

ANNUAL REPORT
January 1, 2018—December 31, 2018

2018

New Growth Stage



Corporate Philosophy

Tokai Carbon Group Basic Philosophy

Ties of Reliability

Guidelines

By applying the following four guidelines, Tokai Carbon Group will continue pursuing its corporate philosophy through unique activities as a manufacturer of carbon materials.

Ability to create value

Fairness

Ecology

Internationalism

Code of Ethics

Fair business activities

Compliance

Information disclosure

Appropriate
management of
information

Respect for
human rights

Severing relationships
with antisocial forces

Respect for overseas
cultures and customs

Response to breach of
the Tokai Carbon
Code of Ethics

Philosophy

<https://www.tokaicarbon.co.jp/en/company/philosophy.html>

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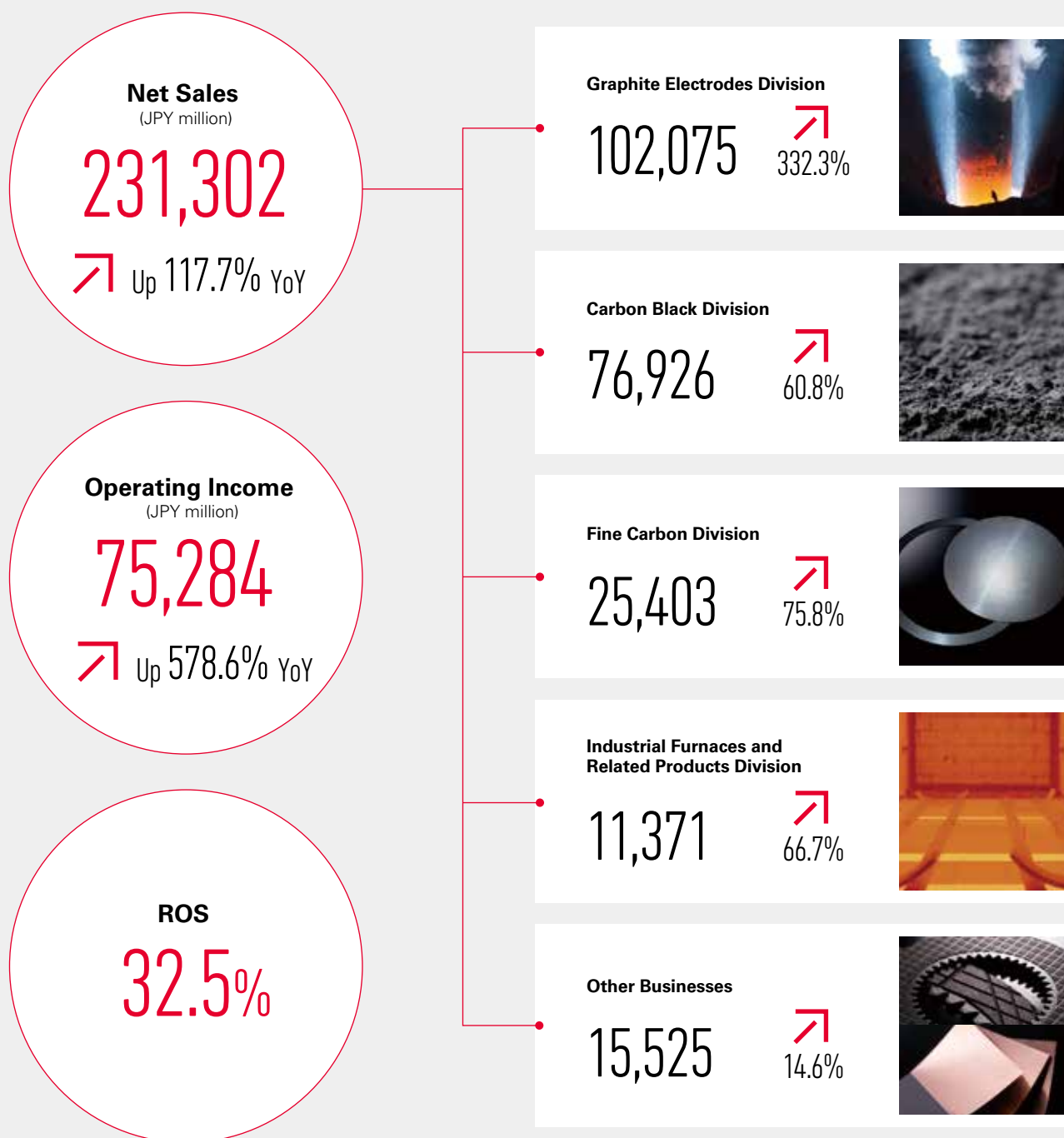
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2018 Financial Highlights



