

Respect of Humanity and Assurance of Comfortable Working Environment

The NGK Group makes an effort to respect the humanity of its employees and provide a safe and comfortable working environment. In the interest of fair treatment, NGK employs a human resources system that enables employees to maximize their potential.

Basic Approach

In the NGK Group Guidelines for Corporate Behavior, our relationship with employees is based on Respect of Humanity and Assurance of Comfortable Working Environment and defined as follows.

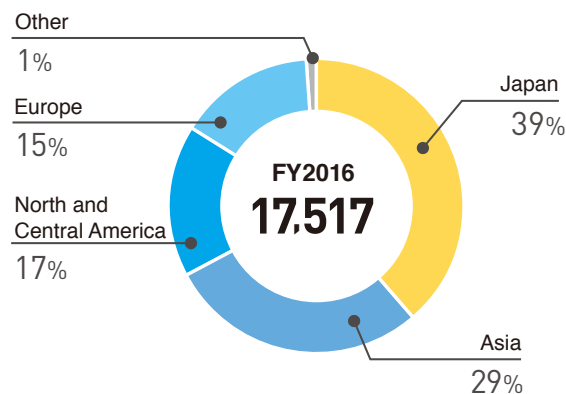
- We will hire and treat our people in a proper and fair manner and will provide a safe and pleasant working environment in which our people can work comfortably without sacrificing their family life.
- We will make available the place and opportunities that can be challenged by people with versatile talent 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

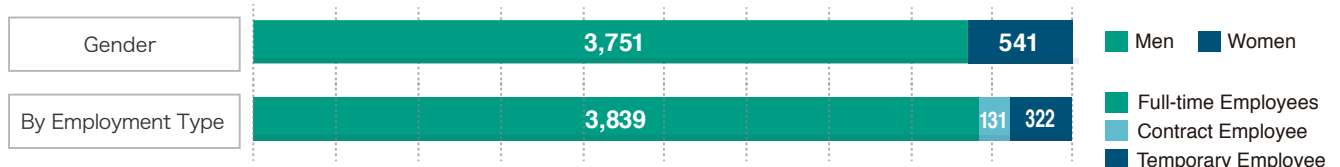
NGK Group Number of Employees

| | Number of Employees |
|--------|---------------------|
| FY2012 | 13,159 |
| FY2013 | 13,210 |
| FY2014 | 16,217 |
| FY2015 | 16,657 |
| FY2016 | 17,517 |

NGK Group Employee Composition by Region



NGK Employee Status in Fiscal 2016



| | |
|---|--|
| Average age | 39.0 years old (Men: 39.1/ Women: 38.9) |
| Average number of years worked | 14.6 years (Men: 14.0 years / Women: 15.1 years) |
| Turnover ratio within 3 years among new hires | 2.2% |
| Average salary | 7,861,726 yen |

Turnover ratio

| | FY2016 |
|----------------|-----------|
| Turnover ratio | 1.1% (46) |
| Men | 0.9% (35) |
| Women | 2.0% (11) |

Voluntary Turnover Ratio

| | FY2016 |
|--------------------------|-----------|
| Voluntary Turnover Ratio | 0.8% (34) |
| Men | 0.7% (25) |
| Women | 1.7% (9) |

Number of New Hires Remaining at the Company (3 years)

| | New graduate hires in 2014 | Retention in 2017 |
|-------|----------------------------|-------------------|
| Total | 36 | 33 |
| Men | 28 | 25 |
| Women | 8 | 8 |

Revision of the Human Resource Management System for General Employees

In April 2017, NGK revised its human resource management 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 enroll the future key roles and encourage them to realize 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 evaluation based on effort and result. |
| Retirement at age 65 | <ul style="list-style-type: none"> • Maintaining the level of salary after age 60. |

Developing an Environment that Allows Employees to Demonstrate Their Full Potential

