

DYNIC CORPORATION

Environmental Report 2019



Table of Contents

Message from the President P.1

Company Profile P.2

Basic Environmental Policy P.3

Environmental Objectives/Achievements P.4

Initiatives to reduce the environmental burden and performance P.5-P.8

Initiatives related to global warming/saving energy

Initiatives related to saving resources/reducing waste

- Efficient use of water resources
- Initiatives to reduce waste matter

Initiatives to reduce the release of chemical substances

Material flow P.9

Environment-Related Products P.10

FY2018 Environmental Activities P.11-P.17

Aiming to reduce the environmental burden

Working together with the local community

Message from the President

Dynic Corporation promotes corporate activities covering the stages from development through to disposal of products, considering the environmental preservation at all times.

The corporate objective of Dynic is to color our day-to-day life *abundant* and *comfortable*.

All employees of Dynic always take care to follow the Environmental Basic Policy, which was established for the purpose of directing us to a habitable earth, and are working hard every day on environmentally-friendly corporate activities in consideration of harmony between technology and the environment.

We at Dynic updated and consolidated our compressors, introduced high-efficiency boilers and air conditioners, reduced steam loss by refurbishing piping equipment, updated our substation facilities to cubicle type, visualized our steam usage, and conducted energy-saving activities such as the use of the J-credit system. The Dynic Astronomical Observatory (Dynic Astropark Ten-Kyu-Kan) at our Shiga Factory cooperates with Taka Town to hold the Starry Sky Nature Observation Event (Hoshizora・Shizen Kansatsu-Kai) with local people, and also conducts environmental awareness-raising activities as well as astronomical observations.

To ensure that we continue to be a trusted company in the future, all our employees will work together as one to strengthen our efforts regarding environmental measures and undertake the development of environment-related products that take into consideration the global environment and living environments, promoting business activities that contribute to the realization of global environment preservation with our eyes towards the next generation.



A handwritten signature in black ink, which appears to read "Yoshio Oishi". The signature is fluid and cursive, written over a white background.

Yoshio Oishi
President
Dynic Corporation

August 2019

Company Profile

Corporate Name	Dynic Corporation
Establishment	August 18, 1919
Capital	5,795,650,000 yen
Stock Listing	Listed on the first section of the Tokyo Stock Exchange
Amount of Sales	27.8billion yen (40.4 billion yen including the Group companies) (As of March 31, 2019)
Employees	599(1,386 including the Group companies) (As of March 31, 2019)
Head Office	<p>Kyoto Head Office: 26 Daimon-cho, Nishikyogoku, Ukyo-ku, Kyoto 615-0812 Tel: +81-75-313-2111(main) Fax: +81-75-313-2116</p> <p>Tokyo Head Office: Shin Onarimon Bldg., 6-17-19, Shimbashi, Minato-ku, Tokyo 105-0004 Tel: +81-3-5402-1811(main) Fax: +81-3-5402-3146</p>
Branch	Sapporo, Tokyo, Nagoya, Osaka, Fukuoka, Hong Kong, Singapore, U.S.A., Thailand, England, China, Indonesia, Czech (including the Group companies)
Factory	Shiga, Saitama, Oji, Fuji, Moka, Singapore, U.S.A., Thailand, England, China, Indonesia, Czech (including the Group companies)
Affiliated Company	Six companies in Japan; eleven companies in other countries
Business Line	Book-binding cloth, cloth for printing/business purposes, decorative cloth for packages, cloth for magnetic passbooks, film-coated products, material for display labels, composite film, printer ribbon, business card printers, stationary paper goods, magnet-related products, moisture getter for organic EL, carpet, wallpapers, ceiling material, blinds, non-woven cloth/carpets for automotive interiors, filters, industrial tarpaulins, canvases, rainwear, industrial non-woven cloth, aluminum foil/lid material for container sealing, paper core/paper packaging, film processing for cataplasm, freshness-keeping agents for food, adhesive interlining, fancy products, transportation/storage of products, etc. (including



Basic Environmental Policy

[Basic Environmental Policy of Dynic]

Dynic Corporation is aware the efforts toward environmental preservation are an important business challenge and believes it is the responsibility of the manufacturer to observe domestic and overseas laws and regulations related to the environment and provide products with less environmental burden to the markets. To implement the concept in a specific manner, we will thoroughly promote the following items in each of the stages, including development, material procurement, manufacturing, sales, distribution, and disposal.

- (1) We will reduce the environmental burden in all stages of our business activities throughout the life cycle of the products;
- (2) We will proactively make efforts to save energy and reduce waste, thereby preventing environmental contamination;
- (3) We will prevent risk caused by harmful chemical substances that damage the environment;
- (4) We will disclose information regarding our business activities related to the environment and proactively promote environment preservation activities, while acting in concert with local communities; and
- (5) We will implement education related to environmental preservation, thereby improving awareness of the environment.

Yoshio Oishi, President
Dynic Corporation

■ Efforts for Reducing Environmental Burden

We are introducing the manufacturing method that features less of an energy burden and implementing product design where resource saving and longer service life are taken into consideration; in addition, we consider materials that feature less of an environmental burden and materials that are easy to recycle from the design phase of the product. In the manufacturing phase, we make efforts to save energy and reduce waste in the manufacturing scene every day, thereby contributing to the reduction in the environmental burden. In the marketing phase, we propose environmentally friendly products that reduce the environmental burden at the customer by using the products, thereby making efforts to contribute to the environmental preservation of the earth.

