



Progress of Strategy by Business Segment:

Electronic & Advanced Materials

Growth businesses

*On April 1, 2023, the name was changed to Electronic & Advanced Materials

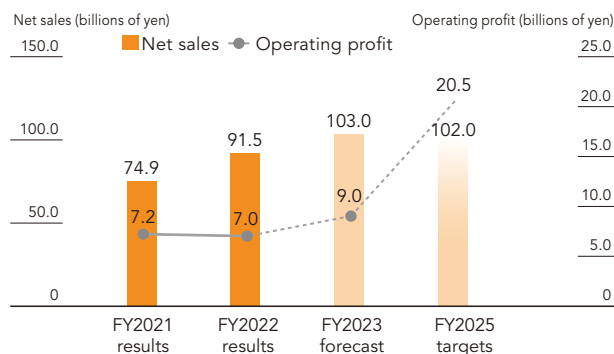


Push forward with globalization and capture the top market share in the high-purity and thermal management materials fields supporting the miniaturization and stacking of semiconductors

Priority Measures

- Pursue aggressive expansion in overseas markets
- Develop new applications, expand product portfolio
- Produce high-quality products, pursue microanalysis technology

Quantitative Targets



SWOT Analysis

<ul style="list-style-type: none"> • Superior quality in semiconductor-related products • Differentiation through such proprietary technologies as reductive nitridation method (thermal management materials) and direct hydration (IPA) • High market share in aluminum nitride powder 	<ul style="list-style-type: none"> • Lack of marketing strengths for global expansion
<ul style="list-style-type: none"> • Promotion of 5G and IoT, increased demand for data centers • Growth in semiconductors due to increased functionality of electronic devices, larger memory capacity, and electrification of vehicles • Increased level of quality requirements from users associated with advancements in miniaturization and stacking 	<ul style="list-style-type: none"> • Entry of emerging manufacturers • Technological innovation in semiconductor market

Progress by Product Area

Product Area	FY2022 Results	Future Plans and Investments
Silicon	<ul style="list-style-type: none"> • Improve on quality control for semiconductor-grade polycrystalline silicon 	<ul style="list-style-type: none"> • Enhance capacity for high-purity chlorosilanes and expand in Asia • Consider JV for polycrystalline silicon business in Malaysia
IC Chemicals	<ul style="list-style-type: none"> • Develop Taiwan JV supply structure for high-purity IPA for the electronics industry • Establish JV in South Korea as a subsidiary for manufacturing and sales of this product 	<ul style="list-style-type: none"> • Launch JV plant in South Korea for high-purity IPA for the electronics industry
Silica	<ul style="list-style-type: none"> • Investment enhancement of hydrophobic silica • FDA certification of silica, grades for food additives. 	<ul style="list-style-type: none"> • Expand CASE* and personal care applications • Enter organic silicone field
Thermal Management Materials	<ul style="list-style-type: none"> • Invest in facilities to study mass production of aluminum nitride filler at the Center for Commercialization of Advanced Technology 	<ul style="list-style-type: none"> • Launch silicon nitride products • Expand sales of boron nitride • Develop new applications and enter downstream fields

*Coatings, adhesives, sealants, elastomers

Message from the Executive Officer in Charge

Responding with Technological Innovation to the Semiconductor and Mobility Industries Improving Our Market Presence

Executive Officer
General Manager, Electronic &
Advanced Materials Business
Headquarters and Advanced
Materials Business Division

Katsumi Nagase



FY2022 Summary (results and issues)

The Electronic & Advanced Materials Business Headquarters was reorganized into two divisions: the Electronic Materials Business Division and the Advanced Materials Business Division, as of April 2023. In the Advanced Materials Business Division, we manufacture and sell fumed silica used for the semiconductor polishing (CMP*) slurries and silicone rubbers, thermal management materials such as boron nitride and aluminum nitride, for some of which the Company has the world's top market share. We received U.S. Food and Drug Administration (FDA) certification for silica and began customer evaluations for entry into the food and personal care markets. This will result in expansion applications, which is the priority measures in the Medium-Term Management Plan. Responding to expansion of the market in China for adhesives for wind-power generator blades and paint inks in China, Tokuyama Chemicals (Zhejiang) Co., Ltd. will boost capacity for surface-treated hydrophobic silica, with operations set to begin in FY2023. Thermal management materials are supported by robust demand for semiconductor components, but the issues confronting us will be to meet quality requirements for state-of-the-art semiconductors and to increase our presence in the mobility industry as it grows.

