



# ENVIRONMENTAL REPORT

2017



**mitsubishi nichiyu forklift co., ltd.**

1-1, 2-chome, Higashikotari, Nagaokakyo-shi, Kyoto 617-8585 Japan  
Tel: +81-(0)75-956-8622 Fax: +81-(0)75-955-0480 URL: <http://www.nmf.co.jp/en/>

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**MITSUBISHI NICHYU FORKLIFT CO., LTD.**

Head Office, Kyoto Plant, Shiga Plant

## Message from the President



二宮秀明  
Hideaki Ninomiya  
President

### On the Publication of the 2017 Environmental Report

One of our management policies is to advocate for the preservation of the global environment with an international viewpoint through sound corporate operations while contributing to the continuous development of local communities. By providing eco-friendly products to markets around the world, we are contributing to the harmonious preservation of the global environment.

ESG performance — the application of environmental, social, and governance (ESG) criteria — is becoming an increasingly important investment issue. Corporate environmental initiatives were until recently considered in the same light as 5S practices for lean manufacturing or additional plant investment that did not link directly to profit. This is an outmoded idea of investment, as today a company's environmental approach is seen not only as a principle but also as a practical matter.

Environmental initiatives are always a part of business planning and activities based on management policy. Carrying out work efficiently and according to a plan while eliminating wastage and nonuniformity through a focus on improving quality can save energy and resources and reduce waste, which will have a positive effect on business performance.

Looking ahead, we plan to incorporate an environmental perspective into the implementation of all business processes, from the contracting of orders and procurement to design and development, manufacturing, and administration. In that way we pay attention to protecting the global environment hand in hand with carrying out business operations.

In October 2017 we will carry out a business merger with UniCarriers Corporation. The synergy should amplify the strength of our core business. In line with this development, we aim to continue adapting and moving forward with environmental initiatives.

This Environmental Report 2017 is how we can present to customers and all who have supported the Group in easy-to-understand language the environmental initiatives that were taken by our Kyoto Plant and Shiga Plant in fiscal 2016.

### Outline of the Kyoto Plant and Shiga Plant

#### Kyoto Plant

Location: 1-1, 2-chome, Higashikotari, Nagaokakyo-shi, Kyoto, Japan  
Start of operation: 1940  
Employees: Approx. 860 (including partner companies)  
Site area: 44,509 m<sup>2</sup>  
Principal products: Forklifts

#### Shiga Plant

Location: 8-1, Nishioiso, Azuchi-cho, Omihachiman-shi, Shiga, Japan  
Start of operation: 1991  
Employees: Approx. 360 (including partner companies)  
Site area: 68,794 m<sup>2</sup>  
Principal products: Automated guided vehicle systems; automated storage systems; rack forks; monorail workshop trucks; bogie wheels; winders; forklift components



## Environmental Policies & Organizational Structure

### Environmental Policies

#### Environmental Philosophy

We shall seek to preserve the global environment with an international perspective through sound corporate operations while contributing to the ongoing development of local communities.

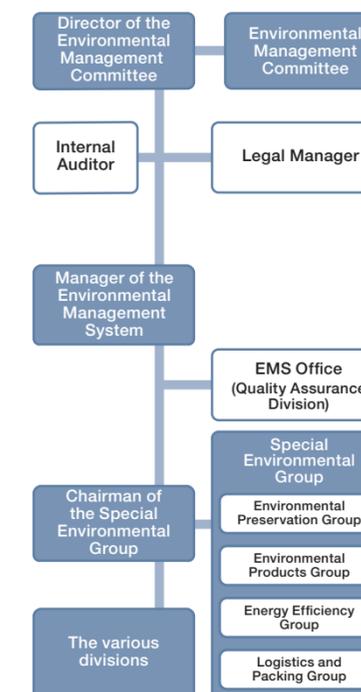
#### Environmental Policies

Mitsubishi Nichiyu Forklift Co., Ltd. and its affiliates are committed to proactively implementing the following environmental policies through our business operations, which encompass the development, manufacture, sales, and servicing of forklifts and other industrial vehicles, distribution systems, and logistics products. In keeping with our environmental philosophy, we aim to reduce the environmental impact of our business on a sustainable basis while improving the circumstances of society through our business operations.

