

Household and Industrial Materials Businesses

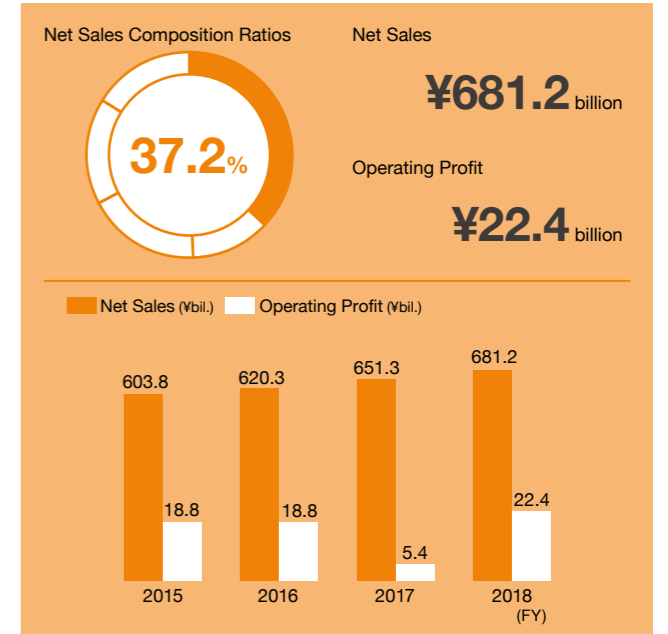
The Household and Industrial Materials Businesses aim to be a “lifestyle and social support enterprise” that contributes to the prosperity of society as a whole into the future by sustainably providing materials and technologies that are closely tied to people’s day-to-day lives.



Ryoji Watari
President, Industrial Materials COMPANY
President, Household and Consumer Products COMPANY

Changes in Net Sales and Operating Profit

In FY2018, the Household and Industrial Materials Businesses had net sales of 681.2 billion yen (up 29.9 billion yen from FY2017) and operating profit of 22.4 billion yen (up 17.0 billion yen from FY2017). The Industrial Materials Businesses reported that costs increased as a result of higher raw materials and fuel prices and other factors, but profit increased year-on-year due to product price revisions and progress in cost reductions. The Household and Consumer Products Business reported higher net sales as a result of an overall increase in household paper sales.



Industrial Materials Business

Business Overview

[Industrial Materials Business]

The Industrial Materials Business has production and sales structures that integrate materials and processing from base paper manufacturing to product processing and packaging design for the packaging materials that are essential to industry such as corrugated containers, folding cartons, and paper bags and responds in a timely manner to customer needs.



Main products of the Industrial Materials COMPANY

Business Strategies (1)

Increase the Earnings Capacity of Domestic Business

Demand for corrugated containers, one of the main business lines of the Industrial Materials COMPANY, is expanding nationwide as a result of e-commerce and other factors, and the growth in demand in the Kanto region in particular is prominent because of the concentration of population in the Tokyo metropolitan area.

To meet this demand, the Industrial Materials COMPANY decided to construct a new corrugated container plant at a Group logistics center in the bay area of Funabashi City in Chiba Prefecture. Operations are scheduled to start in stages in April 2020. In addition, base paper supply capacity will be increased by converting Oji Paper newsprint manufacturing facilities into containerboard and kraft paper manufacturing facilities.

To further reinforce earnings bases through the integration of materials and processing, investments will be made for the full utilization of Group management assets.



Rendering of the completed new Funabashi corrugated container plant

Expansion of Overseas Businesses

The Industrial Materials COMPANY conducts business at 44 sites in nine countries in Southeast Asia, India, and Oceania. Until now, business has focused on establishment and expanding processing sites to respond to growing packaging demand however, but a new containerboard manufacturing facility is being established in Malaysia with a target of commencing operations in 2021, and efforts are being made overseas to develop business further by integrating materials and processing.

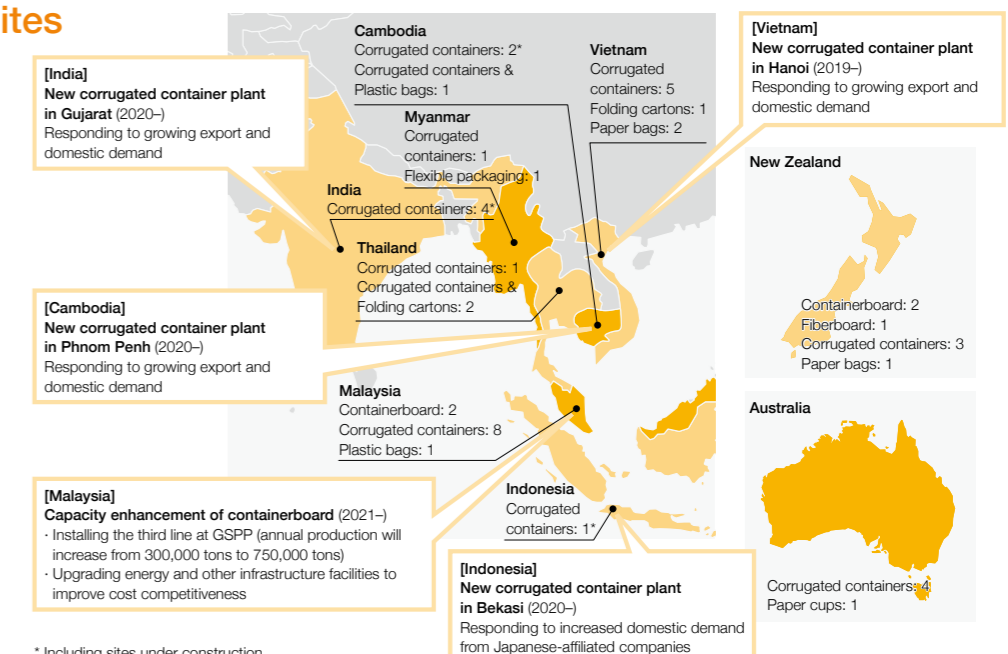
A decision was also made to enter business in Indonesia, a previously untapped market, by means of a joint venture, and preparations are underway for a corrugated container plant to

start operating in 2020. Going forward, business expansion will continue by carefully examining risks and returns in each region and market and making effective use both of new business site establishment and M&A.



Rendering of the completed containerboard manufacturing facility in Malaysia (structures with blue roofs)

Main Overseas Sites



Business Strategies (2)

Promotion of Innovation

As a result of the growing trend to shift away from plastics, a movement to replace various plastic products with paper can be seen around the world.

The Industrial Materials COMPANY is making efforts to capture the demand to switch to products made from both

paper and plastic such as shopping bags and is working in collaboration with the Innovation Promotion Division to develop products with new functions using paper and other materials for products that previously were available only in plastic to capture this new demand.

