

# Environmental Preservation

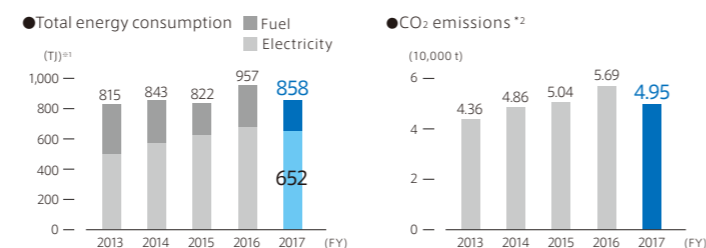
(As of March 31, 2017)

## Environmental management data of subsidiaries (Domestic factories of MES subsidiaries in Japan)

### Energy conservation and CO<sub>2</sub> emissions

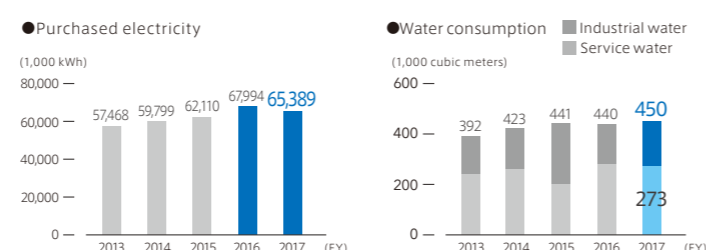
The total volume of subsidiary energy consumption for fiscal 2017 was down approximately 10% from fiscal 2016. During that same period, the amount of electricity purchased by subsidiaries decreased by no more than approximately 4% from the previous fiscal year.

CO<sub>2</sub> emissions in fiscal 2017 were down approximately 13% due to a decrease in energy consumption and CO<sub>2</sub> emission coefficient of electricity.



### Effective use of aquatic resources

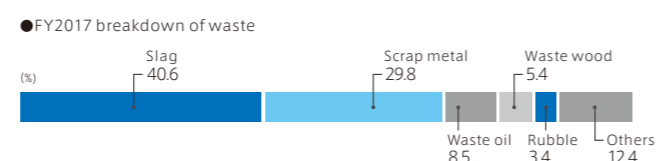
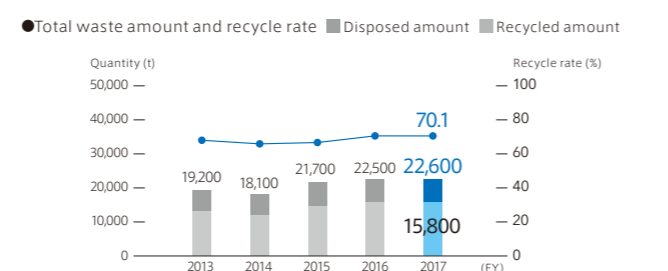
Water consumption has been increasing since fiscal 2013. In fiscal 2017, it was up approximately 2% from the previous fiscal year.



\*1 TJ: Tera Joule (=10<sup>12</sup>) \*2 CO<sub>2</sub> emissions were calculated by following the Guidelines for Calculating Corporate Greenhouse Gases Emissions issued by the Ministry of the Environment. CO<sub>2</sub> emissions from electric power were calculated by using the adjusted CO<sub>2</sub> emission coefficient for designated electric enterprises that was also published by the Ministry of the Environment.

### Data related to waste

Compared to fiscal 2016, the amount of waste for fiscal 2017 increased by approximately 0.3%. Domestic subsidiaries include those involved in iron casting, steel casting manufacturing, and ship repair operations that differ from operations conducted by MES. As such, the breakdown of waste from our subsidiaries also differed from MES. Approximately 40% of the waste produced by domestic subsidiaries was slag (fiscal 2017). Due to the progress in the recycling of slag, the recycle rate increased 0.2% from fiscal 2016, to approximately 70%.



## Environmental accounting (non-consolidated)

MES spent a total of 4,010 million yen on investments and costs related to environmental preservation efforts. A detailed breakdown of these expenditures is shown on the right. The categories for environmental preservation costs are based on the Environmental Conservation Cost Categories shown in the Environmental Accounting Guidelines 2005. These expenditures included a total of 370 million yen spent on investment, consisting of 340 million yen spent on research and development, 20 million yen spent on pollution prevention cost such as exhaust gas measures, and 10 million yen spent on energy conservation of global environment conservation. Total non-investment costs came to 3,640 million yen, which included 2,490 million yen spent on the research and development of environmentally friendly energy-saving products, 680 million yen as the cost for preservation of the global environment, including energy conservation, 210 million yen allocated to resource circulation costs such as waste treatment, and 180 million yen for pollution prevention costs.

