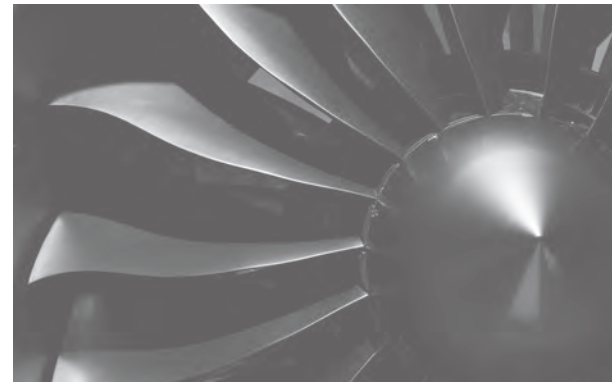


TOKAI CARBON CO., LTD.

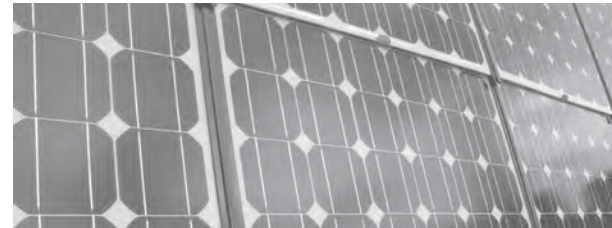
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Tokyo 107-8636, Japan

Tel: +81-3-3746-5100 (Switchboard)



Integrated Report 2022



TOKAI CARBON CO., LTD.



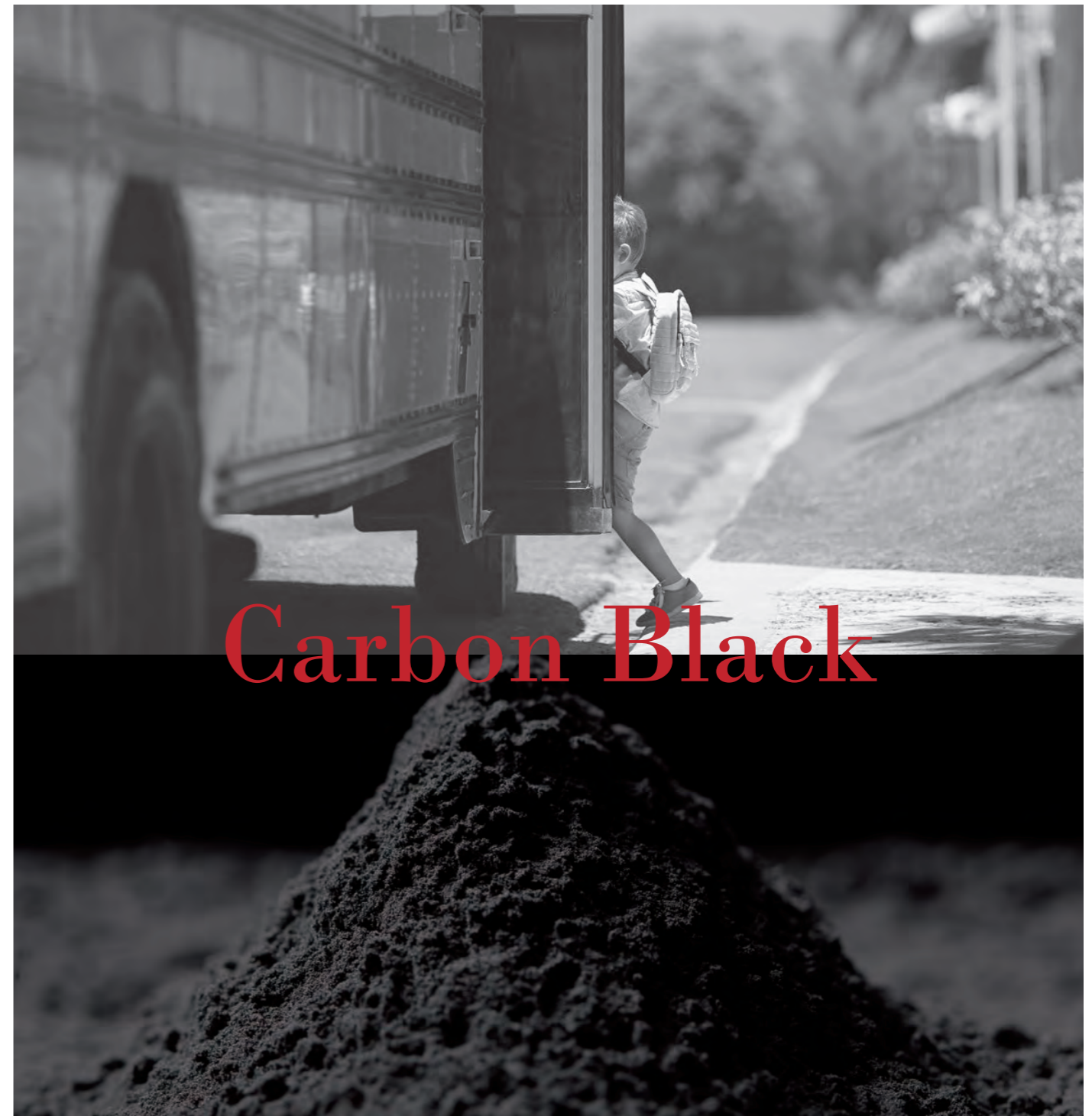
Graphite Electrode

Graphite Electrodes Supports Infrastructure

Steel scrap is recycled by electric arc furnace (EAF) and then transformed into structural materials, such as materials for buildings and bridges, and stainless steel products. Tokai Carbon's graphite electrodes are manufactured in Japan, Germany, and the United States, supporting EAF steel production around the world.

Manufacturing world largest diameter graphite electrode

32 inches
in diameter
800mm



Carbon Black

Carbon Black Supports Safety in Our Daily Lives

Carbon black is an important raw material that accounts for about 30% of the weight of a tire. With bases in North America, Thailand, and Japan, we support the performance and safety of automobiles. It is also used as a black pigment in many of the black-colored products you come across daily.

Largest capacity in the U.S.





Fine Carbon

Fine Carbon Supports the Semiconductor Industry

As one of the few companies in the world that manufactures fine carbon, we develop and supply components for manufacturing equipment that enable semiconductor quality to be improved. We support the rapidly changing semiconductor industry with our diverse product lineup.

Largest solid SiC producer in the world

70%
Global Share



Smelting & Lining

Cathode Blocks Supports the Development of the Aluminum Industry

Demand for aluminum is growing worldwide due to the need to reduce the weight of electric vehicles (EVs) and transportation equipment. Our long-life cathode blocks used in aluminum electrolytic furnaces are indispensable for its manufacture. Tokai Carbon holds global top share with its outstanding stability and performance.

Cathode blocks used in aluminum smelting

30%
Global Share



Basic Principle

Ties of Reliability

Our stakeholders, including customers, business partners, employees, society, and shareholders, are indispensable partners for the Company to contribute to the realization of a sustainable society. Coexistence and co-prosperity with our stakeholders are the Company's earnest wishes, and the key to "co-creation" that creates new value is trusting relationships.

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Overview Consolidated Data for 2022

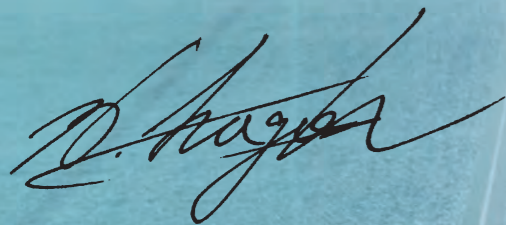
Net Sales	Operating Income (Operating Income to Sales)	Net Income Attributable to Owners of the Parent Company (profit rate)	Total Assets	Capital-to-Asset Ratio	ROIC	Overseas Sales Ratio	GHG Emissions	Number of Employees (Consolidated)	Overseas Employee Ratio
340.3 billion yen	40.5 billion yen (11.9%)	22.4 billion yen (6.6%)	576.4 billion yen	46.6%	7.1%	79.6%	2,408 thousand tCO ₂	4,378	70.7%

Top Message

Top Message

We will boldly take on the challenge of investing in cutting-edge fields while cultivating the pillars of our earnings

With a sense of urgency, we will raise Tokai Carbon to a higher level. While enhancing the profitability of our core businesses, we will continue to invest in cutting-edge fields for stakeholders and the next generation of employees who will be responsible for Tokai Carbon in the future.



Hajime Nagasaka

President and CEO





Our Structural Reforms and Business Portfolio Transformation to Date

Nine years have already passed since I became President of Tokai Carbon in February 2015.

During my second year in office in 2016, I devoted myself to thorough structural reforms, and from 2017 onward, I shifted my focus to a growth strategy, leading to multiple overseas M&As. As a result, Tokai Carbon's business portfolio has been diversified, and the scale of its business has expanded to approximately three times in terms of sales and ten times in terms of operating income compared to 2014.

Tokai Carbon is a global company with a 105-year history. If you follow the Company's trajectory so far, it can be said that our business has developed along with the automobile industry, which has flourished over the years. Japan's automotive industry accelerated in the late 1970s as the country shifted its main focus from the steel industry and heavy industry to the auto industry. Many automotive parts manufacturers have continued to grow in line with the development of finished goods manufacturers, with some suppliers now exceeding 500 billion yen in sales and some top suppliers now witnessing sales in excess of 1 trillion yen.

In contrast, our company's sales remained stagnant at around 100 billion yen even in 2014. Our Graphite Electrode and the Carbon Black businesses, which were our core businesses at the time, complemented each other's market fluctuations and produced relatively stable profits. At that time, we did not have a keen awareness of the issue of business stagnation. However, upon assuming the position of President, I once again felt a sense of crisis which told me that the Company needed to change its direction. Although our business performance was stable, I knew from experience that we would not be able to gain the trust of investors and financial institutions if we remained to be a company with sales of just around 100 billion yen. Therefore, I felt it was my mission to draw up a clear growth strategy for our Company and work tirelessly to implement it.

In an equipment industry like ours, the bottom line is achieving profits of scale. A company needs to be a certain size when a large amount of funds are needed for future capital investment or research and development and to attract excellent human resources. With this in mind, I decided that our medium-term target would be to achieve net sales of 300 billion yen.

Decisive implementation of structural reforms

At first, we decisively implemented bold structural reforms without being preoccupied with immediate sales and profits, and focused on the thorough elimination of waste within the company. As a result, revenue and profits fell sharply in 2016, which resulted in a negative net income. Naturally, although people around me began to criticize me more and more, I continued with my reforms believing that the results would follow rather than being concerned about the short-term numbers.

I thought it would be a good idea to proceed with structural reforms all at once. We accomplished 60% of the structural reforms that we had originally envisioned in about one year. However, I determined that the remaining 40% of reforms, especially for changing internal awareness, would take some time, so I decided that the Company should move on to the next stage while continuing to work on the remaining reforms.

Business portfolio transformation

From 2017 to 2020, the Company implemented five M&As overseas. We focused on increasing the sizes of our earnings pillars with the aim of moving away from a profit structure that relies on our Graphite Electrodes and Carbon Black businesses. Until that time, the Company had been operating virtually debt-free. However, as a result of actively raising funds from financial institutions as well as directly from the capital markets and investing a cumulative total of approximately 180 billion yen, our balance sheet structure changed significantly. Despite this, I believe we have successfully diversified our business portfolio, making us less susceptible to fluctuations in the graphite electrode and carbon black markets.

Results right in front of us

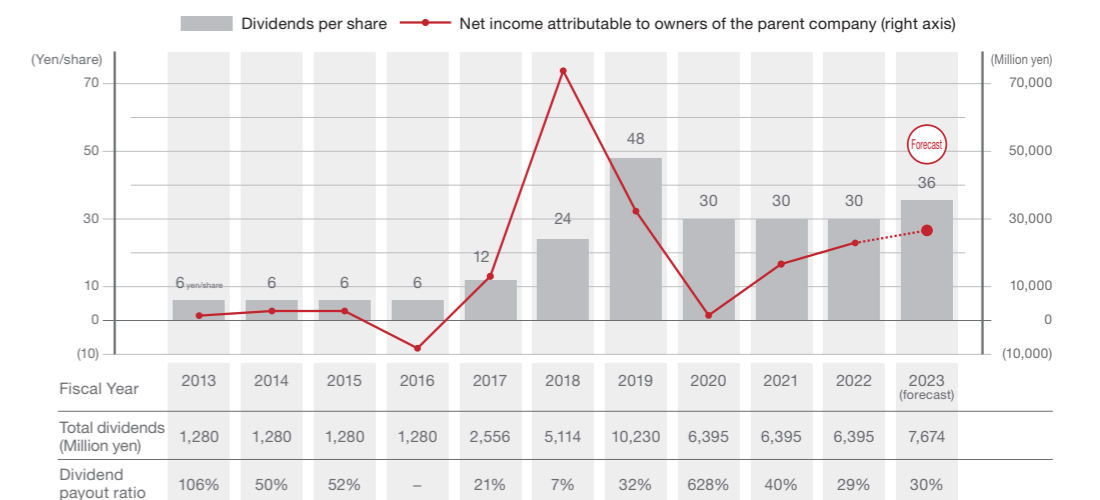
In 2022, while the multi-year COVID-19 pandemic began to show signs of abating, supply chain disruptions triggered by the crisis in Ukraine, the global inflationary trend, and the resulting tightening of monetary policy were major downward pressures. Uncertainty regarding the global economic outlook increased once again. Under these circumstances, in accordance with our basic policies of "returning core businesses to a path of growth," "optimizing the business portfolio (selection & concentration)," and "strengthening the consolidated governance structure" set forth in the rolling medium-term management plan "T-2024" announced in February, the Company expanded its business activities, and was able to achieve significant increases in both revenue and profit compared to the previous fiscal year. I believe that the reason why we were able to exceed our initial plan targets despite the challenging business conditions is that our structural reforms and business portfolio transformation have gradually begun to show results.

As for 2023, we aim to achieve net sales 484 billion yen, an operating income of 69 billion yen, and an operating income to net sales ratio of 14% in 2025 in accordance with our basic policies of "returning core businesses to a path of growth," "optimizing the business portfolio (selection & concentration)," and "establishing a foundation for sustainability management" set forth in the new rolling medium-term management plan "T-2025."

With regard to shareholder returns, Tokai Carbon will continue to focus on consistent, stable dividends while setting the target dividend payout ratio at 30%. Although the current business environment is quite severe and does not allow for optimism, we will continue to be vigilant.

Shareholder Returns

Dividends Per Share and Net Income Attributable to Owners of the Parent Company



Further Strengthening Our Core Businesses to Realize Our Long-term Vision

It goes without saying that I could not carry out structural reforms and business portfolio transformation on my own. I am very grateful for the deep understanding and support of the management team and the efforts of our employees. Going forward, I will continue to work together with management and employees to achieve even higher level results aimed at our long-term vision for 2030: “Contribute to a sustainable society through advanced materials and solutions.”



The potential of our core businesses

Our graphite electrodes are mainly used in electric furnaces where scrap iron is melted down to produce steel for construction and other uses. One medium- to long-term business opportunity is the shift from blast furnaces to electric furnaces, which is aimed at reducing CO₂ emissions in the steelmaking process. Although the blast furnace manufacturing method emits a large amount of CO₂, the electric furnace manufacturing method is said to reduce the amount of CO₂ emissions to about 25% of that amount. Since the shift from blast furnaces to electric furnaces is a global trend, particularly in the United States, we expect business opportunities for the Company to expand further.

About 70% of the carbon black produced is used for tires. The automotive industry is undergoing a major transformation with the shift from gasoline and diesel vehicles to EVs moving forward. However, the demand for tires will not diminish as long as the vehicles are running on the ground. We are working with a sense of mission to ensure that we can meet demand, which is expected to continue to grow, with high-quality products.

Smelting and Lining is a business closely related to aluminum smelting and is mainly performed at our plants in Poland and France. Although I expect that demand for aluminum vehicles and wheels will grow as a result of the shift to EVs, the aerospace industry will be the key to the future. There is currently goodwill amortization associated

with M&A, so the contribution to profit is yet to come. However, I have high expectations for the expansion of our Smelting and Lining business.

Fine carbon is a product made from tiny carbon particles broken down to the micron level. More than 70% of fine carbon is used for semiconductor-related applications. Although memory semiconductors used in PCs and mobile phones are currently in an adjustment phase, demand for power semiconductors used in EVs and other applications is growing significantly. I see our Fine Carbon business as another highly profitable business with great potential.

Nurturing our businesses and generating stable cash flows

First, I would like for the Company to fully nurture these existing businesses and generate stable cash flows while allocating some of the cash we earn to cutting-edge business fields. It goes without saying that the research and development of cutting-edge businesses involves a high level of risk. However, I would like for the Company to continue taking on challenges looking toward next-generation business expansion. Although I do not expect that we will easily succeed, we will move forward with a sense of speed by grasping the changes of the times, and will indicate the direction in which we are headed while considering not only internal management resources but also co-creation with like-minded external partners.

Increasing Management Sustainability

In terms of contributing to the sustainability of society, our efforts are just getting started. The most important issue that we face is carbon neutrality. Of the Company’s six businesses, the Carbon Black business accounts for the largest amount of CO₂ emissions, so reducing CO₂ emissions in this business is an urgent issue. In addition to conventional, steady efforts to save energy and improve the yield ratio, we will pursue with a sense of urgency innovative technologies such as product recycling and CO₂ recovery, as well as dream technologies such as the development of carbon products that utilize recovered CO₂.

With regard to governance, we have viewed the strengthening of governance of domestic and foreign group companies as a key issue that must be prioritized. Since overseas sales account for approximately 80% of our sales in our company, governance is particularly important for our overseas subsidiaries. While many Japanese companies appoint Japanese nationals as the CEOs of their overseas subsidiaries, we appoint local personnel as CEOs of all of our overseas subsidiaries except one in Thailand and one in the United States. This is because we are convinced of the superiority of our style of delegating what needs to be delegated based on a relationship of trust with competent

local personnel. Naturally, this does not mean that we can just appoint anyone that is local to the position of CEO. However, I believe that each of our subsidiaries has a good CEO right now.

Three of our eight directors are external directors. In order for them to guide our Board of Directors, it is important for them to know us well. Therefore, we also invite them to attend the weekly meetings of the Management Committee so that they can better understand the status of business execution. Since the outside directors have extensive experience in their respective fields, we place a high degree of trust in them.

Tokai Carbon Will be Further Expanded for the Next Generation

While achieving our net sales target of 484 billion yen and operating income target of 69 billion yen for 2025 will be challenging, my dream is to take our business scale to an even higher level in the not-too-distant future beyond “T-2025.”

As we continue to invest in cutting-edge businesses and continue to conduct research and development, the most important thing is that those efforts lead to business expansion. However, it is also true that the hurdles to overcome are high. Currently, working on post-merger integrations related to past M&As is a top priority, and M&As will continue to be an option for the Company.

I want Tokai Carbon to be a company that is trusted and recognized by society by doing what we can do now for the next generation of employees who will be responsible for Tokai Carbon in the future.

I welcome you to look forward to the future initiatives of Tokai Carbon, a company that boldly takes on challenges for the future.



Corporate Strategy

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2 Management Strategy	P19-20
3 Reinvestment for Growth	P21-22
4 Business Area Expansion	P23-24
5 Business Composition	P25-26

Picture of Value Creation

“Contribute to a sustainable society through advanced materials and solutions” — Our long-term vision for 2030. Amid the trend toward carbon neutrality, this statement demonstrates our resolve to boldly take on the challenge of entering new business areas and clarifies the reason for the existence of Tokai Carbon.



In order to realize our long-term vision, it is important to co-create with our stakeholders, including our customers and business partners around the world. In this context, we would like to play a role in global co-creation by further combining our strengths.

In order to achieve this, it is a prerequisite for us to meet the expectations of our stakeholders by maximizing and expanding our technological capabilities based on superior management strategies and governance. “Reinvestment for Growth” and “Business Area Expansion” are the means to achieve this, and they are also the means to expand the areas in which we can contribute. As a result, they promote the soundness of our “Business Portfolio” and lead to a stable management foundation for the Company.

This cycle leads to the next stage of co-creation from which new value is created. We believe that Tokai Carbon’s cutting-edge materials and solutions can make this world more prosperous.



