

2015

CSR REPORT

CORPORATE

SOCIAL

RESPONSIBILITY

REPORT



Manufacturing that Contributes to the Global Environment and Society

NGK products and technologies must create new value and contribute to the quality of life. Utilizing ceramics technologies accumulated over nearly a century since our founding, NGK manufacturing continues to advance globally toward the future.

Editorial Policy

| Reference Guidelines

Ministry of the Environment's Environmental Reporting Guidelines (2012) and the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines (Versions 3.1 and 4.0).

| Target Organization

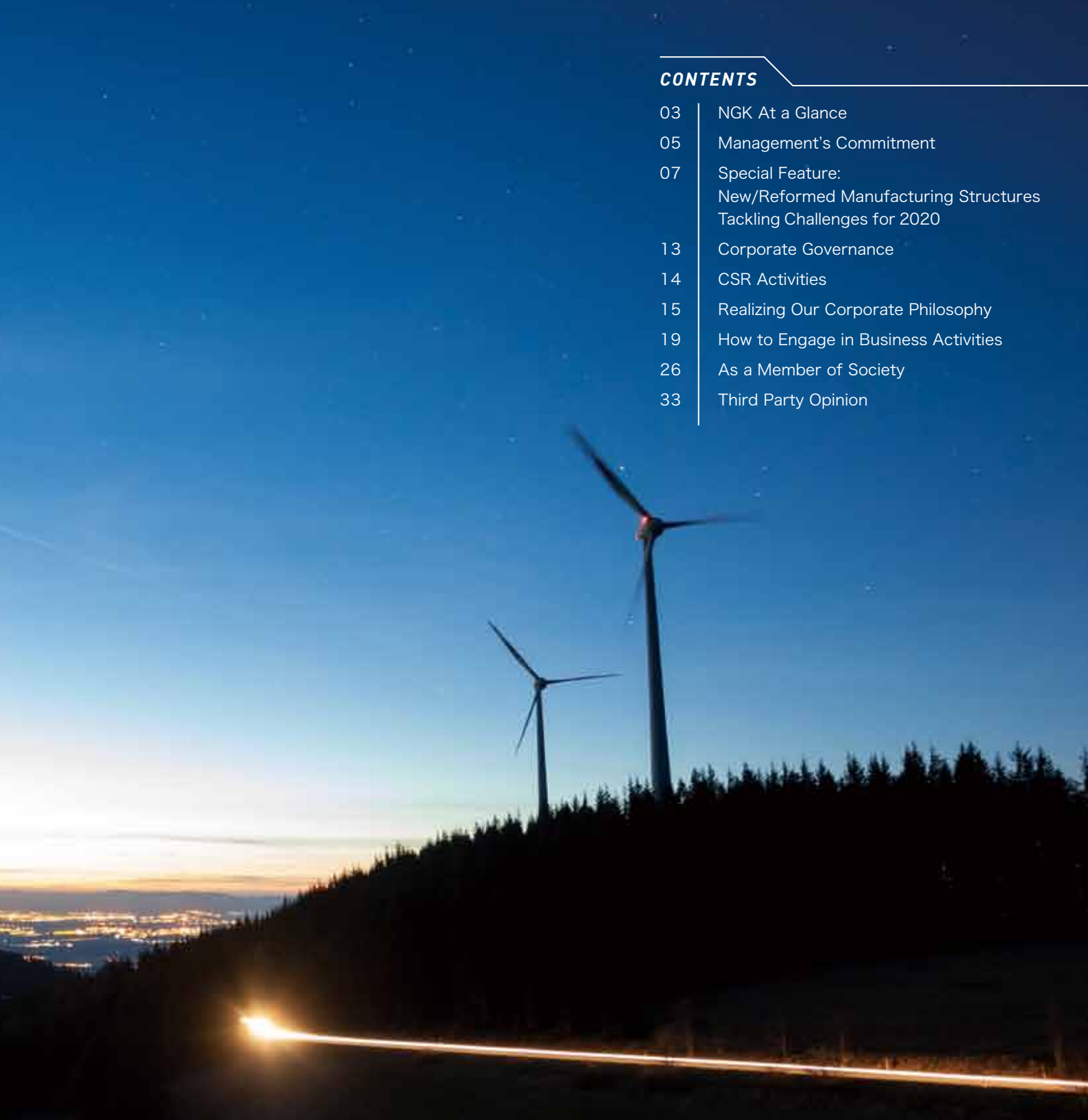
As each example differs, data is presented individually for each article in the report.

| Target Period

April 1, 2014 - March 31, 2015

| Report Content Based on CSR Promotion Actions

NGK clearly states eight actions for promoting CSR (see P. 14) defined in the NGK Group Guidelines for Corporate Behavior and establishes targets for each action every fiscal year. This report is compiled based on these CSR promotion actions.



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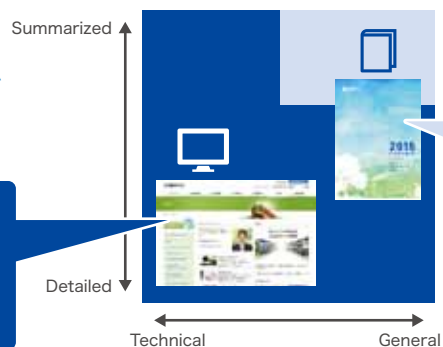
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| This publication is a digest.

This publication is a digest version of the CSR Report 2015. The full report can be viewed on the CSR section of the NGK website.

The website provides information on a wider range of activities.

CSR Report 2015 (Full Report)
<http://www.ngk.co.jp/english/csr>



The print version provides an overview of NGK Group CSR activities and is easily understood by the average reader.

NGK Ceramics Technologies Create the Cutting Edge in the Triple E Business Domain

The NGK Group contributes to solving global environmental problems in the "Triple E" business domain (Energy, Ecology, and Electronics) with its core ceramics technologies. Each product developed using our proprietary ceramics technologies supports the stable

supply of electric power, the reduction of environmental impacts and the accelerated advancement of electronic products. NGK technologies and products play an active role in creating a better social environment.

Energy

NAS[®] Battery Systems for Electric Energy Storage

NAS batteries enable megawatt-class electricity storage, facilitate power demand peak cut and provide stable, renewable energy.



NAS battery systems for electric energy storage

Power Business

Insulators and Electric Power Equipment

Power transmission, substation and distribution insulators and related products support the stable supply of energy in over 100 countries around the world.



Insulators for power transmission



The Stable Supply of Electric Power

Ecology

HONEYCERAM[®] Honeycomb Ceramics for Automotive Catalytic Converters to Purify Exhaust Gases

Automobile exhaust gases are purified by catalytic metals on the ceramics surface.



HONEYCERAM for gasoline-powered vehicles



Large size HONEYCERAM (right)

Ceramics to Purify Diesel Vehicle Exhaust Gases/NOx sensors

Providing various products for the purification of diesel vehicle exhaust gases.



Diesel particulate filters (DPFs)



High-precision in-vehicle NOx sensor

The Reduction of Environmental Impacts

Industrial Processing Products

Contributing to the safe disposal of radioactive waste, water purification in each process and the manufacturing of solar cell and lithium-ion batteries.



Industrial heating systems



Subnano-ceramic membranes

Electronics

Ceramics for Semiconductor Manufacturing Equipment

Fine ceramics enable semiconductor miniaturization and improved productivity.



Ceramics for semiconductor manufacturing equipment

Electronics Business

Ceramics for Electric and Electronic Machinery

Providing bonded wafers and piezoelectric micro-actuators for digital devices, electronic components for telecommunications equipment and HICERAM[®] translucent alumina ceramics.



Bonded wafers

Beryllium Copper Alloy

Contributing to improved reliability and miniaturization technologies with conductive spring material for electrical appliances and automobiles.



Beryllium copper strip

The Advancement of Electronics Products

Corporate Outline

Company Name

NGK INSULATORS, LTD.

Address

2-56, Suda-cho, Mizuho, Nagoya 467-8530, Japan Telephone +(81) 52-872-7171

Establishment

May 5, 1919

Paid-In Capital

69.8 billion yen
(As of March 31, 2015)

Net Sales

378.7 billion yen
(Consolidated, for the year ended March 31, 2015)

Employees

NGK: 3,569 Consolidated: 16,217
(As of March 31, 2015)

Business Development by Region (As of March 31, 2015)

Japan

NGK INSULATORS, LTD.
22 consolidated subsidiaries
2 equity-method affiliates

Europe

6 consolidated subsidiaries

North America

14 consolidated subsidiaries

Asia and Others

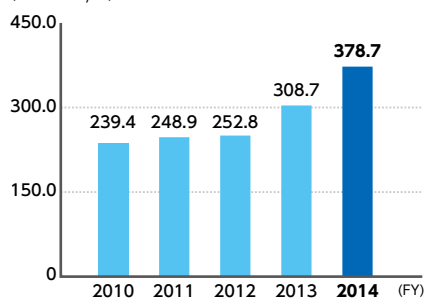
16 consolidated subsidiaries

Business Overview (Consolidated)

Data includes target company consolidated results (22 domestic, 36 overseas companies as of March 31, 2015)

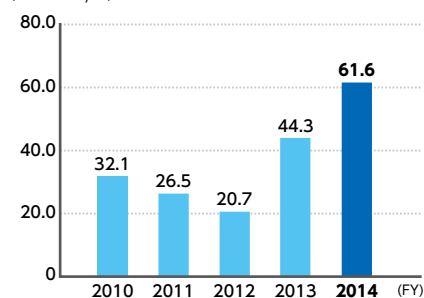
Net Sales

(Billions of yen)



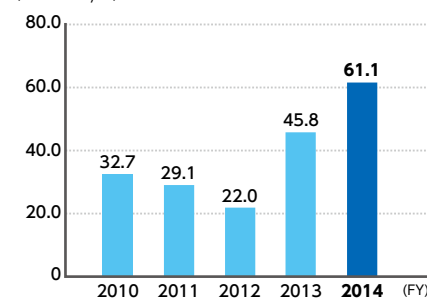
Operating Income

(Billions of yen)



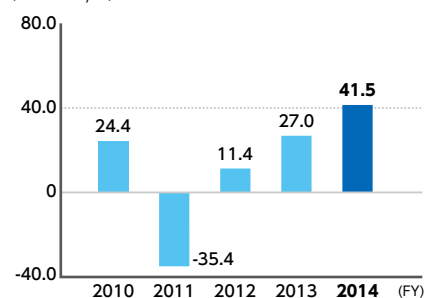
Ordinary Income

(Billions of yen)



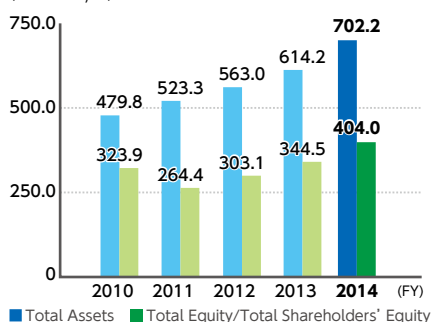
Net Income (Loss)

(Billions of yen)



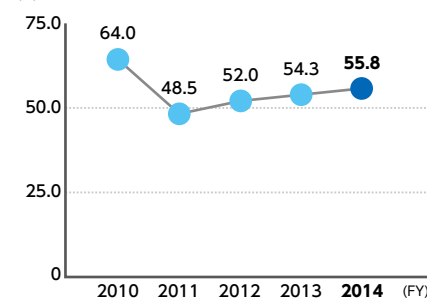
Total Assets, Total Equity/ Total Shareholders' Equity

(Billions of yen)



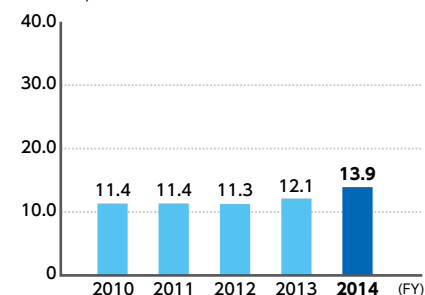
Equity Ratio

(%)



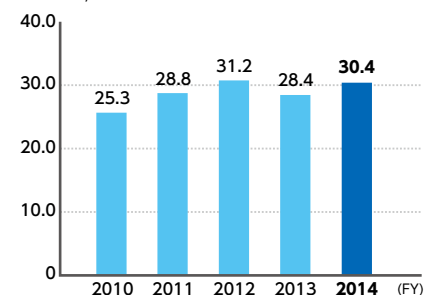
Research and Development Expenses

(Billions of yen)



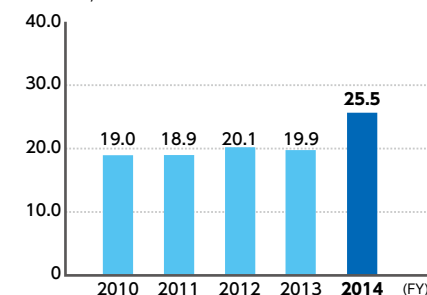
Capital Expenditures

(Billions of yen)



