

Denyo



Environmental Report 2014

Denyo Co., Ltd.

Editorial Statement

Information Disclosure

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

【Annual Environmental Report】 <http://www.denyco.co.jp>



Reporting Period

Fiscal 2014 (April 2013 to March 2014) and for some content, the periods before and after.

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Contact

Denyo Co., Ltd.
2-8-5, Nihonbashi-Horidomecho, Chuo-ku,
Tokyo 103-8566
Website: <http://www.denyco.co.jp>
Planning Coordination Office:
Phone: +81-3-6861-1111
Facsimile: +81-3-6861-1185



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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Aiming to Deliver a Sustainable Society

Developing Technology Tomorrow's Power Needs

Message from the President



Thank you for reviewing the Environmental Report of Denyo Co., Ltd. I would also like to thank you for your interest in our company.

Our lives as human beings are much richer than in the past. On the other hand, we have been using resources rapidly, and resources to leave for future generations have been further decreasing. In addition, in recent years environmental problems all over the world have grown more serious such as disasters frequently caused by abnormal weather.

Under such circumstances, Denyo Co., Ltd. will think daily about what we can do as a company in "Developing Technology Tomorrow's Power Needs" and tackle environmental problems seriously with an aim to deliver a sustainable society.

October 2014

Shigeru Koga, President
Denyo Co., Ltd.

A handwritten signature in black ink, consisting of stylized characters that appear to be 'S. K.' followed by a flourish.

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.

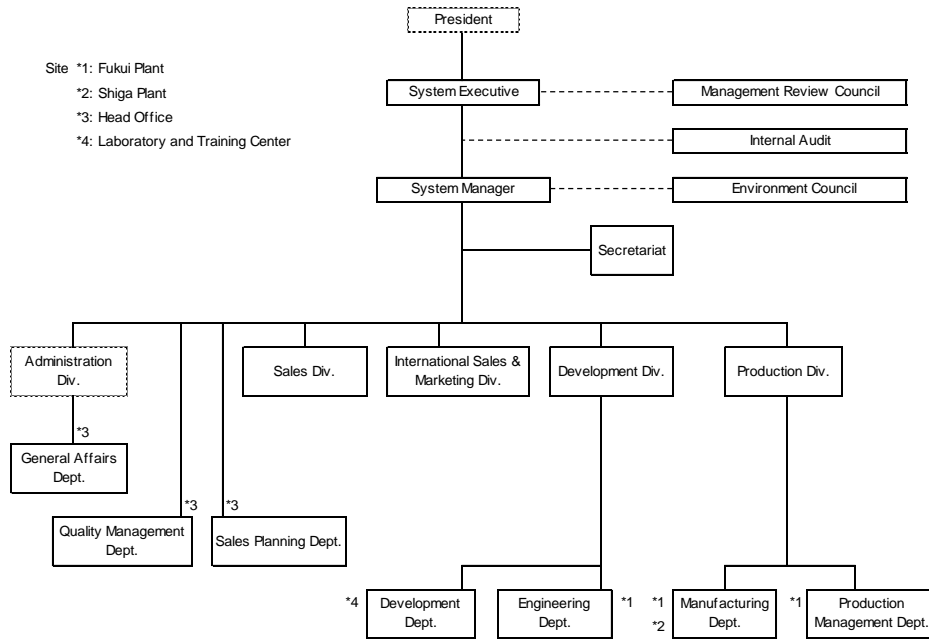
Environmental Policies

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 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, we disclose the information in the public domain.

Environmental Management Structure

Promotion System

Organization Chart for Quality and Environmental Management Systems



ISO14001 Certification

We obtained ISO14001:2004 certification for our environmental management systems on October 19, 2006. We control CO2 emissions by conserving resources and energy. Through our business, we also carry out activities aimed at reducing the total environmental impact.

