

CSR Report 2014





The NSK Group and Company Overview

Ever since the invention of the wheel, human creativity has focused on the challenge of achieving smooth, continuous rotation. Today, everything in modern life that moves is the result of progress toward the ultimate goal of friction-free motion with zero energy loss. Focused on “Responsive and Creative MOTION & CONTROL,” at NSK we continue to pursue this ultimate goal. Our work starts with fundamental research and extends through bearings for automotive applications, industrial machinery, precision products and many other fields. The numerous NSK products developed through this pursuit continue to make the world turn, smoothly supporting the dreams of each new era and leading the quest for zero energy loss.

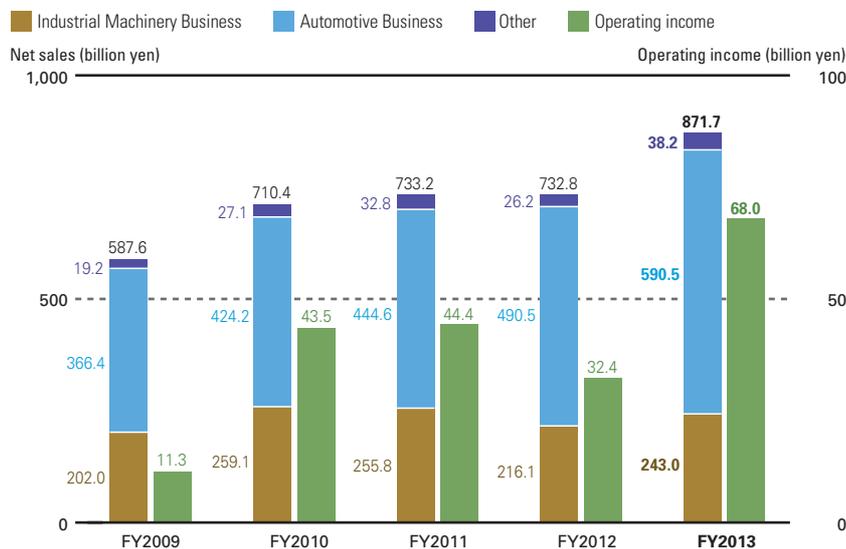


▶ Company name	NSK Ltd.
▶ Established	November 8, 1916
▶ Capital	67.2 billion yen*
▶ Group companies	Within Japan: 21 Outside Japan: 72*
▶ Head office	Nissei Bldg., 1-6-3 Ohsaki, Shinagawa-ku, Tokyo 141-8560, Japan
▶ Number of employees (consolidated)	30,454*
▶ Net sales (consolidated)	871.7 billion yen (fiscal year ended March 31, 2014)

* As of March 31, 2014

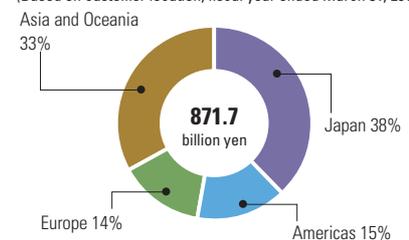
Financial Data

Net Sales / Operating Income (Consolidated)



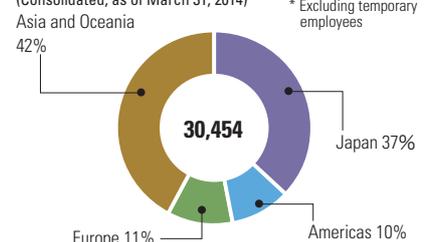
Breakdown of Net Sales, by Region

(Based on customer location; fiscal year ended March 31, 2014)



Breakdown of Employees, by Region

(Consolidated, as of March 31, 2014)



* Excluding temporary employees

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About This Report

The aim of this publication is to help as many stakeholders as possible to gain a deeper understanding of the activities of the NSK Group. In editing this report, priority is placed on presenting information that is considered of most interest to stakeholders or that is deeply connected to the NSK Group's business.

An effort has been made to present a clear picture of each activity and the Group's progress in those activities by presenting content including policies, goals, and performance on initiatives, examples of activities in fiscal 2013, and data that show progress in activities for each activity item.

Reference Data Published on NSK's Website

More information and reference data are published on NSK's website. For more information and reference data related to topics on pages with a  icon in this report, please visit the following site:
www.nsk.com > Sustainability > CSR Reports.

Period of Coverage

April 2013 to March 2014.

Activities conducted outside this period are indicated with the inclusion of a date.

Referenced Guidelines

Sustainability Reporting Guidelines (3.1 edition) by the Global Reporting Initiative (GRI)

ISO 26000:2010 Guidance on social responsibility by International Organization for Standardization (ISO)

Environmental Reporting Guidelines (2012 edition) by the Ministry of the Environment of Japan

Scope of Coverage

The report covers all NSK Group sites and plants, both in and outside Japan. For data and information that differs from the scope of coverage above, the scope is separately defined.

Industrial Machinery Business

Industrial Machinery Bearings

Bearings reduce friction in the rotating parts of machinery and enable smooth rotation. NSK's bearings are used in a range of products and machines, including home appliances such as vacuum cleaners, railway vehicles such as bullet trains, steel-making equipment, wind turbines for power generation, large industrial machinery, airplanes, and satellites.



NSKHPS™ Spherical Roller Bearings



Low-Torque, Long-Lasting Grease-Sealed Bearing for Motor Applications

Precision Machinery and Parts

The NSK Group's precision machinery and parts are the core components in the machine tools and industrial robots used to manufacture automobiles, personal computers, and other products. They are also found in equipment used to produce semiconductors and in injection molding machines. The NSK Group's precision machinery and parts play a crucial role on the front-line of manufacturing.



HMS Series Ball Screws for High-Speed Machine Tools



Megatorque Motor™ PB Series

Automotive Business

Automotive Bearings

Some 100 to 150 bearings are incorporated into a single automobile. The NSK Group provides numerous products that support the diverse automotive needs of society, including various bearings used in the engine, transmission, and electrical components as well as the hub unit bearings that support the axle.



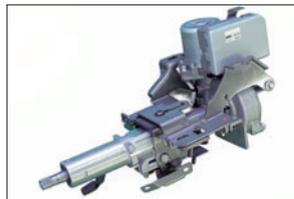
Hub Unit Bearing with High-Reliability Seal



High-Performance Cartridge Bearing for Automotive Turbochargers

Automotive Parts

The NSK Group's automotive parts include many important components that control forward motion, turning, and stopping in automobiles, such as steering systems that transmit the driver's movement of the steering wheel to the vehicle's wheels, and clutches that are used in automatic transmissions. The Group's products also contribute to automobile safety, comfort, and environmental performance.



Advanced Electric Power Steering for Modular Units



Hybrid Car-Compatible WSC Start Control Forward/Reverse Clutch

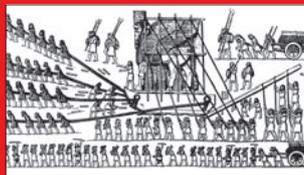
NSK's Four Core Technologies

NSK's Research and Development

For nearly a century since its founding in 1916, NSK has focused efforts on R&D, developing new technologies and raising product quality. Having grown into a leading company in the fields of bearings, automotive products, and precision machinery and parts, NSK's technological capabilities are based on four core technologies: tribology, material engineering, analysis technology, and mechatronics.

Tribology

Tribology is a technology that controls friction and wear of sliding surfaces in relative motion. This is a key technology for bearings that support rotational or linear motion applications. The principle of bearings traces its origin to ancient Mesopotamia, where gigantic stones were transported with relative ease by placing logs underneath them.



Material Engineering

Materials play a key role as technologies that affect the performance of products. Optimal compositions and heat treatment processes under optimal conditions for metal and high polymeric materials, as well as the utilization of ceramics technologies, are key contributors to increasing the durability, reliability, and performance of bearings.



Analysis Technology

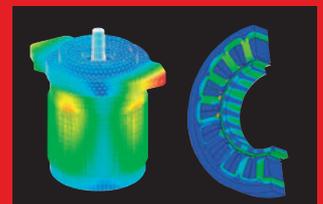
NSK uses computer simulations to test and assess the performance of bearings in virtual environments. Taking advantage of advanced analysis technology enables the Company to assess performance in extreme conditions, under which testing in actual machinery is difficult. This helps to speed up the creation of optimal designs and product development for bearings.



Mechatronics

NSK has honed proprietary mechatronics technologies that fuse control technologies with mechanical technologies—which the Company has fostered through product development and at production sites—and motor, sensor, and circuit technologies.

Mechatronics contribute to the development of new products by giving NSK's products movement, and creating new functions and performance.



NSK Group Sites Worldwide (as of March 31, 2014)

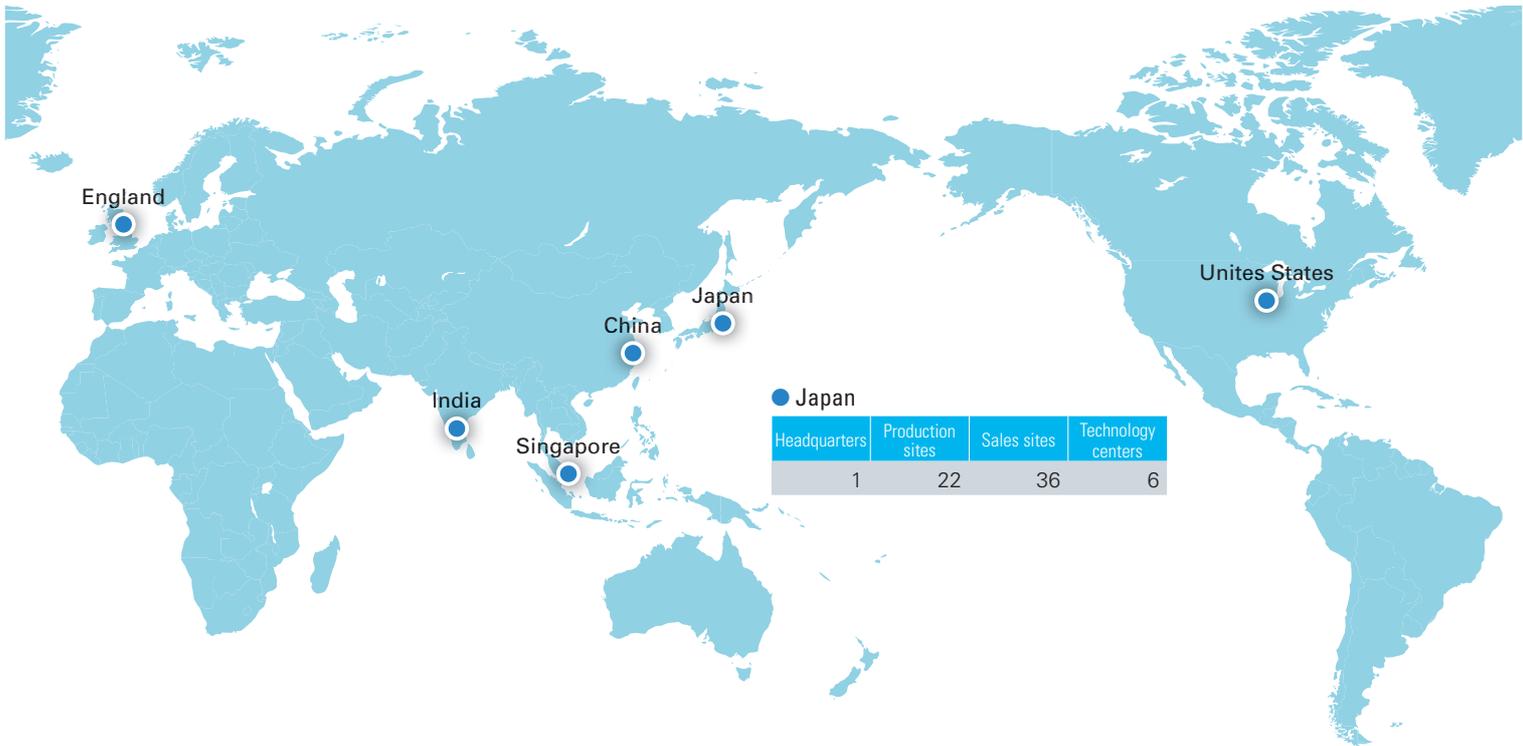
The NSK Group has been implementing full-scale development of its global business operations since the early 1960s. Today, the Group continues to expand its network of manufacturing, marketing and technological expertise around the world.

● Europe, Middle East and Africa

	Headquarters	Production sites	Sales sites	Technology centers
England	1	4	2	1
Germany		1	2	1
France			1	
Italy			1	
Netherlands			1	
Spain			1	
Poland		4	3	1
Russia			1	
Turkey			1	
United Arab Emirates			1	
South Africa			1	
Sub-total	1	9	15	3

● Americas

	Headquarters	Production sites	Sales sites	Technology centers
Unites States	1	7	10	1
Canada			3	
Mexico		1	1	
Brazil		1	5	1
Peru			1	
Argentina			1	
Sub-total	1	9	21	2



● Japan

Headquarters	Production sites	Sales sites	Technology centers
1	22	36	6

● Asia and Oceania

	Headquarters	Production sites	Sales sites	Technology centers
China	1	12	18	1
Taiwan			6	
Korea		2	2	1
Singapore	1		2	
Indonesia		3	2	
Thailand		2	3	1
Malaysia		2	4	
Vietnam			1	
India	1	4	6	
Australia			4	
New Zealand			1	
Sub-total	3	25	49	3

Headquarters

6 in **6** countries

Production sites

65 in **13** countries

Sales sites

121 in **29** countries

Technology centers

14 in **9** countries



Reinforcing Safety, Quality and Compliance to Ensure Further Growth as a Socially Responsible Corporation

Looking Back on Fiscal 2013

Despite a deceleration in the speed of global economic growth, mainly in emerging countries, developed economies continued to make a gradual recovery. Against this backdrop, the NSK Group achieved record-high figures for sales and ordinary income. This growth was primarily driven by our electric power steering (EPS) business, which helps vehicles to deliver better fuel efficiency, safety and comfort. Other positive factors were higher sales in our industrial machinery business and favorable exchange rate conditions.

Continuing to improve our products, we rolled out a full lineup of our NSKHPS™ series of high-performance bearings, which feature significantly improved functionality compared to conventional standard bearings. In the aftermarket, we expanded the maintenance services we provide for our customers' production equipment. We are working closely with our customers to develop a strategic business model that allows us to improve productivity while also contributing to environmental protection. (See p. 38 for more details.)

Steadily Implementing Our Mid-term Management Plan with a Focus on Safety, Quality, and Compliance

In May 2013, NSK announced its Fourth Mid-term Management Plan (FY2013-2015). In this plan, we have assigned the highest priority to the key issues of "safety, quality, and compliance." The plan outlines what we will do to achieve "growth with a focus on profitability," and "the development of management capabilities to handle ¥1 trillion in sales volume." The plan's overarching vision is "establishing corporate fundamentals appropriate for a company with net sales of ¥1 trillion."

All the officers and employees of the NSK Group are united in pursuit of these goals. We are working hard to

continue strengthening the Group's ability to deliver a stable supply of trusted products worldwide through fair business operations. This mid-term plan is designed to lay a foundation for sustainable growth by ensuring that the NSK Group makes even stronger contributions to society and delivers even greater levels of customer satisfaction.

In the area of compliance, NSK was ordered to pay fines or penalties by the authorities in the U.S., Europe, China and other countries, for participating in activities that violated competition laws in relation to sales of bearings. I would like to express my sincere regret for the concern these matters have caused our customers, shareholders, investors, and other stakeholders.

To ensure that we prevent any reoccurrence, the NSK Group has been working hard to reinforce its compliance system and is carrying out training in order to ensure employees have a more detailed understanding of the relevant regulations. As we move forward, we will step up our efforts to ensure total compliance even further, and do everything in our power to regain the trust and confidence of all of our stakeholders. (See p. 16 for more details.)

Aiming for Sustainable Growth as a Trusted Company

Looking Towards NSK's 100th Anniversary in 2016

To achieve sustainable growth as a public institution, we recognize that the NSK Group must fulfill its mission as a socially responsible organization and continue to meet the expectations of customers and other stakeholders. Our mission statement expresses this: "NSK aims to contribute to the well-being and safety of society and to protect the global environment through its innovative technology integrating 'Motion & Control.' We are guided by our vision of NSK as a truly international enterprise, and are working across national boundaries to improve relationships between people throughout the



world." We will continue supporting the development of the global economy while conserving the global environment by creating innovative products that help our customers succeed. We are committed to conducting our business in a manner befitting a good corporate citizen in all the local communities that have welcomed us worldwide.

In November 2016, NSK will celebrate its 100th anniversary. We will take this opportunity to look back on our history, while clarifying NSK's vision as we look toward the next 100 years. To this end, the NSK 100th Anniversary Committee was set up in October 2013. In addition to announcing the NSK Centenary Vision, this commemorative occasion will enable us to reiterate our commitment to society while expressing our gratitude to stakeholders. We look forward to your continued understanding and support.

To Our Stakeholders

This CSR Report is designed to foster communication with you, our stakeholders, by clearly conveying the NSK Group's progress and performance. In the report, we strive to provide information with a high degree of transparency and accessibility. We look forward to your candid feedback on this report and the activities of the NSK Group.

Norio Otsuka
President and Chief Executive Officer,
NSK Ltd.



Reference data is available
on NSK's website.

www.nsk.com > Company > Vision & Philosophy

www.nsk.com > Investors > IR Events

● Release of Mid-term Plan (FY'13-FY'15)

The NSK Group's CSR

Mission Statement

NSK aims to contribute to the well-being and safety of society and to protect the global environment through its innovative technology integrating MOTION & CONTROL™. We are guided by our vision of NSK as a truly international enterprise and are working across national boundaries to improve relationships between people throughout the world.

Management Principles

1. To serve our customers through innovative and responsive solutions, taking advantage of our world-leading technologies.
2. To provide challenges and opportunities to our employees, channeling their skills and fostering their creativity and individuality.
3. To identify the needs of the times and of the future and to use all of NSK's resources to meet those needs by being versatile, responsive and dynamic.
4. To work together with our employees and contribute to the communities in which we operate.
5. To manage our business from an international perspective and to develop a strong presence throughout the world.

Corporate Message

Responsive and Creative
MOTION & CONTROL™

Corporate Slogan

Beyond Limits, Beyond Today

Sub Slogans

- Beyond Frontiers
- Beyond Individuals
- Beyond Imagination
- Beyond Perceptions
- Challenging the Future

The NSK Group's View of CSR

NSK's Mission Statement makes clear the Group's commitment to contributing to the development of society and to the protection of the global environment, and NSK's Management Principles set the course to realizing these goals.

The NSK Group's products have the special characteristic of aiding the smooth functioning of a wide range of machinery, and they support the reliability, safety, and energy efficiency of the machines into which they are incorporated. The NSK Group regards its fundamental

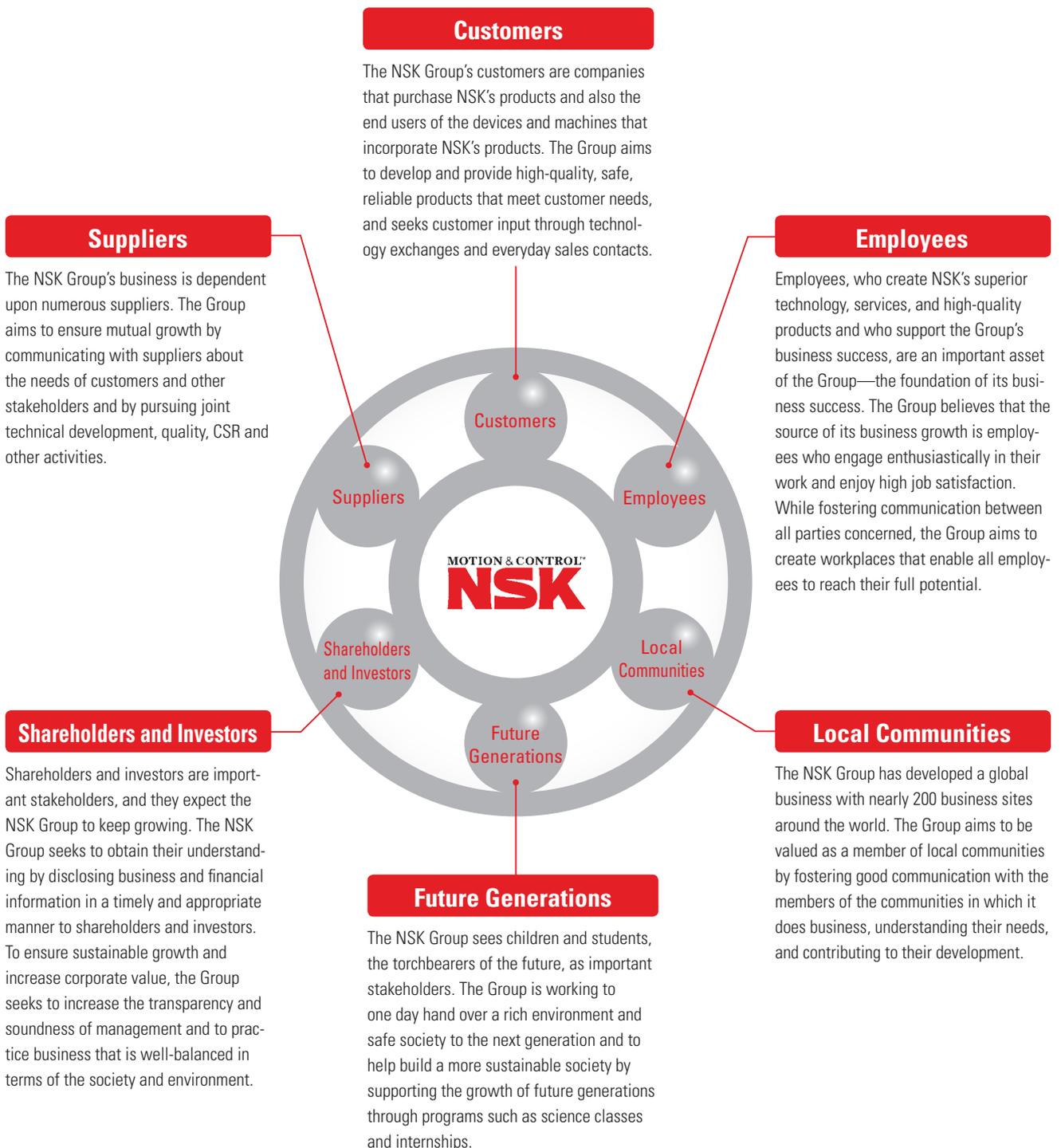
corporate activity as contributing to smoothly running, safe societies, protection of the global environment, and the realization of sustainable societies through the supply of those products—that is, through the Group's main business. The NSK Group aims to achieve greater corporate value and sustainable growth by ensuring that all directors and employees are firmly committed to the Group's purpose and by making sincere efforts to contribute to business growth and society by taking the perspective of customers and other stakeholders.



