

Employees

The NGK Group implements a human resource system which enables every employee to perform at their full potential under fair treatment.

Basic Approach

In the NGK Group Guidelines for Corporate Behavior, our relationship with employees is based on the idea of “ensuring respect for humanity and comfortable working environments” and defined as follows.

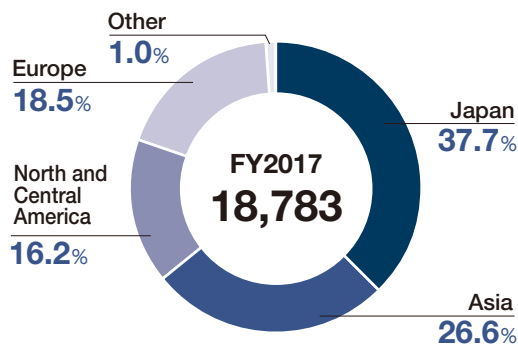
- We will hire and treat our people in a proper and fair manner and will provide a safe and pleasant working environment in which our people can work comfortably without sacrificing their family life.
- We will provide opportunities that allow a diverse range of personnel to take on new challenges, and will support the development of human resources through acquisition of knowledge and expertise.
- We will prevent any bullying, discrimination, harassment, or other acts that violate human rights and, if there is any violation, we will take appropriate actions in an expeditious manner.

Basic Information on Employees

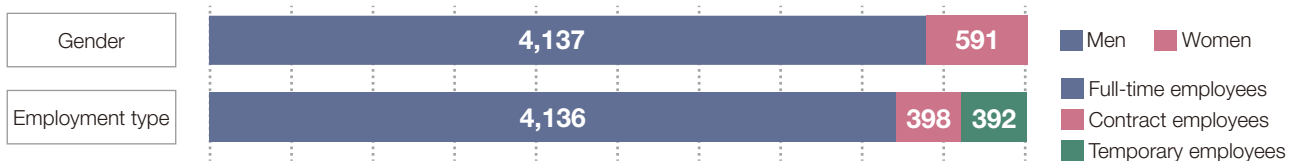
Number of NGK Group Employees

	Number of employees
FY2013	13,210
FY2014	16,217
FY2015	16,657
FY2016	17,517
FY2017	18,783

Composition of NGK Group Employee Composition by Region



NGK Employee Status in Fiscal 2017



Average age	38.7 years old (Men: 38.7 / Women: 38.6)
Average length of service	14.1 years (Men: 13.6 years / Women: 14.6 years)
Turnover ratio within 3 years among new hires	2.4%
Average salary	7,852,010 yen

Turnover Ratio	(No. of persons)		Voluntary Turnover Ratio	(No. of persons)		Number of New Hires Remaining at the Company (3 years)		
	FY2017			FY2017		New graduate hires in 2015	Retention in 2018	
Turnover ratio	0.82% (39)		Voluntary turnover ratio	0.76% (36)		Total	68	63
Men	0.68% (28)		Men	0.63% (26)		Men	58	55
Women	1.86% (11)		Women	1.69% (10)		Women	10	8

Revision of the Human Resource System for General Employees

In April 2017, NGK revised its human resource system for general employees to enable all employees, from the young to the experienced, to work with enjoyment and fulfillment. As NGK develops its businesses globally and promotes the creation of new products and businesses, it is essential to motivate young and mid-level employees who will take on future key roles and encourage them to demonstrate their full potential. The revised system aims to build the environment that makes these possible.

Key Points of the Revised System

Qualifications	<ul style="list-style-type: none"> • Developing a mechanism whereby all employees can challenge to qualify for a higher job grade. • Clarifying the definition of each qualification.
Evaluation	<ul style="list-style-type: none"> • Shifting from age-based evaluation to effort- and result based evaluation.
Retirement at age 65	<ul style="list-style-type: none"> • Maintaining the same level of salary after age 60.

Developing an Environment that Allows Employees to Demonstrate Their Full Potential

In the new human resource system revised in April 2017, we have clarified what kind of human resources the company is looking for and developed a system that allows young and mid-level employees to demonstrate their full potential. I hope they can actively take on challenges to move to higher stages. This system also allows mature workers to keep working in the same way until their retirement age of 65. I hope this revised human resource system can also increase motivation among women and encourage the NGK Group initiatives to promote women's active participation. We will keep on improving our human resource system by incorporating opinions from within our company.

Yuka Sugiura
Human Resources Department Manager

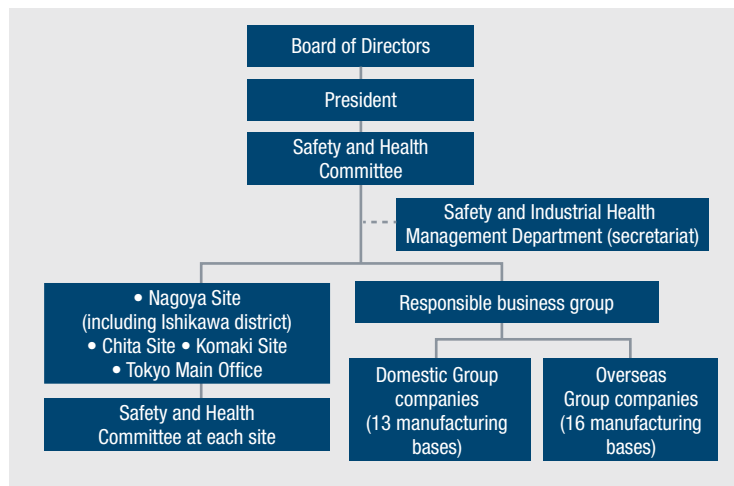


Safety and Health

Aiming for zero industrial accidents, NGK 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.

We also make a concerted effort to promote better health and wellbeing among our employees. In addition to our longstanding commitment to reduce overtime work and to monitor the health of employees who do work overtime, this year the NGK Group issued its Health Declaration, which is comprised of four main pillars: (1) Provide a workspace that is both people-friendly and work-friendly, (2) Cultivate a health-conscious corporate culture for executives, employees, and their families, (3) Promote early detection and early intervention for health concerns, and (4) Offer support for mental health and wellbeing.

Structure to Promote Safety and Health Management



Safety and Health Policy

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

1. Comply with occupational safety and health laws 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 and 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

Health Declaration

Health Declaration of the NGK Group

At NGK, we consider employee health and safety to be of fundamental importance to the company's operation and are, therefore, proactive about developing dynamic, people-friendly work environments and a health-conscious corporate culture, which contribute to better health for each and every employee.

