

DENKA100 Corporate Philosophy

Taking on New Challenges as We Near Our Centennial

To Become a Company That Creates New Value from Resources by Fully Employing Our Technological Capabilities



We are building a highly transparent corporate structure to earn the trust of all stakeholders.

Corporate Governance

We must meet the expectations and respect of shareholders, customers, local communities, employees, and other stakeholders. Corporate governance underpins social respect and support. We have thus taken steps to improve both the Board of Directors and our auditing system, while streamlining our management organization and bolstering our compliance system.

Corporate Governance Structure

We adopted a Corporate Auditor System as the basis of our Corporate Governance System. The Board of Auditors includes two independent members assessing our operations and management to ensure that our business properly serves stakeholders.

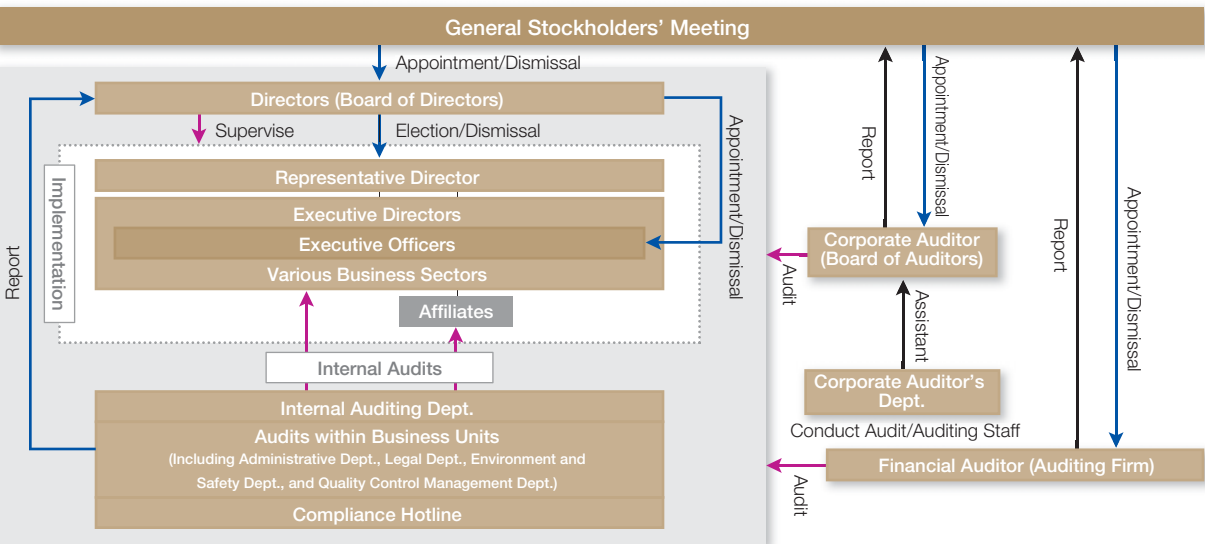
The Board of Directors similarly has two external members. We ensure management transparency by separating that board's oversight from executive implementation. On August 1, 2012, the Legal Dept., which was previously under the Administrative Dept., has been put under the direct control of President with the aim of strengthening its authority as well as broadening its functions.

The chart below shows our corporate governance structure, including the Internal Auditing System

Management Committee

DENKA established the Management Committee, which is composed of directors, corporate auditors and some executive

Corporate Governance Overview



officers, to streamline and accelerate deliberation on important managerial matters. For such important matters as the drawing up of a budget and capital investment, we set up special committees or deliberative councils by function redundant.

Internal Controls

Internal control systems are fundamental to meeting society's expectations and gaining its respect. We will continue to improve our systems in line with the policies of the Board of Directors. The following outlines details of the system.

1. Board of Directors and Executive Officers

Two of our ten directors are external. In April 2008, we reformed this body to separate oversight and implementation by eliminating ranks within the board while reinforcing its supervisory functions. The Board of Directors appoints executive officers to run operations under the leadership of the president. The abovementioned two external Directors and two independent Auditors are appointed as independent directors/auditors under the rules of Tokyo Stock Exchange Group, Inc.

2. Internal Auditing System

The Internal Auditing Department conducts our in-house checks, with assistance from the Legal, Environment and Safety, and Quality Control Management departments. It also works closely with the Product Liability, Responsible Care and other committees based on their specific functions. Each department and committee collaborates to educate on legislation and

audit operations. The results are reported to the Board of Directors as needed.

We inaugurated the Compliance Hotline System supplement internal audits by swift identifying and addressing any violations (see page 2).

3. Internal Controls Reporting System

This system under Japan's Financial Services and Exchange Act aims to ensure that financial statements are reliable.

We conduct checks of Groupwide business procedures to reduce mistakes and possible risks in keeping with the implementation standards of this system, swiftly addressing any problems that are discovered. We issued an internal control report following the system's implementation in fiscal 2008. In fiscal 2011, this document declared the effectiveness of our internal controls based on an evaluation in line with assessment standards for generally accepted financial reports.

An independent accounting firm (ERNST & YOUNG SHINNIHON LLC) audited our report and determined that all significant aspects of our disclosure were proper. We will continue to maintain internal controls for the purpose of ensuring the reliability of our financial reports.

Compliance

Compliance is essential for sustainable growth. We accordingly adhere to internal rules and legislation and refrain from acts that violate moral and ethical norms. In 2002, we codified conduct standards in the DENKA Group Ethics Policy.

We established the Ethics Committee, which the president chairs, to oversee compliance and enforce the policy. We adopted compliance policies for the Legal, Environmental and Safety, Intellectual Property and other departments.

We educate employees on compliance through programs run by the Human Resources Development Center.

Compliance Hotline System

This system covers any shortfalls in our internal control and compliance systems by enabling us to fix organizational problems that may arise. We set up the Compliance Hotline in keeping with the DENKA Group Ethics Policy.

The hotline accepts calls on actions that may or do violate that policy. The Ethics Committee quickly addresses reports.

The hotline's mandate is to be fair and swift. It receives reports from the Corporate Auditors' Office and the labor union, which operate independently, as well as from the Ethics Committee Administrative Office and general affairs sections within all offices. People can send reports to an external law firm. They can also e-mail reports to internal auditors. During fiscal 2011, we received two reports.

The DENKA Group Ethics Policy specifically safeguards whistleblowers from discrimination and mistreatment.

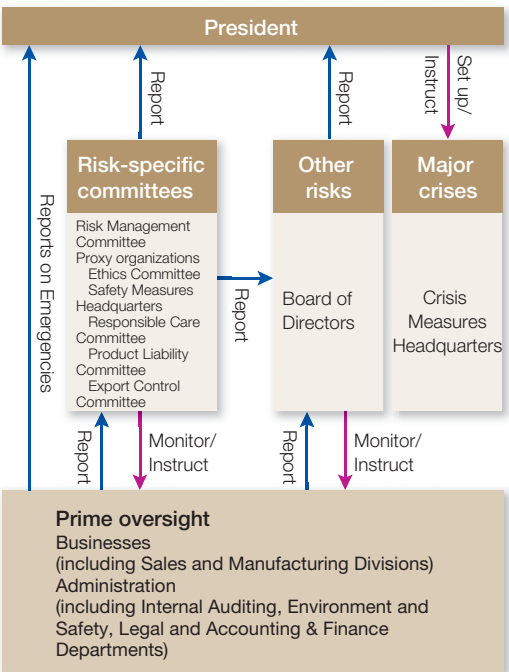
Risk Management

It is important to understand the diverse and numerous hazards of corporate activities through proper risk control.

In general, each business unit is responsible for identifying and managing its specific risks. To handle environmental, safety, product liability and export control issues that affect the entire Company, we maintain special sections and permanent committees and have also appointed a team of specialists to audit our Group subsidiaries.

We formulated our Risk Management Guidelines to comprehensively tackle incidents that greatly affect corporate activities. We also set up the Crisis Measures Headquarters and the permanent Risk Management Committee.

Risk Management Overview



The DENKA Group Guidelines

Based on our corporate philosophy, “to become a company that creates new value from resources by fully employing our technological capabilities,” the DENKA Group established CSR action guidelines.

1. We will promote sustainable social and business development out of a conviction that corporate social responsibility is the essence of business.
2. While constantly ensuring quality to maintain customer trust, we will contribute to sound social progress by developing and supplying products and services that are safe and environment friendly.
3. We will operate fairly.
4. We will maintain a good level of communication with society and disclose appropriate information.
5. We will comply with laws and regulations and operate fairly according to social norms.
6. We will maintain safe, clean and comfortable workplaces and respect all basic human rights.
7. We will use, reuse and recycle resources to help protect the environment.
8. We will maintain security and disaster prevention measures, participate in environmental protection activities and communicate with society.
9. We will contribute to society as a good corporate citizen.
10. We will contribute to social development as a good member of the global community.

Established in April 1, 2007

Information Management/System Administration/Response to Insider Trading-Related Regulations

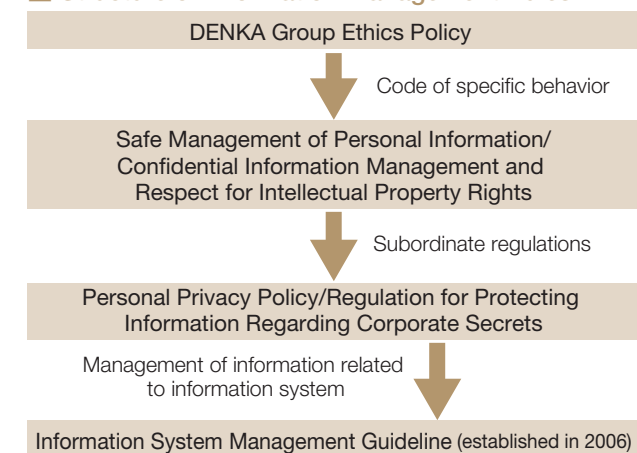
DENKA Will Secure Information Security through Appropriate Control

Information Control

The DENKA Group Ethics Policy established in 2002 includes a code of specific behavior that encompasses guidelines under the headings the Safe Management of Personal Information and Confidential Information Management and Respect for Intellectual Property Rights, both of which are strictly complied with. As subordinate regulations of these guidelines, DENKA established and developed the Personal Privacy Policy and the Regulation for Protecting Information regarding Corporate Secrets, which are thoroughly disseminated through lectures and in-house newsletters.

Furthermore, DENKA strictly manages and respectfully handles confidential information provided by third parties in accordance with the DENKA Group Ethics Policy.

Structure of Information Management Rules



Lectures on Information Control

To disseminate in-house rules pertaining to information control, our information technology specialist course provides training on the Information System Management Guidelines and basic rules.

The course is provided annually at the Headquarters as well as each branch and plant. With classes of about 10 employees, the course aims to ensure the adoption of proper information control methods through practical training as well as active discussion.

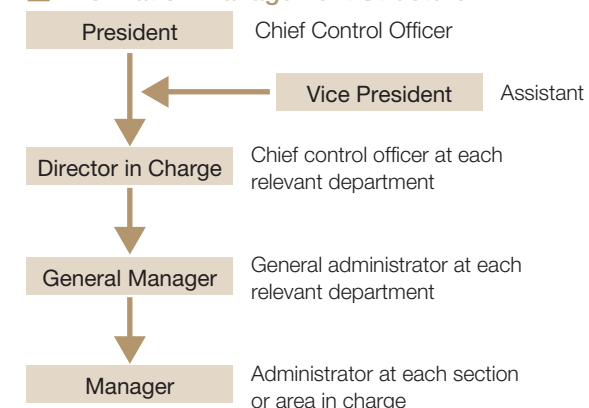


Lesson on information control (Headquarters: May 22, 2012)

Management of Information Related to the Information System

In recent years, the volume of information digitally processed by the Group's information system has been rapidly expanding on the back of drastic advances in IT technologies. Accordingly, it is increasingly important to secure our information management system. DENKA set up the Information System Management Guidelines in 2006 and the Information System Work Manual in 2008 based on the Regulation for Protecting Information regarding Corporate Secrets. In cooperation with managers and persons in charge at each relevant department, we are appropriately handling digitized information.

Information Management Structure



Lectures on Insider Trading

Since the introduction of the surcharge system in 2005, regulations have been tightened to detect insider trading. It is exceedingly important to accurately understand relevant regulations and comply with in-house rules to prevent the occurrence of insider trading. Understanding this, DENKA is holding lectures on regulations pertaining to insider trading for General Managers and Managers assigned to the Headquarters, the Central Research Institute and plants, aiming to regularly reconfirm their awareness of such regulations as well as of relevant in-house rules.

Breakdown of Consolidated Net Sales by Principal Business Segment

The percentages of fiscal 2011 consolidated net sales accounted for by each principal business segment and summaries of their operations are as follows.

Organic Materials

Percentage of consolidated net sales in fiscal 2011

44.8%

Main products: Resin raw materials, synthetic resins, acetate acid products, synthetic rubber

Styrene monomers recorded higher revenue due to sales price revisions in response to rising raw fuel prices. However, ABS resin and transparent resins experienced decreases in revenue in line with lower domestic and export sales volumes. In addition, sales of CLEAREN, a specialty resin, remained on par with the previous fiscal year. DENKA's Singapore based subsidiary, Denka Singapore Pte. Ltd., recorded a rise in revenue owing to firm sales of polystyrene resin and other products.

Despite a decrease in sales volume caused by sluggish demand in China and the rest of Asia during the second half of fiscal 2011, chloroprene rubber experienced an upswing in revenue thanks to efforts to adjust sales prices.

Inorganic Materials

Percentage of consolidated net sales in fiscal 2011

13.3%

Main products: Fertilizers, inorganic chemicals, cement, special cement additives

Fertilizers recorded an increase in revenue due to a rise in sales volume. This was mainly attributable to a rise in the shipment of the Company's products being substituted for competitors' products following the Great East Japan Earthquake. Although the sales volume and net sales of fire-resistant materials, steel materials and cement remained unchanged from the previous fiscal year, special cement additives experienced lower sales volume and a fall in revenue due to a decline in major construction projects.

Electronic Materials

Percentage of consolidated net sales in fiscal 2011

11.9%

Main products: Electronic materials, electronic packaging, functional ceramics, adhesives

Electronic circuit substrates enjoyed higher revenue due to increased sales volume related to electric trains. However, spherical fused filler for semiconductor sealant fillers and electronic packaging (including DENKA THERMOSHEET EC for electronic components and semiconductor transportation) experienced lower revenue due to a fall in sales volumes accompanying stagnant demand in the second half.

Sales of ALONBRIGHT, a SiAlON Phosphor used in LEDs, and the highly functional adhesive HARDLOC remained virtually unchanged from the previous fiscal year.

Functional Materials and Plastics

Percentage of consolidated net sales in fiscal 2011

20.9%

Main products: Food packaging, construction materials, industrial materials and pharmaceuticals

Sales of plastic rain gutters and agricultural- and construction-use corrugated piping were steady. Also, higher revenue was recorded for TOYOKALON synthetic wig fibers due to robust exports to Africa. On the other hand, revenue from the weather-resistant, fluorine-alloy film DX FILM stagnated, reflecting declining demand for solar cells in Europe.

Sales of food packaging sheets were firm. In addition, sales of products made from food packaging sheets by the Company's subsidiary, DENKA Polymer Co., Ltd., were brisk.

In pharmaceuticals, the sales volume of high-molecular sodium hyaluronate preparation, a product that improves joint function, remained on par with the previous fiscal year. Revenue from influenza vaccines and test kits manufactured by DENKA SEIKEN Co., Ltd. rose along with growth in sales volume.

*The percentage of net sales in the Others business segment stood at 9.1%

Research and Development Activities

We constantly reinforce our unique technologies to facilitate further improvements to our high-quality products. At the same, we focus on developing specialized, highly functional product lineups in the growing peripheral technology field, which is rooted in existing businesses; strive to rapidly meet market demands that emphasize next-generation product development; and work to position our R&D operations with the aim of achieving the early commercialization of products.

In fiscal 2011, we allocated ¥10,639 million to R&D operations, which employed 623 researchers. During fiscal 2011, we had 175 outstanding applications in Japan and registered 301 patents (including for utility models) domestically.

The following is an explanation of each business segment's research objectives, main concerns and successes in fiscal 2011.

Organic Materials

In the styrene-based functional resin segment, we are reinforcing our production technologies while enhancing product quality, focusing on such unique products as transparent resins, heat-resistant modifiers and shrink materials. In this segment we are also seeking new applications that will lead to new product development. In addition, the upgraded production capacity of our Singaporean subsidiary contributed to sales growth.

In the organic chemicals segment, we pursued expansion in both the domestic and overseas markets, focusing on strengthening chloroprene rubber, DENKA ER and acetylene black production technologies. Amid these efforts, we are placing particular emphasis on winning the top share of the global market for chloroprene rubber by developing new processes and product grades to enhance our competitive edge. We are also aiming to increase our market share of acetylene black for use in lithium-ion secondary batteries by improving its quality and suitability for such use.