*CMP: chemical mechanical polishing

Honing Our Technology and Adding Value to Remain the Company of Choice Among Semiconductor Industry Leaders

FY2022 Summary (results and issues)

The Electronic Materials Business Division includes two subsegments: Silicon and IC Chemicals. For the Silicon subsegment, soaring coal prices and other factors have pushed up the cost of electric power, significantly increasing manufacturing costs. This has exposed us to a more difficult business environment than we have ever experienced. However, by carefully explaining our business environment to our customers, we were able to gain their understanding and pass on the cost increases to our product pricing. For IC Chemicals, on the other hand, there has been major growth in demand from the electronics industry for high-purity IPA used in cleaning processes due to more miniaturization and lamination of semiconductor chips. We have therefore built a plant in Taiwan for integrated production starting with raw materials; demand in Taiwan is the strongest worldwide, so we have put a system in place to supply locally manufactured products to our customers there. We have similarly started construction of a new plant in South Korea, where we plan to supply samples to customers from FY2023. Given that these products are all used in state-of-the-art semiconductor plants, the technical challenge we

Progress on Medium-Term Management Plan 2025 Priority Measures and Future Business Implementation

In July 2021, we finished construction of a facility at the Center for Commercialization of Advanced Technology to manufacture silicon nitride used in thermal management applications, then in 2022 we finished construction of the mass production examination facility for aluminum nitride filler. By undertaking the commercialization of new thermal management materials in addition to the existing aluminum nitride powder, we plan to provide the market with wide variety of products having excellent heat dissipation and high strength required for EVs, and other power semiconductor products, some of which has function to significantly improve thermal conductivity by blending filler with resin. The manufacturing process that we are currently testing for mass production is made up of a number of component processes. While evaluating each of these processes, we are working every day to develop technologies to ensure the quality, safety, and stable production that will satisfy our customers. Global demand, in China and elsewhere, is more dynamic than we initially expected. We will do our best to commercialize new products early, since we naturally consider quality and building a future supply structure to be issues that we must address.

Executive Officer
General Manager, Electronic
Business Materials Division

Seiji Teranishi



face is how to maintain a high degree of purity throughout all processes before the products are used by our customers.

Another challenge is working out how we can help our customers recognize this value, so that this technical advantage results in earnings as a growth business.

Progress on Medium-Term Management Plan 2025 Priority Measures and Future Business Implementation

The semiconductor market will continue to enjoy solid growth. However, the fact that this is such a growth market means that competition over pricing and quality is intense. We must keep our distance from price competition and pursue quality together with our customers, creating added value so that we can survive in this growing market. Specifically, in order to meet customers' requirements for high quality, we will continue to improve our technologies for consistent production, quality control, and microanalysis, as we continually strive to be preferred by customers who specify us for their purchases. Moreover, as we work to grow sales in the Asian market, currently the most important "battleground," we will also work on deploying into the US and European markets, where growth is anticipated in the future.



Progress of Strategy by Business Segment:

Life Science Growth businesses

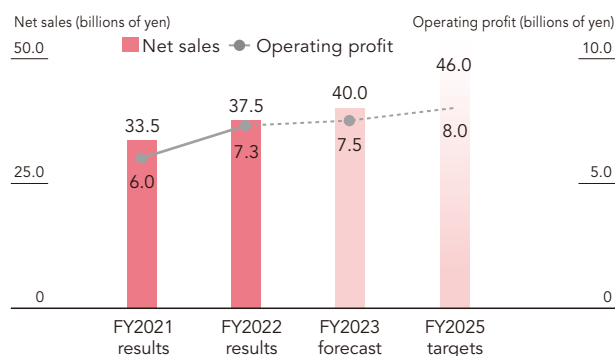


Use unique technology to capture top niche market share in areas where differentiation is possible: vision, dental, and diagnostics

Priority Measures

- Strengthen the marketing system and accelerate expansion of production capability to further boost market share of dental materials outside Japan
- Develop new products and strengthen sales activities to further expand the photochromic market outside Japan
- Strengthen the medical diagnostic systems business

