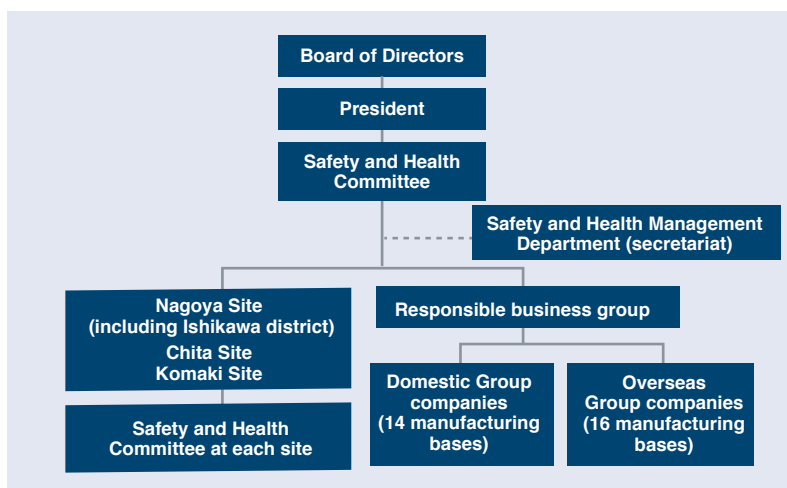


Aiming for zero industrial accidents, NGK has introduced an Occupational Safety and Health Management System (OSHMS) in fiscal 2007 as a mechanism for the ongoing systematic implementation of safety and health initiatives based on company-wide safety and health policies. Since then, we have made efforts to thoroughly embed and operate this system and strengthen risk assessment.

Also, we are proactively engaged in improving the health of our employees. In recent years, we have focused on reducing long work hours and health management for employees who work long hours.

Structure of Promote Safety and Health Management



Safety and Health Policy

'Maintaining the safety and health of each employee constitutes a basis for a company's operation and existence'

1. Comply with Occupational Safety and Health Law and Company Regulations.
2. Engage in activities in line with the OSHMS* to continuously raise the safety and health standards.
3. Promote safety and health activities under enough education & training and good communication with employees.
4. Reduce the risks of hazards and toxicity and prevent accidents to provide a comfortable work environment.
5. Prevent employees' health hazards and enhance health promoting activities.

*OSHMS : Occupational Safety and Health Management System

Activities to Promote Safety and Health Management in Fiscal 2016

	Main points	Priority Activities
NGK (alone)	Development of ability to foresee risks	<ul style="list-style-type: none"> • Providing Experience-based Safety Education to all employees at the Manufacturing Division • Conducting self-evaluation on safety levels and sharing the results with managers • Continuing Risk Assessment activities and providing residual risk education
	Enhancement of rules and education	<ul style="list-style-type: none"> • Enhancing safety work rules and providing organized education to inexperienced employees • Providing training for Safety Assessors
	Clarification of issues that need improvement in the work environment	<ul style="list-style-type: none"> • Auditing compliance with laws/rules • Identifying workplaces that need improvement • Identifying challenges and developing improvement plans
Domestic and overseas Group companies	Audit at Group companies and follow-up on the progress toward improvement	<ul style="list-style-type: none"> • Site patrol, identifying issues, sharing awareness of issues that need improvement • Following up on the items identified in the audit • Following up on improvement plans and their progress
	Reinforcement of mechanisms	<ul style="list-style-type: none"> • Improving the management system • Starting acquisition of international certification

Activities to Promote Safety and Health Management in Fiscal 2017

	Main points	Priority Activities
NGK (alone)	Enhancement of education, focusing on programs for managers	<ul style="list-style-type: none"> • Providing education to managers on relevant laws and regulations • Providing practical Risk Assessment education to improve risk management skills
	Improvement of the self-management system	<ul style="list-style-type: none"> • Conducting comprehensive Risk Assessment activities
	Development of ability to foresee risks	<ul style="list-style-type: none"> • Enhancing Experience-based Safety Education.
Domestic and overseas Group companies	Strengthening the mechanism to identify and disseminate risks	<ul style="list-style-type: none"> • Promoting Risk Assessment activities • Enhancing the risk management system and the education system

Enhancing Safety and Health Activities

NGK views the enhancement of safety and health activities as one of its highest priorities.