ESG and SDG Topics

Promoting Recycling—Dissolution treatment of confidential documents

Oji Materia Edogawa Mill is equipped with a high-security dissolution treatment facility, where confidential documents packed in sealed corrugated carton boxes are recycled into boxboard, entirely remaining unopened. This system, which takes the environment into consideration while maintaining information security, contributes to the creation of a sustainable society.

Aid Distribution Agreement under Disaster Cases (Oji Container & Morishigyo Group)

“Aid Distribution Agreement under Disaster Cases” refers to collaboration between our corrugated container plants located throughout Japan with neighboring local governments, so that we are able to contribute to making people feel safe and at ease at evacuation sites when disaster strikes. In times of disasters we promptly deliver corrugated container products such as portable beds, sheets, partitions, and portable toilets to the public.



Household and Consumer Products Business

Business Overview

[Household and Consumer Products Business]

In the household paper and disposable diaper business fields, Oji Nepia integrates sales, marketing, and production in the pursuit of three types of quality: quality of life as in the seeking of good texture, comfort, and functionality; environmental quality as in forest conservation such as the adoption of FSC™ certified paper*; and social quality such as taking CSR initiatives that contribute to society and that are in line with customers' hopes. FSC™C018118

* FSC™ is the world's most widely recognized forest certification program. Examinations are performed on issues such as whether forests and lumber are properly managed and whether new trees are planted to replace trees cut in order to protect precious nature. Selecting products with the FSC™ certification mark is a sign of support for forest conservation activities worldwide, and is conducive to sustainable forests in the future.



• Main Products



nepia Premium Soft Toilet Rolls



nepia Premium Soft Tissues



nepia Hana Celeb Three Pack



nepia Genki! Pants

Business Strategies (1)

Profitability Improvement of Domestic Business

In addition to boosting sales of nepia Genki! baby diapers, concentrated efforts are put forward to penetrate the market with high-quality, high-price range nepia Whito products. By reinforcing collaboration with retailers such as drugstores and baby goods stores, the fine quality and benefits of these products are conveyed to parents resulting in an upwards shift in profitability of the disposable baby diaper market.



The Whito high-quality, high-price range nepia brand

Expansion of Overseas Businesses

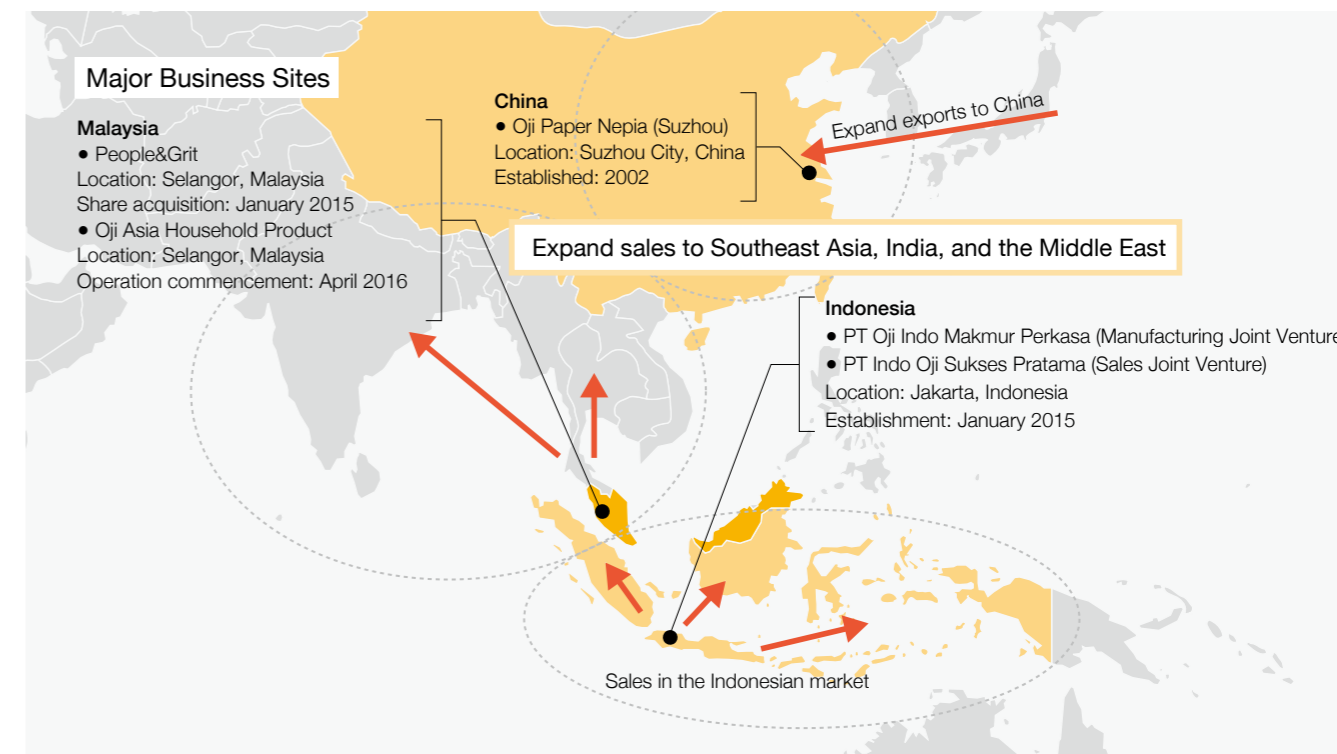
In order to strengthen the business foundation, the Southeast Asia business is being expanded, where consumption of disposable baby diapers is expected to grow. This besides, production capacity was increased and costs were reduced through reorganization of production structures at two sites in Malaysia, and a production facility is being constructed in Indonesia, which has the largest population in the region. Active business expansion through investment including M&A is also under consideration.

As high-quality “made in Japan” products, export of Genki! brand and Whito brand products has also been growing in China and Southeast Asia.



Genki! products sold in Malaysia

Main Overseas Sites



Promotion of Innovation

Three-hour-use pants diaper is unprecedentedly developed for the baby diaper market and added to the superior nepia Whito brand lineup to further enhance product quality and respond to the requests of parents. The Household and Consumer Products COMPANY will continue to propose products that reform the competitive axis of the market by instilling the differentiation between 3-hour-use and 12-hour-use with a focus on their different usage conditions. The company will continue its efforts in advancing the proprietary quilting technology adopted in Whito products to enhance performance even further.



3-hour use pants diapers added to the product lineup

ESG and SDG Topics (1)

nepia Quality

Pursuing “nepia Quality,” which comprises high living, environmental, and social quality, Oji Nepia engages in various activities in order to be the No. 1 in each of these three aspects. This is especially evident in “environmental quality,” where we have adopted the FSC™ certified paper for our major products since 2011, way ahead of our industry peers. Furthermore, we established a tie-up with WWF Japan in 2017 and created a logo which emphasizes forest conservation, while encouraging the use of FSC™ certified paper as our focus.