Categories corresponding to business activities	Investment	Cost	Major initiatives and effects
<b>1. Business Area Cost</b>			
(1) Pollution prevention cost	19.4	177.8	Exhaust gas measures, wastewater treatment, dust control and other pollution control
(2) Global environmental conservation cost	9.5	683.6	Energy saving
(3) Resource circulation cost	0.0	210.7	Waste treatment
<b>2. Upstream / downstream cost</b>			
—			
<b>3. Administration cost</b>			
—			
<b>4. Research &amp; development cost</b>			
—			
<b>5. Social activity cost</b>			
—			
<b>6. Environmental remediation cost</b>			
—			
<b>Total</b>	<b>370.6</b>	<b>3,643.4</b>	

# Work Environment

## Efforts to prevent labor accidents

Based on the MES Occupational Safety and Health Management System Manual, we maintain our basic policy on occupational safety and health for the overall company declared by the employer (president). Based on this basic policy, we have developed and introduced the Company-Wide Occupational Safety and Health Management Plan. We also hold labor and management councils and conferences to discuss measures and to promote the plan. We also inform employees of the plan and collect their opinions through the safety and health committee of each works, workplace, etc. We provide training relating to programs in a company-wide manner or at each work or workplace, and also provide special training to young employees as necessary.

We also receive flash report of labor accident from subsidiaries and share the information to improve the safety level of the overall Group. Depending on the result of labor accidents, the safety and health inspection patrol may be conducted by the Company-Wide General Safety and Health Manager and the director in charge of the Environmental & Safety Control Department.

### Company-Wide Occupational Safety and Health Management Plan

- Basic policy  
Regarding corporate behaviors relating to safety and health, we will achieve the followings by instilling a safety culture in each workplace and fostering human assets:
  - (1) Safety first principle, for manufacturing and engineering practices as top priority to safety
  - (2) Creating a comfortable workplace by proactively working on physical and mental health management
- High-priority issues
  - (1) Safety
    - 1) 2S3tei ("seiri" for orderly, "seiton" for tidy, "teiichi" for designated position, "teihin" for designated tools, and "teiryō" for designated amount), discipline, and habit
    - 2) Transmission of the philosophy for safety
    - 3) Mutual warning and 3-nai management (3-nai literally means "3 don'ts," that is, "Don't allow unsafe behaviors," "Don't compromise by making excuses," and "Don't leave unsafe conditions unimproved.")
    - 4) With self checking with finger pointing  
Particular emphasis shall be placed on the following:
      - i. Enhancing facilities for, and contents of, experiential safety training
      - ii. Assigning supervisors to positions exclusively for ensuring safety for a certain period
      - iii. Enhancing risk notice meetings before the starting of work
  - (2) Health
    - 1) Reinforcing the mental health care system
    - 2) Strengthening measures against overwork
  - (3) Each line manager shall set an example by declaring safety and health and implementing the workplace safety and health management plan and promoting the PDCA of the activities.

## Specific measures in 2016

- Concerning the Team Safety II activity, the president's prize were awarded two times during the year.
- Safety and health inspections are conducted by the central labor-management council every year at each work.  
Depending on the result of injuries of the previous year, intensive inspections were conducted at works with poor result.
- Safety and health inspection patrol of works were conducted by the president during the Safety and Health Promotion Months (July to August).  
Proposals for improvements were solicited during the period, and remarkable proposals were awarded by the president.
- The safety and health slogan for the year was solicited from the employees.

## Aiming to create workplaces that enable employees to enjoy working energetically — A message from the director in charge of the Environmental & Safety Control Department



Director and Managing Executive Officer  
Akira Nishihata

Under the company philosophy of "To continue our role as a trusted company, and as a trusted member of society" the company's corporate code of conduct is to provide a safe, comfortable and healthy workplace for its employees.

In the field of safety, we have established the safety first policy, under which we make daily efforts to establish manufacturing and engineering practices that give top priority to safety, by positioning initiatives for preventing labor accidents as the most important tasks. In the field of health, we work together with the health insurance association to promote the data health plan aggressively, hold a range of seminars for preventing lifestyle-related diseases, provide individual employees with specific health guidance and instructions for preventing any increase in the severity of diseases, and take other measures.

Recent years have seen an accelerating trend of companies seeking to promote good health among their employees. It is now commonly recognized that health-oriented management contributes to corporate growth and sustainability.