1. We recognize that preserving the environment and maintaining harmony with the global ecosystem are among the most important management issues, and we shall continue to systematically promote environmental initiatives through our business operations.
2. Under our environmental management system, we shall strive to control environmental pollution and promote environmental preservation activities by accurately monitoring the environment impact of our business operations.
3. We shall strictly comply with all environmental laws, regulations, and ordinances as well as all agreements and other requirements to which we are party; adopt voluntary standards; and takes steps to preserve the environment.
4. In acknowledging the environmental impact of our business operations, we shall adopt the following important initiatives.
  - (1) We shall manufacture eco-friendly products.
  - (2) We shall reduce, recycle, and properly dispose of all industrial waste resulting from our business operations.
  - (3) We shall become more efficient and reduce our consumption of raw materials, fuel, and energy, and we shall promote environmental preservation in our manufacturing activities.
  - (4) We shall improve the transportation efficiency of our product and parts distribution, reduce the use of packing materials, and decrease our environmental load.
5. We shall implement in-house training sessions and awareness campaigns to inform all our employees and trading partners of our environmental policies and shall disclose them to the public.

In order to implement the above environmental policies, we shall establish environmental goals and targets within our technical and economic scope and periodically review our progress. We shall remain committed to continuously improving our environmental management system and environmental performance.

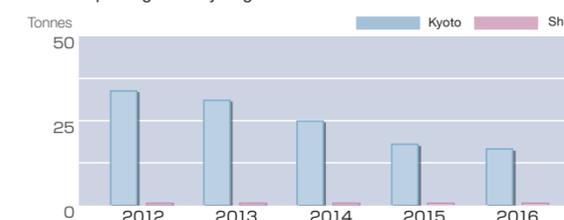
### Organizational Structure



## Environmental Initiatives

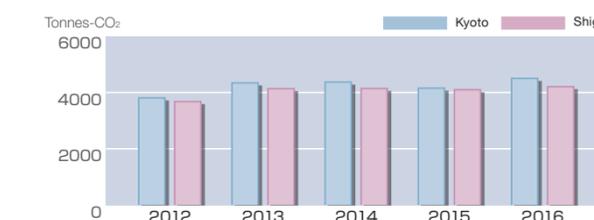
### Burnable Waste (domestic solid waste) Generated

We decreased our overall volume of burnable waste through periodic patrols and by seeking the cooperation of our various workplaces. We are looking to further reduce such waste by reexamining sorting rules and other steps aimed at improving our recycling rate.



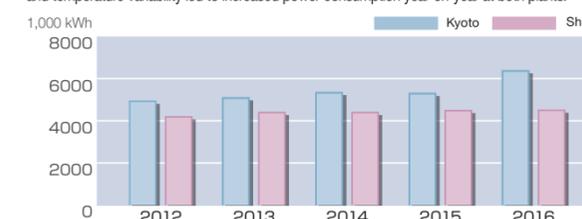
### CO<sub>2</sub> Emissions

We upgraded our fuel-oil-fired heating units to electric air conditioners, adopted LEDs for plant illumination, fixed air leakages, and performed other facility upgrades. However, CO<sub>2</sub> emissions rose at both the Kyoto and Shiga Plants year-on-year due to the introduction of air conditioning for summertime and additional air conditioning use due to increased production and temperature variability.



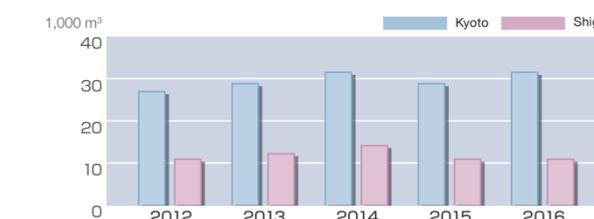
### Electricity Consumption

We took various measures at our Kyoto and Shiga Plants, such as introducing a "Cool Biz" casual summer dress code, reducing labor, and upgrading facilities. However, the introduction of electric air conditioners for summertime and additional air conditioning use due to increased production and temperature variability led to increased power consumption year-on-year at both plants.