WWFはFSC™認証を応援しています。ネピアの紙は、森を守る紙FSC™認証紙*です。『FSC™認証紙のネピアを選ぶことは世界の森を守ることです』と消費者に呼びかけています。
*一部商品を除きます。
© 1986 Panda symbol WWF ® “WWF” is a WWF Registered Trademark

Adult Disposable Diapers

Reducing the work burdens of caregivers has become a major issue because of a shortage of workers at care sites, and changing diapers is one such burden. Because of this, the market for urine pads with high absorption volumes that can reduce the frequency of changing is growing year by year. This trend is expected to continue into the future.

Nepia Tender, a commercial brand, is developed by the Household and Consumer Products COMPANY to ease changing difficulties and reduce and shorten the changing procedures for caregivers. Meanwhile, the absorption capability provides comfort and long periods of peace of mind for diaper users.

In recent years, research has focused on absorbing not just urine, but watery stool as well. Watery stool can cause skin problems for diaper users and, in the case of leakage, can lead to substantial burdens on caregivers. For these reasons, it is included among the most troublesome issues relating to diaper changing. From October 2019, the Household and Consumer Products COMPANY began

sales of incontinence pads with the ability to allow watery stool to pass through and be absorbed without spreading along the surface of the diaper. Going forward, the Household and Consumer Products COMPANY will continue to pursue comfort for both caregivers and care recipients and contribute to human dignity, health, and longevity by enhancing the quality of care.



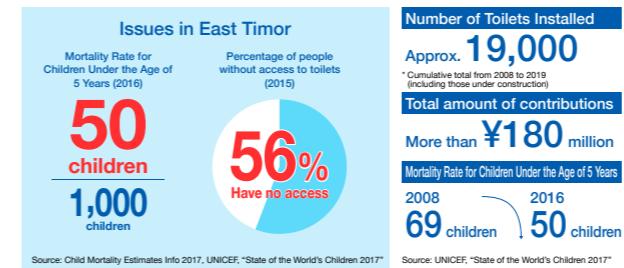
Large urine pads with the ability to absorb watery stool fulfill the need of nursing care facilities to reduce diaper changing burdens

ESG and SDG Topics (2)

nepia 1,000 Toilets Program

In today's world, approximately 800 children lose their lives each day due to diarrhea and dehydration in environments that lack potable water and proper sanitary systems. In the Democratic Republic of Timor-Leste, (hereinafter, East Timor), where open defecation remains commonplace, there are many such children. The mortality rate for children under the age of five years is 50 per 1,000 live births, and diarrhea caused by contaminated water and lack of sanitary systems is one of the leading causes.

The nepia 1,000 Toilets Program is a program intended to install toilets and end open defecation in East Timor. Since 2008, a portion of Oji Nepia's sales have been contributed to a UNICEF (United Nations Children's Fund) program for improving sanitation in East Timor. The aim is to eliminate open defecation, a cause of disease, by installing toilets through community efforts and conducting educational programs, mainly in agricultural villages. Oji Nepia will continue to provide support to protect the lives and health of East Timorese children and their families.



Poo Class by Oji Nepia

“As a company that delivers toilet rolls, we want to contribute to society via the topic of poo.” With this thought in mind, Oji Nepia launched a unique learning program called the Poo Class jointly with the Japan Toilet Labo. in 2007.

Excretion is equally important as ingestion in maintaining our lives. There are numerous opportunities for children to learn about diet and health, as indicated by the term “dietary education,” but there are few opportunities to learn about excretion and health. For this reason, the Poo Class was created to provide children with opportunities to learn about excretion and think about their health.

To date (as of 2018), a total of 19,767 children have attended the Poo Class. Through 2018, the class has been conducted at a total of 48 elementary schools in the Kanto region as well as Fukushima, Iwate, Fukui, and Aichi Prefectures.

Through Poo class, children learn about the importance of excretion in a fun way. With an aim to promote healthy lifestyle to children, the Poo Class program will continue to expand in the future.



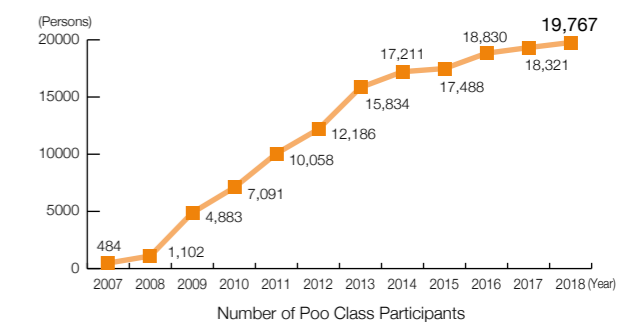
Photo by Kisei Kobayashi



A toilet installed with the support of the project Photo by Kisei Kobayashi



Children learn about their bodies through poo.



Functional Materials Business

The Functional Materials Business will lead the Oji Group's transition to an "Innovative Value-Creating Company" by enhancing our comprehensive proposal making capabilities to react promptly and appropriately to various customer needs, and further developing high value-added products targeted at global markets.



Shoji Fujiwara
President, Functional Materials COMPANY

Business Overview

[Specialty Papers Business]

The specialty Papers Business has a lineup of products with advanced special functions such as electrical material paper including insulation materials, dry pulp nonwoven fabric with excellent bulk and liquid retention properties, and glass paper with outstanding dimensional stability and heat resistance.



Glass paper (Oji F-Text)

[Adhesive Products Business]

Using proprietary adhesive force control technology, the Adhesive Products Business handles products such as familiar items like food and beverage labels, courier delivery labels, adhesive tape for packaging, and wound dressings as well as to less familiar, special applications like aluminum tape for construction material and forgery prevention tape.



PP Clean stickers (Oji Tac)

[Imaging Media Business]

The Oji Group boasts a leading share of the world's market for thermal recording media. Using diverse coating technologies such as thermal and inkjet technologies, the Imaging Media Business is developing products that meet diverse needs in household, industrial, logistics, and medical applications.



Various types of thermal papers (Oji Imaging Media)

[Film Business]

Films for capacitors are used in the power supply units of hybrid and full electric vehicles, and the Oji Group offers films of various thicknesses including the world's thinnest. The Film Business also offers optical adhesive double-coated films and hard-coated films that are seeing rapid growth due to their use in smartphones and other precision devices.