■ Efforts for Countermeasures against Global Warming and Biodiversity Conservation

We are promoting countermeasures against global warming through our efforts for energy-saving activities throughout Dynic, thereby reducing emissions of carbon dioxide. In addition, regarding the biodiversity conservation, we are making efforts toward coexistence with the global environment through our activities toward risks, including countermeasures against global warming.



● Environmental Objectives/Achievements ●

We set the midterm objectives for environmental performance (FY2018 to 2020) and are committed to them.

The results of our efforts in FY2018 against this target are as follows.

● FY2018 Environmental Objectives/Achievements List

Areas		Control parameter	FY2018				FY2019 objectives	Final objectives of FY2020
			Objective	Achievement	Self-evaluation	Related page		
Global warming mitigation Energy saving	CO2 emissions reduction	t-CO2	Versus FY2013 5% reduction	-13.5%	◎	P5	Versus FY2013 6% reduction	Versus FY2013 7% reduction
	Reduction in specific energy consumption	L/km of oil equivalent	Versus FY2017 1% improvement	-2.4%	◎	P5	Versus FY2017 2% improvement	Versus FY2017 3% improvement
Resource saving	Reduction in water consumption	1000 tons	Versus FY2017 1% reduction	+7.4%	×	P6	Versus FY2017 2% improvement	Versus FY2017 3% improvement
Reducing, reusing, and recycling of waste	Waste volume reduction	t	Versus FY2017 1% reduction	+1.2%	△	P7	Versus FY2017 2% improvement	Versus FY2017 3% improvement
	Volume reduction of industrial wastes subject to final disposal	t	Versus FY2017 1% reduction	+46%	×	P7	Versus FY2017 2% improvement	Versus FY2017 3% improvement
Prevention of environmental pollution	Reduction in emissions of PRTR substances	t	Versus FY2016 10% reduction	-27%	◎	P8	Versus FY2016 15% reduction	Versus FY2016 20% reduction
Environment-related products	Increase in % sales	%	Versus FY2017 0.5% improvement	+1.1%	◎	P10	Versus FY2017 1% improvement	Versus FY2017 1.5% improvement

<Self-evaluation legend>

- ◎ More than twice the objective
- Achieved the objective
- △ The objective was narrowly not achieved
- × Improvement toward the objective was not made.

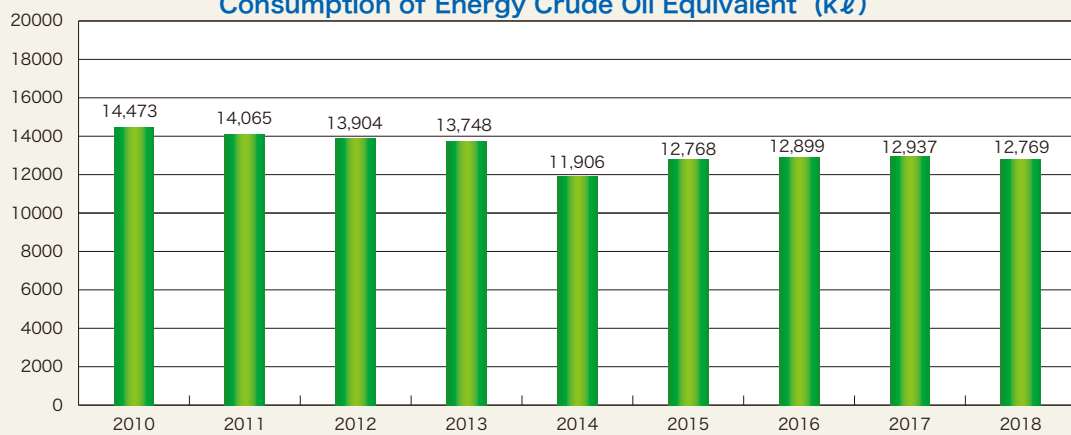
Initiatives related to global warming/saving energy

In our production activities, we consume energy and create products. As a result, we emit CO₂, a greenhouse gas. We are working to reduce energy consumption in our production process with the aim of reducing CO₂ emissions. In terms of investments in various energy-saving equipment, we have systematically implemented changes such as changing our factory ceiling lighting to LEDs, changing our transformers and air conditioners to high-efficiency types, improving efficiency by consolidating our compressors and changing to inverter types, changing the fuel we use in our boilers (A heavy oil→Town gas), and renovating our steam pipes. We have also implemented productivity improvements to improve energy efficiency, such as the establishment and renewal of new facilities.

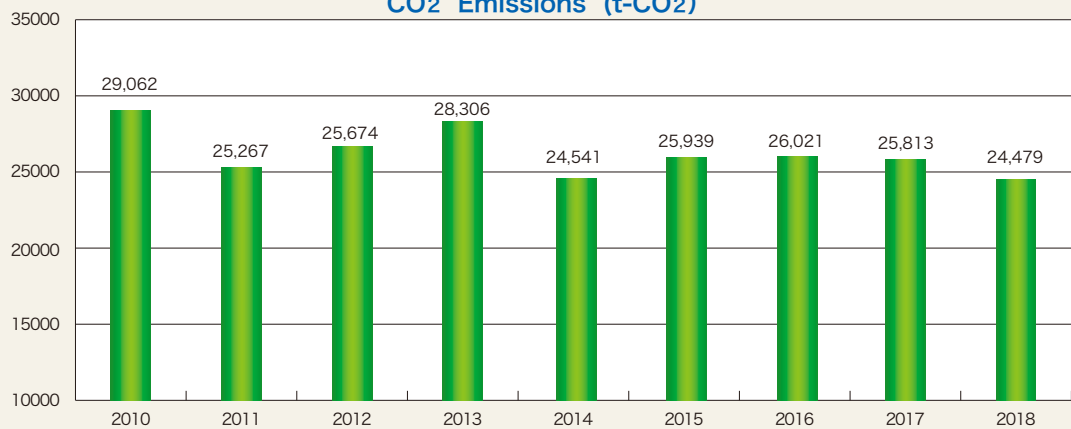
In FY2018, our energy consumption decreased by 1.3% compared to the 1.1% increase in production volume versus the previous fiscal year. In addition, our CO₂ emissions decreased by 5.2% and our energy intensity improved by more than 2%, resulting in efficient use of energy.

