



***Denyo***

**Environmental  
Report**

**2018**



 ***Denyo Co.,Ltd.***

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# Editorial Statement

## Information Disclosure

Denyo Co., Ltd. will use the media shown below to disclose information to all stakeholders, including customers and shareholders about its environmental initiatives aimed at delivering a sustainable society.

【Annual Environmental Report】

<http://www.denyo.co.jp/english/>



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## Reporting Period

Fiscal 2018 (April 2017 to March 2018) and for some content, the periods before and after.

## Disclaimer

This Environmental Report may contain predictions or forecasts about the future. Actual results may vary from forecasts due to a variety of factors.

# Management

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# Management

## Message from the President

In recent years, disasters such as floods and heat waves have been increasing in Japan and around the world, and it is reported that the major cause is global warming. Based on the Paris Agreement on climate change, which came into force in 2016, countries around the world have begun to take measures against global warming.

As a company operating a global business, we, the Denyo Group, believe that we are responsible for dealing earnestly with environmental issues and positively carrying out activities and developing products that are environmentally friendly. Given this situation, we have been conducting environmental activities continuously based on the environmental management system ISO 14001, and we have been introducing energy-efficient facilities, promoting the 3Rs and greening, and making other efforts to reduce CO<sub>2</sub> emissions and waste materials in our business activities. On July 2 this year, we also celebrated the 70th anniversary of our founding. Over these 70 years, numerous environmental issues have arisen, such as noise and exhaust gas, and we have been addressing each of them. As worldwide population increases and the economies of developing countries grow, it is expected that we will see many more environmental issues in the future. We will continue to address diversified environmental issues seriously, contribute to achieving a sustainable society, and strive to celebrate our 80th, 90th and 100th anniversaries. We would greatly appreciate your continued understanding and support.



October 2018

Shoichi Shiratori,  
President  
Denyo Co., Ltd.

A handwritten signature in black ink that reads "S. Shiratori". The signature is written in a cursive, flowing style.

# Management

## Environmental Philosophy

As well as contributing to social infrastructure upgrades worldwide through our power source products, Denyo is profoundly aware of its corporate social responsibility to conserve the environment, and tirelessly promotes environmentally sound business activities.

## Environmental Policies

1. In our business activities, we strive to prevent pollution and to promote eco-friendly products while seeking ways to maintain a healthy environment by conserving materials and energy, cutting back on solid waste, and reducing odors and noise.
2. We comply with environmental regulations and other agreed requirements, and we respect related demands from society.
3. As well as building a system of management which is based on the ISO14001:2015 to engage with environmental conservation and finding ways to make continual improvements, we set environmental goals and targets, and improve environmental performance by carrying out reviews.
4. As well as documenting the environmental policies to inform employees and everyone who works on behalf of the company, including the requirements of stakeholders, we disclose the information in the public domain on our homepage.
5. We strive to achieve environmental targets by continually improving the effectiveness and efficiency of the process.