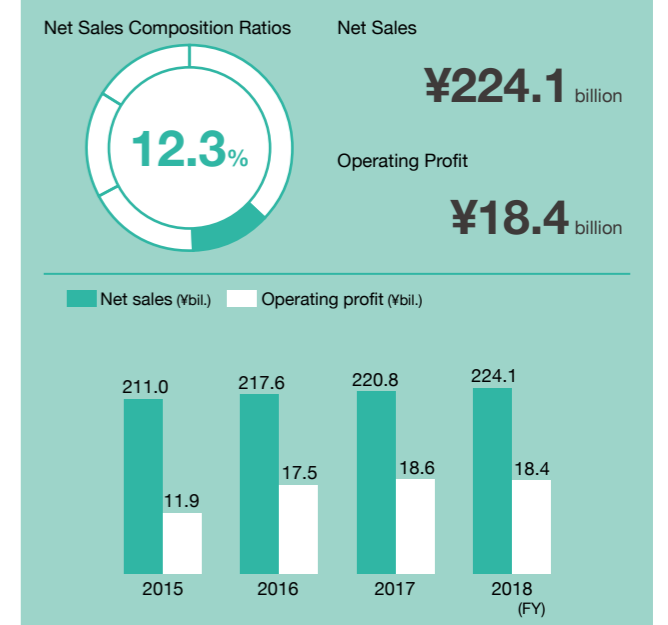


Film used in capacitors (Oji F-Text)

Changes in Net Sales and Operating Profit

In FY2018, the Functional Materials Business had net sales of 224.1 billion yen (up 3.3 billion yen from FY2017) and operating profit of 18.4 billion yen (down 0.2 billion yen from FY2017).

With regard to net sales, effects from the suspension of mill operations caused by the 2018 Hokkaido Eastern Iburu Earthquake resulted in lower sales volume, but effects from price revisions concerning specialty papers for export sales and higher sales volume of thermal paper, particularly in emerging countries in Southeast Asia and South America, pushed net sales higher. Cost reduction efforts were implemented, but effects from higher prices for raw materials and fuel resulted in lower operating profit.



Business Strategies

Profitability Improvement of Domestic Business

Through the integration of Oji Group core technologies developed in the past such as papermaking, converting (functional and adhesive coatings), and film forming with new materials, the Functional Materials Business will rapidly develop and supply high-function and high Value-added products. Air laid technology that forms sheets from various powders, fibers, and so on contributes to the reduction of waste through the recycling of manufacturing process waste materials generated by fiber manufacturers into raw materials and manufacturing new air laid nonwoven fabrics.

In addition, we maximize profit, by expanding new business fields high value-added products in collaboration with the Innovation Promotion Division, by achieving business collaboration effects with Mitsubishi Paper Mills, and by reorganizing production structures.



The 6FM at the Oji F-Text Shiga Mill



Oji Kinocloth Fuji Factory Machine No. 2 (Product name: Kinocloth)

Expansion of Overseas Businesses

In conjunction with the economic development of emerging countries and regions such as Southeast Asia, India, and South America, demand for existing products including thermal paper and adhesive paper is expanding steadily.

The Functional Materials COMPANY is establishing integrated production structures and expanding business in Southeast Asia from upstream (release paper production, thermal sensitive coatings) to midstream (adhesive converting) and downstream (printing). Plans call for the production capacity of Oji Papéis Especiais to be increased and sales boosted in response to robust demand for thermal paper in Brazil. In Myanmar, production and sales of flexible packaging products such as films for consumer goods makers was launched in 2017, and efforts are being made to develop new markets.