- Certification Body JIC Quality Assurance Ltd.
- Applicable Standards ISO 14001:2004/ JIS Q 14001:2004
- Certification No. E1652
- Scope of Certification Activities related to Design , Development , Production and Servicing of Engine - driven Generator , Engine - driven Welder , Engine - driven Air Compressor and Motor-driven Air Compressor
- Registered Organization Denyo Co., Ltd.
- Other sites in the Scope of Certification Fukui Plant, Shiga Plant, Saitama Development Division Development Department
- Date of Certification October 19, 2006
(Renewal date: November 7, 2013)

Environmental Management System



The operations of the environmental management system are periodically validated through inspections by the ISO certification body and our own internal audits. We strive to continually improve the operations of the environmental management system through periodic reviews.



Fukui Plant



Laboratory & Training Center (Saitama)

Environmental Targets and Achievements

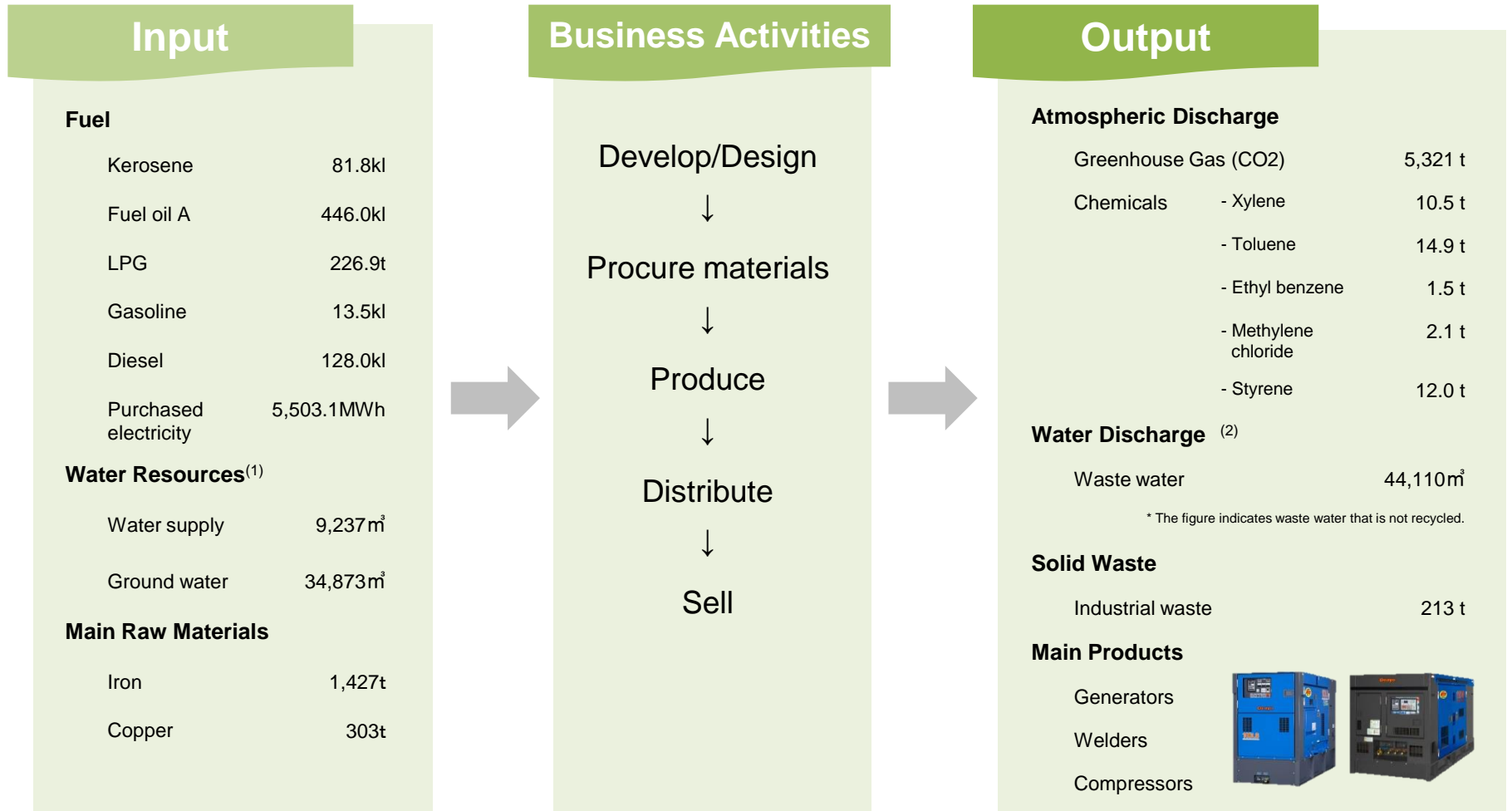
To implement environmental management, we set targets for each financial year and carry out evaluations from time to time. The evaluations for FY2014 indicate that we exceeded the targets for all items.

