



CSR Report 2017

Creating a Better Future Through *Monozukuri*

 **CENTRAL GLASS CO., LTD.**



Message from the President

Contributing to the Establishment of a Truly

Introduction

I was appointed Representative Director, President, and CEO of Central Glass in June of 2017. We are committed to contributing to the establishment of a truly prosperous society through the spirit of *Monozukuri* in our core businesses – glass and chemicals.

The Transition to CSR Reports

Central Glass celebrated its 80th anniversary in 2016. From 2017, we are determined to undertake a variety of initiatives with a new resolve. Up to now, we had been publishing a Social and Environmental Report (“Responsible Care Report”). From fiscal 2017 onwards, we will be publishing a CSR Report with more fulfilling content that will help our many stakeholders to understand the Central Glass Group.

Realizing Our Corporate Philosophy Is CSR

Under the Central Glass Group’s Basic Philosophy, “Creating a Better Future through *Monozukuri*,” we are working to contribute to the establishment of a truly prosperous society through the spirit of *Monozukuri*. In order to achieve this philosophy, in addition to setting out a basic policy, we carry out our business activities on the basis of a Code of Conduct shared by all members of the Group, and a mid-term management plan that we are striving to achieve.

As we conduct business under our Basic Philosophy, what we prioritize above all is proposing, developing, and manufacturing products that offer the highest level of customer satisfaction. We believe that the absolute precondition for conducting such business activities is responding to the expectations of our diverse stakeholders, while also complying with societal norms.

That is to say, we believe that the achievement of our Corporate Philosophy is the cornerstone of our management, and this also corresponds to our CSR. In order to embody our ideal, we are working on a range of initiatives that will enable us to respond to the demands of a rapidly changing society.

•Strengthening Our Management Foundation and Corporate Strategy

At Central Glass, we are continually increasing the transparency and fairness of our overall management in order to further expand our revenue and enhance our corporate value. We observe the entirety of the Corporate Governance Code, and we have adopted an executive officer system that clearly distinguishes the auditing function of Directors from the business-execution function of Executive Officers in order to ensure the appropriateness and efficiency of our business. We are also enriching understanding of compliance among our employees through educational and awareness-raising activities conducted by our Compliance Promotion Committee.

In our Mid-Term Management Plan, we have established a target ROE of 8%, and we are promising all of our shareholders a total return ratio of 30% or more. In fiscal 2016, although we did not reach our target for ROE, we achieved a total return ratio as promised, with a dividend of 11 yen per share and share buybacks totaling one billion yen.

Resolving Problems and Creating Value

•Creating Pleasant Workplaces

Maintaining and improving working environments in which our employees can feel safe and secure is essential to the sound development of our business. We have introduced a system that prohibits employees from putting in hours beyond a prescribed limit. Since 2009, we have also been operating a system under which all employees receive stress checks and consult with specialists if any problems are discovered. We have further developed systematic measures to offer employees peace of mind by actively supporting employees who are raising children or caring for family members.

At the same time, in accordance with our belief that “*Monozukuri* starts with *Hitozukuri*,” or the development of human resources, we have also enhanced our educational systems, including those for employee development and the training of global human resources. Additionally, in order to promote diversity, we are working actively to provide opportunities for non-Japanese employees and to increase our ratio of

Prosperous Society through *Monozukuri*

female employees.

Since the majority of our manufacturing is carried out at facilities that operate around the clock with no breaks, there are three shifts at our manufacturing sites, including a night shift. As a result, the makeup of our workforce is skewed toward male employees. In our future hiring, we intend to consciously increase the ratio of female employees at our manufacturing sites, and introduce reforms and improvements that incorporate women's perspectives.



A handwritten signature in black ink, reading "T. Shimizu".

Tadashi Shimizu
Representative Director, President & CEO
Central Glass Co., Ltd.

Message from the President

•Contributing to Society through *Monozukuri*

Today, promoting electric vehicles is an urgent task throughout the world as a means of tackling issues such as global warming and environmental pollution due to exhaust emissions. Central Glass is responding to the demands of global society by developing high-performance electrolytes for the lithium-ion batteries that are essential components of electric vehicles, and manufacturing them at our plants in Japan, Korea, and China. Our efforts to combat global warming continue with the development and production of a blowing agent for rigid urethane foam for onsite use and a cleaning agent that both display an extremely low global warming potential (GWP). In fiscal 2016, we finished installing production facilities for the new low-GWP blowing agent at our Ube Plant, and are ready to respond to future demand.

Autonomous driving is also an essential function in an aging society, and it will require automotive glass with high

surface quality so that the vehicle can accurately take in images from the exterior. In addition to manufacturing products that can respond to this demand, Central Glass is also continuing in its development of connected devices that will enable vehicle-to-vehicle communication.

Demand for semiconductors to assist in the realization of autonomous driving and boost the performance of smartphones and other communication devices is also continuing to grow, and greater precision is needed. Central Glass is manufacturing products essential to semiconductor production such as process gases, cleaning gases, and water-repellent drying agents, developed with our proprietary technologies.

We will further strengthen our management foundation so that we can continue to provide value to society through our business activities.

We look forward to your continued understanding and support as we move forward.

Corporate Philosophy

Basic Philosophy

Creating a Better Future Through *Monozukuri**

The Central Glass Group will contribute to the establishment of a truly prosperous society through the spirit of *Monozukuri*.

**Monozukuri* refers to all the business activities in which the Central Glass Group engages with a basic stance of integrity and sincerity, including R&D, quality oriented manufacturing, and sales.

Basic Policy

- Create new value through original technology.
- Pursue harmony with the environment and harmonious coexistence with society.
- Strive to increase corporate value powered by global growth.
- Aspire to be a vibrant company that respects the pioneering spirit and diversity.

Code of Conduct

1. Take responsibility for one's own actions, and engage in honest corporate activities.
2. Cultivate sensibilities, and constantly pursue original ideas and technologies.
3. Achieve the establishment of a society in which all people can live in comfort and good health, and protect the global environment.
4. Strive to create products that satisfy customers all over the world by learning about different cultures and customs.
5. Respect the diversity of every individual, and never cease to embrace the challenges of the future.

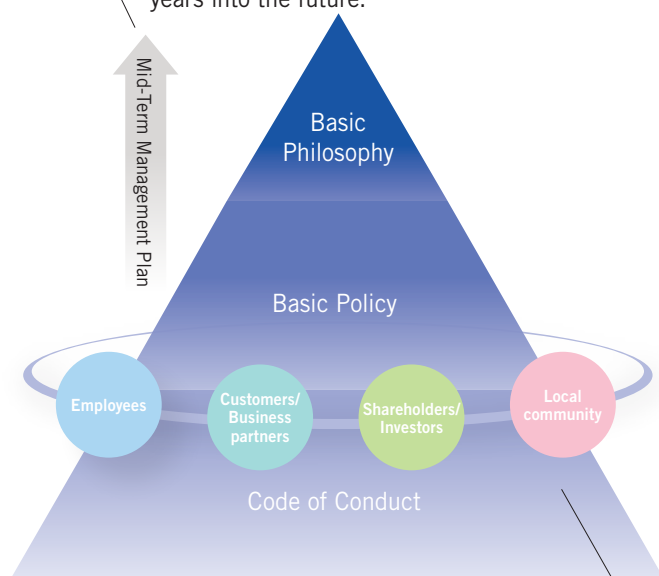
CSR at Central Glass means achieving our Corporate Philosophy.

It is essential to have cooperation and collaboration with our many stakeholders in order to fulfill our social responsibility through our Basic Policy and Basic Philosophy, based on observance of our Code of Conduct. In recognition of our corporate social responsibility, Central Glass's management applies and promotes the PDCA cycle with regard to various activities, based on the system shown below.

Our Mid-Term Management Plan

Basic Strategies

- Achieve revenue growth through aggressive investment in growth businesses.
- Promote structural reforms in existing core businesses.
- Aggressively expand overseas operations and strengthen Group management.
- Strengthen our R&D structure with our eyes set ten years into the future.



Our Stakeholders

Employees	Central Glass focuses on the idea that “ <i>Monozukuri</i> starts with <i>Hitozukuri</i> ” at the foundation of our corporate growth, and we aim to create workplaces in which every employee is able to demonstrate his or her capabilities and skills to the utmost.
Customers/ Business partners	Central Glass carries out quality-control initiatives that always place customer satisfaction first, so that we can provide products and services that our customers love and can use with peace of mind. With our business partners, we work to build fair, equitable, and positive relationships of trust.
Shareholders/ Investors	Central Glass strives to realize rapid and highly transparent information disclosure. Through our financial results briefings and publications, we are working to prioritize communication with all shareholders and investors.
Local community	Central Glass contributes to the realization of a sustainable society while recognizing the effect of our business activities on the environment, striving to reduce our environmental burden, and growing in harmony with the regions where we do business.

Contents

Message from the President	2
CSR at the Central Glass Group/Editorial Policy	5
Business Outline of the Central Glass Group	6
Products of the Central Glass Group	8
Special Features 1	
Next-Generation Fluorocarbon Products – Hydrofluoroolefins (HFOs)	10
Special Features 2	
The Development of Auroverre® Transparent Screen Glass	12
Corporate Governance and Compliance	13
Environment, Safety & Quality Management	16
Safety	19
Environment	22
Quality	25
Employees	27
Society	30
Activities at Individual Plants	32

Editorial Policy

With this CSR report, Central Glass is transitioning from the Social and Environmental Report published up to last year, and making efforts to provide greater detail on the full range of our corporate activities to stakeholders.

Reference Guidelines

- Environmental Reporting Guidelines 2012 of the Ministry of the Environment
- Responsible Care (RC) Code of the Japan Responsible Care Council (JRCC)
- ISO 26000 (Guidance on social responsibility)

Report Period

April 2016 to March 2017
(The period for overseas companies was from January to December 2016)

Scope of the Report

Central Glass Group
(The scope of data was only gathered from the plants and research institutes of Central Glass Co., Ltd. along with some of its subsidiaries.)
Next scheduled publication date: End of September 2018

What Is Responsible Care (RC)?

Most chemical companies voluntarily work to secure the environment, safety, and health throughout every process, from the development stage for chemical substances through to their manufacture, distribution, use, final consumption, and lastly their disposal. Those companies then publicize the results of these activities so as to engage themselves in dialogue and communication with society. These activities are referred to as responsible care.



Business Outline of the Central Glass Group

Corporate Outline (as of March 31, 2017)

Company Name	Central Glass Co., Ltd.
Established	October 10, 1936
Number of Employees	1,662 (7,236 consolidated)
Capital	18,168.28 million
Listed Stock Exchange	Tokyo Stock Exchange

Europe

Carlex Glass Luxembourg, S.A. (Luxembourg)
 Central Glass Germany GmbH (Germany)
 Central Glass Europe Limited (UK)
 Apollo Scientific Limited (UK)
 Central Glass Czech s.r.o. (Czech)

List of Workplaces

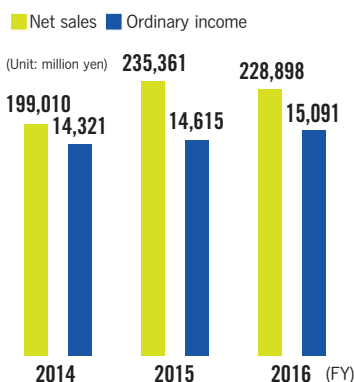
Head Office	Kowa-Hitotsubashi Bldg., 7-1 Kanda-Nishikicho 3-chome, Chiyoda-ku, Tokyo, Japan
Chemical Research Center (Tokyo)	17-5 Nakadai 2-chome, Kawagoe City, Saitama
Chemical Research Center (Ube)	5253 Okiube, Ube City, Yamaguchi
Glass Research Center	1510 Okuchi-cho, Matsusaka City, Mie
Ube Plant	5253 Okiube, Ube City, Yamaguchi
Matsusaka Plant	1521-2 Okuchi-cho, Matsusaka City, Mie
Matsusaka Plant Sakai Mfg. Site	6 Chikko-minamimachi, Sakai-ku, Sakai City, Osaka
Kawasaki Plant	10-2 Ukishima-cho, Kawasaki-ku, Kawasaki City, Kanagawa

Asia

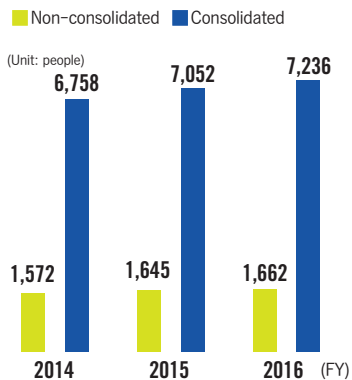
Taiwan Central Glass Co., Ltd. (Taiwan)
 Central Glass (Zhangjiagang) Co., Ltd. (China)
 Giga Gas & Electronic Materials Company (Taiwan)
 Giga Gas & Electronic Materials Trading (Shanghai) Co., Ltd. (China)
 Giga Gas & Electronic Materials (Singapore) Pte. Ltd. (Singapore)
 Zhejiang Central Glass Chemspec Company Ltd. (China)
 JCEL Co., Ltd. (South Korea)

Central Glass Trading (Shanghai) Co., Ltd. (China)
 Central Glass Korea Co., Ltd. (South Korea)
 Central Glass Company India Private Limited (India)
 Yue Sheng Industrial Co., Ltd. (Taiwan)
 Saint-Gobain Central Sekurit (Qingdao) Co., Ltd. (China)
 Japan Vietnam Fertilizer Company (Vietnam)

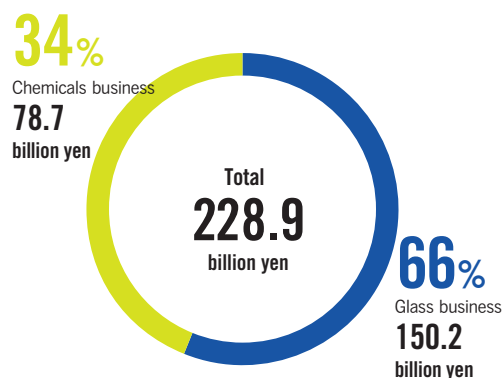
Trends in net sales and ordinary income (consolidated)



Trends in the number of employees



FY2016 sales by segment (consolidated)





Japan

Northwestern Industries, Inc. (US)
 Central Glass America Inc. (US)
 Central Glass International, Inc. (US)
 SynQuest Laboratories, Inc. (US)

America

Central Glass Sale Co., Ltd.
 Central Glass Engineering Co., Ltd.
 Takada Co., Ltd.
 Tohoku Garasu Kenzai Co., Ltd.
 Bishu Silica Sand Co., Ltd.
 Mie Glass Industry Co., Ltd.
 Central Glass Plant Services Co., Ltd.
 Central Saint-Gobain Co., Ltd.
 Central Glass Module Co., Ltd.
 Japan Tempered & Laminated Glass Co., Ltd.

Central Chemical Co., Ltd.
 Central Glass Fiber Co., Ltd.
 Tosho Central Co., Ltd.
 Ube Trading Co., Ltd.
 Sowa Transportation and Warehouse Co., Ltd.
 Central Engineering Co., Ltd.
 Ube Analytical Center Co., Ltd.
 Ube Yoshino Gypsum Co., Ltd.
 TOKUYAMA & CENTRAL SODA Inc.
 Central Insulation Co., Ltd.