The NSK Group's Stakeholders

The NSK Group's business is built on the trust of a variety of stakeholders. The NSK Group believes that active communication is the key to building better relationships with its stakeholders. The Group is also striving to build a corporate culture in which each site, each

department, and each and every officer and employee recognizes the needs of stakeholders and the broader society and can reflect those needs in their own everyday work.



Fiscal 2013 CSR Activity Performance and Fiscal 2014 and Mid-Term (Fiscal 2015) Targets

Category	FY2013 target	Performance in FY2013
Management Structure Supporting Sustainable Growth		
Corporate governance	Enhance and accelerate dissemination of NSK Group rules	Enhanced and disseminated NSK Group rules
Risk management	<ul style="list-style-type: none"> Establish an internal audit office in the Americas and China Conduct internal audits of finance and compliance based on regional risk assessment in the Americas, Europe, China, and ASEAN Respond to changes in mission-critical task systems in Japan, the Americas and Europe Develop Group operating standards relating to internal audits 	<ul style="list-style-type: none"> Established an internal audit office in the Americas and China Conducted self-inspections and internal audits of finance and compliance based on regional risk assessment in the Americas, Europe, China, and ASEAN Held global internal audit manager conferences Responded to changes in mission-critical task systems in Japan, the Americas and Europe Started to develop Group operating standards relating to internal audits
	Development of Group Crisis Management Systems Formulate Group crisis management standards	Formulated Group crisis management standards
	Business Continuity Plan (BCP) Creation Promote measures to deal with the risk of large-scale earthquakes in Japan <ul style="list-style-type: none"> Improve BCP effectiveness through training (head office functions) Establish concrete BCPs (Production sites, including group companies with others) 	Promoted measures to deal with the risk of large-scale earthquakes in Japan <ul style="list-style-type: none"> Verified BCP effectiveness through training (initial response mainly at the head office) Established a concrete BCP (Production sites, including group companies with others)
Compliance	Procurement <ul style="list-style-type: none"> Push development of replacements for parts that are difficult to replace with alternatives Conduct supply chain surveys two degrees further upstream and follow up on supplier BCP countermeasures 	<ul style="list-style-type: none"> Continued to develop replacements for parts Updated supply chain data and expanded the survey scope
	Continue to provide rank-based training on compliance	<ul style="list-style-type: none"> Educated 1,121 salespersons over 58 sessions in Japan and 530 salespersons over 39 sessions outside Japan Provided e-learning to officers and employees
	CSR Procurement Revise guidelines to reflect conflict mineral information disclosure rules In Japan: Conduct survey based on CSR Self-Assessment Check-Sheets Reply to customers' and supply chain survey requests concerning use of conflict minerals	Implemented revisions including provisions relating to conflict minerals <ul style="list-style-type: none"> Conducted survey based on CSR Self-Assessment Check-Sheets Confirmed that there are no compliance violations
Creating Quality to Earn the Confidence of Society	Security Export Improve security export control related to transfer of equipment	<ul style="list-style-type: none"> Completed and started to use various procedure documents and manuals Implemented security and export control training for relevant departments
	Quality	Globally roll out a self-audit system for heat treatment processes
	Customer satisfaction	Globally implemented a self-audit system for heat treatment processes
Creating a Dynamic Work Environment		
Basic labor rights	Continue providing human rights training through e-learning	Continued providing human rights training through e-learning
Safe and healthy workplaces	In Japan: Expand risk assessment lines beside model lines	Progressively expanded risk assessment to lines other than model lines
Self-motivated employees	Continue holding the Global Management College	Held the 3rd Global Management College
Working with Local Communities		
Social contributions targeting community development	Continue awareness building efforts in priority areas for social contribution	Made awareness building efforts through training sessions
	Continue to share information on initiatives among business sites	Distributed <i>NSK Group Social Action Program</i> intranet booklet (Japanese/English) to all business sites
Relationship with Shareholders and Investors		
Information disclosure	<ul style="list-style-type: none"> Encourage understanding of the Fourth Mid-term Plan (FY2013–2015) among investors and analysts Strengthen IR initiatives for individual investors 	<ul style="list-style-type: none"> Held briefings for the Fourth Mid-term Plan, and explained the details and exchanged opinions through small meetings with top management and IR promotion trips outside Japan Six briefings were held for individual investors in Japan, and about 500 people participated
Environmental Voluntary Action Plan		
System for promoting environmental protection initiatives	<ul style="list-style-type: none"> Maintain ISO 14001 certification at all subject sites Obtain certification within three years of starting full-scale operations at four sites 	<ul style="list-style-type: none"> Maintained certification at all 61 subject sites Four sites obtained certification
	<ul style="list-style-type: none"> Zero instances in which emissions standards are exceeded Zero instances of oil and other leakage-related environmental accidents 	<ul style="list-style-type: none"> One instance occurred in which sewage effluent with oil slightly exceeding standards (in Thailand) Had one spill of water-soluble grinding fluid (in Japan)
Environmentally friendly products and services	Create environmentally friendly products and technologies	Created 17 environmentally friendly products
Initiatives for saving energy and controlling CO ₂ emissions	Manufacturing In/outside Japan: Reduce CO ₂ emissions per production unit by 2% (base year: FY2011)	In Japan: Reduced CO ₂ emissions per production unit by 4.4% (base year: FY2011) Outside Japan: Reduced CO ₂ emissions per production unit by 21.4% (base year: FY2011)
	In Japan: Reduce CO ₂ emissions to no more than FY2011 level	In Japan: Reduced CO ₂ emissions by 3.8% (base year: FY2011)
Initiatives for optimal use of resources	Distribution In Japan: Reduce CO ₂ emissions per ton-kilometer by 2% (base year: FY2011)	In Japan: CO ₂ emissions per ton-kilometer increased by 1.0% (base year: FY2011)
	Development/Design/Manufacturing In Japan: Continue to reduce waste of resources by changing machining processes	In Japan: Reduced waste of resources by changing machining processes
	Manufacturing In Japan: Maintain zero emissions (landfill disposal rate no more than 0.01%)	Maintained zero emissions (landfill disposal rate was 0.001%)
	In Japan: Achieve a waste recycling rate of 99.99% or more Outside Japan: Achieve a waste recycling rate 96.4% or more	In Japan: Recycling rate was 99.999% Outside Japan: Recycling rate was 95.3%
	In Japan: Reduce industrial waste emissions per production unit by 2% or more (base year: FY2011)	In Japan: Reduced industrial waste emissions per production unit by 18.4% (base year: FY2011)
System for optimal management of environmentally harmful substances	Procurement In Japan: Conduct on-site audits at key suppliers Investigate status of NSK Environmentally Harmful Substances at suppliers Outside Japan: Conduct on-site audits at key suppliers Investigate status of NSK List of Environmentally Harmful Substances at key suppliers	In Japan: Conducted on-site audits at 48 key suppliers Investigated status of NSK Environmentally Harmful Substances at 139 suppliers Outside Japan: Conducted on-site audits at 36 key suppliers Investigated status of NSK List of Environmentally Harmful Substances at 163 key suppliers
	Manufacturing In Japan: Reduce handling of PRTR-designated substances per production unit by 4% from FY2011	In Japan: Reduced handling of PRTR-designated substances per production unit by 15.2% from FY2011
	In/outside Japan: Reduce use of machining fluids containing chlorine additives	In Japan: Replaced two fluids; one fluid remaining Outside Japan: Replaced one fluid; two fluids remaining
Biodiversity preservation	Manufacturing Japan: Perform impact assessment and determine issues to address	Japan: Performed impact assessment and determined issues to address at Group companies

Evaluation	FY2014 target	FY2015 target	Page
●	Strengthen corporate governance <ul style="list-style-type: none"> Continue to enhance and accelerate dissemination of NSK Group rules Respond to anticipated evolution of society's expectations 	Strengthen corporate governance (increase management transparency and soundness)	pp.10 – 13
●	<ul style="list-style-type: none"> Conduct internal audits of finance, purchasing and compliance based on regional risk assessment in the Americas, Europe, China, and ASEAN Visit all sites to conduct compliance audits Formulate Group operating standards for internal audits 	<ul style="list-style-type: none"> Conduct internal audits of finance, purchasing and compliance based on regional risk assessment in the Americas, Europe, China, and ASEAN Globally roll out Group operating standards for internal audits and carry out internal auditing based on these standards 	
●	<ul style="list-style-type: none"> Develop crisis management systems, based on the Group crisis management standards, focusing on organizational structure Identify critical risks in each Group organization 	Start creating business continuity plans (BCP) for critical risks	
●	Promote measures to deal with the risk of large-scale earthquakes in Japan <ul style="list-style-type: none"> Implement measures to deal with issues to ensure BCP (head office and business sites) Verify and revise BCP effectiveness through training (recovery measures mainly at the head office, and production sites) Expand BCP measures to suppliers (guidance for BCP creation) 	Promote measures to deal with the risk of large-scale earthquakes in Japan <ul style="list-style-type: none"> Continue to implement measures to deal with issues to ensure BCP Continue to verify and revise BCP effectiveness through training Continue to expand BCP measures to suppliers Promote preparedness measures for other disasters <ul style="list-style-type: none"> Start creating a BCP for critical risks other than earthquakes 	
●	<ul style="list-style-type: none"> Continue to undertake development trials Update data on supply chain risk items in and outside Japan 	<ul style="list-style-type: none"> Develop supply chain disaster response system Visualize global supply chain data 	pp.14 – 17
●	Continue to provide rank-based training on compliance	In/outside Japan: Expand categories of who receives compliance training and enhance training content	
●	Continue to make the NSK Supplier CSR Guidelines widely known to gain understanding of suppliers	Continue to make the NSK Supplier CSR Guidelines widely known to gain understanding of suppliers outside Japan	
●	<ul style="list-style-type: none"> Distribute the revised <i>NSK Supplier CSR Guidelines</i> in China and ASEAN, and implement surveys using the Self-Assessment Check-Sheets Conduct supplier surveys concerning conflict minerals and respond to customer surveys 	<ul style="list-style-type: none"> Boost efforts using the NSK Supplier CSR Guidelines and Self-Assessment Check-Sheets Develop standard system for replying to customer's conflict mineral surveys 	
▲	Strengthen cooperation between relevant departments to improve operation quality for international trade in general, and set up a website for general trade operations	Adopt a trade security export screening structure that uses an IT system	
●	Improve the level of the self-audit system for heat treatment processes	Start operating self-audit systems for special processes besides heat treatment	pp.20 – 23
●	Promote maintenance service provision and operation standardization	Enhance maintenance service and expand scope of targets	
●	Enhance e-learning training and expand training support tools	Enhance education for customer technical support employees	
●	Improve the level of sales skill improvement training	Expand education aimed at strengthening sales capabilities	
●	Continue providing human rights training through e-learning	Enhance human rights training	pp.24 – 31
●	Continue to develop further risk assessment	Strengthen health and safety initiatives globally	
●	Continue holding the Global Management College	Strengthen development of regional management personnel and global human resources	
●	Continue awareness building efforts in priority areas for social contribution	Continue awareness building efforts in priority areas for social contribution	pp.32 – 37
●	Improve <i>the NSK Group Social Action Program</i> intranet booklet	Continue to share information on initiatives among business sites	
●	<ul style="list-style-type: none"> Enhance dialogue with investors and analysts concerning the Fourth Mid-term Plan, business environment, governance and non-financial topics Strengthen IR initiatives for individual investors 	<ul style="list-style-type: none"> Understanding of progress and the level of achievement of the Fourth Mid-term Plan Diversify in shareholder distribution 	p.54
●	<ul style="list-style-type: none"> Maintain ISO 14001 certification at all subject sites Obtain certification within three years of starting full-scale operations 	<ul style="list-style-type: none"> Maintain ISO 14001 certification at all subject sites Obtain ISO 14001 certification within three years of starting full-scale operations at a site 	pp.40 – 41
✘	<ul style="list-style-type: none"> Zero instances in which emissions standards are exceeded Zero instances of oil and other leakage-related environmental accidents 	<ul style="list-style-type: none"> Zero instances in which emissions standards are exceeded Zero instances of oil and other leakage-related environmental accidents 	
●	Create environmentally friendly products and technologies	Create environmentally friendly products and technologies	pp.42 – 43
●	In/outside Japan: Reduce CO ₂ emissions per production unit by 3% (base year: FY2011)	In/outside Japan: Reduce CO ₂ emissions per production unit by 4% (base year: FY2011)	pp.44 – 46
●	In Japan: Reduce CO ₂ emissions to no more than FY2011 level	In Japan: Reduce CO ₂ emissions to no more than FY2011 level	
✘	In Japan: Reduce CO ₂ emissions per ton-kilometer by 3% base year: FY2011)	In Japan: Reduce CO ₂ emissions per ton-kilometer by 4% (base year: FY2011)	
●	In Japan: Continue to reduce waste of resources by changing machining processes	In Japan: Continue to reduce waste of resources by changing machining processes	pp.47 – 49
●	In Japan: Maintain zero emissions (landfill disposal rate no more than 0.01%)	In Japan: Maintain zero emissions (landfill disposal rate no more than 0.01%)	
▲	In Japan: Achieve a waste recycling rate of 99.99% or more Outside Japan: Achieve a waste recycling rate 97.7% or more	In Japan: Achieve a waste recycling rate of 99.99% or more Outside Japan: Achieve a waste recycling rate 99.0% or more	
●	In Japan: Reduce industrial waste emissions per production unit by 20% or more (base year: FY2011)	Japan: Reduce industrial waste emissions per production unit by 23% or more (base year: FY2011)	
●	In/outside Japan: Reduce water usage per production unit by 3% (base year: FY2011)	In/outside Japan: Reduce water usage per production unit by 4% (base year: FY2011)	
●	In Japan: Reduce packaging material waste per production unit by 7% (base year: FY2007)	In Japan: Reduce packaging material waste per production unit by 8% (base year: FY2007)	
▲	Conduct on-site audits at key suppliers Investigate status of NSK List of Environmentally Harmful Substances at suppliers	Conduct on-site audits at key suppliers Investigate status of NSK List of Environmentally Harmful Substances at suppliers	pp.50 – 52
●	In Japan: Reduce handling of PRTR-designated substances per production unit by 16% from FY2011	In Japan: Reduce handling of PRTR-designated substances per production unit by 17% from FY2011	
▲	In/outside Japan: Completely phase out use of machining fluids containing chlorine additives		
●	<ul style="list-style-type: none"> Perform impact assessment and determine issues to address Develop initiatives for preserving biodiversity through social contribution activities 	<ul style="list-style-type: none"> Perform impact assessment and determine issues to address Develop initiatives for preserving biodiversity through social contribution activities 	p.53

Corporate Governance

Management Structure Supporting Sustainable Growth

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

The international community must cooperate to overcome a range of challenges in order to realize a sustainable world. As corporate activities expand globally, companies are expected to do their part to help solve the challenges of their respective countries and regions. They are called upon to contribute to the global community through ethical business activities.

NSK's Approach

Basic Approach

Ensuring Fair, Efficient Management

NSK regards corporate governance as a structure that enables the operational organizations to realize efficient and fair management under the supervision of the Board of Directors. The Corporate Governance Rules, which are part of NSK's in-house regulations, articulate the basic approach to and framework of corporate governance at the NSK Group.

NSK's efforts to strengthen corporate governance are based on the following four policies.

- (1) Improve management flexibility by delegating more authority from the Board of Directors to operational organizations;
- (2) Ensure the supervision of the operational organizations by the supervisory organizations by separating the former and the latter;
- (3) Strengthen the supervision of the operational organizations by the supervisory organizations through close coordination between the former and the latter; and
- (4) Increase management fairness by strengthening the compliance system.

Management

Corporate Governance Structure

NSK operates under a "Company with Committees" system in which executive and supervisory roles are clearly defined, with the aim of maintaining and enhancing management soundness and transparency. For the operating organizations, the CEO makes final management decisions, and the executive officers appointed by the Board of Directors oversee the specific operational functions under the direction of the CEO. As the primary supervisory organization, the Board of Directors makes decisions regarding important management matters such as fundamental management policies, and supervises the operating organizations. In order to strengthen this supervisory function, the Company has also established an Audit Committee, a Compensation Committee, and a Nomination Committee (each consisting of two independent directors and one non-independent director).

In fiscal 2013, the Board of Directors and the Audit Committee each met 14 times, while the Compensation Committee and Nomination Committee each met for times. 

Internal Control System

At a meeting in April 2006, the Board of Directors established the Basic Policies for Establishment of an Internal Control System. The policy has subsequently been updated by the board each year to reflect structural changes made in response to the Company's changing business environment. Moreover, to increase the soundness and transparency of management, the NSK Group Management Rules were established to ensure smooth management, and the Group continues to improve its internal controls. The Internal Audit Department performs audits of the legality, appropriateness and effectiveness of business operations and also monitors their status.

2013 Topic

First Global Internal Audit Manager Meeting

The building and strengthening of a global internal audit structure is one of the goals of the current mid-term plan. Accordingly, the Internal Audit Department has established internal audit offices at the regional headquarters in the Americas, Europe, China, and ASEAN and Oceania. They perform regional internal audits and assess internal controls over financial reporting at subsidiaries.

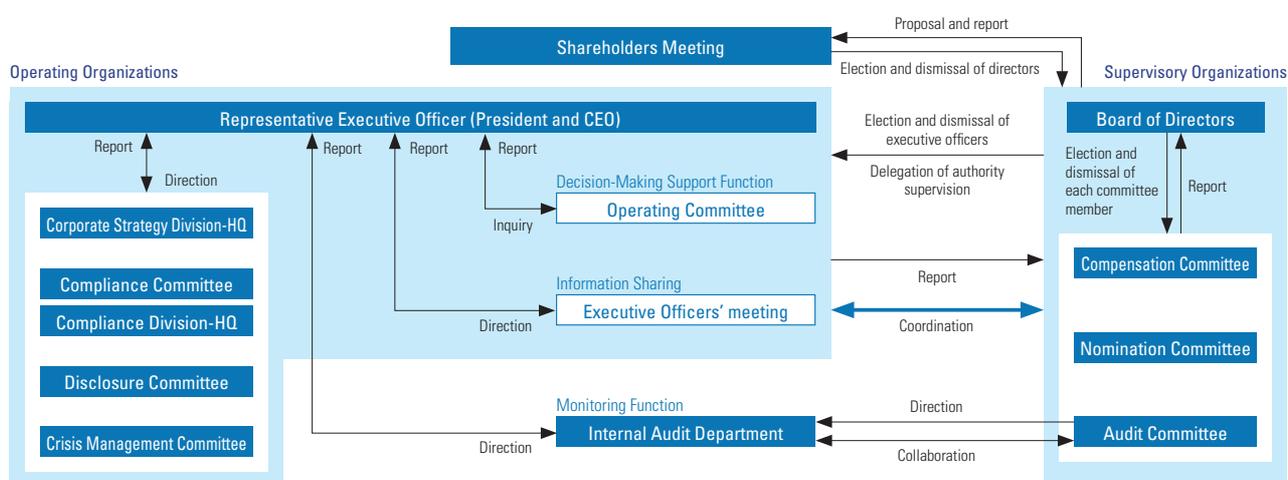
In December 2013, the Internal Audit Department held the first Global Internal Audit Manager Conference. The participants reported on risk assessments and internal audits in their respective regions, while discussing and sharing mid-term internal audit issues.



Photo 1 Global Internal Audit Manager Meeting

Photo 1

Figure 1 Corporate Governance Structure



Reference data is available on NSK's website.

www.nsk.com > Company > Corporate Governance

● Corporate Governance Report (only in Japanese)

www.nsk.com > Investors > IR Documents

● Securities Report (only in Japanese)

Internal Control over Financial Reporting

The Internal Audit Department assessed the status of design and operation of internal control over the NSK Group's financial reporting for the year ended March 31, 2014. Based on this assessment, the Company concluded that its internal control over financial reporting was effective. The Group also obtained an audit certification (unqualified opinion) from its external auditing firm evaluating the assessment process as effective.

Risk Management

Basic Approach

Aiming to Minimize Risk

With the global expansion of its business, the NSK Group recognizes the great importance of initiatives to minimize risk. Accordingly, it is taking steps to ensure that various risks are properly identified and managed.

Management

Risk Management Systems

NSK has established a fundamental policy of risk management and risk management systems as part of its in-house rules. The Group classifies and organizes potential risks into business risks, disaster risks, compliance risks, and risks to reliability of financial reporting. It designates responsible divisions that supervise the prevention of risks and countermeasures in the event that a risk materializes.

Every year, all the business sites perform their own risk assessments, and work to ensure appropriate response to risks. In addition, each business site identifies the risks that it needs to manage, and creates a monthly risk report. The Internal Audit Department then performs Group-wide risk assessment based on the site risk assessment results, before creating the annual audit plan and conducting audits. Monthly risk monitoring also helps confirm that the Group's risk management systems are sufficient.

Figure 2 Crisis Management Structure for Disaster Risks

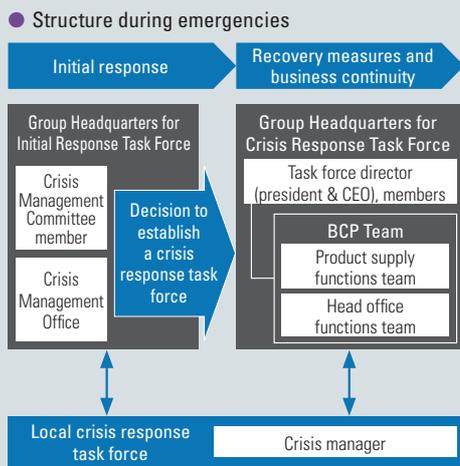
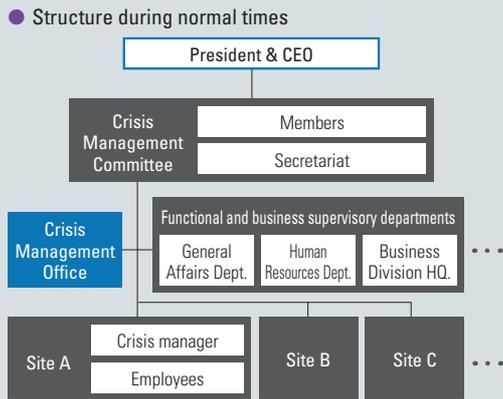


Figure 3 BCP Creation Scope and Initiative Levels

BCP training	Implemented in 2013	Planning in 2014	Planning to begin in 2014
System establishment BCP development	Implemented in 2012	Implemented in 2013	Planning to begin in 2014
Disaster mitigation	Implemented by 2012	Implemented by 2013	(Partially implemented)
	Head office functions	Business sites	Suppliers

Disaster Risk Management Systems

The permanent Crisis Management Committee acts to prevent risks and minimize damages in the case of a risk event by developing and strengthening management systems for disaster risks, particularly natural disasters, outbreaks of infectious disease, and major incidents. It also works at establishing and improving business continuity plans (BCP).