Human Resources Department Manager

Yuka Sugiura

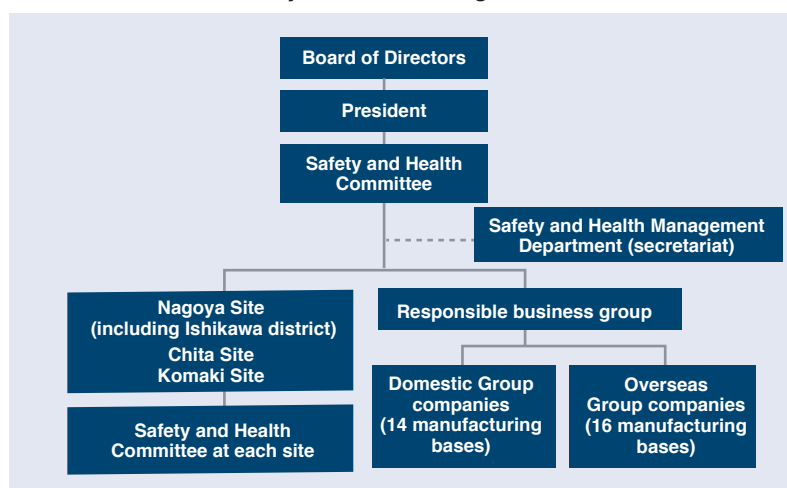
In the new human resources system revised in April 2017, we have clarified what kind of human resources the company is looking for and developed a system that allows young and mid-level employees to demonstrate their full potential; I hope they can actively take on challenges to move to higher stages.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



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

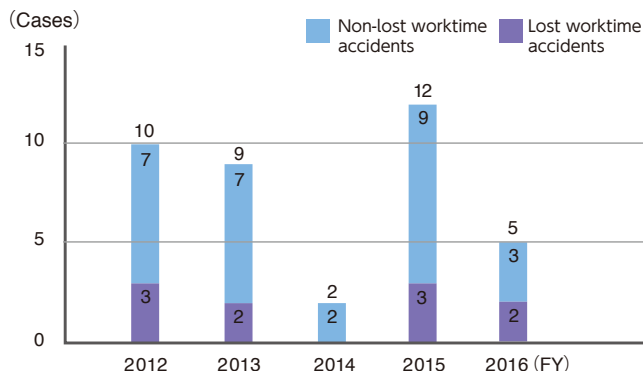
We are seeing a growing number of accidents among inexperienced workers. In response, we have established training centers at three sites in Nagoya, Chita and Komaki, as well as at Ishikawa Plant, where trainees can actually experience risks. Establishing these centers in-house means that more workers 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.



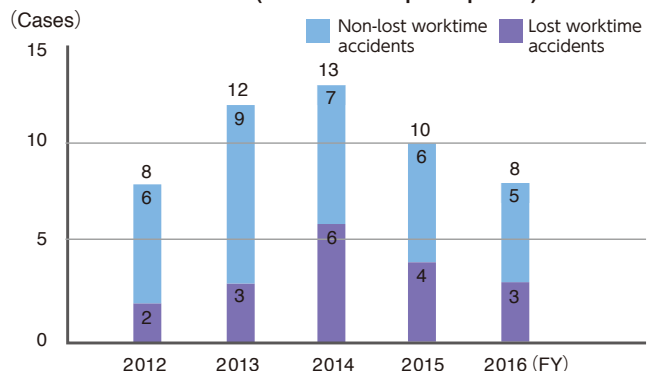
Training for Safety Assessors at the Manufacturing Division

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.

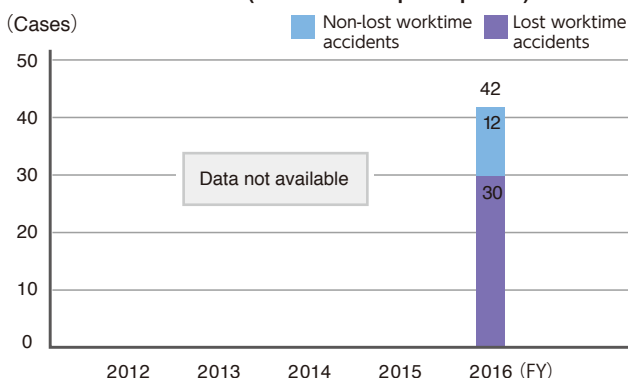
Work-Related Accidents (NGK)



Work-Related Accidents (Domestic Group Companies)



Work-Related Accidents (Overseas Group Companies)