Business Division/Segment/Major Products

Glass Business	Architectural glass	Float glass, figured glass, wired glass, heat reflective glass, fabricated glass (tempered glass, heat-resistant glass, laminated glass, insulating glass units, security glass), mirrors, anti-fog mirrors, decorated glass
	Automotive glass	IR-cut glass, UV-cut glass, glass antennas, privacy glass, module glass, acoustic glass, glass with conductive heating defogger print, head-up display glass, and other various safety glasses
	Glass for electronic materials	Thin flat glass for LCDs, chemical tempered glass, powder glass and glass paste
Chemicals Business	Basic chemicals	Fluorocarbon products, polyaluminum chloride, gypsum, hydrofluoric acid
	Fine chemicals	Active ingredients & intermediates for pharmaceuticals/agrochemicals, fluorinated organic/inorganic compounds, high-purity fluorine gases, electronic materials, electrolytes for lithium-ion batteries, fluorinated organic/inorganic reagents
	Fertilizers	NPK compound fertilizer, NK compound fertilizer, coated fertilizer, organic chemical fertilizer, fertilizer materials, microbiological plant-protection agents/materials
	Glass fibers	Glass fibers, glass wool

Products of the Central Glass Group

The Central Glass Group supplies products related to the fields of glass and chemicals. Although the products of Central Glass may not be visible to the general consuming public, they support many aspects of a comfortable daily life, as well as a well-functioning society and industry. We provide raw materials for glass products used in commercial buildings, residences and automobiles, as well as raw materials for industrial products, materials supporting industrial production processes, fertilizers, and pharmaceutical products. The Central Glass Group is continually pursuing possibilities for the manufacturing and technologies in which we excel along with taking on the challenges of new fields in the future as well in order to develop and provide environmentally friendly products and products that take people's health and safety into consideration.



Glass

1. Architectural glass

Glasses like eco-glass, security glass, and soundproof glass that save energy and contribute to more comfortable interiors

2. Automotive glass

Laminated glass and tempered glass for automotive windows, and high-performance glass such as heat-insulating glass that contributes to environmental protection

3. Glass for Touch Panels

Ultra-thin glass for touch sensor panels and cover glass

4. Lead-Free and Anti-Fog Mirrors

Environmentally friendly lead-free mirrors without the harmful components usually used in back coatings, and anti-fog mirrors with special coatings applied to their surfaces in order to prevent fogging

5. Transparent Screen Glass (Auroverre®)

Glass screens that combine the transparency of glass with the ability to project images

Agri-Bio

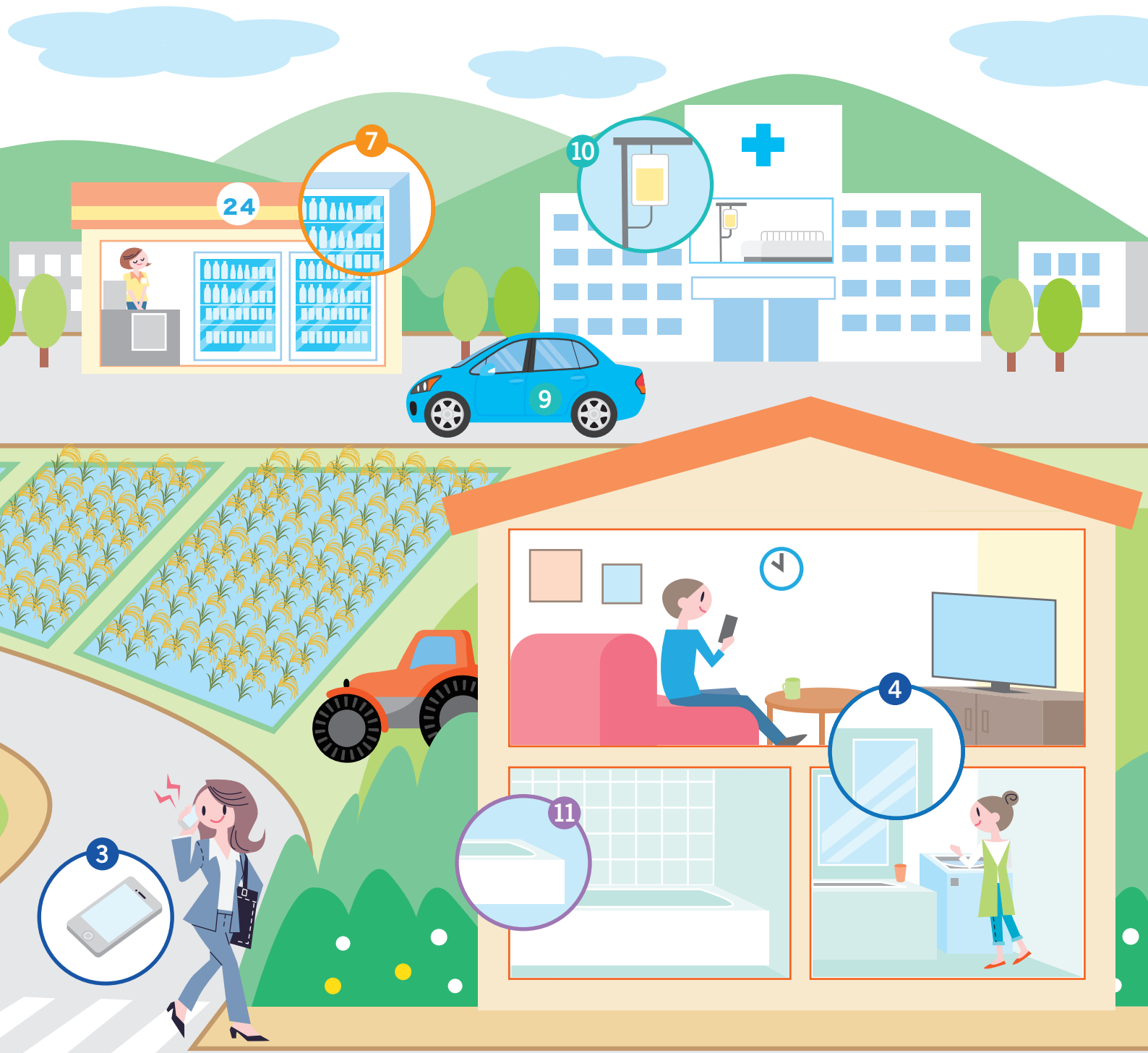
6. Environmentally Friendly Agricultural Materials

Coated Fertilizer Cera-coat®

A controlled-release fertilizer developed based on the concepts of an ideal fertilizing effect, labor saving and low cost, and environmental friendliness. Highly effective, so less of the product needs to be used.

Microbial Control Agents

Anti-microbial agricultural chemicals suitable for organically or specially cultivated agricultural products. Extremely safe for humans, animals, and crops. Can be used until just before harvest, without being counted toward the number of times pesticides are used.



Basic chemicals

7. Urethane Foam Blowing Agents

One of materials for the heat-shielding rigid urethane foam used in refrigerated equipment such as showcases

Fine chemicals

8. Fluorine Products for Electronic Materials

Fluorine-based process gases, cleaning gases, and resist materials employed in the production of semiconductors and LCD panels used in computers and smartphones

9. Electrolytes for Lithium-Ion Batteries

For applications such as electric vehicles (EVs) and hybrid vehicles

10.Active Ingredients & Intermediates for Pharmaceuticals

Active ingredients and intermediates for pharmaceuticals such as anesthetics and antiulcer drugs utilizing fluorine chemicals and other technologies developed in-house

Glass fibers

11. Resin-Reinforced Materials (bathtubs, etc.)

Glass fiber widely used in such diverse applications as fiber-reinforced plastic for bathtubs, housing, automobiles, ships, and electronic products

12. Automotive Sound-Absorbing Materials

Glass wool, a noncombustible, fire-resistant material used for heat insulation and sound absorption in automobiles, railcars, etc.



Special Feature 1 Next-Generation Fluorocarbon Products – Hydrofluoroolefins (HFOs) Next-Generation Environmentally Friendly Blowing Agents and Solvents

History of Chlorofluorocarbon Regulation

Chlorofluorocarbon Regulation and Central Glass's Business

Chlorofluorocarbons (CFCs) were developed in the 1920s as coolants for refrigerators and similar devices. Demand for CFCs increased from the 1960s onward.

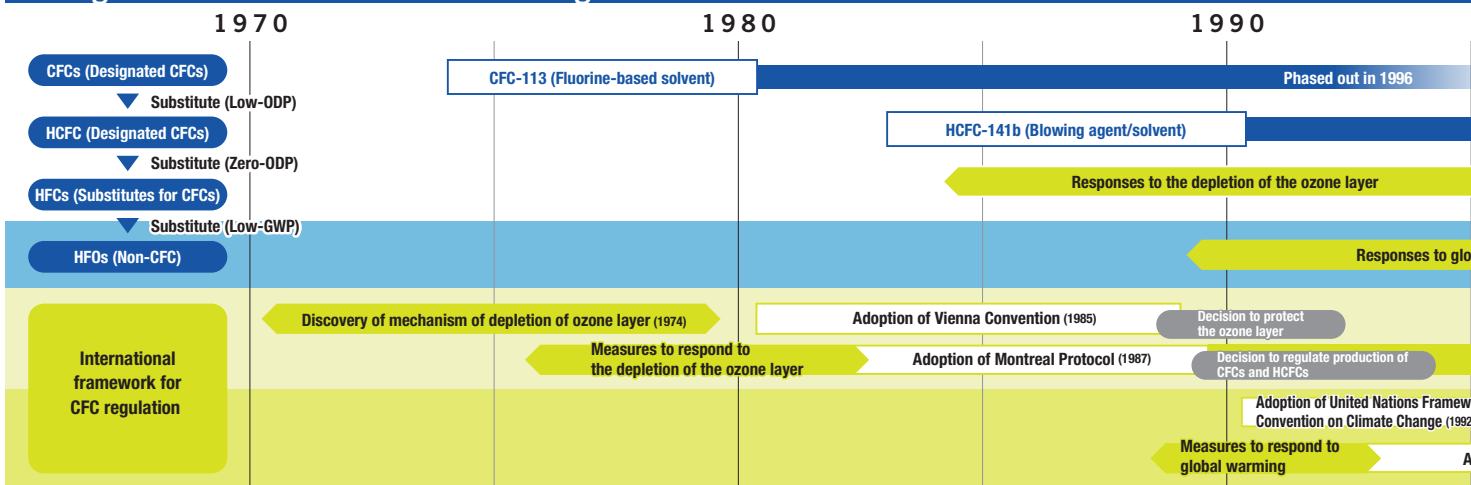
However, the effect of CFCs in depleting the ozone layer and contributing to global warming became known with the discovery of the mechanism of ozone depletion in 1974, creating a need for the development of alternative substances.

Against this backdrop, Central Glass developed the fluorine-based blowing agent HFO-1233zd(E), used mainly in rigid urethane foams, and the fluorine-based solvent HFO-1233zd(Z), used mainly to clean metals and electronic components. These are non-CFC products that can replace CFCs.

Major Events in Relation to CFC Regulation

1974	Discovery of mechanism of depletion of ozone layer
1985	Adoption of Vienna Convention → Decision to protect the ozone layer
1987	Adoption of Montreal Protocol → Decision to regulate production of designated CFCs
1992	Adoption of United Nations Framework Convention on Climate Change → Agreement to combat global warming
1997	Adoption of Kyoto Protocol → Decision to regulate emissions of greenhouse gases (including HFCs)
2015	Adoption of Paris Agreement → Decision to make efforts to combat global warming by all signatory nations
2016	Revision of Montreal Protocol (Kigali Revision) → Decision to regulate production of HFCs

Changes in the Environment surrounding CFCs and Central Glass's Fluorocarbon Business



Next-Generation Non-CFC Products

Next-generation blowing agent HFO-1233zd(E)

HFO-1233zd(E) is a low-GWP product with a GWP*¹ approximately one thousandth that of existing products (GWP=1). Its performance is either equal or superior to the currently used HFC-245fa, but it does not contribute to ozone depletion.

Hydrofluorocarbons (HFCs) that do not damage the ozone layer are currently used as fluorine-based blowing agents. Central Glass is the only company producing HFC-245fa in Japan, and also sells the product. However, HFCs were targeted for reduction in the Kyoto Protocol as greenhouse gases that absorb heat released from the surface of the earth.

Central Glass therefore worked to develop technologies for a next-generation blowing agent with a low GWP and environmental burden.

*1 Global warming potential (GWP): An index that expresses the degree to which a greenhouse gas contributes to global warming, compared to the benchmark of carbon dioxide

*2 Ozone depletion potential (ODP): A relative value that indicates the potential of a substance to destroy the ozone layer, compared to CFC-11 as a benchmark



Our Ube UF-1 Plant, where HFO-1233zd(E) is manufactured

Next-generation solvent HFO-1233zd(Z)

HFO-1233zd(Z), developed by Central Glass, is a fluorine-based solvent that satisfies all of the requirements of environmental performance, cleaning performance, safety, and easy handling.

Although substances such as chlorine-based methylene chloride and bromine-based 1-bromopropane were previously used in fields requiring cleaning performance, the toxicity of these substances and especially their effects on health have become issues in recent years.

In the area of fluorine-based solvents and cleaning agents, HCFC-225 and HFC- and HFE-based substances have been used since the complete phase-out of HCFC-141b. However, HCFC-225 has a high ODP*², and will be phased out in 2020. Many efforts are underway to reduce HFCs and HFEs, which have high GWPs. Under such conditions, there is demand for the development of environmentally friendly products with zero ODP and low GWP.



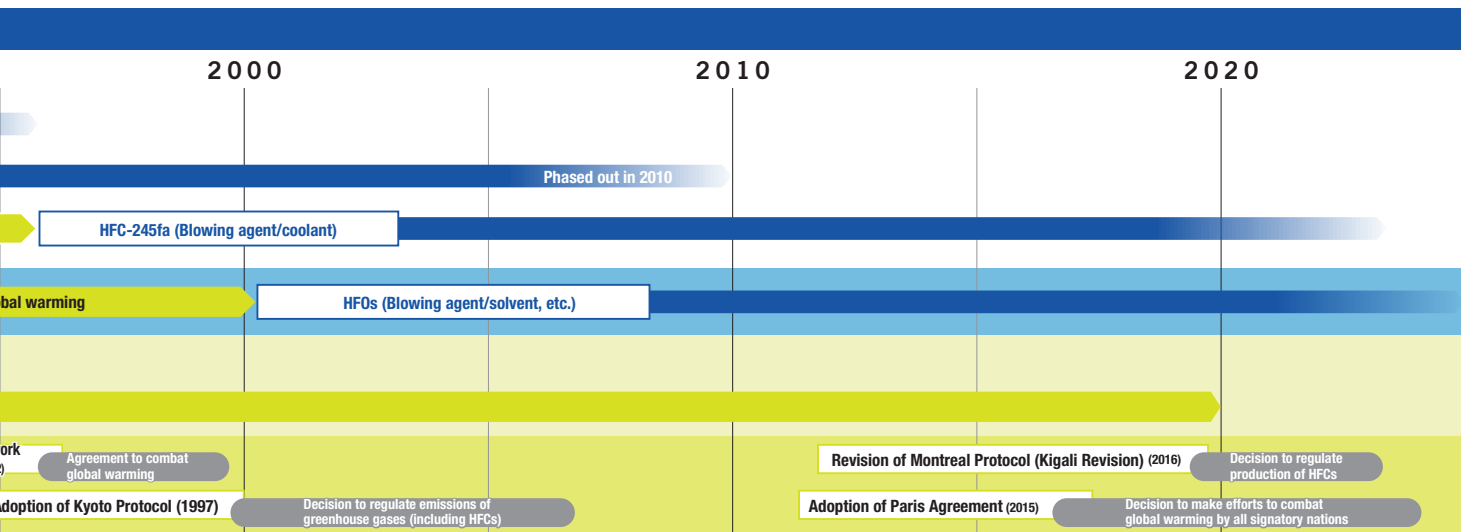
Packaging of HFO-1233zd(Z) (Left: 20L pail; Right: 200L drum)

Expansion of the Ube Plant and Future Plans

Formerly, we only manufactured fluorocarbon products at our Kawasaki Plant. As we predict increased demand for our next-generation blowing agent, a promising material in efforts to address global warming, we began operating a new facility that manufac-

tures HFO-1233zd(E) at our Ube Plant in fiscal 2016.

Central Glass will continue to respond to social demands, contributing to a better global environment through R&D and global supply.



Development of Aoverre® Transparent Screen Glass

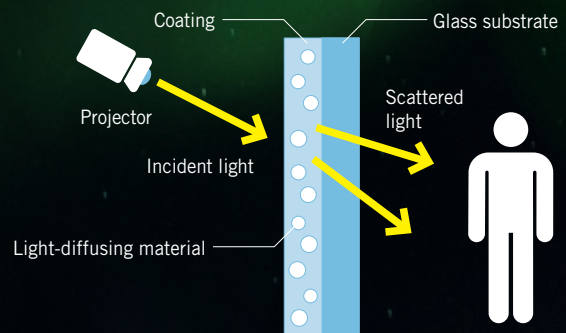
A Social Contribution with Added Value Born from Central Glass Technology

As a material, glass offers a variety of functions in addition to admitting light and providing transparency. It can also block out heat and sound, and prevent crime and disasters. Thanks to these functions, glass is used in not just buildings and automobiles, but almost every possible application. Demand for digital signage in a variety of places including commercial facilities, stores, showrooms, and office buildings is on the rise, and expected to continue growing, particularly in Tokyo as it prepares to host the Olympics.