In fiscal 2011, R&D investment was ¥2,385 million in this segment.

Inorganic Materials

In special cement additives, DENKA is developing new product lineups as well as technological proposals for the civil engineering and construction fields. Among existing products, we are seeking to develop the market for expansive additives in the construction field. At the same time, we are stepping up new product development and proposals related to highly specialized construction methods, which are best suited for the maintenance and repair market. We are also cultivating the market for ultra-high strength and high-durability concrete products, including fiber-reinforced concrete. Moreover, we are developing environment-friendly technologies that curb CO₂ emissions as well as products aimed at supporting the post-Great East Japan Earthquake reconstruction, for example a soil additive that strengthens weak ground.

In fertilizers and inorganic products, we focused on R&D aimed at expanding applications in such fields as automobiles while further developing alumina fiber production technologies. We are also conducting R&D of such products as alumina cement and fertilizer to strengthen our operations.

In fiscal 2011, R&D investment was ¥1,098 million in this segment.

Electronic Materials

In Electronic Materials, we are reinforcing our lineups of LED substrates and thermally conductive materials, the markets for which are expected to grow. In phosphor products, we are striving to enhance the properties of existing products while pursuing the further development of new products. In thermally conductive materials for power electronics, in addition to R&D to strengthen our competitive edge in the market, we are working to attain high-functionality products in preparation for the commercialization of SiC elements. Moreover, we are proactively investing in production facilities for newly developed products. In adhesive-related products, we are promoting product and market development for specialty functional adhesives that harness our ultraviolet light-curing technology. In particular, we are dedicating efforts to the development of processing technologies that will expand sales of TEMPLOC temporary fixing adhesive for electronic component processing.

In electronic packaging, we promote new product development aimed at meeting market needs in timely manner, focusing on tapes for transporting electronic components and adhesive tapes for protecting and fixing semiconductor wafers. This approach contributes to the expansion of our operations.

In functional ceramics, we continued to pursue higher performance in spherical fused silica for semiconductor sealants. We are also developing hexagonal boron nitride powder (h-BN) for thermal materials; functional fine particles (including nanofillers) such as spherical alumina for thermal materials and semiconductor sealants; and boron nitrate molded products for use in the semiconductor manufacturing process.

In fiscal 2011, R&D investment was ¥2,955 million in this segment.

Functional Materials and Plastics

In polymer processing products for packaging, construction and industrial use, we continued to develop such product lineups as weather-resistant films for solar cells and synthetic fibers. Taking advantage of our capabilities in adhesive coating technologies as well as film and sheet technologies, including multi-layer and profile extrusion technologies, we are driving business expansion by promoting product development that responds to market needs, working together with Group companies while seeking to better utilize the existing materials.

In pharmaceutical products, we are pursuing the development of fermented high-molecular hyaluronan as an agent that improves joint function, with the aim of expanding our share of the market. On the other hand, we are seeking other applications that exploit the characteristics of high-molecular hyaluronan.

DENKA SEIKEN Co., Ltd. is developing high-quality vaccines with excellent safety and efficiency. It also develops bacteriological diagnostic reagents to detect infectious diseases and viruses that may cause significant damage to society as well as clinical-use chemical diagnostic reagents and immunochemistry-based diagnostic reagents that are vital for health management.

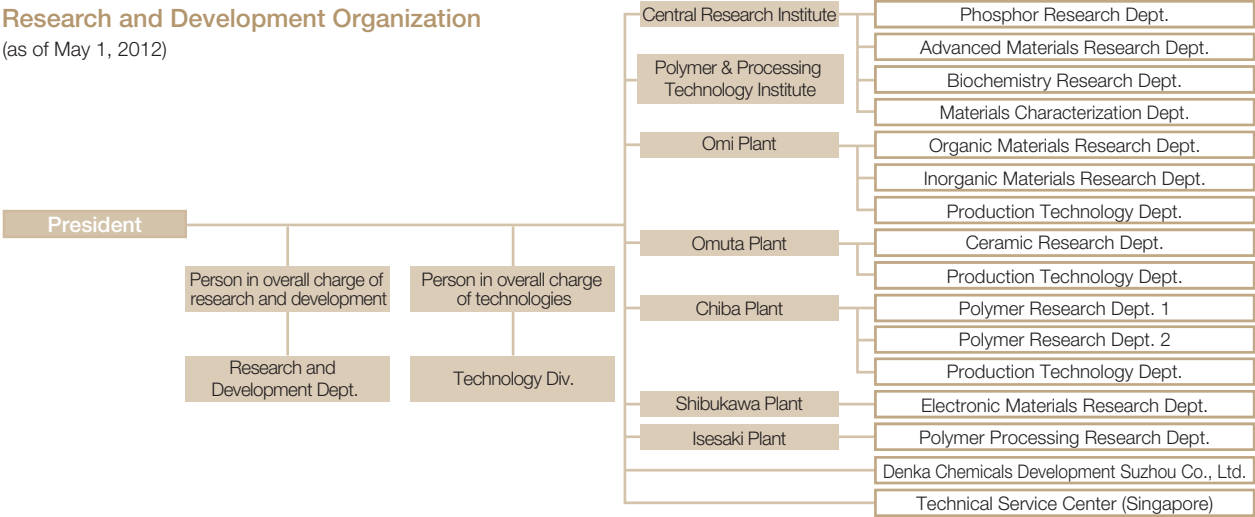
In fiscal 2011, R&D investment was ¥4,165 million in this segment.

Other Businesses

Denka Engineering Co., Ltd. designs and installs industrial equipment. Its R&D is focused on improving the efficiency of pneumatic transfer equipment for powders and wastewater treatment facilities.

In fiscal 2011, R&D investment was ¥35 million in this segment.

Research and Development Organization (as of May 1, 2012)



Financial Statements

Consolidated Balance Sheets (Summary)

Account item	Amount		Millions of yen	
	As of March 31, 2012	As of March 31, 2011		
Assets				
Current assets	¥153,637	¥143,352		
Cash and deposits	8,308	6,258		
Notes and accounts receivable, trade	78,059	75,564		
Inventories	54,527	47,622		
Other	13,162	14,348		
Allowance for doubtful accounts	(419)	(441)		
Non-current assets	248,915	258,693		
Property, plant and equipment	201,637	203,395		
Intangible fixed assets	1,770	2,749		
Investment securities	38,889	38,571		
Other	6,734	14,123		
Allowance for doubtful accounts	(116)	(146)		
Total assets	¥402,552	¥402,046		
Liabilities				
Current liabilities	¥160,676	¥153,410		
Notes and accounts payable, trade	52,367	48,364		
Short-term loans	45,323	44,632		
Commercial paper	13,000	16,000		
Current portion of corporate bonds	10,000	—		
Other current liabilities	39,985	44,414		
Long-term liabilities	69,139	80,453		
Bonds	15,000	25,000		
Long-term loans	34,725	28,929		
Other long-term liabilities	19,413	26,523		
Total liabilities	229,815	233,864		
Net Assets				
Shareholders' equity	160,228	156,645		
Capital stock	36,998	36,998		
Capital surplus	49,293	49,292		
Retained earnings	80,327	73,997		
Treasury stock	(6,390)	(3,642)		
Accumulated other comprehensive income	10,174	8,974		
Minority interests	2,334	2,561		
Total net assets	172,737	168,182		
Total liabilities and net assets	¥402,552	¥402,046		

Consolidated Statements of Income (Summary)

Account item	Amount		Millions of yen	
	Fiscal 2011	Fiscal 2010		
Net sales	¥364,712	¥357,893		
Cost of sales	291,421	281,219		
Selling, general and administrative expenses	52,576	52,054		
Operating income	20,713	24,618		
Non-operating income	2,608	3,081		
Non-operating expense	4,326	4,647		
Ordinary income	18,996	23,052		
Extraordinary losses	1,657	2,021		
Income before income taxes and minority interests	17,338	21,030		
Income taxes—current	3,801	6,385		
Income taxes—deferred	2,386	180		
Minority interests in income (loss)	(179)	108		
Net income	¥11,330	¥14,355		

Consolidated Statement of Comprehensive Income

Account item	Amount		Millions of yen	
	Fiscal 2011	Fiscal 2010		
Income before minority interests	¥11,150	¥14,463		
Other comprehensive income				
Valuation difference on available-for-sale securities	263	(521)		
Deferred gains or losses on hedges	4	(6)		
Revaluation reserve for land	1,374	—		
Foreign currency translation adjustments	(493)	(1,149)		
Share of other comprehensive income of associates accounted for using equity method	(52)	34		
Total other comprehensive income	1,095	(1,642)		
Comprehensive Income	¥12,246	¥12,821		
(Breakdown)				
Comprehensive income attributable to owners of the parent	12,439	12,697		
Comprehensive income attributable to owners of the minority interests	(193)	123		

Consolidated Statements of Shareholders' Equity for Fiscal 2011 (April 1, 2011, to March 31, 2012) Millions of yen

	Shareholders' equity				
	Common assets stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity
Balance at April 1, 2011	¥36,998	¥42,292	¥73,997	¥(3,642)	¥156,645
Changes of items during the period					
Dividends from surplus			(4,909)		(4,909)
Net income			11,330		11,330
Purchase of treasury stock				(2,749)	(2,749)
Disposal of treasury stock		0		1	1
Reversal of revaluation reserve for land			(90)		(90)
Net changes of items other than shareholders' equity					
Total changes of items during the period	—	0	6,329	(2,747)	3,582
Balance at March 31, 2012	¥36,998	¥42,293	¥80,327	¥(6,390)	¥160,228

	Accumulated other comprehensive income					Minority interests	Total net common assets
	Unrealized gain on other securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustments	Total accumulated other comprehensive income		
Balance at April 1, 2011	¥4,858	¥(6)	¥7,594	¥(3,473)	¥8,974	¥2,561	¥168,182
Changes of items during the period							
Dividends from surplus					—		(4,909)
Net income					—		11,330
Purchase of treasury stock					—		(2,749)
Disposal of treasury stock					—		1
Reversal of revaluation reserve for land			90		90		—
Net changes of items other than shareholders' equity	224	4	1,374	(493)	1,109	(227)	881
Total changes of items during the period	224	4	1,464	(493)	1,199	(227)	4,554
Balance at March 31, 2012	¥5,083	¥(1)	¥9,059	¥(3,967)	¥10,174	¥2,334	¥172,737

Consolidated Statements of Cash Flows (Summary)

Account item	Amount		Millions of yen	
	Fiscal 2011	Fiscal 2010		
Net cash provided by operating activities	¥28,521	¥ 33,780		
Net cash used in investing activities	(22,363)	(23,763)		
Net cash used in financing activities	(4,050)	(10,554)		
Effect of exchange rate changes on cash and cash equivalents	(59)	(118)		
Net increase in cash and cash equivalents	2,047	(655)		
Cash and cash equivalents at the beginning of the year	6,160	6,815		
Cash and cash equivalents at the end of the year	8,207	6,160		

Promoting Rationalization in Logistics to Reduce CO₂ Emissions

■ Response to the Law Concerning the Rational Use of Energy

As a designated shipper, we are dedicated to enhancing cargo transportation efficiency as well as the quality of our logistic operations. Going beyond the reduction of CO₂ emissions, we constantly work to secure a more than 1% per year reduction in energy consumption on the basis of energy consumption intensity, an index defined by the Revised Law Concerning the Rational Use of Energy. To this end, activities involving such bodies as the RC Promotion Committee and the Export and Logistics Improvement Subcommittee are undertaken Companywide at the initiative of the Logistics Department.

Specifically, our activities include reviewing distribution operations undertaken within each plant's premises, restructuring redundant modes of transportation and distribution, expanding the use of container transportation provided by Japan Railways, promoting the shipment of cargo for export from ports in the vicinity of our plants and helping affiliates improve their logistics operations.

In fiscal 2011, the CO₂ emissions volume was down 12,900 tons compared with the fiscal 2007 level to 34,700 tons (total

transportation volume: 521 million ton/kilometers). Nevertheless, in the five years since fiscal 2007 DENKA's energy consumption intensity deteriorated slightly due to a decrease in shipments of such high transportation efficiency items as cement and acetic acid.

Looking ahead, we will further promote energy savings through consumption reduction calculated on the basis of consumption intensity by comprehensively strengthening our logistic capabilities while pursuing the reduction of overall CO₂ emissions.

■ Energy Saving Status

	2007	2008	2009	2010	2011	Five-year average (FY)
Transportation volume (1000t-km)	797,452	831,227	618,865	605,609	521,131	—
Energy consumption intensity (amounts converted into crude oil equivalent and divided by cargo volume)	0.0224	0.0217	0.0240	0.0239	0.0250	—
Previous fiscal year	—	97.1%	110.3%	99.6%	104.8%	102.8%
CO ₂ emissions (t-CO ₂)	47,500	48,300	39,500	38,500	34,700	—

■ Safety Measures in Distribution Operations

As one of our attempts for implementing better safety measures in distribution at each plant, we installed safety lines for fall prevention and safety platforms to ensure the safety of workers loading trucks.

The safety lines installed in exterior areas help prevent fall injuries among employees working in high places, such as on top of a possibly unstable stack of products. The safety lines used in interior spaces, on the other hand aim to secure the safety of workers loading of cardboard boxed products onto trucks.

Moreover, safety platforms enable employees to work from the same level as the truck bed when loading. This helps to decrease strain on workers while preventing injuries.



Safety line in action (outdoor)



Safety platform

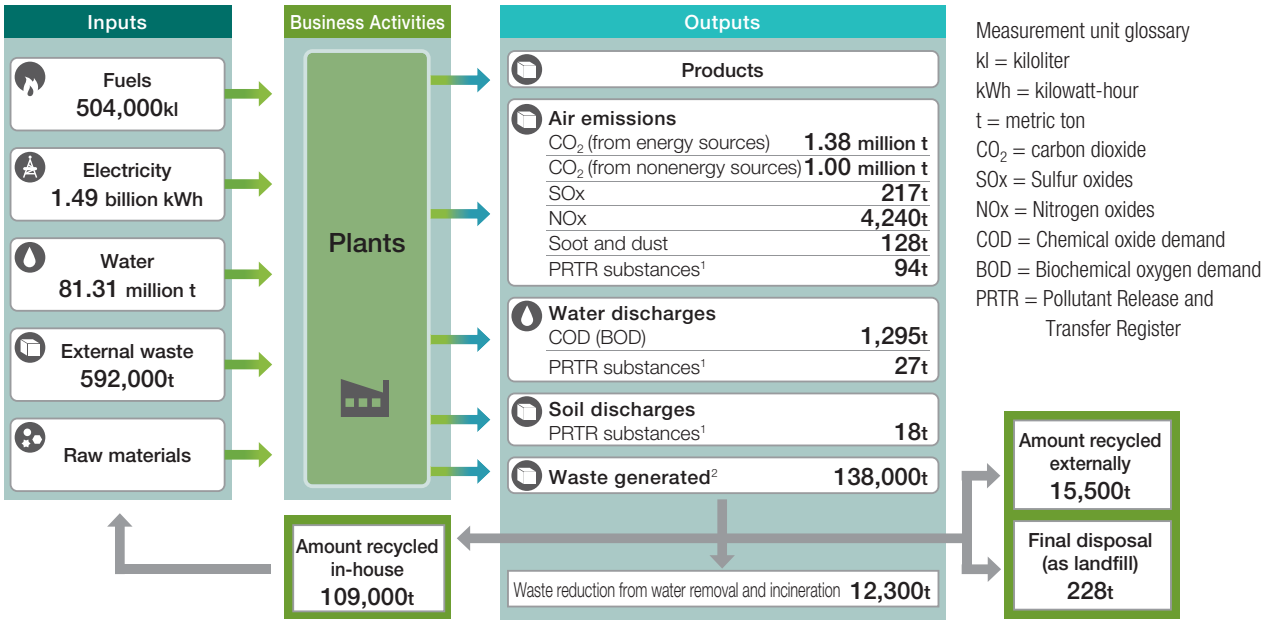
A safety platform in use



Safety lines (indoor)

■ Overview of Environmental Burdens

The main environmental impact totals of all business sites for fiscal 2011 are shown below.



This environmental impact data encompasses DENKA's plants and main affiliates within those facilities.

Main affiliates
Omi Plant: Denal Silane Co., Ltd. / Denak Co., Ltd. / JUZEN Chemical Corporation
Chiba Plant: Chiba Styrene Monomer Ltd., TOYO STYRENE Co., Ltd., Taiyo Vinyl Corp.

