

Place the Utmost Priority on Safety

Omi Plant Pipe Burst Accident

Our deepest thoughts and prayers are with the worker from our partner company who lost their life in the accident that occurred at Denka's Omi Plant on June 14, 2023, and with the worker's bereaved family during this harrowing time. We also express our heartfelt sympathies to the workers who were injured.

Please see the following URL to view the final report (Japanese): https://www.denka.co.jp/storage/news/pdf/1193/20240111_denka_omi_finalreport.pdf

1 Overview of the accident

The accident occurred during pipe replacing work in the chloroprene monomer production facility of the Omi Plant. In order to remove the pipe for transferring synthesized chloroprene monomer to the storage facilities, the pipe was being cut with an (electric) saw saber. As it was being cut, the pipe burst approximately 3 meters from the cutting point. Out of the three workers from our partner company, the worker (A) who was supporting the pipe with his hand near the bursting point died, and the worker (B) and supervisor (C) who were performing the cutting work were injured.



A plan to renew the pipes to make it easier to clean deposits (scale) inside the pipe was planned

(An increase in deposition of scale after periodic repair work in October 2022 was confirmed)

About 10:00 of the day before
Partially shut down manufacturing equipment and discharged liquid in pipe

About 15:00 Started flushing with water inside the pipe

About 4:00 of the day of the accident

Stopped flushing with water

To prevent issues such as chemical burns due to dripping, dry nitrogen was influxed
The scales were dried

About 6:30 Stopped influx of nitrogen

About 9:00 Began pipe removal work
Cut using saw saber

9:05 **Accident occurred**

2 Improving absolute safety

After the accident, we established an Accident Investigation Committee consisting of external experts and specialists, and looked into the cause exhaustively and formulated measures to prevent any recurrence. The investigation determined that factors behind the accident included: poor understanding of the danger of the scales stuck in the pipe, inadequate investigation of the cause of small changes in the operating state of the plant, and inadequate collaboration between the staff involved in the work. As a measure to prevent recurrence, we will ensure that the pipes are always kept in a moist condition. We are also examining and implementing operating conditions to suppress the generation of scale. Furthermore, we are working to strengthen safety management company-wide, as well as at partner companies.

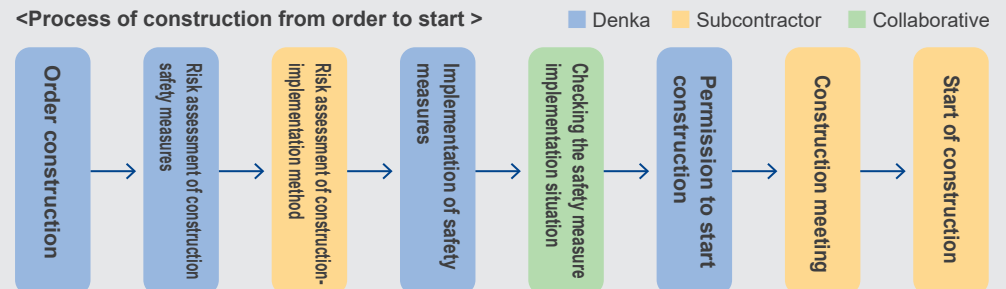
3 Fostering a safety culture centered around environment & safety division

- (1) Since the start of this fiscal year, we have been strengthening the environment & safety division at our Head Office and other business sites, and making efforts towards safety auditing of the handling of chemical substances and partner companies.
- (2) We are improving safety issues by developing a safety patrol system at each business site, and having full-time staff conduct patrols where they go to the actual location and observe the situation firsthand.
- (3) We have declared the day the accident occurred as "Safety Day," and we are working hard to ensure that the memory of the accident does not fade away.

4 Stronger risk assessment of chemical substances and work safety management

- (1) We are reassessing the risk of chemical substances, with a focus on by-products such as scale, and taking countermeasures.
- (2) We are doing risk assessments of work safety measures and work implementation methods, and sharing information on residual risks with partner companies.