Item	FY2014 Target	FY2014 Achievements	FY2015 Target
Develop products with high environmental performance	[Develop Eco-friendly Products] We will develop eco-friendly products.	We developed the Eco-Base technology, the LP Gas Emergency Generator Series, and equipment that complies with exhaust gas regulations.	[Develop Eco-friendly Products] We will develop eco-friendly products.
Formation of a recycling-based society	[Reduce Solid Waste] By the end of FY2014, we will cut the volume of industrial waste per output by at least 10% compared to FY2012 levels.	- 51.6% year-on-year reduction in discharge volume compared to FY2012 levels - 52.3% year-on-year reduction per output compared to FY2012 levels	[Reduce Solid Waste] By the end of FY2015, we will cut the volume of industrial waste per output by at least 10% compared to FY2012 levels.
	[Conserve Energy] By the end of FY2014, we will cut the volume of crude oil equivalent energy used per output by at least 5% compared to FY2012 levels.	- 13.5% year-on-year reduction in consumption volume compared to FY2012 levels - 14.6% year-on-year reduction per output compared to FY2012 levels	[Conserve Energy] By the end of FY2015, we will cut the volume of crude oil equivalent energy used per output by at least 15% compared to FY2012 levels.
Contribute to society	[Green and Clean Tactics] Carry out maintenance and cleaning activities in at least one place in green belts adjoining the areas around our business facilities.	- We cleaned and mowed around the Fukui and Shiga Plants. - The Development Department pruned and planted plants surrounding the Laboratory & Training Center and cleaned the roads around the center. - The General Affairs Department cleaned around the head office building.	[Green and Clean Tactics] Carry out maintenance and cleaning activities in at least one place 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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Eco-Base Welder

Variable-Pressure, Variable-Capacity Motor Compressor

Proactively Developing Eco-Friendly Products

Eco-Friendly Products

Developing Products with High Environmental Performance

Eco-Base Generator

The Eco-Base Generator is designed to reduce the risk of environmental pollution which might occur in the event of an engine oil leakage caused by unforeseen circumstances. By utilizing the eco-base installed at the bottom of the main unit, leaks are contained.

In addition, the generator comes in a structure that is carefully designed to prevent rain infiltration. This ensures that almost no rainwater gets into the generator when it is not in operation. Even if rainwater enters the unit and the eco-base becomes full, the water is discharged from the equipment ahead of the oil as the oil and water separation system is standard equipment for the generator.

The unit also comes with a new swivel oil drain, which ensures higher workability than the previous drawer drain.



DCA-25LSKE
*An illustration showing the eco-base at the bottom of the unit



Swivel oil drain

Eco-Base Welder

The engine-driven welder is also equipped with an eco-base, which enables the unit to reduce the risk of environmental pollution from an oil leakage in the event of an unforeseen circumstances by containing the oil at the bottom of the main unit.

The same as the eco-base generator, the welder comes standard with the oil-water separation system. Therefore, even if rainwater enters the welder and the eco-base becomes full, the water is discharged from the equipment ahead of the oil.

It also features a double structure, in which fuel spilled during fueling is caught by a separate tub before being pooled in the eco-base. This enables the welder to be used with confidence at construction sites of industrial complexes and power stations and in work sites where environmental protection is required.