¹ PRTR substances: Excluding those from TOYO STYRENE Co., Ltd. and Taiyo Vinyl Corp. inside the Chiba Plant
² Waste generated: Excluding that from TOYO STYRENE Co., Ltd. inside the Chiba Plant

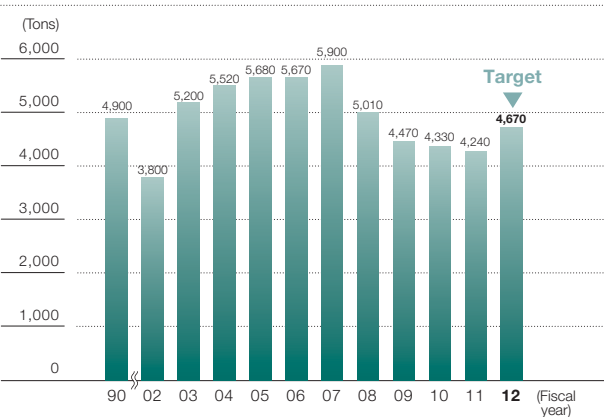
- | Explanation of Input | Explanation of Output |
|---|--|
| ▶ Fuels are the sum of all fuels used at each business site, converted into crude oil equivalents on a calorie basis. They include fuels for in-house power plants. | ▶ With regard to CO ₂ emissions from energy sources, the total represents emissions from in-house fuel production and from electricity purchases. |
| | ▶ CO ₂ emissions from nonenergy sources cover mainly that portion that is derived from raw materials. |
| | ▶ COD is the BOD discharge into rivers converted into COD values. |
| | ▶ External waste recycling covers materials converted externally into resources or fuel. |
| | ▶ Final disposal refers to material buried on Company premises or at external landfill sites. |
| | ▶ Waste reductions are mainly from incineration. |

DENKA strives to reduce the emission of substances and waste generated by its production activities while pursuing the appropriate treatment of such emissions.

Emissions

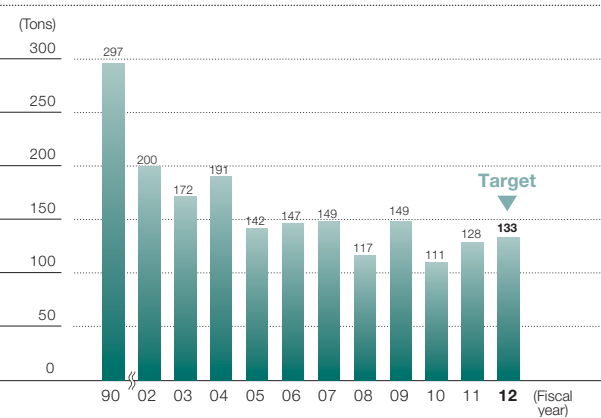
Nitrogen Oxide (NOx)

Declined approximately 2% year on year, reflecting such factors as decreased production of fused silica.



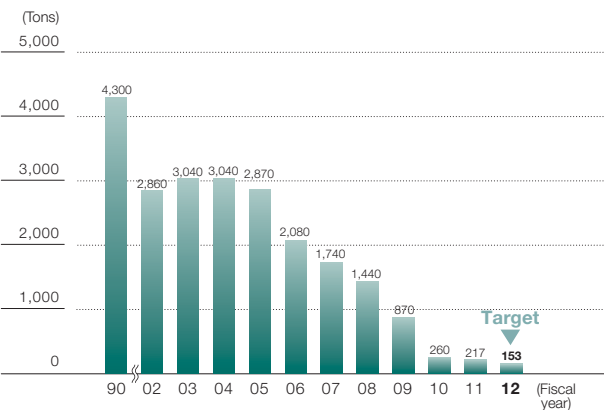
Soot and Dust

Increased approximately 15% year on year due to an increase in the amount of waste materials accepted for cement recycling that caused the filtering efficiency of dust collecting machines to deteriorate. We will work to improve the figure by adjusting and optimizing such machines.



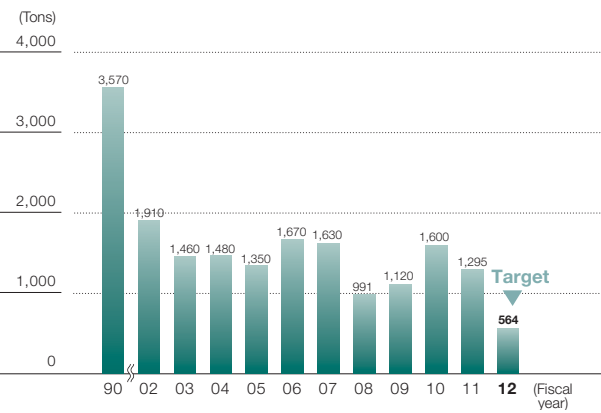
Sulfur Oxide (SOx)

Decreased approximately 15% year on year thanks to the changeover of fuel from heavy oil to natural gas that has no sulfur content. We will strive for further reduction toward the goal for fiscal 2012.



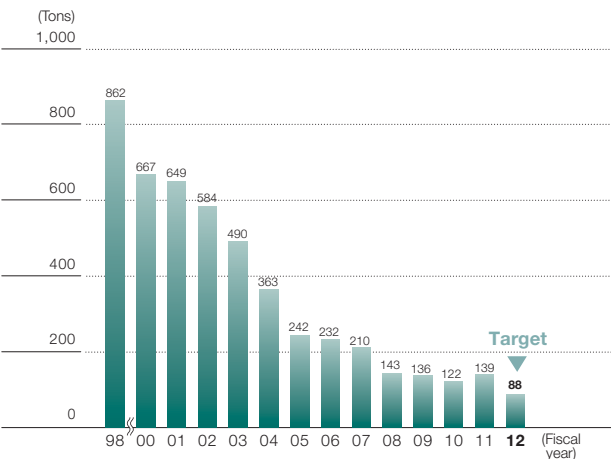
Chemical and Biochemical Oxygen Demand (COD (BOD))

Decreased approximately 19% year on year due to the adjustment of water treatment facility operations. Looking ahead, our plans call for augmenting the capacity of such facilities.



PRTR Substances Emissions

Successfully decreased on schedule thanks to analysis of causes of emissions, efficient countermeasures figured out and undertaken based on said analysis that involved installment of new facilities. Due to the one-time only landfill disposal of 18 tons of such substances, however, the volume increased 27 tons year on year. Looking ahead, in fiscal 2012 we will focus our efforts on decreasing substances that are emitted in relatively larger volumes.



Fiscal 2011 Substance Emissions and Transfers

The following table shows PRTR registered substances emitted and transferred in amounts exceeding one ton.

PRTR substances	Emissions					Amount transferred
	Air	Water	Soil	Landfill	Total	
n-Butyl acrylate	0	0	0	0	0	2
Acrylonitrile	2	0	0	0	2	11
Acetaldehyde	2	9	0	0	11	0
Aniline	0	0	0	0	0	7
Ethyl benzene	3	0	0	0	3	48
Ferric chloride	0	0	0	0	0	50
Calcium cyanamide	0	0	0	18	18	35
Vinyl acetate	16	0	0	0	16	0
Dimethyl formamide	0	0	0	0	0	31
Styrene	27	0	0	0	27	135
Water soluble copper salt (excluding complex salt)	0	4	0	0	4	0
Toluene	38	1	0	0	39	34
Carbon disulfide	2	0	0	0	2	0
Hydroquinone	0	2	0	0	2	0
Bis (2-ethylhexyl) phthalate	0	0	0	0	0	1
Hydrogen fluoride and its water soluble salts	1	0	0	0	1	26
Boron and boron compounds	0	12	0	0	12	20
2-ethylhexyl methacrylate	0	0	0	0	0	1
Methyl methacrylate	2	0	0	0	2	14
Total	92	27	0	18	139	413
Dioxins (mg-TEQ) (see note)	0	4	0	0	4	0

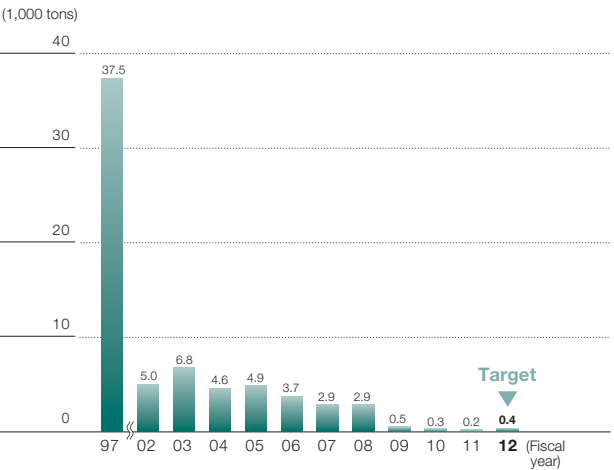
Units: tons (excluding dioxins)

Waste

Changes in the amount of waste for final disposal

Decreased 25% year on year thanks to waste reduction efforts implemented at each plant. The overall consolidated emissions improved significantly to 0.17% from 0.27% in fiscal 2010, maintaining the status of zero emissions (DENKA's definition*). We will strive to further reduce the waste.

*final disposal amount/amount of waste generated × 100<1



Utilization of Environment-Related Subsidies

Developing technologies that reduce environmental burden and energy consumption through the proactive utilization of the subsidy system

Fiscal 2011 Project Gained Approval for Subsidies

As part of its activities to reduce environmental burden as well as energy consumption, DENKA actively utilizes a subsidy system established by the Japanese Ministry of Environment and the Ministry of Economy, Trade and Industry. In fiscal 2010 and 2011, we received approval for four subsidies.

1. Japan's Voluntary Emissions Trading Scheme (JVETS)

The Shibukawa Plant has been granted a subsidy by the Ministry of Environment covering the cost of installing low-carbon equipment. In fiscal 2011, the plant achieved a 2,407 tons reduction in CO₂ emissions, which considerably exceeded the target for the year and entitled the plant to CO₂ emission credits.

2. Developing a Technological Foundation That Will Promote the Establishment of a Next-Generation Recycling-Oriented Society

Receiving a subsidy from the Ministry of Environment to develop a technological foundation for next-generation recycling, the Omuta Plant is promoting the development of a method to recycle slacked lime, a byproduct of acetylene manufacture, into calcium carbide.

3. Subsidies Supporting Businesses' Energy Consumption Rationalization (Omi and Chiba Plants)

To promote energy-saving initiatives, both plants are receiving subsidies from the Ministry of Economy, Trade and Industry through the Sustainable open Innovation Initiative.

The Omi Plant's cement section decreased annual energy consumption by 2,252kl, well in excess of its target.

The Chiba Plant is participating in an energy-saving program for petrochemical plants that utilizes the latest technologies, aiming to reduce annual consumption by 3,342kl.

Continuing to proactively implement energy-saving initiatives in fiscal 2012, these plants are applying to another subsidy program that requires a further 2,012kl annual reduction.

Environmental Accounting

We apply environmental accounting covering investments and spending and their environmental and economic effects

Conservation Costs

In fiscal 2011, research and development spending focused on developing energy saving-related products accounted for approximately 70% of environmental investments, with initiatives for environmental burden reduction representing another approximately 22%.

Coverage: Plants and Research Institutes

Category	Details	Conservation costs (millions of yen)	
		Investments	Expenses
1. Business site costs	(Subtotal)	784	2,500
(1) Pollution prevention	Environmental burden reduction measures	587	1,983
(2) Conservation	Conserving energy	84	79
(3) Recycling resources	Using resources effectively	113	438
2. Upstream and downstream costs	Changing raw materials	0	0
3. Administrative costs	Environmental education	0	23
4. R&D costs	Products that contribute to energy saving	1,914	2,313
5. Social activity costs	Environmental education	0	6
6. Environmental damage costs	Community relations	0	110
7. Others		0	41
Total		2,697	4,994

In fiscal 2011, research and development spending increased due to investments in energy saving-related projects, including the development of phosphor for use in white LEDs; thermal materials; and carbon black for lithium-ion secondary batteries.

Conservation Effects

We calculated the environmental load data.

△: Increase

Environmental load	Units	Fiscal 2010 results	Fiscal 2011 results	Effects
CO ₂ emissions (from energy and non-energy sources)	10,000 t	247	237	10
SOx emissions	t	257	217	40
NOx emissions	t	4,320	4,240	80
Soot and dust emissions	t	111	128	△ 17
COD (BOD) discharges	t	1,600	1,295	305
Water used	1,000m ³	80,400	81,300	△ 900
PRTR substance emissions	t	122	139	△ 17
Waste	1,000 t	112	138	△ 26
Final waste disposal	t	304	228	76
CO ₂ emissions from transportation	1,000 t	39	35	4

Soot and dust emissions increased in fiscal 2011, reflecting such factors as the degradation in the quality of heavy oil used in boilers due to the impact of the Great East Japan Earthquake. Another factor contributing to the increase was a rise in the amount of waste materials accepted at cement plants for recycling. This caused the filtering efficiency of our dust collecting machines to deteriorate and soot and dust emissions therefore increased. On the other hand, COD (BOD) emissions decreased by approximately 20% year on year due to the augmented operation of water treatment facilities (constantly monitored for TOD*). However, plans call for the expansion of such facilities as we expect that demand for our water treatment capability will further increase.

*Total Oxygen Demand

Economic Effects

We calculated proceeds from selling waste, energy savings, reductions in waste treatment costs and yield improvements.

△: Increase

Category	Item	Details	Effects (millions of yen)
Profits	Proceeds from selling waste from core operations and income from recycling waste	Sales profits	387
Cost reductions	Lowering energy costs by conserving energy	Conserving energy	214
	Reducing waste treatment costs by conserving or recycling resources	Using resources effectively	57
Total			658

Due to the increase in the amount of waste that was internally recycled, proceeds from the sale of waste decreased.

Occupational Safety and Health Management System

We endeavor to maintain safe and comfortable workplaces.

Occupational Safety and Health Management System

DENKA conducts risk assessment to monitor the degree of risk at each plant.

Based on assessment results, we comprehensively manage risks and implement improvements. The status of certification acquisition from external institutions is as follows.

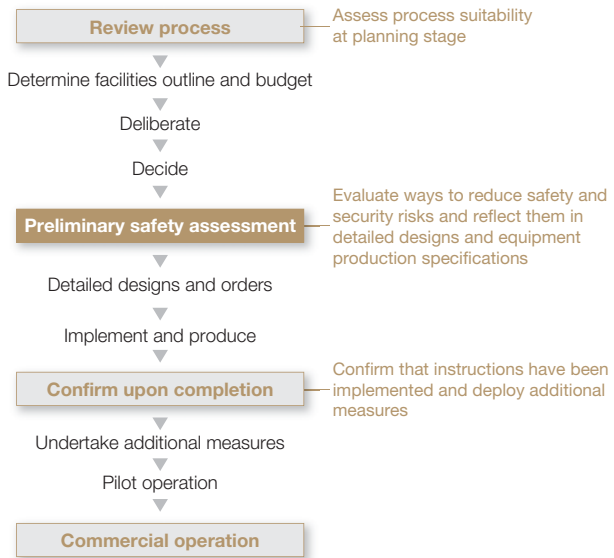
Plant Name	Certification System	Certification Number	Acquisition Date
Chiba Plant	OHSAS18001	1026525	February 6, 2007
Omi Plant	OSHMS	10-15-6	March 8, 2010
DSPL Seraya Plant	OHSAS18001	SNG6011133	January 23, 2011

Change Management

This encompasses establishing rules to assess risks and implement measures where needed for changes in the 4Ms* during production. Preliminary safety assessments are important when building plants that use new processes. Change management comes into play when we upgrade or modify facilities. Facilities and operations departments conduct preliminary safety assessments and gather with in-house third parties to discuss risks relating to fires, explosions and worker safety.

In particular, we emphasize preventing key lapses in areas concerning disaster prevention and occupational health.

* The 4Ms: man, machines (facilities, equipment, tools), materials (raw materials and components) and methods (including work methods/operations, processing conditions and formulas)



ISO 14001 and 9001 Management System

We are pursuing ongoing improvement based on our quality and environmental management systems.

