



ENVIRONMENTAL  
REPORT

2019

# Top Message

In recent years, social issues related to the environment, such as climate change due to the impact of global warming, resource depletion due to population growth and marine pollution due to plastics have become increasingly serious. As a movement of the international community toward the environment, it is necessary to tackle these issues on a global scale.

In response to this situation, the United Nations General Assembly issued the "Sustainable Development Goals (SDGs)" in 2015, which agreed on 17 goals and 169 targets that should be addressed for a sustainable world, including environmental conservation, such as "Taking urgent action to combat climate change and its impacts" and "Ensuring sustainable consumption and production patterns" and called for active involvement of companies as well as the national government.

In our medium-term plan, we clearly set out the relationship between "Efforts to address E (Environment), S (Safety), and G (Governance)" and the SDGs. We will continue to contribute to the development of society through our business activities in response to increasingly complex and serious social issues.

In December of the same year, the "Paris Agreement" was adopted at the International Conference "COP21" of the United Nations Framework Convention on Climate Change (UNFCCC), and the movement toward decarbonization is accelerating in Japan and overseas. Companies are required to understand the risks and opportunities posed by climate change to their businesses, set long-term reduction targets, and work to reduce greenhouse gas emissions throughout the supply chain. It is also expected that local communities, companies, and the whole world will work together to resolve important environmental issues

Under these circumstances, companies are playing an increasingly important role in solving environmental problems, and it is essential to respond to the various requirements and needs of society.

Nakanishi Inc. (hereinafter referred to "NSK") recognizes that addressing global environmental issues such as climate change is one of the most important management issues. We will use our accumulated know-how and advanced technological capabilities to show solutions to environmental problems. We will build a foundation for achieving the SDGs by steadily advancing activities such as strengthening legal compliance, reducing the environmental impact of manufacturing, promoting environmental education and communication, and conserving biodiversity.

Recognizing that preservation of the global environment is one of the most important issues for all humankind, we will contribute to the reduction of greenhouse gases in society as a whole by working to reduce greenhouse gases in manufacturing and providing high-performance products and services that are energy-efficient and lead to reductions in emissions during use.

We will also work to reduce greenhouse gas emissions, recycle resources, and manage chemical substances throughout the product life cycle to reduce the overall environmental impact.

As a company that contributes to the global environment, we have set the goal of "coexistence between people and the earth," and we intend to combine the technological and creative capabilities we have cultivated over the years to achieve both the resolution of social issues and business growth, thereby contributing to the creation of a brighter future. We appreciate your continued support.

NSK will provide the best value to stakeholders by passing on environmental activities to the next generation and committing continuous improvements to develop our business.

Nakanishi Inc.  
President and Group CEO  
Eiichi Nakanishi



## Contribution to the Sustainable Development Goals (SDGs)

The 2030 Agenda for Sustainable Development, adopted at the United Nations Headquarters in New York, sets 17 Sustainable Development Goals (SDGs) and 169 targets for sustainable development, including poverty, hunger, energy, and climate change, as important guidelines for the international community to realize sustainable development by 2030, and calls for active involvement not only by the national government but also by companies.

In our medium-term plan, we clearly indicate the relationship between "Efforts to address E (Environment), S (Safety), and G (Governance)" and the SDGs.

In this context, we can contribute to the goals of environmental activities such as "Goal 7: Affordable and Clean Energy", "Goal 9: Industry, Innovation, and Infrastructure", "Goal 12: Responsible Consumption and Production", "Goal 15: Life on Land", and "Goal 17: Partnerships". To achieve these goals, we will work to reduce the environmental impact of our manufacturing processes,

strengthen communication with neighboring communities of our factories and relevant stakeholders, and commercialize high-performance products. We believe that ultimately, we can build a foundation that will support the realization of the SDGs, such as "Goal 3: Good Health and Well-Being", "Goal 8: Decent Work and Economic Growth", and "Goal 13: Climate Action".

In addition to steadily complying with environmental laws and regulations, we are continuing our efforts to reduce energy consumption, resource consumption, and chemical substances. We are also promoting activities to achieve "Goal 13: Climate Action" and "Goal 15: Life on Land" through the introduction of recyclable packaging materials and greenery within the company. We will continue to encourage our employees to understand the necessity and importance of engaging in environmental activities through "Goal 4: Quality Education" and promote efforts to achieve the SDGs by utilizing environmental management.

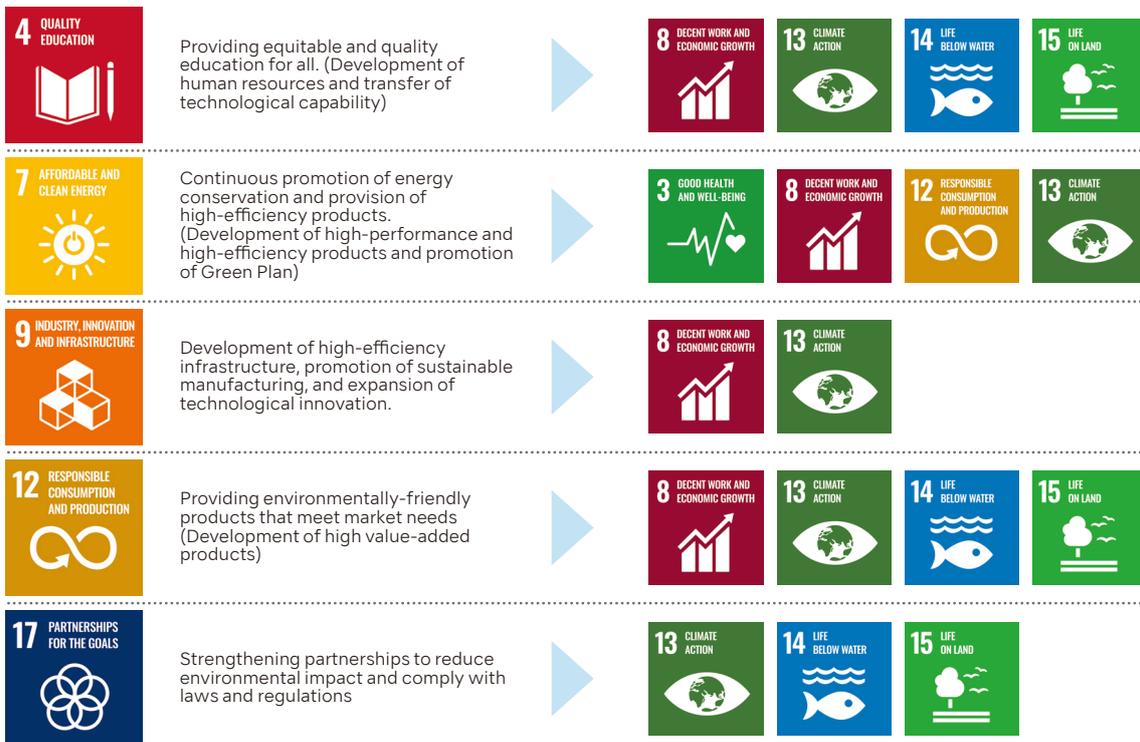
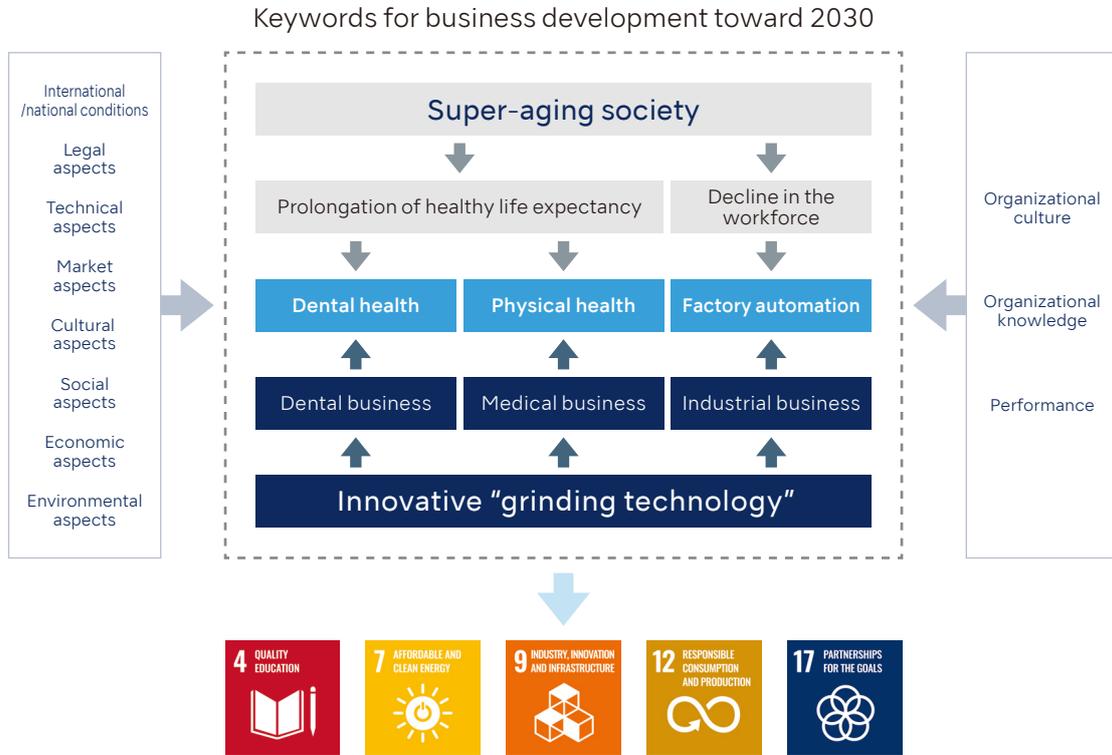
## SUSTAINABLE DEVELOPMENT GOALS