Quantitative Targets



SWOT Analysis

<ul style="list-style-type: none"> • Unique product and technology development strengths based on chemical technology • Able to swiftly respond to specific user requirements through close coordination among sales, manufacturing, and development 	<div style="border: 2px solid red; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="background-color: red; color: white; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">S</div> <div style="font-size: 8px; margin-bottom: 5px;">Strengths</div> <div style="background-color: red; color: white; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">W</div> <div style="font-size: 8px; margin-bottom: 5px;">Weaknesses</div> <div style="background-color: red; color: white; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">O</div> <div style="font-size: 8px; margin-bottom: 5px;">Opportunities</div> <div style="background-color: red; color: white; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">T</div> <div style="font-size: 8px; margin-bottom: 5px;">Threats</div> </div>	<ul style="list-style-type: none"> • Lack of marketing strengths and weak sales system in overseas markets
<ul style="list-style-type: none"> • Growth of healthcare due to advent of super aging society and heightened health awareness • Expansion of emerging markets in the Middle East, Asia, and South America 	<ul style="list-style-type: none"> • Rise of emerging manufacturers centered on South Korea and China • Destabilization of supply chain such as procuring raw materials, outsourcing production overseas, and exporting product due to global instability 	

Progress by Product Area

Product Area	FY2022 Results	Future Plans and Investments
Fine Chemicals	<ul style="list-style-type: none"> • Generic drug sales remained firm due to our strong reputation for quality control • Global market share increased steadily due to strong performance of photochromic materials for eyewear lenses 	<ul style="list-style-type: none"> • Develop high-rarity APIs and strengthen competitiveness • Develop new photochromic materials and enhance sales activities
Dental Materials and Equipment	<ul style="list-style-type: none"> • Tokuyama Dental Corporation began commercial operations of new production line at the Kashima Factory • Composite resin business expanded worldwide due to increased shipments to overseas markets and increased sales to Europe, the US, and emerging countries • Sales of blocks for dental crowns increased 	<ul style="list-style-type: none"> • Further grow overseas market share by reinforcing sales structure and accelerating improvements to the supply system
Medical Diagnosis Systems	<ul style="list-style-type: none"> • Increased orders resulted in only slightly increased sales due to parts and materials shortages • Electrolytes for the Chinese market increased 	<ul style="list-style-type: none"> • Expand major product sales and earnings, while strengthening development of diagnostic reagents

Message from the Executive Officer in Charge

Promoting DX, Strengthening Overseas Sales Networks, Growing Earnings by Continually Introducing New Products

Executive Officer
General Manager, Life
Science Business Division

Naoki Tamura



FY2022 Summary (results and issues)

Japan's declining birthrate and aging population are irreversible trends. In order to compensate for the employee shortage that will result from the decrease in population, we have begun a DX project at the Kashima Factory to ensure continued growth by increasing production through plant automation.

In the dental materials and equipment subsegment, we began commercial operations at the new expanded facility at the Tokuyama Dental Corporation Kashima Factory, where construction was completed in 2021, enabling us to make more shipments to overseas customers. We have also been able to steadily accelerate global sales of OMNICHROMA™ and other composite resins in Europe, the US, and emerging countries. Although there was a delay in placing on the market resin blocks for anterior teeth, these are now in full production.

Profit rose in the fine chemicals subsegment due to strong sales of APIs and intermediates for generic drugs. Partly due to inventory buildup by generic drugmakers, orders remained strong with favorable evaluations of our quality control. There was a year-on-year decline in sales of photochromic materials for eyeglass lenses in this sector, partly due to inventory adjustments. Nonetheless, the growth of our worldwide market share for photochromic lenses has grown steadily along with the development of next-generation products.

For medical diagnosis systems, a shortage of parts and materials was among the factors that forced us to delay some deliveries, but the subsidiary that A&T Corporation established in China is now in full operation, helping to grow our sales to China. Rising raw material and fuel prices, as well as a lockdown at the Shanghai plant, made it a tough year for the microporous films used in the backing sheets of disposable diapers and other items, but we continued taking action, including developing environmentally friendly products.

Progress on Medium-Term Management Plan 2025 Priority Measures and Future Business Implementation

We will continue to develop DX systems for extended production, reinforce our overseas network, and introduce new products and services in order to continue transforming our business portfolio.

In the and equipment business subsegment, Tokuyama Dental Corporation has decided to follow up on the production expansion begun in 2021 by constructing a new facility on the Kashima Factory aiming for completion in October 2024. When reorganizing our European sales network, Tokuyama Dental Corporation plans to make the joint venture Tokuyama Dental Deutschland GmbH into a wholly owned subsidiary, in this way increasing the number of expatriate employees in Europe. The sales plan is geared toward more growth for our market share by resuming presentations at exhibitions and more effective advertising as the impact of the COVID-19 pandemic subsides.