DLW-300LSE
*An illustration showing the eco-base at the bottom of the unit

Variable-pressure, variable-capacity motor compressor

This compressor comes with a variable pressure system, which permits the user to set it any level of discharge pressure and select from three different levels of the maximum discharge pressure. It can therefore be operated in an optimal condition for usage load and input power capacity.

Use of an inverter has significantly reduced the striking current compared to the previous star-delta starting. Power consumption and noise are also much lower because the unit controls the volume of air from the electric fan in accordance with the internal temperature.

In addition, the combination of purge unload (standby control at reduced pressure) and auto start/stop function enables even more energy-saving operation.



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Eco-Friendly Production



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Lowering Environmental Impact

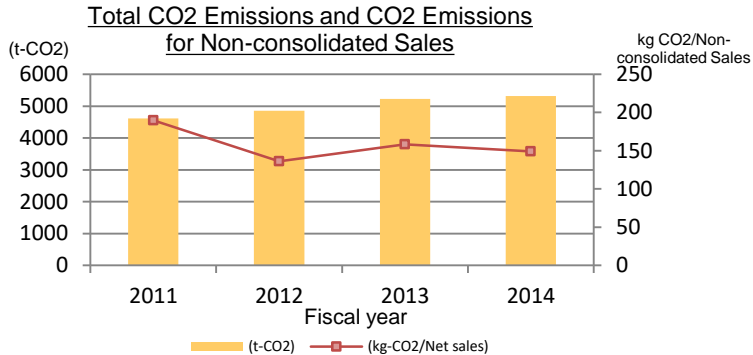
Eco-Friendly Production

Global Warming Prevention

Reduce CO2 Emissions

Denyo endeavors to prevent global warming through initiatives to reduce CO2 emissions due to business activities. CO2 emissions in FY2014 were 5,321 tons, an increase of 9.7% from the FY2012 levels. This is because of the increase of conversion factor for CO2 emission coefficients for power consumption, which are determined by electric power companies. Our power consumption before conversion to CO2 emissions coefficients decreased 11.6% from the FY2012 levels. The amount of the consumption of fuels also decreased 10.9% from the FY2012 levels. We will continue to implement initiatives to cut CO2 emissions during FY2015.

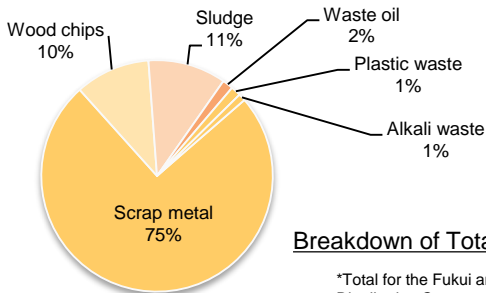
	Power consumption (thousand kWh)	Fuel consumption (GJ)	CO2 emission after conversion (t)	CO2 emissions/ Non-consolidated sales (kg)
FY2014	5503.1	37189.5	5321	148.9
FY2012	6224.3	41736.6	4850	135.9
Change from FY2012	- 11.6%	- 10.9%	9.7%	9.6%



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 FY2014, we discharged about 213 tons of industrial waste, down by 52.3% per output compared to the FY2012 levels, which is far above the target. We are also working toward a new target of cutting the volume of industrial waste per output by at least 20% compared to FY2012 levels by the end of FY2017.



Breakdown of Total Solid Waste

*Total for the Fukui and Shiga Plants and the Distribution Center

Managing Chemicals

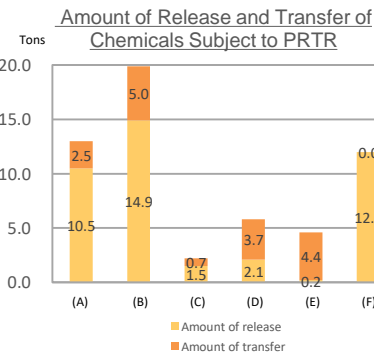
Managing Chemicals Subject to PRTR

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	10.5	2.5
(B) Toluene	14.9	5.0
(C) Ethyl benzene	1.5	0.7
(D) Methylene chloride	2.1	3.7
(E) Tetrahydromethyl phthalic anhydride	0.2	4.4
(F) Styrene	12.0	0.0