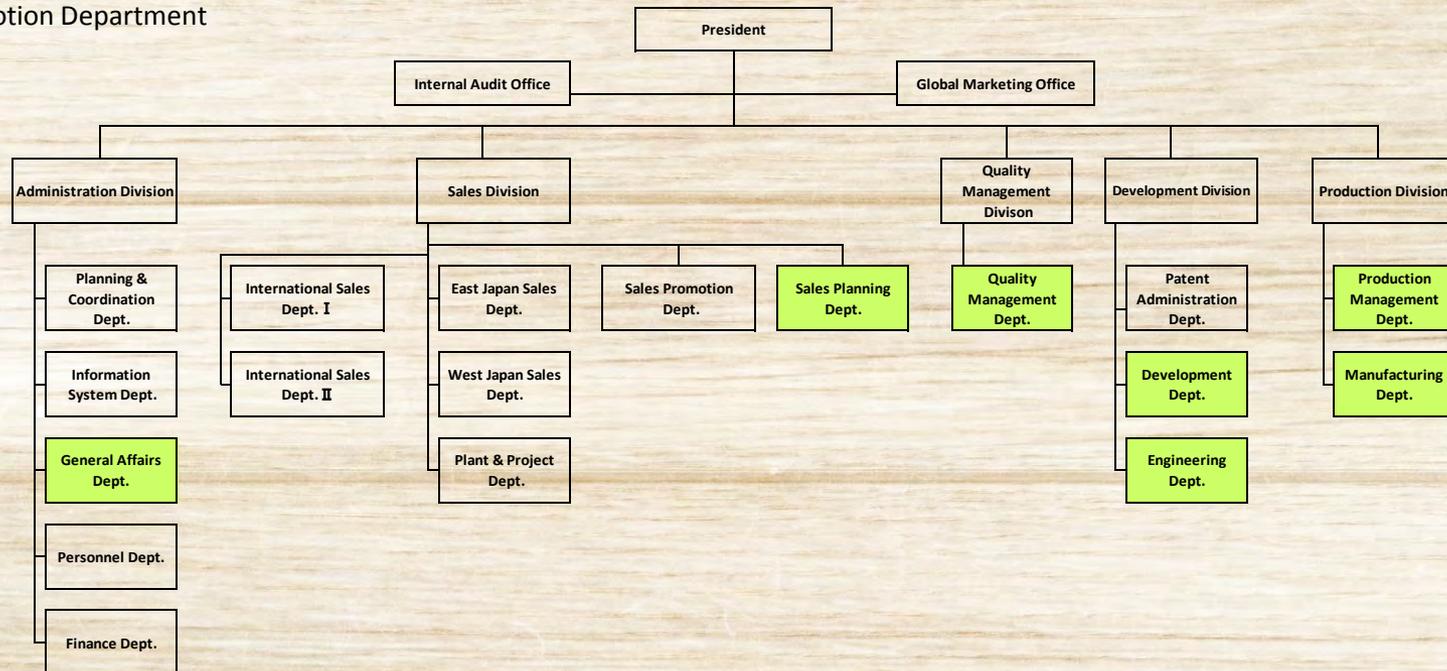
# Management

## Environmental Management Structure

### ● Promotion System

Denyo is carrying out promotion activities aimed at reducing the total environmental impact by the following promotion Dept. intensively.

### ■ ...Promotion Department



### ● ISO14001 Certification

We obtained ISO14001:2015 certification for our environmental management systems on November 13, 2017. And one of the Denyo group companies, Denyo Vietnam Co., Ltd. also has obtained ISO9001, ISO14001 certification. We control CO<sub>2</sub> emissions by conserving resources and energy. Through our business, we also carry out activities aimed at reducing the total environmental impact.

