

Cement Business (Japan) GRI102-6, 15

Our cement business engages in the manufacture and sales of cement and ready-mixed concrete. Both are essential construction materials for infrastructure development such as high-rise buildings, housing, roads, airports and ports. We also manufacture and sell special cements, blended cements and soil stabilizers for a diverse range of applications.



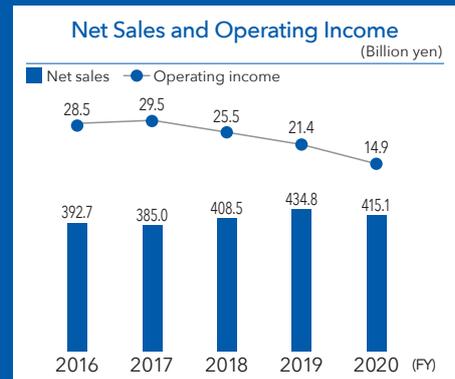
Yukimasa Nakano
Managing Executive Officer &
Senior General Manager of
Cement Business Division

Net sales
415.1 billion yen

down 19.7 billion yen from the previous year

Operating income
14.9 billion yen

down 6.4 billion yen from the previous year



Achieving Sustainable Growth with Our Solid Supply Infrastructure and Improved Customer Satisfaction

In our cement business in Japan we stably supply our products to users through our solid foundation in manufacturing, transportation and supply chains, which includes 9 cement plants, 106 service stations and 36 cement tankers. In the future, as measures for national resilience are implemented, a larger number of projects will adopt diversified construction methods and call for soil stabilizers and specialty cement such as medium-heat cement. We will therefore further enhance our logistics network to meet these demands.

To support our customers we organize our user societies by business sector such as ready-mixed and concrete product manufacturers. We provide them with technical services based on knowledge acquired by the group's technical and R&D divisions. Along with our stable supply and high product quality we believe our enhanced technical services are one of the main reason for users to select our products. Thus, we will strengthen initiatives such as the activities of user societies to improve customer satisfaction.

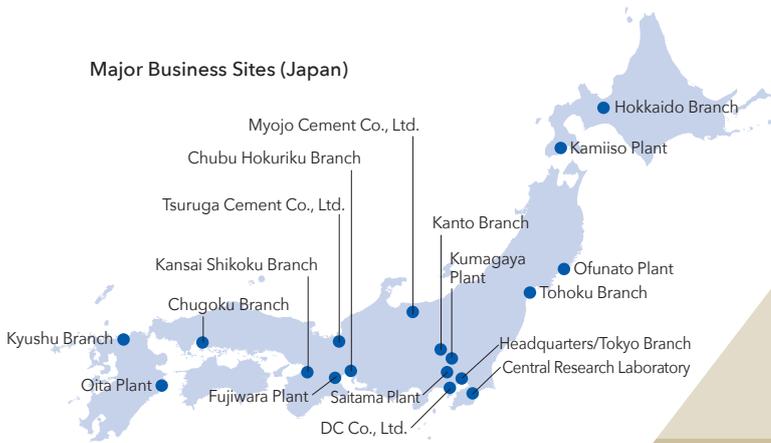


Results of Operations and Principal Initiatives for FY2020

Both public and private sector demand for cement in Japan declined in FY2020 following the completion of preparations for the Tokyo Olympics and Paralympics, and also the reconstruction projects in the areas affected by the Great East Japan Earthquake. Furthermore, extended construction periods due to labor shortages at construction sites across Japan has had an impact. As a result, the group's domestic cement sales by volume, including sales in conjunction with toll-manufacturing agreements, fell by 5% to 14.47 million tonnes year-on-year. As a result, net sales for FY2020 declined by 19.7 billion yen to 415.1 billion yen year-on-year. Operating income for FY2020 dropped by 6.4 billion yen to 14.9 billion yen year-on-year due to the decrease in sales volume and an increase in fixed expense such as repair expense.

Under such a business environment, we were able to reach agreements to revise prices with around 80% of our customers. We started supplying cement to Hitachi Cement Co., Ltd. based on a toll-manufacturing agreement with the company in April 2019. In addition, we duly responded to regulations on sulfur oxide (SOx) contained in fuel for cement tankers, which were enforced in January 2020. With regard to major capital investments for plants, we installed a bag filter system and a high-efficiency cooler to No.5 kiln at Oita Plant. We also expanded the chloride bypassing capacity for the No. 6 kiln and installed a facility to accept biomass ash at the Kamiiso plant.

