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Editorial Policy

The NSK Group carries out a variety of governance, social, and environmental initiatives to do its part in creating a sustainable society. We produce the *CSR Report* to explain these initiatives in detail. With this report, care was taken to facilitate understanding of the overall picture and progress of each initiative by including the policy, structure, targets and performance, the activities in fiscal 2016, and data measuring progress.

Scope of Coverage

•Period of Coverage

Primarily fiscal 2016 (April 1, 2016 to March 31, 2017). Activities conducted outside this period are indicated with the inclusion of a date.

•Organizations Covered

NSK Ltd. and its consolidated subsidiaries (89 companies in all). Affiliates accounted for using the equity method (17 companies).

•Scope of Performance Data

All sites in the NSK Group.

The scope is indicated separately for information with a different scope.

•Reporting Cycle

Published annually.

•Date Published

December 2017

Reference Guidelines

G4 *Sustainability Reporting Guidelines* by the Global Reporting Initiative (GRI)
 ISO 26000: *2010 Guidance on Social Responsibility* by the International Organization for Standardization (ISO)
Environmental Reporting Guidelines (2012 edition) by the Ministry of the Environment of Japan

Third-Party Assurance/Verification

In order to improve the reliability of this report, we received third-party assurance of fiscal 2016 performance in social, and environmental areas. We received third-party assurance of the lost-worktime injury rate, water consumption, total waste, and VOC emissions from Sustainability Accounting Co., Ltd. In addition, we also received third-party verification of emissions of greenhouse gases from the Japan Quality Assurance Organization.

Related Methods of Disclosure

See the *NSK Report 2017* and NSK's website for financial and non-financial information about the NSK Group.



NSK Report 2017



NSK's website <http://www.nsk.com/>

Assessment by External Organizations

Social responsibility indexes (SRIs) include companies recognized for 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 October 2017, NSK is included in the following internationally recognized SRI/ESG indexes.



Dow Jones Sustainability Indices
<http://www.sustainability-indices.com/>



FTSE4Good Index Series
<http://www.ftse.com/products/indices/FTSE4Good>



FTSE Blossom Japan
<http://www.ftse.com/products/indices/blossom-japan>



Ethibel Investment Register
http://forumethibel.org/content/ethibel_sustainability_index.html



Euronext Vigeo Eiris
<http://www.vigeo-eiris.com/>



Oekom research Corporate Responsibility Prime
<http://www.oekom-research.com/>



Morningstar Socially Responsible Investment Index
<http://www.morningstar.co.jp/sri/index.htm>



About the NSK Group

Since producing the first bearings in Japan in 1916, NSK has fostered global industrial development for more than a century by creating and supplying many types of bearings, automotive parts, precision machinery/components, and other products. NSK products are hard at work around the world, and their high performance and high quality has made NSK a trusted brand. NSK is determined to keep contributing to a safer, smoother society by supplying products that reduce energy loss by controlling friction with its Motion & Control™ technologies, as reflected in its mission statement, which is the foundation of all of its business activities.

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The NSK Group's Business and Company Overview

Company Overview

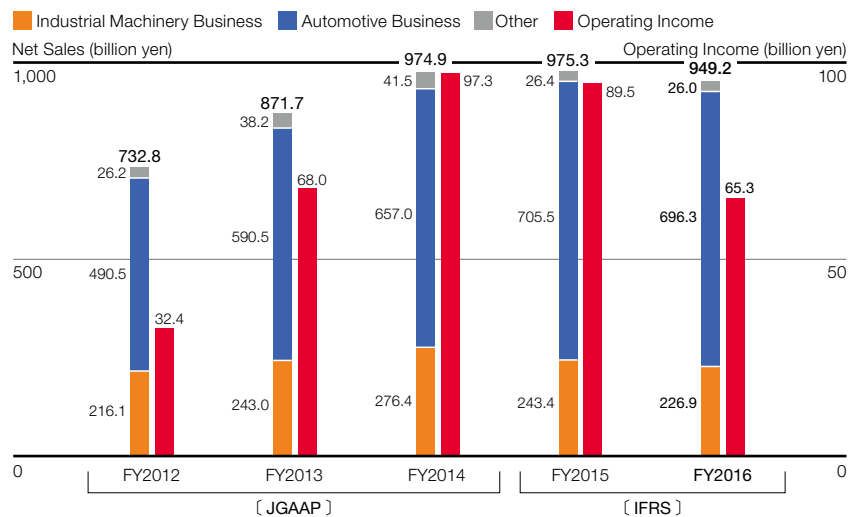
Company Name	NSK Ltd.
Established	November 8, 1916
Capital	67.2 billion yen*
Group Companies	Within Japan: 19* Outside Japan: 70*
Head Office	Nissei Bldg., 1-6-3 Ohsaki, Shinagawa-ku, Tokyo 141-8560, Japan
Number of Employees (Consolidated)	31,501*

* As of March 31, 2017

Financial Highlights (FY2016) (International Financial Reporting Standards [IFRS])

Sales	949.2 billion yen
Operating Income	65.3 billion yen
Capital Expenditures	58.6 billion yen
R&D Expenses	13.9 billion yen
Total Assets	1,044.0 billion yen

Net Sales / Operating Income (Consolidated)

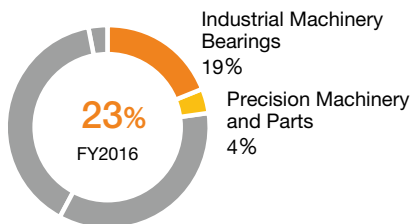


Note: Presented as a new classification dating back to the fiscal year ended March 31, 2016 following a segment change (from industrial machinery to automotive) in certain business areas.

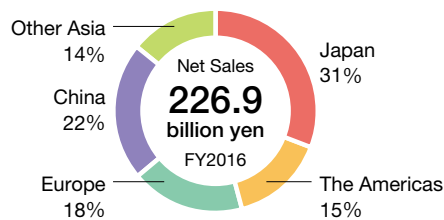
Business Segments

Industrial Machinery Business

Net Sales (%)

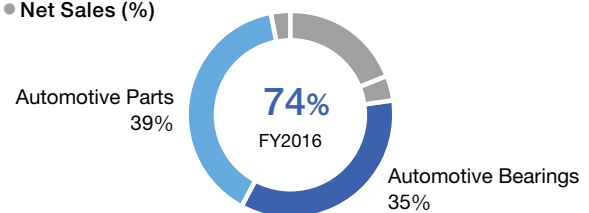


Net Sales, by Region (%)

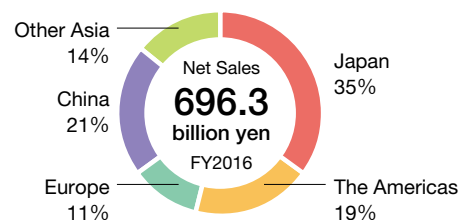


Automotive Business

Net Sales (%)



Net Sales, by Region (%)



Reference data is available on NSK's website.

www.nsk.com > Investors > Financial Information

● Financial Highlights



NSK Group Businesses

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, steelmaking equipment, wind turbines for power generation, large industrial machinery, airplanes, and satellites.



NSKHPS™
Large Spherical Roller Bearings



Double Row Cylindrical Roller Bearings,
High Rigidity Series

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.



X1 Ball Screw with Seal



Megatorque Motor™ PS/PN 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.



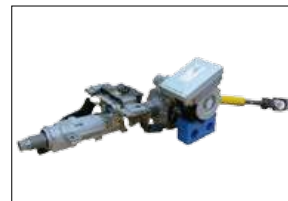
Double-Row Angular Contact Ball
Bearings with Inner and Outer Mounting
Flange (Hub III for driven wheels)



Needle Roller Bearings for Planetary
Gears (cage and roller assembly),
Pinion Shafts

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.

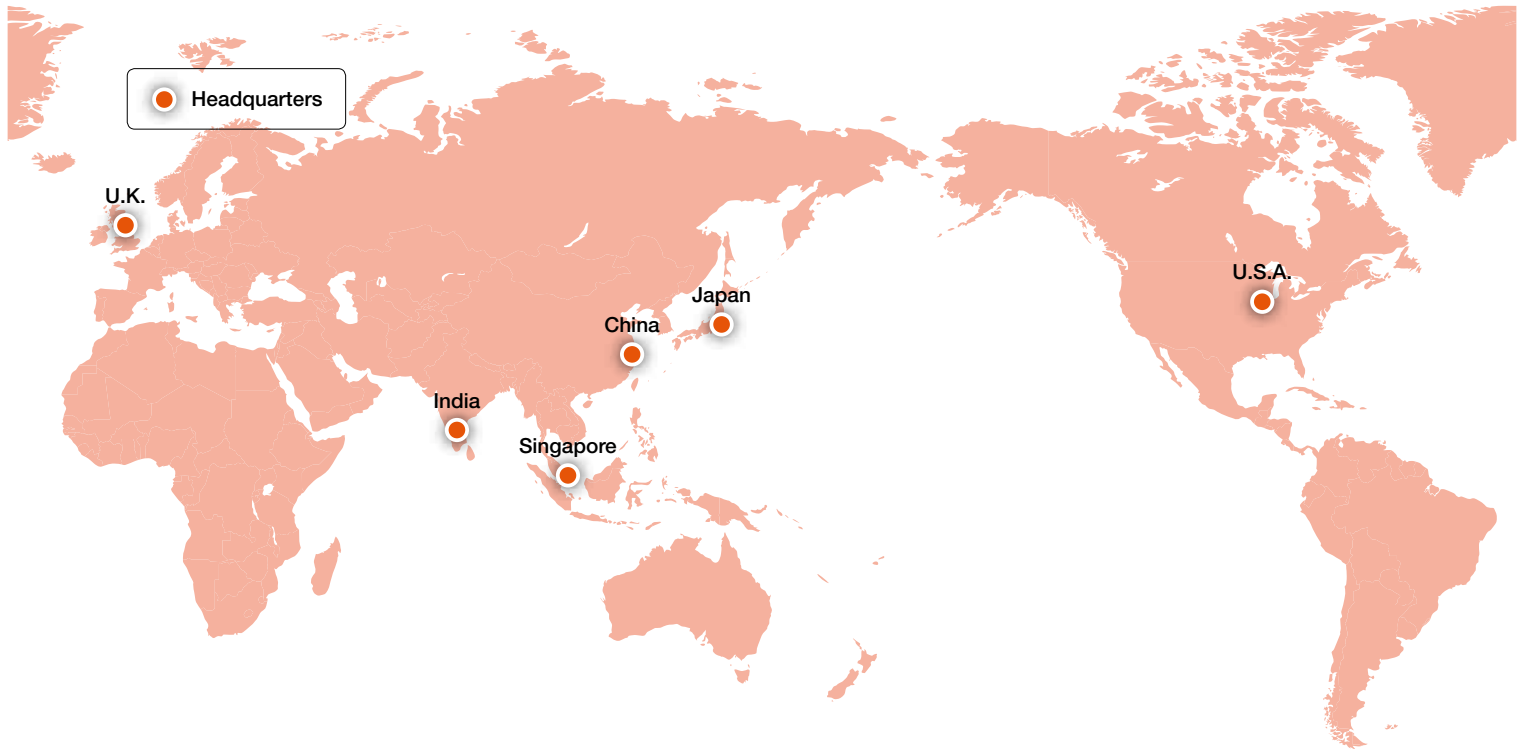


Functional Safety Compliant Electric
Power Steering (EPS)



Low-Drag Clutch Assemblies

NSK Group Sites Worldwide (as of March 31, 2017)



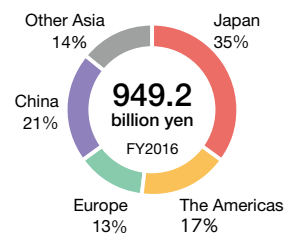
● Asia and Oceania

Countries and regions	Headquarters	Production Sites	Sales Sites	Representative Offices	R&D Centers
Japan	1	21	31		6
China	1	12	18	1	1
Taiwan			3		
Korea		2	2		1
Singapore	1		2		
Indonesia		3	2		
Thailand		2	6		1
Malaysia		2	4		
Philippines					1
Vietnam			1	1	
India	1	4	9		1
Australia			4		
New Zealand			1		
Sub-total	4	46	83	3	10

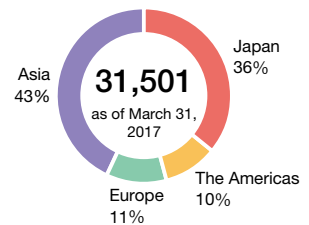
● The Americas

Countries and regions	Headquarters	Production Sites	Sales Sites	Representative Offices	R&D Centers
U.S.A.	1	7	10		1
Canada			3		
Mexico		1	1	1	
Brazil		1	5		1
Peru			1		
Argentina			1		
Sub-total	1	9	21	1	2

Breakdown of Net Sales, by Region (Based on customer location)



Breakdown of Employees, by Region (Consolidated)
* Excluding temporary employees



● Europe, Middle East and Africa

Countries and regions	Headquarters	Production Sites	Sales Sites	Representative Offices	R&D Centers
U.K.	1	4	2		1
Germany		1	2	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	2	3
Global total	6	64	119	6	15



Reference data is available on NSK's website.

www.nsk.com > Company > Global Network

● Global Network

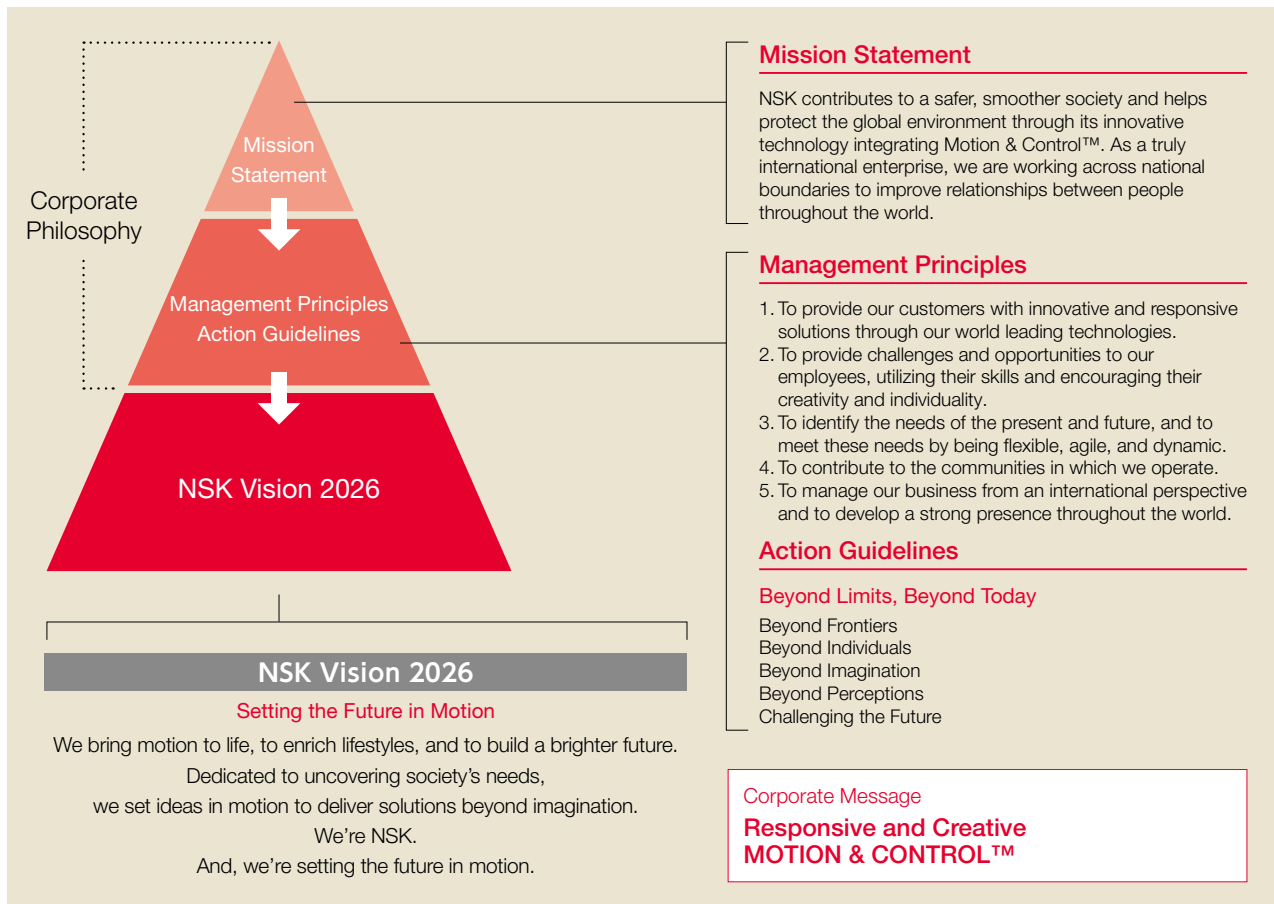
NSK Corporate Philosophy and NSK Vision 2026

The NSK Corporate Philosophy was established in 1991, on the occasion of the Company's 75th anniversary. At that time, more than 30 years had already passed since NSK began its expansion outside Japan, and the Company was well on its way to meeting the demands of the age of globalization, including localizing production and expanding its overseas sites. Aiming to become an excellent corporation in the 21st century, at a time when globalization was expected to advance even further, NSK set itself the goal of being "a company that is needed, loved, and respected in every region and country in the world." This goal—a statement of the kind of company NSK aspires to become—was articulated in the NSK Corporate Philosophy, formulated through extensive discussion and study within the Company.

The NSK Corporate Philosophy is comprised of four parts: a Mission Statement, Management Principles, a Corporate Message, and Action Guidelines. Founded on a belief that sharing, instilling, and practicing the Corporate Philosophy would be the key to realizing its Group-wide aim of being a truly outstanding global company, NSK has subsequently operated its business based on this Philosophy.

Today, however, as the social and market environment continues to shift dramatically, NSK recognizes that it must consistently create unique existential value in order to continue growing as a world-leading company that delivers ongoing high value to customers and society. Amidst the increasing diversification of products, services, and human resources, the NSK Group established a new vision, which spells out the approach that everyone working at the NSK Group should adopt in order to drive the creation of new value. The key to achieving this vision is bringing together the combined efforts of everyone on the NSK team.

In 2016, to mark the 100th anniversary of its founding, the Company formulated NSK Vision 2026, which expresses the ideal the Company aspires to reach over the medium- to long-term in order to remain a company that contributes to society and continues to grow. The NSK Group is committed to achieving further growth by working to realize NSK Vision 2026.



Reference data is available on NSK's website.

www.nsk.com > Company > Vision & Philosophy

● Vision & Philosophy

Ensuring All Employees Embrace the Corporate Philosophy and Vision

NSK has adopted a variety of initiatives to increase employees' understanding of the Corporate Philosophy and NSK Vision 2026 and ensure that these values are reflected during the course of their duties. These include visual methods such as installing posters in workplaces and distributing a handbook, the *NSK Starter Book*, which introduces NSK's history, DNA, Corporate Philosophy, and NSK Vision 2026. The company also shows videos about the vision at "Vision Workshops" at Group sites worldwide, where employees listen to a message from NSK's CEO, engage in group discussions about the need for the Vision while reflecting on their own experiences, and share their thoughts on what the NSK of 10 years' time should look like.

In 2016, the Company held the inaugural "NSK Corporate Philosophy Day," an occasion to reflect on past mistakes. Each year, NSK's CEO delivers a message to employees, an external instructor holds a lecture, and employees study the corporate philosophy and revisit the lessons learned from past compliance incidents.



NSK Vision 2026 Poster

Vision 2026 Office Established

To realize NSK Vision 2026, NSK established a new Vision 2026 Office under its CSR Division Headquarters in April 2017, tasked with disseminating the corporate philosophy and vision worldwide. The new office is working to ensure that the NSK Corporate Philosophy and NSK Vision 2026 are embraced across NSK's global sites. It is developing a range of initiatives and policies to make this happen in collaboration with departments including the Public Relations Department and the Human Resources Department.

The NSK Group's View of CSR

In 2015, the UN adopted the Sustainable Development Goals (SDGs) to form a framework which nations and societies can use to direct and measure their efforts to create a prosperous world for everyone. To achieve the SDGs, governments, companies, and citizens are called upon to join forces to solve problems facing the global community, including the eradication of poverty, reduction of inequality, and protection of the global environment.

NSK clearly avows in its mission statement that “creating a safer, smoother society” and “protecting the global environment” are integral factors in all of its operations. NSK officers and employees are firmly aware of NSK’s roles and responsibilities and embrace the company vision to contribute to the societies of today and tomorrow. The entire NSK team is working sincerely to expand the reach of its businesses and make social contributions in line with stakeholder expectations. The NSK Group will continue to pursue higher corporate value and sustainable growth by comprehensively working to fulfill its social responsibilities.

Relationship with the Global Community

NSK respects and takes into consideration international norms such as the SDGs adopted at the UN, which are the shared goals of the global community. It is NSK’s management policy and commitment always to think and take action with a global outlook.



NSK Group 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.

Customers

The NSK Group’s customers are companies that purchase NSK products and also the end users of the devices and machines that incorporate NSK products. The Group aims to earn customer satisfaction with safe, high-quality products and services that meet customer needs, and seeks customer input through technology exchanges and frequent communication from the sales team.

Suppliers

The NSK Group’s business is dependent upon numerous suppliers. The Group aims to ensure mutual growth by sharing with suppliers the needs of its customers and other stakeholders via procurement policy briefings, the routine exchange of information, and by cooperating with suppliers on initiatives such as technology development, quality improvement, the environment, and safety.

Shareholders and Investors

Shareholders and investors have an expectation that the NSK Group will keep growing, and the Group seeks to effectively communicate with these key stakeholders by disclosing business and financial information in a timely and appropriate manner. To ensure sustainable growth and increase corporate value, the Group seeks to increase the transparency and soundness of management and to practice business that is well-balanced in terms of society and environment.

Employees

Employees, who create NSK’s superior technology, services, and safe and high-quality products, are the foundation of its business success. Accordingly, the Group aims to create workplaces where all employees can work with enthusiasm. Toward that end, the company’s current situation and workplace issues are openly and constructively discussed in dialogues between labor and management and in communication amongst employees in an effort to solve issues through labor-management and inter-departmental cooperation.

Local Communities

NSK Group activities depend upon the understanding of the members of the communities in which it does business. The Group aims to be valued as a member of local communities by developing relationships, based on a high level of mutual understanding, through good communication with the members of the communities, understanding their needs, and contributing to their development.

Future Generations

The NSK Group sees children and students, the torchbearers of the future, as important stakeholders. The Group is working to one day hand over a rich environment and safe society to the next generation. The Group strives to help build a more sustainable society by supporting the growth of future generations through programs such as science classes and internships.

Helping to build a sustainable society

Improved corporate value of the NSK Group

NSK Group Initiatives

Environmental Initiatives

- Environmental Management P.64
- Creating Environmentally Friendly Products P.70
- Global Warming Countermeasures P.73
- Measures for Resource Conservation and Recycling P.78
- Reducing Use of Environmentally Harmful Substances P.82
- Biodiversity Conservation P.85

Social Initiatives

- Research and Development P.32
- Creating Quality That Can Be Trusted P.37
- Creating a Dynamic Work Environment P.45
- Working with Local Communities P.58

Governance Initiatives

- Corporate Governance P.14
- Risk Management P.20
- Compliance P.23
- Supply Chain Management P.29

Message from
the President

We aim to be a company that
creates new value and delivers
sustainable growth over the next
100 years.



Toshihiro Uchiyama

Toshihiro Uchiyama
Director, President and
Chief Executive Officer, NSK Ltd.

Celebrating 100 Years in Business

On November 8, 2016, NSK celebrated its 100th anniversary. We would not be here today without the support of our numerous stakeholders, including our customers, suppliers, local communities, and partners outside Japan. We would like to express our deep gratitude for this support from all our stakeholders.

In conjunction with our centenary, we have chosen “Setting the Future in Motion” as the key message of NSK Vision 2026, the roadmap for the type of company we aim to become in the mid- to long-term (see p. 6). By setting the future in motion, we aim to generate new levels of performance, functionality and value—not only for the customers we supply directly, but also the people who use the vehicles and home electronics in which our products are incorporated, as well as the end users of the industrial equipment, machines and systems that employ NSK products. But beyond that, we recognize that we must also generate new value in forms beyond the current imagination. We follow societal trends and consumer needs closely, and are working to leverage our Four Core Technologies (see p. 33) to generate new products and services.

New Mid-Term Management Plan

Fiscal 2016 was the first year of the NSK Group's Fifth Mid-Term Management Plan. With demand for industrial machinery in decline at the outset, the outlook was not as promising as we had hoped when drafting the plan. However, the situation began to turn around in the third quarter of 2016. Meanwhile, the automobile market in North America remained strong, while the number of vehicles produced in China rose sharply from the previous year due to the effect of tax incentives. Boosted by these market conditions, NSK reported stronger-than-forecast earnings for fiscal 2016.

Under the Fifth Mid-Term Management Plan, NSK is working diligently to improve profitability and strengthen competitiveness in each business division and region, under the motto of “operational excellence.” These efforts have already begun to show measurable results. However, profitability in the Industrial Machinery Business is still not at a satisfactory level, and we will continue to strengthen this area going forward. Although safety, quality and compliance are fundamental requirements for all manufacturing companies, NSK currently has room for improvement in its safety and quality performance, and is prioritizing efforts on this front.

Addressing ESG Issues

At the NSK Group, we are convinced that in order to grow sustainably, it is critical that we accurately gauge the tone of the times, and steadily work to improve our environmental (E), social (S), and governance (G) initiatives.

Environmental initiatives: The need to address climate change is more pressing than ever before. The international community came together to sign the COP21 Paris Agreement in 2015, rallying behind the goal of reducing CO₂ emissions to a net total of zero by the end of the century. Countries and regions around the world have introduced regulations to reduce CO₂ emissions and increase incentives to encourage the use of renewable energy, and competition to develop new technologies has gained momentum, especially in electric vehicles and wind power generation.

The NSK Group's bearings, automotive parts and precision machinery products help minimize energy loss and facilitate the efficient control of mechanical movements. Leveraging our Four Core Technologies, we believe our first mission is to develop more environmentally friendly products that can be employed around the world.

At NSK, we strive to contribute to the environment through both our products and manufacturing methods, aiming to reduce environmental impact in our production processes by improving production efficiency, installing energy-saving equipment, and switching to cleaner energy sources. In order for NSK to attain sustained growth, we understand we must be more proactive and attuned to the global societal goal of achieving a sharp reduction in CO₂ emissions. NSK is determined to address global environmental concerns, as set out in our corporate philosophy. To achieve this goal, we are investing more heavily than in the past.

Social initiatives: Our main focus here is on diversity and inclusion. Organizations composed of people with similar backgrounds and mindsets tend to exhibit conformist, homogenous behavior. However, in a rapidly changing world where uncertainty is the norm, there are limits to what can be accomplished with homogeneous value systems and ways of thinking. In order to remain a company that is highly regarded and welcomed by society and customers, we must respond and adapt to the many changes occurring around the world. Diversity is an asset that will help us achieve this. I believe that having people with a range of different opinions debate and discuss problems will lead to better decisions and outcomes on important matters. At the NSK Group, we strongly believe that this is the best way to operate our business.

To achieve greater diversity and inclusion at NSK—especially with regard to gender, age, and nationality—we are working to ensure that everyone in the Group, including both executive officers and regular employees, understands how important these values are. At NSK, we are committed to building an organization and a culture where everyone recognizes the importance of a diverse workforce and actively embraces this principle.

Governance initiatives: Ever since the introduction of Japan's Corporate Governance Code, attention has focused on the importance of succession planning for top management and developing the next generation of managers. In the past, most companies were exclusively controlled by the CEO, but in the future, companies will have to be more transparent and explain the decision-making process for nominating and selecting successors to the CEO position. NSK has adopted a Company with Three Committees structure. I had previously headed the Nominating Committee as NSK's president and CEO, but since the June 2017 Ordinary General Meeting of Shareholders, an independent director has taken over this role. Under this new system, a clear set of qualification requirements for the NSK Group CEO will be incorporated into both our succession planning* and human resource development programs.

In fiscal 2015 and fiscal 2016, the same external consultant evaluated the effectiveness of the Board of Directors and provided an assessment of progress made over the past two years. This assessment was communicated to all directors based on a predetermined reporting process. NSK's Board of Directors was commended for its improvement in ensuring livelier debates as a result of reviewing the matters put for debate and discussion by the Board of Directors, increasing the length of time allocated for debate, and working harder to make sure all of the directors are well informed prior to meetings. By having the opportunity to visit business sites inside and outside Japan, NSK's independent directors gained a better understanding of the Company's business conditions and key tasks, which has led to deeper discussions and a greater sense of unity at Board of Directors meetings. However, the consultant also raised issues requiring improvement, including greater awareness of the role that the Board of Directors should play in ensuring sustainable growth and improving corporate value over the mid- to long-term, increasing diversity on the Board of Directors, and reconsidering the ratio of external to internal directors. NSK will continue working to improve the effectiveness of its Board of Directors, taking into consideration a range of opinions and the results of self-assessments made by each director (see p. 17).

*Succession plan: A plan that sets out procedures for responding to emergency situations, and serves as a roadmap for the development of top management successor candidates in a manner that reflects the group's mid- to long-term priorities.

Helping to Build a Sustainable World

The United Nations Sustainable Development Goals (SDGs) were adopted at the United Nations General Assembly in September 2015. The SDGs are a set of 17 goals that government bodies, companies, and civic organizations around the world are collectively requested to help achieve (see p. 8).

We believe the United Nations created these goals with the intention of improving the welfare and happiness of people around the world, as the organization has thus far striven to achieve through its initiatives in regions around the world. From the latter half of the

20th century to the present day, unsustainable development has been the reality around the world. In addition to causing environmental problems, this has led to disparities between regions as well as other problems such as the use of child labor in developing countries. Accordingly, we realize that it is more important than ever to focus on sustainable development. While the 17 SDGs are all reasonable goals, figuring out which of them we should aim to address in our corporate activities has posed quite a challenge. Our products, services and business activities directly help to address certain SDGs, while other SDGs are more closely related to our social contribution priorities.

Our initiatives to promote science and support education as an investment in the next generation, which we see as a key stakeholder group, help to contribute to SDG 4: *Quality Education*. For example, NSK holds children's science classes as well as operates the NSK Foundation for the Advancement of Mechatronics, which supports the education of engineers. NSK also established the NSK Scholarship Foundation in conjunction with our 100th anniversary. The Foundation has already begun awarding scholarships to undergraduates and graduate students in Japan wishing to study abroad, as well as assisting science and engineering students from Asian countries, particularly the ASEAN region, to study in Japan (see p. 60).

NSK's products and services help to address SDG 7: *Affordable and Clean Energy*, and we are working to make further improvements in this area. This includes conducting research aimed at increasing the energy-efficiency of the types of machinery in which our products are incorporated, and developing products used in wind power generation. Addressing SDG 9: *Industry, Innovation and Infrastructure*, we have established production, marketing, and development facilities across the globe in a bid to increase the sophistication of our products, which are indispensable to a variety of industries. In doing so we seek to meet market needs across different countries and regions while ensuring a stable supply (see p. 5).

With respect to SDG 12: *Responsible Consumption and Production*, the NSK Group is taking measures at each of the four stages in the product lifecycle to reduce environmental impact (see pp. 64 to 87), starting with environmental measures at the parts and materials procurement stage and continuing through the manufacturing stage (changes to products and manufacturing processes), the logistics stage (modal shift and active efforts to improve efficiency), and the end-user stage (energy savings, resource conservation, and post-use recycling).

At NSK, we are responding to establishment of the SDGs by changing the way we carry out product development, run our businesses, locate our production sites, and operate our manufacturing plants. We are committed to doing our part in realizing these global goals.

Envisioning the Future to Create New Social Value

NSK has established Vision 2026 as its vision for the next decade. Within the context of changes in the business environment over a period that extends beyond this plan and our growth strategies in response to these changes, we believe that the major technological trends in the Automotive Business will be the popularization of electric vehicles, increasing vehicle electrification, and autonomous driving. In the field of industrial machinery, we are seeing rapid advances in technologies related to IoT, artificial intelligence, robotics, alternative materials, metallic lamination technology, and 3D printing. The industrial machinery sector itself, along with the practice of *monozukuri* (quality manufacturing) that relies on such machinery, is headed for momentous changes. In addition, breakthroughs in the technologies needed to achieve a low-carbon, recycling-oriented society are triggering huge changes in the industrial structure, and we are watching these trends closely.

While it is true that such changes entail some risks to NSK, considering the advanced new technologies that are being called for it is clear that this shift also presents NSK with great opportunities. We cannot simply stand by, waiting for customers or other external parties to tell us what they want—we must proactively propose unique solutions. We see this as the key to our future growth. At NSK, we aim to be an enterprise that leverages the many technologies we have developed throughout our history as well as our strong business base to generate new value that makes a meaningful contribution to society.

Fiscal 2016 CSR Activity Performance and Fiscal 2017 Targets

Category		FY2016 target
Governance (Management Structure Supporting Sustainable Growth)		
Corporate Governance	Strengthening of corporate governance	<ul style="list-style-type: none"> ● Create a more effective corporate governance structure driven by management by the Board of Directors
Risk Management	Development of group crisis management systems	<ul style="list-style-type: none"> ● Build crisis management systems and instill management cycles
	Disaster preparedness	<ul style="list-style-type: none"> ● Preparedness for large-scale earthquakes in Japan Improve BCP effectiveness against large-scale earthquakes (Expansion of scope of training and implementation of measures for issues) ● Disaster preparedness outside Japan Clarify the response structure and implement measures to minimize damage from severe disaster risks
	Measures against procurement risk	<ul style="list-style-type: none"> ● Continue to develop replacements for parts ● Visualize global supply chain data and continue improving accuracy ● Continue conducting drills to confirm the safety of suppliers ● Continue to expand BCP measures to suppliers
Compliance	Strengthening of compliance	<ul style="list-style-type: none"> ● Strengthen awareness building to prevent the cartel incident from fading from memory ● Establish a new compliance culture ● Improve compliance awareness at Group companies ● Expand scope of regions included in the compliance awareness survey outside Japan
	Promotion of CSR procurement	<ul style="list-style-type: none"> ● Distribute the NSK Supplier CSR Guidelines worldwide ● Improve activities using the NSK Supplier CSR Guidelines and the Self-Assessment Check-Sheets ● Continue to conduct and respond to conflict mineral surveys (supply chain surveys, response to customers' surveys)
	Security export	<ul style="list-style-type: none"> ● Improve export control system for automotive parts
Quality Assurance (Creating Quality to Earn the Confidence of Society)		
Improving Quality		<ul style="list-style-type: none"> ● Foster quality-first culture and human development ● Enhance preventive quality monitoring and auditing ● Reassert strict adherence to quality control basic matters ● Enhance site control ability based on 5-GEN Principle
Good Labor Practices (Creating a Dynamic Work Environment)		
Providing Opportunities and Workplaces that Foster the Growth of Employees		<ul style="list-style-type: none"> ● Make the most of diverse human resources
Creating Safe and Healthy Workplaces		<ul style="list-style-type: none"> ● Create environments where employees can work with vitality ● Provide opportunities and workplaces that foster the growth of employees
Working with Local Communities (Social Contributions Targeting Community Development)		
Social Contributions Targeting Community Development		<ul style="list-style-type: none"> ● Take measures to invigorate social contributions
Environment (Activities for Global Environment Protection / Environmental Voluntary Action Plan)		
Environmental Management	Acquisition and maintaining of environmental management system certification	<ul style="list-style-type: none"> ● Maintain ISO 14001 certification at all subject sites (respond to FY2015 revisions) ● Obtain ISO 14001 certification within three years of starting full-scale operations at a site
	Measures for complying with environmental laws and regulations and coping with environmental risks	<ul style="list-style-type: none"> ● Zero instances in which emissions standards are exceeded ● Zero instances of oil and other leakage-related environmental accidents
Creating Environmentally Friendly Products		<ul style="list-style-type: none"> ● Create environmentally friendly products and technologies
Global Warming Countermeasures	Reduction of CO ₂ emissions per production unit (saving energy)	<ul style="list-style-type: none"> ● In Japan (Manufacturing): Reduce CO₂ emissions per production unit by 9.3% (base year: FY2011) ● Outside Japan (Manufacturing): Reduce CO₂ emissions per production unit by 33.8% (base year: FY2011)
	Reduction of CO ₂ emissions	<ul style="list-style-type: none"> ● In Japan (Manufacturing): Reduce CO₂ emissions to no more than FY2011 level
	Distribution	<ul style="list-style-type: none"> ● In Japan: Reduce CO₂ emissions per ton-kilometer by 10.4% (base year: FY2011)
Effective Utilization of Resources	Development/Design/Manufacturing	<ul style="list-style-type: none"> ● In Japan: Continue to reduce waste of resources by changing machining processes ● In Japan: Maintain zero emissions ● In Japan: Maintain a waste recycling rate of 100% ● Outside Japan: Achieve a waste recycling rate 96.6% or more
	Manufacturing	<ul style="list-style-type: none"> ● In Japan: Reduce industrial waste emissions per production unit by 27.5% or more (base year: FY2011) ● In Japan: Reduce water withdrawal per production unit by 21.5% (base year: FY2011) ● Outside Japan: Reduce water withdrawal per production unit by 26.8%
	Distribution	<ul style="list-style-type: none"> ● In Japan: Reduce packaging material waste per production unit by 19.0% (base year: FY2007)
Proper Management of Environmentally Harmful Substances		<ul style="list-style-type: none"> ● Conduct on-site audits at key suppliers ● Investigate status of NSK List of Environmentally Harmful Substances at suppliers ● In Japan: Reduce handling of PRTR-designated substances per production unit by 24.6% from FY2011
Biodiversity Conservation		<ul style="list-style-type: none"> ● Develop initiatives for preserving biodiversity through social contribution activities

* For targets by FY2018, please see Mid-Term Goals (FY2016-2018) in each chapter.
* Some activity items and fiscal 2016 targets have been revised.

