Denyo

Environmental Report 2013

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Editorial Statement

Information Disclosure

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

【 Annual Environmental Report 】 http://www.denyo.co.jp

Reporting Organization

Denyo Co., Ltd.

* However, the values for the Fukui Plant constitute the main environmental figures.

Reporting Period

Fiscal 2012 (April 2012 to March 2013) and for some content, the periods before and after.

Publication Date

December 2013

Guidelines

Environmental Reporting Guidelines (Fiscal Year 2012 Version), Ministry of the Environment

Contact

Denyo Co., Ltd.
2-8-5, Nihonbashi Horidomecho, Chuo-ku,
Tokyo 103-8566
Website: http://www.denyo.co.jp
Planning & Coordination Office:
TEL 03-6861-1111
FAX 03-6861-1185

Disclaimer

This Environmental Report may contain predictions or forecasts about the future. Such statements may vary materially from actual performance.

Message from the President

Thank you for reviewing the Environmental Report for Denyo Co., Ltd. I would also like to thank you for your interest in our company. In the interest of disclosure, we have decided to publish an environmental report as of this year. I hope the report will hold your attention.

The recent increase in the global population has revitalized production activities and brought with it bright prospects for global economic development. However, the impact of production activities on the environment is great, global warming being a perfect example, and the global environment is now seen as an issue for the whole world. At Denyo, we recognize that initiatives to solve these problems are a social mission. As a company, we are pulling together to find solutions while keeping constant watch over the environment from the development and production aspects.

Based on our environmental philosophy, we will continue to contribute to a sustainable society by implementing the environmental policies, and we will strive to improve the value of our products and our company through environmental awareness.

December 2013

Shigeru Koga, President
Denyo Co., Ltd.

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.

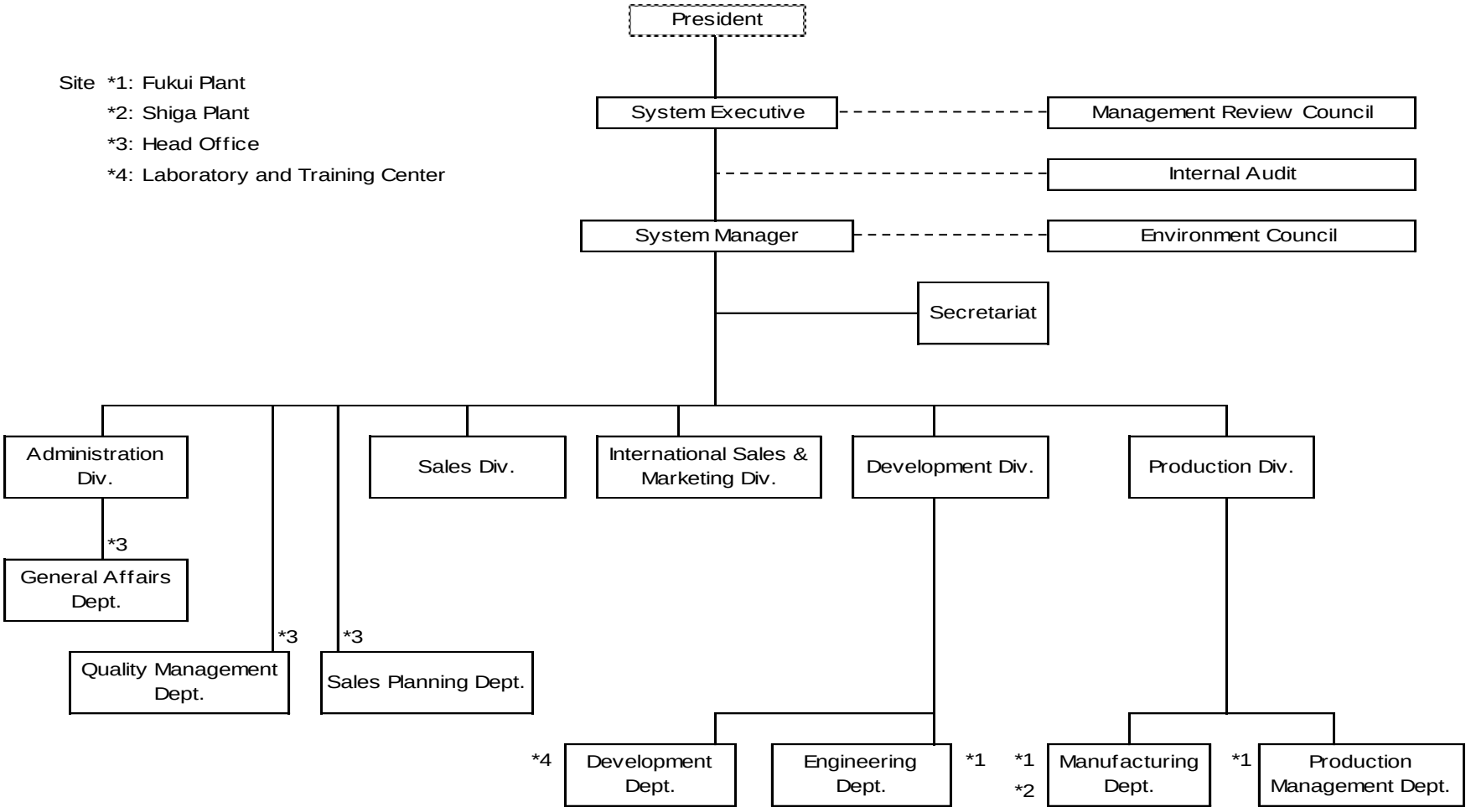
3. As well as building a system of management to engage with environmental conservation and finding ways to make continual improvements, we set environmental goals and targets, and improve environmental performance by carrying out reviews.