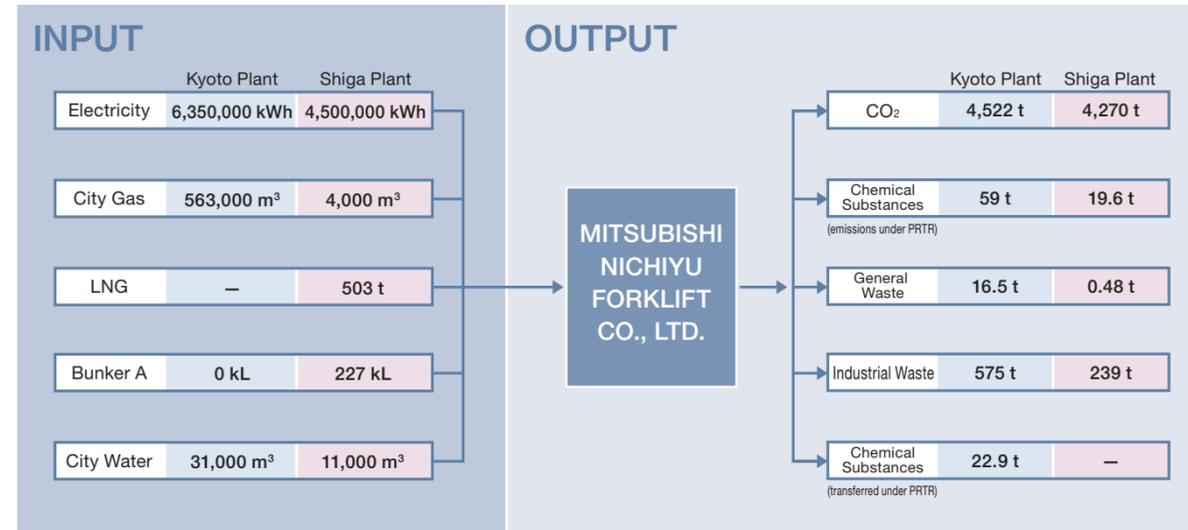
### City Water Consumption

Increased production and the effects of water leakages increased water consumption over the previous year. Sound sensors were introduced to detect water leakages that could then be fixed.



## Environmental Initiatives

### Summary of Environmental Impact (Fiscal 2016)



## Targets and Results

Environmental Targets (Fiscal 2014–2016)	Targets for Fiscal 2016	Results for Fiscal 2016	Evaluation	Supplement to the Evaluation
Positioning of environmental initiatives among our business operations • To enhance our plans to implement an environmental management system in each of our divisions • To assign and train individuals to promote our environmental management systems in each division • To ensure compliance with environmental laws	To upgrade a system for promoting EMS implementation to maintain ISO 14001 certification To convert special group activities into primary tasks in preparation for restructuring the special environmental group	Along with a revision of standards, we conducted internal audits and a management review. Targets (plans) set by the special group were implemented as environmental activities by the divisions, but a gap existed among divisions and there was room for improvement.	○ ×	Shift to the 2015 version of the ISO standards in fiscal 2017.
Developing and supplying products that can lead to savings in energy and resources • To improve energy efficiency • To improve the recycling rate • To modify our management system to achieve Design for Environment (DFE) goals	To create a visualization of reducing environmental impact by reducing waste associated with defective products To implement and establish life cycle assessment (LCA) and life cycle inventory (LCI) analysis based on the ISO 14040 standard	Parts costs within claim costs (excluding overseas) were lower than in the second half of fiscal 2015. Company standards for product assessments were revised and LCI analyses continue to be carried out.	○ ○	
Implementing green procurement • To establish a system for managing chemical substances contained in our products • To strengthen our response to REACH regulations • To strengthen our support of business partners • To specify and implement green procurement in our selection criteria for suppliers	To find alternatives to replace specified chemical substances To promote environmental impact reductions at business partners To strengthen measures regarding chemical substances contained in our products	We decided on target models and implemented replacements. On Aug. 4 and Nov. 8, seminars were held for our business partners on our chemical substances in products surveys. At present, there have been submissions of "declarations of non-use and non-inclusion of banned substances" from all business partners for whom submission is required. The substance survey response exceeded the target value.	○ ○ ○	We will continue supporting investigation of chemical substances in products for our business partners.
Achieving zero emissions (a minimum recycling rate of 99%) • To draft and implement a plan to achieve a 99% recycling rate • To reduce our emissions of general waste • To thoroughly sort all our solid waste • To limit our purchases of materials (including office supplies) in the interests of resource conservation	To achieve a 99%+ target recycling rate at the Kyoto Plant and maintain a 99% rate at the Shiga Plant To boost the green purchasing rate for office goods by 5% over fiscal 2015 Criteria: value base after changing Net-based supplier (average, Oct. – Dec. 2015)	Shiga Plant: Achieved zero emissions (recycled rate was 99.7%); Kyoto Plant: Not achieved zero emissions (recycled rate was 97.3%) Periodic patrols were conducted, raising environmental awareness (4 times annually at each plant). Awareness of green purchasing increased, but the purchasing rate fell below targets.	× ○ ×	We will continue to conduct periodically. There are issues with aggregation methods, etc.
Promoting environmental awareness • To create and implement a quantitative evaluation system that includes such factors as participation rate • To actively participate in community initiatives	To carry out environmental activities outside the company To establish zero waste campaigns twice a year in Kyoto, once a year in Shiga	A system was created to facilitate participation in external environmental activities. Kyoto Plant: held on May 26 and Oct. 12 Shiga Plant: held on May 24	○ ○	We will implement starting in fiscal 2017.
Reducing CO <sub>2</sub> emissions and energy consumption by 1% each compared with the preceding year • To streamline energy consumption according to the terms of the Energy Saving Act • To adopt and implement priority initiative themes for each division • To adopt and set a goal for an appropriate energy intensity • To increase the efficiency of our operations in our normal work routine • To institute environmental investments (by introducing the concept of environmental accounting) • To compile and utilize data on our energy consumption • To stabilize the operation of our lines by adopting TPM	To reduce energy consumption by 1% year-on-year To reduce CO <sub>2</sub> emissions by 1% year-on-year To quantify CO <sub>2</sub> reductions for the energy-saving activities of every division, especially for the production section's labor reductions (To create a "mechanism" by which numerical values are aggregated and reported periodically) To implement energy-saving facilities investment	Compared to results for preceding year: Kyoto Plant: Increased by 8% Shiga Plant: Increased by 2% Compared to results for preceding year: Kyoto Plant: Increased by 13% Shiga Plant: Increased by 8% CO <sub>2</sub> reductions were quantified for the production section's labor reductions. Planned facilities investment was completed and CO <sub>2</sub> emissions were calculated. Energy consumption was streamlined according to the terms of the Energy Saving Act.	× × ○ ○	We improved facilities, but the air conditioning load rose due to increased production and temperature variability. We improved facilities, but the air conditioning load rose due to increased production and temperature variability. We created a visualization of the contribution to the environment from labor reduction. LEDs adopted for some lighting fixtures in the Shiga Plant. Air leakages were fixed. Energy conversion from fuel oil to city gas or electricity
Improving our energy and resource intensity regarding the transportation of products and parts • To adopt and set goals for an appropriate energy intensity • To reduce the amount of solid waste generated through shipping and receiving • To reduce the energy consumed due to shipping and receiving	Regarding buffer material and corrugated cardboard used in parts shipments, to maintain last year's standard with an intensity level relative to our sales volume of parts shipped (less than 0.054%) Regarding packing materials related to product shipments, to reduce the intensity level relative to the amount shipped by 10% (less than 0.46 kg/unit) To reduce use of other company's pallets (through measurement of waste pallet costs) and improve the returnable crate rate (5% year-on-year reduction per production unit) Intensity level: ¥23.75/unit To improve the reuse rate for packing materials used for parts shipments. (Generated at Kyoto/Shiga → used for parts shipments) (Target for Term 116: 500 kg/month on average) To implement measures that improve the returnable crate rate	0.0523% 0.414 kg/unit Excluding the effects of shifting the production of a specific model to the Kyoto Plant that had not been anticipated at the beginning of the term, for Term 116 there was a 10% reduction to ¥22.4/unit. The reuse of packing materials for parts shipments averaged 515 kg/month. We promoted the use of special pallets for limited models. In the future we plan to scale out this approach to other models.	○ ○ ○ ○	We will proceed with inspections and correction of excessive packing. We will look into reducing the weight of packing material for specified models and use of returnable pallets. The listing of current returnable crates will be used for changed models next time. Use of returnable crates for winder rolls (eliminating about 4 tonnes of wood chips)