Achieved Partially achieved Not achieved

Performance in FY2016	Evaluation	FY2017 target	Page
<ul style="list-style-type: none"> Made progress on issues to improve effectiveness of management by the Board of Directors and of the Nominating, Audit, and Compensation Committees 	●	<ul style="list-style-type: none"> Continue to strengthen the corporate governance structure 	pp. 15-19
<ul style="list-style-type: none"> Built crisis management systems and instilled management cycles 	●	<ul style="list-style-type: none"> Continue to instill management cycles 	
<ul style="list-style-type: none"> Expanded scope of BCP training for large-scale earthquakes and implemented measures for issues 	●	<ul style="list-style-type: none"> Prepare for disasters other than earthquakes (e.g., wind and flood damage, new infectious diseases) 	
<ul style="list-style-type: none"> Strengthened structure by appointing persons with responsibility in each region 	▲	<ul style="list-style-type: none"> Implement measures to minimize damage from severe disaster risks 	pp. 20-22
<ul style="list-style-type: none"> Made progress continuing to develop replacement parts 	●	<ul style="list-style-type: none"> Continue to develop replacements for parts 	
<ul style="list-style-type: none"> Made progress in China and ASEAN on initiatives to visualize global supply chain data and improve accuracy 	●	<ul style="list-style-type: none"> Continue to visualize global supply chain data and continue improving accuracy 	
<ul style="list-style-type: none"> Conducted safety confirmation drills using a supplier safety verification system 	●	<ul style="list-style-type: none"> Continue conducting drills to confirm the safety of suppliers 	
<ul style="list-style-type: none"> Requested main suppliers to formulate BCPs and confirmed status of initiatives 	●	<ul style="list-style-type: none"> Continue to expand BCP measures to suppliers 	
<ul style="list-style-type: none"> Established an NSK Corporate Philosophy Day and started initiatives to reaffirm lessons from the anti-competitive incident 	●	<ul style="list-style-type: none"> Continue awareness building to prevent the anti-competitive incident from fading from memory 	
<ul style="list-style-type: none"> Periodically distributed compliance-focused policies within the Group as a message from the president 	●	<ul style="list-style-type: none"> Establish a compliance culture through activities to instill corporate philosophy 	
<ul style="list-style-type: none"> Conducted compliance training for Group companies and affiliated companies 	●	<ul style="list-style-type: none"> Strengthen activities to improve compliance awareness at Group companies 	
<ul style="list-style-type: none"> Expanded scope of the compliance awareness survey to regions outside Japan; 8,499 persons participated 	●	<ul style="list-style-type: none"> Expand the scope of persons included in the compliance awareness survey in regions outside Japan 	
<ul style="list-style-type: none"> Partially revised the Japanese, English, and Chinese versions of the Supplier CSR Guidelines Europe: Made progress distributing to suppliers Japan: Requested enhancement of initiatives at procurement policy briefings 	●	<ul style="list-style-type: none"> Continue to distribute the NSK Supplier CSR Guidelines worldwide 	pp. 23-31
<ul style="list-style-type: none"> Conducted surveys in Japan and Europe using the Self-Assessment Check-Sheets and fed results back 	●	<ul style="list-style-type: none"> Continue to improve activities using the NSK Supplier CSR Guidelines and the Self-Assessment Check-Sheets 	
<ul style="list-style-type: none"> Continued to conduct supply chain surveys Continued to respond to customers' surveys 	●	<ul style="list-style-type: none"> Continue to conduct and respond to conflict minerals surveys (supply chain surveys, response to customers' surveys) 	
<ul style="list-style-type: none"> Returned to a basic quality-first commitment through all-hands activities to raise quality awareness 	●	<ul style="list-style-type: none"> Foster quality-first culture and human development 	
<ul style="list-style-type: none"> Corrected processes down to the essence in order to prevent recurrence 	●	<ul style="list-style-type: none"> Enhance preventive quality monitoring and auditing 	pp. 37-44
<ul style="list-style-type: none"> Redeveloped systematic quality rules and implemented practical training 	▲	<ul style="list-style-type: none"> Reassert strict adherence to quality control basic matters 	
<ul style="list-style-type: none"> Implemented site-specific improvements through category-based workplace patrols and two-way communication in workplaces 	▲	<ul style="list-style-type: none"> Enhance site control ability based on 5-GEN Principle 	
<ul style="list-style-type: none"> Enhanced programs to develop human resources with a global mindset, strengthened diversity and inclusion initiatives, supported women's career advancement to management candidate positions 	●	<ul style="list-style-type: none"> Continue support women's careers 	
<ul style="list-style-type: none"> Established the Safety and Fire-Prevention Enhancement Committee and continued to train safety assessors 	●	<ul style="list-style-type: none"> Strengthen health management (Japan) Enhance support measures for parenting and care giving (Japan) 	pp. 45-47
<ul style="list-style-type: none"> Held the NSK Global Management College with an expanded scope (19 countries, up from 17) and continued to promote language education 	●	<ul style="list-style-type: none"> Apply and share succession plans 	
<ul style="list-style-type: none"> Established Oct.-Dec. as a Social Contribution Action Period Each worksite carried out measures 	●	<ul style="list-style-type: none"> Take measures to invigorate social contributions 	pp. 58-62
<ul style="list-style-type: none"> Maintained certification at all subject sites Responded to FY2015 revisions 	●	<ul style="list-style-type: none"> Maintain ISO 14001 certification at all subject sites (respond to FY2015 revisions) 	
<ul style="list-style-type: none"> Not applicable 	—	<ul style="list-style-type: none"> Obtain ISO 14001 certification within three years of starting full-scale operations at a site 	pp. 64-69
<ul style="list-style-type: none"> One instance of drainage standards being exceeded at a site in ASEAN 	✗	<ul style="list-style-type: none"> Zero instances in which emissions standards are exceeded 	
<ul style="list-style-type: none"> Zero instances of oil and other leakage-related environmental accidents 	●	<ul style="list-style-type: none"> Zero instances of oil and other leakage-related environmental accidents 	
<ul style="list-style-type: none"> Created eight environmentally friendly products 	●	<ul style="list-style-type: none"> Create environmentally friendly products and technologies 	pp. 70-72
<ul style="list-style-type: none"> In Japan (Manufacturing): Reduced CO₂ emissions per production unit by 10.2% (base year: FY2011) 	●	<ul style="list-style-type: none"> In Japan (Manufacturing): Reduce CO₂ emissions per production unit by 10.2% (base year: FY2011) 	
<ul style="list-style-type: none"> Outside Japan (Manufacturing): Reduced CO₂ emissions per production unit by 33.2% (base year: FY2011) 	✗	<ul style="list-style-type: none"> Outside Japan (Manufacturing): Reduce CO₂ emissions per production unit by 34.5% (base year: FY2011) 	pp. 73-77
<ul style="list-style-type: none"> Reduced CO₂ emissions by 0.2% (base year: FY2011) 	●	<ul style="list-style-type: none"> In Japan (Manufacturing): Reduce CO₂ emissions to no more than FY2011 level 	
<ul style="list-style-type: none"> CO₂ emissions per ton-kilometer increased by 11.4% (base year: FY2011) 	●	<ul style="list-style-type: none"> In Japan: Reduce CO₂ emissions per ton-kilometer by 11.3% (base year: FY2011) 	
<ul style="list-style-type: none"> In Japan: Reduced waste of resources as planned by changing machining processes 	●	<ul style="list-style-type: none"> In Japan: Continue to reduce waste of resources by changing machining processes 	
<ul style="list-style-type: none"> In Japan: Maintained zero emissions (landfill disposal rate was 0.0001%) 	●	<ul style="list-style-type: none"> In Japan: Maintain zero emissions 	
<ul style="list-style-type: none"> In Japan: Recycling rate was 100% 	●	<ul style="list-style-type: none"> In Japan: Maintain a waste recycling rate of 100% 	
<ul style="list-style-type: none"> Outside Japan: Recycling rate was 96.3% 	●	<ul style="list-style-type: none"> Outside Japan: Achieve a waste recycling rate 97.1% or more 	
<ul style="list-style-type: none"> In Japan: Reduced industrial waste emissions per production unit by 30.3% (base year: FY2011) 	●	<ul style="list-style-type: none"> In Japan: Reduce industrial waste emissions per production unit by 28.5% or more (base year: FY2011) 	pp. 78-81
<ul style="list-style-type: none"> In Japan: Reduced water withdrawal per production unit by 27.0% (base year: FY2011) 	●	<ul style="list-style-type: none"> In Japan: Reduce water withdrawal per production unit by 22.3% (base year: FY2011) 	
<ul style="list-style-type: none"> Outside Japan: Reduced water withdrawal per production unit by 24.3% (base year: FY2011) 	✗	<ul style="list-style-type: none"> Outside Japan: Reduce water withdrawal per production unit by 27.6% 	
<ul style="list-style-type: none"> Reduced packaging material waste per production unit by 23.3% (base year: FY2011) 	●	<ul style="list-style-type: none"> In Japan: Reduce packaging material waste per production unit by 19.9% (base year: FY2007) 	
<ul style="list-style-type: none"> In Japan: Conducted audits at 41 key suppliers Outside Japan: Conducted audits at 59 key suppliers 	●	<ul style="list-style-type: none"> Conduct on-site audits at key suppliers 	
<ul style="list-style-type: none"> In Japan: Investigated at 290 suppliers Outside Japan: Investigated at 214 suppliers 	●	<ul style="list-style-type: none"> Investigate status of NSK List of Environmentally Harmful Substances at suppliers 	pp. 82-84
<ul style="list-style-type: none"> Reduced handling of PRTR-designated substances per production unit by 29.4% from FY2011 	●	<ul style="list-style-type: none"> In Japan: Reduce handling of PRTR-designated substances per production unit by 25.6% from FY2011 	
<ul style="list-style-type: none"> Conducted forest maintenance experience at four plants 	●	<ul style="list-style-type: none"> Develop initiatives for preserving biodiversity through social contribution activities 	pp. 85-87

Chapter
1

Governance

Management Structure Supporting Sustainable Growth

Any company worthy of the trust and hopes of society must exercise strong corporate governance. Strengthening governance systems and practicing sound, highly transparent management also serve to increase corporate value.

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Corporate Governance

Basic Approach

NSK believes that the establishment and maintenance of systems that ensure transparent, fair and timely decision-making is essential in order to raise our corporate value in a sustainable manner.

To realize this objective, we are working to enhance our corporate governance systems based on the following four guiding principles.

● Policy on Corporate Governance Systems

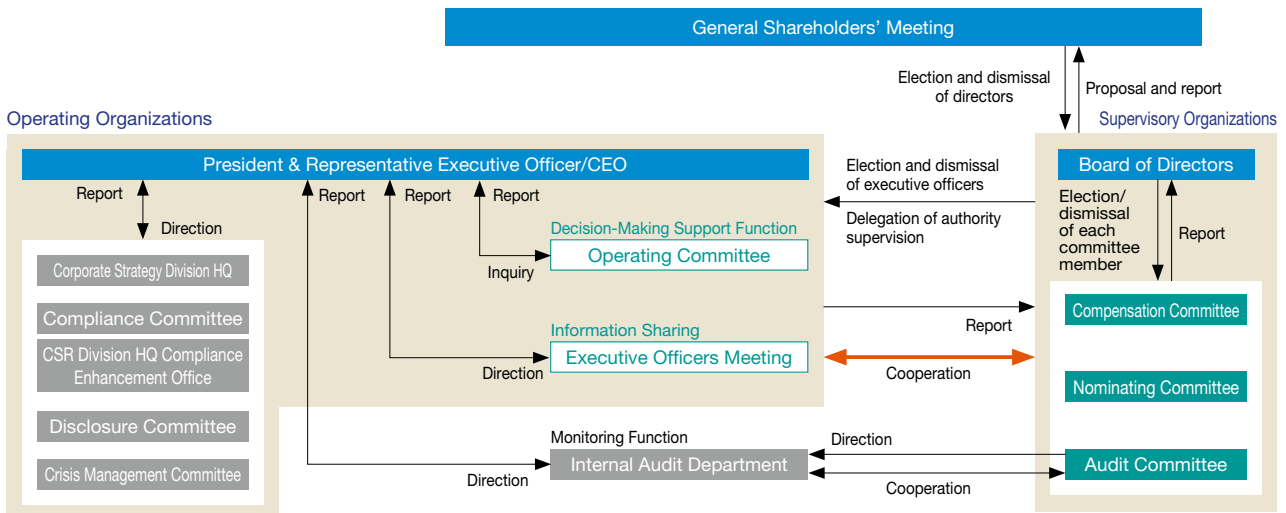
- (1) To increase the efficiency and agility of management by proactively delegating decision-making authority regarding the execution of operations from the Board of Directors to the Company's executive organizations.
- (2) To establish sound oversight of the executive organizations by supervisory organizations through the separation of the former and the latter.
- (3) To strengthen supervisory organizations' oversight of the executive organizations through cooperation between the former and the latter.
- (4) To improve the fairness of management by strengthening compliance systems.

NSK has articulated this basic approach to corporate governance and its structure in its Corporate Governance Rules, which guide the directors and executive officers in the performance of their duties.

Corporate Governance Structure

NSK has adopted a Company with Three Committees system as its form of corporate organization to better achieve the aforementioned basic approach. By clearly defining the executive and supervisory roles, the Company aims to increase management soundness and transparency and to practice swift, fair and decision-making.

● Corporate Governance Structure (as of July 2017)



Effectiveness of the Supervisory Function

The Board of Directors determines basic management policies and other matters with the goal of contributing to the sustainable, long-term growth of the NSK Group's corporate value. As a supervisory body, it appropriately supervises executive officers in the performance of their duties. To strengthen its supervisory function, the Board has established a Nominating Committee, Audit Committee, and Compensation Committee, each of which is comprised of a majority of independent directors, and assigned each committee independent authority to decide important matters concerning the Company's management.

Board of Directors

NSK's Board of Directors consists of 12 directors, including non-independent directors who possess a thorough knowledge of business and industry, and independent directors who are expected to provide objective advice and play a supervisory role from the perspective of external stakeholders. In principle, independent directors are to comprise at least one third of the Board. The Board of Directors elects one chairperson and two vice-chairpersons, with the requirement that one of the vice-chairpersons must be an independent director.

In the fiscal year ended March 31, 2017, the Board of Directors met 10 times, with a 95% attendance rate among independent directors.

Composition of the Board of Directors (as of July 2017)

	Male	Female
Executive directors	7	—
Non-executive directors	1	—
Independent directors*	4	—

* All four independent directors meet the criteria for independence

Policy Regarding the Appointment of Directors

NSK's Board of Directors is expected to play an effective supervisory role in order to contribute to the sustainable, long-term growth of the NSK Group's corporate value, based on business conditions and an outside stakeholder's perspective. For this reason, NSK's directors are required not only to have deep knowledge of the Company's overall business and management and specialized fields, but also to possess high managerial ethics and deep insight into corporate governance, as well as the capacity for objective judgment needed to supervise the execution of business.

The composition of the Board of Directors takes into account career diversity and balance including the expertise and business experience of each director, and its size appropriately reflects that. In addition, when electing Board members, the Company does not unjustly discriminate based on race, ethnicity, gender, nationality and such other factors.

Supplementary Requirements Regarding the Independence of Independent Directors

NSK has set specific standards for independence, which are used as criteria when appointing independent directors. By applying these standards, NSK mitigates the risk that a candidate might have a special relationship with the Company's management or its principal shareholders, or a conflict of interest with general shareholders. When making appointments, the Company also checks to make sure candidates will be able to secure enough time to fulfill their duties as NSK directors in accordance with company rules.

Each NSK independent director meets this criterion relating to independence established by NSK as well as independence criteria established by the Tokyo Stock Exchange, and each has been reported to the Tokyo Stock Exchange as an independent officer.

Criteria for Independence of Independent Directors

The following persons are ineligible to become independent director candidates of NSK Ltd. (NSK).

- 1) Persons holding positions at a company which constituted 2% or more of the previous year's consolidated sales of NSK, or persons who held such a position until recently.
- 2) Persons holding positions at a company which made 2% or more of its previous year's consolidated sales to NSK or a subsidiary of NSK, or persons who held such a position until recently.
- 3) Persons holding positions at a financial institution which NSK relies on for funding, or persons who held such a position until recently.
- 4) Consultants, accounting or legal professionals receiving significant financial compensation in addition to compensation for the NSK independent director position, or persons who held such a position until recently.
- 5) Persons belonging to a company or organization which held 10% or more of NSK's total stock at the end of the most recent financial reporting period, or persons belonging to such a company or organization until recently.
- 6) Persons belonging to a company or organization of which NSK holds 10% or more of the total shares outstanding at the end of the most recent financial reporting period, or persons belonging to such a company or organization until recently.
- 7) Relatives within the second degree, or family members living in the same household as persons specified in items 1) to 6) (excluding non-key posts). ("Key posts" are generally assumed to refer to executive or senior managers of relevant companies or trading partners, chartered public accountants belonging to relevant audit firms, and legal professionals belonging to relevant legal firms).
- 8) Persons who hold executive positions at NSK or a subsidiary of NSK, or relatives within the second degree or family members living in the same household of persons who held such positions until recently.

The wording "recently" in the items above shall be assumed to be a period of three years or less from the date NSK elects directors.



Reference data is available
on NSK's website.

www.nsk.com > Investors > Stock & Bond Information > General Meeting of Shareholders

● The 156th Ordinary General Meeting of Shareholders (June 23, 2017)

Effectiveness of the Board of Directors

NSK's Board of Directors is evaluated by outside experts each year to verify whether the Board is properly fulfilling its role of raising corporate value in a sustainable manner while working to further improve its own effectiveness. The fiscal 2016 evaluation concluded that the Board of Directors had properly fulfilled its supervisory role and had effectively functioned as a mechanism for conducting transparent, fair and appropriate decision-making. The results confirmed that, in response to the previous fiscal year's evaluation, steady progress has been made in improving the Board of Directors' effectiveness. The Company will continue to improve the effectiveness of its Board in order to contribute to the further improvement of corporate value by holding effective, long-term, strategic discussions.

Training for Officers

Training on NSK's business, financial, and governance matters, applicable laws and regulations such as Japan's Companies Act, and other topics is provided to officers as needed, such as at the time of appointment. In addition, detailed explanations are given in advance regarding the agenda of board meetings to encourage lively discussion at board meetings. Visits to business sites in different locations are conducted with the aim of allowing independent directors to deepen their knowledge of matters particular to the NSK Group.

■ Nominating Committee

The Nominating Committee consists of three members: one non-independent director and two independent directors, with an independent director serving as the chairperson. The committee's primary function is to determine director candidates for election by shareholders, and it strives to ensure the transparency and effectiveness of the process for determining director candidates.

In the year ended March 2017, the Nominating Committee was convened six times. The attendance rate for independent directors was 100%.

■ Audit Committee

The Audit Committee consists of three members: one non-independent director who is not concurrently an executive officer and two independent directors, with an independent director serving as the chairperson. The Audit Committee is responsible for auditing the business duties of directors and executive officers, preparing audit reports, and determining the content of proposals regarding the election and dismissal of financial auditors to be submitted for deliberation at the general meeting of shareholders. It also conducts audits of compliance with provisions of the Companies Act and the governance and business risk management of the NSK Group in collaboration with the Internal Audit Department.

NSK has established a full-time secretariat to assist the Audit Committee, which conducts audits in cooperation with the Internal Audit Department.

In the year ended March 2017, the Audit Committee met 15 times. The attendance rate for independent directors was 100%.

■ Compensation Committee

The Compensation Committee consists of three members: one non-independent director and two independent directors, with an independent director serving as the chairperson. The Compensation Committee determines policies on the remuneration of directors and executive officers, as well as matters such as the individual remuneration of directors and executive officers.

In the year ended March 2017, the Compensation Committee was convened five times. The attendance rate for independent directors was 100%.

Policy and Record Regarding Officer Compensation

Compensation for NSK's officers consists of fixed compensation, performance-based salary, stock options, and retirement benefits. However, at the Compensation Committee meeting held on May 16, 2016, the committee decided to introduce a stock compensation plan and to abolish the stock option and retirement benefits systems.

The new compensation package for NSK's officers consists of basic compensation, which includes fixed compensation, a performance-based salary that fluctuates, and stock compensation. Directors' compensation and executive officers' compensation are separately determined. When a director also serves as an executive officer, the total of the compensation for both positions is paid.



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 Library

● Securities Report (only in Japanese)

Total Amount of Officer Compensation

1. Director's compensation: The directors' compensation package consists of basic compensation and stock compensation.

- (1) **Basic compensation:** Basic compensation is determined based on whether the director is an independent director or a non-independent director in addition to the director's role on committees to which the director belongs and the Board of Directors.
- (2) **Stock compensation:** To further enhance the commitment of directors to achieving sustainable growth in corporate value, NSK introduced a stock compensation program using a Board Benefit Trust system. Under the program, NSK grants directors shares of NSK stock at retirement based on a point system whereby points are awarded depending on whether the director is independent or non-independent and according to the value of the stock. However, for a certain portion of those shares, NSK provides directors with monetary compensation acquired by converting NSK shares into cash. For directors who concurrently serve as executive officers, stock compensation is not provided for the director position.

2. Executive officer's compensation: The executive officer compensation package consists of basic compensation, a performance-based salary and stock compensation.

- (1) **Basic compensation:** For basic compensation, the amount is determined according to the title of the executive officer. Moreover, an additional amount will be paid to executive officers with representation rights.
- (2) **Performance-based salary:** The total amount of performance based salary is calculated using the consolidated sales operating income margin and the consolidated ROE targeted in the Company's mid-term management plan, as well as the operating income margin and cash flow for the fiscal year under review, and an index to evaluate contribution to quality improvement. When determining the compensation amount for individual executive officers, performance against the requirements of the rank in question and achievements in the specific assignment are evaluated.
- (3) **Stock compensation:** To further enhance the commitment of executive officers to achieving sustainable growth in corporate value, NSK introduced a stock compensation program using a Board Benefit Trust system. Under the program, NSK grants executive officers shares of NSK stock at retirement based on a point system whereby points are awarded depending on the title of the executive officer and according to the value of the stock. However, for a certain portion of those shares, NSK compensates executive officers with monetary compensation acquired by converting NSK shares into cash.

● Total Compensation Paid for the Year Ended March 2017

Classification	Total of Compensation, etc.	Fixed Compensation		Performance-Based Salary		Stock Compensation		Stock Options		Retirement Benefits	
		No. of Directors/Officers	Amount	No. of Directors/Officers	Amount	No. of Directors/Officers	Amount	No. of Directors/Officers	Amount	No. of Directors/Officers	Amount
Directors (Non-independent)	¥164 million	11	¥132 million	—	—	2	¥11 million	8	¥18 million	1	¥1 million
Directors (Independent)	¥60 million	4	¥43 million	—	—	4	¥6 million	4	¥10 million	—	—
Executive Officers	¥1,860 million	36	¥814 million	32	¥604 million	35	¥242 million	35	¥159 million	28	¥39 million

* Compensation (excluding stock compensation and retirement benefits) for directors (non-independent) includes compensation for directors who also serve as executive officers.

* The previous compensation package for officers of NSK comprised basic (fixed) compensation, performance-based salary, a stock option program (share subscription rights) and retirement benefits. However, at the Compensation Committee meeting held on May 16, 2016, it was decided to introduce a stock compensation program and end the stock option and retirement benefit programs.

* The amount of performance-based salary is the planned payment amount as of July 3, 2017, based on the results for the year ended March 31, 2017. The amount of performance-based salary as of July 1, 2016, based on the results for the year ended March 31, 2016, was ¥632 million.

* In the Board Benefit Trust system, the amount of stock compensation is commensurate with the number of points awarded for the fiscal year and booked as costs.

* The amount of stock options shown is equivalent to the cost recognized during the fiscal year within compensation related to share subscription rights that were allocated as stock options on August 22, 2014, and August 21, 2015.

* The amount of the retirement benefit shown represents accrued officers' retirement benefits during the period from April to June 2016, when the system was discontinued. Retirement benefits were ¥69 million for one director and ¥457 million for seven executive officers who retired during the fiscal year.

* Figures listed above are rounded down to one million yen.

● Compensation by Officer

Name	Total of Consolidated Compensation, etc.,	Title	Company	Amount of Each Type of Consolidated Compensation, etc.				
				Fixed Compensation	Performance-Based Salary	Stock Compensation	Stock Options	Retirement Benefits
Toshihiro Uchiyama	¥136 million	Director	NSK Ltd	¥7 million	—	—	¥1 million	—
		Executive officer	NSK Ltd	¥42 million	¥45 million	¥23 million	¥14 million	¥2 million
Adrian Browne	¥133 million	Executive officer	NSK Ltd	¥65 million	¥45 million	¥1 million	¥4 million	¥16 million
Jürgen Ackermann	¥109 million	CEO	Consolidated subsidiary NSK Europe Ltd.	¥53 million	¥50 million	¥1 million	—	¥3 million
Steven Beckman	¥159 million	CEO	Consolidated subsidiary NSK Americas Inc.	¥52 million	¥104 million	¥1 million	—	¥0 million

* Only officers whose total consolidated compensation is ¥100 million or higher are listed.

Strengthening the Business Execution Function

As a Company with Three Committees, NSK has actively delegated decision-making for business execution to its executive officers in an effort to improve management efficiency and flexibility. With regard to its operating organizations, the Company has established a system under which 35 executive officers execute business under the direction of the CEO in accordance with the duties set by the Board of Directors.



Reference data is available on NSK's website.

www.nsk.com > Investors > IR Library

● Securities Report (only in Japanese)

■ Operating Committee

The Operating Committee was established as an organization to assist the CEO with decision-making. The CEO refers to the discussion conducted by the Operating Committee when making final decisions on business execution. The Operating Committee deliberates on important policies concerning business operation in the NSK Group as well as their implementation, and reports important matters to the Board of Directors.

■ Executive Officers Meeting

An Executive Officers Meeting has been established to allow executive officers to report on the status of business execution to the CEO. Through this meeting, NSK shares information on the status of business implementation in order to unify the direction and understanding of its executive team.

■ Internal Controls

Basic Approach and System

NSK works to strengthen the internal control system of the Group by documenting the basic principles so that global Group management and internal controls function efficiently. In addition, the Internal Audit Department supervises the business execution of executive departments, establishes the internal control system and audits the state of its operation from a position independent from operational organizations, in cooperation with the Audit Committee. To further establish and strengthen the global internal control framework, NSK has established internal audit departments at the regional headquarters which oversee local subsidiaries. At the same time, the Company is taking steps to: (1) strengthen compliance; (2) strengthen monitoring; (3) raise the effectiveness of audits; and (4) promote greater operational efficiency.

Establishment of an Internal Control System

NSK's Basic Policies for Establishment of an Internal Control System specified matters needed to develop a system for ensuring that the NSK Group's business is conducted appropriately and in accordance with the law, articles of incorporation, and internal rules, and also to enable checks by the Audit Committee to be carried out effectively.

Since these policies were first adopted by a resolution of the Board of Directors in April 2006, they have been revised with subsequent changes in social expectations of companies. The Board of Directors checks and votes on the content of these policies every year.

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, 2017. 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

NSK has established a fundamental policy for risk management and risk management systems as part of its in-house rules. NSK classifies and organizes risks identified by the Group 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.

Risk Management Systems

The organizations listed below play an important role in the establishment and operation of risk management systems in the NSK Group.

■ Internal Audit Department

Serves as an internal audit organization, and is responsible for conducting audits to determine the legitimacy, adequacy, efficiency, etc., of operations, and for monitoring performance of operations. Also responsible for overseeing the evaluation of the effectiveness of internal controls over financial reporting.

■ Corporate Strategy Division HQ

Cooperates with each business, functional and regional headquarters, supports the president and CEO, and oversees and manages general risks related to management of the NSK Group. Responsible for maintaining and enhancing the internal control systems necessary for the operation of the NSK Group's global business.

■ Compliance Committee

Creates policies designed to strengthen the compliance of the overall NSK Group, sets and promotes measures to strengthen compliance to realize these policies, and monitors and supervises their implementation. Periodically reports to the Board of Directors on the progress of these activities.

■ CSR Division HQ Compliance Enhancement Office

Responsible for enacting measures to strengthen compliance, based on the policies set by the Compliance Committee. Conducts educational initiatives to ensure that the Company acts as a good corporate citizen with a sense of social responsibility in all situations, and plans, proposes, enacts, and monitors measures to ensure compliance with laws, rules, and corporate ethics. Also reports periodically to the Compliance Committee on the progress of compliance strengthening measures.

■ Disclosure Committee

Responsible for ensuring appropriate and timely disclosure of important corporate information that is likely to influence investors' investment decisions, based on the relevant laws and regulations.

■ Crisis Management Committee

Responsible for preparing and strengthening the management system against major risks to the Company, such as natural disasters, pandemics, or major accidents, in order to prevent such risks from arising or minimize damage, also responsible for leading a swift and appropriate response in the event of a disaster.

Identification and Assessment of Risk

Every year, all of the business sites perform their own risk assessment, where they analyze the status of internal risk management, changes in the social environment, the frequency of risk occurrence, the size of impact, and other factors. This is done to identify risks that should be addressed and ensure appropriate responses. In addition, each business site identifies the risks that it needs to manage, and submits a monthly risk report to the headquarters in charge of risk. The Internal Audit Department then performs a Group-wide risk assessment based on the site risk assessment results, before creating the annual audit plan and conducting audits in cooperation with the Audit Committee. Monthly risk monitoring also helps confirm that the Group's risk management systems are sufficient.

By employing practices like these, the NSK Group not only prevents risks from materializing, but also strives to foster a corporate culture that is prepared to respond appropriately should a risk materialize.

Responding to Disaster Risk

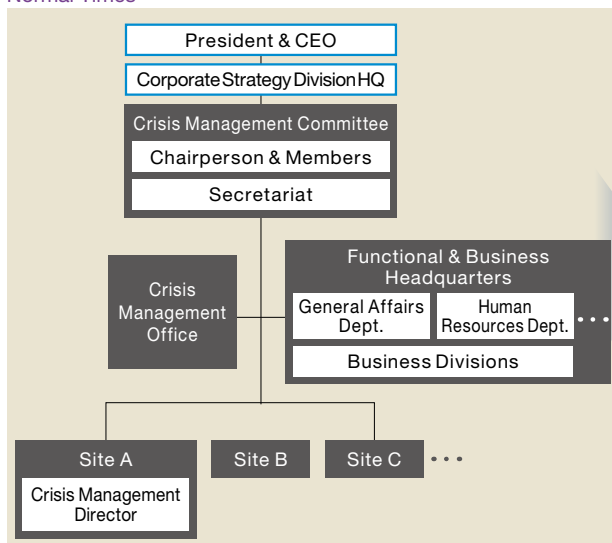
■ Crisis Management Systems for Disaster Risk

The NSK Group has established a permanent Crisis Management Committee to oversee Group-wide initiatives to address disaster risk, including natural disasters, infectious disease outbreaks, and other major incidents. The Committee plans and implements measures to prevent crises and minimize damage in the event that these risks materialize, and is also responsible for establishing and improving business continuity plans (BCP).

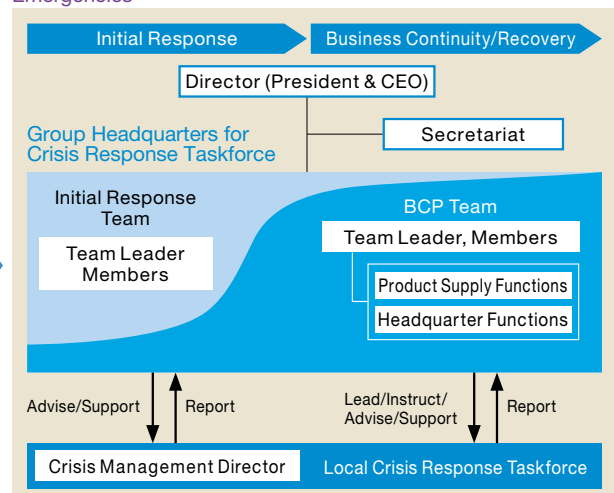
In the event of a crisis, crisis response task forces are set up at the head office as well as at the site of the crisis, and relevant departments cooperate to handle the situation quickly and accurately according to the circumstances.

● Crisis Management Structure for Disaster Risks

Normal Times



Emergencies



■ Strengthening Risk Response Capabilities with Business Continuity Planning

The NSK Group has established a business continuity plan (BCP) addressing the risk of major earthquakes in Japan.

The Group has concrete plans in place for disaster readiness, including a complete organizational structure and the necessary procedures and tools for preparedness at all the business sites of Group companies in Japan. It also conducts drills to confirm the viability of the plan and addresses the issues that emerged during the drills. The Group also takes steps to minimize the potential for damage, including earthquake-proofing buildings and preventing equipment from falling over or moving, enhancing emergency communication and reporting systems, and adopting earthquake-resistant IT infrastructure.

In fiscal 2016, the Group appointed a person responsible for disaster risk countermeasures in each region outside Japan and strengthened its activities promotion system.

■ Building a Disaster-Resistant Supply Chain

The NSK Group has built a system that quickly identifies the scale of damage and problems at suppliers in the event of a disaster and facilitates a precisely targeted response in cooperation with suppliers. Drills are conducted regularly to ensure sites properly utilize the supplier safety verification system, which is used for emergency contact.

The Group has also asked major suppliers to create their own BCPs and verified their progress in order to strengthen risk management throughout the supply chain. By continuing to forge cooperative relationships with suppliers, the Group is determined to build a more disaster-resistant supply chain.

● BCP Formulation Status

Initiative Levels and BCP Formulation Scope

Verify BCP effectiveness	Conducted since 2013 Expand scope of training drills	Conducted since 2014 Increase number of business sites	Conducted since 2014 Increase number of suppliers
	Completed by 2012 Continue revision	Completed by 2013 Continue revision	Started assessments in 2014 Continue revision
	Completed by 2012	Completed by 2013 Conduct additional measures	
Formulate management systems and BCP			
Implement disaster mitigation			
	Headquarters Functions	Business Sites	Suppliers

Compliance

Basic Approach

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

The foundation of compliance at the NSK Group is the NSK Code of Corporate Ethics, which outlines universal principles that must be followed by all officers and employees. The NSK Group aims to remain a corporate group that is trusted by international society and local communities by adhering to the laws and regulations of each country in its corporate activities around the world, and by taking actions based on high ethical standards as a corporate citizen.

To that end, the Group has put in place policies and a management system related to compliance, constantly enhances its education and training for officers and employees, conducts internal audits, and has established an internal whistleblowing system. It also strives to fulfill its corporate social responsibility through initiatives such as preventing information leaks and addressing issues related to conflict minerals.

● NSK Corporate Ethics Policies

1. Personnel will strive to ensure that NSK Ltd. and its affiliates continue to prosper as a company that acts in a sincere and fair manner, and which is respected and trusted in international and regional society.
2. Personnel will comply with all laws related to the company's business activities. Moreover, personnel will act in a highly ethical manner in order to ensure that NSK fulfills its responsibility as a corporate citizen.

● 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.

* NSK Code of Corporate Ethics applies to NSK Ltd. and its consolidated subsidiaries.

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

Compliance Promotion System

NSK has established a Compliance Committee chaired by the president and CEO. The committee formulates policies aimed at strengthening compliance and formulates and promotes initiatives to strengthen compliance in order to achieve those policies. At the same time, it monitors and supervises the implementation of those initiatives and reports regularly to the Board of Directors.

NSK has also established a Compliance Enhancement Office in the Legal Department at CSR Division Headquarters 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 who regularly report on compliance and conduct risk management.