Activities to Promote Safety and Health Management in Fiscal 2017

	Main points	Priority activities
NGK (non-consolidated)	Enhancement of education, focusing on programs for managers	<ul style="list-style-type: none"> • Implementing legal seminars for managers • Implementing practical risk assessment seminars for manufacturing division managers
	Improvement of the self-management system	<ul style="list-style-type: none"> • Expanding risk assessment beyond regular work operations
	Development of ability to foresee risks	<ul style="list-style-type: none"> • Enhancing experience-based safety education
	Ongoing workplace improvement initiatives	<ul style="list-style-type: none"> • Analyzing and responding to stress check results • Promoting chemical substance risk assessment
Domestic and overseas Group companies	Strengthening of 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 • Acquiring international standards certification (newly acquired by five companies)

Activities to Promote Safety and Health Management in Fiscal 2018

	Main points	Priority activities
NGK (non-consolidated)	Improvement of manager's risk management skills	<ul style="list-style-type: none"> • Expanding practical risk assessment seminars to technical workplaces • Improving the level of hazard source identification activities at each production site
	Improvement of the self-management system	<ul style="list-style-type: none"> • Reviewing work instruction and risk assessment activities • Actively developing "Near miss" activities and incorporating them into risk assessment
	Improvement of hazard awareness and strengthening of hazard prediction ability	<ul style="list-style-type: none"> • Launching hazard simulation/hazard prediction training school run by in-house instructors
	Promotion of health hazard prevention at priority workplaces	<ul style="list-style-type: none"> • Analyzing and responding to stress check results • Making improvements to mitigate potential for operations to negatively impact health
Domestic and overseas Group companies	Strengthening of compliance and augmentation of risk identification and awareness-raising systems	<ul style="list-style-type: none"> • Developing mechanisms to ensure legal compliance • Promoting risk assessment activities • Acquiring international standards certification (goal of new acquisition by seven companies)

Enhancing Safety and Health Activities

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

Until fiscal 2015, the three sites of Nagoya, Chita, and Komaki led these activities, while Group companies promoted their own safety and health activities through their responsible business groups. Since fiscal 2016, the entire Group, including both domestic or 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 occupational safety and health management system certification at domestic and overseas Group companies.

Establishment of Hazard Simulation and Hazard Prediction Training School

For some time now, NGK has operated simple training centers at three sites in Nagoya, Chita and Komaki, as well as at the Ishikawa Plant, to allow newer employees and less experienced employees to learn about workplace hazards first-hand in order to help reduce the incidence of workplace accidents caused by new and inexperienced employees.

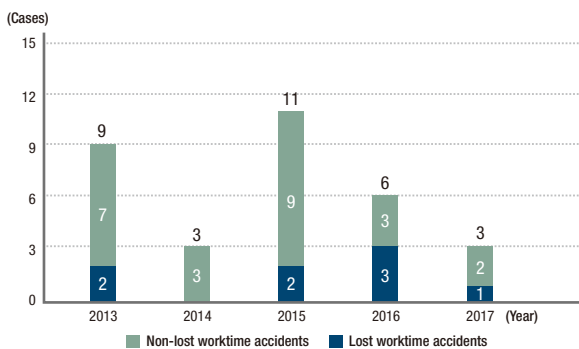
In June 2018, a new Hazard Simulation and Hazard Prediction Training School was established at the Chita Site, which not only provides general hazard simulation training but also specific hazard simulation training that utilizes replicas of actual equipment involved in in-house work accidents in order to be more directly applicable to employees' daily work.



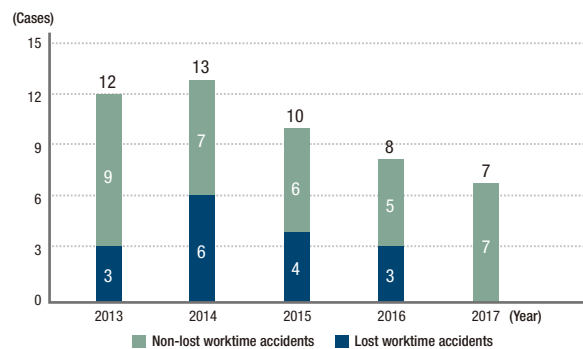
Training of Safety Assessors

We have been encouraging employees in the company facility design/maintenance divisions and manufacturing divisions to acquire Safety Assessor certification. This qualification is granted by the Japan Certification Corporation to recognize people who have a wide range of knowledge and skills in maintaining the safety of machines and equipment, in line with an official notice of the Ministry of Health, Labor and Welfare. There are four levels of certification in the system, awarded according to applicants' knowledge and skills. As of fiscal 2017, 73 employees have acquired Safety Sub-Assessor certification, and 317 employees Safety Basic Assessor certification.

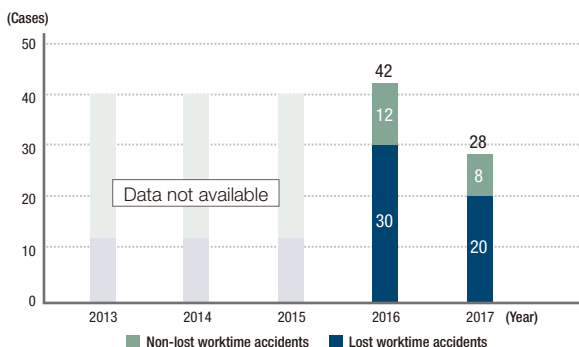
Work-Related Accidents (NGK)



Work-Related Accidents (domestic Group companies)



Work-Related Accidents (overseas Group companies)



Severity Rate

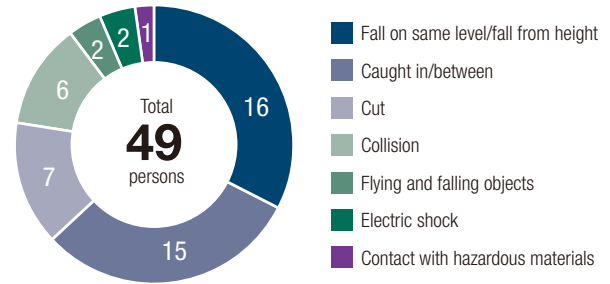
(the number of lost workdays per 1,000 hours worked)

	2013	2014	2015	2016	2017
NGK	0.015	0.000	0.007	0.004	0.000
Domestic Group companies	-	-	-	0.009	0.000
Overseas Group companies	-	-	-	0.040	0.022

Rate of Lost-Worktime Injuries (NGK)
(the number of lost-worktime accidents per a million hours worked)

	2013	2014	2015	2016	2017
All industry total	1.58	1.66	1.61	1.63	1.66
Manufacturing industry total	0.94	1.06	1.06	1.15	1.02
NGK company-wide total	0.28	0.00	0.29	0.41	0.13
Domestic Group companies	-	-	-	0.50	0.00
Overseas Group companies	-	-	-	1.40	0.91

Work-Related Accidents by Type (past 7 years)



Rate of Occupational Disease (NGK)

