	60	—	50	63	63 *1
		Evening	First spot	dB	50	—	50	63	63 *1
		Night	First spot	dB	45	—	45	63	63 *1
	Vibration	Daytime	First spot	dB	60	—	60	44	44
		Night	First spot	dB	55	—	55	47	47
Nichiwa Kiki Co., Ltd.	Drain (sewer)	pH		—	More than 5.0	—	6.0~8.0	6.5	6.6
		n-hexane extract		mg/l	50	—	40	2.00	5.0
	Noise	Daytime	Cooling tower north side	dB	65	—	63	60.5	60.5

*1 These values apply to the background noise level. The background noise level is the noise when machines, and so on, are not operating. It is affected by traffic noise, noise from adjacent factories, and so on.

Compliance Status

Data on Air, Water Quality, Noise and Vibration

Name of factories and companies	Item	Type		Unit	Regulation value		Voluntary standard value	Average	MAX
					Low/Local regulation	Agreement with the city			
Nittoku Spark Tech Tono Co., Ltd.	Air	Soot and dust		mg/Nm ³	—	—	200	10.0	12.0
		NOx		ppm	—	—	400	30.0	33.0
	Drain (public water area)	pH		—	—	—	5.8~8.6	7.3	7.3
		SS		mg/l	—	—	200	33.0	33.0
		BOD		mg/l	—	—	160	29.0	29.0
		n-hexane extract		mg/l	—	—	5	3.3	3.3
	Noise	Morning		dB	50	—	50	44.2	48.2
		Daytime		dB	60	—	60	50.9	58.2
		Evening		dB	50	—	50	44.3	48.2
Night		dB	45	—	45	42.9	44.6		
Ceramic Sensor Co., Ltd.	Air	Soot and dust		mg/Nm ³	200	200	200	0	0
		NOx		ppm	—	—	—	61.5	78.0
	Drain (public water area)	pH		—	5.8~8.6	6.0~8.0	6.0~8.0	7.2	7.7
		SS		mg/l	150	18	18	1.6	4.0
		BOD		mg/l	120	18	18	2.1	6.7
		COD		mg/l	120	18	18	6.6	15.0
		n-hexane extract		mg/l	5	2	2	1.0	1.0
		Nitrogen		mg/l	60	30	30	5.0	16.0
		Phosphorus		mg/l	8	—	4	0.2	1.7
		Fluorine		mg/l	8	—	8	2.7	5.5
		Boron		mg/l	10	—	10	2.2	4.2
	Noise	Daytime	First spot	dB	75	70	70	56.2	63.8
			Second spot	dB	75	70	70	57.4	58.9
			Third spot	dB	75	70	70	58.5	61.1
			Fourth spot	dB	75	70	70	53.2	55.6
			Fifth spot	dB	75	70	70	53.2	59.6
			Sixth spot	dB	75	70	70	51.3	53.5
			Seventh spot	dB	75	70	70	57.2	59.3
		Night	First spot	dB	70	60	60	54.2	57.2
			Second spot	dB	70	60	60	56.6	57.9
			Third spot	dB	70	60	60	57.3	59.7
			Fourth spot	dB	70	60	60	52.7	54.1
			Fifth spot	dB	70	60	60	51.2	55.8
			Sixth spot	dB	70	60	60	50.5	53.0
			Seventh spot	dB	70	60	60	56.8	59.0
Tokai Taima Kogu Co., Ltd.	Noise	Morning	east	dB	75	—	60	42.9	42.9
		Daytime	east	dB	75	—	65	44.8	44.8
		Evening	east	dB	75	—	60	45.0	45.0
		Night	east	dB	70	—	50	42.7	42.7
	Vibration	Daytime	east	dB	75	—	65	48.0	48.0
		Night	east	dB	70	—	60	48.0	48.0

Environmental Accounting

Environmental Conservation Costs

(Unit: million yen)