In the event of a crisis, crisis response task forces are set up at the head office as well as at the site of the crisis, and relevant departments cooperate to handle the situation quickly and accurately according to the circumstances. **Figure 2**

Main FY2013 Initiatives

Strengthening Risk Response Capabilities with Business Continuity Planning

In fiscal 2013, the NSK Group drew up a concrete business continuity plan (BCP), including the creation of a complete organizational structure and introduction of procedures and necessary preparation tools at each business site, including Group companies. Initial response training was also carried out to confirm the validity of the plan developed by the Company's head office functions. Other measures were also taken, including ongoing efforts to minimize potential damage, such as fastening and securing equipment at production sites, enhancing emergency communication systems, and IT infrastructure earthquake-proofing.

In fiscal 2014, the Group is working hard to strengthen its disaster response capabilities, in addition to addressing issues identified during the training by expanding the training scope to include the initial response period at business sites and the recovery and business continuity period at the head office. **Figure 3**

Initiatives to Create a Disaster-Resistant Supply Chain

In fiscal 2013, the NSK Group introduced a system to identify the damage situation at suppliers in the event of a disaster. Using this system, the Group is now able to quickly ascertain problems after a catastrophe, and then take the exact measures needed in cooperation with suppliers. Moreover, the Group has asked major suppliers to create their own business continuity plans (BCP), in order to strengthen risk management throughout the supply chain.

By continuing to forge cooperative relationships with suppliers, the Group is determined build a more disaster-resistant supply chain.

Compliance

Basic Approach

Acting with the Highest Ethical Standards and Striving to Maintain the Trust of Society

The NSK Group specifies the universal philosophy that all officers and employees should adhere to in the NSK Code of Corporate Ethics. The Group aims to continue growing as a company that earns the trust of the international and local communities by following relevant laws and regulations in all of its corporate activities and acting with high ethical standards as a good corporate citizen.

Management

Compliance Promotion System

NSK has established a Compliance Committee to formulate and promote policies aimed at strengthening compliance. The committee also checks the level of policy implementation, and reports regularly to the Board of Directors.

NSK also established a Compliance Enhancement Office and tasked it with overseeing the practical work related to compliance across the entire NSK Group based on the decisions of the Compliance Committee. The Group has appointed persons responsible for compliance in each department, site, and NSK Group company in Japan as well as each headquarters outside Japan to serve as key contact points for all information related to compliance and conduct risk management. **Figure 4**

Global Compliance Meeting

In order to strengthen the global compliance system, members responsible for compliance from the Americas, Europe, and China gather at the head office in Japan for global compliance meetings. In addition to reporting on the initiatives in their respective regions, they share information on laws that require special attention in each country. **Photo 2**

Internal Reporting System

The NSK Group operates a whistle blower "Hotline" system, available to all officers and employees, to quickly identify and correct acts that may violate compliance-related rules. One hotline is in-house at the Compliance Division Headquarters and another is staffed by an outside lawyer. The system allows users to remain anonymous and ensures they suffer no unreasonable loss from using the Hotline.

This information is also included in *Compliance Newsletter (Compliance Kawaraban)*, which has been issued each month since 2012 with the aim of increasing compliance awareness throughout the Company.

Figure 4 Compliance System



Photo 2 Global compliance meeting



Photo 3 Compliance training in South Korea

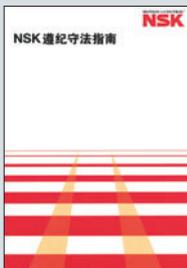


Photo 4 NSK Compliance Guidebook (Chinese edition)



Photo 5 Compliance slogan posters

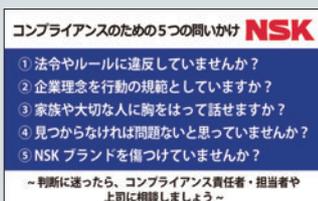


Photo 6 Compliance card

Main FY2013 Initiatives

Compliance Education

The NSK Group conducts ongoing compliance training with the aim of further heightening officers' and employees' awareness of compliance issues. In fiscal 2013, training on the Antimonopoly Act was provided to 1,121 employees in 58 sessions in Japan, focusing on sales departments. An additional 530 employees outside Japan participated in 39 training sessions on competition law. In fiscal 2014, the Group will upgrade this training to include more discussion among participants, in order to ensure that all employees are taking proactive steps for compliance.

To ensure thorough compliance throughout the Group, NSK has prepared a compliance guidebook that explains the NSK Code of Corporate Ethics in detail. This guidebook has been published in Japanese, English, Chinese, Spanish and other languages and is distributed throughout the NSK Group. In fiscal 2013, NSK also provided an e-learning program to ensure employee understanding of the guidebook, in addition to the regular annual e-learning programs on CSR and compliance. Photo 3 Photo 4 Figure 5

Compliance Month

In 2013, NSK began observing Compliance Month every October. The Company conducts a range of awareness raising activities during this month.

In fiscal 2013, employees were invited to submit compliance slogans. Of the 6,329 entries received, two were selected as outstanding slogans, along with three honorable mentions. Posters featuring the two outstanding slogans were designed and distributed to all NSK sites. A compliance card was also issued to all employees. The size of a business card, this compliance card includes five questions employees should ask themselves to ensure their actions are in line with laws and ethical standards, along with contact details for the internal hotline to report potential compliance violations. Photo 5 Photo 6

Figure 5 NSK Code of Corporate Ethics (Established: February 22, 2002, Revised: May 1, 2014)
(Excerpts)

The NSK Code of Corporate Ethics sets out the universal approach for the Company and its officers and employees as they engage in a range of corporate activities, in accordance with the NSK Group vision and philosophy.

1. Compliance with Competition Laws
2. Compliance with Import and Export Related Laws
3. Prohibition of Commercial Bribery (handling of entertainment, gifts, etc.)
4. Transactions with Public Institutions and Handling of Political Donations
5. Accurate Recording and Processing
6. Prohibition of Insider Trading
7. Handling of Intellectual Property Rights
8. Prohibition of Illegal or Anti-social Conduct
9. Protection of Corporate Assets
10. Handling of Confidential and Personal Information
11. Relations with Customers
12. Relations with Suppliers
13. Prohibition of Acts Discrediting Competitors
14. Prohibition of Discrimination and Cultivation of a Sound Workplace
15. Respect of Fundamental Rights at Work
16. Global Environmental Protection

* NSK Code of Corporate Ethics applies to NSK Ltd., its consolidated subsidiaries (unless they have established their own code independently), and NSK-Warner K.K.



Reference data is available on NSK's website.

www.nsk.com > Company > Compliance

- NSK Code of Corporate Ethics (full text)
- NSK Compliance Guidebook (only in Japanese)

Initiatives to Strengthen Compliance

NSK and the NSK Group companies are under investigation by relevant antitrust authorities in various countries for sales of certain products. In September 2013, NSK and its subsidiaries agreed to plead guilty and to pay a total of a fine of US\$68.2 million. In January 2014, NSK was ordered to pay a fine of C\$4.5 million by the Quebec Superior Court of Justice. In March 2014, the European Commission imposed a fine of €62,406,000. In May 2014, NSK was ordered by the Federal Court of Australia to pay A\$3 million, and the Competition Commission of Singapore has imposed a fine of S\$1,286,375 on NSK. In August of the same year, NSK was also ordered to pay a fine of CNY 174.92 million by China's National Development and Reform Commission.

In January 2014, NSK's subsidiary Amatsuji Steel Ball Mfg. Co., Ltd. was investigated by the Japan Fair Trade Commission in relation to the Japan Antimonopoly Act for sales of its products. NSK and the NSK Group are cooperating fully with any relevant authorities in their investigations.

The NSK Group expresses its sincere regret for the concern these matters have caused our customers, shareholders, investors and other stakeholders.

The Group takes these events very seriously, and is making an all-out effort to ensure that all business is conducted in a way that complies with laws and regulations and fulfills social responsibilities. The main compliance strengthening measures already implemented are outlined below.

Main Compliance Strengthening Measures to Date

● See the NSK website for the latest information

Item	NSK Group Initiatives	Date
System strengthening	Established Compliance Committee (meetings held four times a year)	March 2012
	Established Compliance Enhancement Office	July
	Held Global Compliance meeting (once a year)	August
	Held Compliance Conference (twice a year)	December
Established systems for relevant regulations	Began operation of a system to investigate whether or not to participate in meetings attended by competitors	August 2011
	Revised the NSK Code of Corporate Ethics Established the Rules for Compliance with the Competition Law	April 2012
	Revised the Compliance Rules	May
	Revised Internal Regulation for Preventing Insider Trading	November
	Distributed the NSK Compliance Guidebook to officers and employees	March 2013
	Revised internal rules for competition law compliance and hotline operation	June

Item	NSK Group Initiatives	Date
Strengthened education and awareness raising activities	President issues a message to employees calling for thorough compliance efforts (followed by periodic reminders)	August 2011
	Implemented compliance e-learning for all employees (twice a year)	January 2012
	Implemented Antimonopoly Act (competition law) compliance training for sales departments, plants and group companies	February
	Started monthly <i>Compliance Newsletter</i>	November
	Employees and officers submitted written oaths on compliance to the president	March 2013
	Implemented antitrust law compliance training for sales departments (to be held once a year)	May
Strengthened monitoring	Established October as Compliance Month and held a slogan competition	October
	Held Compliance Leadership Training for sales department leaders	March 2014
	Initiated internal audits of sales departments relating to Antimonopoly Act (competition law) compliance	August 2013

Preventing Insider Trading

The Internal Regulation for Preventing Insider Trading applies to all officers and employees. It requires NSK officers and employees to submit a form whenever they buy or sell NSK shares. Awareness of this regulation is being promoted in e-learning programs and the *Compliance Newsletter*.

In fiscal 2013, an Insider Trading Prevention Seminar was given by an external instructor to employees at the Finance Division HQ, who have significant access to the Group's financial information.



Reference data is available on NSK's website.

www.nsk.com > Company > News

● Press Releases

Strengthening Anti-Bribery Measures

Given stronger anti-bribery regulations in many countries, the NSK Code of Corporate Ethics was revised in May 2014, in order to prevent any potential instances of bribery by NSK Group employees. In addition to tightening rules on providing entertainment or gifts to public officials, NSK also established Anti-Bribery Standards in May 2014. The standards have been expanded globally across the NSK Group, and separate anti-bribery rules have been established at each Group site based on the local laws and conditions. NSK is working diligently to prevent any potential bribery by employees.

Avoiding All Contact with Organized Criminal Elements

The NSK Code of Corporate Ethics prohibits any contact with organized criminal elements. In order to clarify the need to avoid any association with organized crime even in transactions with suppliers, the basic procurement contract used by NSK has been revised. Contracts are now being updated through consultation with suppliers.

Security Export Control Initiatives

The NSK Group has strengthened its system of controls for preventing the export of products and leakage of technology related to the development, manufacture, and use of weapons, based on Japan's Foreign Exchange and Foreign Trade Acts.

In fiscal 2013, the Group prepared and began using procedure documents and manuals to strengthen examination of services related to equipment. Moreover, security export control training was provided to sales, technical, and production departments, thereby improving compliance awareness.

Complying with Regulations for Disclosure of Conflict Mineral Information

The Disclosure Rule under the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act in the United States requires an annual survey and disclosure of information on the status of use of four conflict minerals (tin, tantalum, tungsten, and gold) originating in the Democratic Republic of the Congo and surrounding countries. Its goal is to cut off the source of funding for armed groups and rebels involved in human rights violations. NSK is not listed on a U.S. stock exchange and so is not subject to these rules. Nevertheless, NSK has adopted a policy of avoiding the use of conflict minerals and is working with its suppliers on this issue.

In fiscal 2013, the NSK Supplier CSR Guidelines were revised, adding requirements for conflict mineral initiatives. NSK worked to raise awareness of the revised guidelines among its suppliers. Survey responses were received from about 200 suppliers, and there was no reported use of conflict minerals.

In fiscal 2014, the NSK Group will continue to survey its suppliers. Photo 7

Policy to Avoid the Use of Conflict Minerals

NSK's procurement policy seeks to ensure that its entire supply chain is free from any payment to anti-social armed forces engaging in human rights violations.

Whenever the possibility of such payments is discovered, NSK takes measures to avoid the use of the parts, raw materials, or other supplies concerned.

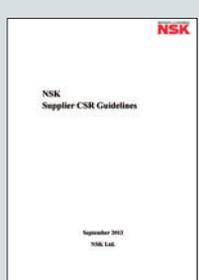


Photo 7 NSK Supplier CSR Guidelines

 Reference data is available on NSK's website.

www.nsk.com > Sustainability > Initiatives in the Procurement

- Basic Procurement Policy
- NSK Supplier CSR Guidelines

Developing Human Resources for Manufacturing

The Globalization of Japanese Manufacturing

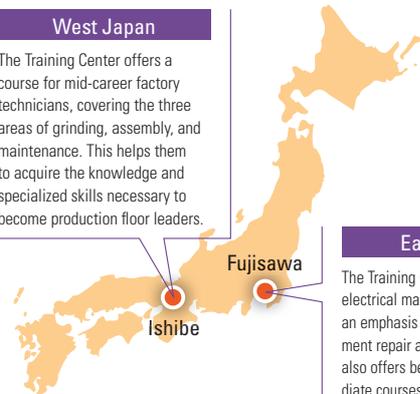
With the globalization of production, competition in the manufacturing industry is intensifying worldwide. In order to produce high-quality products efficiently and meet the needs of customers around the world, the “mother plant” role of Japanese plants needs to be improved. Meanwhile, at production sites outside Japan, manufacturing, manufacturing management, human resources, improvement activities, and technologies need to be localized in order to respond accurately to increasing demand. To adapt, the Japanese manufacturing industry must develop human resources that not only have a high level of technical expertise, but that can also pass that expertise on to employees outside Japan.

Developing NSK Manufacturing Human Resources

Many personnel with a high level of technical expertise are experienced senior employees, and many experienced employees of the first baby-boom generation have been reaching retirement. This is why NSK sees maintaining and improving skill levels on the production floor, as well as systematically passing these skills on to younger employees, as urgent priorities.

To address this problem, enhance manufacturing ability, and strengthen the Company, the NSK Manufacturing Education and Training Center was established at the Ishibe Plant in Shiga Prefecture in 2005. In 2006, a Training Center was also opened at the Fujisawa Plant in Kanagawa Prefecture. With these two centers, the first located in West Japan and the second in East

West Japan
The Training Center offers a course for mid-career factory technicians, covering the three areas of grinding, assembly, and maintenance. This helps them to acquire the knowledge and specialized skills necessary to become production floor leaders.



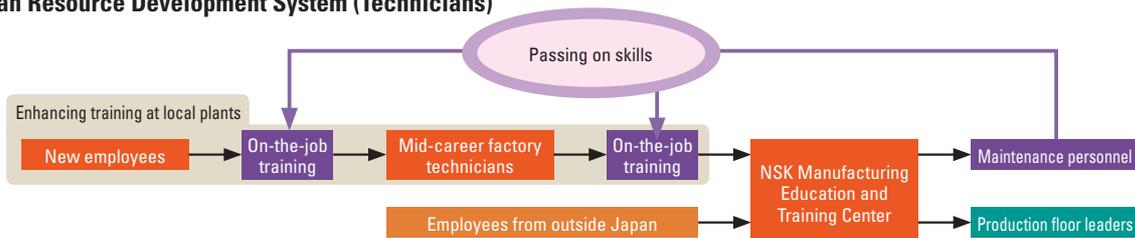
East Japan
The Training Center provides an electrical maintenance course with an emphasis on electrical equipment repair and maintenance. It also offers beginner and intermediate courses designed to improve the manufacturing technology skills of technical personnel.

Japan, NSK is working to develop human resources with a focus on technical skills and skills transmission. Leveraging a rich knowledge base, the centers train employees from around the NSK Group. Graduates then return to their workplaces to teach others what they have learned, thereby spreading the expertise.

The center at the Ishibe Plant generally provides three-month training courses for ten trainees at a time. There are seven full-time instructors who provide individual instruction to trainees.

So far, more than 600 NSK Group employees have been trained at the NSK Manufacturing Education and Training Center. Graduates are now playing an important role in enhancing training at their local plants.

● Human Resource Development System (Technicians)





Comprehensive Training on Technical Principles

The NSK Manufacturing Education and Training Center in West Japan provides a training course for mid-career plant technicians. It is divided into three areas: grinding, assembly, and maintenance.

The course is based on four target outcomes: acquisition of proper technical skills, acquisition of strong equipment skills, ability to teach basic knowledge, and acquisition of basic knowledge for improvement activities.

As part of the outcome related to obtaining strong equipment skills, the trainees learn basic repair and maintenance. They learn methods to enable them to immediately take care of any equipment issues that occur on the production floor. This reflects the NSK approach that emphasizes ability to maintain machinery.

Both classroom and hands-on training is provided to trainees, where they acquire practical knowledge based on data rather than intuition. This includes learning methods for

accurately and efficiently adjusting machining conditions and replacing tools when there is a change in product type, as well as the influence on quality when press pressure has been changed.

The common theme for all of the Training Center courses is the mastery of principles. The trainees improve their ability to apply basic knowledge thoroughly, while learning how to find and solve problems. The curriculum is designed to turn trainees into teachers. Not only does it improve the abilities of the trainees; it also gives them the ability to share their knowledge and skills with their co-workers. The aim is to improve skills on the production floor while also improving the manufacturing ability of the entire NSK Group.

“I recommend the Training Center course for younger employees”

Naokazu Kudo No. 3 Manufacturing Section, Ishibe Plant, NSK Ltd.

“The thing that surprised me about the course at the NSK Manufacturing Education and Training Center was the amount of time spent on lectures concerning people skills and teaching skills. These two subjects were taught intensively for two hours a day, over ten days. Even after moving on to the hands-on training, I carried cards summarizing the main points of these ‘people-related’ topics. I also repeatedly asked myself how I would teach new skills in ways that are easy to understand to my co-workers when I returned to my workplace.

Even for machining processes and equipment maintenance, I repeated the basics and learned how to apply them. I would definitely recommend the Training Center course, especially to younger employees.”



“We are striving to pass on technical skills to the next generation”

Yojiro Nakazawa Deputy Head, NSK Manufacturing Education and Training Center, NSK Ltd.

“As it trains leaders for the production floor, the Training Center is also developing human resources that can teach plant employees. We also send out instructors to group company plants upon request. Previously, we trained 20 employees from NSK Korea Co., Ltd., based on a strong interest at that site. Those course graduates have now developed their own curriculum and are teaching the technical skills to their co-workers in Korea. Ideally, we should have the same kind of initiative implemented at NSK sites worldwide. However, we first need to promote steady human resource development in Japan. These technicians can then be sent overseas to promote NSK’s global human resource development.”

Quality Assurance

Creating Quality to Earn the Confidence of Society

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

Industrial products that support today's affluent lifestyles must perform their prescribed functions safely and reliably. As the advance of technology and globalization continues to accelerate, companies are expected to contribute to the growth of the broader society by providing high-quality products and advanced technologies that meet the specific needs of consumers across a range of countries and regions.

NSK's Approach

No. 1 in Total Quality

The NSK Group aims to become "No. 1 in Total Quality." In other words, the Group is working to achieve the industry's best quality in everything it delivers—not only products and services, but also information. The Group believes that this commitment to quality ensures that its products will satisfy customers all over the world. **Figure 1**

Management

NSK Quality Management

To strengthen Group-wide initiatives NSK Group management checks the status of quality control and directs the needed initiatives in a top-down manner at the Quality Board Meeting, which is chaired by the president and composed of directors in charge of each business division headquarters. NSK has also established quality committees in each business division headquarters and is working to strengthen quality improvement efforts through cooperation among the manufacturing, sales, and design departments. **Figure 2**

Moreover, the Company has obtained quality management system certification, including ISO 9001, and is working to maintain and improve its internal systems.

Goals and Performance

Mid-term Goal: Quality Creation That Ensures Customer Satisfaction

While continually reinforcing its global quality assurance system, the NSK Group carries out the three key quality assurance initiatives (shown at right) to enable employees to work with enthusiasm, to make products that customers enjoy using, and to ensure that the Company grows sustainably. **Figure 3**

FY2013 Activities

In fiscal 2013, the NSK Group rolled out its self-audit system for heat treatment processes worldwide. In addition to developing human resources in the production and design departments to support quality, the Group is also providing global training for sales employees, who are the key point of contact with customers.

Figure 1 Quality-Building Initiatives

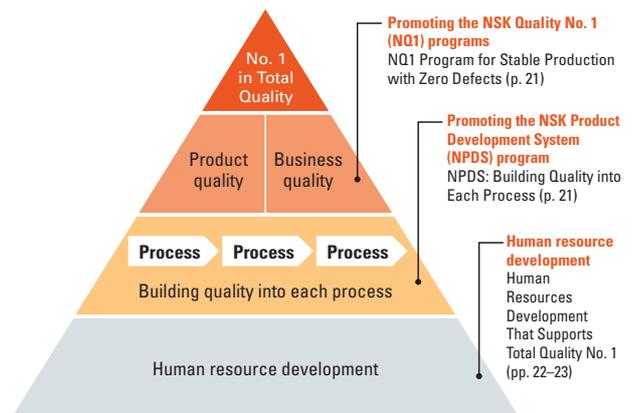


Figure 2 Quality Board Meeting

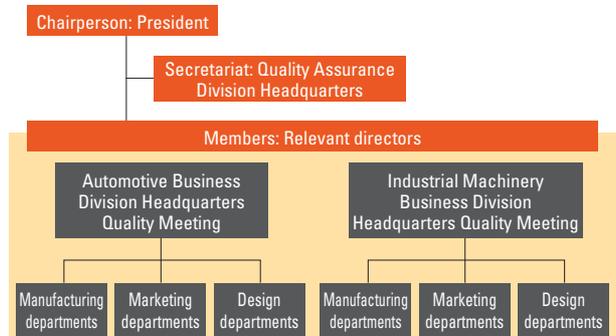


Figure 3 Three Pillars of NSK Quality Assurance

- 1. NSK Product Development System (NPDS)**
In order to quickly transform new orders into reliable, stable production, the NSK Group is promoting initiatives that build quality into each process.
- 2. NSK Quality No. 1 (NQ1) Program**
The NSK Group is promoting initiatives to realize stable production and ensure zero defects.
- 3. Human Resources Development**
The Group is promoting human resources development in order to build a stronger foundation for quality creation.