For eyeglass lens photochromic materials, we will continue to focus on developing new products in response to customer requirements and changes in the market. For sales in this industry sector, we intend to steadily improve shipment volumes, especially to overseas customers. In FY2022, we took on as a subsidiary ASM Inc., a materials venture company with origins at the University of Tokyo, aiming to create new products in the materials field.

In the medical diagnosis systems business subsegment, we are working to boost major product sales at A&T Corporation and, as we aim to increase earnings, we will capitalize on our Tsukuba Second Research Laboratory to focus on developing medical diagnostic reagents.

Market Environment

Map showing the relative sizes of global markets for dental materials and equipment



Circle size: market size Color: growth potential

Europe and the United States make up 70% of the worldwide market for dental materials and equipment, with North America being the largest market. In Brazil and other emerging countries, market growth continues in line with increasing per capita GDP, while the global market is expected to grow at a CAGR of approximately 6%* until 2030.

Our Group is seizing this opportunity for market growth and aggressively intensifying our sales channels.

*Source: Estimate by Tokuyama based on *Global Medical Device Market* (May 2017), Japan External Trade Organization (JETRO)



Progress of Strategy by Business Segment:

Eco Business Growth businesses

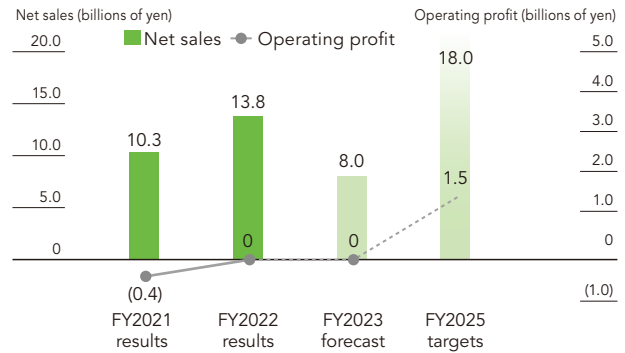


Serve as a new business pillar for the future

Priority Measures

- Respond to expanded demand for water treatment membranes due to strengthened environmental regulations
- Expand resource recycling business in waste gypsum board, photovoltaic panels and others
- Commercialize developed next-generation energy technologies

Quantitative Targets



SWOT Analysis

<ul style="list-style-type: none"> • Unique technologies such as continuous large recrystallization technology for gypsum • Ion-exchange membrane water treatment • Unique technologies, such as PV panel recycling using thermal decomposition treatments 	<ul style="list-style-type: none"> • Weak synergies among businesses • Decreased competitiveness due to rising energy costs
<ul style="list-style-type: none"> • Increased wastewater treatment demand due to tougher environmental regulations in China and emerging countries • Growing global environmental consciousness • Global awareness for creating a recycling-oriented society 	<ul style="list-style-type: none"> • Rise of emerging manufacturers centered in China • Appearance and practical implementation of alternative technologies

Progress by Product Area

Product Area	FY2022 Results	Future Plans and Investments
Environment	<ul style="list-style-type: none"> • Waste gypsum board recycling: Construction began on the third domestic site in Muroran City, Hokkaido • PV (photovoltaic) panel recycling: Improved recycling quality and completed process automation 	<ul style="list-style-type: none"> • Waste gypsum board recycling: Ensure stable operation at three factories in Japan and secure earnings and profits • PV panel recycling: Conduct demonstration testing for continuous operation to establish mass production technology and business model
Ion-Exchange Membranes	<ul style="list-style-type: none"> • Completed large plant for Asian market 	<ul style="list-style-type: none"> • Explore environment-related demand, such as the recovery of valuable resource and decarbonization

Message from the Managing Executive Officer in Charge

Increased Environmental Awareness as an Opportunity to Commercialize Distinctive Technologies

Director, Managing
Executive Officer
General Manager,
Eco Business Division

Tomohiro Inoue



FY2022 Summary (results and issues)

Both revenue and profit in this division increased in FY2022 compared with FY2021.