## Compliance with Laws and Ordinances

### Noise

We undertake periodic noise measurements at the side boundary.

Plant	Measured Item	Unit	Regulated Value	Observed Value
Kyoto	Noise	8:00–18:00	dB	70
		18:00–22:00	dB	60
Shiga	Noise	8:00–18:00	dB	70
		18:00–22:00	dB	70

Measurement dates: February 2, 2017 (Kyoto) and December 5, 2016 (Shiga)

### Water Quality

At the Shiga Plant, we established a wastewater treatment tank facility and ensured that any water from sewage and processes is purified before being discharged from the plant. This purified water is discharged into tributary waterways of neighboring rivers. At the Kyoto Plant, drainage water is discharged into the drainage system after proper treatment.

Plant	Measured Item	Unit	Regulated Value	Observed Value
Kyoto	pH		5–9	7.1
	Biochemical oxygen demand (BOD)	mg/L	600	2.3
	Suspended solids (SS)	mg/L	600	6.5
	N-hexane extracts	mg/L	5	Less than 0.5
	Zinc	mg/L	2	Less than 0.2
Shiga	pH		6–8.5	7.2
	Biochemical oxygen demand (BOD)	mg/L	40	3
	Chemical oxygen demand (COD)	mg/L	40	3.8
	Suspended solids (SS)	mg/L	90	1.6
	Nitrogen	mg/L	12	2.8
Phosphorus	mg/L	1	Less than 0.1	

Measurement dates: January 30, 2017 (Kyoto) and February 14, 2017 (Shiga)

### Odor

We undertake periodic odor measurements at the side boundary.