Direction of Business Performance

In 2018, each of Tokai Carbon's businesses turned in a solid performance with surging profits. Consolidated net sales rose by 117.7% and consolidated operating income rose by 578.6% year on year. Global developments in terms of a worldwide increase in crude steel production and rapid recovery in electric furnace steel production underpinned a strong year in the graphite electrode business. The North American manufacturing base acquired in 2017 also contributed to the rise in earnings. The same was true for companies acquired in the carbon black and fine carbon businesses as well.

Building Trust through Technology

Tokai Carbon pioneered the manufacturing of graphite electrodes in Japan and has been a consistent creator of value over its 100-year history. Below are highlights of our first century.

1918-

Contributed to the birth of Japan's manufacturing sector

1918 Established the company and pioneered the production of graphite electrodes in Japan

Opened the door to domestic production of graphite electrodes



Graphite Electrodes Division

Carbon Black Division



1950 Dramatically enhanced the strength of rubber

Pioneered industrialization of the furnace process for producing carbon black in Japan, thereby, helping to lay the foundation for the development of an automobile-centric society

1959-

Supported the main drivers of Japan's high economic growth

1959 Contributed to the stable and larger-volume production of steel

Became the first to supply 20-inch graphite electrodes in Japan, thereby, contributing to the enlargement of electric-arc furnaces



Since 1918

Industrial Furnaces and Related Products Division

Fine Carbon Division
Friction Materials Division

1927 Contributed to the chemical industry by delivering high-temperature industrial furnaces made in Japan

Industrialized the production of EREMA silicon-carbide, non-metallic heating elements at the Nagoya Branch and introduced them to the market



1938 Contributed to efficiency improvements for various types of industrial motors

Accelerated production of electrical brushes



1949 Contributed to the development of construction equipment in Japan

Became the first to produce sintered metal friction materials in Japan



1960 Contributed to the reliability and safety of the Shinkansen (Bullet Train)

Developed electrical brushes for use in motors for high-speed trains. These brushes offered excellent commutation and wear-resistance performance



Photo: Kyodo News

1970-

Supported the technological innovation of high-tech industries with high-value-added products

1970 Reduced the environmental impact of steel recycling

UHP electrodes, helping to reduce graphite electrode consumption



1990-

Supported global industrial development through our global production

1990 Responded to growing automobile tire demand in Asia

Participated in a joint venture, THAI TOKAI CARBON PRODUCT CO., LTD. in Thailand. Entered into an agreement to provide carbon black production technology to the joint venture



2018 Building up a production and sales platform in North America

Used M&A to add graphite electrode (2017) and carbon black capacity in this region (→ pp.23, 25)

2018

1978 Helped to improve the performance of motorized two-wheel vehicles

Introduced the world's first sintered brake pad for motorized two-wheel vehicles



1994 Provided cutting-edge carbon technology for space exploration initiatives

Provided carbon-carbon composites used in Japan's Orbital Reentry Experiment (OREX)



Anode Materials Division

1996 Serving semiconductor manufacturers in countries throughout the world

Established a local affiliate in the U.S. and provided capital to Tokai Carbon Korea Co., Ltd.



2017 Helping to promote adoption of next-generation energy

Responding to the accelerating sales growth for lithium-ion battery anode materials, made the Anode Materials Business into an independent unit



Providing 100 Years of Value for Wide-Ranging Applications

Products made by Tokai Carbon Group are used in a staggering array of applications. We offer a series of high-quality products that help industries and people's daily lives.

Graphite Electrodes

Steel can be made with a blast furnace or with an electric arc furnace (EAF), which has a lower environmental impact. Graphite electrodes are used in electric arc furnaces (EAF) to melt steel scrap. They, therefore, play a key role in recycling of steel throughout the world.