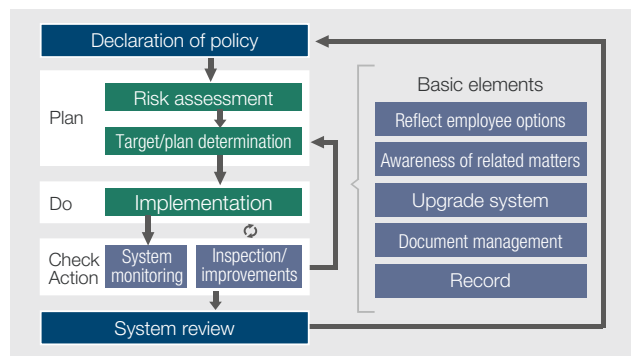
	2013	2014	2015	2016	2017
	0.14	0	0	0.13	0

Number of Deaths from Work-Related Accidents (NGK and domestic Group companies)

	2013	2014	2015	2016	2017
(Person)	0	0	0	0	0

Enhanced Safety and Health Management

Aiming for zero accidents, NGK is promoting the enhancement of the Occupational Safety and Health Management System (OSHMS). At each site, department, factory, and workplace, we have independently established Safety and Health Committees which operate under the auspices of a Group-wide Safety and Health Committee to apply a PDCA cycle aimed at systematic and organizational improvement in occupational safety and health activities.



External Certification on Occupational Safety and Health Management System

The NGK Group promotes the acquisition of occupational safety and health management system certification, which is growing in importance globally, and to incorporate such systems into daily operations in order to supplement medium-term goals on safety and health.

In 2017 at NGK Insulator's Nagoya Site, in addition to the already acquired JISHA (Japan Industrial Safety and Health Association) system's OSHMS certification, the site acquired ISO 45001 for the first time in Japan. In 2018, our plan is to acquire integrated ISO 45001 certification which will cover our Chita and Komaki sites and the Ishikawa Plant, as well as all of our other business sites in Japan. Meanwhile, nine manufacturing-related Group companies in Japan and overseas have acquired OHSAS 18001 certification.

Acquisition of Management System Certification (as of March 31, 2018)

NGK	Nagoya Site: ISO 45001 certification and JISHA's OSHMS certification acquired Chita Site, Komaki Site, Ishikawa Plant: JISHA's OSHMS certification acquired
Domestic Group companies	NGK Adrec and Akechi Insulators: OHSAS18001 certification acquired
Overseas Group companies	ACC, ACIn, ACP, ACS, ACE, ACU, and NGK Insulators Tangshan: OHSAS 18001 certification acquired Note: ACC: NGK Ceramics Suzhou ACP: NGK Ceramics Polska ACE: NGK Ceramics Europe ACIn: NGK Ceramics Indonesia ACS: NGK Ceramics South Africa ACU: NGK Ceramics USA

Restricting Long Work Hours

Since July 2016, we lowered the maximum amount of overtime work to 70 hours per month. We also clarified work priorities at each division and revised the cross-sectional division of roles within a department.

As a result, the number of employees recording over 80 hours of overtime work a month in 2017 decreased 90% compared with the previous period, and only one employee exceeded the maximum amount of overtime in a month.

Overtime Work Hour Trends: General Employees

Hours worked (per person)	FY2013	FY2014	FY2015	FY2016	FY2017
Annual fixed working hours	1,919	1,919	1,919	1,919	1,919
Annual actual working hours	2,087	2,077	2,087	2,069	2,072
Average overtime work per month	24.4	24.5	24.9	23.7	24.3

Following Up on 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

Interviewees (persons)	FY2013	FY2014	FY2015	FY2016	FY2017
General employees	118	63	154	68	65
Managers	46	46	72	40	20

Note: Numbers of people shown are cumulative totals.

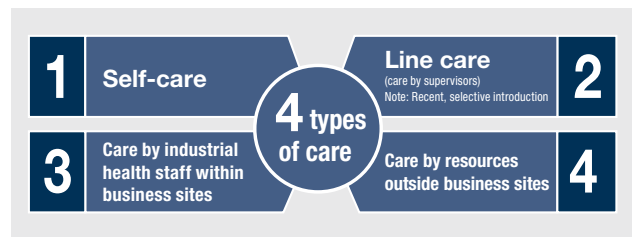
Promotion of Activities Supporting Mental and Physical Health

Four Types of Care for Mental Health

We facilitate the widespread implementation of ongoing mental and physical health promotion activities, centering on the four types of care for mental health promoted by the Ministry of Health, Labor and Welfare.

In fiscal 2017, we carried out stress checks for all employees. The results were subjected to group analysis, and environmental improvements are being advanced for those workplaces with a comparatively large number of highly stressed employees.

Four Types of Care



Position-Based Mental Care Education

We also conduct ongoing stratified mental care education. Continuing on from the previous fiscal year, in fiscal 2017 we selectively provided mental health education to managers in order to further enhance our recent key initiatives on line care (care by supervisors). We are also incorporating it into the job grade-specific education for new managers to deepen their understanding of mental health.

Position-Based Mental Care Education at NGK

	FY2013	FY2014	FY2015	FY2016	FY2017
New hires	88	56	199	234	158
General employees	293	291	272	325	181
Managers	95	95	87	450	63

Hosting a Safety Process Expert Meeting (PEM)

NGK's Ceramic Products Business Group invites overseas production site safety and health managers to its yearly Safety Process Expert Meeting (PEM) to review and discuss ways to improve safety levels across the NGK Group. In fiscal 2017, a total of 32 employees from HONEYCERAM production bases in Japan and overseas gathered to exchange safety-related information and ideas. Also, the Safety and Health Management Department discussed the practical risk assessment seminars (on-site hazard source identification and countermeasure creation-related training), which we have introduced for managers in Japan. All of the participants shared the good points and points for improvement that they discovered from actually visiting production sites and left with a great deal of heightened awareness as a result.

TOPIC

Company-Wide Forklift Safety Tournament

The Safety and Health Management Department held the first-ever Forklift Safety Tournament at the Komaki Site. The aim of this tournament is to serve as a complement to knowledge and skill acquisition done through classroom learning and competition, seeking to promote greater safety awareness for forklift operations by further invigorating forklift safety activities at individual work sites. This first company-wide tournament was also held with the hope that it would serve as a venue for idea and information exchange between work sites. On the day of the tournament, 14 employees selected from the Nagoya, Chita and Komaki sites, as well as the Ishikawa Plant, competed against one another in a demonstration of knowledge and technical skill.



Diversity

It is NGK Group's basic policy to recruit human resources and offer stable employment and equal opportunities regardless of race, nationality, creed, gender, or physical abilities. Also, in an aim to promote autonomy and independence, NGK maintains the human resource systems necessary to provide employees with fair compensation commensurate with their degree of contribution to the company.