Items			Non-consolidated				NGK SPARK PLUG Group*			
Classification		Major efforts	Investment		Expense		Investment		Expense	
			2012	2013	2012	2013	2012	2013	2012	2013
Costs within the business area	Pollution prevention cost	Air/water pollution prevention and noise reduction	58	13	519	387	101	38	988	767
	Global environmental conservation cost	Global warming prevention, energy conservation	47	63	395	408	129	110	448	491
	Resource circulation cost	Effective resource utilization, industrial waste treatment/disposal	12	14	276	194	22	27	466	384
Sub-total			116	91	1,190	989	251	175	1,902	1,643
Upstream & downstream cost			0	0	0	0	0	0	11	1
Management activity cost			8	21	286	346	9	23	363	433
R&D cost			1,012	1,181	6,580	8,030	1,012	1,181	6,580	8,031
Social activity cost			0	0	181	211	0	0	186	216
Environment damage correction cost			0	0	10	7	1	0	13	8
Other costs			0	0	0	0	0	0	0	0
Total			1,136	1,293	8,248	9,584	1,272	1,379	9,055	10,332

Any inconsistency between an aggregate of all itemized figures and a "Total" figure is due to rounding of fractions.

* Excluding Nittoku Alpha Service Co., Ltd.

Economic Benefits Associated with Environmental Conservation Activities

(Unit: million yen)

Area of recognized effect		2012	2013
Revenue	Revenue generated from the recycling of waste generated in operations or used products	147	185
Cost saving	Energy cost saving achieved from energy conservation efforts	104	65
	Reduction of water expenses through water saving	2	2
	Waste disposal cost saving achieved by resource conservation and recycling efforts	4	1
Total		257	253

Quantity of Environmental Conservation Benefits

Classification			Non-consolidated			NGK SPARK PLUG Group		
Effect measured in the business area	Types of effect		2012	2013	Difference from the previous fiscal year	2012	2013	Difference from the previous fiscal year
Effect measured with respect to resource input into operations	Energy consumption	Purchased electricity (GWh)	22,338	21,358	−980	33,503	34,399	896
		Gas (million m³)	1,379	1,144	−236	1,452	1,321	−131
		LPG (million m³)	341	366	25	757	819	62
	Water consumption	Tap water (m³)	604,770	521,041	−83,729	817,405	727,203	−90,202
		Well water (m³)	385,883	372,238	−13,645	719,490	703,847	−15,643
	Quantity of PRTR law-regulated substances handled (tons)		573	643	70	811	911	100
Effect measured with respect to environmental load and waste from business activities	CO2 emission from energy consumption (tons)		120,786	112,542	−8,244	172,021	173,776	1,755
	Waste	Effectively utilized mass (tons)	9,407	8,216	−1,191	12,611	11,758	−853
		Buried, incineration (tons)	106	92	−14	132	148	31
	PRTR law-regulated substances released into air and water (tons)		1.9	1.9	0	140	151	11

Hazardous Substances

PRTR data for Each Business Site

* The table contains the substances that each business location was required to report

(kg)