Plant	Measured Item	Unit	Regulated Value	Observed Value
Kyoto	Toluene	ppm	10	Less than 0.5
	Xylene	ppm	1	Less than 0.5
Shiga	Toluene	ppm	10	Less than 1
	Xylene	ppm	1	Less than 0.1

Measurement dates: March 13, 2017 (Kyoto) and November 11, 2016 (Shiga)

### Atmosphere

We periodically undertake measurement of the concentrations of particulates in the atmosphere around warm air heating units. We also measure for hazardous substances as stipulated under Kyoto prefectural ordinances.

Plant	Measured Item	Unit	Regulated Value	Observed Value
Kyoto	Warm air heating unit (city gas)	Particulate	g/m <sup>3</sup> N	0.10
		NOx	ppm	150
Shiga	Warm air heating unit	Particulate	g/m <sup>3</sup> N	0.20
		SOx	m <sup>3</sup> N/h	1.2
		NOx	ppm	180

Measurement dates: January 10, 2017 (Kyoto) and February 14, 2017 (Shiga)

# Initiatives of the Special Environmental Group

## Environmental Products Group

### Fuel Cell Forklift

We have developed a fuel cell forklift, taking into account environmental issues and the coming of a hydrogen-based society. A prototype was presented at the Logis-Tech Tokyo international trade show for material handling in September 2016.

#### 1. Fuel Cell Unit

(1) A fuel cell is a power-generating apparatus that produces electrical energy from the electrochemical reaction of hydrogen and oxygen — the hydrogen from a storage tank in contact with the oxygen in the air. The only byproduct of the power generation is water. Because no greenhouse gases or environmental pollutants are emitted, it is considered environmentally clean. A fuel cell unit consists of a fuel cell stack, lithium-ion battery, control unit, cooling system, hydrogen tank, and additional weights. Integrated into the unit, it can replace the lead battery used in battery-powered forklifts. (See Fig. 1) This allows fuel cells to be used in existing battery-powered forklifts to easily convert them into fuel cell forklifts. Plus, the lithium-ion battery built into the fuel cell unit can instantaneously transfer high current in and out to improve the forklift's acceleration and help recover power through a regenerative braking system.

(Joint development with Plug Power and Yamato H2Energy Japan)

(2) The main specifications of the fuel cell unit are shown in Table 1.

#### 2. Features of the Fuel Cell Forklift

- (1) Improved work efficiency
  - ① Refueling in about 3 minutes (hydrogen filling), enabling continuous operation.
  - ② No need for maintenance as required by a lead battery, or for battery replacement to operate continuously.
  - ③ Output does not decline when reaching the end of a discharge as with a battery-powered forklift (the "drooping characteristic" of a lead battery).
- (2) A more comfortable work environment
  - ① Not one ounce of CO<sub>2</sub> or exhaust gas is emitted during operation. Also, in a well-to-wheel analysis, in the generation of hydrogen there is much less reliance on fossil fuels compared to electricity, giving the fuel cell forklift a superior environmental rating than a battery-powered forklift.
  - ② Since there is no engine-like drive, there is less vibration and noise.
  - ③ Customers who have had to change batteries no longer need to handle such heavy items. (Improved safety)
- (3) Better warehousing efficiency
  - ① The fuel cell forklift can be refueled in a few minutes; no spare batteries or spare battery chargers need to be kept, so no storage space or space for charging batteries is required.
- (4) External power supply feature
  - ① With the special built-in inverter circuitry, it is possible to supply power externally (100 VAC), so in times of emergency it can serve as a portable emergency power source.



Fig. 1 Replacement with a fuel cell unit

Table 1 Fuel cell unit specifications

I/O	Continuous output	11 kW
	Maximum output	58 kW
System voltage		48 V
Hydrogen	Filling pressure	35 MPa
	Carrying capacity	1.2 kg (60 L)
	Filling time	3 min
Product details	Type	Lead battery replacement type
	Size	710 mm L x 980 mm W x 578 mm H
	Weight	1089 kg
Other	Hybrid system with built-in lithium-ion battery	

### Diesel Engine Forklift for North America 7.0 t

This model has an engine that passes Stage IV and Tier 4 Final\*1 diesel emissions limits for Europe and North America, respectively. The engine used to meet previous limits\*2 was improved with high-pressure fuel injection and a multi-valve design, and in place of a DPF\*3 aftertreatment device a urea-based SCR\*4 system was adopted. This system maintains performance and low fuel consumption without increasing emissions of other regulated substances, thereby reducing NOx emissions by approximately 88%. (See Table 2 for comparison to previous limits)

By not employing a DPF aftertreatment device, there is no need for additional fuel injection to recover the accumulated soot, and no need for periodic ash removal. The improved engine reduces CO<sub>2</sub> emissions, curtails industrial waste, and reduces maintenance costs.