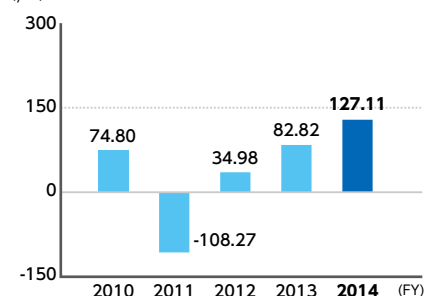
Depreciation and Amortization

(Billions of yen)



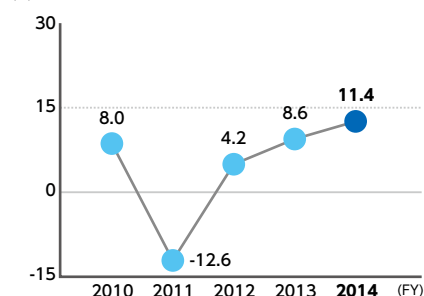
Net Income (Loss) per Share

(yen)

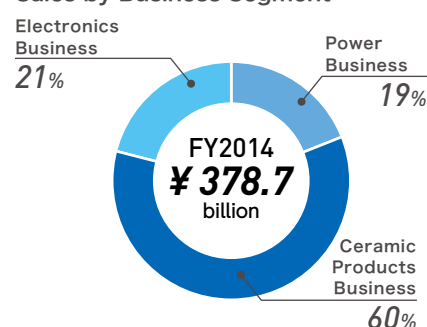


Return on Equity

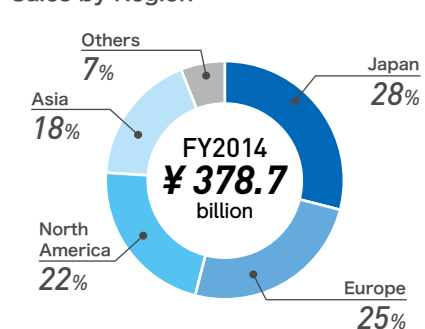
(%)



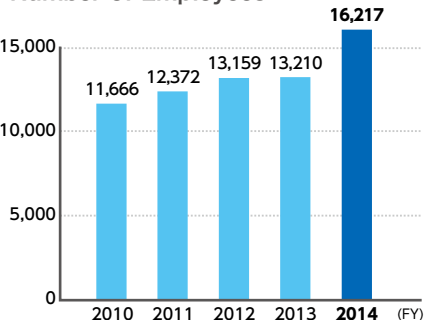
Sales by Business Segment



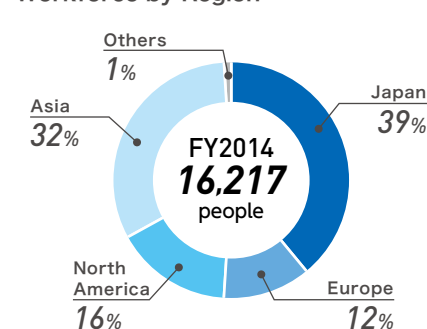
Sales by Region



Number of Employees



Workforce by Region



Further Strengthening Our CSR Initiatives as a Manufacturing Company Growing Globally

In fiscal 2014, ended March 31, 2015, NGK Group net sales increased due to steady demand for automotive-related products in the Ceramic Products Business, increased demand for ceramics used for semiconductor manufacturing equipment in the Electronics Business and the inclusion of fourth-quarter sales from NGK Electronics Devices, Inc., which became a consolidated subsidiary in January 2015. In the Power Business, sales increased due to the shipment of NAS[®] battery systems for electric energy storage to a large project overseas. In terms of income, although a provision for losses related to competition laws was recorded as an extraordinary loss, profits increased due to improved operating income.

In each business area, there is strong potential for achieving medium- to long-term growth, thus we are promoting initiatives aimed at creating new products and businesses. To realize this growth potential amid the expansion of globalization, intensifying competition due to the rise of manufacturers in developing countries and increasing societal demands for management transparency, it is critical that we both create a structure for responding to changes in the environment surrounding NGK and change our own behaviors going forward.

In September 2015, NGK admitted to violating U.S. antitrust laws and other regulations in some business transactions related to automotive catalytic substrates, and accepted a plea agreement.

We deeply apologize for having caused a great deal of concern among our customers, shareholders, investors and everyone involved.

The NGK Group considers legal compliance to be an important management issue. Although we have a compliance structure in place, in recognition of the seriousness of this situation, we will further enhance our compliance structure and conduct thorough training with regard to antitrust and related regulations targeting our Board of Directors and all our employees in an effort to regain stakeholder trust and prevent a recurrence.



Takuo Oshima
President



New/Reformed Manufacturing Structures

New/reformed manufacturing structures promoting the objective of creating resilient and efficient manufacturing sites are focused on the medium- to long-term business environment. To establish competitive capabilities for success in global markets from 2020 onward, we established ambitious “challenge targets,” and launched “new challenge activities” to achieve these targets.

The NGK Group will unite to conduct global initiatives and work together with customers and procurement partners to go beyond conventional thinking in an attempt to realize increased product value and innovative manufacturing processes.

Strengthening Head Office Capabilities Underpinning Global Management

Amid accelerating global business development, the Head Office provides business divisions with highly specialized and strategic support in a desire to reinforce the entire NGK Group. Specific issues refined through detailed discussions, such as the development and utilization of global human resources and responses to increased legal risks, are the focus of activities conducted over a two-year period starting in fiscal 2015 aimed at creating a world-class global company.

Reinforcing CSR

To maintain the high degree of trust from our stakeholders, I personally visit all business divisions and speak with employees directly to ensure all NGK employees possess a strong awareness of compliance and reinforce the recognition that all our business activities are based on a foundation of safety, environmental awareness, quality and CSR. Aiming for high world-class standards, we will further enhance our business, our corporate social responsibility (CSR) and our governance in line with the self-imposed objective of “paying strict attention to on-site operations.” Every person working in the NGK Group will step up their performance while maintaining a focus on the future as we promote the creation of a vigorous company able to make the most of its overall capabilities.

In April 2015, NGK signed the UN Global Compact.* As a world-class global company, we will develop business and proactively fulfill our social responsibilities based on international standards for decision-making.

CSR Report 2015 introduces the NGK Group’s CSR initiatives and target directions in accordance with the Group’s “CSR promotion items.” After reading this publication, as well as the full report posted on our corporate website, we invite you to offer your direct and honest opinions on our initiatives.

The full report can be viewed on the CSR section of the NGK website. <http://www.ngk.co.jp/english/csr/web/index.html>

*The UN Global Compact

The UN Global Compact is a global framework for realizing sustainable growth through companies and organizations acting as good members of society. Participating corporations support ten principles in the areas of human rights, labor, the environment and anti-corruption required in the practice of corporate activities.



The Ten Principles of the UN Global Compact

Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2: make sure that they are not complicit in human rights abuses.
Labor	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; Principle 4: the elimination of all forms of forced and compulsory labor; Principle 5: the effective abolition of child labor; and Principle 6: the elimination of discrimination in respect of employment and occupation.
Environment	Principle 7: Businesses should support a precautionary approach to environmental challenges; Principle 8: undertake initiatives to promote greater environmental responsibility; and Principle 9: encourage the development and diffusion of environmentally friendly technologies.
Anti-Corruption	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

New/Reformed Man Tackling Chall




Aiming for Innovative Manufacturing Targeting Medium- to Long-Term Growth and Contributions to the Global Environment and Society

Under the corporate philosophy “NGK products and technologies must create new value and contribute to the quality of life,” we have pursued the possibilities of ceramics and advanced manufacturing technologies since NGK’s establishment in 1919. We have continued to take on challenges for nearly a century through the development and production of products contributing to global

environmental conservation and supporting social infrastructure.

During the three-year period beginning in fiscal 2009, we engaged in new/reformed manufacturing structures aimed at building robust and efficient manufacturing sites. In fiscal 2014, we launched new/reformed manufacturing structures initiatives to expand targeted product lines.

Manufacturing Structures Engines for 2020



| New/Reformed Manufacturing Structures Activities Concept

- Activities consist of “fiscal year improvement activities” involving targets that must be achieved, and “new challenge activities” involving challenge targets.
- New challenge activities are initiatives with even higher objectives for achieving ideals and targets defined for each business focused on the 2020 business environment.

| New Challenge Activities Initiative Perspectives

- Initiatives for further technological advancements, improved product quality and profitability
- Global initiatives unifying Group companies in Japan and overseas
- Wide-reaching initiatives involving customers and suppliers
- New, imaginative initiatives utilizing advanced case studies and external information and resources

These activities will be conducted over three years ending in fiscal 2016. NGK has embarked on a new challenge with the aim of establishing a competitive edge enabling us to compete in the global market and achieve medium- to long-term growth.

Dialogue:

New/Reformed Manufacturing Structures Initiatives

Our ultimate mission is to realize manufacturing technology innovation that provides people throughout the world with a more comfortable lifestyle.



Shuhei
Ishikawa

Director and Senior
Vice President
Group Executive,
Electronics
Business Group

Aiming for Ideals and Targets Focused on 2020

Niwa: New/reformed manufacturing structures involve engaging in new challenging activities aimed at achieving ideals and targets defined by each business division by the year 2020. The mission is to establish NGK Group competitiveness over the medium to long term. What is the status of the targets and initiatives in the divisions you manage?

Ishikawa: The Electronics Business Group's New Metals Division aims to establish a position of solid leadership in the market and is utilizing big data as one means to this end. We think analyzing big data acquired from copper alloy strip production processes will enable more efficient and stable production of products with higher quality and high added value.

Matsuda: The Ceramic Products Business Group aims to become the top supplier of honeycomb ceramics. NGK products account for a large share of the global market, so production that is more efficient and sophisticated will lead to significant merits for the NGK Group as well as the global automotive industry. Deploying production processes established at our mother plant in Japan aimed at saving energy, space and manpower to all production bases worldwide will strengthen our global competitiveness.

Mima: The Power Business Group's NAS Battery Division aims to become the leading company in large-capacity electricity storage

batteries. With a large capacity suited for long-duration storage, NAS batteries are gaining attention as storage batteries able to provide a stable supply of power promoting the introduction of renewable energy. Enhanced cost competitiveness is indispensable for the expanded adoption of NAS batteries. Development, design, procurement and production all face a multitude of issues, so we are tackling the challenge of a multipronged and aggressive target.

Niwa: The Corporate Manufacturing Engineering's Construction & Maintenance Department aims to become the top engineering group in the manufacturing of ceramics. Our goal is to raise energy efficiency and human productivity by 200% compared to existing plants—twice that of current levels—and we are considering the construction of a model plant introducing the most advanced energy conservation and automatization technologies. Furthermore, to enable the appropriate management of production, we are incorporating the latest information technologies into our existing production management system to gain feedback based on the real time analysis of energy consumption, production status and other data while at the same time engaging in "Visualization" initiatives.

Our Ultimate Mission is to Contribute to a Better Social Environment

Matsuda: New/reformed manufacturing structures also

We aim to build plants that contribute to environmental conservation during the manufacturing process through the introduction of the most advanced energy conservation and automatization technologies that will raise energy efficiency and productivity.



Chiaki
Niwa

Director and
Vice President
Group Executive,
Corporate
Manufacturing
Engineering

Launching New Manufacturing Initiatives to Contribute to the Global Environment and Society

What is NGK aiming for with its new/reformed manufacturing structures? How can new manufacturing initiatives contribute to the global environment and society?

Four key personnel discuss NGK's medium- to long-term vision and their thoughts on manufacturing.

Hiroto Matsuda

Vice President
General Manager,
Manufacturing
Division,
Ceramic Products
Business Group



Considering that NGK's HONEYCERAM® ceramics for automobile exhaust purification protect the global environment, I want to advance manufacturing technologies even further.

consider the perspective of contributing to the environment and society through technological advancements and enhanced product value indispensable. HONEYCERAM® is useful for preventing air pollution, so we can say that this product itself contributes to environmental conservation. Considering that products created by NGK are used in cars around the world and protect the global environment, as someone involved in manufacturing, I feel that we must pursue further technological advancements.

Ishikawa: Our corporate philosophy is "NGK products and technologies must create new value and contribute to the quality of life," thus I think this is truly the number one goal of new/reformed manufacturing structures. Contributing to a better social environment involves improving a variety of environments surrounding humans. Providing the world with a more comfortable lifestyle through technological innovations in manufacturing is our ultimate mission.

Mima: At present, the Japanese government is promoting the introduction of renewable energy and is engaged in a variety of initiatives aimed at the realization of a hydrogen society. Large-scale batteries are necessary to efficiently use unstable renewable energy and achieve a balance between energy demand and supply—this is where NAS batteries can display its true capabilities. I want NGK to contribute to the realization of a society with a low impact on the environment through new/reformed manufacturing structures that will enhance NAS

batteries as a product contributing to a better social environment.

Manufacturing Innovations Cultivating the Next-Generation of Human Resources

Mima: Skilled people are the key to further advancements in automatized and labor-saving manufacturing processes. As manufacturing technologies become increasingly advanced, the skills demanded of people also increase, raising the importance of passing on knowledge from one generation to the next. Thus, new/reformed manufacturing structures also aim to cultivate human resources.

Matsuda: Cultivation of human resources able to support global manufacturing systems is also a critical issue for the ceramics business. At production bases in developing countries in particular, there is a tendency toward employee attrition, so fostering motivation in each individual employee and creating a human resources structure that promotes the advancement of local employees is also a critical factor.