ASTOM Corporation achieved major improvements in both revenue and profit by meeting new large-volume demand from the use of specialized membranes with distinctive characteristics to recover a valuable resource lithium (Li). There were also firm demand for ion-exchange membranes used in the production of salt, foods, and potable water. Since strong demand is expected in the future for these applications, both in Japan and overseas, as well as strong demand for continual technology improvements, we will not miss out on the opportunity to develop this technology even further as well as starting work on improving and refining our supply system.

Tokuyama Chiyoda Gypsum Co., Ltd., a company with technology for completely recycling waste gypsum board into the raw material for gypsum board, achieved major growth in revenue since a plant was operating near maximum capacity. The decision was made to capitalize on these circumstances, the untapped area of gypsum board recovery, by moving ahead with a third plant in Muroran City, Hokkaido, Japan, where operations are scheduled to open in the fall of 2023. However, the achievement of this company did not meet earnings targets, due to higher processing costs resulting from an unprecedented surge in resource prices triggered by Russia's invasion of Ukraine. While this company is facing a harsh business climate, we will secure earnings and stable operations at our three locations as we go ahead with several initiatives, including revising our prices.

Plastic window sash manufacturer Excel Shanon Corporation has announced the rollout of Shannon Wind NS50, a new product that vastly improves on existing performance, excelling at

operability and design. Given the extremely high evaluations received from customers for this product, the investment ratio of our partner, Panasonic Corporation, was changed in July 2023 to boost product development and sales of the NS50.

Since FY2019, solar panel recycling technology has been developed in the town of Nanporo (Sorachi District) in Hokkaido in collaboration with NEDO,* and a treatment process was established in FY2022. Our public announcement of these results met with strong interest and high expectations both from Japan and overseas. In FY2023, we will carry out a continuous operation demonstration test as we work on establishing this technology for mass production, as well as a business model.

*NEDO: New Energy and Industrial Technology Development Organization

Progress on Medium-Term Management Plan 2025 Priority Measures and Future Business Implementation

As we look at the five-year period of our Medium-Term Management Plan, although we see some progress in each of our business subsegments, it is evident that we have not yet been able to meet internal and external expectations in Tokuyama's three growth business domains: electronics, healthcare, and the environment. Although every one of our businesses has technical and business challenges that must be overcome, we see the value of each business subsegment increasing in the future amid continued strong market growth and the high value and expectations that our customers continue to place on our technology. We will grasp this opportunity, refine our technologies, help form a sustainable society through the commercialization of environmentally friendly technologies, and pursue our goal of establishing new businesses for the future in FY2025, the final year of our Medium-Term Management Plan.

Market Environment

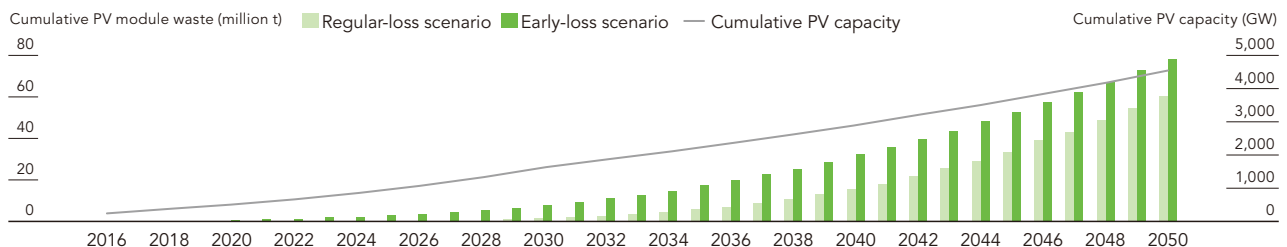
Anticipated Volume for PV¹ Panel Waste Disposal

In Japan, the start of the FIT system² propelled the accelerated adoption of solar power generation, while renewable energy policies are driving this expansion in other countries around the world. At the same time, massive quantities of used panels are also expected to emerge, amounting to a forecast global disposal volume of at least 1.7 million tonnes by 2030, rising to 60 million tonnes by 2050.