Status of ISO Certification Acquisition

We secured the following ISO certifications in fiscal 2011:

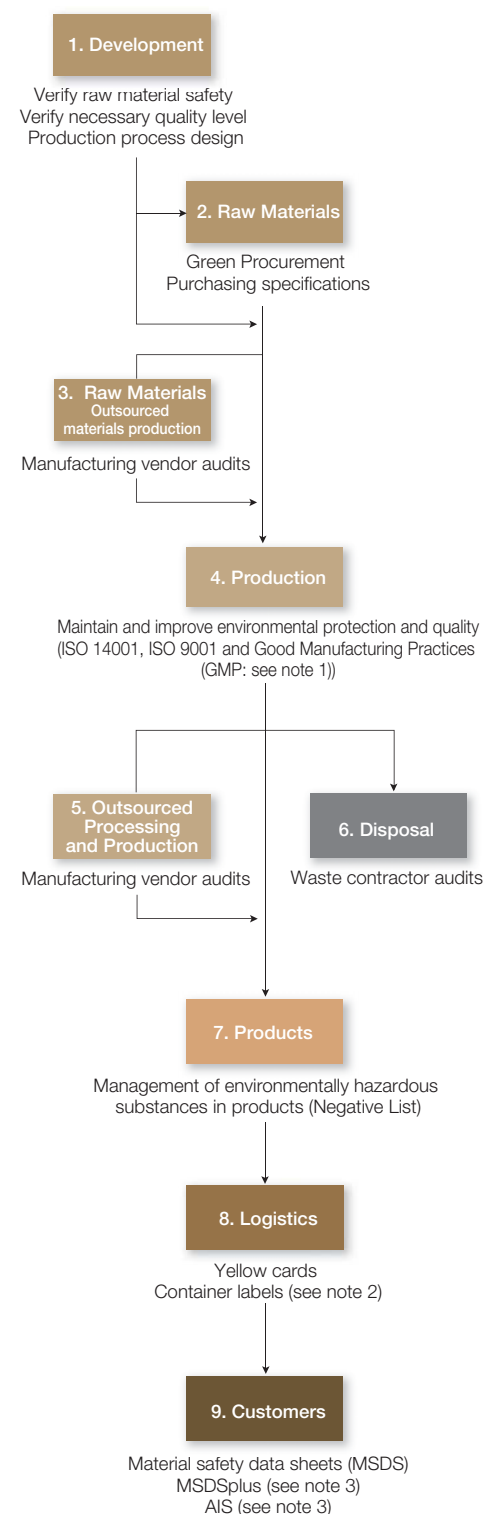
	ISO 14001 (Environment)		ISO 9001 (Quality)		
	Date certified	Registration number	Date certified	Registration number	Products covered
Omi Plant	October 16, 1999	2661116-2A (BV)	August 19, 1994	1281435 (BV)	Chloroprene, acetaldehyde, POVAL, ASR, SAKNOHOL, butyral, special cement additives, cement, alumina fiber, monochloro acetic acid, sodium monochloroacetate, caustic soda, monosilane, dichlorosilane, hexachlorodisilane
Omuta Plant	October 28, 2000	1170995 (BV)	November 7, 1998	1897810 (BV)	Fused silica, special cement additives, nitride powder, ceramic substrates, steel additives, acetylene black, calcium aluminate cement, FIRELEN, boron, boron carbide powder, thermally conductive materials, heat sinks, phosphor
Chiba Plant	May 31, 1999	180943 (BV)	March 22, 1995	155885 (BV)	Polystyrene, acrylonitrile styrene resins, methyl methacrylate styrene resins, methacrylate-butadiene-styrene resins, methacrylate acrylonitrile butadiene styrene resins, acrylonitrile butadiene styrene resins, styrene-maleimide copolymers, styrene-butadiene copolymers, vinyl acetate, ethylene vinyl acetate copolymers, acrylic rubber, polystyrene sheet, acetic acid, styrene monomer, toluene, ethyl benzene, rain gutters, vinyl tape, corrugated pipes, duct hosing, wall ducts, polyvinyl chloride
Shibukawa Plant	May 21, 2001	1527443 (BV)	October 23, 1996	1957684 (BV)	Metal substrates, adhesives, emitters, thermally conductive spacers, thermally conductive adhesive sheets, electromagnetic shields, Elegrip Tape
Ofuna Plant	November 9, 2001	JQA-EM1895 (JQA)	October 25, 1996	JQA-1429 (JQA)	Packaging tape, plastic films, polyvinyl chloride fibers
Isesaki Plant	September 30, 2003	1090712 (BV)	February 28, 2008	1679787 (BV)	Stretch films, food packaging sheets, electronic packaging sheets, cover tapes, DX FILMs
Central Research Institute	July 5, 2004	1491430 (BV)	—	—	—
DSPL Merbau Plant	June 8, 2001	SNG0190016 (Lloyd's)	November 29, 2000	SNG0160194 (Lloyd's)	Acetylene black
DSPL Seraya Plant	May 28, 2003	SNG0190023 (Lloyd's)	September 27, 2001	SNG0160242 (Lloyd's)	Polystyrene, methyl methacrylate styrene resins, styrene-butadiene copolymers
DAPL Tuas Plant	March, 2003	2003-0194 (PSB)	April, 2000	99-2-0984 (PSB)	Manufacture of fused silica filler
Denka Advanced Materials (Suzhou) Co., Ltd.	May 20, 2008	310092-UK (BV)	September 19, 2007	273428 (BV)	Electronic packaging sheets, cover tapes
DENKA Polymer Co., Ltd.	—	—	September 14, 2001	C2010-01748 (PJR)	Plastic food packaging and plastic sheets
DENKA SEIKEN Co., Ltd.	June 23, 2000	2737475 (BV)	July 13, 2005	12 100 25631 TMS (TUV)	Clinical chemistry diagnostic reagents, immunological diagnostic reagents, bacteriological and virological diagnostic reagents, sterile cotton swabs
CRK Corporation	—	—	November 19, 2009	1069716 (BV)	Rubber compounds, rubber tape, rubber molding

DSPL: Denka Singapore Pte., Ltd.
DAPL: DENKA Advantech Pte., Ltd.

We thoroughly undertake management operations that fully consider safety, environmental protection and quality in all our processes, from raw materials procurement to research, production, logistics, consumption and disposal.

■ Product Safety Management

Materials Safety and Management Flowchart



We ensure product safety at each phase—from development, production and use by customers—while focusing on maintaining and improving quality.

1. Verify the Safety of Raw Materials and Necessary Quality Level and Engage in Production Process Design

We select and use raw materials for which safety can be verified while developing products that conform with customer and legal demands. We establish production processes that ensure consistent quality and thus trust in the products we develop.

2. Green Procurement /Purchasing Specifications

We purchase and use raw materials based on the Negative List, which takes into consideration Japanese and international environmental management regulations, as well as purchasing specifications that outline the required characteristics of purchased raw materials. Consequently, we are striving to manufacture superior products from quality raw materials and production processes.

3&5. Manufacturing Vendor Audits

We outsource some raw materials production processes and the manufacture of semi-processed goods. We regularly audit manufacturing vendors based on our in-house standards for quality, logistics, environmental management and product safety.

4. Maintain/Improve the Environmental Protection and Quality

We are undertaking environmental and quality management operations; gradually expanding the scope of our efforts to include new products; and working to maintain and improve quality, environmental protection and safety.

6. Waste Contractor Audits

We commission waste contractors in line with the Waste Management and Public Cleansing Law, requiring them to issue manifests and confirm collection. We regularly evaluate the operations and financial positions of these vendors and visit their waste processing sites.

7. Management of Environmentally Hazardous Substances in Products

We established the Negative List, which lists substances that are considered to be harmful to people and the environment. We are taking steps to ensure product quality and safety while reducing environmental load by placing restrictions on usage during the raw material phase and by decreasing the residual volume of harmful substances in our products. The Central Research Institute (which is in charge of certifying measurements) analyzes the amount of residual substances harmful to the environment contained within raw materials and products. Analytical data on items that do not meet regulatory standards is shared with the production, sales, and analysis and product management departments.

8. Displaying Yellow Cards and Yellow Card Container Labels

We require drivers to carry yellow cards that explain post-accident procedures. We also label containers to ensure swift and proper remediation. We regularly inform drivers of our requirements and conduct emergency drills.

9. Material Safety Data Sheets (MSDS)

We produce these sheets for all products to ensure proper handling according to physical and chemical hazards and health and environmental risks. The sheets inform customers and help educate employees. We have begun disseminating information on environmentally hazardous substances contained in our products to customers through the MSDS plus—which supplements information conveyed on MSDS sheets—and Article Information Sheet systems.

■ Collaborating in Chemical Industry Initiatives

● High Production Volume Program (HPV)

Through the HPV Program, we and other companies collaborate under the auspices of the International Council of Chemical Associations to evaluate the safety of around 1,000 substances that the Organisation for Economic Co-operation and Development has designated.

● Japan Challenge Program

Under this program, manufacturers are working with the Ministry of Health, Labour and Welfare, the Ministry of Economy, Trade and Industry and the Ministry of the Environment to collect, assess and disclose safety information on around 700 chemical substances. We are participating in areas of the program that relate the substances that we use.

● Long-Range Research Initiative

The Japan Chemical Industry Association, the American Chemistry Council and the European Chemical Industry Council oversee this program. The program entails conducting long-term basic research to correctly determine if and/or in what manner chemical substances affect human health and the environment. Currently, these bodies are engaged in long-term basic studies of such issues as ecological (environmental) toxicity due to exposure to chemical substances, neural toxicity and cancer caused by exposure to toxic chemicals, and endocrine hypersensitivity due to exposure to chemical substances. As we did in fiscal 2010, we fully cooperated in the implementation of this program in the year under review.

Notes 1. Good Manufacturing Practices (GMP) refers to standards that Japan's Ministry of Health, Labour and Welfare established in its Ministerial Ordinance on Standards for Manufacturing Control and Quality Control for Drugs and Quasi-drugs.

2. The Japan Chemical Industry Association created a labeling format to augment the Yellow Card system. The labels present emergency guideline numbers and United Nations identification numbers for different chemicals transported in relatively small amounts on the same vehicle. The labels aid in the proper handling of these chemicals in emergencies.

3. The Joint Article Management Promotion-consortium (JAMP)'s* Material Safety Data System plus (MSDSplus) and Article Information Sheet systems provide standardized formats for presenting information on substances subject to management. MSDSplus is mainly for substances and agents that are upstream in the supply chain. Article manufacturers produce Article Information Sheets based on that information. JAMP aims to spread its systems throughout Japan and Southeast Asia.

* JAMP is a cross-industry association established in Japan in 2006 to encourage companies to properly manage information on substances and compounds as well as on chemical substances in parts, plastics and other articles. JAMP also establishes mechanisms to disclose and present information on supply-chain products.

DENKA is Promoting the Development of Environment-Friendly Products in All Business Areas

Category	Business Department	Product Name	Application	Details of Contribution Effects
1	CO ₂ emissions reduction in manufacturing process	Organic Chemicals Dept. Acetylene black (AB)	Tire bladders	Incorporated in bladders used in the manufacturing (vulcanization) of tires to improve heat conductivity and thus shorten vulcanization time (contributing to energy conservation)
		Special Cement Additives Dept. CO ₂ -SUICOM	Concrete precast products	CO ₂ -SUICOM supplemented with γ 2CaO•SiO ₂ undergoes carbonization processing in its production process. As it absorbs CO ₂ during this process, it contributes to CO ₂ reduction. Moreover, as γ 2CaO•SiO ₂ uses slaked lime instead of limestone, even at the raw material stage no CO ₂ is generated.
2	Materials and technologies that support environment-friendly products	Organic Chemicals Dept. Chloroprene rubber (CR)	1) Gaskets for photovoltaic panels	Potential for use in roof panel gaskets, which require a particular level of flame resistance
		Organic Chemicals Dept. Chloroprene rubber (CR)	2) Vibration insulation rubber for wind power generation	Potential for use in vibration insulation rubber for wind turbine nacelles
		Organic Chemicals Dept. Chloroprene rubber (CR)	3) Charging cables for electric vehicles	Potential for use in charging cables, which require flame resistance
		Organic Chemicals Dept. Acetylene black (AB)	Lithium-ion secondary cells	Used as a conductive aid
		Electronic Products Dept. ALSINK, ANP	Railway industry, industrial instruments, EV	Used to dissipate the high heat generated by drive transistors as well as in electric insulation substrates to improve inverters' efficient use and control of electricity
		Electronic Products Dept. HITTPATE	Air conditioners	Used to dissipate the high heat generated by drive transistors as well as in electric insulation substrates to improve inverters' efficient use and control of electricity
		Electronic Products Dept. Thermally conductive sheets	EV	Used to dissipate the high heat generated by drive transistors as well as in electric insulation substrates to improve inverters' efficient use and control of electricity
		Electronic Products Dept. HITTPATE, thermally conductive sheets	LEDs	Used to improve LED luminance by effectively dissipating the heat generated by LED chips
		Advanced Filler Dept. Spherical alumina	LEDs	Inserted in resin used as filler for the purpose of effectively dissipating the heat generated by LED chips and thereby enhancing LED's luminance
		Functional Materials Dept. BN powder	LEDs	Inserted in resin used as filler for the purpose of effectively dissipating the heat generated by LED chips and thereby enhancing LED's luminance
		Functional Materials Dept. Molded BN products	LED manufacturing equipment	Used in LED chip manufacturing equipment as an excellent, easy to cast insulation material
		Functional Materials Dept. ALONBRIGHT	Phosphor for LEDs	Used increasingly in the shift to backlights for LCD TVs and LED lighting, which is expected to reduce energy consumption
		Industrial Materials Dept. DX FILM	Photovoltaic back sheets	Used on back sheets of photovoltaic panels that contribute to CO ₂ reduction
		Housing & Environmental Materials Dept. Rain Oasis	Rainwater storage system	Used to collect rainwater through a system of rain gutters with water intake fittings. Collected rainwater may be used for watering gardens and washing cars, contributing to water savings and helping to prevent global warming.
3	Bring the weight-saving effect to bear when in use	Inorganic Chemicals Dept. ALCEN	Automotive engine peripherals	Used to replace steel automotive engine parts in the shift to aluminum parts reinforced with alumina fiber, which is helping to reduce automobile weight and thus improve fuel efficiency and reduce CO ₂ emissions
		Household Packaging Materials Dept. SOFRIA	Food packaging	Used to make food packaging as thick as but lighter than A-PET
		Special Cement Additives Dept. SUQCEM	Concrete precast products	Used to create lighter, thinner products than possible with ordinary concrete, this superhigh-strength fiber-reinforced concrete can cut construction costs.
4	CO ₂ emissions reduction when in use	Inorganic Chemicals Dept. SULFEX	Steel desulfurization	Used in place of calcined lime, the most common desulfurizing agent, these products lower thermal loss during steel refining while helping to reduce CO ₂ emissions from transportation by lowering slag ejection
		Inorganic Chemicals Dept. Synthetic FLUX COMPOUND		
		Fertilizer Dept. Calcium cyanamide	Agriculture	A nitrogen fertilizer with lower N ₂ O emissions compared with other nitrogen fertilizers, can also be used to curb CH ₄ emissions from rice straw
		Inorganic Chemicals Dept. ALCEN	Fire resistant materials	Used as a high heat insulator to reduce heat loss and thus save energy, boasts greater heat resistance than ceramic fibers, thereby improving repair and maintenance frequency for fireproof linings while helping to lower CO ₂ emissions from the transportation of products and waste

Category	Business Department	Product Name	Application	Details of Contribution Effects
4	CO ₂ emissions reduction when in use	Special Cement Additives Dept. Σ1000 Σ2000	Concrete secondary product	Used as high-strength additives to reduce the volume of high CO ₂ emitting cement needed to make concrete
		Special Cement Additives Dept. Σ80N	High-strength cast-in-place concrete	Used as high-strength additive to reduce the volume of high CO ₂ emitting cement needed to make concrete
		Special Cement Additives Dept. F-DAC	Concrete secondary product	Increasing the strength of concrete, F-DAC can shorten pre-curing and steam curing time while reducing the CO ₂ emissions from products made of concrete
		Special Cement Additives Dept. TECHNOCRETE method (electrochemical repair work)	Repair and maintenance of concrete structures	When concrete is damaged by salt or neutralized, the TECHNOCRETE method repairs it electrochemically so that it does not need to be demolished, thereby reducing the amount of construction materials needed compared with existing repair methods.
5	Improve customers' operational processes	Inorganic Chemicals Dept. Slaked lime		By reacting with the CO ₂ formed during the limestone cycle, encompassing limestone, calcined lime, calcium carbide, (water and) hydrated lime, hydrated lime absorbs CO ₂ while helping to curb the use of heavy machines for limestone mining (and thus reduce CO ₂ emissions).
		Organic Chemicals Dept. CR latex	Water-based adhesives	With no VOCs, this product helps customers to reduce the use of (or not use) solvents that produce VOCs while improving operational environment.
		Functional Resin Dept. CLEAREN	Sheets	Lightweight (80% of the specific gravity of the competitive material PET-G), CLEAREN has a lower energy burden regarding transportation per unit area and volume. In addition, it has a processing temperature for sheet and other materials that is 50C° lower than that of PET-G, therefore it lowers energy costs for processing.
		Functional Resin Dept. MS resin	Moldings	MS resin is lighter than PMMA when used for the same applications (specific gravity is 6% lower than that of PMMA) and has lower energy burden in transportation per unit area and volume.
		Tapes & Adhesives Dept. TEMPLOC	Temporary adhesives for the processing of glass in smartphones	Unlike previous temporary adhesives that had to be removed by dissolving with organic solvents that posed potential health hazards for workers, these products can be removed with heated water, averting the aforementioned risk.
		Tapes & Adhesives Dept. SOLARLOC		
		Special Cement Additives Dept. Slurry shot method (NATMIC US-32, US-50)	Shotcrete for tunnels	Reduce dust and concrete splash when spraying shotcrete, while improving the operational environment and decreasing material losses.
		Special Cement Additives Dept. Slurry shot method (NATMIC LSA, USS)	Shotcrete for tunnels	The low alkaline content of NATMIC LSA and USS results in an improved operational environment with reduced dust and less concrete splash when shotcrete is sprayed, qualities that, in turn, reduce the environmental burden and decrease material loss.
		Special Cement Additives Dept. Super Cement	Emergency repair of road, railways and airports	Using ultrarapid hardening concrete that quickly attains initial strength, Super Cement can gain practical strength in a short period of time, helping to shorten construction periods and reduce the time of closure to traffic.
		Special Cement Additives Dept. F-DAC B-FORM	Concrete secondary products	Facilitating the hardening and increasing the strength of concrete, these products shorten pre-curing and steam curing time while lowering costs by reducing fuel use and improving production efficiency.
6	Reduce energy and resource consumption by improving durability	Special Cement Additives Dept. DENKA TECHNOCRETE SYSTEM (electrochemical repair work)	Repair and maintenance of concrete structures	When concrete is damaged by salt or neutralized, the TECHNOCRETE method repairs it electrochemically so that it does not need to be demolished, thereby extending the life of structural objects and reducing life cycle costs and waste generation.
		Special Cement Additives Dept. SUNTIGHT T-K, T-F	Repair and maintenance of sewage systems	The sulfuric acid generated inside sewage facilities deteriorates concrete. Therefore, the use of acid-resistant mortar for repair and maintenance work can enhance the facility durability and extend the life of facility buildings.
		Special Cement Additives Dept. EIEN	Concrete precast products	Incorporating special cement additives (γ -2CaO•SiO ₂), EIEN can densify the internal structure of concrete by reacting with carbonate ions, thereby improving concrete durability and thus reducing life cycle costs.
		Special Cement Additives Dept. SUQCEM	Concrete precast products	SUQCEM's durability is extremely high thanks to its ultra-high strength. Therefore, it can reduce life cycle costs.

