

## Ensuring Safety

### Policy for Ensuring Safety

"To ensure the safety of people as our highest priority, reduce and eliminate risks through the appropriate allocation of management resources and the maintenance and improvement of facilities, pro-cesses and work mechanisms with the aim to eliminate accidents and injuries while also making efforts to cultivate our safety culture" is the policy for ensuring safety. The ensuring of safety based on this policy is the result of management efforts and realizing zero accidents and disasters is the foremost achievement of these efforts. Based on this recognition, the following specific policies are established as the most important standard to be prioritized to ensure safety for the various criteria for determining value in each scene and stage in all our busi-ness activities including production, logistics, sales and research and develop-ment, in all our operations and all our activities.

1. Ensure the safety of people
2. Ensure the safety assurance of facilities and processes
3. Ensure safety in work mechanisms and procedures
4. Properly allocate and utilize management resources
5. Cultivate safety culture and promote safety management

### System for Promoting HSSE Initiatives

Our group has traditionally positioned "Safety, Health and the Environ-ment" as the foundation of its management, and has established the "Safety & Environmental Protection Headquarters" to promote initia-tives to secure and preserve them. The executive in charge of safety and environment (director), who is delegated by the President and Representative Director, serves as the General Manager of the Safety & Environmental Protection Headquarters, overseeing the headquarters as the person in charge of safety, health, and environment.

The role of the Headquarters is to determine the Medium-term Management Plan, the annual basic policies and priority issues on HSSE, to assess and evaluate performance through audits, to main-tain, review, and improve the Safety Management System and the Environmental Management System (page 16), and to instruct all executive departments and major group companies to secure management resources necessary to establish, implement, maintain, and continually improve the Manage-ment Systems. As a general rule, we have the Safety & Environmental Protection Headquarters Meeting once a year in December to decide on our group's annual basic policies for the next fiscal year.

Each executive department appoints a manager in charge of safety and environment to manage and promote the overall HSSE activities of the department, including the business sites under its management.

In addition, in order to confirm and promote the HSSE activities of each executive department, the General Manager of the Safety & Environmental Protection Headquarters or top management visits business sites to provide Safety and Environment-related instructions or safety patrols, or the Safety & Environmental Protection Headquar-ters secretariat conducts Safety and Environment audits at business sites. In particular, at our company's refineries and plants, the General Manager of the Safety & Environmental Protection Headquarters pro-vides Safety and Environment-related instruction and safety patrol once a year, while the Safety & Environmental Protection Headquar-ters secretariat conducts Safety and Envi-ronment audit once a year.

Furthermore, in order to prevent large-scale disasters at our busi-ness sites, we have established the Safety and Safe-ty Assurance Advisory Committee, which consists of members, including external experts, as an advisory body to the Board of Directors or the Presi-dent and Representative Director, with the aim of establishing more effective safety and safety assurance measures.

\* Safety Management System: To promote safety management activities, safety management policies and objectives and targets are established. To achieve these objectives, a safety management plan is formulated, implemented, reviewed, and continuously improved

### Activities and Results Based on the Annual Basic Policies on HSSE

#### Annual Basic Policies on HSSE in FY2018

Continue to take on the challenge of zero accidents, and aim for "Zero serious accidents", "Zero fatal and lost time injuries," and "Zero environmental anomalies." In particular, continue to promote "Strict adherence to livesaving rules" and "Caring for and encouraging peers."

#### Safety, Health and Environmental Performance in 2018

(including partner companies)	(Unit: cases)	
	Idemitsu Group's	Showa Shell Group's
Serious accidents	1 <sup>*1</sup>	0
Fatalities	1 <sup>*2</sup>	1 <sup>*3</sup>
Lost time injuries	16	7
Environmental anomalies	0	0

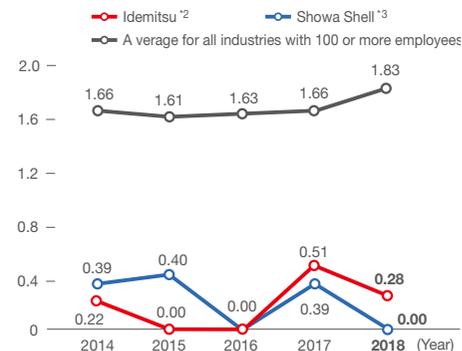
\*1 In February 2018, an explosion and fire occurred at the Yokohama Plant of SDS Biotech K.K., killing an employee of a subcontractor (There were no serious accidents at refineries or business sites.)

\*2 Including the above serious accidents

\*3 In April 2018, an employee of a subcontractor fell into the sea while moving 2 container ships that were berthing, and died.