NGK New Graduate Hires

Note: Excluding new graduates planned to transfer from temporary to regular positions. (Persons)

Joined company	University graduate			Junior college/vocational school graduate	High school graduate, other
	Total	Men	Women		
April 2014	36	28	8	0	20
April 2015	38	29	9	0	30
April 2016	94	67	27	0	60
April 2017	65	50	15	0	46
April 2018	104	72	32	0	51

NGK Mid-Career Hires

(Persons)

Joined company	Total	Total			
		University graduate men	University graduate women	Other men	Other women
April 2013–March 2014	7	3	1	3	0
April 2014–March 2015	49	15	4	30	0
April 2015–March 2016	200	69	12	116	3
April 2016–March 2017	158	66	15	73	4
April 2017–March 2018	135	58	12	63	2

System to Promote Diversity

At NGK, the Human Resources Department plays a central role in promoting diversity, including through nursing care support and promotion of women's active participation.

Regarding human rights issues, NGK strives to educate employees by distributing booklets on human rights on occasions such as training for the recently promoted employees. A helpline is also available for consultation on these issues.

Promoting the Success of Women

Appointment of Female Key Personnel (Management Staff)

The NGK Group strives to increase opportunities for motivated and skilled people to enhance their skills regardless of gender. We are also engaged in creating comfortable working environment for women. The number of female key personnel (management staff) of NGK in fiscal 2017 was 17.

Promoting Women's Active Participation through the Revised Human Resource System

NGK has revised its human resource system, aiming to enable employees in general employment positions who were engaged in routine tasks to take on a broader range and a higher level of work.

The new human resource system supports career advancement of individual employees. They can take the initiative to challenge to move up to a higher job grade.

Establishment of a Career Consultation Helpdesk

In March 2016, we established a career consultation helpdesk for female employees to discuss career-related concerns. At the helpdesk, certified career counselors provide support and consultation services to employees, while strictly observing confidentiality. Since May 2017, we have expanded the service to make it available not only to women but to all employees.

Introduction of System to Support Early Return from Parental Leave

We have introduced a system to encourage and support employees so that they can return from maternity and childcare leave and resume their careers at an early stage.

Certified as an “L-Boshi” Company for Excellence in Promoting Women’s Active Participation

In March 2017, NGK was certified as an “L-Boshi” company by the Minister of Health, Labor and Welfare (MHLW). This certification is granted to companies that have done excellent jobs in accordance with the Act on Promotion of Women’s Participation and Advancement in the Workplace.

Each applicant for the certification is evaluated on five criteria: recruitment, employment continuity, working hours, percentage of female managers, and diverse career paths. By meeting four of these five criteria, NGK has received the second highest certification of the three levels.



Certified as a Company Promoting Women’s Active Participation by Nagoya City*

In recognition of our efforts to create a workplace environment that encourages women’s active participation such as revising our system for transferring to career-track positions, we were certified as a Company Promoting Women’s Active Participation by Nagoya City in January 2012 and recertified in 2014.

*A system for certifying companies that conduct outstanding initiatives in the areas of (1) awareness improvement, (2) work-life balance, and (3) promotion of women’s active participation.



January 2012
Company Promoting Women’s
Active Participation
(Nagoya City)

Submitting Our Action Plan for Promoting Women’s Active Workplace Participation to MHLW

In January 2016, in accordance with the Act on Promotion of Women’s Participation and Advancement in the Workplace, NGK submitted a general employer action plan to the Aichi Labor Bureau, which is overseen by MHLW.

In this plan, NGK sets the goal of hiring more female employees. Accordingly, the proportion of women among new hires increased from 16% in fiscal 2012 to 29% in fiscal 2016. This figure was 23% in fiscal 2017.

We will keep working on the initiatives according to the action plan to accomplish our goals.

Action Plan

Issues

- Although there is no gender gap in terms of criteria for promotion and service years, the number of women in management positions and its candidates is small.
- The occupational range (job types, job locations, and titles) in which women play an active role is limited.

Goals

- Foster a corporate culture that promotes women’s active participation.
- Increase the number of candidates for managers (section chief level) by 1.5 times and prepare them for future appointment.

Initiative 1 Raise career awareness of female employees and utilize their inherent potential.

Initiative 2 Increase the ratio of women among new graduate hires and diversify career opportunities.

Ratio of Female Key Personnel (Managers)

	2014/3	2015/3	2016/3	2017/3	2018/3
Ratio of female employees ¹	13.3%	12.9%	12.6%	12.7%	12.5%
Ratio of female key personnel ²	1.5%	1.8%	1.8%	2.0%	2.0%
Ratio of female general employees ³	16.6%	16.1%	15.6%	15.5%	15.1%

¹: Ratio among all employees

²: Ratio among all key personnel

³: Ratio among all general employees

Ratio of Women in Managerial Positions at Overseas Group Companies (as of March 31, 2018)

	Europe	North and Central America	Asia	Other
Ratio of women in managerial positions	7%	17%	25%	29%

Female Key Personnel (Managers)

	2014/3	2015/3	2016/3	2017/3	2018/3
No. of persons	12	14	14	16	17
No. of department managers or higher	2	2	3	3	4

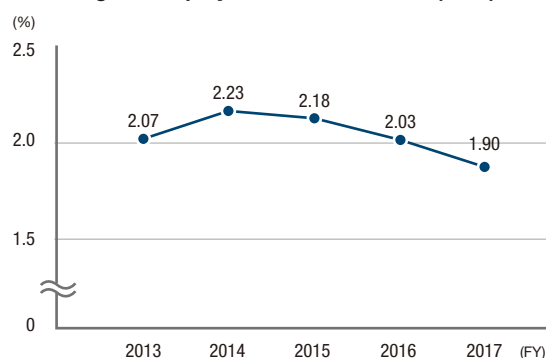
Expanding Employment of Persons with Disabilities

The NGK Group promotes employment of people with disabilities by accepting students from special-needs schools as trainees and hiring participants from employment seminars for people with disabilities. As a result, the percentage of employees with disabilities at the end of fiscal 2016 was 2.03%, which exceeded the legally mandated percentage of 2.0% for the fourth straight year; however, the percentage at the end of fiscal 2017 was 1.9%.

Continuing on from fiscal 2016, in fiscal 2017, we accepted students from special-needs schools as trainees, who we then hired as new employees in fiscal 2018.

We have also expanded the divisions that hire people with disabilities in order to broaden the scope of jobs available.

Percentage of Employees with Disabilities (NGK)



Various Systems to Make Use of Diverse Human Resources

The NGK Group implements systems promoting the utilization of human resources based on the idea that personnel diversity is linked to innovation in organizational culture.

Human Resource Utilization Systems Aligned with Employee Individuality and Skills

To open the way for employees to take full advantage of their individuality and skills, NGK adopts an internal job application system, in which open positions are announced internally and eligible applicants are appointed. There is also a career follow-up system for career track registration enabling applicants to register their work history, qualifications, and desired position to provide an opportunity for individuals to carry out their work duties with a sense of satisfaction. And an FA (free agent) system allows employees to register their personal aspirations and preference of jobs to appeal themselves within the company.