Until fiscal 2015, Group companies worked on this issue on their own or promoted safety and health activities through their responsible groups. Since fiscal 2016, the entire Group, including both domestic and overseas companies, has been working together on the enhancement of safety and health activities. As part of the efforts to enhance our global compliance and governance, we disseminate information to each site and keep track of individual situations. Through auditing and provision of support, we strive to solidly improve the level of our safety and health activities.

In September 2016, we developed a medium-term action plan with compliance, risk reduction and enhancement of governance as the generic concepts. In order to further strengthen these efforts, we are also promoting the acquisition of international management system certification at domestic and overseas Group companies.

Promotion of Experience-based Safety Education

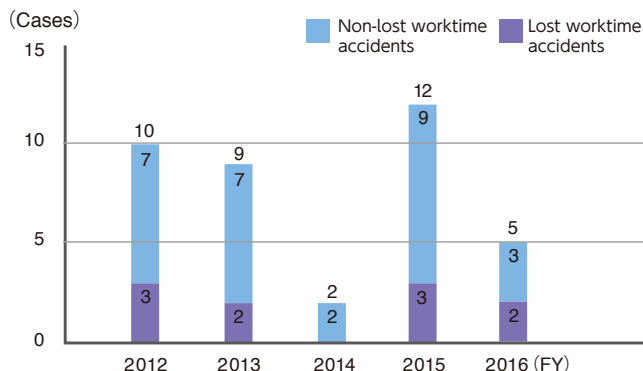
We are seeing a growing number of accidents among inexperienced workers. In response, we have established training centers at three sites in Nagoya, Chita and Komaki, as well as at Ishikawa Plant, where trainees can actually experience risks. Establishing these centers in-house means that more workers can now take enhanced training. At each training center, we teach them the importance of compliance with safety rules while using simple devices that let trainees safely experience three kinds of risks: electric shock, being pulled into machinery and getting caught. We are also planning to set up a "Safety Dojo" (meaning Safety School), aiming to further enhance the Experience-based Safety Education and develop trainees' ability to foresee risks.



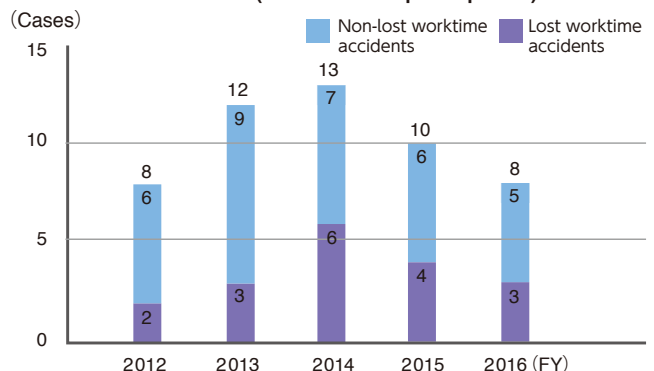
Training for Safety Assessors at the Manufacturing Division

Since fiscal 2016, we have been encouraging employees at the Manufacturing Division to acquire Safety Assessor certification. This qualification is granted by Japan Certification Corporation to recognize people who have a wide range of knowledge and skills necessary for the safe operation of machinery based on international safety standards. There are four levels of certification in the system, awarded according to applicants' knowledge and skills. In fiscal 2016, we started by encouraging worksite leaders and above at the Manufacturing Division as well as those in charge of safety and health to acquire the entry-level Safety Basic Assessor certification. As a result, 317 employees have passed the examination as of the end of fiscal 2016.

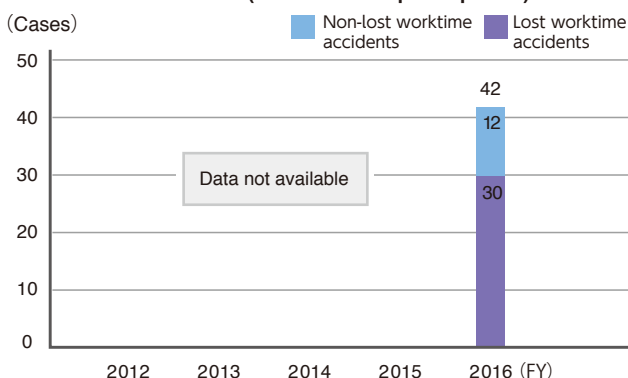
Work-Related Accidents (NGK)