Niwa: We will cultivate the next-generation of human resources through new/reformed manufacturing structures. The entire NGK Group will come together to take on challenges to be achieved by the year 2020 with the aim of realizing growth through businesses that contribute to the environment and society.

Toshiyuki Mima

Vice President
General Manager,
NAS Battery
Division,
Power Business
Group



We are working towards a society with a low impact on the environment by enhancing the product value of NAS® battery systems for electric energy storage to enable more efficient energy utilization, thereby improving our social environment.

Toward the Forefront of Innovation

The Global Spread of Manufacturing and Personnel Training



JAPAN

Creating the Future
Global Environment with
Zero-Worker Plants

Yukihito Tsuchiya

NAS Battery Division,
Power Business Group



To reduce NAS battery costs, we are promoting automatization of manufacturing processes with the aim of creating zero-worker plants. Leaving simple tasks to machines and shifting humans to high-value-added work to increase productivity is the aim of the zero-worker movement. One step in that direction currently involves initiatives to automate manual labor in the manufacturing process, including the application of multi-axial, robot-controlled 3D vision and high-output laser markers among other new devices. There is no end to the challenges we are taking on, including IoT* initiatives involving the centralized management of facilities equipped with networks through data communications. The spread of NAS batteries due to reduced costs promotes the use of renewable energy, creating a better global environment. I am proud of the work we are doing for the future.

*Internet of Things

Japanese Innovation Will Create New Value



Manufacturing
Innovations
Using Big Data

Nobuaki Nakayama

New Metals Division,
Electronics Business Group

Last year, I returned to Japan after working for seven years at the New Metals Division production base in France. Waiting for me was work that excites the engineer's spirit: manufacturing innovation using big data. The manufacturing worksite involves more than a few conditions that cannot be quantified accurately. For example, metallic material heat treatment. Although conditions are supposed to be identical, small fluctuations in temperature and line speed cause characteristic deviations. Nor can we ignore discrepancies in previous operational conditions. Use of this accumulated chain of data is linked to the stabilization of quality. Up to now, we have analyzed data from hundreds of samples, but the use of big data will enable us to analyze 10–100 times more data. The discovery of unexpected data unnoticed until now will likely lead to significant improvements. An unexplored world is coming into view through the perspective of big data usage. This presents significant possibilities and importance for those of us creating new manufacturing structures.



JAPAN

People develop technology, and technology develops people. The virtuous cycle of manufacturing is spreading globally.

With the launch of new/reformed manufacturing structures, young employees at bases in each global region are taking on new challenges. Experiences of success when taking on difficult issues are spreading globally, ushering in the next-generation of manufacturing. This section introduces leading-edge NGK Group innovations led by individual employees.

CHINA

Improving Productivity and the Global Environment with Databases

Huang Xiaoxin

NGK CERAMICS
SUZHOU CO., LTD.

At NGK's production base for automotive exhaust purification ceramic products in China, my job is to propose more efficient production conditions using a database to "visualize" information related to personnel, equipment, raw materials and processes. The completeness, accuracy and timeliness of data are critical to compiling information in a database. To ensure these conditions, I not only collect data, but must also increase awareness among relevant personnel and build the management system necessary for the data. I want to improve the NGK Group product efficiency by incorporating improvement case studies from overseas Group companies and sharing our own improvement case studies. I want to contribute to global environmental conservation through my work to increase the productivity of automotive exhaust purification ceramic products.

Manufacturing Innovations Promoted at Bases in Each Global Region

POLAND

Pursuing Energy Conservation to Reduce Impacts on the Environment

Kazuhi Matsumoto

NGK CERAMICS
POLSKA SP. Z O.O.

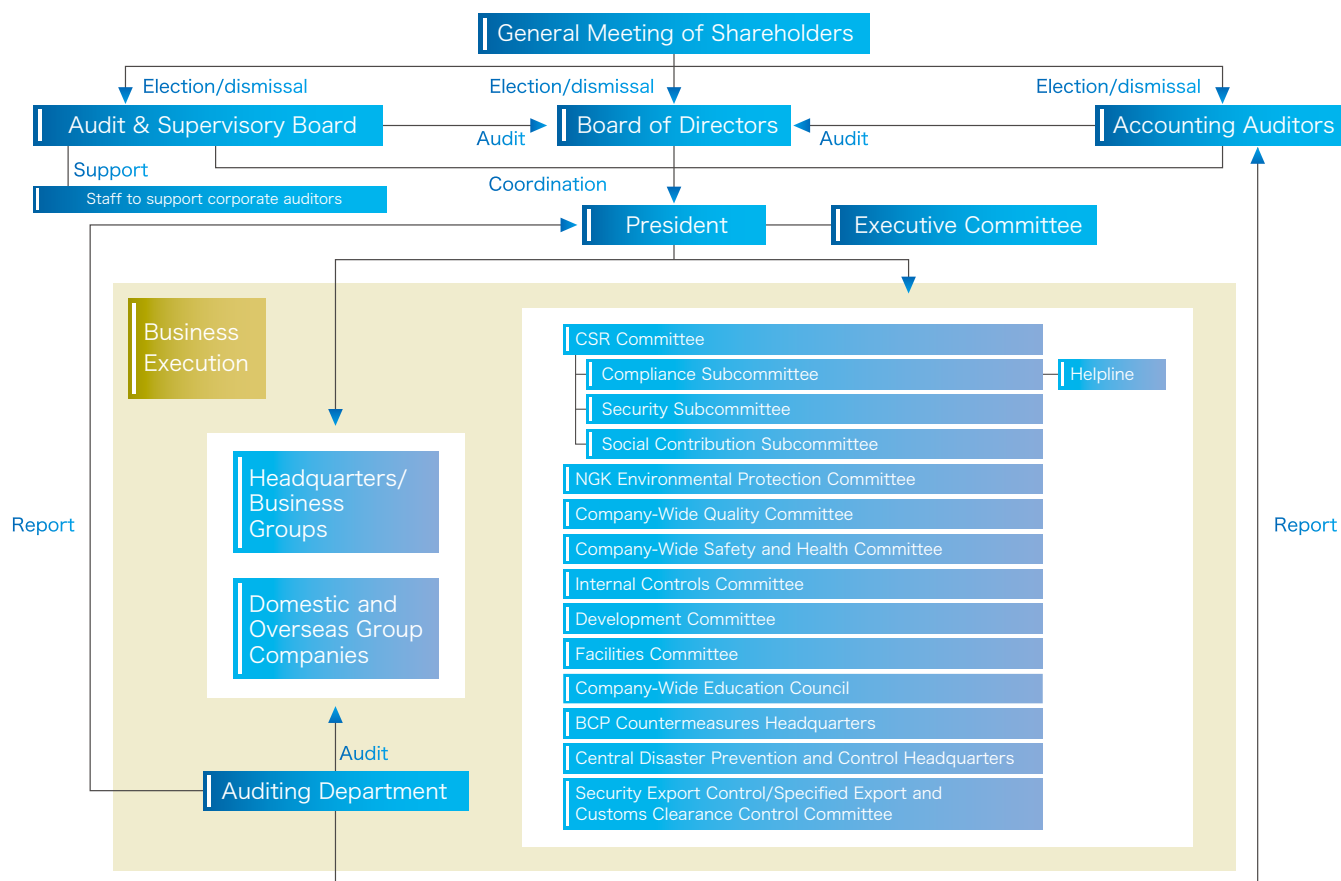
Ceramics are pottery, so firing and drying account for more than half the energy used. My mission is to search for new manufacturing approaches that would address these processes. Specifically, I am promoting initiatives for the maximal plant-wide reuse of mid- to low-temperature waste heat from kilns and other equipment. At present, I am conducting surveys, analyzing data and submitting effective usage proposals regarding energy consumption and waste heat. This will become foundational data used in the energy-conserving design for a new automotive exhaust purification ceramics plant to be constructed in Poland. There are all sorts of ideas in energy conservation. As I move forward with surveys and analysis to discover energy-saving techniques ideal for a mass-production ceramics plant, I feel this fleshing-out process is extremely worthwhile.

Basic Approach to Corporate Governance and Status Initiatives

To ensure appropriate operations and transparent management, NGK has set its sights on establishing and maintaining an organization capable of swiftly responding to changes in the business environment, and a fair and open management system emphasizing the interests of shareholders. These components make up NGK's basic approach to corporate governance. To put this approach into practice, NGK has chosen a governance structure anchored by an Audit & Supervisory Board. In addition to the General Meeting of Shareholders, the Board of Directors and the

Audit & Supervisory Board, NGK's corporate governance includes the Executive Committee and several other committees established to assist the president in management decision-making. These bodies help to enhance governance efficacy by deliberating and reviewing important matters. To execute swift and optimal decision-making and respond promptly to changes in the operating environment, NGK introduced a corporate officer system, thus separating the management decision-making and supervision functions from business execution functions.

Corporate Governance Structure



Business Execution Status

Regarding business execution based on Board of Director resolutions, the president presides over company business as the chief executive of business execution. The Executive Committee holds discussions to assist the president's decision-making with respect to important matters regarding business execution.

Monitoring Status

In line with monitoring policies and plans defined by the Audit & Supervisory Board, Audit & Supervisory Board members make an effort to collect information in an attempt to communicate with directors and employees while monitoring the business execution of directors by attending Board of Director and Executive Committee meetings. At Audit & Supervisory Board meetings attended by external Audit & Supervisory Board members, accounting auditors and members of Auditing the Department exchange information in an attempt to facilitate mutual cooperation.

Internal Control Systems

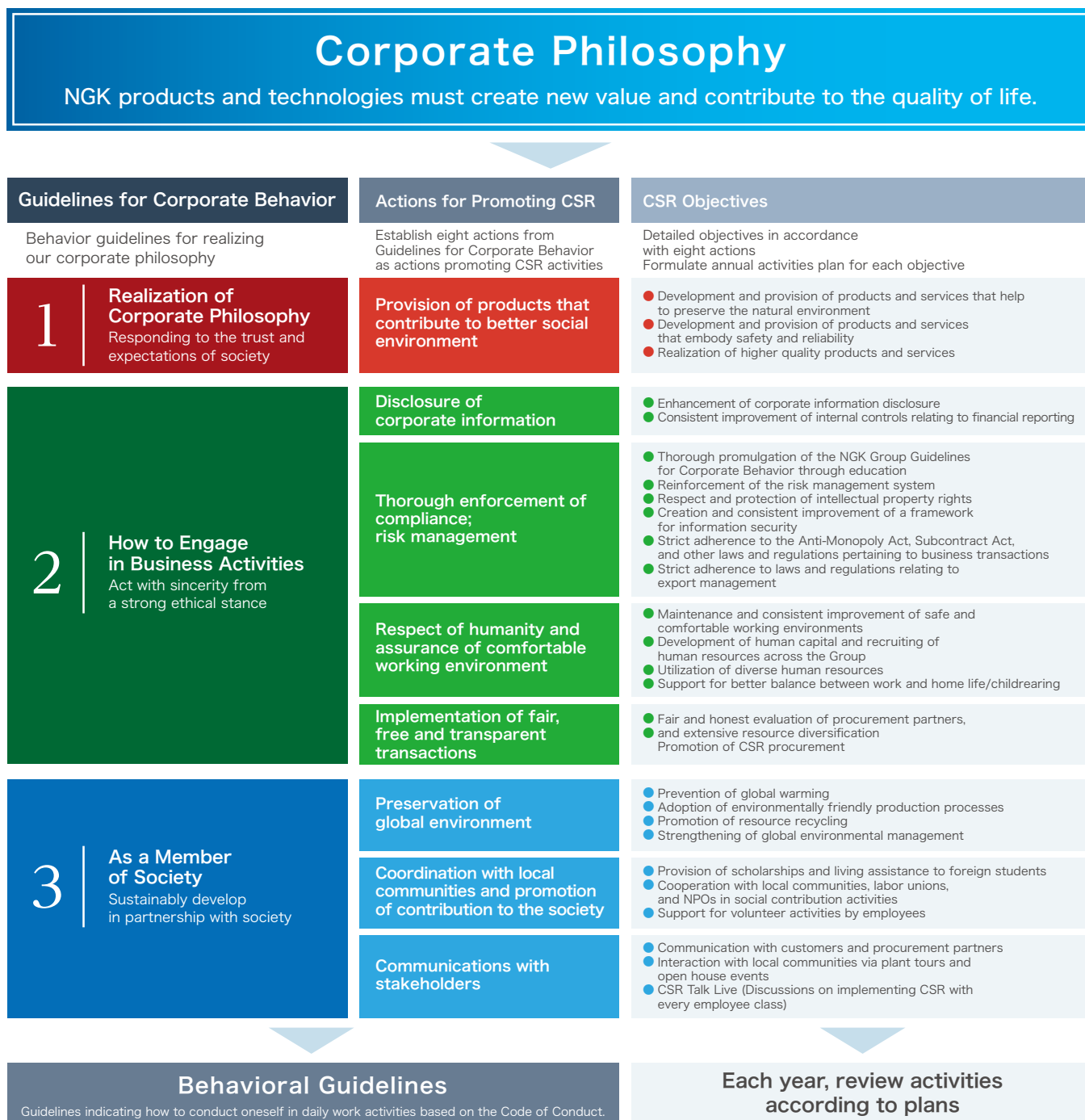
The Board of Directors and the executive bodies overseen by the president are responsible for establishing and operating NGK's internal control system. The Auditing Department, a specialized internal audit body, is responsible for monitoring the status of business execution at each operating division. Moreover, NGK has established the Internal Controls Committee to manage its reporting system for internal controls pursuant to Japan's Financial Instruments and Exchange Law. The NGK Group Guidelines for Corporate Behavior were formulated as a policy embodying the Group's corporate and management philosophies and as a guide for the actions we take. These guidelines specify

the Group's fundamental stance with respect to business activities and corporate behavior to ensure it remains a company that is beneficial to society, even in the pursuit of its economic goals. The CSR Committee, meanwhile, is responsible for a range of activities that include formulating NGK Group Guidelines for Corporate Behavior; ensuring compliance with laws, regulations and corporate ethics is fully entrenched throughout the Group; and developing responses to incidents and accidents it believes could significantly impact the Company. The committee's actions are designed to maintain and improve the level of the Group's internal control system.