Steel recycling



Semi-conductive layer of electrical wires



In Industry

Steelworks

Social Infrastructure

Manufacturing Plants



Heat treating ceramics and electronic components



Machine tools, industrial robots



Heat treatment of semiconductor wafers

Industrial Furnaces and Related Products

Industrial furnaces are used to heat treat ceramics and electronics components. We design and manufacture industrial furnaces and also provide furnace heating elements. One of our products, the silicon carbide EREMA® (Electric Resistance Material) heating element has won high praise from customers worldwide.

Friction Materials

Friction materials are used to control movement in items such as automobiles, trains, ships, construction and agricultural machinery, industrial robots, and wind turbines. As a comprehensive manufacturer of friction materials, we help to enable smooth motion, and contribute to safety, in various types of machinery and equipment.

Carbon Black

Carbon black is vital for enhancing the strength of tires and other rubber products. It is also used as a pigment for plastics and ink, and to impart conductivity to materials. Backed by our continuous technical innovations, we have held the top share* in the Japanese market for nearly 70 years.

Ink for newspapers and other printed matter



Tires



Anode Materials

Our anode materials are used in the lithium-ion batteries that power electric vehicles and smartphones. As batteries continue to grow in capacity, we are supporting the industry by providing consistent quality and high-added-value products made possible by our expertise in heat treatment technologies and facilities developed in our graphite electrode and other businesses.

Lithium-ion batteries



Cities

In Daily Life

Automobiles

Trains



Smartphone cases, LED lights, etc.



Front grills, car navigation systems



Vehicle components

Fine Carbon

Fine carbon offers excellent heat resistance and conductivity, and is used in the manufacturing of semiconductors and solar panels. It is also useful for controlling CO₂ emissions and has other environmental benefits, as well. With our proprietary development technologies, we have assembled a line of fine carbon products that are among the very best in the world.

* Based on research by Tokai Carbon

Our Strength, New Value

As a global company supporting society with carbon products, we aim to create value through businesses making the most of our strengths.

Megatrends Affecting Our Businesses

Emergence of climate change risk

Stricter environmental regulation across the globe

Shift to green energy

Advancement of the digital revolution
(Rising AI, IoT needs)

Increasingly serious decline in Japan's working-age population



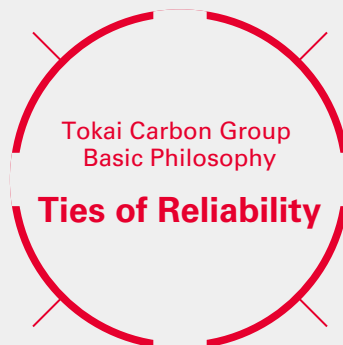
Tokai Carbon's Strengths and Businesses

Unique Technological Prowess

We develop world-class carbon products. We offer cutting edge Solid SiC (solid silicon carbide) technology for semiconductor manufacturing.

Global Synergies

Our various manufacturing locations throughout the world are working in concert to mutually enhance technologies and efficiency.



100 Years of Quality

For over a century, we have been working with customers and suppliers to achieve greater heights in quality.

Solid Customer Base

World-class quality has earned us high praise from customers across the globe.



Value Creation Platform

Harmonizing with the environment

Human resources

Corporate governance

Technical capabilities

Business Segments

Graphite Electrodes



Carbon Black



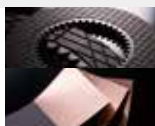
Fine Carbon



Industrial Furnaces
and Related Products



Friction Materials,
Anode Materials



Contributing to Greater Value for Society

Long-term vision

**A global company
supporting society with
carbon products**

Saving Energy / Cutting CO₂ Emissions

- Steelmaking with a lower environmental burden
- Helping to promote adoption of solar and wind power

Development of a Recycling-Oriented Society

- Recycling of steel scrap

Enhancement of Safety and Convenience in Daily Life

- Supporting safe vehicle operation
Enhancement of tire performance
- Technology for smart devices

Development of Industrial and Social Infrastructure

- Contributing to the production of high-quality steel
- Technology for industrial robots

Supply chain

Sound financial base



Part 1

Vision and Strategy

Creating Value for a Changing World

In 2018, the combination of timely strategic investments and favorable market conditions in key regions greatly increased our profit. Cash returned from the business will be reinvested to expand our core and growth businesses.