Initiatives to Achieve Higher Quality

Basic Approach

Create High-Quality Products

The NSK Group develops, designs, manufactures, and markets products with a superior level of quality by meeting its own unique quality targets over and above the basic quality that customers have come to expect. This approach ensures that the Group contributes to its customers' development while achieving its own growth.

Main FY2013 Initiatives

NQ1 Program for Stable Production with Zero Defects

As part of its NQ1 program, NSK is engaged in improvement activities aiming for the very best quality, with zero defects, called "Dantotsu activities." Each plant in Japan decides initiative themes and carries out various improvements targeting zero defects on a test line. Since fiscal 2013, study sessions bringing personnel from all the plants together have been regularly held to deepen understanding of case studies from other plants and further enhance initiatives. Initiatives that were effective on the test lines are quickly rolled out to other lines to reduce defects efficiently. Photo 1



Photo 1 Study session for improvement activities creation as part of the NQ1 program

NPDS: Building Quality into Each Process

The NSK Group has deployed its unique NSK Product Development System (NPDS) globally. The system is used for new projects and is designed to achieve efficient mass production of high-quality products by solving problems at key points in each process before moving on to the next stage. In fiscal 2013, a system was established under which dedicated design quality technicians check products based on codified Quick DRs, which are efficient design reviews focused on the parts of the design that have been revised. Figure 4

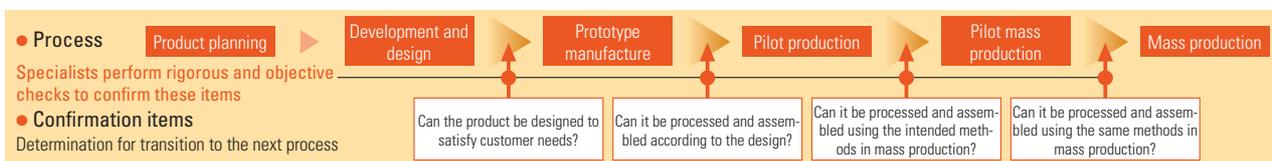
Self-Audit System for Heat Treatment Processes Rolled Out Worldwide

The NSK Group has created a self-audit system to prevent product defects. With the globalization of production, in fiscal 2013, the Group focused on the worldwide roll-out of its self-audit system for heat treatment processes. Under the system, Quality Assurance Division Headquarters personnel visited production sites—mainly in ASEAN countries and China—several times to conduct onsite audits. Only personnel that have achieved a high level of expertise are designated as in-house auditors. Photo 2



Photo 2 Self-audit personnel training in China for heat treatment processes

Figure 4 Outline of the NPDS



Reference data is available on NSK's website.

www.nsk.com > Sustainability > Creating Quality to Earn the Confidence of Society

● Global Quality Assurance Organization ● Certification for Quality Management Systems

Developing Human Resources Who Can Create Superior Quality

The NSK Group provides a range of education and training programs to develop the human resources needed to ensure manufacturing of superior quality.

All divisions work together to create products and services that deliver ever higher levels of quality and customer satisfaction. **Photo 3**

Quality Knowledge Education Rolled Out Globally (Outside Japan)

The NSK Group believes that increasing all employees' knowledge of quality will result in higher quality work as well as higher quality products. Accordingly, the Group has rolled out its Quality Knowledge Education to sites worldwide.

In fiscal 2013, a total of ten quality knowledge education instructors from India and Malaysia participated in training. The instructors diligently acquired the necessary quality assurance knowledge, and will begin teaching at their respective local sites in fiscal 2014. **Photo 4**

Quality Month (Japan)

In order to create products that customers can select with confidence, NSK recognizes that it is essential for every employee to maintain a high level of quality awareness.

The NSK Group holds Quality Month, which promotes awareness of product quality, to realize a range of quality improvements in November every year. In the fiscal 2013 Quality Month, employees were encouraged to submit ideas for an NSK quality slogan that captured their concept of quality, and the best slogans were selected for display on posters at all sites in Japan. Priority initiatives were set by each plant, according to a theme determined by the Quality Assurance Division Headquarters, and employees worked hard to further improve quality. **Photo 5**

Working with Suppliers to Improve Quality

High-quality products would not be possible without high-quality parts, materials, lubricants and other supplies. Based on the relationships of trust it has with its suppliers, the NSK Group shares issues with them through regular technical and quality meetings. This close communication helps to further increase quality.

Representatives from the NSK head office, regional headquarters, and production sites worldwide visit suppliers to confirm production processes and exchange information. By increasing mutual understanding with suppliers in this way, the NSK Group is working to raise its quality level even higher.



Photo 3 Quick DR training



Photo 4 Training instructors from India and Malaysia



Photo 5 Quality slogan posters. Right: "Confirm and immediately report problems in the manufacturing process. Everyone work together to build trusted NSK quality." Left: "No defects produced, no defects allowed off the line, no defects get past inspection. This is the exacting standard of our professional zero-defect manufacturing."

Efforts to Increase Customer Satisfaction

Basic Approach

Raise the Profile of the NSK Brand

In addition to providing products and services that satisfy customers, the NSK Group is always looking for ways to improve sales activities. It is determined to strengthen its relationships of trust with customers by developing staff who possess advanced knowledge and can deliver a higher level of service.

Main FY2013 Initiatives

Maintenance Service Initiatives

The NSK Group takes a multifaceted approach to improving customer support—for instance by providing technical service and product information as well as expanding product lineups to meet customer needs.

The NSK Group has established a new system to help customers in newly emerging markets maintain their production equipment. NSK engineers not only inspect bearings included in the customer's equipment, but also provide other maintenance services including entire equipment inspection, diagnosis, and monitoring. This contributes to stable operation and cost reduction. NSK aims to do as much as possible to help solve problems for customers. Photo 6



Photo 6 Staff that launched the NSK onsite maintenance service

Education to Increase Technical Support Capabilities

The NSK Group carries out initiatives around the world aimed at increasing its ability to provide technical support to customers.

The Group strives to assist customers with machinery design and equipment maintenance by sharing its in-depth technical knowledge with them. This is done through educational activities and the use of cutaway models that allow customers to see the internal structure of different bearings. Training tools are also provided to simulate bearing installation and removal from machinery, and customers are given opportunities to handle the actual bearings.

The NSK Group also strives to improve the skills of the employees who provide its technical support worldwide, using an online training program. In fiscal 2013, the Group continued to make steady progress in developing employees capable of providing high-quality technical support to customers.



Photo 7 Sales quality training in the U.S.



Photo 8 Sales quality training in Thailand

Quality Training for Sales Departments (Outside Japan)

Since fiscal 2010, the NSK Group has implemented sales quality training sessions intended to raise the level of customer satisfaction by increasing employee awareness of quality in sales departments, which are the point of contact with customers. Through lectures and e-learning programs, the Group is helping sales staff to acquire knowledge on topics such as problem solving and practical quality management. These methods can be immediately applied to sales activities, and are conducted in local languages worldwide.

Under the keyword of "sustainability," the Group provided the training in fiscal 2013 for new employees, along with refresher training as required. It was held in the same locations as in fiscal 2012, along with several additional countries and territories.

Photo 7 Photo 8 Photo 9



Photo 9 Participants of the sales quality training in Vietnam

Good Labor Practices

Creating a Dynamic Work Environment

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

As globalization advances, there are more and more opportunities for exchange among different peoples and nationalities. It has never been more important to work together to achieve harmony and mutual benefit for all countries and regions, and the basis of this must be deeper mutual understanding. Companies, for their part, must create workplaces where employees respect the diverse cultures and practices of different countries and regions, embrace diversity in the workforce, and can work safely, with vitality, and with sensitivity to the unique characteristics of the local area.

NSK's Approach

Creating Workplaces Where Employees Feel Job Satisfaction

The NSK Group's Management Principles clearly state that the Group seeks "to provide challenges and opportunities to our employees, channeling their skills and fostering their creativity and individuality." The Group sees human resources as the foundation of its business. This is why the Group strives to create work environments where employees can work enthusiastically and enjoy ever-increasing job satisfaction. The Group also works constantly to globally develop human resources who will lead the Group in the future. Figure 1

Goals and Performance

Mid-term Goal:

Develop the Work Environment and Employee Base Needed to Support a Global Management Structure

Global business activities begin in workplaces where employees with diverse values can play an active role and select from among a variety of working styles. The NSK Group creates safe and healthy workplaces, strives to develop globally minded human resources, and works to build a personnel system that embraces diversity. The Group is also building a global training system to enable continuity when handing over technology and skills within development and design, production, and other departments.

FY2013 Activities

The focus of the Global Human Resources Committee in fiscal 2013 was the management and development of human resources who can become candidates for key executive positions outside Japan, as well as the construction of human resources risk monitoring systems, especially at production sites. The participants from each region confirmed their respective roles in implementing specific measures, and drafted action plans. Figure 2

Moreover, the Global Management College entered its third year of working to develop management executives to play an important part in NSK's future. The participating employees were selected from all over the world for development as globally-minded human resources. Photo 1

Figure 1 Creating Dynamic Work Environments

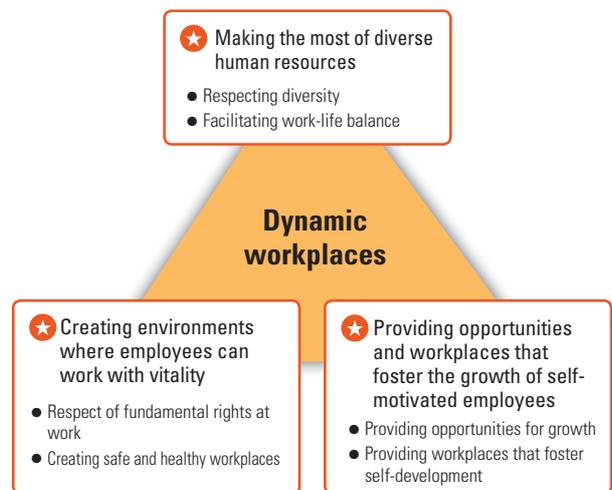


Figure 2 Organization of the Global Human Resources Committee



Photo 1 Opening ceremony for the Global Management College



Respect of Fundamental Rights at Work

Basic Approach

Employment That Preserves the Stability of Both Society and NSK

As a manufacturer that is committed to quality, and as a sustainable company, the NSK Group approaches employment from a long-term perspective. That is why the Group believes it is essential to continually recruit and develop outstanding human resources who can carry the business forward. The Group also engages in appropriate employment practices in accordance with the laws and ordinances of each country and region where a business site is located.

Prohibiting Discrimination and Respecting Fundamental Rights at Work

As specified in the Group's Management Principles, the NSK Group has committed itself to providing "challenges and opportunities to our employees, channeling their skills and fostering their creativity and individuality." Moreover, the NSK Code of Corporate Ethics clearly states that the NSK Group prohibits discrimination and respects fundamental rights at work. Accordingly, the Group steadily promotes measures to enhance employee awareness of these points. It prohibits discrimination on the basis of race, appearance, belief, gender, religion, lineage, ethnicity, nationality, age or physical ability. It also prohibits harassment, forced labor, and child labor. In this way it creates workplaces where diverse human resources can work enthusiastically. The Group also strives for equal opportunity employment in the areas of hiring, assignment, and appraisal.

Highlight Human Rights Training Provided Worldwide

Throughout its history, the NSK Group has built awareness of human rights by revising and disseminating its Code of Corporate Ethics. NSK is taking new initiatives to instill the respect of fundamental rights at work (prohibition of discrimination, child labor, forced labor, etc.) as specified in the Code of Corporate Ethics. It expanded the scope of training sessions that had been provided in Japan and made it available to managers of business sites worldwide through e-learning.

In fiscal 2013, more than 8,900 people took those courses. Going forward, NSK will keep providing training sessions and conducting even broader awareness-building activities.

Labor-Management Relations Based on Dialogue

The NSK Group regards sound labor-management relations as critical to the sustainable growth of the Company. One way in which the Group respects fundamental rights at work, as pledged in the NSK Code of Corporate Ethics, is by guaranteeing employees the right to communicate openly and directly with management without fear of retaliation, intimidation, or harassment. Employees and managers are becoming better partners as they build trust by working to communicate more deeply, share views on the workplace environment and business conditions, and discuss and implement improvement measures. The NSK Group is committed to creating workplaces where employees can work vigorously.



Creating Safe and Healthy Workplaces

Basic Approach

Creating Workplaces Where Everyone Feels Secure and Helps Build a Culture of Safety

In order to protect the safety and health of each and every employee, NSK undertakes initiatives with the following basic philosophy: "Safety is the first and foremost priority. Workplaces should ensure employees can work safely, no matter the level of output demand."

It is important to raise the awareness of each and every employee in order to ensure safety in the workplace. This is why NSK is fostering a culture of safety awareness where employees watch out for each other and never overlook an unsafe action or condition.

Management System

Occupational Safety and Health Management System

The NSK Group realizes how important it is to be proactive about safety and health in the workplace, which forms the heart of manufacturing. This is the key to providing an environment in which employees can reach their full potential. Based on this conviction, NSK regularly convenes the NSK Central Occupational Health and Safety Council, which involves both labor and management, to set the course for labor issues for the entire Group. Following the course determined by the council, the NSK Group builds occupational safety management systems and strives to foster a "safety first" corporate culture that fully engages all employees.

The Group is globally sharing information about occupational accidents that have occurred within the Group and making every effort to prevent similar accidents from occurring again. The Group analyzes the information globally and implements effective prevention measures. [Figure 3](#) [Figure 4](#) [Table 1](#)

Highlight OHSAS 18001* Certification (South Korea)

In order to build workplaces where employees can work safely and in good health, it is important not only to increase the safety awareness of employees, but also to enhance safety management capability. By improving in this area, NSK Korea Co., Ltd. obtained Occupational Health and Safety Assessment Series (OHSAS) 18001 certification in October 2013.

Under the guidance of a consultant, the company first reviewed its management system and then began to make improvements aimed at acquiring certification. Next, the company provided risk assessment training and training for managers and confirmed the results. NSK Korea also provided training to internal auditors, and made improvements that were based on multiple checks by these auditors. Subsequently, a preliminary examination was made by an external organization, and the company worked to implement its recommendations. NSK Korea finally obtained OHSAS 18001 certification after eight months of focused effort.

NSK Korea will continue to effectively implement plan-do-check-act (PDCA) cycles, while maintaining the OHSAS perspective and striving to build even healthier workplaces.



* OHSAS 18001 (Occupational Health and Safety Assessment Series): Certification established by the British Standards Institute (BSI) for companies to manage occupational health and safety risk and improve performance.

Figure 3 Occupational Safety Structure



Figure 4 Occupational Safety and Health Management System

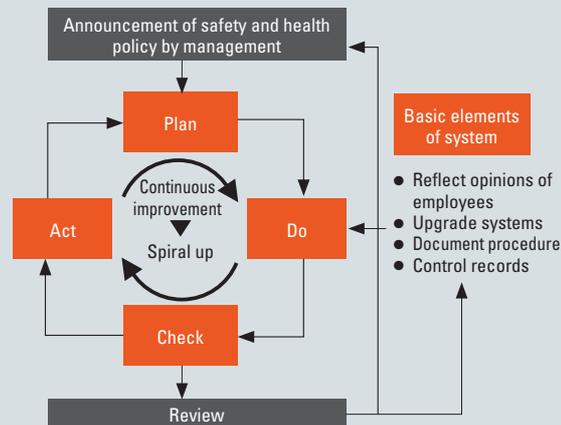


Table 1 Occupational Accidents

	FY2012*1	FY2013
Number of occupational accidents	50	49
Lost-worktime injury rate*2	0.34	0.34

*1 Data for Group companies in Japan aggregated since fiscal 2012 (including accidents involving temporary employees)

*2 Lost-worktime injury rate = Number of persons absent from work due to occupational accidents / Total actual working hours × 1,000,000.

Defined as occupational accidents involving one or more days of absence from work

Mental Health Initiatives (Japan)

Recognizing that companies must provide healthy work environments for their employees, NSK has implemented the following mental health measures. **Figure 5**

(1) Training for Managers

Mental health is part of the required training for newly appointed managers. The instruction includes lectures by outside specialists, and practical training such as role-plays of specific situations. As part of efforts to keep the minds of employees healthy, managers study specific cases involving awareness of subordinate behavior and mental health response measures.

(2) Individual Consultations with Doctors

Along with regular medical checkups, all employees are given a stress check. When deemed necessary by the physician, follow-up is provided through individual consultations with a doctor.

(3) Utilizing Outside Employee Assistance Programs for Mental Health Support

In order to prevent mental health issues from occurring or reoccurring, employees receive mental health advice from outside experts, and those who take administrative leave for mental health reasons are given support upon their return to work.

(4) Mental Health Consultation

Recognizing the importance of creating an environment where employees can freely seek consultation without worry, the Company has established a mental health consultation office using an outside expert. To ensure that employees who seek counseling can feel relaxed, the consultation office is bright, cheerful, and also soundproof.

Photo 2

NSK strives to provide workplaces where all employees can work in a supportive atmosphere.



Photo 2 Inside the mental health consultation office

Figure 5 Activities to Promote Mental Health

Target	Purpose	Primary prevention (prevention and health promotion)	Secondary prevention (early detection and response)	Tertiary prevention (treatment, return to work, and relapse prevention)
Individual employee (self-care)		Stress awareness and management		
		Improvement of lifestyle habits	Voluntary counseling	Treatment
Managers and supervisors (department-based care)		Consultation and care for workers		
		Assess/improve work environment	Ascertaining the case type and response	Support for return to work
Care by organizations within the workplace		Policy creation/announcement and planning		
		Personnel policies review	Stress checking and guidance	Support for return to work
		Training and information provision	Consultation system establishment	
Care using resources outside the workplace		Providing specialized knowledge along with the necessary information, advice and tools		



Providing Opportunities and Workplaces That Foster the Growth of Self-Motivated Employees

Basic Approach

Creating Personnel Systems Suited to Globalization and Developing Human Resources

The NSK Group believes that as the globalization of business advances, it is vital that employees can show their abilities in a workplace environment where they can recognize and solve common challenges, spanning national borders and cultural barriers. Toward this end, the Group creates educational training programs in each region and provides employees with opportunities to pursue personal and professional growth. The Group also works to develop the human resources needed to support its business, while expanding its specialized training globally. This includes training for candidates selected to become the next generation of executives, the NSK Manufacturing Education and Training Center, which teaches and passes on technical skills, and the NSK Institute of Technology (NIT), which provides comprehensive technical training for engineers. Figure 6 Table 2

Main FY2013 Initiatives

Language Education

The NSK Group uses English as its common language in order to conduct operations smoothly through active communication between employees around the world. At the head office in Japan and at some plants, the Group offers English-language training with native-English-speaking employees acting as instructors. This provides employees with the opportunity to learn practical English relevant to their work. For example, an English Conversation Salon is held weekly at the head office, and participants bring actual English materials from their daily work, such as emails, or video and telephone conference recordings. Individual lessons are provided by employees who are native English speakers.

Highlight English Conversation Salon



Craig White
Human Resource Department, NSK Ltd. (right)

I have been an instructor at the English Conversation Salon for about six months. In the Salon, I try to first create an atmosphere where participants can speak freely, and I am committed to helping participants gain confidence when speaking English. When I hear my students mention that they can write English emails more quickly now, or they are able to conduct meetings in English more smoothly, it is gratifying to know that I am helping to improve the work efficiency of NSK employees through the English Conversation Salon.

The Salon is also a great opportunity, as it allows me to promote good communication with people in other departments and uncover their educational needs.

Figure 6 NSK Group's Human Resources Development System

	▶ Pre-employment	▶ New employees	▶ Two years after joining company	▶ Age: 30	▶ Age: 35	▶ Age: 40	▶ Age: 50
Training by rank	<ul style="list-style-type: none"> ● Pre-employment education • OA software • English • Business writing 	<ul style="list-style-type: none"> ● New employee development • Introductory training (one week) • Plant working experience (6 months) • Follow-up training Conducted three times during first two years 	<ul style="list-style-type: none"> ● Career seminar 				<ul style="list-style-type: none"> ● Financial planning seminar ● Retirement plan seminar
Training by role			<ul style="list-style-type: none"> ● Mentor training 		<ul style="list-style-type: none"> ● New manager training 		<ul style="list-style-type: none"> ● Management training
Next-generation leader education				<ul style="list-style-type: none"> ● NSK Management College • Manager Course ● Global Management College 		<ul style="list-style-type: none"> • General Manager Course 	



Reference data is available on NSK's website.

www.nsk.com > Sustainability > CSR Reports

- Global Human Resources Strategy
- Workplace Safety & Health and Healthcare Measures
- Personnel System to Support Career Advancement
- Human Resources Development

Table 2 Number of Participants in Education and Training Programs in Fiscal 2013

Content	Participants
Headquarters' training ● New employee training ● Language training, etc.	1,049
Technology divisions' training ● NIT	218
Specialized training (headquarters) ● Manufacturing Education and Training Center ● Sales quality training, etc.	79
Plant training (conducted by plants) ● Quality education ● Safety education ● ISO-related education, etc.	4,848
Other ● Retirement plan seminar, etc.	360
Total: 6,554	

* The total number of participants who took training programs conducted by NSK Group companies in Japan.

Table 3 Related Employee Data*1

	FY2009	FY2010	FY2011	FY2012	FY2013
Average years of employment	17	18	18	18	18
Average age	41	41	41	41	41
Proportion of female employees	6.6%	6.5%	6.7%	6.5%	6.6%
Rate of childcare leave taken*2	93%	100%	100%	100%	100%

*1 NSK and main group companies in Japan.

*2 Excluding short-term childcare leave taken.

Global Management College

The NSK Group offers a Global Management College program for executive candidates being developed for leadership roles around the world. In fiscal 2013, the college's third year, 12 employees were selected from the U.S., Mexico, Germany, China, Malaysia, Australia, South Korea, and Japan. They visited NSK Group sites in Japan, South Korea, China, and the U.S., gaining a common understanding of the Group's mission statement and business strategies and building relationships with employees in each region. During the final session in Japan, the participants made proposals to top management concerning measures for the development of human resources capable of success on the global stage.