In FY2019, we will continue to aggressively increase productivity and install more energy-saving equipment toward the objectives.

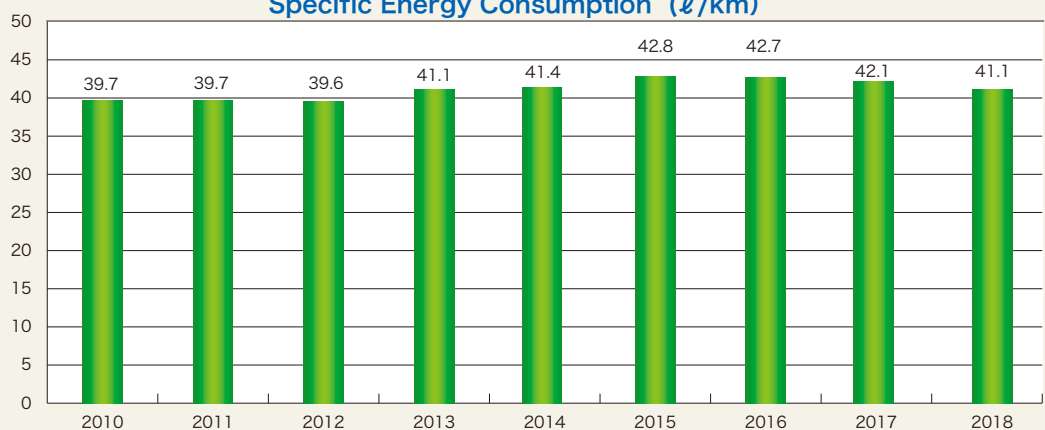
Consumption of Energy Crude Oil Equivalent (kℓ)



CO₂ Emissions (t-CO₂)



Specific Energy Consumption (ℓ/km)



Initiatives related to saving resources/reducing waste

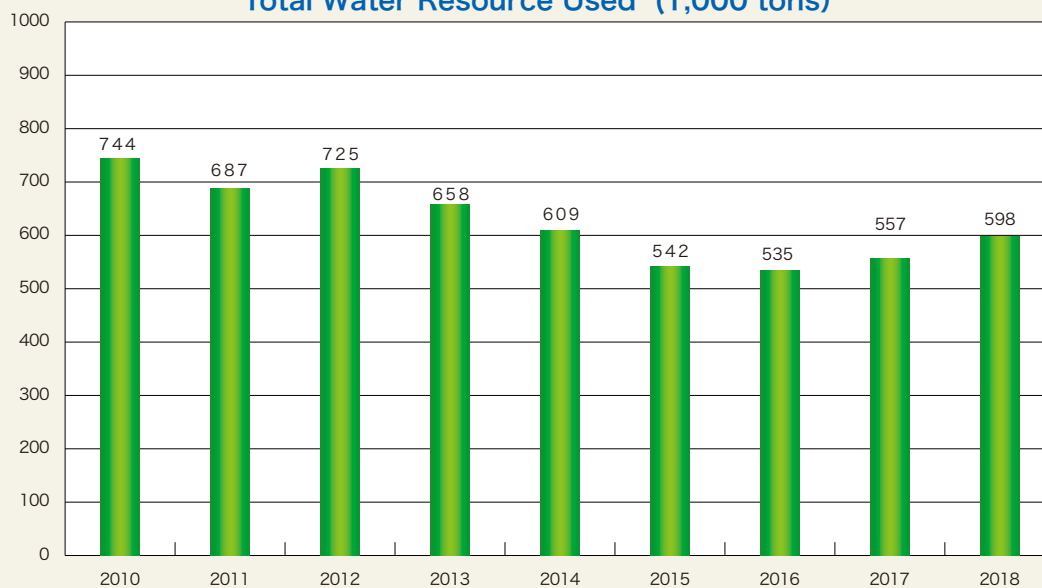
● Efficient use of water resources

We have recycled more waste water from the washing and cooling steps in the production process in order to effectively conserve water resources.