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 the ISO14001:2004 certification for environmental management systems on October 19, 2006. We control CO_2 emissions by conserving resources and energy. Through our business, we also carry out activities aimed at reducing total environmental load.

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.

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 FY2012 indicate that we exceeded the targets for all items.

Item	FY2012 Target	FY2012 Achievements	FY2013 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.	We will develop eco-friendly products.
Resource recycling society	Reduce Solid Waste By the end of FY2012, we will cut the volume of industrial waste per output by at least 2% compared to FY2011 levels.	- 14.6% year-on-year reduction in discharge volume - 10.9% year-on-year reduction per output	By the end of FY2013, we will cut the volume of industrial waste per output by at least 10% compared to FY2011 levels.
	Conserve Energy By the end of FY2012, we will cut the volume of crude oil equivalent energy used per output by at least 1% compared to FY2011 levels.	- 8.8% year-on-year reduction in consumption volume - 4.8% year-on-year reduction per output	By the end of FY2013, we will cut the volume of crude oil equivalent energy used per output by at least 5% compared to FY2011 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 the vicinity of the Fukui Plant and planted seasonal flowers on the mountainside at the north gate. - We cleaned the vicinity of the Shiga Plant, and installed more planter boxes in front of the office. - We cleaned the vicinity of the Laboratory & Training Center, and the outdoor testing area. - The General Affairs Department cleaned the vicinity of the head office.	Carry out maintenance and cleaning activities in at least one place in green belts adjoining the areas around our business facilities.

Environmental Load Overview

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

Input

Fuel

Kerosene	84.3 kl
Type A heavy oil	436.7 kl
LPG	227.1 t
Gasoline	14.1 kl
Diesel	124.5 kl
Purchased electricity	4,849.8 MWh

Water Resource

Water supply(1)	14,221 m^3
Ground water(2)	33,094 m^3

Main Raw Materials

Iron	1,437 t
Copper	283 t

Business Activities

Develop/Design
↓
Procure materials
↓
Produce
↓
Distribute
↓
Sell

Output

Atmospheric Discharge

Greenhouse Gas (CO_2)(3)		5,229 t
Chemicals	- Xylene	9.9 t
	- Toluene	16.2 t
	- Ethyl benzene	1.4 t
	- Dichloromethane	1.3 t

Water Discharge

Waste water 47,315 m^3
* The figure indicates waste water that is not recycled.