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

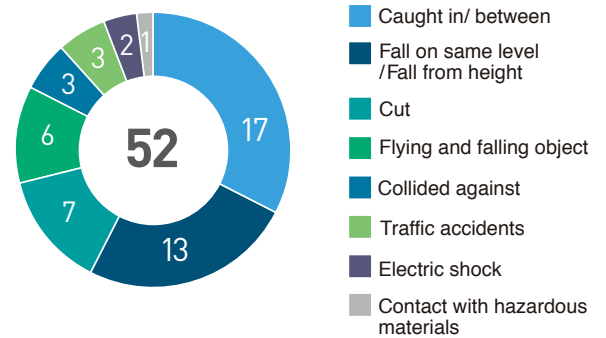
| | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|--------------------------|--------|--------|--------|--------|--------|
| NGK | 1.049 | 0.026 | 0 | 0.007 | 0.003 |
| Domestic Group companies | — | — | — | — | 0.009 |
| Overseas Group companies | — | — | — | — | 0.040 |

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)

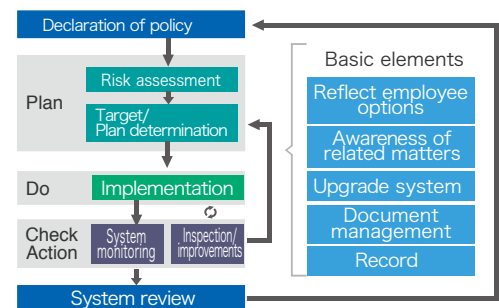
| FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|--------|--------|--------|--------|--------|
| 0.41 | 0.14 | 0 | 0 | 0.13 |

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

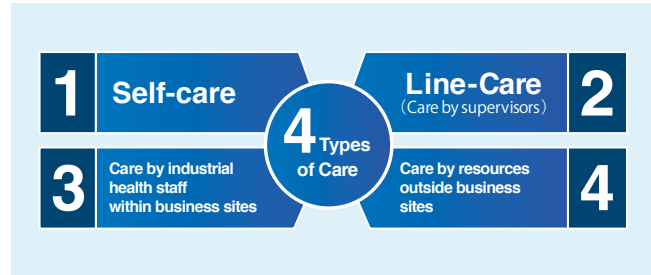
Promotion of Activities Supporting Mental and Physical Health

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.



Diversity

It is NGK Group 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 (People)

| Joined company | University graduate | | | Junior college/ Vocational School | High school graduates |
|----------------|---------------------|-----|-------|--------------------------------------|-----------------------|
| | Total | Men | Women | | |
| April 2013 | 62 | 53 | 9 | 0 | 25 |
| 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 |

NGK Mid-Career Hires

(People)

| Joined company | Total | Total | | | |
|-------------------------|-------|--------------------------|----------------------------|-----------|-------------|
| | | Men university graduates | Women university graduates | Other men | Other women |
| April 2012 - March 2013 | 53 | 17 | 15 | 21 | 0 |
| 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 |

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 such occasions as training for the recently promoted. 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 the creation of an environment that makes working comfortable for women. The number of female key personnel (management staff) of NGK in fiscal 2016 was 16.

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

NGK has revised its human resources management system, aiming to enable employees in general employment positions with routine tasks to engage in a broader range and a higher level of work.

The new human resources management 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 employees to discuss career-related concerns for women. 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 system to encourage and support employees so that they can return from maternity and childcare leave and resume their careers at an early stage.

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> Systems to Support Early Return from Parental Leave

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

In March 2017, NGK was certified as an “L-Boshi” company by the Minister of Health, Labour and Welfare. 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 Activities by the City of Nagoya*

In recognition of our efforts to create a workplace environment that encourages women's activities such as revising our System for Transferring to General Employment Jobs, we were certified as a Company Promoting Women's Activities by the city of Nagoya in January 2012 and recertified in 2014.



January 2012 Company Promoting Women's Activities (City of Nagoya)

* Note: System for certifying companies that conduct outstanding initiatives enabling women to actively participate in the workplace in the areas of (1) awareness improvement, (2) work-life balance and (3) promotion of women's active participation.

Submitting our Action Plan for Promoting Women's Active Participation in their Working Life to MHLW

In January 2016, in accordance with the Act to Advance Women's Active Participation in their Working Life, NGK submitted a general employer action plan to the Aichi Labor Bureau, which is overseen by the Ministry of Health, Labour and Welfare.