1 Technological Prowess

High Quality/Stable Supply

We cannot build a relationship of trust with our customers unless we can provide a stable supply of high-quality products by making use of our sound technological prowess. Only when our technology is superior can we provide value to society.

Tokai Carbon was founded in 1918. We were the first Company in Japan to realize domestic production of high-quality graphite electrodes. Graphite electrodes are indispensable for steelmaking, which was considered a national industry. At present, we have been supplying the world's top graphite electrodes from our plants in three countries to EAF steel producers around the world.

In 1941, we began mass production of carbon black for the first time in Japan at the Kyushu-Wakamatsu Plant in Fukuoka Prefecture. Since then, we have continued to grow and now support our customers in production by having established plants in Japan, Thailand, and North America, where demand for tires is strong. Carbon black is a raw material that determines tire performance and requires management of its characteristic conditions at the nano level. We continue to respond to these demands and work to improve the product performance of tire manufacturers and the mobility industry.

The Fine Carbon business has been developing in earnest since 1986 when the Tanoura Plant in Kumamoto Prefecture became a dedicated fine carbon manufacturing plant. Utilizing the heat treatment technology cultivated in our Graphite Electrode business, the Company has expanded its business to date meeting demand from general industries, aerospace, and semiconductor industries. Tokai Carbon is supporting the accelerating technological innovation of semiconductors by advancing SiC coating technology.

The primary reason our products have been widely used by our customers over the years is their trust towards our stable supply of high quality materials. By solving customers' issues day by day, our core technologies have been refined ever since. Tokai Carbon's core technologies continue to evolve also from the newly acquired technologies through M&As and co-creation activities.

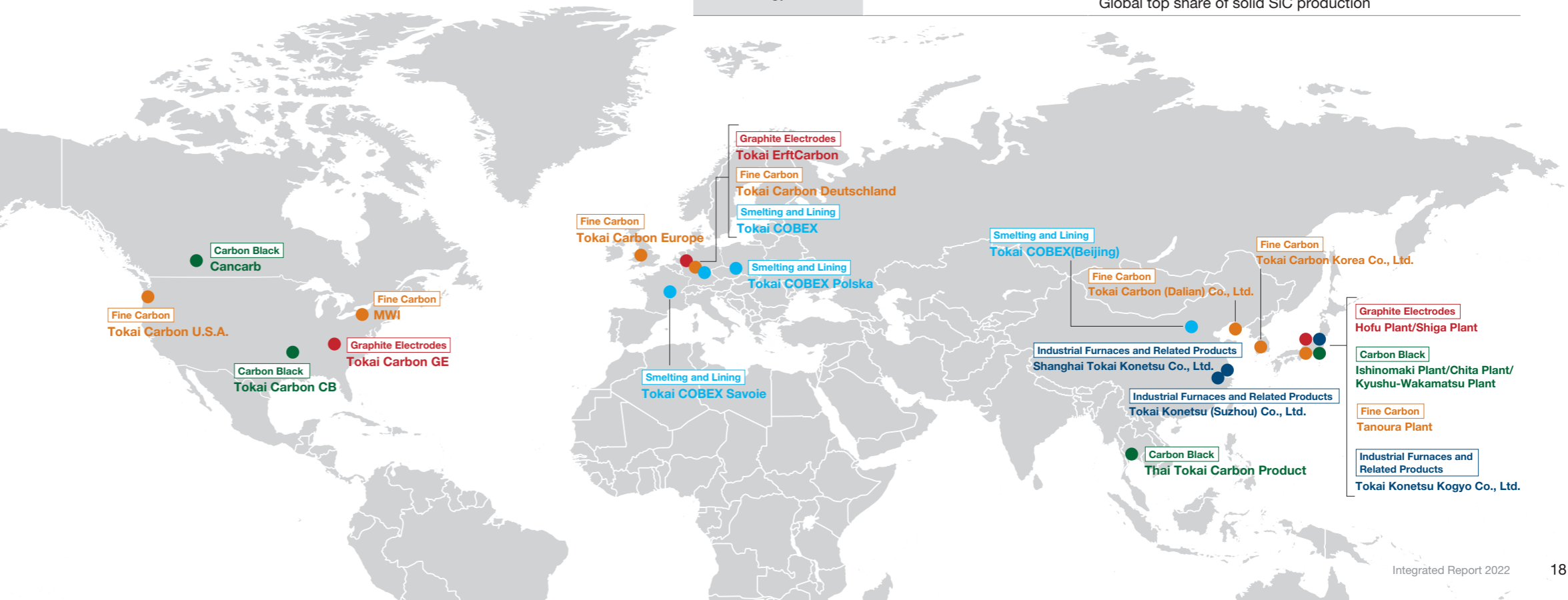
Core Technologies That Continue to Evolve Locally

By developing and manufacturing products in the regions where our customers operate, we are committed to long-term quality improvement and stable supply of products. In addition to grasping the needs surrounding local production for local consumption, we are also working to diversify regional risks.

High-temperature heat treatment is a technology common to our four main businesses. We have multiple heat treatment facilities in Japan, the U.S., and Europe. Our Carbon Black business, which employs surface treatment technology, has bases in the U.S., the region with the second highest level of demand after China, as well as in Japan and Thailand to meet demand in each region. Although the SiC mass production technology possessed by the Fine Carbon business was born from research and development in Japan, it has grown significantly by expanding it to the U.S., and South Korea where semiconductor customers are concentrated.

The Sources of Our Technological Prowess

Core Technology	Primary Products	Description
Heat Treatment	Graphite Electrodes Fine Carbon Smelting and Lining products Anode Materials	Heat treatment technology for unique environments up to 3,000°C Further evolution of technology through fusion with other companies' technologies acquired through M&A, etc.
	Industrial furnaces (niche heat treatment furnaces)	Tokai Carbon holds the global top share in sintering furnaces heated by electric furnaces and SiC heater materials
Surface Treatment	Carbon Black (for rubber products)	Control of powder properties of nano-level particles and production of more than 60 varieties
	Aqua Carbon Black (for pigment inks)	By developing surface treatment technology, the Company succeeded in developing Aqua Carbon Black that can be used for pigment inks
SiC Mass Production Technology	SiC Coated Carbon Solid SiC	World's leading high-speed deposition-based SiC mass production technology Global top share of solid SiC production



2 Management Strategy

Profit Generation

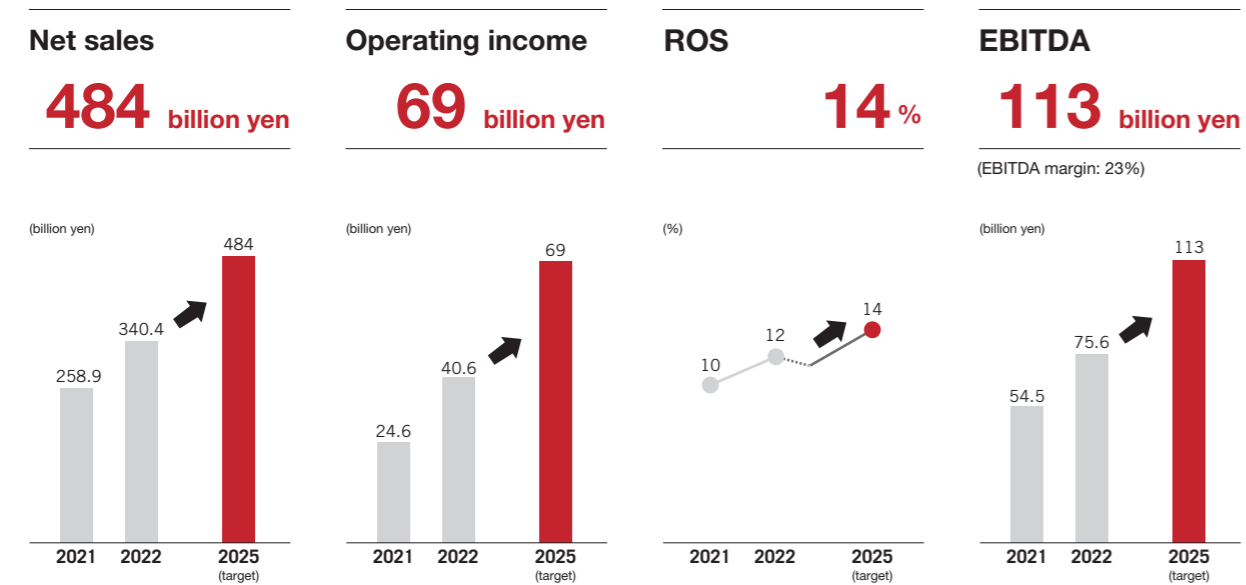
We will realize a “stable supply of high-quality products” at sustainable manufacturing costs. We will maximize profits by effectively investing management resources in the medium-term management plan.

Tokai Carbon formulates its medium-term management plan on a rolling basis to prevent the plan and awareness from becoming obsolete, updating the three-year forecast annually so that it can respond quickly and agilely to the rapidly changing business environment.

Under the medium-term management plan “T-2025,” which covers the period from 2023 to 2025, we aim to achieve significant increases in sales and profits. The net sales target for 2025, the final year of the plan, is 484 billion yen, which is 1.4 times higher than in 2022, which will be a record high if achieved. The operating income target for 2025 is 69 billion yen, 1.7 times higher than in 2022, the second highest level after 2018, the year when electrode price market conditions were booming. As for EBITDA, the target for 2025 is 113 billion yen, 1.5 times higher than in 2022.

We will stabilize our earnings base by returning to the growth path of our core businesses, select and concentrate our businesses in light of environmental changes, such as carbon neutrality and supply chains, and promote initiatives to build a sustainability management foundation based on our long-term vision to achieve our goals.

Medium-term Management Plan “T-2025” Quantitative Targets



* ROS (Return on Sales) = Operating income to net sales
 * Assumed exchange rate for “T-2025” targets: 1 USD = 130 JPY; 1 EUR = 140 JPY

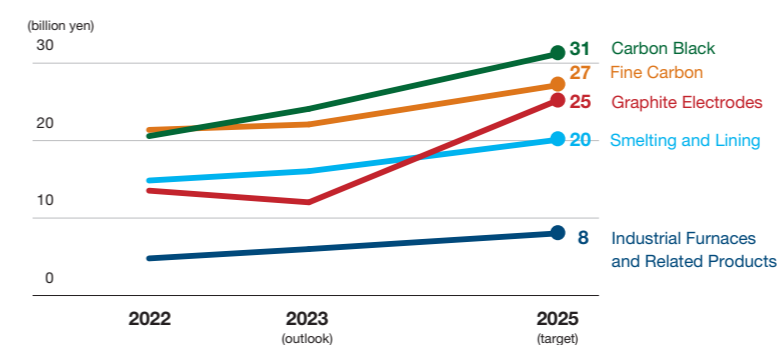
EBITDA Growth Forecast by Business Segment

Tokai Carbon aims to increase the EBITDA of each business by returning our core Graphite Electrodes and Carbon Black businesses to paths of growth, bringing about the stable growth of the Smelting and Lining business, and strengthening production capacity in the Fine Carbon and Industrial Furnaces and Related Products businesses.

Measures for Each Business Segment

Business Segment	Main Market	Measures by Segment
Graphite Electrodes	Electric steelmaking furnaces	Increase production capacity for super-size electrodes
Carbon Black	Tires	Stabilize operations at U.S. base by completing the implementation of environmental measures
Fine Carbon	Semiconductors	Expand facilities to meet growing demand for semiconductors
Smelting and Lining	Aluminum	Improve our ability to produce cathodes designed for aluminum smelting
Industrial Furnaces and Related Products	Electronics/Lithium-ion batteries	Increase production capacity for industrial furnaces and EREMA heating elements

EBITDA Growth Forecast by Business Segment



Operating cash flow
2023-2025

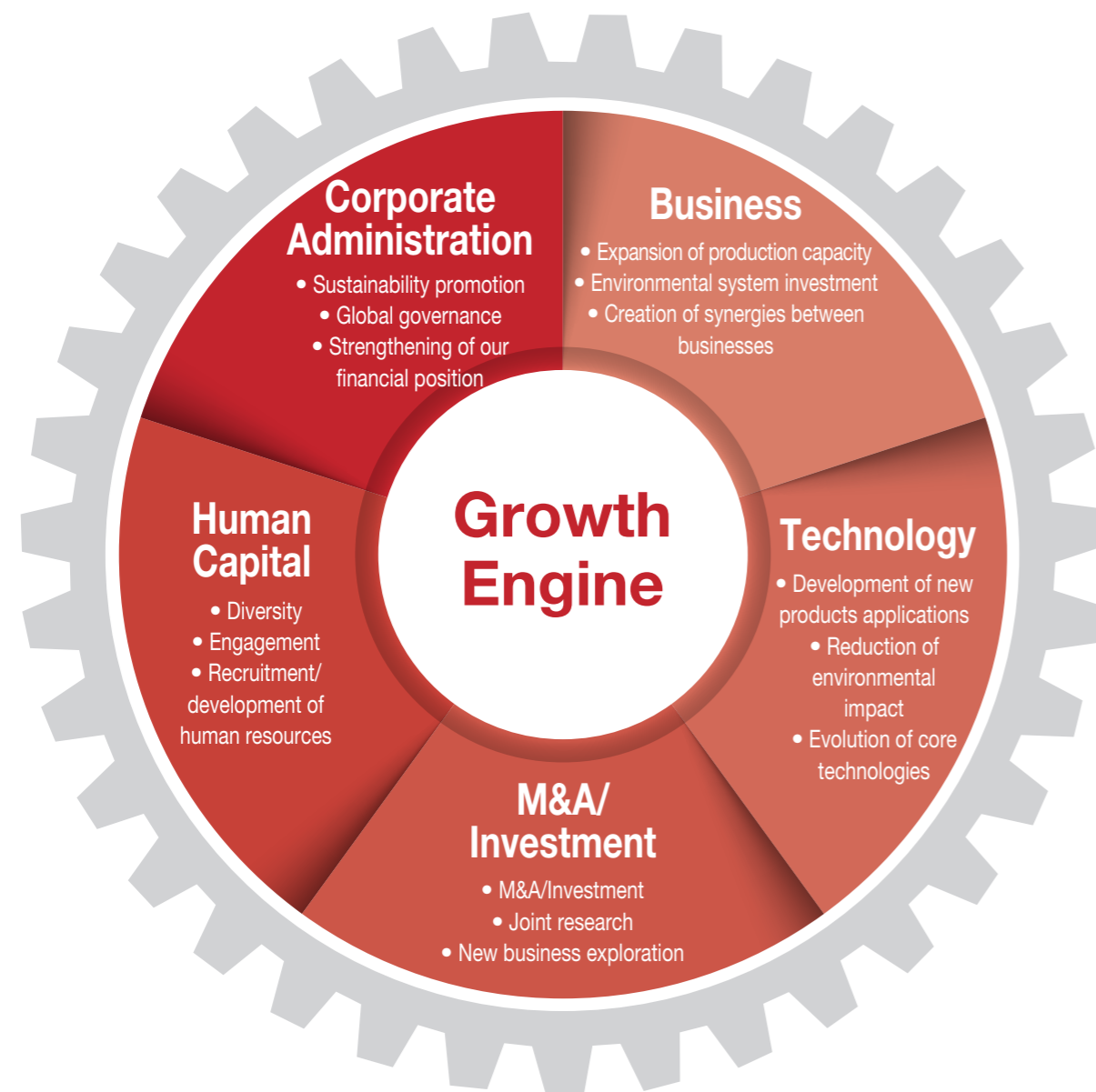
210 billion yen
Three-year total

3 Reinvestment for Growth

Empowering the Growth Engine through Reinvestment

The reinvestment of generated profits strengthens the engine (driving force) that generates new growth. Tokai Carbon will accelerate its growth by effectively investing in the following areas: Facility expansion for the growth of each business segment, global environmental preservation, R&D that contributes to social development, M&A and investments that create new co-creation, and human capital, which is the source of value creation.

Conceptual Diagram of the Growth Engine



Business Investment

Medium-term Management Plan “T-2025”

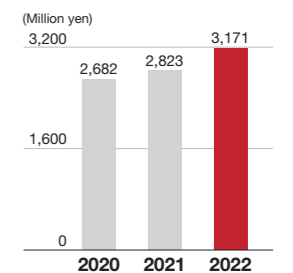
Purpose	Investment Amount (three-year total)	Description
Expansion of production capacity	36 billion yen	Increase production capacity for fine carbon and industrial furnaces, two business areas that are witnessing promising growth
Environmental system investment	17 billion yen	Environmental measures to be carried out at North American plants where carbon black is produced
Facility renovation	70 billion yen	Renovation of facilities to realize stable supply and improve throughput

Technology Investment

Our five research centers (the Fuji Research Laboratory, which serves as our general research laboratory and main research facility, the Chita Laboratory, Hofu Laboratory, Tanoura Laboratory, and Chigasaki Laboratory) conduct everything from basic research on carbon materials to the development of new products.

In the development of new products, we have developed solid SiC Focus Rings using our proprietary CVD* method. Solid SiC Focus Rings are used in equipment for manufacturing high-performance semiconductors. To reduce environmental impact, we plan to develop anode materials for lithium-ion batteries used in EVs and other vehicles in Japan using heat treatment technology developed in our Graphite Electrodes business. Now planning to expand the anode production technology to Europe and the U.S. Based on our surface treatment technology, one of our core technologies, we have also developed Aqua Black, a modified version of carbon black that is mixable with water. This material is used in black ink for inkjet printers and other applications. Tokai Carbon will continue to focus on the development of advanced technologies that meet the needs of the times.

Research and Development Expenses



* CVD (Chemical Vapor Deposition): A method of depositing a film through a chemical reaction by supplying a raw material gas containing the components of the desired thin film to the surface of a base material heated in a reaction tube

Human Capital Investment

Providing opportunities to learn and take on challenges

In order to develop human resources to take on global challenges and make a leap forward, we conduct study-abroad language training and global training, as well as next-generation leader training and executive management training to develop human resources who will be responsible for future management.

Promoting diversity

Tokai Carbon actively hires experts who can respond quickly and flexibly to issues that require expertise. In addition, we have set targets for raising the percentage of females to the total number of new graduates taken on for career-track positions, increasing the number of women in managerial positions, and increasing the number of foreign employees in managerial positions. These are initiatives that the Company promotes.

Strengthening our strategic foundation by improving engagement

Tokai Carbon is promoting initiatives that lead to increased engagement, such as reviewing the personnel compensation system and shortening working hours. From 2023, we plan to visualize and analyze engagement levels and implement initiatives to improve and enhance them.

▶ See pages 47 - 48 for the targets and progress of each initiative.