Solid Waste

Industrial solid waste 289 t

Main Products

Generators
Welders
Compressors

N.B. (1) Total for head office, Laboratory & Training Center, and Fukui Pant
(2) Total for Fukui Plant.
(3) Total for the whole of Denyo Co., Ltd.
* Other totals than (1)-(3) refer to the Fukui Plant and Shiga Plant

Developing Products with High Environmental Performance

- **Eco-Base Engine-Driven Generators and Welders**

Even if an unexpected accident causes oil to leak, the Eco-Base Engine Generator is designed to reduce the risk of environmental pollution through the eco-base installed at the bottom of the main unit to contain leaks.

DCA-220LSIE

The lineup of Eco-Base Engine-Driven Generator includes a model equipped with a big tank—a high-capacity fuel tank installed in its eco-base. There is no need for constant monitoring and the generator will operate continuously for a long period of time on a single supply of oil.

Since the engine-driven welder is also equipped with an eco-base, it supports a broad range of construction work from industrial complexes and power stations to general construction work.

We will continue to develop eco-friendly products that meet the needs of our customers.

DLW-300LSE

- DLW-200X2LS Engine-Driven Welder

The DLW-200X2LS is an engine-driven welder for two users, which includes an automatic idle-stop function as a standard feature. When pausing welding work or work that uses the alternator, the engine is automatically stopped after a set period of time and when operations resume, the engine automatically restarts. Since welders are rarely in continuous use on the work floor, the automatic idle-stop feature greatly reduces fuel consumption and CO_2 emissions. Denyo is the first in the world to develop the automatic idle-stop technology feature for engine welders (patented). The function has been highly acclaimed for its impact on reducing the CO_2 emissions that cause global warming.

When welding work starts, the non-step e-Mode function applies variable speed control to the engine and keeps it operating at the optimum number of revolutions. This function reduces fuel consumption and noise levels during operation.

The automatic idle-stop function and the non-step e-Mode function in the DLW-200X2LS contribute to a reduced environmental load by keeping down fuel consumption, cutting CO_2 emissions and reducing noise levels.

DLW-200X2LS

- DIS-200 VPS (B) Engine-Driven Compressor

The DIS-200VPS (B) is the first variable pressure compressor in the industry that allows the operator to freely set the discharge pressure by inputting settings on a digital panel. When the required discharge pressure (0.6–1.27 MPa) has been set, the variable pressure system automatically controls the number of engine revolutions and capacity according to air volume. The system optimizes the features of the electronically controlled engine, and the efficiency of the compressor (patented).

As a result, a single air compressor can accommodate environments that require high pressure and low-pressure capacity applications, eliminating the need for several compressors depending on work environment and application, and thereby increasing efficiency.

The large-scale high-pressure compressor is also the first in the industry to be designated an ultra-low noise construction machine, adding an element of excellence in terms of environmental load reduction.

