

» Creating a Safe and Healthy Workplace Environment

Purpose of activities	Activities during fiscal 2018	Self-assessment	Targets/plans for activities from fiscal 2019 onwards
<ul style="list-style-type: none"> Promoting safety and health activities 	<ul style="list-style-type: none"> Continue to promote the Zero Occupational Accident Project 	B	<ul style="list-style-type: none"> Continue to promote the Zero Occupational Accident Project
	<ul style="list-style-type: none"> Implement thorough activities for risk reduction as a campaign to eliminate multiple accidents 	B	<ul style="list-style-type: none"> Expand multiple accidents to the top three ranked accidents and conduct a campaign to eliminate them*
	<ul style="list-style-type: none"> Reinforce equipment safety based on risk assessments 	A	<ul style="list-style-type: none"> Continue to make thorough efforts to ensure facility safety through risk assessments (RA)
	<ul style="list-style-type: none"> Promote safety and health education through effective utilization of the Occupational Safety & Health Education Center 	A	<ul style="list-style-type: none"> Continue to promote safety and health education through effective use of the Occupational Safety & Health Education Center and introduce Virtual Reality accident simulations
	<ul style="list-style-type: none"> Promote transition to electronic health management records, through measures such as integrating health checkup organizations 	A	<ul style="list-style-type: none"> Promote health measures through the individual health management system
	<ul style="list-style-type: none"> Make effective use of group analysis results based on stress checks 	B	<ul style="list-style-type: none"> Continue to make effective use of group analysis results based on stress checks

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

* If each plant can eliminate their top three accidents, this can reduce the total number of accidents by around 60%. As such, we will continue and develop the same elimination campaign targeting three types of accidents over a period of three years starting in 2017 in the same manner.

Basic Approach

In Chapter 2 of the MMC Group Code of Conduct, we vow to “We are committed to providing a safe and healthy environment for all our stakeholders.” This is based on the notion that, if we can’t keep our employees safe and healthy, they won’t be able to provide secure and happy lives for their families, we won’t be able to operate effectively, and we will never be able to keep on expanding as a company.

MMC Group Basic Policy on Safety and Health Management

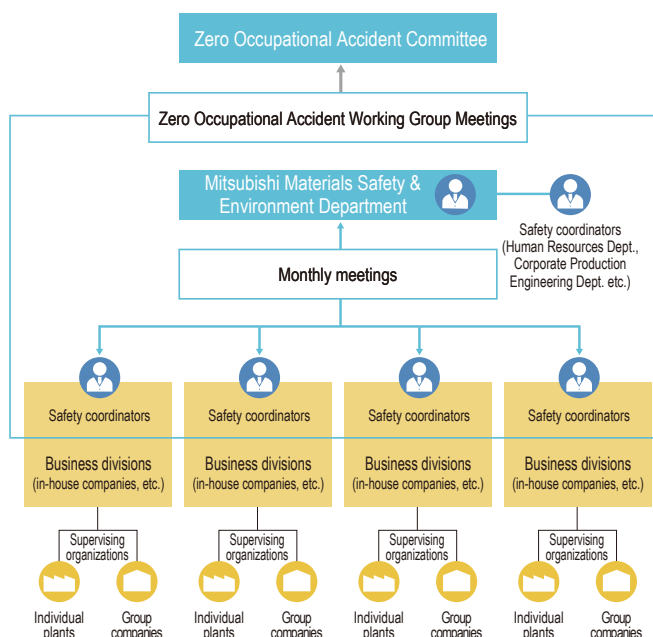
1. We will carry out safety and health activities based on full participation from all employees, underpinned by leadership and initiative from the President and other managing personnel.
2. We will ensure that all employees comply with the Industrial Safety and Health Act and other applicable legislation, manuals and operating procedures, and establish a workplace culture whereby everyone follows the rules and ensures that others do too.
3. We will make every effort to create pleasant workplaces that are healthy for both body and mind, for all employees, through activities aimed at creating open workplaces and promoting health.
4. We will take preventive measures in accordance with Ministry of Health, Labour and Welfare guidelines on the prevention of work-related traffic accidents and improve road etiquette amongst all employees, in order to eliminate traffic accidents based on our commitment to promoting road safety activities as an example to society as a whole.

Framework

In the wake of the fire and explosion at our Yokkaichi Plant in January 2014, we launched a new Zero Occupational Accident Project in April that same year, and set about strengthening the foundations of safety and health on a groupwide scale, with the aim of eliminating serious occupational accidents resulting in four or more lost days.

Our safety management framework revolves around the Mitsubishi Materials Safety & Environment Department. We also appoint Safety Coordinators at each in-house company, in order to share information regarding progress and issues with safety and health measures at plants / factories under their management, including group companies, with the Safety & Environment Department via monthly meetings, and to consult regarding solutions. We have an integrated groupwide promotion framework in place whereby Safety Coordinators take part in Zero Occupational Accident Working Group Meetings, to report on and discuss matters that extend beyond the confines of individual companies.