CSR Activities Basic Concepts and Systems

The NGK Group aims to realize its corporate philosophy through the provision of products and services that will bring new value to society and contribute to the creation of a better social environment. We will fulfill our social responsibilities

through these activities, establishing and continually strengthening CSR objectives to meet the expectations and earn the trust of society.



Promoting Human Rights Initiatives

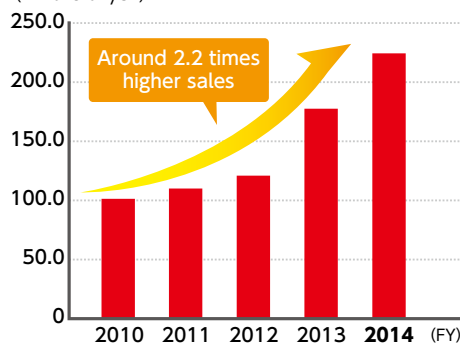
Having established respect for humanity in its Guidelines for Corporate Behavior, the NGK Group uses its intranet, accessible to all employees in Japan, to explain and disseminate the United Nations "Universal Declaration of Human Rights" and "Guiding Principles on Business and Human Rights." In April 2015, the NGK

Group joined the UN Global Compact* to engage more proactively in education and awareness activities related to the protection of human rights.

*The UN Global Compact is a global framework for realizing sustainable growth through companies and organizations acting as good members of society.

For nearly a century since its founding, the NGK Group has made use of accumulated technologies to develop and provide products and technologies that reduce burdens on the global environment.

■ Sales from Products that
Contribute to the Environment
(Billions of yen)



Products that Contribute to the Environment: Automotive exhaust purification ceramics, Nox sensors, NAS Batteries, etc.

NAS[®] Batteries Powering the Effective Use of Renewable Energy

NGK was first in the world to commercialize the NAS Battery megawatt-class electricity storage system. These batteries facilitate load leveling at times of peak demand and stabilize intermittent renewable energy. Advancing the provision of NAS batteries on a global scale contributes to the reduction of environmental burdens.

■ NAS Batteries throughout the World

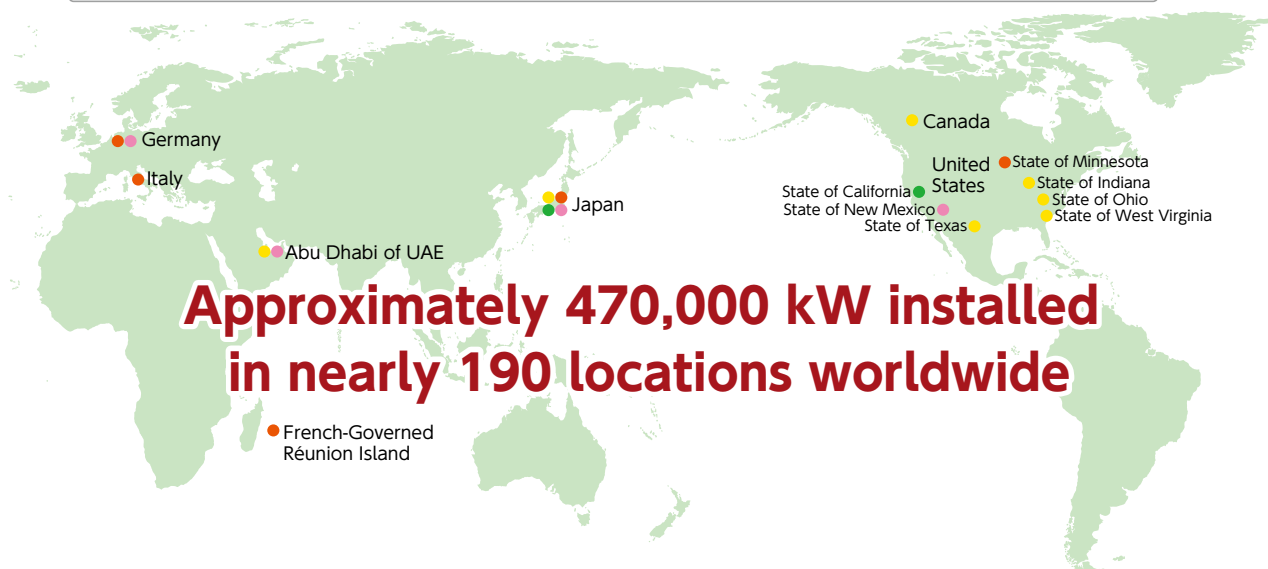
NAS Battery Applications

● Peak shaving

● Parallel establishment of system countermeasures/renewable energy

● Frequency regulation

● Smart grid



**Approximately 470,000 kW installed
in nearly 190 locations worldwide**

NAS[®] Battery Features

**Large capacity,
long life and high
energy density**

T O P I C

NAS Battery Wins the Gold Prize at the 2015 Aichi Environmental Awards

NGK received the Gold Prize for its NAS Battery System at the 2015 Aichi Environmental Awards held by Aichi Prefecture. NAS battery systems were highly evaluated for their contribution to substantially reducing environmental impacts, including the control of output fluctuations from renewable energy sources and the stabilization of electrical power systems. The Aichi Environmental Award recognizes effective pioneering initiatives taken by companies, groups and other organizations aimed at recycling resources and reducing environmental impacts.



NGKs Insatiable Challenge Aimed at Further Automotive Exhaust Gas Purification

Monitoring NOx concentration with high-precision in-vehicle NOx sensor

NOx sensors are capable of measuring concentrations of nitrogen oxides (NOx) in real time at the parts per million (ppm) level. NGK was the first company in the world to successfully develop this product.



High-precision in-vehicle NOx sensor

TOPIC

NOx Sensor Wins Okochi Memorial Production Prize

NGK's NOx sensor won the Okochi Memorial Foundation 61st (FY 2014) Okochi Memorial Production Prize in recognition of the originality and innovation of its development and manufacturing technologies and the substantial contribution it has made to the spread of clean diesel vehicles.



Contributing to the resolution of global environmental problems through the NOx sensor design.

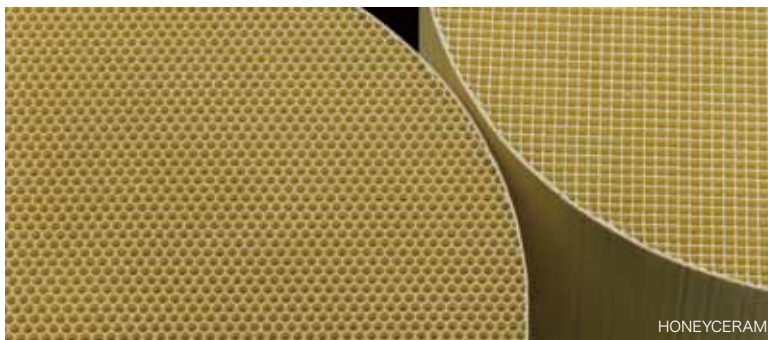
Mika Murakami

Sensor Division, Ceramics Business Group

I am in charge of design for the NOx sensor. Detecting NOx concentrations in real time and providing that information to the engine control unit controls the precision of the exhaust purification device enabling the reduction of NOx emissions. In response to tightening restrictions on NOx in the United States and Europe, the installation rate of NOx sensors increases every year. Although responding to the needs of customers and society keeps me quite busy every day, I feel there is great meaning in doing a job that significantly contributes to the resolution of global environmental problems through the spread of clean diesel vehicles.

HONEYCERAM®

HONEYCERAM, catalyst carriers for purifying automobile exhaust gas are indispensable for automobile exhaust purifiers and employed by automotive manufacturers in all countries around the world.



HONEYCERAM

■HONEYCERAM Degree of Contribution to the Environment

Estimated annual reduction of harmful substances such as NOx and HC by HONEYCERAM produced by the NGK Group are listed on the right. (NGK estimates^{*1})

NOx Elimination

4 million metric tons annually

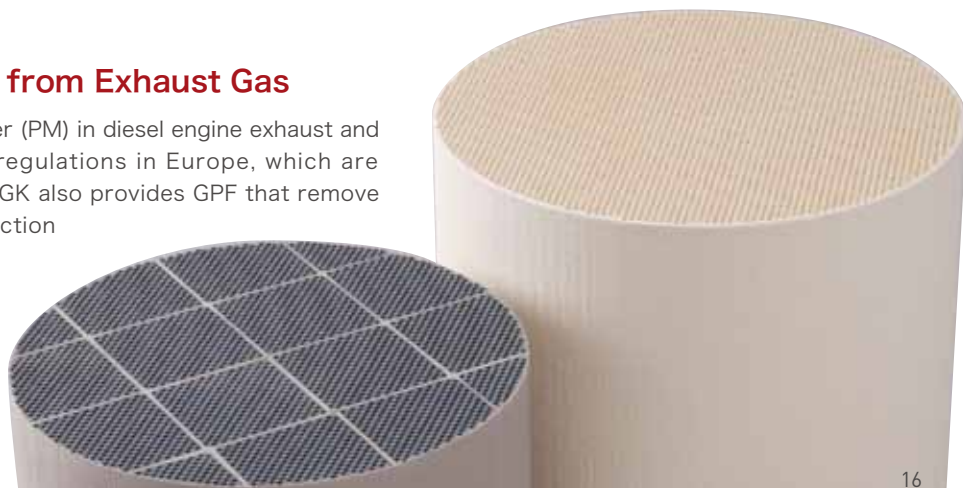
Equivalent to approximately twice the total annual NOx emissions^{*2} in Japan

^{*1}Assumption based on installation of this system in new cars not equipped with exhaust gas systems.
^{*2}Source: OECD, OECD Environmental Data Compendium 2006/2007.Air

DPF and GPF for Removing PM from Exhaust Gas

DPF eliminates up to 99% of particulate matter (PM) in diesel engine exhaust and comply with strict diesel engine exhaust regulations in Europe, which are expected to become even more stringent. NGK also provides GPF that remove PM from the exhaust of gasoline direct injection engines.

►Cordierite DPFs, primarily used in trucks and other large vehicles, and silicon carbide DPFs, used mainly in cars.



The NGK Group considers the provision of products and services that contribute to a better social environment to be one of its most important missions and strives to create quality from the customer's perspective that is trusted throughout the world.

On a Mission to Enhance Quality through a Combined Company Effort Aimed the Creation of Products that Contribute to Better Social Environments

NGK Group Corporate Quality Policy

The NGK Group engages in the creation of quality from the customer's perspective by defining Corporate Quality Objectives each year in accordance with Corporate Quality Policy based on the NGK Group Guidelines for Corporate Behavior.

Corporate Quality Policy

Take quality seriously, providing useful products and services that earn our customers' trust and that of the world at large

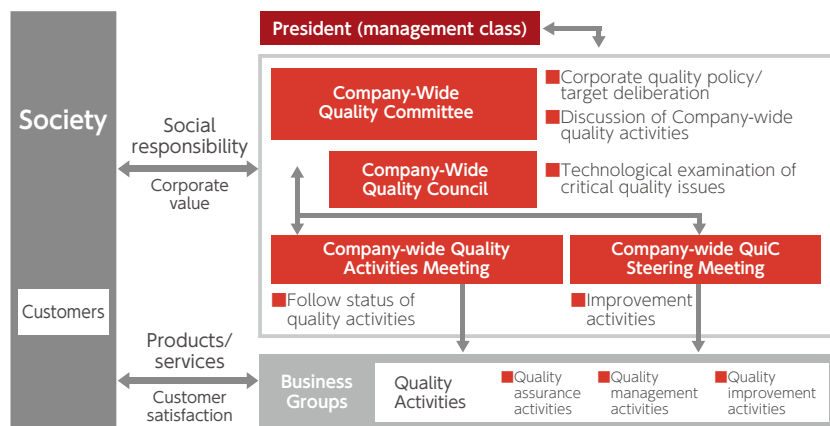
Fiscal 2015 Corporate Quality Objectives

Zero major customer complaints through strict design inspection and reliability evaluation. Eliminate failure costs through optimization and standardization of production conditions

The NGK Quality Activity System

NGK promotes quality activities system consists of a company-wide system, led by the Company-wide Quality Committee chairman, and business division internal activity system, led by the heads of each business division.