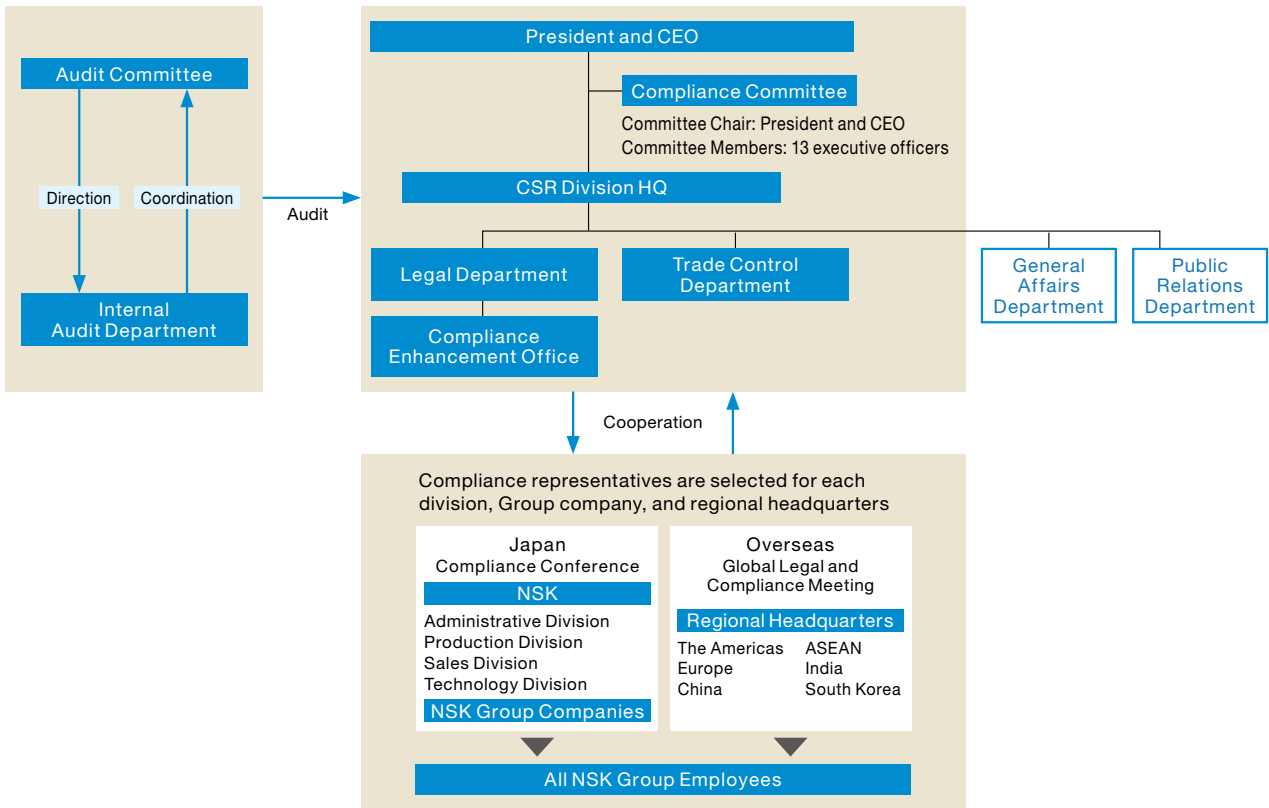


Reference data is available on NSK's website.

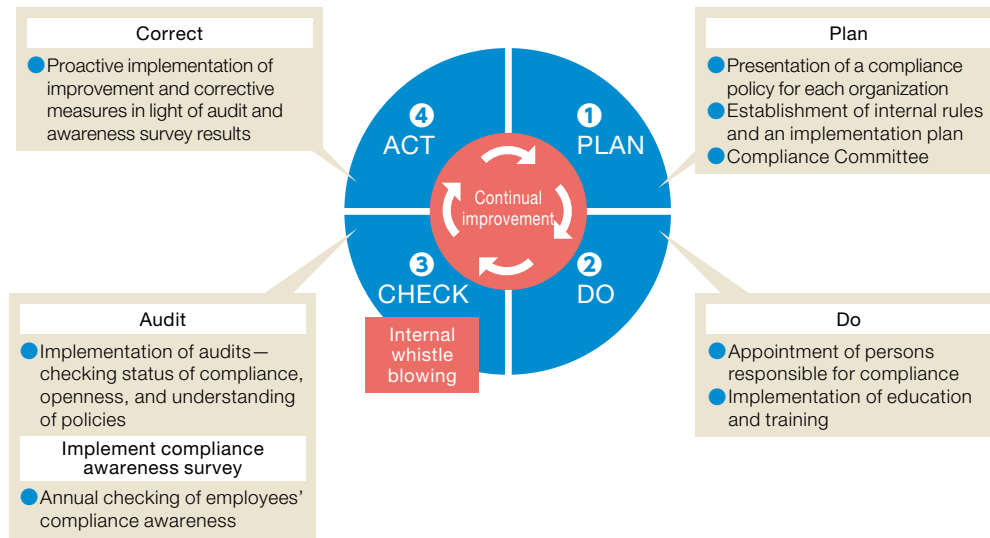
www.nsk.com > Company > Compliance

● NSK Code of Corporate Ethics

● NSK Group Compliance System (As of July 2017)



● PDCA Cycle for Continual Compliance Improvement



The policies (“plan”) decided at the Compliance Committee are deployed (“do”) by the Compliance Enhancement Office to each organization within the Group. The office reports the results of monitored (“check”) internal audits and awareness surveys, and also implements (“act”) improvements and corrective measures based on audit and awareness survey results. The office makes the most of the PDCA cycle to ensure continual compliance improvement.

No serious legal violations were confirmed in fiscal 2016.

■ Global Legal and Compliance Meeting

In order to strengthen the global compliance system, global legal and compliance meetings were held in January and November 2017. At these meetings, members responsible for compliance from the Americas, Europe, China, ASEAN, India, and South Korea gathered at the head office in Japan and reported on activities in their respective regions and countries. They also shared information on legal requirements in each country, seeking ways to improve future efforts in each country. In addition, at the Global Legal and Compliance Meeting held in January, information was shared about personal information protection regulations in each country.

■ Internal Reporting System (Whistleblowing System)

The NSK Group operates a whistleblowing system (hotlines, etc.), available to all employees and to all suppliers (in certain regions), to quickly identify and correct acts that may violate compliance-related rules. One hotline is in-house at the CSR Division Headquarters and another is staffed by an outside attorney. The system allows hotline users to remain anonymous, and they are protected from any unfair repercussions by the provisions specified in the NSK Code of Corporate Ethics and the Whistleblowing System Operation Rules.

In fiscal 2016, the whistleblowing hotline was contacted 52 times worldwide. After taking steps to ensure that the whistleblowers would not suffer repercussions, the incidents were quickly investigated and resolved, including implementation of corrective actions where needed.

The Group is working to ensure that users are well informed about the hotline by putting up posters about the Whistleblowing System and distributing large-sized business cards containing the hotline contact information.

■ Compliance Audits

The Compliance Enhancement Office, in cooperation with the Internal Audit Department, regularly conducts internal audits and on-site assessments of the state of compliance with the Antimonopoly Act of Japan and other competition laws. In fiscal 2016, audits were conducted on 39 business sites and no major non-conformities were found.

Evaluations of internal controls related to compliance were also carried out. In fiscal 2016, audits were conducted on 145 business sites using a self-assessment technique and no major non-conformities were found.

Initiatives to Strengthen Compliance

NSK and its Group companies are making Group-wide efforts to ensure thorough legal compliance and striving to enhance business activities based on corporate social responsibility. 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	Item	NSK Group Initiatives	Date	
Strengthening System	Established Compliance Committee (meetings held four times a year)	March 2012	Strengthening Education and Awareness Raising Activities	President issued a message to employees calling for thorough compliance efforts (followed by periodic reminders)	August 2011	
	Established Compliance Enhancement Office	July 2012		Started implementing compliance e-learning for officers and employees (twice a year)	January 2012	
	Started holding Global Legal and Compliance meetings (number of meetings increased from one to two per year)	August 2012		Implemented Antimonopoly Act (competition law) compliance training for sales departments, plants and Group companies	February 2012	
	Started holding Compliance Conference (twice a year)	December 2012		Started monthly Compliance Newsletter	November 2012	
Establishing Systems for Relevant Regulations	Began operation of a system to investigate whether or not to participate in meetings attended by competitors	August 2011		Officers and employees submitted written oaths on compliance to the president	March 2013	
	Revised the NSK Code of Corporate Ethics Established the Rules for Compliance with the Competition Law	April 2012		Implemented antitrust law compliance training for sales departments (once a year)	May 2013	
	Revised the Compliance Rules	May 2012		Established October as Compliance Month and held a slogan competition * Starting in fiscal 2016, Compliance Month was changed to one month after NSK Corporate Philosophy Day	October 2013	
	Revised Internal Regulation for Preventing Insider Trading	November 2012		Held Compliance Leadership Training for sales department leaders	March 2014	
	Distributed the NSK Compliance Guidebook to officers and employees	March 2013		Strengthening Monitoring	Initiated internal audits of sales departments relating to Antimonopoly Act (competition law) compliance	August 2013
	Revised internal rules for competition law compliance and hotline operation	June 2013			Conducted first compliance awareness survey for officers and employees including those of Group companies	August 2014
	Published and distributed the NSK Compliance Guidebook 2015	March 2015				

Main FY2016 Initiatives

■ Compliance Education

The NSK Group conducts a variety of mandatory compliance education and training sessions with the aim of further heightening officers' and employees' awareness of compliance issues.

In fiscal 2016, training on Japan's Antimonopoly Act was provided to 1,848 employees in 100 sessions (941 employees in 70 sessions in Japan and 907 employees in 30 sessions outside Japan). The NSK Group strives to realize fair and free business transactions by ensuring employees are aware of and comply with competition law and by prohibiting agreements with competitors regarding such matters as price, quantity, customers, and sales outlets as well as the exchange of information that could impact competition with competitors. In the future, the Group will continue this training on the Antimonopoly Act, incorporating discussion among participants.

In addition to training for sales departments, training sessions on compliance were also held for plants, engineering departments and Group companies and affiliates (provided to 1,383 employees in 32 sessions). The Group also continued the e-learning that it conducts twice a year (taken by 7,703 employees the first time and 7,801 employees the second time, for a 100% participation rate by persons covered by the program).

Additionally, in fiscal 2015 the Group published the NSK Compliance Guidebook and distributed it to all officers and employees throughout the NSK Group. The Guidebook is produced in multiple languages (Japanese, English, Chinese, Korean, Polish, Indonesian, Thai, etc.) so that employees can understand its content in their native language. After confirming the importance of compliance, all officers and employees submitted a written oath of compliance adherence.

Furthermore, through the NSK Supplier CSR Guidelines, the NSK Group shares its awareness with suppliers and asks them to understand and practice compliance, including compliance with competition law. (See p. 30 for details.)



NSK Compliance Guidebook 2015

■ Establishment of NSK Corporate Philosophy Day

Six years have passed since the Japan Fair Trade Commission raided NSK offices in 2011. In order to revisit the lessons learned from the past incident, reconfirm the resolve of all NSK Group employees that no anti-competitive incident will ever occur again, and to ensure all employees review the Corporate Philosophy and make it their own code of conduct, the date of July 26 has been designated "NSK Corporate Philosophy Day." On the NSK Corporate Philosophy Day in 2017, the president gave a speech and outside instructors lectured, and on a subsequent day the attendees discussed workplace issues related to compliance at each workplace.



NSK Corporate Philosophy Day (Head Office)

■ Compliance Month

Starting on NSK Corporate Philosophy Day, NSK held compliance month, inviting employees to submit compliance slogans and surveying them on compliance awareness.

In fiscal 2016, employees were again invited to submit compliance slogans. Of the 7,084 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.

■ Surveying Employees on Compliance Awareness

NSK has been commissioning a yearly compliance awareness survey to an outside research company since 2014 to verify the compliance awareness of its officers and employees. The third survey, in 2016, had 13,866 respondents including employees from the head office and Group companies in Japan. The awareness survey outside Japan had 8,499 respondents.

In fiscal 2017, NSK will address issues identified as a result of the awareness survey and conduct activities to raise and spread compliance awareness.



Compliance slogan posters



Reference data is available on NSK's website.

www.nsk.com > Company > News > Press Releases

● Press Release

www.nsk.com > Company > Compliance

● NSK Compliance Guidebook 2015

■ 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, in that same month NSK also established Anti-Bribery Standards. These standards have been rolled out globally. The Group established Anti-Bribery Rules for China and the ASEAN region in May 2015 and for South Korea in December 2015 and is striving to prevent bribery according to each country's specific laws and situation.

■ Preventing Insider Trading

The Internal Regulation for Preventing Insider Trading applies to all officers and employees. It requires NSK and its Group companies' officers and employees to submit a form whenever they buy or sell NSK shares. Awareness of insider trading regulations is being promoted in e-learning programs and the Compliance Newsletter.

Additionally, in September 2014 NSK adopted a system which requires employees to get prior approval before trading stock.

■ Security Export Control Initiatives

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

In fiscal 2015, NSK developed a technology provision inspection system associated with equipment maintenance and overhaul. This makes possible the systematic implementation and operation of maintenance and overhaul at plants outside Japan. In fiscal 2016, the Technology Division set up and began using a protocol for centralizing contact points and for procedures in the export of cargo required for product development and investigative research. In fiscal 2017, NSK will continue to instruct and educate stakeholders in order to ensure these initiatives take root.

■ Addressing Conflict Mineral Issues

The NSK Group'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. When there are potential conflict mineral issues or other concerns, the Group takes steps to avoid the use of relevant parts and materials. (See "Meeting Regulations for Information Disclosure about Conflict Minerals" on p. 31 for details.)

■ Information Security Management

There have been several recent scandals around the world involving leakage of personal information and corporate secrets, sparking calls for more rigorous laws and regulations on information security. The NSK Group views information security as an important management task and is taking steps to strengthen it.

Basic Policy on Information Security and Management Standards and Rules

In June 2003, the NSK Group issued the NSK Basic Policy on Information Security as well as the Rules of NSK Information Management. It subsequently established rules concerning information security and strengthened Group efforts. In March 2017, NSK drastically revised the NSK Group Information Security Management Standards and the NSK Group Information Security Management Rules. Going forward, NSK will issue standardized sub-regulations under these standards and rules.

Information Security System

To develop a global approach to more comprehensive information security strengthening measures, in April 2015 NSK established a new Information Security Enhancement Office under the Corporate Strategy Division Headquarters. The Information Security Enhancement Office plans and implements information security measures for the Group, working in cooperation with information security management committees in Japan, the Americas, Europe, China, ASEAN, India and South Korea.

● Information Security Governance System



Prevention of Information Leaks

NSK takes meticulous care in the handling of confidential information and works hard to prevent the leakage of information. The Company is deploying tools that enhance security and taking steps to reduce the risk of information leaks from PCs. It has also categorized information according to its level of confidentiality and established rules for proper handling. NSK will roll out these rules globally in fiscal 2017.

Development of Information Security Education

NSK is providing education on information security and other subjects via e-learning programs for all officers, employees, and temporary employees who use PCs. It is also conducting regular email-based training globally to help prevent targeted attacks.

Supply Chain Management

Basic Approach

In order for a company to grow sustainably, it must be aware of and live up to its social responsibilities. The NSK Group works hard to meet the expectations of society while reinforcing its business foundations. In the area of procurement, NSK understands that it is vital to build a shared awareness with suppliers and to pursue CSR initiatives throughout the supply chain.

CSR Procurement Promotion System

In order to fulfill the Group's social responsibility throughout the entire supply chain, the Procurement Division Headquarters, which is directed by a senior vice president, plays a central role in building systems to promote CSR procurement in collaboration with relevant functional headquarters, such as the Global Environmental Department, and production, procurement and administrative divisions within the Group.

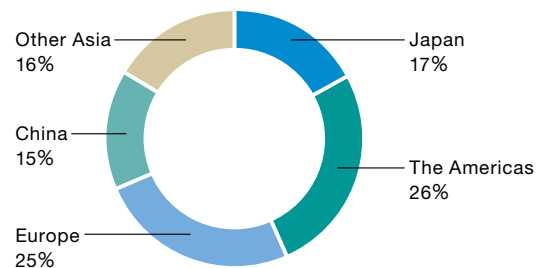
At the biannual Global Procurement Conference, with those responsible for procurement in each global region participating, NSK shared policies pertaining to CSR activities and reviewed progress on related measures.

NSK Group Supply Chain

The NSK Group has transactions with approximately 9,000 suppliers globally.

The share of NSK's sales outside Japan is about 70%, and the share of its production outside Japan is roughly 55%, and these figures are expected to continue to grow. As a result, the Company expects to be doing more procurement outside Japan, as well.

● NSK Group Suppliers, by Region (based on number of suppliers)



Building Relationships with Suppliers Based on Trust

Recognizing that mutual development with suppliers is important, the NSK Group works at establishing solid relationships of trust: long-term cooperative relationships. The Group shares the importance of CSR with suppliers at briefings and using other means, pursuing greater understanding through mutual communication.

■ Procurement Policy Briefings

NSK holds procurement policy briefings every year to explain its procurement and other policies to major suppliers, and it asks them to reinforce their efforts to implement CSR activities in pace with the entire supply chain.



Procurement Policy Briefing

Whistleblowing System (for Third Parties)

NSK has established a reporting system (whistleblowing hotline) for anyone to anonymously convey their criticisms, opinions, and concerns, enabling the Company to identify issues at an early stage and take corrective measures. The hotline has two points of contact: one is the Head of the CSR Department and the other is an outside attorney. In addition to any internal whistleblowers, the Company is careful to ensure that suppliers can use the hotline safely and securely and face no repercussions due to using it. In fiscal 2016, the hotline did not receive any calls from third parties.



Internal reporting system leaflet

Fair Trade Promotion

In September 2016, Japan's Minister of Economy, Trade and Industry released the Basic Policies for Future-Oriented Trade Practices. This move aims to promote fair trade and improve added value for both main subcontracting enterprises and subcontractors, as well as to further enhance trade environments across the entire supply chain. In December, the Operational Standards of the Subcontractor Act and the Promotion Standards under the Act on the Promotion of Subcontracting Small and Medium-sized Enterprises were revised and the notice "Method of Payment of Subcontractor Proceeds," was released.

The Japan Automobile Manufacturers Association, Inc. and Japan Auto Parts Industries Association formulated and announced their Voluntary Action Plan to Promote Fair Trade and Increase Productivity and Added Value.

In light of these government and industry trends, the NSK Group created an internal manual explaining matters that those involved in procurement should take note of and offering guidelines on conduct that is likely to be viewed with suspicion in 2017. The manual has been disseminated, and the Group continues to work hard to promote fair trade.



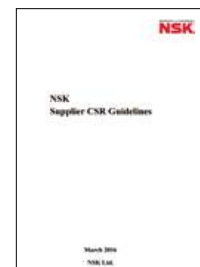
Fair Trade Promotion Manual

NSK Supplier CSR Guidelines

NSK publishes and distributes NSK Supplier CSR Guidelines and asks suppliers to supply safe products, comply with laws and regulations, and give consideration to environmental protection, human rights, safety and health.

In response to the UK Modern Slavery Act, which was enacted in October 2015, NSK partially revised the NSK Supplier CSR Guidelines in March 2016 to better prevent human rights violations throughout the supply chain. The Company also posted statements on the website of NSK Europe, which oversees the European region.

In fiscal 2016, the Group ensured that suppliers around the world were aware of the revised content and implemented assessments based on the Guidelines.



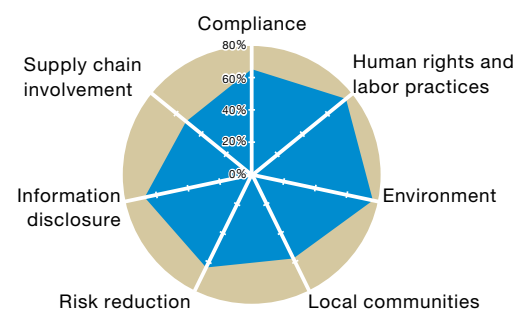
NSK Supplier CSR Guidelines

Supplier CSR Assessment

NSK asks suppliers to perform CSR assessments and monitor the actual state of their activities (every two years), and it feeds back the assessment results to all suppliers.

In fiscal 2016, NSK asked approximately 506 suppliers in Japan to conduct a self-assessment, and 87% responded. Based on the results of the survey, NSK set the next challenge to tackle: improving programs to spread CSR procurement activities throughout the supply chain at second-tier suppliers and beyond.

CSR Assessment Results in Fiscal 2016



■ NSK Group Green Procurement Standards

The NSK Group Green Procurement Standards set out requests for initiatives, such as the management of environmentally harmful substances, so that the Group can work with suppliers to promote environmental management throughout the supply chain, starting at the stage of parts and materials.

The NSK Group obtains understanding and acceptance from all suppliers of the NSK Supplier CSR Guidelines and the NSK Green Procurement Standards. In addition, basic business contracts contain clauses that pertain to environmental, social, and governance (ESG) performance. (See p. 66 for details on green procurement initiatives.)

Meeting Regulations for Information Disclosure about Conflict Minerals

■ Basic Approach

The NSK Group has a policy of not using conflict minerals and takes care in its procurement activities to avoid benefitting armed groups that violate human rights.

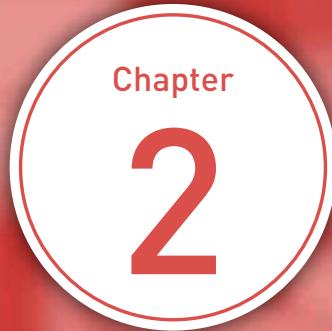
If involvement by armed forces is suspected, NSK takes steps to avoid using the suspected parts or materials.

■ Action Update

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. This rule took effect in January 2013.

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 2013, the NSK Supplier CSR Guidelines were revised to unequivocally prohibit the use of conflict minerals, and the Group has endeavored to raise awareness of that among its suppliers. Since then, NSK has conducted a conflict mineral survey every year with cooperation from the suppliers of parts and materials used in NSK products. Surveys through 2016 have not identified any case of conflict minerals produced in restricted regions.



Chapter
2

Research and Development

Setting the Future in Motion with R&D

Balancing prosperity with reduced environmental impact is a challenge in establishing a sustainable society. For this reason, all manner of things that support society, such as motor vehicles and home appliances, must be made safer and cleaner. R&D is the core driver of this kind of progress. As the world continues to change dynamically, companies are expected to pursue growth in step with the evolution of society by developing more advanced technologies and products.

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Basic Approach

The NSK Group's product and technology development is driven by its Four Core Technologies—tribology, materials, numerical simulation, and mechatronics. R&D is focused on achieving the NSK Mission Statement, which states, "NSK contributes to a safer, smoother society and helps protect the global environment." The Group helps protect the global environment by contributing to energy savings and reduced CO₂ emissions and by speedily supplying the market with sophisticated products offering new features that accurately meet the needs of customers and society. Through all of these activities, the NSK Group helps to build a safer, more secure world.



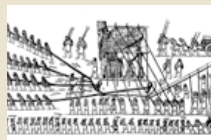
R&D at NSK: Applying 100 Years of Technology to Set the Future in Motion

For over 100 years since its establishment in 1916, NSK has constantly pursued innovation in technology and enhancement of quality. NSK has grown to become a leading company in bearings, automotive parts, and precision machinery on the foundation of its Four Core Technologies: tribology, materials, numerical simulation, and mechatronics.

Tribology

Improving Performance by Optimizing Friction

Tribology is the study of friction and wear of contact surfaces in relative motion, such as rotating parts that endure enormous forces with a thin oil film. Severe operating conditions are mitigated through lubrication and surface treatments developed by NSK, resulting in superior performance for applications requiring low friction, high-speed rotation, quiet operation, or enhanced durability.



Materials

Superior Performance in Any Application

Materials research and development affects nearly every aspect of product performance. Through careful selection of material composition, heat treatment, and ceramic materials, NSK enables optimization of application performance. This may be thanks to improvements in function, endurance, or reliability, or even through advancements in cost-effectiveness or production efficiency.



Numerical Simulation

Turning Blind Risk into Trusted Reliability

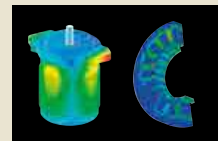
In the past, accuracy and reliability in product development were achieved with experience-based design and longer testing periods. NSK's simulation technology allows virtual validation to accelerate design and production. Extreme conditions or innovative designs that defy previous expectations can also be evaluated and analyzed.



Mechatronics

Technology Supporting People for a Safe and Comfortable Future

Mechatronics refers to the combination of mechanics and control technologies. NSK has cultivated knowledge of mechanics through years of product development and production. This knowledge is used in conjunction with motors, sensors, and circuits to develop mechatronic systems that add new functions, improve reliability, and increase performance in various industries while also improving convenience and safety in our daily lives.



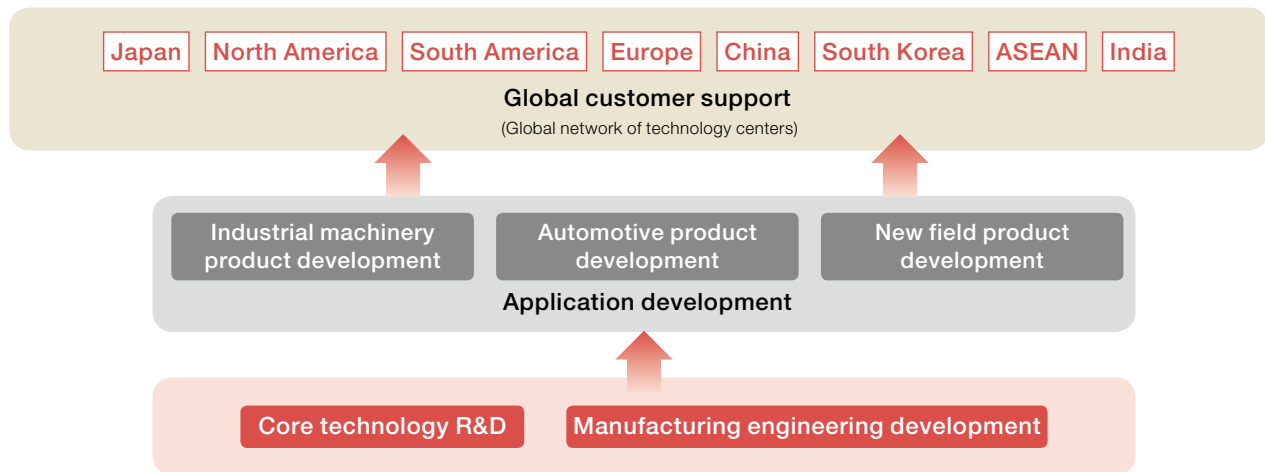
R&D Infrastructure

To increase its technical capabilities on a global level, NSK created the Technology Development Division Headquarters as an organization under the direct control of the president. It engages in tasks such as the planning and implementation of technology strategy, the control and management of technology-related risks, and human resource development. The Core Technology R&D Center and the New Field Products Development Center, which were set up under the Technology Development Division Headquarters, carry out R&D to meet societal needs and customer requests while collaborating with outside research institutions.

■ Global Technology Development Structure

NSK operates technology centers at 15 sites in 10 countries and regions, including Japan, the Americas, Europe, China, South Korea, ASEAN, and India. This worldwide network aims to flexibly and swiftly respond to customers' wide-ranging needs in each locale. At these technology centers, experts in various fields are developing new technologies and next-generation products to meet local needs in three categories: industrial machinery products, automotive products, and new field products. Meanwhile, they also strive to enhance technical services while sharing information globally.

● Technology Development Process



Mid-Term Targets (FY2016–FY2018)

To meet the needs of customers and society, the NSK Group will create new value by developing new fields and investing in new technology while assessing market trends, such as those in the evolution of automotive technology, IoT*, social infrastructure, healthcare, and robotics. In terms of production, the Group is advancing the creation of smart factories and pursuing next-generation manufacturing practices.

* IoT: Internet of Things. A paradigm for creating new value by gathering and analyzing data through the Internet from all kinds of things, including motor vehicles, home appliances, and industrial equipment.

Main FY2016 Initiatives

In fiscal 2016, NSK worked to develop products that contributed to efficiency improvements in industrial machinery and equipment and enhanced automobile fuel-efficiency, compactness, and safety—all in an aim to build a more sustainable world. The Group also made efforts to “expand into new growth fields,” and embraced this as a challenge in its Fifth Mid-Term Management Plan.

NSK spent around 13.9 billion yen on R&D in fiscal 2016.

■ Development of Condition Monitoring Systems (CMSs)

As the development of IoT progresses, equipment and machinery condition monitoring systems (CMSs), which shorten downtime and make operation more stable, have been in the spotlight. NSK is developing CMSs in the fields of bearings for general industrial machinery, linear motion products, and bearings for wind turbines and railcars. In 2016, NSK deployed its numerical simulation technology to develop Bearing Doctor BD-2, a bearing abnormality diagnostic device that brings predictive maintenance technology into rotating machinery. The Group is currently preparing to launch this product outside Japan.

In April 2017, NSK established a new CMS Development Department under its Industrial Machinery Technology Center to consolidate CMS development that had previously been pursued separately for each product. The new department will conduct system development to create a platform and will standardize both the commercialization process and quality management, thereby increasing development efficiency for CMS-related technologies and products.



Bearing Doctor BD-2

■ Innovation of Production Technology

The NSK Group's pursuit of technological innovation includes areas such as production facility design and product processing technology. The Group works hard to achieve maximum production with minimum labor and energy resources. Development departments and production departments are cooperating in efforts to develop the most compact production equipment possible and to replace components such as hydraulic machinery and motors used in existing equipment with the latest high-efficiency models.

■ Development of Technical Human Resources

The NSK Group takes a global approach to technology dissemination and human resource development. NSK established the NSK Institute of Technology (NIT) in 2007 to develop its global technical human resources. At NIT, curricula and expected achievement levels are set separately for each faculty and academic year, and systematic education is provided using an exam-based credit system. (See p. 52 for details.)

■ Collaboration with Outside Research Institutions

By incorporating outside technology and perspectives into its own areas of expertise, the NSK Group aims to expand the scope and reach of its R&D. Apart from pursuing independent R&D, NSK also engages in joint projects with a variety of outside research institutions.

● Examples of Joint R&D with Outside Institutions

- An R&D project focused on increasing the commercial viability of wind power generation, conducted with the New Energy and Industrial Technology Development Organization (NEDO), a national R&D organization in Japan
- Development of a wireless in-wheel motor, conducted with the Graduate School of Frontier Sciences of The University of Tokyo and Toyo Electric Mfg. Co., Ltd.

■ Renovation of NSK's Technology Showroom

In celebration of its centennial, NSK renovated the showroom at its R&D Center in Fujisawa, Kanagawa Prefecture. The showroom introduces NSK's 100-year journey and NSK's Four Core Technologies. It also exhibits products and cross-section models in areas categorized by application, such as automobiles, Shinkansen (bullet trains), wind turbines, and machine tools. The showroom additionally offers a driving simulator and other features that allow visitors to learn about NSK's technology by sight, touch, and total experience.



Showroom at the R&D Center

NSK Products

1 S-HTF Series Ball Screws for High-Load Drives

In recent years, the size and shape of plastic products have diversified, from large parts for automobiles to everyday items and small electronics parts, and demand is expected to keep growing. This will necessarily require increased productivity for electric injection molding machines and molded parts diversification.

NSK applied proprietary “tough” (TF) technology to a ball screw, delivering longer fatigue life and improved load-carrying capacity in S-HTF Series ball screws for high-load drive applications. This product contributes to improved productivity in electric injection molding machines and servo press machines.

<http://www.nsk.com/company/news/2016/press1017a.html>

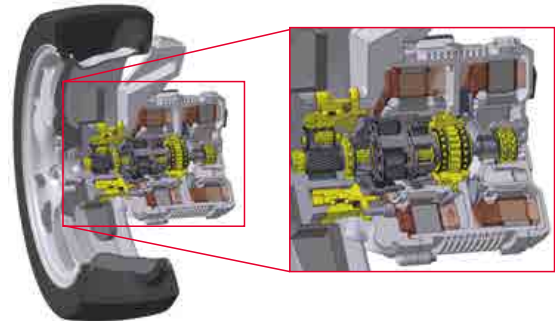


2 Demonstration of the World's First Transmission-Equipped Wheel Hub Motor

As awareness of environmental problems increases, diversification of automobile drive systems is advancing, including those in hybrid electric vehicles (HEVs), electric vehicles (EVs), and fuel cell vehicles (FCVs). In-wheel motors that can work with various drive systems independent of the body structure of the automobile are attracting attention as next-generation drive devices. They face high expectations in the areas of environmental performance, safety, and driving comfort.

Using two motors and a special transmission, NSK made in-wheel motors more compact and conducted the world's first demonstration test. Building on the knowledge gained from the prototype wheel hub motor it developed, NSK is aiming to commercialize wheel hub components such as a hub unit bearing with built-in speed reducer, a one-way clutch unit, a miniature cage and roller bearing, and an anti-corrosion bearing.

<http://www.nsk.com/company/news/2017/press0119a.html>



3 LIGHBOT™ Guide Robot Now Available for Use

Since 2004, NSK has been leveraging its mechatronics technology to pursue R&D in human-assisting guidance robots that help people in their day-to-day lives, seeking to help build a society where all people can live freely in safety and comfort.

In fiscal 2016, NSK made its LIGHBOT™ guide robot available for practical use, and rental services were launched in April 2017. This product aims to improve convenience for the sight-impaired and elderly visitors to hospitals and other facilities, as well as to reduce the workload of staff members who provide information to visitors. LIGHBOT™ obtained an ISO 13482 certification, the only international standard for safety related to personal care robots. (See p. 60 for details.)

<http://www.nsk.com/company/news/2017/press0413b.html>





Chapter
3

Quality Assurance

Creating Quality That Can Be Trusted

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. With a constant focus on the customer's point of view, and an eye on trends in society, NSK will seek to deliver this contribution by practicing "quality-first manufacturing," which is the foundation of safety and reliability.

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P.38 Quality Management System



Quality Management System

NSK's Approach

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.

Toward that end, the Group engages in activities based on the Three Pillars of NSK Quality Assurance.

● 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.

■ Quality Assurance Vision 2026

NSK put in place the Quality Assurance Vision 2026 as a part of efforts to identify specific targets through 2026. As indicated below, this vision also clarifies the ideal state to which the Company aspires. Guided by this vision, NSK is implementing total quality management to achieve a level of “NSK Quality” that engenders trust and contributes to the safety and peace of mind of customers. In specific terms, the Company will endeavor to enhance the quality of its products, work and human resources, which are elements that provide the underlying strength of its business activities, while at the same time incorporating the necessary quality to deliver attractive products that reflect market needs and the requirements of customers.



The Ideal State to which the Company Aspires

- Contribute to society by delivering total quality
- Maintain an approach to quality that customers will evaluate highly
- Ensure all employees think and act based on the quality-first principle according to high-quality ethics

Action Guidelines

- Put the customer first
- Be honest
- Provide 100% good products and services

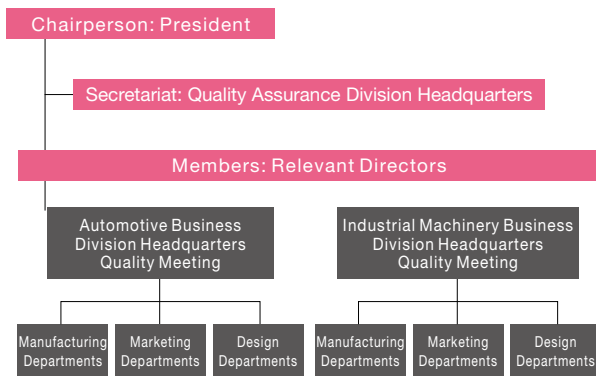
Management

■ Quality Assurance Organization

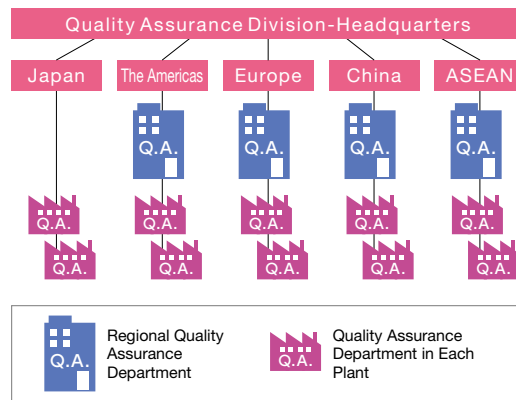
The NSK Group has established the NSK Quality Committee, chaired by the president, to supervise Group-wide quality management. The Committee meets three times a year, and the president and directors in charge of each business division headquarters confirm the status of quality control and discuss matters such as quality issues and necessary initiatives. The Quality Assurance Division Headquarters serves as the global lead for quality management, assisted by quality committees at each business division headquarters. This headquarters and these quality committees are working to strengthen quality improvement efforts by promoting cooperation among the manufacturing, sales, and design departments. The headquarters also reports the Group-wide status of quality management to management at the monthly Executive Officers' Meeting.