\*1 EU Stage IV (EC Directive), Tier 4 Final (U.S. EPA/CARB)  
 \*2 EU Stage IIIB (EC Directive), Tier 4 Interim (U.S. EPA/CARB)  
 \*3 Diesel Particulate Filter  
 \*4 Selective Catalytic Reduction (See Fig. 2)

Table 2 Emission limits

	Standard		Limits (g/kWh)			
			CO	HC	NOx	PM
Previous limit	Europe	Stage IIIB	5.0	0.19	3.3	0.025
	North America	Tier 4 Interim	5.0	0.19	3.3	0.020
Current limit	Europe	Stage IV	5.0	0.19	0.4	0.025
	North America	Tier 4 Final	5.0	0.19	0.4	0.020

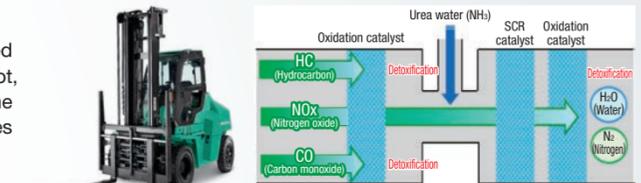


Fig. 2 Efficacy of urea SCR system

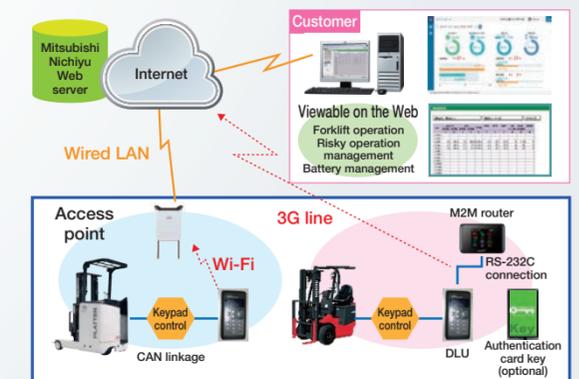
### Driverless Forklift

"Platter Auto" is our newly developed laser-guided driverless forklift. The system employs reflective plates on the walls for self-positioning, which eliminates the need to bury magnetic guides in the floor, a requirement for magnetic guidance systems. Also, the driverless forklift does not kick up dust, thereby improving the work environment. It also incorporates a Route Optimizer, which is a new multi-truck movement control system that uses our Group's proprietary algorithms to automatically select the optimal truck allocation and conveyance route to improve work efficiency and save energy.



### Forklift Operation Management System

Forklift operational data (obtained from sensors and a Controller Area Network (CAN)) are wirelessly transmitted to and managed on a cloud server to allow operational status to be visualized and information to be shared, thereby improving safety, boosting productivity, and reducing accident rates. The forklift utilization rate is also boosted, leading to energy savings. Efficiency is also increased across multiple operational fields by linking the data to production and delivery systems, reducing environmental impact.



# Initiatives of the Special Environmental Group

## Logistics and Packing Group

### 1. Our Modal Shift

We have affected a modal shift in our use of ferries and tractor-trailers for delivery transportation. Up until mid-2016, a truck would be loaded with products and driven onto a ferry. Now, we are using a tractor-trailer and detaching the tractor at the port, loading only the trailer and container with products onto the ferry to be transported. With this improved transportation method we increased the number of truckloads, dropping the vehicle weight per product from about 7 tonnes to about 2 tonnes, thereby greatly reducing CO<sub>2</sub> emissions.

### 2. Returnable Pallets

We began discussing with our partner companies the most efficient way to return the fork unit delivery pallets that were previously discarded because of no available return route. Now close to 500 pallets a year are reused, eliminating about 3 tonnes of waste wood chips.



Pallets made returnable

### 3. Use of Returnable Crates

At the Shiga Plant, we produce winders and unwinders for high-performance film. Multiple long rolls are used in such equipment, and previously the rolls were packed in discardable wooden crates for delivery by our partner company. In negotiation with our partner, we changed the configuration to make the wooden crates reusable. This effort now saves about 4 tonnes of waste wood chips annually.