# Management

## Environmental Targets and Achievements

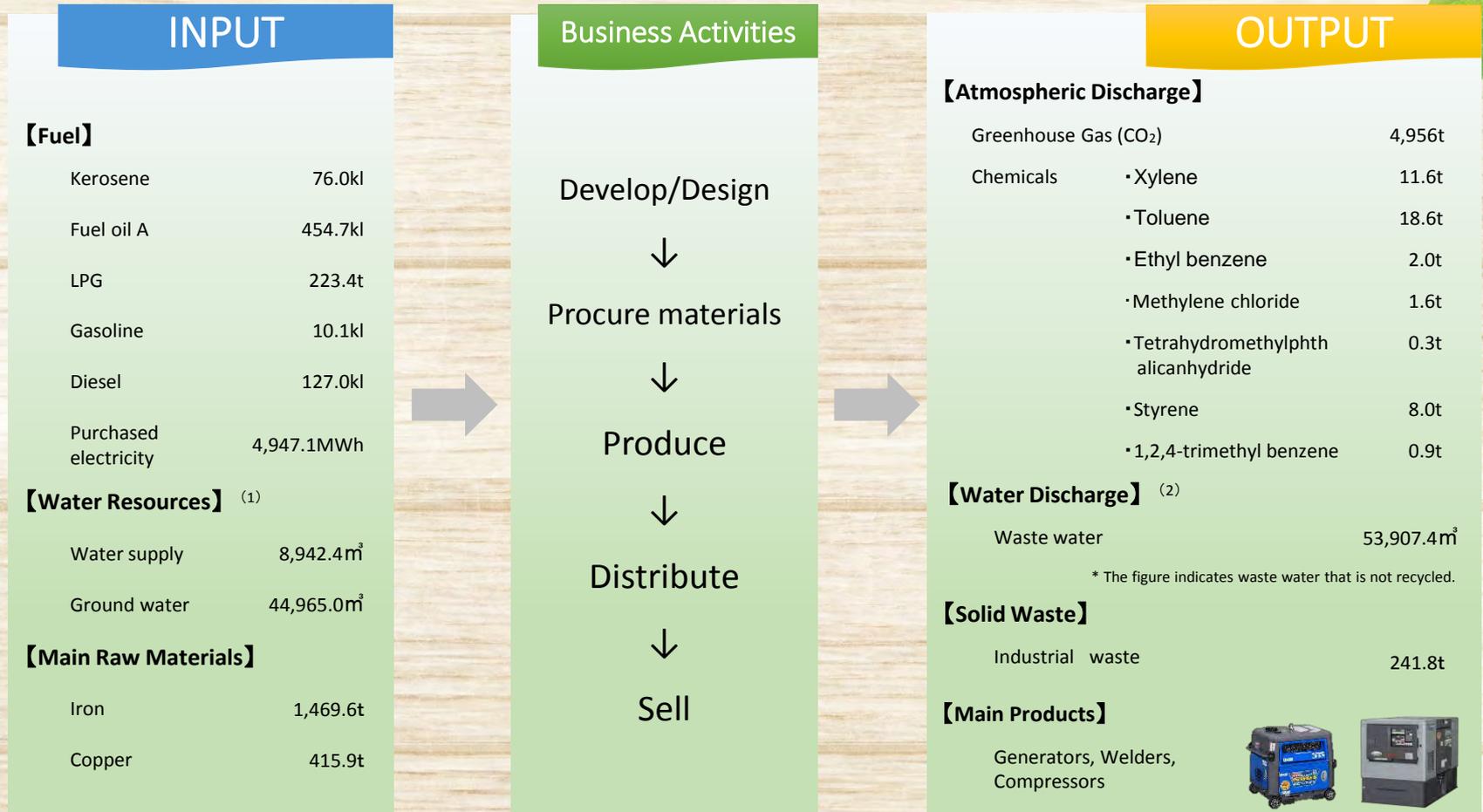
To implement environmental management, we set targets for each financial year and carry out evaluations from time to time.

Item	FY2018 Target	FY2018 Achievements	FY2019 Target
Develop products with high environmental performance	We will develop eco-friendly products.	<ul style="list-style-type: none"> <li>· Development of rotation control welding machines and generators</li> <li>· Development of ultra-silent generators for overseas</li> </ul>	We will develop eco-friendly products.
Formation of a recycling-based society	By the end of FY2018, we will cut the volume of industrial waste per output by at least 1% compared to FY2017 levels.	<ul style="list-style-type: none"> <li>· 6.1% year-on-year reduction in discharge volume compared to FY2017 levels</li> <li>· 4.6% year-on-year reduction per output compared to FY2017 levels</li> </ul>	By the end of FY2019, we will cut the volume of industrial waste per output by at least 9% compared to FY2017 levels.
	By the end of FY2018, we will cut the volume of crude oil equivalent energy used per output by at least 1.5% compared to FY2017 levels	<ul style="list-style-type: none"> <li>· 4.5% year-on-year increase in consumption volume compared to FY2017 levels (*)</li> <li>· 6.2% year-on-year increase per output compared to FY2017 levels (*)</li> </ul> <p>*This is attributable to the fact that the amount of fuel used for heating and clearing snow at the Fukui Plant increased due to the record-breaking snow that hit the Hokuriku areas, in February 2018.</p>	By the end of FY2019, we will cut the volume of crude oil equivalent energy used per output by at least 3% compared to FY2017 levels.
Contribute to society	Enhance maintenance in green belts adjoining the areas around our business facilities.	<ul style="list-style-type: none"> <li>· We carried out planting on the south side of the entrance to the Fukui plant .</li> <li>· In addition to planting in the front gate, placing more planters and cutting deadwood, routine cleaning activities are implemented at the Shiga Plant.</li> <li>· The maintenance and management of Green Belt and routine cleaning activities in the surrounding areas are conducted at the Laboratory &amp; Training Center.</li> </ul>	Enhance maintenance in green belts adjoining the areas around our business facilities.