Company-Wide Quality Activities System



NGK Group Corporate Rules for Company-Wide Quality Activities

Company-wide quality activity rules were formulated to eliminate quality risks by promoting the establishment and improved efficacy of rules within the promotion of activities. Among these, design review (DR) is considered most critical. DR is conducted when development milestones are reached and when production processes change. Critical DR is conducted by reviewers from throughout the company to support the elimination of risks.

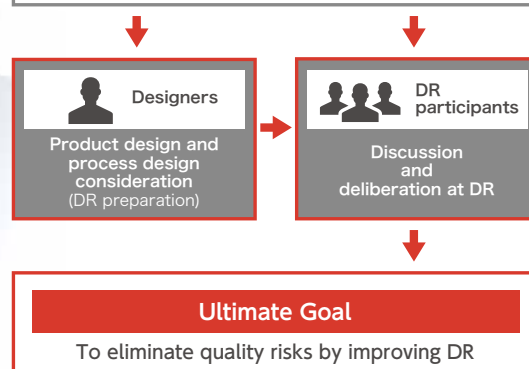
DR Guidelines

DR Guidelines were created to enable more proactive DR and the thorough elimination of quality risks. We promote increased DR efficacy through efforts to spread DR, including training and reviews of each DR.

DR Guidelines

Key concepts and perspectives

- Systematically search for influential factors, check for risks with no omissions
- Discuss bases for risk assessments, get opinions
- Exchange knowledge that makes for better design with everyone





All Employees Compete Based on the Results of Quality Improvements in the Company-wide QuiC Activities Contest



The NGK Group develops QuiC (Quality up innovation Challenge) quality improvement activities that all employees have participated in since 2003. Each year in July, NGK holds a Company-wide contest at headquarters to showcase examples of outstanding improvement activities intended for deployment. QuiC activities were conducted mainly to improve the resolution of immediate problems at worksites, but in 2014, Group improvement activity

guidelines were issued in an attempt to shift the focus to the resolution of business issues in each division. In fiscal 2104, we began exchange-based training workshop at overseas production bases for personnel demonstrating excellent QuiC activities. This leads to an increase in knowledge and motivation with respect to improvement activities at both bases.

TOPIC

Promoting Employee Exchanges Between Japan and Poland to Realize Further Quality Improvements

In November 2014, the Company conducted an overseas training activity at NGK CERAMICS POLSKA SP. Z O.O. for the first time with the intent of increasing the effectiveness of QuiC activities. The six participants comprised employees who submitted the best proposals in fiscal 2013 and Grand Prize winners from the company-wide presentation for fiscal 2014 QuiC activities. The training helped improved the skills of both the participants and the local Polish staff.



Voice!



The boundless ambition of the overseas staff made a deep impression on me.

Masatoshi Kamiya
Ceramics Business Group

This training was my first time visiting a European manufacturing base, where I participated in improvement training with highly ambitious Polish staff. Exchanging specific opinions while viewing the worksite led to many new realizations and discoveries, resulting in an extremely meaningful training for all involved. What I learned will be useful for improving quality going forward, and by sharing the information I received with coworkers in Japan, I will attempt to raise the level of the workplace overall.

Voice!



I will optimize the manufacturing process using the knowledge I gained during training

Boleslaw Warzecha
NGK CERAMICS POLSKA SP. Z O.O.

Seeing the factory where I work through the eyes of the Japanese staff led to my discovering approximately 30 areas for improvement. I received a wealth of advice that will lead to big improvements. Seeing the Japanese staff's thorough and uncompromising approach to improvements significantly increased our motivation. At present, we are engaged in a company-wide project to eliminate waste from the manufacturing process. Utilizing what we learned during training will lead to the optimization of manufacturing processes.

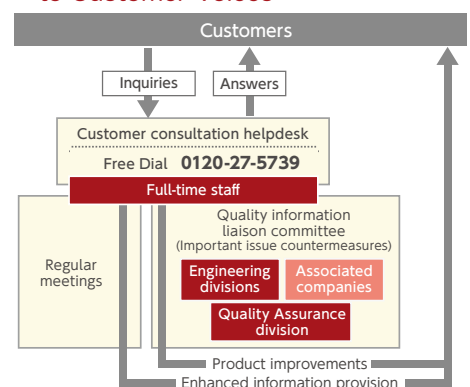
Providing a Wide Variety of Responses to Customer Feedback

As the top industrial ceramics manufacturer in the industry, NGK makes use of its accumulated technologies to manufacture and sell C1 home-use water purifiers. A dedicated C1 customer consultation helpdesk was established in-house to ensure the reflection of a wide range of customer feedback in our products and services.

◀C1 home-use water purifiers



■ Mechanism for Responding to Customer Voices



Viewing compliance as the foundation of CSR, the NGK Group positions enhancing trustworthiness as the most important initiative and strives to create specific systems to inculcate this view among employees, prevent corruption and comply with laws and regulations.

In line with business expansion, we are also engaged in minimizing risks related to globalization and diversification while augmenting our risk management structure.

Compliance Promotion Structure for Strict Observance of Laws, Regulations and Corporate Ethics

We established the Compliance Subcommittee under the CSR Committee to ensure strict observance of laws, regulations and corporate ethics within the Group. Furthermore, we established the Security Subcommittee to respond to incidents and accidents with the potential to significantly impact the Company.

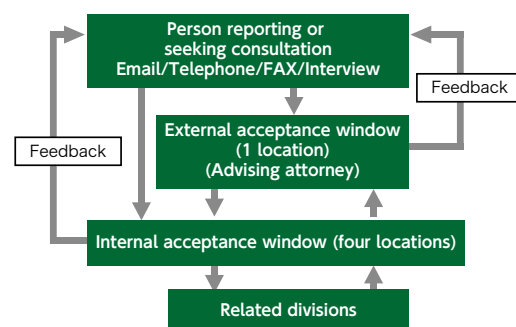
Guidelines for Corporate Behavior and Thorough Observance of Behavioral Guidelines

To spread awareness of the NGK Group Guidelines for Corporate Behavior, which define items that must be observed to realize our corporate philosophy, and Behavioral Guidelines, which define initiatives that must be conducted individually, we created awareness handbooks and compliance cards that are distributed to all NGK and domestic Group company employees.

Observing the Competition Law and Other Laws and Regulations Pertaining to Business Transactions

The NGK Group endeavors to strictly and thoroughly observe business related laws and regulations including the Competition Law (Anti-Monopoly Act) and the Subcontract Act. The NGK Group Guidelines for Corporate Behaviors mandates the observance of the Anti-Monopoly Act. In December 2014, we revised the Competition Laws Compliance Rules formulated in 2011. We also introduced a mechanism for the effective operation, management and verification of a Competition Laws compliance program via a company-wide centralized system led by the Board of Directors. In 2015, we worked with compliance specialists from PricewaterhouseCoopers to confirm from a neutral point of view the status of the competition laws compliance program and the newly introduced centralized system.

■ Helpline (consultation/reporting) Process



Helpline Establishment

We established a helpline to receive inquiries and reports from employees aimed at curtailing and preventing activities contrary to the spirit of the NGK Group Guidelines for Corporate Behavior and to facilitate the quick resolution when issues occur. Each overseas Group company has its own helpline. Those seeking advice or reporting issues are promised protection under corporate regulations.

Practicing Fair and Transparent Business Transactions

To practice fair and transparent business transactions, the NGK Group engages in the prevention of bribery and other forms of corruption. As in the previous fiscal year, in fiscal 2014 we conducted training on regulations pertaining to the bribery of foreign public officials as part of our training for Japanese expatriates. Training was also conducted independently at overseas Group companies using a DVD to present bribery regulations.

▼Competition law-related seminars conducted for all corporate officers, key personnel (managers) and salespeople to strengthen compliance systems



Seminar for employees



Seminar for directors



Seminar for key personnel

A Risk Management Structure Striving to Avoid and Prevent a Variety of Risks

The NGK Group assumes six categories of company-wide risks pertaining to compliance, information, employment and labor, making an effort to avoid and prevent these risks through examination and analysis at Strategy Committee and Executive Committee meetings. NGK operates a risk

management promotion structure led mainly by the CSR Committee. A person of responsibility and response structure is established for each risk category in an effort to improve risk response capabilities and risk prevention activities.

Establishment of BCP Countermeasures Headquarters

Led by the President, the Business Continuity Planning (BCP) Countermeasures Headquarters is organization for leading business continuity and quick recovery in the event of a large-scale natural disaster. Countermeasure initiatives include the establishment of multiple bases and procurement points, building and equipment reinforcements and employee safety assurance.

Identifying and Preventing Risks Based on the CSA Questionnaire

NGK and domestic Group companies conduct the Control Self-Assessment (CSA) questionnaires every two years to ascertain and prevent the wide variety of risks potentially present in daily business operations. The CSA questionnaire, which also functions to raise awareness regarding attempts to prevent and accurately respond to risks, will continue to be implemented going forward.



▲BCP restoration measures meeting led by head of BCP Countermeasures Headquarters, President Taku Oshima

Promoting Intellectual Property Training for Managers and Young Engineers

NGK conducted managerial-class awareness programs to enhance intellectual property strategy in the research and development and business divisions. We also conducted patent map utilization presentations using educational graphs and charts for the visualization of intellectual property information targeting mainly young engineers in development divisions and

introduced e-learning to teach about patent basics company-wide. Interactive-style small group seminars were held ten times primarily for young engineers in the research and development and business divisions, who exchanged opinions on subjects including fundamental patent knowledge, prior art search and how to read patent specifications.

Voice!



“Patents” Led to Change in Thinking About New Product Development

Risako Ito

SOFC Project, Corporate R&D

With a sense that the creation of a patent network was necessary for the development of new products, I decided to participate in the patent-related small group seminar. After learning about the patent system, the necessity of patents and reviewing case studies related to the notice of reasons for patent rejection, I felt I had gained practical knowledge and response capabilities. The small group seminar format enabled participants to comfortably ask questions about points they don't understand during the presentation. This seminar gave me a new awareness of the importance of patents. As a result, I now engage in my work with a daily awareness of generating ideas that might be patentable.

The NGK Group strives to create a safe and comfortable workplace environment with respect for employee humanity. We also manage a human resources system providing fair treatment and enabling each employee to maximize their skills.



Promoting Diversity Enabling individualities to Shine

Promoting the Success of Women

The NGK Group strives to increase opportunities for motivated and skilled people to succeed regardless of gender. We are also engaged in the creation of an environment that makes workplace comfortable for women and promote the appointment of female managers (management staff).

■NGK Female Managers (persons)

2012 2013 2014
8 ▶ 12 ▶ 14

Support for Better Balance between Work and Home Life/Childrearing

NGK promotes the creation of an environment that makes work easy for employees who are both working and raising children or providing care for a family member. With respect to childrearing support in particular, in addition to considerations in terms of working hours, we increased amount of maternity gift payments, established a gift payment for starting elementary school and established a babysitter expense subsidy system. We also created a system for preferentially allotting employee parking spaces within the vicinity of the headquarters to employees raising children. In recognition of these efforts, in January 2012, we were certified as a Company Promoting Women's Activities by the city of Nagoya. In December 2012, we were certified as a Company Supporting Childcare and received the next-generation certification Kurumin mark from the Ministry of Health, Labour and Welfare.

Voice!



Achieving a
Work-Life Balance
through Help from
Workplace
Colleagues

Aya Sato

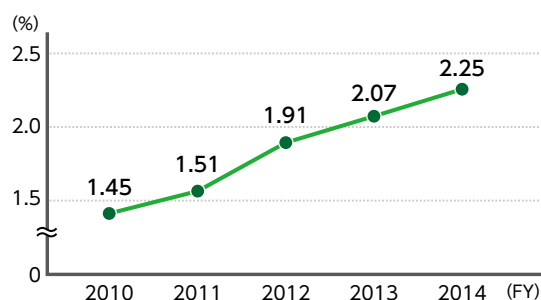
NCM Project, Corporate R&D

As the daycare center closes at 18:30, I take advantage of shortened working hours. As I work in research, there were many times in the past that I worked overtime while waiting for the results of an experiment, but my supervisor understands the nature of this work and my workplace colleagues help out, enabling me to achieve a work-life balance. After my child is older, I hope to be able to return the favors I am receiving now.

Expanding Employment of the Disabled Beyond the Legally Stipulated Rate

The NGK Group is engaged in initiatives to expand employment of people with disabilities. As a result of promoting employment by accepting students from special needs schools as trainees and hiring participants from employment seminars for people with disabilities, the ratio of people with disabilities employed by NGK at the end of fiscal 2014 exceeded the legally mandated ratio of 2.0% instituted in April 2013 for the second straight year.