Major Business Sites (Japan)



Efforts to Address Social Issues

- ▶ Stable provision of cement products
- ▶ Efforts to mitigate and adapt to climate change
- ▶ Further contribution to recycling-oriented society
- ▶ Technological development to reduce environmental impacts
- ▶ Addressing the reinforcement of environmental regulations

Closely Related SDGs



Risks and Opportunities in Our Business Environment

Risks	Decline in domestic demand due to declining birth rates and an aging population
Opportunities	New demand created by a commitment to national resilience and development of advanced infrastructure
Risks	Reinforcement of regulations on GHG emissions
Opportunities	Development of innovative technology for utilizing CO ₂

Business Strategies for the Cement Business (Japan) Based on the 20 Medium-Term Management Plan

- Strengthen profitability by quickly realizing fair prices and thoroughly cutting costs
- Contribute to national and other projects by strengthening and expanding our capacity for reliably supplying products
- Actively pursue measures toward mitigating climate change

Outlook for FY2021

Following the state of emergency declared by the government to prevent the spread of COVID-19, many ministry-controlled infrastructure construction projects under the Ministry of Land, Infrastructure, Transport and Tourism, and private investment projects by major contractors and others, have been suspended or delayed. Under such difficult circumstances we will strive to maximize profits while reducing costs by implementing the key strategies shown on the right. We plan to achieve net sales of 397.0 billion yen (down 18.1 billion yen year-on-year) and operating income of 13.0 billion yen (down 1.9 billion yen year-on-year).

Key Strategies for FY2021

- 1. Sales**
 - Continue price negotiations; respond to increasing costs
 - Maintain a stable supply of special cement (low-heat, moderate-heat and blended cement)
- 2. Ready-mixed concrete**
 - Establish a production system best suited for regional cement demand
 - Improve recognition of high-strength concrete and concrete pavements to encourage wider use
- 3. Concrete products**
 - Support an improvement in the workability of precast products in enhanced collaboration with our construction materials business and R&D divisions
- 4. Acquire more large-project orders**
 - Provide total solutions that integrate other businesses and the products of other group companies
- 5. Develop the soil stabilizers business**
 - Improve the supply system; reinforce the transport system

MESSAGE



Making Every Effort to Reduce CO₂ Emissions and Achieve Eradication of Occupational Accidents

Yoshiyuki Uenoyama
Managing Executive Officer, Overseeing Production Department and Maintenance & Engineering Department

We are actively addressing the key challenges of reducing CO₂ emissions and achieving zero work-related accidents in cement manufacturing.

To reduce CO₂ emissions, we will work on using less fossil energy by doubling the annual amount of waste plastic used from 200,000 tonnes by the middle of the 2020s, based on the CSR Objectives for 2025 that the group formulated in 2015. We will both maintain the stable operation of kilns and save energy by fully operating an AI-enabled operating support system by FY2021. Moreover, we decided to install a WHR power

generation system at the Saitama plant, the only one of our six directly managed plants not equipped with the system. Installation work is scheduled for completion in 2022.

Every employee must fully comply with safety rules to eradicate occupational accidents. The group achieved zero fatalities over two consecutive years, FY2019 and 2020, although we still had a number of occupational accidents with no leave of absence. We will strengthen measures to improve the situation. To create a safe workplace for our employees we will also take action to prevent heatstroke and COVID-19 infection.

Cement Business (Overseas)

GRI102-6, 15

Overseas, we manufacture and sell cement products from nine plants in the Pacific Rim: three in the U.S. West Coast, three in China (including Qinhuangdao Asano Cement Co., Ltd., which was excluded from the consolidation after the Group had transferred all equity interests of the company in September 2020), and one each in Vietnam, the Philippines and Papua New Guinea. In addition to exporting product from Japan we also conduct a variety of trading activities, including trilateral trade.

Main Business Sites (Overseas)



Yoshifumi Taura
Managing Executive Officer
Senior General Manager of
International Business
Division

Net sales

21.3 billion yen

up 1.6 billion yen year-on-year

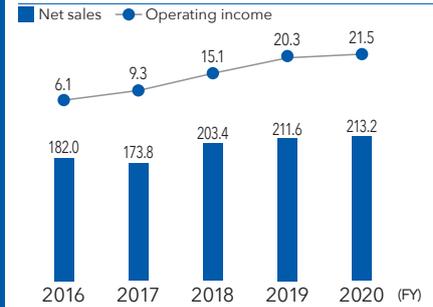
Operating income

21.5 billion yen

up 1.2 billion yen year-on-year

Net Sales and Operating Income

(Billion yen)



Providing Environmental Solutions as Our Added Value

Ensuring the stable supply of products and meeting quality requirements unique to the region are prerequisites for providing customers with solutions as a cement company.

We will focus on providing environmental solutions as our added value. Various initiatives for reducing CO₂ emissions are being implemented in California in the U.S. We have promoted the use of natural gas as a fuel for concrete mixer trucks while increasing the use of natural gas as kiln fuel, enabling us to reduce environmental impact at a minimum cost. In Dalian, our contribution to the community through the efficient treatment of sewage sludge was recognized by the government, thereby allowing us to continue operations.

We will also provide environmental solutions for municipal waste and sewage sludge to countries in Southeast Asia and other regions by properly combining existing and new technologies. We believe this is a time when our continued contributions to solving environmental issues are highly valued, even if each alone is relatively small in countries that face the challenge of improving their environments.

Results of Operations and Principal Initiatives for FY2020

In the U.S., prices increased despite minimal growth in shipment volume for both cement and ready-mixed concrete, which was partly due to bad weather on the West Coast. In China the market held solid due to improved supply and demand conditions as a result of the government's policy to curb cement production nationwide. In Vietnam our business was affected by the entry of a new manufacturer. In the Philippines the level of demand and market conditions stayed the same as in the previous year mainly due to the temporary suspension of and delays to public investments during the campaigning for the unified regional and national elections. As a result, net sales for FY2020 were 213.2 billion yen (up 1.6 billion yen year-on-year) and operating income for the year was 21.5 billion yen (up 1.2 billion yen year-on-year).