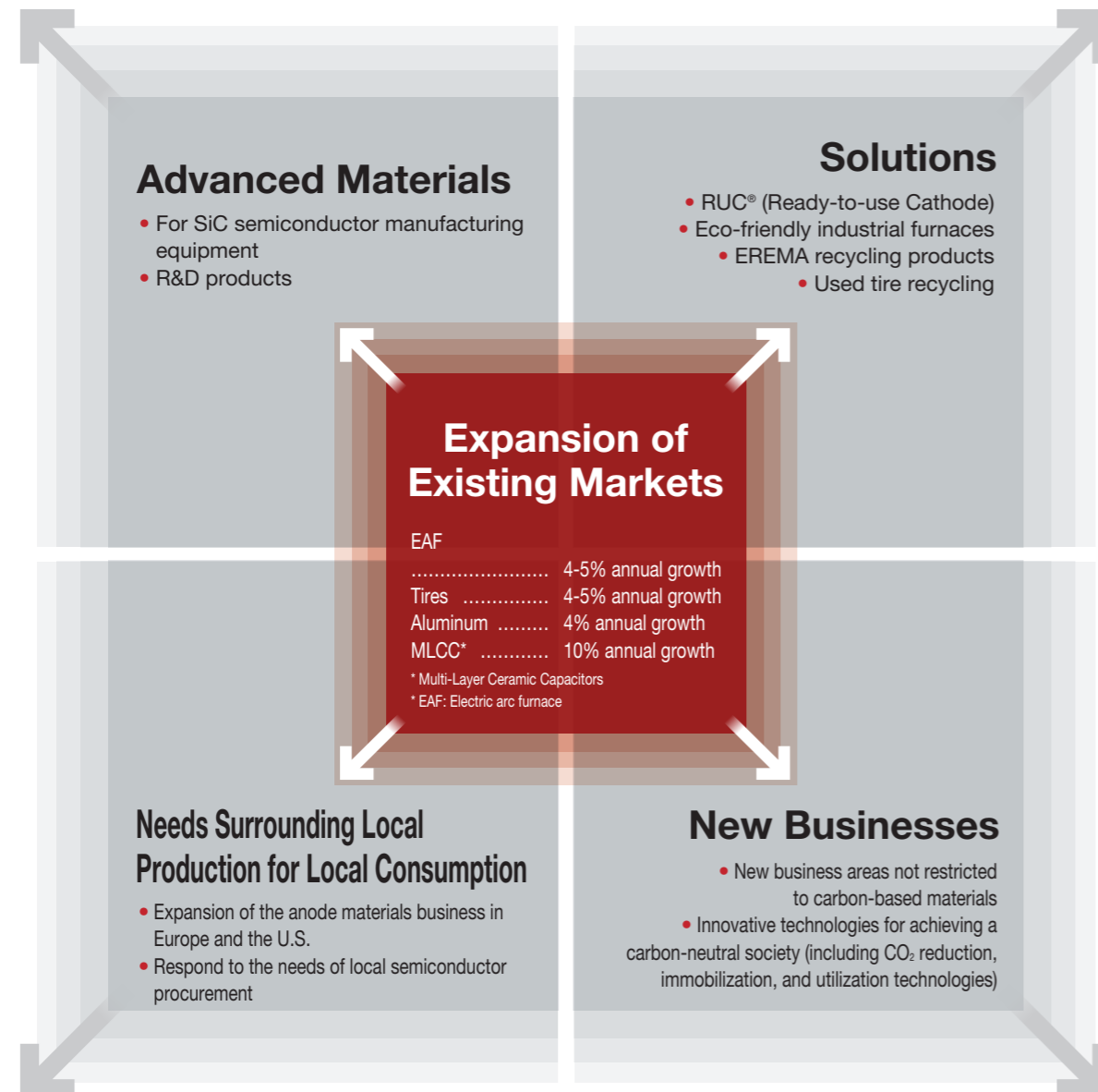


4 Business Area Expansion

Market Creation

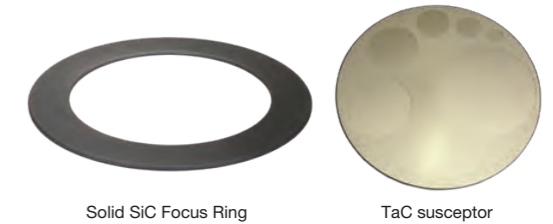
Our enhanced growth engine will invigorate our market creation efforts. As a manufacturing company that possesses materials production technology, Tokai Carbon's products are used in a wide range of industrial fields. We will continue to create new value by utilizing our expertise in carbon materials to contribute toward achieving carbon neutrality and solving relevant issues.

Market Creation Opportunities



Advanced Materials Investment

Due to the miniaturization of semiconductors and increases in cell height, the load on components used in semiconductor manufacturing equipment is increasing. Tokai Carbon was the first company in the industry to succeed in the mass production of solid SiC Focus Rings. Their adoption is expanding as a new material that offers twice the service life of conventional silicon components. In addition to high-purity SiC products, we have developed and supply TaC (tantalum carbide), which has even better heat resistance than SiC, to respond to the higher-loaded manufacturing process for SiC semiconductors, which are expected to become the next-generation semiconductors.



Solutions for Future Needs

With the demand for carbon neutrality and resource recycling initiatives, the challenges facing our customers are also changing dramatically. We will contribute to solving issues through co-creation with customers so that we can move ahead of demand in response to the new needs that arise in these circumstances.



RuC® solution-type next-generation cathode

Initiatives for Creating New Businesses

Exploring new business opportunities through the promotion of carbon neutrality

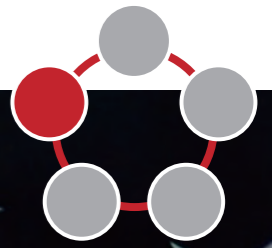
Tokai Carbon has set a goal of achieving carbon neutrality by 2050. Through our efforts to achieve this, we aim to solve issues through various technological innovations. In addition to creating businesses that do not depend on fossil fuels, we are making efforts to review the use of raw materials in our existing businesses, switch to clean energy, and invest in CO₂ collection technology. In addition, through co-creation with other companies, we will promote research on tire recycling technologies and technologies for manufacturing carbon materials using CO₂ as a resource with the aim of creating new business opportunities.

Establishment of the Business Incubation Department

In September 2022, Tokai Carbon established the Business Incubation Department. In addition to creating new businesses, we aim to build a system for launching new businesses on an ongoing basis. In order to create new businesses in the non-carbon fields that do not rely on fossil fuels and to convert CO₂ into a resource (manufacturing of carbon materials and products from CO₂), we will develop cross-departmental activities, actively co-create with external organizations, and promote initiatives.

Activities of the New Business Promotion Department

- Explores new business areas that are not restricted to carbon
- Makes use of external institutions (collaborates with universities, research institutes, venture firms, etc.)
- Co-creates carbon-neutral technologies
- Tallies and deeply investigates Group technologies and finds way to utilize them



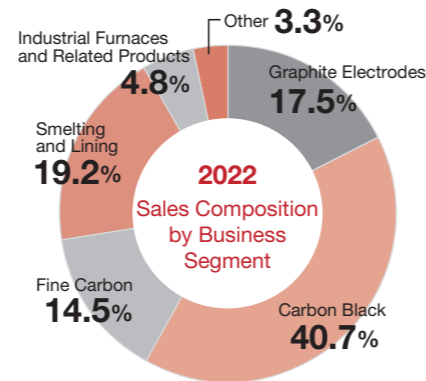
5 Business Portfolio

Stable Cash Flow

With a diverse and well-balanced business structure, we will reduce the impact of market fluctuations and generate stable cash flow. This will serve as the foundation for realizing a “stable supply of high-quality products” and the loops in the direction of our long-term vision will continue to rotate toward further growth.

2022 Business Composition

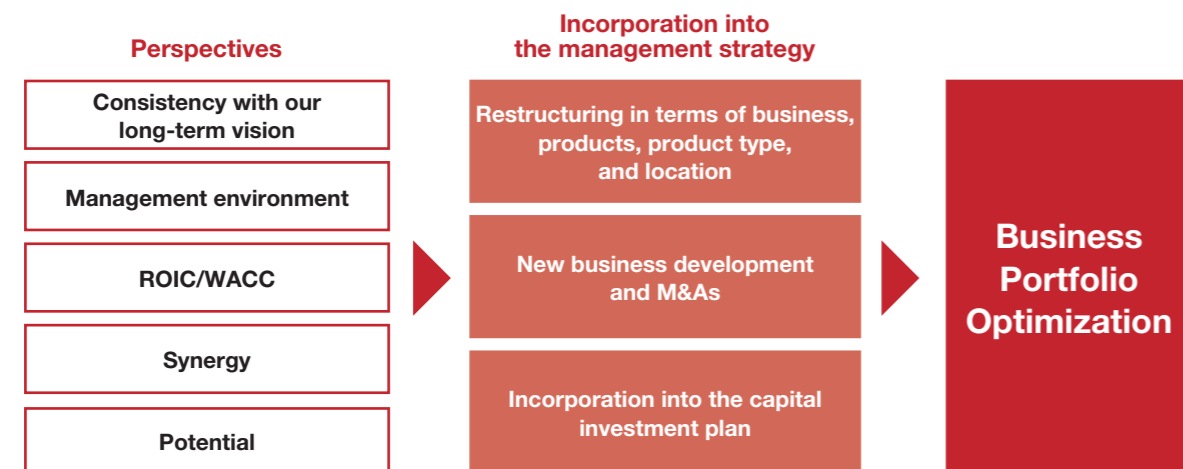
Although our largest business was the Graphite Electrodes business, the acquisition of a U.S. base for our Carbon Black business, growth in the Fine Carbon business, acquisition of the Smelting and Lining business, etc. made our business composition less dependent on Graphite Electrodes by the end of 2022, which contributes to cash flow stabilization.



“Selection & Concentration” Aimed at Optimizing Our Business Portfolio

In November 2021, the Board of Directors approved the Business Portfolio Management Policy. In addition to setting and monitoring profitability and capital efficiency targets based on the cost of capital, the Board of Directors deliberates on the direction of our business portfolio on an annual basis, taking into account consistency with our long-term vision and perspectives toward medium- to long-term growth. We will pursue a business portfolio that continuously improves corporate value by analyzing businesses, products, product types, bases, etc. from various perspectives and promoting selection and concentration.

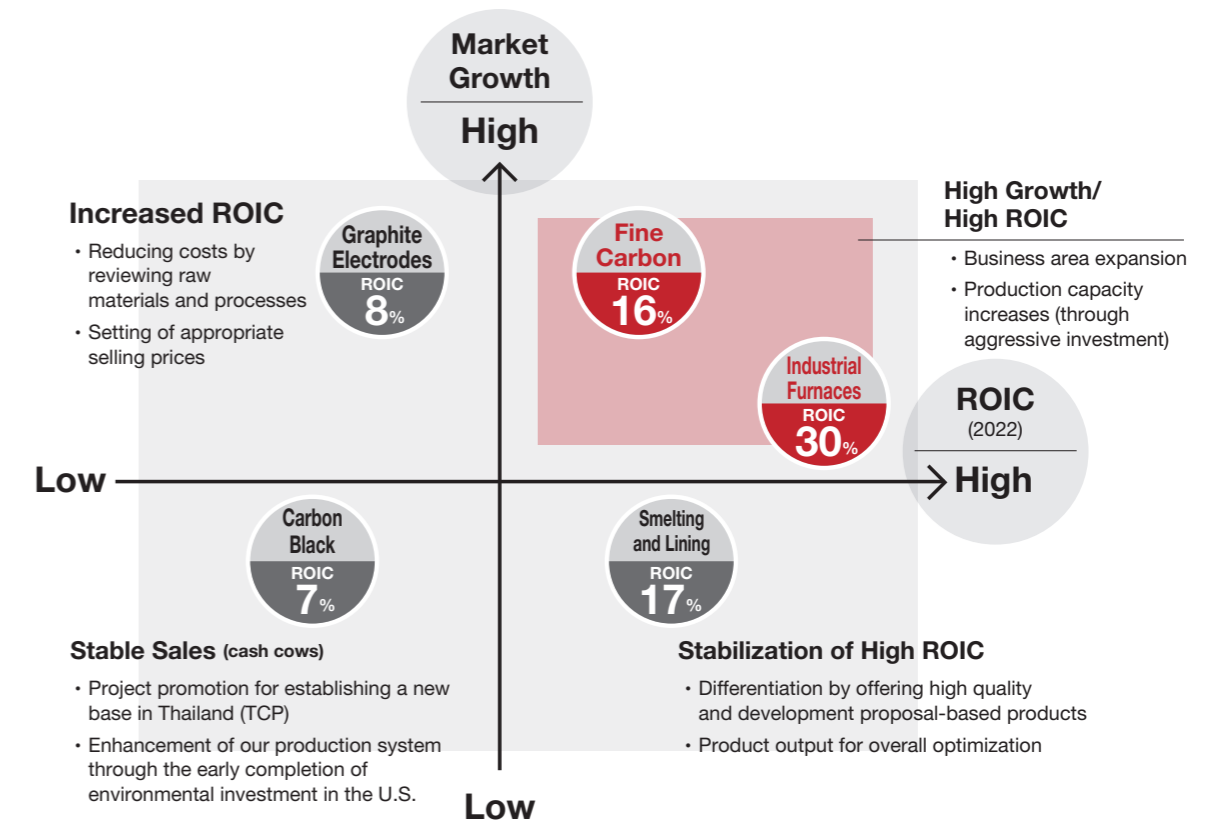
In addition, amid the trend toward decarbonization, we aim to realize our long-term vision of “Contribute to a sustainable society through advanced materials and solutions” by transforming our portfolio to incorporate new businesses that do not rely on fossil fuels while maintaining our core carbon-related businesses, such as our Graphite Electrodes and Carbon Black businesses in the medium term.



ROIC Measures by Business Segment

Our consolidated WACC (weighted average cost of capital) was 5% and consolidated ROIC (return on invested capital) was 7% at the end of FY2022. At the same time, the ROIC of each segment exceeded WACC. We target ROIC higher than 10% for 2025 by promoting business “selection & concentration” and implementing measures tailored to the business environment of each segment.

We will expand our business areas, especially in the Fine Carbon and Industrial Furnace and Related Products business segments, which are growing businesses and each have a high ROIC, by increasing production capacity and developing next-generation products. In Graphite Electrodes, our core foundation business, Carbon Black, and Smelting and Lining businesses, we will secure stable cash flows and stabilize profits across the Group by implementing measures tailored to each market environment.



Business Strategy

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Friction Materials	P39
Anode Materials/Other Operations	P40

Graphite Electrodes



Large diameter with higher quality standard.
We will contribute to support the coming expansion of the EAF and its higher productivity.

Mitsuharu Nobata

General Manager,
Graphite Electrode Division

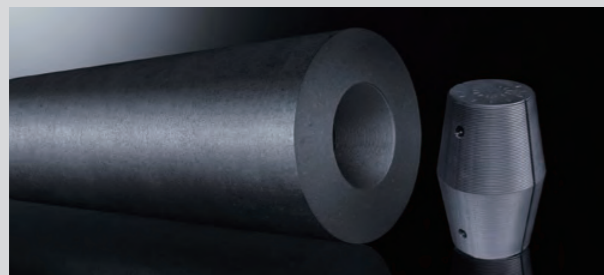


Roles of Our Products and Their Connections with Society

There are two methods of steel production: The blast furnace method and the EAF method. In the blast furnace method, iron is produced through a process of reducing iron ore, while in the EAF method steel scrap is melted in an EAF and recycled as steel products. Graphite electrodes are used as conductors in an EAF to melt steel scrap at once by arc discharge. The temperature of the electrodes in an EAF exceeds 1,600°C, and graphite electrodes, which can be used under such harsh conditions, are indispensable for EAF steelmaking. We support the stable operation of EAF by supplying electrodes that can withstand high thermal shock and have high strength.



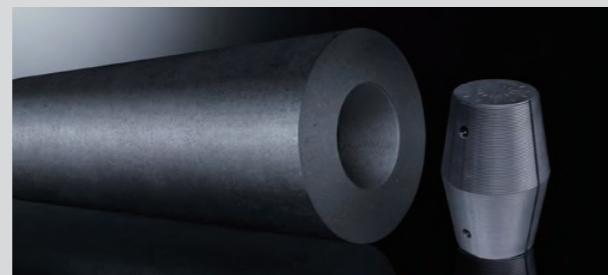
Main Products



Graphite Electrodes for DC Furnaces (direct current furnaces)

Size: 22-32 inches (550-800 mm)

Electrodes for DC furnaces, which require 1 column of graphite electrodes. Often used for high-current operations, the allowable current amount increases due to the larger diameter. The largest size diameter currently available is 32 inches.



Graphite Electrodes for AC Furnaces (alternating current furnaces)

Size: 16-28 inches (400-700 mm)

Electrodes for AC furnaces, which require 3 columns of graphite electrodes. This is the main type of graphite electrode used for EAF, with electrode diameter sizes of 20-28 inches.

Q What is your current market position and competitive advantage?

A The world supply capacity of graphite electrodes, excluding China, is less than 800,000 tons per year. Our supply capacity is approximately 100,000 tons, giving us a 13% share of the global market in 2021, ranking us fourth in the world. We have operational sites at three major demand centers as Asia (Japan), Europe (Germany) and the U.S., This platform allows us to procure raw material, produce, sell and take care of the customer when the electrodes are used, which helps us maintain longer relationships with customers and improve quality to match their needs. The world's best manufacturing technologies are shared among the global production sites, which also support our performance to be outstanding.

Q How was business performance for the segment in 2022?

A In 2022, net sales increased 46.8% from the previous year to 59.630 billion yen and operating income was 8.032 billion yen (operating loss of 400 million yen in the previous year) due to the

recovery of the electrode market, higher selling prices in the second half of the year, and steady sales of large-diameter, high-quality electrodes in the United States, where EAFs are used for 70% of the total steel production.

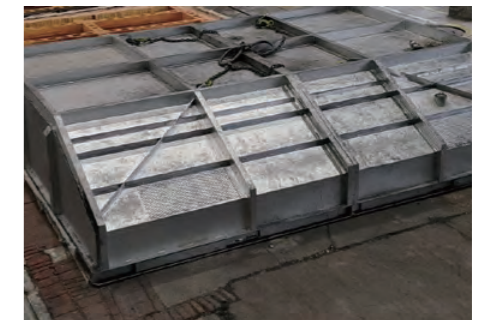
Q What is your outlook for future market trends and what are your priority measures?

A The EAF method can reduce CO₂ emissions to about 1/4 that of the blast furnace method. From the perspective of carbon neutrality, there is a global shift from blast furnaces to EAFs. That said, steel production using the EAF method is expected to increase from the current 500 million tons to 700 million tons by 2030. Demand for electrodes will increase accordingly, especially for large-diameter electrodes used in large furnaces. The large-diameter electrode market demands high quality, in other words, a market where we can demonstrate our competitive advantage. Since these are high value-added products, we intend to raise production capacity of the larger ones to meet strong demand.

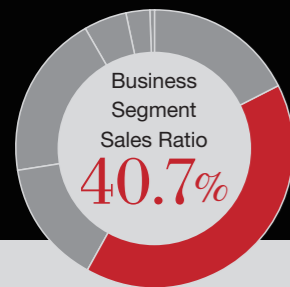
TOPICS

Efforts to Reduce CO₂ Emissions from Electrode Manufacturing

The baking process carried out in the manufacture of graphite electrodes uses a large amount of fossil fuels. Tokai Carbon is working to reduce CO₂ emissions and save energy by improving the thermal insulation properties of our firing facilities. We are also working to reduce CO₂ emissions by switching fuels and using green electricity for the entire plant.



Carbon Black



Roles of Our Products and Their Connections with Society

Carbon black is mainly used for tires. This material, which can make up about 30% of the weight of a tire, supports the safe driving of trucks, buses and passenger cars, which are indispensable for daily life. Due to its characteristic of increasing the strength of rubber, it is used in a variety of other products besides tires, such as rubber hoses, belts, and anti-vibration rubber.

Carbon black is also used as a pigment for coloring. It supports society and our daily lives in familiar ways since it is used for black pigment in plastics, ink for printing newspapers, documents and more.



Main Products



SEAST

SEAST is a type of carbon black that is added to rubber to make it stronger and more resistant to wear, improving vehicle fuel efficiency. It is used in the rubber parts of industrial machines and various sizes and models of tire. As a furnace black product for rubber*, SEAST proudly holds top share on the domestic market.

* Carbon black produced by the incomplete combustion of heavy oil



Aqua Black

Aqua Black is used as black ink in inkjet printers. Since carbon black is manufactured from oil, it is difficult to blend with water. We succeeded to modify it to mixable properties using our exclusive surface treatment technology. The technology allows to realize the deep black color, which is unique to carbon materials.

Stable supply to the local needs. We will propel our efforts toward carbon neutrality through our environmental equipment and technologies.

Norikazu Kawabe

General Manager,
Carbon Black Division



Q What is your current market position and competitive advantage?

A Tokai Carbon started the production of carbon black for the first time in Japan in 1941. Since then, the technology and know-how that we have cultivated over many years as well as our solid track record have become our major strengths.

Since carbon black has a low bulk density and is lightweight, manufacturing and supplying carbon black at locations where it is in demand will reduce transportation costs and CO₂ emissions. We have three carbon black plants in Japan, three in the U.S., one in Thailand, and one in Canada. Our supply system, which is based on local production for local consumption, is the source of our competitiveness. Besides being a reinforcing material for rubber, carbon black is also used as a pigment for coloring. It is used as a black pigment for plastic such as TV frames and as ink for newspapers. In addition, by applying a special surface treatment to our carbon black, it is used as black ink used in inkjet printers by various manufacturers, supporting society and our lives in familiar ways.

Q How was business performance for the segment in 2022?