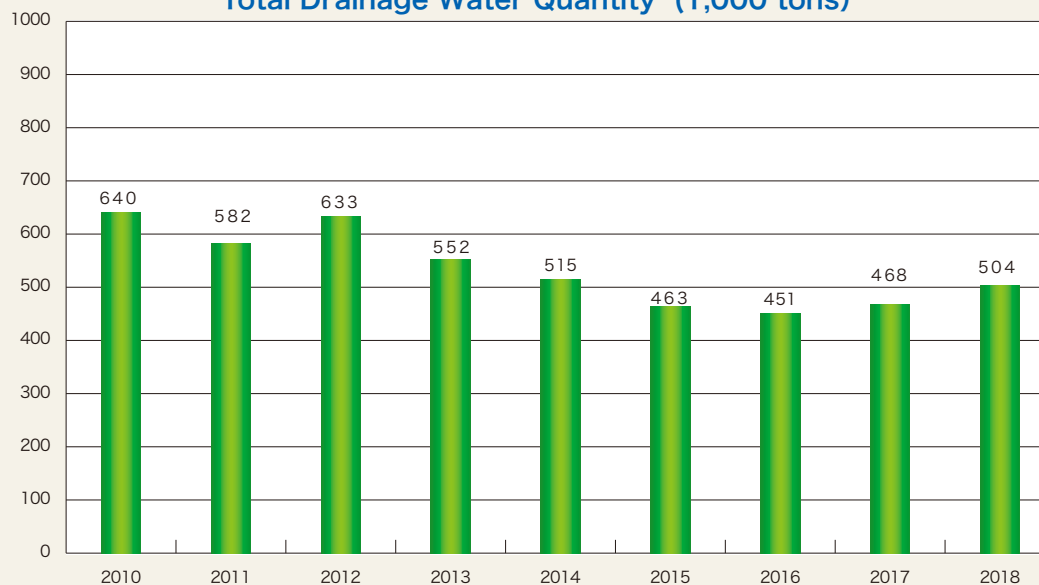
In FY2018, with the increase in production activity at our Saitama Factory, our total water resource input volume increased by 7.4% year-on-year. Total wastewater volume increased by 7.7% year-on-year, and increased for the second year in a row.

In FY2019, we will review our use of water resources and work to stem this increase in water usage.

Total Water Resource Used (1,000 tons)



Total Drainage Water Quantity (1,000 tons)



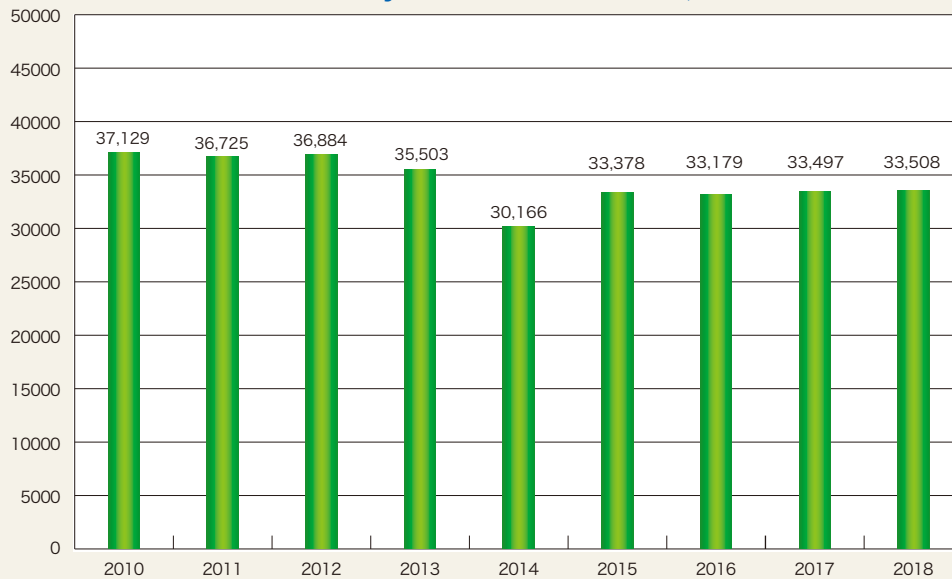
● Initiatives to reduce waste matter

We are committed to waste reduction in order to protect the global environment. In order to not only reduce waste generation but also effectively use resources, we push forward reuse and recycling approaches.

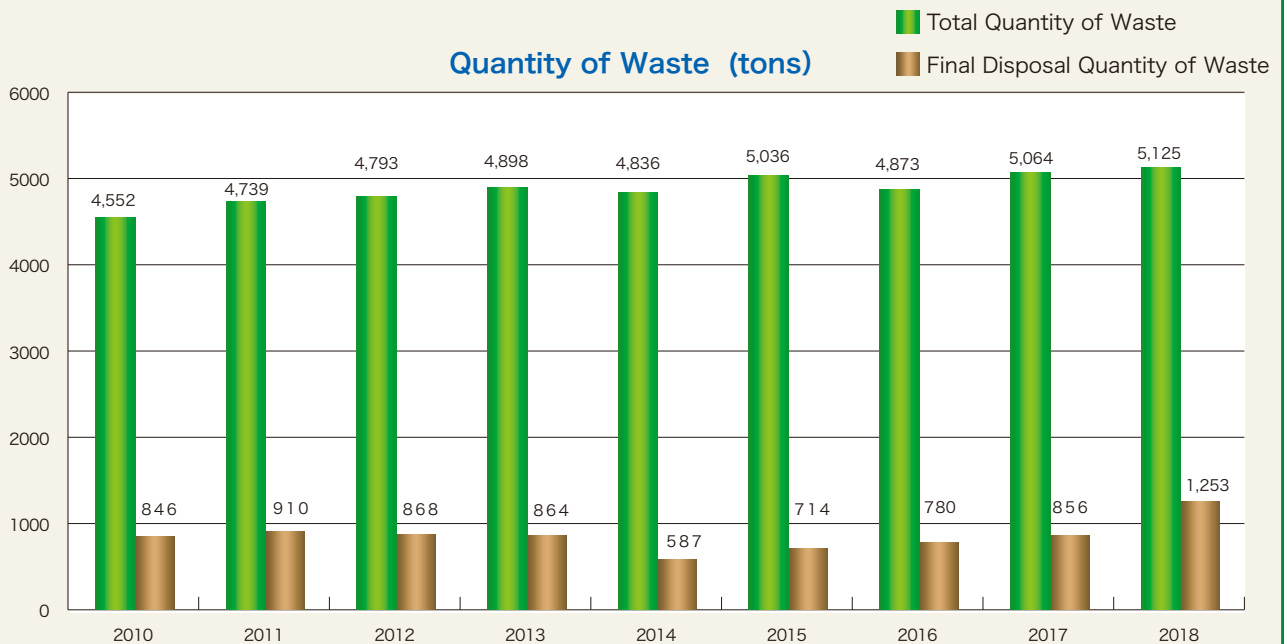
In FY2018, the total amount of material input volume was 33,508 tons, roughly the same as the previous year.