Given this business environment, in the U.S. we completed the construction of a finish mill at the Oro Grande plant. In the Philippines we are constructing a belt conveyor system that links the port and the plant, and in Vietnam we established a local subsidiary to handle products related to resources and the environment.

Outlook for FY2021

The spread of COVID-19 has affected our business in the U.S., China, Vietnam and the Philippines to varying extents by region. Under these circumstances we will strive to



Efforts to Address Social Issues

- ▶ Contribution to infrastructure improvement
- ▶ Efforts to mitigate and adapt to climate change
- ▶ Contribution to creating recycling-oriented society
- ▶ Addressing the reinforcement of environmental regulations

Closely Related SDGs



Risks and Opportunities in Our Business Environment

Risks	Reinforcement of environmental regulations in the countries where we operate
Opportunities	Contributing to the creation of a recycling-oriented society in the countries where we operate
Risks	Climate change in the countries where we operate
Opportunities	Providing innovative technologies for utilizing CO ₂

Business Strategies for the Cement Business (Overseas) Based on the 20 Medium-Term Management Plan

- Expand our strategic business domain in the Pacific Rim regions
- Establish a brand image that expresses our quality, technology and environment-oriented values, thereby further reinforcing our regional presence

earn profits based on key strategies, shown on the right, while reducing costs and properly responding to the environmental regulations in each region.

We plan to achieve net sales of 213.0 billion yen for FY2021 (down 0.2 billion yen year-on-year) and operating income of 20 billion yen for the year (down 1.5 billion yen year-on-year). In April 2020 we concluded a basic agreement on a capital and business alliance with an Indonesian company, PT Semen Indonesia, that will allow us to expand our business area. We will explore the possibility of collaborating with the company in areas such as cement exports as well as the resources, environmental and construction materials businesses. Our representative office was set up in Jakarta, the capital of Indonesia, to collect information and support our business.

Key Strategies for FY2021

- 1. Boost earnings capacity of businesses**
 - (1) **U.S.** • Promote investments to increase production capacity and maximize the production volume of clinker and cement
 - Improve the operating rate of cement plants through an effective equipment maintenance system
 - (2) **China** • Improve the utilization rate by properly responding to environmental regulations
 - Promote the environmental business
 - (3) **Vietnam** • Enhance logistics sites to address a shift toward high-end markets
 - Improve profit margins by offering a broader selection of products
 - (4) **The Philippines** • Boost supply capacity
 - Accelerate efforts to stabilize production process and reduce costs
- 2. Expand and increase the sophistication of the trading business**
 - Develop markets for our high value-added products; enhance shipping bases
 - Strengthen trading of cementitious materials
- 3. Expand the regions where we operate**
 - Expand business in Indonesia

MESSAGE



Making Full Use of Our Global Network of Plants by Mutually Introducing Domestic Environmental Technologies and New Technologies Overseas

Overseas operations represent a group strength that we must fully capitalize on in applying environmental technologies developed in our cement plants.

We are providing environmental technologies that we have developed in Japan to our overseas plants. On the same token, some of our overseas plants have taken the lead in introducing advanced technologies to satisfy stricter environmental regulations. We will introduce those technologies into our domestic plants as appropriate. For instance, our domestic plants are introducing a NOx

reduction technology used in China and another for preventing the discharge of mercury used in the U.S. Other innovative environmental technologies will be introduced into our plants in Japan as soon as they are applicable.

In our plants in Japan we are accelerating the use of alternative raw materials and thermal energy by applying a technology for recycling waste containing high-concentration chlorine. We will also see a shift toward a recycling-oriented society in emerging markets, for which group technologies will be significantly beneficial to users, and we will continue to expand them into our global operations.

Yoshiyuki Uenoyama
Managing Executive Officer, Overseeing
Production Department and Maintenance &
Engineering Department

Mineral Resources Business GR102-6, 15

We own quarries across Japan and supply abundant, high-quality limestone as a raw material for cement. We also sell them for a variety of industries such as construction, civil engineering, steelmaking and chemicals. In addition, we also sell high value-added products made from inorganic minerals and operate a business for the treatment of contaminated soil.



Kunihiro Ando
 Director & Senior Managing
 Executive Officer
 Mineral Resources Business
 Department

Net sales

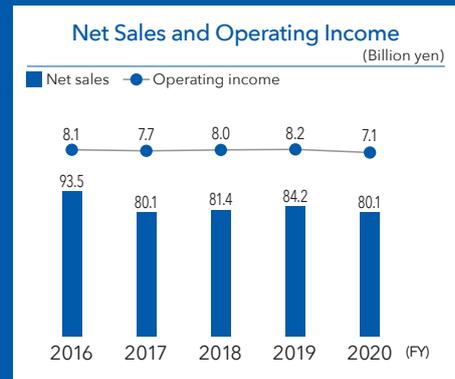
80.1 billion yen

down 4.1 billion yen year-on-year

Operating income

7.1 billion yen

down 1.0 billion yen year-on-year



Achieving Sustainable Growth through the Full Use and Appropriate Development of Group Mineral Resources

Limestone is one of the few mineral resources in which Japan is self-sufficient; however, ongoing quarry development is becoming increasingly difficult. The aggregates and mineral products businesses, our division's core businesses, largely rely on the mineral resources that the group owns so we are therefore developing quarries with a long-term perspective.