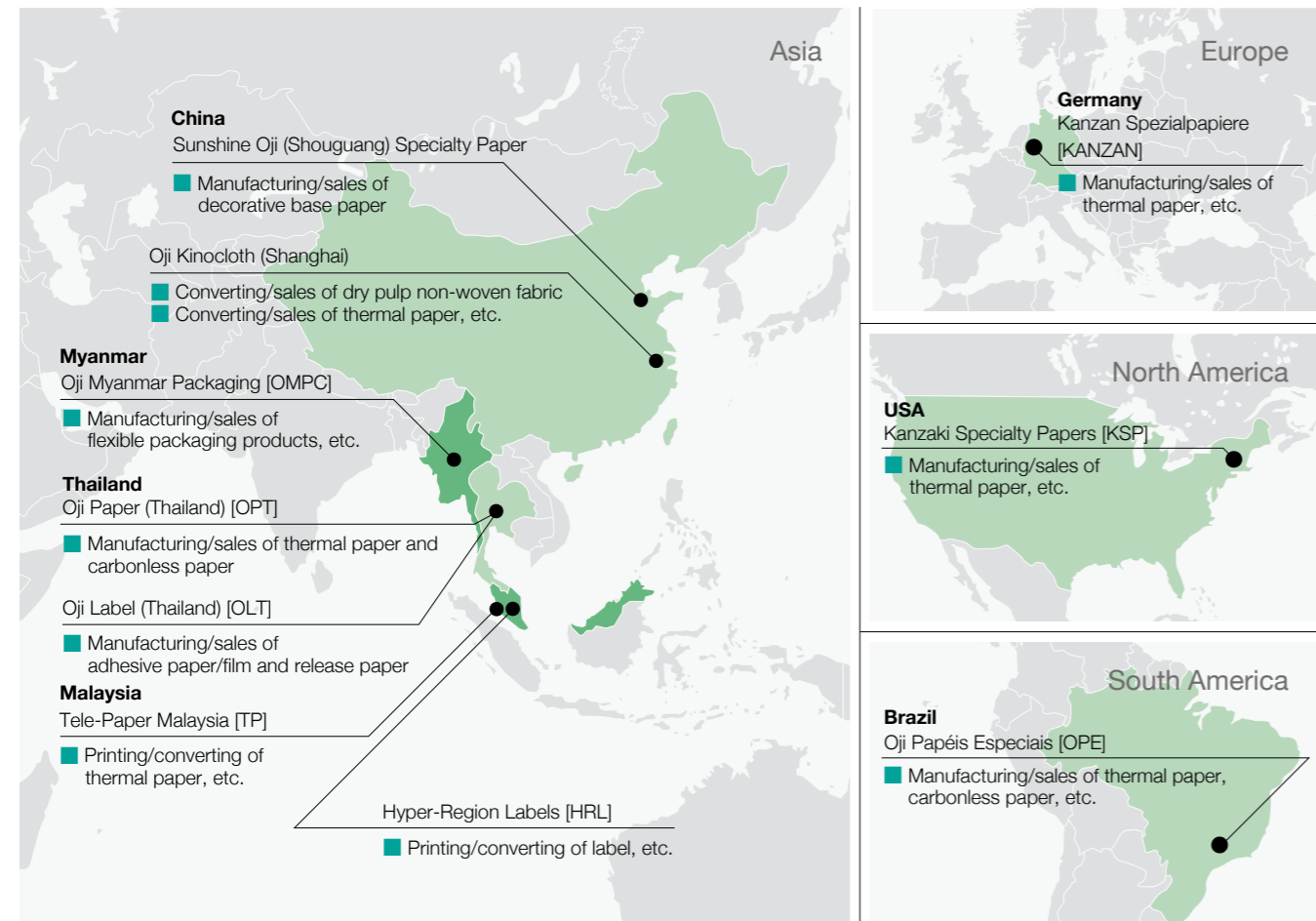


Overall view of the Oji Paper (Thailand) and Oji Label (Thailand) Plant



The PC3 at Oji Papéis Especiais

Main Overseas Sites

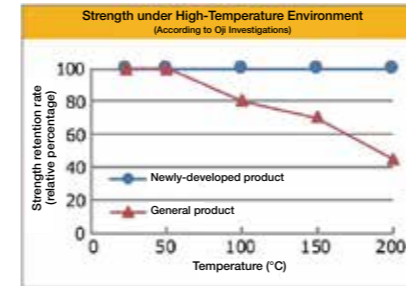


Promotion of Innovation

Oji F-Tex developed heat resistant glass paper by adding heat resistance properties to existing glass paper. Glass paper is made primarily from glass fiber and formed into sheets that maintain excellent properties derived from glass fiber such as electrical insulation, dimensional stability, high elasticity, heat resistance, corrosion resistance, and durability and can be processed in various ways. Glass paper is a product that is expected to have reliable effects and enhance functionality

in various applications. In addition to the characteristics of existing glass paper, the newly developed heat resistant glass paper maintains strength even under high-temperature environments and hardly emits any smoke at all even when near fire. Moreover, individual fireproofing treatment (sintering) of glass paper is not needed.

Adding new functions to glass paper and expanding possible applications is expected to lead to use in new fields.



Smoke test with heating from alcohol lamp

ESG and SDG Topics

Measures to Address the Issue of Plastic in the Ocean

The Issue of Plastic in the Ocean is becoming increasingly serious, leading to movements to eliminate plastics around the world and rising demand for paper products with minimal environmental impact as alternatives to plastic containers and straws. A shift from plastic to paper straws and other such changes can be seen in leading restaurant chains.

Oji F-Tex is leveraging the technologies used to manufacture various types of base paper for food applications to develop straw base paper that has the same water resistance as existing plastic straws and maintains spiral processability. Supply of prototypes has started.

Oji F-Tex is also developing composite materials (resin pellets) that contain biodegradable plastics made from pulp and polylactic acid. In addition to biodegradability, improvements in physical properties such as improved rigidity after molding and heat resistance are expected to expand application to food containers and other products that can replace plastics.



Samples of cup base paper use



Molding examples (spoons and chopsticks)

Forest Resources and Environment Marketing Business

The Forest Resources and Environment Marketing Business supports the Group's business through the stable supply of raw materials and other materials and comprehensively leverages Group assets including renewable resources of the likes of forests and water as well as facilities, real estate, and technologies to reinforce business.



Fumio Shindo

President, Forest Resources and Environment Marketing COMPANY

Business Overview

[Pulp Business]

Market pulp supply capacity is 2.5 million tons per year, and the Forest Resources and Environment Marketing Business has a diverse lineup of pulp grades including hardwood pulp, softwood pulp, and dissolving pulp. The broad product lineup and the Group's sales channels are used to boost sales in Asia and other growth regions. Moving forward, we will continue to carry out strategic financial measures to secure our competitiveness.



Dissolving pulp

[Energy Business]

The electric power generation business has strengthened by expanding and fortifying electricity generation facilities and entering the electricity retailing business. With regard to biomass electric power generation, the Energy Business brought two new boilers online in FY2015 and, in March 2016, established a joint venture biomass power generation company together with Mitsubishi Paper Mills, which started operation in 2019.



Biomass power plant (Oji Green Energy Nichinan/Nichinan City, Miyazaki Prefecture)

As for hydroelectric power plants, the energy business continues to update existing facilities. Additionally, a joint electricity retailing business was launched with ITOCHU ENEX.

[Lumber Processing Business]

In the lumber business, the Forest Resources and Environment Marketing Business stockpiles and sells lumber products and processed lumber products, primarily in Asia and Oceania, and is taking measures to expand production capacity. Efforts to



Pan Pac lumber

expand sales at sales bases established in China and Southeast Asia are ongoing.

[Forest Plantation Business]

The Group has engaged in forest management for many years and has 190,000 hectares forests in Japan and 250,000 hectares of forest plantations overseas. The purposes of forests are, in addition to existing uses for paper manufacturing raw materials, and use for processed products including lumber and plywood as well as diverse resources namely, biomass fuel, to develop a comprehensive forestry industry that generates maximum value from forest resources.

Integrated Report p. 68
 Forest Recycling: Company-Owned Forests in Japan and Overseas Forest Plantations

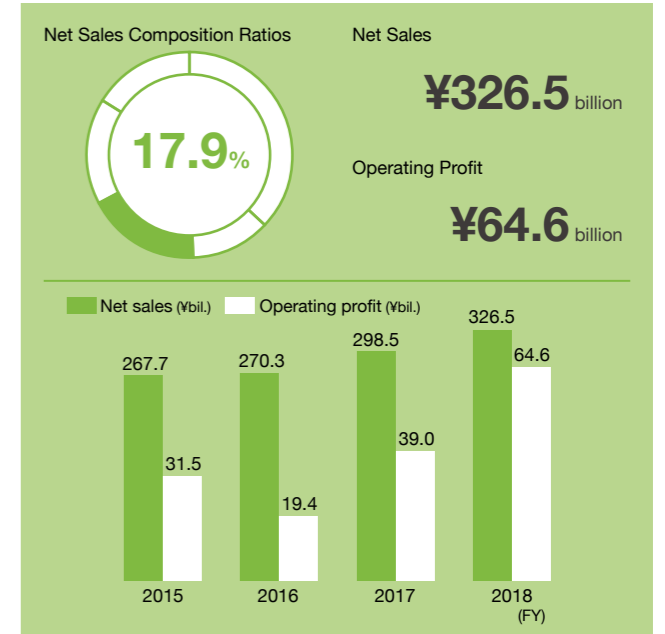
[Raw Materials and Fuels & Materials Procurement Business]

As prices for raw materials, fuels, and materials increase in conjunction with economic development of emerging countries, centralized management procurement and advantageous procurement are conducted for the group as a whole. CSR procurement is conducted while taking into consideration the environment and society in accordance with the Oji Group Partnership Procurement Policy.

Changes in Net Sales and Operating Profit

In FY2018, the Forest Resources and Environment Marketing Business had net sales of 326.5 billion yen (up 28.0 billion yen from FY2017), and operating profit of 64.6 billion yen (up 25.6 billion yen). Thus, both sales and profit increased significantly, due mainly to effects from higher pulp prices.

In the pulp business, sales volumes were solid both in Japan and overseas. In the lumber business too, sales volume was brisk in Japan and overseas, particularly to China, and sales were up from the previous fiscal year. In the energy business, sales were solid with electric power sales remaining at the same level as the previous year.