#### Occupational accidents frequency rate<sup>\*1</sup> (Frequency of occurrence of accidents)

\*Excluding employees of partner companies



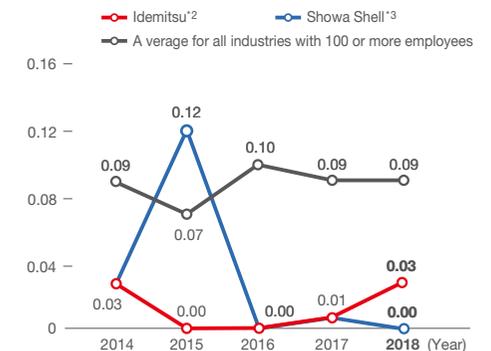
\*1 Number of fatalities and injuries due to work-related accidents per 1 million hours of actual work

\*2 Idemitsu's data covers Hokkaido Refinery, Chiba Complex, Aichi Refinery, Tokuyama Complex, Prime Polymer Co., Ltd., Anesaki Works, BASF Idemitsu Co., Ltd.

\*3 Showa Shell's data covers Showa Yokkaichi Sekiyu Co., Ltd., TOA Oil Co., Ltd., Seibu Oil Co., Ltd.

#### Severity rate<sup>\*1</sup> (Degree of severity of accident)

\*Excluding employees of partner companies



\*1 Number of lost working days per 1,000 hours of actual work

\*2 Idemitsu Kosan's data covers Hokkaido Refinery, Chiba Complex Aichi Refinery, Tokuyama Complex, Prime Polymer Co., Ltd., Anesaki Works, BASF Idemitsu Co., Ltd.

\*3 Showa Shell's data covers Showa Yokkaichi Sekiyu Co., Ltd., TOA Oil Co., Ltd., Seibu Oil Co., Ltd.

The annual basic policies for FY2019 will follow the annual basic policies for FY2018. Based on the results described above, we are working to prevent accidents by adding the following items to our priority issues.

#### Annual Basic Policies on HSSE in FY2019

- Standardization to create and keep safety cultures for "Strict adherence to livesaving rules" including partner companies
- Promotion of countermeasures through exhaustive identifi-cation of potential risks and implementation of appropriate risk assessment



## Ensuring Safety

### Safety and Health Initiatives

#### Efforts to Prevent Accidents

In 2018, a serious accident (dust explosion fire accident) occurred at an affiliated company of Idemitsu Kosan, resulting in a fatality in the partner company. This was due to insufficient identification of potential risks. As a member of the accident investigation committee, we worked to identify the cause of the accident and supported to make preventive measures. Urgent investigations were conducted at domestic and overseas business sites to confirm that there were no similar risks. We will continue to strengthen our efforts to prevent serious accidents in all executive departments.

The number of work-related accidents (lost-time injuries and medical treatment cases) in our group in 2018 was lower than in 2017. This is the result of our efforts to thoroughly implement "Strict adherence to livesaving rules" such as the use of fall prevention devices, in order to prevent the recurrence of accidents that might lead to fatalities by falling from a high place occurred in 2016 and 2017. In FY2019, with the aim of achieving "Challenge of zero accidents," each department is promoting the PDCA cycle for safety and environmental management on its own initiative, and is working to continue safe and stable operations by identifying potential risks, including processes and equipment, and implementing appropriate risk assessment measures.

#### Safety and Safety Assurance Advisory Committee

In the FY2018 Safety and Safety Assurance Advisory Committee, we consulted on the "Efforts to achieve advanced safety assurance equivalent to Super-certification\*" and received the reply that "Upgrading of risk assessment and strengthening of facility management and operation management by utilizing advanced technologies are important points." Based on this, the Tokuyama Plant obtained Super-certification in FY2019. The Chiba Plant also underwent an on-site inspection and applied.

In FY2019, we consulted the Committee as "Efforts to deal with increasingly severe natural disasters" and received the reply. We will consider and respond to it in the future.

\* Super-certification: A system in which the Ministry of Economy, Trade and Industry certifies accredited manufactures that are engaged in advanced safety assurance, such as IoT, the use of big data, advanced risk assessment, and third-party evaluation of safety capabilities, as "Super-certification Manufactures (Specified Accredited Manufactures)" in response to diversifying disasters, aging of plants, and a decrease in the number of skilled employees.

#### Reinforcement of earthquake resistance of existing facilities

The Group's refineries and complexes have worked to strengthen its measures for natural disasters. As for earthquakes, we have constantly assessed the earthquake resistance of our equipment based on the standards required by laws against the expected earthquake magnitudes, and strengthen them, if necessary. In addition, having learned lessons from the Tokachi-oki Earthquake in 2003 and others, we have assessed and enhanced the earthquake resistance of our facilities against expected earthquake magnitudes that exceed the standards required by laws.

Following the Great East Japan Earthquake on March 11, 2011, laws concerning high-pressure gas equipment were tightened and the standards of earthquake resistance were reviewed. In response to these changes, we have been systematically reinforcing the spherical tanks that store LPG at the Group's refineries and complexes in order to improve the earthquake resistance of their support structures. In addition, Yokkaichi Refinery of Showa Yokkaichi Oil Co., Ltd. reinforced its marine jetty with a view to strengthening disaster response capabilities. Going forward, we will consider further enhancing the earthquake resistance of the the Group's refineries and complexes.

#### Reinforcement of LPG tank support structures (Tokuyama Complex)



#### Reinforcement of marine jetty with a view to strengthening disaster response capabilities (Yokkaichi Refinery of Showa Yokkaichi Sekiyu Co., Ltd.)