The characteristics and quality of every mineral varies by quarry so we need to establish an optimum supply system for the most effective use of resources. To ensure stable supply, we are strategically implementing capital investments to establish a smarter and more flexible logistics system.

The geo-solutions business significantly contributes to society through the sales of the heavy metal immobilizer focusing on large infrastructure projects and the treatment of construction soil and surplus soil. In view of this we will strive to ensure the stable operations of this business.

Our growth strategy will remain centered on expanding the overseas mineral resources business and achieving the early commercialization of the functional materials business. We will also continue to maximize earnings and achieve sustainable growth through business operations in collaboration with the production and sales divisions in cooperation with group companies.

Results of Operations and Principal Initiatives for FY2020

The sales of limestone aggregates for ready-mixed concrete declined in FY2020 due to the end in demand related to preparations for the Tokyo Olympics and Paralympics and restoration projects in the areas affected by the Great East Japan Earthquake. Limestone sales for the domestic steel industry were also sluggish, due to a reduction in the domestic production volume of steel. Our geo-solutions business steadily achieved the target sales of the heavy metal immobilizer for highway construction projects in the Greater Tokyo Area. As a result, net sales for the business in FY2020 were 80.1 billion yen (down 4.1 billion year-on-year) and operating income was 7.1 billion yen (down 1.0 billion yen year-on-year).

Under such a business environment we are expanding production equipment for crushed limestone sand at the Shin-Tsukumi Quarry of Tsukumi City in Oita Prefecture. Additionally, we are conducting environmental assessments for the development quarry site for cement raw materials at the Yato area of Shin-Tsukumi Quarry. In the field of functional hollow particles, we began a trial mass production of Cellspheres, which are expected to increasingly be used for paints and electronic devices. This was conducted in the demonstration plant we had installed at the group company Chichibu Taiheiyo Cement Corporation. In overseas operations, we established a subsidiary in Vietnam and started to handle mineral resource products.

Efforts to Address Social Issues

- ▶ Stable provision of mineral products
- ▶ Further contributions to a recycling-oriented society
- ▶ Provision of environmentally friendly products

Closely Related SDGs



Risks and Opportunities in Our Business Environment

Risks	Quarries subject to large-scale natural disasters associated with climate change
Opportunities	Reinforcing our supply chain, leveraging our abundant mineral resources from quarries
Risks	Triggering the deterioration of concrete by alkali-aggregate reaction
Opportunities	Developing more sophisticated mining technology

Business Strategies for the Mineral Resources Business based on the 20 Medium-Term Management Plan

- Establish a robust system for ensuring the stable supply of resources
- Take full advantage of the group's abundant resources to boost the profitability of our businesses
- Focus on developing future-oriented businesses as well as creating an overseas resource business

Outlook for FY2021

We expect ongoing projects at construction sites across Japan to be temporarily suspended in response to the spread of COVID-19. Due partly to this, the sales volume of our limestone aggregates for ready-mixed concrete will decline in FY2021. In the mineral products business, we expect a decline in sales volume given the projected reduction in the production volume of crude steel. Despite this severe environment, we will strive to maximize earnings based on the following key strategies while strengthening collaboration with group companies and driving cost reductions. We plan to achieve net sales of 78.0 billion yen for FY2021 (down 2.1 billion yen year-on-year) and operating income of 6.0 billion yen for the year (down 1.1 billion yen year-on-year).

Key Strategies for FY2021

1. Maximize profits from core businesses

- Aggregates business**
 - Reinforce the supply and sales system for limestone aggregates in the Greater Tokyo Area
 - Establish the Taiheiyō-Brand Sand business in the Tokyo Bay area
- Mineral products business**
 - Establish the optimal limestone supply system for steelmaking
 - Improve the profitability of the crystalline limestone business and strategically expand sales, including exploring the possibility of quarrying crystalline limestone at the Horoshi area of the Ofunato Quarry
- Geo-solutions business**
 - Further develop the heavy metal immobilizer and construction soil business by promoting their specification and utilization in large scale construction project

2. Formulate and implement a growth strategy

- To secure stable income sources for the limestone business in Vietnam, we will formulate and implement growth investments in Southeast Asia
- Early commercialization of ultra high-purity silicon carbide and functional hollow particles, including the establishment of low-cost, mass production technology; development of new customers



Development of a Next-generation Quarry Site at the Ofunato Quarry

The Ofunato Quarry is providing limestone to the Ofunato plant and is developing the Horoshi area for its next-generation operations toward the start of quarrying in 2021. Its limestone deposits amount to around 250 million tonnes, equivalent to more than 100 years of limestone consumption as a raw material for cement in Ofunato. The new site also includes a deposit of crystalline limestone, used in paper manufacturing, and is expected to become a new shipment base for the product.