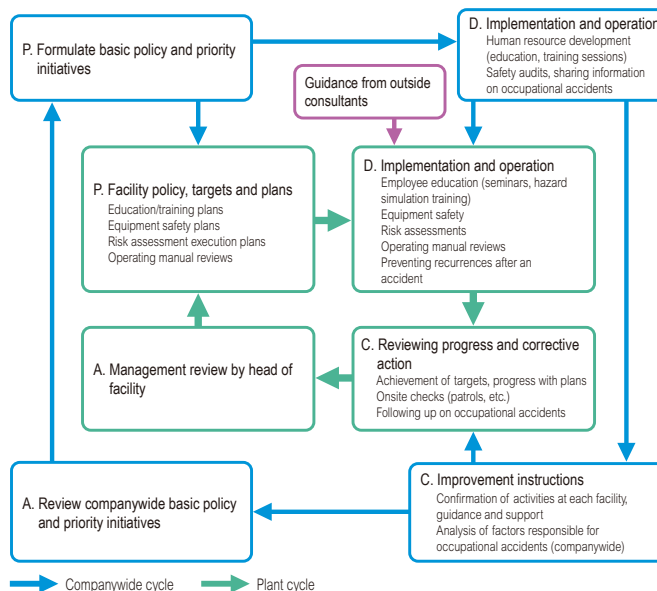
At the same time, Safety Managers, Safety Coordinators and Safety Instructors are assigned to individual plants / factories, where their role is to promote safety activities. We hold regular Groupwide Safety Manager meetings and meetings for Safety Coordinators and Safety Instructors, where we exchange openings on a wide range of occupational accident information and health and safety activities across the Group and the various business sectors in which it is involved, and endeavor to raise the level of health and safety.



Management Priorities

To expand the joint labor-management initiative to achieve zero occupational accidents, we have identified issues at the MMC Group in light of occupational accidents, etc. that occurred last year, engaged in joint labor-management discussions on the particular items to be addressed to achieve solutions, and designated management priorities on that basis. In 2017, we set out the following management priorities, and rolled out occupational safety and health management systems at each of our plants / factories accordingly.

Group occupational safety and health management system



Group-wide priorities for safety and health management (2017)

1. Campaign to Eliminate Multiple Accidents at Each Plant

A survey of the safety measures implemented by excellent firms publicly acknowledged for their safety work in the industry shows that what they have in common is not innovative activities or quick remedies, but thorough implementation that yields results. The Group decided to have each plant run a Campaign to Eliminate Multiple Accidents since we deemed that this “thoroughness” was lacking and because of frequently occurring similar accidents peculiar to each plant.

[Procedure]

- ① Each plant designates what accidents to eliminate.
- ② A Declaration to Eliminate Accidents is adopted at each plant about an accident selected at that plant.
- ③ The risks relating to the designated accidents are thoroughly identified, measures to reduce risks are considered and implemented, and the results in terms of risk reduction and accident elimination are assessed.

A permanent mechanism is established for measures to reduce risks that do not depend on temporary managerial measures, such as education and calling for vigilance.

2. Thorough efforts to make equipment safe (engineering measures) through risk assessments (RA)

At the core of our work on safety management priorities is our efforts to make equipment safer through engineering measures by utilizing risk assessment, which we have been promoting since 2015. We set the index for these activities as an 80% reduction rate (risk level II or below: acceptable level) of high risks (risk level III or above: unacceptable level). All plants are working to exceed this index.

An analysis of the types of occupational accidents occurring at the MMC Group has revealed that many occupational accidents occur due to two factors: “flawed protective and safety measures” such as incomplete safety measures for machinery and equipment, and “proximity to dangerous areas,” such as touching machinery or equipment while it is operating. To strengthen the physical measures in place by reviewing structures and mechanisms from the perspectives of the foolproof*¹ and failsafe*², we are employing thorough engineering-based action through risk assessments.

Further, with respect to occupational accidents caused by “flawed operating methods” such as the use of inappropriate tools and jigs or incorrect operating procedures, we will strive to make risk assessment-based improvements including the verification of operating methods, and revised operating procedures that reflect hazard prediction.

Risk assessment is an effective means of discovering, eliminating or mitigating potential danger or harm attributable to operating practices and other work performed at a manufacturing site. At the MMC Group, we implement risk assessment activities from the perspective of workers on the production floor at each facility. We have trained risk assessment instructors to improve the ability to identify unsafe equipment states and began offering training classes from October 2015. About 480 people have taken the course as of March 2018. Centering on these instructors, it is contributing to enhancing and stimulating on-site activities.