Under these circumstances, Central Glass developed Aoverre® jointly with Vision Development Co., Ltd. (based in Hachioji City, Tokyo), with funding from the Strategic Innovation Promotion Program of the Japan Science and Technology Agency (JST), and began selling the product in March 2017. Aoverre® is a revolutionary product consisting of glass with a transparent coating, created by dispersing diamond powder across the surface of transparent float glass. Images or written information can be displayed on the glass by using a projector, while the glass itself remains transparent. Conventionally, glass with a semi-transparent film coating is used for projecting images onto glass. Compared to film-coated glass, Aoverre® offers a greater range of viewing angles – the image retains its clarity no matter the angle from which it is viewed. Aoverre®

also displays excellent durability because the hardness of the coating is similar to that of glass. Another merit of the product is that it does not require the installation of LCDs, or pasting of posters or cutting sheets onto the glass surface.

The use of Aoverre® in a wide range of applications will allow Central Glass to contribute to an information-driven society. We will continue to advance R&D aimed at increasing the added value of glass.



Sample application of Aoverre®



*The image above is for illustrative purposes, and may differ from the actual product.

VOICE

About the Development of Aoverre®

Aoverre® is a new product that Central Glass developed by concentrating all of its expertise in the area of functional glass coatings. Because functional glass requires a high-quality appearance in addition to performance, it is very important to optimize the selection of materials and the method of coating in order to satisfy both requirements. My goal is to continue to find ways to improve the performance and quality of glass and expand its applications in order to pursue higher added value.

Masafumi Inoue

Research Engineer
Glass Research Center



Increasing the Transparency and Fairness of Overall Management

Central Glass has established a corporate governance structure to increase the transparency and fairness of its overall management and to improve efficiency and speed. We are also carrying out initiatives to raise all employees' awareness of compliance in order to practice honest corporate activities.

Corporate Governance

Central Glass is continually increasing the transparency and fairness of its overall management, and strives to establish an efficient, rational organizational structure that can respond swiftly to changes in the business environment in order to further enhance its corporate value and expand its revenue. This is our fundamental concept of corporate governance.

Based on this concept, we position our Board of Directors and Board of Corporate Auditors as the foundation of Central Glass's corporate governance. In addition, we have adopted an executive officer system. By separating decision-making re-

garding important business matters, the supervision of business execution, and the actual execution of business, we have slimmed down the Board of Directors to make management more efficient and prompt.

In order to enhance auditing and supervisory functions, independent outside directors and outside auditors who pose no risk of a conflict of interest with general shareholders ensure the fairness of decisions made by the Board of Directors and play a role in eliminating arbitrary decisions by the Board of Directors.

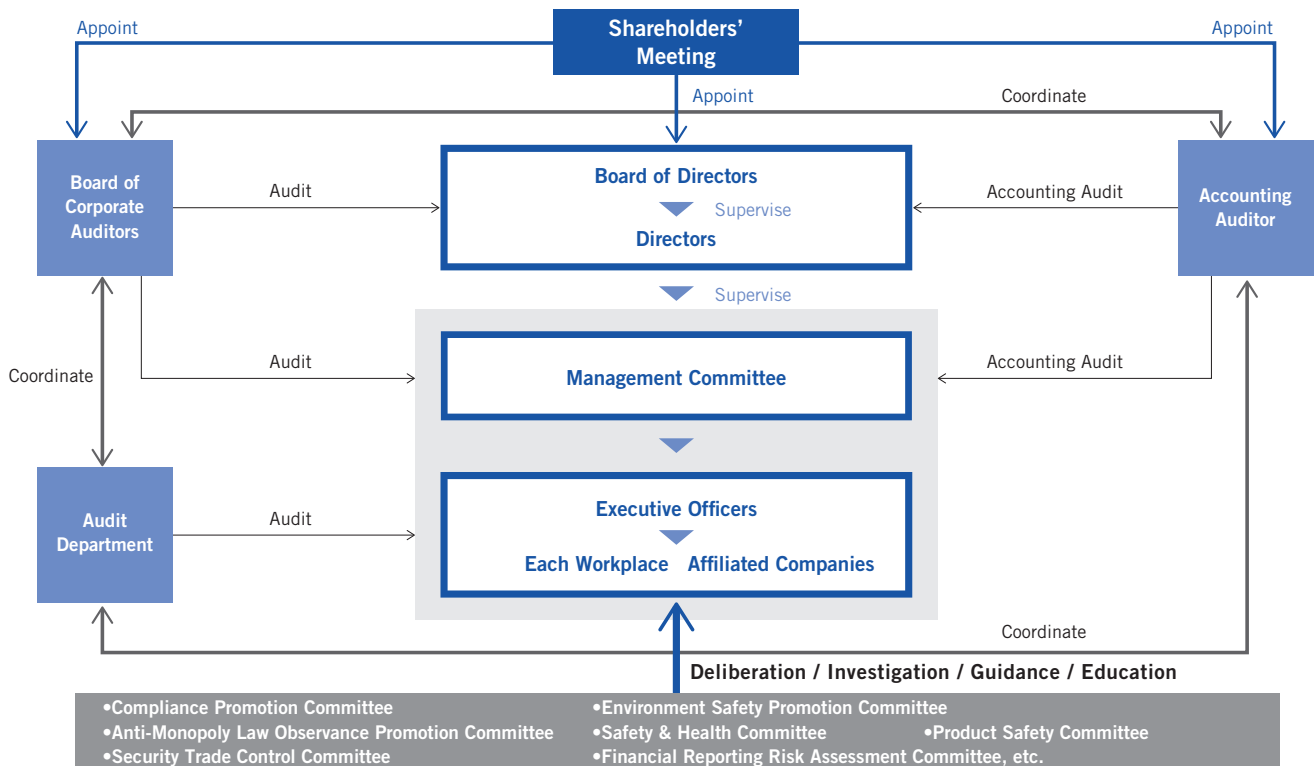
Compliance with the Corporate Governance Code

The Tokyo Stock Exchange began applying Japan's Corporate Governance Code in June of 2015. The Corporate Governance Code provides rules to ensure that corporate decision-making is conducted rapidly, transparently, and with integrity. Listed companies are expected to explain the status of their compliance with the rules and related policies in reports on corporate

governance (via the Japan Exchange Group's website).

Central Glass has put every aspect of the Corporate Governance Code into practice. We will follow the intentions of the Code in establishing fair, rapid, and decisive decision-making mechanisms as we strive to realize sustainable growth and increase corporate value over the medium and long term.

Organizational Chart for Corporate Governance



Recent Efforts to Reform Corporate Governance and Compliance

Year	Status
May 2006	The Board of Directors decides on a basic policy regarding the establishment of an internal control system stipulated in Japan's Companies Act.
April 2008	The system is partially revised with content to exclude antisocial forces.
April 2009	The system is partially revised with regard to internal information management and insider trading rules as well as an internal control system concerning financial reporting and a financial reporting risk assessment committee.
April 2010	The system is partially revised with regard to appointment of outside directors, enhancement of the internal whistleblowing system, and a compliance promotion committee.
April 2012	The system is partially revised with regard to an appropriate management system for confidential information and measures against persons from crime syndicates when making contracts.
April 2014	The Board of Directors makes partial revisions with regard to the communication of undisclosed internal information and regulation of acts that recommend trade in line with an amendment to Japan's Financial Instruments and Exchange Act, and to prevent unforeseen damages to the company and involvement in unanticipated scandals due to the spread and use of social media.
April 2015	The system is partially revised with regard to the development of a system to ensure reasonable business practices in corporate groups and a system to support auditing by auditors in line with amendments to Japan's Companies Act and Ordinance for Enforcement of the Companies Act, as well as personal information protection and prevention of sexual and power harassment.
April 2016	The system is partially revised with regard to ensuring appropriate handling of personal identification numbers, maintaining the soundness of contract management, and establishing and operating a system for preventing bribery.

* Corporate governance: The way a corporation should be governed

* "Compliance" refers not only to the observance of laws and regulations in a limited sense, but also includes the observance of a wide range of social norms when conducting business activities.

Compliance

In order to establish corporate governance, it is essential to raise our awareness of compliance in addition to upgrading and reinforcing our corporate governance framework. To fulfill this purpose, the Central Glass Group established the "Central Glass Group's Code of Conduct" as the internal code for conducting faithful business activities with stakeholders such as business partners, customers, consumers, and employees. Every employee carries a card displaying this Code of Conduct to constantly enhance awareness of compliance. The top executives also strive to set a good example through their actions.

We also created a "Compliance Manual" to serve as a guide on dictating social norms and corporate ethics. This manual covers a wide range of fields including, among others: anti-

monopoly law; independence from antisocial forces; intellectual property rights; regulations on insider trading; environmental conservation; the workplace environment; the protection and management of information; and respect for human rights. The Central Glass Group also established and started operating a Whistle Blowing System so that all employees can obtain guidance and consult on issues.

The effective use of these systems, together with regular education through internal training seminars, helps each employee gain a deeper understanding of relevant laws and regulations and take appropriate action when conducting business. Through these activities, the Central Glass Group aims to enhance both awareness and compliance.

Compliance Education

Central Glass conducted an e-learning program for all employees in FY2016. This e-learning program utilized the Compliance Manual discussed in the "Compliance" section of this report, and sought to provide employees with a comprehensive understanding of its content.

Moreover, to provide further practical education, we have been conducting a series of study sessions on the antimonopoly law for salespersons, including employees at our affiliates. These sessions are held in small groups within each of our de-

partments, and emphasize multidirectional communication, both between participants and lecturers and between participants themselves. Through the examination and discussion of problems contained in case studies customized for each participating group, the study sessions give employees an understanding of the antimonopoly law as something that concerns them closely, and foster an awareness of risk in the course of daily work.

Risk Management

In response to risks that Central Glass regards as particularly important, we have established a variety of committees that formulate relevant rules. In addition, each of our business and management departments, including those at affiliated companies, manages risks specific to that department.

When new risks arise or are likely to occur, we quickly appoint an executive officer to take responsibility for response to the risk. The Board of Directors also receives a report from the relevant committee or executive officer or requests a report, as necessary, and works to assess the risk, including our social responsibility, and determine the necessary response.

Overseas Risks

Central Glass regularly holds meetings attended by responsible personnel from our overseas affiliates and our own managing departments, and makes efforts to share information concerning overseas risks. In addition, when the Ministry of Foreign Affairs provides advisories regarding overseas terrorism incidents, etc., our Head Office quickly makes announcements to the entire Group. We have systems in place to share the necessary information throughout the Group to ensure that we are not involved in unexpected contingencies.

When we dispatch staff overseas, we work to proactively prevent exposure to risks by providing advance lectures and training that ensure the staff understands local customs and etiquette.

Whistleblowing System

In addition to establishing an in-house liaison, Central Glass also provides access to an external legal office as a whistleblowing system. We have set the system in place to enhance our compliance, and work to identify and correct organizational and personal violations of laws and regulations at an early stage.

BCP

Central Glass prepares for the possibility of large-scale accidents, natural disasters, etc. by working to institute measures for security and disaster prevention at all of our worksites. We have also formulated a BCP to ensure business continuity. The appropriate implementation of our BCP at the appropriate time ensures that we can minimize damage when a disaster occurs and rapidly get our main businesses up and running again, preserving the confidence of our stakeholders. We will continually work to maintain and improve our BCP in order to increase its viability.

Information Management System

Central Glass's information management system is thoroughly compliant with the Act on the Protection of Personal Information, and related laws and regulations. As a concrete measure, we have established Regulations for Protection of Personal Information. In addition, in order to ensure that the spread and use of social media does not involve the company or our employees in any unforeseen damages or trouble, we have established Social Media Guidelines, and are warning our employees of the risks involved. We have also responded to Japan's new personal identification number system by creating a safety management system based on the Basic Guidelines for the Appropriate Treatment of Specific Personal Information, etc. and Rules for the Handling of Specific Personal Information, etc.

In compliance with the Timely Disclosure Rules formulated by the Tokyo Stock Exchange, we have established a system to respond rapidly by releasing any company information that is subject to timely disclosure.



Promoting Management that Meets Societal Demands

The Central Glass Group undertakes voluntary management activities aimed at making improvements by taking care to ensure the environment, safety, and health and environmental protection over the total life cycle of our products, from the R&D stages through to the procurement of raw materials, production, distribution, use, and disposal. We pay meticulous attention in order to maintain, manage, and guarantee the quality of the products that we deliver to our customers, and have set in place structures for their production, transportation, and supply. We promote management that is responsive to the societal demands of every one of our stakeholders as we aspire to be a company that is truly beneficial and contributes to society.

Mid-term Targets and FY2016 Results

Progress Accomplished: ⊙ Made steady progress: ○ Additional measures required: △

Major Issues	(P)Mid-Term Targets	(D)FY2016 Results	(C)Ratings	(A)FY2017 Plans
Establishment & maintenance of environmental management system	<ul style="list-style-type: none"> Renew and maintain certification at Ube, Kawasaki, and Matsusaka Plants (including the Sakai Manufacturing Site). 	The Ube Plant, Kawasaki Plant, and Matsusaka Plant (including the Sakai Manufacturing Site) maintained their ISO 14001 certification and underwent a periodic review for certification renewal.	⊙	Renew and maintain certification at Ube, Kawasaki, and Matsusaka Plants (including the Sakai Manufacturing Site).
	<ul style="list-style-type: none"> Renew and maintain certification and promote acquisition of new certification at affiliates. Improve self-management level at affiliates that have not acquired certification. 	Domestic affiliates that have already acquired certification maintained and continued their certification. During onsite audits, provided guidance on self-management to affiliates that have not yet acquired certification.	○	Renew and maintain certification and promote acquisition of new certification at affiliates. Improve self-management level at affiliates that have not acquired certification.

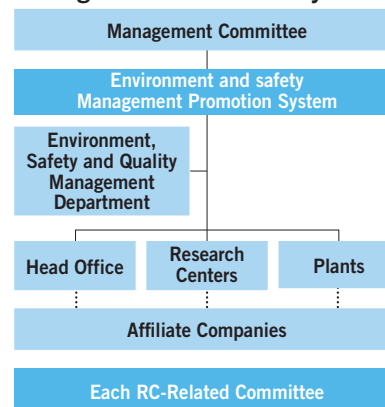
Environment, Safety, and Quality Management Promotion Systems

The various supervisory departments for each area form the core when it comes to promoting the environment, safety, and quality management systems at Central Glass. They coordinate with other related departments in order to follow up on the various activities at our head of ce, plants, research centers, and affiliate companies.

As indicated in the figure on the right, our Environment Safety Promotion Committee forms the core of our responsible care activities, while our Environment, Safety and Quality Management Department serves as the secretariat for this. They support and promote activities related to environmental and safety matters carried out by each of our departments.