Aggregates Yard for the Greater Tokyo Area

Concrete made with limestone aggregates is less susceptible to alkali-aggregate reaction and exhibits low drying and self shrinkage, thereby helping to prevent cracks. Demand is therefore rising for limestone aggregates, particularly in the Greater Tokyo Area where there are many high-rise buildings. We operate an aggregates yard with a storage capacity of 230,000 tonnes, the largest in the Greater Tokyo Area in Sodegaura City, Chiba Prefecture to ensure the stable supply of aggregates.

Environmental Business GRI102-6, 15

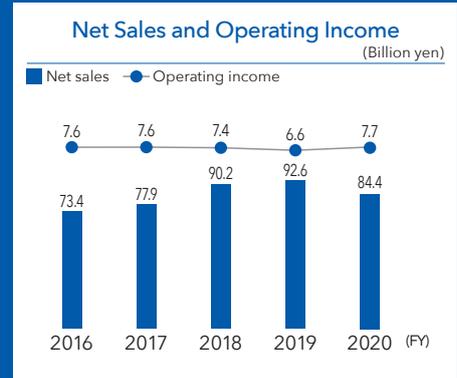
In the Environmental Business we are contributing to the realization of a recycling-oriented society by recycling waste and by-products generated at thermal power stations, steelmakers and chemicals manufacturers, as well as municipal waste incineration ash and sewage sludge at the request of municipalities, capitalizing on the diverse environmental technologies we have cultivated in cement production. We also engage in the aquatics business by supplying water purification materials.



Kunihiro Ando
 Director & Senior Managing
 Executive Officer
 Environmental Business
 Development Department

Net sales
84.4 billion yen
 down 8.2 billion yen year-on-year

Operating income
7.7 billion yen
 up 1.0 billion yen year-on-year



Aiming to Achieve Sustainable Growth and Contribute to Society by Maximizing the Earnings Capacity of Our Businesses and Commercializing New Technologies

We have established and operate our recycled-waste-to-cement system to treat a large volume of industrial waste and by-products as well as municipal waste, and reusing the recycled waste for cement production. We have striven to create and expand a recycling-oriented society through this system. Efforts to reduce greenhouse gas emissions have recently been accelerating across the world. Taking action to address this is becoming vital for every industry.

The Taiheiyo Cement Group formulated its long-term vision for reducing greenhouse gas emissions by 80% by 2050. Our efforts in the Environmental Business include increasing the use of alternative fuels. We are also focusing on establishing technologies to recycle discarded lithium-ion batteries and for the recycling and recovery of materials using low-temperature embrittlement technology, as well as conducting R&D for the recovery of precious metals and phosphorus from municipal waste incineration ash.

We plan to continue developing the environmental business by making progress in these new fields and building up the new businesses to the same level as our current e-materials and recycling businesses.



Results of Operations and Principal Initiatives for FY2020

The volume of waste plastic treated increased following stricter restrictions by China and Southeast Asia on the import of waste plastic. In addition, more disaster waste was treated such as straw mats and rice straw generated by tropical cyclones such as Typhoon No.19. Sales of biomass fuel also rose as the Ofunato Biomass Power Station started operation. The operation of coal-fired power stations in Japan has declined due to a global shift toward a low-carbon society, resulting in a drop in the availability of coal ash, the mainstay of our environmental business. Sales of calcium carbonate for scrubbing systems at power stations declined proportionally, as did the trade in by-product gypsum. As a result, net sales for the business in FY2020 was 84.4 billion yen (down 8.2 billion yen year-on-year), although operating income was 7.7 billion yen (up 1.0 billion yen year-on-year).

Given this business environment, we introduced an ash washing system for cleaning municipal waste incineration bottom ash to allow its use in cement production at the Kumagaya plant. We also launched our container liner service (Tokyo-Hakodate) to transport waste plastic to the Kamiiso plant.

In addition, we concluded a comprehensive partnership agreement with the Miyagi prefectural government and launched the regional treatment of disaster waste such as waste rice straw generated by Typhoon No. 19 and other disasters.

Efforts to Address Social Issues

- ▶ Further contributions to a recycling-oriented society
- ▶ Establish a new model for recycling resources
- ▶ Provision of environmentally friendly products and solutions

Closely Related SDGs



Risks and Opportunities in Our Business Environment

Risks	Changes in environmental regulations in countries to which we export waste
Opportunities	Growing use of blended cement in Southeast Asia and other regions
Risks	Decline in the volume of coal ash generated due to fewer coal-fired power stations in operation
Opportunities	Development and deployment of technologies to use alternative by-products

Business Strategies for the Environmental Business based on the 20 Medium-Term Management Plan

- Maximize the earnings capacity of our businesses while constructing a new business model by developing advanced technology
- Contribute to creating a new recycling system for unutilized resources

Outlook for FY2021

We expect demand for waste plastic treatment in Japan will remain high. The treatment of disaster waste generated by the typhoons in 2019 will also accelerate. Given formal enforcement of the Paris Agreement this year the volume of our business related to coal-fired power stations, such as the treatment of coal ash, our core business, will continue to decline in FY2021. Moreover, steelmakers are being forced to reduce production volume due to the spread of COVID-19. Thus, the volume of our business with steelmakers, such as the acceptance of blast furnace slag, is also likely to drop. Despite this difficult business environment we hope to maximize earnings based on the following key strategies while reducing costs. We plan for 85.0 billion yen in net sales for FY2021 (up 0.6 billion yen year-on-year) and operating income of 6.0 billion yen for the year (down 1.7 billion yen year-on-year).