In order to build up a circular system for solar power generation, it will be necessary to prepare for the coming era of mass disposal by establishing PV panel recycling technology that is sustainable

1 PV: photovoltaic panels for converting sunlight into electricity
2 FIT system: A feed-in tariff for renewable energy

Cumulative global PV module waste disposal (estimated)



*Source: Status of PV Module Recycling in Selected IEA PVPS Task12 Countries 2022



Progress of Strategy by Business Segment:

Chemicals Traditional businesses



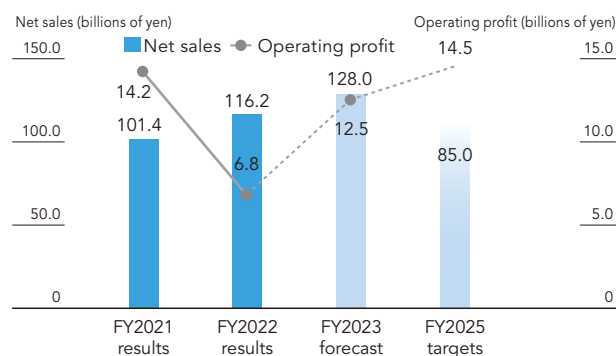
Business Goal

Ensure stable earnings in the existing business

Priority Measures

- Strengthening the Chloro-alkali and PVC chain to maximize profits
- Reduction of CO₂ emissions and waste through the development and introduction of world-class energy-efficient electrolyzers and manufacturing process improvements
- Improve manufacturing processes and supply chains through promoting DX

Quantitative Targets



SWOT Analysis

<ul style="list-style-type: none"> • Only domestic manufacturer of soda ash • Electrolyzer unit, electrolysis and manufacturing technology with extensive operating record 	<ul style="list-style-type: none"> • Weak sales network overseas • Sales volume of calcium chloride for antifreeze fluctuates depending on weather conditions • Coal-based private power generation
<ul style="list-style-type: none"> • Spread of fuel cell vehicles and promotion of hydrogen society • Increase in demand for caustic soda and PVC resin due to economic growth in Southeast Asia and India 	<ul style="list-style-type: none"> • Decreasing domestic demand due to Japanese economic recession, customers relocating overseas, etc. • Easing supply and demand balance due to higher production at competitors using expanded electrolysis and vinyl chloride production plants • Impact of continued high raw material prices associated with the Russian invasion of Ukraine

Progress by Product Area

Product Area	FY2022 Results	Future Plans and Investments
Soda Ash and Calcium Chloride	<ul style="list-style-type: none"> • Maintained competitiveness by establishing a stable supply system 	<ul style="list-style-type: none"> • Maintain and update facilities needed for stable business continuity
Chlor-Alkali and Vinyl Chloride	<ul style="list-style-type: none"> • Strengthen Group partnerships, with Shin Dai-Ichi Vinyl Corporation as a wholly owned subsidiary 	<ul style="list-style-type: none"> • Advance energy savings and rationalization to address environmental issues

Message from the Managing Executive Officer in Charge

A Stronger PVC Business with Shin Dai-Ichi Vinyl Corporation as a Wholly Owned Subsidiary Focusing on Keeping Product Supply and Quality Stable

Managing Executive Officer
General Manager,
Chemicals Business Division
Hiroataka Nishihara



FY2022 Summary (results and issues)

Fiscal 2022 was a tough year for our chemicals segment, with soaring coal prices due to Russia's invasion of Ukraine and economic stagnation resulting from China's zero-COVID policy. We asked our customers to allow price adjustments in response to sharp increases in the prices of raw materials and fuel as well as logistics costs, then having gained their understanding we have been working to ensure a stable supply. Although the business environment is expected to remain uncertain in FY2023, I intend to engage in dialogues with our customers to work through the issues. Since we are the only manufacturer in Japan of soda ash and calcium chloride, it is particularly important for us to maintain the supply and quality. We will continue to work hard to provide a continuous supply. Also, to reach our goal of a 30% reduction in GHG emissions by FY2030, we are currently studying ways to innovate for more environmentally sustainable manufacturing processes in the Chemicals Business Division. In FY2023, we launched the SCM Visualization Project as part of our promotion of DX in the Chemicals Business Division. Through this project, we will thoroughly review all existing operations and redesign tasks that are overly dependent on personal skills, which I hope will lead to greater efficiency.

Also in FY2023, we will strive to provide a consistent supply to our customers by placing the highest priority on safety and stable operations. In addition, I prefer to think of the trend toward carbon neutrality as a business opportunity and to make this a year when the entire Chemicals Business Division builds environmentally friendly manufacturing processes.