Environmental safety aspects...Environment, Safety, and Quality Management Department
Product safety aspects...Glass Quality Assurance Department; Chemicals Quality Assurance Department; Environment, Safety, and Quality Management Department
Occupational safety and health aspects...Personnel Department; Environment, Safety, and Quality Management Department
Social demands...Corporate Administration Department
Education/human resource building aspects...Personnel Department

Environment and Safety Management Promotion System



Acquisition Status for Environmental, Safety, and Quality Management System

Workplaces	Environment	Quality		Safety
	System ISO 14001, etc.	ISO 9001	ISO/TS 16949	OHSAS 18001
Ube Plant	○	○		○
Kawasaki Plant	○	○		
Matsusaka Plant (including Sakai Manufacturing Site)	○	○	○ (Matsusaka Plant)	
Central Chemical Co., Ltd. - Ube Plant	○			○
Mie Glass Industry Co., Ltd. - Matsusaka Plant	○	○		
Central Glass Plant Services Co., Ltd. - Matsusaka Plant	○			
Central Glass Plant Services Co., Ltd. - Urayasu Plant		○		
Central Glass Plant Services Co., Ltd. - Sakai Plant / Sakaide Manufacturing Site	○ (Sakai Plant)	○		
Central Glass Fiber Co., Ltd. - Matsusaka Plant / Kasugai Plant	○ (Matsusaka Plant)	○		
Central Glass Engineering Co., Ltd.		○		
Central Glass Module Co., Ltd. - Head Office / Kyushu Plant			○	
Japan Tempered & Laminated Glass Co., Ltd.	○ ¹	○		
Carlex Glass America, LLC (Vonore Plant) (US)	○		○	
Carlex Glass America, LLC (Nashville Plant) (US)	○		○	
Carlex Glass America, LLC (Ligonier Plant) (US)	○		○	
Carlex Glass America, LLC (Auburn Plant) (US)	○		○	
Carlex Glass Luxembourg, S.A. (Luxembourg)	○		○	
Apollo Scientific Limited (UK)	○	○		
JCEL Co., Ltd. (South Korea)	○	○		
Taiwan Central Glass Co., Ltd. (Taiwan)	○	○		
Central Glass (Zhangjiagang) Co., Ltd. (China)		○		
Giga Gas & Electronic Materials Company (Taiwan)		○		
Central Glass Chemspec Company Ltd. (China)		○		

*Affiliates shown are those over which Central Glass has the right of control.
 *Acquisition statuses for overseas affiliates are as of December 31, 2016.

*Acquisition statuses of Central Glass and affiliates in Japan are as of March 31, 2017.
 *1 Eco-Action 21

Environment and Safety Audits

Central Glass carries out environment and safety audits every year focusing on our plants, research centers, and domestic affiliates, in order to verify the status of their responsible care activities. Our audits are conducted in two stages: a self-audit in which all targeted workplaces use a checklist to check the status of their RC activities, and an onsite audit in which the Environment Safety Department checks workplaces, selected based on the self-audit results, through direct visits.

In FY2016, onsite audits were carried out at 17 of our workplaces, and we also instituted site visits, documentation checks, and hearings on matters of concern and important issues.

During onsite audits, we verify whether RC activities are being implemented appropriately and perform detailed checks including confirming environmental compliance and conducting safety risk assessments. This helps improve initiatives at

each of our workplaces.

Continuing from FY2015, we conducted audits of four overseas affiliates in FY2016.



Environment and safety onsite audit (Kawasaki Plant)

Education and Training for Environmental and Safety Aspects

Under the recognition that “all of our employees are talented individuals and treasures to the company”, each of the workplaces in the Central Glass Group focuses its efforts on education and training. Education and training are indispensable for every one of our employees as members of society to deepening the understanding of the environment as one of CSR activities, as well as to acting in a responsible manner or minimizing damage when disasters occur. We offer education and training at each workplace in a timely manner by choosing themes that are suited to the timing of implementation and targeted employees, with the goal of raising their awareness of such environmental, safety, and other issues.

In FY2016 we carried out disaster drills and provided education related to the environment and safety at many of our workplaces on several occasions.

At the Head Office, we conducted a safety training workshop (focusing on “5 Whys” analysis) for employees responsible for safety at Central Glass and domestic affiliates (twenty-four people). Safety-related problem-solving requires every individ-

ual to be engaged, correctly recognize problems, and act with self-awareness.

A partial list of the education/trainings related to the environment, safety, and other issues offered at our head office, research centers, plants, and affiliate companies in FY2016 is shown in the table below.



Safety training workshop (Head Office)

Examples of environmental education and training held in FY2016

Workplaces	Overview of education and training	Targeted persons	Dates held	Number of attendees
Head Office	Safety training workshop (“5 Whys” analysis)	Employees responsible for safety at Central Glass and domestic affiliates	December 2016	24
Chemical Research Center	Emergency call training	Center staff	February 2016	Approx. 100
Chemical Research Center (Ube)	Risk assessment of chemical substances	Center staff	August 2016	57
Glass Research Center	Education on health checkups (significance and details of special examinations)	Center staff	August 2016	67
Ube Plant	Education on disaster prevention (for line managers, process supervisors, and operation leaders)	All employees of the Ube Plant and affiliates/ Cooperating worksites	November/ December 2016	419
Matsusaka Plant	ISO 14001 environmental education	All employees within the ISO 14001 site	Different for each department	Approx. 1,000
Matsusaka Plant – Sakai Manufacturing Site	Safety education using the safety video “Preventing Daily Work Accidents”	All employees of manufacturing sections	May 2016	36
Kawasaki Plant	Tsunami evacuation training	All employees	February 2017	140
Central Engineering Co., Ltd.	Education on “Rules for the Management of Chemical Substances Used in Products”	All employees	July 2016	155
Japan Tempered & Laminated Glass Co., Ltd.	Training for response to emergency situations (methods of shutting off LP gas)	All employees	November 2016	85

Environmental Accounting

We calculate the environmental costs related to our environmental preservation initiatives for air, water, soil, and disposal of waste at Central Glass and our main affiliates in Japan.

Our investments increased from the previous fiscal year due to capital investment in facilities for the production of next-generation replacements for CFCs. In expenses, a decline in the volume of production of certain products caused the volume of industrial waste produced by manufacturing process-

es to decrease, and our waste processing expenses were reduced as a result. In terms of environmental preservation effects, our emissions of pollutants affecting water quality increased as a result of plant operations. We and our domestic affiliates will continue to work to promote environmental preservation by maintaining appropriate environmental preservation costs.

Environmental Preservation Costs

(Unit: million yen)

Category	Major initiatives	FY2015		FY2016	
		Investments	Expenses	Investments	Expenses
(1) Business area costs		711	3,327	1,605	3,047
Pollution prevention costs	Preventing the pollution of the air, water, soil, etc.	186	1,685	1,350	1,660
Global environmental preservation costs	Preventing global warming, measures to conserve energy, etc.	520	177	185	172
Resource recycling costs	Waste disposal, recycling treatment, etc.	5	1,465	70	1,215
(2) Upstream/downstream costs	Collection, recycling, and appropriate disposal of products, etc.	0	0	0	0
(3) Cost of management activities	Maintaining the EMS, environmental monitoring, environmental education costs, etc.	3	230	0	247
(4) Cost of R&D activities	R&D of products involved in environmental preservation	6	449	19	526
(5) Cost of social activities	Improving the environment, contributing to local communities, etc.	0	3	0	2
(6) Cost of dealing with environmental damage	Restoring the environment, environmental preservation compensation, etc.	0	0	0	0
Total		720	4,008	1,624	3,822

Environmental Preservation Effects (Environmental Impact Indices): Results for FY2016

Effect in business areas	Environmental impact	FY 2015	FY 2016	Year-on-year change (%)
Greenhouse gases	CO ₂ equivalent (t-CO ₂)	577	540	▲6.4
	Atmospheric impact (SO _x , NO _x , ash dust) (tons)	3,913	3,604	▲7.9
Environmental pollutant	Water-quality impact (COD, total phosphorous, total nitrogen) (tons)	74	87	17.0

The Flow of Substances at the Central Glass Group

The Central Glass Group quantitatively tracks the environmental impact of manufacturing processes in order to identify environmental issues and implement measures for making improvements as we constantly strive to reduce the burden on the environment.

A huge amount of heat energy is needed to melt raw ma-

terials in the glass business, so its central issue is measures to prevent global warming. The development of environmentally friendly products and reducing waste are the central issues of the chemicals business, and sustained efforts are being made toward energy saving activities and to establish recycling systems.

INPUT

Total amount of materials input...1,085,000tons		Amount of water resources input...22.252million m ³		Amount of net energy input.....12,741TJ*	
Central Glass	Affiliate companies	Central Glass	Affiliate companies	Central Glass	Affiliate companies
444,000tons	641,000tons	12.443million m ³	9.809million m ³	6,561TJ	6,180TJ

*TJ (terajoules) is a unit for energy (joules). One terajoule is equal to one trillion joules.



OUTPUT

Atmosphere		Water		Waste	
Emissions of greenhouse gases...807,000tons-CO ₂		Net amount of discharged water...18.195million m ³		Net emissions of waste106,000tons	
Central Glass	Affiliate companies	Central Glass	Affiliate companies	Central Glass	Affiliate companies
460,000tons-CO ₂	347,000tons-CO ₂	10.131million m ³	8.064million m ³	39,000tons	67,000tons
Emissions of substances that damage the atmosphere...3,755tons		Emissions of substances that affect water quality...95tons		Final amount of waste disposed.....19,000tons	
Central Glass	Affiliate companies	Central Glass	Affiliate companies	Central Glass	Affiliate companies
3,597tons	158tons	87tons	8tons	12,000tons	7,000tons
				Recycling rate for waste.....82%	
Central Glass	Affiliate companies			Central Glass	Affiliate companies
69%	90%			69%	90%

Reporting range

•Central Glass...Three plants, one manufacturing site, three research centers, and the head office

•Affiliate companies : Seven major domestic affiliates and eleven major overseas affiliates

Tabulation of emissions of environmental impact substances at overseas affiliates began in FY2013. Some worksites for which calculations were unavailable are excluded.

Industrial Safety and Health, Security and Disaster Prevention, Logistical Safety, and Safety of Chemical Substances

The Central Glass Group recognizes industrial safety and health, security and disaster prevention, logistical safety, and safety of chemical substances as the most important challenges in our corporate activities, and promotes initiatives for each of them.

Mid-term Targets and FY2016 Results

Progress Accomplished: ⊙ Made steady progress: ○ Additional measures required: △

Major Issues	(P)Mid-Term Targets	(D)FY2016 Results	(C)Ratings	(A)FY2017 Plans
Industrial health and safety	•No injuries causing lost work hours (try various timely measures)	Among all of our Group companies in Japan, including affiliates, there were six accidents resulting in lost work hours, a reduction of three from the previous year. This was the lowest number of accidents we have ever recorded. The total number of accidents, including those that did not result in lost work hours, was thirty-nine accidents, an increase of two from the previous year.	△	Implement proactive measures against accidents based on the analytical results of annual reports on Group-wide industrial accidents (eliminate potential hazards through risk assessment and KY, etc.) and hold safety training workshops aimed at implementing sound measures to prevent recurrence.
	•Enhance risk management for industrial health and safety	Continue to maintain OHSAS18001 certification at our Ube Plant. Continued efforts toward establishment of risk management systems at our Matsusaka and Kawasaki Plants.	○	Maintain and continue management system and cross-deploy it to other workplaces.
Security and disaster prevention	•Conduct voluntary safety audits on high-pressure gas by management •Enhance preventative measures against disasters	Periodic inspections were carried out by administrators at our Ube, Kawasaki, and Matsusaka Plants and Sakai Manufacturing Site. Voluntary safety audits on high-pressure gas were conducted. The state of management at workplaces with elevators, including statutory inspections, was confirmed for all group companies in Japan, including affiliates. Operation of a database for the collection of in-house accident data began in order to prevent similar accidents.	○	Continue to comply with laws and pass on safety techniques and know-how. Efforts toward establishing equipment safety measures. Make efforts to effectively utilize accident data.
Chemical and product safety	•Implement appropriate management of chemical substances	Compliance with the Act on the Evaluation of Chemical Substances, Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management. Thereof, and Industrial Safety and Health Act, and provision of information to the concerned parties (requiring various submissions). Sequentially improved SDS and labeling.	⊙	Continue compliance with laws & regulations and revision of our SDS and labeling.
	•Promote alternatives to or detoxification of environmental impact substances •Asbestos •PCBs •Other environmental impact substances	Removed and treated non-scattering asbestos-containing materials from manufacturing facilities when upgrades were made. All plants and affiliates sequentially implemented final disposal of low-concentration PCB machinery.	○	Continued removal of asbestos used at workplaces when upgrades are made. Continued strict management of machinery containing PCBs and their disposal according to local administrative guidance.
	<Promotion of Green Procurement> •Implement audits on chemical substances •Provide information to customers promptly	Each Group company in Japan, including affiliates, confirmed chemical substance management (compliance with laws) and customer response status using an environmental safety self-checklist.	○	Efforts to reduce the environmental impact of products by enhancing management of our database of information and to provide reliable and prompt information to our customers.

Industrial health and safety

The Central Glass Group believes that maintaining a safe working environment is a basic requirement for all business operations. In 2016, we once again conducted a variety of activities aimed at realizing zero accidents throughout the Group. These included implementation of risk assessment, particularly KY (hazard prediction), and prevention of recurrence of similar accidents by increasing awareness of the relevant preventive measures, which are among the items for implementation in our Policies on Safety and Health.

In addition, we called attention to safety measures by holding the “Summertime Industrial Accident Prevention Campaign,” as well as by issuing a white paper on “Industrial Accidents” and awarding “Safe Operation Awards” to further boost motivation regarding industrial safety.

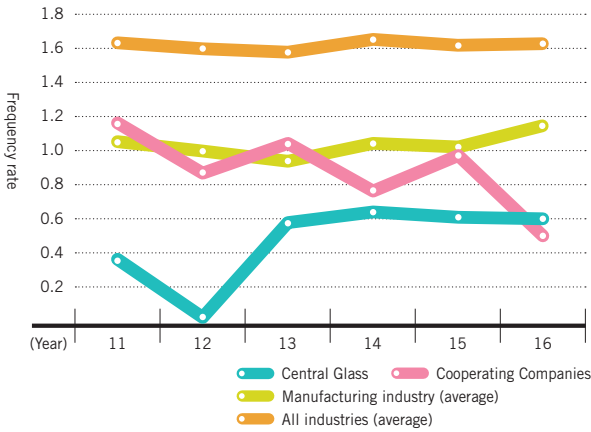
In 2016, there were thirty-nine accidents in total. Six accidents resulted in lost work hours, and thirty-three accidents did not. Compared to 2015, the number of accidents resulting in

lost work hours declined from nine to six, while the number of accidents that did not result in lost work hours increased from twenty eight to thirty three, representing an increase of two accidents in total. However, the number of accidents resulting in lost work hours was the lowest that we have ever recorded.

Compared to 2015, the rate of accidents resulting in lost work hours improved at Central Glass and cooperating companies. Figures for both Central Glass and cooperating companies were also below the averages for all industries and the manufacturing industry.

To make further progress in eliminating industrial accidents, we will work to improve safety awareness among all employees, through to end-process workers. In addition to initiatives such as 5S, safety patrols, risk assessment, and KY, managers will use reference materials that include case studies of past accidents to instill an awareness of risks and knowledge of measures to prevent recurrence.

Frequency rate of accidents resulting in lost work hours



Frequency rate of accidents resulting in lost work hours = (Number of deaths or injuries by accident / Total work hours) x 1,000,000 (The frequency rate of accidents that result in lost work hours per million working hours)

*Cooperating companies: Affiliate companies and cooperating contractors

2016 Policies on Safety and Health—Priority Implementation Items

1. Implement risk assessment, especially KY (hazard prediction).
2. Prevent similar accidents by keeping all members informed of measures to prevent recurrence.
3. Improve safety awareness by fostering sensitivity to danger.
4. Enforce 3S (Shifting/Organization, Sorting, and Shining/Cleaning) activities.
5. Promote healthcare, the maintenance of health, and mental healthcare.
6. Prevent traffic accidents during everyday driving as well as commutes.

Security and Disaster Prevention

Since most of Central Glass's major plants are located in areas designated by the Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities, each plant has established a full-scale security and disaster prevention system under the guidance of authorities concerned with the environment, security, and disaster prevention, as we aim to completely eliminate facility disasters. We make efforts to preemptively prevent accidents and disasters through efforts like activities at each plant that are based on the "Security and Accident Prevention Guidelines" compiled by the Japan Chemical Industry Association (JCIA) and the passing down of know-how to our young employees. We carry out drills at our plants and workplaces that simulate various different disasters and abnormal conditions in the aim of raising our level of disaster preparedness with our employees and the employees of each plant's contractors.

Our domestic affiliates are also working to ensure security and prevent disasters through facility management and training in accordance with laws and regulations.