Enhancing Training for Human Resources in Manufacturing

To continue creating competitive products, it is essential to develop human resources with highly specialized knowledge. It is also important to accurately meet the specific needs of customers worldwide in order to secure global business expansion.

The NSK Institute of Technology (NIT) was established in Japan in fiscal 2007. Today, NIT provides highly specialized education at NSK technology centers in the U.S., Europe, China, ASEAN (Thailand), Brazil, and South Korea.

In Japan, NIT offers programs of up to four years, and the participants include NSK engineers from all over the world. Each year, about 50 employees enroll in the program. At the sites outside Japan, the programs have been expanded to two years, and about 300 employees are currently taking part.



Respecting Diversity

Basic Approach

Human Resource Diversity That Reflects NSK's Global Business

The NSK Group believes that local communities and the NSK Group can grow together if the Group develops businesses worldwide and creates stable employment. Currently, the NSK Group employs diverse human resources at sites worldwide, who are working together energetically, without limitations based on nationality, race, or gender. In Japan, the Group is promoting HR programs to help employees achieve work-life balance, and to employ seniors and persons with disabilities, in order to meet the changing needs of society. Table 3

Making the Most of Diverse Human Resources

Diverse human resources play active roles in many areas of operations within the NSK Group, not only in Japan. The NSK Group aims to realize optimal human resource deployment, without regard to country of origin, at manufacturing and technical sites around the world.

Working at a Global Level



Yu Hyun Min

European Technology Centre,
NSK Deutschland GmbH

I joined NSK Korea Co., Ltd. in 2004. In 2007, I was posted to Japan where I received training and worked for about six years. Now I am a systems engineer for electric power steering systems at the technology center in Germany. Although it is sometimes challenging to achieve com-

mon goals through good communication with people who have different languages, cultures, and backgrounds, I believe it is a great opportunity for personal growth. I want to take advantage of this valuable experience and develop my abilities to become a person who is capable of success on the global stage.

Yada Kijasthan

Bearing Design Technology Department,
Industrial Machinery Bearing Technology Center
NSK Ltd.

I joined the Asia Pacific Technology Center (APTC) in Thailand in May 2013. Currently, I am receiving two years of training at the Fujisawa Technology Center in Japan, and I belong to the bearing design department. I have learned a lot of new things here, not just

advanced technical knowledge, but also Japanese language and culture. My workplace is very supportive, and I get a lot of coaching from my colleagues. My goal is to acquire as much knowledge and experience as possible during the training, and to return to Thailand as a full-fledged technical designer. I will continue to work hard as a member of the NSK Group.



COLUMN

Older Workers

Helping to Support an Aging Society (Japan)

Japan's population is aging rapidly. In light of changes in the public pension system, it has become a social challenge to enable workers to have access to employment opportunities even after mandatory retirement. NSK recognizes that the knowledge and skills of experienced senior employees are beneficial in growing its business. The Company's basic policy is to provide work opportunities to healthy persons willing to work after retirement. The Company has had a reemployment program since April 2001.

The Company recently revised its reemployment program, including working conditions, to ensure stability in life, augmenting the basic policy in light of Japan's Revised Law Concerning Stabilization of Employment of Older Persons, which came into effect in April 2013. [Table 4](#)

Persons with Disabilities

Providing Work Opportunities to Persons with Disabilities (Japan)

NSK believes that one role it should perform is providing suitable work opportunities to persons with disabilities who are willing to work. An NSK special subsidiary called NSK Friendly Services Co., Ltd., in particular, provides employment opportunities where persons with intellectual disabilities can work with enthusiasm. In fiscal 2013, NSK, its main group companies, and NSK Friendly Services together employed a total of 116 persons with disabilities, for a rate of employment of persons with disabilities of 2.04%. [Table 5](#)

Table 4 Number of Re-employed Persons (over 60 years of age)*

	FY2009	FY2010	FY2011	FY2012	FY2013
Seniors	227	272	325	383	441
Others (part-time employees, etc.)	42	42	34	29	29
Total	269	314	359	412	470

* NSK and main group companies in Japan.

Table 5 Rate of Employment of Persons with Disabilities*

	FY2009	FY2010	FY2011	FY2012	FY2013
Rate of employment of persons with disabilities	1.83%	1.85%	1.97%	1.99%	2.04%
Legally mandated rate of employment	1.8%				2.0%

* NSK and main group companies in Japan.

Table 6 Childcare and Nursing Care Support System at NSK Ltd.

Childcare leave	Japan law	Up to 18 months (non-paid)
	NSK	Through the end of April when child is 3 years old (the first five days paid)
Shorter working hours for childcare	Japan law	Up to 3 years old
	NSK	Through the end of March in the third year of elementary school
Nursing care leave	Japan law	Up to 93 days
	NSK	Up to 1 year
Shorter working hours for nursing care	Japan law	Up to 93 days
	NSK	Up to 1 year
Elimination of half-day holiday restriction	Usually, 12 times per year; but when providing nursing care, unlimited	
Re-employment registration system*	System for employees that resign when their spouse is temporary transferred to another city, but who want to eventually return to work at NSK	

* Launched in fiscal 2014



Facilitating Work-Life Balance

Basic Approach

Developing a Workplace Environment Where Employees Are Enthusiastic and Active

The NSK Group believes that ensuring that employees sincerely enjoy both their work and their private lives, and can be enthusiastic and active, is the key to making its business even more successful. That is why the Group's basic policy is to develop an ideal working environment for all employees, regardless of gender or age, in terms of both facilities and support programs. The Group always strives to be sensitive to employee needs and social changes.

In Japan, NSK recognizes that it is important to work harder than ever to accelerate support for work-life balance in order to cope with the social challenges presented by a rapidly aging society with a low birth rate. Such efforts include enhancing programs to support employees' childcare and nursing care obligations and healthy time management. **Table 6**

Supporting Work-Life Balance (Japan)

In order to reduce the number of employees resigning for childbirth or childcare reasons, the NSK Group in Japan has been improving its programs to support employees with childcare responsibilities. This includes longer childcare leave and a longer eligibility period for shorter working hours due to childcare reasons.

In April 2014, the Group launched a program to register employees who resign for family reasons but wish to be re-hired at a later time. It is designed for employees that quit due to the temporary relocation of a spouse, and it aims to encourage them to return to their workplace.

Highlight Next Generation Certification Mark "Kurumin"

In recognition of its efforts to promote work-life balance among employees, NSK has been certified as a child-rearing support company by the Tokyo Labour Bureau of the Ministry of Health, Labour and Welfare. The next generation certification logo, "Kurumin," is based on the Japanese law called the "Act for Measures to Support the Development of the Next Generation."



VOICE

Importance of Childcare Leave



Masato Tonogai

Technology Development Department 3, Corporate Research & Development Center, NSK Ltd.

I took childcare leave for the birth of my second daughter, as I wanted to reduce the burden of housework on my wife. The understanding and cooperation of my supervisor and co-workers enabled me to adjust my work schedule, and it was a very meaningful experience for me. Not only did I spend time with my newborn daughter, but I also helped my eldest daughter adjust to the new situation and the decreased attention from her mother. Thanks to the childcare leave program and the understanding of those in my workplace, NSK has given me and my family a sense of security. Although I am no substitute for my baby's mother, as a husband, father, and NSK employee, I recognized the importance of childcare leave. I encourage others to take advantage of the program, as well.



Reference data is available on NSK's website.

www.nsk.com > Sustainability > CSR Reports

● Labor and Management Cooperate to Develop Better Working Environment

Working with Local Communities

Social Contributions Targeting Community Development

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

People the world round now expect companies to be proactive about solving social, environmental, and economic issues in order to help build a more sustainable world. The companies who do this best are those who build good relationships with local communities, recognizing that their business depends on it. Today's ideal is that companies and communities help each other grow.

NSK's Approach

Establishing Good Relationships with Communities through Community-Based Activities

The NSK Group recognizes that its business depends on maintaining good relationships with community members. The Group focuses its efforts on the three priority areas (shown in the figure at right) and respects the needs of each country and region and their differing circumstances.

NSK's promotion of science and technology includes grants to research institutions. Its support for the development of the next generation includes scholarships, internships, and classes about bearings. Its efforts to build mutual harmony and benefit with communities include support for local events and welfare programs. Figure 1

Goals and Performance

Mid-term Goals: Growing with the Community Through Our Initiatives

The NSK Group's social contribution initiatives aim to promote the growth of the local communities where the Group does business.

The Group values communication with community members and seeks to develop better relationships with them in order to ascertain and respond to their needs. Information on these initiatives is shared among the Group's business sites to foster a corporate culture of community engagement and heighten awareness of community development among all employees.

FY2013 Activities

The NSK Group strives to enhance its relationships with local communities through initiatives such as providing awards for outstanding students, holding classes about bearings, offering young people work experience opportunities, and supporting community welfare projects. As in fiscal 2012, the NSK Group Social Action Program intranet booklet was produced again in fiscal 2013. Featuring social contribution activities from around the NSK Group, the booklet was distributed at Group sites around the world.

Figure 1 Priority Areas for NSK's Social Contribution Initiatives

1. Promoting science and technology that supports the prosperity of society



Promotion of science and technology

The NSK Group contributes to the development of industry, not only through its technology and products, but also through a broad range of unique initiatives that support the promotion of science and technology.

2. Fostering the development of the next generation



Development of the next generation

The NSK Group is committed to supporting the education of children and young adults long into the future.

3. Engaging in activities designed to build mutual harmony and benefit with communities



Mutual harmony and benefit with communities

The NSK Group values communication with local communities in the countries and regions where it does business, and aims to ensure mutual prosperity as an upstanding corporate citizen.



Priority Area 1 Promotion of science and technology

The NSK Group is working to promote science and technology by providing scholarships and technical courses to students who are pursuing higher education.

 **NSK (China) Investment Co., Ltd., NSK (China) Research & Development Co., Ltd.**



Award ceremony for an essay competition for university students

 **NSK Ltd., Fujisawa Technology Development Center**



Helping further technical exchange between China and Japan

 **NSK Rodamientos Mexicana, S.A. de C.V.**



After taking a class about bearings



Priority Area 2 Development of the next generation

The NSK Group provides educational support for the students who will become the leaders of the next generation. It sponsors field trips, offers workplace experience opportunities, and provides awards to outstanding students.

 **NSK Bearings Europe Ltd.**



Plant tours for university students

 **PT. NSK Bearings Manufacturing Indonesia**



Plant tours for vocational training school students

 **Kuribayashi Seisakusho Co., Ltd.**



Workplace experience for high school students



Priority Area 3 Mutual harmony and benefit with communities

The NSK Group contributes to the welfare of local communities by supporting welfare facilities, community health initiatives, and other programs. The Group also promotes the personal growth of employees and seeks to build even better relations with local residents.

 **NSK Peru S.A.C.**



Visiting an orphanage

 **RANE NSK Steering Systems Ltd.**



World AIDS Day: Letter of appreciation received

 **NSK France S.A.S.**



Participating in a charity run to support cancer treatment

Fiscal 2013 Highlights

UK



NSK Bearings Europe Ltd. (Newark Plant)

Offering Career Support for Students

A plant tour was given to 14 students in April 2013 as part of Industry Week. Throughout the week, students and staff from colleges and universities participate in industry visits designed to inspire the next generation of engineers. Working in partnership with West Nottinghamshire College, NSK Bearings Europe Ltd. welcomed local students to our manufacturing facilities at Newark.

The students gained an appreciation of the engineering disciplines and processes in place at the plant. The students were shown the engineering techniques used to manufacture Super Precision Bearings at NSK, and the college reported that they gained valuable insight into real life work in an engineering environment.

NSK Bearings Europe is planning to take part again in Industry Week in 2014 and beyond, demonstrating NSK's ongoing commitment to encourage local students to study engineering and related disciplines.



Germany



NSK Deutschland GmbH



Participating in a corporate charity run in Dusseldorf

India



RANE NSK Steering Systems Ltd. (Bawal Plant)

Co-sponsoring an AIDS Awareness Campaign

Minimizing the number of people who are HIV-positive or suffering from AIDS has become an important social challenge for India. As part of its social contribution activities in fiscal 2013, RANE NSK Steering Systems' Bawal Plant co-sponsored an AIDS awareness campaign held in Rewari district on December 1, which is World AIDS Day. The company hopes that correct knowledge about HIV/AIDS will increase, engaging more people in the fight against this devastating disease.



Singapore



**NSK International (Singapore) Pte Ltd.,
NSK Singapore (Private) Ltd.**



Participating in the "Walk for Our Children" charity event

Indonesia



PT. NSK Bearings Manufacturing Indonesia

Giving Plant Tours to Students

Raising a highly skilled younger generation will lead to further growth of Indonesia's industry and support social development.

In fiscal 2013, NSK Bearings Manufacturing Indonesia gave plant tours to local technical vocational school students and university students. The students listened enthusiastically to employees' explanations while asking questions on the manufacturing floor. The company hopes that some of the students will go on to become competent engineers who will support the future of industry.



Malaysia



NSK Micro Precision (M) Sdn. Bhd.



Local cleanup activities

China



NSK (China) Investment Co., Ltd.,
NSK (China) Research & Development Co., Ltd.

Presentation Ceremony for the 3rd NSK Mechanical Engineering Best Paper Awards

Promotion of advanced technology is essential for the development of industry and society. At the same time, in order to advance technology, outstanding human resources are required. In November 2013, NSK (China) Investment Co., Ltd. and NSK (China) Research & Development Co., Ltd. held a presentation ceremony for the 3rd NSK Mechanical Engineering Best Paper Award at a Xi'an Jiaotong University. Ten outstanding scientific papers were recognized out of a total of 100 entries. The selected papers are to be published in prestigious journals in and outside China. By recognizing the academic work of students, these two NSK Group companies are helping to develop young researchers who will lead the future of engineering in China.



Japan



NSK Ltd., Fujisawa Technology Development Center

Contributing to Tribology Development

To help realize a sustainable society where affluence and environmental conservation are both possible, science and technology need to be further advanced and applied worldwide, in order to achieve advancements in industry.

As part of this effort, the NSK Group conducts a range of initiatives to support research institutions and academic societies, along with technical support for customers. NSK is a supporting member of the Japanese Society of Tribologists, and assists with the planning and management activities of the society, including providing lectures by prominent researchers and creating opportunities for industry-university exchange meetings. The company also helps with the holding and running of the Japan-China Advanced Forum on Tribology, an opportunity for researchers from the two countries to meet and interact.

Additionally, employees from NSK's research and development department are loaned to universities as part-time lecturers, thereby contributing to the development of young engineers and researchers.



Australia



NSK Australia Pty. Ltd.



Participating in the Relay for Life charity event to support cancer treatment

USA



NSK Corporation (Franklin Plant),
NSK Precision America, Inc.



Participating in the Relay for Life charity event to support cancer treatment

Peru



NSK Peru S.A.C.

Providing Gifts for Children in an Orphanage

Correcting the gap between rich and poor is a current social challenge in Peru. Many children have become orphans because of poverty.

As part of its contribution efforts in fiscal 2013, NSK Peru gave a gift of new shoes, which was the number-one request, to children at an orphanage named El Rebano de Jesus. On the day of the visit to the orphanage in December 2013, NSK Peru hired a band, and one employee, dressed as Santa Claus, handed out the shoes to each child. The NSK team and the children enjoyed listening to the music and playing with Santa Claus.



Donating of used clothing to welfare facilities

Brazil



NSK Brasil Ltda.



Helping to Foster the Next Generation

Being an open and supportive member of the local community
Fostering children's interest in science
NSK Micro Precision Co., Ltd. holds a plant tour for children during their summer vacation

Deep in Concentration: Children Encounter Serious Science

NSK Micro Precision develops and manufactures miniature bearings that are used for applications such as computer hard disc drives and dental drills. Aiming to be accessible to the local community, the company planned and held its first plant tour in 2010, inviting children of NSK Group employees to visit. In 2013, the company held its fourth annual plant tour, welcoming 14 children aged 6 to 13, including local elementary school and junior high school students.

These plant tours aim to give the children a chance to become more familiar with science. Before they enter the plant, the children are given a pre-tour science class. They learn about friction, which is a key part of bearing technology. It is important that they first understand what kind of role

bearings play before they see the manufacturing process.

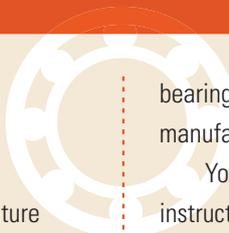
Young employees served as instructors and gave the children fun quizzes on the mechanism of friction. The participants also learned about bearings used in familiar home appliances such as vacuum cleaners, and got to experience putting together an actual bearing. The children's faces grew serious with concentration as they worked to assemble the bearings.

During the plant tour the children watched bearings being ground and polished, and experienced an air shower before entering the clean room. Their eyes gleamed as they enjoyed these new experiences.

Reflecting on this year's tour experience, Toshikazu Ishii, Senior Vice President of NSK Micro Precision, said, "You could see from their faces that the kids gained an interest in science and manufacturing."



Toshikazu Ishii
Representative Director, Senior Vice President
NSK Micro Precision Co., Ltd.





Special Guest

After the pre-tour science class, a special guest made an appearance. It was Taka, the world yo-yo champion. Taka wowed the participants with his array of yo-yo techniques. Naturally, a yo-yo contains a bearing. Upon hearing that bearings were behind the yo-yo's smooth motion, the children gave a round of applause.

Taka's first contact with NSK Micro Precision came at an exhibition several years earlier. He was searching for the ultimate bearing for his yo-yo, and paid a visit to the company's booth. This conversation led to the joint development of a new bearing.

Mr. Ishii recalls that the requirements involved were new to the team and that the development process was more difficult than initially imagined. Yo-yo bearings have markedly different features from the types NSK Micro Precision usually manufactures. Grooves must be cut into the outside of the bearing for the string to wind onto. Moreover, since yo-yos are spun in a number of directions, force is applied to the bearing from various angles. This means the bearing needs to be strong. But it also has to be light in order to spin quickly. After much consultation and a series of prototypes, the company successfully developed a special model for Taka to use in competition, and another model to be mass-produced for regular consumers.

Shortly before summer in 2010, Mr. Ishii asked Taka to take part in the company's plant tour for children. The champ readily agreed, and gave an amazing demonstration for the kids.

Changes at the Plant

The plant tours have also helped to bring about a variety of changes among employees.

The tours are planned and managed by NSK Micro Precision's young employees. They asked themselves how they could get elementary school students to understand what the plant does. Of course, they would need to avoid any difficult words or specialized terms and be able explain the operations in a limited period of time. Designing the program improved their ability to put themselves in another person's shoes.

This was not the only change. As bearings are a vital but hidden component that supports the final product, they usually do not attract much direct reaction or feedback from end users. So it was gratifying for the employees to hear Taka express his appreciation of the bearings made by NSK Micro Precision.

In the pre-tour science class, the children participated in bearing experiments and quizzes with wide eyes, and listened with great interest. Akihiro Tanaka of the General Affairs Department, who is responsible for organizing the plant tours, said that seeing the smiling faces of these "young customers" gave him a renewed sense of pride and satisfaction in his work.



Akihiro Tanaka

Chief, Human Resources Section, Fujisawa Administration Division-Headquarters, General Affairs Department
NSK Micro Precision Co., Ltd.

NSK Micro Precision's Bearings Helped Me Set the World Record

Takahiko Hasegawa President, Sorohamu Co., Ltd. (a.k.a. Taka, Yo-yo Champion)

I was working at setting a yo-yo world record in the longest sleeper category. In this event, which measures how long a yo-yo can spin on a single throw, the bearing performance has a huge impact on the time recorded. After trying various bearings, I found that the NSK Micro Precision bearing suited me best. Working with the company on the development process, I requested a lightweight bearing that rotated quickly and smoothly. Over the period of about a year and a half, NSK prepared a series of prototypes, each of which got more responsive and comfortable to use. This hard development work finally paid off, and in 2010 I managed to pull off a world record throw of 21 minutes and 21 seconds.

With NSK Micro Precision as my trusted partner, I am ready to keep taking on new challenges!



Helping Customers Increase Productivity and Decrease Environmental Impact



In 2004, NSK launched the NSKHPS™ series of high-performance standard bearings. By 2013, the series had grown to include a complete lineup of six types of bearings in a total of 30,000 varieties. The NSK Group not only provides NSKHPS bearings to customers such as manufacturers of machinery and devices; it has also established a new business model under which NSK provides equipment checking and maintenance services to customers who use machinery with NSK bearings in production operations. By supporting the entire lifecycle of production equipment, NSK is helping to increase productivity and reduce energy consumption.

NSKHPS™ Series: High-Performance Standard Bearings That Last Up To Twice as Long

While the NSKHPS™ series of high-performance bearings are standard bearings that meet the types and dimensions specified by the ISO* and other standards, they are high-performance products that substantially exceed conventional specifications. The spherical roller bearings launched in 2004 provide up to double the conventional operating life and 1.2 times faster maximum rotational speed. In 2009 NSK released angular contact ball bearings for pumps and compressors, and in 2013 it released high-precision angular contact ball bearings and angular contact thrust ball bearings for ball screw support for machine tools, as well as cylindrical roller bearings and deep groove ball bearings for various kinds of industrial machinery. The expanded series now offers over 30,000 varieties of bearings for diverse applications.

The NSKHPS series offers major advantages to customers who manufacture machinery and devices as well as to customers who use industrial machinery in production operations.

Machinery manufacturers can save resources by making smaller and lighter products, since NSKHPS bearings provide the same capabilities as larger conventional bearings due to their longer life and greater durability. The series also allows the creation of higher performance machinery with excellent energy efficiency, thanks to its high-speed rotation capacities. By replacing conventional bearings with NSKHPS bearings, machinery customers can decrease the frequency of replacements, cut maintenance costs, and reduce waste from used products.

* International Organization for Standardization. A non-governmental organization that develops international standards.

NSKHPS™ series spherical roller bearing

Neco=1.6

(See p. 43 for details.)

NSK brought together its development, materials engineering, and manufacturing technologies to develop this bearing. It provides up to double the longevity of and 1.2 times faster rotation than the conventional product.



Working to Develop a New Business Model with the Introduction of the NSKHPS™ Series

NSK's Aftermarket Business—Contributing to Increased Productivity and Energy Savings

The NSK Group had conventionally responded to repair needs for production equipment by providing bearings and other products. The creation of the NSKHPS series and the transformation of production sites in developing countries are what sparked NSK's aggressive expansion of business into equipment diagnosis and maintenance services.