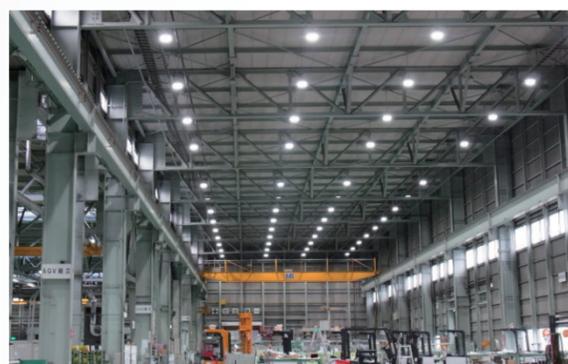


Use of returnable crates

## Energy Efficiency Group

### Conversion to LED Lighting at Shiga Plant

We upgraded mercury lamps to LED lamps for 195 lighting fixtures in the Shiga Plant. The shift to LED fixtures with their high luminous efficiency reduced CO<sub>2</sub> emissions by 63 tonnes/year.



### Kyoto Plant Air Leakages Fixed

Air leakage sounds were investigated on days when the plant was not in operation and 95 air leakage locations were repaired. The lower compressor output thus required helped to reduce CO<sub>2</sub> emissions by 55 tonnes/year.



### Energy Conversion from Fuel Oil

The five fuel-oil-fired heating units of Assembling Factory No. 1 were replaced with electric air conditioners. The more efficient electric heat pump system reduced CO<sub>2</sub> emissions by 130 tonnes/year.



## Environmental Preservation Group

### 1. Environmental Patrols

At the Kyoto and Shiga Plants we have been engaged in reducing waste for many years. But there is still room for improvement in individual workplaces. We therefore set up quarterly environmental patrols that focus on checking if waste is sorted properly. The patrol works with each workplace to find better solutions and year by year the amount of waste is gradually being reduced.



Environmental patrol

### 2. The “Zero Waste” Campaign

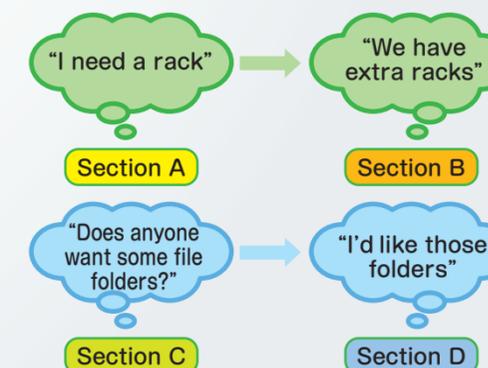
Twice a year we carry out cleanup activities around both the Kyoto and Shiga Plants as a way of expressing our gratitude to the areas’ residents. By participating in such activities to benefit local residents, environmental awareness is raised among our employees. We plan to continue with such efforts that involve the local community.



Zero Waste Campaign at the Kyoto Plant Zero Waste Campaign at the Shiga Plant

### 3. The 3 Rs—Reduce, Reuse and Recycle

On our in-house website we set up a new “3 Rs Corner” in which new information is posted on a regular basis. Such postings include classified ads, such as “Giving away a cabinet. Contact M. Tanaka by Friday,” or “Looking for a desk.” The corner becomes a kind of bridge between workplaces, where unneeded items that would ordinarily be thrown away are given away to others working at the company who have a use for them. This helps to reduce waste, and can help the company to save money both to dispose of an item or to replace it.



# 1 Relationship with the Community

## ① Participating in the Nagaokakyo City's Environmental Fair

According to the Environmental City Declaration of Nagaokakyo, the city's environmental fair is held annually with the aim of raising the environmental awareness of members of the public regarding prevention of global warming. In fiscal 2016, this event was held at the Nagaokakyo City Central Community Hall on November 19.

On that day, a variety of hands-on workshops and exhibits intended to increase public knowledge of specific environmental issues were set up and agricultural products were also available for purchase. As Nagaokakyo City is home to the head office of our company, we exhibited a display of information on our environmental initiatives.



## ② Forest Volunteer Program

We participated in the Nishiyama Forest Volunteer program hosted by the Association for Promoting Forest Improvement of the Nishiyama Forest. This annual initiative is intended to raise awareness of the Nishiyama Forest improvement project. As a volunteer program, it encourages citizens and enterprises to collaborate in promoting forest management to preserve the water and greenery of Nishiyama.

In fiscal 2016, this initiative was held on October 22, with the participation of our employee volunteers who helped to thin the overgrown forest and prune trees around the Nishiyama campground.



## ③ Participating in the Cleaning and Beautification Initiatives of Neighboring Waterways

Every year at the beginning of July, Shiga Prefecture organizes a Lake Biwa beautification activity with members of the local residents' associations engaging in a local cleanup campaign. On June 19, 2016, we participated in a regional cleaning activity conducted by two neighboring residents' associations. Participants gathered at 8:00 a.m. and, having been assigned to the waterways neighboring the Shiga Plant, all worked together to collect the mud, sand, and waterweeds that had been deposited.