The Group has established regional quality assurance departments in the Americas, Europe, ASEAN, and China. In other areas, the Group has established organizations in charge of quality assurance. This has reinforced the Group's global quality assurance organization by providing tailored support designed to meet customer needs in each country and region. Regular annual global meetings and biannual regional meetings are held in an effort to strengthen monitoring, audits, and the support structure in each region while sharing information globally.

● Quality Board Meeting



● Global Quality Assurance Organization



■ Quality Management Systems

The NSK Group obtains ISO 9001 and ISO/TS 16949* certifications for quality management systems at business sites conducting development and design, and manufacturing. (See pp. 95-96 for details.)

Additionally, the effectiveness of the quality management systems is verified through regularly conducted third-party audits and internal audits. When problems are discovered, appropriate corrective actions are taken, and the level of quality initiatives is continuously improved.

* ISO/TS 16949 is aligned with ISO 9001, the criteria for quality management systems set by the ISO (International Organization for Standardization), with the addition of quality system requirements for automotive-related products.

■ Response in the Event of a Product Defect

NSK makes every effort to ensure quality. However, should a defect occur in a product or service, NSK would notify customers immediately, and the relevant departments would work together to promptly take appropriate action to stop the problem from growing. The causes would also be identified and measures taken to prevent a recurrence.

Mid-Term Targets (FY2016 – FY2018)

■ Security and Reliability in Terms of Market Quality and the Customer's Appraisal of Quality

NSK is committed to enabling employees to work with enthusiasm while staying abreast of social trends, to making products that customers enjoy using, and to ensuring that the Company grows sustainably. While continually reinforcing its global quality assurance system, the NSK Group will carry out the initiatives shown below, in accordance with its mid-term plan.

● The Fifth-Term Management Plan (FY2016 to FY 2018)

1. Fostering quality-first culture and human development
2. Enhancing preventive measures for quality monitoring and audit
3. Establishing a field quality¹ responsibility system
4. Reasserting strict adherence to quality control basic matters
5. Enhancing site control ability based on the 5-GEN Principle²

* 1 Field quality refers to the quality products display during actual use by end users.

* 2 A set of Japanese principles that focus on "GEN-ba," the ACTUAL frontline; "GEN-butsu," the ACTUAL item or product; "GEN-jitsu," the ACTUAL condition or situation; "GEN-ri," the ACTUAL principle or theory; and "GEN-soku," the ACTUAL rules or standards.

Overview of Activities and Main Initiatives in FY2016

In fiscal 2016, the NSK Group worked under five important policies (shown below) in accordance with the Three Pillars of NSK Quality Assurance. In fiscal 2017, the Group will promote total quality management as set out in its Vision, in order to increase the level of quality management to achieve “operational excellence”^{*} and “innovate and challenge,” which are two topics set out in the Fifth Mid-Term Management Plan.

^{*} Operational excellence: In this report, operational excellence refers to “efforts to enhance front-line capability to increase the competitiveness of the NSK Group’s business.”

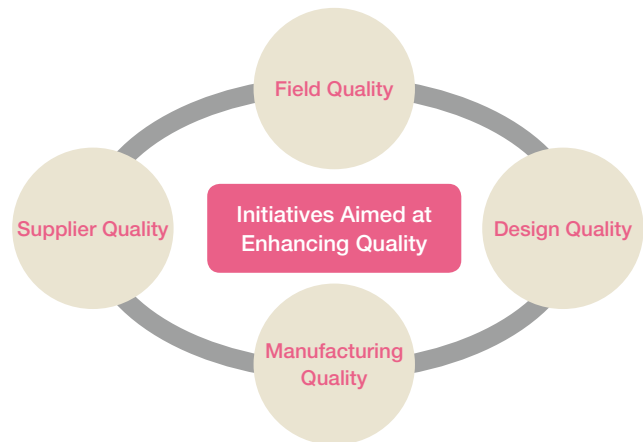
● Fiscal 2016 Quality Priority Policies and Evaluation

○ Achieved, △ Partially achieved, ○ Not achieved

1. Returning to the basics of the quality-first principle through full employee participation in quality awareness improvement activities	○
2. Fixing problems at their root cause to prevent recurrence	○
3. Relaying feedback regarding field (market) quality to the design processes and increasing the sophistication of active application technology	△
4. Reorganizing internal quality regulations in a systematic manner and conducting practical training	△
5. Implementing on-the-spot improvements through rank-based site visits and two-way communication with shop floor staff	△

■ Initiatives to Achieve Higher Quality

The NSK Group classifies quality into four categories: field quality, design quality, manufacturing quality, and quality of supplier components, and strives to enhance the level of each.



Initiatives Aimed at Enhancing Field Quality

As a company that services the manufacturing sector, the NSK Group aims to achieve a level of quality that meets the expectations of society, not just those of the customers who directly use NSK’s products. Looking beyond the level of quality that satisfies the standards of customers, the Group strives to accurately grasp the needs of end users who use the things built with NSK’s products. In this effort, the Group is building a structure capable of providing advanced proposals to customers on products and services that would satisfy the quality the public seeks.

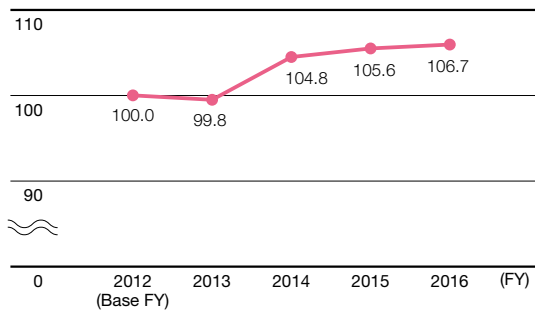
▶ Gathering and Analyzing Information on Market Trends and Providing Feedback

To accurately ascertain market trends, the NSK Group monitors field quality by gathering and analyzing information, such as data on any quality defects. This information is fed back to all relevant departments, including development and design, manufacturing, and sales, in an effort to raise the level of product and service quality and prevent quality problems.

▶ Customer Satisfaction Survey

The NSK Group has been conducting a periodic customer satisfaction survey since fiscal 2012, with the aim of increasing customer satisfaction with NSK’s products and services, as an indicator for managing field quality. The sales, engineering, and manufacturing departments cooperate in initiatives to improve quality based on the survey results and daily feedback from customers.

● Degree of Customer Satisfaction (with FY2012 as a base of 100)



● Establishment and Use of a Customer Management Database

The NSK Group provides technical support related to design and expertise in the use of products, in order to accurately meet customer requests. The Group has also established a database for accumulating information such as records of how customer requests were met. The database is used to improve products and services by bringing together information from around the world.

Highlight Commendations of Quality from Customers

The NSK Group has received letters of appreciation and commendations from customers in recognition of its efforts over many years to increase quality.

- Apr. 2017: Quality improvement activity “Zero Award” for level of quality provided to the Honsha Plant of Toyota Motor Corporation
- Jul. 2017: “2016 Japan Regional Quality Award” from Nissan Motor Co., Ltd.
- Jul. 2017: “Award for Excellence in Quality” from Aichi Machine Industry Co., Ltd.

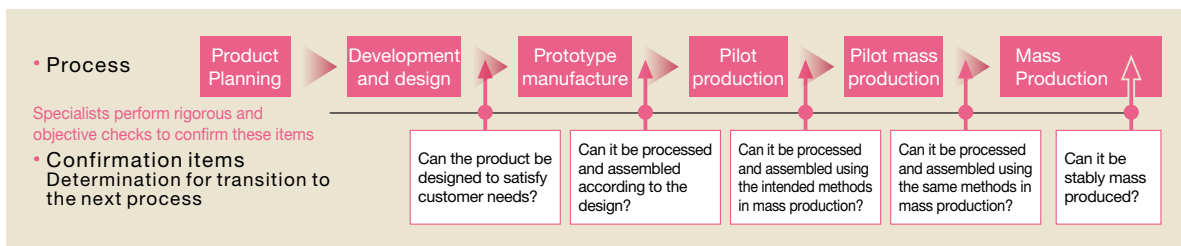
Initiatives to Enhance Design Quality

The NSK Group reflects feedback from customers in the marketplace into its design work to enhance quality at the design stage. The Group makes every effort to design products with a superior level of quality by drawing on its expertise and experience in the market, cultivated over many years. The Group always strives to meet its own unique quality targets, going over and above the basic quality that customers have come to expect.

▶ NPDS: Building Quality into Each Process

The NSK Group has deployed its unique quality management system, the NSK Product Development System (NPDS), globally. The system is used for new projects and is designed to achieve efficient and stable mass production of high-quality products by solving problems at key points in each process before moving on to the next stage. All processes are managed, from development and prototyping through manufacturing, and comprehensive management continues through mass production to ensure that high quality is reliably maintained.

● Outline of NPDS



▶ Training of DR Experts

To improve design quality, NSK has established its own qualifications and is training experts around the world to perform design reviews (DR). These experts, who are divided into ranks such as DR Pilot and DR Crew depending on their proficiency level, identify issues related to product quality starting in the design phase, in order to prevent problems down the road. As of March 31, 2017, a global total of 22 DR experts were on the job. In fiscal 2017, the Group will share DR best practices and enhance materials in an effort to raise the level of DR experts.

Initiatives to Enhance Manufacturing Quality

The NSK Group works diligently to deliver a consistently high level of product quality that meets customers' requirements.

The Group also develops manufacturing processes that focus on the 4Ms (manpower, machinery, materials and methods) in order to further improve product quality.

▶ 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.

In fiscal 2016, the Group continued to hold study sessions bringing personnel from all the plants together regularly 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. The accumulated knowhow in Japan is also deployed horizontally to the main manufacturing sites around the world, enabling the Group to standardize quality at a high level. In fiscal 2016, the NSK Group focused on deployment in China.



NQ1 program

▶ 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, the Group focused on the worldwide rollout of its self-audit system for heat treatment processes. Under the system, the persons in charge visited production sites and suppliers several times to conduct onsite audits. Only personnel that have achieved a high level of expertise are designated as in-house auditors.

Highlight Smart Factory Concept and the "Quality Cockpit"

The NSK Group is taking initiatives aimed at the creation of smart factories that will analyze a variety of information from production processes to prevent the production of defective products and establish a flexible manufacturing system.

As part of those initiatives, the Group is adopting the Quality Cockpit, an effort to improve productivity by preventing the production of defective products instead of responding after they are produced, by analyzing large amounts of data measured during equipment operation and parts processing and visualizing it to monitor signs of trouble.

▶ Global Rollout of Measures from Best Practice Plants

Every month, NSK monitors the status of quality management at all production sites worldwide. Production sites that produce exceptional results in terms of quality are named "Best Practice Plants." The characteristics of those plants and their management initiatives are analyzed and rolled out horizontally to other production sites.

Initiatives to Enhance Supplier Quality

High-quality materials and parts, as well as other key inputs including various types of oils and greases, are essential in the manufacture of high-quality products. The NSK Group engages in a wide range of activities aimed at enhancing quality based on strong ties of mutual trust with suppliers.

▶ Quality-Focused Procurement

The NSK Group conducts receiving inspections on parts and raw materials delivered to its business sites in each country and region. It also visits suppliers to verify their quality management. When starting business with new suppliers, it not only verifies the quality of procured items but also the systems and actual state of quality management at the design and production stages. By taking all of these steps, the Group ensures that its procurement is focused on quality.

► **Sharing Issues with Suppliers**

The NSK Group provides education on continuous improvement activities while sharing issues and engaging in initiatives to increase quality with suppliers through regularly held technical meetings and quality meetings. Every year, procurement policy briefings are held at which the executive officers responsible for the Procurement Division Headquarters and Quality Assurance Division Headquarters explain NSK's corporate and procurement policies and ask for cooperation with CSR procurement.

► **Visiting Suppliers**

The NSK Group strives to increase the level of quality while deepening mutual understanding with suppliers by sending personnel from the NSK headquarters, regional headquarters, and plants around the world to visit suppliers and audit their processes and exchange information.

NSK sent a questionnaire to suppliers of parts and raw materials in Japan that would be difficult to substitute from the standpoint of quality assurance, asking them to conduct self-assessments to confirm the progress of initiatives on matters such as response systems in the event of an earthquake and envisioned damage and countermeasures (see "Building a Disaster-Resistant Supply Chain" on p. 21 for details). NSK also conducts audits on and provides guidance to suppliers requiring improvement in their level of quality.

In fiscal 2016, NSK strengthened its initiatives to support improvement, so as to prevent recurrences of important quality problems, by starting a new special audit of suppliers designated as requiring priority improvements.

■ **Developing Human Resources Critical to 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.

Overview of Quality Education

NSK provides appropriate quality education according to each employee's rank and department. In fiscal 2016, it began restructuring the system of quality education by introducing quality ethics education and practical education in statistical quality control (SQC).

● **Rank-Based and Department-Based Quality Education System**

Rank	Plant	Technology Division	Sales & Management Division
Senior Managers/ Managers	Quality Knowledge Education		
Assistant Managers	Quality Management Education	Quick DR (DRBFM) ^{*2}	Sales Quality Education
Staff/Skilled Operators	NSK Manufacturing Education and Training Centers ^{*1} (beginner/intermediate)	NSK Institute of Technology ^{*3} (2nd/3rd years)	
Group Leaders (Plants only)	Quality Education Why Analysis	—	
Common	Quality Awareness (Ethics) Education, Awareness-Raising Seminar		
New Employees	New Employee Education / 7 Tools of QC / FMEA & FTA		

*1 NSK Manufacturing Education and Training Centers: See p. 53 for details.

*2 DRBFM: Design Review Based on Failure Mode. A technique for preventing quality trouble by focusing on design changes to investigate failure mode effects.

*3 NSK Institute of Technology: See p. 52 for details.

Quality Education in Sales Departments

The NSK Group has been conducting Sales Quality Education since fiscal 2010 with the aim of increasing customer satisfaction by raising the awareness of quality among employees in sales departments, which are the point of contact for customers. Using lectures and e-learning, the Group attempts to instill such knowledge as techniques for practical quality management and problem solving, which can be immediately used in sales activities, in different languages.



Sales Quality Education

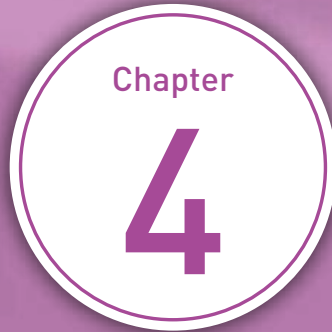
Quality Month

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. During Quality Month, employees are encouraged to submit ideas for an NSK quality slogan that captures their concept of quality, and the best slogans are selected for display on posters at all sites. Priority initiatives are set by each plant according to a Group-wide theme determined by the Quality Assurance Division Headquarters, and employees work hard to further improve quality.



Quality slogan posters



Chapter
4

Good Labor Practices

Creating a Dynamic Work Environment

As globalization continues its advance, there are more and more opportunities for exchange among people of different nationalities and backgrounds. It has never been more important to work across national borders and regional boundaries to achieve prosperity for all, and the basis of this must be deeper mutual understanding. Companies, for their part, are now expected to work toward the development of safer, more engaging workplaces that respect the cultures and practices of countries and regions worldwide, and that embrace diversity in the workforce.

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- P.46 Creating a Dynamic Work Environment
- P.54 Creating a Safe Workplace
- P.56 Initiatives for Corporate Health Management



Creating a Dynamic Work Environment

NSK's Approach

In our Management Principles, the NSK Group clearly states our aim “to provide challenges and opportunities to our employees, channeling their skills and fostering their creativity and individuality.” Further, in acknowledgment of the fact that each and every employee is a priceless asset, the Group has committed itself to “maximizing individual talent in a fair and dynamic work environment.” This commitment features three key areas of focus: leveraging a diverse workforce, creating a motivating workplace, and creating workplaces and opportunities that foster employee growth. We strive to create and maintain engaging work environments that inspire our employees, and which enable us to develop the human resources we need to lead the NSK Group of the future.

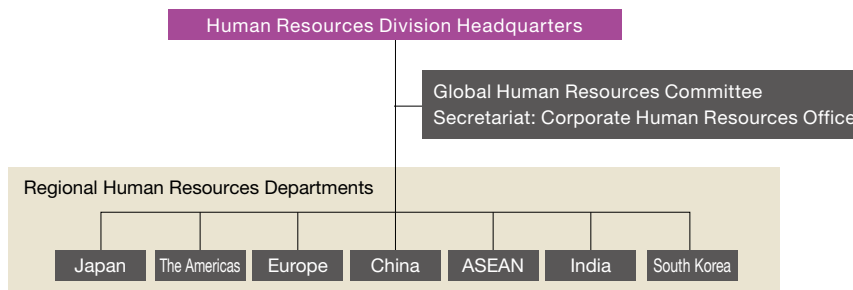
● Creating a Dynamic Work Environment



Global Human Resources

To exercise unified management of our global human resources, NSK established the Human Resources Division Headquarters in June 2016. In close collaboration with local HR departments, the division headquarters engages in a variety of undertakings based on the approach described above. The Global Human Resources Committee meets twice a year to report on their regional initiatives, share about the local challenges they face, and engage in global discussions on measures to further improve talent management.

● Structure of the Human Resources Division Headquarters



Mid-Term Targets (FY2016–FY2018)

■ Build a Global Talent Management System

- Accelerated leadership development
- Collaborative succession planning
- Developing talent with a diverse range of experience

■ Promote Diversity, Create a Safe and Inspiring Workplace

- Recruit high potentials with diverse backgrounds
- Create work environments where every member of our diverse team can maximize their strengths and abilities

Fiscal 2016 Activities

In fiscal 2016, the Global Human Resources Committee continued to focus efforts on enhancing developmental management of successor candidates positioned to fill key global positions, and on developing leadership competencies for the organization. The Global Management College, established to develop the next generation of organizational leaders, began its sixth annual program in fiscal 2016. The college has graduated more than 70 participants over the last six years, who have all gone on to contribute to NSK business operations throughout the world.

The Diversity Development Team has now been reorganized as the Diversity Promotion Office, which holds seminars aimed at instilling a better understanding of what diversity is all about. In addition, the Diversity Promotion Office looks out for the needs of parents with small children, and provides career support for women on the management career track. NSK is working hard to accelerate the progress of diversity and inclusion throughout the organization.

Respecting Fundamental Rights at Work

■ Basic Approach

Respecting the fundamental rights of our employees is one of the most important ways for the NSK Group to fulfill our social responsibility as a corporate citizen and employer operating a global business. As such, we are committed to conducting business in a way that pays respect to the individual.

■ Prohibiting Discrimination and Respecting Fundamental Rights at Work

The NSK Group adheres to the Universal Declaration of Human Rights and promotes activities based on the declaration's ideals. Having clearly stated our aim “to provide challenges and opportunities to our employees, channeling their skills and fostering their creativity and individuality” in our Management Principles (see p. 6), the Group also defines the “prohibition of unfair discrimination” and “respect for basic fundamental rights at work” in the NSK Code of Corporate Ethics. Prohibiting discrimination—on the basis of race, appearance, belief, gender, social status, lineage, ethnicity, nationality, age or disability—as well as harassment, forced labor and child labor, NSK creates workplaces to engage and inspire our diverse workforce, while striving to provide equal opportunity in recruitment, job assignment, evaluations and other employment issues. In addition to making NSK’s stance on human rights better known among our employees, we have identified acts that run contrary to that stance through internal audits and our internal reporting system, and take immediate action when necessary to correct it.

In fiscal 2016, we held harassment training at our Group companies in Japan to better equip our harassment hotline responders with the skills they need to handle these sensitive situations.

■ Employment Policy to Preserve the Stability of NSK and the Society at Large

As a corporate group that is committed to *monozukuri* (quality manufacturing), the NSK Group pursues sustainable growth. For this reason, we take a long-term perspective on employment and place high value on the continual recruitment and development of outstanding human resources to lead our businesses. Having established a policy to prevent mass layoffs, the Group also engages in appropriate employment practices in accordance with the laws and ordinances of each country and region where we operate.

■ Labor-Management Relations Based on Dialogue

The NSK Group regards sound labor-management relations as critical to sustainable growth. One way in which we respect 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 work as partners and strive to communicate at a deeper level, sharing views on the work environment and business conditions, and discussing and implementing improvement measures. We are committed to creating workplaces where employees can proactively engage in their duties.

As of March 31, 2017, 81% of the Group’s eligible employees in Japan belonged to a labor union. Through regular meetings between employee representatives and members in management, participants discuss ways of improving the workplace through better working hours and improvements in safety and health.

Diversity and Inclusion: Creating an Organization that Embraces Our Differences

■ Basic Approach

It is our conviction that employing people with diverse backgrounds—in gender, age, nationality, culture, lifestyle and values—will foster a work environment full of new perspectives and ways of thinking, which will in turn strengthen our competitiveness and ability to avoid risks. For this reason, the NSK Group promotes the creation of a corporate culture that embraces the diversity and inclusion of people and the values they hold.

■ Diversity Roadmap and Priorities for our Mid-Term Management Plan (FY2016–FY2018)

NSK is promoting diversity and inclusion in a three-phase initiative lasting from 2016 to 2026. During the initial Raising Awareness phase, which coincides with our three-year Fifth Mid-Term Management Plan (FY2016–FY2018), we will work to create an organization where our employees recognize the importance of diversity and are accepting of our differences.

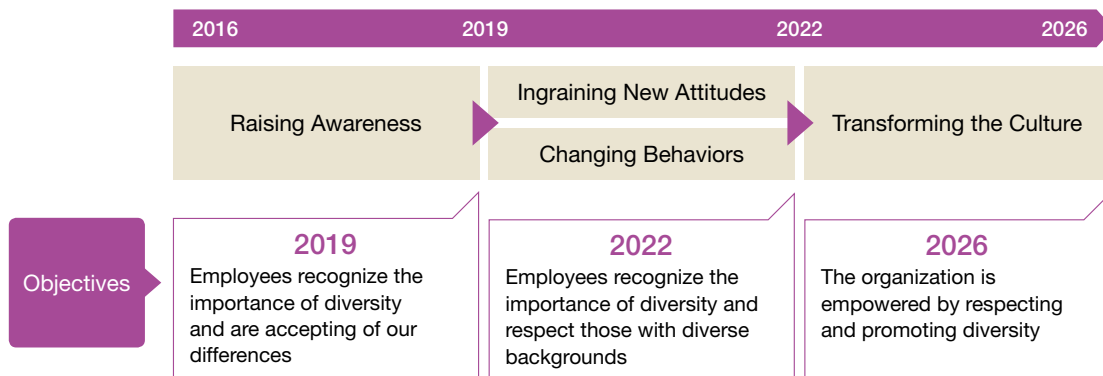


Reference data is available
on NSK’s website.

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

● Labor and Management Cooperate to Develop Better Working Environment

● Our Diversity Roadmap



For the Fifth Mid-Term Management Plan, our initiatives are based on the following four priority areas:

Priority 1: Promote a better understanding of diversity and inclusion

Priority 2: Support working parents and caregivers

Priority 3: Promote the advancement of women in the workplace

Priority 4: Work style reform

■ System for Promoting Diversity

NSK established a Diversity Development Team in 2006 with the aim of creating a work environment that promotes work-life balance. To further accelerate the team's progress and consolidate its place in the organization, the team was reorganized in 2016 as the Diversity Promotion Office.

The mission of the Diversity Promotion Office is to support the development of a rewarding corporate culture and work environment that enables each and every employee to maximize their unique set of strengths and abilities. To make this a reality, the office is pursuing its four priority areas to accelerate diversity within the organization.

■ Initiatives in Fiscal 2016

We began our efforts at raising awareness in fiscal 2016: Through diversity training and LGBT* seminars for both executives and employees, and direct talks from the president and other members of senior management, we worked to instill a better understanding of diversity and inclusion.

In the other three priority areas, as well, NSK has taken a broad approach to instill support for diversity. We launched a childcare service for parents of small children with shifts on national holidays, and have worked to support career advancement by offering training courses for female assistant managers. We have also responded to the Japanese government's calls for "work style reform," offering a telecommuting option for working parents, and flextime on a trial basis for employees working reduced hours.

*LGBT is an acronym for lesbian, gay, bisexual, and transgender.

■ Leveraging Global Talent

The NSK Group has undertaken a variety of initiatives to leverage our global talent across both national and regional boundaries. We are currently working to create a shared global infrastructure for HR that promotes standardization while leaving room for regional distinctions. This will include a common grading system for ranking executive posts, a deliberate system of promotion and development based on succession plans, core competencies for our global leaders, and a guideline for global mobility.

■ Promoting the Advancement of Women in the Workplace (Japan)

The rate of female employees in the NSK Group remains at 10.7% (in fiscal 2016 at NSK Ltd. and major NSK Group companies in Japan), and the rate of women in management positions also remains low, at 1.2%. To promote gender diversity, NSK has begun attempts to improve our female hiring rate and expand work options for female employees. Our efforts do not stop there, however: as a first step in cultivating diversity in talent and values at the management level, NSK conducts training for female managerial candidates to prepare them with the skills and mindset they will need to excel as leaders.

In recognition of our efforts to support the advancement of women in the workplace, the Minister of Health, Labour, and Welfare awarded NSK the highest certification of Eruboshi.*

*Eruboshi: Based on the Act of Promotion of Women's Participation and Advancement in the Workplace, this accreditation awarded by the Minister of Health, Labour and Welfare goes to "companies and organizations working proactively to create work environments where women can play an active role."



■ Helping to Support an Aging Society (Japan)

Japan's population is aging rapidly. Due to changes in the public pension system, it has become a societal expectation that companies provide access to employment opportunities even after mandatory retirement. NSK recognizes that the knowledge and skills of our experienced senior employees are beneficial in growing our business. Our basic policy is to provide work opportunities to employees willing to continue at NSK after retirement. We have had a rehiring program in place since April 2001.

Upon passage of Japan's Revised Law Concerning Stabilization of Employment of Older Persons, which came into effect in April 2013, we revised our rehiring program to improve labor conditions and ensure stability for our senior employees.

● Number of Rehired Senior Employees*

	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
Senior employee rehiring system	383	441	470	505	620
Other (fixed-term contract, etc.)	29	29	28	25	35
Total	412	470	498	530	655

*Includes employees of NSK Ltd. and major NSK Group companies in Japan

■ Providing Work Opportunities to People with Disabilities (Japan)

At NSK, we believe it is our responsibility to provide employment opportunities for people with disabilities. Special subsidiary NSK Friendly Services Co., Ltd., in particular, provides opportunities for people with intellectual disabilities to work and thrive in our organization. In fiscal 2016, NSK Ltd., Major NSK Group companies in Japan, and NSK Friendly Services together employed a total of 123 people with disabilities, representing 2.20% of all employees.

● Employment Rate of People with Disabilities*

	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
Employment rate of people with disabilities	1.99%	2.04%	2.09%	2.17%	2.20%
Legally mandated employment rate	1.8%	2.0%	2.0%	2.0%	2.0%

*Includes employees of NSK Ltd. and major NSK Group companies in Japan



Reference data is available on NSK's website.

www.nsk.com > Sustainability > Creating a Dynamic Work Environment

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

● Human Rights and Diversity

● Diversity and Work-life Balance

Facilitating Work-Life Balance

Basic Approach

NSK believes that having employees who enjoy and are actively engaged in both their work and personal lives will have a beneficial impact on our business activities. An improvement in employee productivity will lead to an improvement in their ability to produce quality work, which will ultimately cultivate a more fulfilling life both at work and at home. For this reason, NSK strives to better manage employee working hours, to encourage employees to take their annual paid leave, and to provide a variety of work style options to fit their diverse lifestyles. With an aim of boosting job satisfaction, NSK also runs seminars and other programs to raise awareness—of both managers and employees—on the need for work style reform.

Support for Working Parents and Caregivers (Japan)

To create a more open, amiable workplace that responds to the needs of a diverse workforce, NSK's first step of action is providing support for parents of small children and caregivers. While our priority in the past has been to stay legally compliant in this area, we are now beginning to take a more proactive role. Not only will NSK work to provide comprehensive support for these employees, but will also create a work environment where they can maximize their potential. Many employees struggling with the time constraints of parenthood are still very eager to excel in the workplace. For these parents, NSK is offering flexible working hours on a trial basis, and has started an onsite childcare service on working public holidays when regular daycare facilities close down. In recognition of our efforts to support working parents of small children, the Minister of Health, Labour, and Welfare awarded NSK certification for Kurumin*.

*Kurumin: Based on the Act on Advancement of Measures to Support Raising Next-Generation Children, NSK formulated an action plan as a general business operator and received certification from the Minister of Health, Labour and Welfare as a corporation that supports child raising.

Support System for Working Parents and Caregivers*

	NSK	Japanese law
Parental leave	Through end of April following child's third birthday (first five days is paid)	Up to 2 years (unpaid)
Reduced hours for working parents	Through end of March of child's 6th grade year	Up to 3 years
Caregiver leave	Up to 1 year	Up to 93 days
Reduced hours for working caregivers	Up to 3 years	Up to 3 years
Exemption from half-day limit	Usually limited to 12 half-days per year, but unlimited for family care	
Re-employment registration system	Employees who resign to follow a transferring spouse can register for re-employment at NSK upon their return	



*Includes employees of NSK Ltd. and major NSK Group companies in Japan

Work Style Reform (Japan)

In an effort to demonstrate to our employees how the way we work needs to change, NSK conducted manager training sessions in 2016, and held seminars on work style reform for all of our 200 managers in the technology departments. In addition to learning about global trends and government policies, seminar participants discussed actual case studies and considered possibilities for changing the way we work.



Work style reform seminar

Total Working Hours per Employee, and Average Days of Paid Leave Taken Annually

	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016
Total working hours per employee	1,819 hours	1,838 hours	1,864 hours	1,855 hours	1,860 hours
Average days of paid leave taken annually	15.5 days	15.4 days	15.6 days	15.8 days	15.6 days

*Includes employees of NSK Ltd. and major NSK Group companies in Japan

Appendix P.102 Employee Data



Reference data is available on NSK's website.

www.nsk.com > Sustainability > Creating a Dynamic Work Environment

● Facilitating Work-Life Balance

■ Lifelong Learning Program (Japan)

NSK provides employees with various opportunities to reflect on their health, personal finances, and life in general as they prepare for retirement. The Lifelong Learning Program and seminars on pension and employment insurance are widely attended by our employees.

Human Resource Systems and Development Programs That Support Sustainable Business Practices

■ Basic Approach

Amid the ongoing process of globalization, if NSK is to successfully bring out employee potential and maximize talent, we will need a work environment where people recognize common problems that transcend cultures and borders and can work to resolve them.

The NSK Group has honed in on three central strategies for raising up a diverse talent pool: developing global talent, developing talent with professional expertise, and creating HR systems that embrace diversity.

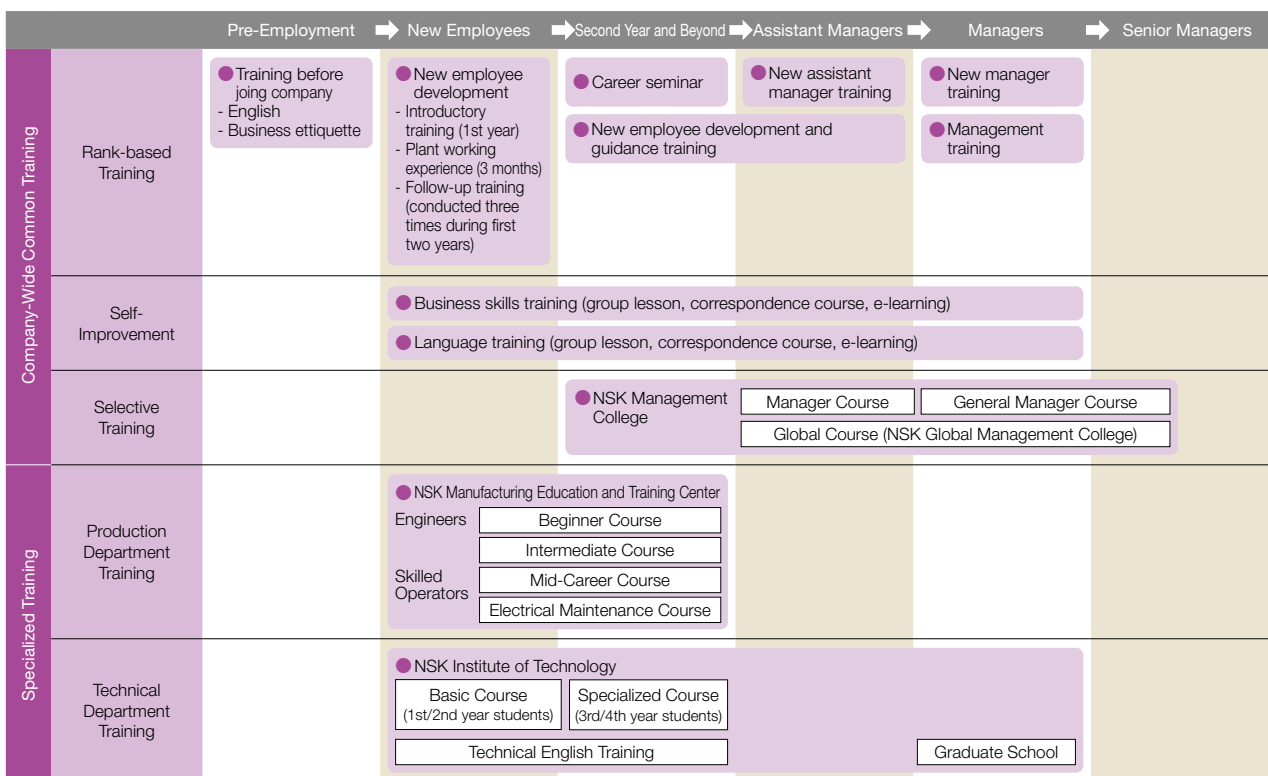
■ Employee Development Programs

To develop the talent necessary to support sustainable growth, NSK employs a talent management system to ensure that each employee can realize their full potential. We are also working to promote career advancement and boost employee motivation by orchestrating strategic job rotations that serve to stretch the skills and abilities of our employees.

Through a variety of educational offerings and training programs that further refine our people's abilities, knowledge and character, NSK provides opportunities and forums to help in the development of our employees. In addition to targeted training geared for managers and other levels of the organization, each year NSK runs both the Japan Management College and the Global Management College, which provide selective training for future leaders of the organization. We have also begun offering opportunities to study abroad and participate in liberal arts programs, with an aim to broaden horizons and develop character. The Group also offers professional education by function, such as the NSK Manufacturing Education and Training Center, established to facilitate the transfer of technical skills involved in manufacturing, and the NSK Institute of Technology (NIT), which conducts comprehensive technical training for engineers.

In Japan, NSK provides information on our various training programs and career seminars on the company intranet site, giving employees quick access to our many development opportunities. In fiscal 2016, we invested approximately ¥44,000 per person in employee training and development (figure only for employees of NSK Ltd.).

● Career Development System



Language Education

The NSK Group has elected English as a common language in order to conduct operations smoothly through active communication among employees around the world.

We offer English-language training lead by external instructors at our headquarters and a number of plants in Japan. This provides employees with the opportunity to learn practical language skills relevant to their work. In fiscal 2015, we started Language Training Abroad, a new program giving promising language learners the opportunity to study overseas in an English-speaking country. In fiscal 2016, two employees were selected for the program and sent to study abroad.

At our sites outside of Japan, the NSK Group is also conducting Japanese and English courses for local employees.

NSK Global Management College

To develop talent for managerial roles around the world, the NSK Group has been running the Global Management College (GMC) since 2011. During the college's sixth year in fiscal 2016, 13 employees were selected as participants from the US, Brazil, the UK, Germany, the Philippines, Vietnam, China, India, South Korea, and Japan. Sessions were held at NSK Group sites in Japan, South Korea, Germany, Singapore, and Thailand. The participants gained knowledge and skills in leadership through an interactive curriculum, which included lectures on business strategy and visits to NSK Group sites and our customers.



GMC-6 students with members of NSK management

In just its first six years, the GMC has already graduated 72 people from 20 countries. These leaders are now driving NSK's business operations in their respective regions.

NSK Institute of Technology

Established in November 2007, the NSK Institute of Technology (NIT) is a global educational institution that provides opportunities for employees to obtain knowledge on a broad range of market and customer technologies, while gaining specialized expertise by diving deeper into fields of focus at NSK. Going beyond mere technical theory, the institute aims to provide a comprehensive education in our technologies, from the application and handling of products to quality management, production methods and cost management. The credit-based curriculum is divided by academic discipline, with classes provided at technology departments in Japan and technology centers around the world. In Japan, all academic disciplines require courses in critical thinking and communications, as well as courses in cross-cultural understanding and diversity. In addition to these standard courses, there are systematic courses of English instruction, technology management training, sales engineer training, and quality education that combines textbook knowledge with practical skills. Open seminars are also held periodically, where external lecturers introduce new perspectives into the organization. Through these programs, NSK goes a step beyond mere technical training in an effort to raise up highly talented engineers who will have a direct impact on strengthening the competitiveness of our businesses.