# Management

## Environmental Impact Overview

At Denyo, we understand the material input for our business activities and we endeavor to reduce the environmental impact.



N.B.  
(1) and (2) are totals for the Fukui and Shiga Plants.

# Eco-Friendly Products



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Welding machines with an automatic idling stop function

New Simul Generator

# Eco-Friendly Products

## Developing Products with High Environmental Performance

### ● Welding machines with an automatic idling stop function

While there has been greater interest in preventing global warming in recent years, eco-friendly engine welding machines with an automatic idling stop function are highly rated. This function is designed to stop the engine automatically when welding work is suspended and reduce CO<sub>2</sub> emissions, which are causes of global warming.

If the idling state exceeds the set time during the welding work, the engine will stop automatically. This will save fuel and reduce CO<sub>2</sub> emissions significantly. To resume the welding work, the welding materials simply need to be knocked with the welding rod twice, and then the engine will restart automatically.

The automatic idling stop function of engine welding machines is the first such technology in the industry, developed by Denyo. About 10 years have passed since its debut in 2007, and there are now seven models with this function. We would like to strive to expand adoption of the automatic idling stop function and contribute to the prevention of global warming.



Welding machines with an automatic idling stop function GAW-155ES

### ● New Simul Generator

New Simul Generators are now available. These generators enable you to simultaneously use a three-phase power load, such as submersible pumps and compressors, and a single-phase load, such as lighting and air conditioners in a temporary office. Because there is no need to prepare two generators, and it is possible to respond to needs with a single unit when a three-phase power load and a single-phase load are used simultaneously, the new generators are highly acclaimed for enhancing environmental performance in terms of delivery and installation. With the adoption of the unique new winding method, the new Simul Generators have drastically improved the voltage fluctuation on the single-phase side compared with conventional machines. In addition, the single-phase output has been increased by about 10%, so it is possible to feel secure in using it more conveniently.



DCA-25LSKE-D2



DCA-45LSKE-D2

# Eco-Friendly Production



The image shows a wooden sign with a floral border of yellow and green flowers. The sign is mounted on a wooden background with green leaves and sparkles in the top right corner. The sign contains a table of contents.