# 2 Environmental Management Systems

## ① Environmental Audits

By conducting internal audits twice yearly and undergoing an annual audit by external auditors from the certification organization, we confirm that our ISO certifications—which cover the maintenance and improvement of our environmental management system and the adoption of continuous improvements—are being used effectively as tools for business improvement.

## ② Implementing Training Related to Fiscal 2015 Revision of ISO Standards

Internal auditor workshops were held in four groupings from September through October, aimed at those within the company qualified as internal auditors for the purpose of accommodating the fiscal 2015 revision of the ISO standards.

## ③ Internal Auditor Training

To increase the number of internal auditors, we held a three-day professional training session on February 8–10 to train QMS/EMS internal auditors.

## ④ Emergency Preparedness

We launched an emergency preparedness initiative as a precautionary measure to reduce the likelihood of accidents and emergencies. In preparation for an emergency, we provide periodic emergency response training in the workplaces whose facilities have the potential to greatly impact the environment.



## ⑤ Confirmation of Local Industrial Waste Disposal

Responsibility for waste disposal lies with the company generating the waste; therefore, we are even responsible for waste from operations that has been contracted out to a waste disposal company. Every year, we dispatch employees to visit the relevant sites to visually confirm that the waste we generated is disposed of appropriately by our several waste disposal companies.



# 3 Environmental Impact Reduction Initiatives

## ① Participating in the "Light-Down Campaign" Targeting Reduced CO<sub>2</sub> Emissions

We participated in the "Light-Down Campaign" sponsored by Japan's Ministry of the Environment. For the "Summer Solstice Light-Down" on June 21 and the "Cool Earth Day" on July 7, we encouraged employees to leave the office by 19:00. Moreover, incentives were offered at our Kyoto Plant for global warming countermeasures while our Shiga Plant encouraged employees to leave the office by 20:00, excluding those locations that have adopted a flextime policy.

## ② Responding to the Issue of PCB Waste

Although we appropriately store and manage polychlorinated biphenyl (PCB) waste products in compliance with related laws and ordinances, the need exists to conduct detoxifying treatment within a scheduled time limit. We had been storing one high-density PCB waste unit at the Kyoto Plant, but in fiscal 2016 the treatment was completed.



## ③ Green Curtain

As a summer power-saving and energy-efficiency measure, a plant known as bitter melon was cultivated over the factory structure of the Kyoto Plant, creating a "green curtain" to minimize the daily temperature rise. In order to prepare soil for cultivation, we mixed in fallen leaves collected from the plant grounds and composted.



## ④ Chemical Risk Assessment Internal Explanatory Meeting Held

A revision to the Industrial Safety and Health Act now legally requires a risk assessment of the specified chemical substances contained in paints, solvents, and other items handled in the workplace. We therefore held explanatory meetings targeting related in-house divisions on June 7 and 17. We will strive to implement measures to reduce risks identified through the risk assessments.



## ⑤ Seminars on Investigating Chemical Substances in Products

As environmental activities gain more recognition worldwide, it has become necessary to maintain an environment in which the chemical substances in products are well managed and information is communicated properly. As part of supply chain management, we held seminars on August 4 and November 8 for business partners to study chemical substances contained in products for a better understanding of environmental considerations.



# 4 Contributing to the Community

## ① Cooperating with Blood Donation Drives

Every year, our Kyoto Plant and Shiga Plant participate in blood donation drives in response to requests from the Blood Center of Japanese Red Cross Society. In fiscal 2016, we welcomed the participation of a total 205 blood donors at the Kyoto Plant and a total of 55 at the Shiga Plant. In the future, we intend to continue participating in this endeavor as part of our contribution to society.



## ② Opening of Regional Social Welfare Facilities

The Kyoto Plant rents out its grounds in response to requests from various groups such as Otokuni Fire Extinguishing Technology Meeting, the executive committee for the Nagaokakyo Garasha Festival and gateball (a type of croquet) competitions. In this way the plant is helping to revitalize the region.



## ③ Providing Work Experience for Students from Neighboring Junior High Schools



From June 6 to 9, we hosted four junior high school students from schools in the Shiga Plant neighborhood for work experience. These students were introduced to the Shiga Plant and were able to deepen their understanding of the operations conducted on the production site. We hope this opportunity helps these students make important decisions about their future careers and their choice of employer.

## ④ Cooperation with the Hakone Trust

We were a charity sponsor supporting the CAT Ladies Golf Tournament held on August 19–21, 2016, setting up the venue for an "approach shot for charity contest." The charity funds gathered were donated to the Hakone Town Resource Maintenance Foundation (Hakone Trust) for the protection of the natural environment and cultural assets of Hakone, a town designated as a national park.