Omi Plant

Profile

■ Address

2209 Omi, Itoigawa, Niigata
Telephone: +81-25-562-6105

■ Employees

781 (as of March 31, 2012)

■ Major products

Inorganic materials: Cement, special cement additives, calcium carbide, calcium cyanamide and ALSEN (alumina fiber)

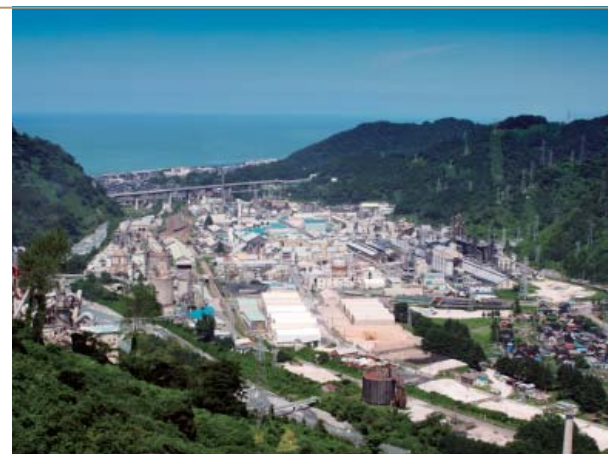
Organic materials: Chloroprene rubber, polyvinyl alcohol and monosilane

Pharmaceuticals: High molecular hyaluronan preparation

Others: Eel farms

■ Operations

Since our establishment in 1921, we have maintained unique carbide chemical operations that exploit in-house assets. These include Mount Kurohime, with its five billion metric tons of limestone reserves, and an in-house power generation capacity of 185,000kW. Our broad product



range includes calcium cyanamide, chloroprene rubber and cement. In recent years, we have diversified into inorganic fine chemicals and pharmaceuticals. We continue to develop our business to meet new and diverse challenges in chemicals.

CSR Policies



Akihiko Okuda
Executive Officer,
General Manager of
Omi Plant

General Manager's Policies

Striving to upgrade our on-site and technological capabilities and to ensure stable operations to become a main plant that is highly competitive

Safety and Health, Environmental and Quality Policies

<Safety and health>

To ensure zero accident, zero disaster and zero occupational illness rates, every employee shall embrace a safety-oriented organization culture. By doing so, let's make the Omi Plant a cheerful and sparkling workplace.

<Environment>

We will fully utilize and strive to enhance the environmental management system as we pursue environmental activities.

<Quality>

To eliminate all substantial quality-related complaints and to gain the greater trust of customers, we will raise and maintain awareness toward product quality while enhancing technological capabilities.

Environmental Performance

Item	Units	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012 targets
Energy consumption indicator unit	Compared with fiscal 1990	0.95	0.94	0.97	0.96	0.91
CO ₂ emissions (from energy sources)	10,000 t	93	76	76	77	74
PRTR substance emissions	t	17	16	12	17	5
NOx emissions	t	3,870	3,030	2,750	2,820	3,090
SOx emissions	t	1,340	740	120	94	41
Soot and dust emissions	t	108	140	103	114	123
Water used	1,000m ³	66,800	64,700	66,300	67,200	—
COD (BOD) discharges	t	964	1,100	1,570	1,270	540
Waste	t	82,800	74,700	83,900	105,200	75,100
Final waste disposal	t	2,330	240	160	143	182

Note: Totals of individual figures in this and other tables may not be exact because we rounded down fractions. The totals for this table match the figures in the Input and Output section on page 12 of the web-based CSR Report 2012 references.

We registered under the Japan government's pilot emissions trading scheme in December 2008, so for CSR Report 2009 we calculated energy intensity and CO₂ emissions based on the coefficients standards of the voluntary action plan of Nippon Keidanren, recalculating figures for previous reports, which we had based on the coefficients of the amended Law Concerning the Rational Use of Energy.

Fiscal 2011 Achievements

● Communication with local societies

In response to local residents' requests, we issued reports covering environment-related information. We strove to shorten response times while utilizing the results of analysis carried out in preparing the reports in the operation of the plant. In addition, with the aim of gaining the trust of the local community we regularly communicated information on our business activities, including environmental and security initiatives, to local communities as well as the various organizations concerned about our business operations.

To facilitate communication with the local community, we participated in the *Omanta* Summer Festival in Itoigawa City. A number of employees joined in the festival parade, bringing a lot of excitement to the event.



The *Omanta* Summer Festival parade, in which 150 employees participated (July 30, 2011)

● Local cleanup activities and environmental improvement

We proactively participate in cleanup activities in the local area, for example, the Himekawa River Cleaning Mission, cleaning along the Omi coast and other such activities along the Omi river and roads around the plant.



Cleanup activities

● Local disaster prevention activities

Aiming to firmly collaborate with local municipalities at times of disaster and to fully prepare the disaster prevention system, we conduct disaster drills on a routine basis. Such drills include comprehensive emergency drills at Himekawa Port, combined emergency drills with the Itoigawa City fire companies and comprehensive emergency drills at the plant.

● Local youth development

To deepen understanding of the Omi Plant as well as to nurture interest in chemistry, we proactively invite local elementary schoolchildren on plant tours and participate in the Youngsters' Science Festival.

At the Youngsters' Science Festival in Itoigawa held on November 5, 2011, we sponsored the booth where children got to personalize PET bottles using DENKA's CLEAREN, an SBC resin film known as "shrink film." 224 children participated in the experiment.



Local elementary school children invited on a plant tour



Youngsters' Science Festival in Itoigawa

● Volunteer Activities

Every June *Hisui-no Sato* Mountain Marathon is held in Itoigawa City and a number of the plant's employees voluntarily assist with this event. The event has five running courses, including a 30 kilometer-course with a 650 meter height difference for mature runners and a 3 kilometer course for elementary school children. The race welcomed a record-high 830 participants from across the nation.



Left: Plant employees participated in the race
Right: The 19th *Hisui-no Sato* Mountain Marathon (June 19, 2011)

Fiscal 2012 Initiatives

- We will implement monitoring training (including pointing and calling, the exchange of courtesies, etc.) as the "Basics of Safety" at the initiative of managers.

By rejuvenating communications, we will strive to achieve zero occupational accidents, disasters and illness.

- Following up on the achievements of fiscal 2010, we attained zero emissions in fiscal 2011. Aiming to further reduce harmful substance emissions, we will continue to strive to improve and maintain conditions in the local environment. In addition, we will continue to build trust through the careful consideration of dialogue with local communities.

- To accurately meet customer needs, including demand for product safety, we will enhance production technologies while striving to improve technology for stabilizing product quality.

Omuta Plant

Profile

■ Address

Shinkai-Machi 1, Omuta, Fukuoka

Telephone: +81-944-52-1055

■ Employees

616 (as of March 31, 2012)

■ Major products

Inorganic materials: Carbide, calcium cyanamide, FIRELEN, alumina cement (for refractories) and special cement additives

Organic materials: Acetylene black

Electronic materials: Fused silica filler, silicon nitride, boron nitride, aluminum nitride, ceramic electronic circuit substrates, thermally conductive sheets, high thermal conductive composite and phosphor for use in LEDs

■ Operations

Established in 1916, the Omuta Plant is DENKA's oldest plant, and the first to manufacture carbide and calcium cyanamide. Since that time, as a production base of inorganic chemical products based on the proprietary electric furnace, high-temperature control and nitride technologies,



the Omuta Plant has introduced a number of unique products. In recent years, we have entered the fine ceramics and electronic materials fields. Today, we contribute to the development of the electronics, automotive and numerous other industries.

CSR Policies



Shohei Tamaki
Senior Executive Officer
General Manager of
Omuta Plant

General Manager's Policies

Addressing objectives to achieve targets stipulated in the DENKA100 management plan, the Omuta Plant will pursue further advancement and strive to be a plant with even greater organizational strength while contributing to society.

Environmental, Safety and Quality Policies

(1) Maintaining Safety, Security and Health

Managers and operators will work together as one to step up the level of safety, security and health and thus promote the development of a safe and comfortable working environment. Proactively utilizing our safety level evaluation system, we will undertake concrete actions aiming to realize better safety at worksites.

(2) Further Pursuing RC Activities

Through the entire production process, from raw materials

procurement, manufacturing and storage to distribution, usage and disposal as well as in our R&D activities, each employee will address objectives to improve global environment and contribute to society, including local communities.

(3) Reinforcing On-Site Capabilities—Improving Customer Satisfaction

Promoting the “advancement of technologies to improve quality” by product and “raising awareness of employees engaged in manufacturing,” we will secure stable production underpinned by consistent quality and enhanced yields to achieve better customer satisfaction.

(4) Addressing Objectives to Achieve Targets Set Out in the DENKA100 Management Plan—To Further Thrive

While promoting human resource nurturing to reinforce our on-site capabilities, we will solidify our technological foundations that enable us to generate sufficient profits and remain responsive to the drastic change in market needs. By doing so, we will gain even greater organizational strength. Moreover, we will accelerate the improvement and development of facilities to make the Omuta Plant a place that benefits people both within and outside the Company.

Environmental Performance

Item	Units	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012 targets
Energy consumption indicator unit	Compared with fiscal 1990	0.92	0.92	0.91	0.90	0.87
CO ₂ emissions (from energy sources)	10,000 t	11	9	11	11	11
PRTR substance emissions	t	6	6	17	25	6
NOx emissions	t	770	1,000	1,120	940	1,140
SOx emissions	t	1	2	1	1	1
Soot and dust emissions	t	5	3	3	6	4
Water used	1,000m ³	1,308	1,190	1,310	1,390	—
COD (BOD) discharges	t	1	1	1	2	1
Waste	t	9,345	6,861	8,670	13,600	6,920
Final waste disposal	t	420	133	71	39	58

Note: Totals of individual figures in this and other tables may not be exact because we rounded down fractions. The totals for this table match the figures in the Input and Output section on page 12 of the web-based CSR Report 2012 references.

We registered under the Japan government's pilot emissions trading scheme in December 2008, so for CSR Report 2009 we calculated energy intensity and CO₂ emissions based on the coefficients standards of the voluntary action plan of Nippon Keidanren, recalculating figures for previous reports, which we had based on the coefficients of the amended Law Concerning the Rational Use of Energy.

Fiscal 2011 Achievements

● Communication with local societies

We are participating in local community organizations' committees as well as school districts' liaison councils and committees to report on conditions at the plant and our operations. We will continue these initiatives, aiming to realize the co-existence and co-prosperity of the Company and local communities.

Participated in the Omuta Daijaya Festival

One hundred of the plant's employees participated in the Omuta Daijaya Festival, summer festival that has a long 300-year history. They joined “10,000 people's dance” the main attraction of the festival and were awarded the parade's 3rd prize for groups. In addition, we took responsibility for a large retired festival display that is now in the front entrance of the main office. With the wish of safety for local people, we are introducing the festival to visitors.



The Omuta Daijaya Festival



The festival display is featured in the front entrance

Machizukuri Activities

The “Omuta Machizukuri [Local Development] Symposium” was held in Omuta City, and Shohei Tamaki, General Manager of the Omuta Plant participated as a panelist. Mr. Tamaki shared how much he loves the city as well as his opinions on how to make the city a better place to live.



Support for a Local High School

A plant employee gave a lecture at a job fair for high school students sponsored by the Omuta City Government and provided advice on how to find employment.

In addition, we dispatched four employees from the Engineering Dept. to present lectures at a training session for gas welding for Omuta High School students.

Plant Tours

We are striving to deepen community understanding of DENKA by inviting local associations to plant tours.

Participating in the New Year Fire Review

As a representative of the plant, our in-house firefighting team participated in the Omuta City New Year Fire Review that is held every January.



Members of the Omuta Kita Rotary Club on a plant tour



The Omuta City New Year Fire Review

● Local cleanup activities

In tandem with local community organizations, in fiscal 2011 we conducted voluntary cleanup activities biannually in spring and autumn with approximately 350 employees participating. Moreover, the plant participated in the Japanese Islands Cleanup Campaign that is held biannually and involves cleaning of entire local areas.



● Blood Donation Activities

We are cooperating with blood donation campaigns. In fiscal 2011, such campaigns were held twice and 366 employees donated blood (cumulative total).



Fiscal 2012 Initiatives

- Utilizing an in-house developed “safety level evaluation system,” we strive to enhance the safety level of the entire plant and create a safety-oriented organization culture.
- We will continue to cut environmental burdens, mainly industrial waste, and strive to maintain our zero emission status in 2012 for the third consecutive year.
- By undertaking investments on the plant's facilities, we will improve and develop the plant to make it a favorable place for anyone within and outside the Company.
- We will continue to pursue initiatives to facilitate children's interest in chemistry by offering hands-on experience in fun way, through such initiatives as holding chemistry classes for children and providing local elementary schools with on-demand demonstrations involving experiments.

Chiba Plant

Profile

■ Address

6, Goi-Minamikaigan, Ichihara, Chiba
Telephone: +81-436-26-3200
Bibai Subplant: 1-1 Higashi-Gojo-kita, 10-chome, Bibai, Hokkaido
Telephone: +81-126-62-1444

■ Employees

456 (as of March 31, 2012)

■ Major products

Organic materials: Styrene monomer, polystyrene,* ABS resin, transparent resins, heat resistance resins, CLEAREN styrene-butadiene block copolymer, vinyl acetate monomer and DENKA ER

* Product of an affiliated company

Functional Materials and plastics: Food packaging, construction materials and vinyl chloride tapes

■ Operations

Begun as a styrene monomer plant, the Chiba Plant is reinforcing such styrene operations as polystyrene, ABS resins, CLEAREN styrene-butadiene block copolymer and transparent plastics. It also focuses on the petrochemical related



businesses represented by vinyl acetate monomer and acrylic rubber while reinforcing such plastic processed products as biaxially oriented polystyrene sheet (OPS), construction materials and vinyl chloride tapes.

CSR Policies

General Manager's Policies



Shotaro Fujii
Senior Executive Officer,
General Manager of Chiba Plant

1. Attaining an absolute zero accident and disaster rate through continuing efforts aimed at ensuring safe and stable operations by putting the greatest emphasis on safety and implementing concrete actions for safety (promoting safety and security activities backed by a safety-oriented culture)
2. Responding to new businesses
3. Reinforcing our organizational foundation and passing on technologies to nurture young engineers through human resource development and the operation of techno schools
4. Reinforcing on-site capabilities that create value-added products by raising awareness of quality and enhancing production technologies
5. Pursuing CS13-based activities, including "reorganizing businesses" and "strengthening the plant's capabilities in existing business areas"
6. Pursuing corporate social responsibility (CSR)—legal compliance, environment consciousness and product safety

Along with the DENKA100 management plan, we are simultaneously promoting CHIBA50 activities to celebrate the Chiba Plant's 50th anniversary. Under the latter initiative, we aim to strengthen the plant's capabilities and thus establish the foundations for the transformation that has to be achieved in order to thrive in the next 50 years.

Environmental, Safety and Quality Policies

<Environment>

We will consider the environment in all processes, from product development, manufacturing and distribution to usage, final consumption and disposal. We will build an environmental management system.