Business Strategies

Expansion of Overseas Businesses

In the pulp business, the Forest Resources and Environment Marketing Business continues to implement strategic profit measures at key business sites to reinforce business foundations that are resilient to fluctuations in pulp markets.

Oji Group know-how and operational management methods have been introduced and used in New Zealand to stabilize operations and raise efficiency. In Brazil, profit measures are implemented on a continuous basis by updating production facilities and through other means.

In Japan, the Forest Resources and Environment Marketing Business is expanding business and started production of high value added products: medical product materials and filter materials in addition to existing products for rayon applications.

The Forest Resources and Environment Marketing Business conducts forest plantation operations in nine locations in six overseas countries and is working to continuously secure sustainable resources.

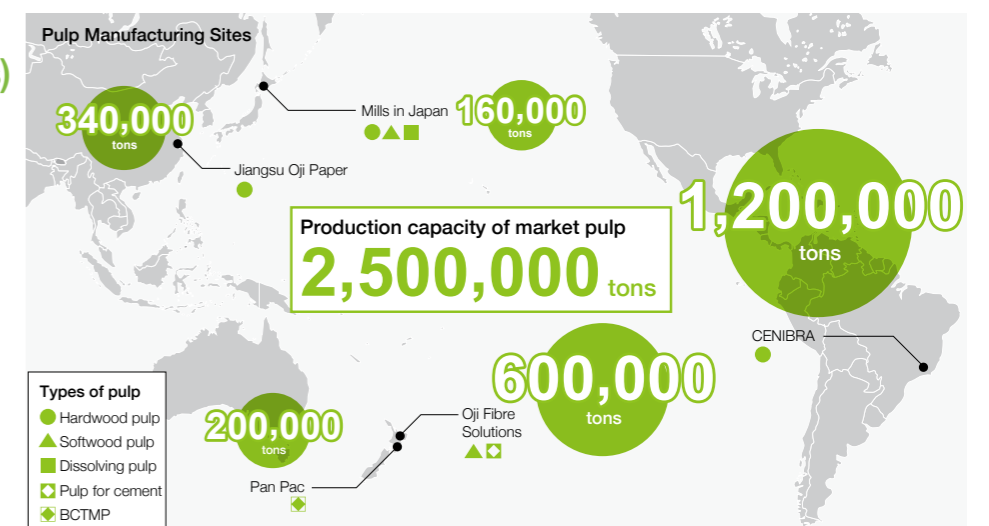


Overall view of the CENIBRA Mill (Belo Oriente, Minas Gerais, Brazil)

Forest plantation at CENIBRA
 Photo by João Rabelo



Main Overseas Sites (Pulp Production Sites)



Profitability Improvement of Domestic Business

Electric Power Generation Business: Expansion of the renewable energy business with a focus on establishing new biomass power plants

The Forest Resources and Environment Marketing Business is pursuing further expansion of the energy business, and a joint venture biomass power generation facility established with Mitsubishi Paper Mills commenced operation in 2019. Additionally, a decision was made to construct a biomass power generation facility in Tokushima Prefecture as a joint venture with ITOCHU ENEX, and preparations are underway for the start of operations in 2022. To reinforce the biomass fuel business in conjunction with expansion of the energy business, a new fuel woodchip production company was established in Hokkaido in November 2018 to expand production of fuel woodchips by making use of unused domestic forest resources. Overseas, efforts to increase procurement of palm kernel shells (PKS) for use as fuel continue in Indonesia and Malaysia.



One of the Group's strengths is its ability to procure PKS through the networks developed for procuring raw materials for paper and through the development of overseas business. PKS is used in the Group's biomass energy business and is sold externally.



MPM Oji Eco-Energy's biomass electric power generation facility

MPM Oji Eco-Energy	Oji Green Energy Tokushima	Other
Operation commenced in 2019 (on the site of Mitsubishi Paper Mills Hachinohe Mill)	Operation to commence in 2022 (On the site of the Oji Paper Tomioka Mill)	Undertakings that seek to contribute to the development of a low-carbon society including the fuel procurement business for biomass power generation, hydroelectric power business, and other businesses
Generating capacity: 75,000 kW	Generating capacity: 75,000 kW	
Joint venture with Mitsubishi Paper Mills	Joint venture with ITOCHU ENEX	

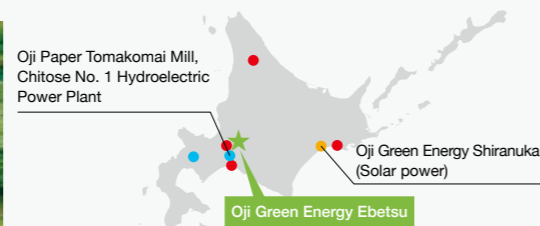
Oji Group's Power Generation Sites



Oji Paper Tomakomai Mill, Chitose No. 1 Hydroelectric Power Plant (Inside)



Oji Paper Tomakomai Mill, Chitose No. 1 Hydroelectric Power Plant



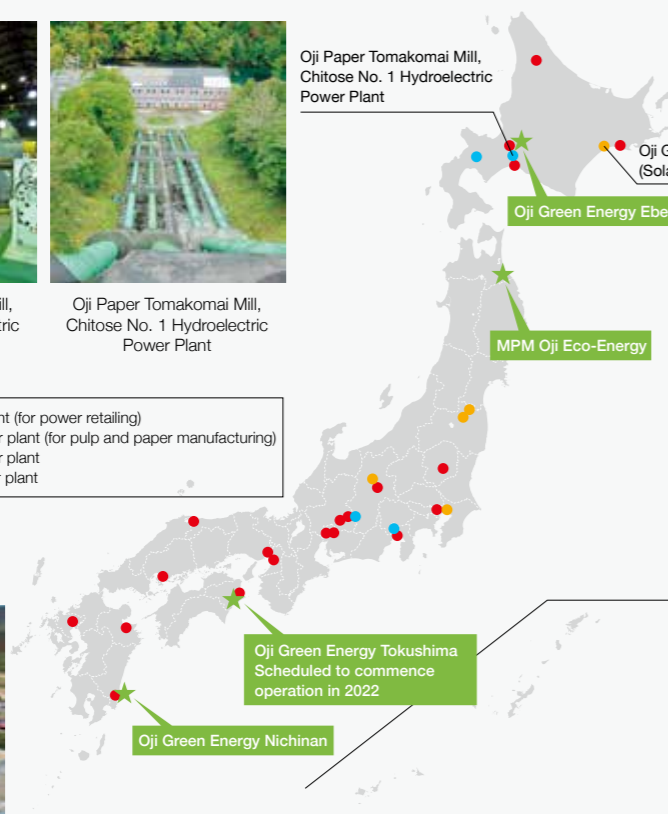
Oji Green Energy Shiranuka (Solar power)