Name of factories and companies	Cabinet order No.	Name of chemical substance	Quantity handled	Quantity released			Quantity transferred			Quantity processed		Quantity taken out
				Air	Public water area	Soil	Public sewer	Buried and incineration	Effective use	Incineration on the premises	Disassociation reaction	
Headquarters and Nagoya Plant	53	Ethylbenzene	5,089	0							5,089	
	80	Xylene	21,809	1							21,808	
	87	Chromium and chromium (III) compounds	16,822				2	2	314			16,505
	144	Inorganic cyanide compounds (except complex salts and cyanates)	1,075				9				1,066	
	296	1,2,4-trimethylbenzene	9,168	1							9,167	
	297	1,3,5-trimethylbenzene	2,793	0							2,793	
	300	Toluene	64,102	11							64,091	
	308	Nickel	106,656				2	0	35			106,620
	392	n-hexane	4,731	1							4,730	
	400	Benzene	2,304	1							2,303	
	405	Boron compounds	1,990					1	225			1,763
	412	manganese and its compounds	1,166				0		0			1,165
Komaki Plant * Including NTK ceramic (Komaki Plant)	20	2-aminoethanol	4,926						4,764		161	
	53	Ethylbenzene	3,021	79					765		2,177	
	80	Xylene	14,301	160					4,279		9,861	
	87	Chromium and chromium (III) compounds	3,463					0	671		0	2,792
	132	Cobalt and its compounds	1,851	0				0	21			1,829
	144	Inorganic cyanide compounds (except complex salts and cyanates)	3,658						245		1,759	1,655
	245	Thiourea	1,424	0					698		14	711
	272	Copper salts (water-soluble, except complex salts)	2,326		27				1,275		1,024	
	297	1,3,5-Trimethylbenzene	1,276	1					0		1,275	
	300	Toluene	30,747	77					2		30,667	
	308	Nickel	29,812					3	246			29,563
	309	Nickel compounds	1,400		60				750		590	
	400	Benzene	693.1	0							692.9	
	405	Boron compounds	36,303		359			15	1,651		48	34,230
	411	Formaldehyde	1,162						1,150		12	
Miyanojo Plant	412	Manganese and its compounds	4,478		2			0	4,095		1	380
	87	Chromium and chromium (III) compounds	25,283						1,327			23,956
	144	Inorganic cyanide compounds (except complex salts and cyanates)	2,157								2,157	
	308	Nickel	179,698									179,698
	405	Boron compounds	8,872		95				104			8,673
	412	manganese and its compounds	2,164									2,164
Ise Plant	305	Lead compounds	45,781					0	5,434			40,347
Takenami Plant	300	Toluene	1,532	997					60		475	
	309	Nickel compounds	953						216			737
Subtotal			644,984	1,329	543		12	22	28,328		161,963	452,789
NTK Ceramic (Iijima Plant)	53	Ethylbenzene	6,642	2,608					4,035			
	80	Xylene	3,998	1,825					2,172			
	87	Chromium and chromium (III) compounds	5,279						660			4,619
	144	Inorganic cyanide compounds (except complex salts and cyanates)	2,642		0				1,792		326	525
	300	Toluene	76,328	76,328								
	308	Nickel	1,898									1,898
	309	Nickel compounds	3,181						3,181			
NTK Ceramic (Nakatsugawa Plant)	354	di-n-butyl phthalate	9,955						1,042		8,913	
	53	Ethylbenzene	1,463	566					806			91
	80	Xylene	8,290	3,209					4,568			513
	87	Chromium and chromium (III) compounds	4,115						2,087			2,028
	300	Toluene	65,391	62,778					2,614			
	354	di-n-butyl phthalate	23,364						10,404		5,421	7,540
	355	bis (2-ethylhexyl) phthalate	2,021						1,827		108	86
NTK Ceramic (Kani Plant)	453	Molybdenum and its compounds	2,536						275			2,261
	80	Xylene	1,026	821					205			
	354	di-n-butyl phthalate	2,703						1,418		893	391
Nansei Ceramic	305	Lead compounds	11,630						1,396			10,234
	384	1-bromopropane	4,048	1,417					2,631			
Nittoku Seisakusho (Oguchi Plant)	308	Nickel	12,977									12,977
Ceramic Sensor	333	Hydrazine	14,694						12,978		1,712	4
	374	Hydrogen fluoride and its water-soluble salts	3,092						3,029		63	
Subtotal			267,273	149,551	0				57,120		17,435	43,166
Total			912,257	150,880	543		12	22	85,448		179,399	495,955

Waste

Volumes of Waste Generated at Each Business Site

The volume of waste generated in fiscal 2013 in the factories and the affiliated companies is listed in the table as follows.

