





**Our CSR Vision**

**Pursuing Lasting Trust as an Outstanding Manufacturer**

Toward its CSR vision, "pursuing lasting trust as an outstanding manufacturer," the DENKA Group promotes CSR activities from the economic, social and environmental perspectives.

The Group has established the DENKA Group Guidelines to guide its CSR activities.\*

\* The DENKA Group Guidelines are presented on page 1 of the DENKA CSR Report 2013 References (PDF format) posted on our website.



**Continuously Enhancing Technologies to Create Products with Value and Thereby Supporting Social Development**

**DENKA100 Corporate Philosophy**

**Creating Valuable Things That Benefit Society from Resources with Advanced Technologies**

To realize our CSR vision, we established the above corporate philosophy, implementing the DENKA100 Companywide initiative encompassing six pillars,\* namely: "The expansion of business operations"; "Human resource development"; "R&D Promotion"; the "GCP: Good Company Program"; "Promote further innovation"; and "CSR: Corporate Social Responsibility." The initiative looks to achieve sustainable growth beyond fiscal 2015—the year we will mark the centennial of our founding.

We are committed to maintaining an earnest attitude and sincere conduct in our dealings, both of which have been our essential traditions as a manufacturer. By fulfilling our roles and responsibility as a member of society, we will endeavor to garner its trust, thereby achieving sustainable growth over the next 100 years.

\* Please see page 10 for the details of six pillars of the DENKA100 initiative.



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Making Safety an Integral Part of Our Business, We Will Strive to Realize People- and Eco-Friendly Operations in Our Pursuit of “Lasting Trust as an Outstanding Manufacturer.”

### Report on Accidents at Our Plants

First of all, I would like to express my sincere gratitude to our stakeholders for their continued support. Herein, it is my pleasure to present the *DENKA CSR Report 2013*, which summarizes initiatives undertaken in fiscal 2012, ended March 31, 2013, with the aim of fulfilling DENKA's Corporate Social Responsibility (CSR).

Regrettably, before discussing our initiatives in fiscal 2012, we must report that two major accidents occurred at our plants.

At the Omi Plant, on June 17, 2013, an employee of one of our subcontractors was struck by a heat blast from an electrical furnace in the calcium carbide production facility, resulting in death. We would like to extend our deepest condolences to the victim of this accident and sincerely express our apology to the bereaved family. Also, on July 20, 2013, a fire broke out at the Chiba Plant during the demolition of a styrene monomer production facility. Although the fire did not cause human injury or environmental damage and was extinguished the next day, we would extend our deepest apologies to the plant's neighbors and others in the area as well as relevant authorities for any trouble and anxiety caused by this accident.

Recognizing the critical nature of these accidents, we will earnestly implement exhaustive countermeasures aimed at preventing any recurrence, guided by the instruction of related authorities. Reinforcing our awareness that the utmost priority must be placed on safety and disaster prevention in all corporate activities, the entire DENKA Group will rally its strengths to regain the trust of society.

### Ensuring Safety: Going Back to the Basics

Up to the present, DENKA's focus has been on encouraging individual employees to master the basics of safe operations and raising their safety awareness, striving to maintain worksite safety by building on strong communication among employees. Despite these efforts, the accidents occurred. Our assessment of these accidents suggests insufficient hazard prediction and a lack of communication with subcontractors to ensure safety.

In addition to the Omi Plant, DENKA operates a number of plants that include high-temperature and high-pressure facilities. Applying the lessons learned from these accidents, we are

going back to the basics of safe operations, thoroughly redeveloping our plant maintenance techniques and safety management methods. Simultaneously, we are working to cultivate a corporate culture that is conducive to communications, facilitating mutual support among all plant staff to ensure the safety of day-to-day operations.

### Starting a New Phase of DENKA100 to Accommodate a Changing Business Environment

In April 2013, we started a new phase of DENKA100, a Companywide initiative launched in 2007. Although steady progress has been made toward securing sustainable growth, it has become unlikely that the DENKA100 numerical targets for business performance such as that for operating income can be attained by the end of fiscal 2015. This is due to the harsh operating environment caused by such factors as European debt problems, the deteriorating relationship between Japan and China and the repercussions of the Great East Japan Earthquake. Taking the above into account, we moved the target year of DENKA100 to fiscal 2017 while reestablishing growth strategies. Moreover, in April 2013 we revised our organizational structure in line with market changes.

### Remaining On-Trend with Market Needs by Renewing Growth Strategies and Implementing Organizational Restructuring

New growth strategies established in concert with the next phase of DENKA100 consist of: “Create the most optimal production system”; “Scrutinize every cost element”; and “Focus management resources on new growth drivers and develop next-generation products.”

We will accelerate global expansion to penetrate growth markets with products that boast a competitive edge while maintaining cost competitiveness capable of prevailing on the global stage. Simultaneously, we devote our management resources to four growth fields, namely, the environment, energy, infrastructure and healthcare. While making the most of our proprietary technologies in each of these fields, we will strive to develop next-generation products that help to resolve social issues through the pursuit of “open innovation,” including joint

research initiatives. Examples of such products include alumina fiber for vehicle exhaust gas purification; acetylene black for use in secondary lithium ion batteries (LiBs); special cement additives to meet infrastructure demand in emerging Asian countries; and the diagnostic reagents and joint function improvers to accommodate expanding healthcare needs.

With the aim of facilitating these growth strategies, our April 2013 organizational revisions included the integration of six business divisions that were previously divided by type of material into four divisions that better suit market needs. Pursuing areas of operations where DENKA has unique strengths, we will develop core businesses that can drive us forward over the next 100 years as we take a global perspective.

### Fulfilling Our Responsibility to the Environment

As a chemical company, DENKA makes products from natural resources and by using energy. To remain a trustworthy corporate citizen and continue operations, it is essential not only to make products of value but also to take into consideration such issues as energy and resource saving. With this in mind, our important management issues over the next 100 years include the further utilization of renewable energy sources through the increase of output from hydroelectric power plants, additional installation of such plants and the construction of mega-solar power stations.

To reduce environmental burdens, we are continuously implementing voluntary Responsible Care (RC) activities to improve the entirety of products' life cycles while formulating the Medium-Term Environmental Plan aimed at systematically promoting energy saving and the reduction of emission of environment load substances and industrial waste.

Furthermore, DENKA proactively seeks to help to resolve environmental issues by providing society with its technological expertise on production and product development accumulated over the years. One such attempt is the licensing of dry acetylene generation technology, which saves on the use of energy and water, to Chinese manufacturers. Also, we expanded our waste material recycling business at our cement plant in Omi. Cooperating with relevant government authorities and municipal bodies, in January 2013 we began accepting sludge generated during the filtration process of water supply



facilities, after confirming such sludge conforms to safety standards with regard to residual radioactivity and gaining the understanding of local residents.

### Ensuring Compliance

To expand our business overseas, it is indispensable to maintain sufficient understanding of laws, regulations and social ethics of each country in which we operate. Drawing lessons from an allegation of EU Competition Law violation with regard to sales of chloroprene rubber, we have reinforced our education-related efforts aimed at deepening our employees' understanding of legal systems and having them abide by the DENKA Group Ethics Policy, which sets forth our voluntary ethics standards.

As for human rights, the DENKA Group Ethics Policy strictly prohibits forced labor, power harassment and sexual harassment. We have also set up internal and external consultation services and the Compliance Hotline System. Moreover, with the aim of ensuring compliance, including respect for human rights, across our supply chain, we launched the CSR Procurement Committee and formulated procurement policies and guidelines in fiscal 2013. These policies and guidelines will be in effect by the end of fiscal 2013.

As a response to mental health problems, which are becoming a social concern in recent years and are likely to be discussed in a revision of the Industrial Safety and Health Act, we have begun implementing the "Mental Health Promotion Plan," a program that includes reinstatement support for those who have taken leave due to such problems.

### Creating Rewarding and Comfortable Workplaces

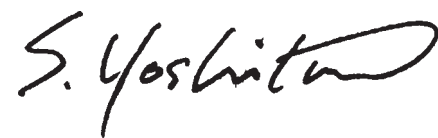
A company is built on the work of each employee. Therefore, we believe that it is important to ensure that each employee is able to achieve an optimal balance between their work duties and private lives, a balance that has a bearing on the happiness of their families. Striking such balance is not only essential to improve labor productivity but also indispensable for a company desiring to continue operating and achieving sustainable growth. In line with this belief, we are enriching career development programs while developing leave systems that accommodate diverse lifestyles, allowing employees to engage in child raising, nursing care and volunteer activities without anxiety.

In fiscal 2012, DENKA revised its personnel system, abolishing the seniority-based promotion and remuneration system in order to ensure that employees at all levels, from new recruits to managers, are evaluated based solely on their quality of work and willingness to take on new challenges and are promoted accordingly. At the same time, we established recruiting policies aimed at increasing the number of specialist female staff and proactively hiring international employees.

### Looking Toward the Next 100 Years—Becoming a Manufacturer That Deserves People's Trust

Since July 2011, DENKA employees have continued to engage in volunteer activities aimed at supporting areas devastated by the Great East Japan Earthquake. Group volunteer trips to such areas have been organized on more than 30 occasions to date. Also, DENKA has been holding experimental science classes for local children. Spearheaded by younger employees with a strong sense of duty toward society, such science classes are helping nurture children's interest in chemistry and are facilitating greater understanding of the DENKA Group's business operations among local residents, including the parents and teachers of such children. We are thus expanding both the number of locations where we hold these experimental science classes and scope of their content.

We believe that improving business performance and fulfilling our responsibilities as a member of society must be realized in tandem—the two are inextricably linked and together constitute indispensable conditions to obtaining the trust of society and ensuring our sustainable growth over the next 100 years. While staying true to our traditions of maintaining an earnest attitude and sincere conduct in our dealings, DENKA will continue its pursuit of the lasting trust of society as an outstanding manufacturer.



Shinsuke Yoshitaka  
President & CEO

## A Heat-Blast Accident at the Omi Plant's Calcium Carbide Production Facility

On June 17, 2013, at the Omi Plant, an employee of one of our subcontractors was struck by a heat blast that blew out from the top of an electrical furnace in the calcium carbide production facility. The accident occurred while he was undertaking electrical work and caused burns all over his body, resulting in death despite his being rushed to intensive care.

The accident did not involve fire or cause the dispersion of hazardous substances and had no impact on the environment of surrounding areas.

Although operations at the electrical furnace in question were suspended in accordance with an order from the Itoigawa City Fire Department issued on June 17, 2013, the furnace resumed production on July 3, 2013, upon the lifting of said order.

## A Fire at the Chiba Plant During the Demolition of a Styrene Monomer Production Facility

On July 20, 2013, at the Chiba Plant, a fire broke out in a distillation tower during the demolition of a styrene monomer production facility that had been nonoperational since May 2012. The Ichihara City Fire-Prevention Section, the Goi Joint Disaster Prevention Council and DENKA's in-house fire brigade were able to confine the fire to the facility, extinguishing it the next day. The fire resulted in no human injury or property or environmental damage.

Further details of these accidents and updates can be found among the news releases posted on DENKA's website.

(Available only in Japanese.)

<http://www.denka.co.jp/news/>

In the *DENKA CSR Report 2014*, we will feature follow-up reports with regard to actions taken in response to these accidents.

# While Striving to Ensure Thorough Compliance, We Are Endeavoring to Develop a Highly Transparent Management Structure, Giving Due Consideration to the Latest Global Trends in Corporate Governance.

## Corporate Governance Structure

We adopted an Audit & Supervisory Board System as the basis of our Corporate Governance System. The said board includes two outside members assessing our operations and management to ensure that our business properly serves stakeholders.

The Board of Directors similarly has two outside members. We ensure management transparency by separating the 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, members of the Audit & Supervisory Board and selected executive 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.

## Internal Control

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 systems.

### 1. Board of Directors, Audit & Supervisory Board and Executive Officers

Two of our ten directors are outside members. 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 outside directors and two outside members of the Audit & Supervisory Board are appointed as independent directors/auditors under the rules of Tokyo Stock Exchange Group, Inc. They maintain sufficient independence while retaining extensive knowledge in their area of specialty. This ensures that the Company's management receives supervision from an external viewpoint.

### 2. Internal Auditing System

The Internal Auditing Dept. 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.

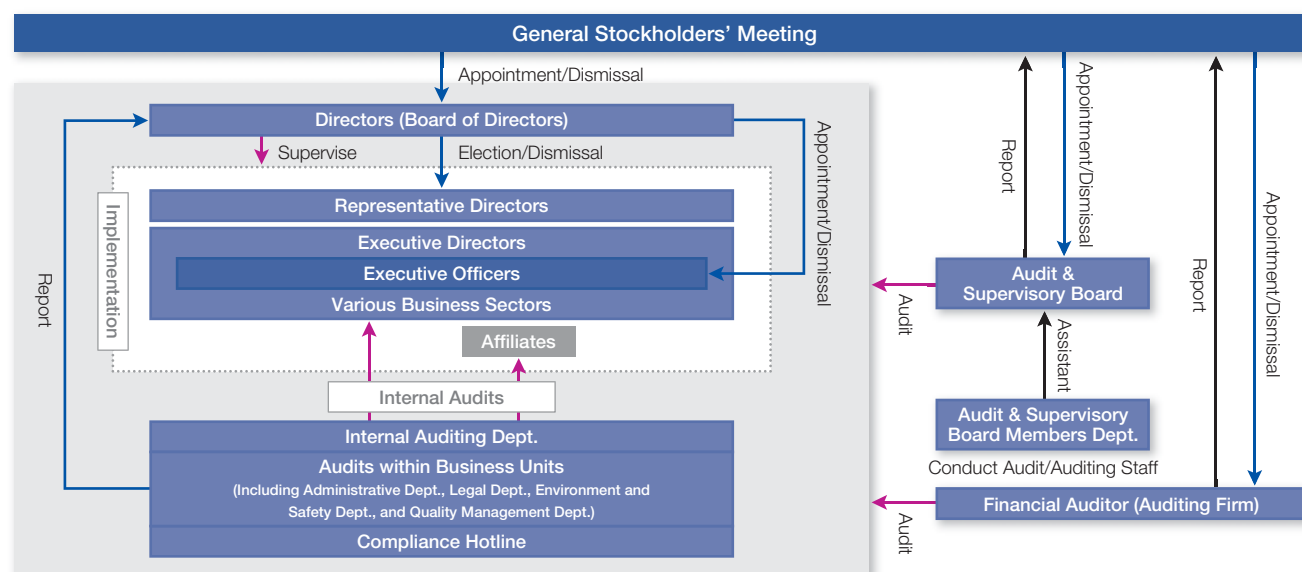
We inaugurated the Compliance Hotline System to supplement internal audits by swiftly identifying and addressing any violations.

### 3. Internal Control 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

## Corporate Governance Overview



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 2012, 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.

In December 2007, DENKA and its overseas subsidiary DENKA Chemicals GmbH (DCG) were notified of the decision made by the European Commission pertaining to an allegation of their EU Competition Law violation with regard to sales of chloroprene rubber undertaken in Europe from 1993 to 2002. As we believed the European Committee's fact-finding was different from ours, we objected to this decision and filed an appeal against it to the European General Court in February 2008. However, the Court rendered a judgment in favor of the European Commission's decision in February 2012 and we decided not to file any further appeals.

Upon serious reflection in light of this incident, we have made thoroughgoing efforts aimed at ensuring compliance. While improving our internal auditing system, we stepped up the implementation of in-house education centered on competition laws (e.g., the anti-monopoly laws), holding training sessions on 13 occasions throughout the Group, including overseas subsidiaries, with more than 500 employees participating and external lawyers and other specialists lecturing.

The year in which the said violation has been deemed to have ceased is 2002, and for the more than 10 years since then the DENKA Group has not been charged with the violation of any competition laws overseas while staying free of the violation of relevant domestic laws for more than 20 years since 1992. We are striving to maintain this status, continuously taking various measures aimed at preventing recurrence, including employee education.

## 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 Audit & Supervisory Board Members Dept. 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 2012, we received two reports.

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

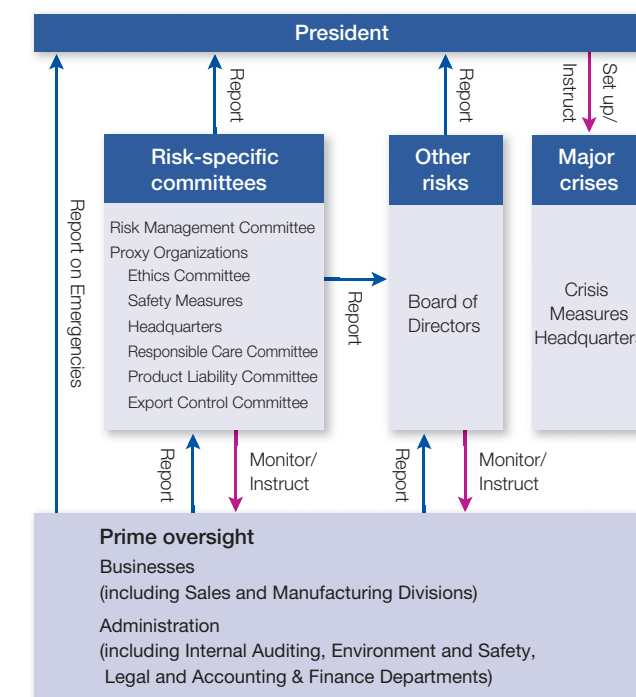
## Risk Management

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



WEB The DENKA Group Guidelines and details of our information system management are available on pages 1 and 3 of the DENKA CSR Report 2013 References (PDF format) posted on our website.

## DENKA Group's CSR



### To Achieve the Goals Set Forth in DENKA100, We Promote CSR Activities from the Economic, Social and Environmental Perspectives in Our Continued Pursuit of "Trust as an Outstanding Manufacturer."

Since its founding in 1915, DENKA has sought to contribute to society's development as a manufacturer in the chemical industry while always striving to be a company that garners people's trust.

In 1995, we began implementing responsible care (RC) activities, adopting a CSR initiative promoted across the entire chemical industry for the voluntary management of chemical substances. Since then, we have taken a systematic approach to advancing environmental conservation, product safety, security and disaster prevention, and communication with local communities.

In 2007, we launched DENKA100, a key management initiative that guides efforts to fulfill our social responsibility in six areas, setting goals for fiscal 2015—the year we will mark the centennial of our founding.

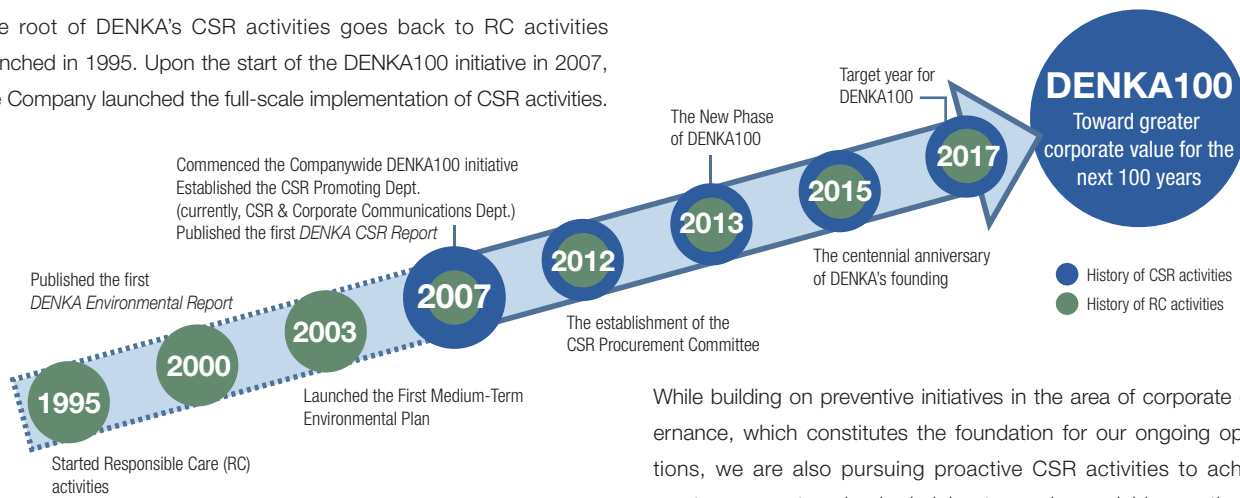
Constantly striving to be an exemplary corporate citizen, we seek ways to help to resolve social issues by drawing on our unique strengths and thereby continue to pursue trust as an outstanding manufacturer.

**Junichi Kimura**

Executive Officer, General Manager of Corporate Planning Dept., CSR & Corporate Communications Dept.

## History of CSR Activities

The root of DENKA's CSR activities goes back to RC activities launched in 1995. Upon the start of the DENKA100 initiative in 2007, the Company launched the full-scale implementation of CSR activities.



### Six Pillars of Activities toward DENKA100

#### The Expansion of Business Operations

To secure sufficient management resources, we have set quantitative targets to be achieved in fiscal 2017, namely, consolidated operating income of ¥60 billion, an operating income ratio of 10%, and a 50% ratio of overseas sales to net sales.

#### Human Resource Development

While boosting employee motivation, we will facilitate the development of human resources who can independently think, learn and take action.

#### R&D Promotion

We will reinforce our R&D functions and foster collaborative relationships within the Company to develop new products for future growth and cultivate new markets.

While building on preventive initiatives in the area of corporate governance, which constitutes the foundation for our ongoing operations, we are also pursuing proactive CSR activities to achieve greater corporate value by helping to resolve social issues through our business activities.

#### GCP: Good Company Program

To be a "Good Company," we work to solve material issues under the mottoes "leadership" and "full participation of employees" while striving to enhance our capabilities.

#### Promote Further Innovation

Through the effective use of resources, improvement of plant capacity, creation of higher-value-added products and enhancement of operational efficiencies, we are striving to promote technological innovation and strengthen our productive and organizational capabilities.

#### CSR: Corporate Social Responsibility

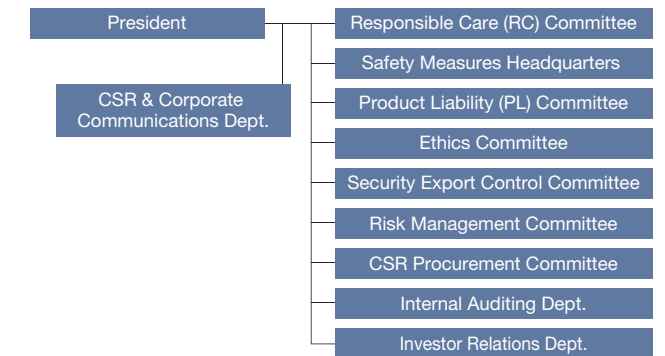
We faithfully address social, environmental and economic issues and steadily promote CSR activities.

## CSR Promotion Structure

To promote its CSR activities, DENKA established its CSR promotion structure spearheaded by the president and consisting of the CSR & Corporate Communications Dept. and nine specialized bodies.

When major issues arise, specialized committees under the direct control of the president hold discussions and make decisions on the actions to be taken. The CSR & Corporate Communications Dept. has been systematically developing an in-house structure to promote CSR, facilitating the understanding of all Group employees to ensure their wholehearted engagement in CSR activities and publishing these activities' results in the *DENKA CSR Report*.

### CSR Promotion Structure



As of July 2013

## CSR Promotion Challenges, Goals and Performance

Stakeholders	Challenges	Fiscal 2012				Major Challenges and Goals in Fiscal 2013 and Beyond	
		Goals	Performance	Pages	Results		
Employees	<ul style="list-style-type: none"> <li>Comfortable and rewarding workplaces</li> </ul>	<ul style="list-style-type: none"> <li>Secure occupational safety and health (elimination of occupational accidents)</li> <li>Develop human resources (nurturing a CSR mindset)</li> <li>Report on CSR activities at overseas business bases</li> </ul>	<ul style="list-style-type: none"> <li>Activities of the Safety Measure Committee (reconfirming the importance of leadership and accelerated facility improvement)</li> <li>Held safety discussion meetings at worksites (to facilitate communication), safety training sessions at each business site and safety networking meetings aimed at eliminating accidents specific to resin processing lines</li> <li>Revised personnel system, pursued diversity promotion, reinforced human resource development (overseas training programs, etc.)</li> </ul>	12 to 13 26 to 29 6 (Web*)	C Accidents did not decrease	<ul style="list-style-type: none"> <li>Secure occupational safety and health (elimination of occupational accidents)</li> <li>Ensure adherence to the "fundamental actions required to maintain safety" by on-site workers, facilitating worksite communication, creating a vibrant and lively workplace and enhancing employee education</li> <li>Apply a security capability evaluation system</li> <li>Implement a program to strengthen countermeasures against mental health problems</li> </ul>	
Society	General Public and Local Communities	<ul style="list-style-type: none"> <li>Maintain thorough compliance as a good corporate citizen and reinforce communication with local communities</li> </ul>	<ul style="list-style-type: none"> <li>Ensure thorough compliance (reviewing educational programs and strengthening of the Legal Dept.'s authority)</li> <li>Hold a Company-sponsored "chemical experiment" show</li> </ul>	<ul style="list-style-type: none"> <li>Strengthened the Legal Dept.'s authority and the implementation of compliance education</li> <li>Dispatched employee volunteers to Minami Sanriku-cho through the Disaster Area Volunteer Support Program</li> <li>Participated in the Summer Holiday Chemical Experiment Show for Children and hosted experimental science classes</li> <li>Contributed to the revitalization of local community by supporting the NIGATA Albirex BB Rabbits women's basketball team</li> <li>Contributed to social welfare through educational and cultural initiatives involving music (the Fureal Trio)</li> </ul>	8 to 9 32 to 34 3 (Web*)	A	<ul style="list-style-type: none"> <li>Undertake comprehensive reviews of the status of social contribution activities being implemented across the Group</li> <li>Continuously implement volunteer activities to support disaster-stricken areas</li> <li>Reinforce communication with local communities through experimental science classes</li> </ul>
	Governmental/ External Institutions	<ul style="list-style-type: none"> <li>Engage in public policies and activities</li> </ul>	<ul style="list-style-type: none"> <li>Utilize subsidy systems to pursue R&amp;D projects and improve production technologies</li> </ul>	<ul style="list-style-type: none"> <li>Drew on the Government's subsidy system to conduct R&amp;D and facility improvements that contribute to energy saving and environment conservation</li> </ul>	12 (Web*)	A	<ul style="list-style-type: none"> <li>Continue utilizing subsidy systems to pursue R&amp;D and improvement of energy-saving and other green technologies</li> </ul>
The Environment	<ul style="list-style-type: none"> <li>Prevention of global warming (CO<sub>2</sub> emissions reduction), curbing chemical substance emissions, waste reduction, technological innovation for energy conservation</li> </ul>	<ul style="list-style-type: none"> <li>Promote RC activities</li> <li>Implement the Medium-Term Environmental Plan and formulate a future plan</li> </ul>	<ul style="list-style-type: none"> <li>Implemented the Fourth Medium-Term Environmental Plan (fiscal 2010-2012)</li> <li>1. Missed the target for energy consumption intensity: 0.94 compared with fiscal 1990 level (target: 0.86) Due mainly to the suspension of a styrene monomer facility</li> <li>2. Missed the target for emissions of PRTR substances: 103 tons (target: 88 tons) A 25% year-on-year decrease due to lower production volume and the use of solvent-free adhesives</li> <li>3. Achieved the target for the volume of final waste disposal: 179 tons (target: 374 tons) Due mainly to an improvement in the internal recycling rate at the Omi Plant's Special Cement Additives Dept.</li> </ul>	18 to 25 2 (Web*)	C Missed the targets	<ul style="list-style-type: none"> <li>Implement the Fifth Medium-Term Environmental Plan (systematically reduce emissions of CO<sub>2</sub>, environmental load substances and PRTR substances)</li> <li>Promote RC activities</li> </ul>	
Customers and Suppliers	<ul style="list-style-type: none"> <li>Development and provision of high-quality, economic products</li> <li>Business activities through fair and open trade</li> </ul>	<ul style="list-style-type: none"> <li>Develop and market environment-friendly products</li> <li>Supply reliable and safe products</li> <li>Prepare for the establishment of a CSR procurement structure</li> </ul>	<ul style="list-style-type: none"> <li>Launched the CSR Procurement Committee</li> <li>Pursued product development aimed at energy saving and environmental load reduction</li> <li>Contributed to society by transferring energy-saving technologies, such as calcium carbide manufacturing methods (technology licensing in China)</li> </ul>	30 to 31 4 to 5 (Web*)	B	<ul style="list-style-type: none"> <li>Disclose the CSR Procurement Policies and Guidelines to suppliers</li> <li>Develop and market products aimed at helping to resolve environmental and social issues</li> <li>Continue supplying reliable and safe products</li> </ul>	
Shareholders and Investors	<ul style="list-style-type: none"> <li>Secure returns to shareholders through stable business performance</li> <li>Establishment of relationships of trust through information Exchanges</li> </ul>	<ul style="list-style-type: none"> <li>Enhance CSR-related information disclosure and ensure reliability</li> <li>Execute the business plan</li> </ul>	<ul style="list-style-type: none"> <li>Continued seeking a third-party opinion</li> <li>Enhanced the content of the <i>CSR Report</i> and the website</li> </ul>	34 to 39	C Delayed the target year set forth in the business plan	<ul style="list-style-type: none"> <li>Enhance CSR-related information disclosure and ensuring reliability</li> <li>Continue executing the business plan</li> </ul>	

A: Achieved significant results B: Observed some results C: No results were observed D: The level of activity deteriorated

\* Reported in the web-based *DENKA CSR Report 2013 References* (PDF format).

**WEB** Reports on our responsible care activities are available on page 2 of the *DENKA CSR Report 2013 References* (PDF format) posted on our website.



# Aiming to Realize a “Workplace Free of Accidents and Disasters,” We Facilitate a Safety-Oriented Corporate Culture through Worksite Communication while Raising Safety Awareness among All Employees.



## Fiscal 2012 Occupational Safety Management Plan

We recognize that the leadership of the managers and the heads of each section, a practical approach to daily operations and thorough information sharing among all operators are essential to the pursuit of safety. Under this recognition, in fiscal 2012 we implemented the following initiatives.

1. Ensuring adherence to the required basics of safety
2. Raising safety awareness, facilitating mutual support among all staff
3. Eliminating recurring accidents through information sharing
4. Promoting safety activities best tailored to each site
5. Enhancing the security management system

Despite the above-listed initiatives, we recorded a number of occupational accidents, including those attributable to unsafe behavior and insufficient adherence to the basics of safety. Eight such accidents resulted in absence from work. Approximately 80% of those who suffered accidents were workers with less than ten years' on-site experience. We will work to facilitate worksite communication while reinforcing education for operators with less on-site experience.

As for occupational health, in fiscal 2012 three workers suffered heat-related illness, versus one in fiscal 2011.

## Occupational Safety Record

The number of accidents resulting in absence in 2012\* is as follows. (The figures in parentheses are accident frequency rates.)

**DENKA:** 5 (0.92)

**Subcontractors:** 3 (0.54)

\* The figures are recorded from January to December 2012 (based on regulations set forth by the Labor Standards Inspection Office and guidelines issued by the Japan Chemical Industry Association).

$$\text{Accident frequency rate} = \frac{\text{Number of deaths and injuries}}{\text{Total number of working hours}} \times (1 \text{ million})$$

The rate if 2.6 people per 1,000 DENKA employees suffered accidents would be about 0.9.

## Fiscal 2012 Safety Activities

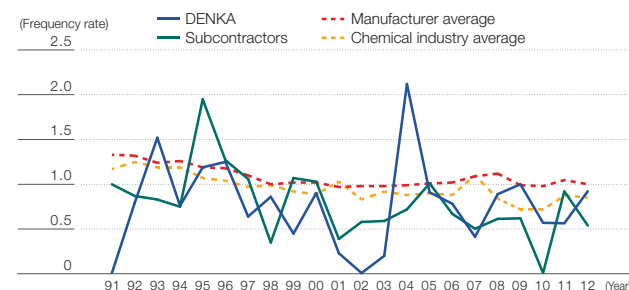
In light of the occurrence of major accidents in fiscal 2011, in February 2012 DENKA established the Safety Countermeasures Committee, composed of safety managers at each production site and the general manager of the Personnel Department. The Committee had met 10 times by December 2012, and identified the problem to be a lack of leadership among the heads of each section in nurturing the workplace culture, pursuing safety records and solving problems. In response, we are stepping up efforts to train leaders who can harness various ideas. We are also enriching employee training programs, such as educational sessions involving danger simulations.

### Facility Security and Disaster Prevention

In fiscal 2012, the DENKA Group experienced no major accidents, such as fires, explosions or leaks of hazardous substances, that could impact surrounding areas. However, the number of facility-related incidents impeding operations was 11, up from 9 in fiscal 2011. Four of the incidents involved a fire or the emission of smoke; three were electricity-related problems; one was water leakage; two were equipment failures and the last involved leakage of muddy water at a construction site and can be categorized as an environmental accident.

The primary causes of these accidents were the inadequate maintenance of facilities and the inappropriate implementation of safety management procedures. Currently, we are carrying out systematic inspections and repairs of facilities. At the same time, we are

### Accident Frequency Rates



reviewing safety management procedures, thoroughly enforcing the implementation of preliminary evaluations and change management.\*

\* See page 6 of the web-based DENKA CSR Report 2013 References

### Safety Review Meetings and Safety Networking Meetings

All six of the Group's main domestic plants as well as the DENKA Innovation Center hold annual safety review meetings to hear directly from on-site employees and identify root causes of accidents. In fiscal 2012, these meetings were held in October and November.

Safety networking meetings are held at least once a year to make sure that best practices are shared horizontally throughout the organization. The fiscal 2012 meeting was held at the Omi Plant on February 28 and March 1, 2013. In addition, the Chiba, Shibukawa, Ofuna and Isesaki plants, all of which are involved in resin processing, hold their own annual safety networking meetings to eliminate accidents specific to resin processing lines. One such meeting was held at the Chiba Plant on July 17, 2012, to share information and discuss measures to prevent recurrences.

### Safety Bulletin Boards, Safety Activity Newsletters and Accident Case Studies

In fiscal 2012, we installed electronic bulletin boards at the entrances of all sites to display their daily safety records. Also, since fiscal 2011 we have issued safety newsletters to share unique safety activities undertaken at each business site and need-to-know information about safety. In fiscal 2012, the 12th edition of the newsletter was issued. Similarly, we have compiled safety booklets since fiscal 2011 and introduced examples of accidents and disasters experienced in the past.

### Unique Safety Activities Undertaken at Each Plant

Plant	Safety Activities Undertaken
Omi	Thoroughly adopting the basics of safety and facilitating worksite communication An initiative aimed at refreshing worker's memories of accident countermeasures
Omuta	Applying a safety-level evaluation system (comprising eight evaluation axes)
Chiba	Implementing the safety and security reinforcement project
Shibukawa	Reviewing hazard source measures using guidelines focused on preventing human errors
Ofuna	Implementing safety drills and danger simulations at safety training sessions
Isesaki	Eliminating typical accidents through facility improvement, training and information sharing

### Lectures on Safety and Security and the Security Capability Evaluation System

Mr. Higashi Ito, a special advisor to DENKA, presented lectures at each site based on research into trends in safety activities conducted by the Japan Society for Safety Engineering (JSSE). Mr. Ito discussed such matters as the latest approaches to and the role of top management in safety activities, the preparation of crisis management systems, the importance of autonomous maintenance, the limitations of risk assessment and the importance of a safety-oriented corporate culture.

In fiscal 2013, we will introduce the Security Capability Evaluation System developed by the JSSE. Targeting facilities that handle large volumes of hazardous substances, we will identify problems inherent to the production of styrene, chloroprene rubber and calcium carbide and implement improvements.

### Participating in the Fifth JPCA Security Summit

The Japan Petrochemical Industry Association (JPCA) hosted JPCA Security Summits on several occasions beginning in November 2012, with the aims of strengthening chemical companies' security measures against industrial accidents and facilitating discussion among chemical companies. On June 6, 2013, DENKA's president, Shinsuke Yoshitaka, attended the fifth meeting, exchanging opinions with other industry leaders on such topics as how to pass on technological expertise to younger employees; human error due to overfamiliarity with operations; and conducting disaster drills in tandem with local communities and enterprises.

Mr. Yoshitaka commented, "I consider safety to be an integral part of our business. Safety and productivity improvement must be pursued simultaneously and with full commitment...We focus on facilitating worksite communication and motivating employees, especially the younger generation, to take a fresh approach toward safety."

At the end of the meeting, the leaders agreed to step up the reinforcement of security measures under the strong leadership of top management.



### Facilitating a Safety-Oriented Corporate Culture and Creating a Vibrant and Lively Workplace



**Miyuki Nakamura**, General Manager, Environment and Safety Department

With the heads of each section spearheading on-site initiatives, we are promoting safety activities aimed at ensuring that safety measures are thoroughly adopted by all operators.

As for occupational accidents, we carried out a case analysis, categorizing them by type, the nature of workers involved and actions they took. We are putting particular emphasis on eliminating accidents resulting from carelessness through the implementation of safety drills and danger simulations.

As for facility-related accidents, we are utilizing the JSSE's Security Capability Evaluation System to identify and address points of improvement to enhance the facilities' capability in order to maintain security.

**WEB** Information on our occupational safety and health management system and change management is available on page 6 of the DENKA CSR Report 2013 References (PDF format) posted on our website. Initiatives undertaken at each site and affiliate are featured in the "Site Reports" section of the web-based references.



## Fiscal 2012 Overview

During fiscal 2012, ended March 31, 2013, the global economy was sluggish due to the repercussions of the European debt crisis and decelerating economic growth in China. These factors, in turn, caused Japan's economy to remain stagnant overall, despite a market rebound backed by a reversal in the trend of yen appreciation toward the end of the fiscal year.

Against this backdrop, the chemical industry was hindered from regaining profitability by such factors as a downturn in domestic and overseas demand and hikes in the prices of such raw materials as naphtha.

Given these circumstances, the DENKA Group has striven to expand its businesses and to secure profitability, working to increase sales in Japan and overseas, revising product prices and cutting costs. However, consolidated net sales for fiscal 2012 decreased 6.3% year on year to ¥341,645 million. Operating income also fell, down 9.2% year on year to ¥18,817 million, and the operating income ratio contracted 0.2 of a percentage point to 5.5%. Among the factors contributing to these results were lackluster sales of high-value-added products, including electronic circuit substrates and fluorine-alloy films, and hikes in raw material prices, all of which offset the favorable performance in the healthcare business.

On the other hand, in fiscal 2012 the Company undertook a number of steps aimed at optimizing its production structure, accelerating R&D activities and better securing and utilizing clean energy.

For example, we reorganized our styrene monomer business, integrating the relevant production facilities into a single plant. We also established new plants in Singapore to produce DENKA IP styrene copolymer resin and TOYOKALON synthetic fiber for wigs and hairpieces, accelerating the shift to local production to capture growing overseas markets. Moreover, in May 2012 we entered into a capital partnership agreement with NIPPON CARBIDE INDUSTRIES CO., INC., with the aim of creating synergies in such fields as the electronic material business.

In R&D activities, we are boosting our research capabilities in a bid to accelerate next-generation product development and to advance our core technologies. At the same time, a construction project is now under way to establish the DENKA Innovation Center main building as a base for joint research initiatives with external organizations.

Furthermore, to continue to thrive for the next 100 years, DENKA is expanding the utilization of clean energy and its capacity to secure electricity in-house. Specifically, the Company increased the maximum output of its Otokorogawa Power Plant and in July 2013 launched in-house mega solar power generation facilities at the Shibukawa and Isesaki plants.

### Major Capital Expenditures (Fiscal 2012-2013)

Completion	Facilities and Plants
Apr. 2012	DENKA IP (Seraya) (new)
May 2012	Electronic packaging material production facilities (Isesaki) (renewal)
Aug. 2012	Silicon nitride production facilities (Omuta) (renewal)
Jul. 2013	TOYOKALON plant (Tuas) (new)
Jul. 2013	DENKA Solar Power Shibukawa (Shibukawa) (new)
Dec. 2013*	DENKA ALCEN production facilities (Omi) (renewal)
Mar. 2014*	DENKA Innovation Center main building (new)

\* Scheduled

The DENKA Group will step up the abovementioned efforts in line with three new growth strategies, namely, "Create the most optimal production system"; "Scrutinize every cost element"; and "Focus management resources on new growth drivers and develop next-generation products."

Meanwhile, on July 26, 2013, the Chinese Ministry of Commerce announced its decision to raise the anti-dumping tax rate imposed on the Company's chloroprene rubber from 9.9% to 20.8%, enforcing the new tax rate the same day. This case had been under the examination of the ministry since June 2012, and we regret that our petition to stop the tax hike was rejected. We will feature follow-up reports on this case in the *DENKA CSR Report 2014*.

## Landmarks in Fiscal 2012

### DENKA'S Styrene Monomer Unit 3 Ceases Operations

In May 2012, DENKA's styrene monomer production facility unit No. 3 (CM-3) ceased operations, bringing the curtain down on a history spanning the 29 years since 1983. The Company integrated its styrene monomer production facilities into a single, more competitive plant dubbed CM-4, in a bid to strengthen its operating base for the styrene-related businesses.



Plant tours at CM-3

### Celebrating DENKA CHLOROPRENE's 50th Anniversary

Since its commercialization 50 years ago, DENKA CHLOROPRENE has been a mainstay of the Company's elastomer business and today DENKA boasts a world-leading chloroprene rubber production capacity. On November 21, 2012, we held the "DENKA CHLOROPRENE 50th Anniversary Celebration" to express our gratitude for stakeholders who have supported this business.



President Shinsuke Yoshitaka greeting stakeholders

## Renewing DENKA100 Growth Strategies

DENKA has implemented the DENKA100 Companywide initiative, which previously set targets for fiscal 2015, the year the Company will mark the centennial of its founding, under six pillars "The expansion of business operations"; "GCP: Good Company Program"; "Human resource development"; "Promote further innovation"; "R&D Promotion"; and "CSR: Corporate Social Responsibility." As for the expansion of business operations, the targets were operating income of ¥60 billion or more, an operating income ratio of 10% or greater and an overseas sales to net sales ratio of 50% or greater. However, taking the recent economic trends into account, without changing the numerical targets, we changed the target year from fiscal 2015 to 2017. In fiscal 2013, we also formulated new growth strategies that give due consideration to the demand structure of markets and changes in customer needs.

## DENKA100 New Growth Strategies

### New Growth Strategies

#### 1. Create the most optimal production system

- Accelerating a shift to local production to ensure timely product supply to growing overseas markets while dedicating domestic plants to produce specialty and high-performance products

#### 2. Scrutinize every cost element

- Cutting costs through such steps as the streamlining of production processes, yield improvement and the reduction of raw material costs and maintenance expenses

#### 3. Focus management resources on new growth drivers and develop next-generation products

- Developing solution businesses in such growth fields as the environment, energy, infrastructure and healthcare
- Reinforcing open innovation, including joint research initiatives (utilizing the DENKA Innovation Center and establishing the NIMS\*-DENKA Center of Excellence for Next-Generation Materials)

\* Japan's National Institute for Materials Science

### Reforms in Corporate Culture and Reorganization

Reforming our corporate culture and reorganizing business structures to facilitate the aggressive, speed-oriented business approach needed to become a successful global company

- Revising the personnel system (fiscal 2012): Launching a new personnel system that puts greater value on the spirit of challenge and contribution to the Company, providing younger employees with more career opportunities and promoting diversity (see pages 26-27)
- Reorganizing business divisions (April 2013): Integrating six business divisions into four divisions with the aim of creating new products and businesses that are more on-trend with market circumstances and responsive to customer needs (see page 17)

### Securing Sustainable Growth for the Next 100 Years

Working to reduce the impact of business activities on the environment while striving to become a company that garners the lasting trust of employees and local communities

- Securing clean energy: Expanding the utilization of hydroelectric power generation and establishing mega solar power generation facilities (see pages 22-23)
- Creating a healthy work environment: Improving the workplace environment at plants and establishing company-sponsored housing and corporate dormitories
- Contributing to local communities and supporting employees' volunteer activities (see pages 32-33)

## Minimizing Disaster Risk

As concerns are growing about a major earthquake hitting the Kanto area, DENKA formulated business continuity plans (BCPs) to minimize the risk of disruption in its business operations, which might, in turn, significantly impact our stakeholders. Simultaneously, working groups were established at each plant in the Kanto area, implementing a year-long project in fiscal 2012 to mitigate the potential risk arising from earthquakes.



Reinforced wall of the Ofuna Plant's recreation facility

Examples of countermeasures:

- Reinforcing building structures and fixtures
- Reinspecting firefighting equipment
- Reviewing emergency response procedures and implementing disaster drills

The said working groups are assessing the earthquake resistance of buildings, formulating and implementing renovation plans as needed.



Reinforcing the Chiba Plant's pipe rack modules



## Our R&D Activities

### With a Spirit of "Open Innovation and Challenge," We Will Develop Technologies and Products That Meet the Needs of Society.

The DENKA Group's corporate philosophy is "creating valuable things that benefit society from resources with advanced technologies." To realize this philosophy, the Group is implementing DENKA100 Companywide initiatives.

Under new growth strategies established to address rapid changes in demand structure in recent years, we will shift the focus of our R&D activities to growth drivers and next-generation product development.

Specifically, we target such growth fields as the environment, energy, infrastructure and healthcare in a bid to develop peripheral technology based on existing products while striving to create new businesses and products employing our competitive technological edge.

While promptly addressing the anticipated needs of next-generation market, we will also strengthen collaboration with our strategic partners and external research institutions to realize the effective integration of our proprietary technologies and external input. In these ways, we will go beyond the scope of a material manufacturer to expand into such fields as components, finished products and the solution businesses.

#### Norihiro Shimizu

Managing Executive Officer, General Manager,  
Research and Development Department

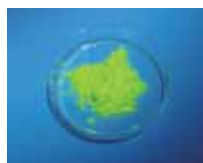
## Accelerating the Development of Next-Generation Technologies through Collaboration

As a step toward strengthening business-academia collaboration, on June 1, 2013, DENKA established the NIMS-DENKA Center of Excellence for Next-Generation Materials, with Japan's National Institute for Materials Science (NIMS). DENKA has long pursued R&D efforts based on NIMS research, thereby creating such outstanding products as the  $\beta$  SiAlON Phosphor for white LEDs and the DENKA LaB<sub>5</sub> Cathode for electron microscopes. The establishment of the new research center is aimed at accelerating such efforts, leading to the creation of innovative products and new businesses through the combination of NIMS's material research expertise and DENKA's technological capabilities.

The scope of the Company's collaboration with external entities includes not only research institutions but also the R&D sections of domestic and overseas business corporations, including our corporate customers and suppliers. Under the slogan "Open Innovation and Challenge," we seek to build win-win relationships with our partners to realize a fusion of core technologies that goes beyond a mere combination of existing products. We thereby aim for the creation of innovative products and next-generation businesses.

## Fiscal 2012 R&D Achievements

### The $\beta$ SiAlON Phosphor ALONBRIGHT



$\beta$  SiAlON Phosphor for white LEDs (product name: ALONBRIGHT), which was commercialized by DENKA based on NIMS research, was awarded the Fiscal 2012 Prize for Science and Technology (Development

Category) by the Minister of Education, Culture, Sports, Science and Technology. Although the original aim of the research that resulted in  $\beta$  SiAlON Phosphor was to find a new material for use in engine components, NIMS and DENKA focused on its superiority as a green phosphor and succeeded in commercializing this use. Used in liquid crystal television backlights, ALONBRIGHT significantly improves picture quality while reducing environmental load.

### "TEMPLOC" Temporary Adhesive



On May 1, 2013, DENKA received the Fiscal 2012 Award of the Society of Polymer Science, Japan (Technology Category) for TEMPLOC, a next-generation temporary fixing agent developed using its proprietary

polymer design technologies. More effective than conventional temporary fixing agents, such as waxes, TEMPLOC hardens with a short exposure to ultraviolet light and can be easily peeled off by immersing it in hot water, eliminating the need for organic solvents. It is widely used in the cutting and polishing of various types of glass, silicon wafers and other electronic components, helping to enhance productivity and reduce environmental load.

## DENKA's Four New Divisions

To facilitate new growth strategies established in concert with the next phase of DENKA100, we integrated six business divisions that were previously based on type of material\* into four divisions in line with market needs.

\* Styrenic Division, Electronic Materials Division, Living & Environmental Products Division, Chemicals Division, Cement & Special Cement Additives Division, Medical Science Division

### Elastomers & Performance Plastics Division

This division supplies polymer chemical products, including DENKA CHLOROPRENE synthetic rubber, styrene-based functional resins and acetyl chemicals, bolstering technological innovation in such fields as automobiles, home appliances, construction materials and food packaging.

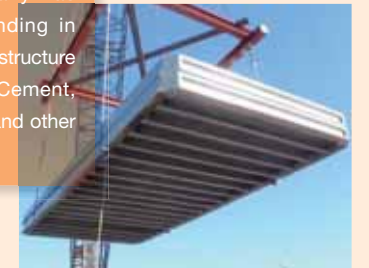


#### Products:

Boasting over 70 years of history, DENKA BLACK is a highly pure, electrically and thermally conductive carbon black made from acetylene. In recent years, this product has been adopted for use in lithium-ion secondary cells for electric automobiles.

### Infrastructure & Inorganic Materials Division

This division handles inorganic materials, including calcium carbide and calcium cyanamide fertilizers, which the Company has produced since its founding in 1915, while providing infrastructure developers with Denka Cement, special cement additives and other solutions.

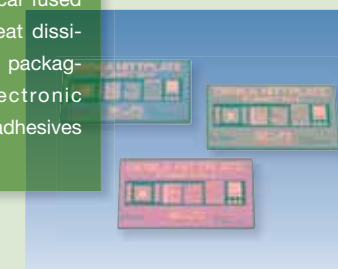


#### Products:

DENKA ALCEN is a crystalline alumina short fiber used as a thermal insulation material and for other purposes. Due to its high quality and thermally stable performance, this product is also increasingly used for exhaust gas purification and secondary batteries.

### Electronics & Innovative Products Division

This division employs the full range of organic, inorganic and polymer chemistries to make fine particles such as spherical fused silica and phosphors, heat dissipating circuit substrates, packaging materials for electronic components, functional adhesives and electron guns.



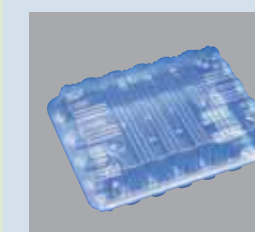
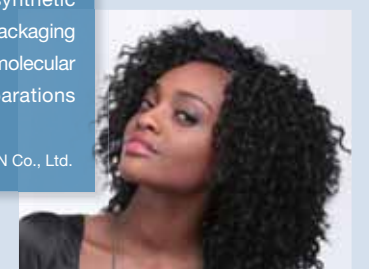
#### Products:

TEMPLOC, a temporary fixative developed applying one of DENKA's proprietary adhesive technologies, is used for the machining of smartphones' touch-screen panels, and has contributed to a significant reduction in processing time as well as eliminating the need of organic solvents.

### Life Science & Environmental Products Division

This division provides various products for better living, including pharmaceutical products. These include pipes, industrial tapes, synthetic fibers for wigs and food packaging materials, as well as high-molecular sodium hyaluronate preparations and diagnostic reagents\*.

\*Manufactured by DENKA SEIKEN Co., Ltd.



#### Products:

SOFRIA is a highly functional biaxially oriented polystyrene sheet (OPS) used for food packaging. Stronger than conventional OPS products, this product helps realize weight-saving packaging while being easily crumpled, contributing to resource saving and waste reduction.

**WEB** Information on our products and technologies aimed at contributing to society and the utilization of environment- and energy-related subsidies is available on pages 8 to 11 and 12 of the DENKA CSR Report 2013 References (PDF format) posted on our website.

## Environmental Management

From the Perspective of Responsible Care (RC), We Will Work to Save Energy and Resources and Reduce Environmental Impact at All Stages of the Product Life Cycle.

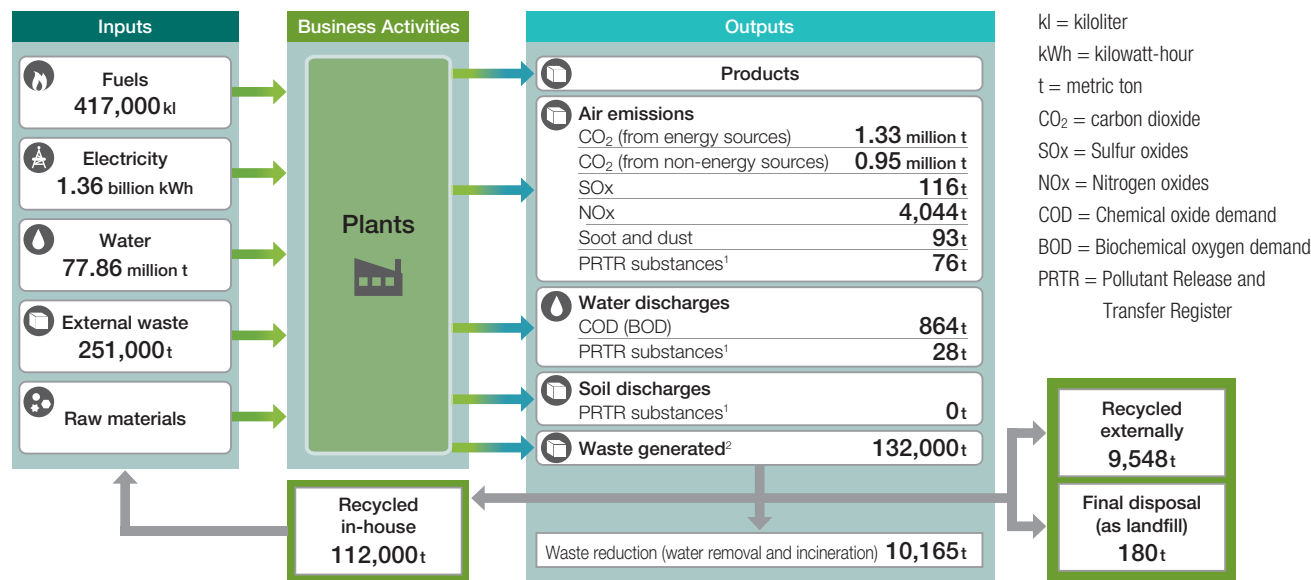
The DENKA Group takes a systematic approach to environmental management, drawing up Medium-Term Environmental Plans, which set forth numerical targets mainly for energy and resource saving and environmental load substance reduction, that it renews on a triennial basis. The latest, the Fifth Medium-Term Environmental Plan, targets fiscal 2015 and calls for reducing energy consumption intensity 3% compared with the fiscal 2012 level. We will also continuously strive to reduce the emission of CO<sub>2</sub> and other environmental load substances.

Performance	Fourth Medium-Term Environmental Plan (final year)		Fifth Medium-Term Environmental Plan	
	Fiscal 2012	Fiscal 2013	Fiscal 2013	Fiscal 2015
Energy consumption intensity (fiscal 1990 base)	0.86	0.94	0.93	0.91
Emissions of PRTR substances (tons)	88	103	95	88
Final landfill waste (tons)	374	180	177	176

**Hitoshi Watanabe**

Representative Director and Senior Managing Executive Officer

### Overview of Environmental Burdens (totals of all production sites for fiscal 2012)



kl = kiloliter  
kWh = kilowatt-hour  
t = metric ton  
CO<sub>2</sub> = carbon dioxide  
SO<sub>x</sub> = Sulfur oxides  
NO<sub>x</sub> = Nitrogen oxides  
COD = Chemical oxide demand  
BOD = Biochemical oxygen demand  
PRTR = Pollutant Release and Transfer Register

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

Fuels are the sum of all fuels used at each production site, converted into crude oil equivalents on a calorie basis. They include fuels for in-house power plants.

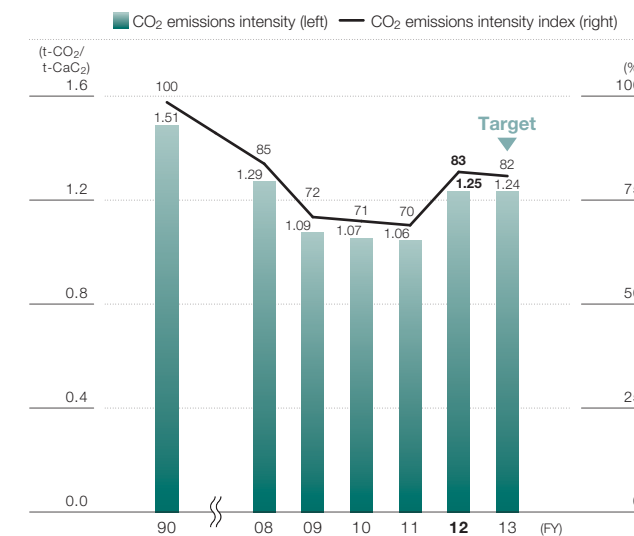
#### Explanation of Output

- CO<sub>2</sub> emissions from energy sources represents emissions from in-house fuel production and from electricity purchases. CO<sub>2</sub> emissions from non-energy 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.

### CO<sub>2</sub> Reduction Initiatives

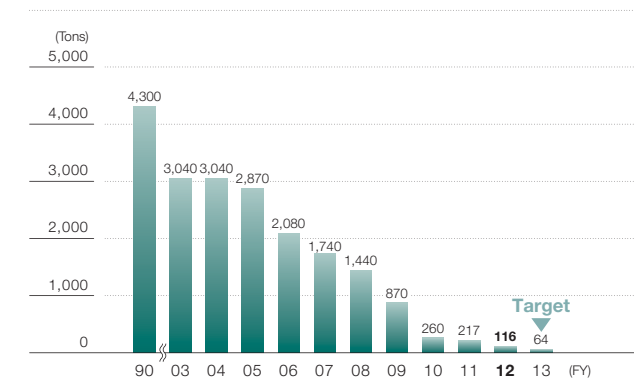
In fiscal 2012, energy consumption intensity deteriorated due to a drop in production volume that reflected such factors as the suspension of operations at a styrene monomer plant. The CO<sub>2</sub> emission volume of DENKA's six domestic business sites was successfully reduced to 1.33 million tons from energy sources and 0.955 million tons from non-energy sources, below the initial targets of 1.34 million tons and 1.01 million tons, respectively. However, CO<sub>2</sub> emissions intensity deteriorated from 1.06t-CO<sub>2</sub>/t-CaC<sub>2</sub> in fiscal 2011 to 1.25t-CO<sub>2</sub>/t-CaC<sub>2</sub> in fiscal 2012, due to the suspension of nuclear power generation, which increased the ratio of thermal power generation in the volume of purchased electricity.

### CO<sub>2</sub> Emissions Intensity (energy derived)

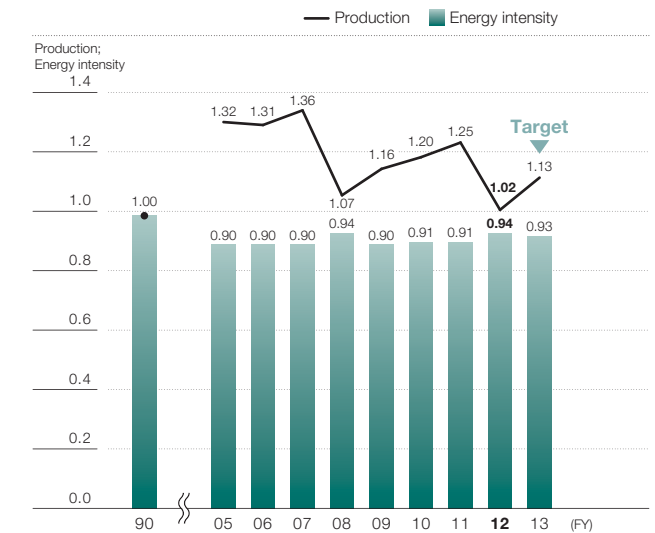


### SO<sub>x</sub>

The emissions decreased by approximately 45% year on year thanks to the use of byproduct gas recovered from nearby factory complex as a fuel for the Chiba Plant's boilers. We will continue to utilize byproduct gas in fiscal 2013 to reduce SO<sub>x</sub> emissions.

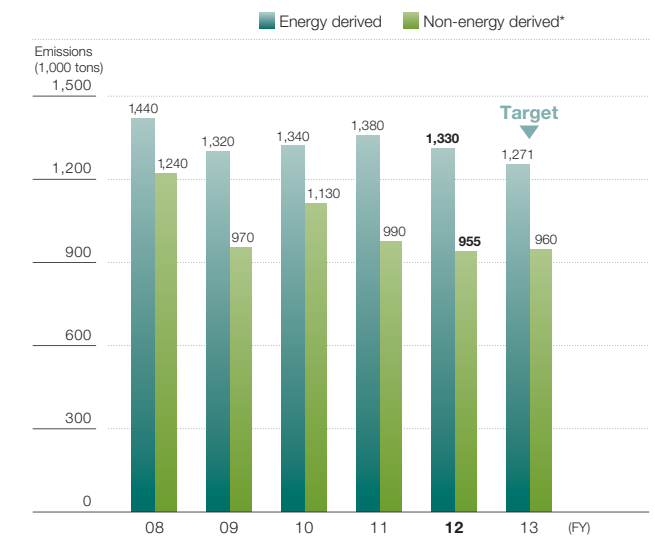


### Production Volume and Energy Consumption Intensity Relative to the Fiscal 1990 Level



\* Base year: Fiscal 1990

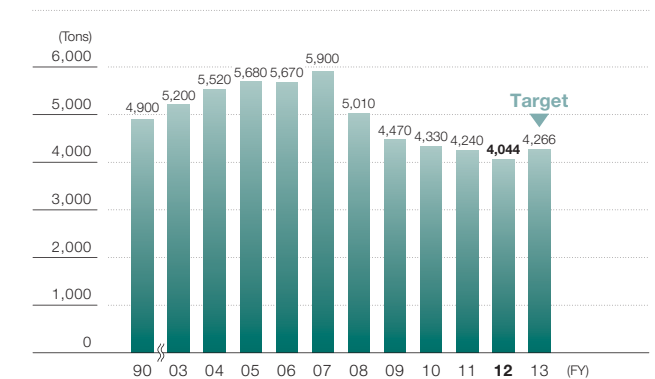
### CO<sub>2</sub> Emissions



\* Non-energy derived CO<sub>2</sub> emissions are generated from raw materials processing and waste disposal during the manufacturing process.

### NO<sub>x</sub>

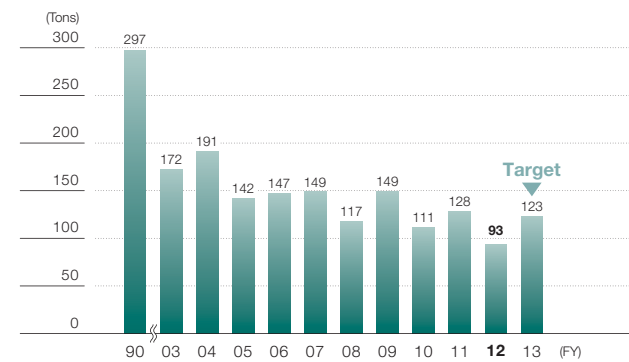
The emissions decreased approximately 5% year on year due to such factors as the suspension of operation of a styrene monomer facility. Although the emissions are expected to rise in fiscal 2013 as production volume rebounds, we will strive to reduce emissions by such means as the continuous use of byproduct gas.





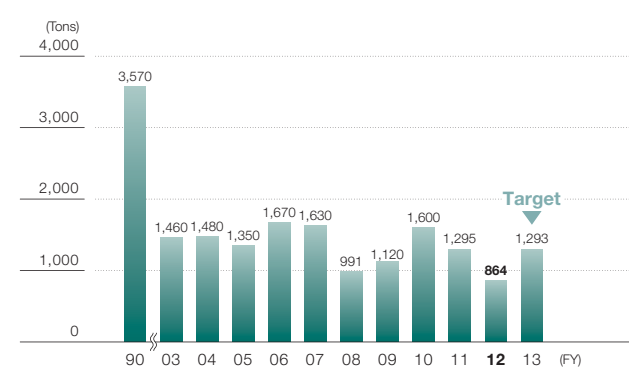
**Soot and Dust**

The emissions decreased approximately 30% compared with fiscal 2011 thanks to the replacement of the exhaust gas filters at the Omi Plant's calcium carbide production facilities. For fiscal 2013, we expect soot emissions to increase with an upturn in the cement production volume. We will seek emission reduction through such means as facility improvement.



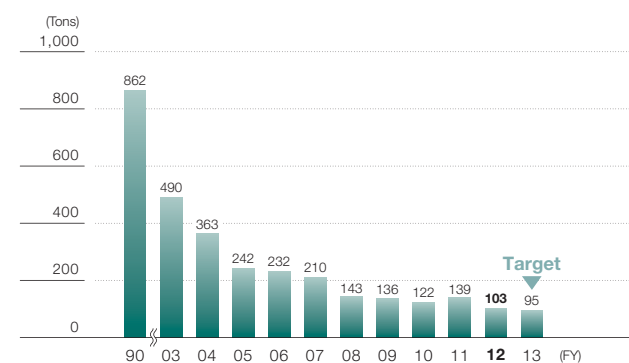
**COD (BOD)**

The emissions decreased approximately 19% year on year thanks to the introduction of an anaerobic wastewater treatment process at the Omi Plant's POVAL production facilities. In fiscal 2013, although an anticipated production rise will result in the increase of COD (BOD) emissions, we will strive to keep numbers down by further reinforcing wastewater treatment facilities.



**PRTR Substances**

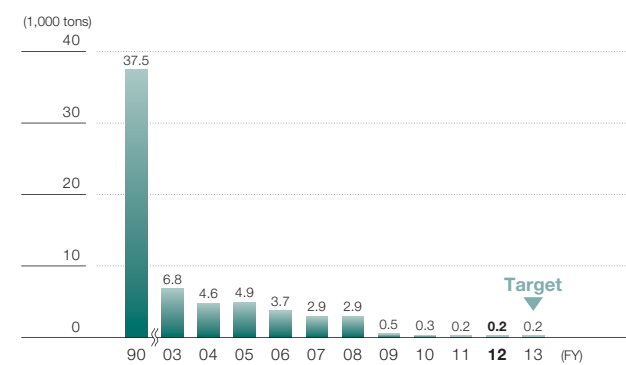
In fiscal 2012, the Company sought to decrease emissions of PRTR substances to 88 tons through a reduction in the use of toluene. However, we failed to meet the target due to such factors as nature of the product mix. A year-on-year reduction in PRTR substance emissions as a percentage was approximately 25%.



**Final Landfill Waste**

In fiscal 2012, we cut final landfill waste approximately 30% year on year thanks to ongoing efforts at each plant. The Omi Plant's cement production facilities have made particular contributions to this reduction through an improvement in the internal recycling rate. Consolidated emissions improved from 0.17% to 0.07%, maintaining the status of zero emissions (DENKA's definition\*).

\* Amount of final landfill waste/Amount of waste generated × 100 < 1



**Fiscal 2012 PRTR Substance Emissions and Transfers**

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

Units: tons (excluding dioxins)

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	9
Acetaldehyde	2	10	0	0	12	0
Aniline	0	0	0	0	0	15
Ethyl benzene	3	0	0	0	3	38
Ferric chloride	0	0	0	0	0	32
Vinyl acetate	17	0	0	0	17	0
Cyanamide	0	0	0	0	0	3
N,N-Dimethylformamide	0	0	0	0	0	16
Styrene	18	0	0	0	18	107
Water soluble copper salt	0	5	0	0	5	0
Toluene	28	1	0	0	29	32
Hydroquinone	0	1	0	0	1	0
Fluorine compound	1	0	0	0	1	16
n-Hexane	0	0	0	0	0	3
Boron and boron compounds	0	10	0	0	10	10
2-Ethylhexyl methacrylate	0	0	0	0	0	1
Methyl methacrylate	2	0	0	0	2	11
<b>Total (tons)</b>	<b>73</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>296</b>
Dioxin (mg-TEQ)	37	97	0	0	134	0

**WEB** Information on our responsible care activities, ISO 14001 management system, utilization of environment and energy-related subsidies and environmental accounting is available on pages 2, 7, 12 and 13 of the DENKA CSR Report 2013 References (PDF format) posted on our website.

**Streamlining Logistics to Save More Energy**

**Response to the Law Concerning the Rational Use of Energy**

As a designated shipper,\* we are dedicated to enhancing the efficiency of the transportation and storage of products while constantly striving to improve the quality of our logistics operations for greater customer satisfaction.

In particular, following the enforcement of the Revised Law Concerning the Rational Use of Energy, we have promoted ongoing, across-the-board energy saving activities involving such bodies as the RC Promotion Committee and logistics sections at each plant, with the Logistics Department spearheading the effort.

Under the DENKA100 initiative, in fiscal 2012 we began an exhaustive review of the existing distribution structure with the aim of further enhancing logistics efficiency. Specifically, we are considering such measures as modal shifts while taking steps to improve the utilization rate of storage facilities, for example by integrating warehouses. By eradicating redundant energy use and wasted space in existing logistics operations, we seek to comprehensively strengthen our logistics capabilities.

In fiscal 2012, although the Company's total transportation volume was 533 million t-km, up 2.2% compared with fiscal 2011, we were able to cut energy consumption intensity 1.7% year on year and managed to keep the CO<sub>2</sub> emission volume to the same level as the previous fiscal year.

\* Designated under the Law Concerning the Rational Use of Energy: Business operators whose annual transportation volume exceeds 30 million t-km are obligated to fulfill specific requirements under said law.

Energy Saving Status					
(FY)	2008	2009	2010	2011	2012
Transportation volume (1,000t-km)	831,227	618,865	605,609	521,131	532,709
Energy consumption intensity*	0.0217	0.0240	0.0239	0.0250	0.0246
Change from fiscal 2011	—	110.3%	99.6%	104.8%	98.3%
CO <sub>2</sub> emissions (t-CO <sub>2</sub> )	48,300	39,500	38,500	34,700	34,800

\* Crude oil equivalent divided by cargo volume

**The Logistics Ability Enhancement Project**

**1. Strengthening Logistics Safety**

To enhance safety of on-premises distribution at plants, staff members selected from each plant conduct mutual inspection tours, making the rounds throughout all plants to identify problems and discuss countermeasures with the people on-site.

**2. Capacity Development for Logistics Operations**

For six months in fiscal 2012, we provided distribution operators from our plants and affiliates with specialized training programs covering such subjects as the basics of distribution, inventory management and problem solving.



Logistics safety inspection tour

Training session for distribution operators

**Installation of Automated Constant Temperature Storage**

At our Omi Plant, we installed a large automated constant temperature storage facility for chloroprene rubber that came fully online in 2011. The expansion of the plant's product storage capacity allowed us to better utilize the nearby ports, and now approximately 50% of the Omi Plant's products for export are shipped from Fushiki Toyama Port and Naoetsu Port. As a result, we substantially reduced logistics-related CO<sub>2</sub> emissions and distribution costs as compared to those generated by the previous distribution flow, which involved transporting most of the plant's output to Yokohama Port by truck.



Loading of products onto containers

Inside the automated constant temperature storage facility

**Promoting the Utilization of Himekawa Port**

DENKA utilizes Himekawa Port for unloading raw materials used in the Omi Plant. Since its opening in 1973, approximately ¥60 billion has been invested in developing the port and, under the initiative of Japan's Ministry of Land, Infrastructure, Transport and Tourism, a terminal development project is currently under way to accommodate larger-size cargo vessels.



Cargo handling at Himekawa Port

**Promoting the Exhaustive Review of Logistics Operations**



**Yoshihiro Ishikawa**, General Manager, Logistics Dept.

In line with the latest phase of DENKA100 launched in April 2013, we began comprehensive reviews of distribution costs, aiming to achieve management targets for fiscal 2017. The Logistics Dept. spearheads the across-the-board efforts to solve problems faced by DENKA's distribution segment and enhance logistics efficiency. As we push forward reforms to streamline our logistics operations, we seek to strengthen our logistics capabilities throughout the Group.



## Taking an Environment-Friendly Approach to Securing Vital Resources for Our Operations, We Are Promoting the Use of Clean Energy Sources Centered on Hydroelectric Power Generation.

### Expanding the In-House Power Generation Ratio While Further Utilizing Clean Energy\*

DENKA uses electricity generated by 15 hydroelectric power plants, which include five that are jointly owned, three thermal power plants and a cement waste heat recovery power plant\*\* as well as purchased electricity. The in-house power generation ratio is approximately 56% of total electricity use.

Hydroelectric power generation accounts for 32% of DENKA's electricity use, making it an essential electricity source. This clean energy source not only makes a significant contribution to the reduction of CO<sub>2</sub> emissions, it also offers a stable electricity supply.

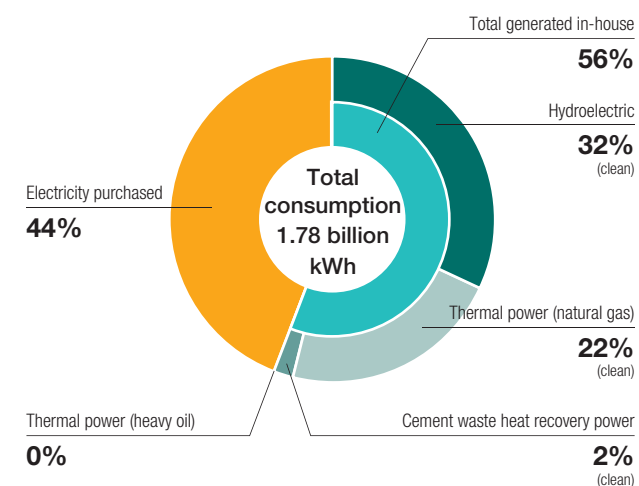
At thermal power plants, we have been changing over the fuel used from heavy oil to natural gas in an initiative to reduce CO<sub>2</sub> emissions. In addition, we have improved the efficiency of natural gas power generation by adopting cogeneration\*\*\* facilities.

\* Clean energy: Energy from sources that emit no or very small amounts of air pollutants, such as CO<sub>2</sub> and NO<sub>x</sub> when used

\*\* Cement waste heat recovery power plant: A power generation facility using waste heat from cement factories

\*\*\* Cogeneration: A system using waste heat generated from gas turbine power generation that simultaneously produces steam

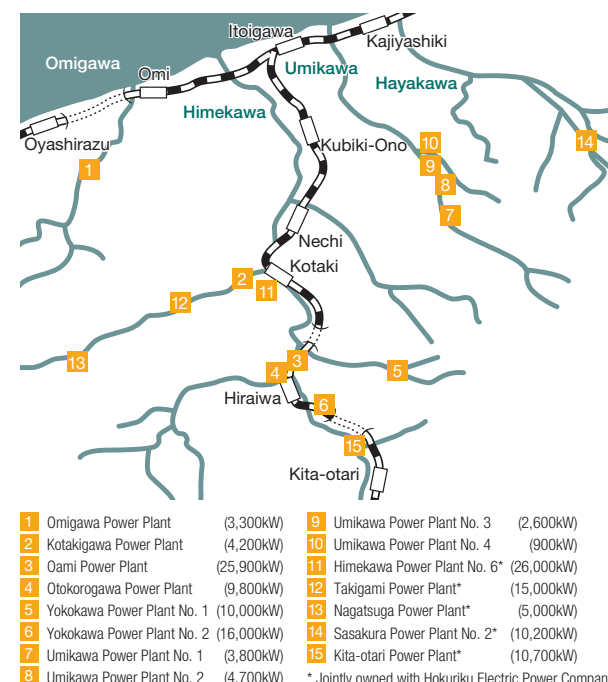
#### Power Sources in Fiscal 2012



### Initiatives in Hydroelectric Power Generation

Since its founding, DENKA has been establishing its own hydroelectric power plants in order to secure a stable electricity supply. Currently, DENKA owns one hydroelectric power plant along the Omi River system, five along the Himekawa River system and four along the Umikawa River system. In addition, Kurobegawa Electric Power Company, which was jointly established by DENKA and Hokuriku Electric Power Company, maintains five hydroelectric power plants. The total maximum output of all these facilities is 114,650kW.

The run-of-river type hydropower generation system employed at our in-house hydroelectric power plants uses the momentum of water drawn from a river and flowing downward through a conduit. As the flow of water is very strong, the facilities of this type are subject to severe abrasion, making constant maintenance necessary. Moreover, these plants occasionally suffer extensive damage due to mudslides while requiring periodic inspections and snow removal in winter because of their locations in heavy snowfall areas.



The total maximum output of DENKA's in-house power generation: 114,650kW

### Initiatives to Secure Electricity Supply and Augment In-House Generation Capacity

Because of the energy-intensive nature of the chemical industry, since its founding DENKA has considered not only the securing of the electricity supply but also energy saving and the reduction of environmental burdens to be essential management issues. To the present day, DENKA has focused on these issues as preconditions of its sustainable operations.

DENKA has one of Japan's largest hydroelectric power generation networks privately owned by a chemical company. While striving to exploit this valuable asset, we are seeking to augment the power generation capacity of our hydroelectric power plants. To this end, we are constantly upgrading power generation facilities and technologies for the more efficient use of water resources. We are also looking to establish a new hydroelectric power plant.

In addition, we are proactively introducing biomass power generation and cogeneration facilities, which are highly effective for energy saving and the reduction of environmental burdens, while proceeding with the construction of mega solar power generation facilities.

Society today is increasingly demanding that companies use cleaner energy and reduce the burdens they put on the environment. DENKA is acting proactively to fulfill these demands and thereby establish an even stronger operating base.

#### Increasing the Power Generation Capacity of Otokorogawa Power Plant

In fiscal 2012, after gaining the understanding of local residents, DENKA obtained permission to increase its annual water intake and raised the maximum output of its Otokorogawa Power Plant from 8,400kW to 9,800kW. This boosted the total annual power generation amount by approximately 3,500,000kWh. Water intake will be increased only during high-water season and will not impact the river ecosystem. While conducting surveys on the water intake of each hydroelectric power plant, we will consider the possibility of building a new hydroelectric power plant.

#### Maintenance and Management of Power Plants

In winter, transmission lines are checked using helicopters.



#### Mega Solar Power Generation

In response to the enactment of the feed-in-tariff law for renewable energy, DENKA established mega solar power generation facilities at its Shibukawa and Iseaki plants. With a combined maximum output of 3.2MW from the two facilities, we expect an annual power generation amount of 3,600,000kWh. We commenced sale of electricity to Tokyo Electric Power Company in July 2013.

Also, in October 2012, DENKA began leasing a portion of land it owns in Tomakomai City, Hokkaido, to Mitsui Fudosan Co., Ltd. with the aim of providing sites for mega-solar power generation business.



DENKA Solar Power Shibukawa



Mr. Sadaji Akutsu (right), the mayor of Shibukawa City, and Mr. Shinsuke Yoshitaka (left), president of DENKA, shaking hands at the completion ceremony

#### Stepping up Electric Power Generation That Utilizes Clean Energy Sources



Shuichi Hirai, General Manager, Electric Power Dept., Technology Div.

DENKA's annual electricity consumption is as much as 1,800 million kWh, an amount comparable to that used by 500,000 households over the same time period. Taking this into account, we are changing

over from heavy oil to natural gas at our thermal power plants to reduce CO<sub>2</sub> emissions and are increasing the capacity of clean power facilities, especially our hydroelectric power plants, where we are enhancing efficiency and increasing water intake. In fiscal 2013, we also commenced solar power generation. Looking ahead, we will continue to proactively utilize environment-friendly energy sources.



By Proactively Accepting Waste Materials, We Are Striving to Protect the Environment While Securing the Sustainable Development of Our Cement Business.

**Waste Material Recycling Business in Cement Production**

The waste material recycling business at the Omi Plant involves the utilization of coal ash from thermal power stations, waste soil from construction sites, sludge from waterworks facilities and waste sand from die-casting foundries as raw materials for cement. The plant also receives recycled oil, waste plastic and scrap wood for use as fuel sources.

In fiscal 2012, DENKA used 560 kilograms of recycled materials for every metric ton of cement produced. Moreover, DENKA began to accept automobile shredder residue (ASR) to contribute to automobile recycling.

From the perspective of social contribution, in 2013 DENKA also began accepting sludge from water purification facilities, on the condition that it meets the clearance level for radioactivity (below 100Bq/kg), from Niigata City and other municipal bodies.

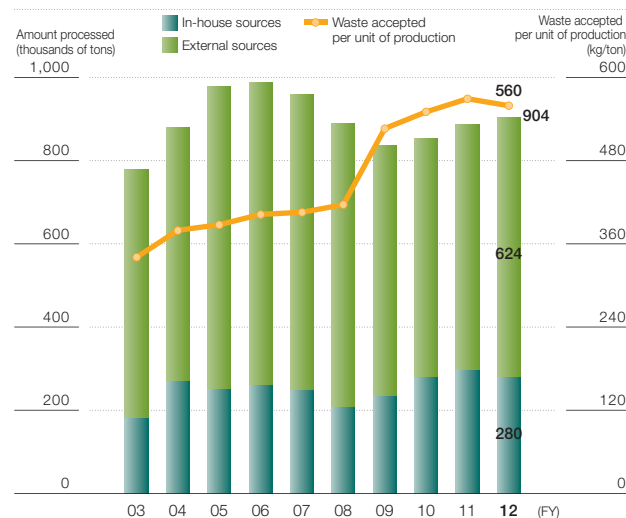
Going forward, we will proactively expand our facilities' waste processing capacities as well as the types of waste materials we accept. Simultaneously, we will strengthen cooperation with diverse businesses that emit waste materials and local government bodies to help realize a recycling-oriented society.



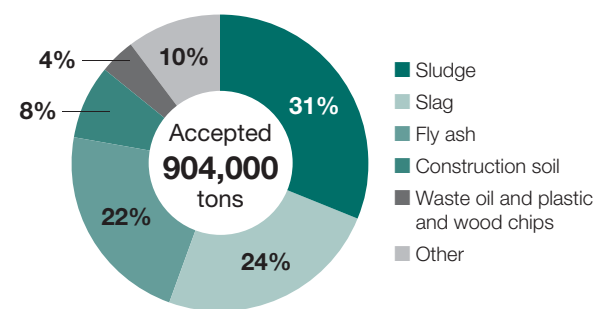
Used tire processing facility

Coal ash silo

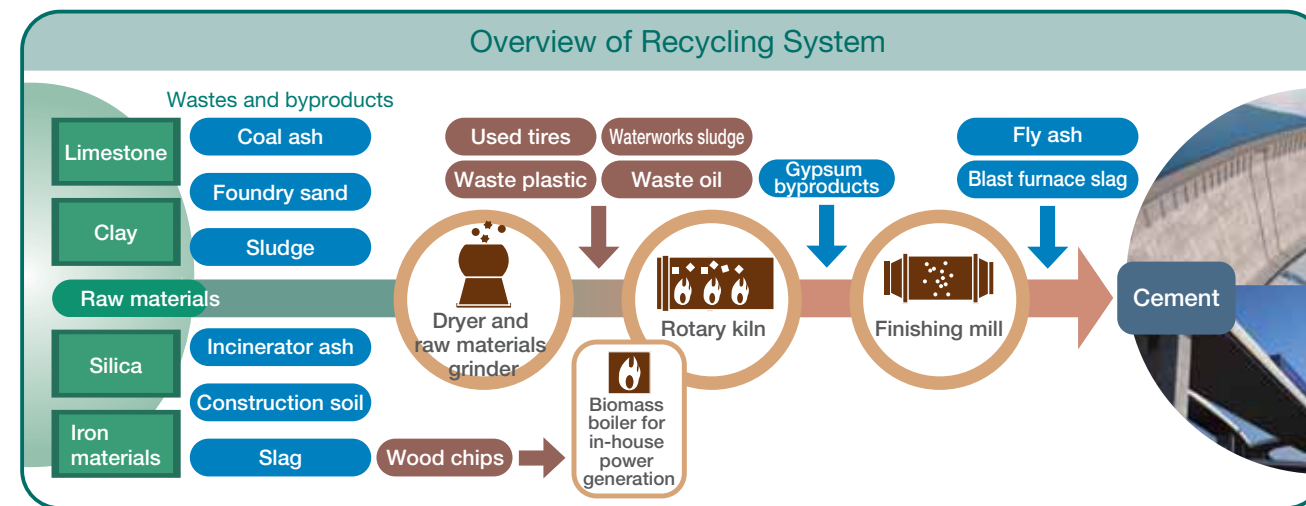
**Volume of Waste Accepted**



**Breakdown of Waste Accepted in Fiscal 2012**



Biomass boiler in cement plant



**Fiscal 2012 Topic**

**Accepting Sludge from Niigata City's Water Works**

The Great East Japan Earthquake resulted in the amassing of a substantial amount of debris in disaster-stricken areas. Moreover, because of the nuclear accident that broke out at the Fukushima Daiichi Nuclear Power Station following the earthquake, the processing of this debris has come to entail the treatment of waste sludge that may be radioactive. The Japanese government requested member companies of the Japan Cement Association to ensure the steady acceptance of such waste materials, including radioactive sludge, for cement production. At the same time, DENKA was asked by several public water suppliers in Niigata Prefecture, including Niigata City, to cooperate in the processing of sludge generated through water purification process. From the perspective of social contribution, we decided to accept such sludge at our Omi Plant following discussions with the local government body in Itoigawa City, where the plant is located, on the condition that it meets a clearance level of radioactivity of below 100Bq/kg, putting the utmost priority on the safety of local residents and our employees. On December 20, 2012, we entered into a basic agreement

regarding the processing of waterworks sludge with Itoigawa City and started accepting the sludge on January 9, 2013.

In relation to this move, DENKA is undertaking a variety of surveys and measurements and disclosing the results to citizens of Itoigawa City through the Itoigawa Municipal Office. We are also posting data on radioactive concentrations in cement products on our website.\* Airborne radiation information and data on the radioactive concentrations measured inside and around the Omi Plant are available on the Itoigawa City official website.

\* <http://www.denka.co.jp/cement/> (the Cement Department's website; measurement results are available only in Japanese)



Finishing mill (cement plant's ball mill)

Dryer and raw materials grinder (raw material mill)

**Appreciation for DENKA Waterworks Sludge Recycling Business**



**Mr. Junichi Tsuchiya**, Deputy General Manager, Management and Planning Section, Niigata City Waterworks Bureau

Ensuring environment-friendly operations is one of the goals of the Waterworks Bureau. To achieve this goal, we sought to utilize waterworks sludge as soil for horticultural use and other applications. However, we have not been able to reuse such sludge since the nuclear accident in Fukushima and have been forced to store it on the water purification facilities premises.

We are therefore deeply grateful for the cooperation of Itoigawa City and its citizens as well as for DENKA's decision to accept waterworks sludge and utilize it as a cement material.

**Recognizing Our Cement Business's Social Responsibility**



**Yoshihiro Ishikawa**, Manager, Resource Recycle Promoting Section, Cement Department

Given its limited land area and natural resources, it is essential for Japan to minimize waste going to landfills and to seek methods of effective reuse. Our cement business is turning such waste materials into valuable materials and fuels for making superior recycling-oriented products.

DENKA is one of the few cement companies with a plant on the coast of the Sea of Japan. Looking ahead, we will strengthen cooperation with local communities as we expand our capacity to accept recycling resources in order to further contribute to a recycling-oriented society.



## Initiatives with Employees

### New Personnel System to Encourage People to Take on New Challenges

As a part of our human resource strategies to achieve the goals of DENKA100, we revised our personnel administration system in fiscal 2012. Amid a rapidly changing business environment, we seek to nurture a corporate culture that motivates people by setting high targets and rewarding those who proactively take action and take on new challenges. To this end, we abolished both the practice of seniority-based promotion and a personnel management system based on fixed job categories.

Specifically, the new personnel system allows people to change their job category (the "Job-Category Transfer System") and incorporates an education system aimed at imparting advanced skills and techniques (the "Engineers' Skill Improvement Plan.") We also established a remuneration system with greater emphasis on performance-based evaluations. As for managers, we shifted the focus of their competence evaluations to their leadership capabilities, drive to take on new challenges and ability to develop their staff. In these ways, we are creating a personnel system that places greater value on nurturing next-generation human resources who can proactively think and take action.



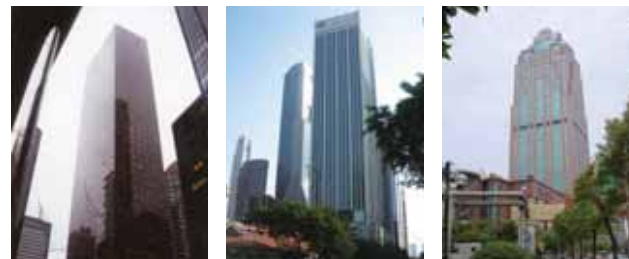
**Kenji Nakano**

Representative in China, Executive Officer in charge of Secretary Dept., Administrative Dept., Legal Dept., HR Dept., DENKA100 Promoting Dept.

## Nurturing Globally Capable Human Resources

### Enriching Overseas Training Programs for Younger Employees

DENKA100 has set the target of achieving a ratio of overseas sales to net sales of 50% or greater. To expand globally, we need to secure human resources with superior communication skills and the ability to accurately perceive the diverse needs of customers worldwide. DENKA will therefore further enrich its overseas training programs, targeting mainly younger employees.



From left: Denka offices in New York, Singapore and Shanghai

## Voices of Trainees

### Gaining Greater Awareness of Overseas Operations

**Her Ryun**

Elastomers & Acetylene Black Dept.



Although many consider language to merely be a tool, during my overseas training in the United States I realized that

real communication exists only where there is a certain level of language skill. Also, experiencing life as an expatriate made me recognize that I was very naïve about how things work overseas. Exposed to real-life situations in the U.S., I regretted my past ignorance about how refreshing and inspiring such experience can be. One month in overseas training provided me with much to think about.

### Learning the Secret of China's Development

**Kazutoshi Tatebayashi**

Housing & Environmental Materials Dept.



My four weeks in Shanghai were full of discoveries and surprises. As I stood on a street amid sweltering heat, listening to

the conversations of the people around me and blaring car horns, it suddenly hit me that I was in a truly "foreign" land. On the other hand, when accompanying my senior colleagues on their sales rounds, I was impressed that many of the people I met were extremely hardworking and treated me with courtesy and kindness. I was glad to meet these people who are at the forefront of the rapidly developing Chinese economy.

## Developing Comfortable Workplaces

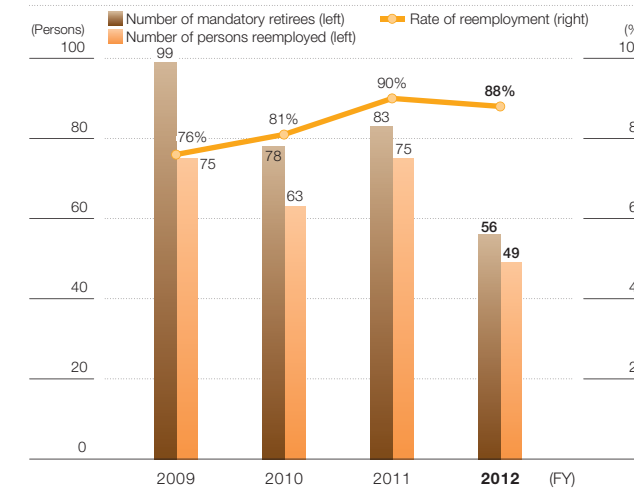
### Diversity

DENKA recognizes that respecting the individuality of each person and allowing them to realize their full potential will, in turn, bolster the Company's growth and development. Accordingly, we are actively pursuing diversity promotion initiatives. For example, we are proactively hiring female employees and foreign students. We have set a target of making female workers account for 20% of the new specialists recruited every year. As a result, 11, or 24.4%, of the 45 specialists hired in fiscal 2013 were female. As for the recruitment of foreign students, in fiscal 2013 we welcomed two new graduates from China and Taiwan and recruited another Chinese national as a mid-career recruit. Moreover, we began having manager candidates who were recruited in Singapore undergo long-term training in Japan.

### Reemploying Retirees

Against the backdrop of the rapid graying of Japan's population, in 2006 DENKA introduced a program to rehire retirees who have superior technological knowledge and skills. By allowing them to work even after mandatory retirement age, we aim to facilitate the transfer of their skills and expertise to younger employees. In response to the April 2013 revision of the law pertaining to the employment of the elderly, we also implemented various revisions in the personnel system with the aim of encouraging a greater number of new retirees to return to employment, reemploying 88% in fiscal 2012.

### Retiree Reemployment Rate



### Employing People with Disabilities

We are creating safe workplaces so that people with disabilities can realize their full potential. In fiscal 2012, the percentage of employees with disabilities stood at 2.10%, exceeding the statutory employment rate.

### Work-Life Balance

Giving due consideration to the need to balance work and private life, we are striving to develop comfortable workplaces and ensure healthy working styles by eliminating excessive overtime and encouraging the full use of annual paid leave. Moreover, all employees are allowed to take paid leave on a half-day basis, while the staff at Headquarters and branches are encouraged to leave work on time every Wednesday, our "No Overtime Work Day."

In addition to childcare and nursing care leave plans, we established a volunteer leave plan that allows people to engage in volunteer activities in disaster-stricken regions. In fiscal 2012, two people took leave under this plan. In this way, we are assisting those who are keen to contribute to society.

Also, we set up a 24-hour telephone healthcare consultation service for employees and their families, using an external specialized institution.

### Initiatives with Labor Unions

Management maintains positive relationships with employee organizations, regularly meeting with officials of The Denki Kagaku Labor Union and The Head Office Labor Union in an atmosphere of mutual good faith. We hold regular meetings with these bodies three times in a year, and are open to holding other meetings and negotiations as needed. DENKA and labor unions are thereby working together to create a better workplace.

### Other Initiatives

DENKA's fiscal 2012 personnel system revisions aim to increase people's motivation to work and their drive to take on new challenges, thereby helping them realize their full potential. In addition to the aforementioned "Job-Category Transfer System" and the "Engineers' Skill Improvement Plan," we introduced an in-house "Meister Certification System" to accredit employees who have distinguished skills.

## DENKA Helped Me Grow as a Professional and as a Mother



**Sayaka Shima**

Styrene & Acetyl Chemicals Dept.,  
Elastomers & Performance Plastics Div.

I left the workplace for a year using the childcare leave system. Being able to see my daughter growing bigger every day helped me to grow as a mother.

I am grateful that I was able to return to the place I worked at

before I had my daughter. I often find it hard to work the hours I used to because of such demands on my time as taking my daughter to her day-care center, picking her up from there and taking care of her when she gets sick. However, I am able to manage thanks to the Company's flexible attitude. I am always thankful for that.

I want to devote my best efforts to work, so that I not only better contribute to the Company but also set an example to encourage those who want work at DENKA while raising their children.



## Employee Education

In line with the DENKA100 corporate philosophy and our CSR vision, we are implementing the human resource policy presented below under the initiative of the Human Resource Development Center, which revises the content of human resource development programs every year.

### ● DENKA's Policy for Human Resource Development

"Nurturing people who have the ability, motivation and energy to excel in today's highly competitive and rapidly evolving business environment"

### ● Ideal for DENKA's Human Resources

"People who can proactively think, learn and take action to overcome challenges while maintaining an earnest attitude toward enhancing their potential through their duties and self-development"

To realize the ideal presented above, we have developed four human resource development program categories: mandatory job level-based training, specialist courses, the DENKA Techno School and in-house symposia. Moreover, in fiscal 2013 we introduced a new category, special-purpose education.

### New Initiatives in Fiscal 2012

#### 1. External Training Sessions for Executive Candidates

We began having executive candidates in managerial or higher positions participate in external training sessions. Each month, we rotate a few of them through training camp-style programs that bring together people from different companies so that they can develop their communication skills and ability to effect change.

#### 2. Practical Training Program with External Specialists

We revised our training program for newly appointed managers. The new program invites external specialists to give lectures accompanied by practical training with an emphasis on hands-on experience as well as group discussions, role-playing and psychological assessments.

#### 3. Training Program for Incumbent Managers

We introduced a training program for incumbent managers themed on strategic thinking, the creation of a vibrant workplace and business innovation.

#### 4. Overseas Training Program for Younger Employees

We launched an overseas training program for younger employees. With regard to administrative specialists, all those who have been at the Company for two years are sent on four-week overseas assignments in Shanghai, Singapore or New York. This gives them the opportunity to acquire overseas business experience while exposing them to the realities of living overseas.

#### 5. Mental Health Training Sessions

Mental health training sessions are already conducted at each plant and we began holding such training sessions at other business sites, targeting all Group employees, including those who are seconded to affiliates, in our efforts to develop a healthy working environment.



A training session for new employees

### Plans for Fiscal 2013

- Enriching first-year training programs for new employees (e.g., extending the training period)
- Having employees undergo e-learning after mandatory job level-based training sessions to help them adopt what they learned at these sessions
- Introducing special-purpose education programs (e.g., leadership training for technological specialists and training on formulating career plans)

## Fiscal 2012 Topics

### Overseas Training Program for Second-Year Employees

As the Company expands globally, it is increasingly essential for DENKA employees to maintain the drive to move forward and take on the challenge of new living and business environments in countries overseas. Such assignments require communication skills that enable them to proactively negotiate with people who speak different languages.

With these needs in mind, in fiscal 2012 we launched an overseas training course that entails a four-week overseas assignment to a city or country abroad, namely, Singapore, Shanghai or New York, and is mandatory for all administrative specialists who have been at DENKA for two years. The participants in first round of this program were 11 employees. While learning the local language, they accompanied senior expatriates on visits to local business partners and production sites and were given opportunities to see the front-lines of DENKA's business in those countries. We hope that this exposure to diverse cultures and need to communicate in foreign languages will help them grow to perform successfully on the global stage in the future. (Comments from the participants are presented on page 26.)



Lecture at a business site in Singapore

### Holding Technological Symposia

With the aim of sharing information on the latest technologies and market trends, in fiscal 2012 we began holding technological symposia, gatherings of DENKA Group engineers who engage in R&D activities and production technology development. By providing them with a forum for sharing their research and development efforts, we aim to facilitate the exchange of opinion among researchers and thereby strengthen our technological capabilities as an organization.



Technological symposium at DENKA's Headquarters (January 23, 2013)

## Good Company Program (GCP) Activities

Comprising one of the six pillars of DENKA100, GCP activities involve organizational CSR activities aimed at the creation of a "Good Company," with all departments across the DENKA Group participating. Each department formulates its own theme for initiatives to raise employees' awareness and improve daily operations, presenting the results of such initiatives at meetings held every six months. The results are evaluated by the evaluation committee and GCP prizes are awarded for excellence.

### Fiscal 2012 GCP Activities Undertaken by Each Branch and Sales Office

DENKA's seven branches in Osaka, Nagoya, Fukuoka, Niigata, Sapporo, Hokuriku and Tohoku and three sales offices in Hiroshima, Shikoku and Akita are engaged in GCP activities.

At the branches and sales offices, because often each staff member is assigned a highly specialized product or task, they hold frequent internal study sessions aimed at facilitating the mutual understanding of their duties. Also, branches and offices engaged in regional sales activities tend to implement GCP activities focused on traffic safety, as they often use company vehicles to cover large sales areas, and disaster prevention, taking lessons from earthquakes and flooding suffered in the past.

- Study Sessions** Holding product presentation meetings and plant tours at DENKA's and Group subsidiaries' production sites
- Traffic Safety Activities** Participating in traffic safety events and training sessions hosted by police departments and traffic safety associations
- Disaster Prevention** Preparing disaster response manuals and implementing disaster drills



Nagoya Branch: Hilling at the fertilizer testing farmland; cultivating various types of vegetables to test our fertilizer products



Niigata Branch: Confirming the emergency supply stock



Tohoku Branch: Cleaning the statue of Dr. Tsuneichi Fujiyama in Sankyozawa

Branches/Offices	Main Activities
Osaka Hiroshima Shikoku	<ul style="list-style-type: none"> <li>• Sales Capability Improvement Committee (training on the proper attitude for sales personnel as well as on relevant laws and regulations and ICT systems, holding study sessions on products and improving hospitality)</li> <li>• West Japan Disaster Prevention Team (preparing disaster response manuals, rehearsing the confirmation of employee's safety and implementing disaster drills)</li> <li>• Improving worksite environment and issuing an in-house newsletter <i>Tonari no Shibafu (The Grass Is Always Greener)</i></li> </ul>
Nagoya	<ul style="list-style-type: none"> <li>• Revising disaster response standards that postulate a major earthquake hitting the Tokai region and preparing disaster response manuals</li> <li>• Holding networking meetings to share information on DENKA's automobile-related products</li> <li>• Managing farmland for testing the fertilizer AZUMIN (cultivating spinach, carrots, onions, radishes and bok choy)</li> <li>• Implementing human resource development initiatives, saving energy and holding training sessions on safe driving techniques</li> </ul>
Fukuoka	<ul style="list-style-type: none"> <li>• Holding product presentation meetings, lectures and plant tours and implementing initiatives to improve daily operations</li> <li>• Participating in the "Safety Challenge 100 in Hakata" traffic safety initiative</li> </ul>
Niigata	<ul style="list-style-type: none"> <li>• Preparing disaster response manuals, securing three days' worth of emergency supplies, holding a lifesaving course and evacuation drills</li> <li>• Inviting ex-employees to give lectures, holding cleanup activities at Niigata Port and collecting PET bottle caps</li> </ul>
Hokuriku	<ul style="list-style-type: none"> <li>• Holding study sessions on products and networking meetings to which external delivery operators at cement stations and distribution bases are invited</li> <li>• Issuing a newsletter themed on the economy, sightseeing spots and gourmet eating in areas adjacent to the Hokuriku bullet train route</li> </ul>
Sapporo	<ul style="list-style-type: none"> <li>• Implementing cleanup activities in Sapporo City in line with a municipal program that encourages volunteer cleanup activities</li> <li>• Implementing initiatives to improve daily operations, encouraging tidying up and participating in the "Safety Rally" traffic safety initiative hosted by Hokkaido Prefectural Police</li> </ul>
Tohoku Akita	<ul style="list-style-type: none"> <li>• Holding study sessions on products, implementing cleanup activities and participating in the Miyagi Prefecture's "Safety 123" traffic safety initiative</li> <li>• Cleaning the statue of Dr. Tsuneichi Fujiyama in Sankyozawa, Sendai City</li> <li>* The founder of DENKA, who became the first in Japan to develop and apply the calcium carbide mass-production method</li> </ul>

## An Example of Unique GCP Activities

### *Tonari no Shibafu (The Grass Is Always Greener)* Newsletter Compiled by Branch

With the aim of facilitating mutual understanding among the branches and sales office staff, the newsletter is compiled in-house by staff at the Osaka Branch and the Shikoku Sales Office. The newsletter features such articles as "Getting to Know the Department Next Door," "Introducing a Newcomer" and "Landmark" which introduces local sightseeing spots. Although nearly 60 people work at the Osaka Branch and each is in charge of a different product, the newsletter helps facilitate mutual understanding and a sense of unity.

*Tonari no Shibafu* is a sister publication to *Shikoku Tsushin SK188*, a newsletter compiled by staff at the Shikoku Sales Office since fiscal 2010 to spotlight the region's unknown specialties.



# Giving Due Consideration to Product Life Cycles, We Strive to Reduce Environmental Burdens, Working in Concert With the Entire Supply Chain.

## CSR Procurement and Green Procurement

Under the DENKA Group Guidelines, which were formulated as the basic policies for our CSR initiatives in 2007, we are striving to ensure just and fair procurement that gives due consideration to compliance, environmental conservation, human rights, occupational safety and health, security and disaster prevention at worksites and contribution to society. In fiscal 2013, we established the CSR Procurement Committee in order to step up our CSR-oriented procurement initiatives, expanding their scope to involve not only the Group members but also our supply chain as a whole.

### Establishing CSR Procurement Policies and Guidelines

In concert with the establishment of the CSR Procurement Committee in 2013, the DENKA Group formulated its CSR Procurement Policies based on the DENKA Group Guidelines with the aim of clarifying its approaches to CSR procurement.

Moreover, DENKA established the CSR Guidelines to communicate its CSR Procurement Policies with suppliers whose cooperation is essential for promoting CSR procurement throughout the supply chain. Suppliers that meet Guidelines' conditions are eligible for preferential selection.

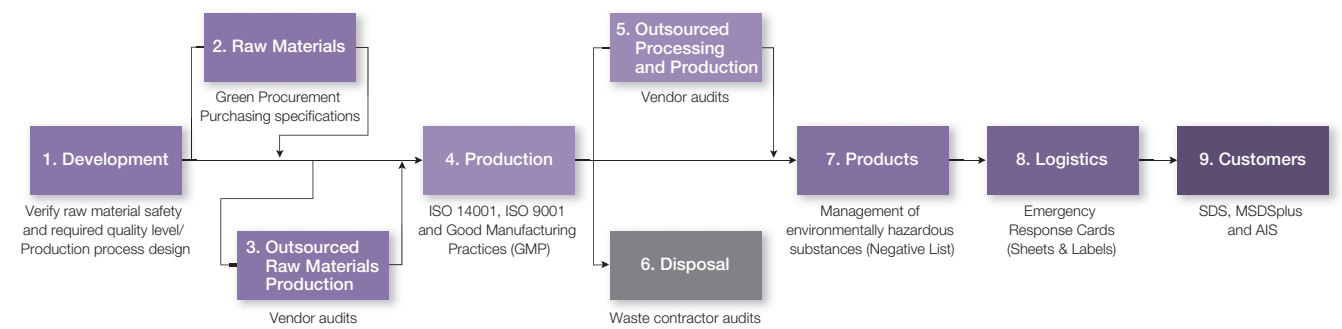
### The CSR Procurement Policies

1. We will maintain respect for human rights while striving to improve the workplace environment and occupational safety and health.
2. We will pursue environment-conscious procurement, striving to secure safety and to reduce our impact on the earth's environment.
3. We will undertake procurement activities based on compliance with relevant laws, regulations and corporate ethics.
4. We will purchase raw materials and equipment and consign construction work by comprehensively taking into account such factors as quality, prices and delivery time as well as suppliers' technological capabilities, supply reliability and their environmental conservation initiatives.
5. We will sincerely engage with our suppliers and treat them as important business partners, fostering mutual understanding and trustworthy relationships with them through fair business transactions.
6. We will not accept from our suppliers nor provide them with any gifts or entertainment of value that are deemed in excess of social norms or of an inappropriate nature.
7. We will not divulge any non-public information acquired in confidence from our suppliers in the course of procurement activities while properly managing and protecting their intellectual property rights.
8. We will maintain an equal partnership with all suppliers and provide them with equal opportunities for competition in a fair manner.

### The CSR Procurement Guidelines

1. **Respect for Human Rights and Occupational Safety and Health:** A supplier is required to include respect for fundamental human rights and the pursuit of occupational safety and health in its corporate policy.
2. **Compliance with Laws and Regulations:** A supplier is required to include compliance with law and regulations, as well as fair corporate activities in accordance with social ethics, in its corporate policy.
3. **CSR Promotion:** A supplier is required to recognize CSR as being integral to its business activities. This entails including sustainable social and business development in its corporate policy and establishing an in-house CSR promotion structure.
4. **Environmental Conservation:** A supplier is required to include environmental conservation activities in its corporate policy and disclose the status of said activities to the general public. The said activities include the appropriate management of chemical substances contained in its products and green procurement.
5. **Product Quality and Safety:** A supplier is required to include quality and safety assurance in its corporate policy. Such activities are expected to take place under an established product quality management system.
6. **Fair and Just Business Transactions:** A supplier is required to include fair and just business transactions in its corporate policy.
7. **Risk Management:** A supplier is required to make sure that any risk or contingencies it may confront are managed and controlled through such means as the appropriate and timely information disclosure.
8. **Contribution to Society:** A supplier is required to include proactive contribution to local communities and global society in its corporate policy.
9. **Severing Ties with Antisocial Forces:** A supplier is required to not have any relationship with antisocial forces, whether they are individuals or entities.

## Product Safety Management Flowchart



\* Please also see page 4 of the DENKA CSR Report 2013 References (PDF format) posted on our website for further detail.

### Future Initiatives

To step up the promotion of CSR procurement, plans call for using questionnaires targeting suppliers with the aim of benchmarking them in accordance with criteria set forth in the CSR Procurement Guidelines as well as providing suppliers with feedback about how we evaluate their CSR initiatives.

### Status of Green Procurement Initiatives

We believe that good products are made only from good raw materials and through appropriately designed and controlled processes. We also recognize that upstream management is basic to controlling hazardous substances. With these in mind, we are clarifying the required characteristics of procurement items while implementing upstream management aimed at securing quality assurance and compliance with laws and regulations.

Prior to procurement, we agree with suppliers on purchasing specifications that are in conformity with domestic and international environmental regulations and other requirements. We also obtain SDSs,\*1 MSDSplus\*2 and AISs\*3 while confirming the results of screening for substances subject to mandatory management, such as those under EU's RoHS\*4 regulations.

Moreover, with the aim of securing product safety, we conduct auditing at and give guidance to suppliers as necessary by using our in-house developed Negative List.\*5

### Message from General Manager



**Masato Mitani**, General Manager, Quality Control Management Dept., Technology Div.

In accordance with DENKA100, we focus on ensuring the proper management of raw materials and facilities, securing built-in quality and enhancing quality management techniques. In these ways, we are making sure that legal requirements and customer needs are precisely met from the product development stage.

Going forward, these efforts must involve our overseas business sites and their local partners. To enhance customer satisfaction, we are striving to achieve steady improvements in quality while preventing quality-related problems.

- \*1 Safety Data Sheets
- \*2 Material Safety Data Sheets
- \*3 Article Information Sheets
- \*4 Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
- \*5 A list of chemicals that ranks substances regulated by laws and subject to reporting obligations under guidelines for the automobile, electric equipment and electronics industries by their level of hazardousness, based on which their controlling methods are determined

## Chemical Substance and Quality Management

### Fiscal 2012 Companywide Quality Policies

1. Ensuring a strengthened response to product liability (PL) and related laws and regulations
2. Improving quality assurance levels Companywide
3. Enhancing technologies to ensure built-in quality
4. Raising awareness of employees engaged in manufacturing
5. Facilitating the adoption of statistical quality control (SQC) methods at each site

### Fiscal 2012 Results

- Recorded no PL-related problems; the number of complaints decreased by 36% year on year
- Provided staff of manufacturing and R&D sections with practical training themed on response to laws and regulations
- Reinforced facility improvement and process management to ensure built-in quality, based on clearly defined key processes
- Promoted the adoption of the SQC method through reinforced employee training undertaken at each site in line with Companywide quality policies and the introduction of a quality engineering approach (Taguchi methods)
- Raised awareness of on-site workers through strengthened initiatives undertaken at production frontlines, such as quality control (QC) circle activities

### Plans for Fiscal 2013 and Beyond

- We are striving to ensure the upstream management of procurement items and product quality management from the development stage through the review of purchasing specifications and the strengthening of the design review process.
- We will continue to promote the adoption of the SQC method.





Under the Keywords “Nurturing the Next Generation” and “Working with Local Communities,” We Cooperate with Various Stakeholders in Our Ongoing Social Contribution Activities and Post-Disaster Reconstruction Initiatives.

### Facilitating Greater Interest in Chemistry

With the aim of nurturing their interest in chemistry, we invite local children to participate in tours and experimental science classes that each plant holds.

#### The Summer Holiday Chemical Experiment Show for Children

In fiscal 2012, DENKA participated for the first time in 15 years in the Summer Holiday Chemical Experiment Show for Children. Spearheaded by the “Dream Chemistry 21” committee\* formed by a number of industry organizations, the event aims to provide elementary and junior high school students with hands-on experience of the wonders and excitement of chemistry. Involving a number of creative chemistry experiments hosted by various companies, the fiscal 2012 show was held on August 4 and 5 at the Science Museum in Tokyo and attended by approximately 9,000 children and their parents.

Led by younger employees from the Headquarters and the DENKA Innovation Center, DENKA held a class entitled “Wonder of Powder,” welcoming approximately 120 children to join in experiments of dissolving DENKA’s hyaluronic acid powder in water and creating personalized magnets using DENKA ES, an “instant-hardening cement.”

The surprise and smiles on the faces of the children reminded the DENKA employees leading these experiments of the significance and reward of chemical manufacturing.

\* An NPO operated by the Chemical Society of Japan; the Society of Chemical Engineers, Japan; the Japan Association for Chemical Innovation and the Japan Chemical Industry Association with the aim of facilitating children’s interest in chemistry and chemical industry through the provision of experimental science classes and other events.



The event was a roaring success



Children having fun making magnets



The children had a variety of questions and comments



DENKA employees who planned and ran the classes

### Initiatives to Support Local Communities

#### The DENKA Group’s Educational Assistance: Example of Fiscal 2012 Activities

Category	Business unit	Name of event or school	Main content of experiment and education
Experimental science classes	Headquarters and DENKA Innovation Center	Participated in the Summer Vacation Children’s Chemistry Experiments Show (at Science Museum; welcomed 120 children)	Dissolving hyaluronic acid powder in water and making personalized magnets (using DENKA ES)
	Omi Plant	Participated in <i>Geomaru &amp; Nuna to Omoshiro Science</i> (welcomed 236 people)	Personalizing PET bottles (using an SBC resin film CLEAREN)
	Omuta Plant	Visited schools to hold chemistry classes for children (Meiji Elementary School and Haseba Kita Elementary School) and participated in the Omuta Eco-Town Fair	Observing phosphor’s luminescence, making an instant sherbet using a super-cooling phenomenon, using thermography, personalizing PET bottles, making key holders (using OPS sheets)
	Chiba Plant	Invited children and their parents to host the Summer Vacation Plant Tour and Experimental Science Class	Personalizing PET bottles, using TEMPLOC adhesive and dilatancy experiment
Internship	Shibukawa Plant	Invited children to host experimental science classes (Shibukawa Nishi Elementary School and Kanashima Elementary School)	Making slime (a viscous toy; using PVA), personalizing PET bottles, making Cartesian divers, making bath powder and chromatography experiments
	Omuta Plant	Tamana Technical High School	Observing objects through an electron microscope, practicing the use of X-ray devices, discipline training, hands-on inspection of a fire truck, etc.
	DENKA Azumin	Kurosawajiri Technical High School and Seibun High School	Presenting HITPLATE and Emitter manufacturing process
Others	Headquarters	DENKA Scholarship System	Providing college or university students who grew up in the vicinity of DENKA’s domestic plants with rent assistance
	Headquarters	The Fureai Trio concerts featuring Kyoko Yoshida and friends	Providing assistance for classical music classes at elementary schools
	Denka Chemicals Holdings Asia Pacific (Singapore)	The National University of Singapore (NUS)	Providing lectures on Japanese culture at the Department of Japanese Studies

#### The Fureai\* Trio

On December 9, 2012, a concert for people with disabilities was held in Tokyo, featuring the Fureai Trio (Kyoko Yoshida and friends), a musical ensemble supported by DENKA. The concert was attended by more than 400 people, who enjoyed the opportunity to hear a live performance, have a try at playing a real violin and participate in the performance by playing body percussion.

To run the event, 40 volunteers from DENKA, six other supporting companies and the Japan Culture Center for Youths and Children, which sponsored the concert, took part in setting up the venue, guiding people and assisting violin performance workshops. DENKA will continue to support the activities of the Fureai Trio in tandem with various companies and organizations.



The Fureai Trio concert

\* Fureai is a Japanese term referring to the formation of emotional connections between people of different backgrounds within a community

#### Blood Donation Activities (Shibukawa and Omuta)

In Japan, 3,000 people are saved by blood transfusions every day and the number of such people totals 1,200,000 per year.\* Because blood cannot be artificially produced or preserved for long, blood transfusions depend on the altruism of donors.

DENKA’s Omuta Plant and Shibukawa Plant hold annual blood donation campaigns on their premises to support local Red Cross Blood Centers. Fiscal 2012 campaigns gained the participation of 260 employees in total. While significant in terms of social contribution, blood donation campaigns also present opportunities to monitor participants’ health status through biochemical and blood cell count examinations.

\* Source: the Japanese Red Cross Society’s website



Employees of the Omuta Plant donating their blood

#### Volunteers Supporting Disaster-Stricken Areas

DENKA has pursued ongoing activities aimed at supporting areas hit by the Great East Japan Earthquake, and many of its employees have participated in recovery efforts as volunteers. Since the launch of the “Disaster Area Volunteer Support Program” in August 2011 until May 2013, the Company had dispatched 234 employees, mainly to Minami Sanriku-Cho, Miyagi Prefecture, on a total of 28 occasions.

Although it has been three years since the earthquake, the post-disaster reconstruction is only half completed. Moreover,

there is a growing call for the provision of mental care for region’s hard-hit people.

We believe that our volunteer activities, although only minor, will make a difference when they are continued over the long term. In line with this belief, we will pursue ongoing efforts, together with people in local communities, to support reconstruction.



The 28th round of volunteers (May 2013)

WEB Initiatives undertaken at each business site and affiliate are featured in the “Site Reports” section of the web-based references.





In Addition to Timely Information Disclosure, We Are Undertaking a Variety of Investor Relations Activities, Maintaining Effective Communication with Shareholders and Investors to Prove Worthy of Their Trust.

### Results Briefings

DENKA holds results briefings for analysts and institutional investors. A results briefing for the fiscal year ended March 31, 2013, was held on May 9, 2013, with nearly 90 people attending.

During the briefing, we presented on our fiscal 2012 financial results, performance forecasts for fiscal 2013, new growth strategies and the diagnostic reagents business.



The fiscal 2012 results briefing (May 9, 2013)

Presentation on the diagnostic reagents business given by Tetsuro Maeda, the president of DENKA SEIKEN Co., Ltd.



### Briefing for Individual Investors

On September 5, 2012, DENKA held a corporate briefing for individual investors in Niigata City.

After presenting an overview of DENKA, we introduced the calcium carbide business, our mainstay business since our founding, and gave an overview of the Omi Plant, our main factory in Niigata Prefecture, and its products. We also presented our unique initiatives in hydro-electric power generation.



Individual investors listen to the presentation

### Public Relations

In addition to results briefings and corporate briefings, we undertake a variety of public relations activities, holding press conferences, preparing press releases, responding to mass-media coverage, disclosing information through our website and undertaking advertising activities, to facilitate effective communications with society.

#### Fiscal 2012 Public Relations Activities

##### 1. Complete Renewal of Website

On September 28, 2012, we made a complete renewal of our website. The homepage design and site structure were made more user-friendly, while website security\* was enhanced.

\* For further detail, see page 3 of the DENKA CSR Report 2013 References (PDF format) posted on our website.

##### 2. Co-sponsored J-WAVE "Green Casting Day"

Since July 2012, we have co-sponsored "Green Casting Days," an initiative undertaken by J-WAVE, an FM broadcasting station in Tokyo, with the aim of powering radio broadcasts with "green electricity."

##### 3. Supporting the NIIGATA Albirex BB Rabbits

As a company with production sites and affiliates in Niigata Prefecture, we entered into a uniform supplier agreement with a local professional female basketball team, the NIIGATA Albirex BB Rabbits.

In addition, plans for fiscal 2013 call for co-sponsoring basketball clinics that the team holds for elementary school students.

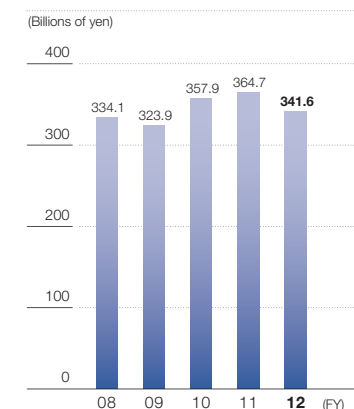


A NIIGATA Albirex BB Rabbits' game at the Gosen City Muramatsu Gymnasium

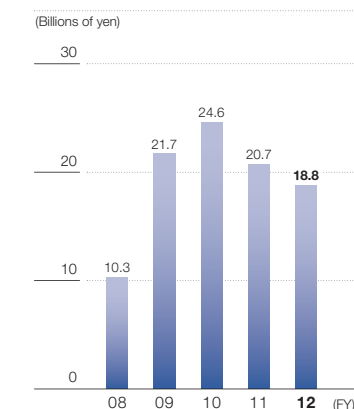
### Consolidated Financial Highlights

	(Millions of yen)				
	Fiscal 2008	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012
Net sales	334,130	323,875	357,893	364,712	341,645
Operating income	10,302	21,655	24,618	20,713	18,817
Ordinary income	3,094	16,888	23,052	18,996	17,824
Net income	1,439	10,474	14,355	11,330	11,255
Total assets	377,912	400,407	402,046	402,552	415,356
Total net assets	150,142	160,316	168,182	172,737	180,709
Total shareholders' equity ratio (%)	39.1	39.4	41.2	42.3	43.1
Net income per share (yen)	2.89	21.33	29.24	23.22	23.63
Net assets per share (yen)	300.60	321.46	337.35	353.64	376.99

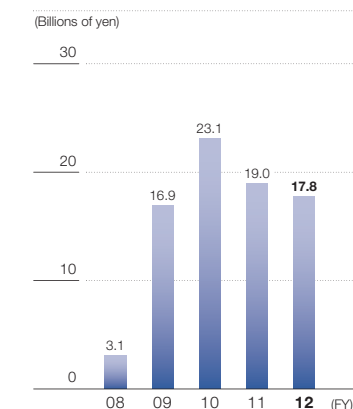
#### Net sales



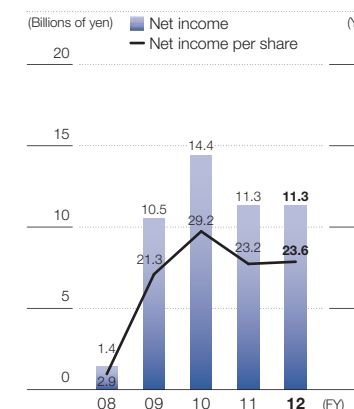
#### Operating income



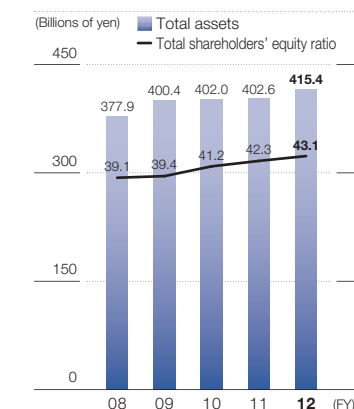
#### Ordinary income



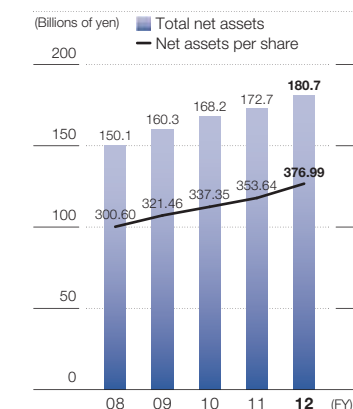
#### Net income/Net income per share



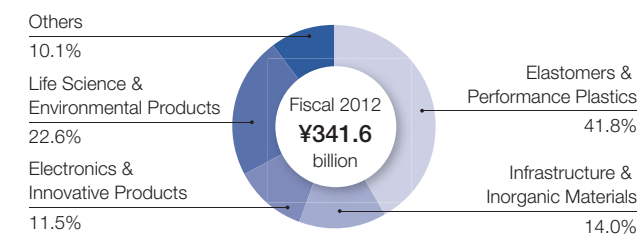
#### Total assets/Total shareholders' equity ratio



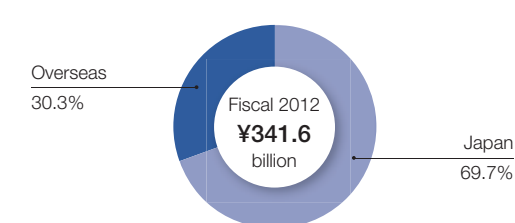
#### Total net assets/Net assets per share



#### Consolidated net sales by segment



#### Consolidated net sales in Japan and overseas



WEB Consolidated financial statements are on pages 14 to 15 of the DENKA CSR Report 2013 References (PDF format) posted on our website.



The Focus on Challenges Specific to the Chemical Industry Draws Readers' Attention

Prior to preparing this third-party opinion for the *DENKA CSR Report 2013*, I gave a lecture at DENKA on the latest trends in CSR activities and corporate information disclosure, made 35 recommendations with regard to the first draft of this report and, in a separate dialogue, exchanged opinions pertaining to these recommendations.

The sight of heads of departments participating in the lecture and dialogue impressed upon me how strong DENKA's commitment to CSR and corporate information disclosure is. Also, the Company set clear objectives for these events, namely, "brushing up this report based on recommendations" and "enhancing CSR activities Companywide by providing third-party feedback to each department," which suggests its determination to make the most of the process of preparing this report. Because of that, I have growing expectations for DENKA's future initiatives and the reports it will make.

Compared with the previous year, the *DENKA CSR Report 2013* is structured differently, focusing on the three aspects of building trust, ensuring sustainability and collaborating with stakeholders while taking into consideration the challenges confronting today's chemical industry. When it comes to report structures, styles include those organized around stakeholders or the triple bottom lines. I believe that the structure DENKA has chosen, which draws readers' attention, might provide a good model for future corporate reporting.

I also noted that the content of the web-based references has been enriched even further. On the other hand, such important sections as corporate governance, compliance and emissions information, which were presented only as online references in the fiscal 2012 edition, were included in the print edition of the *DENKA CSR Report 2013*. Moreover, in certain sections of the printed booklet, the icon **WEB** appears, indicating the availability of online resources to enhance reader convenience.

One of the more remarkable articles in this report is the announcement of two accidents that occurred in June and July 2013. Even though the accidents occurred after the coverage period of this report, DENKA provided statements covering these incidents in the message from the president, recognizing them as material subsequent events. These statements briefly touch on the accidents and do not go into detail, however, DENKA states its intention of providing readers with follow-up reports in the *DENKA CSR Report 2014* on the actions taken in response to these accidents. As the chemical industry has seen an increase in the number of accidents over the last two years, DENKA's approach is suggestive of the Company's sense of crisis and its sincerity. In the next report, I would like DENKA to closely examine any insufficiency in hazard prediction and safety communication mentioned in the top message. I also expect that the Company will continue providing stakeholders with follow-up reports on steps being implemented to prevent such accidents from recurring and evaluations of their effectiveness over the next several years. I believe these matters are

an indispensable part of DENKA's reporting, in line with its emphasis on building trust and ensuring sustainability.

Other impressive articles in this report included one discussing the Company's promotion of clean energy sources centered on hydroelectric power generation. Because chemical product manufacturing is energy-intensive, securing an electricity supply and saving energy are essential management issues for chemical companies seeking sustainable growth. The Company's initiatives since its founding to secure electricity have resulted in an in-house power generation ratio of 56%, which is significant given the recent concerns over the electricity supply in Japan. Looking ahead, I expect DENKA to report on the initiatives aimed at expanding the use of clean energy sources, including not only hydroelectric and mega solar power generation but also biomass power generation.

Lastly, I would like to close this third-party opinion by presenting a recommendation for the method of corporate information disclosure. As stated in the "Editorial Policy," the articles were selected for this report based on materiality of information, adopting a style that is more consistent with recent trends in integrated reporting. In fact, the fourth version of the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (G4) was issued in May 2013 and an integrated reporting framework will be released by the International Integrated Reporting Committee (IIRC) by the end of 2013. It is true that incorporating these external guidelines into CSR reports is essential. However, I have to mention that reporting formats under these guidelines also include significant changes from the previously adopted formats, while differences are seen even between GRI and IIRC on the definition of materiality and the assessment of impact. I believe that, to simultaneously enrich the content of CSR and investor information disclosure, it is essential to carefully examine these two guidelines and establish an in-house consensus with regard to corporate information disclosure on such matters as the quantity and quality of information, means of disclosure and management thereof.

Given the Company's proactive approach toward corporate information disclosure, I am confident that DENKA will be capable of putting the abovementioned recommendation into practice.



**Tamio Yamaguchi**  
Representative of Junkan Workers Club\*

\* An NPO dedicated to fostering the harmonious coexistence of society and natural ecosystems through research conducted from a global perspective. It studies and spearheads local community efforts for creating a recycling-oriented society joining citizens, businesses and governments, presenting recommendations through CSR workshops and other means.  
URL: <http://www.nord-ise.com/junkan/> (Japanese only)

A Dialogue Held Prior to the Preparation of the Third-Party Opinion

To enhance the reliability of its CSR reporting, since fiscal 2007 DENKA has been subject to third-party audits by specialists in the chemical engineering field and, since fiscal 2011, has been engaging CSR experts in dialogue. The results of such audits and dialogue are presented as third-party opinions in the *DENKA CSR Report*. For this year's report, as in the previous year we invited Mr. Tamio Yamaguchi, a leading authority on CSR in Japan, to join us in dialogue as well as to present a lecture on CSR, with the aim of reflecting his recommendations in the report.

On July 30, 2013, we invited Mr. Yamaguchi to give a lecture on global trends in CSR and approaches to localizing CSR efforts. Mr. Yamaguchi's presentation covered the latest trends in business initiatives aimed at "Creating Shared Values (CSV)" by addressing the social and environmental issues that countries worldwide are confronting and efforts to enhance information disclosure.

Then a dialogue was held on September 3, 2013, which involved a question-and-answer session based on comments Mr. Yamaguchi had made with regard to the first draft of this report. We discussed such issues as the importance of maintaining a consistent report structure based on a clear editorial policy and the growing trend among overseas stakeholders to pay more attention to how companies address human rights issues, factors that should, in turn, be reflected in our CSR reports, as well as how to handle potential risks in environmental accounting.

Participants in this lecture and dialogue included heads of departments, including environment and safety managers.



The dialogue held at Headquarters on September 3, 2013; Mr. Yamaguchi (left above) and representatives of DENKA deliberated the issues to be addressed to enhance the Company's CSR reporting.

Response to the Third-Party Opinion

First of all, we would like to express our appreciation to Mr. Yamaguchi for his invaluable comments and beneficial advice with regard to the *DENKA CSR Report 2013*.

Prior to receiving the third-party opinion from Mr. Yamaguchi, we were given a number of recommendations with regard to the first draft of this report, especially pertaining to its structure and content. Also, during the dialogue Mr. Yamaguchi made some valuable suggestions about the posting of quantitative information on workplace diversity and work-life balance while enlightening us about the importance of reporting on activities aimed at protecting human rights, a matter that is attracting growing attention among today's overseas stakeholders.

In recent years, we have been struggling to improve our report structure and better allocate information to the print edition and online references, keeping in mind Mr. Yamaguchi's pointed observations. We considered the important social challenges confronting us and decided to organize the contents of the print edition around the three pillars of building trust, ensuring sustainability and collaborating with stakeholders. We are very grateful that our efforts were evaluated highly by Mr. Yamaguchi in the third-party opinion he has made.

On the other hand, Mr. Yamaguchi has proposed utilizing external guidelines and establishing an in-house consensus for enriching the content of information disclosure to stakeholders. These proposals suggest the importance of taking a more systematic approach to addressing the challenges facing DENKA in meeting its corporate social responsibility. As we are now seeing a growing trend toward integrated reporting, we anticipate that society's expectations regarding corporate information disclosure will continue to change. While being mindful of these changes, our stance will remain unchanged with regard to the steady and ongoing pursuit of CSR activities to enhance the substance of our Groupwide CSR initiatives.

We would also like to express our gratitude to the readers of the *DENKA CSR Report 2013* and are delighted to hear their frank opinions and comments. Spurred by the guidance and advice of our stakeholders, we will step up Groupwide CSR activities and fulfill our social responsibility as a company.



**Noriyuki Shimizu**  
General Manager, CSR & Corporate Communications Dept.

Corporate Data (As of March 31, 2013)

Established: May 1, 1915

Paid-in capital: ¥36,998,436,962

Employees: 5,206 (consolidated) and 2,832 (non-consolidated)

Sites

• Head Office:

Nihonbashi Mitsui Tower, 1-1, Nihonbashi-Muromachi 2-chome, Chuo-ku, Tokyo 103-8338, Japan  
Tel: +81-3-5290-5055

• Branches

Osaka, Nagoya, Fukuoka, Niigata, Hokuriku (Toyama), Sapporo, Tohoku (Sendai)

• Sales Offices

Nagano, Gunma (Takasaki), Hiroshima, Shikoku (Takamatsu), Akita

• Research Institutes

Central Research Institute (DENKA Innovation Center) (Machida, Tokyo)  
Polymer & Processing Technology Institute (Ichihara, Chiba)

• Plants

Omi (Itoigawa, Niigata), Omuta, Chiba (Ichihara, Chiba), Shibukawa, Ofuna (Kamakura, Kanagawa), Isesaki



Head Office (Nihonbashi Mitsui Tower)

Overseas Subsidiaries & Offices

New York, Düsseldorf, Singapore, Shanghai, Beijing, Guangzhou, Suzhou, Hong Kong, Taiwan, Seoul

Major Affiliates

DENKA Polymer Co., Ltd. (Koto-ku, Tokyo)

DENKA SEIKEN Co., Ltd. (Chuo-ku, Tokyo)

CRK Corporation (Takasaki, Gunma)

Hinode Kagaku Kogyo (Maizuru, Kyoto)

DENKA Azumin Co., Ltd. (Hanamaki, Iwate)

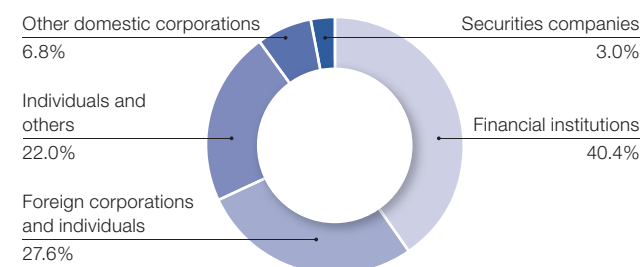
Shareholder Information (As of March 31, 2013)

Total number of authorized shares	1,584,070,000
Shares of common stock issued	481,883,837
Number of shareholders	40,796

Major Shareholders

	Number of shares held (thousands)	Percentage of shares held (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	31,551	6.64
Japan Trustee Service Bank, Ltd. (Trust Account)	25,508	5.37
Japan Trustee Service Bank, Ltd. (Trust Account 9)	19,492	4.10
National Mutual Insurance Federation of Agricultural Cooperatives	15,965	3.36
Trust & Custody Services Bank, Ltd. (Mizuho Corporate Bank, Ltd. Retirement Benefit Trust Account re-entrusted by Mizuho Trust and Banking Co., Ltd.)	15,275	3.21
Mitsui Life Insurance, Co., Ltd.	11,908	2.50
Mitsui Sumitomo Insurance Co., Ltd.	6,916	1.45
The Nomura Trust and Banking Co., Ltd. (Trust Account)	5,474	1.15
Mitsui & Co., Ltd.	5,437	1.14
Japan Trustee Service Bank, Ltd. (Trust Account 4)	5,267	1.10

Shareholder Composition



Notes:

1. Treasury stocks (7,042,507 shares) are not accounted for in the list of major shareholders on the left.
2. The calculation of percentage of shareholding excludes treasury stocks.

Executives (As of June 21, 2013)

Board of Directors/Audit & Supervisory Board/Executive Officers

Directors

Representative Director	Shinsuke Yoshitaka
Representative Director	Hitoshi Watanabe
Director	Tetsuro Maeda
Director	Mitsukuni Ayabe
Director	Shinji Sugiyama
Director	Hideyuki Udagawa
Director	Manabu Yamamoto
Outside Director	Kozo Tanaka
Outside Director	Tadashi Hashimoto

Audit & Supervisory Board Members

Standing Corporate Auditor	Hideo Oishi
Standing Corporate Auditor	Jiro Hiroe
Outside Corporate Auditor	Toshiaki Tada
Outside Corporate Auditor	Tsunehiro Sasanami

Executive Officers

President & Chief Executive Officer	Shinsuke Yoshitaka
Senior Managing Executive Officer	Hitoshi Watanabe
Senior Managing Executive Officer	Mitsukuni Ayabe
Managing Executive Officer	Shinji Sugiyama
Managing Executive Officer	Hideyuki Udagawa
Managing Executive Officer	Manabu Yamamoto
Managing Executive Officer	Shohei Tamaki
Managing Executive Officer	Norihiro Shimizu
Managing Executive Officer	Toshiharu Kano
Managing Executive Officer	Sanshiro Matsushita
Executive Officer	Kazuyuki Koyama
Executive Officer	Akihiko Okuda
Executive Officer	Kenji Nakano
Executive Officer	Masaharu Suzuki
Executive Officer	Ken Koizumi
Executive Officer	Tetsuya Shinmura
Executive Officer	Junichi Kimura
Executive Officer	Toshio Imai

Editorial Policy

DENKA set up its CSR Promoting Dept. (currently, the CSR & Corporate Communications Dept.) in April 2007 as part of DENKA100, a Companywide initiative targeted for its centennial in 2015, and has reported all of its CSR activities since October 2007.

With an eye on the challenges confronting today's chemical industry, the *DENKA CSR Report 2013* focuses on three aspects: building trust, ensuring sustainability and collaborating with stakeholders. Starting with a message from the president, the report begins with a review of two major accidents that the DENKA Group decided to report on to fulfill its responsibility to stakeholders, namely, a heat-blast accident at the Omi Plant and a fire at the Chiba Plant. It then goes on to highlight our efforts "To remain a company that deserves trust" by featuring our corporate governance, CSR activities and initiatives to secure worksite safety. The articles themed on "Sustainability for the next 100 years" then follow and present our initiatives aimed at achieving sustainable growth, with particular focus on DENKA100 new growth strategies and the two priority issues for achieving long-term growth, namely, securing our electricity supply and recycling initiatives at our cement plant. The report closes with introducing collaborative initiatives we have pursued "With our stakeholders"—employees, suppliers, local communities and shareholders and investors.

The *DENKA CSR Report 2013* also includes consolidated financial highlights for investors' interest while putting greater emphasis on representing a management viewpoint, a style that is more consistent with recent trends in integrated reporting. The overall content of the report has been selected by giving due consideration to materiality.

In preparing this publication, we referred to the Environmental Reporting Guidelines 2012 of Japan's Ministry of the Environment and Version 3.1 of the Sustainability Reporting Guidelines of the Global Reporting Initiative.

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Coverage

This report generally covers fiscal 2012 (April 1, 2012, through March 31, 2013). It also includes information on subsequent initiatives undertaken in fiscal 2013 while presenting numerical targets for and performance statistics from the past several fiscal years.

Scope

Unless stated otherwise, the data in this report is based on information on the business sites of DENKA and key affiliates listed below, and financial information presented hereto includes consolidated data.

- Business sites: The Omi, Omuta, Chiba, Shibukawa, Ofuna and Isesaki plants and the Central Research Institute (DENKA Innovation Center)
- Key affiliates: Denal Silane Co., Ltd., Denak Co., Ltd., JUZEN Chemical Corporation at the Omi Plant, and Chiba Styrene Monomer Limited Company, TOYO STYRENE Co., Ltd., and Taiyo Vinyl Corporation at the Chiba Plant

Website-Only Contents

To introduce its CSR initiatives to stakeholders, DENKA utilizes both the *DENKA CSR Report* printed booklet and web-based references, which are prepared in PDF format and posted on its website. While the former presents the latest examples of DENKA's initiatives aimed at achieving sustainable growth, the latter covers information on its long-standing CSR activities.

In addition, the Global Reporting Initiative (GRI) Content Index has been newly added to the web-based references to the *DENKA CSR Report 2013*.