In fiscal 2016, 403 students were enrolled in programs offered at 12 sites in 10 countries.

● **NIT Education System**

NIT Standard Course: Four-Year Curriculum Mainly for Newly Graduated Engineers (Two-Year Curriculum Outside of Japan)

		Basic Engineering	Bearing Technology	Steering Technology	Precision Technology	Specialized Training (Liberal Arts Course)	
Vocational Course	Fourth year	Vocational classes	Vocational classes	Vocational classes	Vocational classes	Specialized classes	English education (only in Japan)
	General classes (e.g. cross-cultural, diversity)						
Liberal Arts Course	Third year	Vocational classes	Vocational classes	Vocational classes	Vocational classes	Specialized classes	
	General classes (e.g. critical thinking, communications)						
Liberal Arts Course	Second year	Vocational classes	Vocational classes	Vocational classes	Vocational classes	Specialized classes	
	Liberal arts classes						
Liberal Arts Course	First year	Vocational classes	Vocational classes	Vocational classes	Vocational classes	Specialized classes	
	Liberal arts classes						

■ NSK Manufacturing Education and Training Center

With an aim to develop frontline manufacturing specialists to inherit our unique skills and expertise, and pass them on to the next generation, NSK established the NSK Manufacturing Education and Training Center at Ishibe Plant in Shiga Prefecture and at Fujisawa Plant in Kanagawa Prefecture. The technical education provided at these facilities, conducted in three courses on grinding/assembly, maintenance, and electrical maintenance, provides training suited to the abilities and experience of each individual employee. Going forward, the centers will continue conducting the education needed to ensure skill transfer among our frontline employees.

● NSK Manufacturing Education and Training Center: Courses and Content

	Course	Participants	Period	Course Content
Skilled Operators	Skilled operators (grinding/assembly)	Skilled operators	3 months	<ul style="list-style-type: none"> •Skills knowledge focused on the basic fundamentals of shop floor management
	Skilled operators (maintenance)	Skilled operators	3 months	<ul style="list-style-type: none"> •Special skills for repair/maintenance as well as shop floor management
	Electrical maintenance	Candidates for advanced maintenance staff	6 weeks + 2 months (at plant)	<ul style="list-style-type: none"> •Fundamentals of electrical maintenance (basic theory, programming, troubleshooting) •2 months of hands-on training at plant
Engineers	Beginner-level engineers	Engineer with 2-3 years (or equivalent) experience	6 weeks	<ul style="list-style-type: none"> •Fundamentals of being a plant engineer (basic engineering, basic management knowledge)
	Intermediate-level engineers	Engineer with 5-7 years (or equivalent) experience	2 weeks (2x per week)	<ul style="list-style-type: none"> •Knowledge for shop floor management skills for intermediate-level engineers •<i>Monozukuri</i> knowledge from the Toyota Production System

■ Goal Management and Performance Agreement System

The NSK Group has elected the Performance Agreement System as a means to align individual goals with departmental and corporate targets, allowing our employees to maximize their potential as they grow along with their department and company. Under this system, employees meet regularly with their supervisors to set goals for the fiscal year, verify interim progress, and conduct a results follow-up at the end of the year. In order to ensure that managers and their employees are engaging in interactive discussions, we also conduct a survey to determine how satisfied employees are with evaluation feedback from their supervisors. In fiscal 2016, 55% of employees (NSK Ltd. and major NSK Group companies in Japan) were evaluated under this system.

■ Workplace and Career Aspirations Survey

Once a year, we give our employees the opportunity to submit feedback directly to HR through the Workplace and Career Aspirations Survey. The survey includes questions on their current workplace environment, the employee's personal aspirations for their future with the company, and other personal concerns they might like to address. Employees may also request a follow-up interview with HR. Based on the results of these surveys and interviews, NSK employs strategic personnel transfers to enable our employees to fully develop their unique skills and abilities. A total of 2,790 employees submitted the survey in fiscal 2016 (NSK Ltd. and major NSK Group companies in Japan).

■ Internal Job Posting System

NSK posts internal job offerings to promote engagement and help employees proactively develop their careers. Job postings specify qualification requirements and the number of people needed, and anyone interested can submit an application directly to the HR Department. By launching a system that allows employees to proactively seek out new types of work, NSK aims to improve employee morale and engagement.



Reference data is available on NSK's website.

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

www.nsk.com > Sustainability > Creating a Dynamic Work Environment

● Personnel System to Support Career Advancement

● Resources Development Programs

Creating a Safe Workplace

Basic Approach

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. The Company should establish safe, secure, and comfortable workplaces, no matter the level of output demand."

We believe that safe workplaces can only be achieved by promoting global standards to improve unsafe facilities, by encouraging information sharing, and by fostering a culture where employees feel free to challenge one another on the safety of their actions.

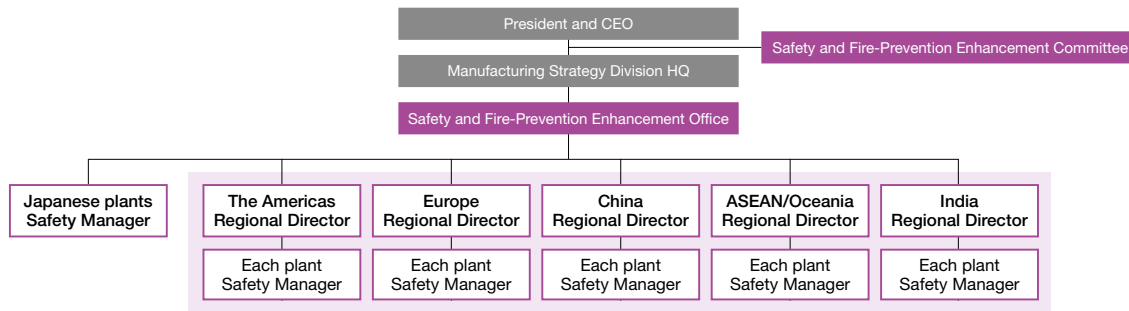
Occupational Safety and Health Management

Organizational Structure

The NSK Group appreciates the importance of a proactive approach toward safety and health to a sustainable manufacturing process. Accordingly, NSK established a Safety and Fire-Prevention Enhancement Committee in fiscal 2016, which is chaired by our president. We also hold periodic meetings of global safety and fire prevention—both for heads of operations in each region and regional fire and safety directors—to discuss global safety issues. Such meetings allow NSK to adopt unified policies, share best practices among regions, and ultimately to create safe and healthy workplaces for all our employees.

In the future, NSK will continue to leverage these meetings to maintain connections among regions and ensure worker safety.

Global Safety and Fire-Prevention Management System

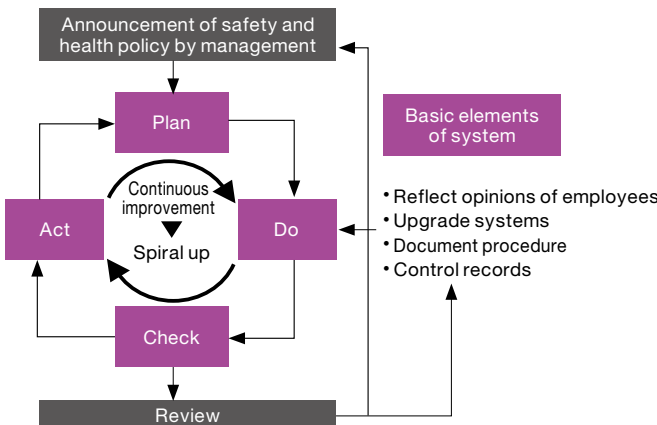


Occupational Safety and Health Management System

The NSK Group has developed an occupational safety and health management system that complies with OHSAS 18001 and other related regulations, and we strive to foster a "safety first" culture that fully engages all employees at each of our sites.

By reporting accident occurrences and implementing appropriate countermeasures to all our sites globally, we always work to prevent recurrence of similar incidents.

Occupational Safety and Health Management System



Lost-Time Accident Occurrence Rate*1

	Fiscal 2014	Fiscal 2015	Fiscal 2016**
Japan	0.44	0.32	0.28
Outside Japan	1.00	0.91	0.89
Globally	0.80	0.70	0.68
Japan's manufacturing industry (average)	1.06	1.06	1.15

*1 Lost-time accident occurrence rate = Number of work accidents resulting in one or more days of work absence / Total actual working hours × 1,000,000.

*2 The data for fiscal 2016 has been independently verified by a third party. (See p. 111 in the Appendix for details.)

Mid-Term Targets (FY2016–FY2018)

In order to establish safe, secure, and comfortable workplaces, NSK will concentrate on the following three focal points.

● Three Main Focal Points of the Fifth Mid-Term Management Plan

1. Correcting unsafe behaviors
2. Standardization, commonalization and sharing
3. Improving unsafe facilities

Overview of Activities and Main Initiatives in Fiscal 2016

In fiscal 2016, we upgraded our organizational structure for safety in order to accelerate efforts to ensure safe workplaces throughout the Group.

In spite of this, the number of group-wide workplace accidents only dropped by 5%, falling short of our 25% reduction target. We also experienced a major accident in 2016. We take this incident very seriously, and have implemented preventive measures to ensure another major accident like this never happens again.

Work Accidents in Fiscal 2015

Accidents are trending downward, but there are still too many falls, entanglements, and caught-in injuries.

Priority Measures and Results for Fiscal 2016

NSK enacted the following three measures to reduce entanglements and caught-in injuries by half:

- (1) Risk assessments (on machine safety)
- (2) Rollout of "maintenance call-out lines" (Workers assigned on a select few lines to call out problems when short stops* occur and work toward a fundamental solution of the issue. By lowering the occurrence of short stops, we can reduce the incidence of entanglements and caught-in injuries.)
- (3) Rollout of "point-and-call" (By encouraging employees to wait just one second before taking action, we can reduce injuries related to people putting their hands in running machinery. In fiscal 2016, this technique was only used at certain plants in Japan.)

Result Change in the accident occurrence rate. We will enact the following measures to reduce entanglements and caught-in injuries.

- (1) Install interlock** mechanisms on movable covers and aim for a 100% global deployment rate
- (2) Roll out the point-and-call technique at all sites in Japan and run a "stop and double-check" campaign (After a machine is turned off, and a light or other indicator is checked to confirm the machine has been stopped, the machine is visually inspected again to ensure it is off. By implementing this double-check to ensure the machine is off, we can reduce incidents where an operator's hand is caught in a machine set on auto.)

Reduce falls by half: identify all fall hazards and implement prevention measures, post maps showing fall hazards

Result Prevention measures in the first half of fiscal 2016, but there was no effect on accident occurrence. In the third quarter we revamped our efforts, sending representatives from headquarters to accelerate the efforts locally. As a result, we achieved a significant reduction in falls in the fourth quarter. In fiscal 2017, we will continue working to reduce injuries by updating fall hazard maps and eliminating uneven floor surfaces.

We have also adopted an accident severity scale in fiscal 2017, allowing us to focus our efforts on preventative measures for severe incidents, and to deploy these horizontally throughout the Group. This will allow us to reduce the incidence of serious injuries in NSK.

*1 Short stop: Repeated stoppage of machinery for short durations due to machine trouble.

*2 Interlock: A safety feature that prevents a machine from operating unless specific procedures are followed. For example, a mechanism that prevents a machine from starting while the safety cover is still open.

Occupational Safety Measures

■ Organizational Improvements

NSK established the Safety and Fire-Prevention Enhancement Committee—chaired by the president—to formulate policy and manage progress on objectives on a group-wide basis. The committee meets four times a year to discuss issues and make decisions related to safety and fire prevention. In addition, representatives from each regional headquarters* also meet four times a year to share best practices and discuss new fire and safety initiatives.

*Europe, the Americas, China, ASEAN, India, Japan and South Korea

■ Standardization of Safety Education

The NSK Group has compiled the procedures used in our Safety Dojo* training into a manual, which in 2017 is being used at NSK plants throughout the world. We have also created a fire and safety portal on our company intranet where employees can access related resources and learn about recent safety measures.

*Safety Dojo: training designed to help employees gain awareness of safety hazards and the importance of work rules by experiencing simulated accidents

■ Recent Safety Initiatives

NSK is dedicated to raising up highly knowledgeable and competent safety assessors in our equipment development departments, who are capable of designing machinery with an emphasis on safety to prevent accidents resulting from human error and machine failure. In 2015, we began training safety sub-assessors to conduct risk assessments of our existing facilities, and to implement safety measures to improve them.

In fiscal 2016, an additional 161 employees obtained qualification to serve as safety sub-assessors. In fiscal 2017, these people will lecture and train up other employees to qualify even more of our people as safety sub-assessors.

Initiatives for Corporate Health Management

■ Basic Policy

At the core of NSK's Vision to set the future in motion is a desire to create a brighter tomorrow where we can all lead safe, healthy, and fulfilling lives. It is NSK's firm belief that the health of our employees and their families is foundational to achieving this future.

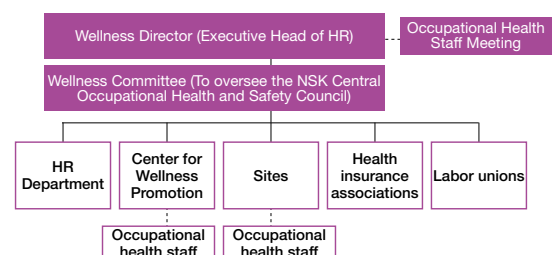
The health—both of body and mind—of each one of our employees and their families is an invaluable asset to the Group. As such, NSK has established a management structure that prioritizes health and is committed to a full range of activities to promote employee wellness, all with the aim of improving their physical and mental health.

NSK sees an investment in employee wellness as an investment in the future profitability of the NSK Group, and will continue to proactively pursue initiatives in this area.

Corporate Health Management Structure (Japan)

Our health and wellness objectives are a reflection of in-depth discussion and critical analysis at meetings held throughout the organization. This collaborative effort has involved the Human Resources Department, the Center for Wellness Promotion, labor unions, health insurance associations, and onsite labor divisions and occupational health staff, all under the supervision of the executive head of HR. In order to create a management structure that prioritizes health, NSK established a Center for Wellness Promotion within the Human Resources Department, and has worked to build a stronger medical team through the recruitment of additional occupational physicians, nurses, and health specialists. But our efforts do not stop there: through regular meetings of occupational health staff and the Wellness Committee—a function established to oversee the activities of the NSK Central Occupational Health and Safety Council—NSK will continue working to improve our ability to support the wellness of employees.

● Corporate Health Management Structure



Physical Health (Japan)

■ Disease Prevention and Lifestyle Improvements: Putting Checkup Results to Good Use

The prevention and early detection of disease is essential for ensuring that all NSK employees can thrive in the workplace. That's why every year, when employees have their annual health checkup, those with health concerns are encouraged to have follow-up consultations with a physician who can hear their concerns and recommend lifestyle improvements.

Our health insurance associations also play a big role in the health of employees and their families, promoting early detection and prevention of disease progression through the Specific Counseling Guidance program and periodic cancer screenings.

● Health Checkup Results*

	Fiscal 2015	Fiscal 2016
Rate of employees showing health concerns	53.1%	51.8%
No. of employees receiving follow-up consultations	2,930	2,671
Rate of employees participating in the Specific Counseling Guidance program	25.0%	24.3%

*Includes employees of NSK Ltd. and major NSK Group companies in Japan

Mental Health (Japan)

■ Mental Health Education

Through lectures from specialists and roleplay coaching, new employees are trained in self-care, and managers are educated in "line care," providing line managers with the skills they need to notice and react to sudden changes in their employees. By learning to identify early signs of stress and gaining new strategies to help avoid it, we equip employees with the skills they need to help them nip mental health problems in the bud.

■ Using the Results of Stress Checks

Along with annual health checkups, all employees are given stress checks and notified of the results so they can conduct their own self-care. Where a doctor deems it necessary, this is then followed up with a personal consultation. Also, after an analysis of the stress checks, workplaces found to be especially stressful will be the subject of special action aimed at improving the work environment.

■ Employee Assistance Program (EAP)*

With the help of external specialists, NSK has also rolled out an employee assistance program (EAP). The program enables employees to seek help for mental illness before it becomes too serious, supports employees as they transition back to work after a leave of absence, and works to combat recurrence of mental health problems.

*Employee assistance program: a program that supports employee mental health

■ Mental Health Helplines

NSK has established helplines at each of our sites to provide employees with a safe and easy option for getting help at their workplace. We have also set up a telephone hotline for employees and their families.

● Activities to Promote Mental Health

Purpose Target	Primary prevention (prevention and health promotion)	Secondary prevention (early detection and response)	Tertiary prevention (treatment, return to work, and relapse prevention)
All employees (self-care)	Stress awareness and management		
	Improving lifestyle habits	Voluntary counseling	Treatment
Managers and supervisors (line care)	Reaching out to employees		
	Assessing/improving work environment	Identifying the issue, responding accordingly	Supporting return to work
Onsite health care resources	Policy creation/disclosure and planning		
	HR policy review	Stress check and guidance	Supporting return to work
	Providing training and resources	Establishing support network	
Off-site health care resources	Providing specialized knowledge, necessary resources, advice and tools		

Chapter
5

Working with Local Communities

Social Contributions Targeting Community Development

The world is facing a variety of challenges today. While the circumstances and specific problems faced differ by country and region, in order to create sustainable societies, it is crucial for companies to actively address these challenges and to conduct their business activities with an awareness of local community development.

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- P.59 Policy on Social Contribution Initiatives
- P.59 Establishment of Social Contribution Action Period
- P.59 Example Social Contribution Actions in Fiscal 2016

Policy on Social Contribution Initiatives

The NSK Group's business sites focus their social contribution efforts in the following three priority areas based on the needs of their respective countries and regions.

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.



Examples of initiatives in the three priority areas are: (1) providing aid to research institutions, under promotion of science and technology; (2) providing scholarships, offering students work experience opportunities, and holding classes about bearings, under development of the next generation; and (3) cooperating in community events and welfare programs, under mutual harmony and benefit with communities. The Group also values communication with community members and strives to build better relationships so that it can accurately assess and respond to community needs.

Additionally, by compiling social contribution activities undertaken at each site and sharing them group-wide, NSK aims to foster a corporate culture in which each and every employee is aware of and can engage in community development.

Establishment of Social Contribution Action Period

Taking the opportunity of NSK's 100th anniversary to further enhance social contribution initiatives, the NSK Group has designated the months of, before, and after its founding (October through December) as the Social Contribution Action Period, starting in fiscal 2016. During this period, NSK will work at strengthening its social contribution initiatives throughout the Group, making use of the unique features of each region.

Example Social Contribution Actions in Fiscal 2016

NSK Ltd.

■ Held Factory Tour and Science Class for Elementary School Students



NSK holds factory tours and science classes to familiarize children with science and spark their interest. The Ishibe Plant conducted a factory tour for local elementary school students in November 2016. In addition, the NSK science class was held for the tenth year at the Japan Science Museum in March 2017. At the class, about 40 children were given a simulated experience of engineering work.



■ Donated Bicycle Helmets to Elementary Schools



The Company donated bicycle helmets to elementary schools in Shinagawa Ward, where NSK's head office is located. The donation will enable all children in Shinagawa Ward to wear helmets and aims to reduce children's injuries when riding bicycles.



■ Donated Guide Robot



NSK donated the LIGHTBOT™ guide robot, an obstacle avoidance guide robot certified with the international safety standard ISO 13482 for life support robots, to Kanagawa Rehabilitation Center, a development partner.



■ Supported the NSK Foundation for Advancement of Mechatronics



The NSK Group supports the NSK Foundation for Advancement of Mechatronics, which provides research grants for the advancement and development of mechatronics technology, the promotion of technical exchanges and mechatronics conventions and gatherings, as well as educational subsidies. With the aim of advancing machine technology, contributing to Japan's development, and bettering people's lives, NSK continued to subsidize the foundation in 2016.



Highlight NSK Scholarship Foundation Established



NSK established the NSK Scholarship Foundation to celebrate its 100th anniversary in November 2016. The foundation's activities are based on NSK's mission statement, which calls for contributing to a safer, smoother society and helping protect the global environment, as well as strengthening relationships between people throughout the world. Activities will also be guided by the NSK Vision 2026 "Setting the Future in Motion," as well as NSK's determination to continue to deliver new value to customers and the broader society. The goal of the foundation is to provide advanced educational opportunities to young people who will lead the way in the next generation on global issues such as conflict, hunger, climate change, and protection of the environment.

Foundation information

- Name: NSK Scholarship Foundation
- Founded by: NSK Ltd.
- Chairman: Norio Otsuka, Honorary Chairman, NSK Ltd.
- Location: Nissei Bldg., 1-6-3 Ohsaki, Shinagawa-Ku, Tokyo, 141-8560, Japan
- Established on: April 11, 2017

Business Description

- Provision of scholarships to Japanese students for study abroad at universities and graduate schools
Provision of educational assistance to young Japanese leaders who have a strong desire to contribute to the world
(Fields of study: Social sciences, science and engineering)
- Provision of scholarships to students from Asia for study at universities in Japan
Educational assistance for young people in Asia, as a leading manufacturing enterprise in the region
(Fields of study: Science and engineering)

AKS East Japan Co., Ltd.

Local Cleanup Activities



Cleanup activities, including cleaning sidewalks around the factory site and planting shrubbery, are routinely performed throughout the year.



Asahi Seiki Co., Ltd.

Workplace Learning Experiences



Asahi Seiki conducted a workplace learning experience for local junior high school students who experienced work such as packing bearings.



NSK (China) Investment Co., Ltd.

Established NSK Huaqiao Charity Foundation



The company established the NSK Huaqiao Charity Foundation with government cooperation. The fund is used for elderly care.



Participated in "Project Hope" Preschool Support Campaign



NSK participated in "Project Hope," a preschool support campaign with the goal of improving the educational environment in impoverished areas, and cooperated in the reconstruction of kindergartens in mountainous areas.



NSK (China) Research and Development Co., Ltd.

NSK Japan-China



Mechanical Engineering Affiliation Outstanding Thesis Award
In 2003, NSK established the Mechanical Engineering Dissertation Awards for Sino-Japanese Cooperation at Tsinghua University. The goal is to foster the next generation of engineers who will build China's future. To honor contributions and achievements in research in the mechanical engineering field, annual incentives are awarded to the authors of outstanding research papers.



NSK-WANDA Electric Power Assisted Steering Systems Co., Ltd.

Employee Blood Donation Activities



In collaboration with the regional blood donation service center, more than 40 employees gave blood.



NSK Europe Ltd.

■ Donated in Médecins Sans Frontières



Taking the opportunity of NSK's 100th anniversary, NSK Europe donated 20,000 euros to Médecins Sans Frontières (MSF), a private nonprofit organization that conducts medical and humanitarian assistance from a neutral, independent, and impartial standpoint. The donation will go to benefit relief for victims of conflict and natural disasters as well as people who cannot access healthcare services for various reasons such as poverty.



PT. NSK Warner-Indonesia

■ Tree-Planting and Local Cleanup Activities



More than 30 employees planted trees and cleaned up the local area to help preserve the global environment.



NSK Bearings (Malaysia) Sdn. Bhd.

■ Beach Cleaning Activities



To protect the natural environment, beach cleanup activities were conducted in cooperation with local residents.



NSK Australia Pty. Ltd.

■ Participated in Charity Marathon



NSK Australia participated in a charity marathon. Donations collected will be used for research activities in the field of psychiatry.



NSK New Zealand Ltd.

■ Participated in Conservation Activities



Employees planted trees, removed weeds, and performed nursery garden work in a protected natural environment area of the community.



Social contribution activities including nature conservation are also introduced in the "Biodiversity Conservation" section of this report. (See pp. 85-87 for details.)



Chapter
6

Environment

Protecting the Global Environment

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, pollution of air and water by chemical contamination, 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 ecofriendly products and services and reducing the environmental impact of their operations.

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Environmental Management

To realize a sustainable society, global environmental targets and environmental regulations by country and region have been established. Companies are required to run PDCA cycles for environmental management with the intention of balancing environmental conservation with economic advancement.

Overview of Environmental Management System

NSK adheres to the principle that global environmental protection, as outlined in the Company's mission statement, must be an ever-present concern in all its business activities. Accordingly, the Group states in its Environmental Policy that environmental management forms the basis of its existence and pursuits. While raising the awareness of each of its directors and employees, NSK works to create environmentally friendly products, implement global warming countermeasures, enact measures to promote resource conservation and recycling, enforce measures to reduce the use of environmentally harmful substances, ensure compliance and take countermeasures for environmental risks.

Environmental Policy

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.

■ Environmental Code of Conduct

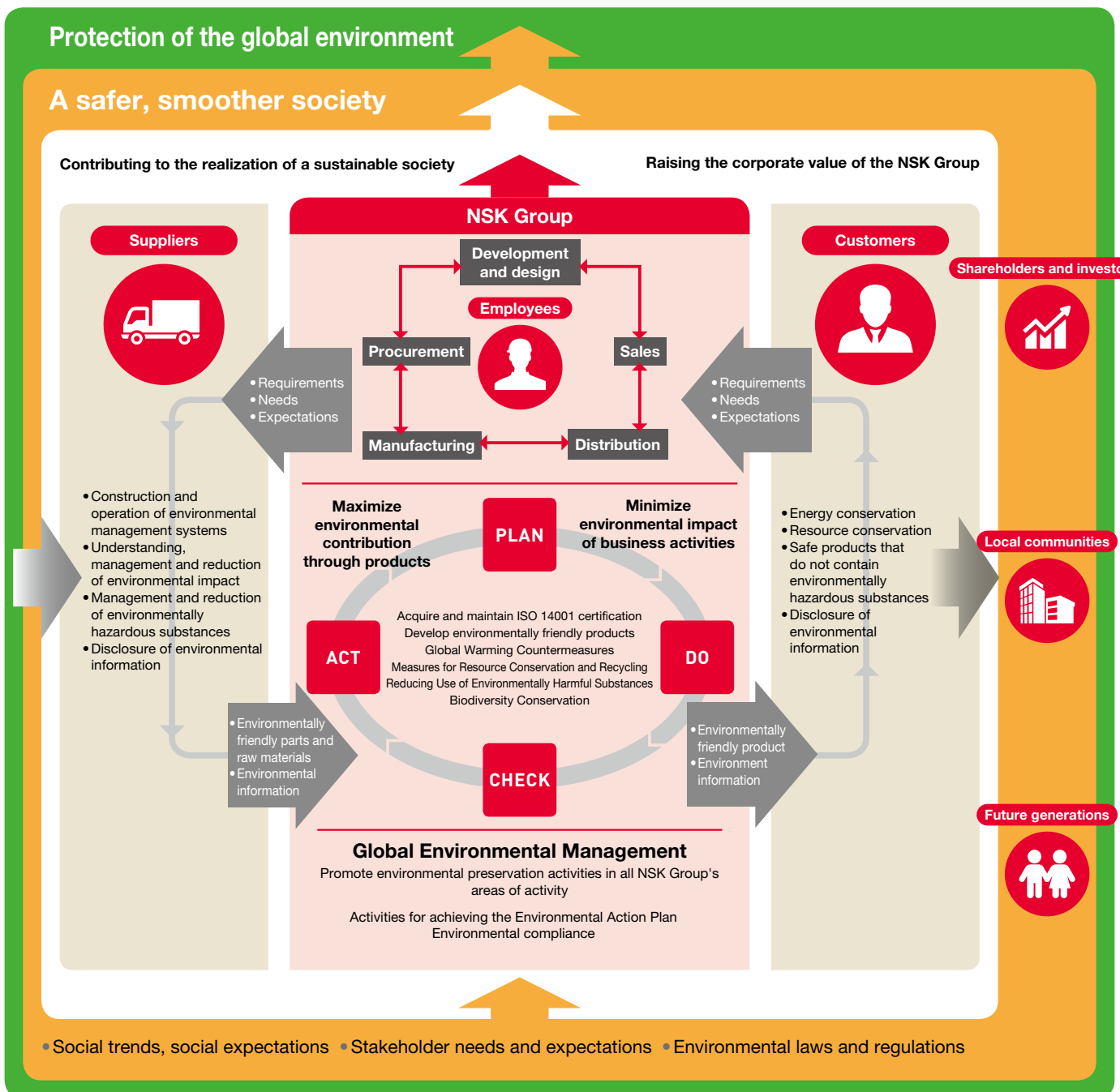
1. To promote the development of manufacturing technologies through the use of our Tribology (friction control and lubrication technologies) in order to create environmentally-oriented products.
2. To ensure energy and resource conservation within all spheres of our business operations.
3. To reform environmental management organizations by improving operational systems and clarifying chains of responsibility.
4. To more aggressively tackle environmental protection by setting and adhering to high internal standards, in addition to complying with laws, ordinances, and agreements.
5. To reduce environmental impact by promoting the switch from chemical substances that adversely affect the environment to environmentally friendly alternative substances, waste reduction, and recycling.
6. To encourage employees to understand our environmental policies and to ensure an environmental mindset in the company through education and internal communications.
7. To contribute to societies by conducting social environmental activities and addressing issues related to the preservation of ecosystems and human health.
8. To actively communicate with environmental authorities and local communities in order to receive insightful and constructive opinions, and to disclose the ongoing status of our environmental management activities to the public.

Established: December 12, 1997, Revised June 25, 2015

NSK Group Initiatives and Stakeholder Involvement

The international community is accelerating efforts to realize a sustainable society with the COP 21 Paris Agreement and the United Nations Sustainable Development Goals (SDGs). In response to this trend, new regulations and incentives are being introduced in each country and region.

The NSK Group seeks to respond appropriately while understanding the risks and opportunities of environmental initiatives. This is why the NSK Group is steadily implementing initiatives based on a solid understanding global social trends, environmental laws and regulations in each country and region, and by defining priority issues and reflecting the measures required in the environmental action plan. The Group is reducing the environmental impact of its business activities, such as reducing greenhouse gas (GHG) emissions, promoting resource conservation and recycling, and preventing environmental pollution. It is also promoting activities with an awareness of the entire value chain including the development of products and technologies that will help spread renewable energy, the development of environmentally friendly products that help conserve the energy of customers' machinery, and the promotion of green procurement.



NSK Group Environmental Management System/Structure

NSK's Global Environment Protection Committee, which is chaired by a senior vice president and made up of 10 relevant officers and the persons in charge of the Global Environment Department and Division Headquarters, is the top decision-making body for environmental management. The committee convenes three times a year to discuss the medium- to long-term environmental plan as well as day-to-day environmental efforts. Special subcommittees that deal with specific issues, such as energy conservation, resource conservation, and environmental products, along with the Global Environment Department, play a central role in operating the everyday environmental management system at all its sites based on decisions made by the global committee.

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. Efforts are made to achieve targets on a global scale under an environmental action plan through a cycle of progress checking and follow-ups, for instance including the holding of periodic environmental meetings focusing on specific issues or regions.

For fiscal 2016 initiatives and their evaluation, see pp. 12-13, "Fiscal 2016 CSR Activity Performance and Fiscal 2017 Targets."

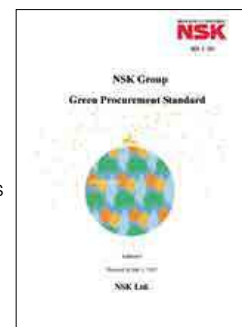
■ Acquiring Environmental Management Certification

The NSK Group implements PDCA cycles for environmental management at all its sites. It gives special attention to environmental initiatives at development, design, manufacturing, and distribution sites, because these processes have a large environmental impact. The Group requires these sites to obtain external ISO 14001 certification—the international standard for environmental management systems—within three years of full-scale operation, typically represented by the start of mass production. The Group believes that the effectiveness of its management system will increase by obtaining certification for each site and undergoing regular reviews by third-party organizations.

As of October 2017, all subject sites have obtained certification, and they are sequentially shifting to ISO14001: version 2015. (See pp. 95-96 for details.) Around 99% of the GHGs emitted from development, design, manufacturing, and distribution process throughout the Group is managed under the scope of ISO 14001 certification. Offices and other sites use environmentally responsible practices based on NSK's own policies.

■ Green Procurement

To reduce the environmental impact of the entire value chain, the NSK Group is strengthening efforts to preserve the environment in cooperation with suppliers, and is seeking to procure environmentally friendly parts and raw materials. To fully disseminate the NSK Group Green Procurement Standard group-wide, it holds supplier briefings around the world and requests that consent forms be submitted for NSK green procurement. NSK received consent forms from 99% of the suppliers in Japan and from 86% of the suppliers outside Japan.



NSK Group Green Procurement Standard

Mid-Term Targets (FY2016-2018)

In the new Environmental Action Plan (see Mid-Term Targets on pp. 71, 74, 78, 82 and 86), which spans from fiscal 2016 through 2018, NSK will work to contribute even more to the environment through its products. NSK seeks to globally enhance its environmental management across the entire Group in order to cut the environmental impact of its business activities and help to build a society that has a low carbon footprint, is committed to recycling, and has a deep respect for the natural world.

Main FY2016 Initiatives

■ Audits and Education

Environmental Audits

In addition to internal audits, third-party audits are regularly conducted in accordance with ISO 14001. Moreover, the NSK Group's Global Environment Department and regional headquarters conduct audits designed to prevent oil leakage accidents, ensure compliance with environmental laws, and properly manage waste. In fiscal 2016, audits of 23 sites (7 sites in Japan, 16 sites outside Japan) were conducted. In addition, 15 sites were audited to strengthen management of environmentally harmful substances. Audits at sites in Japan started in fiscal 2009, and the Group is currently conducting the third round of audits. Audits of sites outside Japan will begin in fiscal 2014, by the year 2016 audits of 28 bases out of 42 bases will be completed, and the remaining bases will be completed in fiscal 2017. In addition, audits were conducted at 23 sites to strengthen the management of environmentally hazardous substances.

Environmental Education

In order to further strengthen environmental protection initiatives and increase their effectiveness, the most important tasks are raising the awareness of every single employee and implementing measures based on sound knowledge.

In fiscal 2016, the NSK Group conducted 461 training sessions in Japan, and 7,563 people attended. NSK routinely conducts training in emergency situations such as oil leakage accidents and verifies response procedures and communications systems.

● Fiscal 2016 Number of Environmental Education Courses and Participants (in Japan)

Training course type	Number of participants	Number of sessions
(1) Compliance with environmental laws and regulations	1,342	85
(2) Raising environmental awareness	5,556	297
(3) Acquisition of environmental qualifications	352	58
(4) Environmentally friendly design, green purchasing and procurement	313	21
Total	7,563	461

■ Compliance and Environmental Risk Countermeasures

Basic Approach

The NSK Group complies with relevant environment-related laws and carries out initiatives in line with policies for preventing environmental pollution and reducing environmental impact, including on air and water, by establishing independent standards that are more rigorous than laws. Additionally, in the event of an environmental accident or legal violation, the Group reports the matter to administrative bodies, investigates the cause, and promptly implements countermeasures.

In China, environmental laws have recently been revised and regulations have suddenly become stricter. The regional headquarters in China has strengthened the environmental management system and conducted environmental audits to ensure thorough compliance with laws and regulations.

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.

Reduction of Leakage Risks Including Oil

The condition of tanks and piping buried underground cannot be directly viewed, which means that, were an oil leak to occur, its discovery could be delayed. To prevent contamination of soil and groundwater caused by the leakage of oil used in the manufacture of products, each site in the NSK Group is dispensing with processes that use oil, moving underground tanks above ground and making them double-walled.

Also, to prevent the runoff of small amounts of oil from the plant, the NSK Group is installing oil and water separation tanks at rainwater drainage outlets at sites around the world.

Preventing a Recurrence of Emissions Standards Being Exceeded

In fiscal 2016, there were no serious legal violations or environmental pollution accidents. However, there was one incident each of drainage standards being exceeded at a site in the ASEAN region. The causes were checked and countermeasures were implemented, remedying the situation.

Reserves for Environmental Measures

NSK Group sites have used asbestos and polychlorinated biphenyls (PCBs) in the past and are now properly managing them to prevent their dispersion or leakage. Expenses expected to arise in the future are recorded as reserves for environmental measures to provide for expenses related to removal and disposal. (See NSK's Consolidated Financial Statements Year ended March 31, 2017, p. 24).

Appendix

P. 95 Certification for Quality, Environmental, Occupational Safety and Health Management System, P. 97 Scope of Environmental Management



Reference data is available
on NSK's website.

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

● NSK Group Environmental Structure ● Scope of Environmental Management ● Acquiring ISO 14001 Certification ● Environmental Education

Material and Energy Balance

NSK works hard to continually reduce its environmental impact and to use energy and resources in the most effective manner by quantifying the amount of resources used in its business activities and the amount of greenhouse gases, waste and other emissions that it outputs.