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.

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

Action Plan

Topics

- Although gender is not a consideration in terms of issues, criteria for promotion, and service years, the number of women in management positions and its candidates is small.
- Occupational range (job types, job locations and titles) for successful women is limited.

Goals

- Fostering a corporate culture that promotes women's active participation
- Increasing the number of candidates for managers (section chief level) by 1.5 times and preparing them for appointment to

Initiative 1 Raising career awareness of female employees, and utilizing their inherent potential.

Initiative 2 Increasing the ratio of women among new graduate hires and diversifying career opportunities.

Ratio of women employees

| | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|-------------------------------------|--------|--------|--------|--------|--------|
| Ratio of women employee *1 | 13.4% | 13.3% | 12.9% | 12.6% | 12.7% |
| Ratio of women key personnel *2 | 1.0% | 1.5% | 1.8% | 1.8% | 2.0% |
| Ratio of women general *3 employees | 16.9% | 16.6% | 16.1% | 15.6% | 15.5% |

*1 Ratio among all employees *2 Ratio to all key personnel *3 Ratio among all general employees

Ratio of Women in Managerial Positions at Overseas Group Companies

(as of August 2016)

| | Europe | North and Central America | Asia | Other |
|---|--------|---------------------------|------|-------|
| Ratio of women in managerial positions *2 | 9% | 14% | 28% | 25% |

Career Planning Roundtable

NGK hosted a career planning roundtable for female employees with less than three years' experience. The goal was to help them develop their career paths through input from more experienced employees.

Participants offered many comments about the event, including: “It was a valuable experience to speak with women from various workplaces.”



Supervisor Training to Promote Women's Active Participation

Since March 2017, NGK has hosted training programs for supervisors of female staff. The goal is to help these supervisors recognize the importance of women's active participation and to learn about the supervisors' roles in promoting career advancement of their staff.



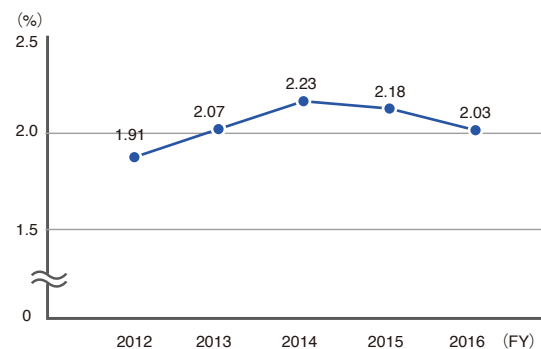
Expanding Employment of the People with disabilities beyond the Legally Stipulated Rate

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 ratio of 2.0%, for the fourth straight year.

In fiscal 2016, we continued to accept students from special needs schools as trainees then hired them as new employees in fiscal 2017.

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 Attempting to Make Use of Diverse Human Resources

The NGK Group employs systems promoting the use of human resources based on the idea that human resource diversity is linked to changes in organizational culture.

Human Resources Utilization Systems Aligned with Employee Individuality and Skills

To open the way for employees to take full advantage of their individuality and skills, NGK operates an internal job application system. Open positions are announced internally and eligible applicants are appointed, a 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 a system designated as "FA (free agent)" for employees to register their personal desires and preference of jobs to appeal themselves internally.

Internal Job Application System Results

| Fiscal year | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|----------------------------------|--------|--------|--------|--------|--------|
| Applications (Cases) | 3 | 2 | 19 | 28 | 17 |
| Recruits (People) | 4 | 3 | 23 | 36 | 28 |
| Applicants (People) | 8 | 3 | 12 | 23 | 11 |
| Successful applications (People) | 4 | 1 | 8 | 9 | 4 |

Career Follow-Up System

| Fiscal year | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|----------------------|--------|--------|--------|--------|--------|
| Registered (People) | 8 | 5 | 2 | 2 | 0 |
| Transferred (People) | 3 | 0 | 1 | 0 | 0 |

FA System

| Fiscal year | FY2014 | FY2015 | FY2016 |
|----------------------|--------|--------|--------|
| Registered (People) | 0 | 1 | 0 |
| Transferred (People) | 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 15 employees were appointed in fiscal 2016. Excellent employees are identified through biannual human resource 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 2016, 11 employees were promoted under this system.