Training in response to an oil spill at sea (Sakai Manufacturing Site, Matsusaka Plant)

In February 2017, a fire occurred at our Ube Plant during work to dismantle idle exhaust-gas treatment equipment. No employees were injured, and no environmental issues resulted. In order to prevent recurrence of a similar accident, we have strengthened our resolve to create safe and secure plants, and will continue to conduct our activities with safety as the highest priority.

Logistical Safety

Central Glass and its domestic affiliate companies implement periodic training and education for not only their employees but also employees at the workplaces to which they consign transporting. This is done to prevent accidents during the transportation of chemical substances and to minimize the damage if accidents occur. For example, at our Ube Plant, when drivers are appointed to transport things like high-pressure gases, they are given instruction by transportation managers. Furthermore, our domestic affiliate companies that handle chemical logistics provide education via SDS at monthly safety meetings and other such occasions.

When chemical substances are to be transported by road,

we prepare emergency contact cards (yellow cards) for drivers, which they carry not only when obligated by law, such as during the transportation of high-pressure gases and poisonous substances, but also during the transportation of other chemical substances, in accordance with the Guidelines for Logistical Safety Management that we have formulated.

On the cards, measures to be taken to minimize damage and details to be reported are clarified so that the transporter, firefighters or police officers can respond appropriately and promptly should an accident occur during transportation by road. The details listed on these cards are periodically revised by the relevant departments.

Safety of Chemical Substances

The regulations on chemical substances in countries around the world have grown more sophisticated, moving from traditional hazard management to risk management that takes into account exposure factors. The intention is to achieve the goal of the accord of the 2002 World Summit on Sustainable Development in Johannesburg, "Aiming to achieve, by 2020, the use and production of chemicals in ways that lead to the minimization of significant adverse effects on human health and the environment." Such regula-

Management of Chemical Substances

Central Glass has been surveying, aggregating, and reporting PRTR*¹ data voluntarily since 1995, prior to the enactment of the Chemical Substances Management Act (2000), in an effort to reduce emissions of chemical substances into the environment. The number of substances subject to notification in FY2016 at Central Glass and its domestic affiliates remained at sixty, as in the previous fiscal year (results for each of Central Glass's plants are given in the section "Activities at Individual Plants" at the end of the report).

We will continue to comply with laws and regulations including the Industrial Safety and Health Act, the Poisonous and Deleterious Substances Control Act, and the High Pressure Gas Safety Act in order to further enhance measures ensuring the safety and health of workers. Our affiliate companies, both in Japan and overseas, work to get a grasp of local laws and the chemical substances they handle in an effort to promote the management of chemical substances from a global perspective. We will continue working to properly manage chemical substances.

*1 PRTR: Pollutant Release and Transfer Register

Handling Asbestos

Structural components containing asbestos are still used in some of the buildings and production facilities at Central Glass and our domestic affiliate companies. We therefore identify the locations where those components are used and manage them appropriately. Components used for such applications as insulation or packing for piping in production facilities are being removed sequentially when facilities are upgraded and disposed of properly. Moving forward, we will continue to comply with laws and ordinances and promote appropriate measures for this.

Management of PCB Machinery

Central Glass and our affiliates in Japan rigorously store and manage and properly dispose of waste condensers and other equipment containing PCBs (polychlorinated biphenyls) in compliance with Japan's Waste Management and Public Cleansing Act and Act on Special Measures concerning Promotion of Proper Treatment of PCB Waste.

In FY2016, the Ube Plant, the Kawasaki Plant, and some affiliate companies disposed of their PCB waste.

tions include Europe's REACH regulations and Japan's revised Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. Furthermore, in recent years revisions to laws on chemical substances have been pushed forward in Asian countries, and we must continue to comply with these in the proper manner. Against this background, the Central Glass Group is working to ensure safety through a variety of different initiatives at every stage in which chemical substances are handled.

SDS and Labeling (Response to the GHS)

Central Glass and our domestic affiliate companies strive to provide information through SDS*² that conform to GHS.*³ When handling chemical substances and the like, measures necessary for risk abatement can be taken based on the information listed in the SDS, which is conducive to protecting safety and the environment. In addition, in an effort to manage safety, we strive to ensure that employees are thoroughly familiar with the SDS for not only our products but also for purchased raw materials. In addition, we are providing information through the labeling of containers and packaging in conformity with the GHS by moving ahead with reliable implementation in response to the amended Industrial Safety and Health Act that came into effect in June 2016. These SDS and labels are included in a company database that is used to share safety information.

*2 SDS: Safety Data Sheet. These are data sheets that list information related to the hazard-ousness of chemical substances and the like as well as information concerning the environment.

*3 GHS: The Globally Harmonized System of Classification and Labeling of Chemicals

Initiatives for Green Procurement

Central Glass is promoting the following initiatives across the entire company in order to proactively advance "green procurement." Green procurement gives priority to procuring raw materials and materials that have less of an impact on the environment when obtaining such goods.

Nowadays, as a result of moves like the enactment of Europe's REACH regulations and the revised Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., thoroughly ensuring the management of chemical substances throughout the entire supply chain and sharing information related to the chemical substances contained in products have grown increasingly important. Through these initiatives, we will promote the reliable management of chemical substances and accommodate requests for the public disclosure of information.

- ◆ Select environmentally conscious raw materials from the R&D through to the trial manufacturing stages
- ◆ Manage raw materials based on the "Green Procurement Guidelines"
 - Confirm the environmental management systems of our suppliers
 - Confirm whether or not substances designated for voluntarily restriction are contained within the raw materials we purchase
- ◆ Prevent the intermixing of environmental impact substances through appropriate process management
- ◆ Manage products (management of packaging materials and confirmation that targeted chemical substances are not contained within products)
- ◆ Share information among the concerned parties through the creation and use of a "Green Procurement Database"
- ◆ Provide education for the persons in charge of the relevant departments

Enriching Society by Protecting the Global Environment and the Health and Safety of People

The Central Glass Group will strive to enrich society through measures that ensure the protection of the global environment and the health and safety of people throughout the entire lifecycle of our products—from product development, the purchasing of raw materials, and manufacturing to distribution, use, and disposal.

Mid-term Targets and FY2016 Results

Progress Accomplished: ⊙ Made steady progress: ○ Additional measures required: △

Major Issues	〈P〉Mid-Term Targets	〈D〉FY2016 Results	〈C〉Ratings	〈A〉FY2017 Plans
Prevention of global warming (energy and resource conservation)	<FY2020 Target> •Reduce FY2020 CO ₂ emissions by 15% relative to FY2005.	CO ₂ emissions totaled 460,000 tons, down 51% from FY2005.	⊙	Continue working toward the FY2020 target of a 15% reduction in CO ₂ emissions relative to FY2005.
Reduction of waste	<FY2020 Target> •Reduce final landfill disposal volume by 71% relative to FY2000.	Final disposal volumes at the Ube, Kawasaki, and Matsusaka Plants (including the Sakai Manufacturing Site) were down 82% from FY2000, meaning that we have already achieved our FY2020 target.	⊙	Continue to work toward our FY2020 target of a 71% reduction in the volume of final landfill waste compared to FY2000. Maintain and continue to realize the level reached in FY2015.

Our Efforts to Prevent Global Warming

The Central Glass Group strives to reduce emissions of greenhouse gases into the atmosphere through the manufacturing and shipper's transportation of goods in order to prevent global warming.

Central Glass

Central Glass has set and is working toward a target of reducing the greenhouse gases given off by the use of fuel, purchased power, and raw materials for manufacturing by 15% relative to 2005 levels by 2020, with this serving as a mid-term initiative to prevent global warming.

Our greenhouse gas emissions due to plant operations in FY2016 were reduced by 51% relative to FY2005. In addition, greenhouse gas emissions resulting from product transportation were down against the previous fiscal year.

Partly due to a change in our business configuration, which had previously been centered on the Ube Plant, there has been a significant drop in our emissions of greenhouse gases. However, in the future we will build new manufacturing facilities and expand our product lineup. We will therefore continue to work to reduce our greenhouse gas emissions.

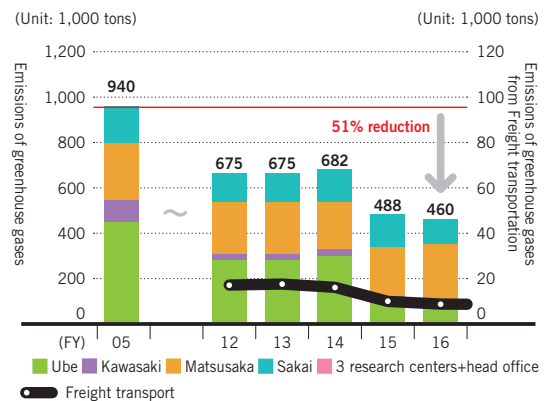
The Central Glass Group

Emissions of greenhouse gases for the Central Glass Group declined from the previous year, despite the fact that the number of production sites managed by overseas affiliates included in the total increased by one.

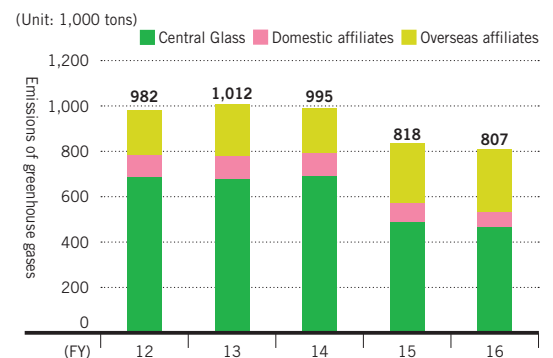
Each production site is pursuing energy-saving initiatives and upgrading to energy-saving equipment, thereby reducing greenhouse gas emissions.

In the future, the Central Glass Group will continue to work to reduce its emissions of greenhouse gases in order to combat global warming.

Emissions of greenhouse gases (Central Glass)



Emissions of greenhouse gases (Central Glass Group)



Reducing Environmental Impact Substances

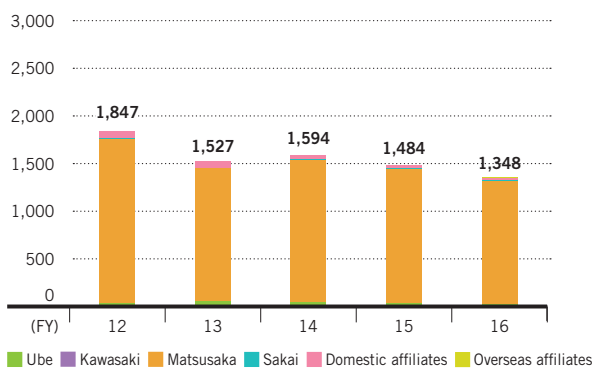
The Central Glass Group's manufacturing sites are operated in compliance with emissions standards for the atmosphere, water quality, and other environmental indicators in the regions where they are located. Reducing environmental impact substances is an important challenge in consideration of the global environment and human health and safety, and so for the future we will continue to undertake appropriate management for this.

Countermeasures Against Substances that Damage the Atmosphere

Of the substances that damage the atmosphere, trends in our emissions of sulfur oxide (SOx), nitrogen oxide (NOx), and ash dust are shown below.

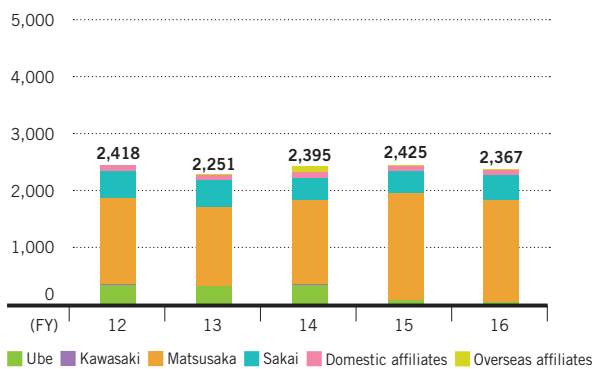
SOx emissions

(Unit: tons)



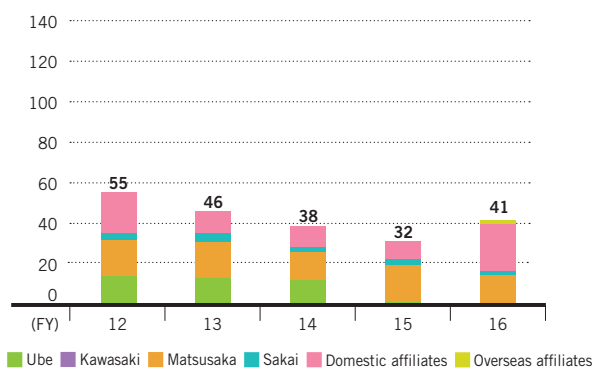
NOx emissions

(Unit: tons)



Ash dust emissions

(Unit: tons)

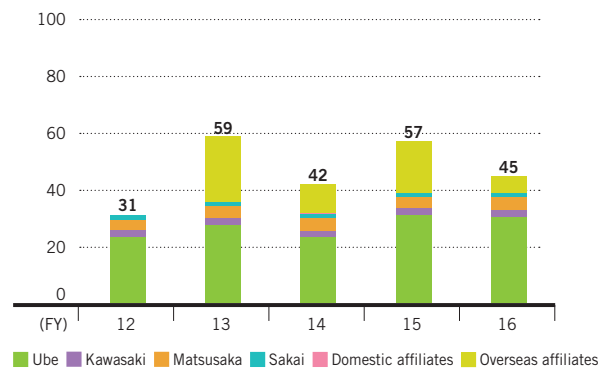


Countermeasures Against Pollutants that Impact Water Quality

Among controlled substances that impact water quality, trends in our chemical oxygen demand (COD) and total emissions of both phosphorous and nitrogen are shown below.

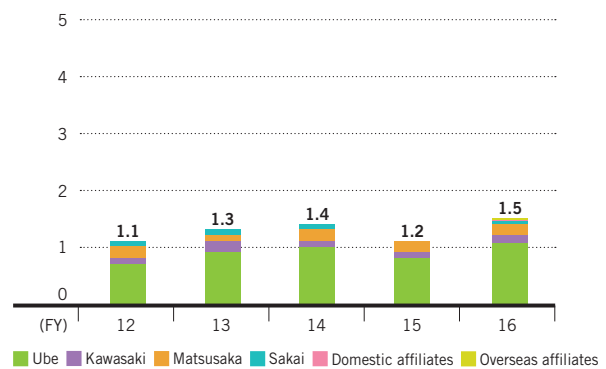
Chemical oxygen demand (COD)

(Unit: tons)



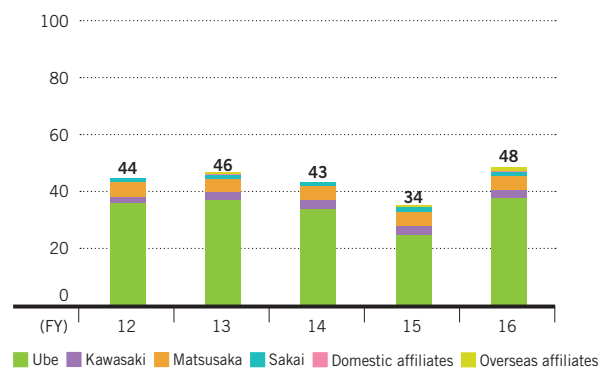
Total phosphorous emissions

(Unit: tons)



Total nitrogen emissions

(Unit: tons)



Reducing Industrial Waste

The Central Glass Group is striving to reduce its industrial waste in accordance with the Basic Act on Establishing a Sound Material-Cycle Society.

Central Glass

Central Glass's plants uphold "promoting reduction and reuse/recycling of industrial waste" as an important task in our responsible care activities, and each workplace carries out initiatives accordingly.

We have been working toward the target of a 65% reduction in industrial waste (final disposal volume) from the FY2000 level by FY2015. We met this initial target, and ultimately achieved a reduction of 74% from the FY2000 level in FY2015. From FY2016 onward, we have set a target of a 71% reduction from FY2000, based on targets set by the Japan Chemical Industry Association and the Flat Glass Manufacturers Association of Japan according to guidelines established by the Japan Business Federation. We aim to achieve this target by 2020.

In FY2016, our industrial waste (final disposal volume) amounted to approximately 12,000 tons, down 82% from FY2000. Thus, we have already achieved our target. We will continue management efforts to achieve our target for 2020.