Key Strategies for FY2021

- 1. Accept a larger volume of waste plastic**
 - Reinforce capital investments and transport routes to ensure the acceptance of a larger volume of waste plastic at our major plants
- 2. Appropriate treatment of disaster waste**
- 3. Establish a new model for recycling resources through a resource complex initiative in which the cement industry plays a central role**
- 4. Establish a new business model through the development of advanced technologies such as low-temperature embrittlement**



A resource complex initiative

All of the waste and by-products treated at our cement plants is recycled to manufacture cement. We proposed the Materials Recovery Complex initiative, under which each of the various industries such as non-ferrous metal, scrap smelting, chemicals and recycling sells to others the waste materials that it does not reuse and purchases waste materials from other industries that it can recycle. We are now working with the government and academia to establish a working complex model.



Lithium-ion Battery Recycling

As large lithium-ion batteries become more widely used for electric vehicles and other purposes, we will soon face the challenge of treating a large quantity of end-of-life lithium-ion batteries. We jointly established a technology to recycle large-sized lithium-ion batteries with Matsuda Sangyo Co., Ltd., leveraging the cement production process, and launched the lithium-ion batteries recycling business in April 2020.

Construction Materials Business GR1102-6, 15

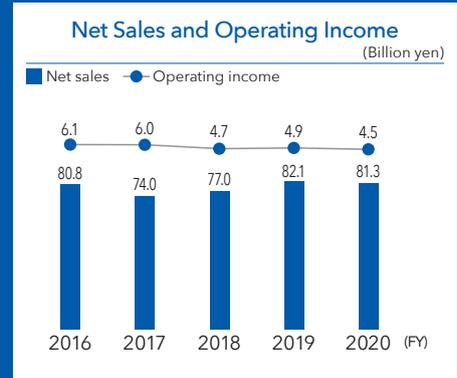
We manufacture and sell a wide range of materials that are essential for construction through our extensive network encompassing all of Japan. We also manufacture and sell various cement-related products such as high-performance premix products, concrete admixture, and concrete products such as autoclaved lightweight concrete (ALC) panels and paving blocks. In addition, we engage in ground improvement and other civil engineering projects. These businesses enable us to address diverse customer needs expeditiously and effectively.



Katsuhide Fukuhara
Managing Executive Officer
Construction Materials
Business Department

Net sales
81.3 billion yen
down 0.8 billion yen year-on-year

Operating income
4.5 billion yen
down 0.4 billion yen year-on-year



Enhancing Our Earning Bases by Developing New Business Domains such as Southeast Asia and Promoting Labor Savings

As part of our efforts to develop new business domains we established a local subsidiary in Vietnam to engage in ground improvement projects, and we are focusing on taking orders for large projects such as subway construction to achieve the vision of expanding business operations to new horizons overseas as symbolized by our corporate logo. We also recruit local employees in Myanmar and Vietnam where we operate representative offices, and provide on-the-job training for them in Japan.

In response to the need to save labor at construction sites and concrete products manufacturing plants, we developed a dry spraying method for repair materials and introduced truck-mounted mixers for supplying materials at road repair sites. To ensure the stable supply of products, we have carefully identified manufacturing sites and products to focus on, while also promoting collaboration with other companies on a toll-manufacturing basis and by other means.

Governance is a prerequisite and foundation for our business operations. We call the representatives of companies that our department oversees and hold a president's meeting to discuss business performance as well as risk management and compliance.



Results of Operations and Principal Initiatives for FY2020

Sales of construction materials and building exterior construction materials increased due partly to the progress of urban redevelopment projects related to The Tokyo Olympics and Paralympics. Sales of autoclaved lightweight concrete (ALC), however, declined due to weak demand. The start of some ground improvement projects were delayed and, as a result, the department's net sales were 81.3 billion (down 0.8 billion yen year-on-year) and operating income was 4.5 billion yen (down 0.4 billion yen year-on-year).

In the Construction Material Business we have focused on making capital investments and developing new construction methods to save labor at construction and manufacturing sites in accordance with priorities of the 20 Medium-Term Management Plan. For instance, we are working on visualizing the state of underground work using information and communications technology (ICT) in carrying out ground improvement work. We are also developing material technologies for pre-cast concrete products to improve productivity at construction sites, and implementing countermeasures for the deterioration of production facilities and reducing environmental impacts to enhance the foundation of our businesses.

To deal with a significant increase in the volume of construction work for national projects such as the Tokyo-Gaikan Expressway and the Chuo Shinkansen, we are fully prepared to provide related products, materials and services such as the deployment of engineers.