A In 2022, sales were strong due to strong demand for aftermarket tires for trucks and buses. In addition, the rise in raw material costs was reflected in the selling prices. As a result, net sales increased 39.2% year on year to 138.484 billion yen and operating income increased 39.8% year on year to 12.282 billion.

Q What is your outlook for future market trends and what are your priority measures?

A Global demand for carbon black is expected to grow at an annual rate of 4% to 5% through 2025, driven by increased demand for replacement tires and the widespread use of automobiles in emerging countries.

We have been intensively investing in large-scale environmental facilities at our U.S.-based plants for several years with system installation expected to be completed by 2023. As a result, we are now ready to meet the strong demand for carbon black in the U.S. in the future. In Thailand, we are planning to start operation of a new plant in 2025 on a new site owned by the company. We will further improve productivity and quality, reduce environmental impact, and build a sustainable supply system.

TOPICS

Promoting the Development of Technologies for a Recycling-oriented Society

We are developing advanced technologies that contribute to carbon neutrality and to reducing environmental impact. Specifically, we will develop materials to extend the life of tires and other rubber products, utilize raw materials other than those derived from fossil fuels, recycle used tires, and recover/reuse energy. This will be achieved through co-creation with customers, business partners, universities, and other research institutions.



Fine Carbon



Roles of Our Products and Their Connections with Society

Fine carbon is a carbon product characterized by its denseness, and isotropic graphite, which is manufactured using micron-level fine carbon particles, is a typical fine carbon product.

Isotropic graphite, with its high purity and ability to withstand high temperatures, is used in manufacturing processes of semiconductors, solar cells, airplane engine parts, and various metals.

Since materials of particularly high purity are required in the semiconductor field, demand for fine carbon has been growing along with the development of communication technology, AI, IoT, and other technologies. Also, since semiconductors are quickly evolving, components incorporated in semiconductor manufacturing equipment are subject to stricter conditions. This means that the materials themselves must also evolve. In response, we play a role in co-creating industrial development.

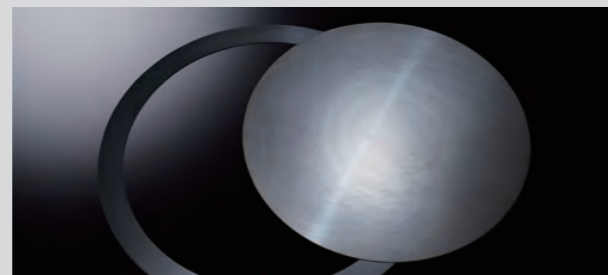


Main Products



Isotropic Graphite Material

In contrast with ordinary graphite, which has anisotropic properties, because of its importance in uniformity, fine carbon material is based on isotropic graphite. It is used for electric discharge machining for creating complex-shaped molds, components for high-temperature processing furnaces, nozzles for continuous casting, and many other products.



Solid Silicon Carbide (SiC)

Manufactured using our unique chemical vapor deposition method, solid SiC is a super high-purity solid silicon carbide manufactured by thickening the SiC coating film, that is normally 100 micron (0.1 mm) thin. With its strength and corrosion resistant properties, it is an ideal material for semiconductor equipment parts.

We will expand the supply of materials that contribute to semiconductor sophistication and productivity improvement to support the higher market demand.

Hideo Shin
General Manager,
Fine Carbon Division



Q What is your current market position and competitive advantage?

A With production bases in Japan, South Korea, China, the U.S., Germany, Italy, and the United Kingdom, which are countries of demand, we are the third largest supplier of isotropic graphite material in the world with an annual supply capacity of 7,000 tons. We have expertise in controlling baking temperatures to achieve stable quality with little variation.

We are the global top supplier of SiC Focus Rings, which were developed and put into production in 2013. Because of its higher strength and lower degree of wear and tear compared to metallic silicon and quartz glass, its use is expanding in increasingly sophisticated semiconductor manufacturing processes. At our bases in Japan, the U.S., and South Korea, where semiconductor device manufacturers and semiconductor equipment manufacturers are concentrated, we have an integrated production system that covers everything from forming to surface CVD-SiC coating to accurately meet customer needs and capture demand.

Q How was business performance for the segment in 2022?

A In 2022, while demand for smartphones and PCs declined, demand for power semiconductors such as SiC semiconductors steadily increased, and sales of SiC Focus Rings and products for general industrial applications expanded, resulting in a 26.2% increase in net sales year on year to 49.393 billion yen and a 54.3% increase in operating income year on year to 14.825 billion yen.

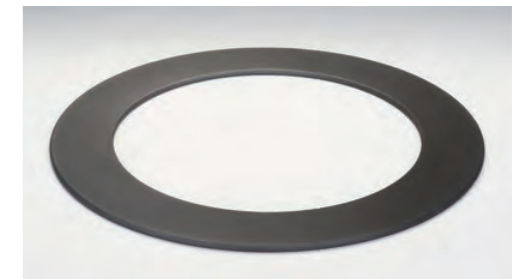
Q What is your outlook for future market trends and what are your priority measures?

A The semiconductor market is expected to grow further in the medium term due to the spread of IoT, AI, and EVs. Since semiconductor manufacturers are enhancing their production systems and improving the performance of semiconductors and manufacturing processes. Under these circumstances, the proportion of SiC products used in the semiconductor manufacturing process is expected to increase. We plan to increase our SiC production capacity 1.5 times higher in 2025 from the 2022 level to capture the demand.

TOPICS

SiC Focus Rings Support the Evolution of Semiconductors

Focus rings are used in the etching process to create grooves in semiconductor circuits using plasmaized gas. The focus ring is placed on the outside of the silicon wafer and is an important component necessary to concentrate the plasma on the wafer and ensure uniform processing. As the number of etching cycles increases and plasma output becomes higher with the miniaturization of semiconductors and the move toward three-dimensional design (stacking), there has been a shift to solid SiC rings that have higher plasma resistance.



Smelting and Lining



With the aim of realizing a sustainable society, we will expand the use of products that reduce environmental impact.

Takashi Masaki General Manager, Smelting and Lining Division



Roles of Our Products and Their Connections with Society

Our Smelting and Lining business consists of three main products: Cathodes, carbon electrodes, and blast furnace blocks.

Cathodes are used in electrolytic furnaces for smelting aluminum. Through the supply of cathodes, we contribute to the stable production of aluminum. Aluminum is lightweight, highly recyclable, and widely used in industries for automobiles, airplanes, trains, and beverage cans.

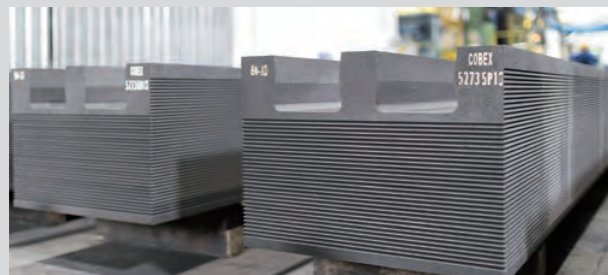
Carbon electrodes are used to produce metallurgical grade silicon, a material used in semiconductors, and support the production of semiconductors, for which demand is expected to grow further.

Furnace linings are installed as refractory materials in blast furnaces used to produce steel for automobiles and other products.

In this way, we contribute to the development of society by supplying key components that are indispensable for the production of each material.



Main Products



Cathodes

Cathodes are used in electrolytic furnaces for smelting aluminum. These products possess excellent thermal conductivity, electrical characteristics, and mechanical characteristics. Using coke as raw material, general-purpose carbon cathodes are heat-treated at 1,000°C and high-end graphitized cathodes at 2,500°C or higher.



Carbon Electrodes

Used as electrical current conductors in submerged electric furnaces (melting furnaces) for production of metallurgical grade silicon, a material used in semiconductors, ferroalloys, phosphorus, lead, nickel, and copper.

Q What is your current market position and competitive advantage?

A The company has manufacturing facilities in Poland and France, sales and service bases in China, and headquarters functions in Germany. We are the global top supplier of high quality cathode and blast furnace blocks while second for carbon electrodes. Based on technologies and know-how accumulated through research and development, we supply products with stable quality that is not affected by raw material characteristics.

Cathodes, carbon electrodes and furnace linings are manufactured using the same equipment and following the same heat treatment process. Therefore, what to produce is switchable that helps to optimize the product mix according to the demand of each product. This kind of product line is unique, which is one of our strength.

In addition, each product requires significant investment and various manufacturing know-how. Since they are essential components for customers' production, changing suppliers entails risks. That said, the entrance barrier for this business is extremely high.

Q How was business performance for the segment in 2022?

A In 2022, shipments of furnace lining decreased due to the impact of the Ukrainian crisis while sales of cathodes and carbon electrodes remained firm. We also made efforts for adjusting sales prices to cover cost increases and to maximize production output. As a result, net sales increased 31.2% year on year to 65.203 billion yen, however, operating income decreased 30.1% to 1.345 billion due to the recording of goodwill amortization and other expenses.

Q What is your outlook for future market trends and what are your priority measures?

A Aluminum, which is lightweight and highly recyclable, is attracting increasing attention from the viewpoint of reducing the environmental impact of automobiles, such as improving fuel efficiency. Global demand for aluminum is expected to grow at an annual rate of 3 to 4%. With the expected increase in aluminum production and expansion of electrolytic furnaces, we will capture the growing demand for cathodes. In the China market, we have been rolling out the RuC®, a strategic product that reduces environmental impact, from 2022 and working on to spread it over.

TOPICS

RuC® - a strategic cathode product

When installing a regular cathode in an electrolytic furnace, the customer must cast a steel bar for conductivity. RuC®, a product that we began supplying in 2017, is a cathode that incorporates a connector rod, which is a rod-shaped material for conducting electricity. This eliminates the need for customers to install the conductor. Furthermore, since the connector rod is made of copper, it has excellent electrical characteristics. Therefore, it is possible to reduce the power consumption of aluminum smelting by approximately 3%. We will contribute to the reduction of environmental impact by spreading RuC® in order to make it an industrial standard.



Industrial Furnaces and Related Products



Contribute to our customer's higher growth, higher quality and the stable production, as a top brand supplier.

Akihiko Sato President, Tokai Konetsu Kogyo Co., Ltd.



Roles of Our Products and Their Connections with Society

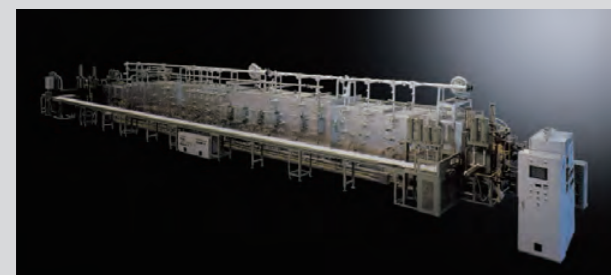
Many components such as MLCCs (Multi-Layer Ceramic Capacitors), lithium-ion batteries, and glass are used in smartphones and cars.

Industrial furnaces are used for heating, sintering, melting, and heat treatment at predetermined temperatures in the production of ceramics, electronic components, secondary battery materials, metals, glass, and powders. Based on the technology and know-how cultivated over many years, the temperature (1,000 to 1,500°C), ambient gas (nitrogen, hydrogen, etc.), pressure, etc. are set according to the material. We supply industrial furnaces capable of manufacturing large quantities of parts with stable quality. EREMA heating elements installed and used in industrial furnaces were the first to be sold commercially in Japan in 1927 and now we are the biggest producer of silicon carbide heating elements in the industry.

In this way, we contribute to society by supplying equipment and products essential for the manufacture of electronic components and lithium-ion batteries.

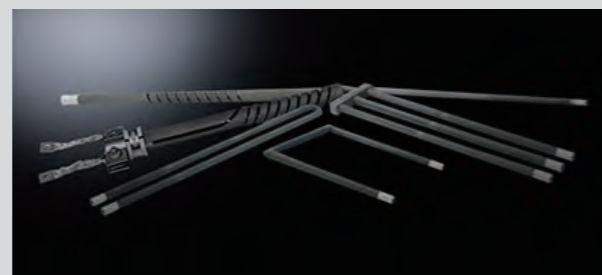


Main Products



Industrial Furnaces

MLCCs and lithium-ion battery materials are inserted into industrial furnaces for heat treatment. We custom design and manufacture our industrial furnaces taking into account heat treatment conditions and material insertion methods to meet customer needs.



EREMA Heating Elements

EREMA heating elements are heating elements composed of high-purity SiC (silicon carbide). Since the heat dissipation per unit area is very large, the temperature can be raised up to 1,600°C. It is an environmentally-friendly heat source that does not create air or noise pollution.

Q What is your current market position and competitive advantage?

A Over the years, we have honed our technology by supplying major electronic component manufacturers in Japan. As the performance of electronic components and battery materials evolve significantly, we respond quickly to customer needs, building a track record of performance and trust. Even for large-scale industrial furnaces that process large quantities of parts, we have achieved the performance to precisely control the temperature and atmosphere gas in the furnace that lead to customers' stable production and quality.

Since baking of electronic components and lithium-ion batteries is an important process in the customer's production, industrial furnaces are an industry with high barriers to entry where trust formed by an excellent track-record is important. The Tokai Carbon Group supplies industrial furnaces and EREMA heating elements to manufacturers around the world, mainly in Japan, China, and Korea, and has established "Tokai" as a leading industrial furnace brand name with 50% share of the global market for industrial furnaces designed for MLCC sintering and 30% share of the global market for heating elements.

Q How was business performance for the segment in 2022?

A In 2022, although demand in the energy-related sector remained firm, net sales decreased 9.7% year on year to 16.272 billion yen due to the impact of the lockdown in China and the slowdown in the electronic component-related industry. Operating income decreased 17.1% year on year to 4.475 billion yen.

Q What is your outlook for future market trends and what are your priority measures?

A The MLCC market is expected to grow at an annual rate of approximately 10% and the lithium-ion battery market at an annual rate of 20-30% backed by a growth in 5G base stations, EVs with its electrification. There should be a series of capital investment coming on line from our customers.

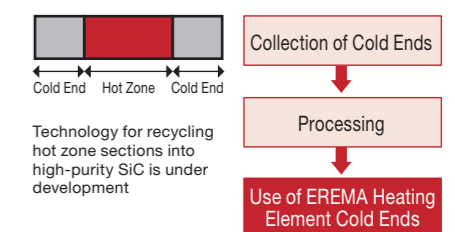
Under these circumstances, we are expanding our production capacity for industrial furnace and EREMA heating elements. Expansion for industrial furnaces production in Shiga plant, Japan will be completed in January 2023. Expansion for heating elements production in Sendai Plant, Japan will be completed in 2025 bringing the capacity up to 1.6 times larger than the current level.

TOPICS

Promoting initiatives to reduce CO₂ emissions

For industrial furnaces, we are working to improve technologies to effectively utilize the energy input during heat treatment in order to save energy. As for EREMA heating elements, we have developed and introduced environmentally-friendly products and launched an initiative to collect and recycle used products from 2023. In terms of production, we are introducing forms of renewable energy such as solar power that contributes to our energy saving and high efficiency production.

Started recycling the cold ends of used EREMA heating elements



Friction Materials

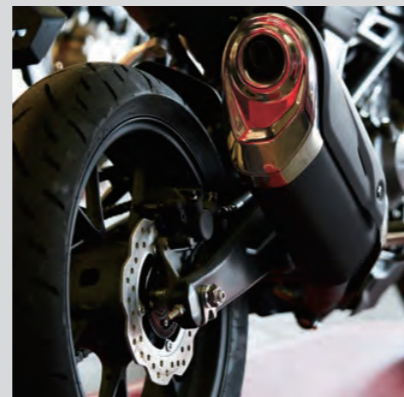


Roles of Our Products and Their Connections with Society

To “stop things that move” and “transfer power”, friction materials are used in brakes and clutches of motorcycles, construction machinery, agricultural machinery, machine tools and robots.

Sintered metal friction materials, our main products, are manufactured by sintering and processing a mixture of graphite, copper, etc. They are highly durable and are incorporated into brakes and clutches for large motorcycles and special vehicles (cranes, mining wheel loaders, combine harvesters, tractors, etc.). In addition, resin-based friction materials are used in control parts of machine tools and industrial robots.

We simplify packaging and utilize returnable containers to reduce environmental impact when delivering our goods. In manufacturing, we are working to reduce CO₂ emissions by switching to carbon-free power at our plants.



Direct match to the needs.
Our product will generate the new market.

Hirofumi Masuda
General Manager,
Friction Materials
Division

Q What is your current market position and competitive advantage?

A We develop and propose products that match the detailed needs of our customers. Our technology and know-how built over a long history makes that possible. It was 1949 when Tokai was the first to produce sintered metal friction materials for motorcycles in Japan. Today, we dominant 60% share in friction materials used for large motorcycles in Japan.

Q How was business performance for the segment in 2022?

A In 2022, despite a slowdown in the Chinese construction machinery market and supply

chain disruptions, sales increased 5.4% from the previous year to 9.362 billion yen due to firm demand for major applications.

Q What is your outlook for future market trends and what are your priority measures?

A In addition to expanding sales of sintered metal friction materials and resin-based friction materials, which are our main products, we will also work to develop the market for off-road vehicles, including four wheeler buggies, which are gaining popularity mainly in the U.S. On the production side, we are promoting the automation of manufacturing and utilizing AI for material formulation for further product development.

Anode Materials/Others



Roles of Our Products and Their Connections with Society

Lithium-ion batteries are found in mobile phones, hybrid cars, and EVs. Graphite is used for the anodes of these batteries. Our advanced graphite manufacturing technology allows us to produce and supply high-quality, low-cost anode materials with less CO₂ emissions during production.

Looking back on 2022 and priority measures for the future

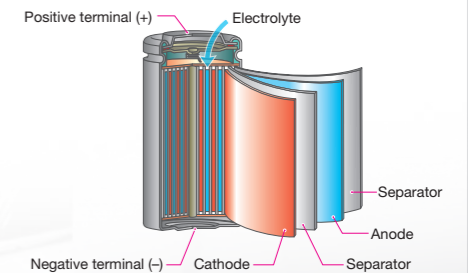
In 2022, sales of anode materials decreased 35.1% from the previous year to 1.888 billion yen due to sluggish sales of EVs in which our products are used and intensified competition caused by the emergence of new companies.

On the other hand, since efforts toward local production for local consumption of EV components are spreading in Europe and the U.S., local production of anode materials for lithium-ion batteries is being encouraged. With heat treatment manufacturing facilities in Europe and the U.S., we are well positioned for growth opportunities to utilize Japanese anode material production technology in regions of demand. Currently, the production technology for anode materials is being transferred from Japan to our base in France under the umbrella of Tokai COBEX. The production capacity will be enlarged according to the market expansion.

TOPICS

How lithium-ion batteries made using graphite work

Rechargeable lithium-ion batteries for repeated use can be charged and discharged by taking in and releasing lithium ions by using the movement of lithium ions in the anode material. This design utilizes the structure and chemical stability of graphite, and has a larger battery capacity and operating voltage than other rechargeable batteries. It is smaller and lighter as well. It can withstand additional charging when it is not fully discharged.



Sustainability

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A Talk with Our External Directors



Enhancing the Effectiveness of the Board of Directors

As the globalization of business progresses rapidly, our three external directors discussed the ideal form of governance appropriate for a global company and the ideal form of the Board of Directors.

Nobumitsu Kambayashi
External Director



Mayumi Asada
External Director



Toshiro Miyazaki
External Director

The mission and thoughts of an external director

Miyazaki One year has passed since I became an External Director of Tokai Carbon. I personally have experience working for many years in the area of corporate management planning at a planning department of a shipbuilding company after I worked at the company's departments that handled management accounting, plan execution follow-up tasks, etc. Later, I also worked as an officer and CFO for several subsidiaries. From there, I joined a company engaged in marine development and became its President. 100% of that company's business is conducted overseas. It is a global company with only about 5% of Japanese employees. Our activities were based in areas where oil could be excavated, such as the U.S., Brazil, Singapore, Australia, Thailand and Africa. Since Tokai

Carbon currently sees 80% of its sales come from overseas operations, I think that a common point is the fact that we are developing our business globally and that the majority of our employees are foreign nationals.