Input and Output of Global Business Activities (FY2016)

INPUT (Global)							
Materials and Parts		Energy		Water Supply		Materials and Parts (Japan) (Environmentally Harmful Substances)	
Steel	705×10 ³ tons	Energy	16,312TJ	Water	4,716×10 ³ m ³	PRTR*1-designated substances	
Oils and greases	21.1×10 ³ tons	Fuel	2,330TJ	Groundwater	1,840×10 ³ m ³	487.8 tons	
		Electricity and heat (steam, etc. supplied from third parties)	13,982TJ	General water	2,274×10 ³ m ³		
				Industrial water	601×10 ³ m ³		



OUTPUT (Global)							
Atmospheric Gases		Waste		Water Quantity		Environmentally Harmful Substances (Japan)	
Greenhouse gases (CO ₂ equivalent)*2	991.4×10 ³ tons	Total waste	213×10 ³ tons (Japan 106×10 ³ tons, outside Japan 107×10 ³ tons)	Wastewater	2,863×10 ³ m ³	Discharge/transfer of PRTR-designated substances	
NOx	128 tons	Recycled	194×10 ³ tons	Rivers	704×10 ³ m ³	95.8 tons	
SOx	48 tons	Landfill waste	4×10 ³ tons	Sewage system	2,159×10 ³ m ³	VOC*4	
		Incinerated waste and water treatment	14×10 ³ tons	BOD*3	2.3 tons	85.8 tons	

*1 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). This Japanese law is intended to facilitate the improvement of chemical substance management by ensuring that the amounts released into the environment are ascertained and reported to the authorities.

*2 The amount of greenhouse gas emissions is multiplied by each region's global warming coefficient. In Japan, calculated in conformity with the Ministry of the Environment and the Ministry of Economy, Trade and Industry's "Greenhouse Gas Emission Calculation and Reporting Manual." Outside Japan, calculated in conformity with the International Energy Agency's "CO₂ Emissions from Fuel Combustion."

*3 An index indicating degrees of water pollution with organic materials, and the amount of oxygen required for the organic material to oxidize and decompose into microbes. The amount of the biochemical oxygen demand (BOD) load shown here is the BOD measurement value multiplied by the amount of the river water discharge.

*4 Abbreviation for volatile organic compounds, which are considered to be one of the substances that cause photochemical smog.

Environmental Accounting

The NSK Group discloses the results of environmental accounting, a tool for quantitatively ascertaining and evaluating the costs and results of environmental protection activities. The Group also has introduced environmental accounting as an information tool to broaden people's understanding of the Group's activities.

Environmental conservation costs for fiscal 2016 were about 3.6 billion yen for investments and about 13.2 billion yen for expenses. The economic benefits of these investments amounted to roughly 1.0 billion yen. The NSK Group is striving to create products that help to reduce environmental impact. Approximately 72% of its environmental conservation costs were for R&D in environmentally friendly products and technologies. (See p. 99 of the "Appendix" section of this report for details.)

Creating Environmentally Friendly Products

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.

Policy

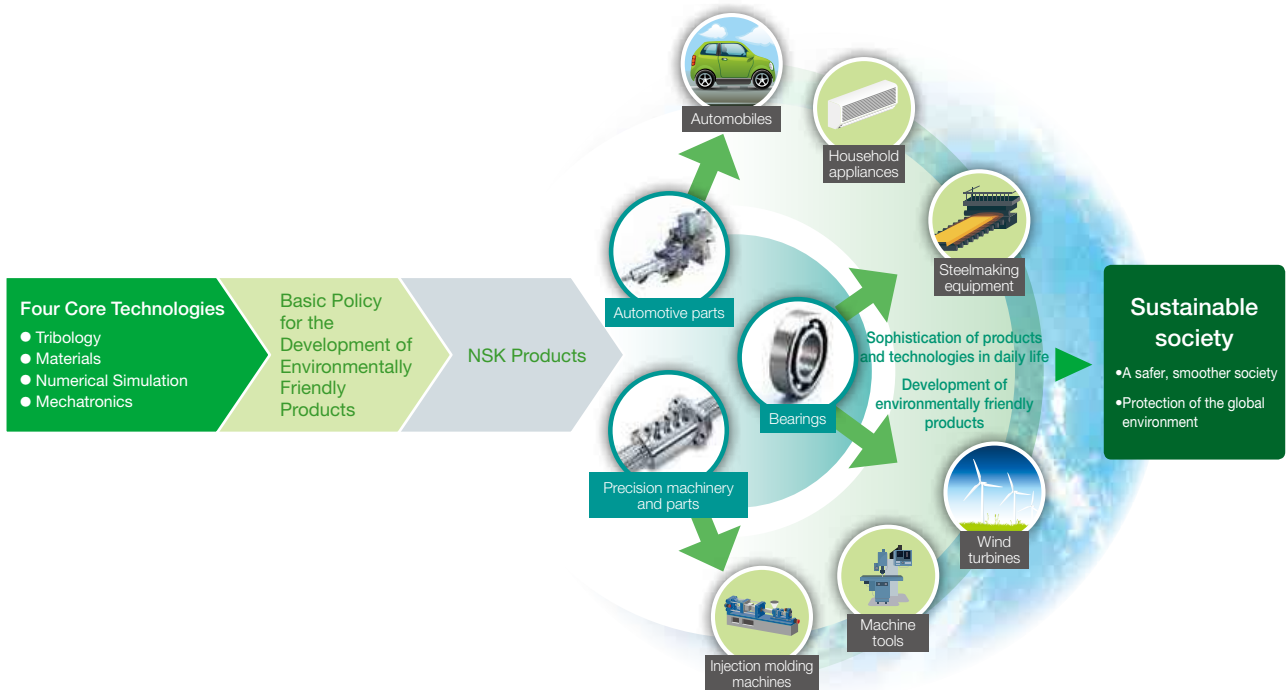
Basic Policy for the Development of Environmentally Friendly Products

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.

■ 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 to help reduce the impact that human societies have on the natural environment. To contribute to a safer, smoother society and to help 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 that make the most of the Company's Four Core Technologies (tribology, materials, numerical simulation, and mechatronics - See p.33 of the "R&D at NSK" of this report for details). The Company is also actively developing technologies in fields that contribute to the environment, including bearings for wind turbines and parts for electric vehicles. 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 the environmental impact of society.



Mid-Term Targets (FY2016-2018)

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.

FY2016 Activities

In fiscal 2016, the NSK Group developed eight new environmentally friendly products that help customers conserve energy and resources. The total number of environmentally friendly products developed since 2002 comes to 219.

■ NSK Eco-Efficiency Indicators

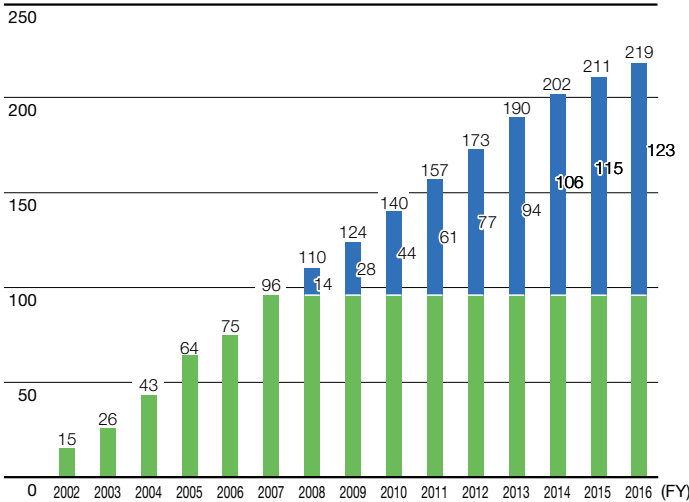
In fiscal 2008, NSK introduced the NSK eco-efficiency indicators (Neco) as a yardstick for quantitatively assessing the degree of environmental friendliness possessed by the products it develops. Since that time, the Company has utilized Neco to conduct assessments of products under development.

The Neco score is a numerical value obtained by dividing the product value V by the environmental impact E. The product value numerator V represents, in numerical form, the degree of improvement of a product in development were an existing product assessed at 1 with regard to assessment parameters that need to be increased to improve product value, such as service life, performance and accuracy. By comparison to an existing NSK product, the environmental impact denominator E represents assessment parameters, such as product weight, power consumption and friction loss, which must be reduced to decrease the environmental impact.

To use a bearing as an example, the longer its service life when compared to an existing product, the better its ability to withstand high-speed rotation, the lighter and more compact that bearing is, and the lower the friction loss, the higher its Neco value will be, and that bearing will be assessed as an environmentally friendly product. NSK is working to develop new products with a Neco score of 1.2 or higher.

● Number of Environmentally Friendly Products Developed

Products (total)



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

- Newly developed products with a Neco score* of 1.2 or higher
* Established in fiscal 2008
- Newly developed products consistent with the Basic Policy for Development of Environmentally Friendly Products established in fiscal 2001

● Environmentally Friendly Products Developed in Fiscal 2016

NSK Products	Technology Developed by NSK	Environmental Benefits for NSK's Customers	Neco
<p>Long-Life, Optimized Cylindrical Roller Bearings for the Free Side of a Steel/Continuous Casting Machine Guide Roll</p> 	<ul style="list-style-type: none"> ● Longer life Achieves a longer life (three times longer than before) by absorbing roll deflection with a new cylindrical roller bearing specification that employs optimal crowning,*1 and by minimizing slippage in the race ring 	<ul style="list-style-type: none"> ● Improved productivity Contributes to the stable operation of equipment such as continuous casting machines used in harsh environments by extending the life of guide roll bearings 	2.9
<p>High Performance Standard NSKHPS™ Series of Large Spherical Roller Bearings for Industrial Machinery</p> 	<ul style="list-style-type: none"> ● Longer life Extends the life (two times longer than before) of bearings by controlling the friction between the outer ring and roller, and reducing the slippage of the inner ring ● Low heat generation Achieves low heat generation (30% compared to existing models) thanks to optimal design of retainer and guide wheels 	<ul style="list-style-type: none"> ● Improved productivity Contributes to stable operation of industrial machinery equipment and reduction of maintenance cost 	1.6
<p>Highly Dust Resistant, Low Friction Loss Bearings for Office Equipment</p> 	<ul style="list-style-type: none"> ● Low friction loss Realizes about 1/5 lower contact friction loss by adopting non-contact shield ● Realization of high dust-resistant performance High dust-resistant performance equivalent to a contact seal is realized through grease layout and form 	<ul style="list-style-type: none"> ● Energy savings Contributes to energy saving through low friction loss bearings ● Improved reliability Prevents abnormal noise, vibration increase, and paper jams, and provides higher reliability 	1.4
<p>6th-Generation Low-Friction Tapered Roller Bearings for Automotive Transmissions</p> 	<ul style="list-style-type: none"> ● Low friction loss Improved surface roughness of the roller head and large rib reduced friction by up to 60% at low speeds and up to 20% at average full rotational speed 	<ul style="list-style-type: none"> ● Improved automotive fuel economy Contributes to improved fuel economy through low friction 	1.2
<p>Super Long-life Needle Rollers for Automobile Transmissions</p> 	<ul style="list-style-type: none"> ● Improved lifetime durability Increased hardness of roller surface film for greater than twice the durability compared to the current rollers ● Damage prevention of mating parts Concave micro-indentations were added to allow lubrication to pool on the surface of the rollers in order to sustain a lubrication film between the roller and mating parts, thereby preventing wear and other surface damage 	<ul style="list-style-type: none"> ● Improved automotive fuel economy Contributes to higher transmission efficiency and improved fuel economy 	1.4
<p>Ultra-High-Speed Spindles with Grease Lubrication for Grinding Processes</p> 	<ul style="list-style-type: none"> ● Improvement of high speeds Achieves long life at high-speed rotation thanks to an improved grease sealing method and an optimized inner structure ● Improved waterproof performance Large aluminum flinger*2 prevents grinding fluid from intruding into the spindle 	<ul style="list-style-type: none"> ● Energy savings Contributes to energy conservation by reducing the need for compressed air, which had been required for spindles, to "0" ● Realization of clean environment Achieves a clean environment with no dispersal of atomized oil into the work environment due to grease lubrication 	1.3
<p>S-HTF Series of Ball Screws for High-Load Drive</p> 	<ul style="list-style-type: none"> ● Longer life and improved load-bearing capacity Longer life (2.2 times longer than before) and improved load carrying capacity (1.8 times or more than before) thanks to application of TF processing technology 	<ul style="list-style-type: none"> ● Improved productivity Contributes to improved productivity of molded parts by extending ball screw life 	1.3
<p>Right/Left Hand Ball Screw Series of Super High Load Capacity ToughCarrier™ Single-Axis Actuators</p> 	<ul style="list-style-type: none"> ● Super-high load capacity and longer life The world's first single-axis actuator to employ rollers in the rolling elements of the guide section, for an ultra-high load capacity, and a lifespan that is more than four times longer than before ● High rigidity Guide section about four-times greater rigidity than before 	<ul style="list-style-type: none"> ● Helps production equipment conserve power Contributes to power conservation with a mechanism optimal for replacement from the pneumatic and hydraulic chuck 	2.3

*1 Crowning: Giving the raceway surface and the end of the roller a slight curvature so that stress does not concentrate at the points of contact on the raceway surface and the end of the roller

*2 Flinger: Disk-shaped drainer plate installed to prevent water and oil from flooding in from the aperture between the axle and housing



Reference data is available on NSK's website.

www.nsk.com > Company > News > Press Releases

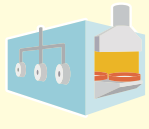
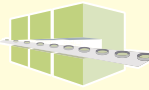
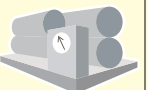
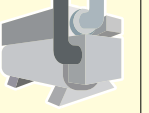



Global Warming Countermeasures

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. Based on the Paris Agreement, which took effect in 2016, the international community agreed to keep a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. 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

NSK is committed to developing and broadly disseminating environmentally friendly products, with the aim of reducing CO₂ emissions throughout society as a whole. In addition, NSK is improving energy usage efficiency (per production unit) and introducing clean energy to reduce CO₂ emissions in its business activities. (See pp. 70-72 for details on environmentally friendly products.)

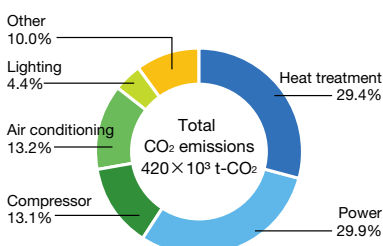
Detailed Approaches to Conserving Energy

	Heat treatment	Production equipment	Compressors	Air conditioning	Lighting	Distribution	Office/Sales
							
Power reduction	<ul style="list-style-type: none"> Optimization of operating conditions Shift to high-frequency heating Improvement of thermal insulation efficiency 	<ul style="list-style-type: none"> Inverter of motor, pump, etc. Equipment miniaturization and power saving Next generation of production lines and production efficiency improvement Retrofit* Inverter Reduction of standby power 	<ul style="list-style-type: none"> Upgrade to high-efficiency equipment Optimization of operating conditions Miniaturization Reduction of compressed air consumption Repair of piping leakage 	<ul style="list-style-type: none"> Selection of model suited to conditions Optimization of operating conditions Upgrade to high efficiency equipment Inverter 	<ul style="list-style-type: none"> Conversion to LED lighting Lighting optimization Frequent turning off of lights 		<ul style="list-style-type: none"> Conservation of electricity Installation of energy-saving devices Cool Biz and Warm Biz energy-saving campaigns
Fuel reduction	<ul style="list-style-type: none"> Switching to cleaner energies Improvement of combustion efficiency Improvement of thermal insulation performance Optimization of operating conditions 			<ul style="list-style-type: none"> Shift to clean energy Selection of model suited to conditions Optimization of operating conditions Operation of cogeneration 		<ul style="list-style-type: none"> Improvement of loading efficiency Joint transport Modal shift Fuel-efficient driving 	<ul style="list-style-type: none"> Shift to eco-cars and compact cars Fuel-efficient driving

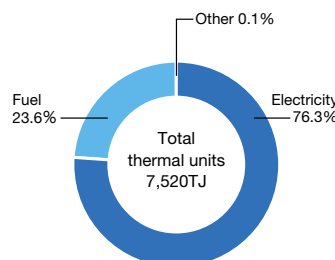
Retrofit: Upgrading old equipment by adding new technology

Breakdown of Energy Used by Energy Type and Application in Fiscal 2016 (Japan/Production)

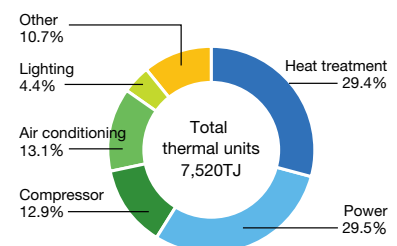
CO₂ Emissions by Application



Breakdown of Energy Used by Energy Type (converted to thermal units)



Breakdown of Energy Used by Application (converted to thermal units)



Mid-Term Targets (FY2016-2018)

The NSK Group is striving to reduce energy consumption and GHG emissions by raising production efficiency, introducing high-efficiency energy-saving equipment, and promoting fuel conversion. Under NSK's Environmental Logistics Policy, distribution divisions strive to reduce the environmental impact of transport through improved loading efficiency achieved by combining product distribution and procured part distribution, shortening distance by improving transportation route, and by shifting to modes of transport with lower environmental impact. The Head Office and sales divisions have also made efforts to save energy, including controlling air-conditioning temperatures and switching to LED lighting.

Fiscal 2018 Targets for Global Warming Countermeasures

Manufacturing

In Japan: CO₂ emissions per value-added production unit: 11.1% reduction from FY2011 level
Total CO₂ emissions: Reduce CO₂ emissions for FY2018 to below FY2011 level

Outside Japan: CO₂ emissions per value-added production unit: 35.2% reduction from FY2011 level

Distribution

In Japan: CO₂ emissions per ton-kilometer: 12.2% reduction from FY2011 level

Offices

In Japan: CO₂ emissions per unit of floor space: 24.5% reduction from FY2011 level

Outside Japan: CO₂ emissions per unit of floor space: 6.9% reduction from FY2011 level

CO₂ emissions intensity:

Manufacturing: CO₂ emissions/Value-added production

Distribution: CO₂ emissions/Transportation amount*

Offices: CO₂ emissions/Floor space

CO₂ emissions:

Manufacturing: The total of the amount emitted directly from the NSK Group's business operations (scope 1) and the amount emitted indirectly by power companies, etc., that supply the electricity used by the NSK Group (scope 2)

Distribution: Total CO₂ emissions are calculated by multiplying total transport volume (ton-kilometers) by CO₂ emission factors (by mode) for each transport mode (truck, ship, etc.)

* The NSK Group changed the unit for transportation volume of logistics from ton-kilometers to volumetric weight in fiscal 2016 to better reflect the effects of reduction of transport distance.

Greenhouse Gas Emissions Verification Report (Global)

The Japan Quality Assurance Organization conducted independent verification of NSK's fiscal 2016 performance, in order to increase reliability related to the group's CO₂ and other greenhouse gas emissions data. The verification covered all NSK Group sites worldwide, including manufacturing departments, technology departments, and head office and administrative divisions. (See p. 103 for details.)



Greenhouse Gas Emissions Verification Report

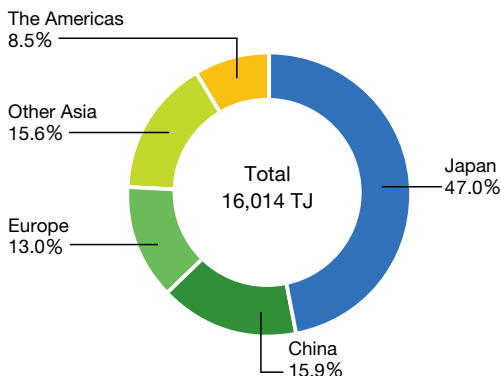
FY2016 Activities

Manufacturing departments in Japan reduced CO₂ emissions intensity from the fiscal 2011 level by 10.2% and achieved its target of a 9.3% reduction. Although the production volume increased, total CO₂ emissions were reduced by 0.2% compared with fiscal 2011 levels, achieving the target of the fiscal year 2011 level or below.

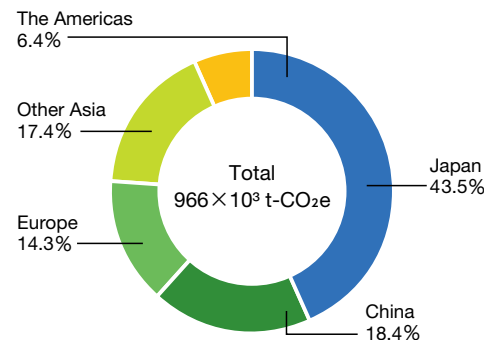
Although plants outside Japan improved production efficiency, installed energy-saving equipment, and implemented fuel conversion, CO₂ emissions intensity was reduced by 33.2% compared to the target of a 33.8% reduction from the fiscal 2011 level, falling just short of the target.

Headquarters and office sites also fell short of their target of a 23.4% reduction, with CO₂ emissions intensity in Japan decreasing 19.8% compared with the fiscal 2011 level. Outside Japan, headquarters and office sites achieved a reduction of 17.7% compared to the fiscal 2011 level, a 4.9% reduction in the target. The CO₂ emissions intensity of logistics departments was 11.4% lower than the fiscal 2011 level, achieving the 10.4% reduction target.

Energy Used in Manufacturing by Region

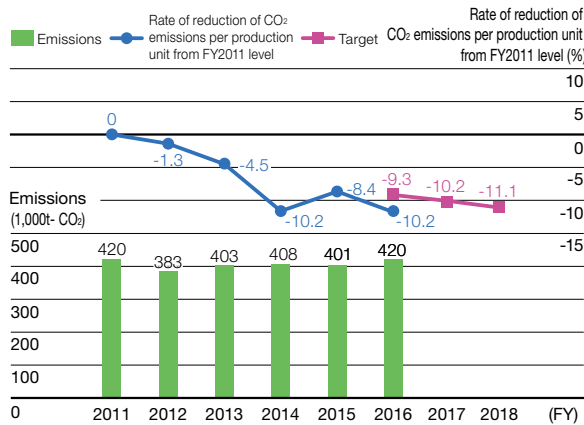


Total GHG Emissions from Manufacturing by Region



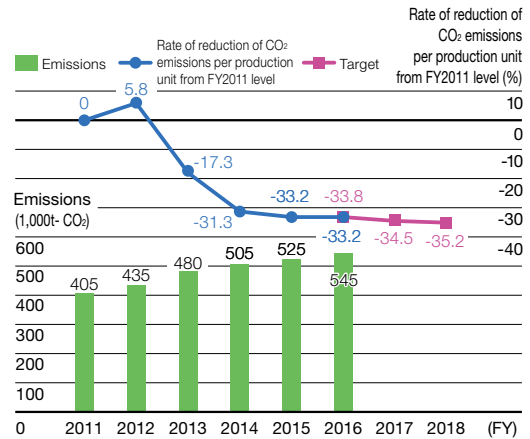
*Includes approximately 2,200 tons of greenhouse gases other than CO₂ (i.e., CH₄, N₂O, HFCs, PFCs, SF₆) converted to a CO₂ basis

● **CO₂ Emissions from Manufacturing in Japan: Total Volume and per Production Unit**



* Due to a change in calculation criteria, the data was recalculated.

● **CO₂ Emissions from Manufacturing Outside Japan: Total Volume and per Production Unit**



* Due to a change in calculation criteria, the data was recalculated.

Manufacturing Effective Use of Energy and CO₂ Emissions Reduction from Development of a Next-Generation Production Line (Japan)

NSK's Manufacturing Engineering Center developed a next-generation production line with a new concept. The center's development was able to reduce energy consumption by designing equipment of a size that is appropriate to bearing size and without hydraulic pressure, reducing the number of grinding machines with improved grinding efficiency, and reducing standby power through improved availability due to shorter changeover times. NSK aims to reduce CO₂ emissions throughout the NSK Group by deploying this line at the Fukushima Plant, the Otsu Plant and other plants in Japan.

Manufacturing Improving Energy Efficiency in Heat Treatment Processes (Japan)

The NSK Group uses a great deal of energy in heat treatment processes for parts, accounting for about 29% of energy use from all manufacturing processes. The NSK Group is expanding the conversion from the conventional method of heat treatment in metal furnaces that use kerosene and gas, to induction high-frequency heat treatment using electricity.

Also, in the heat treatment process at Amatsuji Steel Ball Mfg. Co., Ltd., two tempering furnaces had been used for one quenching furnace, but by consolidating the tempering furnace to one with increased capacity, the availability rate increased and CO₂ emissions were reduced to 41 tons annually. The connection with pre- and post-processes was also improved and the product waiting time was shortened.

Manufacturing Deploying Energy Saving Efforts with Spindles to Each Company (Japan)

The NSK Group uses a great deal of compressed air for the spindles used in grinding processes. The compressors that make and supply that compressed air to facilities account for 13% of the energy use in manufacturing processes. The Group is therefore striving to reduce power consumption by upgrading to an inverter-type compressor.

The Group is also switching the spindles of the grinding machines from oil-air lubrication spindles to spindles that use grease lubrication, which require less compressed air. At the Fujisawa Plant, CO₂ emissions were reduced by 87 tons in fiscal 2016 through the installation of on-off valves in the air pipes of grinding machines and circulating air in only when necessary.

Manufacturing Conversion to Clean Energy (Japan)

Aiming to reduce CO₂ emissions intensity, the NSK Group is installing energy-saving equipment and converting to clean energy at production sites.

The NSK Warner Fukuroi Plant is switching air-conditioner fuel from city gas to electric power and thereby reducing CO₂ emissions to 266 tons annually.

In addition, at the Matsukawa Plant of NSK Micro Precision, four air conditioners at plant buildings have been upgraded to state-of-the-art gas heat pumps, thereby reducing CO₂ emissions to 53 tons annually. Although the fuel used is the same LPG as before, CO₂ emissions have been reduced by increasing energy efficiency and fine tuning operation.

Manufacturing Efforts to Introduce Renewable Energy (Japan and Germany)

At the NSK Group, solar power generation facilities are in operation at a sales office in Hiroshima, at Inoue Jikuuke Kogyo Co., Ltd., at the Munderkingen Plant of Neuweg Fertigung GmbH in Germany, and at other locations. In fiscal 2016, the NSK Group raised its total annual power generation to 1,374 MWh (including power sales) and plans to expand the introduction of solar power generation in the future.



Solar power generation equipment at Inoue Jikuuke Kogyo Co., Ltd.

Manufacturing Reducing Energy for Lighting (Global)

In the past, the NSK Group has replaced low-rated electric power incandescent light bulbs and fluorescent lights with LEDs. In recent years, even 400W mercury lamps have been replaced with LEDs, and the Group promotes the installation of LED lighting at each plant. In Japan, it has reduced CO₂ emissions to 393 tons annually in fiscal 2016.

Manufacturing Initiatives to Improve Energy Efficiency (China and Malaysia)

NSK Micro Precision (M) Sdn. Bhd. in Malaysia reduced CO₂ emissions by 247 tons annually by changing the three 55 kW compressors to one high-performance 150 kW compressor and repairing air leaks of all equipment in plants. At Hefei NSK Co., Ltd. in China, production increased by 20% due to the addition of three lines, but CO₂ emissions were held to only a 5% increase with the measures listed below, resulting in a 12% reduction in CO₂ emissions per production unit.

- Installed heat shield plates in grinding process, and reduced power for air conditioning gas and cooling water
- Improved combustion condition of natural gas boiler
- Reduced the number of air-conditioning units and adjusted temperature settings

At NSK Zhangjiagang Precision Machinery Co., Ltd. in China, an annual reduction of 438 tons in CO₂ emissions was achieved by reusing exhaust heat from air compressors to heat water in the shower room.

Manufacturing Upgraded Air-Conditioning Equipment Motor to a High-Efficiency-Type Motor (UK)

As part of strengthening its fire prevention measures, NSK Europe's Peterlee Plant upgraded the motors used in air-conditioning equipment to a safer type of motor. In doing so, it was able to reduce CO₂ emissions by 166 tons annually by adopting high-efficiency motors and giving consideration to energy conservation.

Manufacturing Started Procurement of Green Power (Germany)

In January 2017, the Munderkingen Plant of Neuweg Fertigung GmbH in Germany started procuring green power with low-CO₂ emissions during power generation, such as wind power and solar power generation.

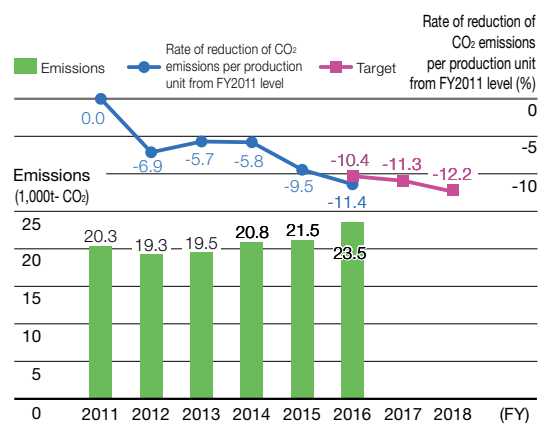
Distribution Initiatives to Improve Transport Efficiency (Japan)

Under its Environmental Logistics Policy, the NSK Group strives to reduce the environmental impact of transport (reduction of CO₂ emissions). It takes three approaches: improving loading efficiency by combining product distribution and procured part distribution; shortening distances by improving transportation routes; and shifting to modes of transport with lower impact.

In fiscal 2016, due to the increase in the volume of maritime transportation and the improvement of transportation routes, CO₂ emissions intensity in logistics was 11.4% lower than the fiscal 2011 level, meeting the NSK Group's target of a 10.4% reduction. (In fiscal 2016, the denominator was changed from transportation volume in ton-kilometers to total transportation weight.)

In fiscal 2017, the NSK Group will develop initiatives aimed at further improving transport efficiency by integrating product distribution and procured goods distribution. It is also examining further shipping and rail transport options to increase modal shift.

• CO₂ Emissions per Transportation Volume and CO₂ Emissions from Distribution in Japan



* Due to a change in calculation criteria, the data was recalculated.

Offices Energy-Saving Efforts at the Head Office and Sales Divisions (Japan)

The head office and sales divisions have been making efforts to save energy, including controlling air-conditioning temperatures, turning off lights when not in use, and switching to LED lighting. Offices as a whole have reduced CO₂ emissions intensity by 19.8% compared with the fiscal 2011 level. Moreover, NSK encourages offices to switch to the latest environmentally friendly vehicles when updating their fleets, and in fiscal 2016 around 71% of the Company's fleet was hybrid and vehicles with small-displacement engines. The NSK branch office in Aichi Prefecture has introduced fuel cell vehicle.



One of the fuel cell vehicles introduced

Appendix P. 100 Change in Energy Consumption and CO₂ Emissions (by Region and Country, Production Sites)



Reference data is available on NSK's website.

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

● Energy Consumption and CO₂ Emissions by Site

Measures for Resource Conservation and Recycling

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.

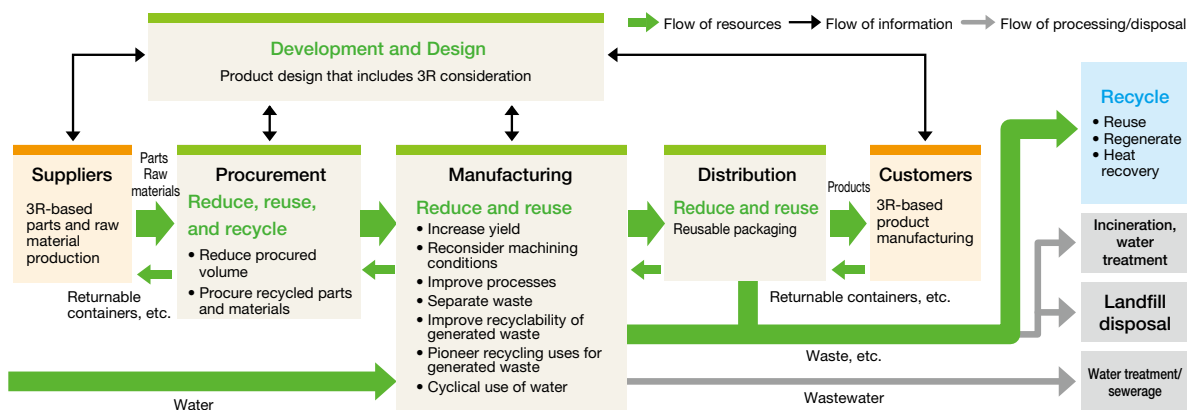
NSK's Approach

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. In order to reduce environmental impact, 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.

To ensure the proper disposal of waste, the Group conducts regular audits of contract industrial waste processors and strives to enhance management using information systems.

As for water, the NSK Group has judged that there is a low possibility—under existing conditions—of it being impacted by water shortages, based on the volume of water it uses and where its business sites are located. Still, the Group remains committed to the efficient use of water, realizing that the future may bring a serious global shortage of water resources.

● 3Rs to Help Build Recycling-Oriented Societies



Mid-Term Targets (FY2016-2018)

The NSK Group is strengthening its initiatives to achieve the rigorous goals it set for the effective utilization of resources, recycling rate, and amount of landfill disposal. The Group constantly pursues higher performance on the 3Rs.

Manufacturing sites in Japan achieved “zero landfill disposal” with a 100% recycling rate at the end of fiscal 2015, and they continued to maintain this in fiscal 2016.

Going forward, NSK will keep working to make effective use of resources, for example by improving productivity to reduce waste emissions. Manufacturing sites outside Japan have set recycling rate targets by plant, in light of the characteristics of each region and plant. The overall target for fiscal 2018 is 97.5%. Furthermore, these sites will make even greater efforts to promote recycling.

Fiscal 2018 Targets

Development and design, manufacturing

Reduce waste of steel and auxiliary materials by changing processing methods

Manufacturing

In Japan: Achieve a recycling rate*¹ of at least 100% for waste*² and maintain zero emissions*³

Reduce industrial waste per production unit*⁴ by 29.5% compared to fiscal 2011

Reduce water withdrawal per production unit*⁵ by 23.1% compared to fiscal 2011

Outside Japan: Achieve a waste recycling rate of at least 97.5%

Reduce water withdrawal per production unit by 28.3% compared to fiscal 2011

Distribution

In Japan: Reduce packaging material waste per production unit*⁶ by 20.7% compared to fiscal 2007

*1 Recycling rate =

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

*2 This waste includes both valuables and actual waste.

*3 The NSK Group has defined zero emissions as “zero landfill disposal.”

*4 Industrial waste per production unit = Industrial waste/Value-added production

*5 Water withdrawal per production unit = Water withdrawal/Value-added production

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

FY2016 Activities

NSK has 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 100%, or, "zero landfill disposal," by thoroughly sorting waste and expanding the channels for use of recycled waste. This performance met fiscal 2016 targets.

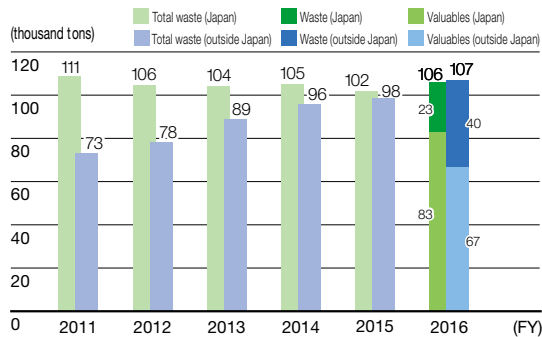
On the other hand, although plants outside Japan did manage to record a recycling rate of 96.3%, they did not attain their target of at least 96.6%. Globally, the recycling rate was 98.1%.

Plants in Japan reduced industrial waste per production unit by 30.3%, achieving the initial target of a 27.5% reduction from fiscal 2011 levels.

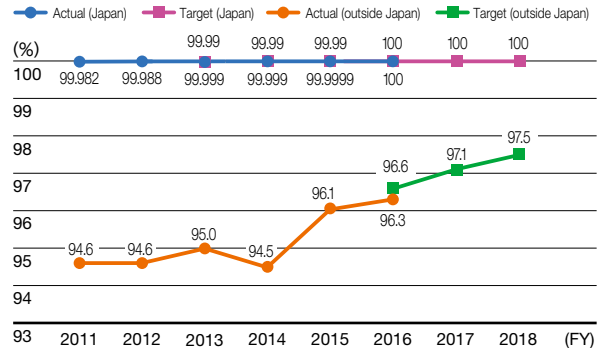
They also reduced packaging material waste per production unit by 23.3% compared to a target of a 19.0% reduction from the fiscal 2007 level.

Against the target of reducing water withdrawal per production unit by 21.5% at plants in Japan and by 26.8% at plants outside Japan, both compared with fiscal 2011, plants in Japan achieved a 27.0% reduction and plants outside Japan achieved a 24.3% reduction, thereby achieving their targets.