Oji Green Energy Ebetsu



Oji Green Energy Nichinan



- ★ Biomass power plant (for power retailing)
- Thermal-fired power plant (for pulp and paper manufacturing)
- Hydroelectric power plant
- Solar electric power plant

Development of New Business and New Products

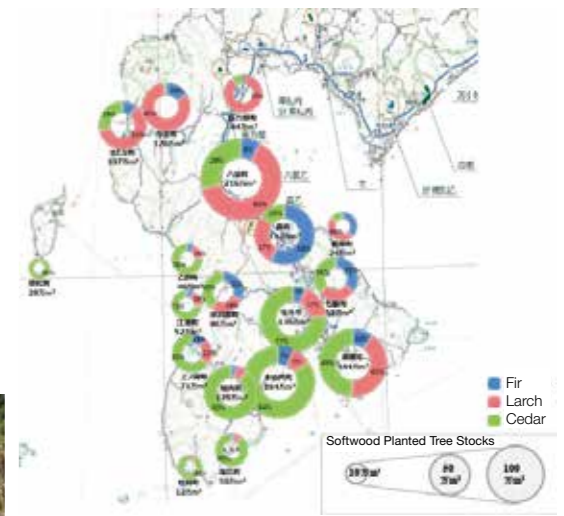
Hakodate-Hokuto Oji Forest & Products was established in Hokuto City in the southern region of Hokkaido in 2018 to produce woodchips for biomass power generation and as a raw material for paper manufacturing. The plant was completed and production commenced in 2019.

Abundant fir, larch, and cedar resources are found in the southern region, but their use has not progressed. To make effective use of these unused forest resources, the new company will use logs harvested from forests in the region to produce woodchips using stationary wood chippers at the mill in Hokuto City. Forest debris including materials remaining after logging (remaining branches, treetops, etc.) will also be used.

Annual production targets are 30,000 GMT of woodchips for biomass fuel use and 6,000 GMT of woodchips for paper manufacturing materials (GMT (green metric ton) is the tonnage with moisture content of approximately 50 percent). The materials will be supplied to the MPM Oji Eco-Energy biomass electric power generation facility (in Hachinohe City, Aomori Prefecture) and the Oji Paper Tomakomai Mill (in Tomakomai City, Hokkaido), respectively.



Cedar trees in a forest owned by Hokkaido Prefecture



Softwood Planted Tree Stocks in Donan

ESG and SDG Topics

Eco-and Society-Friendly CSR Procurement

In order to fulfill its social responsibilities when procuring raw materials, the Oji Group conducts CSR (Corporate Social Responsibility) procurement that takes environmental and social factors into consideration in cooperation with business partners throughout its supply chain. The Oji Group's CSR procurement activities are based on such principles as the United Nations Global Compact, the Oji Group Corporate Code of Conduct, and the Oji Group Environmental Charter. By implementing CSR procurement, we seek to contribute to a truly enriched and sustainable society.

The Oji Group shares the Oji Group Procurement Policy with all its divisions involved in procurement, not only requesting new suppliers for their understanding before starting transactions, but also informing all existing suppliers through the procurement divisions of the revised content at the time of revision. In February 2019, we notified about 1,200 suppliers of wood raw materials, materials, wastepaper, and purchased pulp about the details of the revision, and asked them to comply with CSR procurement again. In addition, our procurement personnel and suppliers promote good communication to expand CSR procurement that takes into consideration the environment and society throughout our supply chain.

The procurement of wood raw materials is covered by the Wood Raw Material Procurement Guidelines, which are subordinate to this procurement policy because more aspects, such as illegal logging and biodiversity, need to be checked than for other procured materials. The Oji Group Partnership Procurement Policy and the Wood Raw Material Procurement Guidelines have been translated into English for suppliers all over the world.



Integrated Report p. 76
Wood Raw Material Procurement Guidelines

Oji Group Partnership Procurement Policy (Overview)

- 1 Ensure stable supply**
 1. Offer competitive prices
 2. Ensure quality and delivery
- 2 Comply with laws and social standards, and engage in fair trade**
 1. Comply with relevant laws and international conventions
 2. Maintain sincere and healthy relations with business partners
- 3 Consider the environment**
 1. Reinforce environment management systems
 2. Reduce waste and effectively use resource
 3. Address climate change (reduce greenhouse gas emissions mainly through energy conservation, and promote carbon dioxide absorption as well as carbon fixation mainly through forest conservation)
 4. Protect biodiversity
 5. Reduce environmental impact
 6. Manage chemical substances
 7. Manage water resources
- 4 Demonstrate social concern**
 1. Protect human rights (prohibit child labor, forced labor, discrimination, and harassment)
 2. Protect labor rights (maintain good labor relations, avoid long working hours, ensure payment of above-minimum wage, and respect freedom of association as well as right to collective bargaining)
 3. Ensure worksite safety and health
 4. Contribute to society and the local community
- 5 Communicate with society**
 1. Build relations of trust with stakeholders through communication
 2. Respect the culture and customs of other countries
 3. Appropriately disclose and protect information

Revised: December, 2018

Printing and Communications Media Business

The Printing and Communications Media Business will build optimal production structures to reinforce domestic business foundations while providing globally-competitive products to raise earnings capacity even further.



Ryuichi Kisaka

President, Printing and Communications Media COMPANY

Business Overview

[Newsprint Business]

Newsprint must have the strength to withstand high-speed rotary press printing and printability for a beautiful finish in color printing. The Oji Group holds approximately 30% share of the Japanese market for newsprint and makes ongoing efforts to enhance quality in response to the needs of newspaper companies throughout the country.



[Printing and Publication Paper Business]

Publication paper used in books and magazines and printing paper used in catalogs and leaflets requires varied levels of quality according to the planning and particulars of the final product and the characteristics of the printing equipment.



We continuously develop products to meet the needs of the times and supply the high-quality products demanded by customers.

[Communications Paper Business]

In addition to conventional forms and Copier paper (PPC), we are developing various new products such as highly functional printing paper for print on-demand (POD) printing. These products are used for diverse tasks in a wide range of industries as information processing system input media.



Business Strategies (1)

Profitability Improvement of Domestic Business

We are taking various measures including concentration of production facilities through shutdown and transfer of operations in order to improve profitability in domestic business and increase international competitiveness, thereby eliminating urgent issues.