In order for a company with global businesses and employees to be effective in governance, it is necessary to devise a certain level of ingenuity. As a result of my previous experience, I need to pay close attention to the governance of subsidiaries, especially the governance of overseas subsidiaries. Currently, with the exception of one overseas subsidiary in Thailand and one in the United States, the management of Tokai Carbon's overseas subsidiaries is basically entrusted to local managers. However, Tokai Carbon, our parent company, needs to take the lead in ensuring compliance among employees, including adhering to internal rules and

regulations apart from delegating management authority. Sometimes I go beyond the scope of governance to provide future-oriented advice on the overall management of the company. I believe it is my role as an external director to provide appropriate opinions when necessary, including such advice.

Kambayashi I have a lot of experience in heavy industry companies and have been employed at a shipbuilding company for a long time, just like Mr. Miyazaki. I also have experience as the general sales manager of an entire company. As you know, there was a time when heavy industry was positioned as a key industry in Japan. At that time, I did my best for the development of society and I think I was able to take on various challenges. When I was approached about becoming an External Director at Tokai Carbon, I was retiring as the head of the shipbuilding company. Although I had some doubts before making this decision, I decided to assume the position in December 2015 partly due to a strong request from President Nagasaka to take the position. Seven years have passed since I took office and I have had many experiences during this time. Since the mission of an External Director is basically monitoring, it is of course important to point out and call attention to runaway management and execution by saying "it is risky, so it should be stopped," "it is dangerous," etc. I think it is also an important role as an External Director to support corporate officers, including President Nagasaka, who is also responsible for business execution. I have taken these points into consideration, sometimes admonishing management and sometimes giving them a push.

Asada I have been working as a lawyer for over 20 years. I think I have not always focused on corporate legal affairs but rather on medical-related legal affairs, such as those of hospitals and medical corporations. I have also been involved in criminal cases and juvenile cases, working on them without specializing in any particular field.

Tokai Carbon was the first company to appoint me as an External Director. I was invited to assume this position in March 2021 in response to the growing importance in society of external directors providing advice from a female perspective.

Since I have no prior experience as an external director, the existence of a system that allows external directors to attend weekly Management Committee meetings has greatly helped me. Normally Board of Directors meetings are held once a month. However, by attending weekly Management

Committee meetings, External Directors can grasp how each department is trying to address the issues that are occurring within the company. I think it is an extremely useful system that allows you to get in touch with real-life information within the company before attending the Board of Directors meetings.

The role of the Management Committee

Asada We also receive reports on accidents and troubles during Management Committee meetings. When this happens, I sometimes give advice during those meetings based on my own experience and knowledge, such as conveying the importance of related surveys and examinations in order to minimize troubles.

On the other hand, External Directors are required to check risks from the standpoint of shareholders rather than simply agreeing with the ideas of the management team. I always try not to forget that perspective.

Miyazaki Most of the proposals for the Board of Directors are deliberated by the Executive Management Committee. As Ms. Asada said, the Management Committee is certainly useful. Because of that, I will listen carefully to proposals made during Management

Sometimes it is important to make comments that encourage executive officers.



A Talk with Our External Directors



Succession planning is also very important from the perspective of management sustainability.

Committee meetings. This is because there is raw information and vivid thoughts from the executive side. However, since the proposals are often filled with the passion of those bringing them forward, there is an undeniable tendency to drift in one direction. I am afraid that even those of us in the position of External Director will make a wrong decision if we know the details and go too deeply into them since there is a risk that we will be pulled by the passion of the person making the proposal. I believe that execution should only be conducted by executives and that external directors should make statements that are focused on monitoring and supervising management. I try to calmly judge the content of deliberations of the Management Committee and express my opinions at the end of deliberations, paying attention to whether I am too biased on one side with passionate proposals.

Of course, since there are many projects that I am personally very supportive of, I sometimes give encouragement. However, I am always careful to find the right balance.

Kambayashi I totally agree. I think it all boils down to what Mr. Miyazaki said and would like to add to this. If you attend a monthly meeting of the Board of Directors without attending Management Committee meetings,

you will probably receive a lecture from the office in advance. This takes up our time as well as their time for the lecture. Considering this time burden, I came to the conclusion that it would be most rational for external directors to attend Management Committee meetings. There is a Management Meeting every Monday morning. To prepare for the meetings, I make it a rule to do a “preparatory study” on each Sunday the day before. I read Management Committee materials in advance. This way, I have the points of the agenda in mind so that I can ask questions if interested and give advice if necessary. By doing so, I can learn about the vivid feelings that Mr. Miyazaki mentioned. By making such efforts, I can also deepen discussions during Board of Directors meetings.

Tokai Carbon’s Board of Directors and the qualities of President Nagasaka as Chairman of the Board of Directors

Asada During Tokai Carbon’s Board of Directors meetings, directors speak frankly which allows us, as external directors, to speak whenever we want to. Of course, meetings are centered on those who propose the agenda, and President Nagasaka is the main person for answering questions from external directors and Audit & Supervisory Board members. However, I try to raise my hand without hesitation when I need to speak in order to confirm everything that needs to be confirmed. I think the reason why discussions at the Board of Directors are more likely to deepen is because, as I mentioned earlier, discussions at the Executive Management Committee serve as the foundation. I believe that President Nagasaka, who is the Chairman of the Board of Directors, is putting his utmost effort into creating a Board of Directors where directors speak frankly and operating the Management Committee to invigorate the Board of Directors.

Kambayashi President Nagasaka is willing to spend enough time fully grasping the thoughts of people making proposals in advance before discussing it at the Board of Directors meetings. It may be possible to have in-depth discussions at meetings of the Board of Directors because we have prepared a casual meeting environment and a solid place for communication. President Nagasaka sometimes asks me to listen to what directors are saying. Listening to them deepens my understanding and allows me to clearly see that Tokai Carbon is a company in which highly qualified personnel have gathered together. I feel that Tokai Carbon is an interesting company.

Thoughts about the Nomination Committee/Remuneration Committee

Kambayashi I serve as Chairperson of the Nomination Committee as well as the Chairperson of the Remuneration Committee.

The most important issue for the Nomination Committee is the issue concerning successors. It goes without saying that a succession plan must be developed internally. It is a difficult issue for any company to deal with. Even if a succession plan is decided on internally, it should not be widely authorized within the company let alone made public. At the moment, although the Nomination Committee is only listing successor candidates, it is a very sensitive issue.

The Remuneration Committee will consider matters at the industry level and the level of companies of the same size. There is no need to break out from that level nor does the level need to be set to a level that is very low. There is no correct answer worthy of 100 points, but we should try to get a sense of satisfaction as a whole. It is important to give consideration to the amount of remuneration so that each officer will be willing to work hard in the future.

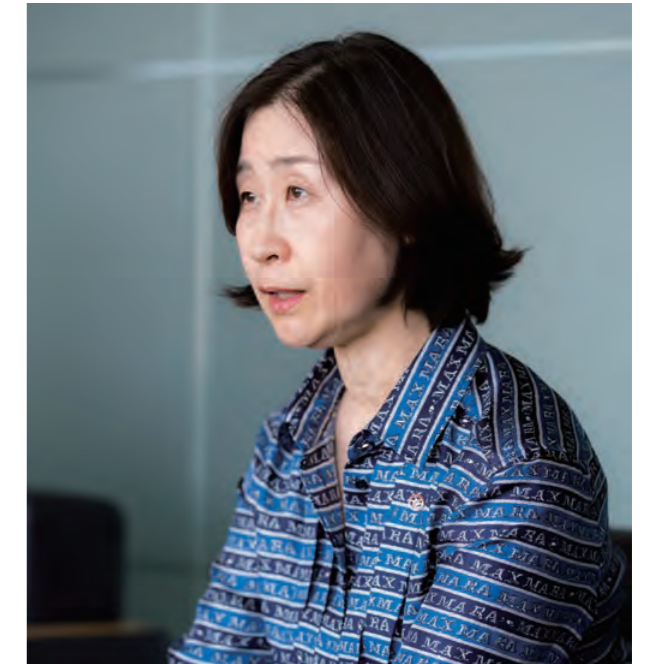
Miyazaki Succession planning is also very important from the perspective of management sustainability. Given the age difference between the President and executive officers of the Company, this is an extremely important issue, and I think it is necessary to take immediate action. I think it is necessary to clearly state to the current executive officers and their subordinates at the general manager level who you intend to succeed to your position. It is important to carry out and update these initiatives every year.

Towards sustainable growth in the future

Asada I do not see many women when I attend Management Committee meetings and global meetings. Of course, there are many female employees, but I have the impression that the number of female employees is still small at meetings of a certain level. There are many excellent female employees in the Company, and I hope that they will play more of an active role. Although it is not appropriate to be preoccupied with gender, at this point in time, I think it is also necessary to intentionally increase opportunities for women to play an active role.

In terms of governance, as was previously indicated, with overseas sales approaching 80%, I think it is necessary to keep an eye on business activities overseas

Women’s active participation is still at the halfway point. It is also important to keep an eye on overseas business.



and check problems. It is difficult to have control when facing language barriers and cultural differences, but I think that is extremely important for us.

Miyazaki We must seriously raise management awareness regarding ESG and the SDGs. Since Tokai Carbon has “Carbon” in its company name, we need to more clearly show how we will work toward carbon neutrality in the future. Rather than being afraid of various headwinds, it is important for us to be conscious of environmental harmony and coexistence with nature to acquire business opportunities and actively contribute to the future of the Earth and society.

Kambayashi Since I became External Director, I have witnessed five major M&As. As a result, 80% of our sales is overseas based. As I have already mentioned, I think there is still more work to be done with regard to the governance of overseas factories and companies.

Since M&As must be considered together with PMI, it is important to make a plan for how to execute PMI after M&As take place and carry it out. In this regard, we are always thinking about how we can improve our grip on things and what we should do in the future. As an External Director, I intend to actively work with the Board of Directors.

Basic Policy and Structure

Sustainability Policy

Tokai Carbon Group engages in corporate activities based on the corporate philosophy of “Ties of Reliability” with our stakeholders. Our management strategies are based on good consideration of ESG (Environmental, Social and Governance) to surely respond to the trust of our stakeholders and we work to solve social issues through our business that will contribute to the realization of a sustainable society and enlarge our corporate value.

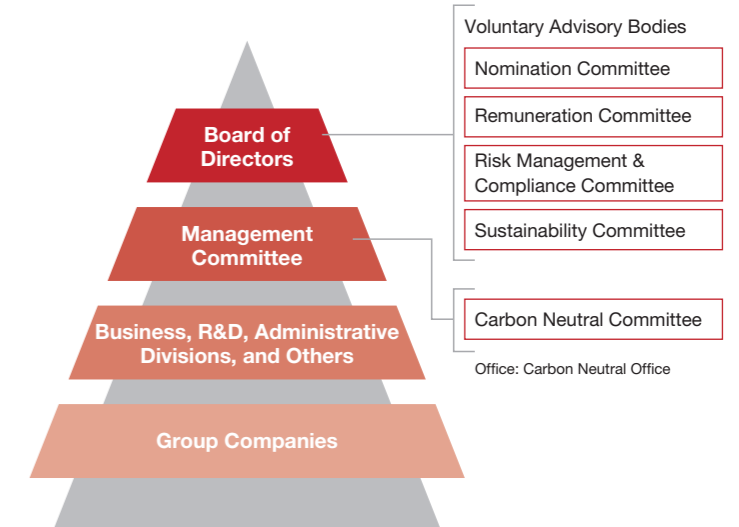
Materiality identification process

In November 2019, we specified our “Materiality” that we should focus on. We will sincerely face each materiality, contribute to the realization of a sustainable society, and appropriately disclose the status of its efforts.



Sustainability management structure

In January 2022, we set up the Sustainability Committee as a voluntary advisory body to the Board of Directors. Chaired by the President and CEO, it consists of the officer responsible for the General Affairs and Legal Affairs Department, the officer responsible for the Corporate Planning Department, the officer responsible for the Human Resources Department, the General Manager of the R&D Strategy Division, the General Manager of the Technology & Engineering Division, and General Managers of four principal business divisions. It meets on a quarterly basis, in principle, to discuss important matters related to sustainability, refer certain matters to the Board of Directors, submit reports to the Board of Directors, and supervise the disclosure of information on sustainability, including the creation of integrated reports.



Sustainability targets (KPIs) and results

Materiality		Goals	2022				2023		
Themes	Elements		Specific numerical targets	Scope	Actual	Rating	Specific numerical targets	Scope	
Harmony with the global environment	Reducing environmental impact	Reduce greenhouse gas emissions	Reduce CO ₂ emissions by 25% (VS 2018) by 2030 and achieve carbon-neutrality in 2050	Consolidated	Total CO ₂ emissions for the Group in 2022: 2,408 thousand tCO ₂ (21% reduction from 2018) This is result of primary efforts such as switching over to renewable energy and fuel switching	○	Reduce CO ₂ emissions by 25% (VS 2018) by 2030 and achieve carbon-neutrality in 2050	Consolidated	
		Reduce pollution	Dispose of all low-concentration PCB waste by March 31, 2025	Domestic group ¹	Almost on target with about 62% of low concentration PCB waste having been disposed of	○	Reduce VOCs to 90% or less compared to 2015 level	Non-consolidated	
			Maintain zero environmental complaints against the Company (contamination of air, water, etc.)	Consolidated	No environmental complaints filed	○	Maintain zero environmental complaints against the Company (contamination of air, water, etc.)	Consolidated	
	Reduce water consumption	Reduce water consumption (1% or more of reduction from FY2018)	Non-consolidated	4% reduction from FY2018	○	Reduce water consumption (less than the 2021 level)	Consolidated ³		
	Realizing a recycling-oriented society	Recycle waste	Recycle 80% or more of waste Final disposal rate of 25% or lower	Domestic group ¹	87% of waste recycled 18% final disposal rate	○	Recycle 80% or more of waste Final disposal rate of 25% or lower	Domestic group ¹	
Use sustainable resources		—	—	—	—	Acquire ISCCPLUS certification at three CB plants in Japan by 2024	Chita Plant/Ishinomaki Plant/ Kyushu-Wakamatsu Plant		
Contributing to society through our business	Technological Innovation	Emphasize research and development	Devote 80% or more of development expenditures to reducing environmental burden	Domestic group ²	91% of development expenditures devoted to reducing environmental burden	○	Devote 90% or more of development expenditures to reducing environmental burden	Domestic group ²	
			Devote 60% or more of development expenditures to reducing environmental burden	Tokai Konetsu Kogyo Co., Ltd.	85.1% of development expenditures devoted to reducing environmental burden	○	Devote 70% or more of development expenditures to reducing environmental burden	Tokai Konetsu Kogyo Co., Ltd.	
			Make 80% or more of patent applications in areas related to reducing environmental burden	Domestic group ²	100% of patent applications filed in areas related to reducing environmental burden	○	Make 90% or more of patent applications in areas related to reducing environmental burden	Domestic group ²	
			Make 70% or more of patent applications in areas related to reducing environmental burden	Tokai Konetsu Kogyo Co., Ltd.	100% of patent applications filed in areas related to reducing environmental burden	○	Make 70% or more of patent applications in areas related to reducing environmental burden	Tokai Konetsu Kogyo Co., Ltd.	
	Supplying safe and secure products	Further elevate quality	Reduce electrode consumption rate (3% reduction from FY2021)	Consolidated	Among target users, there was a reduction in the electrode consumption rate of 3% or more. The overall target has been met since there are also users that have witnessed electrode consumption rates that have surpassed planned targets	○	Establish electrode consumption rate reduction technology (Rate for 2023: 3% reduction from 2022)	Consolidated	
	Supply chain management	Raise supplier awareness of CSR	Disseminate procurement policy to new suppliers on a consolidated basis and conduct CSR survey	Consolidated	From April 2022, when we start regular transactions with new raw material suppliers, we will inform them about our procurement policy and conduct a CSR procurement survey	○	—	—	
		Reduce CSR risks at suppliers	Conduct CSR survey of key suppliers on a consolidated basis	Consolidated	Report on the analysis results of a survey conducted on five key overseas base suppliers in 2022	○	Conduct CSR survey of key suppliers on a consolidated basis	Consolidated	
	Respect for Human Rights	Raise employee awareness of human rights	Revise Harassment Manual and conduct harassment training at domestic subsidiaries	Domestic group ¹	Harassment Manual was revised. Harassment training was conducted at domestic subsidiaries (attendance rate: 100%, average score of comprehension test: approximately 90%)	○	Distribute Harassment Manual to domestic subsidiaries	Domestic group ¹	
			Conduct annual human rights due diligence	Consolidated	Conducted human rights due diligence in 2022	○	Expand human rights due diligence to overseas subsidiaries	Consolidated	
			Improve understanding of global human rights policy	Consolidated	Conducted training related to global human rights policy and due diligence	○	—	—	
Contribution to community	Actively engage in community contribution activities	Enhance disclosure of community contribution activities	Consolidated	Total amount of donations and activity spending: approx. 48.4 million yen (donations to support Ukraine, donations to support regional culture and sports, etc.) Community contribution activities: Cleanups, tree planting, food donations, etc.	—	Enhance disclosure of community contribution activities	Consolidated		
Strengthening Corporate Governance	Establish a consolidated governance system	—	Consolidated	Promotion of internal controls, North American operations holding company's functional upgrading, subsidiary management, etc., have been conducted as planned	—	—	Consolidated		
Strengthening our management base	Ensuring compliance	Maintain ethical standards, regulatory compliance	Commit no serious regulatory violations	Consolidated	Commit no serious regulatory violations	○	Commit no serious regulatory violations	Consolidated	
		Formulate a global code of conduct [tentative name] and inform subsidiaries around the world about it	Consolidated	Formulated new Guidelines and Global Code of Conduct and promoted their adoption within the Group	○	Create a business base aimed at building a global compliance system	Consolidated		
	Developing human resources	Develop diverse human resources	Double the number of female employees in managerial positions (by the end of 2024)	Non-consolidated	Increased 1.66 times over the 2021 level (as of December 31, 2022)	○	Double the number of female employees in managerial positions (by the end of 2024)	Non-consolidated	
			Percentage of new female graduates hired for career-track positions: 30% on a non-consolidated basis	Non-consolidated	Percentage of new female graduates hired (non-consolidated) who entered the company in April 2023: 40%	○	Percentage of new female graduates hired for career-track positions: 30% on a non-consolidated basis	Non-consolidated	
			Increase the number of non-Japanese employees in managerial positions (by the end of 2024)	Non-consolidated	Conducted employment activities, including for management candidates, as planned	○	Increase the number of non-Japanese employees in managerial positions (by the end of 2024)	Non-consolidated	
Promoting occupational health and safety	Reduce occupational accidents	Raise the ratio of mid-career hires in managerial positions (by the end of 2024)	Domestic group ¹	Increased 3.2% over the 2021 level (as of December 31, 2022)	○	Raise the ratio of mid-career hires in managerial positions (by the end of 2024)	Domestic group ¹		
		Effectively implement training	Total training hours planned by head office (new-hire training/specialist training)	Domestic group ¹	Specialist training in 2022: 1,747 hours, New-hire training in 2022: 1,674 hours	○	Total training hours planned by head office (new-hire training/specialist training)	Domestic group ¹	
Promoting occupational health and safety	Reduce occupational accidents	Reduce frequency rate (1.8 or lower)	Consolidated	Frequency rate: 1.20	○	Reduce frequency rate (1.20 or lower)	Consolidated		

¹ Tokai Carbon Co., Ltd. and its principal subsidiaries in Japan (i.e., Tokai Konetsu Kogyo Co., Ltd., Tokai Fine Carbon Co., Ltd., and Tokai Material Co., Ltd.)

² Tokai Carbon Co., Ltd. + Tokai Fine Carbon Co., Ltd., and Tokai Material Co., Ltd.