In recent years, developing countries have also been installing cutting-edge equipment. But in order to increase production efficiency, sophisticated maintenance is required in addition to higher equipment performance. By examining bearings replaced during maintenance to identify potential improvements, and by installing NSKHPS series bearings which provide longer life, NSK helps customers to reduce the frequency and cost of maintenance, as well as to increase productivity.

The NSK Group has also started offering services in which its engineers visit customers' production

sites to provide technical support and training in bearing knowledge as well as equipment diagnosis and maintenance. In some cases, NSK's employees are even stationed permanently at sites; for instance steelmaking plants, which are expected nowadays to operate around the clock 365 days a year, to provide constant maintenance services for equipment used to manufacture steel plates.

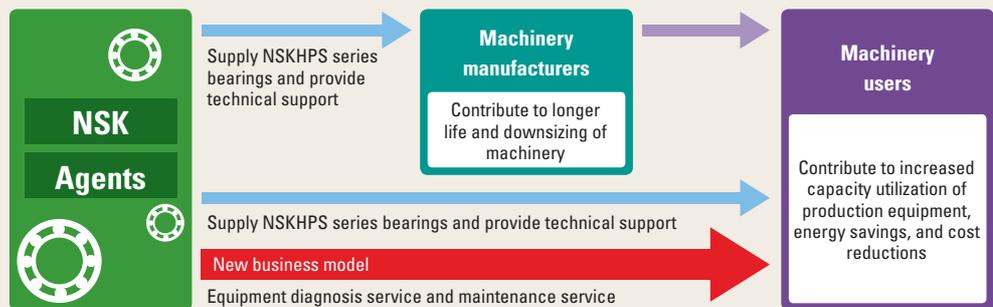
Going forward, the NSK Group will continue working with customers to assess the condition of machinery, identify problems, and propose and implement improvement measures. The Group will also evaluate the effectiveness of the initiatives taken—not just for the bearings but for the production equipment as a whole. In doing so, NSK aims to help its customers increase productivity and save energy.



Toshiyuki Tanabe
Manager, Industrial Machinery Department,
Industrial Machinery Business
Division-Headquarters, NSK Ltd.



Establishing a New Business Model for Customers



Building an Instant Delivery Service System to Help Customers Improve Production Efficiency

In addition to accumulating knowhow and developing engineers, the establishment of a product supply chain is important in order to increase the added value of equipment diagnosis and maintenance services. Products in the NSKHPS series are not exclusive bearings produced in high-mix low-volume lots; they are generic products and so can be delivered to customers quickly. This translates into shorter production lead times for customers who manufacture machinery.

It also enables quick response in the event that machinery-using customers experience equipment problems. The NSK Group is working to expand its distributor network in Southeast Asia, South America, the Middle East, and Africa in addition to Japan, Europe, North America, and China, in order to provide products and services to a greater number of customers. The Group plans to enlarge its network of distributors to 1,000 companies in fiscal 2016.



Reference data is available on NSK's website.

<http://www.nsk.com/company/presslounge/news/2013/press0603a.html>

● NSK Expands NSKHPS™ Series of Industrial Machinery High Performance Standard Bearings

www.nsk.com > Services

● Maintenance & Repairs ● Asset Improvement Program (AIP)

Environmental Management

System for Promoting Environmental Protection Initiatives

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

Concern is mounting over global environmental problems caused by human activity conducted in pursuit of affluence. The depletion of resources, the advance of global warming and climate change, and declining biodiversity are all very serious issues. All of humanity shares the challenge of building sustainable societies that can be prosperous without harming the environment. Today, people expect companies to be proactive about meeting this challenge, for instance, by providing eco-friendly products and services and reducing the environmental impact of their operations.

NSK's Approach

Developing and Popularizing Environmentally Friendly Products and Reducing Environmental Impact in Business Operations

The NSK Group adheres to the principle that global environmental protection, as outlined in the Group's mission statement, must be an ever-present concern in all business activities. Accordingly, the Group states in its Environmental Policy that environmental management forms the basis of its existence and pursuits. The NSK Group strives to raise the awareness of every single employee while taking action to create environmentally friendly products, implement global warming countermeasures and measures for resource conservation and recycling, reduce the use of environmentally harmful substances, and conserve biodiversity. Figure 1 Figure 2

Goals and Performance

Mid-term Goals (FY2013-2015)

In the new Environmental Voluntary Action Plan (see p. 8), which covers from fiscal 2013 through 2015, NSK will work to contribute even more to the environment through its products. Additionally, the Group has set new targets for reducing water usage and waste as a way to cut the environmental impact of its business activities and help to build a low-carbon, recycling-oriented society that exists in harmony with nature. In this way, NSK seeks to globally enhance its environmental management across the entire Group.

FY2013 Activities

The NSK Group gave environmental management functions to its headquarters in Europe, the Americas, and China and established a system in which each region will enhance its environmental initiatives autonomously. Each of these headquarters sets targets based on the Environmental Voluntary Action Plan and monitors the progress of its own activities. In fiscal 2013, the Group succeeded in exceeding most of the targets, including countermeasures for both global warming and waste. In the few target areas that were not met, the Group is working to promote environmental management by identifying the cause of the shortfall and developing solutions to remedy it.

Figure 1 NSK Group's Environmental Management

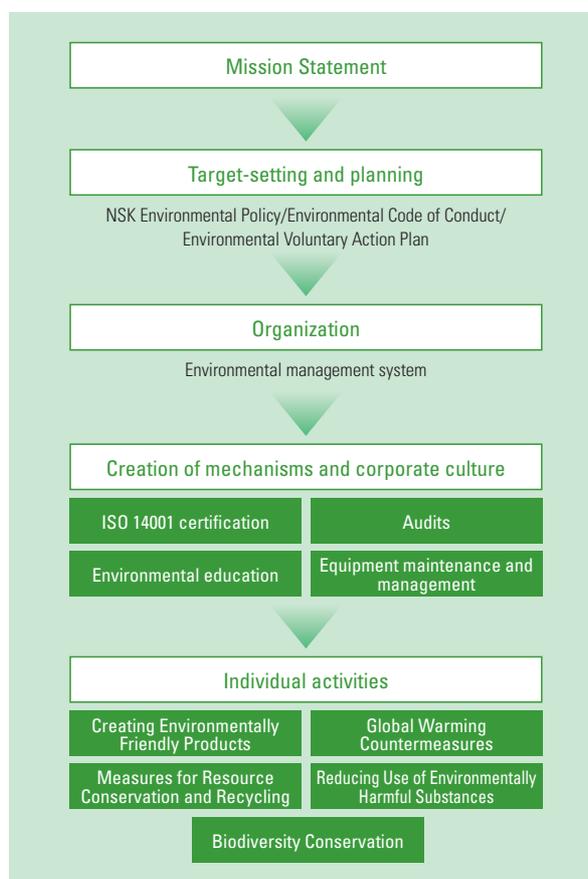


Figure 2

NSK Environmental Policy

Our commitment to environmental management forms the basis of our existence and our pursuits. We are determined to take independent and assertive actions, aiming to establish recycling-oriented societies.

1. Prevention of Global Warming

To actively support efforts to prevent global warming by developing environmentally friendly manufacturing processes and technologies.

2. Reduction of Negative Environmental Impact

To establish and continually improve environmental management systems and systems for the management of chemical substances in products; to comply with regulations, to prevent pollution, and to reduce environmental impact.

3. Contribution to Societies

To be actively involved in the social development of local communities where we operate by promoting our global corporate activities, to create affluent societies that are in harmony with the environment, and to promote the preservation of biodiversity.



Photo 1 Environmental conference in Europe

NSK Group Environmental Structure

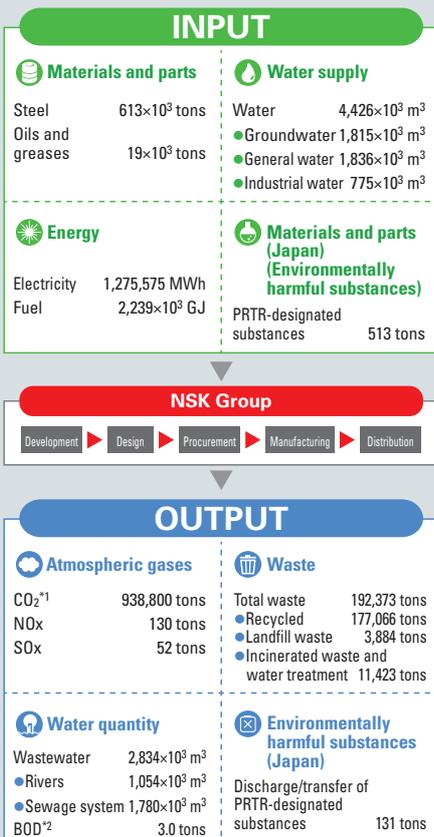
The NSK Group has positioned the Global Environment Protection Committee, which is chaired by the executive officer responsible for the environment, as the top decision-making body for environmental matters. The central role in operating the environmental management system belongs to the Global Environment Department and the special committees that deal with specific issues, such as energy, resource conservation, and chemical substances.

Under the leadership of the Group's regional headquarters in Japan, Europe, the Americas, and China, the plant managers at each site and the executives at affiliates are responsible for environmental management and the administration of chemical substances. In this way, PDCA cycles for improving environmental management are being implemented throughout the Group.

The Group is working to achieve the global targets of the Environmental Voluntary Action Plan by checking progress and taking the necessary follow-up actions, as well as by holding regular environmental conferences in each region and on each environmental issue. Photo 1

Input and Output of Global Business Activities

The NSK Group works hard to continually reduce its environmental impact and use energy and resources in the most effective manner by quantifying the amount of resources it inputs into its business activities and the amount of waste, CO₂, and other emissions it outputs.



*1 CO₂ emissions are calculated in conformity with data from Japan's Ministry of the Environment. Also, different regional coefficients are used for Japan and regions outside Japan.

*2 River discharge.

Reducing Risk through Environmental Audits

The NSK Group's Global Environment Department conducts audits in an effort to prevent oil leakage accidents, comply with environmental regulations, and properly manage waste. In fiscal 2013, the Group audited thirteen locations in Japan as well as four locations in Europe through its regional headquarters there. It also conducted audits to enhance the management of environmentally harmful substances at thirteen locations (six in Japan and seven outside of Japan) through the Global Environment Department and at eight locations through the regional headquarters in Europe and China.

Environmental Education

Each year, the NSK Group conducts e-learning programs as part of its environmental education aimed at raising the awareness of all of its employees. In fiscal 2013, it offered online lectures on waste management risks and measures for preventing oil leakage accidents. Some 8,900 people took part worldwide.

Preventing Recurrence of Spill of Water-Soluble Grinding Fluid

In August 2013, an accident occurred in which water-soluble grinding fluid spilled into a river outside the premises of the Soja Plant Akagi Manufacturing Department of NSK Steering Systems Co., Ltd. Fortunately, there was no noticeable environmental impact because the fluid was mostly water, and therefore non-toxic. Oil solution in the fluid amounted to no more than 14 liters, an extremely small amount considering the total volume of the spill. The company immediately contacted the local authorities, and then investigated the accident's cause and took measures to prevent recurrence. Inspections and improvements were also carried out at other plants to avoid similar accidents. For instance, a plant in Thailand, where sewage effluent standards for oil had been slightly exceeded, carried out recurrence prevention measures.



Reference data is available on NSK's website.

www.nsk.com > Sustainability > Environmental Activity > Environmental Management

- Environmental Policy and Environmental Code of Conduct
- NSK Group Environmental Structure
- Scope of NSK Group Environmental Management
- Acquiring ISO 14001 Certification
- Environmental Education
- Environmental Accounting

Creating Environmentally Friendly Products

Providing Environmentally Friendly Products and Services

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

Transforming the structure of society to reduce risks from events such as increasingly large-scale natural disasters related to climate change and to prevent the depletion of natural resources is a common challenge for humanity. Toward that end, companies are expected to make positive contributions through their products and services. This includes the development of new technologies, making those newly developed technologies even more sophisticated to aid in environmental protection, and increasing utilization of renewable energy.

NSK's Approach

Harnessing NSK's Four Core Technologies to Help Reduce the Environmental Impact of Human Societies

The products of the future must perform better than today's in order to help reduce the impact human societies have on the natural environment. In an effort to contribute to the well-being and safety of society and to protect the global environment, as spelled out by its corporate philosophy, NSK is working hard to accurately determine the needs of its customers and the broader society, as well as to develop environmentally friendly products and technologies which, in keeping with its basic policy, make the most of the Company's four core technologies (tribology, material engineering, analysis technology, and mechatronics). By delivering these products and technologies to all corners of the globe, NSK aims to contribute to the sophistication of the machinery in which its products are incorporated and to the development of environmentally friendly products as well as to the reduction of environmental impact throughout society. [Figure 1](#) [Figure 2](#)

Goals and Performance

Mid-term Goals (FY2013-2015)

The NSK Group is creating even more environmentally friendly products and technologies based on the NSK Environmental Policy and the Basic Policy for the Development of Environmentally Friendly Products. It also calculates how much its products help to reduce CO₂ emissions during use.

FY2013 Activities

In fiscal 2013, the NSK Group developed 17 new environmentally friendly products that help customers conserve energy and resources. [Figure 3](#) [Table 1](#)

The Group also calculated the CO₂ emission reductions made possible by the innovative main shaft of its machine tool bearings (grease lubrication) and its bearings for chillers when these products are used by its customers.

Figure 1

Basic Policy for the Development of Environmentally Friendly Products

The NSK Group minimizes the environmental impact of its products at every stage—from R&D and design, to production, usage, and disposal—by upholding the following standards:

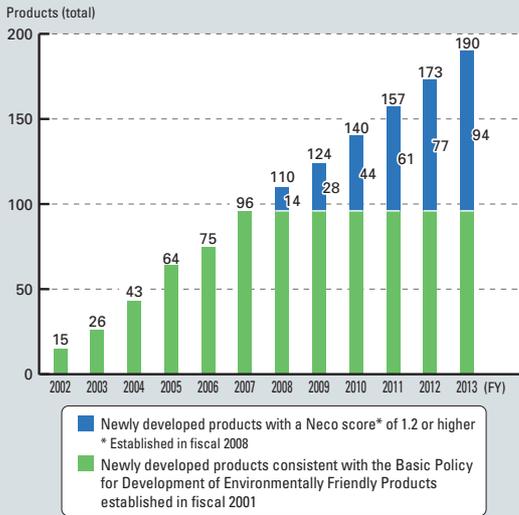
1. Each product should contribute toward the energy and resource conservation of the machine in which it is installed.
2. The amount of energy and resources required during product manufacturing should be minimal.
3. Environmentally harmful substances should not be used in products or manufacturing processes.
4. Products should contribute to the health and safety of end users by having low emissions of vibration, noise, and dust.

Figure 2

Harnessing NSK's Four Core Technologies to Help Reduce the Environmental Impact of Human Societies



Figure 3 Number of Environmentally Friendly Products Developed (Total)



NSK Eco-efficiency Indicators

The Neco score is derived by comparing a new product with a previous version. It is calculated by dividing product value V, which is an indicator of how much the new product's life-time and performance have been improved over the previous product, by environmental impact E, which is an indicator based on parameters such as how much product weight and energy consumption have been reduced. The better a product's performance is (the higher the V score), and the more environmentally friendly it is (the lower the E score), the better its Neco score will be. Currently, the Group is working to develop new products with a Neco score of 1.2 or higher.

$$\text{Neco} = \frac{\text{Product value V (product life, functions)}}{\text{Environmental impact E (product weight and power consumption)}}$$

Grease-Lubricated Main Spindle Bearings for Machine Tools to Cut CO₂ Emissions by 20,000 Tons/Year for Customers

Oil-air-lubricated bearings capable of high-speed rotation are frequently used in all types of machine tools for which high productivity is demanded. However, they require high volumes of compressed air during machining work. Since compressed air requires a significant amount of energy to generate, reducing the amount of it used by manufacturing equipment is an effective way to cut CO₂ emissions during the production process. This is why NSK developed its Robust Series of high-speed, low-heat-generating bearings. By enabling high-speed rotation using only grease lubrication—something that was once possible only through oil-air lubrication—the Robust Series helps cut the consumption of compressed air used by spindle bearings in machine tools. The use of the Robust Series by NSK customers is expected to reduce CO₂ emissions by about 20,000 tons/year,* which is equivalent to the CO₂ absorption of approximately 1.4 million cedar trees.

* Calculated as follows:
 Robust Series sales volume × Consumption of annual compressed air reduction made possible by using grease lubrication for spindle bearings in machining centers



Super Precision Sealed Angular Contact Ball Bearings (ROBUST Series)

Table 1 Environmentally Friendly Products Developed in Fiscal 2013

	Rolling Bearing Injected with World's First Lubricant Grease derived from 100% food-grade ingredients, registered as NSF*1 category H3*2 lubricant, the world's safest category	High-Performance Cartridge Bearings for Automotive Turbochargers	NSK Linear Guide™ NH Series NS Series	Modular Advanced Functionality Electric Power Steering	Hybrid Car-compatible WSC Start Control Forward/Reverse Clutch
NSK Products					
Technology development at NSK	<ul style="list-style-type: none"> Environmental performance: World's safest grease with superior biodegradability and containing no petroleum-based products High performance: 1/3 of the bearing friction loss (torque) compared to other food-based machine grease on the market, and superior water resistance 	<ul style="list-style-type: none"> 50% reduction in mechanical loss Heat-resistant steel for bearing rings Optimal design for low-torque, long-life Heat-resistant resin bearing cage 	<ul style="list-style-type: none"> More than twice as long operating life, and 1.3 times as high dynamic load rating as conventional products (LH Series and LS Series) 	<ul style="list-style-type: none"> EPS-control ECU with at least two times the computing performance of previous products ECU with a two-processor micro-controller that performs high-speed failure detection by having its processors monitor each other's state 10% overall weight reduction, including downsizing of ECU and motor 	<ul style="list-style-type: none"> Increased cooling capacity by improvement of heat resistance and lubricating oil discharge performance due to optimal groove design for low friction Improved friction characteristics: Retention of delamination life and twice high-load judder life due to the development of friction materials
Environmental benefits for NSK's customers	<ul style="list-style-type: none"> Environmentally friendly, excellent biodegradability, and reduction of environmental impact when recycled 	<ul style="list-style-type: none"> Engine downsizing Improved automobile fuel economy Improved turbocharger response 	<ul style="list-style-type: none"> Longer life Smaller and lighter unit 	<ul style="list-style-type: none"> Reduced steering load and improved stability Improved automotive fuel economy 	<ul style="list-style-type: none"> Space-saving vehicle mounting by eliminating torque converter through WSC*3 start control Improved fuel economy by reducing drag torque
Neco	1.3	1.8	1.2	1.2	1.6

*1 National Sanitation Foundation International, a U.S. organization internationally recognized in the field of public health and safety
 *2 A lubricant that is presumed to come in contact with food and can be used for rust prevention and other purposes on equipment in locations such as food-processing plants
 *3 Wet start clutch

Global Warming Countermeasures

Efforts to Save Energy and Reduce CO₂ Emissions

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

Concerns are mounting that today's increasingly serious climate change problems have the potential to cause tremendous damage including rising sea levels, droughts, localized torrential rain, and the spread of infectious diseases, as well as having harmful effects on ecosystems. At present, the world is debating how to achieve substantial reductions in emissions of CO₂ and other greenhouse gases. To help build a low-carbon society, companies are expected to make aggressive efforts to develop new and more advanced technologies that will lead to energy savings. They are also required to help popularize energy-saving products and reduce the CO₂ emissions generated by their business operations.

NSK's Approach

Helping Society Save Energy with Environmentally Friendly Products, and Reducing Energy Use in Operations

The NSK Group is working to develop and promote environmentally friendly products*¹ in order to help society reduce CO₂ emissions. These products contribute to the fight against global warming by reducing the energy loss that takes place when automobiles, machine tools, and other equipment move (see pp. 42-43).

The Group is also working hard to reduce CO₂ emissions by, for instance, improving production efficiency and switching to cleaner energies.

Figure 5

Goals and Performance

Mid-term Goals (FY2013-2015)

The NSK Group has established CO₂ emissions reduction goals related to manufacturing, distribution, and offices and is carrying out efforts to save energy.

Manufacturing departments are striving to increase productivity, installing cogeneration systems in response to power supply shortage risk, promoting fuel conversion, reducing energy consumption during down-time, and switching to more energy-efficient equipment. Distribution departments are working to improve loading efficiency and further shift to modes of transport with lower environmental impact. Meanwhile, headquarters and office sites are installing energy-saving devices and taking other steps to save electricity.

Figure 1

FY2013 Activities

Manufacturing departments in Japan achieved a 4.4% reduction in CO₂ emissions per value-added production unit from the fiscal 2011 level, exceeding the target of a 2% reduction, as a result of working group activities implemented across plants. Total CO₂ emissions were reduced by 3.8% compared to a reduction target of the fiscal 2011 level or below.

Plants outside Japan achieved a 21.4% reduction in CO₂ emissions per value-added production unit from the fiscal 2011 level, exceeding the

Figure 1

Fiscal 2015 Targets for Global Warming Countermeasures

Manufacturing

In Japan: CO₂ emissions per value-added production unit: 4% reduction from FY2011 level (9% reduction from FY2011 level by FY2020)
Total CO₂ emissions: Reduce CO₂ emissions for FY2015 to below FY2011 level

Outside Japan: CO₂ emissions per value-added production unit: 4% reduction from FY2011 level

Distribution

In Japan: CO₂ emissions per ton-kilometer: 4% reduction from FY2011 level

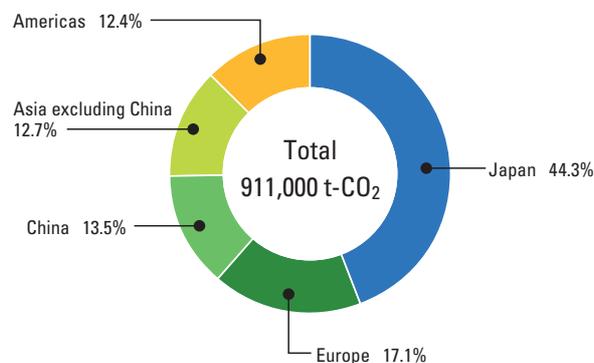
Offices

In Japan: CO₂ emissions per unit of floor space: 12.2% reduction from FY2011 level

Outside Japan: CO₂ emissions per unit of floor space: 4% reduction from FY2011 level

CO₂ emissions intensity: Manufacturing: CO₂ emissions/ value-added production unit
Distribution: CO₂ emissions/ ton-kilometer
Offices: CO₂ emissions/ unit of floor space

Figure 2 Total CO₂ Emissions from Manufacturing by Region



target of a 2% reduction, as a result of improvement in productivity associated with increased production and the increase in operations that emit comparatively lower amounts of CO₂.