# Contribution to the Sustainable Development Goals (SDGs)

## ■ Contribution to the SDGs through business activities

We will clarify the relationship between our business and the SDGs, identify the five goals that we can contribute to through our business, and promote our efforts.



We are committed to realizing a sustainable society through our business activities.

## Environmental Management Promotion

### ■ Environmental Management System

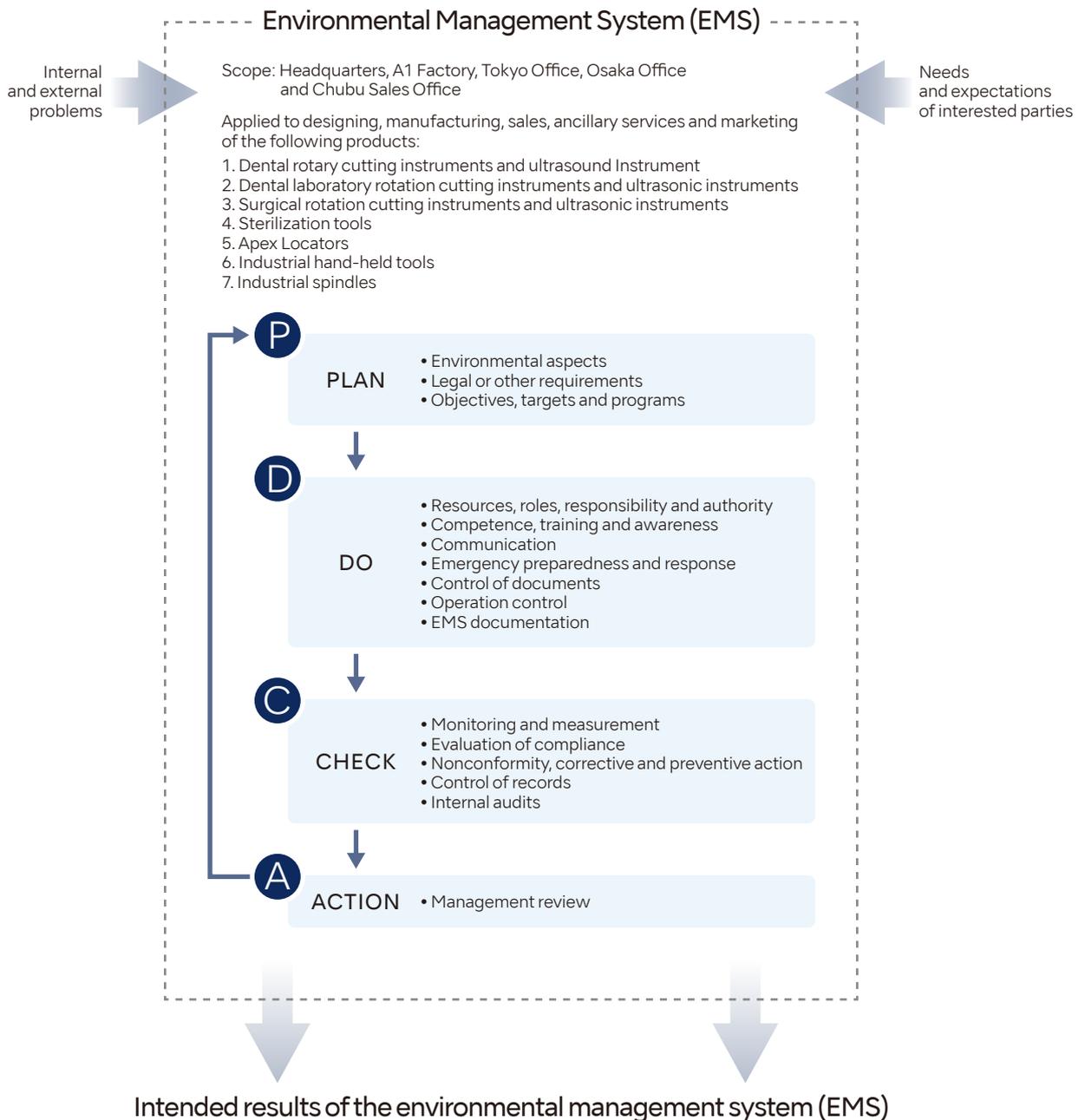
Environmental issues are common to people all of the world, and it has become an age that companies' effort to reduce their environmental burden affects the evaluation of the management quality and, in turn, the evaluation of its products. In January 1999, NSK acquired ISO14001 certification, the global standard environmental management system, and have been engaged in environment-friendly business operations from an early stage.

We are implementing environmental activities based on our management policy of reducing the environmental impact for the future global environment and realizing a healthy and prosperous society in harmony with nature through all our business activities including research

and development, manufacturing, sales, and service of dental medical equipment and other ultra-high speed rotary equipment.

We are working on a variety of environmental issues at all stages of the product life cycle.

We operate the system under all organizational activities, including development, manufacturing, sales, and management department, and we have acquired ISO14001 certification through efficient cooperation with each department. In FY2017, we have completed the transition to ISO14001:2015. We will continuously work proactively to reduce the environmental impact with our all employees, aiming at both environmental conservation and economic development.



