



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.

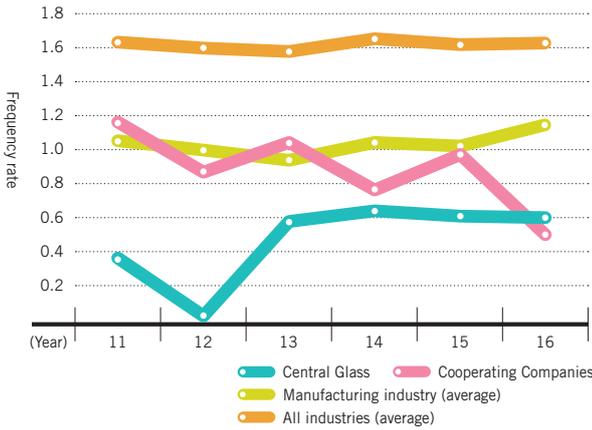
In 2016, there were thirty-nine accidents in total. Six accidents resulted in lost work hours, and thirty-three accidents did not. Compared to 2015, the number of accidents resulting in

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.

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.

When chemical substances are to be transported by road,

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