(Government target: 70% reduction in the final disposed amount of industrial waste in FY2020 compared to FY2000)

The Central Glass Group

As a waste-emitting company, Central Glass, along with its domestic affiliates, unflinchingly complies with Japan's Wastes Disposal and Public Cleansing Act and other relevant laws when it comes to the sorting and storage of waste, as well as consignment, monitoring, and manifest management for proper disposal by industrial waste disposers.

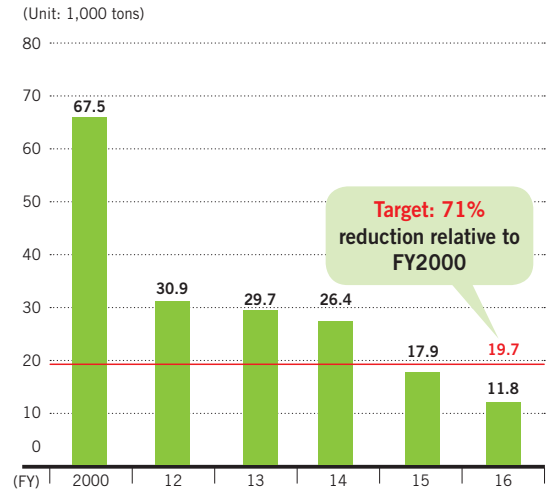
Each of the Central Glass Group's workplaces carries out its own original waste-reduction measures, and as a result, the downward trend in the amount of industrial waste (final disposal volume) continued from FY2015 to FY2016.

We began tabulating the amount of waste at overseas affiliates in FY2006 and continued to follow up with them in FY2016. Each individual company is carrying out efforts to reduce its waste. In particular, our glass plants deployed overseas have been working to reuse nearly 100% of their glass, just like our domestic plants.

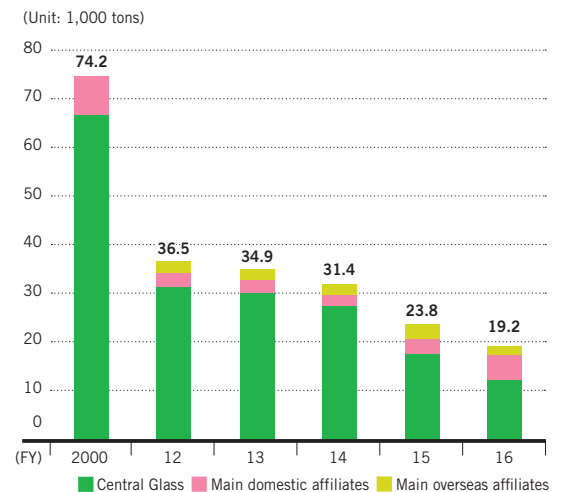
Green Procurement

Central Glass and our domestic affiliate companies enacted "Green Procurement Guidelines" in 2006, and are committed to purchasing products that contribute to lower environmental impacts. Due to variations in criteria among workplaces, we revised the "Green Procurement Guidelines" in March 2014 to clarify the criteria and targeted items.

Final disposed amount of industrial waste (Central Glass' plants)



Final disposed amount of industrial waste (Central Glass Group)



To Provide Products and Services That Our Customers Can Use With Peace of Mind

The Central Glass Group carries out quality control initiatives that always place customer satisfaction first as we work toward our goal of establishing a truly prosperous society through the spirit of *Monozukuri*. In addition to complying with laws and regulations, we ensure product safety in order to minimize risks to customers, and take customer feedback seriously so that we can accurately understand their demands and provide products and services that they prefer and can use with peace of mind.

Basic Quality Policy

We aspire to truly contribute to society with the environment, safety, and quality as our fundamentals. We always place customer satisfaction first and provide products and services that customers love and can use with peace of mind throughout the entire product lifecycle, from product development to disposal after use.

Action Guidelines

1. We listen to customers and respond promptly.
2. Our basic approach is to build quality into processes and improve quality continually.
3. We provide customers with appropriate information regarding quality and features.

Quality Improvement Activities: Toward Sustainable Consumption

The Central Glass Group formulates annual quality policies based on the Basic Quality Policy and in consideration of quality assessment results for the previous fiscal year. These annual policies are rolled out at each workplace and affiliates in Japan and abroad. Each worksite strives to make continuous quality improvements in order to achieve quality objectives based on the quality policies. We check and assess conformity with requirements as well as the validity of our Quality Management System (QMS), manufacturing processes, and products through quality audits and reviews of quality improvement initiatives, tying the results into activities aimed at improving quality.

We have developed an organizational structure for quality-assurance activities that allows us to take practical action on quality assurance for glass and chemicals products respective-

ly by separating corporate functions for glass and chemicals. Our objectives are to establish quality-assurance systems suited to the different businesses of glass and chemicals products, and to enhance the functioning of those systems.

FY2016 Quality Policy

1. **Enhance quality management.**
Further enhance quality management at Central Glass's plants, subsidiaries, affiliates and departments managing subcontractors by implementing the PDCA cycle.
2. **Improve quality performance.**
Improve quality with awareness that "Quality must be built in during the manufacturing processes" and "The next processes are our consumers."
3. **Ensure compliance.**
Ensure strict compliance. "Follow what is decided" and "Follow what we decide."

Details of Activities and Evaluation

Progress Accomplished: ⊙ Made steady progress: ○ Additional measures required: △

Major Issues	(P) FY2016 Quality Policy and Plan	(D) FY2016 Results	(C) Rating	(A) FY2017 Quality Policy and Plan
Customer satisfaction	Enhance quality management. Further enhance quality management at Central Glass's plants, subsidiaries, affiliates and departments managing subcontractors by implementing the PDCA cycle.	<ul style="list-style-type: none"> •Conducted quality audits based on ISO 9001 standards or ISO/TS 16949 standards at each workplace and affiliated manufacturing site, and provided support and guidance for maintenance and improvement of quality-control systems. •Conducted quality management activities targeting subcontractors and suppliers of raw materials. •Conducted activities to reduce risk at an early stage with decisions on R&D feasibility (gate meetings) and design reviews (DR). 	⊙	Improvement of quality management system Improve initiatives to create a more effective quality management system through awareness in all processes that "Quality must be built in during manufacturing processes" and "The next processes are our consumers."
	Improve quality performance. Improve quality with awareness that "Quality must be built in during the manufacturing processes" and "The next processes are our consumers."	<ul style="list-style-type: none"> •Conducted complaint reduction initiatives providing guidance on the practice of "5 Whys Analysis" as a method of analyzing the causes of quality defects. •Identified cases of complaints by business and product category, determined causes, and instituted measures to prevent occurrence and defects reaching the market. •Actively collected quality evaluations from customers and applied them to quality improvement initiatives. •Actively responded to demands for improvement based on quality auditing by customers. •Conducted quality and product-safety education for employees by position and division. 	○	Continue and enhance risk-reduction initiatives. Predict potential risks in all processes and make efforts to reduce them.
	Ensure compliance Ensure strict compliance. "Follow what is decided" and "Follow what we decide."	<ul style="list-style-type: none"> •Confirmed conformity with public standards for products at each workplace and affiliate. •Conducted product safety training sessions that include understanding of laws and regulations related to product liability and quality 	⊙	Ensure compliance Ensure strict compliance. "Follow what is decided" and "Follow what we decide" in all processes.

Quality and Product-Safety Education: Educating Employees to Ensure the Protection of Consumers' Health and Safety

In order to conduct comprehensive and systematic quality-related education, we established a quality education system for Central Glass and our affiliates in Japan in FY2016, and provide employees with systematic education organized by position and division in the areas of laws and regulations, quality-related knowledge, management methods, and quality awareness.

As one of our educational initiatives by position, we hold product-safety training sessions including coverage of product liability law and quality-related laws and regulations, with specialists invited from outside the company, for committees composed of the heads of departments including sales, technology, and back-office departments. This educational initiative is aimed at preventing product accidents and serious quality issues.

Among our educational initiatives by division, we provide education on "5 Whys Analysis" as a method of preventing the recurrence of quality defects not only to employees of our quality and manufacturing departments, but also to employees of R&D and sales departments. We also educate employees of our sales departments regarding quality and product safety, and employees of our R&D and manufacturing departments regarding SDS and labeling (compliance with the GHS).

Central Glass and our affiliates in Japan have been en-

couraging employees to take the Quality Management and Quality Control (QM/QC) Exam since 2007 in an effort to promote the acquisition of knowledge related to quality management and improvement. Each workplace and affiliate in Japan is working continuously on this initiative. Additionally, Central Glass became a sponsor of the Japanese Standards Association's QM/QC Exam in 2016.

Through these efforts, we have raised quality awareness among all employees and applied quality-related knowledge and techniques to quality activities, helping us carry out better "Monozukuri".



Product-safety training session

34th Company-Wide QC Circle Rally

We held the 34th Company-Wide QC Circle Rally on November 22, 2016.

A total of eleven circles gave presentations at the 34th rally, consisting of five circles from our plants' manufacturing divisions, one from the Head Office, four from affiliates in Japan, and one from overseas affiliates.

There were presentations by each circle on various proposals and measures for cutting costs, as well as the outcomes of their efforts over the past year. There was also a lively ques-

tion and answer session between judges and attendees.

As our QC circles engage in friendly competition with each other through these company-wide rallies, they pursue the realization of the Central Glass Group's corporate philosophy, "the creation of a better future through *Monozukuri*."



Carlex Glass America's presentation



Awards Ceremony

Circles Participated in the 34th Company-Wide QC Circle Rally

Workplace	Circle Name
Mie Glass Industry Co., Ltd.	Eight Men
Ube Plant	TEKI
Central Chemical Co., Ltd.	The Guts D
Matsusaka Plant	Blue Impulse
Glass Manufacturing Technology Center	Red Lantern
Central Glass Plant Services Co., Ltd.	JEEP
Carlex Glass America, LLC	Assembly Line Relocation
Ube Plant	Group F
Ube Plant	Gas-Con
Kawasaki Plant	Wave
Central Glass Fiber Co., Ltd.	MFC



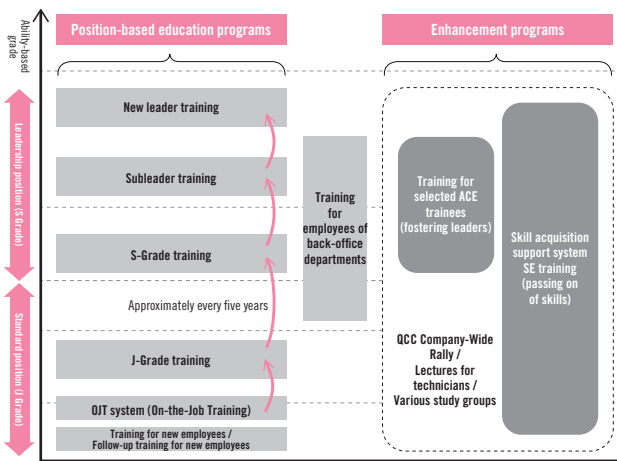
Making Things (*Monozukuri*) Is about Developing Human Resources (*Hitozukuri*)

Central Glass is a “*Monozukuri*” (manufacturing) company that has continually provided superior products with higher added value in order to enrich people’s lives. We focus on *Hitozukuri* (developing human resources) as the foundation of our corporate growth, and strive to enhance our human resource development and HR programs with the aim of creating an environment where each individual can demonstrate his or her capabilities and skills to the utmost.

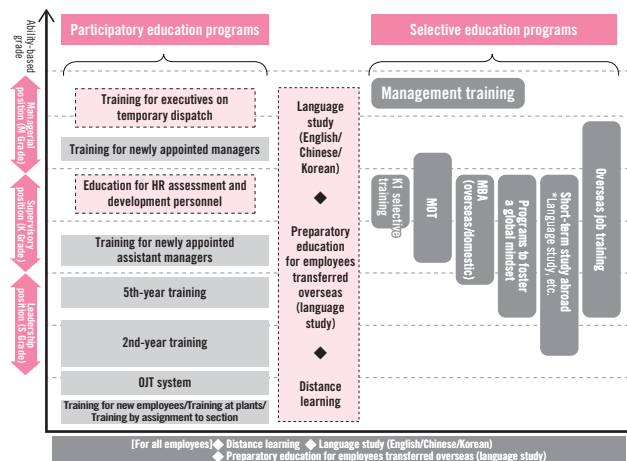
Central Glass’s Education System

The education that Central Glass provides to employees has two pillars: education for career development to foster global human resources and candidates for managerial positions, and education for *Monozukuri* to pass on and develop advanced techniques and skills. In both cases, we offer a wide range of educational opportunities including position-based education programs organized according to participants’ ages and positions, as well as selective education programs organized according to work duties and abilities.

Monozukuri education



Education for career development



Training for Selected AEC Trainees

Central Glass has been conducting education for selected trainees at our Active Expert Centers (AECs) since 2006, aiming to foster new generations of technical leaders at our plants. The AECs established in each plant are educational centers dedicated to passing on and developing technical skills. Each year, candidates for the next generation of leaders are selected from our manufacturing plants and leave their posts for one year of education as AEC trainees. After studying topics such as problem-solving methods in the classroom, trainees participate in themed activities involving problem resolution and improvements to actual manufacturing sites. By teaching trainees how to logically assess situations and respond to them, we are fostering a new generation of leaders who can take charge and develop high-level manufacturing technologies.

Number of trainees by fiscal year

Fiscal year	Number of trainees	Fiscal year	Number of trainees
2006	15	2012	10
2007	11	2013	11
2008	14	2014	10
2009	12	2015	11
2010	12	2016	9
2011	11	Total	126

Study Abroad Programs

Central Glass has established three overseas study systems for employees in order to develop candidates for managerial positions who will be responsible for the company’s future, as follows:

- MBA program: Employees study at domestic or overseas graduate schools for two-year periods in order to foster high-level management skills.
- MOT program: Employees study at domestic or overseas graduate schools for two-year periods in order to foster an extensive knowledge of technology and management and the ability to advance strategic research and technological development.
- Short-term study abroad program: Employees study at overseas language schools for half a year in order to foster practical abilities and international awareness through language study.

Number of participants in each program

Fiscal year	MBA·MOT	Short-term study abroad
2011	2	2 (USA: 2)
2012	4	2 (USA: 1, China: 1)
2013	4	2 (Canada: 1, India: 1)
2014	2	2 (Canada: 1, China: 1)
2015	4	2 (USA: 2)
2016	4	3 (USA: 2, China: 1)
Total	20	

VOICE

As an AEC trainee, I was given the opportunity to study a variety of subjects over a one-year period.

Through the basic education on topics such as data stratification and IE techniques as well as theme-based activities in the AEC program, I learned problem-solving methods applicable to manufacturing sites. The program also increased my safety awareness. Thinking about safety is now a habit for me. In addition, I received education and guidance that encouraged me to think about problems and take action on my own so that I can pursue AEC activities autonomously. I also discovered things that I hadn't noticed while I was focused on my regular manufacturing duties. I had the opportunity to be involved with a variety of other departments within the plant and learn about their jobs.

Before my AEC study, I only thought about things from the perspective of my own department. Since finishing the AEC program, I perform my job with a consciousness of the lateral communications within the plant.

I would like to apply the knowledge and experience I gained from the AEC to boost the productivity of my plant, and actively make improvements to both safety and production. I will also try to provide guidance to younger employees so that they can function more autonomously, thereby increasing the productivity of the plant as a whole.



Masaru Numata
AEC participant
Specialty Chemicals
Section 1, Production
Department, Kawasaki Plant

Fostering Awareness of Diversity and a Global Mindset by Accepting Interns

Central Glass began accepting interns from overseas universities at our plants in FY2012 in an effort to promote employees' awareness of diversity and improve their ability to communicate with people from other countries. By communicating with interns as they perform their work duties, our employees can practice English and learn about foreign cultures, along with developing a diverse outlook that is not bound by national origins.

In addition to performing a variety of duties, interns also host English classes at their plants. By providing employees who have little contact with the English language in the course of their regular duties with the chance to communicate in English, we hope to

both improve their language skills and foster a global mindset. To promote diversity and develop a global mindset among our employees, we will continue to actively accept overseas interns.