Total waste volume increased by 1.2% year-on-year, but the final waste disposal volume increased by 46%. This is due to the fact that some of the waste that had been treated as recycled waste at the Saitama and Shiga Factories was no longer accepted. We believe that one cause of this was overseas regulations regarding the acceptance of resource waste.

Total Quantity of Materials Used (tons)



Quantity of Waste (tons)



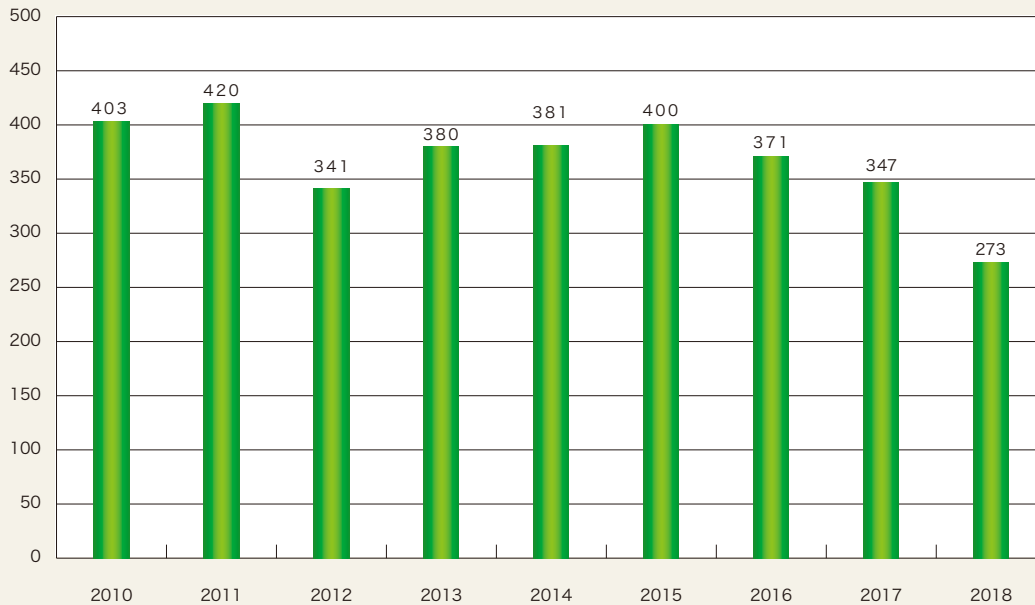
Initiatives to reduce the release of chemical substances

In accordance with the Law concerning Pollutant Release and Transfer Register (PRTR Law), we notify the regulatory authority of the amounts of chemical substances that are discharged into the environment after their use in the manufacturing process and make efforts to reduce them.

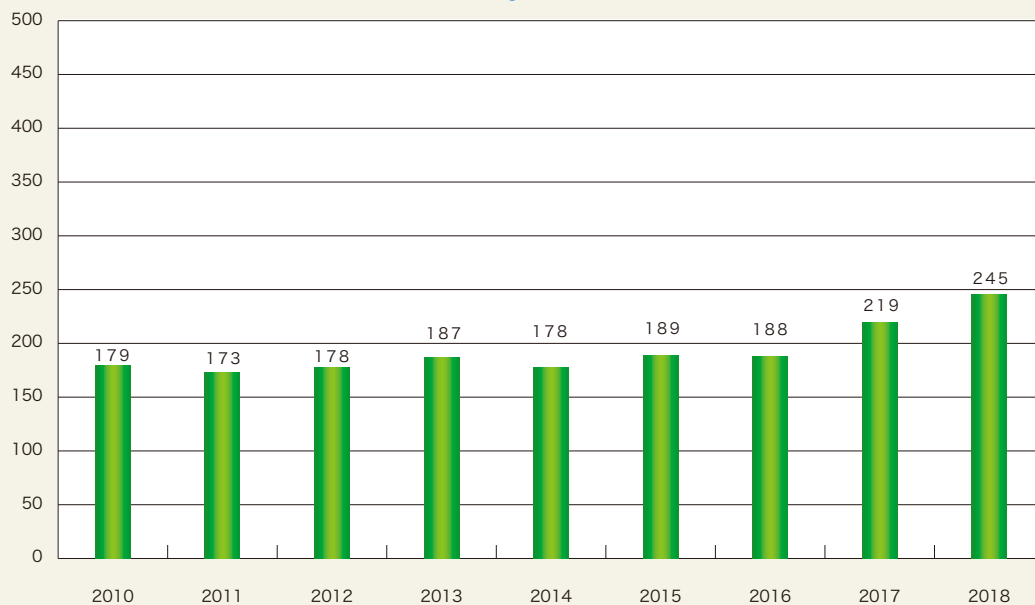
The emissions decreased by 21% in FY2018, compared with those of the previous fiscal year. The transfer increased by 12%.

Although most of the emissions are released into the atmosphere, the VOC processing equipment introduced at the Saitama Factory has resulted in a significant reduction in emissions for the third consecutive year.

Total Emissions (tons)



Total Quantity Moved (tons)



Overall environmental burdens from business activities in FY2018 (material flow)

We assess the environmental burdens from various emissions (OUTPUT) generated as a result of DYNIC's business and production activities involving raw materials, energy, and water resources (INPUT) in order to more effectively conserve those resources through more efficient use.