Transfers from Contract Manufacturing Worker to Regular Employee

| Fiscal year | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|---------------------|--------|--------|--------|--------|--------|
| Converted employees | 17 | 4 | 27 | 25 | 15 |

Double Promotions

| Fiscal year | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|--------------------|--------|--------|--------|--------|--------|
| Promoted employees | 11 | 7 | 4 | 11 | 11 |

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 superior managers, 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 “Come-back System” to rehire people who had left the company for various reasons (e.g., job change, studying abroad, job transfer of a spouse, etc.) as mid-career employees.

| |
|--|
|  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 periods.

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.

Seven 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 work on holidays or late at night.

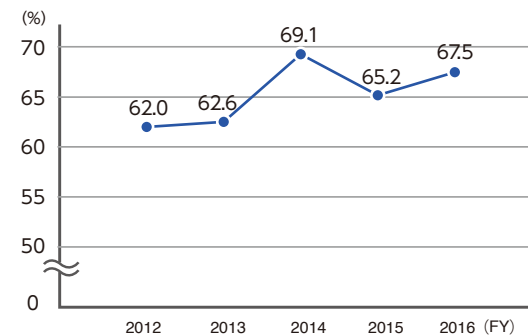
Initiatives to Limit Overtime Work

If, for any reason, overtime work in excess of 45 hour per month appears likely, the reason for the increase in overtime work must be confirmed through prior labor-management consultations to distribute 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 third consecutive year, more than 99% of employees use six or more granted days of paid leave

For the fifth or more consecutive year, average number of used days of granted paid leave exceeds 10.0

For the fifth or more consecutive year, use rate of granted paid leave exceeded 60%

Enhancing Systems Supporting Work-Life Balance

NGK offers flexible systems to help employees maintain a balance between work and lifestyle, especially family care. 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. Considering , the working environment, we support by providing shortened working hour system.

Enhancement of Work-Life Balance System

In 2010, NGK made a major revision to its human resources management 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 children's growth. The accommodation was made possible by relaxing restrictions setup 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 childcare.

In May 2017, we also launched a system for flexible work arrangements that enables balance between work and care not only for those who provide care to children and family members but also for those who need to attend to a health condition of their own that requires repeated and ongoing treatment.

* Services to help facilitate the process of starting to use childcare and returning to work, including tailored support for individual employees during childcare leave to help them start using childcare services and 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 | | 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 |
| | Other systems | | | Childcare Concierge (For those living in the Tokyo metropolitan area) | Priority use of a commuter parking lot(In Nagoya) Unlicensed childcare 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 Paid 2/3 of the standard daily wage | Unpaid | | Lump sum payment six months after returning to work (330,000 yen) |
| Bonus | | During the time off before/after birth Paid the bonus calculated with the 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 (from April 2017)
- Licensed childcare center expense subsidy (from April 2017)
- Childcare Concierge (to be introduced in 2017)

Overview of Childrearing Support Measures and Users

Systems that Exceed Legal Requirements

| System name | Details | Fiscal Year | Number of users | | | | |
|---|---|---|-----------------|----------|-----------|-----------|-------------------------------|
| | | | 2012 | 2013 | 2014 | 2015 | 2016 |
| Childcare leave of absence | Last day of the month in which the child turns 18 months old or the end of March after the child turns one, whichever longer (Legal requirement: until child is 18 months old) | Female | 35 | 40 | 52 | 49 | 44 |
| | | Of which returned to work (Ratio of returned) | 100% | 94.1% | 100% | 100% | 100% |
| | | Ratio of employees still working a year after returning to work | 100% | 100% | 100% | 100% | - (Taking a leave of absence) |
| | | Male | 9 | 8 | 12 | 11 | 7 |
| | | Of which returned to work (Ratio of returned) | 9 (100%) | 8 (100%) | 12 (100%) | 11 (100%) | 7 (Taking a leave of absence) |
| | | Ratio of employees still working a year after returning to work | 100% | 100% | 100% | 100% | - (Taking a leave of absence) |
| Shortened working hours during childrearing | Six hours or seven hours per day for employees until the fiscal year when their children start fourth grade in elementary school (Legal requirement: Only for children not yet three years old) | Users | 33 | 38 | 43 | 53 | 57 |