Efforts to Address Social Issues

- ▶ Provision of environmentally friendly products and technical services
- ▶ Provision of labor-saving products

Closely Related SDGs



Risks and Opportunities in Our Business Environment

Risks	A shrinking domestic construction market due to a declining population
Opportunities	Expanding into new business domains such as overseas markets
Risks	Decline in the competitiveness of our businesses
Opportunities	Providing competitive, high value-added products and technologies

Business Strategies for the Construction Materials Business based on the 20 Medium-Term Management Plan

- Establish a sustainable business foundation capable of adapting to changes in the business environment and strengthen the competitiveness and financial structure of our businesses
- Cultivate new earnings sources in growth fields and maximize synergies between our businesses

Outlook for FY2021

FY2021 is the final year of the 20 Medium-Term Management Plan. Many construction projects are being suspended or delayed due to the COVID-19 pandemic and the Construction Materials Business is expected to remain stagnant during the year.

Under these circumstances we will pursue three pillar strategies in FY2021: 1. Labor savings in all aspects of our business activities, 2. Enhancing the earnings bases of our existing businesses, and 3. Accelerating development of new businesses in growth areas.

We plan to achieve net sales of 80.0 billion yen for FY2021 (down 1.3 billion yen year-on-year) and operating income of 4.0 billion yen for the year (down 0.5 billion yen year-on-year).

Key Strategies for FY2021

1. Achieve labor savings in all aspects of our business activities

- Develop and bring to market products and services that provide solutions that address construction site needs
- Enhance the provision of products to pre-cast concrete manufacturers

2. Enhance the earnings bases of our existing businesses

- Promote labour saving by reviewing how well our manufacturing sites leverage toll-manufacturing and the shared delivery of products in logistics operations
- Improve deteriorating production facilities

3. Accelerate development of new businesses in growth areas

- Respond appropriately to the demand for the maintenance and repair of infrastructure equipment
- Enhance business operations in overseas markets with a focus on Southeast Asia



Ground Improvement Project by Barge (Onoda Chemico Co., Ltd.)

In the Tokyo Metropolitan Area ground improvement projects are underway to reinforce river banks and prevent liquefaction in preparation for future inland earthquakes. We can now obtain the necessary information on site conditions in real time from excavators equipped with an advanced work progress control unit and consequently expect improvements in the quality of construction work.



Diverse Pre-cast Concrete Products

A variety of admixtures are being used to improve the performance of pre-cast concrete products. High early strength expansive additive Taiheiyo N-EX (manufactured and sold by Taiheiyo Materials Corporation) prevents the concrete from cracking and makes it strengthen faster. It also reduces the need for steam curing in concrete products manufacture.

Research and Development

GRI102-15

Our research and development activities provide the technological support for high product quality and ensures that the company contributes to protecting the global environment through new technologies for resource conservation and CO₂ emissions reduction.



Takayoshi Okamura
 Managing Executive Officer
 Intellectual Property
 Department and Central
 Research Laboratory

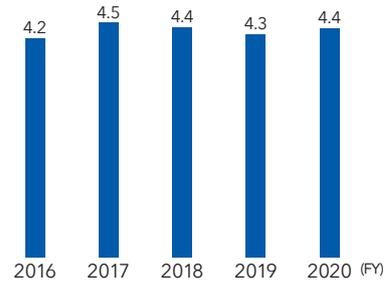
R&D expenses

4.4 billion yen

up 120 million yen year-on-year

Changes in R&D Expenses

(Billion yen)



Creating the Future by Developing Carbon Recycling Technology

The R&D division supports our business divisions by maintaining and improving product quality, and developing technologies for reducing manufacturing costs. It also develops new materials and technologies that will lead to the growth of the Group.

The shift toward a low-carbon society is accelerating. People now expect businesses to go “carbon neutral” and even “beyond zero.” Given this trend we are fully aware that the value of our businesses largely derives from our achievements in reducing CO₂ emissions.

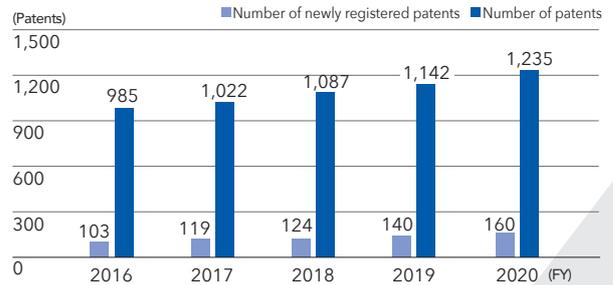
The Taiheiyo Cement Group published its long-term vision and specific measures for reducing greenhouse gas emissions toward 2050. To achieve this long-term goal we must not only apply and develop technologies, but create innovative technologies applicable in financial, technical and societal terms. We are especially focusing on a practical technology to recover and recycle CO₂ emissions applicable to cement kilns as a top-priority project that will preserve the future of the cement industry.



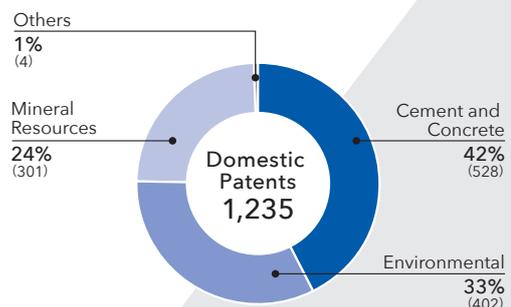
Number of Newly Registered and Current Domestic Patents

The number of new domestic patents registered by the Company has recently increased with a total of 160 new patents registered in FY2020. As a result, the Company currently owns 1,235 patents. The number of patents for Environmental and Mineral Resources has particularly grown.