Headquarters and office sites also achieved their target, but distribution departments did not, due to a decrease in car ferry shipments.

Figure 3 Figure 4 p. 46: Figure 6

Figure 3 CO₂ Emissions from Manufacturing in Japan: Total Volume and per Production Unit

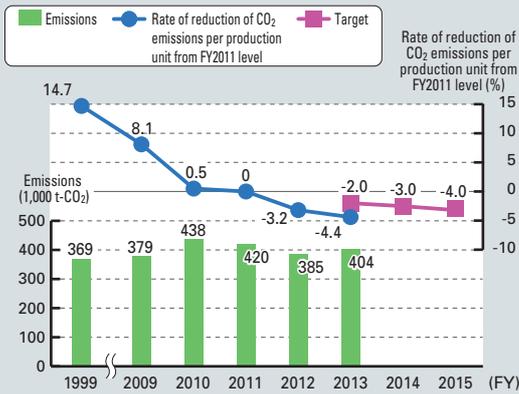
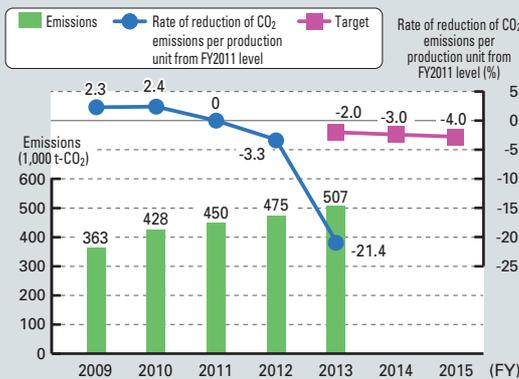


Figure 4 CO₂ Emissions from Manufacturing Outside Japan: Total Volume and per Production Unit



Greenhouse Gas Emissions Verification Report (Japan)



The Japan Quality Assurance Organization conducted independent verification of NSK's fiscal 2013 performance, in order to increase reliability related to the group's CO₂ emissions data. The verification covered all NSK Group sites in Japan, including manufacturing departments, technology departments, and head office and administrative divisions.

Manufacturing 1 Initiatives at Manufacturing Sites in Japan

The Ishibe Plant reduced its CO₂ emissions by around 850 tons in fiscal 2013. The new gas-engine cogeneration system it installed reuses waste heat produced during power generation for chilled and hot water supply for air conditioning. This reduced peak power and contributed to reducing total CO₂ emissions by about 700 tons per year.

The Saitama Plant reduced its CO₂ emissions by about 500 tons in fiscal 2013 through efforts such as switching to energy-saving spindles and LED lighting. The Takasaki Plant of NSK Needle Bearing Ltd. reduced its CO₂ emissions by around 150 tons in fiscal 2013 by improving the efficiency of air conditioning equipment and other measures. **Figure 3**

Manufacturing 2 Initiatives at Production Sites Outside Japan

Siam NSK Steering Systems Co., Ltd., in Thailand reduced CO₂ emissions at its plant by about 250 tons in fiscal 2013 by adding inverters to compressors, switching to LED lighting, and installing timers on air conditioners.

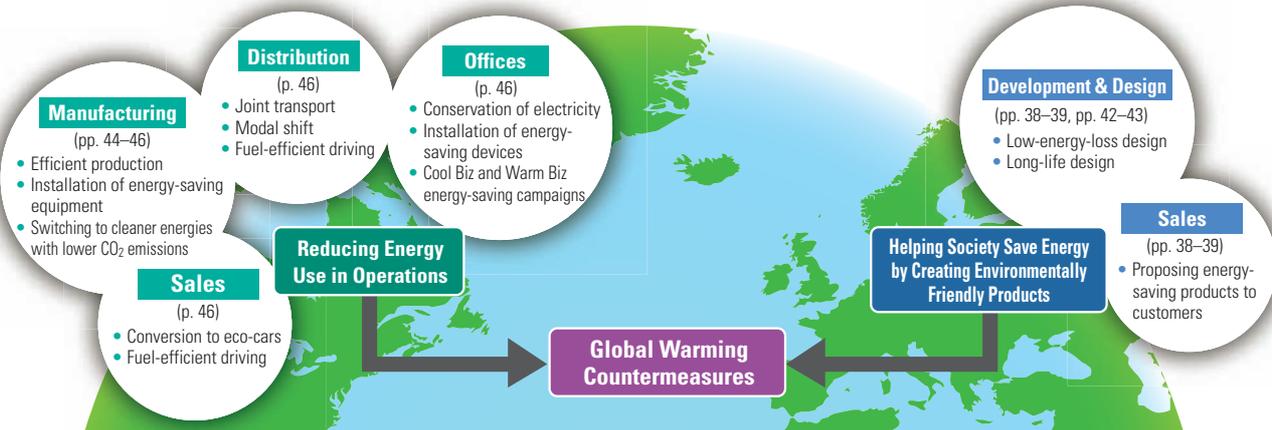
The Peterlee Plant of NSK Bearings Europe Ltd., the Changwon Plant of NSK Korea Co., Ltd., in South Korea, and other plants also switched to LED lighting. **Figure 4**



Manufacturing 3 Heat Treatment Working Group

The Heat Treatment Working Group implements working group activities across plants to reduce energy use in heat treatment processes, which accounts for approximately 30% of the NSK Group's overall CO₂ emissions. Each furnace has been equipped with a wattmeter and a gas flowmeter to ascertain energy usage and promote efficient equipment operation. By identifying energy-saving challenges and cross-deploying effective solutions to other plants, the Heat Treatment Working Group is promoting the reduction of CO₂ emissions.

Figure 5 Contributing to the Fight Against Global Warming by Creating Environmentally Friendly Products and Reducing Energy Use in Operations



Reference data is available on NSK's website.

www.nsk.com > Sustainability > CSR Reports & Reference Data

● CO₂ Emissions

Manufacturing 4 Spindle Working Group

The NSK Group uses a great deal of compressed air for the spindles used in grinding processes. Technology development departments and plants meet regularly to share information and implement initiatives across plants to reduce the amount of compressed air used. In fiscal 2013, the Spindle Working Group's efforts included switching from oil-air lubrication to energy-efficient spindles that use grease lubrication, which require less compressed air, thereby reducing annual CO₂ emissions by around 420 tons.

Distribution Combination of Product and Procured Parts Distribution

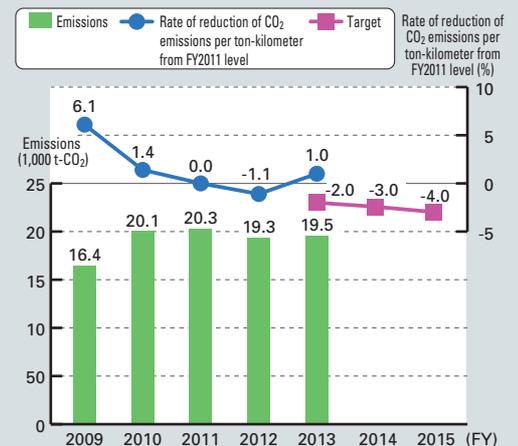
Under its Environmental Logistics Policy, the NSK Group strives to reduce the environmental impact of transport through improved loading efficiency by combining product distribution and procured part distribution and by shifting to modes of transport with lower impact, such as marine transport.

In fiscal 2013, however, a decrease in transport by car ferry resulted in a 1% increase in CO₂ emissions per ton-kilometer from the fiscal 2011 level. In fiscal 2014, NSK is considering shifting the mode of transport between Gunma and Yamaguchi prefectures from truck to rail. Figure 6

Offices Energy-Saving Efforts at the Head Office and Sales Departments

Headquarter and sales departments have implemented energy-saving measures and revisions to the fleet of company-owned vehicles. They achieved an 11.9% reduction in CO₂ emissions per unit of floor space against the fiscal 2013 goal of a 10.2% reduction from fiscal 2011 levels. Specific initiatives included thorough control of air-conditioning temperatures, turning off lights when not in use, and switching to LED lighting. Additionally, by switching company vehicles to electric, hybrid and vehicles with small-displacement engines (no more than 1,500 cc), the percentage of these automobiles among the entire fleet rose to 52%, which had a CO₂ reduction effect of 6.6 tons per year.

Figure 6 Energy Consumed per Ton-kilometer and CO₂ Emissions from Distribution in Japan



VOICE

Making Changes to Optimize and Reduce Energy Use



Masahiko Minamikawa

Assistant Manager, Manufacturing Engineering Section, Saitama Plant, NSK Ltd.

At the Saitama Plant, we are attempting to optimize and reduce energy use related to pumps, compressed air, and lighting. In fiscal 2013, we shut off some water pumps by consolidating water supply equipment and added inverters to relay tank return pumps. We also implemented measures to reduce the amount of compressed air used, including stopping the use of air for conveying equipment and switching to grease in the lubrication of grinder spindles. We switched emergency exit lights, fluorescent lights in offices, and outside lights to LED lighting, and switched mercury lamps to energy-efficient, long-life electrodeless lamps.

Since there are so many issues on the agenda, we have created an annual plan and check our progress in the plant's energy conservation working group, which meets every two months. Even if the effects of each change made are small, by making numerous changes across the plant we were able to reduce annual CO₂ emissions by at least 500 tons. Going forward, we will continue to identify wastefulness and make improvements.

Measures for Resource Conservation and Recycling

Efforts to Make Optimal Use of Resources

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

There is growing concern around the world that an economic system based on mass production, mass consumption, and mass disposal will end up depleting a wide range of resources in the future. Against this backdrop, companies are required to help build recycling-oriented societies by ensuring the efficient use of resources throughout the entire product lifecycle—from the extraction of resources, to product use, to disposal. Additionally, there is concern that the increase in worldwide demand for water will lead to the depletion of water resources in the future. Companies must therefore make efficient use of water resources.

NSK's Approach

Promoting Efficient Use of Resources in All Business Activities

The NSK Group aims to make efficient use of the resources it requires for raw materials and is working on reducing, reusing, and recycling (the 3Rs), striving to do its part in building recycling-oriented societies around the world. The Group's development and design divisions strive to develop products that can be produced with the minimum amount of raw materials and that can be easily recycled when disposed after use. The Group's manufacturing and distribution divisions attempt to reduce the generation of waste and also work to reuse and recycle waste that is generated, aiming to eliminate landfill waste disposal. They also strive to make efficient use of water resources, such as by expanding the recycling of water. [p. 48: Figure 7](#)

Goals and Performance

Mid-term Goals (FY2013-2015)

The NSK Group is strengthening its initiatives to achieve the rigorous goals it set for the effective utilization of resources, recycling rate, and landfill disposal rate. The Group constantly pursues higher performance on the 3Rs. It will also start working on reducing water usage per unit of production.

Manufacturing sites in Japan have already achieved their goals for zero emissions (the elimination of landfill waste disposal) with a recycling rate close to 100%. Furthermore, the Group will make efforts to reduce industrial waste per unit of production. [Figure 1](#)

FY2013 Activities

NSK steadily reduced steel material waste by changing the forging shape for parts. The NSK Group's plants in Japan achieved a waste recycling rate of 99.999% and a landfill disposal rate of 0.001% by thoroughly managing waste that was generated unexpectedly. This performance met the Group's fiscal 2013 targets. Although plants outside Japan did not attain their target of at least 96.4%, they did manage to increase their recycling rate to 95.3% by implementing a range of improvements. Plants

Figure 1

Fiscal 2015 Targets

Development and design, manufacturing

Reduce waste of raw material by changing processing methods

Manufacturing

In Japan: Achieve a recycling rate*¹ of at least 99.99% for waste and maintain zero emissions*²
 Reduce industrial waste per production unit*³ by 23% compared to fiscal 2011
 Reduce water usage per production unit*⁴ by 4% compared to fiscal 2011

Outside Japan: Achieve a waste recycling rate of at least 99.0%
 Reduce water usage per production unit by 4% compared to fiscal 2011

Distribution

In Japan: Reduce packaging material waste per production unit*⁵ by 8% compared to fiscal 2007

*1 Recycling rate (In and outside Japan) =

Recycled amount / (Total waste - reduction amount) × 100

*2 The NSK Group has defined zero emissions as a landfill disposal rate of no more than 0.01%.

Landfill disposal rate (In Japan) = Landfill disposal amount / (Total waste - reduction amount) × 100

*3 Industrial waste per production unit (in Japan) = Industrial waste / Value-added production

*4 Water usage per production unit = Water use / Value-added production

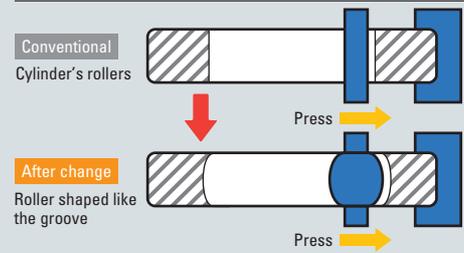
*5 Packaging material waste per production unit = Packaging material waste / Production output

in Japan reduced industrial waste per production unit by 18.4% compared to a target of a 2% reduction from fiscal 2011 levels. They reduced packaging material waste per production unit by 14.6% compared to a target of a 6% reduction from the fiscal 2007 level. With respect to water usage per production unit, plants in Japan achieved a 15.7% reduction and plants outside Japan achieved a 19.2% reduction compared to a target of a 2% reduction from fiscal 2011 levels.

Development and Design Improved Manufacturing Process for Spherical Roller Bearings Reduces Steel Use by 14%

Spherical roller bearings are used in diverse industrial machines such as reduction gears, civil engineering machinery, cranes, and elevators. Machining of the outer ring of spherical roller bearings starts by forging material heated to around 800 °C into a cylinder. Next, pushing from the inside while rotating the cylinder's rollers widens the diameter. Then, the inside groove is created by turning on a lathe. Changing the shape of the cylinder's rollers to make them closer to the final groove reduced the amount of material shaved off during turning, which in turn reduced steel use by 14%. **Figure 2**

Figure 2 Sectional View of the Outer Ring of a Bearing



Manufacturing 1 Initiatives to Reduce Industrial Waste and Incineration

Metal scrap and grinding swarf make up the biggest part of waste generated by NSK's plants. Accordingly, the NSK Group has made efforts to reduce metal scrap and grinding swarf. In fiscal 2013, industrial waste per production unit improved as an increasing amount was re-used as a source of iron. Having achieved its goals by a large margin, NSK raised its targets for fiscal 2014 onward.

The NSK Group also made efforts to reduce the amount of waste incinerated. Polishing sludge, which contains oil, was an issue. But, thermal recycling and conversion to a raw material for cement helped NSK reduce incinerated waste from 255 tons in fiscal 2012 to 6 tons in fiscal 2013. **Figure 3** **Figure 4**

Figure 3 Total Waste (Thousand ton)

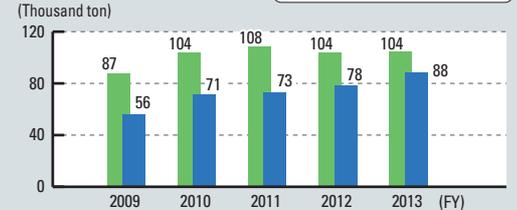
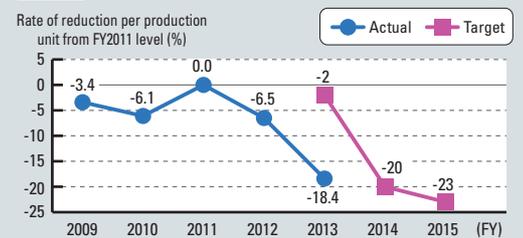


Figure 4 Industrial Waste per Production Unit (Plants in Japan)



Manufacturing 2 Recycling Oil from Oily Sludge in the Polishing Process (South Korea)

The oily sludge produced during the final polishing process for bearing parts is difficult to recycle, and NSK used to dispose of the residue left after incineration in landfills. Since fiscal 2013, NSK Korea Co., Ltd., has been squeezing oily sludge in a compressor and recycling the oil separated this way after adjusting the composition. This reduced oil expenses and also reduced oily sludge waste by 4.8 tons per year.

Figure 5 Recycling Rate (%)

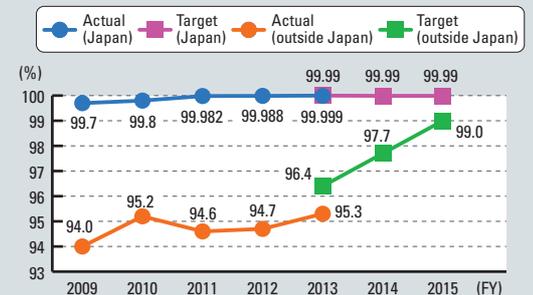


Figure 6 Landfill Disposal Rate (Plants in Japan)



Figure 7 3Rs to Help Build Recycling-Oriented Societies

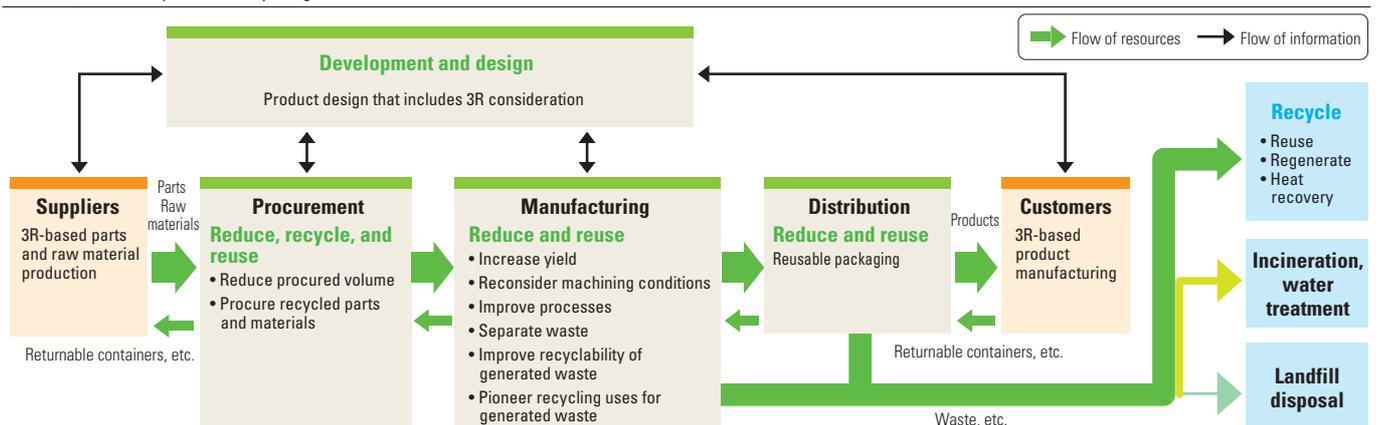


Figure 8 Amount of Packaging Material Waste per Production Unit (Distribution in Japan)

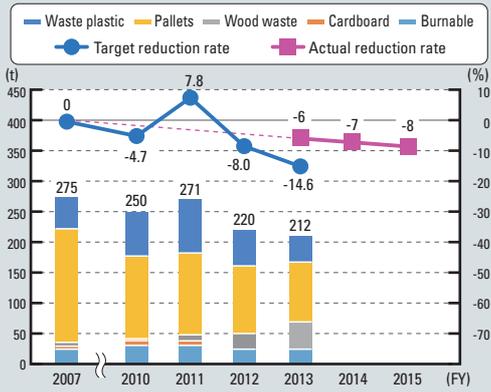


Figure 9 Water Usage per Unit of Production (Plants in Japan)

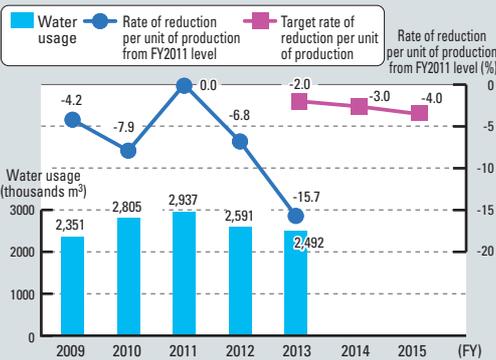
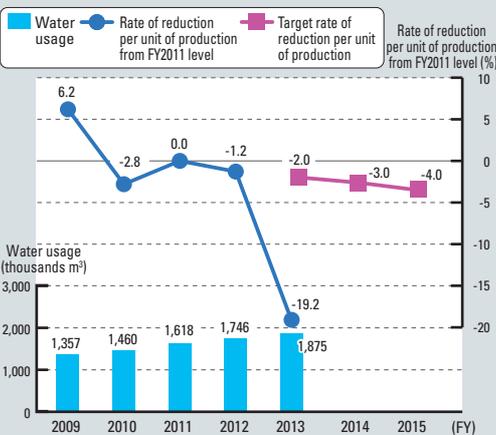


Figure 10 Water Usage per Unit of Production (Plants outside Japan)



Distribution Increasing Reuse and Recycling of Used Packing Materials

The NSK Group is working to reduce packaging materials by meticulously sorting used packaging.

In fiscal 2013, the NSK Group reduced plastic materials treated finally as waste by 26% from the previous fiscal year by selling it as a valuable resource. Additionally, it was able to reduce waste from wooden pallets by 10% from the previous fiscal year by collecting salvagable parts from broken pallets and using them to rebuild pallets. **Figure 8**

Manufacturing 3 Recycling and Reducing Grinding Fluid and Cooling Water

The NSK Group uses grinding fluid to reduce the heat generated during the grinding of bearings and other parts and to increase lubricity. It also uses water to cool production equipment as well as ancillary equipment such as air conditioners and compressors that make compressed air. All grinding fluid is circulated, and cooling water for air conditioners and other equipment is circulated wherever possible.

In fiscal 2013, the NSK Group reduced water usage per production unit by reducing cooling fluid for production equipment. **Figure 9** **Figure 10**

VOICE

Ensuring Compliance and Increasing the Recycling Rate

Ryan Kusumo Adiwibowo

General Affairs and Human Resource Department, P.T. NSK Bearings Manufacturing Indonesia



NSK Bearings Manufacturing Indonesia ensures compliance through internal audits and on-site inspections of waste disposal contractors. Through ongoing internal audits verify the status of compliance with environmental laws and check locations that could lead to latent environmental pollution. We started on-site inspections of waste disposal contractors in fiscal 2011, and in fiscal 2013 we inspected five companies. We have gradually expanded the scope of inspections, starting with hazardous waste, and confirm the status of disposal, the presence of environmental pollution, licensing requirements, and that licenses have been renewed appropriately. We are also working to improve our recycling rate. In fiscal 2013, we achieved the NSK Group's target recycling rate by changing the disposal methods for sludge discharged from oil and water separators and for grinding liquid discharged from the grinding process. We will continue striving to manage waste and practice the 3Rs.