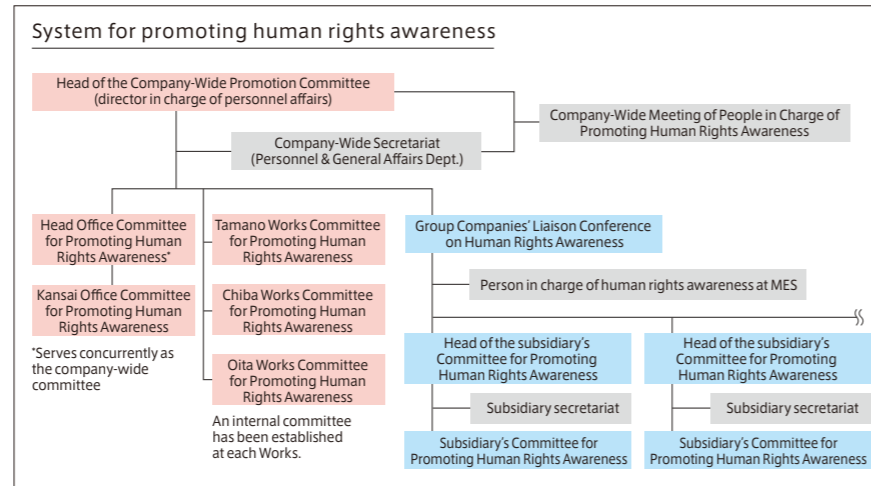
At MES, the Environmental & Safety Control Department, which was established in 2003, is responsible for the environmental management, safety and health control, and the medical office's tasks, in an integrated manner. By working together with the safety and health section in the general affairs department of each facility, we strengthen the system for collaboration among the employer (MES), the insurer (health insurance association), and medical institutions. We aggressively pursue health-oriented management by establishing a system that enables a quantitative understanding of employees' health issues, responses to them, and achievements made through the responses.

In 2017, when we celebrate our 100th anniversary, we will make efforts to create workplaces that permit all employees to communicate with each other and enjoy working actively in a comfortable environment.

# Human Assets

## Initiatives for creating workplaces where every single employee is respected

In corporate activities, every single person working in a workplace is irreplaceable. We believe that a workplace environment with respect for human rights not only provides job satisfaction and creates something that employees live for, but also allows employees to show their abilities to the fullest, leading to greater productivity. At MES, we have established a Basic Policy for Enlightening People about Human Rights. Under this policy, we carry out a variety of activities for raising awareness of human rights for specific job classes, including human rights awareness training for all directors, auditors, and officers, in our efforts to create an equal, discrimination-free workplace environment where human rights are valued.



## Initiatives for creating healthy workplaces

Under our basic policy on the safety and health management plan, we create comfortable workplaces by managing the physical and mental health of our employees in a proactive manner. We compile a database of the results of periodical health examinations, with which our occupational safety and health staff and health insurance association manage the health of individual employees thoroughly. To provide specific examples, they hold various seminars for preventing lifestyle-related diseases and provide individual employees with specific health guidance and instructions for preventing any increase in the severity of diseases. In addition, we operate the Health Attack program, which is aimed at helping all employees and their families, including those from MES Group companies, to improve their lifestyles. In this program, we have them select health challenges that are appropriate for each of them from among a wide variety of courses, and employees work on their assignment for two months. As a mental health policy, we conduct systematic workshops stress checks, mental health news publications, counselor interviews, etc. in a systematic manner. Further, the Environmental & Safety Control Department has concluded a blanket contract so that employees of the MES Group companies (approx. 10,000 employees) and their families can utilize an employee assistance program (EAP) service provided by an external resource (outsourcing service provider). In this service, consultations on physical/mental health and legal consultations are provided via telephone, website, facsimile, or in one-on-one meetings, 24 hours a day, with the privacy of the employees completely protected. We have provided this EAP service continuously for more than ten years.



Line care training session



Health Attack EAP service

## Initiatives for promoting work-life balance

We aim to ensure that all our employees, both men and women, show their abilities to the fullest in manners that are appropriate for various life events. We have established a Flexible Working Hours System without core time, as well as holidays and paid leave programs, so that employees raising children or providing nursing care to their families can continue working while achieving a balance between work and family. We also provide employees on Maternity Leave or Childcare Leave with support for education/training so that the period of their leave will not be a blank period in their career trajectory.

### Pickup

#### Encouraging male employees to take Childcare Leave

As a measure for promoting work-life balance, we work to increase the number of male employees who take Childcare Leave. We revised the leave systems for employees raising children or providing nursing care to their families and reached out to their superiors and the employees themselves. As a result, in 2016, five male employees took childcare leave and six took a leave of absence that may be taken for the purpose of childcare.