Systems Operated Independently by NGK

| System name | Details | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|--|--|--------------|--------------|--------|--------|--------|
| Lump sum payment six months after returning to work | Lump-sum payment received six months after returning to work | 11 | 13 | 20 | 16 | 26 |
| 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 (one day). | Unintroduced | Unintroduced | 18 | 35 | 36 |
| Childcare leave system for fathers | Unused annual paid holidays can be used for childcare leave of absence | 9 | 8 | 12 | 11 | 7 |
| Pre-maternity leave interview | Interview attended by employee, HR and supervisor to provide the employee with peace of mind while on maternity leave and ensure both sides have proper understanding of procedures related to systems supporting childcare and work. | 15 | 23 | 25 | 22 | 20 |
| Interview before returning to work | Supports smooth transition back to work focused on work details and work style. | 13 | 14 | 14 | 27 | 18 |
| System for accompanying family on overseas assignment | Enables employees to take a leave of absence 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. | Unintroduced | 1 | 2 | 3 | 6 |
| Maternity gift (family fund) | ¥50,000 gift when a child is born | 156 | 165 | 183 | 175 | 208 |
| Elementary school enrollment gift (family fund) | ¥50,000 gift when a child enrolls in elementary school 106 cases | 106 | 134 | 137 | 124 | 142 |
| 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. | 25 | 33 | 13 | 16 | 19 |
| Childcare Concierge (For those living in the Tokyo metropolitan area) | Support to facilitate the process of starting to use childcare and returning to work | N/A | N/A | N/A | N/A | 2 |
| Priority parking spaces to support childcare (For those working at the headquarters) | Priority parking spaces available at a commuter parking lot | N/A | No data | 12 | 17 | 19 |

A user of the childcare leave system for fathers

Production Technologies Department, Manufacturing Division,
Ceramic Products Business Group

Daniel Kitaguchi

I decided to take childcare leave with my first child, as I didn't want to miss the special moments during my child's growth and I wanted to support my wife. I'm glad I used the system because I was able to stay close to watch my child grow day by day.

In order to use this system, it was essential to have the understanding and support of the people around me. For this reason, I consulted my supervisor in advance to arrange the work. Since I believe men should also play an active role in childrearing, I hope to see further understanding and cooperation both within the company and across the entire society so that more men can use this system.



List of Systems for Nursing Care Support

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

Revision of the care leave system

In January 2017, we revised our system to respond to the amendments of the Child Care and Family Care Leave Act. Under the new system, for example, employees can take the one-year leave in three separate blocks.

Moreover, we have signed a corporate contract with SeaCare, an NPO that supports caregiving, to introduce services helpful to caregivers.

Company Intranet

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



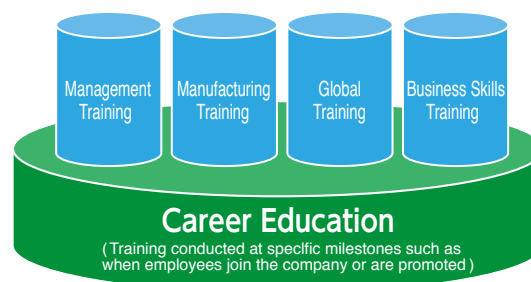
Human Resource Development

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 global talented staff to support our overseas business expansion.

In fiscal 2016, we held training programs to develop future executives and future managers.

NGK's global business development has been accelerating every year. For the first time, we had over 100 participants in our global seminar, which aims to develop global talented staff.

Promoting Human Resource Cultivation through the Establishment of Systems in Four Areas



Promoting Systematic Education through Nearly 120 Programs

NGK is engaged in systematic human resources training covering the four areas based on training conducted at each juncture of an employee's career, such as when joining the company or receiving a promotion. Other than compulsory position-based training, we conduct functional training, offering approximately 120 types of programs throughout the year. NGK conducts management training, including management foundational training targeting newly appointed Group managers, which we are expanding to include younger key personal. Manufacturing training covers categories including worksite capability enhancement and supervisor training, while training for younger employees continued to focus on materials, forming, processing, drying, firing and other ceramics manufacturing fundamentals. Global training includes mindset such as cross-cultural communication, presentation skills, business skills such as international law and labor management, health and safety management, and compliance related education. Foreign language training for various languages is also provided.