Reference data is available on NSK's website.

www.nsk.com > Sustainability > CSR Reports & Reference Data

● Waste Emissions (Plants)

Reducing Use of Environmentally Harmful Substances

Appropriate Management of Environmentally Harmful Substances

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

Chemical substances have made modern life much more convenient. However, some chemicals can have adverse effects on human health and the environment. At the World Summit on Sustainable Development in 2002, the nations of the world reaffirmed their commitment to “aim by 2020 to use and produce chemicals in ways that do not lead to significant adverse effects on human health and the environment.” Since then the international community has been working cooperatively to regulate chemical substances more strictly.

NSK's Approach

Staying Ahead of Regulatory Progress

The NSK Group is striving to create products that use no environmentally harmful substances, ahead of laws and regulations around the world and voluntary standards from its customers. Responding to stricter regulations, the Group tightly controls environmentally harmful substances through each stage of development and design, procurement, manufacturing, and distribution to ensure that safe products are delivered to customers. **Figure 1**

Figure 1

Fiscal 2015 Targets for Reducing Use of Environmentally Harmful Substances

Development and design

Establish a development and design management system that ensures environmentally harmful substances are not contained in products

Streamline management by using a chemical substance management system

Procurement

Complete the extension of NSK green procurement to key suppliers worldwide

Manufacturing

Complete a global chemical substance quality assurance system for products

Totally eliminate machining fluids containing chlorine additives

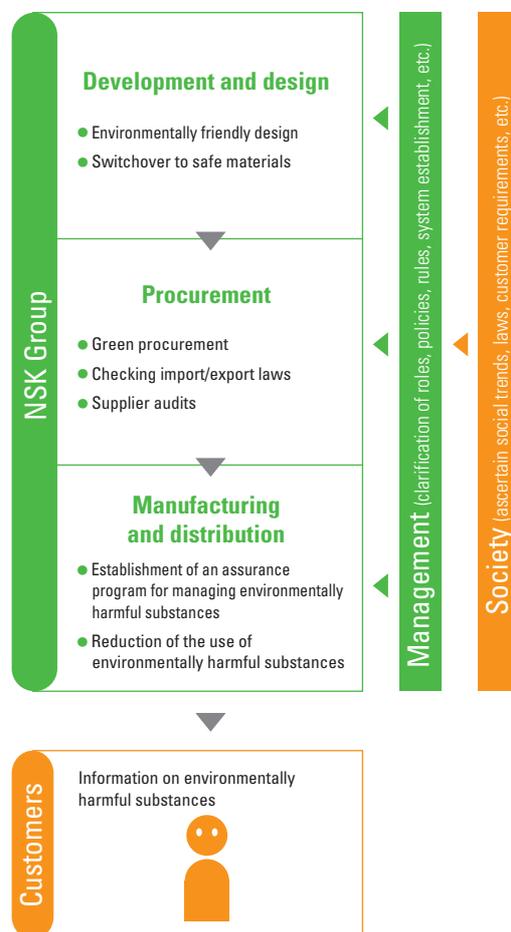
In Japan: Reduce the handling of PRTR-designated substances per production unit by 17% compared to fiscal 2011

Goals and Performance

Mid-term Goals (FY2013-2015)

To ensure the products it delivers are safe, the NSK Group is strengthening its system for global management of environmentally harmful substances and also reinforcing its system for reliably ensuring that products contain no environmentally harmful substances. The NSK Group is also upgrading its management system for the development and design processes and rolling out green procurement to its global production sites. The Group also aims to further reduce environmentally harmful substances handled in production processes. Meanwhile, as a top-priority measure, it is globally scaling out its database on environmentally harmful substance inclusion in parts and raw materials—based on survey data and the latest NSK List of Environmentally Harmful Substances. **Figure 2**

Figure 2 Management of Environmentally Harmful Substances



FY2013 Activities

Following on from fiscal 2012, in fiscal 2013 the NSK Group revised the NSK List of Environmentally Harmful Substances in response to legislative amendments in Europe in order to enhance management of environmentally harmful substances. It conducted a survey not only in Japan but also at production sites worldwide of environmentally harmful substances inclusion in parts and raw materials and strengthened its management so that environmentally harmful substances are not used in products.

Management Strengthening the Global Management System for Environmentally Harmful Substances

The NSK Group is striving to strengthen its management by implementing initiatives not only in Japan but also at plants worldwide to reliably ensure that environmentally harmful substances are not included in products and then auditing the status of implementation.

In fiscal 2013, the Group conducted on-site audits at four plants in Europe, four plants in China, one plant in Indonesia, two plants in Thailand, three plants in India, and one plant in South Korea. These audits identified problems and specified points requiring further attention, aiming to reinforce the management system. Furthermore, the Group trained 35 new environmentally harmful substance auditors in Japan and 52 outside Japan, bringing the total up to 273, so that plants around the world can autonomously conduct self-audits and supplier audits.

Design Taking Action Based on the NSK List of Environmentally Harmful Substances

NSK has registered nearly 3,500 chemical substances in its NSK List of Environmentally Harmful Substances as Prohibited Substances, Reduced Substances, and Observation Substances. The Group is aiming for zero use of environmentally harmful substances in the manufacture of its products.

As in the previous fiscal year, in fiscal 2013 the NSK Group conducted a survey of parts and materials suppliers based on the list to make sure that substances prohibited by NSK are not included in its products.

Procurement 1 Worldwide Efforts to Increase Awareness of NSK Green Procurement Standards

The NSK Group cooperates with suppliers in an effort to strengthen the management of environmentally harmful substances and procure environmentally friendly parts and raw materials. To make the NSK Green Procurement Standards well known outside Japan, the Group holds briefing sessions for suppliers around the world and obtains agreement forms pledging adherence to the standards.

The NSK Group's production sites worldwide will continue to work with suppliers to manufacture dependably safe products. 



Photo 1 Green procurement briefing session in China

VOICE

Strengthening Internal Management of Environmentally Harmful Substances and Supplier Audits

Pornsawan Panumwan-Na-Authaya

General Affairs Department, NSK Bearings Manufacturing (Thailand) Co., Ltd.



In 2012, NSK Bearings Manufacturing (Thailand) (NBMT) set up the NBMT Green Committee to reduce use of environmentally harmful substances and ensure our products are safe for our customers. The NBMT Green Committee has managed prohibited substances, substances to reduce, and substances to monitor based on the List of NSK Environmentally Harmful Substances. It also arranges for internal auditors to provide training to employees.

NBMT requires all of its suppliers to adhere to the Green Procurement Standards, in order to meet NSK's goals and customer requirements. In fiscal 2013, we conducted on-site audits at four suppliers and confirmed that they are operating at a high level. NBMT is committed to working with suppliers to realize manufacturing that is both high quality and environmentally-friendly.



Reference data is available on NSK's website.

www.nsk.com > Sustainability > > Initiatives in the Procurement

● NSK Group Green Procurement Standards and the List of NSK Environmentally Harmful Substances

Procurement 2 Improving On-site Audits of Suppliers

The NSK Group conducts periodic audits of suppliers of parts and raw materials with a high possibility of containing or carrying environmentally harmful substances. Group employees who hold qualifications as environmentally harmful substance auditors visit suppliers and conduct the audits using an NSK audit check sheet. This has strengthened environmental initiatives throughout the supply chain. In fiscal 2013, on-site audits were conducted at 48 suppliers in Japan and 36 suppliers outside Japan. The Group is working with suppliers to follow up on improvements to issues identified through the audits. Going forward, the NSK Group will step up its audits of suppliers outside Japan, aiming to complete on-site audits of all of its principal suppliers by 2015. The NSK Group is committed to further strengthening its management system for environmentally harmful substances. **Photo 2**

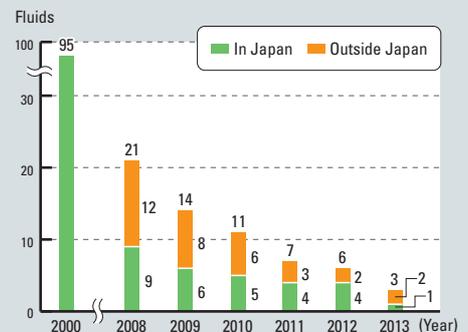


Photo 2 Supplier audit in Thailand

Manufacturing 1 Striving to Totally Eliminate Machining Fluids Containing Chlorine Additives

Machining fluids containing chlorine additives may generate harmful dioxins when incinerated at disposal. The NSK Group is striving to totally eliminate use of these substances. After repeated tests to confirm effects on workability and quality, the Group was able to switch to three new alternatives in fiscal 2013. In fiscal 2014, the Group will continue working to complete the process of eliminating three fluids used in machining under some of the harshest conditions for broaching. **Figure 3**

Figure 3 Number of Machining Fluids Containing Chlorine Additives



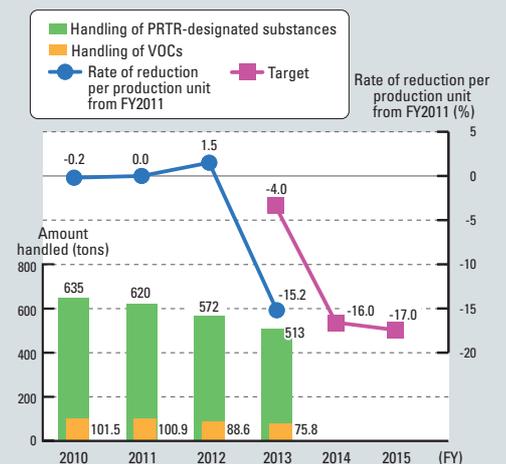
Manufacturing 2 Handling of PRTR*-Designated Substances Reduced by 15.2%

In Japan, the NSK Group set the goal of a 4% reduction in PRTR-designated substances contained in fluids and fuels used in manufacturing processes by fiscal 2013, compared to fiscal 2011.

By switching the fuel used in air conditioning and making changes to wastewater treatment agents, the Group's handling of PRTR-designated substances per production unit in fiscal 2013 decreased 15.2% from fiscal 2011. Since the goal was achieved by a large margin, the goals for fiscal 2014 onward were raised.

Some manufacturing processes use solvents and adhesives that contain volatile organic compounds (VOCs) such as toluene and xylene. By implementing steady initiatives during those processes, emissions to the atmosphere in fiscal 2013 were reduced by 25% from fiscal 2011 to 75.8 tons. **Figure 4**

Figure 4 Handling of PRTR-Designated Substances (Plants in Japan)



* Act on Confirmation, etc., of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register / PRTR). Japan's law intended to facilitate improvement of chemical substance management by ensuring that amounts released into the environment are ascertained and reported to authorities the amounts released into the environment.

Manufacturing 3 Remediating Soil and Groundwater Pollution

The NSK Group completely eliminated the use of chlorinated organic solvents in fiscal 2003. However, the remediation of groundwater is continuing at five sites where soil and groundwater pollution remains from past use. The Group regularly monitors groundwater and reports remediation progress to the authorities.

Biodiversity Conservation

Initiatives to Conserve Biodiversity

Related Stakeholders

Customers

Employees

Suppliers

Future Generations

Local Communities

Shareholders and Investors

On Earth today, there are some 30 million species of organisms that have evolved and adapted to their specific environments. These organisms live in connection with one another, supporting one another through the food chain and the oxygen-carbon dioxide cycle based on photosynthesis. The food, clothing and shelter which people need to live totally depend on the bounty of biodiversity. Aiming to conserve biodiversity, the Convention on Biological Diversity was concluded at the Earth Summit in 1992. In 2008, a new law in Japan, the Basic Act on Biodiversity, came into effect.

NSK's Approach

Conducting Business with Consideration for Biodiversity Impact

Although NSK's business operations have a comparatively minor direct impact on biodiversity, its strong efforts in areas such as energy conservation and air and water quality management indirectly help to preserve biodiversity. The materials that the Group procures, however, have a direct impact on biodiversity when traced back through the supply chain. NSK is committed to contributing to biodiversity conservation by identifying the direct and indirect impacts that its business has on biodiversity and using its findings to improve its business operations and enhance its social contributions.

Goals and Performance

Mid-term Goals (FY2013-2015)

NSK identifies the factors behind the impact that its business operations have on biodiversity and provides education to raise the awareness of its employees. Going forward, NSK will roll out its existing efforts to its global operations and further expand its tree planting and other biodiversity-related activities.

FY2013 Activities

In Japan in fiscal 2013, about 40 employees in Nagano prefecture and 40 more in Kanagawa prefecture took part in environmental protection activities such as cleanups of rivers and seacoasts and eradication of invasive plants near their business sites. Outside Japan,

employees engaged in planting trees, including mangroves, and cleaning up seacoasts, with about 130 people in Thailand, 70 people in Malaysia, and 40 people in India participating.

VOICE

Planting Mangrove Trees



Rumpueng Thabsa

Administrative Department, SIAM NSK Steering Systems Co., Ltd.

SIAM NSK Steering Systems Co., Ltd. in Thailand has made the protection of natural resources part of the plant's environmental policy and is helping with direct action. In fiscal 2013, the company made a donation to the Bang Tamru Conservation Center, which works to conserve mangrove forests. In addition, 97 people, including employees and their families, planted 500 mangrove trees at a nearby seacoast under the direction of the Center. Mangrove forests serve as a breakwater and windbreak, and provide a habitat for many marine organisms. They also absorb CO₂, which is a cause of global warming. As we worked, we experienced first-hand how important it is to conserve our rapidly disappearing natural resources and volunteer to make the world a better place.



Reference data is available on NSK's website.

www.nsk.com > Sustainability > Environmental Activity > Environmental Management

● NSK Biodiversity Guidelines

Relationship with Shareholders and Investors

● Basic Policy on Shareholder and Investor Relations

NSK is committed to meeting the expectations of shareholders and investors by disclosing a variety of management information in a timely and fair manner and by striving to provide stable returns.

● Communication with Shareholders and Investors

NSK has established a dedicated IR division to provide appropriate information that shareholders and investors can refer to when making investment decisions, and it aims to engage in active communication. The Company strives to disclose business and financial information in a fair and appropriate manner in cooperation with other relevant departments.

● IR Events

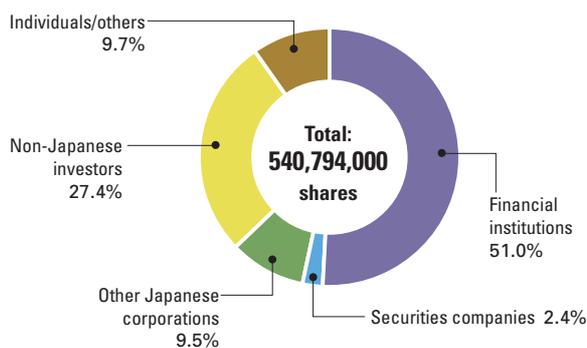
NSK holds a variety of IR events, including results briefings, business briefings, roadshows outside Japan, and briefings for individual investors. The Company strives to disseminate and share information related to business performance, as well as medium-to long-term strategies and their progress, at briefings for institutional investors and analysts.

NSK has set a new mid-term management plan with a vision of "establishing corporate fundamentals appropriate for a company with net sales of ¥1 trillion." At briefings in May and November, the Company explained the progress it has made so far on this plan.

The Company works to communicate actively with shareholders and institutional investors in and outside Japan by accepting interview requests and holding conference calls, as well as at conferences sponsored by securities firms. In fiscal 2013, it again held briefings for individual investors to create opportunities for direct communication and also held small meetings between senior management and analysts. The Group also held briefings and facility tours to highlight NSK's electric power steering business, which is attracting a great deal of interest.

Going forward, the Company would like to create even more opportunities for dialogue.

● Breakdown of Shareholders (Number of Shares, as of March 2014)



● Information Tools

NSK reports on its financial situation and business topics through the publication of an annual report and a business report, the *NSK Group Report* (in Japanese only). It also discloses these reports along with financial briefing materials and financial results on the Investors section of its website. Going forward, the Company will strive to continue disclosing information in a timely manner and to enhance the content of disclosed information.



Annual Report 2014

● Dividend Policy

The return of profit to shareholders is an important management policy for NSK. The Company's basic policy is to continuously provide a stable dividend, which it sets based on consideration of the dividend payout ratio and business performance criteria on a consolidated basis.

● Assessment by External Organizations

Social responsibility indexes (SRIs) include companies that promise long-term sustainable growth because they merit high evaluations for environmental and social contributions as well as financial performance. A broad range of institutional investors are attributing greater importance to such companies. As of March 2014, NSK is included in four internationally recognized SRIs.

Dow Jones Sustainability Indices

<http://www.sustainability-indices.com>



FTSE4Good Index Series

<http://www.ftse.com/products/Indices/FTSE4Good>



Ethibel Investment Register

http://forumethibel.org/content/ethibel_sustainability_index.html



Morningstar Socially Responsible Investment Index

<http://www.morningstar.co.jp/sri/about.htm>



Reference data is available on NSK's website.

www.nsk.com > Investors

Third-Party Comments



Yoshinao Kozuma

Professor, Faculty of Economics, Sophia University, Japan

After leaving the Sophia University Graduate School of Economics upon earning credits in the latter half of the doctoral program, Professor Kozuma worked as a research assistant at the Nagoya Institute of Technology, a visiting researcher at the Limperg Instituut in the Netherlands, an associate professor at the University of Shizuoka, and an associate professor in the Faculty of Economics at Sophia University, before taking up his current position. He has held successive positions as the chair or member of various CSR or environment-related advisory panels, study groups, and research conferences for the Ministry of the Environment; the Ministry

of Economy, Trade and Industry; the Ministry of Land, Infrastructure and Transport; the Ministry of Agriculture, Forestry and Fisheries; the Cabinet Office; and the Japanese Institute of Certified Public Accountants. His specialty is environmental accounting, and his recent work includes *Carbon Labeling to Visualize CO₂* (Chuokezai-sha, Inc., in Japanese).

1. CSR Management throughout the Global Value Chain

The *CSR Report* contains the results from the first year of the Fourth Mid-term Management Plan. It clearly explains the origins of the NSK Group's mid-term vision for achieving ¥1 trillion yen in net sales. Of special note is the Company's deployment of CSR management throughout the global value chain, and the various improvements it made, especially in environmental initiatives.

Thanks to its business policy of local procurement and local production, by fiscal 2012 the NSK Group had already surpassed 70% local procurement of raw materials and parts. For fiscal 2013, the Company achieved an overseas sales ratio of 62% and an employee ratio outside Japan of 63%. Moreover, consolidated net sales were about 20% higher than the previous year, and consolidated operating income more than doubled. These figures represent early achievement of growth targets under the Mid-term Management Plan. However, the data may also suggest that the company is further exposed to CSR risk spread throughout the value chain, due to the nearly complete globalization of its business activities.

Addressing this risk, the NSK Group made great progress on green procurement in fiscal 2013. As part of the globalization of green procurement, site audits were carried out at a total of 15 plants in Europe, China, Indonesia, Thailand, India, and South Korea.

Again this year, NSK asked Professor Yoshinao Kozuma of Sophia University's Faculty of Economics to provide third-party comments on this report.

Looking at value chain measures, while the supplier audits were only carried out in Japan in fiscal 2012, they were expanded to cover 36 companies outside Japan in fiscal 2013, for a total of 84 companies. NSK's training of environmentally harmful substance auditors is also making progress worldwide.

In the area of downstream value chain measures, since 2008 the Company has increased the number of products with an NSK Eco-efficiency Indicator (Neco) score of 1.2 or higher by around 15% each year. This steadily expanding contribution to environmental impact reduction stands out. Commendable efforts in the area of social contribution include the acquisition of OHSAS 18001 certification by NSK Korea, and continued human rights training worldwide.

2. Eliminating Unfair Trading Practices

The NSK Group's biggest current challenge is compliance. Violations of competition law and recent fines imposed by judicial authorities around the world are a concern that cannot be overlooked by stakeholders and the rest of society. Since the establishment of its Compliance Committee in March 2012, NSK has moved rapidly on a number of compliance measures. The cases of unfair trading which recently came to light may have occurred before these measures were implemented. Nevertheless, unfair trading practices not only distort local economies, but also significantly impair society's confidence in the businesses responsible. Consequently, such incidents also have a large impact on financial performance. I hope NSK will further strengthen its compliance measures in order to eradicate such practices, treating this as a critical issue for the entire organization.

3. Other Improvements and Challenges

Other improvements include the establishment of Anti-Bribery Standards and the revision of NSK Code of Corporate Ethics to include stronger anti-bribery provisions. Acquisition of the Next-Generation Certification Mark "Kurumin" is a reflection of the Company's employee support measures. However, NSK still faces challenges gathering and disclosing information on the diversity of its global workforce. In the area of environmental performance, it is concerning that many targets have remained unachieved for years, for instance in areas like pollutant discharge accidents or instances of emissions standards being exceeded.

Response to Mr. Kozuma's Third-Party Comments

Thank you for your valuable comments.

We appreciate your evaluation of our recent efforts, such as the global deployment of green procurement, the development and promotion of environmentally friendly products, and the acquisition of "Kurumin" mark certification that recognizes our support for employees raising young children. We will continue our steady efforts with the aim of achieving sustainable growth for the NSK Group as an organization that contributes to society.

We share your concern regarding the recent competition law violations, and we express our deepest apologies. NSK has made strengthening compliance our most important management issue, and we have implemented measures including organizational reinforcement and more comprehensive training. We will do everything we can to regain the confidence of all stakeholders.

In light of your comments on the need to enhance environmental risk management measures and gather diversity information, we will strengthen our activities with the goal of reporting improvements in upcoming CSR reports.

Simon Nogami

Director, Senior Vice President, Corporate Planning Division HQ-Head, Responsible for IR & CSR Office



Responses to Comments on the *NSK CSR Report 2013*

In his comments concerning the *NSK CSR Report 2013*, Professor Kozuma suggested that, in order to accurately assess and respond to CSR risks in global markets, we should develop information management systems capable of generating labor-related and environmental indexes on a global basis. With the globalization of our business, the NSK Group recognizes the increased importance of activities to assess and minimize risk. This report contains information on our risk management policies (p. 12) and systems. It also describes our initiatives for managing environmentally hazardous substances on a global level, and our efforts to expand global indicators for water usage and waste emissions. We will continue to strengthen both the action we take and the way we disclose the results.



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