³ Tokai Carbon Co., Ltd. and its 9 principal subsidiaries (i.e., Tokai ERtCarbon GmbH, Tokai Carbon GE LLC, Tokai Carbon CB Ltd., Cancarb Limited, Thai Tokai Carbon Product Co., Ltd., Tokai Fine Carbon Co., Ltd., Tokai Carbon Korea Co., Ltd., Tokai COBEX Polska sp. z o.o., Tokai COBEX Savoie SAS)

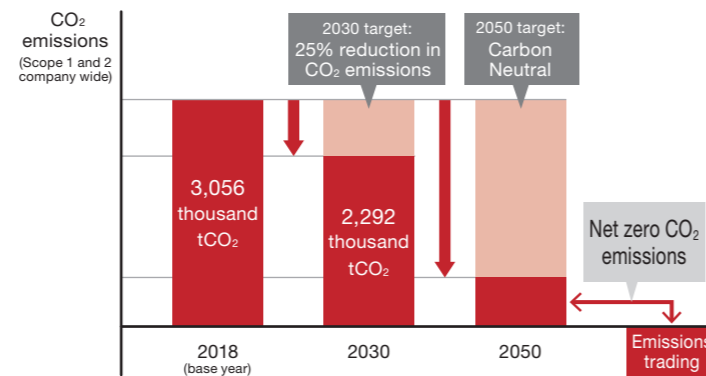
To a Carbon-Neutral Society

The Tokai Carbon Group is working to reduce total CO₂ emissions with a goal of carbon neutral by 2050. Recognizing that addressing climate change is an important management issue, and in November 2021, the Group expressed its support for the Task Force on Climate-related Financial Disclosure (TCFD). We will take appropriate measures toward achieving a carbon-neutral society by assessing the impact of climate change on our business.

Tokai Carbon Group's CO₂ Emissions Reduction Target

Tokai Carbon Group targets reducing CO₂ emissions by 25% (VS 2018) by 2030 and achieving carbon-neutral in 2050.

* The targets pertain to Scope 1 and 2 emissions company wide

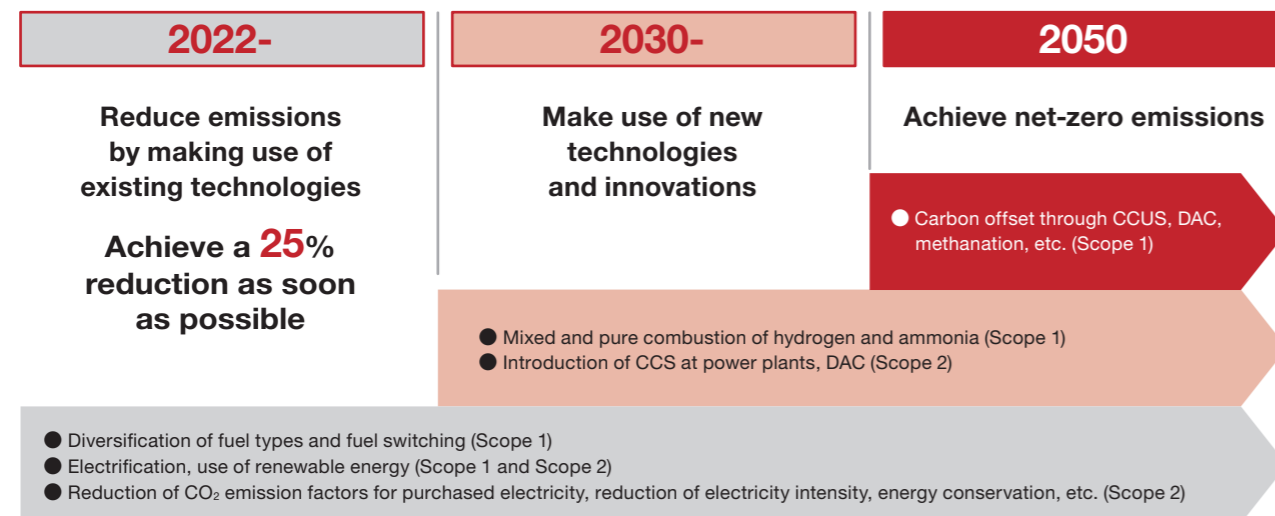


Roadmap to Carbon Neutral

We will take steps to reduce CO₂ emissions using existing technologies to achieve a 25% reduction in CO₂ emissions by 2030, aiming for the earliest possible time. With respect to raw materials, we are considering introducing nature-derived and renewable resources. We will promote fuel diversification and conversion, such as shifting from fossil fuels to electric energy and utilizing renewable energy for manufacturing. We

will also make capital investments in energy conservation.

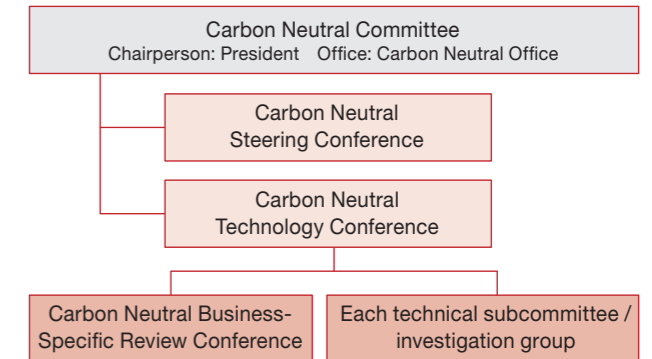
In addition, we will actively use new technologies and innovation towards net-zero carbon emissions in 2050. Amid revolutionary technological advances worldwide to reduce CO₂ emissions, we will actively introduce technologies that are likely to find full practical application.



*CCS: Carbon dioxide Capture and Storage (Capturing and storing CO₂) *DAC: Direct Air Capture (Technology for directly capturing and using CO₂ in the air)
*CCUS: Carbon dioxide Capture, Utilization and Storage (Technology to utilize CO₂ that has been isolated and stored)

Structure for Aiming Carbon Neutral

We reorganized the Carbon Neutral Project launched in May 2021 into a Carbon Neutral Committee in February 2022 to reinforce the organization. Serving as a high-level command tower for our carbon neutral efforts, it plans company wide policies and strategies. It visualizes issues and actions and centrally controls them. Under the committee, we have set up different related meetings, technical subcommittees, and technical study groups to implement specific strategies and measures for increasing the Group's competitiveness cross-divisionally.



Response to Climate Change in Accordance with TCFD Recommendations

We analyze the impacts of climate change on our business in accordance with the TCFD recommendations and publish information specified as disclosure requirements in the TCFD recommendations and the results of scenario analysis on our website.

<https://www.tokaicarbon.co.jp/en/sustainability/climate-change.html>

GHG emissions (Scope 1 and Scope 2) (consolidated)

★Third party assurance

	2018	2019	2020	2021	2022
GHG emissions (thousand tCO ₂ e)	3,056	2,687	2,232	2,409	2,408*
Scope1 (thousand tCO ₂ e)	2,430	2,164	1,825	2,070	2,018*
Scope2 (thousand tCO ₂ e)	626	523	406	339	391*

Calculation of Scope 1 and Scope 2 GHG emissions

Boundary

CO ₂	All the consolidated production sites, head office, branches, and laboratories (Tokai Carbon (Dalian) Co., Ltd., Tokai Carbon (Suzhou) Co., Ltd., Shanghai Tokai Konetsu Co., Ltd., Tokai Konetsu (Suzhou) Co., Ltd., and Tokai Carbon Europe Ltd. Italia Branch were added in 2022)
CH ₄ , N ₂ O	Starting in 2022, major production sites that account for approximately 98% of consolidated CO ₂ emissions have been added to the scope of the calculation

Period covered

	Japan	Overseas
CO ₂	Energy sources	January to December
	Non-energy sources	January to December
CH ₄ , N ₂ O	January to December	January to December

Calculation Method

CO₂ equivalent emissions are calculated using the global warming potentials of CO₂, CH₄, and N₂O gases. HFCs, PFCs, and SF₆ are excluded from calculations because these emissions are negligible.

Scope 1: Direct GHG emissions from corporate activities, including energy-derived GHG emissions and non-energy-derived GHG emissions (emissions from industrial processes) are calculated. In principle, GHG emissions from non-energy sources are calculated from the amount of raw and auxiliary materials used and the balance of products and waste.

Scope 2: ● Indirect GHG emissions associated with use of energy in corporate activities.

● The market-based method in the GHG Protocol is used. For emissions in Japan, the emission coefficient by electricity utility under the Act on Promotion of Global Warming Countermeasures applies. For overseas emissions, emission coefficients published by electricity utilities are used, although the latest emission coefficients published by IEA or national and regional authorities are used for emissions from some plants.

Respect for Human Rights

At Tokai Carbon, we believe that consideration for human rights is important in order to realize our corporate philosophy of “Ties of Reliability”. The Universal Declaration of Human Rights declares the “common standards that all peoples and all countries must achieve” in order to respect and ensure human rights and freedoms, and we support this declaration.

Global Policy on Human Rights

In order to fulfill our corporate responsibility to respect human rights, we conduct business activities with a high sense of ethics based on the Guiding Principles for Business and Human Rights. In July 2020, based on these international regulations on human rights, we established the Tokai Carbon Group Global Policy on Human Rights. Under this policy, we will further promote initiatives to respect human rights as Tokai Carbon Group. The Tokai Carbon Group Human Rights Promotion Committee plays a central role in promoting this global policy and the concept of respect for human rights.

We support the “Children’s Rights and Business Principles”, too, because we believe that special consideration is needed regarding children’s human rights since they are vulnerable to violations of their rights. We are also engaged in social contribution activities to avoid violations of children’s rights in our business and to realize children’s rights.

Provisions of Tokai Carbon Group Global Policy on Human Rights

1	Compliance with laws and regulations
2	Prohibition of discrimination
3	Prevention of child labor and slave labor
4	Support of basic labor rights
5	Reduction of excessive working hours and securing rights to wages
6	Health and safety standards
7	Prohibition of harassment
8	Respect for privacy
9	Prevention and mitigation of negative impacts on human rights
10	Response to human rights violations

 **Tokai Carbon Group Global Policy on Human Rights**
https://www.tokaicarbon.co.jp/en/sustainability/pdf/human_rights.pdf

Human rights due diligence

The Tokai Carbon Group conducts human rights due diligence to ensure corporate respect for human rights in order to identify and assess, as well as prevent and address, potential human rights risk arising from the entire value chain and corporate-related human rights-issues. Such issues shall be identified based on the engagement with our stakeholders including employees, suppliers and business partners.

Process of our human rights due diligence



Initiatives for human rights awareness

Tokai Carbon conducts group-wide and division-specific training to instill an awareness of human rights in its employees.

Based on the Global Human Rights Policy of the Tokai Carbon Group, training focuses on reinforcing an understanding of the basic way of thinking about respecting human rights. In doing so, it uses present-day examples, including ones addressing discrimination, harassment, violations of the rights of people with disabilities, and violations of the rights of people from other countries. Human rights training is conducted for employees who have been newly hired or promoted to management. Particularly when promoted to management, they are educated on human rights issues such as bullying and harassment, by clarifying harassment-based issues, and using actual examples of measures taken in each case.

In 2022, human rights training was conducted with the participation of 1,060 employees at Tokai Carbon and partner companies, and 625 employees at Group companies in Japan. Harassment training was conducted with the participation of 209 employees at Tokai Carbon and 527 employees at Group companies in Japan.

Based on our awareness that human rights are the foundation of sustainability, we have joined human rights organizations for businesses in Tokyo, Osaka, and Nagoya. We use our memberships in these organizations to share information on and expand our understanding of human rights to ensure that respect for human rights remains a key aspect of our corporate culture.

Supply Chain Management

We recognize that maintaining a stable supply of high-quality products is our most fundamental responsibility, and we are continuously striving to comply with various laws, regulations and social norms, and to reduce the environmental impact of our manufacturing processes.

CSR procurement policy/Implementation of CSR procurement survey

In order to face global environmental and social issues as a concerned party, the Company has established the Tokai Carbon Group Procurement Policy. For our new and priority business partners, we request they agree with our Group Procurement Policy and respond to the CSR Procurement Survey to confirm their compliance status. Its major survey items are determined in accordance with the Procurement Policy.

The process is characterized by assessing business partners based on the survey result and requesting them to take necessary improvement actions.

In 2022, we conducted a survey on our priority five raw material suppliers located in overseas to assess the status of existing business partners. The survey found that there were no incidents that needed to be reviewed among the business partners.

 **Tokai Carbon Group Procurement Policy**
https://www.tokaicarbon.co.jp/en/sustainability/pdf/pdf_procurement.pdf

 **Tokai Carbon Group Implementation of CSR procurement survey for our business partners**
<https://www.tokaicarbon.co.jp/en/sustainability/procurement.html>

Occupational Safety and Health

As its global safety policy, the Group has adopted “Safety is a critical core value shared by the entire Tokai Carbon Group. We aim to provide a safe working environment for all people working in our plants by eliminating hazards and reducing risks.”

Health and safety management structure

The Group’s safety policy and initiatives are subject to approval by the Executives Meeting and the Board of Directors. At the Company, the Board of Directors supervises occupational health and safety risks, and the director in charge of risk reports to the Board of Directors on important matters such as occupational accidents as necessary.

In addition, we hold Central Work Committee meetings attended by the director in charge of health and safety, department managers in charge, and the labor union to

discuss health and safety issues and to work on continuous improvement of health and safety. Further, we hold Health and Safety Committee meetings at each site with the participation of managers and supervisors at each site and the labor union to report and discuss matters related to occupational health and safety. Cooperating companies to which the Company outsources its work also participate in the Health and Safety Committee meetings as observers.

Improving occupational safety and health

In order to eliminate hazards and reduce risks, the Group promotes the implementation of risk assessments and countermeasures. In the risk assessment, we evaluate the risks that lead to injury and the risks that affect health, clarify the priorities for the identified risks, and improve the work environment. When installing new production equipment or refurbishing existing equipment, we conduct risk assessments from the equipment design stage, and work to reduce risks in advance if the risks are high. For work-related injuries (occupational accidents), poor physical condition, and serious incidents, we first grasp the situation through on-site verification, thoroughly investigate the root cause through the five whys analysis, and formulate measures to prevent recurrence to confirm its effectiveness. Moreover,

in order to prevent similar accidents, we share information on the details and countermeasures with all business sites.

In addition to these initiatives, we conduct safety education to enhance our safety awareness. In 2022, 118 employees, including newly hired employees, participated in training provided by an external organization in order to improve their sensitivity to danger. We also held a training session using virtual reality (VR) for people to experience danger, with 67 participants in 2022. Furthermore, we are conducting safety training with the aim of thoroughly enforcing safety rules within our workplaces and measures to prevent the recurrence of past occupational accidents, and in 2022, the training program was provided to 106 employees who have been with the Company for less than five years at all of our business sites.

Corporate Governance

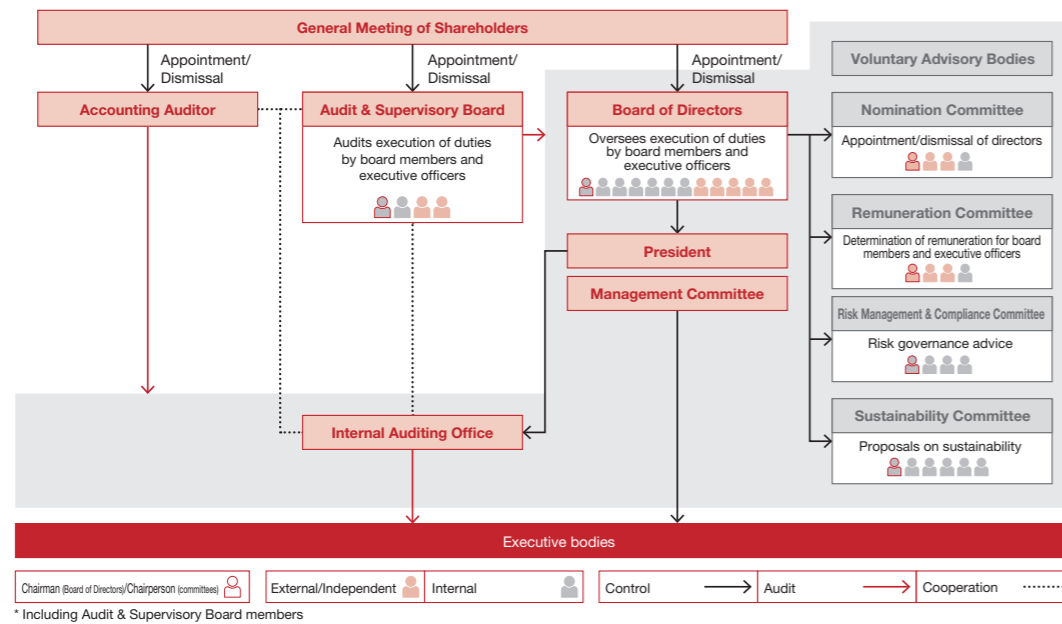
Tokai Carbon recognizes that enhancing medium- to long-term corporate value is the most important management objective. We believe that responding to the expectations of all stakeholders, including customers and shareholders, and building favorable relationships, are essential in achieving this objective. To this end, we embrace the basic philosophy of “Ties of Reliability”. Through this philosophy and the policies and values outlined in our Guidelines and Global Code of Conduct, we are working to develop an effective corporate governance structure.

Corporate governance system

As a company with an Audit & Supervisory Board, Tokai Carbon focuses on enhancing the effectiveness of audits by Audit & Supervisory Board members and our internal audit functions. At the same time, we work to strengthen the management supervision functions of the Board of Directors by appointing multiple external directors and establishing voluntary committees to realize an appropriate

corporate management structure. Furthermore, to clarify the functions and responsibilities of corporate officers engaged in business execution, we have adopted an executive officer system and established a Managing Executives Meeting to enhance and strengthen the business execution functions of the organization.

Corporate governance system (as of April 1, 2023)



Board of Directors

The Board of Directors is responsible for making decisions on important management matters and overseeing business execution. In principle, the Board meets monthly. As of April 1, 2023, there are eight directors, including three external directors. The Nomination Committee and Remuneration Committee, for which the majority of members are external

directors, have been created as voluntary advisory bodies for the Board of Directors. The Risk Management & Compliance Committee and Sustainability Committee, also voluntary advisory bodies, have been established immediately under the Board of Directors.

Audit & Supervisory Board members and the Audit & Supervisory Board

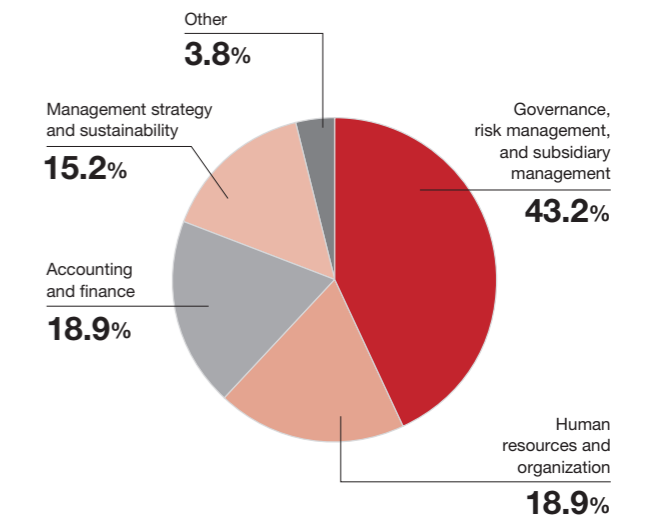
As a general rule, the Audit & Supervisory Board of the Company meets monthly. As of April 1, 2023, there are four Audit & Supervisory Board members, of whom two are External Audit & Supervisory Board members. Audit & Supervisory Board members perform audits based on the auditing

policies and audit plan adopted by the Audit & Supervisory Board. Audit & Supervisory Board members attend Board of Directors' meetings and other important meetings and investigate the status of business operations and assets to confirm the status of business execution by directors.