Tokai Carbon in a New Era



Hajime Nagasaka
President & CEO



Results Far Exceeding Plans

Tokai Carbon, a pioneer of Japan's carbon industry, was founded in 1918. Under our basic philosophy of "Ties of Reliability," we supply carbon products to the steel, chemical, automobile, and other industry sectors.

Under our Medium-Term Management Plan T-2018, we began by implementing structural reforms in fiscal year 2016. These reforms consisted of changes to our internal mindset and a business restructuring, both of which were carried out as planned, to produce a more muscular profit structure. In 2017, we shifted our focus to our growth strategy. During this phase, we undertook strategic investments totaling JPY 59.7 billion in M&A initiatives in three of our businesses - graphite electrodes, carbon black, and fine carbon - and greatly expanded our operations. The added effect of a dramatic turnaround in conditions mainly in the graphite electrode business enabled us to greatly exceed our T-2018 performance targets.

For the fiscal year under review, our consolidated performance consisted of net sales of JPY 231.3 billion (up 117.7% year on year), operating income of JPY 75.2 billion (up 578.6%), and net income attributable to owners of the parent company of JPY 73.9 billion (up 499.4%). Regarding ROS, a key performance indicator, we exceeded our 2018 target of 8% or greater in 2017, and achieved a result of 32.5% for 2018.