### ■ NSK Environmental Vision (Environmental Policy)

NSK defines its mission as "To create brilliant progress via innovative technology".

The "grinding technology" is at the core of all the products and services that we provide.

In other words, we are developing the "grinding technology" by making full use of technologies that do not exist in the world.

In addition, by incorporating the needs and expectations of customers who have been using our products for a long time, we will be able to create "brilliant" value.

In order to realize our vision, it is essential that we share our values with our many stakeholders and cooperate with them.

By sharing a vision with all employees, we can maximize our collective strengths and efficiently promote initiatives aimed

at a sustainable, safe and secure society, such as the prevention of global warming and resource recycling, through our business activities.

Our environmental policy calls for environmental protection, continuous improvement of energy and resource conservation, and compliance with environmental laws and regulations. We are making every effort to ensure that all our employees are fully aware of this policy, and that we are promoting an environmental management system in all of our activities.

This environmental policy is available to all interested parties on our website.

## Environmental Policy

NSK shall implement in all its corporate activities, such as research and development, manufacturing, sales and services of ultra-high-speed rotary equipment, including dental instruments, considering the organization state that can affect business activities, the following environmental activities based on the goals of reduction of environmental impact for the global environment of the future, harmony with nature, and the establishment of a healthy and prosperous society:

**1. Promotion of environmental protection, including prevention of contamination**

NSK reduces environmentally hazardous substances in all of its activities to prevent contamination and protects the natural environment from harm and degradation arising from organizational activities, products and services.

**2. Continuous improvement of the environmental performance of energy and resource conservation**

NSK continuously improves its environmental performance in all fields of its activities including manufacturing products, focusing on energy conservation for global warming prevention and recycling for resource conservation.

**3. Compliance with environmental laws, regulations and other voluntary standards**

NSK ensures compliance with environmental laws and regulations related to all of its corporate activities, products and services and standards judged to affect the needs and expectations of interested parties.

**4. Reduction of environmental loads in all processes of business considering the life cycle**

NSK strives to continuously improve the activities to reduce environmental impact of all production processes from product planning and development to manufacturing, sales, use and disposal, with all of its employees, by accurately assessing the impact of its corporate activities on the environment and setting environmental targets within the range of technological and economical abilities.

**5. Promotion of communication with stakeholders**

NSK communicates with stakeholders, including those in the surrounding areas, to maintain the environment.

**6. Dissemination of environmental policy**

NSK communicates environmental policies and the importance of global conservation to all related stakeholders.

## Environmental Management Promotion

### ■ Environmental Management Promotion Structure

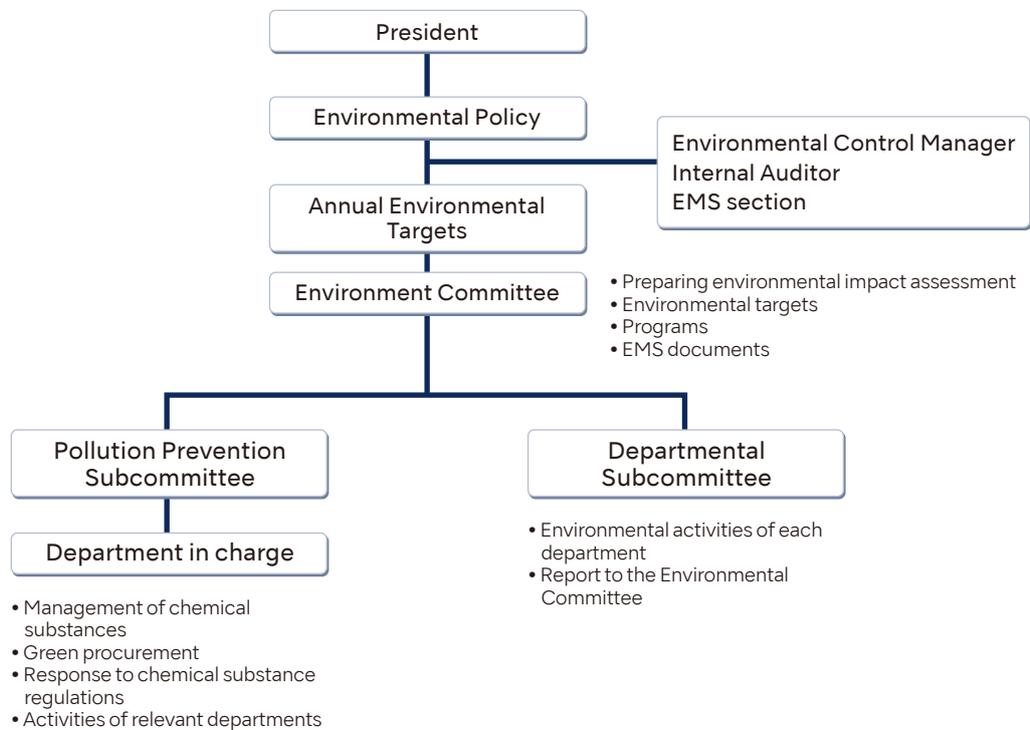
NSK's environmental activities focus on ① strengthening the operation of the environmental management system, ② providing environmentally-friendly products, ③ building environmentally-friendly manufacturing, and ④ promoting environmental communication.

The Environmental Management System (EMS) section has been established as the responsible department to promote these environmental activities.

The EMS section supervises company-wide environmental activities and deliberates and makes decisions on important matters, such as determining environmental policies, setting environmental targets, complying with environmental laws

and regulations, and making proposals to management.

We also have established the Environmental Committee which is responsible for the operation of the environmental management system, document review, and promotion of energy conservation and 3Rs (reuse, reduce, recycle), as well as the Pollution Prevention Subcommittee, which monitors the requirements for chemical substances in each country, such as the RoHS Directive and REACH Regulations, and verifies their impact on us. Through these committees, we examine and deliberate on all issues and implement company-wide activities.



### ■ Environmental Audit

NSK conducts an internal environmental audit of all departments once a year.

The internal environmental audit verifies the conformity, legal compliance, and effectiveness of the management system and ensures that the management system is functioning effectively.

The results of these internal environmental audits are reported to management as input information for

management review.

In addition, the Procurement Department and Production Management Department lead environmental audits of business partners.

We recognize the environmental audits of business partners as opportunities to share the current issues, and cooperate with each other to solve them.

## Environmental Management Promotion

### ■ Compliance with environmental laws and regulations

As global warming, resource energy, and other global environmental issues are becoming more widespread and globalized, policies and regulations are being reviewed and strengthened at the regional and national levels with the aim of achieving sustainable growth.

NSK has strengthened its compliance management in accordance with environmental laws and regulations in order to ensure compliance with environmental laws and regulations in its production and sales organizations.

In FY2019, power consumption at the Headquarters was significantly reduced due to the relocation of the metalworking process to the nearby industrial park (A1 Factory) in the previous fiscal year, and the designated energy management factory was withdrawn.

In addition, the manufacturing process for medical bur was relocated to a separate building, which resulted in the change of specified facilities.

With regard to chemical substances, we introduced chemical substance management using the chemSHERPA tool in response to the urgent need to comply with the EU RoHS Directive.

We believe that it will enable the unified management of chemical substances used in our products, for which stricter regulations are being enforced in each country, and will facilitate decisions on compliance, such as the RoHS Directive, REACH Regulation and Proposition 65.