Internal Job Application System

	FY2013	FY2014	FY2015	FY2016	FY2017
Applications (cases)	2	19	28	17	32
Recruits (persons)	3	23	36	28	50
Applicants (persons)	3	12	23	11	15
Successful applications (persons)	1	8	9	4	5

Career Follow-Up System

	FY2013	FY2014	FY2015	FY2016	FY2017
Registered (persons)	5	2	2	0	3
Transferred (persons)	0	1	0	0	1

FA System

	FY2015	FY2016	FY2017
Registered (persons)	1	0	0
Transferred (persons)	0	0	0

Promoting the Regular Employment of Manufacturing Contract Employees

NGK established a system for appointing manufacturing contract employees to become regular employees, and 20 employees were appointed in fiscal 2017. Excellent employees are identified through biannual personnel assessments and recommended by division heads to sit for the regular employee promotion exam. Those who pass the exam become regular employees.

Excellent workers out of the ones who transfer to regular employment positions also have a chance for promotion to two higher ranks of company qualification. In fiscal 2017, six employees underwent accelerated promotion via this system.

Transfers from Contract Manufacturing Worker to Regular Employee

	FY2013	FY2014	FY2015	FY2016	FY2017
Converted (persons)	4	27	25	15	20

Accelerated Promotions

	FY2013	FY2014	FY2015	FY2016	FY2017
Promoted (persons)	7	4	11	11	6

Management of Follow-up System to Fit Young Employees in the Workplace

To prevent career mismatches, there is a follow-up system for younger employees in NGK. We conduct surveys and interviews about their jobs and the work environment to career-track employees in their second year and manufacturing technology staff in their third or fourth year of employment. If they desire, feedback is provided to their superiors, leading to younger employees' job stability. A job rotation system is also provided mainly to young career-track employees. After working with us for four years, they are transferred to a different job including overseas and outside of the departments to which they currently belong.

Come-Back System

In fiscal 2016, NGK launched the Come-Back System to rehire people who had left our company for various reasons (e.g., job change, studying abroad, job transfer of a spouse, etc.) as mid-career employees. In fiscal 2017, this system was used by one employee.

Reference
URL

Come-Back System

<http://www.ngk.co.jp/recruit/comeback/>

Work-Life Balance

To promote a work-life balance and reduce long working hours, in fiscal 2011, NGK formulated specific rules based on initiatives that had been conducted by labor-management over the previous three fiscal years.

We keep track of social changes, such as changing attitudes toward work as well as legislative amendments, and strive to respond to these changes flexibly and properly by improving systems and revising operations.

Nine Rules for Promoting a Work-Life Balance

- No more than 70 hours of overtime work per month.
- Overtime work exceeding 45 hours per month limited to six months each year.
- At least six days of paid leave must be taken each year.
- No more than 300 hours of overtime work per six months.
- In principle, there will be no overtime work on refresh days (Wednesdays and Fridays).
- If overtime is necessary, a prior permit application must be submitted.
- In principle, work must not be performed for more than seven days straight.
- If work in excess of seven days straight is necessary, a prior permit application must be submitted.
- Written applications must be submitted when requesting employees to work on holidays or late at night.

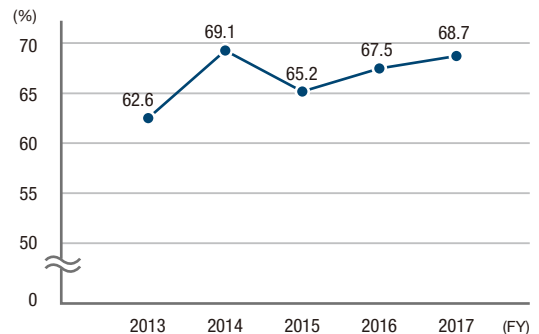
Initiatives to Limit Overtime Work

If, for any reason, overtime work in excess of 45 hours per month appears likely, the reason for the increase in overtime work must be confirmed through prior labor-management consultations to level out the time periods and workloads or increase the number of employees.

Countermeasures for Mitigating Increased Overtime Working Hours

Each year, NGK discloses statistics on hours worked and paid leave utilization to its Labor Union for discussion and countermeasure deliberation purposes. When cases of long working hours are found, Labor Union meets with each workplace to devise countermeasures. When long working hours are found for employees who have been temporarily assigned overseas, they must submit in writing the reason for the long working hours and undergo a health check. These measures are taken to maintain their health, and the written report is used to identify the reasons for long working hours and to develop countermeasures.

Rate of Paid Leave Utilization



For the fifth consecutive year, 99% of employees used six or more granted days of paid leave

For more than 10 consecutive years, the average number of days used for granted paid leave exceeded 10

For more than five consecutive years, usage of granted paid leave exceeded 60%

Enhancing Systems for Supporting Work-Life Balance

NGK offers flexible systems to help employees maintain a balance between work and family life. To support childcare and nursing care, we are enhancing financial support by providing a babysitter expense subsidy system, and a lump-sum payment system for nursing care support. And in consideration of the working environment, we offer support via a shortened working hour system.

Further, we continue to enhance the soft infrastructure NGK has in place to support these employees. For employees seeking to balance their career with childcare, we offer pre-maternity leave interviews, pre-reinstatement interviews during the childcare leave period, career consultations, and other consultation resources. For employees undertaking nursing care, we offer nursing care-related information sessions and distribute nursing care handbooks, as well as facilitate consultation services which make use of outside resources.

Enhancement of Work-Life Balance Systems

In 2010, NGK made a major revision to its human resource system, and we have since been continuously enhancing our support measures by identifying employees' needs. One recent example is the establishment of a system in 2013 to allow employees to take a leave of absence for accompanying a spouse posted overseas for work.

In fiscal 2016, we responded to the needs of employees who would like to gradually increase their working hours linking with their child's growth. The accommodation was made possible by relaxing restrictions set up for children's age for which the exemption from unscheduled work and limitation on overtime work apply. We have also introduced Childcare Concierge* services for employees working in the Tokyo metropolitan area, where it is difficult to find daycare centers.

In fiscal 2017, we established an early reinstatement lump-sum system for employees who return to work early from their childcare leave (within 11 months of the start of their childcare leave). We also established a non-registered daycare subsidy system to help subsidize employees who put their children in non-registered daycares. These systems are part of the initiatives we undertake to support employees' careers after they have returned to work. Also, in addition to childcare and nursing care, we launched a system for flexible work arrangements to help employees who need to attend to a health condition of their own that requires repeated and ongoing treatment, thereby finding a balance between work and medical care.

*Services to help facilitate the process of finding a daycare center and returning to work. They include tailored support for individual employees during childcare leave to help them find a daycare center and giving advice in preparation for their return to work.