■Employment ratio of people with disabilities (NGK)



Human Resource Cultivation to Lead the Next Generation

At NGK, people are our most precious management resource. With respect for employee motivation and ambition, we engage in the cultivation of human resources who will lead the next generation. Human resource cultivation is conducted systematically in four areas based on career training conducted at specific milestones such as when employees join the company or are promoted. We also conduct optimized educational and training programs to meet divisional and personal needs, including practical overseas training conducted over a six-month period at overseas Group companies, English instruction for new employees aimed at rapidly cultivating global human resources and quality improvement training for employees in skilled positions. In addition, we support employee creativity through individual initiatives including an employee invention reward system to provide incentives for employee inventions.

Promoting Human Resource Cultivation through the Establishment of Systems in Four Areas



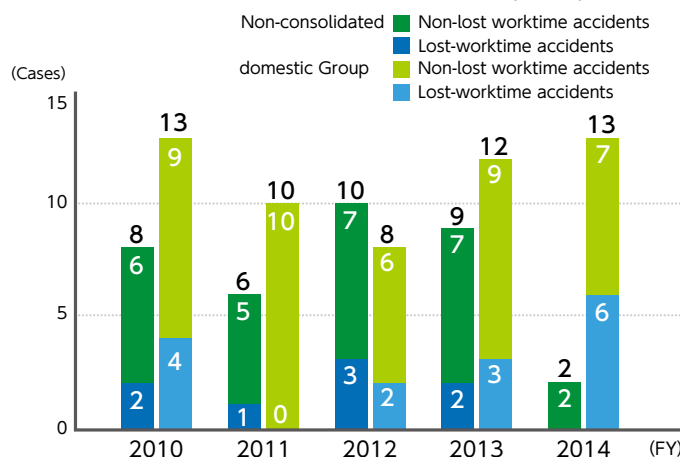
▲Language instruction for newly hired employees

Health and Safety Management thoroughly Focused on Accident Prevention

Occupational Safety and Health Management System Introduction

In fiscal 2007, NGK introduced an Occupational Safety and Health Management System (OSHMS) based on company-wide safety and health policies. Furthermore, in recent years we have been focused on reducing long working hours and managing the health of employees working long hours in a proactive effort to promote employee health.

Work-Related Accidents (NGK, domestic Group companies)



Strengthening Safety and Health Activities

Since 2012, NGK has been strengthening safety measures in accordance with a three year plan. In fiscal 2104, we again conducted a comprehensive risk assessment to ascertain the degree of importance of identified work-related risks and formulate sequential measures based on the degree of risk posed. To ensure thorough accident prevention, we instantly moved to expand the scope of assessment, conducting an emergency review of the potential for serious accidents, such as getting caught or pulled into machinery and electric shock hazards, to promote both tangible and intangible safety countermeasures.

►At NGK CERAMICS SUZHOU CO., LTD. in China, one room was renovated to create an experiential classroom aimed at avoiding various potential risks in daily work routines through simulations

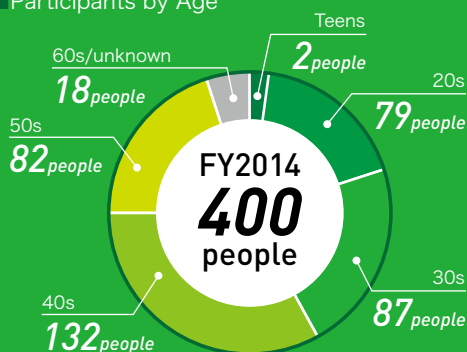


CSR Talk Live Dialogue with Employees Aimed at CSR Practices

Fiscal 2014 CSR Talk Live Venues (Participants)

NGK	Headquarters	Day 1 (50 people)
		Day 2 (55 people)
		Day 3 (52 people)
	Chita Site	(56 people)
Group companies	Komaki Site	(49 people)
	Tokyo Main Office	(28 people)
	NGK CERAMIC DEVICES CO., LTD.	(50 people)
	NGK ADREC CO., LTD.	(30 people)
	AKECHI INSULATORS, LTD.	(30 people)

Participants by Age



Participants Over Six Years (NGK Group)

Total **2,619** people

Approximately 40% of domestic Group employees have attended event

To deepen employee understanding of CSR and related initiatives, NGK conducts "CSR Talk Live," an event facilitating direct discussion with senior management held at all domestic sites since fiscal 2009. In fiscal 2014, this event was held nine times at seven venues, where senior management emphasized the importance of NGK Group CSR initiatives to those in attendance, while the Environmental Management Department and CSR Promotion Office used specific examples to explain CSR Report details. Afterward, a Q&A session with employees was conducted on topics including environmental conservation, workplace safety and compliance. Comments provided on a post-event survey included "This event enabled me to reflect on how low my awareness had been up to now," and "I talked with my children at home about the importance of environmental conservation." We will continue this activities in an attempt to further inculcate CSR.

CSR Talk Live Participant Questions and Company Answers(Excerpt)

Q1

How are CSR and environmental activities developed at overseas plants?

A1

Once every two years, we want to visit overseas plants to meet with the heads of each division and develop environmental activities. We want to conduct an event similar to CSR Talk Live while considering methods appropriate for approaches conducted in countries overseas including but not limited to the environment.

Q2

How is the reduction of CO₂ promoted?

A2

The reduction of CO₂ is promoted through the introduction of new manufacturing technologies that arise from new manufacturing structural innovations. Furthermore, steady on-site efforts have a substantial effect on improved productivity.

Q3

When power or sexual harassment is reported to the helpline, what kind of response can we expect?

A3

The criteria for power harassment are fuzzy, so we make an effort to speak with both parties. When it is difficult to speak directly with those involved, we listen to what people around them say. When an incident is reported to the helpline, we never reveal any details so employees can use it with peace of mind.



With a basic policy centered on the three principles of openness and fairness, partnership and relationship with society, the NGK Group is engaged in fair, free and transparent business transactions with the procurement partners in our supply chain.

Basic Procurement Policy

The NGK Group established the Basic Purchasing Policy in an attempt to conduct fair and honest business transactions and to prosper together with all our procurement partners.

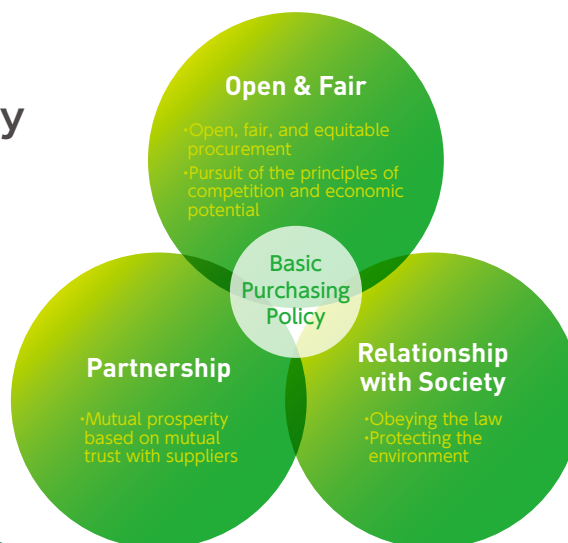
Promotion of CSR Procurement

New CSR Procurement Guidelines

In fiscal 2013, the NGK Group revised the CSR Procurement Guidelines. This involved organizing previously established guidelines in accordance with Basic Purchasing Policy and adding sections on disputed minerals, corruption and principles regarding human rights and labor. Having partially revised existing Green Procurement Guidelines, we newly incorporated them as "Green Procurement Standards" into the CSR Procurement Guidelines as a supplemental material.

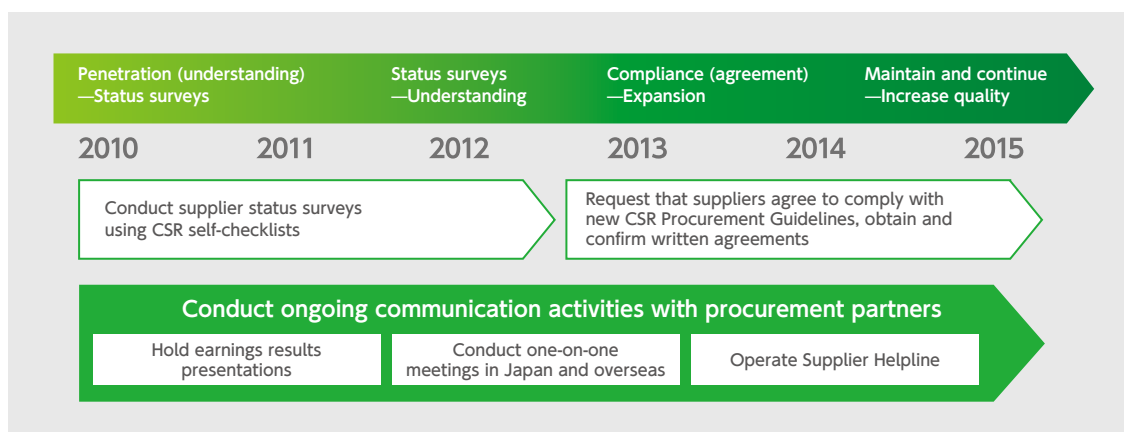
Developing CSR Procurement in Conjunction with Societal Trends

CSR procurement in the NGK Group was raised from the penetration (understanding)—status surveys to the compliance (agreement)—expansion stage. Going forward, we will consider societal trends while aiming for greater quality through the maintenance and continuation of CSR Procurement activities with suppliers. We will also promote activities in each country and region where we operate overseas Group companies.



▲The CSR Procurement Guidelines are published on our website and available in Japanese, English and Chinese languages.

■Ongoing Promotion of CSR Procurement





▲Earnings presentation held for 130 major suppliers

Fair and Honest Procurement Partner Evaluations and Extensive Resource Diversification

Selection of Suppliers Based on Fair and Honest Evaluations

NGK opens its doors to a wide range of procurement sources, including companies with which it has had no previous transactions. Optimal suppliers are selected from multiple companies through a fair and honest evaluation of their CSR initiatives and financial condition as well as quality, cost and delivery (QCD).

Promoting BCP through the Diversification of Procurement Resources

To prepare for major natural disasters and other unforeseen circumstances, NGK promotes and reviews the purchase of critical parts from multiple suppliers as part of its business continuity planning (BCP) efforts. For items which are available from only one supplier, we are in the process of ensuring sufficient inventory and that the storage facilities for these items are located in a safe place that cannot be damaged by tsunami. In addition, when selecting a new procurement partner, we take into consideration the existence or absence of multiple locations and efforts to ensure inventory.

Promoting Communication Activities with Procurement Partners

Earnings Presentations for Suppliers

Each year, we invite suppliers to attend an earnings presentation. At the earnings presentation in fiscal 2014, we introduced NGK procurement initiatives regarding procurement issues such as reducing the cost of procurement, business continuity planning (BCP) and stabilizing procurement in response to fluctuating demand. We also asked suppliers for their cooperation regarding the secure management of information.

Ongoing Operation of the Supplier Helpline

In 2008, NGK established the supplier helpline system. Receiving consultation via email, fax and telephone, we make an effort to respond with solutions quickly. In fiscal 2015, we continue to build and maintain fair supplier relationships through the ongoing operation of the supplier helpline.

Individual Visits to Suppliers in Japan and Overseas

To procure from the most suitable suppliers, NGK visits suppliers around the world to conduct fair and honest evaluations. We also explain quality, cost and delivery (QCD) monitoring results and ask suppliers to make improvements in areas receiving a low evaluation.

■Fiscal 2014
Earnings
Presentation
Participants

130 companies

■Fiscal 2014
Individual
Visits

112 companies



◀President Taku Oshima calls for increased cooperation at a regularly held social gathering with suppliers

The NGK Group is engaged in ongoing environmental conservation efforts by improving manufacturing processes through the development and introduction of innovative manufacturing technologies and the development of products and services that contribute to reducing environmental impacts.