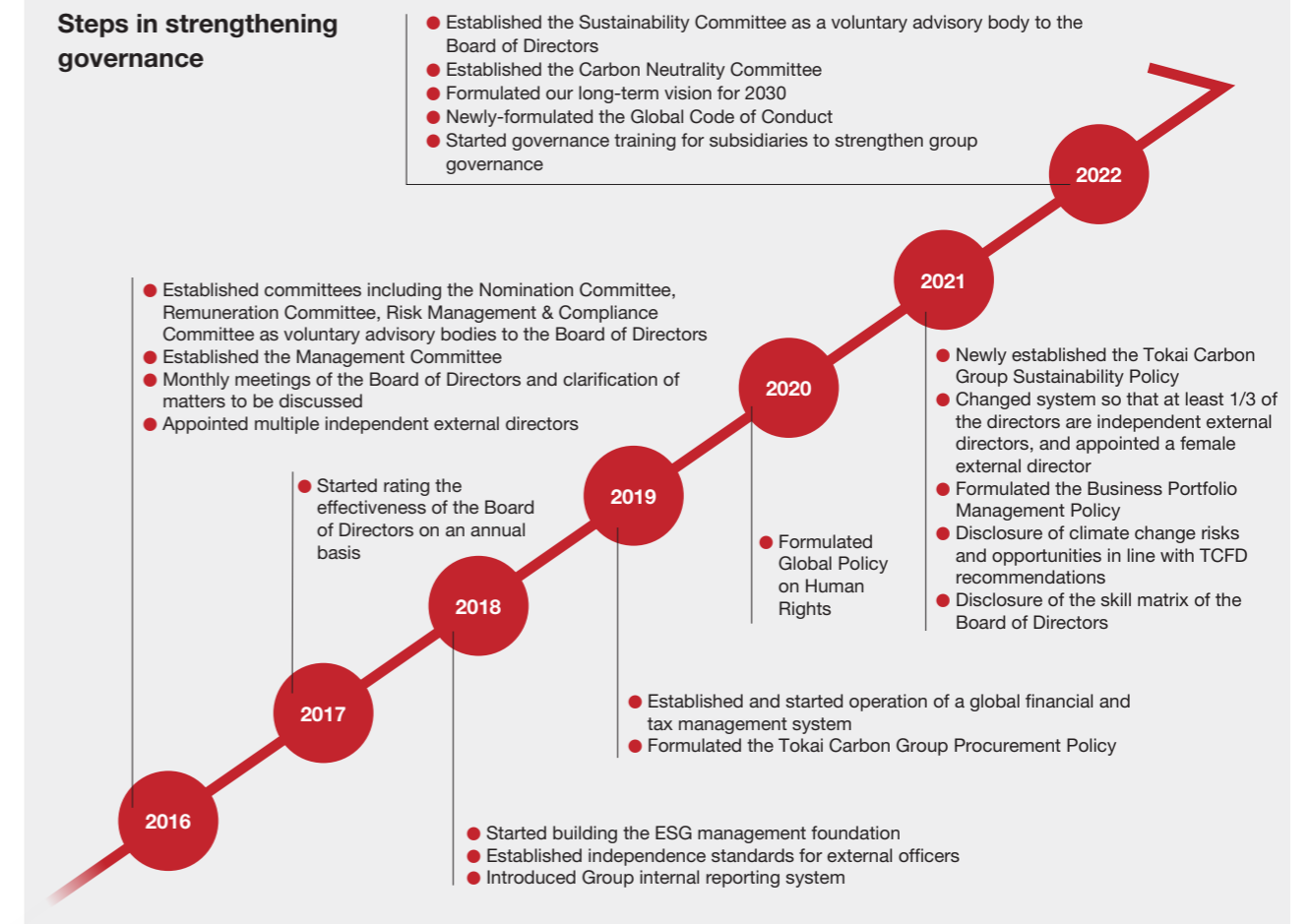
Subjects discussed at the Board of Directors in fiscal 2022

Subject category	Topic
Governance, risk management, and subsidiary management	Analysis and evaluation of the effectiveness of the Board of Directors
	Reports on financing, investments, and market risk management
	Reports on the state of internal control and internal audits
Human resources and organization	Risk Management & Compliance Committee reports
	Establishment of new subsidiary plant/Expansion of existing plants
Accounting and finance	Board member and executive officer candidates
	Organizational/regulation revisions
Accounting and finance	Financial statements
	Annual budget plans
Management strategy and sustainability	Formulation of long-term vision and medium-term management plans
	Sustainability Committee and Carbon Neutral Committee reports

Subject category



Steps in strengthening governance

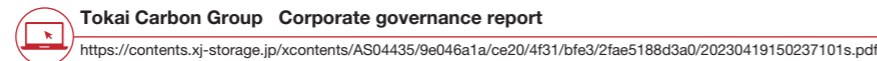


Corporate Governance

Management Committee

The Company has established the Management Committee under the Board of Directors. This committee deliberates and makes decisions on important management matters per basic policies adopted by the Board of Directors. The Management Committee meets once a week, in principle,

with participation from executive officers and Audit & Supervisory Board members, etc. To assist the Management Committee with its work, we have also established committees to deliberate certain matters and report their findings to the Management Committee for higher-level consideration.



Strengthening the effectiveness of the Board of Directors

In 2016, Tokai Carbon established the Nomination Committee, Remuneration Committee, Management Committee, and Risk Management & Compliance Committee to radically strengthen governance system led by the Board of Directors. What is special about this is that our three outside directors actively attend important meetings other than meetings of the Board of Directors to deepen their understanding of significant subjects. The effectiveness evaluation reported that the outside director's impartial and objective comments were of great assistance in improving the supervisory functions of the Board of Directors.

In 2022, the Board of Directors conducted an effectiveness analysis and evaluation based on (1) quantitative and qualitative analysis of the operational performance and status of the governance system, including the Board of Directors and the Management Committee, (2) the results of a questionnaire survey of all directors and corporate auditors regarding the composition and operation of the Board of Directors and provision of

information to outside officers, and (3) the results of individual interviews with external officers.

The new governance structure has largely been established. In addition to the initial results being adequately maintained, in 2022, in accordance with the Sustainability Policy and the Business Portfolio Management Policy newly established in 2021, we steered toward strengthening sustainability management and business portfolio management, expanded matters reported by the Board of Directors, and discussed crisis events such as the impact of the Ukrainian crisis and the emergency response to Taiwan. We believe that we have been able to further improve the effectiveness of these measures.

As future issues, we will continue to work on higher level themes such as (1) linking our sustainability (including carbon neutrality) and management strategies, and (2) sophistication of business portfolio management.

Establishing an internal control system

To ensure that Tokai Carbon Group properly executes business operations per relevant laws, regulations, and the Articles of Incorporation, the Company continuously improves its internal control system. Improvements

are undertaken following the "Basic Policy for Establishing an Internal Control System," which was adopted at the May 2006 meeting of the Board of Directors and revised as necessary.

Management Appointment Process

The appointment of Directors, Audit & Supervisory Board Members and Executive Officers begins with the formulation of recommendations by the Nomination Committee, which is an advisory body to the Board of Directors and consists of one internal board member and three external board members. The Nomination Committee prepares its recommendations by comprehensively considering the experience, knowledge, expertise, and other qualities of internal and external candidates. After approval by

the Board of Directors, candidates for Director and Audit & Supervisory Board positions are submitted to the General Meeting of Shareholders for approval.

The Company discloses the reasons for nominating internal and external candidates for Director and Audit & Supervisory Board positions in reference materials provided for the General Meeting of Shareholders.

Executive remuneration

At Tokai Carbon, executive remuneration is composed of basic remuneration, which is a fixed amount, and performance-based remuneration, which varies depending on performance. For directors with executive responsibilities, the proportion of variable remuneration is designed to rise with executive rank, considering the significance of a manager's responsibilities. Revisions and decisions regarding the executive remuneration system and the performance evaluations and remuneration for individual executives, are based on deliberations by the Remuneration

Committee, which is chaired by an external director and includes external officers as members.

In addition, at the FY2019 Annual Meeting of Shareholders held on March 27, 2020, a proposal was approved that directors (excluding external directors) are provided with remuneration to add shares with restriction on transfer, separate from maximum remuneration approved at the General Meeting of Shareholders.

Compliance

In line with our Basic Policy of "Ties of Reliability" and our Action Guidelines of "Integrity," "Innovation," "Challenge," "Co-creation," and "Agility," we have drawn up the Global Code of Conduct and other regulations for implementing fair business activities. We are working to conduct corporate activities with a high sense of ethics while also complying with the relevant laws, rules, and regulations.

Management Structure

The Risk Management and Compliance Committee, an advisory body to the Board of Directors, discuss important matters concerning risk and compliance, such as risk countermeasures for the entire company. At the same time, it provides advice to relevant departments and sections based on the outcome of the discussion, reports the progress, and proposes, for example, countermeasures to the Board of Directors.

In addition, we have created a Compliance Manual based on our Action Guidelines and Global Code of Conduct. This guidebook provides behavioral standards required by all our officers and employees in conducting their day-to-day duties. It is of some help to entrench the strict practice of compliance in the company.

Internal reporting system

We have introduced an internal reporting system for receiving reports from employees who have found out about legal violations or fraud (or signs thereof), including any acts linked to corruption such as bribery etc. by executive officers or employees. We have established in-house contact points (Legal Affairs Department, Audit & Supervisory Board Member) and external contact points (legal advisors) to receive reports or requests for advice by phone, fax, email, letter, etc. Reports can also be made anonymously. In addition, we also have a system allowing us to respond to reports from external third parties, reports received in a foreign language and reports received by persons other than the prescribed points of contact.

The Company's Guidelines on Handling Internal Reports clearly state that, apart from cases when the system is deliberately misused, informants will not be dismissed or subjected to unfair treatment under this system, thereby

ensuring the appropriate implementation of the system. Specifically, our company's Legal Affairs Department Manager is responsible for conducting an investigation into facts reported by an informant, while strictly maintaining the confidentiality of the informant. If it becomes clear after an investigation that an illegal act was committed, we will take corrective actions and recurrence-prevention actions, and impose a punishment under the employment regulations. At the same time, we have a system whereby all our employees and stakeholders can report to an external point of contact without worries. We are making efforts to increase everyone's awareness of this system, by including it in the Compliance Manual and internal rules, and announcing it using various tools, including in-house seminars, an in-house message board and in-house newsletters.

Prevention of corruption

Prevention of bribery and other corrupt behavior

Our Global Code of Conduct stipulates that we conduct our business through fair competition and maintain sound and normal relationships with political parties, government, and business partners. In addition, we clearly state that we will comply with laws and regulations and conduct business activities based on social norms and common sense. Therefore, we prohibit and strive to prevent bribery, such as proposing or providing profits as consideration for convenience, requesting or accepting profits from cash, excessive entertainment, services, etc., or acts suspected of bribery. We also prohibit employees from engaging in corruption, such as stealing

company funds or undertaking money laundering.

In FY2022, there was no exposure of corrupt behavior and no fines or monetary penalties paid. There was no disciplinary action taken against any employee due to corrupt behavior. We did not offer any political donations.

Supervision of the Board of Directors against corruption

The Board of Directors oversees initiatives on compliance, including the prevention of bribery and other corruption, and receives reports from the Risk Management & Compliance Committee.













Education and training

To raise awareness of our comprehensive ban on corruption, including bribery, we make our anti-corruption policy known to employees in training. We continually provide compliance training for officers, personnel in managerial positions, and new employees, with both internal and external

instructors.

We also distribute compliance message videos internally and publish related articles in our in-house magazine to improve compliance awareness among our officers and employees.

Management (As of April 1, 2023)

													
Title	President & Chief Executive Officer	Member of the Board/Executive Officer	Member of the Board/Executive Officer	Member of the Board/Executive Officer	Member of the Board/Executive Officer	External Director (independent officer)	External Director (independent officer)	External Director (independent officer)	Audit & Supervisory Board Member (full-time)	Audit & Supervisory Board Member (full-time)	External Auditor (independent officer)	External Auditor (independent officer)	
Name	Hajime Nagasaka	Masafumi Tsuji	Katsuyuki Yamaguchi	Shunji Yamamoto	Tatsuhiro Yamazaki	Nobumitsu Kambayashi	Mayumi Asada	Toshiro Miyazaki	Yuji Serizawa	Kazuyuki Kakehashi	Kaoru Ogashiwa	Yoshinori Matsushima	
Date of birth	January 9, 1950	January 10, 1963	March 29, 1964	March 08, 1962	November 22, 1964	May 28, 1948	February 5, 1968	August 21, 1949	December 27, 1959	December 7, 1951	January 7, 1967	February 7, 1968	
Term of office	17 years	6 years	4 years	4 years	—	7 years	2 years	1 year	—	7 years	3 years	—	
Career Summary	<p>April 1972 Joined Tokai Electrode Mfg. Co., Ltd. (currently the Company)</p> <p>March 2006 Member of the Board/Executive Officer Deputy General Manager, Carbon Black Division</p> <p>March 2008 Member of the Board/Managing Executive Officer Deputy General Manager, Carbon Black Division</p> <p>March 2011 Member of the Board/Senior Managing Executive Officer General Manager, Carbon Black Division</p> <p>March 2013 Representative Member of the Board/Senior Managing Executive Officer in charge of Carbon Black Division and Graphite Electrode Division</p> <p>March 2014 Representative Member of the Board/Executive Vice President in charge of Carbon Black Division, Graphite Electrode Division, and Raw Material Procurement Department</p> <p>February 2015 Representative Member of the Board/President & Chief Executive Officer (incumbent)</p>	<p>April 1986 Joined the Company</p> <p>March 2015 Executive Officer General Manager, Carbon Black Division</p> <p>January 2016 Executive Officer General Manager, Graphite Electrode Division</p> <p>March 2017 Member of the Board/Executive Officer General Manager, Fine Carbon Division</p> <p>January 2020 Member of the Board/Executive Officer Deputy Chairman, Corporate Planning Department, Strategic Investment Department, and Sales Research & Planning Department</p> <p>September 2022 Member of the Board/Executive Officer responsible for Corporate Planning Department, Affiliated Company Business Management Department, Strategic Investment Department, Sales Research & Planning Department, and New Business Promotion Department</p> <p>March 2023 Member of the Board/Executive Officer Executive Officer responsible for Human Resources Department, General Affairs Department, and Legal Affairs Department (incumbent)</p>	<p>April 1988 Joined the Company</p> <p>March 2018 Executive Officer General Manager, Technology & Engineering Division</p> <p>March 2019 Member of the Board/Executive Officer General Manager, Technology & Engineering Division</p> <p>March 2021 Member of the Board/Executive Officer General Manager, R&D Strategy Division General Manager, Intellectual Property Department (incumbent)</p>	<p>April 1985 Joined the Company</p> <p>June 2015 General Manager, Production & Technology Department, Carbon Black Division</p> <p>March 2016 THAI TOKAI CARBON PRODUCT CO., LTD. Director, Managing Director</p> <p>March 2018 Executive Officer THAI TOKAI CARBON PRODUCT CO., LTD. Director, Managing Director</p> <p>March 2019 Member of the Board/Executive Officer Director, Tokai Carbon CB Genpar LLC</p> <p>March 2023 Member of the Board/Executive Officer General Manager, Technology & Engineering Division (incumbent)</p>	<p>April 1985 Joined the Company</p> <p>March 2016 General Manager, Production & Technology Department, Carbon Black Division</p> <p>March 2017 Business Director General Manager, Sales Department, Carbon Black Division</p> <p>January 2020 Business Director THAI TOKAI CARBON PRODUCT CO., LTD. Director, Managing Director</p> <p>March 2023 Member of the Board/Executive Officer THAI TOKAI CARBON PRODUCT CO., LTD. Director, Managing Director (incumbent)</p>	<p>April 1971 Joined Kawasaki Heavy Industries, Ltd.</p> <p>June 2002 Director, Kawasaki Shipbuilding Corporation</p> <p>April 2008 Managing Executive Officer, Kawasaki Heavy Industries, Ltd. Director/Senior Vice President, Kawasaki Shipbuilding Corporation</p> <p>April 2010 President & Representative Director, Kawasaki Shipbuilding Corporation Senior Vice President (part-time), Kawasaki Heavy Industries, Ltd.</p> <p>October 2010 Senior Vice President (Representative Director), Kawasaki Heavy Industries, Ltd. President, Ship & Offshore Structure Company</p> <p>June 2013 Senior Advisor, Kawasaki Heavy Industries, Ltd.</p> <p>June 2015 Chairman, Japan Ship Technology Research Association (incumbent)</p> <p>March 2016 External Director of the Company (incumbent)</p> <p>June 2017 External Director, Inui Global Logistics Co., Ltd. (incumbent)</p>	<p>October 2002 Registered as an attorney-at-law Joined Hiranuma Takaaki Law Office</p> <p>January 2014 Representative, Marunouchi Building Aoi Law Office (incumbent)</p> <p>March 2014 Acquired Doctor's degree in Medicine at the Juntendo University Graduate School of Medicine</p> <p>April 2020 Business Director, Incorporated Educational Institution Nikaido Gakuen (incumbent)</p> <p>March 2021 External Director of the Company (incumbent)</p>	<p>April 1972 Joined Mitsui Shipbuilding & Engineering Co., Ltd. (currently Mitsui E&S Holdings Co., Ltd.)</p> <p>June 2007 Director, Finance, Accounting, and Investor Relations and Communications, Mitsui Shipbuilding & Engineering Co., Ltd.</p> <p>March 2008 Director, MODEC, Inc.</p> <p>March 2011 Representative Director, President, MODEC, Inc.</p> <p>March 2019 Director, Chairman of the Board, MODEC, Inc.</p> <p>March 2020 Executive Advisor, MODEC, Inc.</p> <p>March 2022 External Director of the Company (incumbent)</p>	<p>April 1984 Joined the Company</p> <p>March 2012 Member of the Board/Executive Officer in charge of Fine Carbon Division General Manager, Fine Carbon Division</p> <p>March 2014 Executive Officer General Manager, Graphite Electrode Division</p> <p>March 2015 Member of the Board/Executive Officer General Manager, Graphite Electrode Division</p> <p>January 2016 Member of the Board/Executive Officer General Manager, Corporate Planning Division</p> <p>March 2017 Member of the Board/Executive Officer responsible for Human Resources Department, General Affairs Department, and Legal Affairs Department</p> <p>March 2023 Audit & Supervisory Board Member (full-time) (incumbent)</p>	<p>April 1975 Joined Toyo Carbon Co., Ltd. (currently the Company)</p> <p>March 2001 General Manager, Production & Technology Department, Fine Carbon Division</p> <p>March 2004 General Manager, Tanoura Plant</p> <p>March 2009 General Manager, Shonan Office General Manager, Chigasaki Plant Industrialization Group Manager, R&D Strategy Division</p> <p>March 2010 General Manager, R&D Planning Department, R&D Strategy Division</p> <p>August 2010 Member of the Board, Tokai Konetsu Kogyo Co., Ltd.</p> <p>March 2015 Managing Executive Officer, Tokai Konetsu Kogyo Co., Ltd.</p> <p>March 2016 Audit & Supervisory Board Member of the Company</p> <p>May 2019 Audit & Supervisory Board Member (full-time) (incumbent)</p>	<p>October 1990 Joined Research Center Management Consulting Institute, New Japan Securities Co., Ltd (currently Japan Investor Relations and Investor Support, Inc.)</p> <p>December 1992 Registered as a Certified Tax Accountant Representative, Ogashiwa Kaoru Certified Tax Accountant Office (incumbent)</p> <p>June 2005 Corporate Auditor, Senkon Logistics Co., Ltd.</p> <p>June 2017 External Director and Audit and Supervisory Committee Member, Senkon Logistics Co., Ltd. (incumbent)</p> <p>May 2019 External Auditor of the Company (incumbent)</p>	<p>November 1997 Joined Deloitte Touche Tohmatsu</p> <p>May 2001 Registered as a Certified Public Accountant Representative, Matsushima Certified Public Accountant Office (incumbent)</p> <p>May 2006 Registered as a Certified Tax Accountant</p> <p>March 2023 External Auditor of the Company (incumbent)</p>	
Number of shares held	156,847 shares	59,662 shares	32,205 shares	9,500 shares	22,338 shares	23,200 shares	6,500 shares	—	65,662 shares	19,900 shares	400 shares	—	
Attendance at meetings of the Board of Directors in FY2022	21/21	21/21	21/21	21/21	—	21/21	21/21	17/17	21/21	21/21	21/21	—	
Committees	Nomination Committee	●						●					
	Remuneration Committee	●						●					
	Risk Management & Compliance Committee		Chairperson		●			●		●			
	Sustainability Committee	Chairperson	●	●	●			●	●				
Skills matrix	Corporate management	●	●		●			●				●	
	Finance and accounting							●				●	
	Legal affairs and risk management		●					●	●	●		●	
	Global business	●	●		●			●					
	Manufacturing, technology, and ICT			●	●					●			
	Sales and marketing	●		●									
	Personnel and HR development	●	●					●					
ESG and sustainability	●	●	●				●			●			

Data

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Long-Term Earnings Summary (2012–2022, consolidated)