<Safety>

We want all plant workers to recognize the importance of maintaining a safe and healthy workplace. We aim to achieve a healthy, safe and cheerful manufacturing plant that fully recognizes and implements necessary security management systems as a license holder for high-pressure gas handling, boiler operation and first-class pressure vessel operation while complying with relevant laws and regulations. We will achieve zero accidents through continuing system improvement for security management as well as safety and health management, both of which are essential to a healthy, safe and cheerful workplace, while implementing safe and stable operations.

<Quality>

We will strive to secure and enhance product quality to gain the trust of customers by consistently offering satisfying products.

Environmental Performance

Item	Units	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012 targets
Energy consumption indicator unit	Compared with fiscal 1990	0.93	0.85	0.87	0.89	0.83
CO ₂ emissions (from energy sources)	10,000 t	37	44	43	46	46
PRTR substance emissions	t	120	109	86	92	70
NOx emissions	t	355	436	448	479	426
SOx emissions	t	76	116	129	122	86
Soot and dust emissions	t	3	5	5	8	6
Water used	1,000m ³	9,690	9,700	9,700	9,690	—
COD (BOD) discharges	t	22	17	23	22	20
Waste	t	15,412	17,431	18,300	18,100	17,250
Final waste disposal	t	124	98	40	23	102

Note: Totals of individual figures in this and other tables may not be exact because we rounded down fractions. The totals for this table match the figures in the Input and Output section on page 12 of the web-based CSR Report 2012 references.
We registered under the Japan government's pilot emissions trading scheme in December 2008, so for CSR Report 2009 we calculated energy intensity and CO₂ emissions based on the coefficients standards of the voluntary action plan of Nippon Keidanren, recalculating figures for previous reports, which we had based on the coefficients of the amended Law Concerning the Rational Use of Energy.

Fiscal 2011 Achievements

● Safety Activities

<Security and Disaster Prevention>

We applied for and were granted the renewal of the licensing of a safety inspection expert for boiler operation and first-class pressure vessel operation. As a host company of the Ichihara Maritime District Disaster Prevention Council, we, together with the other member companies, promoted a review of the response to the Great East Japan Earthquake and, based on this review, discussed how to enhance security and disaster prevention.

<Occupational Safety and Health>

Focusing on risk assessment, we promoted and revitalized occupational safety activities by utilizing OHSAS 18001 management methods. We held lectures on mental health issues for staff members while offering guidance counseling by industrial physicians.



Practicing fire extinguishing with fire trucks at the comprehensive emergency drill (September 30, 2011)

<Other Activities>



DENKA100/CHIBA50 joint training session for assistant chiefs and experts (February 2012)

● Environmental Activities

We cooperated in the development of technology for measuring buoyant particle substances at soot and smoke-emitting facilities. We provided samples of exhaust gas from the plant's boilers as well as data pertaining to the results of analyses of such samples.

Fiscal 2012 Initiatives

● Environmental Activities

We will promote energy-saving and CO₂ reduction activities to prevent global warming. As for initiatives to reduce environmental burdens, we will pursue resource saving and waste reduction while promoting zero-emissions. Toward environmental improvement, we will work in close liaison with government bodies as well as local residents.

● Safety Activities

To promote security and safety activities backed by a safety-oriented culture, we will pursue ongoing system improvements for security management as well as safety and health management and thus maintain the safe and stable operation of the plant. To ensure the safety of local areas, we promote security and disaster prevention activities in tandem with other companies operating in neighboring areas under the instruction of relating governmental organizations.

● CSR Activities

Aiming to coexist harmoniously with local society, we will proactively participate in local events and festivals, including the Goi Rinkai Festival. We will also continue to hold plant tours for people from local residents' associations as well as for local elementary, junior-high and high school students to gain deeper understanding of the plant.

● CSR Activities

<Community Engagement>

As a member of the Environmental Conservation Association of Chiba Prefecture, we participated in the Eco Fair Ichihara. We held a plant tour as well as an experimental chemistry class for parents and children, to which employees' children were invited. In addition, we held a plant tour for people from local senior citizens' club.

<Social Contributions>

We operated stall at the Kazusa Ichihara Kokufu Festival to deepen exchange with local people. We are continuously engaging in cleaning up a stretch of National Route 16.

<Other Activities>



Volleyball game held as a part of the health promotion campaign co-sponsored by management and the labor union (April 18, 2012)

Shibukawa Plant

Profile

■ Address

1135 Nakamura, Shibukawa, Gunma

Telephone: +81- 279-25-2109

■ Employees

415 (as of March 31, 2012)

■ Major products

Electronic materials: HARDLOC structural adhesive, HARDLOC OP/UV light curing adhesive, DENKA HITPLATE high thermal-conductivity aluminum substrates, DENKA TFE and DENKA LaB6 CATHODE electron and ion emitters, ELEGRIP dicing tape, back grinding tape, THERMALLY CONDUCTIVE SHEETS, TEMPLOC temporary fixing adhesive

■ Operations

Since 1951, the Shibukawa Plant has developed as a production base for vinyl chloride resins. In 1976, the plant began manufacturing HARDLOC structural adhesive and, in 1984, changed its business domain as it entered into full-scale participation in the electronic materials business. Currently, the plant focuses on the production of



electronics-related products, encompassing electronic circuit substrates, thermal materials, emitters, structural adhesives, temporary fixing adhesives, and semiconductor processing-related products, contributing to DENKA's growth as a key organic electronic materials production base.

CSR Policies



Kazuyuki Koyama
Executive Officer,
General Manager of
Shibukawa Plant

General Manager's Policies

As the "mother plant" of DENKA's electronic materials business, we will further accelerate our efforts to solidify competitiveness in the domestic market and expand sales in overseas markets.

General Manager's Basic Guidelines

1. Securing safety, security and health while preserving the environment
2. Reinforcing on-site capabilities and upgrading organizational quality assurance activities
3. Promoting CS13 management plan
4. Energy and resource saving and reduction of environmental load substance emissions
5. Raising awareness of quality, safety and cost issues while developing human resources at the Shibukawa techno school and promoting CSR activities

Environmental, Safety and Quality Policies

<Environment>

We will continue to reduce environmental burdens by conserving resources and energy, cutting CO₂ emissions and waste generation, maintaining zero emissions and reinforcing the management of chemical substances. Together with this, we will aim to operate in harmony with the community through the interaction.

<Safety>

We will strive to adopt the "Basics of Safety," including the exchange of courtesies while reviewing countermeasures against high-risk operations that could lead to accidents wherein an employee is clamped or otherwise caught in machinery. To this end, each employee will proactively think and take action, working together as one for improvement and to secure a safe and comfortable work-site free of any type of accident or disaster.

<Quality>

Continuing to secure and improve product quality, we will offer reliable products that satisfy customers on a timely basis.

Environmental Performance

Item	Units	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012 targets
Energy consumption indicator unit	Compared with fiscal 1990	1.08	0.85	0.74	0.78	0.80
CO ₂ emissions (from energy sources)	10,000 t	1	1	1	1	1
PRTR substance emissions	t	4	5	6	4	5
NOx emissions	t	8	6	10	6	9
SOx emissions	t	23	16	10	1	25
Soot and dust emissions	t	1	1	0	0	1
Water used	1,000m ³	3,430	2,520	2,580	2,520	—
COD (BOD) discharges	t	4	3	3	3	3
Waste	t	453	503	479	416	335
Final waste disposal	t	6	5	3	2	3

Note: Totals of individual figures in this and other tables may not be exact because we rounded down fractions. The totals for this table match the figures in the Input and Output section on page 12 of the web-based CSR Report 2012 references.

We registered under the Japan government's pilot emissions trading scheme in December 2008, so for CSR Report 2009 we calculated energy intensity and CO₂ emissions based on the coefficients standards of the voluntary action plan of Nippon Keidanren, recalculating figures for previous reports, which we had based on the coefficients of the amended Law Concerning the Rational Use of Energy.

Fiscal 2011 Achievements

● Initiatives for Zero-Emissions

In fiscal 2009, we achieved an emissions ratio of 0.9%, attaining zero emissions (DENKA's definition, please see page 14). In fiscal 2010, the figure was improved to 0.6% and in fiscal 2011 we lowered the figure to 0.4%.

● Educational session involving simulating danger and training for the safe operation of forklifts

With the aim of eliminating possible serious accidents, such as employees being caught in rollers or incidents involving forklifts, in July 2011 we conducted an educational session that involved in hands-on training aimed at providing simulated experience of accidents. A similar hands-on training session was held in March 2012 as well, with the cooperation of Daido Steel Co., Ltd. We also held training sessions for the safe operations of forklifts in June and December 2011.



● Other Activities



42 Shibukawa Technical High School students participate in a plant tour (June 17, 2011)



Students watching the ELEGRIP and substrate manufacturing process



At a plant tour for 47 Shibukawa City Government officials, overviews of DENKA and the plant were presented (August 3, 2011)

● Experimental chemistry class

As part of exchanges with the local community, in March 2012 we invited a group of 24 people comprising local elementary school students and their parents on a plant tour incorporating experimental chemistry classes. Starting with an introduction to electronic microscopes and air showers, the event had a number of classes where the children decorated their own plastic bottles using CLEAREN shrink films and made slime (a viscous toy) using DENKA POVAL. Also, DENKA's temporary adhesive TEMPLOC was demonstrated, offering children a new and exciting look into the world of chemistry. The experimental science class is planned to be held in fiscal 2012 and beyond on a regular basis.



Fiscal 2012 Initiatives

- As part of our environmental activities, we will strive to reduce environmental burdens by conserving resources and energy while cutting CO₂ and chemical substance emissions.
- For safety activities, we will aim to achieve zero occupational injuries and zero security, environmental and distribution accidents.
- We aim to deepen community understanding of the Company and contribute to society by participating in local events, holding experimental science classes and engaging other activities, such as hydrangea planting and irrigation channel cleaning.



Cleaning an irrigation channel in Nakamura District (April 27, 2012)

Ofuna Plant

Profile

■ Address

13-1, Dai 2-chome, Kamakura, Kanagawa

Telephone: +81- 467-45-1110

■ Employees

228 (as of March 31, 2012)

■ Major products

Resins and plastic products: Including synthetic fibers for wigs, packaging materials, and functional films

■ Operations

Our product lineup is the fruit of advanced capabilities drawing on ejection molding, adhesion coating and film production technologies. We are DENKA's prime production unit for plastic products. We develop and manufacture such offerings as TOYOKALON synthetic fiber for top global wig and hairpiece brands, packaging tapes that include hand-cuttable and printing tapes, laterally stretched Calalyan Y polyethylene film.



CSR Policies

General Manager's Policies



Tatsuhiro Aoyagi
Senior Executive Officer,
General Manager of
Ofuna Plant

Philosophy: We aim to contribute to and prosper with the community of Kamakura, which abounds with cultural, historical and environmental legacies.

Goals: We will contribute to the community and corporate progress by making the environment, safety and quality our top priorities.

- 1. Reduce our environmental footprint by conserving energy and cutting waste
- 2. Comprehensively manage safety relating to raw materials, products, logistics and disposal and continue to engage with the community

Environmental, Safety and Quality Policies

<Environment>

- Comply with laws and ordinances and enhance environmental awareness
- Act in line with medium-term environmental plan and improve performance
- Contribute to the community

<Safety>

- Cultivate a safety-oriented workplace where nobody gets hurt or causes others to be harmed

<Quality>

- Continue to improve raw materials, processes and product management to pursue and maintain high quality

Environmental Performance

Item	Units	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012 targets
Energy consumption indicator unit	Compared with fiscal 2002	0.80	0.94	0.79	0.75	0.81
CO ₂ emissions (from energy sources)	10,000 t	1	1	1	1	1
PRTR substance emissions	t	1	1	1	1	1
NOx emissions	t	2	1	2	2	2
SOx emissions	t	0	0	0	0	0
Soot and dust emissions	t	0	0	0	0	0
Water used	1,000m ³	70	87	86	59	—
COD (BOD) discharges	t	0	0	0	0	0
Waste	t	211	188	199	124	175
Final waste disposal	t	22	32	30	21	18

Note: Totals of individual figures in this and other tables may not be exact because we rounded down fractions. The totals for this table match the figures in the Input and Output section on page 12 of the web-based CSR Report 2012 references.

We registered under the Japan government's pilot emissions trading scheme in December 2008, so for CSR Report 2009 we calculated energy intensity and CO₂ emissions based on the coefficients standards of the voluntary action plan of Nippon Keidanren, recalculating figures for previous reports, which we had based on the coefficients of the amended Law Concerning the Rational Use of Energy.

Fiscal 2011 Achievements

- We implemented comprehensive emergency drills to ensure preparedness in case of earthquake or fire.
- We continued to strive to raise awareness of safety through safety training sessions to help employees embrace the "pointing and calling method." Machines simulating dangerous situations also offer hands-on experience to employees.
- We implemented special training for operating cranes as well as training that nurtures employees' ability to anticipate risk, leading to the building of a structure for "cultivating safety-conscious employees who do not get hurt or cause others to be harmed."
- We conducted complete cleanups of the plant and nearby streets on the third Wednesday of every month.

To deepen our interactions with local residents, we made the square in front of the plant's main gate available for a summer festival held by a nearby neighborhood association. We also set up food stands and an employee band performed during this event.



Children bearing a Mikoshi (portable shrine) from the local Shiogama Shrine upon their shoulders during the neighborhood association's summer festival (July 10, 2011)



The local residents' brass band performing at the summer festival (July 9, 2011)

- Upon the request of the Kanagawa Prefectural Government, we hosted a plant tour for local residents as a part of "Local Environmental Seminar" and sought to cultivate an understanding of our environmental initiatives as well as manufacturing processes. The prefectural government's following website reports on the seminar.

【URL】

<http://www.pref.kanagawa.jp/cnt/f7013/p420043.html>
(Japanese only)



33 local residents participated in the Local Environmental Seminar plant tour (February 2, 2012)

Fiscal 2012 Initiatives

- Based on the philosophy, "We aim to contribute to and prosper with the community of Kamakura, which abounds with cultural, historical and environmental legacies," we promote dialogue and interaction with the local community. Particularly in terms of our activities to reduce waste, we aim to reduce environmental burdens by curbing waste generation through better yields and by improving our emission ratio based on efforts to separate waste.

Isesaki Plant

Profile

■ **Address**
Isesaki Plant: 245, Nishigawara, Naganuma-cho, Isesaki, Gunma
Telephone: +81-270-32-1251
Isesaki Plant (Ota): 3015 Serada-cho, Ota, Gunma
Telephone: +81-276-52-4111

■ **Employees**
267 (as of March 31, 2012)

■ **Major products**
Electronic materials: DENKA THERMOSHEET EC, DENKA Thermo Film ALS and other carrier tape, trays and cover tape for semiconductor and electronic components processes
Functional materials and plastics: Styrene Sheet, CLEAREN sheet and stretch film, and DENKA DX FILM used in solar cell module back sheets



■ **Operations**
This plant manufactures sheets and films from polystyrene, vinyl chloride and other raw materials. The Ota facility has the greatest production capacity in the Orient for these products. We supply food and electronic packaging

materials that meet stringent requirements for performance and quality management, and are endeavoring to bolster our processing technologies while developing value-added offerings.

CSR Policies



Toshiharu Kano
Executive Officer,
General Manager of
Isesaki Plant

General Manager's Policies

- 1. Pursue safety and health
- 2. Meet the challenge of CS13 objectives
- 3. Improve customer satisfaction
- 4. Continuously update facilities
- 5. Pursue the creation of environment-friendly products

Environmental, Safety and Quality Policies

<Environment>
Conserve energy and resources while harmoniously coexisting with local communities

<Safety>
Achieve zero accident as well as zero disaster status by clarifying managers' responsibilities on anticipating risk and workers' responsibilities on taking right actions

<Quality>
Improve quality and swiftly and accurately meet customer needs

Environmental Performance

Item	Units	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012 targets
Energy consumption indicator unit	Compared with fiscal 2005	1.02	0.99	0.97	0.99	0.93
CO ₂ emissions (from energy sources)	10,000 t	2	1	2	2	2
PRTR substance emissions	t	0	0	0	0	0
NOx emissions	t	0	0	0	0	0
SOx emissions	t	0	0	0	0	0
Soot and dust emissions	t	0	0	0	0	0
Water used	1,000m ³	326	358	412	422	—
COD (BOD) discharges	t	0	0	0	0	0
Waste	t	172	169	207	239	105
Final waste disposal	t	0	12	0	0	11

Note: Totals of individual figures in this and other tables may not be exact because we rounded down fractions. The totals for this table match the figures in the Input and Output section on page 12 of the web-based CSR Report 2012 references.
We registered under the Japan government's pilot emissions trading scheme in December 2008, so for CSR Report 2009 we calculated energy intensity and CO₂ emissions based on the coefficients standards of the voluntary action plan of Nippon Keidanren, recalculating figures for previous reports, which we had based on the coefficients of the amended Law Concerning the Rational Use of Energy.

