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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.

High Quality/Stable Supply

Profit Generation

Empowering Growth Engine

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 highguality 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	
Heat Treatment	Graphite Electrodes Fine Carbon Smelting and Lining products Anode Materials	H C F
	Industrial furnaces (niche heat treatment furnaces)	٦ ۲
Surface Treatment	Carbon Black (for rubber products)	(F
	Aqua Carbon Black (for pigment inks)	E S
SiC Mass Production Technology	SiC Coated Carbon Solid SiC	۲ ۲





Fine Carbon Tokai Carbon Europe





Description

- 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.
- Tokai Carbon holds the global top share in sintering furnaces heated by electric furnaces and SiC heater materials
- Control of powder properties of nano-level particles and production of more than 60 varieties
- By developing surface treatment technology, the Company succeeded in developing Aqua Carbon Black that can be used for pigment inks
- World's leading high-speed deposition-based SiC mass production technology
- Global top share of solid SiC production



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

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



* ROS (Return on Sales) = Operating income to net sales

* Assumed exchange rate for "T-2025" targets: 1 USD = 130 JPY; 1 EUR = 140 JPY



Carbon Black Fine Carbon Graphite Electrodes Smelting and Lining

Industrial Furnaces and Related Products Operating cash flow 2023-2025



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.



Business Investment

Medium-term Management Plan "T-2025"

Purpose	Investment Amount (three-year total)	
Expansion of production capacity	36 billion yen	Increase p two busin
Environmental system investment	17 billion yen	Environmo where car
Facility renovation	70 billion yen	Renovatio

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.

* 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.



Description

production capacity for fine carbon and industrial furnaces, ness areas that are witnessing promising growth

nental measures to be carried out at North American plants rbon black is produced

on of facilities to realize stable supply and improve throughput

Research and Development Expenses





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

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.

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
- Co-creates carbon-neutral technologies
- Tallies and deeply investigates Group technologies and finds way to utilize them





• Makes use of external institutions (collaborates with universities, research institutes, venture firms, etc.)

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 highquality products" and the loops in the direction of our long-term vision will continue to rotate toward further growth.

Other 3.3%

2022

Sales Composition

by Business Segment

17.5%

Graphite Electrodes

Carbon Black

40.7%

Industrial Furnaces and Related Product

Smeltin

and I ini

19.2%

Fine Carbon

14.5%

4.8%

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.