Number of interns accepted

Fiscal year	Number of interns	Nationality of intern(s)
2012	1	UK
2013	—	—
2014	2	USA, Korea
2015	1	USA
2016	2	USA
Total	6	

Creating a Healthy and Vibrant Corporate Culture

With the formulation of our Action Plan to Promote Female Workplace Participation in April 2016, we are striving to reform working styles and change awareness by making the most of the diverse resources represented by our employees, providing effective education, reforming our working environments, and increasing productivity, in order to foster a healthy and vibrant corporate culture that allows all employees to succeed.

We are expanding the job opportunities available to female employees by making efforts to assign them not only to sales, management, and research divisions, but also to shiftwork positions, where female employees have not previously been assigned.

In July 2016, to further invigorate efforts to promote the active participation of female employees, we hosted lectures and meetings regarding future initiatives for top managers and the heads of all Group worksites. Through company-wide cooperation, we have begun to establish more varied work styles by designating the second and fourth Wednesdays of each month as "Smart Days" (days to leave work on time), and implementing a planned time-off system that encourages employees to take at least one day's paid leave per month.

We also conducted a survey of all employees in March 2017, with questions on topics such as workplace environments that accommodate child-raising and the provision of care for family members, and employees' work-related motivation. The results of the survey will be reflected in future initiatives.

First Action Plan to Promote the Active Participation of Female Employees

- Goal 1** Establish a target percentage for female hires in recruitment (numerical goal).
- Goal 2** Reconsider working styles.
 1. Change from "overtime as the norm" to "overtime as something extra"
 2. Create an environment where taking time off is "the norm"
- Goal 3** Conduct an awareness / environmental survey.



Lecture on promoting the active participation of female employees

Employment of persons with disabilities

As of the end of FY2016, our rate of employment of persons with disabilities was 2.21%, above the 2.0% mandated by law. However, the Ministry of Health, Labour and Welfare has announced its intention to increase the legal requirement in stages, to 2.2% in April 2018, and then to 2.3% by the end of March 2021. Amid these efforts to provide stable employment to disabled workers and promote their independence, Central Glass is committed to continuing to advance its employment of persons with disabilities, and to creating accommodating environments where they can exercise their diverse abilities.

Employment status data

Item	FY2014	FY2015	FY2016
Number of employees	1,572	1,645	1,662
Number of new recruits	76	64	83
Average age	36.5	36.4	36.2
Average years of continuous employment	14.9	14.7	14.5
Percentage of persons with disabilities	2.21%	2.20%	2.21%

Initiatives to Support a Balance between Work and Family

In order to support employees who are raising children or caring for family members, we have been working to enhance our support systems, such as by extending childcare leave and granting partial pay, expanding the scope of our system of reduced working hours for childcare, and increasing the flexibility of nursing care leave and reduced working hours. We will continue to enhance support systems that allow our employees to balance work and family with peace of mind, and strive to create a culture where all employees can enjoy an active working life.

Childbirth preparation leave	Two days off per month for hospital visits, etc. during pregnancy
Maternity leave	Legally mandated leave before and after childbirth.
Childbirth leave	Three days off within a one-month period around the expected delivery date
Childcare leave	Legally mandated childcare leave.
Childrearing leave	One day off per month for childcare
Staggered working hours during childcare	One-hour postponement of the start of the workday
Shortened working hours during childcare	Shortening of working hours by a maximum of two hours per day
Nursing care leave for children	Thirty-six days off per year for nursing care for children, etc.
Nursing care leave	Total of 365 days leave, dividable into up to three periods
Time off for nursing care	Ten days off per year for nursing care and attendance of family members, etc.
Shortened working hours for nursing care	Shortening of working hours by one hour per day

Applicable periods for childcare support system (from pregnancy to child-raising)

Pregnancy	6 weeks	8 weeks	1 year old	2 years old	Before elementary school enrollment	First grade	Elementary school graduation
Childbirth preparation leave	Delivery date						
Maternity leave							
Childbirth leave (3days)				(Can be extended until the child is two years old)			
Childcare leave							
Childrearing leave							
Staggered working hours during childcare							
Shortened working hours during childcare							
Nursing care leave for children							

*Only female employees are eligible for maternity leave, and only male employees are eligible for childbirth leave; all other measures are open to both male and female employees.

Mental Healthcare

Central Glass has been conducting mental health checkups or “stress checks” since 2009. As more and more people struggle with mental health problems in our society, mental health checkups became mandatory for businesses with fifty or more employees in 2015. Central Glass has also adopted stress checks as an important primary preventive measure. These checks alert employees to their own stress levels, and if they wish they may also discuss their issues with our industrial physician, who also provides us with advice on how to improve the working environment and other aspects of our operations.

We are also working to create more comfortable workplaces and help our employees maintain their mental health by reducing anxiety among our employees and problems in our organization through initiatives such as support in workplaces and telephone consultations by external advisors (counselors).

VOICE

I have an eight-month-old daughter. I returned to the workplace in April of this year, using the system for shortened working hours while raising children. The day before I was due to return to work, my daughter suddenly developed a fever, and I had to make use of the system for nursing care leave for children. Babies often get sick very suddenly, so I am extremely grateful for this system.

Since returning to work, I have been making an effort to cooperate closely with my colleagues, not only to increase my efficiency in the job, but also to ensure that they are able to respond when I have to take time off on short notice.

My days are very busy, but I value time spent with my family. In the future, I want to continue to perform in my job in order to show my gratitude to my workplace.



Yuriko Harada

Architectural Glass Sales Promotion and Engineering Section, Flat Glass Marketing and Sales Department



To Grow with Society

The support of and harmony with members of the local community are absolutely essential for a company's continued existence. Central Glass will continue to build even better relations with every one of its stakeholders, starting with members of local communities and customers, while also growing and improving together with society in order to realize a sustainable society.

51st Central Glass International Architectural Design Competition

Central Glass began sponsoring a competition for architectural design ideas in 1966. Starting with the 10th competition in 1975, it was renamed the Central Glass International Architectural Design Competition to invite entries from overseas. The theme of the 51st competition in 2016 was "Houses to Live with *Fūdo*." There were 188 entries in total, 101 from Japan and 87 from overseas (refer to the back cover for the First Place Prize design). The theme of the 52nd International Architectural Design Competition in 2017 was "Redesigning Urban

Open Space." We live in a time in which we need to pursue economic efficiency and rationality, while simultaneously preserving the natural environment and protecting historical and traditional cultures. As a company that promotes architectural culture, we believe that it is highly meaningful for us to provide occasions to consider a desirable society and environment through this competition. Central Glass takes great pride in our continuing efforts to sponsor this competition over many years.



Presentation by the winner of the competition



Commemorative photo

Chief Judge	Hiroshi Naito (Naito Architect & Associates)
	Taro Ashihara (Taro Ashihara Architects)
Judges	Tadao Kamei (Nikken Sekkei Ltd.)
	Teruo Kobayashi (Obayashi Corporation)
	Kengo Kuma (Kengo Kuma & Associates)
	Yoshiharu Tsukamoto (Atelier Bow-Wow)
	Satoshi Takayama (Central Glass Co., Ltd.)

28th Junior Science Classes

The "Summer Vacation Junior Science Class" is held every year under the auspices of the Summer Vacation Junior Science Class Executive Committee and jointly hosted by the Yamaguchi Industrial Promotion Foundation in cooperation with universities, technical colleges, corporate research institutes, and more. It is held in the hope of showing children with infinite future potential how interesting and fun science can be. In 2016, it was held at 17 venues in Yamaguchi Prefecture in collaboration with 16 related organizations between July 22 and August 28.

Central Glass wholeheartedly agrees with the premise, and on July 28 we held a class at the Chemical Research Center (Ube) in which 20 elementary and junior high school students from Ube City and other cities in Yamaguchi Prefecture

participated. Under the theme of "Experiencing the wonders of heat and light," young researchers played the role of instructor and prepared hands-on experiments that allowed students to experience the heat energy and light energy found all around us. Participants formed small groups and the seats were arranged for all of the children and their parents to enjoy the class. The children engaged enthusiastically in the experiments, asked the instructors questions, and sometimes gasped in surprise while their parents looked on in enjoyment.

We hope to be able to continue hosting these classes in the future to provide opportunities for more children to learn how exciting and fun science can be and grow up with a greater interest in science.



Lesson in progress



Participating children and their parents



Group photo

14th Regional Town Hall Meeting in the Ube District

Four chemical companies located in the Ube District hold an annual regional town hall meeting with local residents. The fourteenth meeting was held on January 21, 2017, in the gymnasium of Central Glass's Ube Plant. Fifty-six people including members of the local government, NGOs, and local residents participated. The four companies involved first offered overviews of their plants and their environmental initiatives. The Japan Chemical Industry Association then gave a presentation on the history of responsible care and activities associated with the concept. Next, the Ube municipal government explained its environmental protection initiatives in Ube City. Following these presentations, the participants were divided into two

groups and held discussions on the topics of "management of chemical substances" and "emissions from plants (air and water quality)." Each group had a lively exchange of opinions, and specific concerns regarding security and the environment were raised, making this a highly meaningful town hall meeting. We will continue our efforts to engage in communication with the residents of the region in order to create a safe and secure plant together.



The 14th Regional Town Hall Meeting

Participation in Ecocap activities

The Volunteering and Charity Committee of the Matsusaka branch of the Central Glass Labor Union is conducting an "Eco-Cap Collection" initiative. This involves collecting used PET bottle caps from each of our workplaces and selling them to a recycler, with the proceeds donated to the Japan Committee, "Vaccines for the World's Children" (JVC).

In FY2016, 114,380 PET bottle caps collected from Central Glass workplaces were delivered to recyclers. The resulting donation was equivalent to the cost of polio vaccines for approximately 133 children. Since the incineration of the same number of bottle caps would release approximately 837.9 kg of CO₂ into the atmosphere, the initiative also contributed to a reduction in CO₂ emissions.

A cumulative total of 632,620 bottle caps have been col-

lected by the Eco-Cap Collection initiative since its start in 2009. Converted into the cost of polio vaccines, our donations are equivalent to vaccines for approximately 735 children.

Through the activities of its Volunteering and Charity Committee, the Matsusaka branch of the Central Glass Labor Union will continue to actively support children in need around the world.



Bottle caps collected for donation

Volunteer Roadside Cleanup

The Ube branch of the Central Glass Labor Union conducts a variety of volunteer activities in order to contribute to the local community. One of these is the "Volunteer Roadside Cleanup" conducted every April during the first training period for new union members. The Ube Labor Union organized this initiative for the seventh time in 2016 (the first was in 2010). The cleanup is conducted along public roads and residential streets, and in parks around the Ube Plant.

The purpose of this initiative is to allow newly recruited members from all over Japan to become more familiar with the place where they will live, and to foster an awareness of the deep ties between the company and the local community.

The activity was called off in April 2016 because of rain, but given its importance as a CSR activity, it was rescheduled



The cleanup

to the second training period for newly recruited members in July. The temperature was above 30° C, but the volunteers were happy to work and have the opportunity to communicate with local residents, and their expressions were filled with satisfaction when they saw the pile of trash that they had collected through their hard work.

The Ube Plant Labor Union will continue to fulfill its CSR commitments by conducting activities in which all employees can participate and collaborate.



A cleanup by new employees

Ube Plant



Address	5253 Okiube, Ube City, Yamaguchi
Number of employees	547 (as of March 31, 2017)
Major items produced	Fluorine-related products, other chemicals
	Acquired ISO 9001 certification (December 1997) Acquired ISO 14001 certification (December 2000) Acquired OHSAS 18001 certification (April 2011)

Message from the General Manager

The Ube Plant started manufacturing soda ash and caustic soda in 1936, and expanded its operations into the manufacturing of chemical fertilizers and organic and inorganic chemical products. In May 2015, we discontinued production of soda ash and related products, which had been our main products since the founding of the company. We have launched new plant facilities for manufacturing products such as HFO-1233zd(E), a foaming agent with a low global warming potential, in addition to our business for fine chemicals including active pharmaceutical ingredients and high-purity fluoride gas. Going forward, we will continue providing environmentally friendly products.

The plant's green spaces have been furnished with rows of cherry trees, and in spring, local residents are able to enjoy the beautiful blossoms and the natural environment that exists in harmony with us. We will continue in our efforts to be a safe and open plant that offers local residents a feeling of security.



Nobuyuki Tokunaga
General Manager
Ube Plant

Regional Activities

- Cleanup activities for city and prefectural roads on our plant-wide 5S Day (once a month)
- Cleanup activities in Tokiwa Park (once a year)
- Cleanup activities in the Ube city area (once a year)
- Cleanup activities around Lake Ono (once a year)
- Protection and cultivation of grasslands at Akiyoshidai (once a year)
- Cleanup activities around Ube Higashi Port (once a year)
- Forest maintenance activities to protect water resources (once a year)
- Road cleaning using road sweepers (every day)

Preparing for Accidents and Disasters

The industrial complexes that dot Japan handle enormous volumes of high-pressure gases and dangerous substances. Ensuring security at these industrial complexes is therefore a very important element in ensuring the safety and security of the nation's citizens.

In recent years, numerous accidents have occurred at industrial complexes, and their incidence is expected to remain high. Considering this, we work regularly to increase our ability to maintain security and prepare for disasters, and to take preventive steps against trouble. On November 8, 2016, around 260 representatives of twelve organizations including the local government participated in drills in the Ube Plant tank yard as comprehensive disaster prevention training for petrochemical and other industrial complexes in Yamaguchi Prefecture.

The land-based portion of the training assumed the oc-

currence of an earthquake centered in the Nankai Trough, with an intensity of five on the Japanese scale in Ube City and damage to many facilities. On the water, in addition to oil recovery, the training assumed the occurrence of a tsunami resulting from the earthquake. Participants confirmed emergency procedures by practicing closing a seawall and evacuating to higher ground.

We will continue working to further strengthen our security management. Our employees and cooperating workplaces are united in their efforts to ensure security so that our plant is safe enough for neighboring residents to enjoy complete peace of mind.



Earthquake disaster-prevention training

PRTR

(Unit: kg/year)

Ordinance designation No	Substance name	Emissions			Comparison with the previous year	Quantity transferred
		Atmosphere	Water	Soil		
33	Asbestos	0	0	0	→	18,000
41	3'-Isopropoxy-2-trifluoromethylbenzaniilide(also known as Flutolanil)	0	0	0	→	0
53	Ethylbenzene	2,600	0	0	↔	0
71	Ferric chloride	0	0	0	→	0
80	Xylene	1,500	0	0	↔	2.2
81	Quinoline	0	0	0	→	0
94	Chloroethylene (also known as vinyl chloride)	0	0	0	→	0
149	Carbon tetrachloride	810	0	0	↔	17
213	N,N-Dimethylacetamide	0	0	0	→	7,900
232	N,N-Dimethylformamide	19	0	0	→	3,800
243	Dioxins (Unit: mg-TEQ/year)	0.0001	0.92	0	↔	0
281	Trichloroethylene	5,500	0	0	↔	0
296	1,2,4-Trimethylbenzene	80	0	0	↔	0
349	Phenol	100	180	0	↔	0
374	Hydrogen fluoride and its water-soluble salts	670	0	0	↔	4,100
400	Benzene	76	0	0	↔	1,500
411	Formaldehyde	0	0	0	→	0
438	Methylnaphthalene	48	0	0	↔	0

Quantities emitted, discharged, or transferred are listed for those materials handled in amounts exceeding 1,000 kg in 2016 (except for dioxins)

Kawasaki Plant



Address	10-2 Ukishima-cho, Kawasaki-ku, Kawasaki City, Kanagawa
Number of employees	202 (as of March 31, 2017)
Major items produced	Inorganic chemicals, organic chemicals
	Acquired ISO 14001 certification (May 2007) Acquired ISO 9001 certification (July 2001)

Message from the General Manager

Having transitioned from its electrolytic soda business to the fine chemicals business, the Kawasaki Plant is now equipped to offer a stable supply of a wide range of products. The main products of the plant currently include HFC-245fa (an alternative to CFCs), pharmaceutical intermediates, cleaning gases for semiconductors, and photoresist materials.