### Safety Activities at Our Refineries and Complexes

At the Group's refineries and complexes, the Safety & Environmental Protection Section of each site plays a central role in promoting safety assurance of refineries and complexes and environmental conservation. Moreover, in collaboration with business partners of refineries and complexes, we conduct thorough daily safety inspections and take all possible measures to prevent accidents, while forming a self-protection and disaster prevention teams in the event of an accident and carrying out periodic disaster prevention training.

Specifically, in order to promptly implement emergency responses in the event of natural disasters and other disasters as well as disaster prevention activities, we prepare disaster scenarios based on past disasters and carry our periodic disaster prevention training with business partners. We also conduct evacuation drills in consideration of the occurrence of tsunami caused by a large-scale earthquake.

### Safety Education

#### Companywide Education

As part of the company-wide education for new employees in April, we will use videos of past serious accidents at Idemitsu to raise awareness of safety and ensure that employees are always aware that safety is the foundation of management. In seminar for newly appointed managers conducted at each time of personnel changes, we ensure that they learn their legal roles in safety and environmental management.

#### Training Seminar Organized by the Safety & Environmental Protection Headquarters

Safety, Environment (HSSE) & Quality Assurance Department as the secretariat of the Safety & Environmental Protection Headquarters provides key personnel such as managers in charge of safety and environmental management at each executive department and business site with training seminars on their roles based on internal rules and the basics of safety and environment management in order to foster their leadership to autonomously promote the PDCA cycle for safety and environment management at their own executive department and business site. (Seminars are scheduled to be held 10 times in FY2019)

#### Training Organized by the Manufacturing & Technology Department's Technical Training Center

##### ● Training for operators of manufacturing facilities

The Technical Training Center provides training for all operators based on the mid-term training plan in order to foster them as production engineers (PE) The PE is an operating engineer who can logically understand processes, facilities and systems, and their interrelationships, and make comprehensive decisions to ensure the optimal operation of refineries, complexes, and plants in a safe and efficient manner. The PE is responsible for ensuring the safety of the Group's refineries, complexes, and plants.

##### ● Reinforcement of safety training

The Technical Training Center is working to strengthen safety training. For example, it provides the foreman or delegate (assistant to the foreman) with foreman-level training to enhance their abilities to make decisions on emergency measures as the conductor. This is the only advanced training in Japan we have developed in-house. Participants form an operation team to operate a training plant modified from the desulfurization unit that was actually in operation at Tokuyama Complex. Participants conduct practical training in the event of an abnormality at night or on a holiday by reporting and conducting initial activities, emergency shutdown, and disaster prevention activities while the incident is progressing. In addition, safety management training is provided to newly-appointed technical managers at refineries and complexes. This training is divided into two parts. Each participant reconfirms the points of safety management in the basic training, and recognizes the issues and clarifies the action plan to strengthening safety in the follow-up training. In addition, we hold experiential training for governments and organizations, and as part of cooperative human resource development for local communities, we hold seminars to raise safety awareness utilizing our risk sensing equipment and VR in cooperation with outside training centers. These training and seminars have received high reputation from outside the Company.



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### Practical Fire Fighting Training

#### ● Training of personnel for fire fighting at refineries and complexes

In case of a fire or explosion, it is extremely important to implement initial fire extinguishing activities and measures to prevent expansion to minimize damage inside and outside refineries and complexes. In this regard, recognizing that it is important to accumulate practical training based on the basic theory of fire fighting, we are focusing on training of personnel for fire fighting. For example, they learn the basics of fire fighting activities through classroom lectures, and conduct training on handling actual equipment and extending hoses for fire fighting according to the training plan. Particularly at the Hokkaido Refinery, Chiba Complex and Aichi Refinery, we conduct fire fighting training using actual fire training facilities.

#### ● Actual fire training at Niigata Disaster Prevention Training Center

The Safety, Environment (HSSE) & Quality Assurance Department has the Niigata Disaster Prevention Training Center, which receives a large number of trainees every year from within the Company as well as from various companies in the industry. The training assumes that a fire breaks out by facility at a business site. We are strengthening the initial fire extinguishing capability at each business site by learning the initial fire extinguishing method appropriate to the nature of oil fires through theory (classroom lectures) and practice (actual fire training). This Training Center has received high reputation from outside the Company as a facility where they can gain valuable experience and learn firefighting techniques.

### Use of External Training

#### ● Training for top management

In order to prevent serious accidents and disasters, it is extremely important that the top management, i.e. general managers of refineries and complexes have a strong awareness of safety, and exercise strong leadership to promote accident prevention measures. In this regard, associations in the oil and chemical industries and related companies including the Company emphasized to an external training center the importance of developing safety awareness among top management. As a result, the center has regularly held the special lecture entitled "Safety from now on and the role of top management" since March 2016. Every year, general managers of refineries and complexes and top management of the Manufacturing & Technology Department in the Head Office take part in the lecture to strengthen leadership for safety in industry, together with general managers of refineries and plants of other companies in the vicinity of the Center.