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# Eco-Friendly Production

## Global Warming Prevention

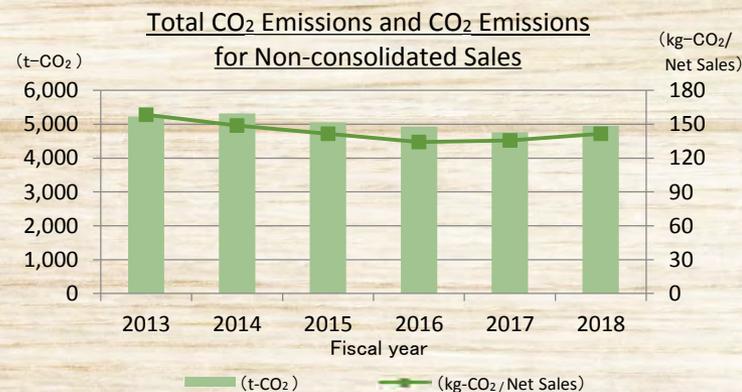
### ● Reduce CO<sub>2</sub> Emissions

Denyo endeavors to prevent global warming through initiatives to reduce CO<sub>2</sub> emissions due to business activities. CO<sub>2</sub> emissions in FY2018 were 4,956 tons, an increase of 4.1% from the FY2017 levels. This is attributable to the fact that the amount of fuel used for heating and clearing snow increased due to the record-breaking snow that hit the Hokuriku areas, including Fukui, in February 2018.

We will continue to implement initiatives aimed at reducing CO<sub>2</sub> emissions.

	Power consumption (thousand kWh)	Fuel consumption (GJ)	CO <sub>2</sub> emission after conversion (t)	CO <sub>2</sub> emissions (kg) / Non-consolidated sales (Millions of yen)
FY2018	4,947.1	37,059.9	4,956	141.7
FY2017	4,932.7	34,088.2	4,762	135.6
Change from FY2017	+ 0.3 %	+ 8.7 %	+ 4.1 %	+ 4.5 %

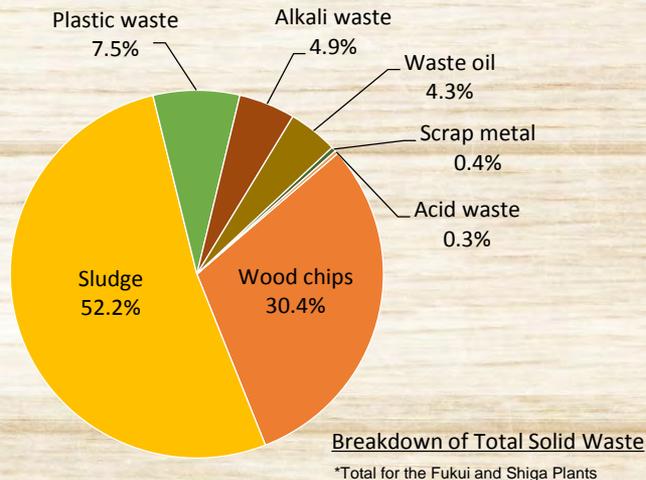
※Net sales is Denyo Non-consolidated Sales



# Eco-Friendly Production

## Formation of a Recycling-based Society

### ● Reduce Solid Waste



We manage and process solid waste appropriately and in compliance with all laws and ordinances.

In FY2018, we discharged about 242 tons of industrial waste, down by 4.6% per output compared to the FY2017 levels.

We are also working toward to implement initiatives to reduce a certain amount or more of Solid Waste stably.

### ● 3Rs Activities

In recent years, there have been problems with the depletion of resources such as petroleum, which are essential for our daily lives, and the shortage of final disposal sites for garbage. The importance of 3Rs (Reduce, Reuse, Recycle) has been increasing.

Denyo implements a range of initiatives to make effective use of limited resources and minimize the impact on the environment. We will now introduce some of these activities.

#### Reduce / Reuse

We changed from wooden pallets to iron pallets on the loading platforms used to transport products and other goods.

The previous wooden pallets became deformed after only one use, and they were disposable. We changed to iron pallets, so they can now be used repeatedly. This has significantly reduced the amount of scrap wood.

#### Recycle

Sludge generated in the production process is used as cement materials, and waste oil is reused as recycled oil by separating oil from water.