(Unit: tons)



Topics



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Head Office

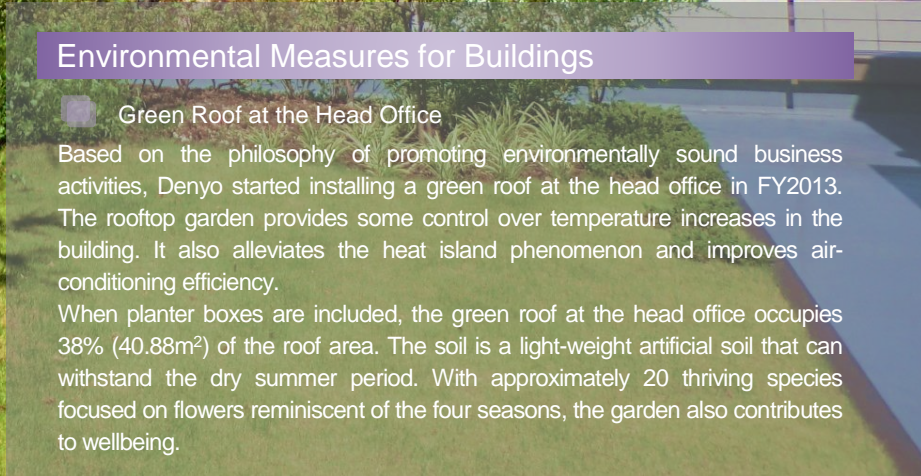
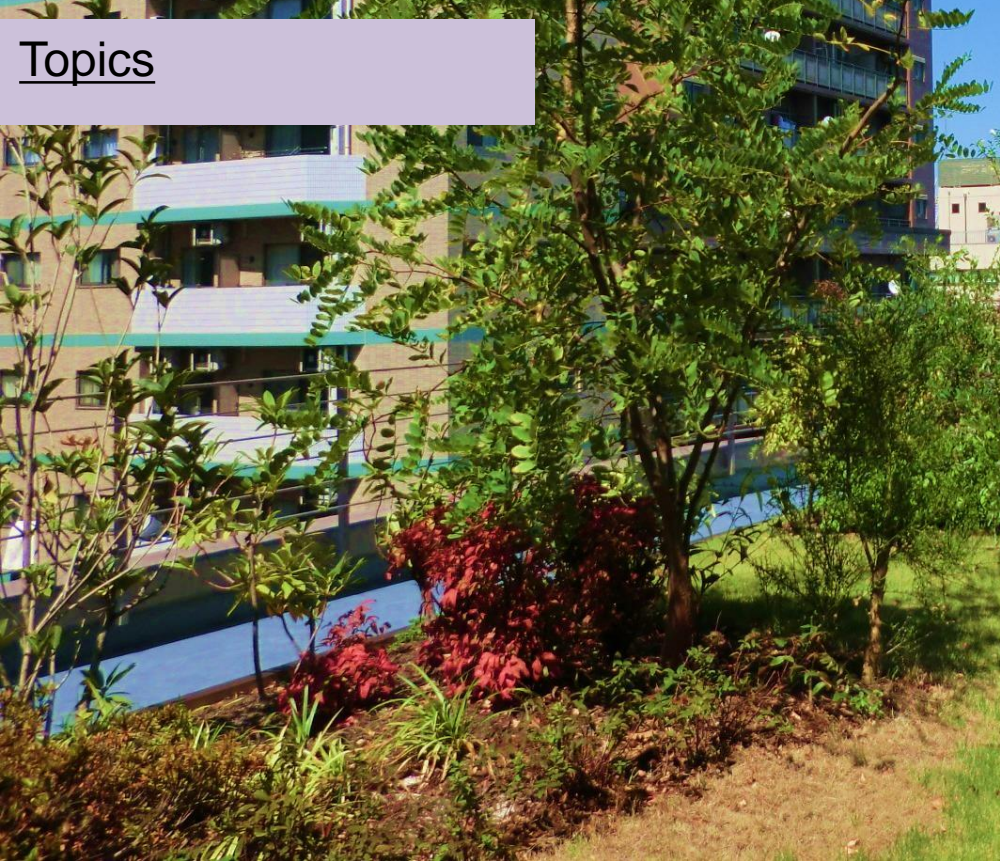
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Blood Donation at Fukui Plant