Progress on Medium-Term Management Plan 2025 Priority Measures and Future Business Implementation

With the cooperation of Sumitomo Chemical Co., Ltd., we made Shin Dai-Ichi Vinyl Corporation into a wholly owned subsidiary as of April 1, 2023. We reached this decision because vinyl chloride is one of the most important items in our chlor-alkali and vinyl chloride sector, and changing our approach in this way enables us to accelerate our decision-making. Although making vinyl chloride paste will be outsourced to Sumitomo Chemical's Ehime Plant beginning in FY2023, the supply to customers will continue as before with no change. The customers of our paste business are primarily domestic manufacturers of wallpaper and flooring materials, as well as automotive-related processing manufacturers. We will maintain the system that allows us to always manufacture products sought by our customers and we will continue to sell the products that our customers prefer.

Topics

Contribute to Mitigation of Global Warming

Japan's first domestic joint feasibility study of the social implementation of circular carbon methanol utilizing CO₂

In July 2023, Tokuyama began a feasibility study with Mitsubishi Gas Chemical Company, Inc. for the production and sale of methanol using as raw materials the CO₂ emitted from the Tokuyama Factory and hydrogen (H₂) generated from caustic soda production, by applying Mitsubishi Gas Chemical's proprietary methanol production technology. Through this study, we are also looking at using the green electricity produced when biomass fuels are fed into in-house power generation facilities to produce hydrogen, which can then be used as a methanol feedstock.

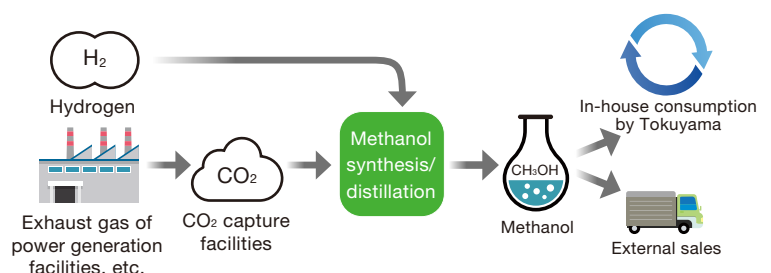
Methanol is a base material for various chemical products, and as it can be produced from CO₂, a greenhouse gas, it is expected to be a powerful resource for building a carbon neutral society through carbon capture and utilization (CCU*).

The methanol produced through this initiative deserves the description environmentally circular. The commercialization of the results of this study will lead to the establishment of Japan's first commercial plant to recycle CO₂ emitted from factories to produce methanol. At Tokuyama, our concept is to achieve the "greening" of chemicals through this circular carbon methanol method utilizing

CO₂ as a chemical raw material. We are also considering using the existing methanol supply network of Mitsubishi Gas Chemical to serve customers who require environmentally circular chemicals.

Our aims in conducting this study are to help create a market for green products made in Japan and the social implementation of a CCU* industry by helping to instantiate low-carbon value and environmentally circular value, in order to promote the spread of environmentally friendly green products.

*CCU: carbon capture and utilization is the process of capturing carbon dioxide (CO₂) to be recycled for further usage





Progress of Strategy by Business Segment:

Cement Traditional businesses

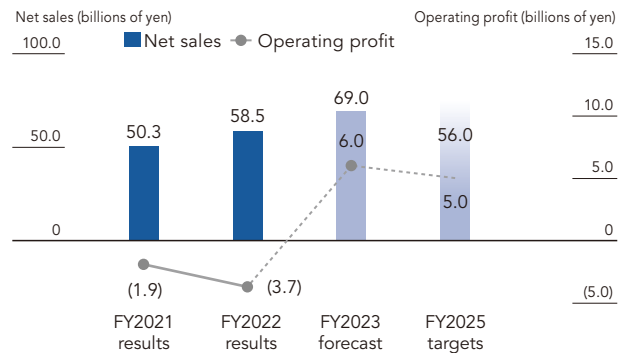


Business Goal Become the domestic industry leader in energy efficiency

Priority Measures

- Introduce energy-saving equipment to reduce CO₂ emissions
- Reduce the amount of coal usage by accepting more fuel-based waste materials such as waste plastic

Quantitative Targets



SWOT Analysis

<ul style="list-style-type: none"> • Contribute to environmental preservation by accepting waste from inside and outside the Company for cement feedstock and as a thermal energy alternative • Enabling technological development from a chemical standpoint based on chemical manufacturing 	S Strengths	<ul style="list-style-type: none"> • Higher of repair costs due to aging of facilities 	W Weaknesses
<ul style="list-style-type: none"> • Domestic demand due to national resilience and Linear Chuo Shinkansen, Osaka/Kansai Expo and an IR,* etc. • Demand for building infrastructure associated with economic development in emerging countries <small>*IR: integrated resort</small>	O Opportunities	<ul style="list-style-type: none"> • Decrease in domestic cement demand due to decline in population • Rising material and logistics costs • Criticism of cement industry due to problems with CO₂ emissions 	T Threats