*1: Foolproof: A function that prevents human error from resulting in an occupational incident or disaster

*2: Failsafe: A function ensuring that equipment will operate on the safe side in the event of mechanical malfunction, power outage or otherwise

Enhancing Safety and Health Education

We thought that personal experiences of hazards are important to improve hazard awareness, so started running an Occupational Safety and Health Education Center -“Midori-kan” in March 2017. The center has 50 different hazard experience facilities inspired by the actual work environment and the dangers that hide in everyday tasks. It also regularly provides specialized education needed for work safety and health in dedicated classrooms, in addition to hazard experience education by expert instructors. In the one year since the center’s opening, more than 1,500 Group employees have received hazard experience education and about 300 have completed the expert education.

Moreover, with “Chemical substance risk assessment” becoming obligatory under the Industrial Safety and Health Act revised in June 2016, we started holding workshops to train and improve the skills of employees in charge of actual operations. As of March 2018, about 210 people at 43 plants have taken the course.



Occupational Safety and Health Education Center -
“Midori-kan”



Monument for safety and health
The monument for safety and health in the courtyard of the Midori-kan. The design consists of a green cross, meaning safety, surrounded by five materials symbolizing our business.

Raising Employees’ Awareness of Health and Creating Mentally and Physically Pleasant Workplaces

Promoting Measures to Maintain and Improve Employee Health, and Improve Working Environments, in Order to Prevent Work-related Diseases

Our attitude to health management is that healthy employees are an essential resource for the company, and we are working to improve our health systems on a companywide basis.

Since FY2016, we have been giving employees health advice after their regular health checks, provided by public health nurse from Head Office. We continued this initiative in FY2019, and have also been offering advice on improving lifestyles, in the interests of detecting and treating illness as early as possible and preventing lifestyle-related diseases.

Starting from April 2018, we have worked to consolidate the institutions in charge of health examinations within the Company as well as initiated a centralized system managing digitized health information, such as physical examination results. This has facilitated more accurate health management and work effectiveness. We will improve health management by drafting and implementing highly effective health promotion measures that are based on data.

Meanwhile, we are committed to continually improving workplace environments to prevent work-related diseases, including stepped-up efforts to manage hazardous substances (poisonous substances, toxic substances, chemicals) and prevent exposure.

Stepping Up Mental Healthcare Initiatives

We continually provide various mental healthcare training as a form of primary preventive care for mental health issues (such as improving workplace environments and providing training). As part of “line-care” training for management personnel, clinical psychologists from Head Office are scheduled to visit all of our sites every two years. In terms of “self-care” training, we select members of staff at each facility to undergo training, so that they can assume the role of instructors as we roll out training to all employees. We also provide mental health training as part of our global human resource and position-specific training programs. Furthermore, starting from fiscal 2019, all employees who have been with us for three years get to talk to the clinical psychologist stationed at each plant, in an effort to forestall mental health issues.

By way of secondary and tertiary preventive mental healthcare (such as early response to employees with mental health issues and support for their return to work), we continue to offer meetings and consultations with industrial healthcare staff at each of our sites, as well as using external back-to-work programs to enable employees to reintegrate smoothly into their jobs and prevent them from having to take further time off.

We operate a stress-check system required by law at all facilities and offer meetings with physicians as needed. In the future, Moreover, we are committed to further strengthening our mental health measures for example by applying the results of group analysis to our workplace improvement activities.

Strengthening Safety and Health Systems

Establishing a Safety and Health Award Scheme

We have established a scheme to award groups and individuals serving as an example to the MMC Group in outstanding safety and health improvement activities over the course of the year.

As the activities carried out by grand prize winners cannot be adequately described in writing, we hold guided visits of facilities open to Groupwide participation as an opportunity to observe the award-winning activities as well as exchange opinions and gain insight into overall safety and health improvement activities.

The third awards were presented in April 2018. The below table lists the facilities presented with awards in the group category. Moving forward, we will continue to actively roll out these outstanding activities within the Group in a bid to further raise the levels of safety and health.

■ The third safety and health activity awards

Grand Prize	
Kyushu Plant	Completion of the Heatstroke Eradication Declaration
Hosokura Metal Mining Company	First year and two consecutive years without accidents requiring leave

Safety and Health Instruction Utilizing Outside Consultants

As the results of an analysis of past occupational accidents revealed issues in risk identification, we have been providing MMC Group facilities with safety and health guidance through outside consultants. Having an expert point out latent risks that are usually overlooked by on-site personnel and taking measures to mitigate the identified risks raises the on-site safety level and improves the hazard sensitivity of employees.

Promoting the Rollout of Information within the Group through consolidation and Dissemination

The Safety & Environment Department has been running an internal portal website since February 2017 for the collection, dissemination, and viewing of information about safety, health, disaster prevention and the environment. As regards health and safety, safety data and safety chronology that had previously only been stored on head office servers along with occupational accident case studies, documents used for safety and health training and information concerning health and mental health have been classified, organized and published to the intranet.