DIS-200VPS

Global Warming Prevention

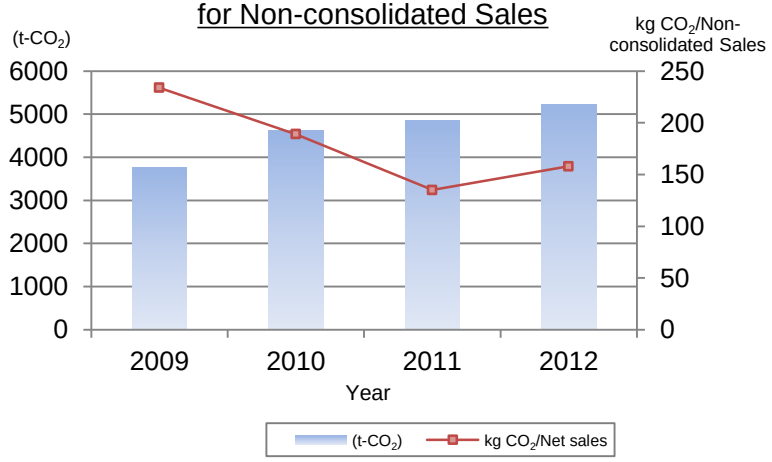
Reduce CO_2 Emissions

Denyo also endeavors to prevent global warming through initiatives to reduce the CO_2 emissions that come with the character of the business.

Disappointingly, CO_2 emissions in FY2012 were 5,229 tons, a year-on-year increase of 7.8%. This is due to the impact of a rise in the CO_2 emission coefficients for power consumption.

We will continue to implement initiatives to cut CO_2 during FY2013.

Total CO_2 Emissions and CO_2 Emissions for Non-consolidated Sales



Resource Recycling Society

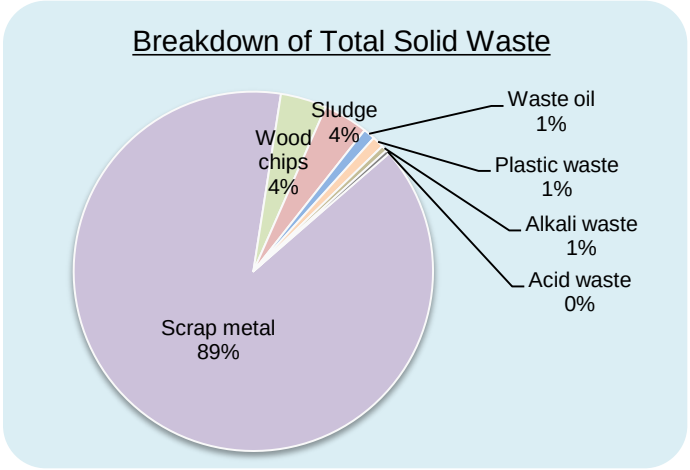
Reduce Solid Waste

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

In FY2012, we discharged about 289 tons of industrial waste, down by 10.9% per output compared to the previous fiscal year, and we reached the target of a 2% year-on-year reduction.

We are working toward a new target of cutting the volume of industrial waste per output by at least 15% compared to FY2011 levels by the end of FY2016.

Breakdown of Total Solid Waste



* Totals for the Fukui Plant and Shiga Plant

Managing Chemicals

Managing Chemicals Subject to PRTR

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

Substance	Amount	Amount discharged in the atmosphere	Recycled materials	Disposal	Consumption
Xylene	10.4	9.9	0.4	0.4	0.0
Toluene	19.1	16.2	2.6	2.9	0.0
Ethyl benzene	1.4	1.4	0.0	0.0	0.0
Dichloromethane	5.4	1.3	3.9	4.1	0.0
Tetrahydromethylphtalic anhydride	14.6	0.4	0.0	8.9	5.3
Ethylene glycol	57.6	0.0	0.0	0.0	57.6

(Unit: tons)

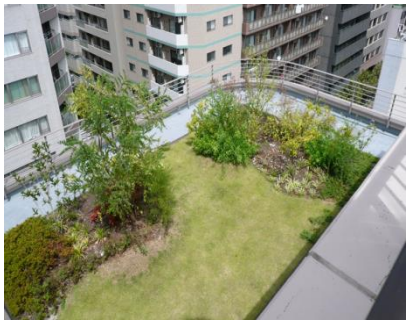
* A Pollutant Release and Transfer Register (PRTR) is a system for compiling and disclosing data on hazardous chemical substances including their sources, how much is released into the environment or transferred off-site with solid waste.