Fiscal 2011 Achievements

● **Security and Disaster Preparedness**
We hold comprehensive emergency drills at the Isesaki and Ota Plants to raise employee awareness about proper conduct during emergencies. Held in cooperation with local fire departments, such drills involve simulations of initial fire suppression actions, reporting the situation to the fire department, the setup of in-house firefighting headquarters and extinguishing the fire using a fire engine pump. We also confirmed rules pertaining to emergency response, including measures to be taken during emergencies as well as how employees should work together under the guidance of the fire departments. Preparing for a variety of disasters, we will continually hold these drills to strengthen our disaster control structure.



● **Safety Education**
We are continuously implementing wide-ranging safety education for frontline operators. Given that the plant's operations entail the use of a number of roller-type machines, we developed a machine to provide hands-on experience of accidents involving a worker getting clamped by or caught in rollers. By simulating such accidents, the machine is helping to heighten employee awareness of the dangers.

Each day, before work begins, employees gather at each section to recite an inspiring slogan, the "three safety credos,"



An employee undergoing a simulated experience of a roller-related accident

Practicing pointing and calling

Fiscal 2012 Initiatives

- We will pursue environmental preservation initiatives while placing the highest possible priority on complying with relevant laws.
- As for environmental preservation, we have obtained ISO 14001 certification and have positioned the following as important initiatives: the reduction of waste; conservation of energy and resources; and ensuring distribution safety. In particular, we will strive to curb waste generation primarily by enhancing our processing technology. We will contribute to the local community, including ongoing beautification activities in areas surrounding the plant.
- Regarding health and safety, we are creating a positive and comfortable workplace mainly by promoting measures to prevent labor and equipment-related accidents, lifestyle diseases, heatstroke and mental problems.

and to practice pointing and calling with the aim of creating a safe workplace.

In addition, each year we provide the opportunity to learn about mental health problems as part of our efforts to foster a healthy and comfortable working environment. In fiscal 2011, we held a training session for staff members presented by an external lecturer from the Gunma Prefectural Occupational Health Promotion Center. Our fiscal 2012 plans call for holding another training session for managers, with the theme of how to guide the mental health care of their staff.



A training session on mental health problems for plant's 240 staff members (September 8, 2011)

● **Social Contributions**
As part of our social contribution efforts, plant employees engage in cleanup activities in the plant's immediate vicinity. In Isesaki District, we clean up Yattajima Industrial Park's Bando Park. In Ota District, we clean up roads alongside the plant. Each section has been assigned a territory that it has to take care of and a number of the plant employees regularly engage in collecting garbage and fallen leaves. We will continue to enhance and maintain the area's amenities by continuing cleanup activities.

In addition, ongoing "beautification day" initiatives are undertaken with the aim of making areas within the plant more attractive. All of these initiatives are participated in by all employees to help keep the plant and adjacent areas clean.



Newly employed staff members engaging in a cleanup activity (May 9, 2012)

DENKA Innovation Center (Central Research Institute)

Profile

■ Address

5-1, Asahi-cho 3-chome, Machida, Tokyo
Telephone: +81-42-721-3611

■ Employees

94 (as of March 31, 2012)

■ Center Overview

The Central Research Institute began operating at its current site after DENKA relocated its Meguro Research Center from its Meguro-ku, Tokyo, location in 1962. As the spearhead of DENKA's product innovation, the facility has developed numerous basic technologies in the areas of inorganic and organic chemicals, petrochemicals and plastics that became the groundwork for a series of the Company's mainstay products. Serving as a focal point for DENKA's R&D efforts, the center will concentrate on R&D initiatives based on medium-to long-term themes aimed at developing major products and next-generation products while further reinforcing existing basic technologies.



● Topic

As part of our centennial celebration, plans call for the construction of the new DENKA Innovation Center building. In preparation for this endeavor, we have been concentrating on the building design in fiscal 2011, taking into consideration the environment and safety. We are proceeding with this rebuilding project, which aims to establish a symbol of DENKA that will be wide open to society.



Artist's rendition of the completed building

CSR Policies

General Manager's Policies



Norihiro Shimizu
Senior Executive Officer
General Manager of
Central Research Institute

In line with our motto, "promoting R&D to create future-oriented, next-generation products," we are:

1. Pursuing research activities through strengthened "industry-academia-government collaboration"
2. Generating new themes to meet market needs
3. Undertaking environmental and safety initiatives

Environmental, Safety and Quality Policies

Based on Companywide safety and health plans, the Central Research Institute works to continuously improve Plan-Do-Check-Act (PDCA) cycles while expanding its involvement in volunteer activities that conform to the circumstances of individual workplaces. Such activities are intended to maintain the institute's environmental preservation and safety and health initiatives. The main activities of each department involve promoting the development of positive workplaces that are accident, disaster and illness free. These efforts are carried out in accordance with administrative action plans that follow the Fundamental Policies listed below.

1. Fundamental policies for responsible care activities:

- Encourage initiatives to counter global warming
- Promote efforts to contribute to society
- Prevent environmental accidents

2. Fundamental safety and health policies:

- Eliminate such safety-related accidents as explosions and fires
- Eradicate labor-related accidents
- Prevent occupational diseases

3. Fundamental product quality-related policy

- Improve quality at the new product development stage

Fiscal 2011 Achievements

● Occupational Safety and Health, Security and Accident Prevention

Safety and health activities are carried out regularly based on the motto: "maintaining an honest commitment to common sense." Accordingly, we steadily undertake safety activities that include maintaining environmental management systems (EMS), raising safety awareness, regularly conducting fire drills involving our in-house firefighters and jointly holding comprehensive fire drills with the Machida Fire Department.



Comprehensive fire drill (November 4, 2011)

● Communication with the Local Community

We vigorously promote interactions with the local community and social activities. Accordingly, we hosted tours for third graders from Machida Dai-Yon Elementary School on September 22, 2011, and third graders from Machida Dai-San Elementary School in February 13, 2012. These educational field trips included enriched content, including an up-close look at the testing facilities and the opportunity to observe objects through electron microscopes, activities that inspired the students to ask many unique questions.



Students of Machida Dai-Yon Elementary School on the plant tour



Students of Machida Dai-San Elementary School on the plant tour

In addition, we welcomed people from the residents' association and the neighborhood association of the Machida Dai-Ni district on January 27, 2012, and members of the senior citizen's "Shirakaba Kai" group on April 19, 2012. On both occasions, we hosted a tour and demonstrated some experiments.



People from the residents' association and the neighborhood association of the Machida Dai-Ni district (January 27, 2012)



Shirakaba Kai members (April 19, 2012)

Fiscal 2012 Initiatives

Regarding our ongoing safety and health activities, we will work to avoid all accidents and disasters. To this end, we will continuously make steady efforts, including maintaining our EMS as well as developing occupational health and safety management systems, while always seeking a better way to implement such efforts.

In fiscal 2012, moreover, we will begin construction converting the Central Research Institute 1st Building into the new DENKA Innovation Center main building. In designing the new building, we proactively incorporated environmental-friendly design concepts, while aiming to create a place that is wide open to society by featuring such facilities as a spacious exhibition spaces, preset tour guide routes, presentation rooms and an open laboratory. By doing so, we hope to encourage greater communication with the local community.

DENKA began participating in the Summer Vacation Children's Chemistry Experiments Show* from fiscal 2012. Led by institute employees, especially younger researchers, we are planning a number of easily understandable experiments for the event, with a focus on subjects that are of immediate interest to children.

* Or Yume Kagaku-21: co-sponsored by the Japan Chemical Industry Association, the Chemical Society of Japan, the Society of Chemical Engineers, Japan, and the Japan Association for Chemical Innovation.

Particularly popular with the ladies attending was an experiment that involved mixing powdered hyaluronate with water to create a high-viscosity solution that can be a highly effective as a moisturizer.

● Social Contributions

As part of efforts to proactively contribute to local communities, DENKA supports the Fureai Trio. (See also page 29 of printed *CSR Report 2012*.) The trio held concerts at Machida Dai-Yon Elementary School and at Machida Citizen's Hall, and institute employees helped out at both events. On November 21, 2011, in the Machida Dai-Yon Elementary School music room, children closely listened to the professionals' performance and seemed to be tremendously impressed. On December 3, 2011, an audience gathered at Machida Citizen's Hall fully enjoyed the special experience of hearing a full playlist, live and in a well-designed concert hall. Workshops in which anyone can try playing the violin were held before and after the trio's performance. At concert hall, sweets and sundries made at a neighboring facility employing people with disabilities were sold to raise money for charity. The institute employees who had volunteered also felt enriched by the experience.



A Fureai Trio performance and a violin workshop for elementary school children

● Other Activities



"VIVA! Machida 2011" gathering meeting for institute employees co-sponsored by management and the labor union



Norihiro Shimizu, general manager of the institute giving a speech at the meeting (October 14, 2011)



A lecture on mental health issues (October 13, 2011)

Denka Singapore Pte., Ltd.

Merbau Plant

Profile

■ Employees

30 (as of March 31, 2012)

■ Operations

The Merbau Plant was DENKA's first production facility in Singapore. We established this plant in 1980 to participate in the Singapore Petrochemicals Complex project. The complex is located on Jurong Island, where we manufacture DENKA BLACK. We began operating our 50% press facility in 1984, augmenting lines in 1997. We set up a granulation facility in 2002. Owing to its superior liquid absorption, electrical and thermal conductivity properties and high purity, DENKA BLACK is used worldwide in dry manganese and lithium-ion batteries, power cables and semiconductor packaging materials.

Denka Singapore Private Limited
4 Shenton Way #29-02 SGX Centre 2, Singapore 068807
TEL : 65-6225-6120



DENKA BLACK is acetylene black, a type of carbon black with high purity and electrical conductivity

CSR Policies

General Manager's Policies



Yoshiteru Yamazaki
General Manager of
Merbau Plant

- While finding harmony between cultures of Japan and Singapore, we will address operational issues in accordance with Denka Singapore's own policies and encourage employees to be proactive
- Eradicating occupational accidents and disasters by learning from prior incidents
- Promptly responding to increasingly high demand for product quality

Fiscal 2011 Achievements and Fiscal 2012 Initiatives

In fiscal 2011, regular repairs (shutdown maintenance) were carried out at the eight companies that comprise the Singapore Petrochemicals Complex over a period of 40 days from late July through end of August. After the repairs, we resumed operations with no accidents or disasters.

As for safety activities in fiscal 2012, plans call for undertaking drills focused on emergency first response. With regard to quality, we will strive to better meet demand for higher purity, particularly with regard to lithium-ion secondary cells.



Merbau Plant employees



An HSE* campaign ceremony at the Singapore Petrochemicals Complex (June 26, 2012)
*Initiatives for Health, Safety and Environment

Denka Singapore Pte., Ltd.

Seraya Plant

Profile

■ Employees

74 (as of March 31, 2012)

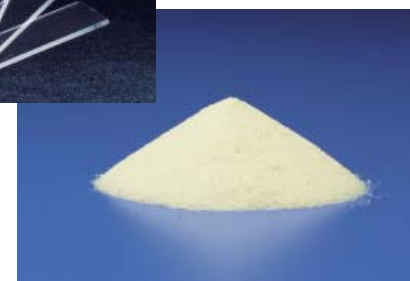
■ Operations

The Seraya Plant commenced operations to produce general-purpose polystyrene in 1998. In 2006, the plant expanded its facilities for manufacturing TX Polymer methyl methacrylate styrene copolymer resin and CLEAREN styrene-butadiene block copolymer. In April 2012, the plant completed further construction on a facility to produce imidized polymers (SIP Plant). Today, the combined annual production capacity of the four facilities is 325,000 metric tons. The Seraya Plant is becoming the DENKA Group's largest styrene-based resin production base.

Denka Singapore Private Limited
4 Shenton Way #29-02 SGX Centre 2, Singapore 068807
TEL : 65-6225-6120



CLEAREN styrene-butadiene block copolymer



DENKA IP, a heat resistant modifier for ABS

CSR Policies

General Manager's Policies



Michio Kawamura
General Manager of
Seraya Plant

1. Maintain zero-accident record
2. Maintain compliance
3. Achieve a better working environment
4. Educate employees and strengthen our organization



Seraya Plant employees

Fiscal 2011 Achievements

- Provided training related to the chemical plant's operations
- Acquired ISO 28000 certification

Fiscal 2012 Initiatives

- We will continue to implement the changeover from paper to plastic bags
- We will promote energy- and resource-reduction measures based on improved manufacturing processes
- We will draw up a plan for the regular repair of facilities during fiscal 2013 and will promote it



The completion ceremony of IP resin production facility (April 25, 2012)



Practicing extinguishing fires in the presence of the local fire department (SCDF) as well as suppliers

DENKA Advantech Pte., Ltd.

Tuas Plant

Profile

■ Employees

60 (as of March 31, 2012)

■ Operations

The Tuas Plant, established in 1991 in Singapore, produces fused silica filler, a material mainly used as a sealant for semiconductor packaging. Currently, the Tuas Plant's focus is on spherical fused silica filler to accommodate advances in semiconductor packaging as well as the trend toward more environment-friendly products, and it is striving to enhance quality and reinforce production. Working in cooperation with the Omuta Plant, the plant supplies products mainly to China and Southeast Asia.

Denka Advantech Private Limited
4 Shenton Way #29-02 SGX Centre 2, Singapore 068807
TEL: 65-6321-9530



Spherical fused silica



CSR Policies

General Manager's Policies

1. Going back to basics, we will secure plant security and employee safety
2. Promoting energy and resource conservation, we will reduce environmental burdens
3. We will reduce customer complaints and pursue better customer satisfaction by controlling risks pertaining to product quality
4. We will develop a supply system that meets market demands and technological trends
5. We will make cost reduction efforts by improving production processes and technologies



Toshiyuki Kageyama
General Manager of
Tuas Plant



Tuas Plant employees

Fiscal 2011 Achievements

<Safety>

1. Safety education was carried out using an in-house safety video produced in fiscal 2010 and KYT (risk prediction training) sheets
2. Indicated hazards using standard symbols and implemented countermeasures against them



Warning symbol



An example of how a warning symbol should be displayed



An example of a countermeasure against exposure to a hazard (a cautionary indication is painted on the floor to catch the attention of those who pass by)

3. Made employees undergo external seminars and obtain certifications aimed at upgrading their skills
4. Conducted thorough monthly cleanups involving all employees
5. Conducted such annual activities as fire drills, in-plant patrols and checks of firefighting equipment



A fire drill



An emergency drill involving responding to chemical leakage

<Environment>

To reduce environmental burdens, we are continuously conducting the following initiatives:

1. Saving energy by enhancing productivity
2. Curbing energy consumption by turning off unnecessary lighting and reducing air leakage from machinery
3. Recycling protective large-sized polyethylene covers and liners used in flexible containers and wooden pallets.



An example of recycling

<Quality>

One recent quality-related issue related to operations is the reduction of product contamination by foreign matter which is too small to be seen by the naked eye. We continually work to address this issue through the improvement of production processes. To eliminate such foreign matter from the raw material stage, we also support and cooperate with raw material manufacturers.

From the second half of fiscal 2011, we have been renewing and repairing aging buildings and facilities to improve the plant's working environment.

Fiscal 2012 Initiatives

<Safety>

1. We will prepare safety slogan posters
 2. We will conduct worksite patrols to ensure that employees are correctly wearing protective equipment
 3. We will conduct Hiyari-Hatt accident control reporting
- In addition, we will continue the initiatives listed in items 3 through 5 of "Fiscal 2011 Achievements."

<Environment>

From fiscal 2013, Denka Advantec will be required to report its energy consumption volume as well as energy-saving measures to the Singaporean Government. Considering that fiscal 2012 is the year in which said report will be prepared, we will further promote and activate our energy saving initiatives.

<Quality>

The Technical Service Center, under construction from fiscal 2011, was completed in early fiscal 2012 and will soon come into full-scale operation. The purpose of the facility is not limited to customer service but includes such tasks as product evaluation with regard to quality following changes in production processes as well as verification tests.



The Technical Service Center

Denka Advanced Materials (Suzhou) Co., Ltd.

Address: Unit 9B, Modern Industrial Square, No. 333 Xingpu Road,
Suzhou Industrial Park, Suzhou, Jiangsu, China 215126
Telephone: +86-512-6287-1088

Profile

■ Employees

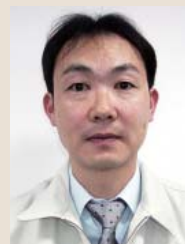
71 (as of March 31, 2012)

■ Operations

In January 2006, this company was established as DENKA's first production and sales subsidiary in China since World War II. The company manufactures carrier tape for electronic packaging and micro-slit products, while responding to domestic users' demand for higher quality.