# Eco-Friendly Production

## Managing Chemicals

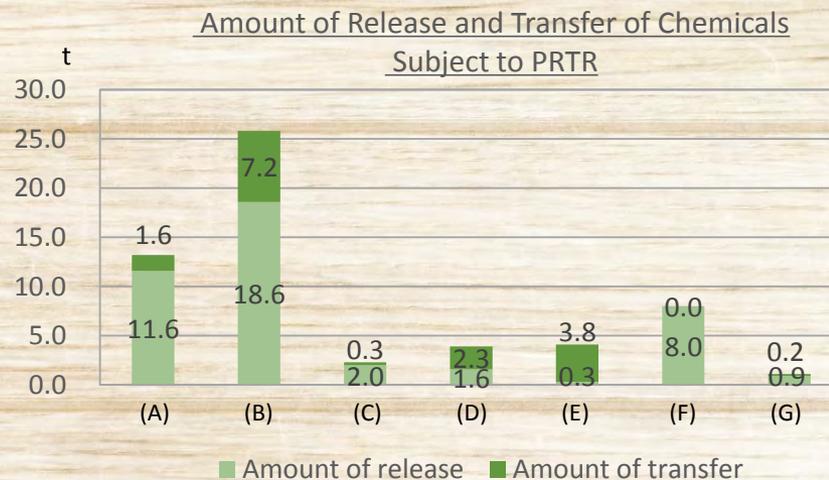
### ● Managing Chemicals Subject to PRTR

Based on the PRTR Law, we compile and release data on chemicals subject to the PRTR including amounts released into the environment or transferred as solid waste.

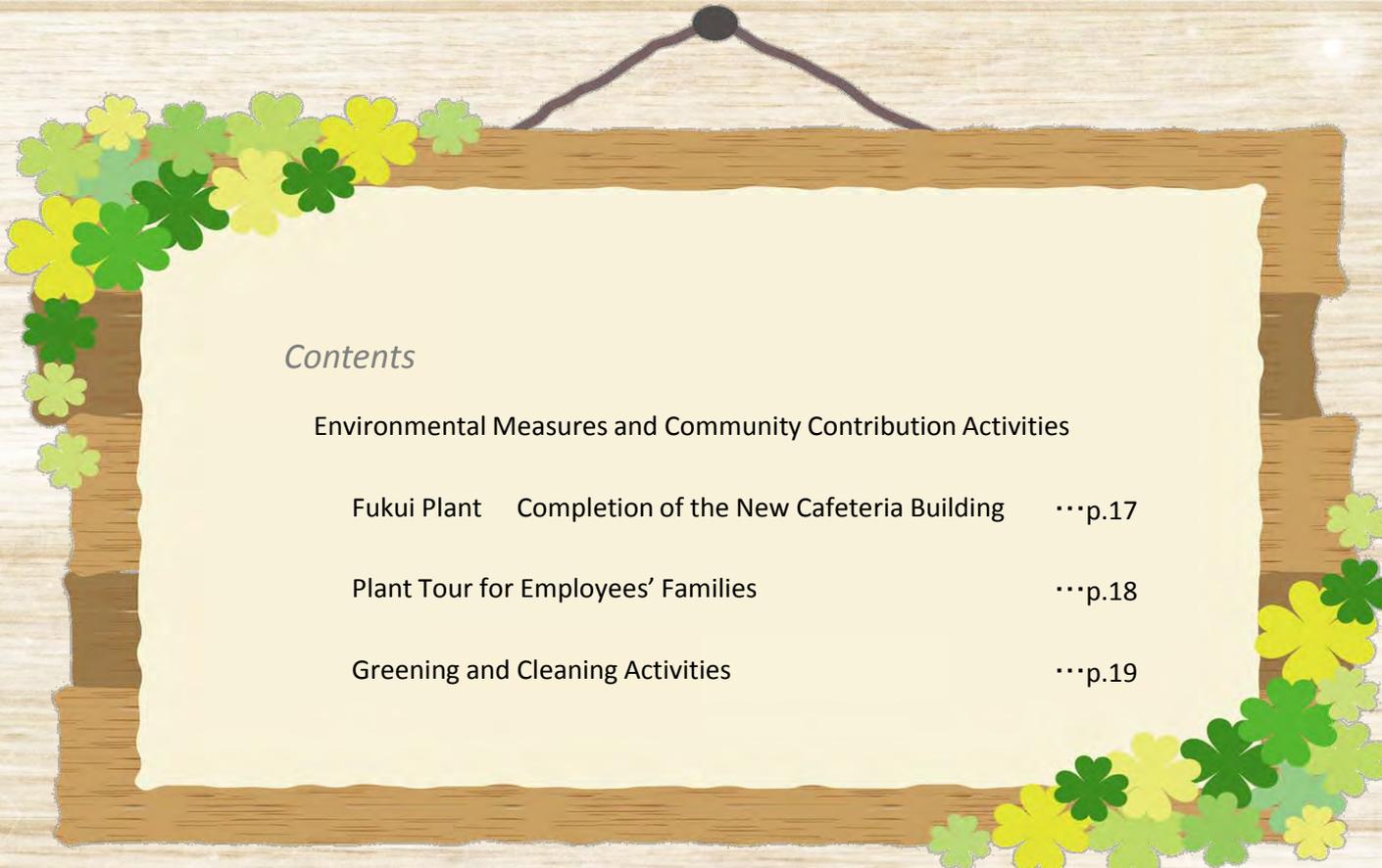
\*A Pollutant Release and Transfer Register (PRTR) is a system for compiling and disclosing data on hazardous chemical substances including their sources, how much is released into the environment or transferred off-site with solid waste.