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Environmental Measures for Buildings

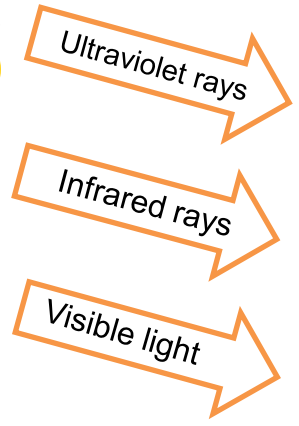
Green Roof at the Head Office

Based on the philosophy of promoting environmentally sound business activities, Denyo started installing a green roof at the head office in FY2013. The rooftop garden provides some control over temperature increases in the building. It also alleviates the heat island phenomenon and improves air-conditioning efficiency.

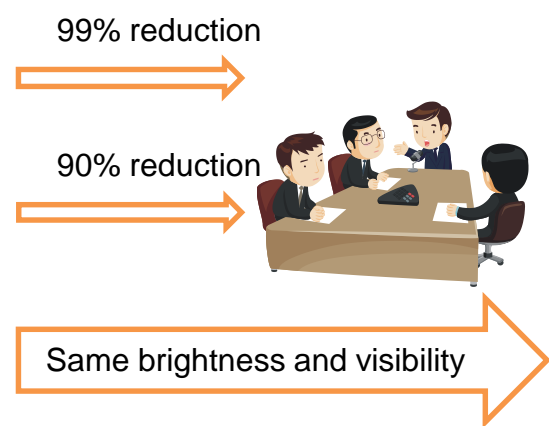
When planter boxes are included, the green roof at the head office occupies 38% (40.88m²) of the roof area. The soil is a light-weight artificial soil that can withstand the dry summer period. With approximately 20 thriving species focused on flowers reminiscent of the four seasons, the garden also contributes to wellbeing.

Head Office

The window glass of the head office uses an energy-saving glass coating. This filters out 99% of ultraviolet rays and 90% of infrared rays. By reducing ultraviolet rays, the coating protects the eyes of the people working in the building. By cutting infrared rays, the coating not only improves the air-conditioning efficiency in summer but also retains heat in winter, thereby saving power consumption. By using the energy-saving glass coating we are helping to reduce power consumption and CO2 emissions.



Outdoor



Inside the building

Environmental Measures at Production Sites

In August this year, Plant Warehouse Building No. 8 was completed at the Fukui Plant. This building uses LED ceiling lights to save energy. In addition, all of the doors are made of semitransparent resin, which lets in natural light.

The equipment of existing plant buildings is also being replaced with eco-friendly alternatives, one by one. The use of LED lights is also being expanded.



Others

Study Tours of Fukui Plant

At Fukui Plant, we organize a wide variety of events to promote an understanding of Denyo among local residents and make the company more familiar to them. Those events include plant study tours for local elementary school children and high school students and an internship program for high school students.

We will continue to proactively organize such events with a strong awareness of the fact that the understanding of local residents is essential for continuing our operations, and with an aim to further strengthen our relationship with local people.



A plant study tour by students from a high school in Fukui Prefecture

Blood Donation at Fukui Plant

At Fukui Plant, we make a blood donation two times a year. A large number of employees donate blood each time, and the amount we donate at a time is as much as the daily amount needed for the entire Fukui Prefecture. At Denyo, we thus commit ourselves to activities for contributing to the local community.



Developing Technology Tomorrow's Power Needs.

Denyo[®]

Denyo Co., Ltd.

2-8-5, Nihonbashi-horidomecho, Chuo-ku, Tokyo 103-8566, Japan

Phone: +81-3-6861-1111, Facsimile: +81-3-6861-1181

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