Business skills training is provided as a program aimed at enhancing the skills of all our employees. We are engaged in planning optimized training in consideration of not only company needs but also employees' business needs.

Training Participant Summary (total participants)

| | FY2013 | FY2014 | FY2015 | FY2016 |
|-------------------------|--------|--------|--------|--------|
| Key personal Men | 927 | 960 | 876 | 903 |
| Key personal Women | 37 | 30 | 16 | 30 |
| General employees Men | 2,779 | 2,752 | 2,775 | 2,697 |
| General employees Women | 308 | 302 | 321 | 372 |
| Men (total) | 3,706 | 3,712 | 3,651 | 3,600 |
| Women (total) | 345 | 332 | 337 | 402 |

Average time spent in training annually per employee

| | FY2013 | FY2014 | FY2015 | FY2016 |
|-------------------|--------|--------|--------|--------|
| Men | 28 | 22 | 21.8 | 25.5 |
| Women | 15 | 14 | 15.4 | 20.3 |
| key personal | 18 | 15 | 15.3 | 13.1 |
| General employees | 28 | 23 | 22.5 | 28.8 |

Average annual cost of training per full-time employee (¥10 thousand)

| | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 |
|------------------|--------|--------|--------|--------|--------|
| Average expenses | 11 | 11 | 11 | 7.8 | 7 |

* With the salary one month after the end of the sixth month

FY2016 Training Scheme

| | | | | | | | | | | | |
|-------------------|---|---|---|--|--|---|------------------------------------|--|---|---|--|
| Management | Management 2 Management 3 / e-learning Global leadership Motivation management Total quality management Accounting Management 4 | Business leader III Business leader II | Basic Management P Follow-up for supervisors | Risk prevention II Quality management Cost management Quality control II Quality control I P Q Data analysis P | Plant managers Managers Instructors Worksite capability leaders section chiefs worksite leaders Follow of trainees | Practical overseas training P English | Innovation III Innovation I, II | Business writing in English (Basic, intermediate, practical) Basic Business English, Presentation skills in English | SPO logical presentation R business skills | All divisions Senior manager development Management Quality, Cost Manufacturing Worksite capabilities Introduction Global seminar Idea generation English Other | Career education Management training Manufacturing training Global training Business skill training |
| S | Cross-cultural communication Innovation Logical thinking III S | Business leader I | Leadership | Quality control II Quality control I Q | Worksite leaders | P English | Innovation I, II | Business writing in English (Basic, intermediate, practical) Basic Business English, Presentation skills in English | SPO logical presentation R business skills | All divisions Senior manager development Management Quality, Cost Manufacturing Worksite capabilities Introduction Global seminar Idea generation English Other | Career education Management training Manufacturing training Global training Business skill training |
| PQR | Logical thinking II P Follow-up Q4 Q Q5 R3 R4 | | | Quality control II Quality control I Q | Worksite capability leaders section chiefs worksite leaders Follow of trainees | P English | Innovation I, II | Business writing in English (Basic, intermediate, practical) Basic Business English, Presentation skills in English | SPO logical presentation R business skills | All divisions Senior manager development Management Quality, Cost Manufacturing Worksite capabilities Introduction Global seminar Idea generation English Other | Career education Management training Manufacturing training Global training Business skill training |
| New hire | Logical thinking I Global mindset Introduction | | | Data analysis P | Basic manufacturing P/Q | P English | Innovation I, II | Business writing in English (Basic, intermediate, practical) Basic Business English, Presentation skills in English | SPO logical presentation R business skills | All divisions Senior manager development Management Quality, Cost Manufacturing Worksite capabilities Introduction Global seminar Idea generation English Other | Career education Management training Manufacturing training Global training Business skill training |

- Legends
- 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 picking out or needs

※P : Young career-track Q : Technical jobs R : General employment jobs

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 four classes based on the skills and experience of the participants. The trainees learn and try practical exercise based on their level of understanding and type of job.

Business skills training is provided as a program aimed at enhancing the skills of all our employees. We are engaged in planning optimized training in consideration of not only company needs but also employees' business needs.