[Environmental Conservation Activities Covered in This Chapter]

- NGK Headquarters/Nagoya Site/Chita Site/Komaki Site/Ishikawa Plant
(does not include Tokyo Main Office, Osaka Branch and six other sales offices)
- Domestic Group companies (12 manufacturing-related consolidated subsidiaries)
- Overseas Group companies (16 manufacturing-related consolidated subsidiaries)

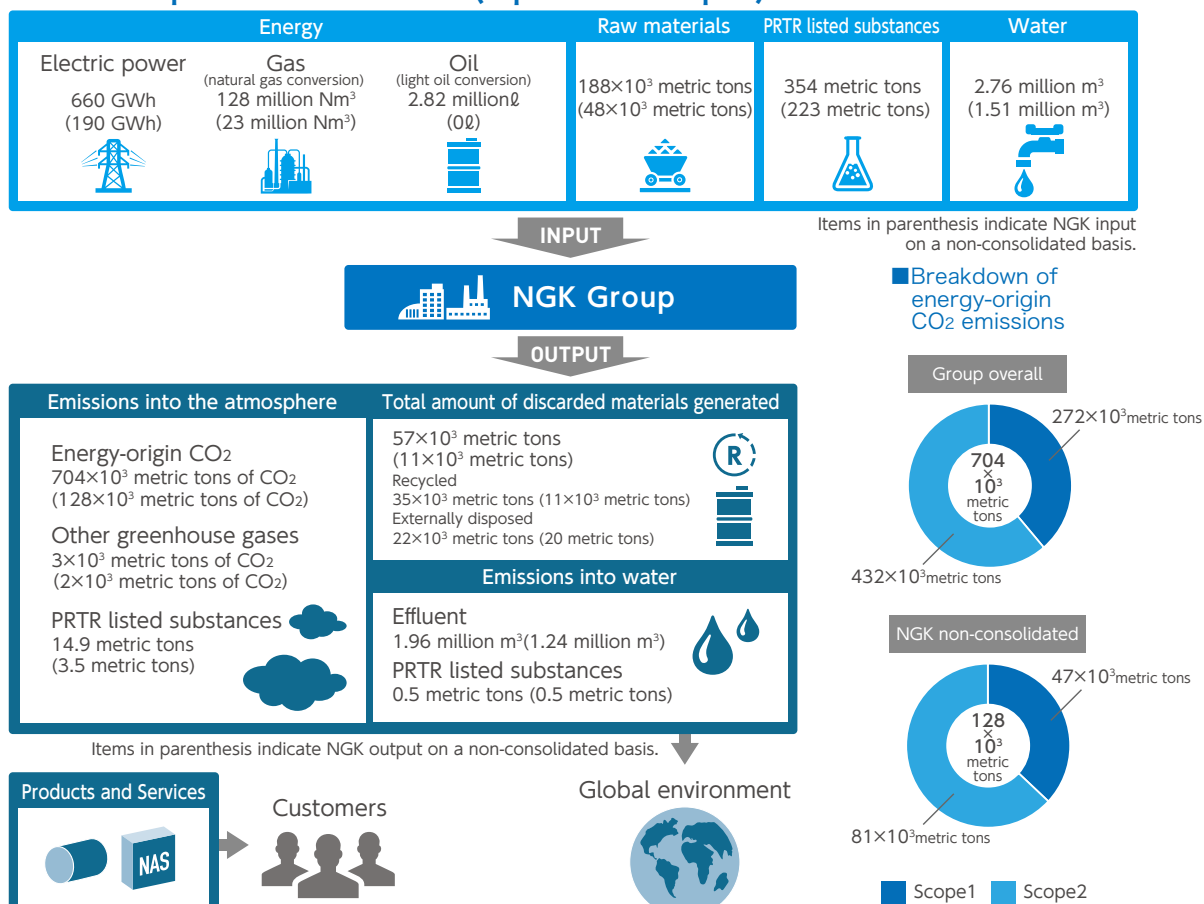
Contributing to Global Environmental Conservation Under NGK's Core Policy on the Environment

Recognizing that protecting the environment is a vital issue that all of humanity must face, the NGK Group formulated its Core Policy on the Environment in April 1996 in order to bring its corporate activities into harmony with the environment. NGK's Core Policy on the Environment consists of the Basic Environmental Principle and Environmental Action Guidelines that define specific behaviors. On the basis of this policy, NGK works to reduce the environmental impact of business activities, and actively strive to help protect the environment by developing products and technologies to that end.

Overall Perspective of Environmental Impact

The diagram below shows inputs and outputs in business activities conducted by NGK. It shows inputs of raw material and energy and outputs in the form of manufactured products and services, as well as substances that are discharged into the atmosphere and into water. In line with expanded production activities, the NGK Group output of substances impacting the environment is on the rise. However, efforts including the introduction of the latest manufacturing and other processes have resulted in the rate of increase for emissions that impact the environment being lower than the rate of increase for products and services (net sales) provided to customers.


NGK Group Material Balance (Input and Output)



Notes: 1. Environmental performance values in this report have been rounded up for convenience; therefore they may not match totals when added together.
2. "Discarded materials" indicates total amount of industrial waste and valuables. (R) indicates outside recycling.

Fiscal 2014 Initiatives Within the Third Five-Year Environmental Action Plan (2011-2015)

The NGK Group promotes environmental initiatives based on the formulation of Five-Year Environmental Action Plans. The Third Five-Year Environmental Action Plan, which was launched in fiscal 2011, promotes activities and establishes reduction targets aimed at CO₂ emissions and discarded materials at overseas manufacturing sites. Fiscal 2014 targets and results, as well as Five-Year Plan targets, are stated below.

Categories	Items	Management items	FY2014 environmental performance			Five-Year Plan Objectives (Fiscal 2015)
			Targets	Achievements	Self- ^{*1} evaluation	
 Global warming prevention	Reduction of CO ₂ from production activities	Domestic CO ₂ ^{*2} emissions	183×10 ³ metric tons or less	185×10 ³ metric tons	△	10% reduction from fiscal 1990 (190×10 ³ metric tons or less)
		Domestic basic unit per net sales	Reduce 13% compared to previous fiscal year	Reduced 13% compared to previous fiscal year (23% reduction from fiscal 2010)	○	20% reduction from fiscal 2010
		Overseas basic unit per net sales	Increase 4% compared to previous fiscal year	Reduced 18% compared to previous fiscal year (31% reduction from fiscal 2010)	○	5% reduction from fiscal 2010
	Reduction of CO ₂ from logistics	NGK basic unit per transport volume ^{*3}	Reduce 1% compared to previous fiscal year	Increased 5% compared to previous fiscal year	×	1% reduction each year
 Effective use of resources	Reduction of discarded materials	Domestic basic unit per net sales	Reduce 23% compared to previous fiscal year	Reduced 15% compared to previous fiscal year (21% reduction from fiscal 2010)	×	10% reduction from fiscal 2010
		Overseas basic unit per net sales	Reduce 9% compared to previous fiscal year	Reduced 19% compared to previous fiscal year (34% reduction from fiscal 2010)	○	5% reduction from fiscal 2010
	Promotion of resource recycling	Domestic recycling rate	Improve domestic Group company recycling rate	Domestic Group company recycling rate was 99.2%	○	99% or higher
		Overseas recycling rate	Ascertain appropriate recycling rate for each location	Established scope of appropriate recycling rate in each location	○	Set and manage recycling rates established with consideration for the conditions in each country
	Effective use of water resources	Plan progress rate	Assess water risks at all locations	Confirmed no water risk situations are serious at all locations	○	Create standards for efficient usage based on water resource usage status survey
 Ensuring chemical substances management	Improvement in level of chemical substances management	Plan progress rate	Establish appropriate management of upgraded management systems	Established appropriate operations by regularly conducting voluntary confirmation	○	Upgrade chemical substance management systems
 Provision of eco products	Promotion of environmental contribution through products	Plan progress rate	Create collective evaluation method for our eco products	Reviewed collective evaluation method	○	Formulate quantitative standards for degree of environmental contribution from products
	Promotion of green procurement		(Completed Green Supplier certifications in fiscal 2012)		○	Complete green supplier certification
 Promotion of environmental communication	Robust environmental contribution activities	Plan progress rate	Promote activities in conjunction with regional communities Promote Environmental Partnership Organizing Club (EPOC) event	Promoted activities in conjunction with regional communities Conducted corporate seminars and next-generation environmental education	○	Continue and expand activities related to regional communities
	Improvement in environmental awareness		Conduct employee environmental education Promote participation in environmental events	Conducted position-based training, professional training and environmental lectures Fully implemented the Eco Point system, promoted eco-proposals and participation in green curtain and other activities	○	Continue and expand environmental education, information disclosure

Note: Figures noted in the Third Five-Year Environmental Action Plan are targets established each fiscal year.

*1. Self-evaluation standards for achievement level: ○Target achieved △80% or more of target achieved ×Less than 80% of target achieved.

*2. CO₂ conversion factors (kg-CO₂/unit) used in calculating CO₂ emissions are as follows: Units are indicated in parentheses. Purchased electric power (kWh): 0.42, Fuel oil (L): 2.677, Diesel fuel (L): 2.64, Kerosene (L): 2.49, City gas (Nm³): 2.347, LPG (kg): 3.007, LNG (kg): 2.70, Gasoline (L): 2.322. Sources: Federation of Electric Power Companies of Japan (fiscal 1990 actual figures), Ministry of the Environment. Some factors have been calculated independently by NGK. However, fiscal 2014 energy-origin CO₂ emission volume for NGK on a non-consolidated basis is 147×10³ metric tons when using the CO₂ conversion factor provided by the Cabinet Orders of the Law Concerning the Promotion of Measures to Cope with Global Warming (revised in March 2015).

*3. NGK basic unit per transport volume expresses in metric ton-kilometers the amount of crude oil equivalent fuel used.

Initiatives Aimed at Reducing CO₂ Emission Volumes

With respect to CO₂ emissions, one cause of global warming, the NGK Group promotes Group-wide initiatives to control and reduce CO₂ emissions.

Domestic and Overseas CO₂ Reduction Plans Progressing on Track

The NGK Group is engaged in curbing global CO₂ emissions mainly through manufacturing process improvements. Although the reduction of CO₂ emissions resulting from domestic production activities in fiscal 2014 exceeded reductions planned at the beginning of the year, mainly due to production increased in response to vigorous demand, we fell slightly short of the fiscal 2014 target. Furthermore, in terms of domestic basic unit per net sales CO₂ emissions, we achieved our initial targets and reached Five-Year Plan objectives ahead of time, with respect to basic unit per net sales CO₂ emissions overseas, we were able to significantly exceed our initial target. We were also able to achieve Five-Year Plan objectives two years in a row.

■Fiscal 2014 domestic CO₂ emission



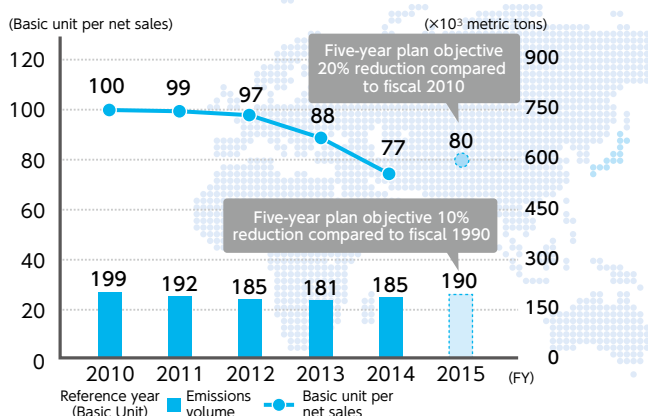
■Fiscal 2014 domestic basic unit per net sales CO₂



■Fiscal 2014 overseas basic unit per net sales CO₂

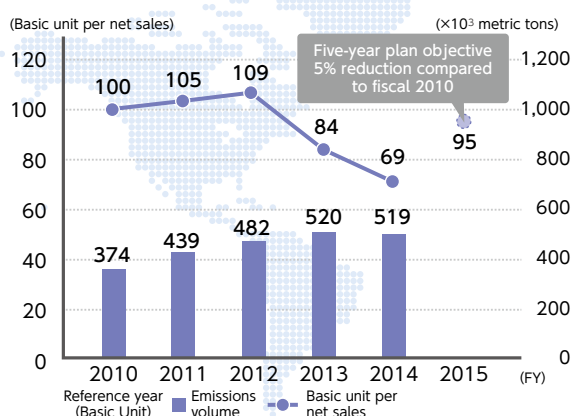


■CO₂ Emissions/Basic Unit Per Net Sales* (NGK and domestic Group companies)



* Basic unit per net sales calculated as 100 in fiscal 2010.

■CO₂ Emissions/Basic Unit Per Net Sales* (Overseas Group companies)



Introduction of Environmentally Friendly Production Processes

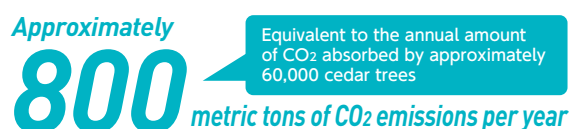
Amid continued expansion of overseas manufacturing, efforts focused on manufacturing process efficiency at our overseas production bases are contributing to reduced CO₂ emissions and discarded materials throughout the NGK Group.

■Fiscal 2014 overseas manufacturing base CO₂ reduction



Introducing Green Power

NGK began introducing Green Power (energy sources such as wind, solar power and biomass fuels) in 2002. The Green Power Certification System agreement with Japan Natural Energy Company Limited involves the generation of two million kilowatt hours of wind power for NGK each year. This is equivalent to about 60% of the power consumed annually at the NGK headquarters building.



Promoting the Effective Use of Resources through Recycling and Limiting Discarded Materials

The NGK Group strives to limit the generation of discarded materials in the manufacturing process and is focused on reducing final disposal amounts through recycling and the promotion of reusing resources.

Discarded Material Reduction Plans are Proceeding on Track in Japan and Overseas

In fiscal 2014, although discarded materials in Japan improved significantly on a basic unit per net sales basis, the launch of new products not planned at the beginning of the fiscal year and the impact of increased sample production that did not contribute to sales prevented us from reaching initial targets. Nevertheless, we did achieve the Five-Year Plan objective ahead of schedule. In terms of discarded materials overseas, we substantially exceeded the initial target for basic unit per net sales. We also achieved the Five Year Plan objective ahead of schedule for the second year in a row.