The #N-5 machine at the Oji Paper Tomakomai Mill

<Overview of Equipment Shutdown and Retrofitting>

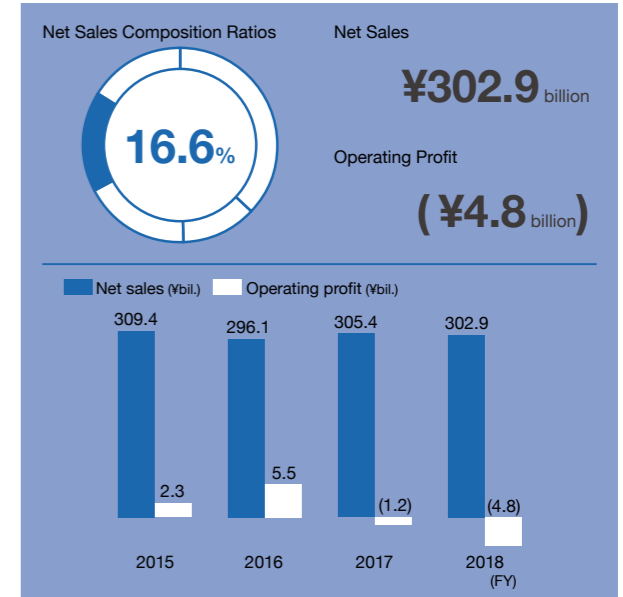
- Retrofitting of the #N-5 machine at the Tomakomai Mill (FY2021)
Modification from newsprint manufacturing equipment to containerboard and kraft paper manufacturing equipment
- Shutdown of the Tomioka Mill #9 machine and #9 coater (end of FY2019)

<Closer Business Partnership with Mitsubishi Paper Mills>

- Cost cutting by eliminating mixed transportation
- Sharing operating technologies
- Integration of brands through complementation of products

Changes in Net Sales and Operating Profit

In FY2018, the Printing and Communications Media Business reported net sales of 302.9 billion yen (down 2.5 billion yen from FY2017) and an operating loss of 4.8 billion yen (down 3.6 billion yen from FY2017). Net sales decreased owing to a slight decline in demand and a slump in both newsprint and printing/communication paper markets. Operating losses had increased despite progress made in cost cutting and price correction because of the effects of higher prices for raw materials and fuel.



Business Strategies (2)

Expansion of Overseas Business

As a result of strong market conditions for both paper and pulp, Jiangsu Oji Paper Co., Ltd. achieved substantially higher sales and profit in 2018. The company will continue to make efforts to strengthen sales capabilities and reduce costs, but due to the effects of advances in information and communications technologies, the business environment is not grounds for optimism in the future. Accordingly, the company has decided to invest in household paper base paper production facilities as a growth field in order to secure new sources of profit.



Diagram of the completed household paper base paper machine

Promotion of Innovation

In the Japanese markets for newsprint and printing paper, a shift has been made over the past several years from gravure printing suitable for large-lot printing to general offset printing in conjunction with declines in the numbers of copies of newspapers, books, and magazines issued, and it is expected that the introduction of inkjet printing suitable for extremely small lots will also be explored. To flexibly respond to these emerging needs. We are developing papers with unique characteristics such as offset printing paper that has strong gloss approaching that of gravure printing and paper suitable for inkjet printing.

ESG and SDG Topics

Oji Charitable Education Fund

Jiangsu Oji Paper Co., Ltd., (Nantong City, China) engages in manufacturing and sales of pulp, printing paper, publication paper, and other products. Oji Holdings has established the Oji Charitable Education Fund jointly with the Nantongshi Charity Federation and Nantongshi Development Zone Charity Federation to help improve the local educational environment.



Annual scholarship granting ceremony

Hydroelectric Power Business

The Hokkaido Eastern Iburi Earthquake that occurred in September 2018 caused an approximately 11-hour blackout throughout Hokkaido, but power to the Shikotsuko hot spring resort Onsen area was restored after only one and a half hours.

Hydroelectric power is supplied to Shikotsuko hot spring resort (Onsen) from the Chitose No. 1 and No. 4



Hydroelectric Power Plants, which are owned and managed by the Tomakomai Mill. From this earthquake, hydroelectric power is being re-examined.

Main Businesses of Corporate Management Group and Shared Service Companies

Kyokuyo and Ginpo Pack

Kyokuyo Co., Ltd. is a specialized trading company that performs business functions for the Oji Group, buying and selling products of Oji Group and other companies. These products include pulp and paper, synthetic resin materials and products, packaging materials, chemicals, and machinery. With the change of its name in January 2018, Kyokuyo has been expanding its business activities to a more diverse range of fields to respond to customer needs in the most suitable and optimal ways.

Ginpo Pack Co., Ltd, a subsidiary of Kyokuyo that conducts planning, manufacture, and sales of plastic containers for food packing with focus on "Pulfine," heat-resistant polypropylene foam containers.



Plastic cups made from used PET bottles (CO₂ reduction)



Pulfine, highly-expanded polypropylene containers feature excellent heat resistance and heat retention properties

ESG and SDG Topics

Eco-friendly Products (Kyokuyo)

This new type of foldable plastic tray is made from eco-mark certified recycled materials. It reduces waste in response to calls from consumers for trays that are not cumbersome and have easily-discardable shapes. The trays have uneven grooves and can be folded along the grooves into a compact form. They are used for food delivery, but are suitable not only for food but can also be used to transport miscellaneous items, stationery goods, cosmetics, and so on.



A foldable tray made from eco-mark certified recycled materials (waste reduction)

Oji Engineering

Oji Engineering, a company that supports Oji Group's technology, leverages its technologies accumulated through paper manufacturing to offer one-stop engineering services ranging from facility design to operations. The company actively spearheads entries into greenfields, such as proposals for practical water treatment and other systems in its water environment business and fuel handling facilities in its biomass power generation business.



Waste water treatment system

Oji Real Estate

Oji Real Estate Co., Ltd. is as a general developer active nationwide in the development and sale of condominiums and single-family homes, lease and management of office buildings, condominiums, and commercial facilities, and the renovation business. It is a comprehensive real estate firm with a construction division that conducts design, supervision, and consultation in a wide range of areas including factories and plants as well as public and private facilities.



Oji Homes Aoyama (located in Minamiaoyama, Minato-ku, Tokyo) is a vintage condominium that provides support for fulfilling lifestyles through a highly-detailed concierge service



Hotel New Oji

Hotel New Oji, engages in the hotel and flight catering businesses. In addition to the Grand Hotel New Oji, which marked 20 years of business in May 2019, a 16-story city hotel located in Tomakomai City, Hokkaido, the company prepares inflight meals for domestic and overseas flights in the catering building at the New Chitose Airport and loads the meals onto aircraft using large, specialized vehicles.



Rooftop crown lighting was used to mark 20 years of business by the Grand Hotel New Oji



A food loader supplies meals to an aircraft

Oji Logistics

Oji Logistics offers a variety of services, mainly to Oji Group companies to transport paper products to be shipped out of mills and consumption area warehouses. These services include warehousing, land transportation, marine transportation, port logistics, international logistics, etc. It offers total logistics service solutions, along with incorporating eco-friendliness into its operations such as implementing a modal shift toward railroads and ships rather than trucks.



A roll-on roll-off (RORO) ship that can transport vehicles carrying goods (placed in service in June 2019)