Number of Domestic Patents (Non-consolidated)



Domestic Patents (by Segment; as of the End of FY2020) (Non-consolidated)

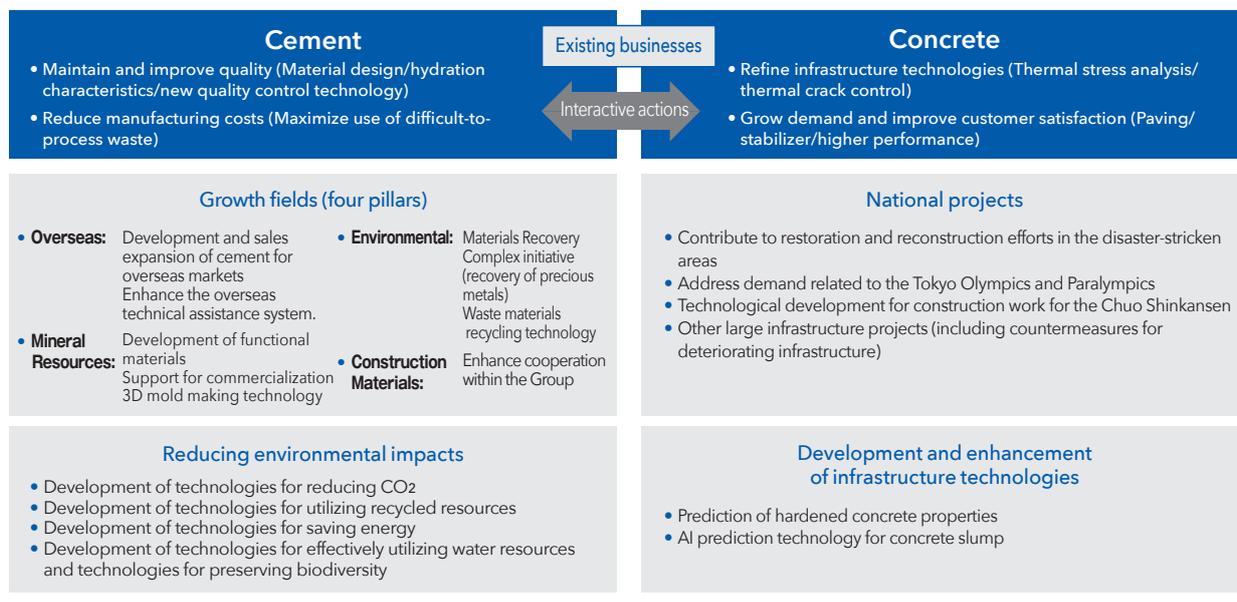


Research and Development Strategies

Based on the 20 Medium-Term Management Plan

Focus on research and development that contributes to Group-wide growth and sustainable development

- Develop infrastructure technologies for each business while contributing to reducing environmental impact
- Quickly establish technologies in growth fields and contribute to commercializing them
- Research and Development that addresses national projects



Recently Developed Technologies

Technologies for Recovering and Recycling CO₂ Emissions

We must develop revolutionary carbon recycling technologies to achieve our long-term vision. Our technology for CO₂ separation and capture from cement kiln exhaust gas was adopted as a project sponsored by the New Energy and Industrial Technology Development Organization (NEDO) and will be demonstrated in FY2021 and 2022.



AI Prediction Technology for Concrete Slump

We developed an AI technology to instantly predict slump from images of mixing inside the concrete mixers during the production process. Its use in the production of ready-mixed concrete and concrete-related products will further stabilize the quality of concrete and save labor through process automation.



Low-temperature Embrittlement Technology for Difficult-to-process Waste Plastic

This new technology allows us to accept a larger volume of difficult-to-process waste plastic and increase our use of alternative energy, dechlorination and recover precious metals. We installed a commercial-scale demonstration of the equipment (7,840 tonnes/year) at the Kawasaki Plant of the Group company DC Co., Ltd. in FY2020.



Environmentally Sound Products Developed by Group Companies

Heat Barrier Coat Heat-shielding Colored Cement Resin Mortar for Road Surfaces (Chichibu Concrete Industry Co., Ltd.)

Heat Barrier Coat is a heat-shielding colored cement resin mortar containing specialized pigments for application on road surfaces. It inhibits the rise of road surface temperature by reflecting heat sources such as infrared rays from the sun. It is expected to mitigate the urban heat island effect and improve the environment along sidewalks and roadsides. It can be applied across a wide range of settings, including sidewalks and parks in urban areas, and the rooftops of condominiums and office buildings. The product can be sprayed on both concrete and asphalt road surfaces. As a highly elastic cement-type material developed using the company's proprietary technology, it firmly adheres to the road surface with high durability. Its muted color harmonizes with the surroundings and provides a comfortable daily living environment.



Heat Barrier Coat application work