We constantly monitor information on revisions of domestic and overseas environmental laws and regulations in order to ensure compliance with them.

As a result, there were no breach of environmental laws and regulations and other requirements in FY2019.

We remain committed to monitoring environmental laws and regulations and other requirements to ensure compliance.

### Major relevant environmental laws and regulations

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#### Water quality

- Water Pollution Control Law
- Septic Tank Law

#### Global Environment

- Energy Conservation Law
- Act on Rational Use and Proper Management of Fluorocarbons

#### Noise and vibration

- Noise Regulation Law
- Vibration Regulation Law

#### Waste & Recycling

- Waste Management Law

#### Safety & Facilities

- Industrial Safety and Health Law
- High Pressure Gas Safety Law
- Fire Service Law

#### Chemical substances

- Chemical Substances Control Law
- Poisonous and Deleterious Substances Control Law
- PRTR Law
- RoHS Directive
- REACH Regulation

NOTE) These are part of the environmental laws and regulations surrounding NSK.

NOTE) NSK also complies with laws and regulations in various countries and regions related to its business.

## Environmental Management Promotion

### ■ Environmental Activity Assessment for FY2019

Purpose	Objective	Achievement	Assessment	Status
Energy conservation	Reduction of energy consumption (4% reduction compared to 2015)	100.0%	○	Increase due to relocation of the medical bur manufacturing process
	Reduction of compressor power consumption	100.0%	○	Reduction of the number of compressors in operation at all times from 6 to 4 (2 stopped) • Repair of air leaks and installation of speed control • Switching to energy-saving air gun nozzles
	Optimization of oil mist collector	100.0%	○	Setting change of dust collection capacity from 50 Hz to 48 Hz
	Partition of the parts storage area	100.0%	○	Stoppage of air conditioners in operation at all times Number of air conditioners in operation from 30 to 4
Resource saving	Reduction of waste emissions (1% reduction from the previous year)	80.0%	×	Production unit consumption: 26% increase over the previous year *Increase due to the expansion of production plant
	Examination of proper inventory	100.0%	○	Standardization of proper inventory based on past repair history
	Reduction of carbon cleaning liquid purchased (5% reduction from the previous year)	100.0%	○	Use of in-house distillers and standardization of distillation methods
	Reduction of Absol purchased (5% reduction from previous year)	100.0%	○	Enhanced shielding of the opening and closing parts of the container to reduce volatility
	Use of rental waste	100.0%	○	Abolishment of disposable waste Annual consumption: 124,000 sheets/year
	Integration and compactness of instruction manuals	100.0%	○	Integration of instruction manuals for three models Annual benefits: ¥510,000
Pollution prevention	Environmental audits of business partners 10 suppliers, 5 contractors for processing	100.0%	○	Promotion of environmental activities and confirmation of legal compliance status
	Substitution of lead and phthalates according to the EU RoHS Directive	100.0%	○	Completion of identification of parts containing restricted substances

Assessment Criteria:

○ = Achievement rate of 100%   △ = Achievement rate of 90% or more and less than 100%   × = Achievement rate of less than 90%

### ■ Efforts to manage chemical substances

In recent years, regulations on chemical substances contained in products have become increasingly strict, including the implementation of the RoHS Directive in each country and the revision of REACH regulations, and it is necessary to establish and operate a thorough management system.

We use a variety of chemical substances in our products, including the manufacturing process.

In order to appropriately manage these chemical substances, we have established the "NSK Green Procurement Guidelines" based on the basic concept of "not to enter," "not to use," and "not to emit" regulated chemical substances. We regard "minimizing the risks posed by chemical substances" as an important issue and are promoting initiatives to identify chemical substances to be managed, replace specified chemical substances, and reduce their content.

By communicating and sharing information on specified substances throughout the production process from product design to shipping inspection, we aim to prevent the risk that these substances will be included in products and shipped, and to give consideration to human health and the global environment.

In addition, along with the globalization of business, we are also expanding our management of chemical substances in products on a global scale. We collect and evaluate the latest trends in chemical substance management policies and regulations in countries around the world and reflect them in our management of chemical substances.

In addition, we have designated two substances as "substances prohibited to be included in procured items such as product parts and materials (prohibited substances)" and "substances that need to be reduced or replaced by understanding their content in procured items in order to reduce environmental impact (controlled substances)". We

promote "green procurement" in cooperation with our business partners and suppliers to procure products, parts, and materials with low environmental impact.

We have introduced the ChemSHERPA Tool as a means of investigating "green procurement" and are working to strengthen the management of chemical substance regulations.

This is one of the efforts we aim for "not to enter," "not to use," and "not to emit".

This effort is intended to improve the management of upstream suppliers, and to build trust with midstream and downstream companies.

We will continue to strengthen our "green procurement" system by conducting regular and continuous audits and guidance for upstream suppliers.

In addition, each internal organization prohibits the use of hazardous chemical substances regulated in each country in accordance with environmental laws and regulations and internal regulations.

As a member of the NSK Brand, we always believe that the mission of manufacturing is to improve customer satisfaction. We are committed "not to use" hazardous chemical substances and promote the development of high-value-added products and highly efficient manufacturing on a daily basis.

By thoroughly strengthening our efforts of "not to enter" and "not to use," we believe that the objective of "not to emit" hazardous chemical substances from our company can be achieved.

We constantly monitor changes in environmental laws and regulations in each country, and we strive to ensure that cooperating companies understand the objectives of "not to enter" "not to use" and "not to emit" and that our customers can use our products without any concern.

## Environmental Management Promotion

### ■ Compliance with the EU RoHS Directive

NSK is promoting the use of alternative substances in response to the additional application of four phthalates as restricted substances to the EU RoHS Directive from July 2021.

Phthalates are used as plasticizers for PVC and other plastics. They are also widely used in electrical and electronic equipment as plastics for parts where flexibility is required, such as cords and cable coverings for internal wiring, and as plasticizers for various types of packing.

However, there are concerns about the reproductive toxicity of phthalates in the process of hazard assessment, and their use in toys and in parts in prolonged contact with the skin has been restricted in the United States and Europe.