Name of factories and companies		Volume of emissions (tons)	Volume effectively Recovery rate used (tons)	Volume of buried and incineration (tons)	Recovery rate (%)
NGK SPARK PLUG CO., LTD.	Headquarters and Nagoya Plant	823	813	9.1	98.9%
	Komaki Plant	4,178	4,101	77	98.2%
	Miyanojo Plant	3,143	3,139	4	99.9%
	Ise Plant	159	158	1.0	99.4%
	Takenami Plant	5.3	5.3	0.0	99.1%
Subtotal		8,308	8,216	92	98.9%
Affiliates	NTK Ceramic Co., Ltd. (Iijima Plant)	599	590	9.3	98.4%
	NTK Ceramic Co., Ltd. (Nakatsugawa Plant)	327	326	0.9	99.7%
	NTK Ceramic Co., Ltd. (Kani Plant)	60	60	0.1	100%
	NTK Ceramic Co., Ltd. (Komaki Plant)	630	618	11.9	98.1%
	Nansei Ceramic Co., Ltd.	46.7	46.7	0.0	100.0%
	Kamioka Ceramic Co., Ltd.	201	201	0.2	99.9%
	Nittoku Seisakusho Co., Ltd.	407	403	3.8	99.1%
	Nichiwa Kiki Co., Ltd.	6.2	6.2	0.0	99.2%
	Nittoku Spark Tech Tono Co., Ltd.	48	46	2.3	95.2%
	Ceramic Sensor Co., Ltd.	1,269	1,241	27.5	97.8%
	Tokai Taima Kogu Co., Ltd.	4.2	3.8	0.4	90.0%
	Nittoku Unyu Co., Ltd.	0.1	0.1	0.0	99.6%
	Subtotal	3,598	3,542	57	98.4%
Total		11,906	11,758	148	98.8%

Local Clean-up Activities

Clean-up Activities around our Business Sites

Name of factories and companies		Number of operations implemented (times)	Total number of participants (people)
NGK SPARK PLUG CO., LTD.	Headquarters and Nagoya plant	5	76
	Komaki Plant	4	150
	Miyanojo Plant	2	78
	Ise Plant	2	49
	Subtotal	13	353
Affiliates	NTK Ceramic Co., Ltd.	Iijima Plant	22
		Nakatsugawa Plant	20
		Kani Plant	28
		Komaki Plant	10
	Nansei Ceramic Co., Ltd.		4
	Kamioka Ceramic Co., Ltd.		33
	Nittoku Seisakusho Co., Ltd.	Head Office Plant	74
		Oguchi Plant	67
		Satsuma Plant	53
	Nichiwa Kiki Co., Ltd.		54
	Nittoku Spark Tech Tono Co., Ltd.		14
	Ceramic Sensor Co., Ltd.		70
	Tokai Taima Kogu Co., Ltd.		12
	Subtotal		461
Total		46	814

Clean-up Activities Initiated by a Local Government, etc.

Name of factories and companies	Event name	Held by	Location	Number of participants (people)
NGK SPARK PLUG CO., LTD. (Komaki Plant), Ceramic Sensor Co., Ltd.	Komakiyama Beautification Program, Spring Clean-up Walk at Komakiyama	Komaki City Committee for Beautiful and Clean Local Environment	Around Komakiyama	21
NGK SPARK PLUG CO., LTD. (Komaki Plant), Ceramic Sensor Co., Ltd.	Komaki Citizens' Anti-Littering Action Day, Komaki City Clean-up Walk	Komaki City Committee for Beautiful and Clean Local Environment	Around Komaki City Auditorium	23
NTK Ceramic Co., Ltd. (Iijima Plant)	Picnic for the Environment of the Tenryu River System	Ina Techno Valley Regional Center of the Nagano Techno Foundation, etc.	Area where the Ohtagiri River and the Tenryu River meet	39
Nittoku Seisakusho Co., Ltd. (Oguchi Plant)	Clean-up Campaign for the Gojo, Aise and Yado Rivers	Oguchi Town	Oguchi Town	11