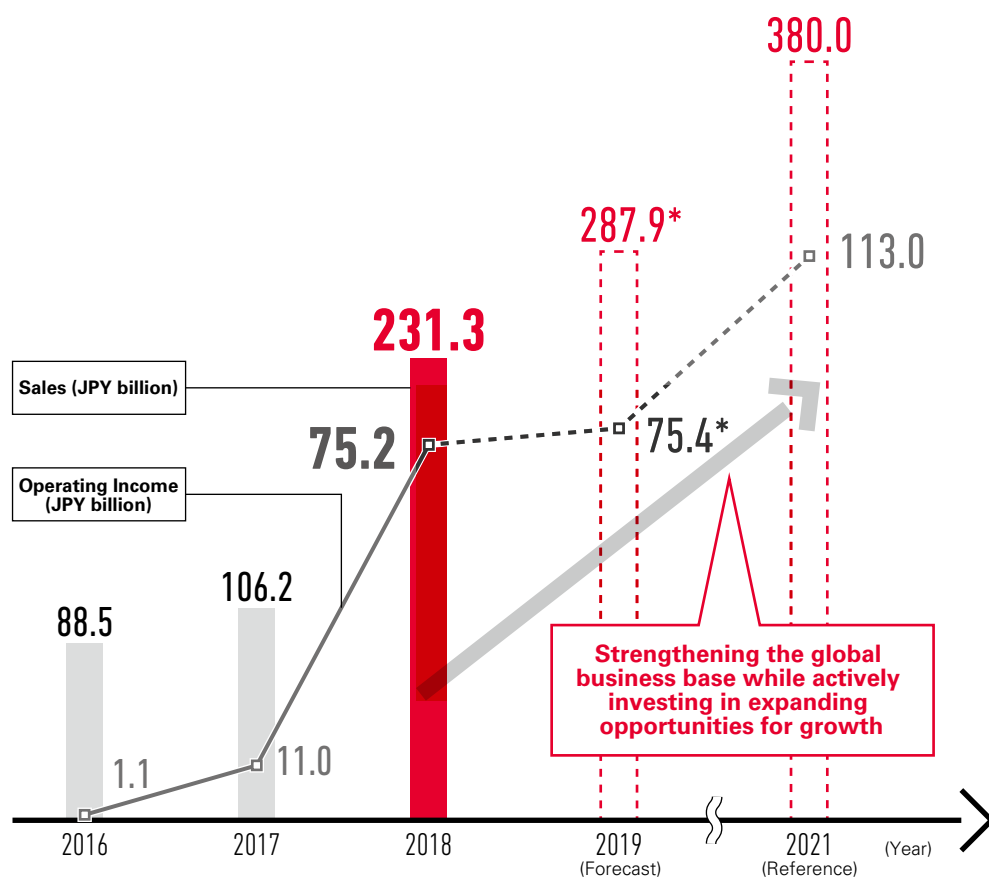
Message from the President

Aiming for Further Growth under Our New Medium-Term Management Plan

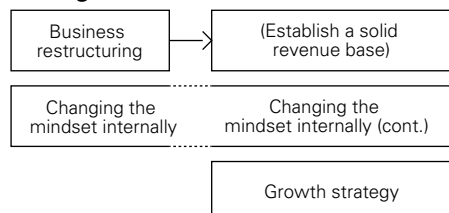
Tokai Carbon has accomplished enormous changes and entered a new phase based on restructured operations and a new growth strategy. Our new Medium-Term Management Plan T-2021 covers the fiscal years 2019 to 2021 and sets forth three basic directions: 1) Strengthening the revenue base; 2) Expanding opportunities for growth; and 3) Building a consolidated governance structure. Performance targets consist of net sales of JPY 380 billion, operating income of JPY 113 billion, and ROS of 30%. These will be pursued through five key measures.

Maintaining stable earnings in our core graphite electrode and carbon black businesses, we will invest JPY 50 billion of the resulting cash flows in growth businesses - fine carbon, industrial furnaces, and anode materials - and JPY 60 billion in facility renovations and environmental equipment. All of these investments will take place over three years. In

Business Results and the Medium-Term Management Plan



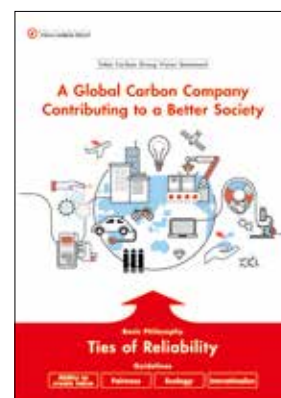
Medium-Term Management Plan T-2018



Medium-Term Management Plan T-2021



Tokai Carbon Group Long-term Vision



* Figures are revised data publicly announced on May 9, 2019. The consolidated performance forecast announced in February 2019 calls for sales of JPY 322.7 billion and operating income of JPY 98.7 billion.

addition, as we did under our previous medium-term management plan, we will also actively undertake M&A investments in the automotive and electronics sectors to capture future growth opportunities.

Given the rapid expansion we have undergone, we see the construction of a commensurate consolidated governance system as a matter of great urgency. In particular, the post-merger integration (PMI) of the three subsidiaries and the building of a globally optimized production system will be the most important determinants of the success of our M&A activities. Careful, considered action will be taken in these areas within our efforts to build a management system that emphasizes ESG (environmental, social, governance) considerations.

Focus on Stable, Consistently Growing Dividends

With the payment of stable, consistent dividends as our basic policy, and our aim of achieving a 30% dividend payout ratio within the T-2021 plan period, we expect to pay a per share dividend of 48 yen for 2019. We will also consider buying back company shares after comprehensively considering factors such as the Group's business environment, business results, future business results outlook, investment plans, cash flow, and share price.

We will spare no effort in making the best management decisions to meet shareholder expectations and will be grateful for your ongoing support going forward.

July 2019



Medium-Term Management Plan T-2021

Business Environment

External Environment

- Continued growth in the areas of EAF steel, tires, and electronics
- Continued tight supply in raw material for graphite electrodes and feedstock oil for carbon black
- Uncertainty in semiconductor cycle
- Trend toward stricter environmental regulations (China, IMO2020, EPA, etc.)
- Deceleration of the Chinese economy
- Acceleration of environmental changes in the global economy

Internal Environment

- Building a consolidated governance structure commensurate with rapidly expanding business

Basic Policies

Strengthening the revenue base

- Generating stable cash flow in core businesses
- Post-merger integration for three acquisition projects (to build the optimal production structure)
- Major renovation of facilities, environmental investment

Expanding opportunities for growth

- Enhance capabilities in growth areas by undertaking new capital investment
- Optimizing business and product portfolios
- Ongoing M&A and investment in strategic areas
- Ongoing initiatives in strengthening technology development

Building a consolidated governance structure

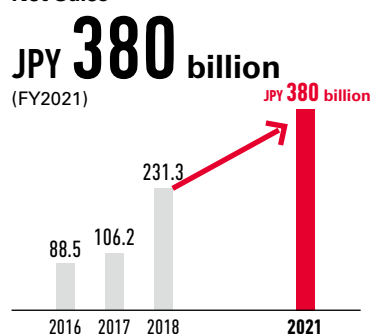
- Head office re-organization and review of systems
- Expanding functions of regional headquarters in North America
- Securing and developing human resources