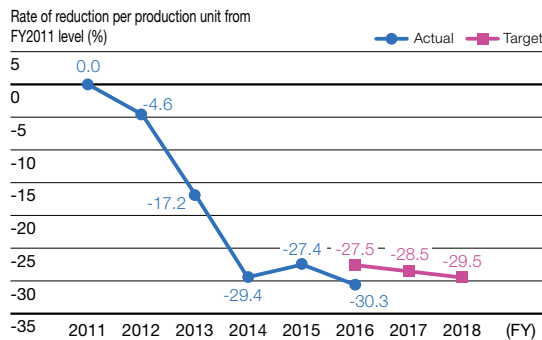
Total Waste (Manufacturing)



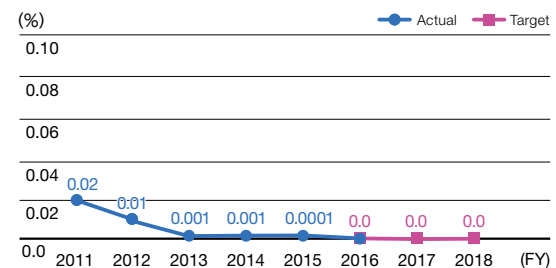
Recycling Rate (Manufacturing)



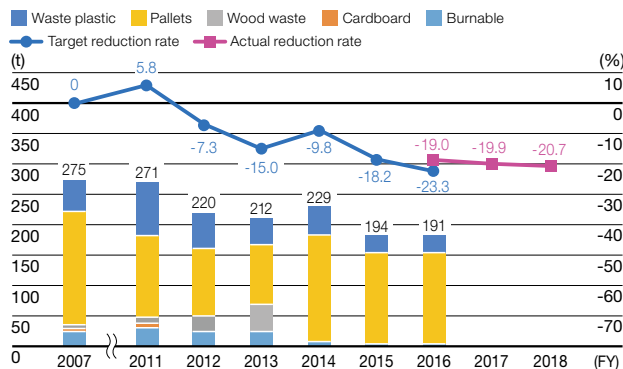
Industrial Waste per Production Unit (Plants in Japan)



Landfill Disposal Rate (Plants in Japan)

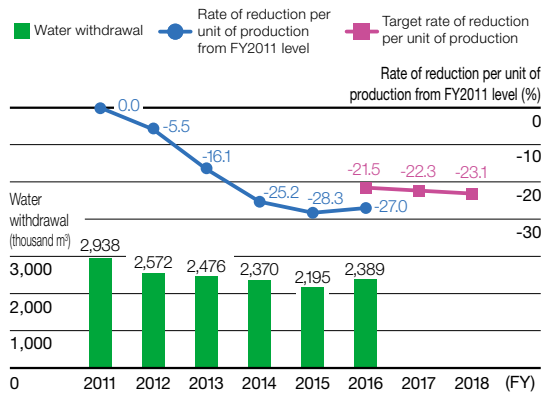


Amount of Packaging Material Waste per Production Unit (Distribution in Japan)



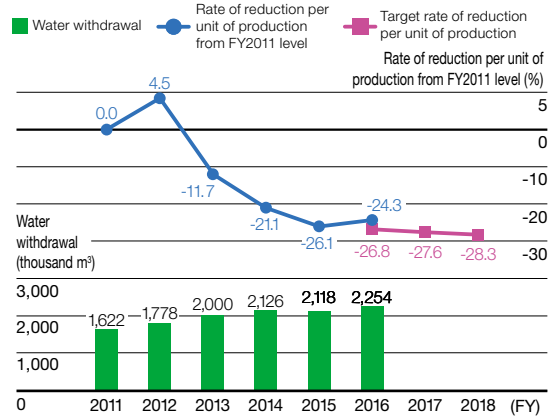
* Due to a change in calculation criteria, the data was recalculated.

● Water Withdrawal per Unit of Production (Plants in Japan)



*The target values for fiscal 2016 and beyond were revised by expanding the scope of coverage.

● Water Withdrawal per Unit of Production (Plants outside Japan)



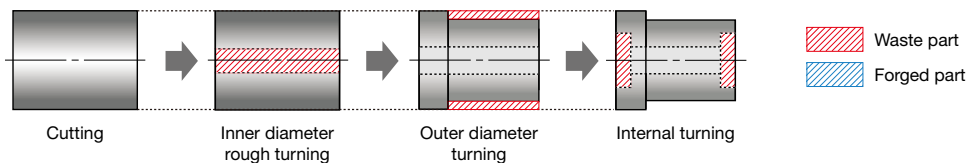
* Due to a change in calculation criteria, the data was recalculated.

Manufacturing Reduced Ball Screw Nut Disposal through Forging (Japan)

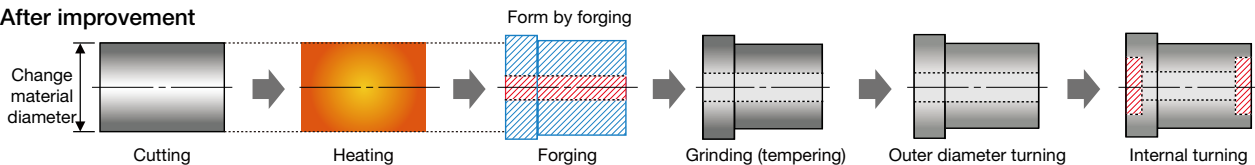
Ball screws used in machine tools and other machinery are machined to a shape that meets customers' requirements and are shipped in a module that includes shaft and nut.

When manufacturing nuts before, NSK had selected materials in accordance with the nuts' largest diameter and scraped off and discarded the excess. Now, NSK forges and molds the excess, thereby reducing the amount of material used and reducing the amount of waste during processing by 30%.

Before improvement



After improvement



Manufacturing Efforts to Reduce the Discharge of Waste Liquid (Japan)

In addition to its conventional waste liquid treatment facilities, the Fujisawa Plant installed a vacuum dewater drying device to reduce the amount of waste discharge. With the operation of newly installed equipment, processing can now be performed in-house, even when waste liquid emissions increase due to maintenance during major consecutive-day holidays, thereby reducing the waste liquid to be outsourced for treatment by 73 tons compared to the previous fiscal year.



Fujisawa Plant's vacuum dewater drying device

Distribution Increasing Reuse and Recycling of Used Packing Materials (Japan)

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

In fiscal 2016, the Group reduced the amount of packaging material waste by about three tons by recycling pallets used with imported materials for export packaging and by converting unusable pallets into fuel for heating.

Manufacturing Extending the Life of Grinding Fluid and Cooling Water (Global)

The NSK Group uses water as a grinding and cutting fluid to reduce the heat generated during the processing of bearings and other parts. It also uses water to cool production equipment as well as ancillary equipment such as air conditioners and compressors that make compressed air. The NSK Group's business sites monitor water withdrawal and have implemented measures aimed at reducing it. NSK is pursuing such measures as air cooling of air-conditioning equipment and extending the life of cutting and grinding fluids.

NSK Steering Systems Dongguan reduced the amount of wastewater by nine tons per year by installing cutting fluid purification equipment in fiscal 2016, thereby extending the period that the fluid can be continuously used.

NSK Steering Systems Europe (Polska) introduced filtering equipment in fiscal 2016 that removes floating oil and other substances from cooling water, which reduced the frequency of cooling water exchange, thereby cutting wastewater by 195 tons annually.



Reference data is available
on NSK's website.

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

● Water Usage, Wastewater Amounts and Waste Emissions

Reducing Use of Environmentally Harmful Substances

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

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 based on the NSK List of Environmentally Harmful Substances through each stage of development and design, procurement, manufacturing, and distribution to ensure that safe products are delivered to customers. In addition, the Group requests suppliers to practice rigorous management based on the NSK Group Green Procurement Standard.

Mid-Term Targets (FY2016-2018)

To ensure the products it delivers are safe, the NSK Group is reinforcing its systems for global management of environmentally harmful substances and systems for ensuring that products contain no environmentally harmful substances.

The NSK Group is also enhancing its management systems for the development and design processes and rolling out green procurement to its global production sites. The Group additionally aims to further reduce environmentally harmful substances handled during production processes. The Group is focused on establishing a global management framework by surveying the inclusion of environmentally harmful substances in parts and raw materials, based on the latest NSK List of Environmentally Harmful Substances.

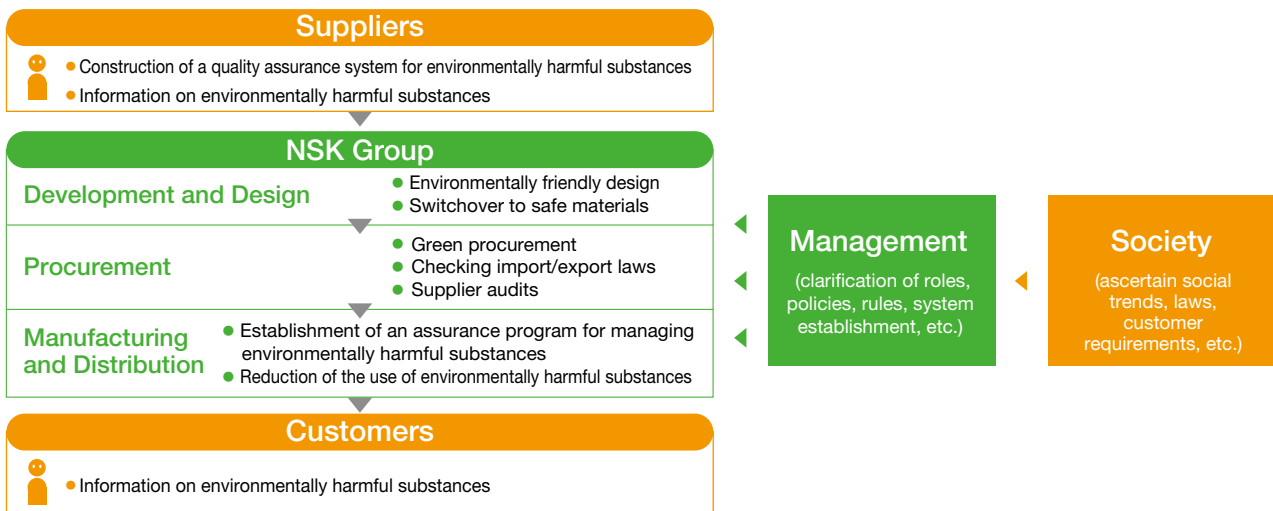
Fiscal 2018 Targets for Reducing Use of Environmentally Harmful Substances

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

Procurement
Complete the extension of NSK green procurement to key suppliers worldwide

Manufacturing
Complete a global chemical substance quality assurance system for products
In Japan: Reduce the handling of PRTR-designated substances per production unit by 26.6% compared to fiscal 2011

● Management of Environmentally Harmful Substances



FY2016 Activities

In fiscal 2016, the NSK Group again 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. The NSK Group also pursued initiatives to prevent the leakage of fluorocarbons in the production process by ensuring better management of the equipment in which CFCs are used.

■ Management System

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 2016, the Group conducted on-site audits at seven plants in Japan, three plants in Europe, nine plants in China, and four plants in the ASEAN region. These audits identified problems and specified points requiring further attention, and needed changes were made, reinforcing the management system. Furthermore, the Group trained 29 new environmentally harmful substance auditors in Japan and three outside Japan, bringing the total up to 375, so that plants around the world can autonomously conduct self-audits and supplier audits.

In fiscal 2017, the Group will upgrade its auditor-training curriculum and further train auditors who already have advanced skills.

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

NSK has registered nearly 4,500 chemical substances in its List of NSK Environmentally Harmful Substances as “prohibited substances,” “reduced substances,” and “observation substances,” and it is properly managing these environmentally harmful substances. In the List of NSK Environmentally Harmful Substances, substances that must not be contained in or adhere to parts or sub-materials are termed “prohibited substances”; substances that need to be selected and evaluated for substitutes are called “reduced substances”; and substances for which the parts used and contents must be monitored are known as “observation substances.”

As in the previous fiscal year, the NSK Group conducted a survey in fiscal 2016 of parts and materials suppliers based on the list to make sure that substances prohibited by NSK are not included in its products. The survey was conducted on 290 suppliers in Japan and 214 suppliers outside Japan. Based on the results, NSK listed all parts that have been confirmed not to contain substances prohibited by NSK. It also used the results to build a system that ensures design departments check that products under development contain no harmful substances and production departments accept no parts that contain harmful substances.



List of NSK Environmentally Harmful Substances

Procurement Promote Improvement with Local Audits of Suppliers (Global)

The NSK Group periodically audits suppliers who deliver parts and materials that are highly likely to contain environmentally harmful substances or have those substances adhered to them. A person responsible from the NSK Group who is qualified as an environmentally harmful substance auditor visits and conducts audits using NSK's audit check sheet to enhance all supply chain activities. In fiscal 2016, the NSK Group conducted on-site audits of 41 suppliers in Japan and 59 suppliers outside Japan. The issues that the audit clarified are being followed up on through improvements made in collaboration with suppliers. From now on, the Group will increase local audits of suppliers outside Japan, and work to further enhance its environmentally harmful substance management system.



Reference data is available on NSK's website.

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

● NSK Group Green Procurement Standard ● List of NSK Environmentally Harmful Substances

Manufacturing Complying with Japan's Amended Law Concerning the Discharge and Control of Fluorocarbons* (Japan)

Controlling atmospheric emissions of fluorocarbons, which are powerful greenhouse gases, is a challenge in the fight against global warming. Accordingly, Japan amended its Law Concerning the Discharge and Control of Fluorocarbons, and the amendments went into effect in April 2015. To prevent the leakage of fluorocarbons from industrial air conditioners and other equipment, the law requires regular inspection of equipment and, where leaks are discovered, no replenishment of fluorocarbons until the leaks are completely repaired, as well as other appropriate management. It also requires records to be kept on the amount of leakage and, where total leakage is confirmed to be at or above 1,000 t-CO₂e per year, a report must be submitted to the national government.

NSK conducted simple inspections of around 4,500 pieces of equipment in fiscal 2016 as well as regular inspections on around 300 pieces of equipment. The results showed that the leakage of fluorocarbons was below 1,000 t-CO₂e per year.

* Law Concerning the Discharge and Control of Fluorocarbons: Act for Rationalized Use and Proper Management of Fluorocarbons. Japan's law establishing comprehensive measures covering the entire lifecycle of fluorocarbons, from their manufacture to disposal, in order to reduce their effect on ozone layer destruction and global warming.

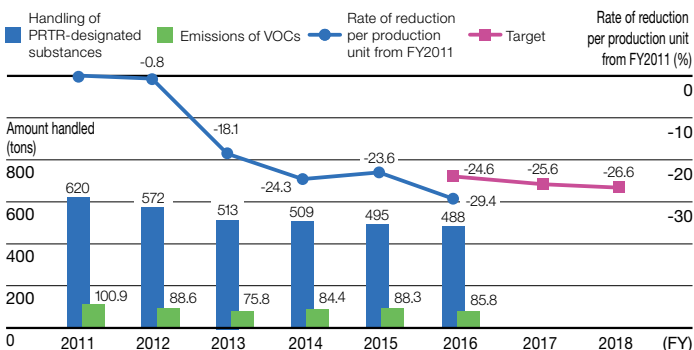
Manufacturing Handling of PRTR*-Designated Substances Reduced by 29.4%

In Japan, the NSK Group set the goal of a 24.6% reduction in PRTR-designated substances contained in fluids and fuels used in manufacturing processes in fiscal 2016, compared to fiscal 2011. By switching the fuel used in air conditioning, the Group's handling of PRTR-designated substances per production unit in fiscal 2016 was decreased by 29.4% from fiscal 2011. In fiscal 2017, the Group set the goal of a 1% reduction.

In addition, the NSK Group promotes steady initiatives in manufacturing processes where solvents and adhesives containing volatile organic compounds (VOC) are used. VOC emissions in fiscal 2016 were 85.8 tons (85.8 tons of this in Japan), a 13.4% reduction compared to fiscal 2011, even including Europe. In steps to reduce VOC emissions, the Group converted from gasoline to electric forklifts and converted the fuel of constant temperature air conditioning heat sources and heating boilers from heavy oil to electricity.

* Law concerning Pollutant Release and Transfer Register (PRTR): Act on Confirmation, etc., of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. 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.

● Handling of PRTR-Designated Substances (Plants in Japan)



Reference data is available on NSK's website.

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

● Air Pollutant Measurement Results (Japan) ● Water Contaminant Measurement Results (Japan) ● Volume of PRTR-Designated Substances Handled (Japan)

Biodiversity Conservation

There are believed to be some 30 million species of organisms on Earth today, which have been adapting to their specific environments for as long as several millennia. 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

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 play a role in preserving biodiversity. The materials that the Group procures, however, have an indirect 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

● NSK Biodiversity Guidelines

Basic Policy

The NSK Group recognizes the importance of biodiversity, and understands the relationship between our business activities and the ecosystem. We aim to reduce our impact on the environment by creating systems and initiatives that ensure biodiversity is conserved.

■ Action Agenda

1. Research and Development

We will contribute to the conservation of biodiversity by developing products that save energy and resources.

2. Procurement and Purchasing

We will contribute to the conservation of biodiversity throughout the supply chain when procuring main materials, sub-materials, and packaging/packaging materials.

We will promote the purchase of the environmentally-friendly products, and consider the conservation of biodiversity in product selection criteria.

3. Manufacturing and Logistics

We will minimize the impact of our production on biodiversity by reducing consumption of energy and resources, and emission of environmentally harmful substances.

4. Plant and Office Grounds

We will consider the impact on the ecosystem when acquiring land for our places of business and during greening initiatives.

5. Social Contribution Activities

We will perform social contribution initiatives as a member of international society, and value our collaboration with public and private institutions.

6. Communications

We will actively disclose information on biodiversity-related initiatives to persons both inside and outside the company.

We will heighten employee awareness of biodiversity-related issues, and constantly work to improve the quality and efficiency of initiatives.

Established October 5, 2010 NSK Ltd.



Reference data is available
on NSK's website.

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

● NSK Biodiversity Guidelines

Mid-Term Targets (FY2016-2018)

In the Mid-Term Plan, the NSK Group will implement education in Europe and the ASEAN region and carry out further initiatives to reduce impact on biodiversity.

FY2016 Activities

The NSK Group identifies the factors behind the impact of its business operations on biodiversity and provides education to raise the awareness of its employees. The Group is taking steps to raise the awareness of employees at business sites in and outside Japan.

■ Survey of Biodiversity on Plant Premises (Japan)

Wild grey-headed lapwings*1 live at NSK's Fukushima Plant while plants such as the Golden Orchid*2 grow at the Kirihara Branch. NSK will continue to protect these wild animals and plants.

*1 Class I endangered species on the Fukushima Red List

*2 Class II endangered species on the Ministry of Environment Red List and Class II endangered species on the Kanagawa Prefecture Red List

■ Natural Treasure Preservation (Japan)

In September 2016, 24 employees of the NSK Saitama Plant participated in efforts to preserve the native habitat of the waterwheel plant (*Aldrovanda vesiculosa*), a nationally designated natural treasure, in Houzouji-numa in Hanyu City, Saitama Prefecture. The employees cut invasive species of grass after receiving environmental training from Hanyu City staff. About 20 employees of the NSK Saitama Plant and NSK Machinery, along with their families, participated in June 2017.



■ Tournament for Catching and Removing Invasive Fish (Japan)

As part of its biodiversity conservation activities, NSK's Ohtsu Plant has held a fishing tournament to catch and remove invasive fish species from Lake Biwa since 2014. Many endemic species live in Lake Biwa, but invasive species such as bluegill and black bass are threatening the survival of rare species. Fifty people, including employees and their families, participated in the tournament held in July 2016, and removed 184 fish. Forty-four people including trainees from abroad participated in the July 2017 tournament, which served as an opportunity for colleagues from different worksites to interact.



■ Maintenance of the NSK Gunma Future Forest (Japan)

In October 2015, NSK's Takasaki Plant, Haruna Plant, and NSK Steering Systems Co., Ltd., signed an agreement with Gunma Prefecture regarding the Gunma Prefecture forest maintenance partner project. Since 2015, employees and their families at these three sites have worked to promote the sustainable cultivation of prefectural forests. In October 2016, 50 employees participated in the work at the NSK Gunma Future Forest by weeding and thinning forests.



■ Satoyama Preservation and Nature Observation Workshops (Japan)

The Fujisawa Plant, Fujisawa Technology Center, Kirihara Building, NSK Micro Precision Co., Ltd., and AKS East Japan Co., Ltd. have held *satoyama* (village forest) conservation activities and nature observation workshops together with Fujisawa City and the NPO Fujisawa Green Staff no Kai in Fujisawa City's green area conservation zone. Five people participated in March 2017, and 70 people including employees and their families participated in June 2017.



■ Mangrove Planting (Thailand)

Siam NSK Steering Systems Co., Ltd. in Thailand engages in mangrove planting annually as part of its CSR efforts. Mangrove is the generic name for a plant that grows in tropical and subtropical regions and is said to help control global warming due to its absorption and significant accumulation of CO₂. The mangrove also plays a role as a "green breakwater" that protects people's lives and ecosystems from natural disasters, such as high waves and tsunamis, and also serves as a home for many organisms.

In fiscal 2016, a total of 107 executives, employees and family members participated, planting trees in the mangrove forest in eastern Thailand.



Appendix

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P.97	Scope of Environmental Management
P.98	Estimating Indirect CO ₂ Emissions (Scope 3)
P.99	Environmental Accounting
P.100	Environmental Data by Country
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P.104	Independent Assurance Statement

GRI Content Index

This report contains Standard Disclosures from the GRI G4 Sustainability Reporting Guidelines.

GENERAL STANDARD DISCLOSURES

Report Pages

Strategy and Analysis		Report Pages
G4-1	Provide a statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	pp. 9-11
G4-2	Provide a description of key impacts, risks, and opportunities	pp. 9-11, 92-94, web: Business Risks and Other Risk Factors
Organizational Profile		Report Pages
G4-3	Report the name of the organization	p. 3
G4-4	Report the primary brands, products, and services	pp. 3-4
G4-5	Report the location of the organization's headquarters	p. 3
G4-6	Report the number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	p. 5
G4-7	Report the nature of ownership and legal form	p. 3
G4-8	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	pp. 3-5, NSK Report 2017 (pp. 28-31)
G4-9	Report the scale of the organization, including: • Total number of employees • Total number of operations • Net sales (for private sector organizations) or net revenues (for public sector organizations) • Total capitalization broken down in terms of debt and equity (for private sector organizations) • Quantity of products or services provided	pp. 3, 5
G4-10	a. Report the total number of employees by employment contract and gender b. Report the total number of permanent employees by employment type and gender c. Report the total workforce by employees and supervised workers and by gender d. Report the total workforce by region and gender e. Report whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors f. Report any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries)	pp. 3, 5, 102
G4-11	Report the percentage of total employees covered by collective bargaining agreements	p. 47, web: Labor and Management Cooperate to Develop Better Working Environment
G4-12	Describe the organization's supply chain	pp. 8, 29-31
G4-13	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain, including: • Changes in the location of, or changes in, operations, including facility openings, closings, and expansions • Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations) • Changes in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination	N/A
G4-14	Whether and how the precautionary approach or principle is addressed by the organization	pp. 83
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	pp. 47
Identified Material Aspects and Boundaries		Report Pages
G4-17	a. List all entities included in the organization's consolidated financial statements or equivalent documents. b. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report	Securities Report (In Japanese only) (pp. 8-12)
G4-18	a. Explain the process for defining the report content and the Aspect Boundaries b. Explain how the organization has implemented the Reporting Principles for Defining Report Content	p. 1
G4-19	List all the material Aspects identified in the process for defining report content	p. 8
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements	pp. 12-13, 74-76, 79-80, 100
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries	N/A
Stakeholder Engagement		Report Pages
G4-24	Provide a list of stakeholder groups engaged by the organization	p. 8
G4-25	Report the basis for identification and selection of stakeholders with whom to engage	p. 8
G4-26	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	p. 8
G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns	p. 8
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G4-29	Date of most recent previous report (if any)	Back Cover
G4-30	Reporting cycle (such as annual, biennial)	Back Cover
G4-31	Provide the contact point for questions regarding the report or its contents	Back Cover
G4-32	a. Report the 'in accordance' option the organization has chosen b. Report the GRI Content Index for the chosen option c. Report the reference to the External Assurance Report, if the report has been externally assured	pp. 89-91
G4-33	a. Report the organization's policy and current practice with regard to seeking external assurance for the report b. If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided c. Report the relationship between the organization and the assurance providers d. Report whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report	pp. 103, 104
Governance		Report Pages
G4-34	• Report the governance structure of the organization, including committees of the highest governance body • Identify any committees responsible for decision-making on economic, environmental and social impacts	pp. 15, 66
G4-35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	pp. 15, 66
G4-36	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	pp. 15, 66
G4-37	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body	pp. 15, 66

GENERAL STANDARD DISCLOSURES

Report Pages

Governance		
G4-38	Report the composition of the highest governance body and its committees by: •Executive or non-executive •Independence •Tenure on the governance body •Number of each individual's other significant positions and commitments, and the nature of the commitments •Gender •Membership of under-represented social groups •Competences relating to economic, environmental and social impacts •Stakeholder representation	pp. 15-19
G4-39	Report whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement)	pp. 15-16, 18-19
G4-40	Report the nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members, including: •Whether and how diversity is considered •Whether and how independence is considered •Whether and how expertise and experience relating to economic, environmental and social topics are considered •Whether and how stakeholders (including shareholders) are involved	pp. 16-17
G4-41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed Report whether conflicts of interest are disclosed to stakeholders, including, as a minimum: •Cross-board membership •Cross-shareholding with suppliers and other stakeholders •Existence of controlling shareholder •Related party disclosures	pp. 16-17
G4-42	Report the highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts	pp. 15-19
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G4-44	a. Report the processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics. Report whether such evaluation is independent or not, and its frequency. Report whether such evaluation is a self-assessment b. Report actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics, including, as a minimum, changes in membership and organizational practice	pp. 16-17
G4-45	a. Report the highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities. Include the highest governance body's role in the implementation of due diligence processes b. Report whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities	pp. 15-19
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G4-52	Report the process for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Report any other relationships which the remuneration consultants have with the organization	p. 17
Ethics and Integrity		
G4-56	Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	p. 6
G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines	pp. 25, 30
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SPECIFIC STANDARD DISCLOSURES

Report Pages

Disclosures on Management Approach		
G4-DMA	a. Report why the Aspect is material. Report the impacts that make this Aspect material. b. Report how the organization manages the material Aspect or its impacts c. Report the evaluation of the management approach, including: •The mechanisms for evaluating the effectiveness of the management approach •The results of the evaluation of the management approach •Any related adjustments to the management approach	pp. 8, 12-13, 15, 20, 23-25, 29, 33-34, 38-39, 46-48, 54-56, 59, 64-66
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G4-EC2	Economic Performance Financial implications and other risks and opportunities for the organization's activities due to climate change	pp. 65, 70, 73, 94, 99 NSK Report 2017 (pp. 18-23)
G4-EC3	Coverage of the organization's defined benefit plan obligations	Securities Report (In Japanese only) (pp. 27, 100)
Environmental		
G4-EN1	Materials Materials used by weight or volume	p. 69
G4-EN3	Energy Reduction of energy consumption	p. 69, 73-74, 107
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G4-EN10	Percentage and total volume of water recycled and reused	pp. 69, 79
G4-EN11	Biodiversity Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	pp. 86-87
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Environmental			Report Pages
G4-EN15		Direct greenhouse gas (GHG) emissions (Scope 1)	pp. 69, 73-74, 100 Independent Assurance Statement: p. 103
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G4-EN17		Other indirect greenhouse gas (GHG) emissions (Scope 3)	pp. 76, 98
G4-EN18		Greenhouse gas (GHG) emissions intensity	pp. 74-75
G4-EN19		Reduction of greenhouse gas (GHG) emissions	pp. 74-75, 100
G4-EN21		NOx, SOx, and other significant air emissions	pp. 68-69
G4-EN22		Total water discharge by quality and destination	pp. 69, 101
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G4-EN27	Products and Services	Extent of impact mitigation of environmental impacts of products and services	pp. 71-72, 78
G4-EN28		Percentage of products sold and their packaging materials that are reclaimed by category	p. 79
G4-EN30	Transport	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	p. 76, 98
G4-EN31	Overall	Total environmental protection expenditures and investments by type	p.99
G4-EN32	Supplier Environmental Assessment	Percentage of new suppliers that were screened using environmental criteria	pp. 29-31, 83
G4-EN33		Significant actual and potential negative environmental impacts in the supply chain and actions taken	pp. 31, 83
G4-EN34	Environmental Grievance Mechanisms	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	None
Social			
Labor Practices and Decent Work			
G4-LA1		Total number and rates of new employee hires and employee turnover by age group, gender and region	p. 102 NSK Report 2017 (p. 17)
G4-LA2	Employment	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	p. 50
G4-LA3		Return to work and retention rates after parental leave, by gender	p. 102
G4-LA5	Occupational Health and Safety	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	p. 47, web: Labor and Management Cooperate to Develop Better Working Environment
G4-LA6		Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	p. 54
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G4-LA12	Diversity and Equal Opportunity	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	pp. 16, 49, 102 NSK Report 2017 (pp. 14-17)
G4-LA14	Supplier Assessment for Labor Practices	Percentage of new suppliers that were screened using labor practices criteria	pp. 29-31
Human Rights			
G4-HR2	Investment	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	p. 47
G4-HR10	Supplier Human Rights Assessment	Percentage of new suppliers that were screened using human rights criteria	pp. 29-31
Society			
G4-SO1	Local Communities	Percentage of operations with implemented local community engagement, impact assessments, and development programs	pp. 59-62
G4-SO4	Anti-corruption	Communication and training on anti-corruption policies and procedures	pp. 26-27, 29-31
G4-SO7	Anti-competitive Behavior	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	None
G4-SO8	Compliance	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	None
G4-SO9	Supplier Assessment for Impacts on Society	Percentage of new suppliers that were screened using criteria for impacts on society	p. 29-31
Product Responsibility			
G4-PR5	Product and Service Labeling	Results of surveys measuring customer satisfaction	p. 40-41

Business Risks and Other Risk Factors

The risks that NSK addresses with risk management are wide-ranging. The entire list of the principal risk factors that could have an effect on the NSK Group's business development, business performance, and financial condition is given in NSK's Securities Report, but the especially important ones are described below. For risks related to compliance, see pp. 23–28 of this report.

1 Economic Conditions in Countries, Regions and Industries

The NSK Group manufactures and sells products to the automotive and other diverse industries in countries all across the globe. As a result, the business performance and financial position of the Group could be adversely affected by changes in the economic environments of those specific countries and regions in which it operates.

2 Reliance on Specific Industries

Specific fields on which the NSK Group is heavily dependent include automotive bearings and automotive products, which account for some 70% of its sales; in precision machinery, the sales ratio is high for semiconductor production and machine tool industry products. For industrial machinery bearings and precision machinery products, NSK strives to increase the relative sales ratio of the broader general machinery field and aftermarket to mitigate the impact from downward fluctuations in those fields upon which NSK is highly dependent. Nonetheless, there is a risk that the business performance and financial position of the Group could be adversely affected by sudden declines in demand from the aforementioned industries.

3 Reliance on Specific Suppliers

The NSK Group's basic strategy is to avoid reliance on a single supplier by procuring components and materials from multiple sources. However, the Group could become unable to source necessary items due to the inability of some suppliers to meet technical requirements, or a supplier's lack of production capacity, poor-quality products, fires, natural disasters including earthquakes, bankruptcy, or other reasons, which could in turn impede the Group's ability to supply products to customers.

Related information → pp. 21–22 Responding to Disaster Risk, pp. 29–31 Supply Chain Management

4 Rising Prices of Raw Materials

Fluctuations in the international economy or in demand trends might substantially affect the prices of such raw materials as iron ore, coking coal, scrap, and crude oil; an increase in these raw material prices could drive up the cost of materials and parts used in the products of the NSK Group. The Group is working to reduce costs by procuring items from outside Japan, and conducting Value Analysis (VA) and Value Engineering (VE) campaigns while also reflecting cost increases in higher product prices. However, there is a risk that the NSK Group might not be able to recover cost increases fully and that business performance could be adversely affected as a result.

5 Quality Risks

The NSK Group's products are used in a broad range of industries and end-user products, and high-precision performance is essential for parts used in automobiles, rolling stock, airplanes, and other end-user products where safety is paramount. The NSK Group recognizes the importance of quality, and has put in place a high quality assurance system. However, in the event of a product defect leading to large-scale recalls or product liability lawsuits, the business performance and financial position of the Group could be adversely affected by substantial costs and reputational damage. Although the NSK Group has obtained global product liability insurance, and recall insurance for some products, there is a risk that this might not be sufficient to cover all compensation payments and other losses.

Related information → pp. 37–44 Quality Assurance

6 Product Development Risks

The purpose of new product development is to bring new products to the market, which is an important priority from the viewpoint of income expansion. Product development needs in the market for the NSK Group's products are diversifying; the pace of change in these needs has also accelerated.

New product development does not contribute to income until the market values a product and it begins to sell, but product development comes with a range of risks, including those given below. If not avoided, these risks could adversely affect the business performance and financial position of the NSK Group.

- i) sales of newly developed products might be weaker than anticipated due to the Group misjudging market needs;
- ii) sales of products might decrease due to delays in product development and mass production;
- iii) newly developed products might inadvertently infringe on the intellectual property rights of a competitor's products and technologies; and
- iv) other companies might introduce new products or new technologies that could be used as alternatives to those developed by the Group.

Related information pp. 32–36 Research and Development, pp. 70–72 Creating Environmentally Friendly Products

7 Intellectual Property Risks

The NSK Group believes in the importance of filing patents on the technologies it develops, and otherwise protecting its intellectual property rights. The NSK Group obtains intellectual property rights in Japan and abroad to sustain and improve the competitiveness of its businesses. However, with intellectual property increasing in importance, it is not possible to entirely eliminate the prospect that the business performance of the NSK Group could be adversely affected by the following risks:

- i) the risk of invalidation claims concerning the intellectual property of the NSK Group;
- ii) the risk that royalty payments might arise regarding the use of the intellectual property rights of a third party for the Group's business, or the risk that the Group might not be able to obtain permission to use the intellectual property of other parties;
- iii) the risk of intellectual property infringement by third parties; and
- iv) the risk that the NSK Group might not be able to eliminate counterfeit products effectively in certain countries or regions.

8 Global Expansion Risks

The NSK Group conducts business worldwide, and in the fiscal year under review, sales outside Japan accounted for more than 60% of consolidated net sales. The Group's businesses outside Japan share the following common risks related to global expansion.

- i) unforeseen changes in local government laws and regulations;
- ii) changes in social, political, and economic conditions, or a deterioration in public safety;
- iii) transportation delays or damage to electrical power and other infrastructure;
- iv) foreign exchange restrictions and exchange rate fluctuations;
- v) unfavorable changes in tax systems or taxation;
- vi) invocation of protective trade restrictions;
- vii) credit risk in business partners due to differing business practices;
- viii) unfamiliar employment systems and social insurance systems;
- ix) changes in labor conditions and difficulty in hiring personnel; and
- x) outbreak of contagious diseases.

9 Disaster and Terrorism Risks

The production and sales activities of the NSK Group could be adversely affected in the event that its business sites or those of its suppliers and customers are hit by earthquake, flood, fire, heavy snow, nuclear incident, the outbreak of a new infectious disease, terrorist attack, or damage or injury resulting from social unrest caused by changes in political conditions. Furthermore, insurance does not completely cover all damage resulting from fire, natural disasters, and the like. The Group's response to natural disasters and terrorism is a key management issue, and the Group will do its utmost in this regard, including taking precautionary measures to minimize damage and ensure that the NSK Group can continue operations. However, the Group cannot completely eliminate such risks.

Related information pp. 21–22 Responding to Disaster Risk

10 Litigation Risks

The NSK Group is in the manufacturing industry, and most past and current litigation is related to product transactions. NSK particularly faces the risk of lawsuits for product liability. The NSK Group has product liability insurance that covers alleged claims in litigation for product liability. This insurance does not provide unlimited and unconditional coverage for claims against the NSK Group for product liability.

Plaintiffs in the United States and Canada, including representatives of purchasers of bearings and other products, have filed class actions against certain parties, including NSK and some of its subsidiaries in Japan, the United States, Canada and Europe. The plaintiffs allege, among other things, that the defendants conspired with each other to restrict competition in sales of bearings and other products in these countries, and seek damages, injunctions, and other legal remedies against the defendants. NSK and some of its

subsidiaries in Japan and the United States have agreed on a settlement with indirect purchasers and some other plaintiffs in the class actions in the United States. Furthermore, in the United Kingdom, plaintiffs, including some Group customers, have filed a claim against defendants including NSK and some of its subsidiaries in Europe, for damages related to the past violation of European competition law.