System to Support Employees to Balance Work and Childcare at Each Stage

		Interview (employee, supervisor, and HR)		Interview (employee, supervisor, and HR)	
		During pregnancy	Before/after birth	During childcare leave	Balancing work and care
Work systems	Other systems	Measures on health management Overtime work exemption Late-night working hours exemption Flex time system	Time off before/after birth Special paid leave when a spouse gives birth Childcare leave (using accumulated vacation days)	Childcare leave Continuing the childcare leave	Shortened working hours Flex time system Unscheduled work exemption Limitation on overtime work Late-night working hours exemption Half-day paid leave Caring for a family member (using accumulated vacation days) Caring for a child
				Childcare Concierge (for those living in the Tokyo metropolitan area)	Priority use of a commuter parking lot (in Nagoya) Non-registered daycare expense subsidy
Financial support systems	Family Fund		Maternity gift		Babysitter expense subsidy Elementary school enrollment gift
	Insurance benefits	Health insurance	Lump-sum birth allowance		
		Employment insurance			Lump-sum childcare leave allowance
Salary			During the time off before/after birth, pay 2/3 of the standard daily wage	Unpaid	Lump-sum payment made six months after returning to work (330,000 yen)
Bonus			During the time off before/after birth, pay a bonus calculated with a 2/3 attendance rate	Unpaid	

Systems to Support Early Return from Parental Leave

NGK has systems to encourage and support employees who have taken maternity and childcare leave so that they can return to their careers at an early stage.

These systems are aimed at developing workplaces that support female employees in particular, with the expectation of promoting their active participation.

Systems to Support Early Return from Parental Leave

- A lump-sum payment for early return
- Licensed daycare center expense subsidy
- Childcare Concierge

Overview of Childrearing Support Measures and Users

Systems That Exceed Legal Requirements

System name	Details	Number of users					
			FY2013	FY2014	FY2015	FY2016	FY2017
Childcare leave	Until the last day of the month when the child turns one year old. When there are certain circumstances, such as not being able to find a daycare center, leave is available until the last day of the month in which the child turns 18 months old or the end of March after the child turns one, whichever is longer (Legal requirement: until the child turns 18 months old)	Women	40	52	49	44	36
		Rate of returned	94.1%	100%	100%	100%	– (On leave)
		Rate of employees still working a year after returning to work	100%	100%	100%	100%	– (On leave)
		Men	8	12	11	7	17
		Of which returned to work (Rate of returned)	8 (100%)	12 (100%)	11 (100%)	7 (100%)	17 (100%)
		Rate of employees still working a year after returning to work	100%	100%	100%	100%	–
Shortened working hours during childrearing	Six or seven hours per day for employees until the fiscal year when their children start fourth grade in elementary school (Legal requirement: For children under the age of three)	Users	38	43	53	57	51

Systems Operated Independently by NGK

System name	Details	FY2013	FY2014	FY2015	FY2016	FY2017
Lump-sum payment made six months after returning to work	Lump-sum payment is paid six months after returning to work	13	20	16	26	19
System for taking annual paid leave in hourly increments for employees working shortened hours	Paid leave can be taken in hourly increments by employees working shortened hours for five days	Unintroduced	18	35	36	36
Childcare leave for fathers	Unused annual paid holidays can be used for childcare leave	8	12	11	7	17
Pre-maternity leave interview	Interview is attended by employee, HR, and supervisor to provide the employee with peace of mind while on maternity leave and ensures both sides have proper understanding of procedures related to systems supporting childcare and work	23	25	22	20	27
Interview before returning to work	Supports smooth transition back to work through consultation on work details and work style	14	14	27	18	30
System for accompanying a spouse's overseas assignment	Enables employees to take a leave of up to two years and six months while accompanying a spouse (including a non-NGK employee) posted overseas for work, and allows employees to continue their career path, which was difficult to do prior to the establishment of this system	1	2	3	6	5
Maternity gift (Family Fund)	¥50,000 gift when a child is born	165	183	175	208	225
Elementary school enrollment gift (Family Fund)	¥50,000 gift when a child enrolls in elementary school	134	137	124	142	151
Babysitter expense subsidy (Family Fund)	Provides up to ¥100,000 per year for employees who must pay for a babysitter or daycare due to working hours	33	13	16	19	9
Childcare Concierge (for those living in the Tokyo metropolitan area)	Support to facilitate the process of putting a child in daycare and returning to work	Unintroduced	Unintroduced	Unintroduced	2	1
Priority parking spaces to support childcare (for those working at headquarters)	Priority parking spaces available at a commuter parking lot	No data	12	17	19	29

Systems to Support Nursing Care

Working hours	Time off	Financial support
<ul style="list-style-type: none"> ① Shortened working hours ② Working 3 days a week ③ Flex time system (for employees at departments to which the regular flex time system does not apply) ④ Limitation on overtime work ⑤ Unscheduled work exemption ⑥ Late-night working hours exemption 	<ul style="list-style-type: none"> ⑦ Caring for a family member using accumulated vacation days ⑧ Unpaid days off to provide care 	<ul style="list-style-type: none"> ⑩ Care leave benefits ⑪ Care leave support fund ⑫ Lump-sum care allowance
	Leave of absence	
	<ul style="list-style-type: none"> ⑨ Care leave 	

Nursing Care Leave Usage

	FY2013	FY2014	FY2015	FY2016	FY2017
No. of employees taking nursing care leave	0	0	0	0	1

Revision of the Care Leave System

In line with revisions made in January 2017 to the Child Care and Family Care Leave Act, we made revisions to our own system, such as enabling employees to divide their one-year nursing care leave into three blocks. Moreover, we have signed a corporate contract with SeaCare, an NPO that supports care-giving, to further enhance services helpful to caregivers.

This service makes care-giving consultations available free of charge, regardless of whether Certification of Needed Long-Term Care has been obtained, and enables employees to receive support in care-giving when they are unable to do so.

Company Intranet

We have launched a site on diverse work styles on the company intranet to widely announce our measures to support a work-life balance. The new site is a redesigned and more user-friendly version of the previous Work and Family Life Support Site. Its new features include, for example, an online handbook on childcare and nursing care.



Ministry of Health, Labor and Welfare
Next-generation support certification logo "Kurumin" (2012)



Ministry of Health, Labor and Welfare
"L-boshi" certification of corporate excellence in the promotion of women's active participation Certification level 2 (2017)



Nagoya City
Certification of corporate promotion of women's active participation (2011)



Aichi Prefecture
Certification of Aichi "Shining Women" Companies (2016)

Awards Received in Fiscal 2017

NGK received a variety of awards for its initiatives aimed at promoting women's active participation, as well as supporting work-life balance for childcare, nursing care, and illness.