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 FY2012. 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% (40.88 m^2) of the roof area. The soil is a light-weight artificial soil (Aquasoil) that can resist the dry summer period. With approximately 20 thriving species focused on flowers reminiscent of the four seasons, the garden also contributes to wellbeing.



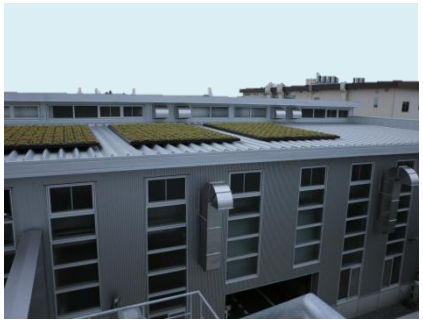
Laboratory & Training Center

Construction of the Laboratory & Training Center at Sakado, Saitama Prefecture was completed in February 2013.

The building is equipped with many of the most recent environmental technologies including solar panels and a mist spray system that uses rain water to cool the building as part of efforts to conserve energy. As a result of sensitivity to the outdoor environment, including greening of the premises, the building has achieved the top S score under the CASBEE* system.

We are also installing a green roof at the Center.

* CASBEE (Comprehensive Assessment System for Built Environment Efficiency) is a system for objective and comprehensive assessment of the quality of buildings including sensitivity to the environment, economical running costs. and comfort of the residential environment. The assessments are scored on a five-point scale and labeled Excellent (S), Very good (A), Good (B+), Fairly poor (B-), or Poor (C).



Environmental Measures at Overseas Plants

In FY2013, the MVP2 Award was presented to Denyo Manufacturing Corporation, a Group company in the United States. The awards ceremony was held in September 2013. The MVP2 Award is presented by the National Pollution Prevention Roundtable (NPPR), the largest membership organization devoted to pollution prevention in the United States and with headquarters in Washington D.C., to companies that have contributed to environmental conservation based on five broad criteria including innovation and measurable results.

The award was presented in the Projects/Programs category, which assesses solid waste reduction, conservation of environmental resources and recycling activities.

Denyo Manufacturing Corporation was also chosen Kentucky Manufacturer of the Year in 2012. The company is the most active contributor to the environment in the whole Group.

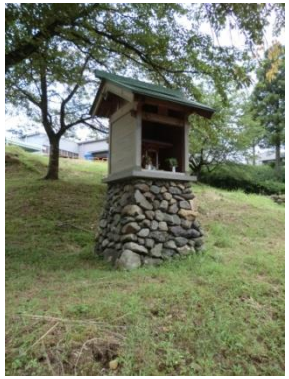
Other

- **Protecting Ancient Tombs**

We have taken the initiative to protect an ancient tomb discovered on the premises of the Fukui Plant.

In 1973 when plans were drawn up to build the plant, three round burial mounds dating to the 6th century (late Kofun Period) were discovered and named the Kiyoshi group of ancient tombs. Only one of the tombs remains today. We do not know who was buried in the tomb, but based on weaponry and harnesses excavated from the tomb, it is thought to belong to a mid-ranked clan. Some ornaments found in the tomb are kept in a small shrine next to the burial mound.

This is not only environmental conservation, but a contribution to preserving regional history and features.



Bio-indicators to Monitor Water Quality

At the Fukui Plant, treated waste water is held in a stabilization pond on the premises before discharging to the river. The stabilization pond is stocked with carp. By confirming whether organic life can sustain itself in the pond, we have introduced bio-indicators to monitor the quality of the treated waste water.

By routing the treated water via the stabilization pond, the risk of releasing polluted water straight into the river is also minimized in case of a discharge of primary waste water.

Developing Technology Tomorrow's Power Needs.

Denyo®

Denyo Co.,Ltd.

Head office : 2-8-5,Nihonbashi-horidomecho,Chuo-ku,Tokyo
103-8566,Japan
Tel:+81-3-6861-1111 Fax:+81-3-6861-1181
http://www.denyo.co.jp