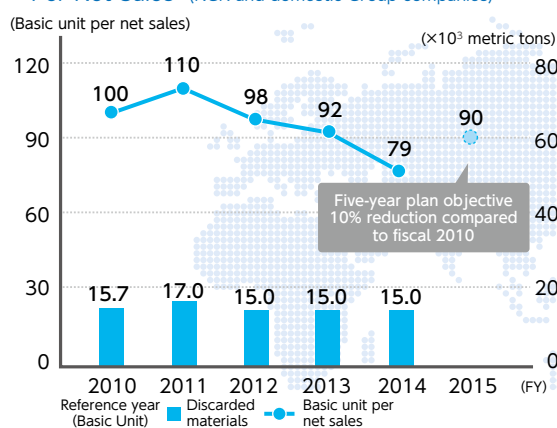
■Fiscal 2014
domestic discarded materials basic unit per net sales



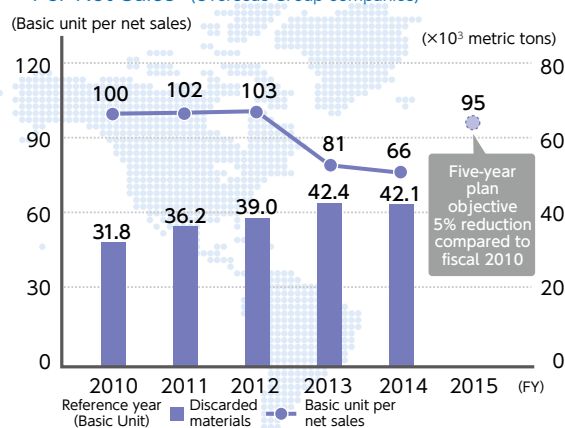
■Fiscal 2014
overseas discarded materials basic unit per net sales



■Amount of Discarded Materials Generated/Basic Unit Per Net Sales* (NGK and domestic Group companies)



■Amount of Discarded Materials Generated/Basic Unit Per Net Sales* (Overseas Group companies)



Promoting Recycling at all NGK Group Companies

Through systematic sorting, separating and the quest for new recycling methods, NGK maintains a high recycling rate (99.8%). Improvements are also being steadily achieved at domestic Group companies. In fiscal 2014, the domestic recycling rate was 99.2%, clearing 99% of Five-Year Plan targets for the second straight year. At overseas Group companies, where situations differ by region, we considered the circumstances at each location when ascertaining the appropriate scope for recycling rates. Going forward, the NGK Group will continue to promote initiatives aimed at recycling in Japan and overseas while attempting ongoing improvements and the establishment of management.

Note: Due to internal standards, non-recyclable discarded materials are excluded from these calculations.

■Fiscal 2014 domestic overall recycling rate



Promoting Enhanced Global Environmental Management

The NGK Group horizontally deploys domestic environmental impact reduction initiatives in overseas Group companies while taking our global environmental management to the next level.

Mitigating Potential Risks Throughout the Group

NGK has launched initiatives aimed at the reduction of environmental risks throughout the Group. In fiscal 2014, NGK conducted a survey regarding past issues and countermeasures at all manufacturing bases, including those located overseas, to organize items that need confirmation aimed at mitigating potential risks. Going forward, we will identify issues based on these results and consider appropriate responses.



Effective Use of Water Resources

Water Risk Evaluation

Regarding water risks at manufacturing bases, including Group companies in Japan and overseas, we use “Aqueduct”^{*} and other tools to conduct analysis and make efforts to ascertain the status of responses to water risks at each location. We strive to use precious water resources as appropriately and efficiently as possible, including the recycling of water used inside plants, at bases located in highly water-stressed regions.

Note: Global water risk analysis tool made available to the public by World Resources Institute (WRI).

■ Results of Fiscal 2014 Survey

Accounting for
10% of all
manufacturing bases

Four manufacturing bases located in regions that are highly water-stressed have a high quantity of water withdrawal

In analyzing conditions at these bases, it was determined that none faced any serious risks.



Promoting Societal Environmental Contribution Activities from the Perspective of Biodiversity Conservation

Activities Aimed at Achieving the “Aichi Target”

NGK engages in activities aiming to realize “Aichi Target” international goals for biodiversity agreed upon at The 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 10: Nagoya, 2010).



▲ Maintenance of Asian skunk cabbage colonies (NGK Okhotsk)

Aichi Target		NGK Activities
Target 1	Spread awareness	Employee environmental education, next-generation education (Guest lectures, employee environmental education lecturer volunteers)
Target 4	Sustainable production and consumption	CO ₂ reductions, effective use of resources, expand sales of products that contribute to the environment
Target 5	Inhibit loss of all natural habitats	Employee volunteer participation in forestation and other environmental conservation activities
Target 8	Control pollution by chemical substances, etc.	Chemical substance management, management of exhaust and waste water, expanding sales of products that prevent air pollution
Target 11	Conserve protected areas	Employee volunteer participation in forestation and other environmental conservation activities
Target 14	Ecosystem services	Employee volunteer participation in forestation and other environmental conservation activities



Employee and Next-Generation Environmental Education

To facilitate an understanding of the aims and content of NGK’s Core Policy on the Environment we conduct position-based training related to environmental management system. We also conduct next-generation education to deepen concern and understanding with regard to resources and the environment.

Promoting the Acquisition of Environment-Related Qualifications

NGK makes an effort to develop and increase the skills of legally qualified personnel through support in each department for the acquisition of environment-related legal qualifications targeting managers engaged in pollution prevention required for the management of each area. Additionally, NGK supports employees sitting for the Eco Test^{*} by lending reference materials to those who require them and providing test-related expenses.

Note: An environmental and social certification test administered by the Tokyo Chamber of Commerce and Industry.

■ Eco Tests Certification (NGK)

379 passed, equivalent to approximately **10%** of all employees

Conducting Guest Lectures at Elementary Schools

NGK conducts guest lectures for elementary school students as environmental education for the next-generation who will lead the future. Up to now, NGK has presented guest lectures attended by approximately 1,800 elementary school students. The importance of water resources is conveyed through lectures using specialized teaching materials, quizzes and experiments. In fiscal 2014, guest lectures were conducted four times.



▲ Presentation of water purification experiments

With concern for social issues in each country and region where we operate, the NGK Group is engaged in social contribution activities that meet the needs of local communities through people and education, environmental preservation, and community involvement with the objective of becoming a corporate citizen trusted by local communities.

Contributing to the World with a Global Perspective through Support for Foreign Students



▲Fiscal 2014 NGK Scholarship certification ceremony.
Provided assistance to 20 students from 10 countries

Exchange between Supported Students, Communities and Employees

NGK conducts a variety of events to promote grassroots international relations among supported students, regional communities and employees. In fiscal 2014, Chinese and Korean language classes as well as cross-cultural exchange meetings introducing foreign students from eight countries, including Sweden and Malaysia were held.



◀Event welcoming foreign students attended by employees

■Supported Foreign Students
(Fiscal 1997–2014)

674 students

Providing Scholarships and Housing Assistance Students from Overseas

NGK conducts ongoing support activities launched in 1997 targeting foreign students visiting Japan with the aim of contributing to human resource cultivation that fosters the development of an international community.



▲NGK International House (living accommodation for foreign students). In fiscal 2014, NGK provided housing for 39 students from five countries



▲Language class taught by a foreign student

TOPIC

Roundtable Discussion Facilitates Exchange between Supported Foreign Students and NPO Shingi-Juku Network

I want to contribute to global environmental conservation through ceramics technologies that make exhaust gas emissions clean.



(Employee and former supported student)
Hendri Taufan
(Indonesia)

(Supported student)
Nur Izzah Binti Norshariffudin
(Malaysia)

(Supported student)
Saez Annie Alanah
(Sweden)

In October 2014, NPO Shingi-Juku Network held a social event attended by NGK employees (former scholarship students) and supported foreign students. Various opinions were exchanged with the intent of thinking about Japan anew from a global perspective, and participants shared experiences and thoughts in response to the questions "What good things about Japan do you want to spread around the world?" and "What Japanese behaviors or ways of thinking need improvement?" Participants noted "the exchange was extremely enlightening in terms of portraying a new image of Japan."

*NPO Shingi-Juku Network: An NPO staffed mainly by corporate veterans engaged in activities aimed at cultivating the next-generation human resources and creating a better society.



Cooperating with Regional Communities, NPOs and the Worker's Union to Conduct Volunteer Activities



Donating Meals to Children in Africa through TABLE FOR TWO Initiatives

Since September 2010, NGK has participated in the TABLE FOR TWO (TFT) program as a volunteer activity employees can easily participate in. When a meal is ordered from the employee cafeteria's healthy menu, a donation equivalent to one school lunch (20 yen) is provided to children in Africa. In fiscal 2014, the equivalent of approximately 44,700 meals were donated.

Donating Emergency Supplies to Foodbanks

NGK donated food from emergency supplies to a foodbank to support needy people.

► Provided around 3,000 cans of canned bread and around 5,000 bottles of mineral water.



Cumulatively, **170,000** meals have been donated. Equivalent to a full year of school lunches for approximately 770 children

Group Volunteer Participation in Marathon Festival Nagoya-Aichi

Approximately 60 employee volunteers participated in a group volunteer activity at the Marathon Festival Nagoya-Aichi in March 2015. The volunteers supported operations by providing runners with water and maintaining the course.



Supporting Runners with Colleagues and Workplace Friends!

Naomi Kinoshita

Environmental Management Department



Motivated by the call of the company, I participated as a group volunteer. I supported race operations and was responsible for maintaining the course, setting up colored cones to ensure runner safety and providing guidance to avoid time loss as the runners battled for a record finish. I want to participate again next year, and will invite my colleagues and workplace friends to join me.

Original Science Experiments Introduced by Employee Volunteers

Employee volunteers from NGK set up a booths for science experiments at Science World Gifu Research Information Center in July 2014 and at a science event held at the Nagoya City Science Museum in October.



Plant Tours Aimed at Deepening Interactions with Regional Communities

NGK attempts to interact with regional communities through plant tours for elementary school students and local residents to deepen interest in and understanding of NGK and manufacturing. In fiscal 2014, we conducted 13 plant tours.



NGK Holds its Annual Summer Festival

In July 2014, the Komaki Site held its annual NGK Summer Festival, marking the 48th year of this event, which drew local residents, employees and their families totaling approximately 2,300 people.



Third Party Opinion



Mr. Koichi Ikeda

Visiting Professor,
Ritsumeikan University Management School

It has been about ten years since corporations in Japan began adopting corporate social responsibility initiatives accompanied by the term CSR. Having formulated a number of global CSR guidelines, corporate initiatives and subsequent reporting have risen to a high standard. We can call this CSR Phase 1.

The NGK Group CSR Report 2015 vividly conveys the transition from Phase 1 to Phase 2 in terms of the Group's CSR awareness, initiatives and reporting. Phase 2 involves CSR standards rooted in the significant presence of NGK in society and the development of various activities centered on those standards.

At the beginning of CSR Report 2015, the addition of "manufacturing that contributes to society and the global environment" and "utilization of ceramics technologies accumulated for nearly a century since our founding" is symbolic. It deepens the significance and clearly indicates an awareness of NGK's presence in society and in the management activities based on this awareness, enabling us to see the strong intent behind the development of CSR activities as a cornerstone of the report

For example, Special Feature 2 presents a discussion about the "New Manufacturing Structural Innovations" mentioned in the Top Commitment, which introduces the thoughts of corporate officers focused directly on the significance of the company's existence for the world through statements such as "Our ultimate mission is to realize manufacturing technology innovation that provides people throughout the world with a more comfortable lifestyle." Special Feature 3 "The Global Spread of Manufacturing and Personnel Training," introduces a wide range of sentiments from employees in Japan and around the world such as "I want to contribute to global environmental conservation through my work to increase the productivity of automotive exhaust purification ceramic products," and "I take pride in work that is creating the future." Throughout the world, among both managers and employees, the awareness of "contributing to the global environment and society through one's work" increases work motivation and improves corporate performance, while at the same time contributing further to the global environment and society.

Furthermore, from the "reporting" perspective of CSR activities, NGK is attempting to innovate in light of the cornerstone I mentioned above. NGK changed the CSR Report by partially reorganizing the chapters based on the establishment of CSR promotion items within guidelines for corporate behavior aimed at realizing their corporate philosophy with aim of making the report easy to evaluate from the perspective of socially responsible investing (SRI). The use of images and simple, appealing charts in a sincere attempt to express the status of environmental preservation initiatives and a wide range of other activities is a major feature of this robust report.

In Phase 2, the importance of monitoring increases. As results each year act as a stabilizer of management activities, monitoring in Phase 2 CSR also plays the role of a stabilizer. I hope NGK makes increased use of monitoring in the future.



Nobumitsu Saji

Director and Senior Vice President
CSR Committee Chair

Response from NGK

Thank you very much for sharing your valuable opinions. All NGK Group employees are focused on realizing our corporate philosophy by fostering a constant awareness of "contributing to the global environment and society through work activities," while listening with sincerity to the voices of our stakeholders in an attempt to rise to a higher level.

Going forward, we anticipate further expansion of business overseas. Accordingly, in June 2015, we established the Global Compliance Office to build a Group-wide foundation for our compliance framework that is effective and efficient on a global scale amid increasing demands for stronger compliance with international rules. With a continued awareness of compliance as the lynchpin of CSR activities, and in line with international standards for decision-making, we will act in good faith to live up to the expectations and trust from global society.



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