Yukinari Hashimoto
General Manager
Kawasaki Plant

We are actively working to manufacture new products that meet customer needs. We have launched mass production of Pattern Keeper™, a water-repelling drying agent that addresses circuit-pattern collapse in semiconductors.

As environmentally friendly products, we are producing HFO-1233zd(E), a foaming agent with a low global warming potential and superior heat-insulating properties, HFO-1233zd(Z), a cleaning agent that also has a low GWP, and next-generation electrolytes for lithium-ion batteries.

Our efforts in conducting environmental activities over many years have been recognized by Kawasaki City. The Kawasaki Plant has been certified as a workplace taking environmental action, as defined in the city's bylaws. Our entire team is united in its efforts to ensure perfect scores for the environment and commitment to safe operations.

Regional Activities

- Roku-Cho-Kai (Regular social gatherings with residents of neighboring areas including Tono Town and the Daishi District)
- Regular cleanups of the roads around the plant
- Regular exchanges of information concerning the environment and safety with employees of neighboring plants in the Kawasaki Industrial Complex
- Participation in joint disaster drills with neighboring businesses in the Ukishima District
- Participation in street-level traffic safety guidance(organized by the Kawasaki Rinko Traffic Safety Association)
- Participation in Tokyo Bay General Survey for Water Environment (Analysis of and report on water quality in Tokyo Bay near plant)
- Activities related to environmental safety conducted to improve the local environment through the Research Society for Environmental Safety Technology in the Kawasaki Industrial Complex

Initiatives for Security and Disaster Prevention

Since the Kawasaki Plant is located in an area where industrial complexes are clustered, as defined in the Act for the Prevention of Disasters at Petrochemical Complexes, etc., we are required to maintain a system for the maintenance of security and prevention of disasters at all times. We boost awareness of security and disaster prevention and keep systems for response to emergencies in place even under normal conditions by conducting plant-wide earthquake disaster-prevention training that assumes the occurrence of earthquake-related leaks and fires, training in evacuation from the plant utilizing the time between operations, and education for members of our plant disaster prevention organization several times a year.

We have also joined the Ukishima Joint Disaster Prevention Association, made up of companies located near Kawasaki's Ukishima district. The association conducts monthly disaster prevention drills in members' facilities, and has a mutual aid system in place in case a member company experiences an emergency as a result of an accident or a natural disaster such as an earthquake, typhoon, etc. Members also regularly exchange information on security and disaster prevention.



Earthquake disaster-prevention training

PRTR

Ordinance designation No	Substance name	Emissions			Comparison with the previous year	Quantity transferred
		Atmosphere	Water	Soil		
81	Quinoline	0	0	0	→	0
94	Chloroethylene (also known as vinyl chloride)	3,000	0.3	0	↘	0
149	Carbon tetrachloride	260	1.1	0	↘	11,000
213	N,N-Dimethylformamide	11	0	0	↘	71,000
243	Dioxins (Unit: mg-TEQ/year)	0.050	0.12	0	↘	0
280	1,1,2-Trichloroethane	0	0.6	0	↘	1,700
300	Toluene	23	0	0	↘	2,200
374	Hydrogen fluoride and its water-soluble salts	0	0	0	↔	8,300
392	n-hexane	0.2	0	0	↘	10,000

Quantities emitted, discharged, or transferred are listed for those materials handled in amounts exceeding 1,000 kg in 2016 (except for dioxins)

The Kawasaki Plant is continuing groundwater purification treatment as a result of contamination by a leak of 1,2-dichloroethane in 1982.

Matsusaka Plant



Address	1521-2 Okuchi-cho, Matsusaka City, Mie
Number of employees	Plant :199 (as of March 31, 2017)
Major items produced	Safety glass for automobiles, architectural and industrial flat glass, fabricated glass, functional glass for electronic equipment
	Acquired ISO 14001 certification (April 2000) Acquired ISO 9001 certification (November 2003) Acquired ISO/TS 16949 certification (June 2004)

Message from the General Manager

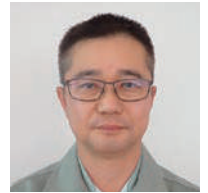
The Matsusaka Plant manufactures polished plate glass using the world's only duplex equipment capable of employing a consecutive double-sided polishing method. We also manufacture flat glass such as high-permeability cover glass for photovoltaic cells and processed glass for automotive and industrial applications.

Because the plant consumes a huge amount of energy and resources, we continually work to rigorously implement environmental conservation activities.

In order to conserve energy and power and reduce CO₂ emissions, we are working to reduce loss, introducing equipment that conserves energy in conjunction with large-scale renovations, and pushing ahead with improvements to our operational technologies.

Since 2004, we have maintained zero emissions, but we are working to derive value from our waste (i.e. convert it into products) in order to achieve further reductions.

Each of our employees is continually working to achieve growth and improvement, based on our motto, "The Matsusaka Plant: Everything for the sake of people and the global environment - Looking at the future through glass." We will continue to contribute to our region and work to make our plant safe and happy, never forgetting our sense of gratitude.



Denzo Tokushima
General Manager
Matsusaka Plant

Regional Activities

- Participation in Mie Prefecture Kids' ISO 14000 Program activities
- Participation in cleanup of waste drifting ashore at Toshijima Island, Toba City, organized by the Mie Prefecture Industrial Waste Countermeasures Promotion Council
- Exhibition of Eco-Glass at the Matsusaka Environmental Fair held by the Matsusaka City Environmental Partnership Committee
- Participation in the Matsusaka Street Cleanup organized by Matsusaka City
- Opening of plant grounds to youth sports associations and other organizations free of charge
- Provision of company-owned land to neighboring municipalities as temporary parking areas free of charge
- Inviting local residents to plant's summer festival
- Participation in the Aqua Social Festival in Matsunase, organized by Mie University's Mie Global Environment Center for Education & Research (beach cleanup)
- Participation in voluntary cleanup activities at Matsunase Beach organized by the Matsusaka Taki District Workers' Welfare Council
- Participation in Ecocap (bottle cap collection) activities

Safety Initiative: Danger Simulation Dojo

The Matsusaka Plant carries out danger simulation workshops with the aim of raising the danger sensitivity and safety awareness of each and every employee.

In March of 2015, we opened a "Danger Simulation Dojo" equipped with original devices designed jointly by veteran and junior employees of the Engineering & Technical Section, including a falling glass weight simulation device and a glass cut simulation device. The dojo is used for a variety of educational programs, such as job rotation training and training of new hires including employees of cooperating companies.

In FY2016, we installed an electrical leak simulation device.

This device simulates the current produced during an electrical leak, and gives users firsthand awareness of the safety provided by correct grounding, and the risk of electrocution when grounding is neglected.



Dojo entrance



Electrical leak simulation device

PRTR

Ordinance designation No	Substance name	Emissions			Comparison with the previous year	Quantity transferred
		Atmosphere	Water	Soil		
31	Antimony and its compounds	0	0	0	→	0
132	Cobalt and its compounds	0	0	0	→	0
242	Selenium and its compounds	86	0	0	↘	0
412	Manganese and its compounds	62	0	0	↘	0
438	Methylnaphthalene	22	0	0	↘	0

(Unit: kg/year)

Quantities emitted, discharged, or transferred are listed for those materials handled in amounts exceeding 1,000 kg in 2016 (except for dioxins)

In 2002, the Matsusaka Plant discovered groundwater containing arsenic and lead attributable to a past production method. It is currently continuing groundwater purification treatment.

Sakai Manufacturing Site Matsusaka Plant



Address	6 Chikko-minamimachi, Sakai-ku, Sakai City, Osaka
Number of employees	Plant : 45 (as of March 31, 2017)
Major items produced	Architectural and residential flat glass, flat glass for electronic equipment, architectural frosted glass
	Acquired ISO 14001 certification (December 1999) Acquired ISO 9001 certification (February 1999)

Message from the General Manager

The Sakai Manufacturing Site is located in the center of the Coastal Industrial Zone in Sakai City, Osaka, and it has been manufacturing flat glass continuously since 1959 as the birthplace of the Central Glass Flat Glass Division. In 1982, we adopted the float process as our manufacturing method and started manufacturing high-grade flat glass.

In 2007, we completed our second round of cold repair work (repairs of the entire manufacturing lines starting from melting furnaces). As part of this process, we conducted improvement work that reduced our CO₂ emissions by 3%, and restarted production in April 2008. In August 2009, we conducted work to improve our float baths, and began manufacturing thin flat glass for use in electronic devices such as smartphones and other mobile terminals.

In May 2012, we completed our installation of spattering equipment that deposits thin metallic membranes on glass surfaces and began manufacturing Eco-Glass, a product that can reduce the cost of cooling and heating buildings.

We are currently improving heat retention and adjusting operating conditions for our glass-melting furnace in order to reduce our fuel consumption.



Keiichi Kon
General Manager
Sakai Manufacturing Site
Matsusaka Plant

Regional Activities

- Participation in the Osaka Bay Cleanup Project
- Participation in comprehensive disaster drills in the Sakai/Senboku coastal area
- Support for a flea market and donation of proceeds to social welfare activities
- Activities to inform the public about fires and first aid at the Sakai Fureai Festival as a member of the Sakai City Disaster Response Committee
- Provision of support for a project conducted by the Osaka Prefectural Seikoukai in Sakai Senboku Port to ensure the safety of ships navigating through the port and protect the environment
- Blood donation drive at the Sakai Manufacturing Site
- Acquisition of proficiency in cardiopulmonary resuscitation technique through emergency lifesaving course offered by Sakai Fire Department (6 employees)

Participation in FY2016 Osaka Bay Cleanup Project

Every year, Central Glass (including Central Glass Plant Services Co., Ltd.) takes part in beautification activities conducted along the Osaka Bay sea walls as part of a campaign organized by Osaka Prefecture to remove trash and ensure the cleanliness of the water in Osaka Bay.

This beautification activity was hosted by the Port and Harbor Bureau of the Osaka Prefectural Government, and co-hosted by Sakai City and the Sakai City Federation of Fisheries Cooperative Joint Associations. In 2016, eleven employees from the Sakai Manufacturing Site took part, with almost 200 participants in total collecting trash from the sea walls.

Looking over the sea walls before starting the cleanup, it seemed that there was less trash than in the past several years. However, once we started cleaning up, it became apparent that there were just as many discarded PET bottles as usual. We realized that our task of picking up a variety of trash was just as vital as ever.

The PET bottles that are so convenient to us in our daily

lives do not just return to nature when discarded. Our participation in this cleanup reminded us of the importance of collecting and recycling them.

The Sakai Manufacturing Site will continue to participate actively in these kinds of activities, with the aim of minimizing the amount of trash littering Osaka Bay.



Cleaning up

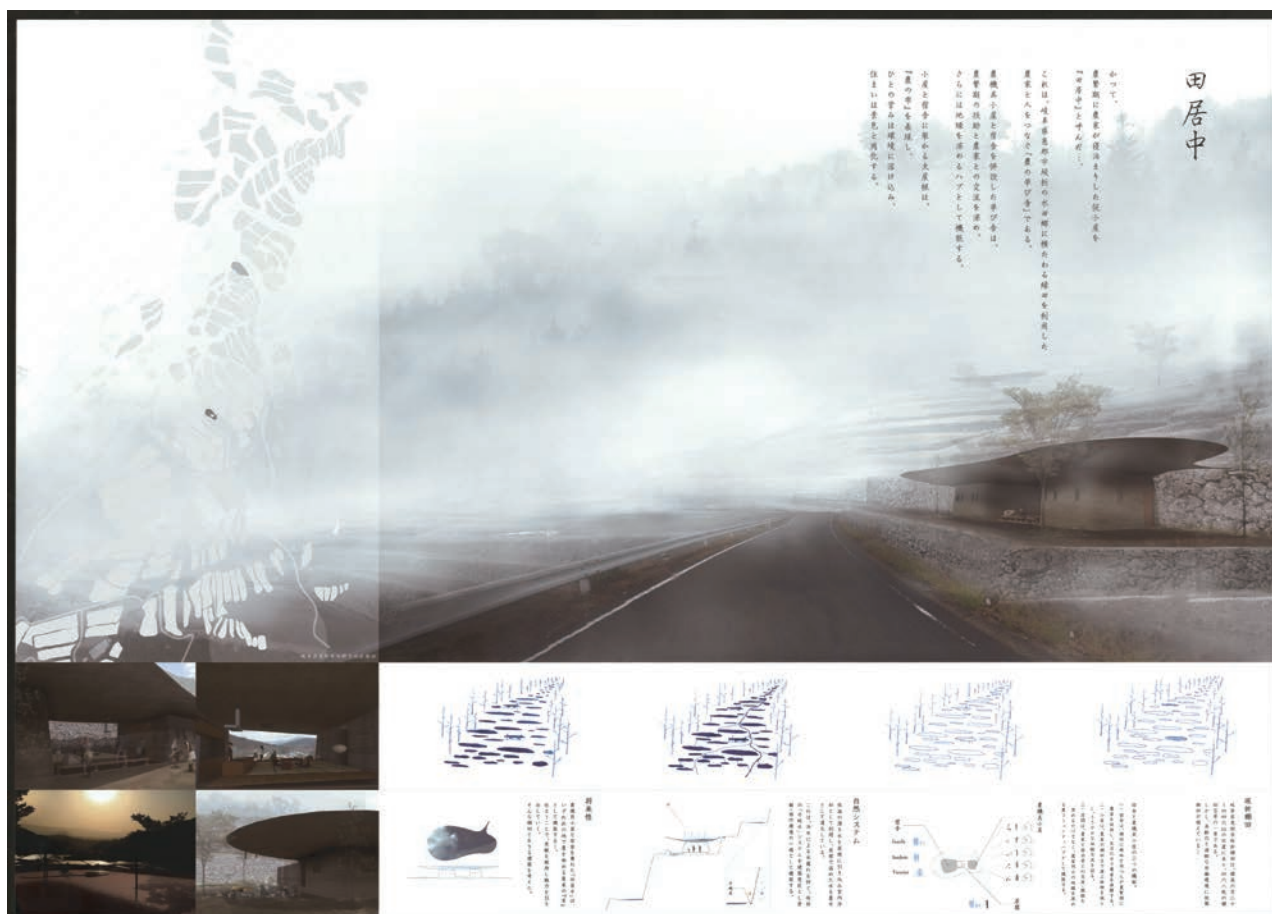
PRTR

Ordinance designation No	Substance name	Emissions			Comparison with the previous year	(Unit: kg/year)	
		Atmosphere	Water	Soil		Quantity transferred	
80	Xylene	62	0	0	↔	0	
296	1,2,4-Trimethylbenzene	71	0	0	↔	0	

Quantities emitted, discharged, or transferred are listed for those materials handled in amounts exceeding 1,000 kg in 2016 (except for dioxins)

51th Central Glass International Architectural Design Competition

First Place : Ryo Itoigawa (NOSIGNER Co., Ltd.)



Theme: Houses to Live with *Fūdo*

Since times long past, humans have created houses to protect themselves from the natural environment. Over many years, they created buildings with characteristics unique to their own regions. As a result, different architectural styles arose in different places, forming the fertile soil for distinctive regional cultures.

However, with the rise of modernism in the 20th century, similar kinds of architecture began to be built all over the world. Architecture prioritizing function, rationality, and economy has provided indoor spaces with constant temperatures, humidity, and lighting, regardless of place, season, or time. But as the trade-off for this, energy consumption has expand-

ed, and regional cultures have declined.

In the 21st century, facing natural disasters and the destruction of the earth's environment, we need to reevaluate our relationship with places. There is a Japanese word, *fūdo*, which refers to the distinctive climate, geology, topology, and scenery of a place, together with the history and culture that were born there. Architecture today has been called upon to reestablish harmony with nature and rediscover its relationship with *fūdo*.

Thinking about *fūdo* means not only grasping the climate and landscape of a place, but also thinking about the people who live there.

 **CENTRAL GLASS CO., LTD.**

Contact: **Environment, Safety and Quality Management Department**
Kowa-Hitotsubashi Bldg, 7-1 Kanda-Nishikicho 3-chome, Chiyoda-ku, Tokyo, 101-0054 Japan
TEL: +81-(0)3-3259-7359 FAX: +81-(0)3-3259-7394 <http://www.cgc-jp.com/>