NSK, its subsidiaries or its affiliated companies could face additional future actions similar to the above; the NSK Group will manage these actions appropriately. Furthermore, as cases proceed, the NSK Group will consider the possibility of reaching settlements with such plaintiffs.

The possibility exists of future financial losses, in the form of payment of monetary damages, etc.; however, it is difficult to provide a reasonable estimate of the amount of such losses at this time, and their impact on NSK's operational results, etc., is uncertain.

11 Environmental Risks

The NSK Group's business operations are subject to wide-ranging environmental laws and regulations, covering air pollution, water pollution, environmentally harmful substances, waste disposal, prevention of climate change, energy, and more. The NSK Group has identified environmental protection activities as an important aspect of its management policies and has worked to improve its environmental management systems. To date, the Group has had no major environmental problems. However, there is a risk that environmental problems could occur in the future, leading to costs relating to compensation payments, product recalls, the suspension of production, and clean-up operations, as well as fines and other official penalties, and reputational damage. The introduction of new regulations could also result in substantial costs being incurred.

Related information pp. 63–87 Environment

12 Recruitment Risks

The NSK Group recognizes that to stay competitive, it needs to continuously recruit, hire and train talented people. Competition for talent in the Group's business fields is growing increasingly fierce, and if the NSK Group is unable to recruit and train personnel, it could impair business expansion and have an adverse effect on operations.

Related information pp. 45–57 Good Labor Practices

13 Labor Dispute Risks and the Labor Environment

The NSK Group considers that there is little risk of deterioration in labor relations in Japan because it holds labor-management council meetings regularly to discuss improving the labor environment and labor conditions. However, there is a risk that labor relations outside Japan could deteriorate due to differing labor practices, or such unforeseeable contingencies as changes in the legal, economic or social environment, leading to labor disputes and other problems. In such cases, there is a possibility that the Group's business operations might be curtailed. The NSK Group is taking initiatives to provide a safe and comfortable work environment, but there is also a risk of industrial accidents caused by malfunctioning equipment or improper operation by workers. A particularly serious industrial accident could adversely affect the Group's operations.

Related information pp. 45–57 Good Labor Practices

Certification for Quality, Environmental, and Occupational Safety and Health Management Systems

(As of October 2017)

Region	Country	Site name	Quality Management System	Environmental and Energy Management System	Occupational Safety and Health Management System
Japan	Japan	NSK Ltd., Fujisawa Plant / Fujisawa Plant Kirihara branch / Fujisawa Technology Center	ISO 9001, EN/JISQ/AS 9100	ISO 14001	
		NSK Ltd. Ohtsu Plant	ISO 9001, ISO/TS 16949	ISO 14001	
		NSK Ltd. Ishibe Plant	ISO 9001, ISO/TS 16949	ISO 14001	
		NSK Ltd. Saitama Plant	ISO/TS 16949	ISO 14001	
		NSK Ltd. Saitama Precision Machinery Plant	ISO 9001	ISO 14001	
		NSK Ltd. Kirihara Precision Machinery Plant	ISO 9001	ISO 14001	
		NSK Ltd., Fukushima Plant	ISO 9001	ISO 14001	
		NSK Ltd., Takasaki Plant	ISO 9001, ISO/TS 16949	ISO 14001	
		NSK Ltd., Haruna Plant	ISO/TS 16949	ISO 14001	
		NSK Ltd., Steering Technology Center		ISO 14001	
		NSK Steering Systems Co., Ltd., Soja Plant (Soja)	ISO/TS 16949	ISO 14001	
		NSK Steering Systems Co., Ltd., Soja Plant (Akagi)	ISO 9001	ISO 14001	
		NSK Micro Precision Co., Ltd., Fujisawa Plant	ISO 9001	ISO 14001	
		NSK Micro Precision Co., Ltd., Matsukawa Plant	ISO 9001	ISO 14001	
		NSK Kyushu Co., Ltd.	ISO 9001	ISO 14001	
		Asahi Seiki Co., Ltd.	ISO 9001	ISO 14001	
		Amatsuji Steel Ball Mfg. Co., Ltd., Main Works	ISO/TS 16949	ISO 14001	OHSAS 18001
		Amatsuji Steel Ball Mfg. Co., Ltd., Shiga Works	ISO/TS 16949	ISO 14001	OHSAS 18001
		AKS East Japan Co., Ltd.	ISO/TS 16949	ISO 14001	
		NSK Toyama Co., Ltd., Head Office & Factory	ISO 9001	ISO 14001	
		NSK Toyama Co., Ltd., Yatsuo Factory	ISO 9001	ISO 14001	
		Shinwa Seiko Co., Ltd. Shin-asahi Plant	ISO 9001	ISO 14001	
		Shinwa Seiko Co., Ltd. Kutsuki Plant	ISO 9001	ISO 14001	
		Kuribayashi Seisakusho Co., Ltd.	ISO 9001	ISO 14001	
		NSK Machinery Co., Ltd.	ISO 9001	ISO 14001	
		NSK Logistics Co., Ltd. (headquarters; logistics centers in Kanto, Chubu, and Kansai regions)	ISO 9001	ISO 14001	
Inoue Jikuuke Kogyo Co., Ltd.	ISO 9001, ISO/TS 16949	ISO 14001			
NSK-Warner K.K.	ISO 9001, ISO/TS 16949	ISO 14001			
Chitose Sangyo Co., Ltd.	ISO 9001	ISO 14001			
The Americas	U.S.A.	NSK Corporation (administration, technology)		ISO 14001	
		NSK Corporation, Clarinda Plant	ISO 9001, ISO/TS 16949	ISO 14001	
		NSK Corporation, Franklin Plant	ISO 9001, ISO/TS 16949	ISO 14001	
		NSK Corporation, Liberty Plant	ISO 9001	ISO 14001	
		NSK Precision America, Inc.	ISO 9001	ISO 14001	
		NSK Steering Systems America, Inc., Bennington Plant	ISO 9001, ISO/TS 16949	ISO 14001	
		NSK Steering Systems America, Inc., Dyersburg Plant	ISO/TS 16949	ISO 14001	
		NSK-AKS Precision Ball Company	ISO 9001, ISO/TS 16949	ISO 14001	
		Mexico	NSK Bearings Manufacturing Mexico S.A. de C.V.	ISO/TS 16949	ISO 14001
	Brazil	NSK Brasil LTDA., Suzano Plant	ISO 9001, ISO/TS 16949	ISO 14001	

Region	Country	Site name	Quality Management System	Environmental and Energy Management System	Occupational Safety and Health Management System
Europe	U.K.	NSK Europe Ltd. (administration, technology, sales, distribution)		ISO 14001	
		NSK Bearings Europe Ltd., Newark Plant	ISO 9001	ISO 14001	OHSAS 18001
		NSK Bearings Europe Ltd., Peterlee Plant	ISO 9001, ISO/TS 16949	ISO 14001	OHSAS 18001
		NSK Precision UK Ltd.	ISO 9001	ISO 14001	OHSAS 18001
		AKS Precision Ball Europe Ltd.	ISO 9001, ISO/TS 16949	ISO 14001	OHSAS 18001
	Germany	Neuweg Fertigung GmbH, Munderkingen Plant	ISO/TS16949	ISO 14001 ISO 50001	OHSAS 18001
	Netherlands	NSK European Distribution Centre B.V.			OHSAS 18001
	Poland	NSK Bearings Polska S.A., Kielce Plant	ISO 9001, ISO/TS 16949	ISO 14001	OHSAS 18001
		NSK Needle Bearing Poland Sp. Z O.O.	ISO/TS 16949	ISO 14001	
		NSK Steering Systems Europe (Polska) Sp. Z O.O.	ISO/TS 16949	ISO 14001	OHSAS 18001
		AKS Precision Ball Polska Sp. Z O.O.	ISO 9001, ISO/TS 16949	ISO 14001	
	Africa	South Africa	NSK South Africa (Pty) Ltd.		ISO 14001
China	China	Kunshan NSK Co., Ltd.	ISO/TS 16949	ISO 14001	
		Changshu NSK Needle Bearings Co., Ltd.	ISO/TS 16949	ISO 14001	
		Dongguan NSK Steering Systems Co., Ltd.	ISO/TS 16949	ISO 14001	
		Zhangjiagang NSK Precision Machinery Co., Ltd.	ISO 9001	ISO 14001	OHSAS 18001
		Suzhou NSK Needle Bearings Co., Ltd.	ISO/TS 16949	ISO 14001	
		AKS Precision Ball (Hangzhou) Co., Ltd.	ISO/TS 16949	ISO 14001	
		NSK-Warner (Shanghai) Co., Ltd.	ISO/TS 16949	ISO 14001	
		NSK-WANDA Electric Power Assisted Steering Systems Co., Ltd.	ISO/TS 16949	ISO 14001	
		NSK-Yagi Precision Forging (Zhangjiagang) Co., Ltd.	ISO/TS 16949	ISO 14001	
		Shenyang NSK Precision Co., Ltd.	ISO 9001	ISO 14001	
		Shenyang NSK Co., Ltd.	ISO 9001	ISO 14001	
Hefei NSK Co., Ltd.	ISO/TS 16949	ISO 14001			
Korea	Korea	NSK Korea Co., Ltd., Changwon Plant	ISO/TS 16949	ISO 14001	OHSAS 18001
ASEAN	Indonesia	PT. NSK Bearings Mfg. Indonesia	ISO/TS 16949	ISO 14001	
		PT. AKS Precision Ball Indonesia	ISO 9001, ISO/TS 16949	ISO 14001	
		PT. NSK-Warner Indonesia		ISO 14001	
	Thailand	NSK Bearings Mfg. (Thailand) Co., Ltd.	ISO 9001, ISO/TS 16949	ISO 14001	OHSAS 18001
		Siam NSK Steering Systems Co., Ltd.	ISO/TS 16949	ISO 14001	OHSAS 18001
	Malaysia	NSK Micro Precision (M) Sdn. Bhd.	ISO 9001	ISO 14001	OHSAS 18001
ISC Micro Precision Sdn. Bhd.		ISO 9001	ISO 14001	OHSAS 18001	
India	India	NSK Bearings Manufacturing India Private Limited	ISO/TS 16949	ISO 14001	
		Rane NSK Steering Systems Ltd., Chennai Plant	ISO 9001, ISO/TS 16949	ISO 14001	OHSAS 18001
		Rane NSK Steering Systems Ltd., Bawal Plant	ISO 9001, ISO/TS 16949	ISO 14001	OHSAS 18001
		Rane NSK Steering Systems Ltd., Pantnagar Plant		ISO 14001	



Reference data is available on NSK's website.

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

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

● Certification for Quality Management Systems

● Acquiring ISO 14001 Certification

Scope of Environmental Management

In order to increase coverage and reliability, the Global Environmental Department of NSK headquarters and each Group site confirm environmental information and data. Moreover, the Group decides which information and data is to be disclosed, taking into account relevant laws and regulations, guidelines, social concerns and materiality of the Group.

	Category	Scope	
Environmental Management	INPUT	Steel	Procurement Volume from main suppliers
		Oils and greases	
		Energy	ISO14001 acquiring sites
		Water	
	OUTPUT	Environmentally harmful substances	ISO14001 acquiring sites in Japan
		Atmospheric gases	
		Waste	ISO14001 acquiring sites
		Wastewater	
		Environmentally harmful substances	ISO14001 acquiring sites in Japan
CSR Report 2017 p. 69: Input and Output of Global Business Activities			
CSR Report 2017 Appendix p. 99: Environmental Accounting			
CSR Report 2017 p. 67: Environmental Education		NSK Group in Japan (e-learning: NSK Group)	
Creating Environmentally Friendly Products	CSR Report 2017 p. 71: Figure: Number of Environmentally Friendly Products Developed CSR Report 2017 p. 72: Table: Environmentally Friendly Products Developed in FY2016	NSK Group (Products Development Divisions)	
Global Warming Countermeasures	CSR Report 2017 p. 73: Percentage of Energy Used by Energy Type and Application in Fiscal 2016 (Japan/Production)		
	CSR Report 2017 p. 74: Figure: Energy Used in Manufacturing by Region Figure: Total GHG Emissions from Manufacturing by Region		
	CSR Report 2017 p. 75: Figure: CO ₂ Emissions from Manufacturing in Japan: Total Volume and per Production Unit Figure: CO ₂ Emissions from Manufacturing Outside Japan: Total Volume and per Production Unit	ISO14001 acquiring sites (Production)	
	CSR Report 2017 p. 100: Energy Consumption and CO ₂ Emissions (by Region and Country, Production Sites)		
	CSR Report 2017 Supplemental Materials (website) : Energy Consumption and CO ₂ Emissions (by Site)		
	CSR Report 2017 p. 76: Figure: CO ₂ Emissions per Transportation Volume and CO ₂ Emissions from Distribution in Japan	NSK Logistics Co., Ltd., and main distribution contractors	
	CSR Report 2017 p. 77: Energy-Saving Efforts at the Head Office and Sales Divisions	NSK Group sites in Japan (Headquarters, Branch Offices and Sales Offices)	
CSR Report 2017 pp. 74, 103: Greenhouse Gas Emissions Verification Report	NSK Group site in Japan(Headquarters, Branch Office and Sales Offices, Production, Technology Division)		

	Category	Scope
Measures for Resource Conservation and Recycling	CSR Report 2017 p. 79: Figure: Total Waste	ISO14001 acquiring sites (Production)
	CSR Report 2017 p. 79: Figure: Recycling Rate	
	CSR Report 2017 p. 79: Figure: Industrial Waste per Production Unit (Plants in Japan)	ISO14001 acquiring sites in Japan (Production)
	CSR Report 2017 p. 79: Figure: Landfill Disposal Rate (Plants in Japan)	
	CSR Report 2017 p. 79: Figure: Amount of Packaging Material Waste per Production Unit (Distribution in Japan)	NSK Logistics Co., Ltd.
	CSR Report 2017 p. 80: Figure: Water Withdrawal per Unit of Production (Plants in Japan) Figure: Water Withdrawal per Unit of Production (Plants outside Japan)	
	CSR Report 2017 p. 100: Total Waste, Landfill Disposal Volume and Recycling Rate (by Region and Country, Production Sites)	ISO14001 acquiring sites (Production)
	CSR Report 2017 Supplemental Materials (website): Water Withdrawal, Wastewater Amounts and Waste Emissions	
	CSR Report 2017 p. 101: Water Withdrawal and Wastewater Amounts (by Country)	
Reducing Use of Environmentally Harmful Substances	CSR Report 2017 p. 84: Figure: Handling of PRTR-Designated Substances (Plants in Japan)	ISO14001 acquiring sites in Japan (Production)
	CSR Report 2017 Supplemental Materials (website): Volume of PRTR-Designated Substances Handled (Japan)	
	CSR Report 2017 Supplemental Materials (website): Air Pollutant Measurement Results (Japan)	ISO14001 acquiring sites (Production)
	CSR Report 2017 Supplemental Materials (website): Water Contaminant Measurement Results (Japan)	

Estimating Indirect CO₂ Emissions (Scope 3)

NSK is making efforts to estimate the amount of CO₂ emitted indirectly as a result of the Group's activities, including the CO₂ emitted when suppliers produce the parts and raw materials used by the NSK Group (scope 3). The estimate for fiscal 2016 was 2,056,187 tons. Going forward, NSK will expand the scope of emissions included and will increase the accuracy of its calculations.

● NSK Group's (Global) Scope 3 Emissions in FY2016

Category	CO ₂ emissions (t-CO ₂)	Percentage
1 Purchased goods and services	1,444,263	70.2%
2 Capital goods	187,526	9.1%
3 Fuel- and energy-related activities	51,073	2.5%
4 Upstream transportation and distribution	13,203	0.6%
5 Waste generated in operations	25,521	1.2%
6 Business travel	6,915	0.3%
7 Employee commuting	93,812	4.6%
9 Downstream transportation and distribution	67,702	3.0%
12 End-of-life treatment of sold products	70,009	3.4%
15 Investments	96,162	4.7%
Total	2,056,187	100.0%

* Since the NSK Group's products are semi-manufactured goods, category 11 (Use of sold products) is not subject to calculation.

Environmental Accounting

The NSK Group has disclosed the results of environmental accounting, a tool for quantitatively ascertaining and evaluating the costs and results of environmental protection activities. The Group also has introduced environmental accounting as an information tool to broaden people's understanding of the Group's activities. The environmental conservation cost in fiscal 2016 included approximately 3.6 billion yen in investments and about 13.2 billion yen in expenses. The economic benefits came to roughly 1.0 billion yen.

The NSK Group seeks to ensure that its products contribute to environmental preservation. As a result, approximately 72% of environmental conservation costs comprised R&D costs for environmentally friendly products and environmental conservation technologies.

● Table 1: Environmental Conservation Cost

Category	Investment			Cost			
	FY2015 Millions of yen	FY2016 Millions of yen	(%)	FY2015 Millions of yen	FY2016 Millions of yen	(%)	
Business area costs	Pollution prevention costs	183.1	345.2	9.7%	530.1	529.0	4.0%
	Global environment conservation costs	970.0	892.2	25.1%	963.8	955.6	7.3%
	Resource circulation costs	92.0	250.3	7.0%	669.4	794.3	6.0%
	Subtotal	1,245.1	1,487.8	41.9%	2,163.3	2,278.9	17.3%
Upstream and downstream costs	0.0	0.0	0.0%	287.1	258.7	2.0%	
Administration costs	1.1	40.5	1.1%	601.7	502.2	3.8%	
Research and development costs	1,383.3	2,017.5	56.8%	7,766.6	10,058.1	76.4%	
Social activity costs	0.0	0.0	0.0%	43.1	41.4	0.3%	
Environmental remediation costs	13.8	5.8	0.2%	30.4	18.9	0.1%	
Total	2,643.2	3,551.5	100.0%	10,892.2	13,158.1	100.0%	

Category	Key activities	
Business area costs	Pollution prevention costs	<ul style="list-style-type: none"> Repaired underground tanks and pipes Maintained and inspected dust collectors and smoke removal units
	Global environment conservation costs	<ul style="list-style-type: none"> Upgraded to equipment with high energy efficiency and installed photovoltaic facilities
	Resource circulation costs	<ul style="list-style-type: none"> Installed grinding-dust briquette-making equipment. Took countermeasures to reduce and recycle waste material.
Upstream and downstream costs	<ul style="list-style-type: none"> Practiced green procurement (low-polluting vehicles, paper, uniforms, and office equipment and supplies). 	
Administration costs	<ul style="list-style-type: none"> Maintained and followed procedures for ISO 14001. Measured and analyzed environmental impact. 	
Research and development costs	<ul style="list-style-type: none"> Conducted research and development with the main goal of environmental protection for new product development. 	
Social activity costs	<ul style="list-style-type: none"> Participated in and donated to the Keidanren Nature Conservation Fund. 	
Environmental remediation costs	<ul style="list-style-type: none"> Maintained discharge treatment facilities. 	

● Table 2: Economic Benefits Associated with Environmental Conservation Activities

Category	FY2015	FY2016
	Millions of yen	Millions of yen
Reductions in energy costs through energy conservation activities	100	117
Reductions in waste disposal costs through waste reduction activities	44	51
Sales of recyclable waste material	685	793
Total	829	961

● Table 3: Physical Benefits Associated with Environmental Conservation Activities

Area	Indicators	FY2015	FY2016
Plants	CO ₂ emissions / production unit	1.6% deterioration	2.0% improvement
	Water withdrawal / production unit	6.0% improvement	8.0% improvement
	Landfill waste disposal ratio	0.001% improvement	No change
	Waste recycling ratio	0.001% improvement	No change
Distribution	CO ₂ emissions / ton-kilometer	3.2% deterioration	2.1% improvement

Method of Calculation

● Criteria for environmental protection costs

Environmental costs and expenses determined in accord with the *Environmental Accounting Guidelines 2005* issued by the Ministry of the Environment in Japan. Depreciation is entered as a cost using the 5-year straight-line depreciation method.

Compound costs are divided in proportion to the relevant environmental objective.

Costs incurred through green procurement are entered as full amounts and not as differential amounts.

● Criteria for environmental protection benefits

Includes economic benefits (in monetary units) calculated from tangible evidence and physical benefits gained from environmental policies.

Does not include imputed benefits (risk avoidance benefits, estimated profit contribution benefits, etc.).

Environmental Data by Country

● Energy Consumption and CO₂ Emissions*¹ (by Region and Country,*² Production Sites)

Region	Country	FY2012		FY2013		FY2014		FY2015		FY2016* ³	
		Energy Consumption (TJ)	CO ₂ Emissions (1000t-CO ₂)	Energy Consumption (TJ)	CO ₂ Emissions (1000t-CO ₂)	Energy Consumption (TJ)	CO ₂ Emissions (1000t-CO ₂)	Energy Consumption (TJ)	CO ₂ Emissions (1000t-CO ₂)	Energy Consumption (TJ)	CO ₂ Emissions (1000t-CO ₂)
Japan	Japan	6,751	383	7,117	403	7,203	408	7,079	401	7,372	420
	U.S.A.	1,096	55	1,127	56	1,206	60	1,121	56	1,093	55
The Americas	Mexico	0	0	0	0	41	2	60	3	71	3
	Brazil	209	4	220	4	226	4	214	4	201	4
	The Americas sub-total	1,304	59	1,347	60	1,474	67	1,395	63	1,364	62
Europe	U.K.	582	26	601	26	613	27	661	29	650	28
	Germany	37	2	36	2	36	2	36	2	33	2
	Poland	1,282	99	1,296	100	1,253	96	1,329	102	1,405	108
	Europe sub-total	1,901	126	1,933	128	1,903	125	2,026	133	2,088	138
Asia	Indonesia	846	64	922	70	956	72	966	73	977	74
	Thailand	328	18	339	19	363	20	371	20	378	21
	Malaysia	446	31	455	31	467	32	478	33	447	30
	China	1,604	112	2,045	142	2,230	155	2,363	165	2,542	177
	Korea	323	17	392	21	417	22	442	23	488	26
	India	110	9	125	10	147	12	187	15	211	17
	Asia sub-total	3,658	250	4,278	292	4,580	313	4,808	329	5,042	345
NSK Group total		13,613	817	14,676	883	15,160	912	15,307	925	15,867	964

*1 Including CO₂ emitted from production sites by combusting fuel and CO₂ emitted from power plants regarded as generated by the user of electricity (sum of scope 1 and scope 2).

*2 Adding the actual values of all in-scope production sites by country.

*3 Figures in previous years have been revised retrospectively due to a change in the standard for calculation.

● Total Waste, Landfill Disposal Volume and Recycling Rate (by Region and Country,* Production Sites)

Region	Country	FY2012			FY2013			FY2014		
		Total Waste (1000-t)	Landfill Disposal Volume (t)	Recycling Rate (%)	Total Waste (1000-t)	Landfill Disposal Volume (t)	Recycling Rate (%)	Total Waste (1000-t)	Landfill Disposal Volume (t)	Recycling Rate (%)
Japan	Japan	105.9	12	99.99	104.4	1	99.999	105.1	1	99.999
	U.S.A.	14.8	861	94.2	14.9	1,148	92.3	16.9	1,292	92.3
The Americas	Mexico	—	—	—	—	—	—	—	—	—
	Brazil	3.4	66	98.0	3.9	57	98.5	3.6	60	98.3
	The Americas sub-total	18.2	927	94.9	18.8	1,205	93.5	20.5	1,352	93.4
Europe	U.K.	5.4	1,239	71.0	5.4	1,267	72.4	6.2	1,483	72.9
	Germany	1.4	0	100.0	1.3	0	100.0	1.3	0	100.0
	Poland	18.9	342	98.1	20.4	136	99.3	19.5	77	99.6
	Europe sub-total	25.6	1,581	93.4	27.0	1,403	94.5	27.1	1,561	93.9
Asia	Indonesia	7.4	158	97.9	8.4	121	98.6	8.6	120	98.6
	Thailand	4.0	88	97.6	4.5	109	97.4	5.2	148	97.0
	Malaysia	2.5	67	97.4	2.4	54	97.7	2.4	46	98.1
	China	17.2	1,052	93.1	23.3	1,190	94.2	27.4	1,647	93.4
	Korea	2.8	17	99.3	3.6	21	99.2	3.6	23	99.2
	India	0.6	97	84.6	0.7	93	86.1	0.7	75	90.0
	Asia sub-total	34.5	1,479	95.4	42.9	1,587	95.9	48.0	2,058	95.4
NSK Group total		184.1	3,999	97.7	193.2	4,197	97.7	200.7	4,972	97.4

Region	Country	FY2015			FY2015		
		Total Waste (1000-t)	Landfill Disposal Volume (t)	Recycling Rate (%)	Total Waste (1000-t)	Landfill Disposal Volume (t)	Recycling Rate (%)
Japan	Japan	101.8	0	99.9999	105.5	0	100.0
	U.S.A.	17.0	778	95.4	17.0	888	94.8
The Americas	Mexico	0.5	132	62.3	0.6	12	100.0
	Brazil	3.1	55	98.2	3.5	42	94.8
	The Americas sub-total	20.6	888	95.6	21.0	943	94.0
Europe	U.K.	7.0	1,412	77.3	6.9	1,464	98.8
	Germany	1.3	0	100.0	0.9	0	95.4
	Poland	20.5	75	99.6	24.5	130	75.9
	Europe sub-total	28.7	1,486	94.6	32.3	1,593	100.0
Asia	Indonesia	8.3	30	99.6	9.5	29	99.5
	Thailand	5.2	118	97.6	4.9	29	94.8
	Malaysia	1.9	41	97.9	2.1	20	99.7
	China	28.9	1,083	95.6	31.8	1,000	99.4
	Korea	3.6	23	99.3	3.9	28	99.1
	India	0.8	65	92.3	1.1	22	96.3
	Asia sub-total	48.7	1,361	96.9	53.4	1,128	99.2
NSK Group total		199.9	3,735	98.0	212.2	3,664	98.0

* Adding the actual values of all in-scope production sites by country.

● Water Withdrawal and Wastewater Amounts (by Region and Country,* Production Sites)

Region	Country	FY2012		FY2013		FY2014		FY2015		FY2016	
		Water Withdrawal (1000-m ³)	Wastewater (1000-m ³)	Water Withdrawal (1000-m ³)	Wastewater (1000-m ³)	Water Withdrawal (1000-m ³)	Wastewater (1000-m ³)	Water Withdrawal (1000-m ³)	Wastewater (1000-m ³)	Water Withdrawal (1000-m ³)	Wastewater (1000-m ³)
Japan	Japan	2,571.7	1,439.8	2,475.9	1,458.6	2,369.9	1,417.1	2,195.0	1,191.6	2,388.5	1,202.2
The Americas	U.S.A.	104.4	71.4	111.9	90.6	105.8	79.9	98.3	51.9	99.0	56.1
	Mexico	0.0	0.0	0.0	0.0	10.7	10.7	12.9	12.9	16.6	0.0
	Brazil	30.5	13.2	33.8	14.0	33.5	13.0	30.9	14.4	36.8	13.1
	The Americas sub-total	134.9	84.6	145.7	104.6	150.0	103.6	142.2	79.2	152.5	69.2
Europe	U.K.	71.9	71.9	60.8	60.8	73.6	73.6	76.1	64.2	75.7	64.4
	Germany	2.1	2.1	3.6	3.6	2.9	2.9	4.2	3.3	3.8	3.1
	Poland	238.9	124.4	242.9	126.0	227.8	122.0	247.5	135.2	267.5	146.6
	Europe sub-total	312.8	198.4	307.3	190.4	304.4	198.6	327.8	202.7	347.0	214.1
Asia	Indonesia	210.6	188.8	235.0	210.7	241.5	214.6	270.0	243.3	279.9	256.3
	Thailand	122.1	97.7	99.4	79.5	109.1	87.3	146.1	101.8	154.7	106.8
	Malaysia	105.8	105.8	72.0	72.0	46.4	46.4	125.0	69.8	120.2	9.4
	China	816.7	601.5	1,028.2	738.0	1,156.8	865.0	1,009.9	801.1	1,091.9	848.7
	Korea	44.3	33.2	55.4	22.7	56.6	23.3	60.0	41.7	72.1	50.2
	India	31.1	8.4	57.5	27.9	61.3	5.5	36.7	8.1	36.1	7.0
	Asia sub-total	1,330.6	1,035.5	1,547.4	1,150.8	1,671.7	1,242.1	1,647.7	1,265.8	1,754.8	1,278.4
NSK Group total		4,350.0	2,758.3	4,476.3	2,904.3	4,496.0	2,961.4	4,312.7	2,739.3	4,642.8	2,763.9

* Adding the actual values of all in-scope production sites by country.

Employee Data

● Related Employee Data*¹

		FY2012	FY2013	FY2014	FY2015	FY2016** ²
Average years of employment		18	18	18	19	15
Average age		41	41	41	42	41
Percentage of female employees	In Japan	6.5%	6.6%	6.9%	7.0%	10.7%** ⁴
	Global** ³ (reference)	—	—	—	17.3%	17.6%
Number of employees who took childcare leave	Male	11	6	13	25	34
	Female	25	17	17	26	41

*1 NSK and main group companies in Japan.

*2 Subsidiaries absorbed in 2016 are included in the scope.

*3 Calculation of the global percentage of female employees began in fiscal 2015.

*4 9.4% in NSK (non-consolidated) (Number of female employees: 715, Total number of employees: 7,585)

● Number of New Graduates Hired*

	April in FY2013	April in FY2014	April in FY2015	April in FY2016	April in FY2017
Male	96	65	66	68	100
Female	9	6	8	11	18

* Corporate staff employees at NSK (non-consolidated)

Greenhouse Gas Emissions Verification Report



No.1811002939

Greenhouse Gas Emissions Verification Report

To: NSK Ltd.

1. Objective and Scope

Japan Quality Assurance Organization (hereafter JQA) was engaged by NSK Ltd. (hereafter "NSK") to provide an independent verification on "FY2016* NSK Group GHG emission calculation report" (hereafter "the Report"). The content of our verification was to express our conclusion, based on our verification procedures, on whether the statement of information regarding the FY2016 GHG emissions in the Report was correctly measured and calculated, in accordance with the "NSK Group GHG emission calculation standard (Ver.02-01, as of May 31, 2017)" (hereafter the Rule). The purpose of the verification is to evaluate the Report objectively and to enhance the credibility of the Report.

*The fiscal year of NSK Ltd. ended on March 31, 2017.

2. Procedures Performed

JQA conducted verification in accordance with "ISO 14064-3". The scope of this verification assignment covers energy-derived CO₂ emissions from Scope 1 and 2. The verification was conducted to a limited level of assurance and quantitative materiality was set at 5 percent of the total emissions in the Report. The organizational boundaries of this verification cover all NSK Group sites in Japan and overseas, including production sites, technology centers and non-production sites of NSK Ltd., NSK equity affiliates* and NSK brand producing companies.

* NSK equity affiliates which 50 percent or more of the voting stock is owned by NSK.

Our verification procedures included:

- Visiting NSK Head offices to perform validation to check the Rule prior to the Site Visit.
- Visiting five domestic sites: NSK Head offices, NSK Ltd. Fukushima Plant, NSK Ltd. Mid-Japan Automotive Department, Shinwa Seiko Co., Ltd. Shin-Asahi Plant, Inoue Jikuuke Kogyo. Co., Ltd. Tondabayashi Plant, selected by the Company.
- On-site assessment to check the report boundaries, GHG sources, Monitoring points, Monitoring and Calculation system and its controls.
- Vouching: Cross-checking the GHG emissions data against evidence for all sampling site.

3. Conclusion

Based on the procedures described above, nothing has come to attention that caused us to believe that the statement of the information regarding NSK's FY2016 GHG emissions in the Report is not materially correct, or has not been prepared in accordance with the Rule.

4. Consideration

NSK was responsible for preparing the Report, and JQA's responsibility was to conduct verification of Greenhouse gas in the Report only. There is no conflict of interest between NSK and JQA.

Tadayuki Yano, Board Director
For and on behalf of Japan Quality Assurance Organization
1-25, Kandasudacho, Chiyoda-ku, Tokyo, Japan
June 28, 2017

Independent Assurance Statement



Independent Assurance Statement

September 6, 2017

Mr. Toshihiro Uchiyama
President & CEO
NSK Ltd.

1. Purpose

We, Sustainability Accounting Co., Ltd., have been engaged by NSK Ltd. ("the Company") to provide limited assurance on the Company's Global Lost-Worktime Injury Rate, Global Water Consumption, Total Waste (Japan), and VOC Emissions (Japan) which were 0.68, 4,716 thousand m³, 106 thousand tons, and 85.8 tons, respectively for FY 2016 ("the performance data"). The purpose of this process is to express our conclusion on whether the performance data were calculated in accordance with the Company's standards. The Company's management is responsible for calculating the performance data. Our responsibility is to independently carry out a limited assurance engagement and to express our assurance conclusion.

2. Procedures Performed

Our assurance engagement has been planned and performed in accordance with International Standard on Assurance Engagement 3000 (ISAE3000).

The key procedures we carried out included:

- Interviewing the Company's responsible personnel to understand the Company's standards
- Reviewing the Company's standards
- Performing cross-checks on a sample basis and performing a recalculation to determine whether the performance data were calculated in accordance with the Company's standards.

3. Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the performance data have not been calculated, in all material respects, in accordance with the Company's standards.

We have no conflict of interest relationships with the Company.

A handwritten signature in black ink, appearing to read "Takashi Fukushima", is written over a thin horizontal line.

Takashi Fukushima
Representative Director
Sustainability Accounting Co., Ltd.

Third-Party Comments



As in fiscal 2016, NSK again this year asked Professor Yoshinao Kozuma of Sophia University's Faculty of Economics to provide third-party comments on this report.

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).

Diversity Promotion Roadmap

NSK, which marked its 100th anniversary in November 2016, has established a long-term vision which it calls NSK Vision 2026. In this vision it presents the ideal state that the Company hopes to achieve in 10 years using the symbolic phrase: "Setting the Future in Motion." In a business environment that is changing markedly accompanying the shift to a sustainable society, a long-term vision serves as a basic information source that conveys the course a company aims to take to achieve corporate growth and provides a timeline that is essential for evaluating the company's adaptation to a sustainable society. In the case of the NSK Group, this kind of long-term vision exists for its CSR management, as well. The Group has established a long-term roadmap (with a target year of 2026) for "diversity and inclusion," which it has raised as an issue in the "S" category of its important ESG issues—and this is a long-term vision for building organizations that embrace diversity. I give very high marks to NSK for developing a diversity promotion organization, including its reorganization and reinforcement of the Diversity Development Team into the Diversity Development Office in 2016.

Supply Chain Management

This year's CSR Report shows considerable effort to improve the disclosure of information on supply chain management, which I pointed out as a challenge last year. The transparency of information on the state of CSR management in the supply chain has indeed increased markedly. In particular, we can see from the newly disclosed information on CSR assessment of suppliers that NSK not only monitors the status of suppliers' activities but also evaluates the assessment results and feeds those evaluation results back to suppliers. This is an important clue for assessing the level of initiatives in supply chain management. I look forward to further progress in strengthening initiatives at the level of secondary suppliers and beyond, which I had also raised as a challenge.

Ensuring Reliability of Disclosed Information

Guarantees from an independent expert are a very effective means of ensuring the reliability of disclosed information. The NSK Group has disclosed a Verification Report for its greenhouse gas emissions since fiscal 2014 and an Assurance Statement for its global lost-worktime injury rate since fiscal 2015. In fiscal 2016, the Group expanded the scope of such guarantees to include global water use and, for group companies in Japan, total waste and VOC emissions. Proactively pursuing such guarantee engagements evidences a strong self-awareness befitting a global company.

Future Challenges

Future challenges still remain to be addressed in CSR management targets and performance management. In terms of information disclosure, while it has become easier to see the working progress of the PDCA cycle by contrasting targets and performance, conducting self-evaluations, and setting targets for the next fiscal year, there are a number of issues to consider when it comes to specific initiatives. For instance, I hope to see stronger initiatives in the future to improve performance against the target of "zero instances in which emissions standards are exceeded," which has tended to go unachieved over time, and against environmental targets for sites outside Japan, which are less likely to be achieved than at sites in Japan.

Response to Prof. Kozuma's Comments

Yukio Ikemura Senior Vice President and CSR Division HQ-Head

Thank you very much for your valuable opinions.

I would like to express my sincere thanks for your commendation of points such as strengthening of our diversity promotion organization, enhancing information on supply chain management, and ensuring the reliability of information disclosure.

In preparing this year's CSR Report, we kept in mind your advice from last year to enhance the disclosure of information on supply chain management and tried to make improvements by increasing the disclosure of information such as the status of our initiatives in CSR procurement and the results of calculations of CO₂ emissions associated with the procurement of parts and raw materials. Going forward, we will strive to strengthen our initiatives to improve CSR management targets and performance management, as you pointed out as a challenge this time.





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