Key Measures

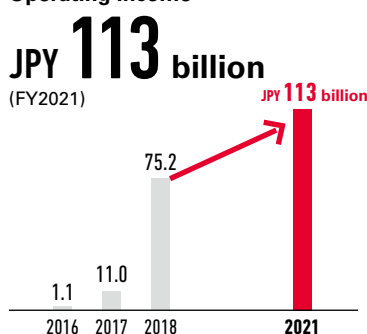
- 1 Generating stable cash flow in the graphite electrode business
- 2 Integrated management of global carbon black plants
- 3 Rebuilding the revenue model for the fine carbon business
- 4 JPY 50 billion investment in growth areas
- 5 Building and strengthening consolidated governance system

Quantitative Targets

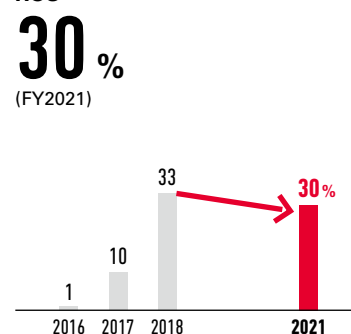
Net Sales



Operating Income



ROS



Direction of the Business Portfolio

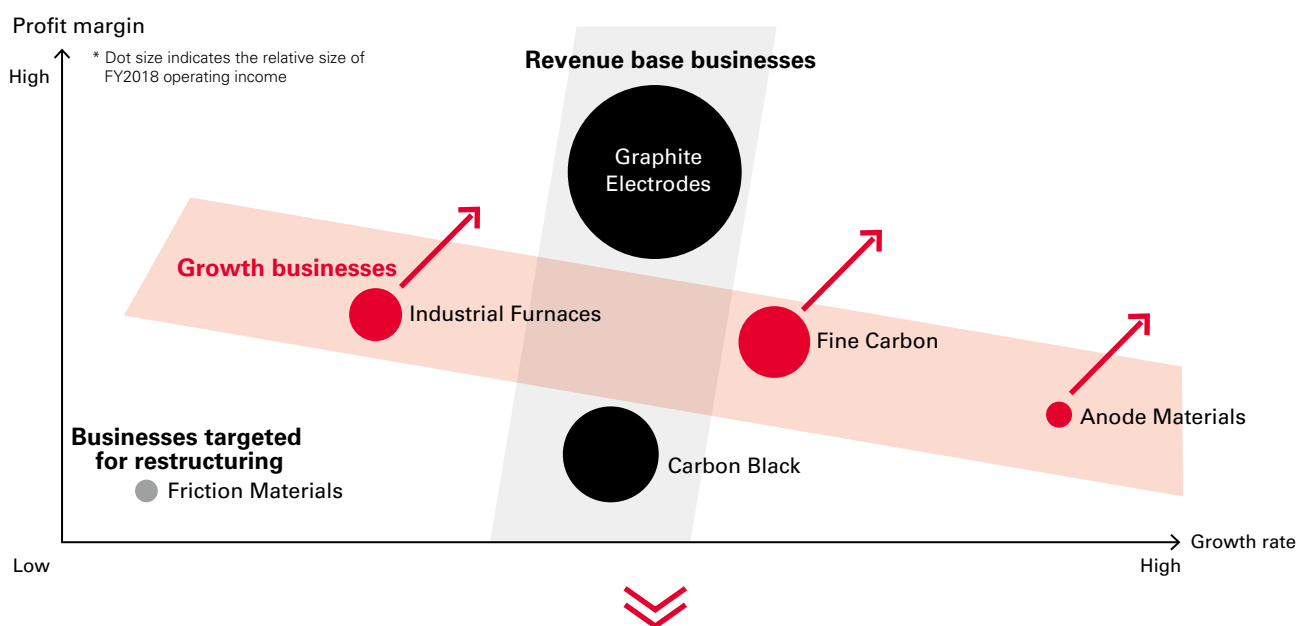
At present, graphite electrodes and carbon black account for approximately 80% of the Group's sales. