



# The Daicel Group CSR Report 2015



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*The Best Solution for You*



Our Global Network

# We are DAICEL.

## Principal International Affiliates of the Daicel Group

### Germany

- 1 Daicel (Europa) GmbH**  
Purchase and sales of products in the European market
- Topas Advanced Polymers GmbH**  
Production and sales of cyclic olefin copolymer
- Polyplastics Europe GmbH**  
Sales of engineering plastics
- LCP Leuna Carboxylation Plant GmbH**  
Production and sales of hydroxybenzoic acid and potassium sulfate

### Poland

- 2 Daicel Safety Systems Europe Sp. z o. o.**  
Manufacture and sales of automobile airbag inflators

### France

- 3 Chiral Technologies Europe S.A.S.**  
Sales of chiral columns and technical services for chiral businesses

### India

- 4 Daicel Chiral Technologies (India) Private Ltd.**  
Sales of chiral columns and technical services for chiral businesses

### Singapore

- 5 Daicel (Asia) Pte. Ltd.**  
Purchase and sales of products in Asian markets
- Polyplastics Asia Pacific Singapore Pte. Ltd.**  
Sales of engineering plastics

### Malaysia

- 6 Polyplastics Asia Pacific Sdn. Bhd.**  
Manufacture and sales of engineering plastics

### Thailand

- 7 Daicel Safety Systems (Thailand) Co., Ltd.**  
Manufacture and sales of automobile airbag inflators
- Daicel Safety Technologies (Thailand) Co., Ltd.**  
Manufacture and sales of automobile airbag initiators and micro gas generators
- Special Devices (Thailand) Co., Ltd.**  
Manufacture and sales of automobile airbag initiators and micro gas generators
- Polyplastics Marketing (T) Ltd.**  
Sales of engineering plastics
- Daicel Polymer (Thailand) Co., Ltd.**  
Sales of flame-resistant ABS, ABS alloys and other products

### South Korea

- 8 Polyplastics Korea Ltd.**  
Sales of engineering plastics
- Daicel Safety Systems Korea, Inc.**  
Manufacture and sales of automobile airbag inflators

### Taiwan

- 9 Polyplastics Taiwan Co., Ltd.**  
Manufacture and sales of engineering plastics

### Hong Kong

- 10 Daicel Polymer (Hong Kong) Ltd.**  
Sales of flame-resistant ABS, ABS alloys and other products
- Polyplastics China Ltd.**  
Sales of engineering plastics

### Guangxi, China

- 11 Daicel Nanning Food Ingredients Co., Ltd.**  
Manufacture and sales of sorbic acid and potassium sorbate

### Zhejiang, China

- 12 Ningbo Da-An Chemical Industries Co., Ltd.**  
Manufacture and sales of cellulose acetate and acetic anhydride

### Shanghai, China

- 13 Daicel (China) Investment Co., Ltd.**  
Hub of the manufacture and sales organization in China
- Shanghai Daicel Polymers, Ltd.**  
Manufacture and sales of flame-resistant ABS, ABS alloys, etc.
- Daicel Trading (Shanghai) Ltd.**  
Purchase and sales of products in the Chinese market
- Polyplastics Trading (Shanghai) Ltd.**  
Sales of engineering plastics
- Polyplastics (Shanghai) Ltd.**  
Sales of engineering plastics
- Daicel Chiral Technologies (China) Co., Ltd.**  
Sales of chiral columns and technical services for chiral businesses

### Jiangsu Province, China

- 14 Daicel Safety Systems (Jiangsu) Co., Ltd.**  
Manufacture and sales of automobile airbag inflators
- PTM Engineering Plastics (Nantong) Co., Ltd.**  
Manufacture and sales of engineering plastics
- Polyplastics (Nantong) Ltd.**  
Manufacture and sales of engineering plastics

### Shaanxi Province, China

- 15 Xi'an Huida Chemical Industries Co., Ltd.**  
Manufacture and sales of acetate tow for cigarette filters

### Kentucky, U.S.A.

- 16 Daicel Safety Systems America, LLC**  
Manufacture and sales of automobile airbag inflators
- Daicel Safety Technologies America, Inc.**  
Production of gas generants for automobile airbag systems
- Daicel Safety Tube Processing, Inc.**  
Manufacture of automobile airbag inflator Parts
- Topas Advanced Polymers, Inc.**  
Sales of cyclic olefin copolymer

### Pennsylvania, U.S.A.

- 17 Chiral Technologies, Inc.**  
Sales of chiral columns and technical services for Chiral businesses

### New Jersey, U.S.A.

- 18 Daicel (U.S.A.), Inc.**  
Purchase and sales of products in the U.S. market

### Michigan, U.S.A.

- 19 Polyplastics USA, Inc.**  
Sales of engineering plastics

### Arizona, U.S.A.

- 20 Special Devices, Inc.**  
Manufacture and sales of automobile airbag initiators and micro gas generators

### Mexico

- 21 Polyplastics Marketing Mexico, S.A. de C.V.**  
Sales of engineering plastic

\* The scope of companies covered on this page comprise consolidated subsidiaries including equity-method affiliates.



1 Topas Advanced Polymers GmbH 2 Daicel Safety Systems Europe Sp. z o. o. 3 Chiral Technologies Europe S.A.S.



4 Daicel Chiral Technologies (India) Private Ltd. 6 Polyplastics Asia Pacific Sdn. Bhd. 12 Ningbo Da-An Chemical Industries Co., Ltd. 13 Shanghai Daicel Polymers, Ltd. 15 Xi'an Huida Chemical Industries Co., Ltd. 16 Daicel Safety Systems America, LLC

## Principal Domestic Locations



1 Osaka Head Office 2 Tokyo Head Office

- 1 Osaka Head Office:** GRAND FRONT OSAKA Tower B, 3-1 Ofuka-cho, Kita-ku, Osaka 530-0011
- 2 Tokyo Head Office:** JR Shinagawa East Bldg., 2-18-1, Konan, Minato-ku, Tokyo 108-8230
- 3 Himeji Production Sector/Aboshi Plant:** 1239, Shinzaike, Aboshi-ku, Himeji-shi, Hyogo 671-1281  
Principal products: Acetic acid, Cellulose acetate, Acetate tow, CMC, HEC
- 4 Himeji Production Sector/Hirohata Plant:** 12, Fuji-cho, Hirohata-ku, Himeji-shi, Hyogo 671-1123  
Principal products: PS sheet, AS resins
- 5 Harima Plant:** 805, Umaba, Ibogawa-cho, Tatsuno-shi, Hyogo 671-1681  
Principal products: Automobile airbag inflators, Pilot emergency-escape systems, Rocket propellants, Gunpowder
- 6 Central Research Center:** 1239, Shinzaike, Aboshi-ku, Himeji-shi, Hyogo 671-1283
- 7 Himeji Technology Head Office:** 1239, Shinzaike, Aboshi-ku, Himeji-shi, Hyogo 671-1281
- 8 Nagoya Sales Office:** Meiffice-Meieki Bldg., 26-25, Meieki 4-chome, Nakamura-ku, Nagoya-shi, Aichi 450-0002
- 9 Kanzaki Plant:** 12-1, Kanzaki-cho, Amagasaki-shi, Hyogo 661-0964  
Principal products: Packaging films, Adhesive films
- 10 Arai Plant:** 1-1, Shinko-cho, Myoko-shi, Niigata 944-8550  
Principal products: Ketene derivatives, Active ingredients and Intermediates for pharmaceuticals and agrochemicals, Chiral columns, Synthetic resin emulsions
- 11 Ohtake Plant:** 1-4, Higashisakae 2-chome, Otake-shi, Hiroshima 739-0695  
Principal products: Ethyl acetate, Butyl acetate, 1,3-butylene glycol, Caprolactone, Cellulose acetate, Acetate tow
- 12 H.R. Training Center:** 14-1, Kouto 3-chome, Kamigori-cho, Akou-gun, Hyogo 678-1205
- 13 Polyplastics Co., Ltd./Fuji Plant:** 973, Miyajima, Fuji-shi, Shizuoka 416-8533  
Principal products: POM, PBT, LCP, PPS

- ◆ Polyplastics Co., Ltd. JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo
- ◆ WinTech Polymer Ltd. JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo
- ◆ PTM Corporation JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo
- ◆ Polyplastics Services Co., Ltd. Located within the Fuji Plant (of subsidiary Polyplastics Co., Ltd.), 973 Miyajima, Fuji-shi, Shizuoka
- ◆ Daicel Polymer Ltd. JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo
- ◆ Daicel Value Coating Ltd. JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo
- ◆ Daicel Pack Systems, Ltd. Suda-cho MK Building, 2-8-1 Kandasuda-cho, Chiyoda-ku, Tokyo
- ◆ DM NOVAFOAM Ltd. 361-1 Karida, Obuse-mach, Kamitakai-gun, Nagano
- ◆ Kyodo Sakusan Co., Ltd. Kasumigaseki Business Center 3-7-1 Kasumigaseki, Chiyoda-ku, Tokyo
- ◆ Daicel Arai Chemical, Ltd. 1-1 Shinko-cho, Myoko-shi, Niigata
- ◆ Dainichi Chemical Corp. 23-11 Kuidesaku, Jyobanshimofunao-machi, Iwaki-shi, Fukushima
- ◆ Daicel Safety Systems Inc. 805 Umaba, Ibogawa-cho, Tatsuno-shi, Hyogo
- ◆ Daicel Pyrotechnics Ltd. 760 Hamagawa-machi, Takasaki-shi, Gunma
- ◆ Daicel Membrane-Systems Ltd. Shinjuku Estate Building, 1-34-15 Shinjuku, Shinjuku-ku, Tokyo
- ◆ Daicel FineChem Ltd. Sumitomo Mitsui Banking Corporation Asakusabashi Minami Building, 2-1-1 Bakuro-cho, Nihonbashi, Chuo-ku, Tokyo
- ◆ Daicel Logistics Service Co., Ltd. GRAND FRONT OSAKA Tower B, 3-1 Ofuka-cho, Kita-ku, Osaka-shi
- ◆ Kyoei Shokusan Co., Ltd. GRAND FRONT OSAKA Tower B, 3-1 Ofuka-cho, Kita-ku, Osaka-shi
- ◆ Daicel Aboshi Sangyo Co., Ltd. 1239 Shinzaike, Aboshi-ku, Himeji-shi, Hyogo
- ◆ Daicel Ohtake Sangyo Co., Ltd. 2-1-4 Higashisakae, Otake-shi, Hiroshima
- ◆ Nagano Novafoam Industry Co., Ltd. 361-1 Karida, Obuse-mach, Kamitakai-gun, Nagano
- ◆ Daicel-Evonik Ltd. Shinjuku Monolith Building, 2-3-1 Nishi-shinjuku, Shinjuku-ku, Tokyo
- ◆ DAICEL-ALLNEX LTD. Nihonbashi Front Building, 3-6-2 Nihonbashi, Chuo-ku, Tokyo
- ◆ Kyodo Polymer Co., Ltd. JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo
- ◆ Toyo Styrene Co., Ltd. CJ Building, 2-7-4 Nishi-Shinbashi, Minato-ku, Tokyo
- ◆ Toyama Filter Tow Co., Ltd. 3 Kaigandori, Toyama-shi, Toyama



3 Aboshi Plant 4 Hirohata Plant



5 Harima Plant 6 Central Research Center



9 Kanzaki Plant 10 Arai Plant



11 Ohtake Plant 13 Polyplastics Co., Ltd./Fuji Plant

\* The scope of companies covered on this page comprise consolidated subsidiaries including equity-method affiliates.

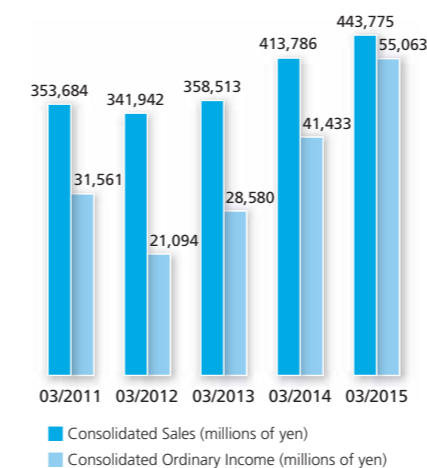
# Overview of the Daicel Group

The Daicel Group includes Daicel Corporation and 75 Group companies. The Company's primary business is the manufacture and sales of cellulosic derivatives, organic chemicals, plastics, pyrotechnic devices and other products. The business segments of Daicel Corporation, its subsidiaries and affiliated companies are shown below.

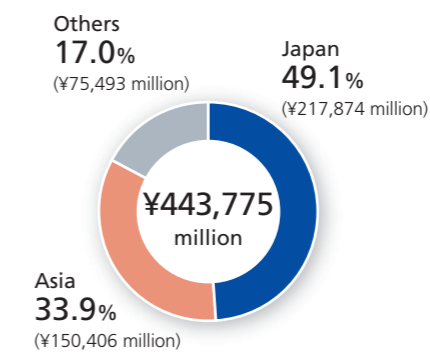
	Principal Products	Principal Group Companies	Number of Employees by Segment
<b>Cellulosic Derivatives</b>	<ul style="list-style-type: none"> <li>Cellulose acetate</li> <li>Acetate tow for cigarette filters</li> <li>CMC (Carboxy methyl cellulose)</li> </ul>	<b>Domestic:</b> Daicel Corporation, Daicel FineChem Ltd. <b>Overseas:</b> Xi'an Huida Chemical Industries Co., Ltd., Ningbo Da-An Chemical Industries Co., Ltd.	<p><b>2.9%</b> (291)</p>
<b>Organic Chemicals</b>	<ul style="list-style-type: none"> <li>Acetic acid and its derivatives</li> <li>Caprolactone derivatives</li> <li>Epoxy compounds</li> <li>Photoresist materials for semi-conductors</li> <li>Chiral columns</li> </ul>	<b>Domestic:</b> Daicel Corporation, Kyodo Sakusan Co., Ltd., Dainichi Chemical Corp. <b>Overseas:</b> Chiral Technologies, Inc., Chiral Technologies Europe S.A.S., Daicel Chiral Technologies (India) Private Ltd., Daicel Chiral Technologies (China) Co., Ltd., Daicel Nanning Food Ingredients Co., Ltd.	<p><b>9.9%</b> (1,004)</p>
<b>Plastics</b>	<ul style="list-style-type: none"> <li>POM (Polyacetal)</li> <li>PBT (Polybutylene terephthalate)</li> <li>ABS</li> <li>Engineering plastic alloys</li> <li>Plastic molded products</li> <li>Functional coating films</li> </ul>	<b>Domestic:</b> Polyplastics Co., Ltd., Daicel Polymer Ltd., Daicel Pack Systems, Ltd., Daicel Value Coating Ltd., Daicel-Evonik Ltd., DM Novafoam Ltd. <b>Overseas:</b> Shanghai Daicel Polymers, Ltd., Topas Advanced Polymers GmbH	<p><b>24.2%</b> (2,460)</p>
<b>Pyrotechnic Devices</b>	<ul style="list-style-type: none"> <li>Automobile airbag inflators</li> <li>Emergency-escape systems for aircraft crew and gunpowder</li> </ul>	<b>Domestic:</b> Daicel Corporation, Daicel Safety Systems Inc., Daicel Pyrotechnics Ltd. <b>Overseas:</b> Daicel Safety Systems America, LLC, Daicel Safety Systems (Thailand) Co., Ltd., Daicel Safety Systems Europe Sp. z o. o., Daicel Safety Systems (Jiangsu) Co., Ltd., Special Devices, Inc.	<p><b>48.7%</b> (4,951)</p>
<b>Others</b>	<ul style="list-style-type: none"> <li>Membrane separation modules for water treatment</li> <li>Transportation &amp; storage services</li> </ul>	<b>Domestic:</b> Daicel Corporation, Daicel Membrane-Systems Ltd., Daicel Aboshi Sangyo Co., Ltd., Daicel FineChem Ltd., Daicel Logistics Service Co., Ltd. <b>Overseas:</b> Daicel (China) Investment Co., Ltd.	<p><b>3.5%</b> (361)</p>

\* Altogether there are 10,173 employees. In addition to the number of employees designated by segment in the above pie graphs, there are 1,106 (10.9%) corporate staff common to all segments.

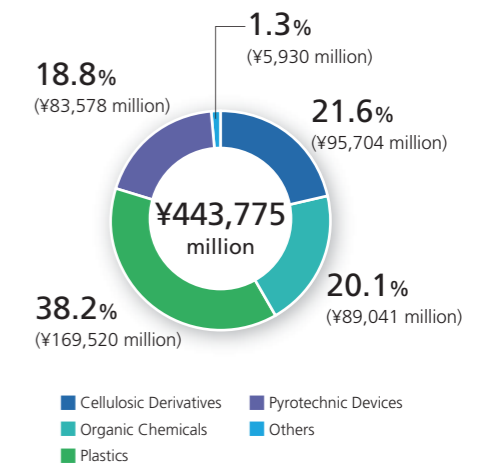
### Sales and Ordinary Income\*



### Sales by Region\*



### Sales by Segment\*



\*Graphs are presented on a consolidated basis for the year ended March 31, 2015.

# The Daicel Group's CSR

Our Basic Philosophy—**"Ceaseless Approach to Creation"**—represents the highest ideals of the Daicel Group. Keeping to the essence of this philosophy, the Daicel Group formulated a Corporate Objective and the **"Daicel Spirit"** as its Basic Philosophy.

## Basic Philosophy

**Corporate Objective**

We contribute to a better quality of life by developing and manufacturing products that society needs and values.

**The Daicel Spirit**

- Integrity and Ceaseless Efforts
- Focus on Creation of New Value (Monozukuri\*)
- Respect for Individuality and Achievements

\*"Monozukuri"; Our focus on "Monozukuri" is unshakeable. Although the literal meaning of the Japanese word "Monozukuri" is "making things," for our purpose the meaning of the term has been broadened to encompass the creation of new value in all corporate activities, including R&D, sales and marketing and support services.

## The Daicel Group's CSR

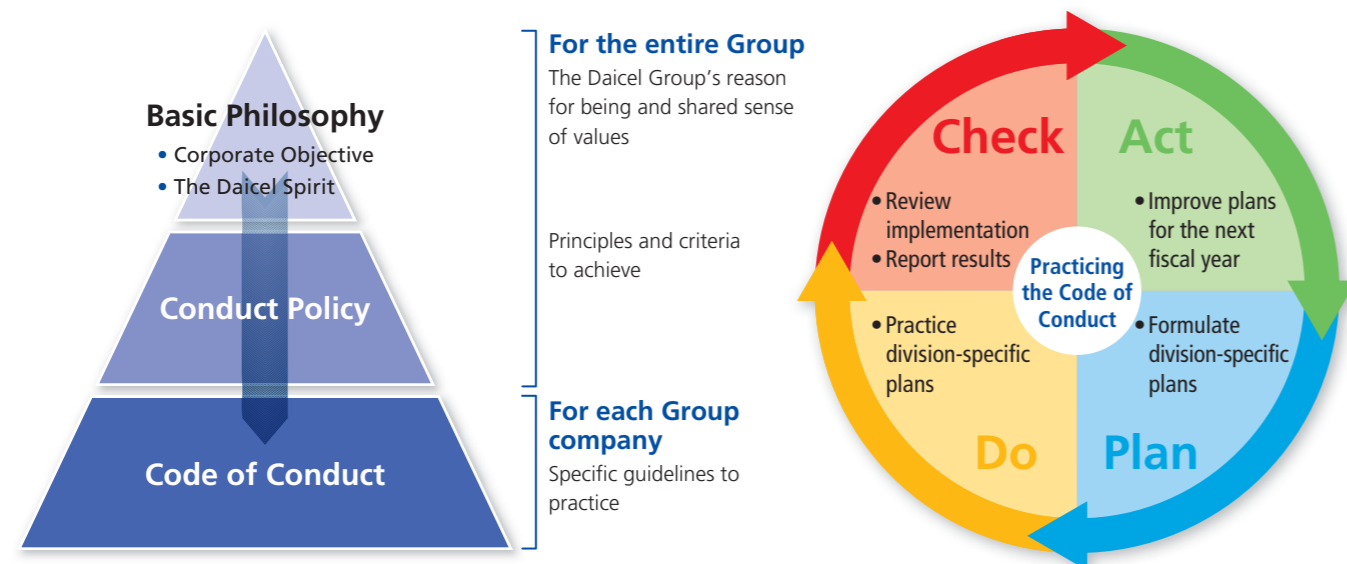
The Daicel Group has put in place a conduct policy based on the basic philosophy common throughout the Group. In order to properly carry out this policy, each Group company formulates its own code of conduct. Moreover, the Corporate Ethics Initiative and Responsible Care Initiative\*1 underpin the Conduct Policy or more specifically the Code of Conduct (the Daicel Group Conduct Policy in the case of the Group), which lie at the heart of the Daicel Group's CSR activities.

In addition, steps are taken to utilize a check, act, plan, and do (CAPD)\*2 cycle.

\*1 Please refer to page 31.

\*2 Daicel has adopted a CAPD improvement cycle as opposed to a plan, do, check, and act (PDCA) cycle to avoid any possibility of overlooking certain facts and realities at the initial planning stage

### Basic Philosophy, Conduct Policy and Code of Conduct



## Conduct Policy

We, the Daicel Group, have established the following Conduct Policy in order to realize our Basic Philosophy. Every member of the Daicel Group shall fully understand and voluntarily consider this Conduct Policy and shall put it into practice in a tangible way through their daily activities.

1. We shall not only comply with all laws and regulations but also act with high ethical standards and sound judgment.
2. We shall contribute to the development of society as good corporate citizens.
3. We shall offer safe, high-quality products and services that satisfy and gain the trust of our customers.
4. We shall contribute to the development of local communities by complying with international rules and each country's laws and regulations and by respecting local cultures and customs.
5. We shall willingly and justly disclose reliable corporate information.
6. We shall conduct honest trade in accordance with the basic principles of fair and free competition.
7. We shall work positively to conserve the natural environment and to ensure safety.
8. We shall properly manage corporate assets and information.
9. We shall respect the diversity, personality and individuality of every member of the Daicel Group and shall maintain a healthy and comfortable work environment that is free from discrimination and harassment.

The Daicel Group Conduct Policy:

[www.daicel.com/en/profile/policy.html](http://www.daicel.com/en/profile/policy.html)

The Daicel Code of Conduct:

[www.daicel.com/en/profile/standard.html](http://www.daicel.com/en/profile/standard.html)

## Basic Purchasing Policy

The Raw Material Purchasing Center in charge of the purchase of raw materials and the Engineering Center Procurement Group responsible for the purchase of machinery have worked together to formulate the Basic Purchasing Policy. This Basic Purchasing Policy helps the suppliers who provide us with raw materials, equipment and services in the supply chain to better understand Daicel's approach to purchasing, while encouraging them to cooperate with us in fulfilling our CSR throughout our supply chain.

In keeping with courses of action intended to implement the Daicel Group's Basic Philosophy, we shall comply with the following Basic Purchasing Policy when purchasing from suppliers.

### Fairness & Rationality of Transactions

- We shall be fair in providing prospective suppliers with opportunities for participating in business transactions.
- Our overall considerations shall be limited to matters of quality, price, stability of supply, state of technological development, environmental considerations, and the assurance of safety. We shall consider these aspects in a comprehensive manner according to economic rationales.
- We shall conduct our purchasing activities in an open manner with no regard for previous dealings and with no preference for companies domiciled in Japan.

### Legal Compliance, Confidentiality, and Information Disclosure

- We shall comply with laws and corporate ethics in our business operations.
- We shall strictly protect confidential information obtained through businesses and shall never infringe third parties' intellectual property rights.

### Establishing Relationships of Trust

- We shall strive to establish better partnerships with our suppliers by pursuing mutual economic benefit.

### Adherence to CSR Initiatives

- We shall promote our CSR initiatives with the aim of enhancing our corporate value and that of our suppliers.

<http://www.daicel.com/purchase/index.html>

# Message from the President

Daicel contributes to the growth and development of society by engaging in “Monozukuri”\* that is friendly to people and the environment while placing the utmost importance on safety, quality and compliance.

\*“Monozukuri”; Our focus on “Monozukuri” is unshakeable. Although the literal meaning of the Japanese word “Monozukuri” is “making things,” for our purpose the meaning of the term has been broadened to encompass the creation of new value in all corporate activities, including R&D, sales and marketing and support services.



## Initiatives under the Medium-Term Plan

The Daicel Group put in place its long-term Grand Vision 2020 in 2010 with the overarching goal of becoming a company that provides the best solutions to the world. Through its “Monozukuri”, the Group is committed to creating significant value and takes pride in efforts aimed at resolving issues in the most effective manner.

In order to achieve its goal, the Group formulates a “3D Step-up Plan” as a medium-term plan every three years. Fiscal 2014, the year ended March 31, 2015, was in fact the initial year of 3D-II, the Group’s second Step-up Plan, under which energies will be channeled toward seeking an evolutionary leap to new value. Guided by the plan, we will place considerable emphasis on the five key themes of further growth in core businesses, development of new businesses, development and enhancement of businesses from a global perspective, enhancement of production foundations and enhancement of capabilities of corporate divisions.

As a part of efforts to enhance production foundations, the Group is achieving considerable success in conserving energy through the introduction of innovative technologies. Hindered by prolonged difficulties in practically applying Petlyuk distillation processing technology\*, Daicel took steps to implement various improvements. Through these improvements, we have found out ways in which this technology can be adopted by modifying existing equipment. With practical application now in sight, Petlyuk technology has been introduced on a technical demonstration basis at the Arai Plant, which has commenced commercial operations. In addition, installation of technical demonstration facilities utilizing vapor recompression (VRC) tech-

### Misao Fudaba

President and CEO, Daicel Corporation

*M. Fudaba*

nology, which is yet to be applied commercially at organic solvent plants, has been completed at the Aboshi Plant. Currently, we are working to confirm the level of energy conservation while acquiring demonstration data. In each case, Daicel is taking the lead with the world’s first application of demonstration facilities. Expectations remain high that the use of distillation processing will generate energy saving in excess of 30%.

In its efforts to develop new businesses, the Daicel Group is expanding sales of materials including LED encapsulants for use in the electronics field. In this manner, we are contributing to energy conservation throughout society as a whole. In the medical health-care sector, Daicel has purchased a health and amenity business. Through the use of this business and Daicel materials employing biotechnologies, including EQUOL (anti-aging material derived from soybeans) that promote sound health and benefit humankind, we plan to accelerate the pace of business development in this field.

Each of these initiatives forms a part of the Group’s overall “Monozukuri” that is aimed at creating solutions that address pressing needs within society.

## Ensuring the Highest Standards in Safety and Quality

Since assuming the position of president, I have maintained that safe operations, product safety and quality assurance—the basics for any manufacturer—are our top priority. In 2014, I continued to convey the importance of safety and quality throughout the entire Daicel Group.

In order to ensure safety and quality, it is vital that we develop and train capable people. The Operation Training Center, which opened in 2002, was upgraded in March 2013. In addition to covering existing basic onsite operations, the scope of development has been augmented with the installation of a crisis simulation training facility. This initiative is designed to further enhance the capabilities and functions of the Center as a practical education and training facility with Daicel’s training curriculum continuing to expand each year (please refer to page 14 for details). Moreover, we plan to set up an Operation Training Center sub-office and maintenance training hall focusing on equipment and facility management in fiscal 2015 as a part of efforts to provide training that takes into account the specific attributes of each plant.

Looking to bolster frontline capabilities, we maintain an unwavering commitment to enhancing the production foundations that underpin our manufacturing activities. In fiscal 2014, various steps were also taken to ensure safety with a focus on compliance with basic onsite operations. By implementing a host of initiatives, we intend to foster a corporate culture that places the utmost emphasis on safety.

Daicel set up the Quality Audit Group within the Production Technology Center in order to further strengthen quality management systems at plants and internal companies in fiscal 2013. Through the constructive resolution of issues, the scope of the quality assurance activities will be expanded in fiscal 2015 to cover the Daicel Group as a whole. To complement this endeavor, a Quality Audit Office reporting directly to the president will be established to focus solely on promoting the quality audit functions.

Through these and other initiatives, we will make every effort to

enhance our ability to ensure safety and quality. At the same time, we will work diligently to strengthen our business foundation as we seek to earn the trust of wider society.

## Initiatives Aimed at Maintaining Accepted Standards of Corporate Ethics

In the past, Daicel was involved in overseas litigation. Despite resolving the issue, this matter remains a painful experience. Reflecting on this incident, the Daicel Group as a whole has pledged to not only avoid any breach of statutory and regulatory requirements, but also to refrain from activities that have the slightest hint of illegality. Put simply, our business activities are based on the underlying principles that in doing the right thing we contribute to society and in doing the right things we garner profits.

In order for employees to recommit to the highest standards of corporate ethics in fiscal 2014, a video message was delivered to every member of the Daicel Group both in Japan and overseas. In this message, I made the appeal that a genuine spirit of compliance was essential to maintaining the sufficient standards to earn the trust and confidence of society while ensuring safety and quality.

The Daicel Group is engaged in global business development. Our workforce is roughly comprised of an equal number of Japanese and non-Japanese employees. As a group that is made up of a diverse range of ethnicities and individuals, I believe that corporate ethics activities play an increasingly important role.

While each division and Group company is exercising considerable ingenuity in carrying out corporate ethics activities, it is important that individual employees think long and hard about why it is operated in this way and to question whether approaches that have been consistently used in the past are still right. Moving forward, corporate ethics activities must not be undertaken merely for form’s sake. It is vital that each and every employee masters the art of ingenious behavior.

## In Closing—A Message to All Stakeholders

In fiscal 2014, the first year of its 3D-II medium-term plan, Daicel reported record high results on the back of favorable movements in foreign currency exchange rates and other factors including the decline in raw material and fuel prices. Blessed with these favorable conditions, we were able to maintain stable operations and ensure the quality of our manufacturing activities.

Meanwhile, we are only halfway to carrying out specific measures under our medium-term plan and will work to build a more robust operating platform going forward. Our goal of practicing proper safety, quality and compliance while providing functions and solutions that are of value to the global community remains unchanged. We will endeavor to be profitable with ethical conduct and to use those profits to generate sustainable growth, which in turn will be distributed to all stakeholders. As we work toward achieving these goals, we kindly request your continued support and understanding.

\* A longstanding energy conservation distillation technology. While substantial capital investment was required for practical application to overcome control issues, successful steps have been taken to improve the technology through collaboration with industry and academia and to promote practical application through simple equipment and facility modification.

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Special Feature

### Safety and Quality Assurance Initiatives that Support Daicel's Production Line

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Special Feature

### "Corporate Ethics Initiative" of Thai Subsidiary

Daicel Safety Systems (Thailand) Co., Ltd. (DSST)  
Daicel Safety Technologies (Thailand) Co., Ltd. (DSTT)

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### The Daicel Group CSR Report 2015

Daicel Corporation has published an annual Environmental and Safety Report since fiscal 2000 (year ended March 31, 2001). From fiscal 2007 (year ended March 31, 2008), the scope of reporting was expanded to include social activities, and the report title was changed accordingly to Environmental, Safety and Social Report. From fiscal 2010 (year ended March 31, 2011), emphasis was placed on enhancing the report's content and information relating to the Company's efforts to fulfill its corporate social responsibility. Accordingly, we adopted the title, The Daicel Group CSR Report, and have focused our attention on improving reader-friendliness and understandability while engaging in proactive disclosure.

This CSR Report 2015 is primarily a compilation of the Daicel Group's activities in the areas of business, environmental preservation and safety, social contribution, and human resource development during fiscal 2014 (from April 2014 to March 2015).

Also, in order to ensure reliability, Daicel has submitted its reports to the Responsible Care Verification Center of the Japan Chemical Industry Association (JCIA) for third-party verification annually since 2004.

#### Organizations within Scope of Reporting

The scope of reporting includes Daicel Corporation and Group companies inside and outside Japan. In this report, "Daicel" refers to Daicel Corporation.

##### • Responsible Care Initiatives

In this section, "the Company," "other domestic Group companies" and "overseas Group companies" refer to the companies listed under the scope of performance data compiled for environmental and occupational safety.

<http://www.daicel.com/en/csr/library.html>

Overseas Group companies are not included in data for Environmental Management to Prevent Air and Water Pollution (distribution safety, process safety and disaster prevention, and environmental preservation) and Other Chemical and Product Safety Initiatives (chemical and product safety).

##### • Other Activities Unrelated to Responsible Care

In this section, "the Company" refers to Daicel Corporation, and "the Group" and "the Daicel Group" refer to Daicel Corporation and its Group companies.

Here, Group companies refers to the Group companies listed as Organizations within Scope of Reporting in the CSR Report 2014.

<http://www.daicel.com/en/csr/library.html>

More detailed information about the Group's CSR activities is available on Daicel's website. Topics covered on our website are as follows:

- The Responsible Care Initiative/Scope of Data Collection for Environmental and Occupational Safety Performance
- The Daicel Group's Responsible Care Initiatives: Targets and Results
- Total Environmental, Health and Safety Assessment System
- Environmental Management Systems
  - Environmental Accounting
  - Businesses and Their Environmental Impacts
  - Environmental Preservation
    - Environmental Management to Prevent Air and Water Pollution
    - Reduction and Recycling of Industrial Waste
    - Environmental Impact Data
- Chemical Substance Management
  - Emission and Transfer of PRTR substances
  - Other Chemical and Product Safety Initiatives
- Quality Assurance: Status of Quality Management System Certification
  - Organizations within Scope of Reporting: Scope of Group Companies

<http://www.daicel.com/csr/library.html>

# Fiscal 2014 Highlights

### 13th Daicel Group Responsible Care Promotion Conference Held

The 13th Daicel Group Responsible Care Promotion Conference was held at the Company's Aboshi Plant in April. This conference is held each year to raise awareness of Responsible Care initiatives—one of two components of the Daicel Group's CSR activities. In the fiscal year under review, the keynote speech was presented by Tokyo Institute of Technology guest Professor Masayoshi Nakamura, who spoke about the safety management lessons learned from recent accidents.



2014 April

### Daicel Group 4th KAIZEN Case Study Meeting Held

The 4th KAIZEN Case Study Meeting was held at the Fuji Plant of Polyplastics Co., Ltd. in April. This year, eight sites in Japan that had been selected through earlier preliminary rounds gave their presentations while engaging in lively discussions and the exchange of opinions with top management. Moreover, the days immediately prior to and after the case study meeting were designated KAIZEN week. All participants in the meeting took part in a tour of the Fuji Plant as well as a social event among presenters. This was an opportunity to share concerns and results and went a long way to ensuring KAIZEN activities are conducted in a vigorous manner across the entire Group.



2014 June

### Construction Completed on Japan's First Detonation Pilot Facility at the Harima Plant

Operations at a single-digit nanodiamonds (SDND) pilot facility commenced at the Harima Plant in June. By combining this detonation pilot facility with the refinement and dispersion equipment at the Arai Plant, Daicel became the first company in Japan to offer comprehensive production from raw materials to finished product. As a highly functional next-generation material, SDND has a host of applications encompassing the precision polishing, composite plating, optical, and heat dissipation fields.



2014 Dec.

### Corporate Ethics Training Session Held for Senior Management

Attended by senior management including the Company's directors, executive officers, the heads of sites as well as internal companies, and presidents of Group companies, a corporate ethics training session was held in December. Mr. Toshio Takano, an attorney-at-law and external corporate auditor of the Company, spoke about the risks of criminal action associated with corporate activities. While introducing various case studies, Mr. Takano gave an insight into the wide range of risks linked to labor accidents, safety and health, bribery, unfair competition, and insider trading. Followed by a lively Q&A session, this training was an invaluable opportunity for participants to again recognize the caution required in undertaking everyday management.

2015 Jan.

### Enhancement of the manufacturing capacity of Acetate Tow for Cigarette Filters

Steps were taken to commence the enhancement of the manufacturing capacity of acetate tow for cigarette filters at the Ohtake Plant in January. This initiative was spurred by the request of a major customer, and on completion will lift the Company's current acetate tow supply capacity by around 10%. The facility is projected to come online during the second half of fiscal 2016 (ending March 31, 2017). By ensuring stable supply going forward, the capacity increase is expected to further strengthen relationships with customers.

At the same time, Daicel is constructing a new pilot plant. Taking into consideration the numerous and varied requests of customers, the Company will endeavor to ensure timely operations while ensuring that the commercial activities of existing facilities are unaffected, and work diligently to develop new applications for cellulose acetate.

2015 Feb.

### Lecture on Regenerating Native Forests for Life

Through an introduction from a business partner, Akira Miyawaki, professor emeritus at Yokohama National University, visited the Himeji region to give a lecture on regenerating native forests for life in December. Professor Miyawaki believes that we help to create life by regenerating forests composed of many species. This is very much in line with the importance that the Group places on people. Moving forward, Daicel has made a commitment to work together with local communities to help regenerate native forests (see page 26).



2015 March

### Execution of a Business Transfer Agreement of a Health & Amenity Business

Daicel acquired the Health & Amenity business of UNITIKA LTD. in March. This business also engages in the development of new functional food materials for use in health food items and supplements in the medical and healthcare domain, one of the new business creations listed in the Company's 3D-II Mid-Term Plan. In addition to acquiring commercial products and providing access to sales channels, this purchase will allow Daicel to carry forward the human resources and technologies developed by the business over many years while accelerating the pace at which the Company is able to nurture a new undertaking in this domain.

### Establishment of a Second Automobile Airbag Inflator Manufacturing Plant in the Americas

In order to reinforce its automobile airbag inflator business in the Americas, Daicel decided to establish a second local manufacturing plant in U.S. in February. The new facility will be built adjacent to Special Devices Inc. (SDI), which the Company acquired in 2012. Expectations are that this initiative will help to generate synergies with respect to product development and manufacturing technologies. Operations are scheduled to commence in early 2016. Looking ahead, Daicel will further expand sales in order to meet the increasing demand for airbag inflators in North America, the world's largest market, and the rapidly growing markets in Central and South America.

# Chronology of the Daicel Group

The Daicel Group has its roots in Dainippon Celluloid Co., Ltd., which was established in 1919 through the merger of eight celluloid manufacturers. Today, the Group specializes in the manufacture and sales of a wide variety of chemical products.

Since our earliest days, we have engaged in photographic film business research and led the industry in the quality and volume of the celluloid we produce. During this initial period, we also commenced the shift from cellulose nitrate to cellulose acetate as a key raw material in a bid to advance the noncombustibility properties of celluloid while developing acetate plastics in 1929. In 1935, we took a bold step to commercialize cellulose acetate. This entailed the production of acetic acid (a raw material of cellulose acetate) in-house from carbide. Around the same time, the handling of acetic acid derivatives products led to our entering the organic chemicals field.

In addition to expanding the organic chemicals business in the 1960s, the emergence of the petrochemical boom triggered our participation in a petrochemical complex project. In 1964, we established Polyplastics Co., Ltd. through a joint venture and, launched an engineering plastics business. Meanwhile, ascertaining the fact that celluloid serves as a raw material for gunpowder, we entered the pyrotechnic devices business, providing gunpowder and other products. This segment eventually bore fruit with the development of automobile airbag inflators.

With the onset of the first oil crisis, we strove to promote decreased dependence on petroleum-based raw materials through such means as using methanol produced from natural gas in the manufacture of acetic acid. In recent years, with an eye on the establishment of a sustainable chemical industry, we are increasing the use of bioethanol. In line with such environmental

efforts, an ethylamine plant and an ethyl acetate plant began commercial production in 2007 and 2009, respectively.

Today, the Daicel Group's four flagship businesses encompass cellulosic derivatives, organic chemicals, plastics, and pyrotechnic devices. Through these businesses, the Company has attained high global market shares for such products as triacetyl cellulose (TAC) for use as a raw material of films for liquid crystal displays, chiral columns, polyacetal (POM) and automobile airbag inflators. Through the provision of these and many other products, we are contributing to the development of society.

2010s: The Company's name is changed to Daicel Corporation. Steps are taken to acquire an initiator manufacturing and sales company in the U.S. An acetate tow business joint venture is established with Mitsubishi Rayon Co., Ltd. Great East Japan Earthquake (2011)

2010

2000

1990

1980

1970

1960

1950

1940

1930

1920

1908

1908: History before Establishment of the Company: Sakai Celluloid Company and Japan Celluloid Jinzo Kenshi Co., Ltd. are established. 1919: The Company is established. Dainippon Celluloid Company Limited is established through the merger of eight celluloid manufacturers with plants located in Sakai, Kanzaki, Aboshi and Tokyo. The London Olympics are held. / The end of the First World War leads to a postwar recession



1940: Every plant focuses on production of materials for the war effort, and some plants are damaged. After the war, plants that remain free from damage return to production of civilian goods. The company overcomes a crisis when its plants are designated for war reparations, and an order comes for the breakup of the company. World War II ends (1945)



1950s: The business of acetate tow for cigarette filters begins full-scale production. Cellulose acetate replaces cellulose nitrate as the base for photographic film, which renders film incombustible. Synthetic polymer type plastics are introduced, and demand for celluloid declines. Japan signs a peace treaty and regains its independence (1951) / TV broadcasting begins (1953) / Japan's first petrochemical complex opens in Iwakuni (1958)



1960s: With the rise of the petrochemical industry, Daicel becomes a member of the Iwakuni-Ohtake petrochemical complex and enters the petrochemical business. The polymer business is expanded through the establishment of Polyplastics Co., Ltd. The Japanese economy enters a period of rapid growth / The Tokaido Bullet Train line opens (1964) / The Tokyo Olympics are held (1964) / The first manned moon landing takes place (1969)



1970s: Excessive competition emerges in the petrochemical industry, resulting in low revenues, and 20% of employees accept an offer of voluntary retirement. The oil crisis dampens economic growth and the cellophane business undergoes reorganization. Expo 70 is held in Japan (1970) / Okinawa is returned to Japanese control (1972) / The first oil crisis occurs (1973).



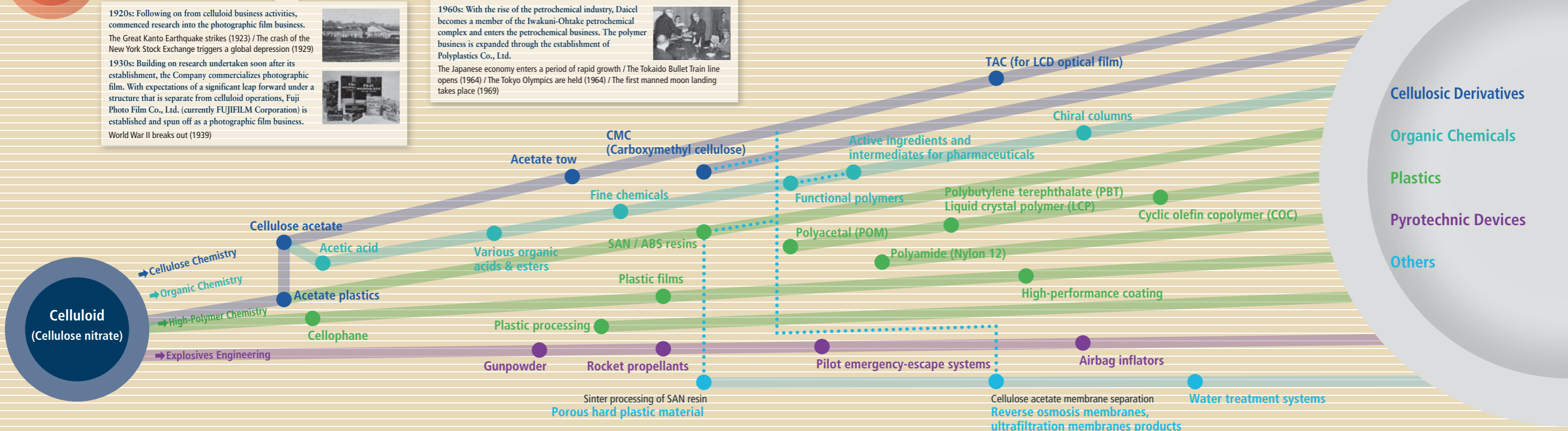
1980s: New acetic acid plant which introduced the methanol carbonylation process was launched. It reduced dependence on petroleum. A foundation for the production of functional chemicals and fine chemicals is created. The Company enters the automobile airbag inflator business in earnest. The Equal Employment Opportunity Law is enacted (1986) / The Japanese economy enters the "bubble" phase



1990s: The Responsible Care Initiative is introduced. The Company enters the chiral chromatography business in earnest. The development of functional chemicals and fine chemicals is promoted. Domestic production of acetate tow for cigarette filters is increased and offshore production in China is begun. End of the Cold War / The Great Hanshin Earthquake strikes (1995)



2000s: The Integrated Production Center is completed in the Aboshi Plant. The automobile airbag inflator business is launched internationally, starting in the U.S.A. Cellulose acetate production is begun in China. In Japan, manufacturing facilities for cigarette filter tow and cellulose acetate are installed at the Ohtake Plant. Terrorist attack on the U.S. on September 11 (2001) / Japan and Korea jointly host the World Cup of Soccer (2002) / Collapse of Lehman Brothers, the fourth largest securities firm in the U.S. (2008)



- Cellulosic Derivatives
- Organic Chemicals
- Plastics
- Pyrotechnic Devices
- Others

# Major Applications of Daicel Group Products

The Daicel Group's products include many basic materials.

As such, the general public may come in contact with them without even noticing it. Here we introduce finished goods around you that are produced using Daicel Group products and materials.

●: Cellulosic derivatives ●: Organic chemicals ●: Plastics ●: Pyrotechnic devices ●: Others

**1 LCDs**

- TAC (cellulose acetate for LCD optical films)

**2 Electrical equipment, office equipment and telecommunication devices**

- ABS and polyamide resins

**3 Packaging and films for snacks and pocket warmers**

- Barrier films for packaging use



**4 Food trays**

- Styrene sheets and finished goods

**6 Household articles**

- Improved sink-corner strainer

**5 Agricultural materials**

- Foamed polyethylene netting

**7 Housing materials**

- Flame-resistant ABS resin



**8 Pharmaceuticals**

- Ketene derivatives, monochloroacetic acid and amines
- CMC

**9 Pharmaceutical development**

- Chiral columns

**10 Cigarette filters**

- Acetate tow, Cellulose acetate

**11 Eyeglass frames**

- Celluloid
- Acetate resin

**12 Polyester fibers**

- Acetic acid

**13 Cosmetics, shampoos and conditioners**

- 1, 3-BG
- HEC, CELISH

**14 Printed circuit boards**

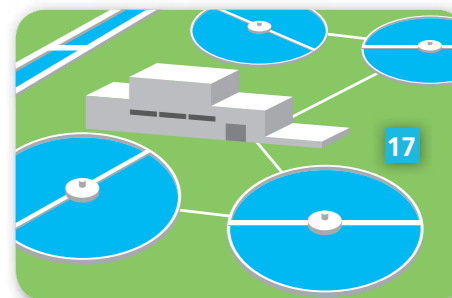
- Epoxy compounds

**15 Office equipment and electronic components**

- POM, PBT, LCP and PPS

**16 Lithium-ion batteries**

- CMC



**17 Water filtration and wastewater treatment**

- Reverse osmosis membranes and ultrafiltration membranes



**18 Lithium-ion batteries**

- CMC

**19 Automotive paints**

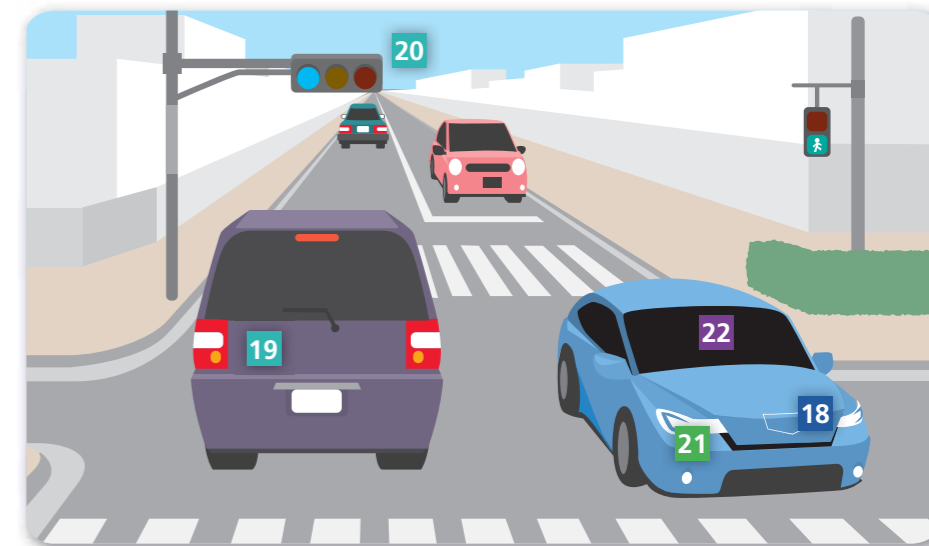
- Caprolactone and special epoxy resins

**20 LED lighting**

- LED encapsulants

**21 Auto parts**

- POM, PBT, PPS, and ABS



**22 Airbag systems**

- Inflators



# Safety and Quality Assurance Initiatives that Support Daicel's Production Line



Safety and quality assurance are the foundations of manufacturing and of the utmost importance as an ongoing concern. With an eye on safety and quality assurance, the Daicel Group has focused its efforts on long-term human resource development.

In this special feature, we introduce the Operation Training Center, where operators and engineers who will be in charge of the manufacturing line are trained, and the Maintenance Dojo\* initiative, a new training course.

\*Dojo: a Japanese word meaning a place of training



Operation Training Center (TRC)

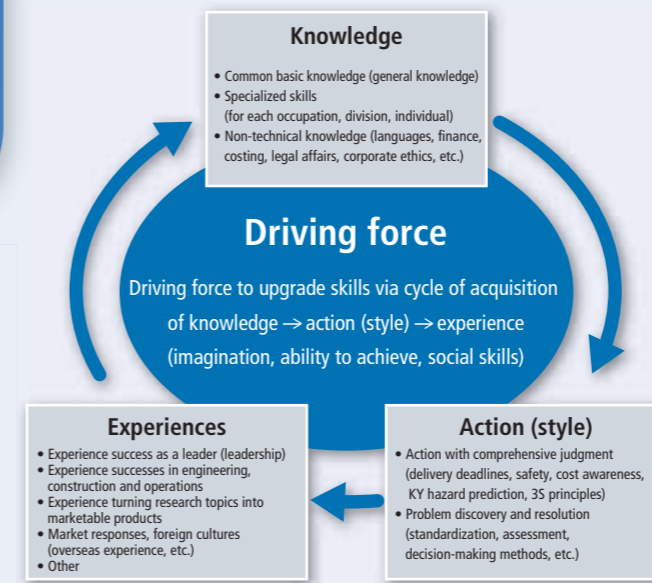
## Operation Training Center



**Kunio Fukunishi**  
 Division Manager of  
 Operation Training Center  
 Production Technology Division  
 Daicel Corporation

### Objective and Overview of Operation Training Center

The Operation Training Center was set up in 2002 with the goal of establishing and maintaining "Production Innovation the Daicel Way" and aimed at achieving a broad range of effects including, (1) safe and stable operations, (2) dramatically higher productivity, (3) substantially lower manufacturing costs, (4) smoother, more uniform operations and quality stabilization, (5) the passing on of skills and techniques and human resource development, and (6) energy conservation. These will be achieved by going back to the starting point of manufacturing activities that are focused on people, the systemization of the skills and know-how of experienced workers, and making it so that anyone can put them to practical use. The center is a place for operators to gain hands-on training in the necessary requirements of "knowledge," "experience" and "action."



The center prepares a curriculum that meets Daicel's needs and maintains a small-scale plant where trainees can experience operating a chemical plant, including operating a distributed control system (DCS). With the goal of contributing to safe and stable operation by understanding the structure of equipment used and its proper operation and control, the center provides equipment for instruction purposes including pumps and valves, distillation towers, cutaway models of instruments, distillation tower filling, and packing materials.

In addition, the teaching of basic operations was conducted to reinforce occupational health and safety. At the same time, equipment was introduced that enabled trainees to experience for themselves (1) getting caught and entangled, (2) solvent/dust explosions, (3) static electricity, (4) pressure, and (5) liquid chemicals getting dashed over operators.

This training is not only targeted at new employees, but all levels of operators, engineers and workplace managers (foremen,

assistant managers, and general managers).

The course has been offered since fiscal 2002 and every year we promote the turning of the check, act, plan and do (CAPD) cycle, the introduction of new education and training programs, and the improvement of curriculum and text content. In March 2013, the new Operation Training Center was revamped to further enhance education and training. The new Operation Training Center has enhanced its training and lab rooms, installed new risk simulation equipment, and added a new curriculum (with educational emphasis on the reviewing of basic actions) aimed at further improving "safety and quality assurance."

### Risk simulation equipment



### Pressure experience

This equipment enables the trainee to actually experience the pressure shown on a pressure gauge through the insertion of pressurized water into pipes of varying diameters. Trainees are able to experience the surprisingly large potential danger inherent in water pressure.



### Entanglement experience

This equipment teaches about the danger and terror of a rotating body by experiencing the shock of seeing an artificial hand become entangled in a roller.



Curriculum (Six Core Areas)

Group Education at the Maintenance Dojo

<p><b>Corrosion and deterioration damage analysis technologies</b></p> <ul style="list-style-type: none"> <li>• Various properties of metals</li> <li>• Corrosion, degradation and various damage phenomena</li> <li>• Various material testing (tensile test, impact test, etc.)</li> <li>• Various analytical testing</li> <li>• Metallographic observation, fractography</li> </ul>	<p><b>Sealing technologies</b></p> <ul style="list-style-type: none"> <li>• Flange sealing technologies</li> <li>• Education and training in tightening of piping flanges</li> <li>• Structure and characteristics of gasket seals</li> <li>• Types of mechanical seals and their maintenance</li> <li>• Other shaft seal theories</li> </ul>
<p><b>Welding management technologies</b></p> <ul style="list-style-type: none"> <li>• Welding methods, types and shapes of welded joints</li> <li>• Types of welding defects and their causes</li> <li>• Weld repair, post-weld heat treatment, dissimilar metal weld</li> <li>• Measurement of grooves and excess metal shapes</li> </ul>	<p><b>Lubrication Management technologies</b></p> <ul style="list-style-type: none"> <li>• Basics of lubrication management</li> <li>• Oil grease lubricating and oiling</li> <li>• Lubricant degradation management</li> <li>• Contamination management (hydraulic fluid)</li> </ul>
<p><b>Non-destructive inspection technologies</b></p> <ul style="list-style-type: none"> <li>• Common non-destructive inspection technologies</li> <li>• Special non-destructive inspection technologies</li> <li>• Relevant standards and how to judge results</li> <li>• Non-destructive inspection (VT, PT, MT, RT, UT)</li> </ul>	<p><b>Vibration diagnostics technologies</b></p> <ul style="list-style-type: none"> <li>• Types and characteristics of mechanical elements</li> <li>• Simple diagnosis (5 senses inspection, vibration measurement)</li> <li>• Pump inspection and maintenance</li> <li>• Precision diagnostics (vibration, temperature, sound, etc.)</li> </ul>

Practice (on-the-job training) in shut down/maintenance (SDM) work

Black→shared Blue→specialty Green→specialty + voluntary  
Red→specialty + partner companies *Italic (bold face) training item*

and skills acquired at the Maintenance Dojo are put to practical use (construction acceptance inspection) through periodic repair and construction work (SDM construction), thereby improving the level of trainee skills.

Case Study Regarding Education and Training for Tightening Pipe Flanges

At the Aboshi Plant, which had already begun education and training in tightening pipe flanges from 2009, we have introduced a skill certification system and made noteworthy achievements in reducing the problem of leakage from pipe flanges. In this education and training, we use a flange tightening skill evaluation device developed in-house. The device is an evaluation system that enables the visualization of a skill by displaying on a computer screen in real time the axial force of a bolt at the time of flange tightening and the surface force of a tightened gasket. In 2015, we will deploy the Maintenance Dojo at other plants on a full scale.

Maintenance Dojo

Background to the Opening of the Maintenance Dojo

From the past, Daicel has taken various initiatives in the area of maintenance of chemical plants. However, around 2007, with the passing of the torch from an older generation to a new one, Daicel has seen several cases of what appears to be a reduction in maintenance technology capabilities, construction management and supervision, acceptance inspection capabilities, and problem analysis capabilities. Therefore, with the aim of improving maintenance technology, the passing on of skills, and raising construction quality, which are needed by Daicel, we opened the Maintenance Dojo in fiscal 2015 to obtain more practical training. The targets for this training are not only Daicel employees, but workers of partner companies engaged in maintenance work.

Maintenance Dojo Overview and Initiatives

At the Maintenance Dojo, with core members of our equipment diagnostic engineers as supervisors (instructors), maintenance technology will be systematized to the needs of Daicel as follows:

- ① Specialized maintenance education for maintenance engineers
- ② Voluntary maintenance training for operators
- ③ Technical instruction for workers of partner companies

Offering a practical education that is not limited to imparting knowledge through classroom lectures alone, the educational curriculum will consist of the six core areas of “corrosion and deterioration damage analysis technologies,” “welding management technologies,” “non-destructive inspection technologies,” “sealing technologies,” “lubrication management technologies” and “vibration diagnostics technologies.” In addition, technologies

● Maintenance Dojo—Transcending the Personnel Training Domain

In order to assure safety and quality in chemical plants, it is important to properly maintain and manage equipment on a daily basis. To that end, it is necessary to accurately identify and evaluate equipment condition and take needed measures at a stage when defects are small. Of course, this is performed by a “person.”

Since we view traditional knowledge- and experience-based human resource development as inadequate for developing such a “person,” we will open a new Maintenance Dojo as a place for practical education in techniques and skills. At this Maintenance Dojo, we will train personnel who can “maintain and manage Daicel equipment with a sense of their own responsibility and with confidence and pride.”



Tetsuo Sakaguchi  
Division Manager of Engineering Center

The number of people who have taken this training since fiscal 2002 has reached a total of roughly 4,200, of which about 2,400 are operators, nearly 1,500 are engineers, and approximately 340 are students.

The educational curriculum consists of the study of “knowledge,” “experience,” and “action,” which are necessary at every level, through hands-on learning. The texts are wide ranging beginning with the basics of chemical plant operation and moving to unit operation in chemical engineering (axioms and principles), machine management, instrumentation technology, and safety assessment. The importance of safety is reaffirmed in the curriculum. The curriculum also provides a historical perspective including the history of safety and improvement (Daicel Production Innovation), and a review of the background and purpose of systems and rules that were created as a result of lessons learned about past problems.

The curriculum consisted of five courses when first offered, but now consists of more than 20 courses. However, taking into account its educational effects, the small class size (interactive education with about 6 students) continues.

At the Operation Training Center, experience-based education for chemical plants is regularly conducted for Daicel employees as well as university and vocational high school students.

Safety and quality assurance are the basis for manufacturing activities and of the utmost importance for our ongoing business activities. To that end, we need to develop human resources who are capable of achieving them, and therefore it is important that we not stop at acquiring more sophisticated technologies and knowledge, but tirelessly continue every day with the basics and basic actions of manufacturing activities such as greetings; 3S *seiri* (tidying), *seiton* (putting everything in order) and *seisou*

(cleaning) activities; crisis-identification activities; and hazard prediction activities. We will maintain our management principle of “start with basics, and return to basics,” which was adopted at the time of our founding, and continue to develop people who support Daicel’s manufacturing activities that are aimed at safety and quality assurance.



Operation Training Center, Japan Chemical Industry Association (JCIA) Awarded “Responsible Care Award”

Daicel’s Operation Training Center was awarded the Responsible Care Award at the JCIA’s 9th Responsible Care Awards (RC Awards) on May 28, 2015.

To increase and stimulate motivation for responsible care activities, the Japan Chemical Industry Association presents the RC Awards to recognize businesses, divisions, groups or individuals for outstanding achievement or contribution to responsible care activities.

Our award-winning theme was entitled “Operation Training Center—Passing on Skills, Education, and Training in the Process Industry.” The Operation Training Center was recognized for its turning of the CAPD cycle and improving its education and training programs and curriculum every year since first offering the course in 2002, and for creating Daicel’s own education system and its human resource development initiatives for manufacturing activities.



Division Manager of the Operation Training Center: Mr. Fukunishi (left) and his predecessor Mr. Harano (right)

# “Corporate Ethics Initiative” of Thai Subsidiary

**Daicel Safety Systems (Thailand) Co., Ltd. (DSST)**  
**Daicel Safety Technologies (Thailand) Co., Ltd. (DSTT)**



DSST and DSTT are both located within the same industrial park site in Prachinburi Province in eastern Thailand. They have roughly 1,300 employees and primarily manufacture automobile airbag inflators and initiators under the slogan of “We Save Lives.”

Both DSST and DSTT are promoting (1) initiatives to spread corporate ethics and (2) initiatives to improve intra-company communication with the goal of creating a better company.

## 1 Initiatives to Spread Corporate Ethics

DSST and DSTT held training courses to help employees better understand the Daicel Group Conduct Policy, the DSST/DSTT Code of Conduct and the importance of corporate ethics. Thus far, a total of about 300 people have attended these courses, but we will continue offering them until all employees have participated.

As a Moral and Discipline (M&D) activity, we conduct programs that get all employees to understand our Code of Conduct, company rules, and basic actions in a concrete and easy-to-understand way. For example, we provide an education that covers new employee orientation, teaches common sense for working members of society, and basic matters that all employees must adhere to (the proper wearing of uniforms and protective equipment, traffic precautions within the premises, etc.). We have also devised an educational video created in-house from the view of a new employee so that even employees who have just joined the company will be able to immediately understand.

## 2 Initiatives to Improve Communication

In corporate ethics, it is essential be able to properly communicate and fully exchange opinions within the company. Therefore, we are actively working to improve communication.



M&D activities



ER Talk



Welfare subcommittee meeting

### 2-1) Employee Relation (ER) Talk

ER Talk was established in 2012 not only to communicate important matters to employees, but as a forum for dialogue to resolve employee questions or to get employees to express their opinions and requests.

In the past, messages were communicated by email, message boards, or words spoken by one’s boss. However, such communication is apt to be top-down, one-way communication and some have expressed the view that “something important was missed” or that the communication was “difficult to understand” in such cases. Therefore, the human resources department has taken the initiative to find more effective methods of communication for delivering information directly to employees. Generally speaking, most people in Thailand are poor at one-on-one dialogue and it was found that it is difficult to take much time off from work because they are busy, therefore the staff of human resources visited each plant and talked to them in close small group units (this kind of communication forum is called ER Talk). The time of the talk was set to not exceed 30 minutes and it was worked into the schedule every month in advance so as not to disrupt the production schedule. The staff of the human resources department knew in advance what would be discussed and after sufficiently rehearsing his talk, he would prepare answers and proposals to expected questions.

Since starting ER Talk, a wide range of notices and information are now being properly communicated according to purpose, the employee work environment has improved, and employees can also communicate their views about welfare and other issues. Knowing the views of most employees has led to further improvement in communication and the work environment for the company as a whole.

### 2-2) Welfare Committee

The Welfare Committee is made up of elected employee representatives and it discusses employee welfare and work environment improvement. Because all members have given serious thought to the company’s actual state of affairs and have come up with countermeasures to problems, the workplace environment has improved and the sense of unity of DSST and DSTT as a whole has gotten stronger with each passing year. The donation to a local hospital reported on page 27 is but one example of the results of the committee’s discussions.

### 2-3) Suggestion Box

A suggestion box was installed as another means for employees to make requests to the company or point out problems in the company. Suggestions submitted are collected each month and lead to the taking of countermeasures. The result of investigating the suggestion is fed back to the person who submitted it. In addition to the suggestion box, we have devised a user-friendly way for the younger generation to submit their suggestions using the LINE application for electronic communication.

To establish corporate ethics, it is necessary to have both corporate ethics activities and good communication properly functioning together. We believe that both DSST and DSTT have already achieved good communication, but we will strive for further improvement.

#### Employee Feedback on ER Talk

Maintenance-Coolant Section / Mana Reangsungnoen

I think it was great that someone came to talk with employees at each workplace. Important things, such as company rules... I would like them to come talk to us about these earlier, but things are certainly much easier to understand than before.

Production-Coolant Section / Sukanya Waylom

I think it is a new approach to good communication. I understand various things much faster and if I have questions, I can ask them on-the-spot.

#### Human Resource Department Staff Feedback

Assistant Manager, ER Section / Charintorn Kumchit

Among employees, there are people with a variety of views and ideas, so it is necessary to respond to explanations and questions from the standpoint of the other person’s feelings and point of view. I tried really hard to explain and was so happy when all the employees said “that’s great” and “thank you.” At that moment, I thought it’s difficult, but it’s worth the effort. I feel this work is very rewarding.



Explanation at ER Talk

# Products and Technologies that Contribute to a

The Daicel Group develops products and technologies that contribute to a healthier environment, providing customers with environmentally friendly products and safety.

## Daicel Corporation

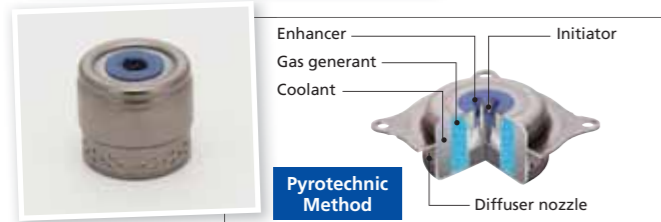
### Airbag Inflators

An airbag inflator, a safety device that is a central component of automobile airbag systems, dispenses gas to the protective airbag at the moment of impact during a collision.

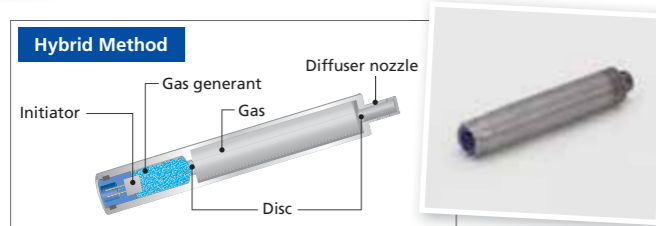
Daicel has been actively involved in environmental measures since inflators were first developed. In order to contribute to improved automobile fuel consumption, we have been developing lightweight inflators. This effort has achieved an approximate 40% weight reduction compared to our 2009 product in the airbag inflators employed in the driver's seats and side airbag inflators of the latest models. Moreover, we commenced inflator recycling operations in 2005 in an effort to ensure the effective use of resources. After safely processing inflators removed from end-of-life vehicles, steps are taken to recover and reuse resources.



Used inflator recycling facilities



Pyrotechnic Method



Cross-section view of an inflator

### PLACCEL (K Series): A Polycaprolactone Oligomer that Does not Contain Tin Compounds

Daicel commercially manufactures PLACCEL through the ring-opening polymerization of  $\epsilon$ -caprolactone. This product is used in painting and other materials. While tin compounds continue to be widely used as a catalyst to generate polymerization reactions, the market is moving away from its application due to the harmful effects to human health and the environment. Utilizing proprietary catalyst technology, Daicel developed the non-tin catalyst PLACCEL (K series), which delivers quality and performance equivalent to existing products made using tin catalysts.

### Efficient Synthesis of Tetrahydrofuran from Biomass Resources

Currently, petroleum is used as a core raw material in the manufacture of the vast majority of chemical products. Tetrahydrofuran, which is used in solvents and resins is one such example. In collaboration with Tohoku University, Daicel has developed a catalyst reaction technology for producing tetrahydrofuran from erythritol, which is manufactured as a raw material from biomass resources that do not cause conflicts with other food-related resources using a microorganism fermentation method. This technology significantly boosts manufacturing efficiency with yields exceeding 99%.

By facilitating the shift from petroleum to biomass resources, Daicel is helping to curtail the consumption of fossil resources while reducing global greenhouse gases (CO<sub>2</sub>).

## Daicel Polymer Ltd.

### DLAMP® Technology for Metal/Plastic Bonding Contributes to Lighter Weights

DLAMP® is a technology that uses continuous wave laser exposure to form a special shape on the surface of metals. This helps to bond metals with a variety of materials including thermoplastics and thermosetting resins with high strength.

This bonding technique, which utilizes continuous wave lasers, is an out-of-the-box completely new type of laser treatment technology that offers outstanding productivity and bonding strength.

DLAMP® can be applied to the surfaces of a variety of metals including stainless steel, aluminum, copper and titanium to produce more than sufficient bonding strength. This is especially true for such non-crystalline resins as polycarbonate as well as ABS, where bonding has proved difficult using conventional chemical etching bonding technologies. This revolutionary technique also helps to curtail running costs. From an environmental perspective, DLAMP® is a dry process and as such does not generate waste or other waste materials. As a result, this technology helps to reduce environmental impact.

Daicel Polymer is currently deploying PLASTRON long fiber reinforced plastics as next-generation metal replacement materials. In combination with DLAMP®, it is now possible to substitute parts and achieve results that have been impossible with resins alone.

Applications are being pursued in a wide range of fields. In automobiles, the process can reduce weight, improve fuel efficiency, and reduce CO<sub>2</sub> emissions; in office equipment and other industries it can help to cut costs by reducing the number of parts required.

# Healthier Environment and People's Safety

## Daicel Membrane-Systems Ltd.

### Electrolysis Wastewater Treatment Unit that Decomposes Dioxane Found in Wastewater

Daicel Membrane-Systems commenced sales of an electrolysis wastewater treatment unit that combines the company's membrane engineering technology developed over many years with electrolysis apparatus.

In addition to the relative ease with which wastewater can be treated even where minute particles are present, this unit facilitates the recycling of treated water.

Through high levels of electrolysis efficiency and the use of ceramic electrodes that offer outstanding service life, this wastewater treatment unit can decompose water pollution that contains concentrations of 1, 4-dioxane in excess of 100mg/L to below regulated effluent standards.



## Daicel-Evonik Ltd.

### ROHACELL® Rigid Polymethacrylimide (PMI) Foam

ROHACELL® is used as a core material in sandwich structure composites made from skin fabric and core materials. ROHACELL® has already been adopted in the manufacture of a large number of existing aircraft and helicopters after attracting high acclaim for its lightweight and high rigidity properties that help to increase fuel efficiency as well as safety.

ROHACELL® was also adopted by Toyota Motor Corporation for use in its LEXUS LFA in 2010.



ROHACELL®  
A rigid polymethacrylimide (PMI) foam

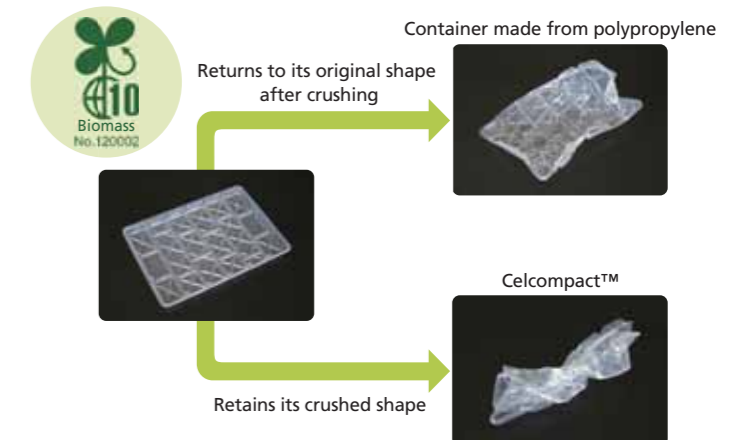
## Daicel Pack Systems, Ltd.

### Celcompact™

Celcompact™ is a material that is used in the manufacture of food containers. In addition to outstanding impact resistance and rigid properties, Celcompact™ helps to reduce the weight and thickness of containers compared with other materials.

By helping to reduce weight, this material also contributes to cutbacks in CO<sub>2</sub> emissions during transportation as well as the volume of waste.

Celcompact™ EX Grade does not break easily even at low temperatures. Taking full advantage of this and its sturdy properties, Celcompact™ EX Grade is being used in the frozen food field. Celcompact™ Eco is an eco-grade version of Celcompact™ that uses environmentally friendly raw materials derived from plants. This product received Biomass Mark certification, a symbol of environmental friendliness in July 2012.



Can be twisted, crushed and then disposed of as waste  
Daicel Pack Systems is a participant in the Container & Package Diet Initiative.

## DM Novafoam, Ltd.

### NOVAL ECO, a Natural Ingredient Shock-Absorbing Material

NOVAL ECO is a natural ingredient-based shock-absorbing material. With starch, a biomass material, as its principal ingredient, NOVAL ECO is an environmentally friendly material that fully decomposes in the earth.



# Human Resource Development Initiatives

## Human Resources Policy of the Daicel Group

Amid the fast-paced expansion of overseas business activities associated with globalization, the Daicel Group put in place a "Human Resources Policy" taking into consideration the need for employees with a varied and diverse set of values to work closely together. In coming up with this policy, which covers a wide range of areas including recruiting, training, assigning, and working conditions, the Group was conscious of the fundamental underlying concept that 'people are the foundation for our success'.

### The Three Core Principles of Our Human Resources Policy

**Will ...** We encourage the strong will and courageous decisions of each individual.

**Diversity & Inclusion ...** We continue to evolve through the interaction of our diverse personalities.

**Integrity ...** We do the right thing and proudly follow the right path.

## Personnel System to Support Human Resource Development

At Daicel, human resource development is underpinned by various systems and structures. By consistently adhering to the intent of these systems and consistently following these rules and structures, Daicel is promoting human resource development.

### "Management by Objectives" (MBO)

MBO is a management system which enables both personnel and the organization to grow together through efforts aimed at achieving established targets. Through biannual meetings between superiors and subordinates, each individual sets his or her goals in line with the targets of divisions and the entire Company. Individual employees then work to accomplish their goals. In terms of evaluation, we focus not only on results but also on the processes used. We use dialogue between superiors and subordinates as opportunities to allow people to develop their skills and ability.

\* MBO: Management by Objectives. A human resource development method under which a person in charge clarifies goals and takes the initiative to manage implementation.



An interview

### System to Hear Employees' Opinions (Voluntary Reporting System)

The voluntary reporting system gives employees an opportunity to express their career-development wishes. Once a year, all employees express their frank thoughts and opinions regarding their current job, future posting preferences and work locations. Through dialogue, supervisors consider optimal placement and personnel training programs based on the individual's wishes and aptitude, with the aim of helping them make the most of their capabilities.

## Educational and Training System to Support Human Resource Development

As a means to promote human resource development, Daicel is strengthening group training. Various educational and training programs have been created to meet employee needs, which vary depending on status and type of work, to maximize their effectiveness.

### Training for New Employees

We provide all new employees with introductory training. Thereafter, these employees undergo training in manufacturing operations for a period of one year. Each trainee initially acquires basic corporate knowledge while learning about the Company's policies and various systems at the HR Training Center. Following this, trainees acquire basic knowledge about the actions and behavior required in manufacturing workplaces through on-the-job training at the Operation Training Center and a production site.



New employee training (Volunteer activities: Reconstruction support activities in eastern Japan; Local cleanup activities)

### Our Commitment to Technicians

For Daicel, a manufacturing-oriented company, the development of technicians is an important management issue, because they underpin the foundation of the Company's manufacturing operations. Starting with first-year training for manufacturing, technicians continue to take training aimed at allowing them to acquire various specialized techniques, appropriate behavior and other knowledge required should they become managers in the future.



On-the-job training (OJT) at the Operation Training Center

### Promoting a Deeper Understanding of CSR by the Group

In order to deepen understanding of the Daicel Group's policies and approach toward CSR, training programs are conducted in line with the status of employees as well as individual roles and responsibilities. When an employee is first appointed to management, he or she undergoes comprehensive training encompassing such wide-ranging fields as corporate ethics (compliance), responsible care, internal control, legal affairs, risk management, intellectual property, labor relations and human resource development. Corporate ethics and legal affairs in particular have been identified as areas of significant importance and are training subjects that are undertaken by all levels of employees. The Daicel Group makes every effort to provide employees with the opportunity to reflect on their roles and responsibilities within society and the proper manner in which they should behave.

# Globalization Initiatives

## Human Resource Development from a Global Perspective

In similar fashion to our efforts in Japan, we are placing considerable emphasis on promoting human resource development at our overseas bases. To ensure a greater sense of autonomy and independence at overseas bases, human resource development and training is undertaken in line with specifically designed local curricula. At the same time, the Daicel Group is actively promoting the development of its local staff at overseas bases supported by training programs in Japan as and when required.

In order to maximize the strengths and capabilities of its Group-wide human resources, Daicel recognizes the critical need to share its basic philosophy and long-term vision with overseas personnel. Looking ahead, we will work to ensure that our long-term vision and human resource policy are widely disseminated and understood by the Group's overseas personnel.

## HR Group Meetings

The Human Resources Division at Daicel has been furthering Group globalization with a new series of HR Group Meetings.

The meetings are being conducted with the participation of worldwide MSD\* affiliates from Japan, U.S.A., China, Thailand, Korea and Poland. The objectives are to strengthen the HR management function at MSD affiliates and build an HR network within the Group.

The first meeting was held at the HR Training Center in Hyogo, Japan, in September 2014, with the theme of "Standardization". Attendees discussed differences in grading systems between affiliates, and developed a standard for international comparison. In addition, DSS Japan provided valuable insight into their ongoing Production Innovation Project and Training System towards assuring greater quality and safety in production.

The second meeting was held at Osaka Head Office in December 2014, and focused on turnover rates at affiliates. Participants from each affiliate analyzed turnover data, shared their successes in improving employee retention, and were able to decide on an improved format for turnover reports.

Although the HR Group Meetings have only recently begun, they are already contributing towards greater globalization of HR at the Daicel Group and we look forward to continued progress at future meetings.

\* MSD (Motor Vehicle Safety Device): Refers to the Company producing airbag inflators (gas generation devices) and related devices.



Nutthapong Nhrakom

Daicel Safety Systems (Thailand) Co., Ltd.  
Leader, Asst. Supervisor,  
Production-Inflator Section

## Training at the Harima Plant

From December 2014 to January 2015, I took part in a training initiative at the Company's Harima Plant in Japan with other members from Daicel Safety Systems (Thailand) Co., Ltd. (DSST) for a period of about one month. DSST was designated to set up a new production line to undertake the initial manufacture of a new inflator model. The purpose of coming to Japan was therefore to receive the necessary training that would allow us to achieve this task.

From morning until night, we were bound closely to Harima Plant's production line. Meanwhile, outside the plant, we experienced cold winds and snowfalls, a novelty for us which would not occur in tropical Thailand. In addition to gaining expertise in operating a new manufacturing facility, I was able to balance work with personal enjoyment. In particular, I was fortunate to gain a glimpse into the working lives of my Japanese co-workers, who are strongly motivated, while enjoying the winter life.

I felt a close affinity with my co-workers in Japan, especially in their strong commitment toward delivery and securing results. I am trying to share everything that I learned while in Japan with my colleagues back at DSST in Thailand. I am convinced that this will help in raising the overall abilities of our company.



# Optimal Workplace Creation (Personnel Systems, etc.)

## Approach to Diversity

### Recruiting and Training Activities

In 2014, Daicel recruited 41 university and junior college graduates. Of this total, two newly recruited employees were born outside Japan and seven were women. Looking ahead, Daicel will continue to adopt a more assertive approach toward promoting diversity as a part of its recruiting activities.

In addition, the Daicel Group maintains a strict non-discrimination policy with respect to the recruiting activities undertaken by local subsidiaries outside Japan. Moreover, our training activities focus on developing individuals in every country throughout the world with a common Daicel spirit. Moving forward, we will reinforce endeavors aimed at promoting diversity and global management through the efforts and performance of our varied workforce.

### Employment of Persons with Disabilities

Daicel systematically recruits persons with disabilities to support the aspirations of these individuals to participate in social activities and to provide motivation in life. We pay utmost attention in assigning jobs according to the degree of disability, in order to help each of these individuals accomplish their best.

### Continued Employment System

With the aim of promoting the employment of people aged 60 and older, Daicel introduced a system for continued employment in 2003 for retired employees. In fiscal 2014, all 30 employees who reached the retirement age were employed on a continuous basis under this system. In accordance with revisions to the Law concerning Stabilization of Employment of Older Persons, applying the system to employees seeking to continue work through to the age of 65, Daicel will continue to offer a work environment where veteran employees can make use of their knowledge and experience.



Employees from the Group's bases around the world participating in the Global KAIZEN Contest

## Efforts to Promote Work-life Balance

### Leave-of-Absence and Labor System to Support Each Employee's Personal Life

Amid the ongoing decline in birthrates and an aging population, Daicel established the following systems to develop a working environment in which employees can work in comfort and with peace of mind.

#### ► Child-rearing leave

Employees can take leave to focus on child rearing until the day before their child has reached the age of one (or up to 18 months in certain cases).

#### ► Extended nursing care leave

Employees can take extended nursing care leave of up to 93 calendar days when full-time nursing care is necessary for family members.

#### ► Special leave due to personal accident or illness

Employees can acquire special leave of up to 20 days per year, aside from annual paid leave, in the event they have a non-work-related accident or illness and have to be absent from work for over one week.

#### ► Family care leave

Employees can shift special leave due to a non-work-related accident

or illness to family care leave of up to 10 days per year when a family member falls ill for over one week and requires full-time care.

#### ► Reduced work-hour system

Employees can decrease their work hours by up to two hours per day when they need reduced hours due to pregnancy, childbirth (within one year of delivery), child rearing (up to the 3rd grade in elementary school) or nursing care (of family members).

#### ► Promoting the take-up of annual paid leave

Employees are encouraged to take annual paid leave when drawing up annual plans for each workplace.

## Labor and Management Relationship to Support Various Initiatives

Daicel considers the labor union to be an important stakeholder and, accordingly, has established the Labor and Management Charter. With respect to the individual positions of labor and management, management carries out discussions with labor in good faith in order to best develop the Company's business. Through these efforts, we are maintaining and reinforcing a healthy relationship between labor and management. In addition, labor and management committees are set up at each place of work. The Daicel Group undertakes a variety of measures covering a wide range of areas. This includes discussions between labor and management regarding such issues as working conditions, productivity improvement, personnel systems, work hours, and health management.

### Information Regarding Human Resources and Labor Services (As of March 31, 2015)

1. Number of employees			
Full-time employees	Regular employees	Male	1,578
		Female	183
	Manager and above	Male	724
		Female	11
	Subtotal	Male	2,302
	Female	194	
	Total		2,496
Other	Contract employees		263
	Temporary staff		46
	Total		309
2. Average age			42.1
3. Average service years			18.0
4. Average number of dependents			1.0
5. Average annual salary			¥7,136 million
6. Annual paid leave consumption rate (fiscal 2014)			62.4%
7. Personnel turnover rate (fiscal 2014)			1.0%
8. Recruitment (fiscal 2014)	New graduates		65
	Mid-career		46
9. Disabled persons employment rate (fiscal 2014)			1.82%
10. Number of re-employed persons (fiscal 2014)			30
11. Number of employees who used child-rearing/extended nursing care leave (fiscal 2014)	Child-rearing		8
	Nursing care		0
12. Number of employees who used the child-rearing/nursing care reduced work hours system (fiscal 2014)	Child-rearing		10
	Nursing care		0
13. Number of labor union members			1,761
14. Ratio of labor union members to total employees			63.8%
15. Average age of labor union members			38.9

The above data is for Daicel Corporation on a non-consolidated basis

# Workplace Health Promotion (Healthcare Activities)

In 2003, Daicel established a Healthcare Committee, which represents both labor and management. This committee is working to create workplaces within Daicel where individual Daicel employees can exert their individuality and capabilities and promote health throughout the Company's workplaces.

The Healthcare Committee puts forward proposals relating to healthcare, takes steps to carry out measures at each workplace and strives to resolve individual issues. Through a process of collaboration, the committee also works to promote physical and mental care. In addition to helping employees with mental health problems return to work, the committee implements training while formulating and implementing plans for various activities aimed at identifying employees suffering from poor mental health at the earliest possible opportunity. These activities include the offering of educational programs to prevent physical and mental disorders and the construction of necessary systems. In this way, the committee is striving to promote the improved physical and mental health of Daicel employees. The Company recognizes that the ability of employees to go about their duties in a healthy and energetic manner goes a long way to ensuring that individual employees lead fulfilling lives. At the same time, this contributes to Daicel's growth and development. Based on this understanding the Company strives to take the appropriate action.

### Initiatives of the Healthcare Committee

As a part of efforts to provide comprehensive support within the Group, a variety of measures are undertaken to ensure the sound health of employees. In addition to the Central Healthcare Committee, workplace healthcare committees are set up at each site. Steps are also taken to provide everyday health guidance. Complementing these endeavors, psychiatrists are employed to help employees who have developed any mental health problems.

#### ► Strengthening Measures Aimed at Employees in Need of Support Activities Undertaken by the Recently Established Health Nurse Team

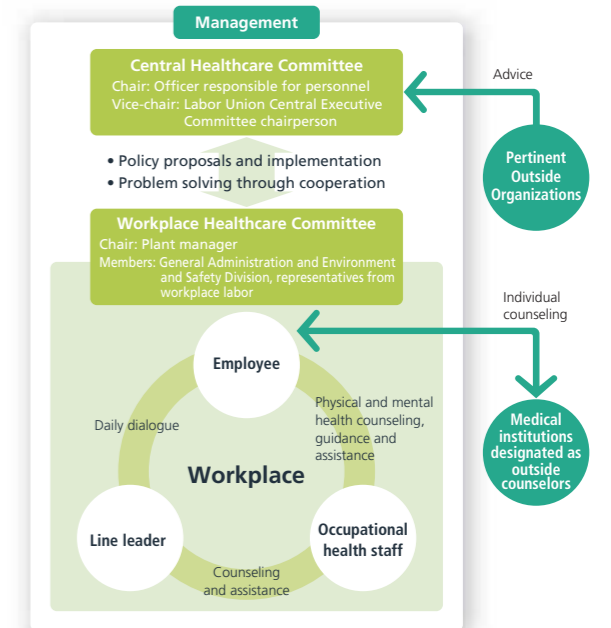
Reporting to the Healthcare Committee, a health nurse team was established in July 2014. Every effort is being made to build a cooperative framework that extends beyond individual worksites and to promote the sharing of information. The health nurse team meets on a regular basis to exchange information. Not only is this helping to promote mutual education and training, this interaction is a wellspring for better attending to the needs of individual employees and identifying preventive measures. These meetings are also a platform from which manuals are prepared and proactive measures are taken to share examples of successful treatment and handling. For employees who relocate between sites, a full range of healthcare consultation services are provided to ensure proper individual advice.

#### Utilizing Psychiatrists Employed Exclusively by Daicel

Daicel began employing its own psychiatrist in order to bolster its follow-up care system for employees who have developed mental disorders. This psychiatrist visits each workplace and arranges consultation services. In addition to supporting the implementation of workplace return programs and mental health training, steps are taken to educate health nurses and to provide information on mental health. The number of psychiatrists employed exclusively by Daicel rose from one to two from fiscal 2014 to provide more thorough assistance.

#### ► Measures Aimed at Strengthening Prevention Support for Improving the Workplace Environment and Daily Disease Preventive Measures

Activities undertaken on an individual workplace basis aimed at ensuring a vibrant working environment include a survey to check on workplace health. Daicel works diligently to support the initiatives of each workplace and efforts to improve workplace management. In



order to prevent disease on a daily basis, steps are taken to follow up on periodic health examinations, provide health consultation services, and implement a system of specific medical checkups as well as specific health guidance in coordination with Daicel's corporate health insurance society.

#### Health Guidance and Consultations for Employees Posted Overseas

From the second half of fiscal 2014, health nurses have called on overseas bases to provide guidance, consultation services, and support to employees posted from Japan. Through specialized and professional health guidance and advice, Daicel is helping to improve the health of employees posted from Japan who play an important part in the operations of local subsidiaries.



Consultation between a health nurse and an employee posted to one of the Group's overseas bases

#### Providing Healthcare Education

Daicel implements training that takes into consideration the status of each employee in an effort to deepen awareness toward the importance of mental and physical health while increasing each employee's ability to cope with stress. Through these means, every effort is being made to maintain a bright and invigorating workplace.

Updated by individual members of the health nurse team, a newsletter is posted on the bulletin boards of each workplace



A newsletter aimed at promoting a vibrant workplace environment prepared by the health nurse team

# Maintaining Communication with Local Communities

## Nurturing Children for the Future

The Daicel Group works diligently to engage children's minds while showing them the magic and appeal of chemistry. We make every effort to nurture children for the future.

### Participating in the 2014 Children's Chemistry Experiment Show

The Daicel Group participated in the Chemistry Day 2014 Children's Chemistry Experiment Show held at Kyocera Dome Osaka. As a part of the Chemistry Day celebrations, this event is the largest chemistry exhibition in the Kansai region. Based on the theme "chemistry can be so much fun," the 2014 Children's Chemistry Experiment Show was an opportunity to instill an interest in chemistry in the children who hold the world's future in their hands. Sponsored by the Dream and Chemistry 21 Committee, which is itself made up of four organizations including the Japan Chemical Industry Association, the show was the first to be held in Osaka and the second in the Kansai area following the inaugural event in Kobe.

A total of 14 employees from the Kanzaki Plant staffed the Company's experiment corner at the show. Visually appealing, safe, and full of fun, the idea was put forward to show children how to make colorful beads. Considerable emphasis was placed on the colors to be used out of the possible 12 different shades available. In addition to fluorescent colors, preparations were made to introduce three colors containing lamé to add to the excitement of proceedings and visual appeal. By placing one drop of brightly colored alginic acid in a calcium chloride solution, a



Making colorful beads

round bead of approximately three millimeters in diameter would instantly appear. While alginic acid, which contains kelp and seaweed, is a low-risk chemical, children participating in the experiment were provided with protective eyeglasses and aprons to ensure absolute safety. After explaining in an easy-to-understand manner the chemical reaction that goes into producing the beads, the fruits of each experiment were placed in a container filled with water and presented to each child as a gift that he or she could take home. With staff wearing white laboratory coats buttoned all the way to the top, children were given a genuine feel of work in a chemical laboratory.

On the day of the exhibition, there was no end to the children wanting to participate in the experiment. The event was a raging success and attracted the interest not only of children, but also their parents and guardians, many of whom participated in experiment proceedings.

## Interaction with the Local Community

The Daicel Group holds plant tours as a means to promote interaction and dialog with the community. The ultimate goal is to provide residents with a better understanding of the Group and its activities.

### Kanzaki Plant Tours

In an effort to ensure harmonious co-existence with the local community, the Company's Kanzaki Plant participates in regional events, meetings, and activities organized by neighboring community associations. Energies are also directed toward promoting wide-ranging communication through interaction with surrounding companies.



Plant tour for local residents

As one of numerous activities, we followed up on a similar event undertaken during the previous year and invited four members of three local district associations to tour the Kanzaki Plant while actually in operation. Participants were provided with a firsthand, frontline view of the manufacturing process through to the finished film product while receiving a detailed explanation of the plant's safety and quality assurance initiatives. After the tour, each member was given the opportunity to view the film products made at the Kanzaki Plant which are used in food packaging material and other fields, as well as samples of products under development and functional films that have been earmarked for expanded sale. An explanation was then given outlining the functions of each product and the role played within society. Looking ahead, steps will be taken to plan and undertake similar initiatives. Through these and other means, the Daicel Group is committed to promoting lively dialogue with the local community.

### Arai Plant Tours

A tour attended by 35 students from neighboring junior high schools was held at the Arai Plant. This tour formed a part of the students' social studies class and began with an overview of the Company and the plant's operations. This was then followed by a tour of the plant and a Q&A session that lasted approximately 90 minutes.

The Q&A session was particularly lively with students keenly inquiring about a host of topics. In addition to the origins of the Company's name, questions covered such areas as the plant's peak period, daily production volume and points of work focus.

On another occasion, a separate tour was held for elementary and junior high school teachers at the request of the Myoko City Board of Education. The purpose of the tour was to provide teachers with an understanding of companies operating within the municipality and to pass on that knowledge to students.

In the future, we would like to see the Arai Plant serve as an open manufacturing facility that welcomes not only students and teachers, but also local residents and the community at large. We will aggressively promote the plant in this manner to deepen understanding toward the Company and its activities.



Tour for junior high school students

ward to the one day in the month that the bread is sold, it is not uncommon to find the bread has been sold out. Sales staff from each facility that come to the plant often express their gratitude. Moving forward, we will continue to foster these kinds of positive ties.



Selling home-made bread



## Social Contribution Activities of Overseas Group Companies

Overseas Group companies engage in social contribution activities in line with conditions and requirements of each region. In the section that follows, we introduce two examples.

### Local Community Contribution Activities of Daicel Safety Systems (Thailand) Co., Ltd. (DSST) and Daicel Safety Technologies (Thailand) Co., Ltd. (DSTT)

Recognizing the lack of adequate medical facilities and equipment throughout the region, the Welfare committees of DSST and DSTT initiated talks to see how the companies could help alleviate the situation.

The decision was then made that both employees and each company would donate funds to local hospitals. Other initiatives included the donation of ball pads and two basketball stands to a local school, and donating to the education fund and providing school supplies on "Children's Day". We hope that in some small way our efforts will contribute to the region.



Donation ceremony

### Daicel Chiral Technologies (India) Pvt. Ltd. (DCTI) Participates in the Clean India Campaign

All employees of DCTI participated in the Swachh Bharat Clean India Campaign. This is a national project that has been initiated in the lead-up to celebrations for Mahatma Gandhi's 150th anniversary in 2019. While DCTI was the first company located in the Hyderabad Genome Valley Industrial Park to



Clean-up activities

participate in the campaign. Looking ahead, the company will actively participate in this initiative going forward including spreading it to other companies.

## The Daicel Group Supports the Activities of Local NPOs

### Supporting the Home-Made Bread Sales Activities of Welfare Facilities for the Disabled

The Company's Harima Plant is supporting the home-made bread sales activities of two local welfare facilities for the disabled, Maple, a multifunction facility, and EBISU, a vocational training center for the disabled.

Home-made bread baked at the facility is sold in the plant's cafeteria during the lunch break once a month. This initiative was first launched in October 2013 and has continued for more than one year. While sales were a little slow at the outset, employees gradually came to learn about the delicious taste of the bread through word-of-mouth. With many employees now looking for

## Creation of Native Forests for Life

### Harima Plant Serving as a Model in the Forest Creation

The Daicel Group invited Akira Miyawaki, professor emeritus of Yokohama National University and an advocate of native forest creation, to speak on the topic of "Creation of Native Forests for Life" at a presentation held in the Himeji region. Professor Miyawaki's view that through creating native forests we can foster talent is very much in line with our Group policy, thinking a great deal of human resources. In this instance, and with the Harima Plant serving as a model, steps were taken to plant trees using the Miyawaki method. The event attracted 87 participants including the chairperson of the RC Council and the heads of the Environment and Safety divisions of each plant. A total of 240 trees comprising six species were planted. Moving forward, the Daicel Group will work in unison to promote creation of native forests for life.



# Upgrading CSR Foundations

## Corporate Governance Framework

Daicel is a company with a Board of Corporate Auditors. Also, by welcoming external directors and allowing them to provide opinions and advice based on their expertise, the Company is working to ensure that the decisions made by its Board of Directors are appropriate and the execution of director duties is effectively supervised. The Company has also adopted an executive officer system. The adoption of the executive officer system has enabled the Company to clearly separate its decision-making, supervisory and business execution functions. Such a clear division of roles has allowed us to bolster our business management structure and, consequently, corporate activities. In addition, Daicel has adopted an internal company system. Through this system, the Company is adhering strictly to a policy of integrated management with respect to the production, sales and R&D functions of existing businesses while improving productivity and strategic functions within its corporate divisions. In this manner, Daicel is reinforcing its product and technology development structure and systems across internal companies as well as horizontally across the Group as a whole.

Based on its corporate auditor system, the Company has established a corporate framework under which its Board of Directors makes management decisions in an efficient manner and fulfills its supervisory functions, and its Board of Corporate Auditors accomplishes its auditing functions. Such a framework has enabled us to keep reinforcing our corporate governance.

\* Business divisions within the Company are essentially operated as independent companies. Functions that traverse each division are referred to as corporate departments. Corporate departments are not only a feature of the Company on a non-consolidated basis, but also serve a head office function across the Group as a whole on a consolidated basis.

### Board of Directors

Daicel's Board of Directors consists of seven directors, two of whom have been externally appointed. The Board of Directors meets, in principle, once a month to make decisions concerning important management issues in line with the regulations for the Board of Directors meetings. Furthermore, the Board of Directors supervises the execution of business and operating activities.

At Daicel, external directors are tasked with providing advice and supervisory functions based on their experience and expertise. Both of

the Company's external directors have been designated as independent directors, as defined under the Securities Listing Regulations of the Tokyo Stock Exchange in Japan.

The term of office for Daicel's directors is one year. Such a short term of office enables Daicel shareholders to increase their involvement in the appointment of directors. At the same time, it allows us to better clarify the management responsibilities of our directors and thereby reinforce our corporate governance.

### Board of Corporate Auditors

Daicel currently has five corporate auditors, three of whom have been externally appointed. All corporate auditors are required to attend Board of Directors' meetings. In addition, full-time corporate auditors are required to attend meetings of the Management Meeting, the Risk Management Committee and other important organizations, thereby auditing the overall management of corporate affairs.

Meanwhile, the Company's corporate auditors all together form the Board of Corporate Auditors. The Board of Corporate Auditors holds meetings to report, deliberate and make decisions on important issues relating to the Company's audits.

Corporate auditors regularly receive reports from the Company's internal auditing divisions including the Responsible Care Office and Corporate Compliance Program Division as well as independent auditors. In addition, on an as needed basis, they collaborate—through the exchange of information and opinions—with the internal auditing division and the independent auditors in promoting audits of the Company. Two of the three external corporate auditors have been designated as independent corporate auditors, as defined under the Securities Listing Regulations of the Tokyo Stock Exchange in Japan.

Also, as an organization to support audits by corporate auditors, the Company has established the Office of Corporate Auditors. The Office of Corporate Auditors has its own dedicated staff which is independent from the business divisions.

### Management Meeting

Daicel has established the Management Meeting as a body to have deliberations and make decisions prior to its president implementing the basic corporate management policies formulated by the Board of Directors. The Management Meeting consists of the president, directors (excluding external directors), corporate auditors (excluding external corporate auditors) and the executive officers selected by the president as its members. The Management Meeting convenes, in principle, twice a month.

### Nomination and Compensation Committee

A Nomination and Compensation Committee has been established. This committee is chaired by an external director and is comprised of external directors as well the Company's president. In addition to taking into consideration advice from the chairperson of the Board of Directors, the Nomination and Compensation Committee reports on the nomination of and compensation paid to directors and executive officers.

## Internal Control Systems

In accordance with its basic policies concerning the development of internal control systems formulated by the Board of Directors, the Daicel Group works to administer and enhance its efficient and effective internal control systems.

We believe that these systems help the Daicel Group sustain steady growth. To accurately grasp the status of the entire Group and as a forum to discuss initiatives aimed at ensuring the effective functioning of internal control systems, Daicel has established an Internal Control Council.

### Response to the Financial Instruments and Exchange Law (Internal Control Reporting System)

The Auditing Office assesses the effectiveness of the Company's internal control over financial reporting in order to prepare and submit a report to the Financial Services Agency (FSA). Through these activities, the Auditing Office is striving to ensure the reliability and transparency of Daicel's financial reporting.

Daicel's report on internal control over financial reporting for fiscal 2014 is disclosed on EDINET, a corporate disclosure system established by the FSA at the following

<http://disclosure.edinet-fsa.go.jp/>

## Risk Management Initiatives

Daicel established the Risk Management Committee in 2006 as an organization to coordinate and promote Companywide risk management activities. Since its establishment, the Risk Management Committee has guided the entire Company in aggressively conducting risk management activities.

Each department within the Company is taking stock of potential risks that could have a major impact on Daicel's ability to achieve its business targets. To fully assess the situation, the Company's risk countermeasures and initiatives are entered into an intranet database. Countermeasures and initiatives are designed to prevent the incidence of risk or to reduce any subsequent impact. Each department assigns a priority level to each risk and carries out countermeasures accordingly. Steps are also taken to regularly update the status and progress of countermeasure implementation, and any newly identified risks are promptly entered into the database. Utilizing this database, Daicel pursues a check, act, plan, and do (CAPD) cycle in conjunction with the risk management activities of each department. Similar risk management activities are undertaken by Group companies in Japan and overseas\*.

The Risk Management Committee periodically confirms the status of countermeasure implementation by each department and Group company. Recommendations and support are then provided as considered appropriate. In addition, summary activity reports are submitted by each department at the end of each fiscal year. This process enables all appropriate parties to fully grasp the status of risk.

In fiscal 2014, Daicel undertook a reassessment of the current status of its capabilities and measures aimed at ensuring business continuity following a major disaster. Steps were taken to clarify important issues. Looking ahead, the Company plans to systematically address the issues identified.

\*Certain overseas Group companies are excluded from using the database.

## Communication with Shareholders and Investors

### IR Activities

Extending beyond the timely disclosure of information, Daicel adopts an aggressive approach toward its IR activities. Briefing sessions covering the Company's interim and period-end results are held by the president and senior executives for institutional investors and analysts. The Company also conducts conference calls to present its results for the first and third quarters of each business period. Moreover, Daicel strives actively to promote communication and to ensure that all appropriate parties gain a deeper understanding of the Company and its activities through the use of individual interviews and small meetings. In its efforts to promote a solid understanding of every facet of the Company's operations, Daicel also conducts plant tours on its own initiative and at the request of investors.

Daicel maintains a designated IR page on its website where it posts various pertinent documents including its Securities Report, Financial Results Report, Briefing Session and presentation materials and Shareholders' Report in a timely manner. In this manner, the Company is working to upgrade and expand its information disclosure aimed at investors.

<http://www.daicel.com/en/ir/irlibrary.html>

### Plant Tours for Analysts

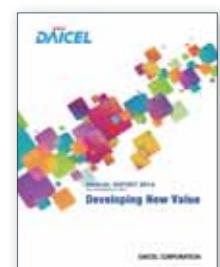
Daicel organized plant tours over a two-day period on September 29 and September 30 at its Himeji Production Sector/Aboshi Plant and its Harima Plant. At the Aboshi Plant, participants were provided with an explanation of the Company's proprietary "Production Innovations by the Daicel-Way" and its outcomes. At the Harima Plant, the tour covered an inspection of the production lines for automobile airbag inflators as well as an explanation of the Company's quality control and human resource development initiatives.



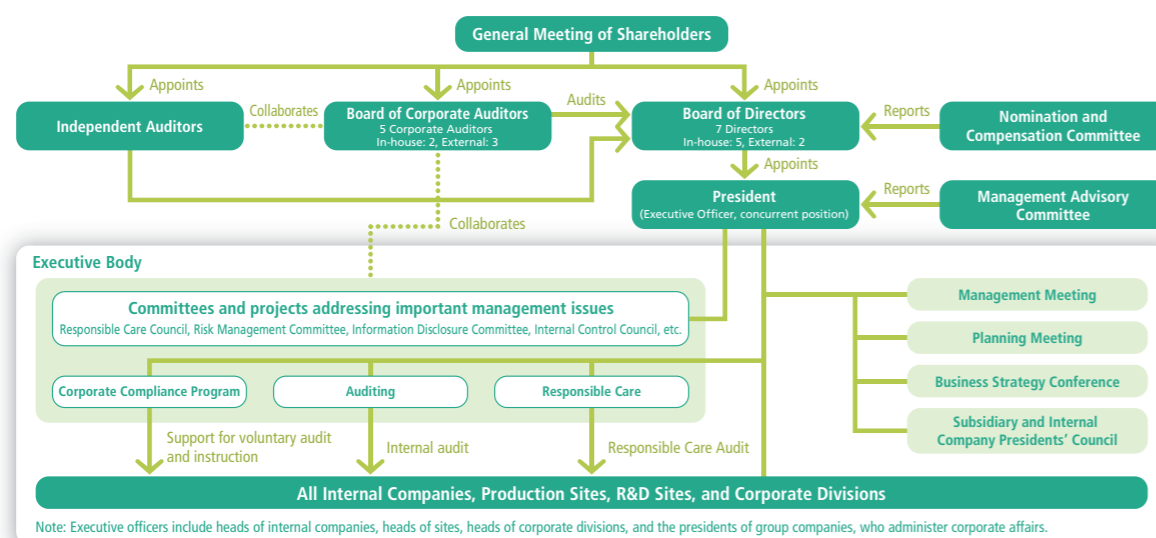
In the future, Daicel will continue to provide interested parties with opportunities to gain a better insight into the Company and its efforts to remain at the forefront of "Monozukuri".

### To Our Overseas Investors

In addition to its Annual and CSR reports, Daicel publishes its Financial Results Reports as well as presentation materials on each Briefing Session in English. These documents are posted on the Company's website. Through these means, every effort is being made to disclose information to overseas investors. In order to further bolster the understanding of overseas investors, the Company is conducting individual interviews including conference calls.



### Corporate Governance Framework (As of March 31, 2015)





# Corporate Ethics (Compliance) Initiatives

The Daicel Group has positioned corporate ethics as an essential component of the systematic efforts of each department and Group company to engage in CSR activities.

## Corporate Ethics Management System

Adherence by each employee to corporate ethics is an essential management issue, and the Daicel Group is accordingly promoting corporate ethics Group-wide.

These efforts to promote corporate ethics are not temporary measures. They are conducted on an ongoing basis. With this in mind, we have formulated Corporate Ethics Management Regulations for the Company. In addition, each department has established its own Corporate Ethics Management System based on processes that incorporate the check, act, plan, and do (CAPD) cycle, and through activities involving the participation of all employees, we are striving to maintain and improve this system. We have also taken steps to introduce this CAPD cycle at each Group company.

## Promotion System

Daicel established the Corporate Compliance Program Division to promote corporate ethics activities and appointed the Company's representative director as its Corporate Compliance Officer. Each Daicel department and Group company appoints a CSR Facilitator to lead various corporate ethics- and compliance-related activities.

The Corporate Compliance Program Division provides support to the Company and each Group company. The Division confirms the status and progress of each corporate ethics activity plan and helps to resolve various issues specific to each department and workplace through a process of interactive dialogue and opinion exchange. In this manner, the Division works to raise awareness toward corporate ethics at each workplace. In fiscal 2014, steps were taken to provide a variety of education materials for use at each workplace. These included news updates, case studies aimed at promoting awareness and understanding through group discussions, a four-panel cartoon, and other materials, which were posted on the intranet and updated on a monthly basis.

With respect to other specific compliance issues, individual committees are established in accordance with each set of relevant rules and regulations. These committees consider and help resolve issues.

## Examples of Committees

Regulation	Committee	Goals
Regulations on Export Controls	Export Controls Committee	To ensure that the Company and its Group companies do not engage in illegal export activities or the provision of goods and technologies that are prohibited under security trade-related laws and regulations for the purpose of maintaining international peace and security
Regulations on Personal Information Protection	Personal Information Protection Committee	To acquire, manage and use personal information appropriately
Regulations on Information Disclosure	Information Disclosure Committee	To disclose corporate information appropriately

## Legal Compliance System

Daicel has established a Legal Compliance System. Under this system, corporate departments are designated as organizations in charge of ensuring compliance with laws and regulations relating to their respective operations. More specifically, designated corporate departments are tasked with obtaining information regarding related laws and regulations and providing that information to other departments that may be affected. There are 13 corporate departments, including the Legal Group, designated as organizations responsible for compliance. These departments use the intranet to provide employees with information on revisions to laws and regulations as well as guidelines while also providing education materials.

Utilizing a checklist, each department and Group company in Japan voluntarily conducts a corporate ethics review once each year. In addition to reflecting on the status of corporate ethics at each workplace, this initiative is designed to uncover any issues.

## Education and Training Programs

Daicel systematically provides corporate ethics training at various levels, including new graduate recruits, position-specific corporate ethics training when an employee is promoted, directors and presidents of Group companies. In addition to reconfirming the Company's concept and definition of CSR, training at various levels provides examples of misconduct by Daicel Group as well as other companies. These examples form the basis for discussions and again highlight the importance of corporate ethics.

The Corporate Compliance Program Division conducts corporate ethics training and provides training materials for the benefit of each Group company in Japan. Training was conducted at a total of six Group companies in fiscal 2014. Also, in line with its technician training programs aimed at familiarizing technicians and engineers with the basic techniques required for fulfilling a manufacturer's responsibility (please refer to page 22)—achieving the stable supply of safe products—the Company offers educational programs in such areas a legal compliance.

Individual departments and Group companies are tasked with obtaining information regarding the laws and regulations directly related to their operations and educating their personnel. In addition, organizations responsible for compliance with laws and regulations continue to hold in-house seminars. In fiscal 2014, particular attention was given to antitrust laws and issues relating to bribery. In addition to the Company, education was extended to encompass Group companies in Japan and overseas.

## Implementation Themes Extracted from In-house Seminars

Act against the Delay of Payment of Subcontract Proceeds, etc., to Subcontractors	Intellectual Property Rights
Chemical management	Antitrust laws and bribery
Countermeasures against Antisocial Forces	Stamp Duty Act

## Whistleblowing System

With the intent of establishing a system to protect whistleblowers who act in the public interest, Daicel is taking steps to ensure that the employees of each workplace are able to issue reports and hold consultations without difficulty. However, for circumstances where corporate ethics-related issues cannot easily be resolved at the workplace through ordinary reporting to supervisors, the Company has put in place the Corporate Ethics Help Line. This Help Line is not only an in-house system. Daicel has also established an external counterpart through which employees can consult and raise issues with external parties. In this manner, the Company is endeavoring to create a system that is easy-to-use by all employees.

Through the administration of the Corporate Ethics Help Line, whistleblowers and those who request consultations must be protected from the consequences of their actions. Daicel has accordingly put in place the following Corporate Ethics Management Guidelines. Steps are being taken to ensure that these guidelines are strictly upheld.

1. The personal information and privacy of whistleblowers and those who request consultations must be protected;
2. Adverse treatment in response to whistleblowers and those who request consultations must be prohibited; and
3. Results related to investigations must be fed back to whistleblowers and those who requested consultations.

Similar in-house and external help lines are established in Group companies in Japan to protect whistleblowers and those who request consultations. In addition, drawing on the experience gained in Japan, whistleblowing systems are also introduced at overseas Group companies as a basic platform to protect individuals who make reports and seek consultations.

# The Responsible Care Initiative

## Responsible Care: Basic Policies and Implementation System

Every effort will be made to implement the Responsible Care Initiative put forward by the Daicel Group throughout its operations in order to contribute to a viable sustainable society.

In 1995, Daicel established its Basic Policies for Responsible Care (RC) based on the guiding principles for improvement of environmental, health and safety conditions of the Japan Chemical Industry Association. Daicel is deeply aware of its responsibility as a corporate citizen to protect the environment and ensure the health and safety of all those involved with the Company in whatever capacity and every stage of its operations—from the design of products to their manufacture and disposal. With this in mind, the Daicel Group is promoting across-the-board RC activities.

## Basic Policies for Responsible Care

In all aspects of its business operations, Daicel is making the utmost efforts to ensure environmental preservation, process safety and disaster prevention, occupational health and safety, chemical and product safety, distribution safety and dialogue with society in accordance with the Responsible Care Standards of the Japan Chemical Industry Association (JCIA). Daicel is making steady and continuous progress in all of these areas.

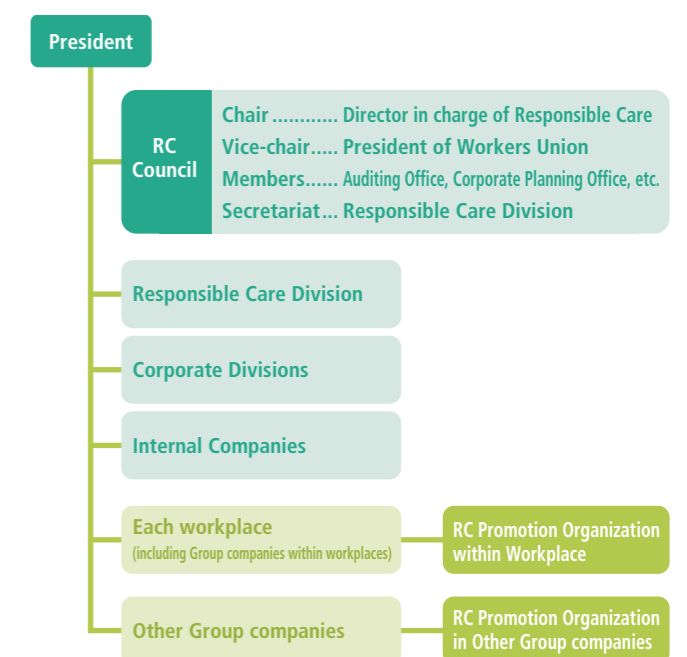
- 1 While strictly abiding by laws and regulations currently in effect, in its business operations, Daicel will strive to uphold the principles of environmental preservation and attention to safety. All employees will be made aware of policy measures and their assistance will be secured during implementation to ensure sustained effort.
- 2 Daicel will conduct a thorough assessment of its new products' impact on health, safety, and the environment at every stage—development, manufacture, distribution, use, and disposal—prior to installing facilities for their production and introducing them to the market. Daicel will also strive to produce and offer products that take people's health, safety, and the environment into consideration.
- 3 Daicel will collect and maintain a database of information regarding environmental and safety issues that relate to its products and the substances it handles. To ensure their safe handling and use, the Company will provide all necessary information to users and distributors.
- 4 Daicel will promote raw material-saving and energy-saving initiatives as well as the recycling of waste products and restraints on their production to protect the environment and economize on the use of limited raw materials.
- 5 Daicel will seek to constantly raise safety standards to achieve a no-accident, no-disaster record at the manufacturing stage. The Company will ensure that appropriate emergency response procedures are in place, training is undertaken, and, in the event of an accident, appropriate countermeasures are taken at once.
- 6 Daicel will research, develop, and introduce technologies and products that are healthier, safer, and more environment-friendly than ever.
- 7 Daicel pledges to strictly abide by regulations in force in the relevant jurisdictions and give due attention to the environmental and safety concerns of the other parties involved when engaging in international transactions involving chemical products, conducting international business, and transferring technologies abroad.
- 8 Daicel will actively lead and support the environment- and safety-related activities of the Daicel Group companies with the aim of securing a better and safer environment for all.
- 9 Daicel will participate in and cooperate with environmental preservation activities undertaken by the communities in which it operates and seek to gain the trust and understanding of society as a whole by establishing a dialogue with it on safety and environmental matters.
- 10 Daicel will deepen its understanding and awareness of the importance of biodiversity conservation and promote biodiversity-friendly activities so that generations to come will be able to receive the benefits of biodiversity.

## Daicel Signs a Declaration to Support the 2014 Revised Version of the Responsible Care Global Charter

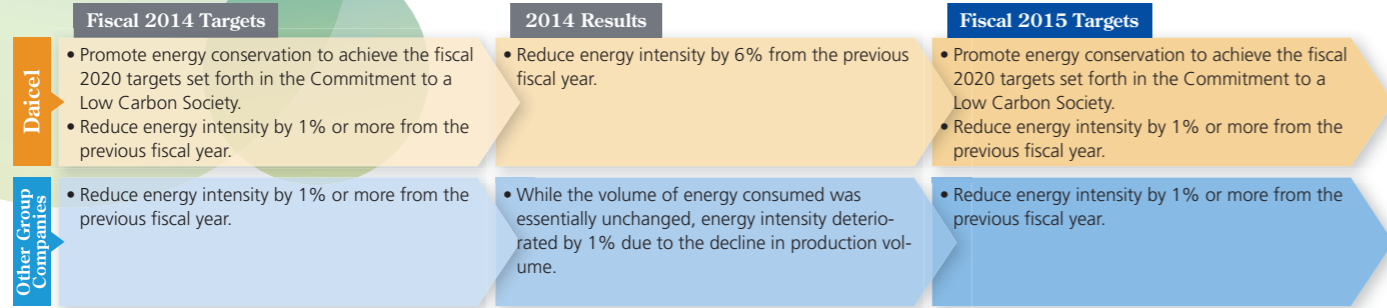
The International Council of Chemical Associations (ICCA), an international responsible care activity organization, put in place the Responsible Care Global Charter in 2005 with the aim of promoting sustainable development within the chemical industry while contributing to society as a whole through responsible care activities. In complete agreement with the goals and principles of the Charter, Daicel became a signatory in 2008. In order to more specifically detail the issues requiring attention with respect to the management of chemical product safety, improvements in the quality of life through the delivery and use of chemical products, and contributions to sustainable development in an easier to understand manner, ICCA revised the Charter in 2014. Taking into consideration these revisions, Daicel has again declared its support and confirmed its participation as an ongoing signatory.



## Examples of Committees



## Environmental Preservation



### The Energy Conservation Committee is the centerpiece of the Group's efforts to conserve energy.

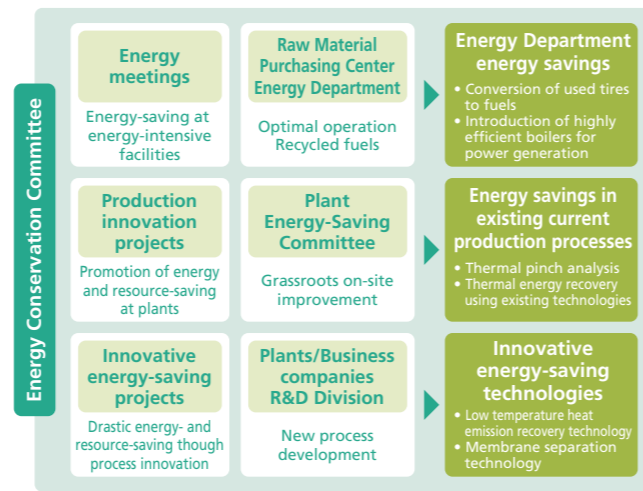
Daicel is a participant in the Nippon Keidanren's Commitment to a Low Carbon Society, which was unveiled on January 17, 2013. With the Energy Conservation Committee taking the lead, Daicel is working to achieve CO<sub>2</sub> emission reduction targets for fiscal 2020 by promoting energy savings from three angles: Energy Department energy savings; energy savings in existing current production processes through production innovation initiatives; and the introduction of innovative energy-saving technologies.

In fiscal 2014, the Group as a whole worked diligently to engage in energy-saving activities. This included the recovery of heat emissions as well as efforts to conserve steam and electric power at production sites through production innovation initiatives. As a result, successful efforts were made to reduce the volume of energy consumed by the crude oil equivalent of 15,000 kiloliters from the previous fiscal year. Other accomplishments also included an improvement in the energy consumption rate<sup>1)</sup> index<sup>2)</sup> by five points from the previous fiscal year.

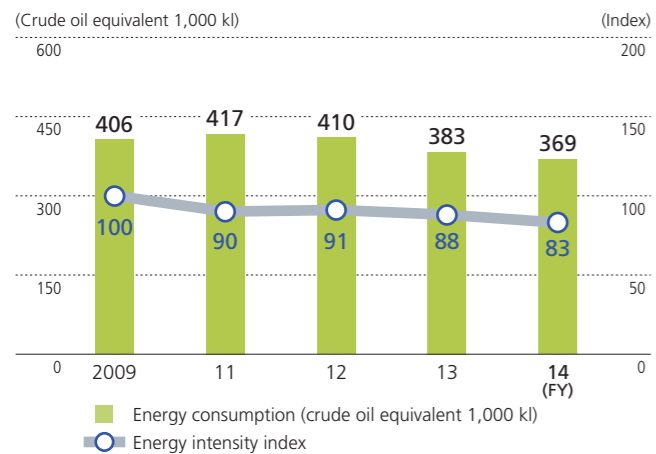
The CO<sub>2</sub> emissions attributable to energy consumption were down 12,000t-CO<sub>2</sub> and the CO<sub>2</sub> emissions intensity index improved one point from the previous fiscal year.

Other and overseas Group companies have identified individual energy-saving targets and are working to reduce energy consumption volumes. Looking ahead, every effort will be made to promote energy

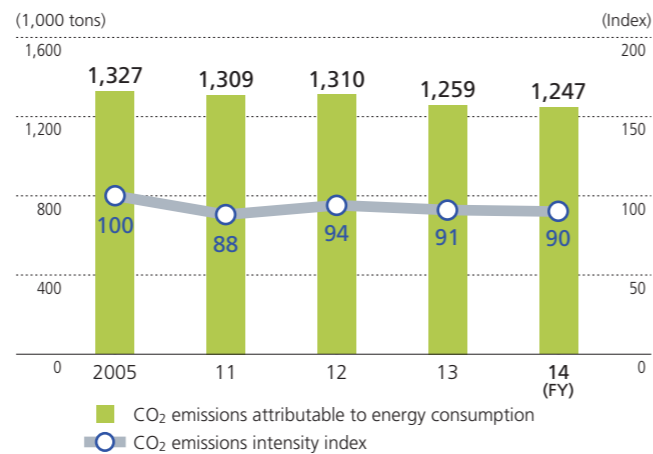
conservation and to reduce CO<sub>2</sub> emissions. As a part of the Group's innovative measures, the Group will continue to develop an improved Petlyuk technology, conduct practical demonstration tests of a vapor recompression (VRC) technology, and introduce other new technologies to optimize energy consumption at the Aboshi and Ohtake plants.



### Daicel's Energy Consumption and Intensity Index



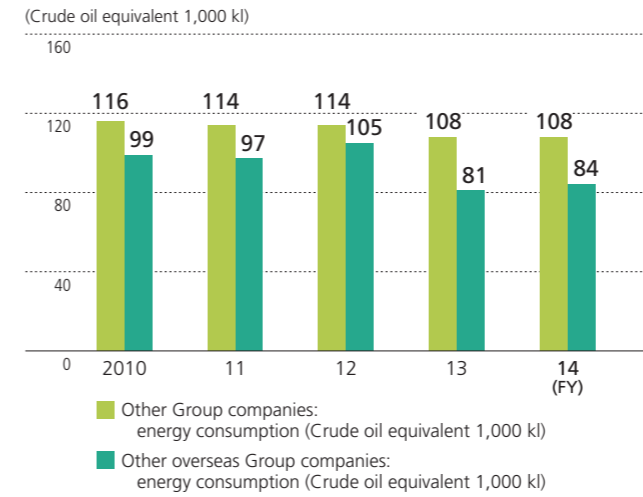
### Daicel's CO<sub>2</sub> Emissions Attributable to Energy Consumption and CO<sub>2</sub> Emissions Intensity Index



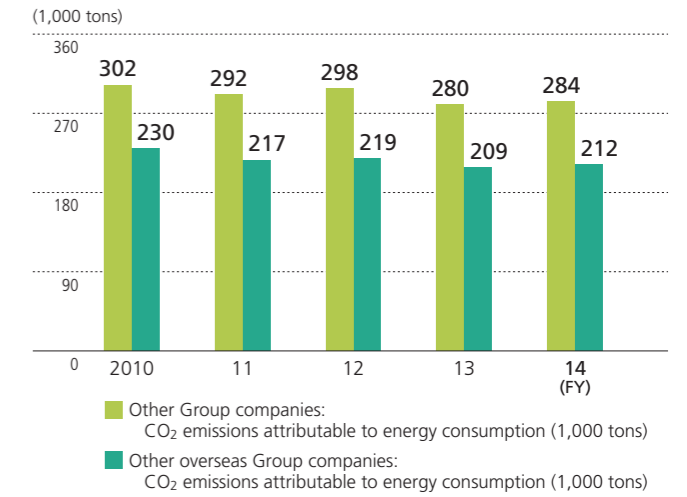
#### What is...?

- Energy intensity:** Energy intensity is defined as the total consumption of electricity, thermal energy and fuels required for manufacturing a specified unit of product. Lower energy intensity indicates higher production efficiency—in other words, greater energy efficiency—which, in turn, presents greater potential for preventing global warming.
- Energy intensity index:** Energy intensity index can be obtained by the following formula: Energy intensity index for a year = Energy intensity for that year / Energy intensity in a standard year × 100
- Modal shift:** The shift from truck-based goods transportation to more environmentally friendly marine and railway transportation.
- Container Round Use:** The practice of using devanned import containers for exports, without returning them to the shipping companies. By omitting the process of returning a devanned empty container and getting a new empty container for vaning, the practice both reduces CO<sub>2</sub> emissions and saves on transportation costs.
- Container Round Use Ratio:** The ratio of containers that were used for imports and where efforts were made to re-use for exports against the number of export containers.
- FEU (Forty-foot equivalent unit):** Conversion figure for a 40ft container.

### Other/Overseas Group Companies' Energy Consumption



### Other/Overseas Group Company CO<sub>2</sub> Emissions Attributable to Energy Consumption



## Distribution Safety

#### Fiscal 2014 Targets

- Aim for zero at-fault logistics accidents.
- Reduce logistics issues at partner companies by 30% from the previous fiscal year.
- Achieve at least 1% energy conservation in logistics annually.

#### 2014 Results

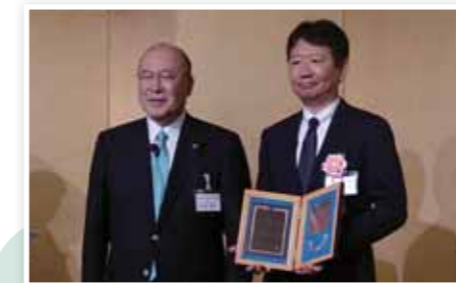
- Achieved zero at-fault logistics accidents.
- Reduced logistics issues at partner companies by 13% from the previous fiscal year.
- Achieved 1.4% energy conservation in logistics for the fiscal year.

#### Fiscal 2015 Targets

- Aim for zero at-fault logistics accidents.
- Reduce logistics issues at partner companies by 30% from the previous fiscal year.
- Achieve at least 1% energy conservation in logistics annually.

### We are continuing activities aimed at reducing logistics-related issues.

Daicel Logistics Service Co., Ltd., which is responsible for the distribution function of the Daicel Group, has put in place a basic philosophy that emphasizes efforts to garner the trust and satisfaction of society by providing services that fulfill the needs of its customers anywhere and at any time. Guided by this philosophy, the company works diligently to enhance transportation quality and safety.



The Fiscal 2014 Logistics Grand Prize Environmental Contribution Award presentation ceremony

In fiscal 2014, Daicel Logistics Service collaborated with its transportation contract partner companies to reduce logistics-related issues. While unable to achieve its identified goal for the year, successful steps were taken to again lower the incidence of trouble on a year-on-year basis.

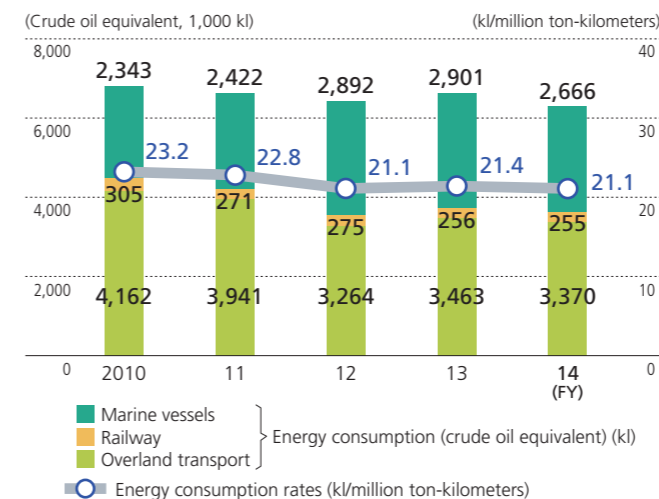
During the fiscal year under review, Daicel Logistics Service experienced a decline in its container round use ratio as a result of such factors as the deterioration in import container quality. By taking all appropriate measures including steps to transport domestic cargo in larger volumes, however, the company was able to reduce energy consumption.

In addition, Daicel Logistics Service attracted praise for its efforts to reduce its environmental footprint. Initiatives included a modal shift as well as container round use. As a part of this recognition, the company received the fiscal 2014 Logistics Grand Prize Environmental Contribution Award from the Japan Institute of Logistics Systems.

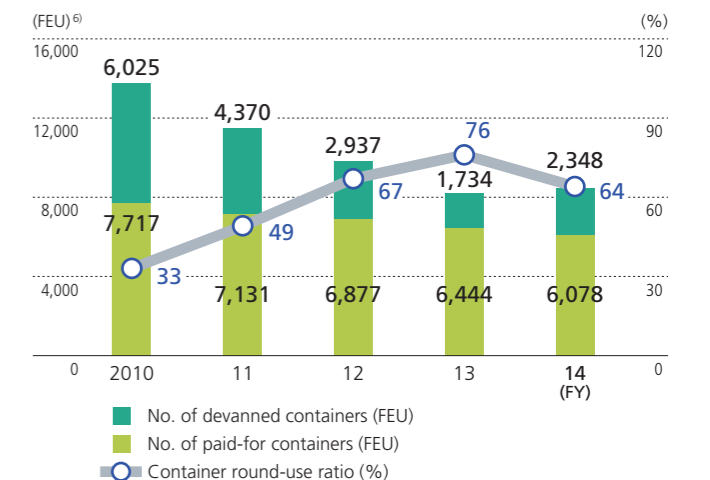


The Fiscal 2014 Logistics Grand Prize Environmental Contribution Award certificate and plaque

### Daicel's Energy Consumption and Energy Consumption Rates in Logistics Operations



### Trends in the Number of Paid-For and Devanned Containers and Container Round Use Ratio<sup>5)</sup>



## Occupational Health and Safety

	Fiscal 2014 Targets	2014 Results	Fiscal 2015 Targets
<b>Daicel</b>	<b>Aim for zero occupational injuries</b> • Strengthen 3S*, crisis-identification and hazard prediction activities. • Create work procedure standards for both stable and unstable periods. • Reinforce safety measures for trial operations and construction work.	<b>11 occupational injuries (down eight year on year)</b> • Strengthened 3S*, crisis-identification and hazard prediction activities, including at partner companies. • Focused on creating work procedure standards for unstable periods. • Achieved zero accidents during trial operations as well as periodic maintenance and construction work.	<b>Aim for zero occupational injuries</b> • Strengthen 3S*, crisis-identification and hazard prediction activities. • Ensure that the pointing and calling occupational safety method is firmly entrenched as standard operating practice. • Strengthen general construction work safety measures.
<b>Other Group Companies</b>	<b>Aim for zero occupational injuries</b> • Promote 3S*, crisis-identification and hazard prediction activities. • Upgrade and expand the horizontal rollout of information on labor accidents.	<b>Two occupational injuries (down five year on year)</b> • Promoted 3S*, crisis-identification and hazard prediction activities through workplace interaction between companies. • Rolled out information using labor accident report database.	<b>Aim for zero occupational injuries</b> • Share information regarding 3S*, crisis-identification and hazard prediction activities between companies. • Roll out activities aimed at learning from the lessons of the past.

\* 3S activities: *seiri* (tidying), *seiton* (putting everything in order) and *seisou* (cleaning)

At all of its workplaces, Daicel is promoting various activities to upgrade the foundation of production sites. For example, the Company is promoting 3S [*Seiri* (tidying), *seiton* (putting everything in order) and *seisou* (cleaning)] activities, crisis-identification activities and hazard prediction activities<sup>7)</sup>.

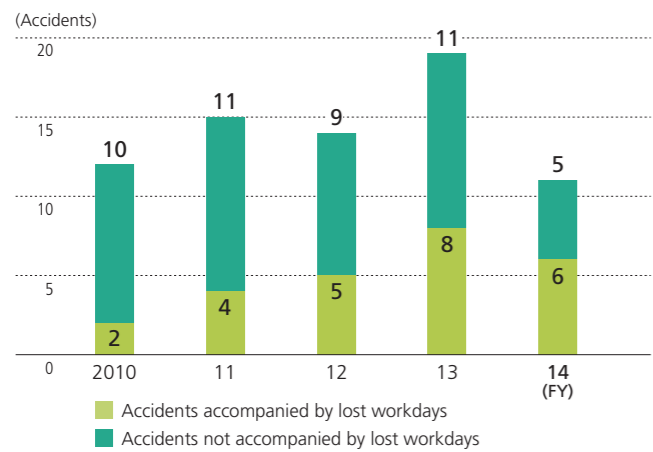
In fiscal 2014, Daicel production site operators and all workplace leaders undertook practical training in basic frontline operations at the Operation Training Center. This initiative was aimed at further raising the awareness of employees toward those basic operations that must be observed at the production frontline.