Vs. previous year

INPUT

98.7%	◆Energy consumption : 12,769,000 L (of oil equivalent)
100.6%	Power (Purchased) : 27,611 MWh
97.8%	LNG : 1,616 tons
100.4%	City Gas : 2,627,000 m ³
77.0%	Bunker A : 573,000 L
99.6%	LPG : 28 tons
86.7%	Gasoline : 12,000 L
107.4%	◆Water consumption : 598,000 tons
109.4%	Groundwater : 415,000 tons
101.1%	Industrial water : 136,000 tons
109.7%	Clean water : 47,000 tons
100.0%	◆Total raw material input : 33,508 tons

Businesses



【 Dynec product groups 】

Publishing and Stationery Products/Print Media Supplies/
Nonwoven Fabric Products/Apparel/Household Products/
Industrial Products/Special Embossed Products/Foil, Films, and Paper Products

Vs. previous year

OUTPUT

94.8%	◆Greenhouse gas (CO ₂ emissions)
94.1%	Emissions attributable to production process : 24,479 t-CO ₂
	Emissions attributable to product logistics : 1,204 t-CO ₂
	※Product logistics activities are outsourced to affiliated companies.
	◆Emission into the atmosphere
78.6%	PRTR substances : 273 tons
95.9%	NO _x : 17.5 tons
88.0%	SO _x : 2.9 tons
94.1%	Dust : 0.2 ton
	◆Discharge into water system
107.7%	Discharge : 504,000 tons
91.0%	BOD : 0.4ton
96.1%	COD : 1.5 tons
	◆Discharge into soil : N/A
	◆Chemical substances (PRTR substances)
78.6%	Emissions into the environment : 273 tons
111.6%	Transferred as waste : 245 tons
101.2%	◆Total waste generation : 5,125 tons
146.4%	Incineration/landfill disposal volume : 1,253 tons
91.7%	Recycled wastes : 2,070 tons
92.4%	Volume of valuables : 1,801 tons
91.1%	Recycling rate : 76%

Environment-Related Products

Dynic Corporation is working hard on the development of various products that contribute to the development of society and creation of a life of affluence. We believe the delivery of such new products to society will lead to our contributing to society through our business activities.

At Dynic Corporation, we define “products that take the global and living environments into consideration” as “environment-related products” .

[Products that take the global environment into consideration]

■ Products that reduce the burden on the environment

▶ PVC-free, plastic-free, or solvent-free products

Non-vinyl-chloride file folders (eco-folders), olefin based cloth, paper bank transfer cards, EVA containers, waterborne coating book-binding cloth for file binders and notebooks, etc.,

▶ Products using recycled paper, recycled fiber, recycled resin

Paper cloth using recycled paper, paper cloth for use in textbooks, paper cloth for use in backing, carpet using recycled polyester,

* Eco Mark adhesive interlining cloth,* etc.

▶ Products using sustainable natural resources

* FSC certified paper cloth (Epalon), rayon 100% color nonwoven fabrics (Panelon color sheet), biodegradable resin-based PLA vehicle interior materials, etc.

■ Products that take treatment and disposal into consideration

▶ Products that take ease of disposal into consideration

Paper blades for cutting polyethylene food wrap and aluminum foil, paper lid materials for milk drinks, etc.

▶ Products that contribute to resource-saving / 3R (Reuse, Recycle, Reduce)

Reuse toner cartridges; reuse TTRs; sub-cassettes for refill, automotive headliner material (lightweight), desiccant for organic EL devices (durable), etc.

[Products that take the living environment into consideration]

▶ Products that provide comfortable spaces

Deodorant Panelon filters, antimicrobial and deodorant wallpaper, negative-ion-radiating wallpaper, filter materials for air purifiers, antivirus wallpaper, sound-absorbing nonwoven floor fabrics, etc.

▶ Products useful for maintaining the freshness of health products/food

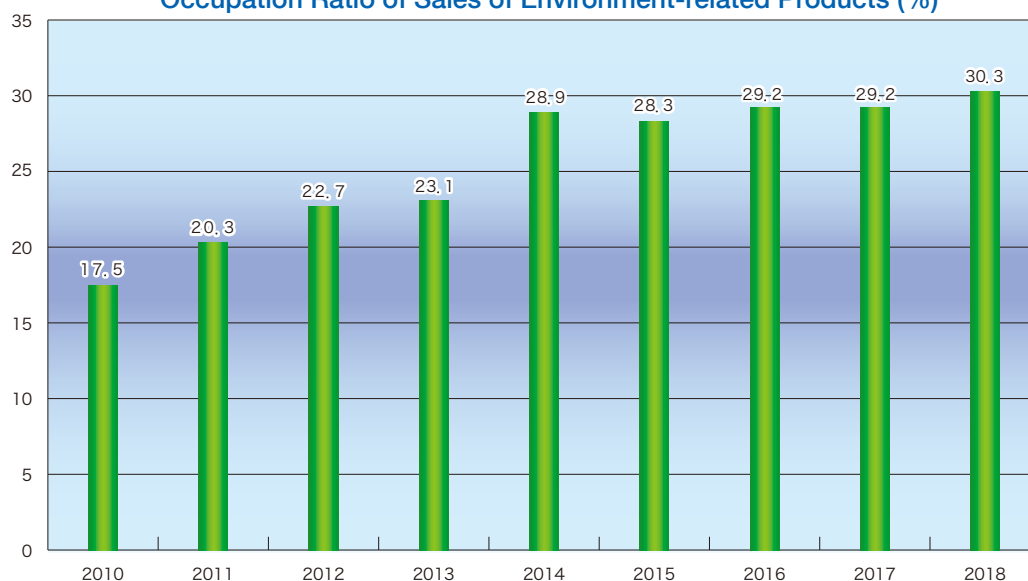
Water-resistant food packaging, food freshness preservatives, NIKKUSEBEN nylon-coated labels* (Echo-tech registered), mold-releasing film for cataplasm, etc.