For electrical and electronic equipment, in June 2015, the EU

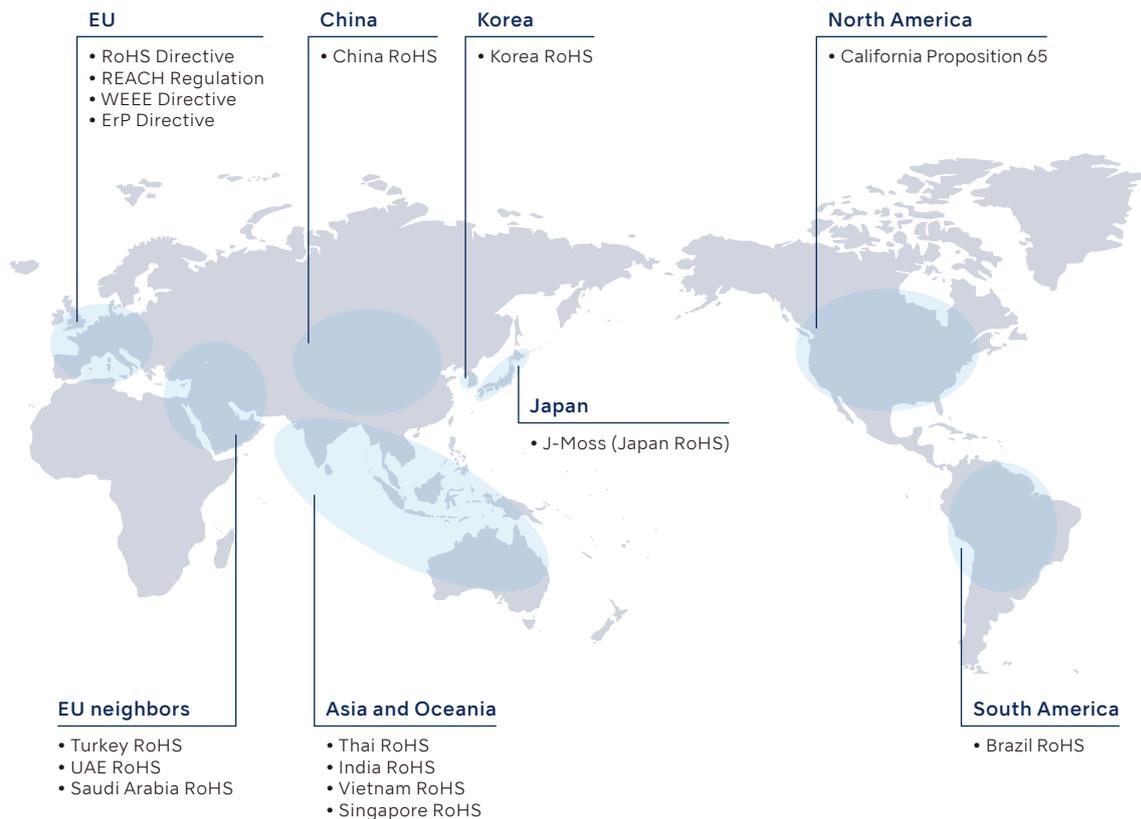
has published the "Commission Delegated Directive (EU) 2015/863" to amend Annex II to the RoHS Recast Directive, and added four new phthalates as restricted substances.

As a result, the use of four phthalates has been restricted since July 22, 2019 for electrical and electronic equipment placed on the EU market.

We are reviewing the "NSK Green Procurement Guidelines" and working on the identification and replacement of procured items containing four phthalates

When reviewing substitute materials and parts, we give due consideration to the quality of our products, conduct evaluations from the user's point of view on all aspects, including durability, safety, functionality, and operability, and promote substitution of materials and parts.

### ■ Example of regulatory trends regarding chemical substances contained in products in countries around the world



## Environmental Communication

### ■ Activities to Preserve Biodiversity

NSK divided its activities to conserve biodiversity into three fields; the raw material procurement, product manufacturing, and industrial sites.

In the procurement of raw materials, we are working in cooperation with suppliers while deepening understanding of biodiversity.

We make particular efforts to prevent the inclusion of hazardous substances based on green procurement, to stop idling during delivery, and to reuse returnable containers and cushioning materials.

Biodiversity conservation activities related to the product manufacturing refer to the impact on the ecosystem through manufacturing, such as the energy and resources used, as well as the greenhouse gases and wastewater generated as a result. We will continue to promote sustainable activities for environmental protection, such as the management of BOD,

power generation using solar panels, and the introduction of high-efficiency equipment.

Regarding industrial sites, we are engaged in social contribution activities, such as securing green spaces on our premises and beautifying the surroundings of our factories, and are giving consideration to the local environment and the ecosystem around our factories Biodiversity provides essential benefits for all humankind.

Consequently, biodiversity conservation activities are spreading as global initiatives.

Although our activities are steady and modest, we believe that they will become very meaningful if all employees continue these small activities with their ingenuity.

We will continue to develop such steady and sustainable activities.

### ■ Education and Enlightenment

Raising environmental awareness of each employee is important for promoting environment conservation activities.

Therefore, we believe that it is necessary to enhance the education system and implement continuous education.

We regularly provide general environmental education in order to improve our employees' knowledge of the environment.

New and mid-career employees are encouraged to increase their knowledge of our environmental policies, ISO 14001 requirements, and environmental laws and regulations. We

also provide education to our business partners and related departments on chemical substances related to the RoHS Directive and REACH Regulation in each country, and on the details of revisions to environmental laws and regulations.

In addition, we give lectures on recent environmental issues and our environmental activities to visitors such as factory visitors from elementary schools.

We have been recognized as a manufacturing company that gives due consideration to the environment and operates locally oriented business.

### ■ Communication with Local Communities

As a local company in Kanuma City, Tochigi Prefecture, NSK continues its manufacturing activities while placing importance on communication with local communities, including government, local residents, etc.

We are promoting the "Clean-up NSK" campaign, a local cleaning activity, mainly undertaken by Environment Committee.

We are working to clean and beautify the roads around our premises so that local residents and employees can use them safely and comfortably every day.

We have submitted the "AI-Road" (which means "Love-Road") application to Tochigi Prefecture for this cleaning activity, and we are responsible for maintaining and managing the environment around the factory.

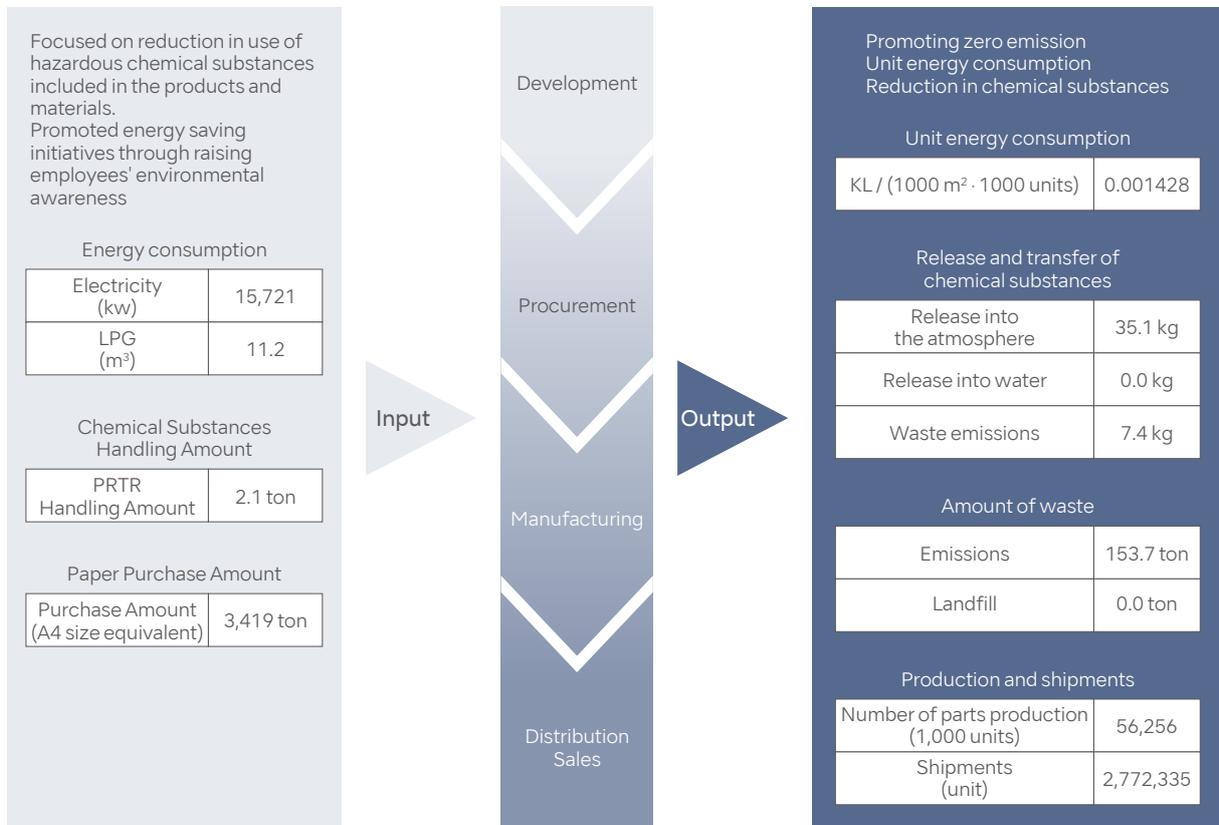
This effort has been highly appreciated by local residents and customers who have visited us.