Substance	Amount released to the atmosphere	Amount of transfer
(A) Xylene	11.6	1.6
(B) Toluene	18.6	7.2
(C) Ethyl benzene	2.0	0.3
(D) Methylene chloride	1.6	2.3
(E) Tetrahydromethyl phtalicanhydride	0.3	3.8
(F) Styrene	8.0	0.0
(G) 1,2,4-trimethylbenzene	0.9	0.2

(Unit: t)



# Topics



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# Topics

## Environmental Measures and Community Contribution Activities

### ● Fukui Plant Completion of the New Cafeteria Building

The construction of the new cafeteria building of the Fukui Plant was completed in March 2018, and it utilizes environmentally friendly equipment, such as introducing LEDs for all lighting.

In addition, the basic color of the room is white, and multiple large windows have been installed to take in natural light efficiently for comfort with a small amount of electricity.

The new cafeteria building has a steel-frame two-storied construction with a total floor area of around 1,258 square meters. The first floor has a cafeteria that can serve about 220 people, and the second floor has a library, a common room with tatami mats and a multi-purpose room for employees to enable them to enjoy break time.

Denyo will strive to improve productivity and operational efficiency, and also develop a better workplace environment.



Appearance of the new cafeteria building



Cafeteria on the first floor

# Topics

## ● Plant Tour for Employees' Families

We invited our employees' families to the Fukui Plant and held a plant tour. This event was held for the first time this year, and 22 people of 10 families participated in the event. It was planned and implemented in our hope of showing their families how they work, which cannot be seen at home, what environment they work in and what kinds of jobs they do.

Family members who participated in the event commented, "I enjoyed experiencing the atmosphere of the workplace and seeing how he/she works," and "The food in the cafeteria was delicious." Employees who work at the Fukui Plant also commented, "I was pleased to see how delighted my family and the others were, and I would like more people to participate in the event in the future."

We held this event for the first time. It met with a favorable reception from the families and it was a good opportunity to deepen their understanding of our work, we would like to continue to hold it in the future.



Family members who participated in the event



Dining scene in the cafeteria

# Topics

## ● Greening and Cleaning Activities

Denyo has been working on greening and cleaning activities in the areas around our operating sites. We call this initiative “Green Clean Activities.”

The pictures show planting work at the Fukui Plant and cleaning activities at the Laboratory & Training Center.

Denyo will continue to focus on Green Clean Activities in the future, while taking harmony with nature into consideration.



Phase 2 planting work (Fukui Plant)



Cleaning Activities (Laboratory & Training Center)



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