▶ Various antimicrobial/deodorant products

Cloth for antimicrobial book binding, antimicrobial packaging materials, etc.

Products marked with an asterisk [*] are third-party certified products.

Occupation Ratio of Sales of Environment-related Products (%)



You can find the individual explanations of such environment-related products on our home page.

With "Contribute to society through environment-related products" as a key phrase, we have actively promoted product development.

As a result, the ratio of our sales of environmental-related products in FY2018 exceeded 30% for the first time at 30.3%.

In the future, we intend to further increase the percentage of our overall sales comprising environment-related products, thereby contributing to society.

FY2018 Environmental Activities

Reducing the environmental burden - Installation of energy-saving equipment

●Update to inverter compressors

We updated the compressors at our Saitama Factory to inverter type compressors. The rotational speed of motors can now be controlled by the inverters. Power consumption can be greatly reduced by suppressing the rotational speed of motors when air consumption is low.(Updated May 2018)



●Consolidation of compressors

We consolidated the air compressors at our Moka Factory A Building from four reciprocating units of 5.5 kW to one screw-type inverter control type of 22 kW. Since air is discharged under the control of a pressure sensor and the inverter to keep the pressure constant, the output at low loads such as at night is reduced compared with the previous equipment, improving energy efficiency. This measure delivers a reduction of 8 kl of crude oil-equivalent per year.(Updated March 2019)



FY2018 Environmental Activities

Reducing the environmental burden - Installation of energy-saving equipment

●Introduction of high-efficiency boilers

At our Moka Factory, we updated our A heavy oil steam boiler to a town gas steam boiler.

Compared to the previous steam boiler, we have greatly improved energy efficiency by improving combustion efficiency through multi-position control and inverter control for the blower.

In addition, by converting the fuel from A heavy oil to town gas and improving energy efficiency, we have reduced our CO2 emissions by more than 30% compared to the previous equipment.(Updated February 2019)



Use of Tokyo Gas Steam fit

●Reduction of steam loss

The C-3 coating machine at our Saitama Factory experienced steam loss due to aging and equipment failure.

We have completely renovated the steam piping equipment and significantly reduced the amount of natural gas used.(Updated February 2019)



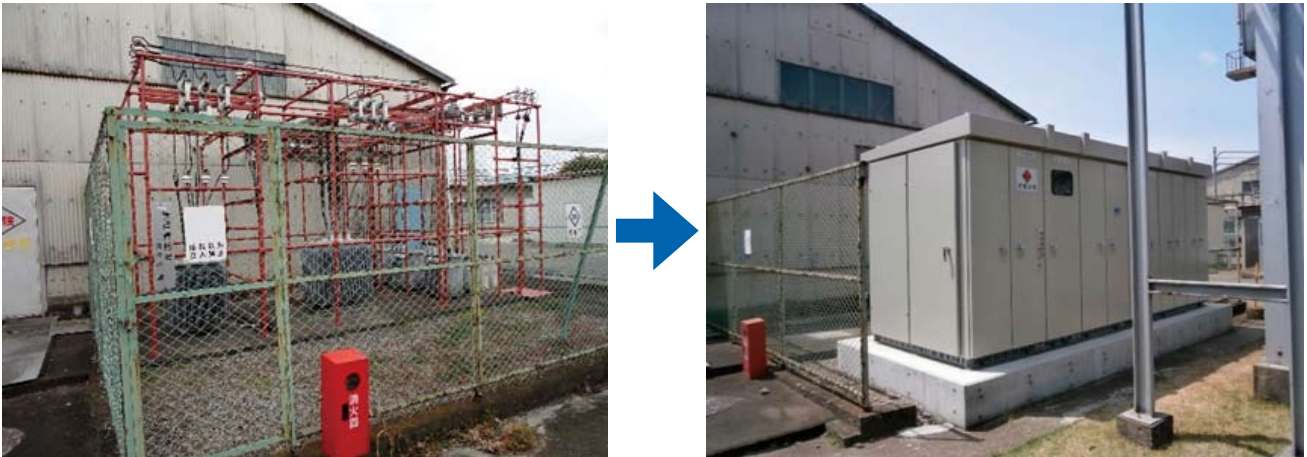
FY2018 Environmental Activities

Reducing the environmental burden - Installation of energy-saving equipment

●Updated substation to cubicle type

At our Saitama Factory, we updated our outdoor substation—which had a high risk of power failure—to a cubicle type.

At the same time, we updated the power equipment to the latest high-efficiency type to reduce power losses and CO2 emissions.(Updated May 2018)



●Introduction of high-efficiency air conditioners

At our Shiga Factory, we renewed our air conditioners and introduced high-efficiency types by utilizing the Energy Use Rationalization Business Support Program.