## Green Factory Activities

### State of environmental impact of business activities

This figure shows the material balance of NSK.



### Promotion of environmental improvement activities (Achievement of environmental targets)

#### Prevention of global warming

- Reduction of energy and greenhouse gas consumption
- Introduction of high-efficiency equipment

#### Effective use of resources

- Reduction of the total amount of waste generated
- Reuse and recycling of waste

#### Management of chemical substances

- Reduction and substitution of chemical substances
- Appropriate management of substances used

## Green Factory Activities

### ■ Global Warming Prevention Activities

Climate change due to global warming has various impacts on human life and natural ecosystems.

The main cause of global warming is greenhouse gases, and we believe that reducing these greenhouse gases is a corporate social responsibility.

Most of the greenhouse gases emitted from NSK come from the use of electricity consumed in production activities and air conditioning equipment that operates to maintain the working environment.

We have increased our energy consumption in proportion to our production volume since FY2011 due to the expansion of facilities and the operation of a new production factory.

In order to reduce greenhouse gases, it is necessary to use energy efficiently and minimize waste. We believe that promoting energy reduction will lead to the prevention of global warming and the effective use of global resources.

We have been actively investing in energy conservation.

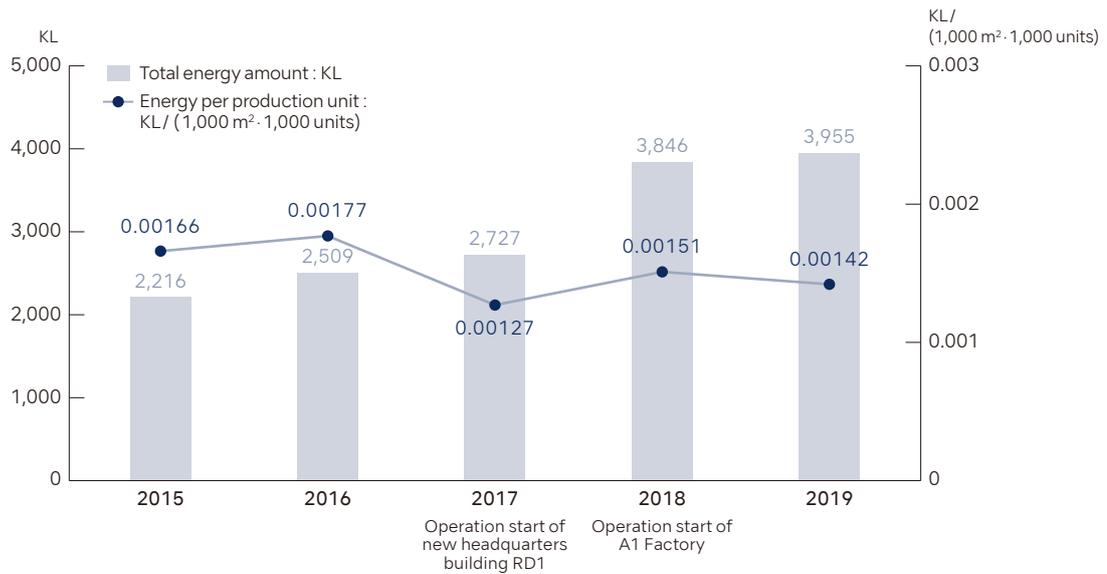
For example, we are developing energy conservation activities through the installation of solar panels, the introduction of a system to visualize electricity, and others including improvements at each workplace.

In FY2019, we worked to optimize the number of compressors in operation by repairing air leaks at production sites and switching to energy-saving air gun nozzles.

Through ISO 14001 activities, our employees have built a high level of environmental awareness and have consistently made steady progress in solving familiar problems that they can tackle.

We will continue to monitor the latest energy conservation technologies and actively promote steady improvement activities.

Electric Power Usage  
(Entire company)



## Green Factory Activities

### ■ Installation of sunlight panels

We have 256 sunlight panels on the southern sidewall of NSK Wing G.

Annual power generation is approximately 33,000 kw, equivalent to approximately 8 residential housing, and is used for lighting in Wing G.

### ■ Introduction of the automatic control system to the company's air conditioners in FY2015

We introduced the automatic control system for the air conditioners, which randomly stops operating for 3 minutes per 30 minutes. This has reduced power consumption of the air conditioner by 10%.

The temperature of the air conditioners is set to 28 °C in summer and 21 °C in winter.

### ■ Active introduction of hybrid vehicles

With a few exceptions, we have actively introduced hybrid vehicles with less environmental impact than gasoline vehicles to our headquarters plants and each offices. As a result, CO2 emissions associated with driving have decreased by 34% compared with 2.0 L gasoline vehicles.

### ■ Operation of R&D Center (environment-friendly building)

The R&D Center building, a new headquarters building that started operation in April 2017, is designed for environmental compatibility. It incorporates environment-friendly materials and structure of exterior walls and equipment such as lighting and air conditioners. We have also introduced a central monitoring system to check each management value remotely at all times.



#### Lighting

All buildings are equipped with LED lighting, partially with a human sense sensor, which prevents forgetting to turn them off for energy conservation.



#### Planting

We have planted more than 300 of 10 different trees and seeds, including cherry trees, zelcova trees and grasses, outside the building to develop rich green walkways and gardens.

We also landscaped the prefectural land in front of the main gate by planting ground-cover plants such as hedelas and other seeds. In addition, environmental beautification activities such as regularly picking up garbage on the surrounding roads are carried out.



#### Underfloor air conditioning by floor cooling/heating

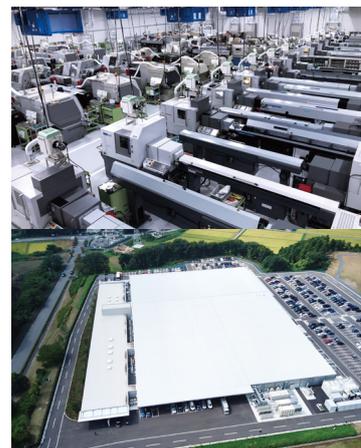
In large spaces, such as entrances, showrooms and the Center Coat with a four-story atrium, the floor cooling/heating system using abundant groundwater works with the underfloor air conditioners to make residential spaces comfortable and achieve high energy conservation.

### ■ Operation of the A1 Factory

March 2018, we began operation of the A1 Factory, we have integrated a number of processes from machining parts to finishing to build up an optimized production line with fewer wastes and losses. This increases production capacity and substantially improve product quality and production efficiency.