Aichi "Shining Women" Company Outstanding Company Award (received from Aichi Prefecture on November 27, 2017)



Fiscal 2017 Excellent Equal Opportunity & Work-Life Balance Companies Awards; Minister of Health, Labor and Welfare Prize for Excellence; Family-Friendly Company Category (received on December 15, 2017 from the Ministry of Health, Labor and Welfare)



Fiscal 2017 Aichi Prefecture Family-Friendly Company Awards; Family-Friendly Company Award (received from Aichi Prefecture on February 13, 2018)

Human Resource Development

At NGK, people are our most precious management resource. With respect for employee motivation and ambition, we engage in the cultivation of human resources who will lead the next generation. In recent years, NGK has concentrated efforts on the enhancement of training to develop future leaders to take management positions as well as globally minded personnel to support our overseas business expansion.

In fiscal 2017, we accompanied our reforms of the personnel system, such as raising the mandatory retirement age and promoting greater work-life balance, with programs aimed at fostering greater employee motivation and activity. Specifically, we offered training to promote autonomous career design for older staff, career path lecture courses aimed at fostering greater diversity, and training in how to perform interviews with subordinates.

Systematized Personnel Development in Four Areas



Promoting Systematic Education through Nearly 120 Programs

Using the major career milestones, such as joining the company or getting a promotion, as opportunities for career training, we have instituted and are systematically implementing training in four areas. In addition to required job grade-specific training, we have introduced around 120 different types of programs that run during the year.

Within the area of management training, examples of the programs we run the "Management Basics" training seminar, which teaches employees about the essential aspects of management, and the "Career Design in Your 50s" training seminar, which promotes autonomous career design among older employees. Manufacturing training programs include those that fall under the category of worksite capability enhancement and supervisor training, as well as ongoing training programs aimed at equipping young employees with the basics of ceramics manufacturing, such as materials, molding, working, drying, and firing ceramics. Within the area of global training, in tandem with foreign language instruction, we instruct employees in understanding different cultures, in how to give effective presentations, in business skills related to international law and labor management, in health and safety management, and in compliance-related matters.

In business skills training, we not only provide training in skills essential to the company's needs, we provide a variety of growth opportunities that employees cannot experience in the course of their normal duties, such as opportunities for exchange and interaction with outside employees via training conducted in collaboration with other companies.

Training Participant Summary (total participants)

	FY2014	FY2015	FY2016	FY2017
Key personnel, men	960	876	903	1,093
Key personnel, women	30	16	30	39
General employees, men	2,752	2,775	2,697	2,426
General employees, women	302	321	372	331
Men (total)	3,712	3,651	3,600	3,519
Women (total)	332	337	402	370

Average Time Spent in Training Annually per Employee (hours)

	FY2014	FY2015	FY2016	FY2017
Men	22	21.8	25.5	22.2
Women	14	15.4	20.3	18.5
Key personnel	15	15.3	13.1	15.6
General employees	23	22.5	28.8	23.3

Average Annual Cost of Training per Full-Time Employee (¥10 thousand)

	FY2013	FY2014	FY2015	FY2016	FY2017
Average expenses	11	11	7.8	7	6.6

Note: Calculated based on actual achievements from FY2015.

FY2017 Training Scheme

Management	Group S	Group M	Group J	New hires	Category	Sub-category
Management 2					All divisions	Other
Management 3 / E-learning						
Global Leadership Motivation Management Quality/cost Management					All divisions	English
Management 4						
Cross-cultural Communication Innovation					All divisions	Global Seminar
New Group S						
Business Leader III	Business Leader I				All divisions	Introduction
Business Leader II						
					Manufacturing	Manufacturing, Worksite Capabilities
					Engineering	Quality, Cost
					All divisions	Career design
					All divisions	Career design
					All divisions	Position-based
					All divisions	Career design
					All divisions	Senior Manager Development
					All divisions	Management
					All divisions	Management Training
					All divisions	Quality, Cost
					Engineering	Manufacturing, Worksite Capabilities
					All divisions	Global Training
					All divisions	Business Skill Training
					All divisions	Global Training
					All divisions	Global Training
					All divisions	Global Training
					All divisions	Business Skill Training
					All divisions	Business Skill Training
					All divisions	Business Skill Training

Legend

- Selecting trainees based on employment status such as new hires, promotion, and service years (position-based training)
- Selecting trainees based on job title and position
- Selecting trainees by screening or need
- Open application

Quality Improvement Training for Manufacturing

In line with a younger workforce and an increase in mid-career hires coming from a variety of backgrounds, it is necessary to create training programs that cover a variety of needs. Given these conditions, we provide quality improvement training for employees in manufacturing divisions in five categories of content corresponding to job type and professional background. The instruction and exercises are tailored to the participants' level of understanding and job type.

Number of Participants in Quality Improvement-Related Training in FY2017

Leader training for worksite capability enhancement	10
Leader training for worksite capability enhancement at the Ishikawa Plant	7
Follow-up training for worksite capability enhancement	144
Instructor development training for worksite capability enhancement	2
Instructor brush-up training for worksite capability enhancement	8
Worksite IE basics	12
Quality control I	29
Quality control II	76

Measuring Human Resource Development Achievements Using Quantitative Indices

We introduced quantitative indices to objectively evaluate the results of human resource development. We aim to accelerate employee skills development by making use of these objective evaluations.

Quantitative Indicators to Measure the Outcomes of Human Resource Development

- Assessments of understanding and satisfaction levels using post-training surveys
- Checking the achievement level by the TOEIC test and instructors (native speakers of the target language)
- Tests during and after the training
- Calculated cost of loss
- Evaluation scores by judges, etc.

On-Site Leader Development

We cultivate leaders who are motivated to pursue improvement, and this is done through the systematic promotion of worksite capability training. This training focuses on the fundamental elements of manufacturing, namely safety, environment, quality, deadlines, and cost, and is carried out within a framework that transcends just the factory itself.

Progress of Training Aimed at Strengthening Worksite Capabilities

Fiscal 2013	12 employees who completed leader training attended. In addition to the 13 employees already trained, the total number of instructors reached 25.
Fiscal 2014	We held training to brush up skills of trained instructors. As of fiscal 2013, a total of 21 employees had participated in instructor development training. To further enhance skills, improvement activity examples were shared and examples from all plants were collected to create in-house case studies.
Fiscal 2015	Employees who had completed in-house instructor development training served as lecturers. The contents of training programs were formulated by the instructors in charge of each program, and they incorporated their worksite experiences as instructors. Using case studies, they taught things such as cost reduction methods.
Fiscal 2016	The content of leader training for worksite capabilities was revised by the in-house instructors to enhance individual guidance. The revised textbooks were also shared with Group companies.
Fiscal 2017	The companies of the NGK Group collaborated together to invite outside instructors, conduct on-site training, and offer opportunities for interaction and mutual learning amongst companies. We also began trialing instructor-led training overseas.

In fiscal 2011, NGK began training for all manufacturing site worksite leaders aimed at improving the leadership qualities and communication skills of on-site leaders that guide and cultivate younger employees.

In fiscal 2017, 29 newly appointed worksite leaders underwent training on labor management and recognition of the role of the worksite leader.

We evaluate effects of the improvements made through the training in financial terms by converting them into specific monetary values.