With the introduction of this equipment, we have achieved an energy saving of 10 kl of crude oil-equivalent per year.(Updated September 2018)



Third factory office



Third factory manufacturing area



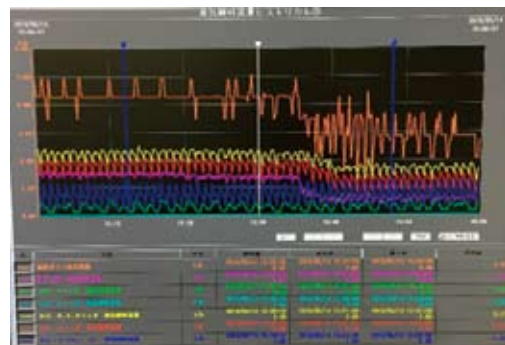
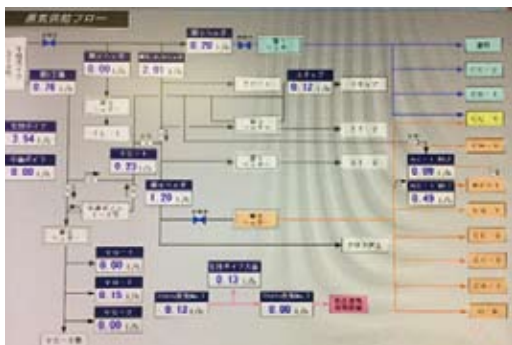
FY2018 Environmental Activities

Toward less environmental burden - our energy saving initiatives

●Visualization of steam consumption

Our Shiga Factory uses boiler steam for thermal energy. The measurement result of the steam flow rate is monitored sequentially by the management device, and the steam consumption is managed.

We predict the demand for steam in each area and use it to reduce energy losses.
(Updated February 2019)



Toward less environmental burden - Monitoring

●IOT for wastewater treatment equipment

We introduced a monitoring device, a remote control device, and an alarm contact device to our wastewater treatment equipment at our Shiga Factory. By remotely monitoring and adjusting our wastewater use with these devices, we can respond quickly in the case of abnormalities and reduce environmental risks.

(Updated April 2018)



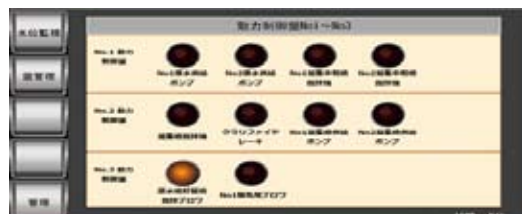
Wastewater treatment equipment area monitoring screen



Remote control screen for volume of water treated



Alarm confirmation screen



Alarm detailed confirmation screen



FY2018 Environmental Activities

Toward less environmental burden - our energy saving initiatives

●Utilization of J-Credit system

At our Shiga Factory, we sold the amount of CO₂ that we reduced by converting our boiler fuel in FY2018 using the J-Credit system. In this way, we effectively reduced greenhouse gas emissions.

J-Credit system: A system whereby the government certifies the amount of emission reduction of CO₂ and other greenhouse gases by the introduction of energy-saving equipment, the use of renewable energy, and CO₂ absorption by appropriate forest management.



J-クレジット制度
J-CREDIT SCHEME
クレジット認証証

プロジェクト番号 : JCS-KC0157

プロジェクトの名称
A 重油焚質流ボイラー及びA 重油焚熱機ボイラから
ガス焚質流ボイラー及びガス焚熱機ボイラーへの
更新プロジェクト

プロジェクト実施者名
ダイニック株式会社

代表者氏名
大石 義夫 殿

認証を受けたクレジット量
7,291 t-CO₂
(識別番号: JC400000002879263~JC400000002886553)

クレジット対象期間
平成 25 年 4 月 1 日~平成 28 年 12 月 31 日

上記プロジェクトについて申請内容を審議した結果、クレジット認証要件に適合すると認められるため、J-クレジット制度実施要綱に基づき、上記J-クレジットを認証いたします。

認証申請日: 2017 年 12 月 13 日
J-クレジット制度 制度管理者
経済産業省・環境省・農林水産省



FY2018 Environmental Activities

Working together with the local community

● Participation in trash pick-up campaign

Every year, we carry out cleaning activities around May 30 (Zero Garbage Day), which Shiga Prefecture designates as the day for environmental improvements.

We carried out cleanup activities along Route 306, adjacent to the Shiga Factory, on May 30.



Every year, around December 1, which Shiga Prefecture designates as the standard day for environmental improvements, Tago Town organizes cleaning activities on both banks of the Serikawa River.

The Shiga Factory also participated in the cleanup activities on December 1.



FY2018 Environmental Activities

Working together with the local community

●Dyonic Astronomical Observatory (Dyonic Astropark Ten-Kyu-Kan) (Inside Shiga Factory)

At the Dyonic Astronomical Observatory (Dyonic Astropark Ten-Kyu-Kan), located in the Shiga Factory, we hold viewing events using the Ten-Kyu-Kan astronomical telescope.

With the aim of working with Taga Town to get to know our local neighbors and many other people, we held the Starry Sky Nature Observation Event (Hoshizora ☆ Shizen Kansatsu-Kai) three times in fiscal 2018, and many visitors took part.

In addition, we transport a small astronomical telescope to various locations depending on requests from the town and hold "mobile viewing events."

参加費無料!!
事前申込不要

星空☆自然かんさつ会

～夏休みに、星空から環境について考えよう～

毎年の恒例行事となっています「星空・自然かんさつ会」を、今年も開催します!
星空を見上げたり自然に触れたりすることで、環境について考え、学ぶ機会を提供できればと考えています。どなたでもご参加いただけますので、ご家族そろってぜひお越しください。

と き	と ころ
平成 30 年 7 月 24 日 (火)	ダイニック アストロパーク天文館
平成 30 年 8 月 8 日 (水)	
平成 30 年 8 月 23 日 (木)	





Environmental Report 2019

Issued by:Environment Enhancement Division,Dynic Corporation

Issued on:August 9.2019