Energy consumption is one of the environmental impacts of the A1 Factory. As 70% of total energy is consumed in the A1 Factory, we have been promoting energy conservation initiatives, including the proper operation of compressors, reduction of air consumption, and optimization of the collection ability of dust collectors, together with the production engineering department and the parts processing department. In addition, the A1 Factory provides employee-friendly facilities by constantly collecting and processing oil mists scattered in work spaces.

As a global company, we will continue to timely provide innovative and impressive products through our manufacturing activities, while considering local environment and work environment.



## Green Factory Activities

### ■ Reduction of waste and promotion of recycling

The 3Rs (reduce, reuse, and recycle) are the most effective ways to reduce waste.

NSK is working to reduce industrial waste and promote the 3Rs with the aim of achieving resource recycling and zero emissions. In FY2019, total waste emissions were approximately 153.7 tons (33% increase over the previous year), accounting for approximately 90% of the discharged waste plastics, waste oil, and sludge.

In FY2019, the production unit increased significantly to 2.734 kg/ thousand units (26% increase over the previous year).

As a possible cause of the increase in emissions, waste liquid had previously been discharged from the company via a wastewater treatment facility. However, the manufacturing process of the medical bur was relocated to a separate building, and the waste liquid was stored in a storage tank and discharged as industrial waste.

This is a measure that takes into consideration the impact on

the local environment, since connecting pipes to the wastewater treatment facility entails the risk of leakage of waste liquid.

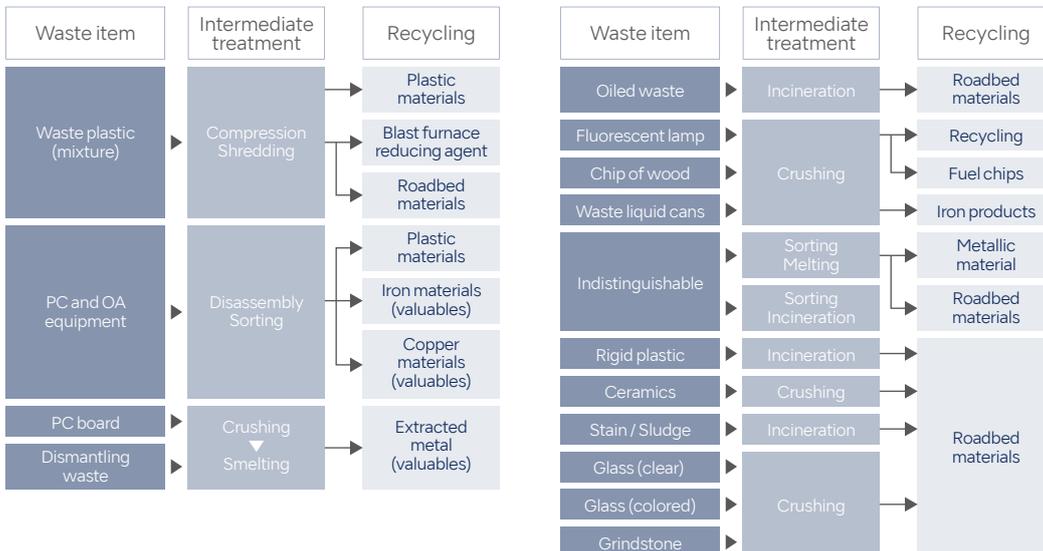
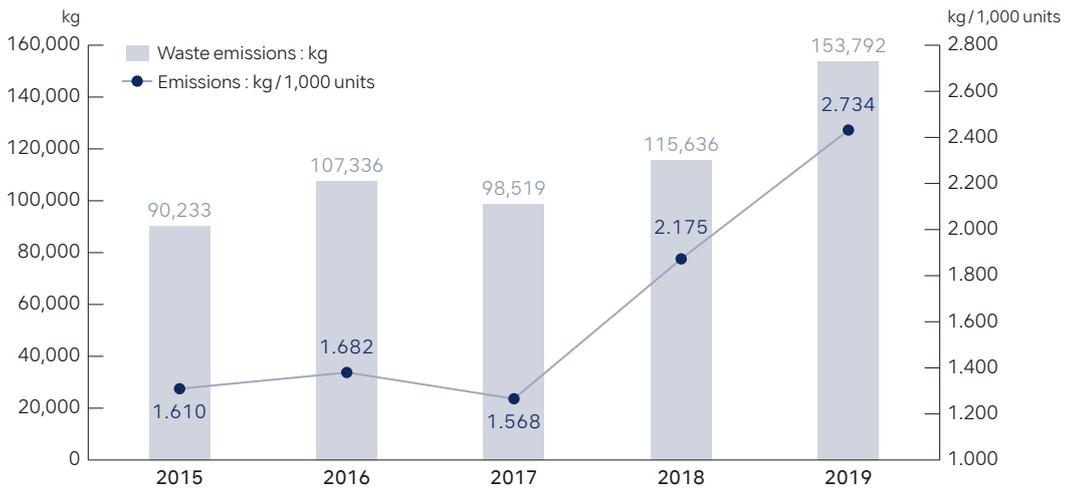
Currently, all faucets used in the manufacturing process of medical bur are equipped with adjusting valves to minimize the amount of water flowing into the storage tank.

In addition, we are continuously working on the rental of waste cloths and the recycling of cleaning liquid.

In order to promote the 5S activities of waste storage facilities and ensure thorough separation of waste within our company, we have devised easy-to-see and easy-to-understand identification methods and have been examining the ease of use of waste storage facilities while incorporating the opinions of the users.

Based on our belief that "if it is disposed, it's a waste, but if it is sorted, it is an effective resource," we will continue to promote recycling while conserving limited resources.

Changes in waste emissions and production units



## Green Factory Activities

### ■ Recycling of work clothes (uniforms and safety shoes)

In recent years, NSK has started operations at A1 factory and relocated the manufacturing process of medical bur. While the amount of industrial waste discharged has been increasing year by year, we have set an environmental goal of maintaining the recycling rate at 99% or higher.

Manufacturers of uniforms and safety shoes used by us have been certified by the Minister of the Environment under the "Cross-jurisdictional Waste Management Certification System". The "Cross-jurisdictional Waste Management Certification System" is a system in which manufacturers are working to improve the recycling rate through a series of life cycle assessments, ranging from materials to design, production, and recycling. At present, the deterioration of the environment, such as global warming and depletion of the ozone layer, has been reported as a global issue, and we have

introduced the system with the aim of reducing industrial waste as a responsibility of manufacturing company.

We utilize the "Cross-jurisdictional Waste Management Certification System" to reduce industrial waste emissions and manage the order point and the number of orders through proper inventory management of uniforms and safety shoes.

In addition, we believe that standardizing exchange conditions and the number of distributions will enable us to reduce the purchase amount and contribute to the reduction of raw materials.

We will continue to use this system to improve the recycling rate, minimize the amount of industrial waste, and contribute to environmental issues.

#### Material recycling



Uniforms → Recycled material → Forming felt

Reduction of conventional incineration has contributed to the reduction of carbon dioxide emissions and the reduction of landfill waste.

#### Chemical recycling



Safety shoes → Dissolution → Steel structures

They are recycled as a reducing agent (coke substitute) for iron oxide, and achieve zero emissions for complete dissolution treatment.