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.

Onsite Leader Human Resource Development

As veteran employees retire in large numbers, the ratio of employees with limited experience is increasing at manufacturing sites. The NGK Group is systematically promoting training aimed at strengthening worksite capabilities.

Progress of Training Aimed at Strengthening Worksite Capabilities

Fiscal 2011 NGK began training to develop in-house instructors with the aim of educating human resources able to lead the manufacturing divisions. Three courses, the longest of which was 18 days in duration, were held on low-cost management and set-up improvement guidance.

Fiscal 2013 12 employees who completed leader training attended. In addition to the 13 employees already trained, bringing the total number of instructors to 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 and taught methods for reducing and improving manufacturing cost using case studies. The contents of training programs were formulated by the instructors in charge of each program, and they incorporated their worksite experiences as instructors.

Fiscal 2016 The content of leader training for worksite capabilities was revised by the in-house instructors to enhance individual guidance. The revised textbooks are also shared with Group companies.

Furthermore, 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 2016, 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.

Number of Participants in Quality Improvement Related Training in FY2016

| | |
|---|----|
| Leader training for worksite capability enhancement | 13 |
| Leader training for worksite capability enhancement at Ishikawa Plant | 8 |
| Follow-up training for worksite capability enhancement | 61 |
| Instructor development training for worksite capability enhancement | 0 |
| Instructor brush-up training for worksite capability enhancement | 12 |
| Worksite IE basic | 13 |
| Quality control I | 20 |
| Quality control II | 86 |

Quantitative Indicators to Measure the Outcomes of Human Resources Development

- Implementing assessments of understanding and satisfaction level after training 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.

FY 2016 Training Results

| | |
|---|-------------------|
| Leader training for worksite capabilities: 18 days | 13 completed |
| Brush-up training: 2 days | 12 completed |
| Worksite leader training: 2.5 days | 29 completed |
| Financial effects of the improvements through the training (Total amount) | 10.47 million yen |
| Financial effects of the improvements per person | 0.81 million yen |

Voice of an In-House Instructor

Encouraging and Developing Young Employees

Manufacturing Section, Insulator Division, Power Business Group
In-House Instructor

Masato Sujino

As global competition intensifies, we urgently need to develop human resources at overseas factories. Accordingly, in-house instructors are taking innovative measures by introducing various mechanisms to develop talented young workers within the context of the daily work environment.

During training and education, I focus on encouraging each employee to take the initiative and on introducing trainees to the joy of work and collaboration with their colleagues. I strive to give trainees a sense of joy and accomplishment at the end of the program.



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 hires in general positions.

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 the individual achievement levels. In addition, teams are formed with trainees of different levels of ability in an attempt to enhance capabilities through mutual encouragement.

Moreover, in order to reinforce employees' awareness of globalization and to raise their motivation, we also provide global mindset training and personal counseling. Through these measures, we encourage employees' self-driven initiatives. In fiscal 2016, we also provided guidance on effective learning methods at the beginning of training to increase trainees' motivation to learn.

Time spent Learning English
per employment new hire
(fiscal 2016 results)

128 hours per year

Practical Overseas Training

NGK conducts overseas practical training over a period of six months at global Group companies with the aim of developing global 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 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 2017, 3,295 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 such issues 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 2016

- Regular Labor-Management Council: held twice
- Labor-Management Advisory Board: held once
- 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 the 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 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.

In fiscal 2016, labor and management worked together on a drastic revision of the human resources system. They engaged in broad discussion, with the aims of developing quality young and mid-level employees and enabling mature employees to keep working with security and fulfillment. Implementation of the revised human resources management system started in fiscal 2017. Under the new system, employees are provided with opportunities to broaden their job scope, the evaluation and wage systems have become more transparent, and the retirement age has been raised from 60 to 65.

Survey on Workplace Vitality

NGK conducts a survey to measure workplace vitality every two years, collecting responses from the entire workforce. The survey aims to identify organizational issues associated with the workplace by analyzing responses to questions to evaluate employee satisfaction, and carry out measures to increase their satisfaction with jobs and work systems. Overall survey results are reported in the internal newsletter, while the results of individual organizations are provided to each related manager for use in day-to-day activities to improve workplace environment.