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Statements of Income												
Net sales	(Millions of yen)	98,704	100,935	114,576	104,864	88,580	106,252	231,302	262,028	201,542	258,874	340,371
Gross profit	(Millions of yen)	18,560	15,267	18,651	19,960	16,529	27,451	99,378	92,840	49,555	70,732	94,052
Selling, general and administrative expenses	(Millions of yen)	12,859	13,611	14,947	15,871	15,398	16,358	26,312	38,495	41,696	46,085	53,463
Operating income	(Millions of yen)	5,700	1,655	3,703	4,088	1,131	11,093	73,065	54,344	7,858	24,647	40,588
Ordinary income	(Millions of yen)	6,470	3,114	4,180	4,317	1,702	12,855	72,991	52,986	6,262	24,770	42,521
Net income before income taxes	(Millions of yen)	3,992	2,926	4,345	6,726	(7,938)	15,533	95,811	51,226	6,116	23,354	42,111
Income taxes	(Millions of yen)	2,142	1,802	1,749	4,345	(67)	2,740	21,543	17,175	2,283	3,248	14,782
Net income	(Millions of yen)	1,993	1,213	2,562	2,484	(7,929)	12,603	74,268	34,050	3,833	20,106	27,329
EBITDA	(Millions of yen)	16,084	12,470	13,845	14,581	10,616	17,740	85,374	77,053	35,262	54,518	75,572
Sales ratio												
Gross profit	(%)	18.8	15.1	16.3	19.0	18.7	25.8	43.0	35.4	24.6	27.3	27.6
Selling, general and administrative expenses	(%)	13.0	13.5	13.0	15.1	17.4	15.4	11.4	14.7	20.7	17.8	15.7
Operating income (ROS)	(%)	5.8	1.6	3.2	3.9	1.3	10.4	31.6	20.7	3.9	9.5	11.9
Ordinary income	(%)	6.6	3.1	3.6	4.1	1.9	12.1	31.6	20.2	3.1	9.6	12.5
Net income before income taxes	(%)	4.0	2.9	3.8	6.4	(9.0)	14.6	41.4	19.5	3.0	9.0	12.4
Net income	(%)	2.0	1.2	2.2	2.4	(9.0)	11.6	32.1	13.0	1.9	7.8	8.0
EBITDA	(%)	16.3	12.4	12.1	13.9	12.0	16.7	36.9	29.4	17.5	21.1	22.2
Investment-related												
Capital expenditure	(Millions of yen)	12,287	9,007	6,830	5,301	6,013	4,282	11,794	24,341	28,873	30,347	48,150
Depreciation	(Millions of yen)	8,712	8,656	8,629	9,242	8,124	6,647	10,390	18,503	20,890	22,900	27,460
R&D expenses	(Millions of yen)	1,961	1,800	1,882	1,822	2,249	1,482	1,883	2,460	2,682	2,823	3,171
Cash flow												
Operating cash flows	(Millions of yen)	8,828	11,606	11,983	20,613	17,505	10,543	44,109	41,664	55,022	38,072	41,205
Investment cash flows	(Millions of yen)	(12,770)	(10,791)	(24,027)	3,189	(3,622)	(14,039)	(53,849)	(99,159)	(44,301)	(35,282)	(49,900)
Free cash flows	(Millions of yen)	(3,941)	815	(12,043)	23,802	13,883	(3,496)	(9,740)	(57,495)	10,721	2,790	(8,695)
Financing cash flows	(Millions of yen)	(3,611)	1,441	9,728	(14,926)	(7,613)	(4,534)	29,677	64,568	927	1,211	(10,629)
Increase (decrease) in cash and cash equivalents	(Millions of yen)	(6,674)	4,155	(1,307)	8,180	5,602	(6,376)	18,979	5,318	11,284	6,707	(15,057)
Exchange rate*	(USD/JPY)	79.82	97.65	105.85	121.05	108.85	112.19	110.43	109.05	106.82	109.80	131.43

* Corporate exchange rate

* Figures have been revised retrospectively.

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Balance Sheet												
Total current assets	(Millions of yen)	86,879	90,984	94,685	87,968	77,645	85,444	164,220	196,446	177,678	215,149	246,691
On-hand liquidity	(Millions of yen)	11,891	16,048	14,862	23,045	28,528	22,152	46,797	52,695	67,174	78,858	70,909
Accounts receivables	(Millions of yen)	28,259	30,075	33,972	26,897	24,220	30,265	55,137	50,648	41,438	56,668	65,197
Inventory	(Millions of yen)	42,993	41,507	41,299	34,253	20,734	27,564	58,789	86,380	63,797	72,479	101,330
Other current assets	(Millions of yen)	3,734	3,352	4,551	3,771	4,162	5,463	3,945	6,722	5,266	7,143	9,254
Total fixed assets	(Millions of yen)	79,788	92,443	115,753	96,106	81,178	99,286	165,648	266,425	282,031	297,353	329,773
Tangible fixed assets	(Millions of yen)	58,169	61,985	67,581	56,629	43,122	51,405	80,312	101,343	125,007	144,165	181,948
Intangible fixed assets	(Millions of yen)	438	464	14,103	11,324	10,534	16,343	61,805	141,966	133,349	123,349	118,839
Investment and other assets	(Millions of yen)	21,179	29,994	34,069	28,153	27,521	31,537	23,529	23,115	23,674	29,838	28,986
Total assets	(Millions of yen)	166,668	183,427	210,439	184,074	158,824	184,730	329,868	462,872	459,709	512,503	576,465
Total current liabilities	(Millions of yen)	38,050	42,385	44,897	31,126	29,028	36,870	91,654	117,541	92,656	130,418	146,696
Short-term interest-bearing liabilities	(Millions of yen)	14,636	20,718	21,576	9,537	12,910	14,074	41,709	68,363	51,879	74,710	80,745
Accounts payables	(Millions of yen)	16,145	14,179	16,051	11,397	9,591	14,522	26,001	28,936	18,648	26,229	32,272
Other current liabilities	(Millions of yen)	7,268	7,488	7,269	10,191	6,525	8,274	23,944	20,241	22,129	29,478	33,676
Total long-term liabilities	(Millions of yen)	15,351	17,809	33,198	27,976	16,806	20,728	30,381	112,355	142,237	125,514	128,900
Long-term interest-bearing liabilities	(Millions of yen)	6,191	5,044	16,713	14,398	4,137	2,068	8,000	79,666	106,764	93,539	90,706
Other long-term liabilities	(Millions of yen)	9,160	12,765	16,484	13,577	12,669	18,660	22,381	32,689	35,473	31,974	38,190
Total liabilities	(Millions of yen)	53,401	60,195	78,096	59,103	45,834	57,599	122,035	229,896	234,894	255,932	275,596
Total net assets	(Millions of yen)	113,266	123,232	132,343	124,971	112,989	127,130	207,833	232,975	224,815	256,570	300,868
Shareholder's capital	(Millions of yen)	106,887	106,807	108,006	108,910	99,693	110,089	179,500	203,819	196,543	206,269	218,761
Total liabilities and net assets	(Millions of yen)	166,668	183,427	210,439	184,074	158,824	184,730	329,868	462,872	459,709	512,503	576,465
Ratio analysis												
ROA	(%)	3.9	1.8	2.1	2.2	1.0	7.5	30.0	13.4	1.4	5.1	7.8
ROE	(%)	1.9	1.0	2.0	2.0	(6.8)	10.4	46.8	16.0	0.5	7.5	9.0
Capital-to-asset ratio	(%)	66.1	66.0	61.8	66.8	69.9	68.4	56.7	45.8	43.8	44.7	46.6
Indicator per share												
EPS	(yen)	9	6	12	12	(37)	58	344	150	4.78	75.55	105.16
BPS	(yen)	516	567	610	577	521	593	878	994	944.16	1,075.19	1,260.95
Dividend	(yen)	7	6	6	6	6	12	24	48	30	30	30
Dividend payout ratio	(%)	75	106	50	52	—	21	7	32	627	40	29

Performance by Business Segment (2020–2022, consolidated)

		2020	2021	2022
Graphite Electrodes				
Net sales	(Millions of yen)	37,879	40,619	59,630
Operating income	(Millions of yen)	(5,766)	(400)	8,032
Operating income to sales	(%)	(15.2)	(1.0)	13.5
EBITDA	(Millions of yen)	(2,274)	4,162	13,549
EBITDA Margin	(%)	(6.0)	10.2	22.7
Carbon Black				
Net sales	(Millions of yen)	70,754	99,491	138,484
Operating income	(Millions of yen)	3,192	8,783	12,282
Operating income to sales	(%)	4.5	8.8	8.9
EBITDA	(Millions of yen)	10,171	14,868	20,491
EBITDA Margin	(%)	14.4	14.9	14.8
Fine Carbon				
Net sales	(Millions of yen)	31,775	39,125	49,393
Operating income	(Millions of yen)	6,647	9,611	14,825
Operating income to sales	(%)	20.9	24.6	30.0
EBITDA	(Millions of yen)	11,802	15,199	21,270
EBITDA Margin	(%)	37.1	38.8	43.1
Smelting and Lining				
Net sales	(Millions of yen)	36,421	49,696	65,203
Operating income	(Millions of yen)	1,161	1,925	1,345
Operating income to sales	(%)	3.2	3.9	2.1
EBITDA	(Millions of yen)	11,564	14,097	14,829
EBITDA Margin	(%)	31.8	28.4	22.7
Industrial Furnaces and Related Products				
Net sales	(Millions of yen)	13,873	18,019	16,272
Operating income	(Millions of yen)	3,765	5,396	4,475
Operating income to sales	(%)	27.1	29.9	27.5
EBITDA	(Millions of yen)	3,997	5,701	4,797
EBITDA Margin	(%)	28.8	31.6	29.5
Other				
Net sales	(Millions of yen)	10,837	11,922	11,387
Operating income	(Millions of yen)	298	754	1,108
Operating income to sales	(%)	2.8	6.3	9.7
EBITDA	(Millions of yen)	832	1,313	1,589
EBITDA Margin	(%)	7.7	11.0	14.0

Non-financial Indicators

		2020	2021	2022
Greenhouse gas emissions ¹	(thousand tCO ₂)	2,232	2,409	2,408
Scope1	(thousand tCO ₂)	1,825	2,070	2,018
Scope2	(thousand tCO ₂)	406	339	391
Water intake (consolidated)	(thousand m ³)	7,836	9,006	8,726
Waste generation ²	(t)	9,400	7,749	6,854
Waste recycling rates ²	(%)	89	85	87
Waste consigned for processing ²	(t)	5,052	3,724	3,250
Waste sent for final disposal ²	(%)	17	19	18
No. of Patents including Applications (non-consolidated)	(case)	88	81	80
Number of employees (consolidated)	(people)	4,178	4,289	4,378
Number of employees (non-consolidated)	(people)	778	760	763
Overseas employee ratio	(%)	68.9	70.4	70.7
Percentage of female employees (non-consolidated)	(%)	8.5	8.3	9.6
Employment rate for people with disabilities (non-consolidated)	(%)	2.53	2.55	2.36
Average acquisition rate of annual paid holidays (non-consolidated)	(%)	62.9	69.3	*3
Percentage of employees returning from childcare leave (non-consolidated)	(%)	100	100	100
Average overtime hours per month (non-consolidated)	(hours)	7.9	11.2	*3
Occupational accident frequency rate (consolidated)		1.22	1.30	1.20

¹ See page 50 for calculation details

² Scope: Tokai Carbon Co., Ltd. and its principal subsidiaries in Japan (i.e., Tokai Konetsu Kogyo Co., Ltd., Tokai Fine Carbon Co., Ltd., and Tokai Material Co., Ltd.)

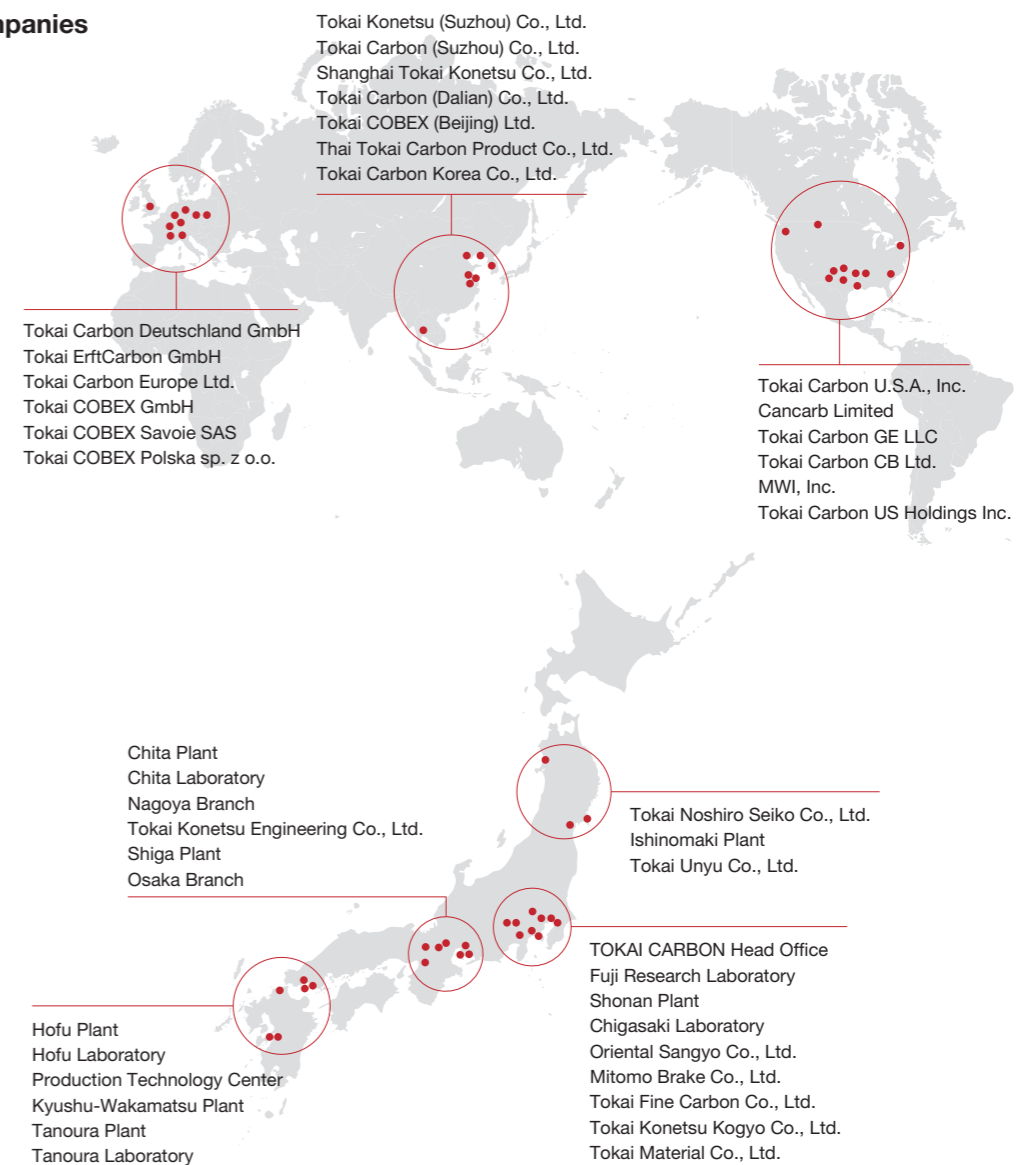
³ We plan to provide this data on our website around July 2023

Company Overview (As of April 1, 2023)

Company Overview

Trade Name	TOKAI CARBON CO., LTD.
Head Office	Aoyama Building, 1-2-3 Kita-Aoyama, Minato-ku, Tokyo 107-8636, Japan Tel: +81-3-3746-5100 (Switchboard)
Established	1918
Representative	Hajime Nagasaka, President and CEO
Accounting Period	January 1 to December 31
Fiscal Year	December
Capital Stock	20,436 million yen
Number of Employees	763 (4,378 including group companies) (as of December 2022)
Operations	Manufacture and sales in the following business segments: Graphite Electrodes, Carbon Black, Fine Carbon, Smelting and Lining, Friction Materials, Anode Materials, Industrial Furnaces and Related Products

Group Companies



Stock Information (As of December 31, 2022)

Stock Summary

Stock Exchange Listing	Prime Market of Tokyo Stock Exchange, Inc.
Securities Code	5301
General Meeting of Shareholders	March
Shareholder Record Date	General Meeting of Shareholders: December 31 Year-End Dividend of Surplus: December 31 Interim Dividend: June 30 (when applicable)
Share Unit	100 shares
Shareholder Registry Administrator	Mitsubishi UFJ Trust and Banking Corporation
Method of Public Notice	Electronic notice (If unavoidable circumstances prevent notice from being given electronically, notice shall be posted in the Nikkei.)

Stock Figures

Total number of shares issued by the company	598,764,000
Total number of outstanding shares (including treasury stock)	224,943,104
Total number of shareholders	88,650

Major Shareholders

Name	Number of shares held (1,000 shares)	Shareholding ratio (%)*
The Master Trust Bank of Japan, Ltd. (Trust Account)	43,878	20.58
Custody Bank of Japan, Ltd. (Trust Account)	22,397	10.51
MUFG Bank, Ltd.	5,827	2.73
Mitsubishi UFJ Trust and Banking Corporation	4,609	2.16
JP Morgan Securities Japan Co., Ltd.	3,614	1.70
STATE STREET BANK WEST CLIENT - TREATY 505234	2,541	1.19
Tokio Marine & Nichido Fire Insurance Co., Ltd.	2,426	1.14
JP MORGAN CHASE BANK 385781	2,267	1.06
SSBTC CLIENT OMNIBUS ACCOUNT	2,205	1.03
Meiji Yasuda Life Insurance Company	2,032	0.95

(Note 1) Tokai Carbon holds 11,748,000 shares of treasury stock but has not been listed among the major shareholders above.

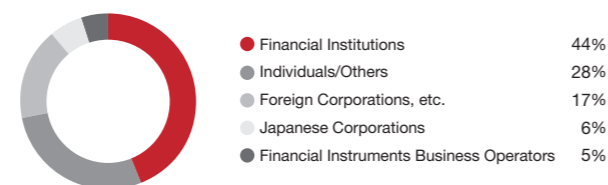
(Note 2) The shareholding ratio was calculated excluding treasury stock.

* Ratio of the number of shares owned to the total number of issued shares (excluding treasury stock)

Share Owner Information

Shareholder	Number of shares held (1,000 shares)
Financial Institutions	93,865
Individuals/Others	59,729
Foreign Corporations, etc.	36,593
Japanese Corporations	12,535
Financial Instruments Business Operators	10,470
Total	213,194

Shareholding ratio (%)*



(Note) The shareholding ratio was calculated excluding treasury stock.

* Ratio of the number of shares owned to the total number of issued shares (excluding treasury stock)

Independent Third-Party Assurance Report



Independent Assurance Report

To the President and CEO of Tokai Carbon Co., Ltd.

We were engaged by Tokai Carbon Co., Ltd. (the “Company”) to undertake a limited assurance engagement of the environmental performance indicators marked with a star ★ (the “Indicators”) for the period from January 1, 2022 to December 31, 2022 included in its Integrated Report 2022 (the “Integrated Report”) for the fiscal year ended December 31, 2022.

The Company’s Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the “Company’s reporting criteria”), as described in the Integrated Report.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the ‘International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information’ and the ‘ISAE 3410, Assurance Engagements on Greenhouse Gas Statements’ issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Integrated Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company’s responsible personnel to obtain an understanding of its policy for preparing the Integrated Report and reviewing the Company’s reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company’s reporting criteria, and recalculating the Indicators.
- Visiting the Company’s Hofu Plant selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Integrated Report are not prepared, in all material respects, in accordance with the Company’s reporting criteria as described in the Integrated Report.

Our Independence and Quality Management

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Management 1, we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Kazuhiko Saito, Partner, Representative Director

KPMG AZSA Sustainability Co., Ltd.

Tokyo, Japan

July 7, 2023



Epilogue

World can be enriched with more advanced materials and solutions.

Issue Date	July 2023
Reporting Scope	This report applies to Tokai Carbon Co., Ltd. and affiliated companies. The scope of applicability for reports with a limited reporting scope shall be indicated separately.
Reporting Period	Excluding content with specific dates, this report reflects activities between January 1, 2022 and December 31, 2022.

Our website presents the latest information and details on our businesses and on environmental and social matters. We invite you to visit it to learn more about Tokai Carbon.
<https://www.tokaicarbon.co.jp>