CSR Policies



Yuichi Kadoya
General Manager

General Manager's Policies

1. Bolster safety initiatives to maintain our zero-accident record
2. Strengthen initiatives for environment preservation
3. Undertake education and drills, continue to work to upgrade workplaces

Fiscal 2011 Achievements

● Initiatives for Eradicating Occupational Accidents

- To identify danger spots needing improvement, management-level and above personnel conduct safety patrols.
- Each day, before work begins, employees gather to recite safety slogans featured on an in-house prepared calendar to raise their safety awareness.



Reciting a safety slogan



A safety slogan featured on the calendar

● Initiatives for Zero-Accident

- Reflecting the results of a voluntary check of firefighting equipment and an audit by a governmental institution, we reviewed and improved our fire prevention measures.

● Environment Preservation

- Aiming to reduce waste generation, we constantly strive to improve manufacturing yields.
- Striving to eliminate wasteful use of lighting and thereby reduce energy consumption, we have posted signs admonishing against the unnecessary use of lighting near switches.

● Beautification Activities around the Plant

- We are conducting beautification activities around the plant. These activities also aim at raising employee awareness of Four-S activities*



*An initiative to ensure the four-S features at the workplace. The four-S's refer to Seiri (tidy), Seiton (organized), Seiketsu (clean) and Seiso (cleaning).



Fiscal 2012 Initiatives

In fiscal 2012, we will continue to enforce disaster prevention measures, secure occupational safety and reduce waste generation. We will also pursue energy-saving efforts. Rallying all employees, we will strive to upgrade these CSR activities.

Denka Chemicals Development Suzhou Co., Ltd.

Address: Unit 1D, Modern Industrial Square, No. 333 Xingpu Road,
Suzhou Industrial Park, Suzhou, Jiangsu, China 215126
TEL: 86-512-6280-6808

Profile

■ Employees

10 (as of June 1, 2012)

■ Operations

In China, DENKA provides such products as chloroprene rubber, electronic materials, styrene-based synthetic resins, special cement additives for concrete to the markets of automotive, home electronics and civil engineering and construction materials. To promptly and accurately respond to demands for analysis, performance evaluation and product improvements from consumers, Denka Chemicals Development Suzhou was established in December 2010 as a new R&D base in Suzhou, China, starting operations in August 2011.

Currently, the company conducts R&D pertaining to synthetic rubbers (chloroprene and DENKA ER) and HARDLOC acrylate-based 2-component type adhesive. Since fiscal 2012, it also conducts research on special cement additives for concrete.



CSR Policies



Tetsumi Ikeda
General Manager

General Manager's Policies

1. Pursue zero-accidents and zero-disasters
2. Promote human resource development by enriching education and training
3. Improve the working environment while ensuring strict compliance
4. Enhance product quality by pursuing development while improving customer service



Fiscal 2011 Achievements

In fiscal 2011, we focused on the following:

- Preparation of operational procedure documents for equipment while providing training on handling such equipment. Clearly labeling equipment to ensure attention to safety.



In the entrance hall, a corner displaying the company's products

- Tightening of controls on handling, storage and disposal of chemicals.
- Raising employee awareness of safety through safety meetings and education.
- Implementing on the job-training aimed at developing human resources and enhancing product quality.



DENKA Polymer Co., Ltd.

<http://denkapolymers.co.jp>

Profile

■ Address

Head Office: 12-8 Kiba, 5-chome, Koto-ku, Tokyo**Telephone:** +81-3-5245-3641**Plants:** 3 in Chiba Prefecture (Sakura, Goi, Katori)

■ Employees

500 (as of April 1, 2012)

■ Major products

OPS products, prepared food trays, food containers, PSP food trays, SOFLIGHT products, agricultural packs and stretch films for food packaging

Shinji Sugiyama
President

Fiscal 2011 Achievements and Fiscal 2012 Initiatives

● Main Initiatives and Activity Report

DENKA Polymer pursues weight cutbacks for all products, aiming to create environment-friendly packaging that contributes to energy and resource conservation. We are carefully using resources and are striving to reduce industrial waste. For example, by recovering scrap plastic materials at manufacturing lines, we are eliminating the waste of such materials while keeping the lines tidy.

● Recycling Initiatives: Aiming to Create a Recycling-Oriented Society at the Local Community Level

Responding to customer requests, we are recycling the white trays made of PSP (polystyrene paper) foam commonly used for food packaging in order to reduce environmental burdens and improve economic efficiency. In addition, we have been participating in the Koto-ku (Tokyo)-based styrene foam packaging recycling business since fiscal 2010.

● Participating in the Koto-ku-Based Recycling Business

Koto-ku is one of municipalities where cutting-edge global warming prevention activities are taking place. For example, the Styrene Foam Recycling Pilot Business was launched three years ago in April 2010. Plans call for upgrading this pilot business into a full-fledged business in April 2013. We are proactively cooperating with this pilot business as a Koto-ku-based food packaging manufacturer.

This business involves the recovery of styrene foam packaging from 9,400 collection points within Koto-ku and accumulated in Ecomira Koto, a recycling facility operated by the NPO Chikyu-Sen Club. After being sorted at the facility, the used packaging is processed into pellets that can be used as resin raw materials for plastic products. We provide wide-ranging advice and support to this business in addition to receiving and recycling the pellets as a raw material.

It is the nation's first attempt to recycle all of the food packaging collected within an entire local municipality. In addition, as a unique business structure in which a local government body, residents, an NPO and a business operator work together to support resource recycling, the business is drawing public attention.

Ecomira Koto provides site tours and hands-on experience to elementary and junior high school students. It

is situated on the premises of Ekokkru Koto, a municipal facility for environmental education aimed at deepening people's understanding of recycling. The facility also offers employment for people with disabilities. We are helping to foster a resource recycling-oriented society at the local community level by proactively participating in this recycling business and helping to get it on track.

● Overview of the Koto-ku-Based Styrene Foam Recycling Business

1. The Koto-ku Government and Chikyu-Sen Club NPO jointly run the Styrene Foam Recycling Pilot Business

2. Purposes are:

- 1) To promote the recycling business and thus global warming prevention while creating a resource recycling-oriented society
- 2) To help people with disabilities achieve independence by generating employment for them
- 3) To provide environmental education involving site tours and hands-on experience

3. Term

Pilot business: Three years from April 2010 to March 2013**Full-fledged business:** From April 2013 and beyond

4. Products eligible for recovery: Styrene foam products

PSP foam: containers used for natto, pot noodles, food trays, etc.**EPS (expanded polystyrene):** boxes used to transport fish, buffer materials, etc.

5. Roles and responsibilities

Koto-Ku Government: Collection and transport of used styrene foam**Chikyu-Sen Club:** Operation and management of recycling facilities (separation, storage and recycling of used styrene foam and sale of recycled materials)**DENKA Polymer:** Reception of recycled materials and manufacturing products using such materials

(In accordance with the Food Sanitation Act, collected materials are not recycled into food packaging materials)

6. Recycling facility

Facility name: Ecomira Koto**Location:** Shiomi, Koto-ku, Tokyo, Ekokkru Koto, the Cleaning Office and Information Center for Environmental Education

DENKA SEIKEN Co., Ltd.

<http://denka-seiken.jp>

Profile

■ Address

Head Office: Nihonbashi Mitsui Tower, 1-1 Nihonbashi-Muromachi

2-chome, Chuo-ku, Tokyo

Telephone: +81-3-6214-3236**Plants:** Gosen, Niigata (Niigata Plant, Kagamida Plant)

■ Employees

577 (as of April 1, 2012)

Shigetoshi Toyooka
President

■ Major products

Influenza vaccines, bacteriological diagnostic reagents, virological diagnostic reagents, clinical chemistry diagnostic reagents, immunological diagnostic reagents, point of care testing (POCT) products



Fiscal 2011 Achievements

In the area of safety and health activities, we conducted risk assessments to prevent major accidents. We also held seminars on mental health issues with lectures by external instructors as well as safety and health education for employees and managers to ensure a more comfortable workplace.

In promoting environmental burdens reduction to preserve the environment, we held dialogue sessions with local residents who monitor the environment surrounding our plants. In these sessions, we exchanged opinions in accordance with the Guidelines for Global Warming Countermeasures set forth by Japanese Government on such matters as the suspension of boilers to prevent the generation of white smoke.

To foster more friendly ties with the local community, we continued to clean up irrigation channels around the Niigata Plant. Furthermore, we held meetings to which we invited neighborhood association representatives to facilitate the exchange of opinions. We will further accelerate these activities.

In terms of social contribution, we made donations for those who were devastated by the Great East Japan Earthquake with the wish for the earliest reconstruction. Moreover, we offered diagnostic kits that enable users to promptly diagnose norovirus infections, an area in which DENKA SEIKEN boasts technological strengths.



Employees who participated in the cleanup activity



Cleaning an irrigation channel

Fiscal 2012 Initiatives

We will continue to focus on our basic initiatives, including safety and health activities to prevent major accidents and disasters. Together with this, we will strive to further deepen communications with the local community to become a company that society can rely on while maintaining our dedication to environmental preservation.

CRK Corporation

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

Profile

■ Address

306-banchi, Koyagi-cho, Takasaki, Gunma

Telephone: +81-27-362-7510

■ Employees

66 (as of May 1, 2012)

■ Major products

Rubber compounds, industrial rubber products, thermal expansion fire-resistant rubber products, butyl adhesive tape, water swelling leakage stop rubber tape and quake-proof manhole joints

Haruo Kimura
President

Fiscal 2011 Achievements

● Risk Assessment Activities

We started risk assessment activities. We thoroughly identified the risks at most dangerous facilities at each worksite and the Safety and Health Committee is considering countermeasures against those risks.

● Seminars for Junior Site Supervisors

Nine junior site supervisors underwent TWI-4J training* provided by external trainers.

*TWI-4J: Training Within Industry in the areas of the four-Js: Job instruction, Job relations (to learn how to relate with people), Job methods (to learn how to improve methods) and Job safety.

● Changeover to Fuel That Produces Less CO₂ Emissions

Our CO₂ emissions decreased by 24% year on year thanks to a fuel changeover from A heavy oil to LPG that has been conducted in line with the renewal of our boilers. Moreover, we expect that the abovementioned changeover will lead to a 14% year on year decline in energy consumption.

● Energy Saving Measures for Facilities

Through the renewal of aging facilities, we implemented energy saving measures. Specifically, at our refining plant we replaced a double-roll machine with two single-roll machines. To improve safety, we intend to change the voltage of the electric power we take from the grid from 3,000V to 400V.

● Energy Saving Measures in General

As part of our summer energy conservation efforts, working hours in the production section were changed, from day shift only to a flexible two-shift system. In addition, we further insulated high-temperature facilities and applied insulation films to windows that receive strong afternoon sunlight.

● Awards

In fiscal 2011, the Chief of the Takasaki Labour Standards Inspection Office presented us with an award for our day-to-day safety efforts. The award was given at the Industrial Safety and Health General Meeting of Takasaki Area.

Fiscal 2012 Initiatives

- We will conduct comprehensive risk assessments to identify danger spots no matter how small and to implement appropriate countermeasures.
- We will develop a system to measure the weight of raw materials with the aim of reducing workloads, improving productivity and tightening quality control.
- We will promote, in addition to developing the aforementioned system, the automated measurement of raw materials to reduce dust at the worksite and thus improve the working environment.
- We will promote measures for improving the workplace environment. Addressing the most urgent issue, we will relocate our press facilities to a newly built plant to eliminate the generation of mist.

- We will improve the arrangement of plant facilities and buildings and thus improve distribution efficiency within the plant. Specifically, we will establish additional material and product warehouses.
- We will continue to implement energy conservation efforts during summer based on a review of our production schedule.
- We adopted MSDSplus in addition to MSDS* that corresponds to GHS** and are identifying designated chemical substances contained in our products. This move will increase our responsiveness to our customers' demand for Green Procurement.

*MSDS: Material Safety Data Sheets

**Globally Harmonized System of Classification and Labeling of Chemicals

Hinode Kagaku Kogyo

<http://www.hinode-kagaku.co.jp>

Profile

■ Address:

660 Aza Kuratani, Maizuru, Kyoto

Telephone: +81-773-75-5760

■ Employees:

41 (as of April 1, 2012)

■ Major products:

Major Products: YORIN (fused magnesium phosphate), TORETARO (fused silicate phosphate fertilizer), mixed fertilizer, chemical fertilizer

Shizuo Takagi
President

Fiscal 2011 Achievements

With the slogan “Aiming to contribute to society and facilitate employees’ self-fulfillment through fertilizer production,” in fiscal 2011 we implemented a number of initiatives under the following policies:

- Complying with laws and regulations, we will contribute to society while striving to survive the competition in fertilizer industry by securing profits.
- Fully utilizing each employee’s uniqueness and strengths, we will sincerely endeavor to realize our ideals.
- After the Great East Japan Earthquake, we strove to enhance our productivity with the aim of supporting other fertilizer manufacturers. Consequently, our energy consumption intensity (index for indicating energy efficiency) improved.
- Focusing on environment-related issues, we provided training on compliance with laws and regulations for the heads of each section and thus raised their awareness.

- The risk assessment method was adopted throughout the Company, from the back office to the production site.
- By striving to rejuvenate “Kaizen” improvement proposals at the workplace, we created a more favorable working environment.
- We prepared documents and records required for implementing the “KES Step 2” environmental management system, completing the establishment of the system.
- As for Good Company Program activities, we enriched the content of our in-house education. Specifically, we provided training on such matters as the maintenance of facilities and statistical analysis methods while ensuring that employees possess wide-ranging background knowledge with regard to the fertilizer manufacturing industry.
- We proactively conducted cleanup activities at neighboring communities.



Training session on how to use the Automatic External Defibrillator (October 20, 2011)



Fire drill (October 20, 2011)



Fiscal 2012 Initiatives

We will continue to contribute to society and facilitate employees’ self-fulfillment through fertilizer production.

- Complying with laws and regulations, we will contribute to society while striving to survive the competition in the fertilizer industry by securing profits.
- We will work to achieve our full potential as an organization by fully utilizing each employee’s uniqueness and strengths.

DENKA Azumin Co., Ltd.

<http://www.denka-azumin.co.jp>

Profile

■ Address

118, 5 Chiwari, Nimaibashi, Hanamaki, Iwate
Telephone: +81-198-26-2131

■ Employees

29 (as of April 1, 2012)

■ Major products

Azumin (magnesium humate fertilizer)



Mamoru Nakamura
President



Fiscal 2011 Achievements

● Response to the Great East Japan Earthquake

On March 11, 2011, an earthquake with a low six intensity was recorded in Hanamaki City, Iwate Prefecture. Fortunately, none of our employees or their families suffered any damage. As our operations were already suspended when the earthquake struck, our production facilities also sustained no significant damage. However, the earthquake damaged water pipes and a water well on the premises as well as transformer in the powerhouse.

When another earthquake, with an upper five intensity struck on April 7, 2011, our facilities were running and we were forced to suspend operations. However, we suffered no damage thanks to our constant practice, which enabled us to promptly respond to this event.

Given the circumstances, we strove to contribute to the earliest recovery of the devastated areas through the following initiatives:

- We lobbied the relevant governmental institutions, including the Iwate Prefectural Government in tandem with port management bodies of Ofunato and Miyako as well as logistic service providers, with the aim of facilitating the earliest possible restoration of service at local ports.
- Our Fertilizer Department together with farm producers conducted tests for improving farmland that had suffered salt damage with the aim of contributing to the restoration of the agricultural industry. These efforts confirmed that “Azumin” fertilizer has a beneficial effect on such farmland (see also page 7 of printed *CSR Report 2012*).

● Response to the Request for Energy Conservation

- From July to September 2011, we strove to save energy in accordance with the request of the Japanese Ministry

of Economy, Trade and Industry to cut energy consumption by 15%. As a result, we succeeded in reducing year on year energy consumption by 29%.

- We amended our operating schedule and suspended operations for 19 days from December 2011 to February 2012 to cooperate with energy conservation.

● Building Relationships of Trust with Local Communities

- In tandem with the Hanamaki City Nimaibashi Council for Environmental Pollution Countermeasures, we briefed local residents on how we respond to such disasters as earthquake to deepen their understanding of disaster prevention measures.

● Efforts to Maintain a Zero-Accident Record

- One accident that required no time off occurred and ended our zero-accident record. However, we continue to pursue safety measures, setting a new target of achieving 1,000 days of zero-accident operations.
- An employee received an award from the Hanamaki City Association for the Safety of Hazardous Materials for the excellent handling of hazardous materials.
- We endeavored to ensure the safety of on-premises distribution by installing devices to prevent accidental falls, introducing specialized vehicles for working at height and conducting inspections of load volumes.

● Environmental Preservation Activities

- In accordance with the Hanamaki City Pollution Control Agreement, we measured air, water and noise pollution as well as vibration from our facility and reported that all were within limits.

Fiscal 2012 Initiatives

- We will maintain a zero-accident record through efforts to ensure safety and stable operations.
- We will pass on production techniques to the younger generation while striving to enhance our technologies and develop new products.
- We will rejuvenate communications to promote safety and environmental preservation activities as well as legal compliance.