### Voice



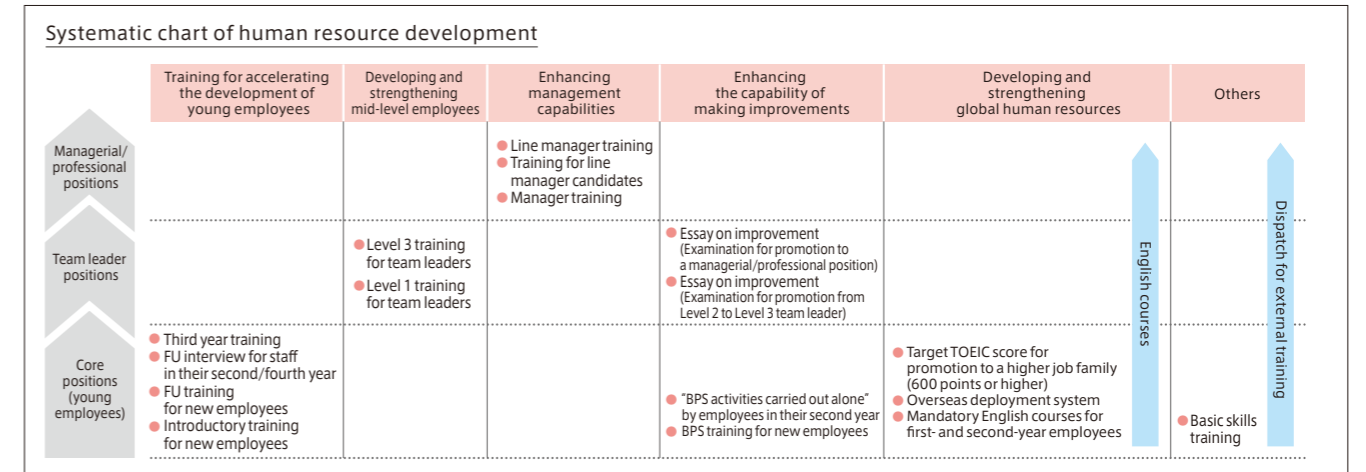
#### Takayasu Ekuni

Personnel & General Affairs Department  
 ○Period of leave: September 1, 2016 to February 28, 2017

It was a valuable experience for the three of us to spend time together immediately after our baby was born. I wondered what to do on many occasions, because I had never raised a child before. However, my baby has been growing steadily, growing more active, more self-assertive, and more lovely day by day. I really appreciate my co-workers, who helped me to take Childcare Leave. Thank you very much.

## Initiatives for developing human resources

We have set "making them full-fledged in five years" as the goal for training young employees. We provide them with group training in their first and third years at the company, training on basic skills for specific types of job, and other training programs. We also provide job-class-specific training programs, including one for mid-level employees and one for those in managerial positions. In addition, from the viewpoint of fostering global human resources, we offer English courses and training programs related to cross-cultural communications and deploy young employees to overseas business locations.



## Overseas deployment system

### Overview of the system

We established this system in 2015 in accordance with the following objectives and began operating it.

### Objectives

- Developing the international sensibility of trainees by having them experience working and living overseas as the groundwork for developing human resources who will manage overseas bases (including local subsidiaries) and projects in the future.
- The opportunities are provided to young employees (in their third to fifth year at the company) whose current jobs do not give them many opportunities to gain overseas experience.

### Required achievement/goal

The achievement as the target of this system is to develop a comprehensive mindset and skills for fulfilling duties overseas by experiencing operations (including legal affairs, accounting, tax affairs, general affairs, and personnel affairs) and daily life in an overseas country, broadly and shallowly. It is not aimed at developing specialists in the destination countries or in the businesses of the companies to which they are deployed.

○Average length of period of deployment: 6 months to 1 year

### 2016 results

First half of 2016: 2 employees were deployed

Destinations	Period
Vietnam: Project site	6 months
Singapore: Project site	1 year

Second half of 2016: 3 employees were deployed (including deployment under an internship program)

Destinations	Period
Singapore: Group company	6 months
China: Group company	6 months
Myanmar: Chamber of Commerce and Industry	6 months

### Voice



#### Chie Terashita

Business Planning Department, Corporate Planning Headquarters

I worked as an intern for a local Chamber of Commerce and Industry in Myanmar, which is attracting attention as the "last frontier in Asia," for a period of about six months from September 2016. I faced a range of difficulties in that country, including the fact that most people don't understand English. Moreover, people were not proactive in providing me with support, operations are not established, and local business customs differ from those of Japan. However, I was able to improve my communication capabilities and flexibility and grow more active than ever by expanding the range of my activities proactively in that environment. I was also able to consider how I should contribute to the country as a Japanese. It was an incredibly valuable experience for me.

### Pickup

#### Transfer of skills by Skill Masters

Transferring the high level of skills held by veteran employees to mid-level and young employees is essential for business operation. The Skills Transfer Center established at the Tamano Works in Chiba Prefecture recognizes veteran employees with a high level of skills as Skill Masters, who transfer their skills and techniques to young employees.