FY2017 Training Results

(Persons)

Leader training for worksite capability enhancement: 18 days	10 completed
Brush-up training: 2 days	8 completed
Worksite leader training: 2.5 days	29 completed
Financial effects of the improvements through the training (total amount)	41.18 million yen
Financial effects of the improvements per person	4.58 million yen

Voice of an In-House Instructor

Deployment to Overseas Plants

NOx Sensor Production Supervisor, NGK Ceramics Polska (Poland)

Takuzo Shikimachi

I was assigned to the position of Production Supervisor three years after the Poland plant went on line. Although the plant's yield was steadily increasing, there was also a lack of clarity in standards and on-site rules, with sporadic defects and careless mistakes occurring on a daily basis. The local team members and I worked together closely and tenaciously to overcome language barriers, as well as a difference in approach to working hours, in order to address these issues. I do not consider the specific improvements we made to be the real achievement; rather, it is the fact that we put in place a localized system for the implementation of improvements. For this I am extremely grateful to the local team members who worked together with me.

In overseas manufacturing, when we, as leaders, seek to gain the trust of local staff in working with us to realize improvements, I believe it is essential that it be done via activities that become thoroughly integrated into local operations. For the sake of all my colleagues within the NGK Group, I will continue working to find and introduce best practices that produce results and enjoyably lead toward ongoing improvement.



English Instruction for New Employees

With the aim of rapidly cultivating global human resources, we began English language instruction in fiscal 2011 targeting all new Group J (staff) hires.

The training is provided for one year, consisting of foundation development training led by Japanese instructors and training to develop practical business skills led by native speakers according to individual achievement levels. Participants not only study but also undertake activities of their own initiative, such as creating their own class slogans.

Further, global mindset training, individual counseling, and study guidance are provided to heighten employees' awareness of globalization and enhance their motivation. In fiscal 2017, we also introduced monthly review testing to facilitate employees' continued learning.

Time spent learning English
per new career-track hire
(fiscal 2017 results)

120 hours per year

Practical Overseas Training

NGK conducts practical training over a period of six months at overseas Group companies with the aim of developing globally minded human resources. The training focuses on developing practical business and communication skills in a cross-cultural environment targeting young employees who are future candidates for overseas postings.

Labor-Management Initiatives

Labor Union

NGK respects workers' rights, including the right to collective bargaining, and strives to build healthy labor-management relations. As of the end of March 2018, 3,525 employees belonged to the Labor Union.

Protecting the Right to Collective Bargaining

NGK and the Labor Union have signed a labor agreement as equal partners. The agreement specifies that both parties shall respect each other's rights and take responsibility for the exercising of their own rights.

The two sides regularly hold Labor-Management Advisory Board meetings to exchange information and promote mutual understanding. They also maintain healthy labor-management relations by exchanging opinions on issues such as management policies, financial conditions, and activities of the Labor Union.

Collective bargaining sessions are held in an orderly manner, with both parties striving in good faith to resolve issues peacefully and promptly.

Labor-Management Consultations in Fiscal 2017

Regular Labor-Management Council meeting: held twice

Labor-Management Advisory Board meeting: held twice

Other bargaining and consultations

- Consultation on overtime work and work on days off
- Consultation on revision of the agreement
- Consultation on measures to rectify long working hours

Guaranteeing the Minimum Wage

NGK and the Labor Union have signed an agreement that sets out original in-house minimum wages, which are fixed at a rate above the minimum wages by region and industry stipulated by the Minimum Wage Act. Through this agreement, we strive to improve employees' working conditions and avoid violation of relevant laws.

Communication between Labor and Management

NGK makes an effort to build labor-management relations founded on mutual trust through communication with various consultative bodies, such as the Labor-Management Advisory Board, the Worksite Advisory Board, and the Regular Labor-Management Council.

NGK and the Labor Union hold Labor-Management Advisory Board meetings to talk about business conditions and performance, and Worksite Advisory Board meetings to share issues pertaining to manufacturing, work systems, and workplace environments from each worksite. In addition, at Regular Labor-Management Council meetings, labor and management also proactively exchange opinions.

Survey on Workplace Vitality

Once every two years NGK carries out a survey aimed at gauging and visualizing workplace vitality. The results of the survey serve as basic data, which facilitate discussion about personnel-related initiatives to create a more work-friendly organizational environment that offers employees a sense of challenge. In addition, the results for each workplace are provided as feedback to the respective managers to help them improve the daily workplace environment.

Human Rights Initiatives

Having established respect for humanity in its Guidelines for Corporate Behavior, the NGK Group uses its intranet, which is available to all domestic Group company employees, to explain and disseminate the United Nations “Universal Declaration of Human Rights”^{*1} and “Guiding Principles on Business and Human Rights.”^{**2} Taking the signing of the UN Global Compact in 2015 as an opportunity, NGK has been actively spreading awareness for protecting human rights by holding seminars on the subject.

*1: Adopted on December 10, 1948 at the Third United Nations General Assembly Session, this declaration expresses the rights to which all human beings in all nations are inherently entitled (General Assembly Resolution 217 (III)). The formal name is the Universal Declaration of Human Rights.

**2: Based on the “Report on Human Rights and Transnational Corporations and Other Business Issues” by John Ruggie, UN Secretary-General’s Special Representative for Business and Human Rights (at that time).

Reference Page **Compliance Education** P120



The UN Global Compact is a global framework for realizing sustainable growth through companies and organizations acting as good members of society. Participating corporations support ten principles in the areas of human rights, labor, the environment, and anti-corruption required in the practice of corporate activities.

The Ten Principles of the UN Global Compact

Human Rights Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2: make sure that they are not complicit in human rights abuses.

Labor Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4: the elimination of all forms of forced and compulsory labor;
Principle 5: the effective abolition of child labor; and
Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment Principle 7: Businesses should support a precautionary approach to environmental challenges;
Principle 8: undertake initiatives to promote greater environmental responsibility; and
Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Eliminating Harassment

When hiring or promoting personnel to key positions, NGK provides these personnel with harassment elimination training.

Harassment Elimination Training

	FY2013	FY2014	FY2015	FY2016	FY2017
Sessions held	4	6	11	6	5
No. of participants	189	203	277	326	350

Commencing Human Rights Due Diligence

The NGK Group has commenced human rights due diligence across the Group as of fiscal 2016. Human rights due diligence is a step that should be taken by companies in order to recognize, prevent, and address negative impacts on human rights. It involves the formulation of policies related to human rights, assessment of impacts of corporate activities on human rights, and follow-up and disclosure of performance results.

In reference to the EICC (Electronic Industry Citizenship Coalition) Code of Conduct and the United Nations' Guiding Principles on Business and Human Rights, the NGK Group set specific survey items with support from external consultants. We embarked on the activities involving Group companies in Japan in November 2016. In fiscal 2017, we gradually expanded the scope of activities to our headquarters and overseas Group companies.