Work-Related Accidents (Domestic Group Companies)



Work-Related Accidents (Overseas Group Companies)



Severity Rate (the number of lost workdays per 1,000 hours worked)

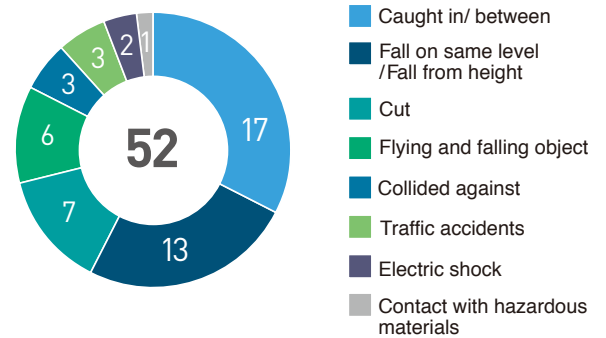
	FY2012	FY2013	FY2014	FY2015	FY2016
NGK	1.049	0.026	0	0.007	0.003
Domestic Group companies	—	—	—	—	0.009
Overseas Group companies	—	—	—	—	0.040

Rate of Lost-Worktime Injuries (NGK)

(the number of lost-worktime accidents per a million hours worked)

	FY2012	FY2013	FY2014	FY2015	FY2016
All industry total	1.59	1.58	1.66	1.61	1.63
Manufacturing industry total	1.00	0.94	1.06	1.06	1.15
NGK Company-wide total	0.41	0.28	0.00	0.41	0.27
Domestic Group companies	—	—	—	—	0.50
Overseas Group companies	—	—	—	—	1.40

Work-Related Accidents by Type (past 7 years)



Rate of Occupational Disease (NGK)

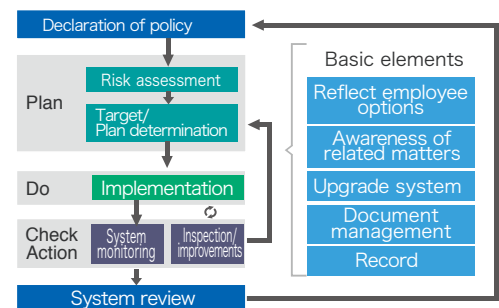
FY2012	FY2013	FY2014	FY2015	FY2016
0.41	0.14	0	0	0.13

Number of Deaths from Work-Related Accidents (NGK and Domestic Group Companies)

	FY2012	FY2013	FY2014	FY2015	FY2016
(Person)	0	0	0	0	0

Enhanced Safety and Health Management

Aiming for zero accidents, NGK is promoting the creation of an Occupational Safety and Health Management System (OSHMS). Under the company-wide Safety and Health Committee, we have established Safety and Health Committees at each site, department, factory and workplace, applying a PDCA cycle, with the aim of systematic and organizational improvement of occupational safety and health activities.



External Certification on Safety and Health Management System

We have been promoting the acquisition of safety and health management system certification, which is gaining importance globally, and incorporation of the system into operations in order to supplement the medium-term goals on safety and health.

Acquisition of Management System Certification (as of the end of fiscal 2016)

NGK	Nagoya, Chita and Komaki Sites as well as Ishikawa Plant have acquired JISHA's OSHMS certification*.
Domestic Group companies	NGK Adrec and Akechi Insulators have started taking action to acquire OHSAS 18001 certification.
Overseas Group companies	NGK Ceramics Suzhou, NGK Ceramics Indonesia, NGK Ceramics Polska and NGK Ceramics South Africa have already acquired OHSAS 18001 certification. NGK Ceramics Europe, NGK Ceramics USA and NGK Insulators Tangshan have started taking action to acquire the certification.



* When requested by a workplace, the Japan Industrial Safety and Health Association (JISHA) and other certifying bodies evaluate the workplace's Occupational Safety and Health Management System (OSHMS) based on JISHA's OSHMS criteria, including whether it is properly introduced based on the guideline released by the Ministry of Health, Labour and Welfare, and whether it is operated properly to produce step-by-step improvement in safety and health performance. Those who meet the criteria can acquire the certification.