## Green Factory Activities

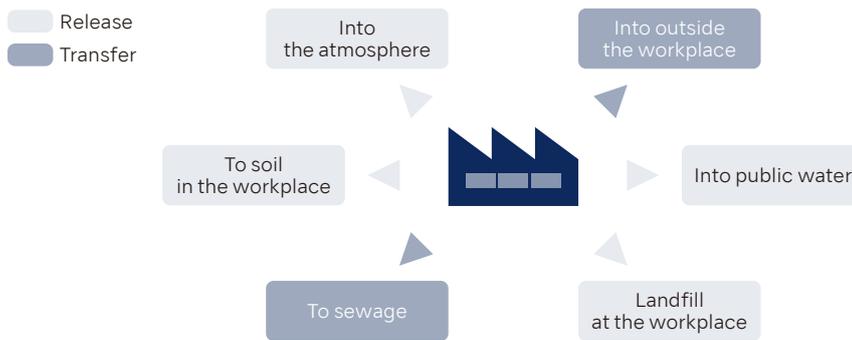
### ■ Reduction of PRTR (Pollutant Release and Transfer Register) substances

In FY2019, the handling amount of the PRTR regulated substances became 2.1 tons a year. Therefore we submitted a notification of the release amounts and transfer amounts.

In FY2019, approximately 84% of the handling amount is Abzol, which is used for cleaning parts.

Since abzol is all reprocessed after use, the transfer amount of PRTR is "zero".

We will continue to reduce release and transfer amounts by replacing substances subject to the PRTR Law and reducing the handling amount.



#### Class I Designated Chemical Substances specified by PRTR Law

	Item	FY2019
Release amount	Emissions into the atmosphere	35.1
	Release into public water	0.0
	Release to soil	0.0
	Landfill	0.0
	<b>Total Release Amount (kg)</b>	<b>35.1</b>

	Item	FY2019
Transfer amount	Transfer to sewage	0.0
	Transfer into outside the workplace	7.4
	<b>Total Transfer Amount (kg)</b>	<b>7.4</b>

Release amount : Amount of substances included in exhaust gas and wastewater from production processes, etc.

Transfer amount : Amount of substances transferred by disposing of waste outside the workplace, etc.

■ Water quality management of plant wastewater and domestic wastewater (BOD value)

Monitoring items (mg/L)			Monitoring standard	2011	2012	2013	2014	2015	2016	2017	2018	2019
Septic tank	Tertiary treatment tank	BOD	20	9.0	9.4	7.1	9.7	4.6	5.4	3.4	3.2	2.4
	30-person tank	BOD	20	7.4	7.7	6.6	10.0	11.3	10.5	12.1	4.5	4.7
Plant wastewater	Hydrogen ion concentration		5.8-8.6	7.5	7.5	7.6	7.3	7.6	7.5	7.6	7.7	7.7
	Suspended solids SS		50	3.8	4.1	1.1	7.2	8.9	16.6	11.3	4.0	4.4
	BOD		25	2.5	3.0	1.8	2.3	3.0	2.1	3.0	3.6	1.9
	n-Hexane		5	0.6	0.5	0.5	0.5	0.7	0.6	1.1	0.7	0.5

■ Energy-saving activities using the “Power Visualization System”

NSK has introduced the “Power Visualization System” in order to use limited energy resources efficiently and effectively.

The purpose of power visualization is to visualize invisible electricity, ultimately to reduce wasted electric power, and to use effective electric power efficiently. We have installed sensors that can monitor power consumption at each workplace and constantly monitor power consumption and demand in real time.

In response to the global warming problem, which will become increasingly prevalent on a global scale, we will continue to promote energy conservation by utilizing the “Power Visualization System”

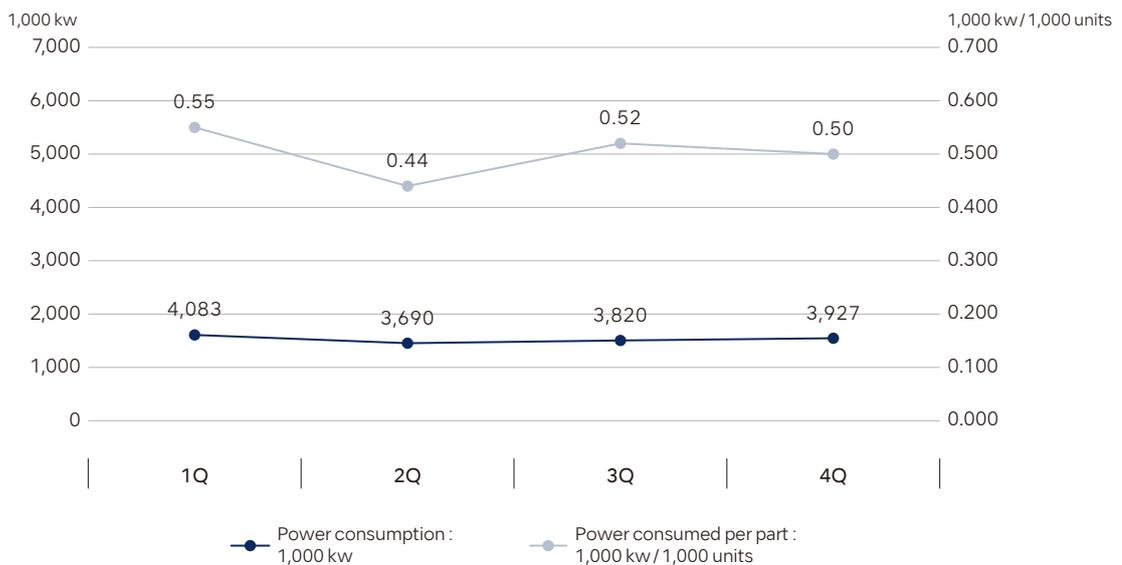
As an example of our efforts, we show the trend in power

consumption for our entire company in FY2019.

In the first quarter (1Q), the production unit was 0.55 thousand kw/ thousand units. As a result of efforts to reduce the air conditioning operation rate, optimize the number of compressors controlled by repairing air leaks and others, we were able to reduce the average production unit from the second quarter (2Q) onwards to 0.48 thousand kW/ thousand units (13% reduction).

In the future, we will continue to contribute as a global company to the prevention of global warming by utilizing the “Power Visualization System” and visualizing the effects of our efforts, thereby raising the company’s awareness of energy conservation

Company-wide electricity consumption in FY2019



## Green Products Activities

### ■ Product information

Here are some of the main products.

#### Medical/ Industrial Products

NSK develops products that have the maximum value and the minimum environmental impact.

We are striving to develop products that are lighter, more compact, and more efficient in order to realize an environmentally friendly and people-friendly society by making the most of technologies available through our corporate activities, and provide products that are friendly to the global environment.

#### Contents of Resource Reduction

##### Higher efficiency

In light of the increasing number of environmental disasters in recent years and the aging society of the future, home-visit medical care is essential.

We believe that integrating various functions into one and commercializing highly convenient, high value-added products will greatly reduce energy consumption and make effective use of limited resources.



VIVA ace



Varios Combi Pro

##### Downsizing

Making products compact leads to a reduction in packaging materials and raw materials used in products.

We also believe that it is effective for energy saving in logistics because it enables many products to be transported with low energy consumption.



S-max pico



VIVA Q



Primado2



E4000

##### Efficiency of cleaning function

Our maintenance equipment can efficiently clean multiple products at one time. We believe this reduces the energy cost of product cleaning and has a significant effect on product life. In addition, by quantitatively managing the cleaning liquid used for cleaning, it is possible to reduce the running cost of the cleaning liquid and reduce raw materials.



iCare