In addition to preparing and sharing across all workplaces a list of essential safety issues summarizing the basic operations of production sites, the Company implemented a variety of safety measures. As well as reviewing the rules relating to the use of protective glasses, steps were taken to introduce a uniform set of helmets equipped with protective glasses on a Group-wide basis and to install emergency water washing facilities<sup>8)</sup>. Recognizing that a large number of labor accidents during the previous fiscal year occurred during unsteady work,

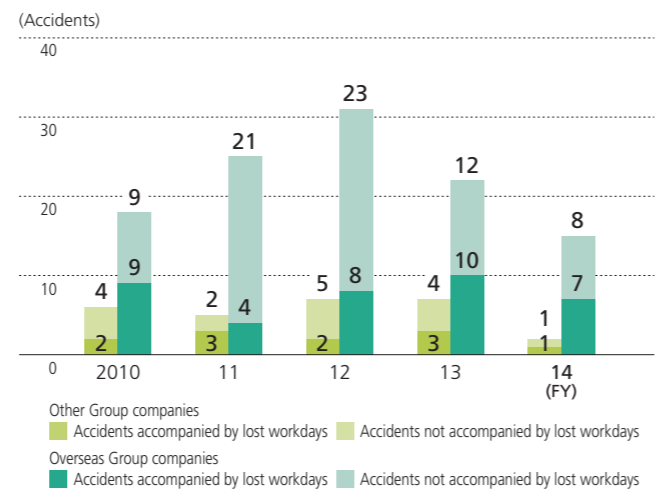
Daicel looked to standardize operations for unsteady work and to revise operating procedures. Turning specifically to the substantial number of construction work-related labor accidents, the Company conducted a review of the rules for entering and exiting plants, took steps to promote dialogue and consensus among all employees involved in production site operations concerning issues of particular concern, and undertook simulated training at all workplaces undergoing large-scale periodic maintenance. As a result of these endeavors, the number of labor accidents (both accompanied and not accompanied by lost work days) as well as the labor accident frequency rate<sup>9)</sup> declined on a year-on-year basis at Daicel and Group companies in fiscal 2014.

In fiscal 2015, the Daicel Group will continue to upgrade the foundation of its production sites. As a part of efforts to ensure construction safety and quality, simulated large-scale periodic maintenance training will be conducted at all production sites. Steps will also be taken to provide specialized technical training to employees, onsite partner companies, and construction work personnel (see page 16).

### ▶ Labor Accidents at Daicel: Accompanied/Not Accompanied by Lost Workdays (including partner companies on plant premises)



### ▶ Labor Accidents at Other/Overseas Group Companies: Accompanied/Not Accompanied by Lost Workdays



## Process Safety and Disaster Prevention

	Fiscal 2014 Targets	2014 Results	Fiscal 2015 Targets
<b>Daicel</b>	<b>Aim for zero accidents involving fire, explosions and leaks.</b> • Conduct a comprehensive inspection of risks and implement countermeasures. • Assess risk of earthquakes, tsunamis and ground liquefaction, and implement countermeasures. • Conduct Group-wide disaster countermeasure exercises pertaining to irregular scenarios based on BCPs.	Reported three incidents of the leakage of hazardous materials. • Undertook a further inspection of the risks relating to mixed compounds and implemented countermeasures. • Undertook earthquake resistance work as well as an assessment of liquefaction risks. • Conducted Group-wide disaster countermeasure exercises pertaining to irregular scenarios.	<b>Aim for zero accidents involving fire, explosions and leaks.</b> • Conduct a comprehensive inspection of risks and implement countermeasures. • Systematically undertake earthquake resistance work as well as liquefaction risk countermeasures. • Conduct Group-wide disaster countermeasure exercises pertaining to irregular scenarios based on BCPs.
<b>Other Group Companies</b>	• Promote emergency measures. • Implement rules in a concrete manner. • Strengthen use of the Total EHS Assessment System.	• Introduced safety confirmation and emergency call systems. • Implemented a new Total EHS Assessment System Plan.	• Promote full-fledged use of safety confirmation and emergency call systems. • Promote full-fledged use of the Total EHS Assessment System including minor changes.

### Process Safety and Disaster Prevention Countermeasures

In fiscal 2014, there were no major incidents of fire, explosion or leakage of harmful substances that impacted areas in close proximity to the various bases operated by the Daicel Group. Regrettably, the Company did report three incidents of hazardous material leakage. In addition to establishing trouble assessment committees for each case of reported leakage, every effort was made to ascertain the causes for each incident and to implement appropriate preventive measures. These initiatives have been rolled out across all of the Group's production sites. Continuing to address the notices\*<sup>1</sup> received from Japan's Fire and Disaster Manager Agency in fiscal 2013, the Daicel Group maintained its focus on ascertaining the status of its self-reactive and hazardous compound substances while reinforcing its monitoring methods for anomalies, determination criteria as well as its response measures.

Furthermore, the Company's Ohtake Plant underwent a third-party evaluation as a part of activities aimed at enhancing safety run by the Japan Society for Safety Engineering, an organization set up for the purpose of bolstering safety in the process industry.

\*<sup>1</sup> Regarding the thorough prevention of accidents at chemical plants (October 1, 2012): Notice No. 220 regarding hazardous materials under the Fire Defense Law and notice No. 195 regarding special provisions under the Fire Defense Law

### Earthquake, Tsunami and Liquefaction Countermeasures

In fiscal 2014, Daicel continued to complete analyses of the seismic conditions of its workplaces and facilities while systematically carrying out structural reinforcement work and installing emergency earthquake alert systems. In addition to preparing and reviewing evacuation manuals, the Company promoted measures aimed at addressing the risks associated with earthquakes, tsunamis and liquefaction. This included bolstering emergency supplies of food, daily essentials and disaster-prevention goods.

Moreover, the employee safety confirmation and emergency call systems adopted by the Company in fiscal 2013 were rolled out to Group companies in Japan.



Fiscal 2014 Responsible Care poster top prize winner

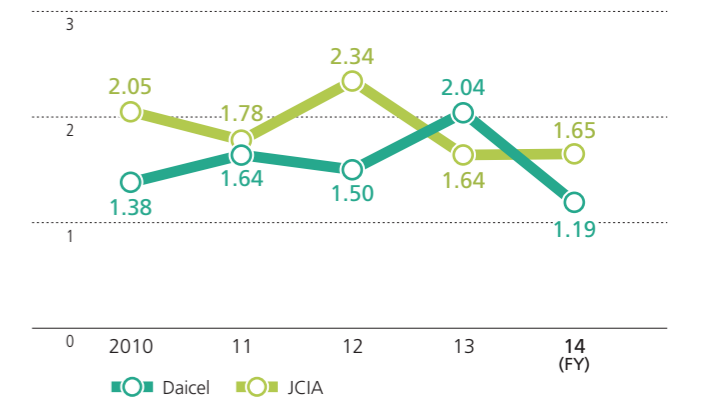
Shinji Imoto  
Daicel Ohtake Sangyo Co., Ltd.

### Emergency Drills

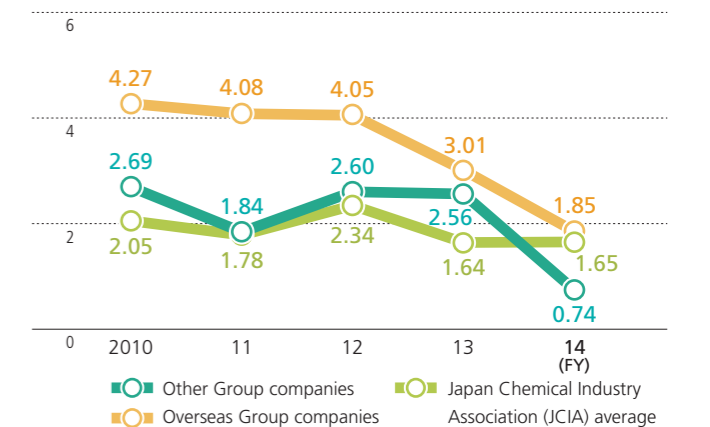
The Daicel Group regularly conducts emergency safety drills in accordance with the annual plans of each place of business. These drills are designed to ensure that all employees are well versed in lifesaving as well as fire extinguishing procedures in the event of an emergency, and are capable of minimizing any impact on neighboring areas and responding appropriately to the needs of local residents in a timely manner.

Complementing these efforts, Daicel also periodically conducts Group-wide disaster countermeasure exercises that address the possibility of a widespread disaster. Carrying on from efforts undertaken in fiscal 2013, exercises were conducted at the Company's Tokyo and Osaka head offices based on the assumption of a major disaster spread across both areas in fiscal 2014. Those participating in each exercise were not provided with advance warning. In this manner, steps were taken to ensure that exercises were undertaken on as practical a basis as was possible. In fiscal 2015, we will continue to implement measures aimed at preventing accidents relating to fires, explosions and leakage. We will also work diligently to mitigate the risks associated with earthquakes and tsunamis.

### ▶ Labor Accident Frequency Rate at Daicel: Accompanied/Not Accompanied by Lost Workdays (including partner companies on plant premises)



### ▶ Labor Accident Frequency Rate at Other/Overseas Group Companies: Accompanied/Not Accompanied by Lost Workdays



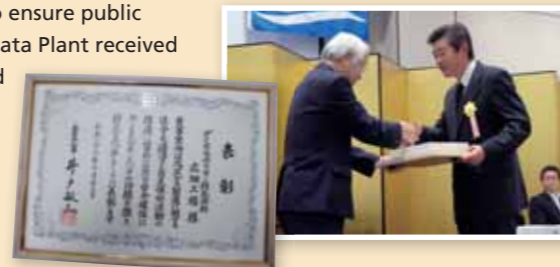
### What is...?

- Hazard prediction:** Near-accident and near-trouble events are recorded to identify the causes of these events. Hazard prediction activities help eliminate causes of accidents and troubles to create safer working environments.
- Emergency water washing facility:** Equipment that is used to wash the bodies and eyes of employees exposed to fluids including chemical agents.
- Labor accident frequency rate:** A safety index to show the labor accident occurrence rate calculated with the following formula: Accident frequency rate = Number of people involved in labor accidents/Number of total extra working hours (unit: millions of hours)

## Awards and Citations

### The Hirohata Plant Receives the Hyogo Prefecture High-Pressure Gas Excellent Manufacturing Workplace Award

In recognition of its efforts to ensure public safety, Daicel Polymers' Hirohata Plant received an excellent workplace award from the governor of Hyogo Prefecture at the Hyogo Prefecture high-pressure gas competition.



### An Employee Receives the Excellent Safety Manager Award from Otake City

Itsuo Okamura, a member of the Energy Department at the Company's Ohtake Plant, received the Excellent Safety Manager Award from Otake City. This award recognizes Mr. Okamura's many years of hard work to ensure workplace safety and outstanding skills.



## Chemical and Product Safety

### Fiscal 2014 Targets

- Maintain the level of PRTR<sup>10</sup> substance emissions to not more than 40% (medium-term target) of levels recorded in fiscal 2001.
- Work to reduce emission of PRTR substances with high emissions.
- Achieve VOC<sup>11</sup> emissions of not more than 40% (medium-term target) of levels recorded in fiscal 2000.
- Reduce VOC emissions by optimizing operating conditions.

### 2014 Results

- Achieved targeted levels of PRTR substance emissions.
- Implemented measures aimed at reducing emissions of PRTR substances with high emissions.
- Did not achieve targets for VOC emissions.

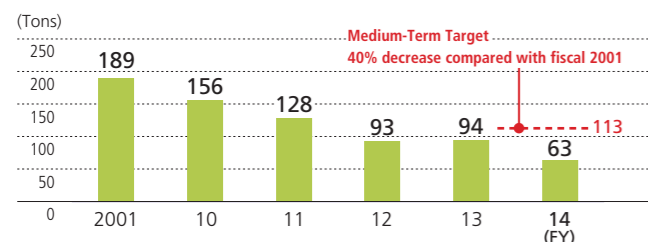
### Fiscal 2015 Targets

- Maintain the level of PRTR substance emissions to not more than 40% (medium-term target) of levels recorded in fiscal 2001.
- Work to reduce emission of PRTR substances with high emissions.
- Achieve VOC emissions of not more than 40% (medium-term target) of levels recorded in fiscal 2000.

### Reducing PRTR Substance Emissions

In fiscal 2014, Daicel achieved its medium-term target of maintaining the level of PRTR substance emissions to not more than 40% of levels recorded in fiscal 2001 through a variety of measures. In addition to reviewing wastewater treatment methods, the Company promoted a wide range of initiatives including off-gas disposal by incineration. On a year-on-year basis, emissions were cut by approximately 30 tons compared with the previous fiscal year. In fiscal 2015, energies will be channeled toward reducing PRTR substance emissions and continuing to maintain the medium-term target.

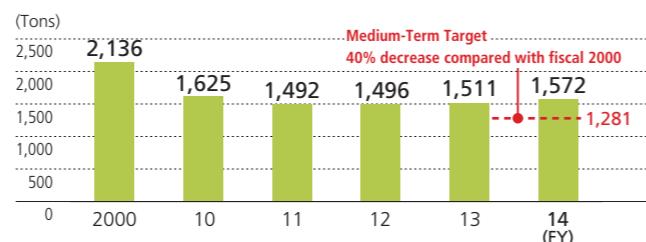
### Daicel's PRTR Substance Emissions



### Reducing Volatile Organic Compound (VOC) Emissions

In fiscal 2014, Daicel took steps to reduce VOC emissions by means such as optimizing operating conditions. Despite these endeavors, however, emissions increased 61 tons compared with the previous fiscal year. This was largely attributable to the increase in volumes handled in line with production volumes. As a result, the Company was unable to achieve its medium-term target of VOC emissions at not more than 40% of levels recorded in fiscal 2000. In fiscal 2015, Daicel will continue to optimize the operating conditions of facilities that handle VOCs and undertake a review of the conditions of such key aspects as solvent recovery in a bid to achieve its medium-term target.

### Daicel's VOC Emissions



#### What is...?

10) Pollutant Release and Transfer Register (PRTR): A system to calculate the extent to which the production, use and storage of specific chemical substances results in the release and transfer of those substances into the environment.

11) Volatile Organic Compound (VOC): Typical VOCs include toluene, xylene, and ethyl acetate.

## Quality Assurance

All of Daicel's plants have acquired ISO 9001 certification, a set of international standards for quality management systems. Each plant constantly works to offer products that satisfy customers and meet their needs.

Each internal company is responsible for the quality of their products. Relevant officials from the Company's plants and internal companies attend regular quality assurance meetings share information, including customer requests. Moreover, plants and internal companies work in unison to leverage the Group's quality management system and thus ensure the maintenance and improvement of product quality across the Group.

In order to strengthen quality assurance measures, the Quality Audit Group, which was set up within the Production Technology Headquarters in 2013, took the lead in conducting an audit of the manner in which efforts to visualize quality assurance information and maintain corrective measures regarding past issues were being managed. This audit was driven by the need to properly rollout product quality assurance initiatives including the development of processes across the Group as a whole.

In addition to expanding quality assurance initiatives to other Group companies, Daicel will take another step forward from fiscal 2015 by dissolving the Quality Management Department and establishing the Quality Management Division from fiscal 2015. The newly established office will report directly to the president and specialize in carrying

out the quality assurance audit function. Through these means, the Daicel Group will increasingly garner the trust of customers by reinforcing its quality assurance management systems.

Furthermore, in an effort to deliver products that fully satisfy customers, we are addressing the issue of acquiring certifications of quality management standards as well as meeting the legal requirements in each field for the following product lineups:

For details of the status of product quality management system certification see the Company's 2015 CSR Report.

<http://www.daicel.com/csr/library.html>

<b>Airbag inflators:</b> Acquired ISO/TS 16949 certification (quality management system standards for the automobile industry)	<b>Special machinery products:</b> Acquired JISQ 9100 certification (quality management system standards for the aerospace industry)
<b>Medical and pharmaceutical products:</b> Implementing production and quality control under structural and administrative standards based on Good Manufacturing Practice (GMP) rules for the manufacturing, management and quality control of pharmaceutical products	<b>Medical device products:</b> Acquired ISO 13485 certification (quality management systems standards for medical devices)
	<b>Food additive products:</b> Acquired ISO 22000 certification (quality management systems standards for food safety)

## Third-Party Opinion



### ダイセルグループCSR報告書 2015

#### 第三者検証 意見書

2015年6月2日

株式会社ダイセル  
代表取締役社長 札幌 操 殿

一般社団法人 日本化学工業協会  
レスポンシブル・ケア検証センター長

高瀬純治



#### ■報告書検証の目的

レスポンシブル・ケア報告書検証は、株式会社ダイセルが作成したダイセルグループCSR報告書 2015(以後、報告書と略す)に記載されている、下記の事項について、化学業界の専門家であるレスポンシブル・ケア検証センターが意見を表明することを目的としています。

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性
- 2) 数値以外の記載情報の正確性
- 3) レスポンシブル・ケア活動及び CSR 活動
- 4) 報告書の特徴

#### ■検証の手順

- ・本社において、各サイト(事業所、工場)から報告される数値の集計方法の合理性、及び数値以外の記載情報の正確性について調査を行いました。調査は、報告書の内容について各業務責任者及び報告書作成責任者に質問すること、並びに資料提示・説明を受けることにより行いました。
- ・大竹工場において、本社に報告する数値の算出方法の合理性、数値の正確性、及び数値以外の記載情報の正確性の調査を行いました。調査は、各業務責任者及び報告書作成責任者に質問すること、資料提示・説明を受けること、並びに証拠物件と照合することにより行いました。
- ・数値及び記載情報の調査についてはサンプリング手法を適用しました。

#### ■意見

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性について
  - ・パフォーマンス数値は本社及び大竹工場において、合理的な方法で正確に算出・集計されていることを確認しました。
- 2) 数値以外の記載情報の正確性について
  - ・報告書に記載された情報は、正確であることを確認しました。原案段階では表現の適切性あるいは文章の分かり易さに関し指摘しましたが、現報告書では修正されており、修正すべき重要な事項は認められません。
- 3) レスポンシブル・ケア活動及び CSR 活動について
  - ・企業倫理教育を国内外のグループ会社まで、幅広く実施されている点を評価します。
  - ・日本化学工業協会の「保安事故防止ガイドライン」に基づいた検証を行い、結果が作業標準書等に反映されている点、及びそのDVDが教育に活用されている点を評価します。
  - ・教育訓練センターで、大学や高等専門学校を相手に体験型教育を実施し、その効果に至る迄きちんと評価されている点を社会貢献の1つとして評価します。
  - ・大竹工場で、教育訓練センターに於ける教育のフォローがきちんと行われている点、及び定期修理に際し、工事リハーサルを実施し、問題点の発掘に努力されている点を評価します。
- 4) 報告書の特徴
  - ・読みやすく、分かり易い内容になっている点を評価します。
  - ・トップコミットメントは、現状について良くまとめられています。
  - ・人材教育に力を入れていることが、よく伺える内容の報告書になっています。
  - ・レスポンシブル・ケアについて、環境保全を中心に良く記載されています。化学品安全について、今後更に内容を充実させることを期待します。

以上