Computer graphics have been used to produce videos depicting cases of typical occupational accidents that have occurred in the MMC Group. The videos can be used to offer straightforward explanations of the conditions of an occupational accident, its cause, countermeasures taken and the lessons learned.

All past accidents in the Group have been entered into a database. That database has been available on the internal portal website since June 2017. It allows keyword and full-text searches and the creation of accident calendars, contributing to the preparation of safety education materials as well as measures against similar accidents. It is constructed so that all plants can obtain the necessary information swiftly and accurately, helping to bolster our safety foundation and foster a safety culture.

Disseminating Examples of Safety and Health Best Practices

Since 2014, we have been compiling a collection of safety and health best practices on a yearly basis, highlighting unique and highly-effective initiatives implemented at each MMC Group facility to prevent occupational incidents. We are promoting the spread of best practices by presenting them during National Safety Week as a shared asset for increasing the Group's safety and health levels.

Hazard experience education using VR (virtual reality)

We introduced VR hazard experience education at our Occupational Safety and Health Education Center in May 2018 to allow participants to experience hazard difficult to simulate with regular equipment.

VR allows participants to have a 360° field of vision, better realism and immersion through haptic and other technologies, and experiences of hazard until the end (e.g., before, during and after falling). It is helpful for creating better hazard awareness. As the devices are portable, the Group can lend them out to each plants, allowing them to conduct hazard experience education there.

■ VR hazard experience courses (Occupational Safety and Health Education Center)



High temperature accidents
(gas releases)



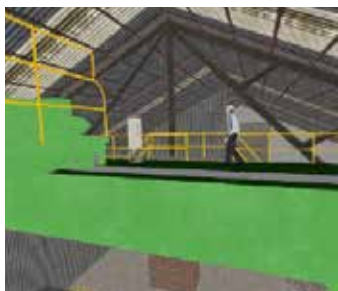
High temperature accidents
(steam explosions)



Forklift accidents
(driver moving forward)



Forklift accidents
(pedestrian moving backward)



Falling accidents
(falling from crane)



Falling accidents
(stepping through the floor)



Caught-between accidents
(press)



Caught-in accidents
(high-speed conveyor belt)

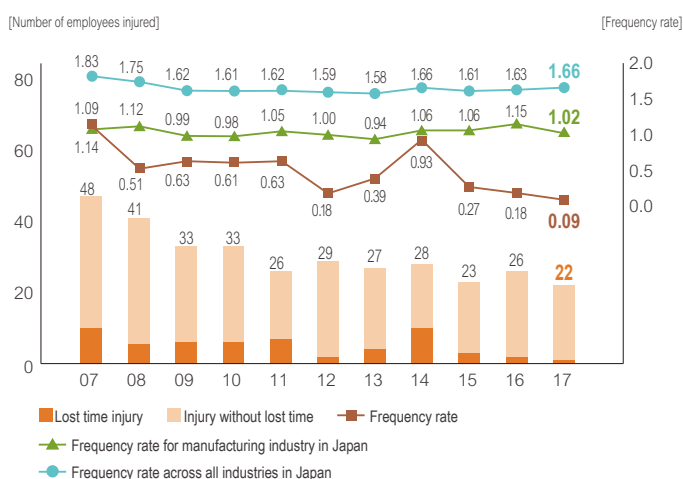


Caught-in accidents
(slow-speed conveyor belt)

Safety Record

The number of employees involved in occupational accidents, including injuries without lost time, in the Company and in 22 major Group companies was as high as 181 in 2017. Of these, 40 were lost time injuries. The number of accidents at the Company, on a non-consolidated basis, has been showing a downward trend for the past ten years, but it has leveled off in recent years. The Company's accident frequency rate (number of deaths and injuries per 1 million working hours), which is an assessment of the frequency of occupational accidents, was 0.09. This is lower than the manufacturing industry average of 1.02, but we are continuing to work in 2018 to achieve our goal of zero accidents, by continuing our campaign to eliminate multiple accidents, promoting equipment safety through risk assessment, and implement measures against common accidents that have to do with basic movements such as falling and twisting.

Number of occupational accidents involving employees (Mitsubishi Materials)*



* Figures are based on calendar years and do not include minor incidents

Breakdown of safety performance (incl. partner companies)

			2015	2016	2017
Non-consolidated	MMC	Lost-time (or more serious)	3	2	1
		No lost-time	20	24	21
	Subcontractors	Lost-time (or more serious)	5	4	7
		No lost-time	11	14	11
Group companies (Incl. subcontractors)	Lost-time (or more serious)	28	14	32	
	No lost-time	93	90	109	
Totals	Lost-time (or more serious)	36	20	40	
	No lost-time	124	128	141	

Number of employees injured