

Process Safety and Disaster Prevention

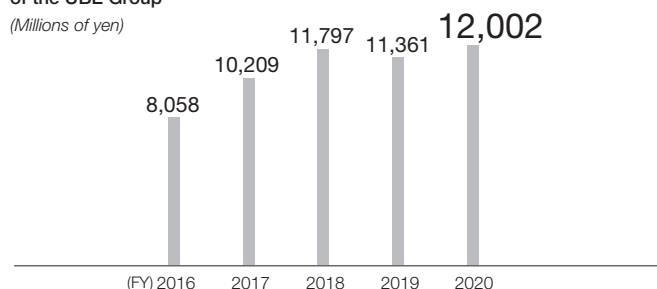
Initiatives for Process Safety and Disaster Prevention

UBE Group Facility-Related Accidents

	(FY)	(Number of accidents)				
		2016	2017	2018	2019	2020
UBE		2	3	4	4	13
Group companies		0	1	0	3	2

In fiscal 2020, the UBE Group recorded 15 accidents, investigated their causes, and implemented recurrence prevention measures.

Occupational Safety, Health, and Disaster Prevention Expenditure of the UBE Group



Plant Safety Assessment

Plant safety assessments of new, additional, or modified offices and facilities are carried out following the methods stipulated in the plant safety assessment standards. In fiscal 2020, the UBE Group carried out 90 such safety assessments.

Response to the Japan Petrochemical Industry Association's Industrial Process Safety Action

	Initiatives that Member Companies Should Take	UBE's Initiatives
1. Commitment of corporate management to industrial process safety	(1) Commitment to basic principles and policies related to process safety and other aspects of safety	Establishing and maintaining the UBE Corporate Philosophy, UBE Management Principles, and UBE Group Environmental and Safety Guidelines Messaging from top management to employees and partner companies about industrial process safety On-site roundtable meetings with top management held at facilities, facilitating direct communication between the president and employees
	(2) Commitment to policy on resource allocation for industrial process safety	Building an educational structure and using educational and training facilities to develop human resources Providing explanations to facilities regarding budgets and staffing for production plans, maintenance plans, and capital investment plans prepared by process safety divisions
2. Setting goals for industrial process safety	(1) Set numerical targets for process safety	Numerical target: Zero major facility accidents
3. Formulating action plans to implement industrial process safety measures	(1) Risk assessment	Conducting risk assessments with the participation of several departments from comprehensive and diverse perspectives for normal and unstable circumstances and when deploying new facilities and processes
	(2) Education and training to develop human resources	Participating in classes, on-the-job training, and RA and educating about operational principles and know-how through experiential education and providing plant simulator education
	(3) Utilize information about accidents	Horizontally sharing information on accidents inside and outside the Company and their countermeasures through the Accident Information Liaison Group
	(4) Organizational operations	Implementing change management with operational management, facility management, process safety management, and design divisions when facilities are newly established or renovated and when procedures change
	(5) Facility maintenance and deterioration countermeasures	Update based on results of assessments of remaining service lives and formulate repair plans Harness the IoT, including for deploying advanced nondestructive inspection techniques and tablets
	(6) Maintain and enhance earthquake resistance of high-pressure gas facilities and conduct voluntary seismic assessments of existing piping	Assessing compliance with seismic resistance standards for high-pressure gas facilities, undertaking measures, and conducting seismic diagnoses of existing piping systems
	(7) Incorporate new methods and technologies to enhance safety	Incorporating operational data to analyze operational patterns, introducing fluctuation prediction systems, and utilizing driving training simulators and smart devices
	(8) Safety management that encompasses partner companies	Group companies and related partner companies hold joint safety management meetings Staff in charge of operational management, facility management, and staff from partner companies meet before construction begins to confirm safety
4. Surveying and evaluating achievement of goals and implementation of measures	(1) Structure and operations relating to attainment surveys and assessments	Progress is checked and evaluated through annual audits Group Strategic Management Meeting considers the results of the year's activities when discussing measures for the next year
	(2) Respond to results of above survey and assessments	Based on assessment results, act on key priorities, which are to undertake overall risk steps to prevent accidents from aging facilities, improve the safety of high-pressure gas-certified business sites, and undertake measures to tackle natural disaster
5. Initiatives to advance each company's own process safety activities (cultivating a culture of safety)	(1) Approaches to developing a culture of safety	Institute safety awards within the Group and at business sites Each business site formulated goals and plans to improve the safety culture and undertook improvement initiatives
6. Leveraging external knowledge	(1) Harnessing third-party institutions	Have the Process Safety Enhancement Center assess business site safety Set improvement goals based on assessment results and acted
	(2) Disseminating information externally	Provide safety and security information to local industry associations
7. Communicating about risks with communities	(1) Risk communications tools and frequency	Holding regular dialogue with local residents Hold events for local citizens
8. Efforts to prevent industrial accidents from earthquakes, tsunamis, and other natural disasters	(1) Evacuating employees in event of major earthquakes and tsunamis and approaches to facility setups	Formulating responses for earthquakes and tsunamis and conducting evacuation training, and assessing and reinforcing seismic resistance of facilities and piping Creating and implementing earthquake and tsunami countermeasure plans and formulating business continuity plans