Progress by Product Area

Product Area	FY2022 Results	Future Plans and Investments
Cement	<ul style="list-style-type: none"> • Raising selling prices • Cutting manufacturing costs by using low-grade coal and increased use of waste plastics/tires • Decision on sales subsidiaries merger 	<ul style="list-style-type: none"> • Consideration of suspending operations of a cement kiln • Maintain and update facilities needed for stable business continuity
Recycling	<ul style="list-style-type: none"> • More collection of waste plastics, etc. • Start of a concrete dome silo operation for the consistent supply of raw materials for cement 	<ul style="list-style-type: none"> • Advance energy saving and rationalization to address environmental issues • Expand waste treatment that contributes to a closed-loop society

Message from the Managing Executive Officer in Charge

Initiatives to reduce costs and increase selling prices

Managing Executive Officer
General Manager,
Cement Business Division

Takahide Taniguchi



FY2022 Summary (results and issues)

Our cement segment faced a tough environment due to soaring coal prices, even higher than the levels they have been at since 2021, caused by Russia's invasion of Ukraine. We worked enthusiastically on both cost cutting and raising our selling prices, our most urgent challenges. From early 2022, in order to improve profitability, we used more waste plastics as an alternative fuel as well as low calorific value coals, which are difficult to handle, while starting to increase selling prices. Although our efforts have achieved limited results, operating profit fell for the second quarter in a row because of significant cost increases.

We invested in loading facilities for soil stabilizing cement at the Osaka cement terminal, readying our system to meet growing demand in the Kansai region for projects such as EXPO 2025 Kansai, Osaka, Japan and an integrated resort project. As well, we merged four sales subsidiaries. These measures strengthened our sales network and management efficiency.

Progress on Medium-Term Management Plan 2025 Priority Measures and Future Business Implementation

As priority measures for our business target of being the domestic industry leader in energy efficiency, we will focus on introducing equipment that is energy efficient and that reduces CO₂ emissions as we cut coal consumption by using more alternative fuels, such as waste plastic.

For our specific initiatives to achieve our targets, in FY2023 we will install high-efficiency clinker cooler bag-filters (converted from electrostatic precipitators) and tanks for new waste liquids. In addition, we have been boosting the use of waste plastics and tire-derived fuel.

Further, we invested in a concrete dome silo in FY2022 to consistently secure alternative raw materials for cement. Because the domestic demand for cement remains on a gradual downtrend, to optimize production and match up our systems with the external environment, we are considering into suspending the operation of one cement kiln.

Topics

Contribute to Mitigation of Global Warming

Joint research toward effective utilization of biomass combustion ash and realization of CCS¹

Disposal of fly ash emitted from biomass power plants, which have been increasing in recent years amid the trend toward eliminating fossil fuels, has become an issue because this ash contains elements such as potassium that restrict its reuse in cement. We have been working since 2020 to develop technology for the effective use of fly ash, including CO₂ fixation. This technology will be applied to a construction material sold by Itochu Enex Co., Ltd. affiliate Kano FA Co., Ltd. (trademark: Recycle Beads^{TM2}) to develop a new CO₂-fixing admixture that enables biomass-derived fly ash to be used effectively and for CCS to be more widely used. By using fly ash that has been made to absorb CO₂ with our technology as a raw material for Recycle BeadsTM, and by effecting further CO₂ absorption during the production of Recycle BeadsTM, we utilize them as CO₂-fixing Recycle BeadsTM.

Initial studies performed by both companies have shown that CO₂ can be adsorbed into the calcium oxide contained in fly ash and Recycle BeadsTM to fix a greater amount of CO₂ than is emitted during the production of Recycle BeadsTM. We will continue research for enabling the adsorption and fixation of more

CO₂ at a lower cost as we move toward the goal of developing construction materials that adsorb more than 10% of the total amount of CO₂ in our products.

¹ CCS (carbon dioxide capture and storage)

² Recycle Beads is a roadbed material and weed control product produced by KANOU FA Co., Ltd., a company in which ITOCHU ENEX Co., Ltd. has a 49% stake.