Restricting Long Work Hours

In fiscal 2016, NGK started lowering the maximum amount of overtime work to 70 hours per month in July. We also clarified work priorities at each division and revised the cross-sectional division of roles within a department. As a result, in the first half of the fiscal year, the number of employees recording over 80 hours of overtime work decreased by 60% compared with the last term, and no employee has exceeded the maximum amount of overtime since September.

Overtime Work Hour Trends: General Employees

Hours worked (per person)	FY2012	FY2013	FY2014	FY2015	FY2016
Annual fixed working hours	1,919	1,919	1,919	1,919	1,919
Annual actual working hours	2,089	2,087	2,077	2,087	2,069
Average overtime work per month	24.1	24.4	24.5	24.9	23.7

Following Up with Employees Working Long Hours

NGK provides employees working long hours, including non-regular and part-time employees, with ongoing opportunities to meet with industrial physicians for health consultations and exams. The results are reported to and followed up on by Safety and Health Committees at each worksite. Also, the medical status of employees working long hours and the condition of those who need medical treatment are reported at monthly Safety and Health Committee meetings in an effort to thoroughly promote the reduction of overtime work.

Consultations by Employees Working Long Hours (People)

	FY2012	FY2013	FY2014	FY2015	FY2016
General employees	125	118	63	154	68
Managers	107	46	46	72	40

The figures represent the annual total number of individuals working 80 or more hours/month and 300 or more hours/6 months

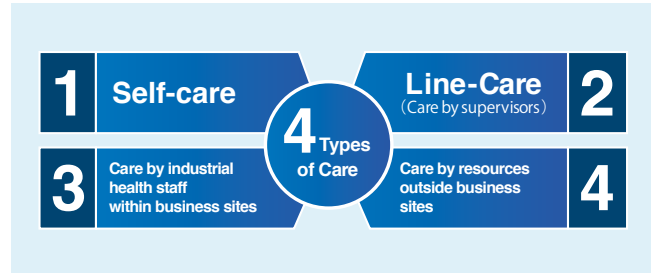
Promotion of Activities Supporting Mental and Physical Health

Four Types of Care for Mental Health

NGK emphasizes the importance of promoting the health, both physical and mental, of its employees. The medical status of employees working long hours and the condition of those who need medical treatment are reported at monthly Safety and Health Committee meetings held at each site in an effort to thoroughly promote the reduction of work performed outside normal working hours.

In fiscal 2016, we conducted a survey on physical and mental health. Employees found to be at risk of developing mental health problems were interviewed and offered guidance by industrial physicians and counselors. In November, we conducted stress checks, which are required by law to help employees become aware of their own stress levels.

Four Types of Care



Position-Based Mental Care Education is conducted

We also conduct ongoing stratified mental care education. In fiscal 2016, we provided mental health education to managers in order to further enhance our recent key initiatives on line care (care by supervisors). We will also incorporate it into the group education for new managers to deepen their understanding of mental health.

Position-Based Mental Care Education is conducted at NGK. (People)

	FY2012	FY2013	FY2014	FY2015	FY2016
New hires	103	88	56	199	234
General employees	227	293	291	272	325
Managers	63	95	95	87	450

Hosting a Safety Process Expert Meeting

The Ceramic Products Business Group of NGK invites global safety and health managers to its Safety Process Expert Meeting (PEM) held every year to review safety measures across the NGK Group. In fiscal 2016, 17 employees from HONEYCERAM production bases in Japan and overseas gathered to discuss themes such as, “Why do people commit unsafe behavior?”

We also hosted a lecture given by a safety consultant to remind ourselves of the importance of leaders' attitudes toward safety.

TOPIC

Hosting “Clearing Competition” at NGK Ceramics Indonesia

NGK Ceramics Indonesia (ACIn) hosted a “Clearing Competition” with the aim of making more room for equipment and products in line with the increase in production volume. The winner was selected based not only on how the space had been transformed but also on enhanced traffic lines and safety through 5S activities. The selection was also based on how the new condition was maintained two months after the competition. As a result of the comprehensive evaluation, the P4 (Peripheral Processing of LSH) Group won the first prize. We will continue our corporate-wide activities to improve work efficiency and safety.