<Process of construction from order to start >



Place the Utmost Priority on Safety

1 | Fiscal 2024 Activities

Companywide Targets

We put the utmost priority on worksite safety and health, facility security and disaster prevention in all aspects of our business activities

- 1 Promotion of initiatives to achieve an occupational accident frequency rate of 0.2 or less**
- 2 Achievement of zero serious accidents**

Priority Initiatives

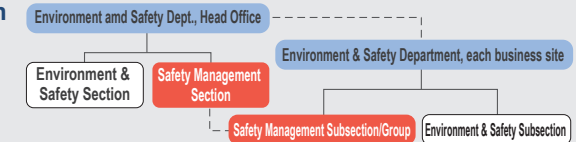
- 1 Initiatives to achieve an occupational accident frequency rate of 0.2 or less**
 - Safety measures for inexperienced workers, elderly workers, and employees of partner companies
 - Establishment of a business site patrol system, and continuous improvement based on auditing by the Head Office
 - Review of education and training system focusing on non-technical skills and improvement of psychological safety
- 2 Initiatives to achieve zero serious accidents**
 - Risk assessment with emphasis on high-energy hazards (e.g., explosive materials, heavy objects, high locations)
 - Promotion of safety measures proposed by the Accident Investigation Committee
- 3 Initiatives to establish and realize Denka's vision**
 - Resolute implementation focused on activities necessary for legal, safety, and other reasons, and activities with high effectiveness

2 | Strategies to Achieve Objectives of Management Plan “Mission 2030”

In order to achieve an occupational accident frequency rate of 0.2 or less and 0 serious accidents by 2030, we are systematically working on the following strategies.

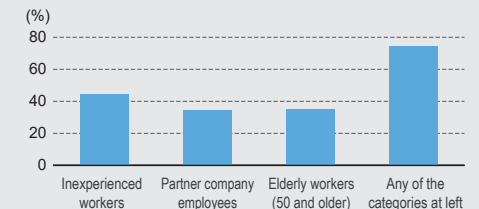
(1) Reorganization to strengthen safety management

We are bolstering our system by establishing divisions specializing in safety management at our Head Office and business sites.



(2) Initiatives to achieve an occupational accident frequency rate of 0.2 or less

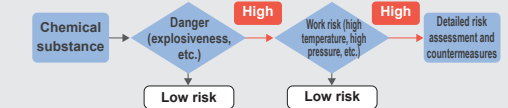
About 3/4ths of all accidents that have occurred in recent years have involved people in one of the following categories: inexperienced workers, elderly workers, or partner company employees. Therefore, we are focusing on safety measures for these types of workers.



(3) Initiatives to achieve zero serious accidents

Based on risk assessment results for high-energy hazards, we will take provisional and permanent measures.

Flowchart for clarifying dangers of chemical substances



3 | TOPICS

1. Initiatives to achieve an occupational accident frequency rate of 0.2 or less

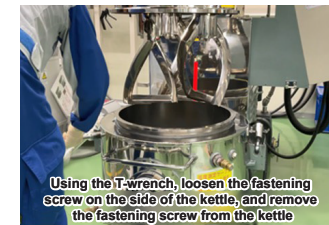
- We are working toward company-wide deployment of video procedures that even inexperienced workers and foreign workers can understand.
- By carrying out thorough risk assessment before each type of work, we will reliably communicate residual risk to everyone at partner companies. At the same time, we will further improve communication, and work as a team to prevent accidents.

2. Initiatives to achieve zero serious accidents

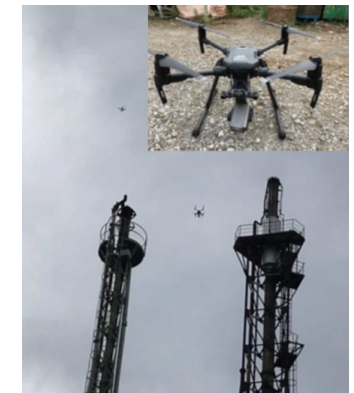
- Through the use of monitoring cameras, management and workers can check videos together, for things like whether workers are carrying out work according to procedures, or whether they are engaged in unsafe work practices. When there is a problem, everyone comes together to consider improvements, and procedures are revised. In this way, we are working to improve the workplace environment so everyone can work safely and securely.
- To check early for problems with safety equipment and devices, we use drones for inspection and monitoring of high locations.

3. Initiatives to establish and realize Denka's vision

- By putting in place an auditing system, we are working hard to ensure compliance, including at group companies. The mother plant at Denka is continually working as a team to support safety activities at affiliated companies.
- For education, we have adopted new instructional materials, and we are working hard to improve safety knowledge and understanding of the law throughout the group.



Example of a video procedure



Example of using a drone for equipment inspection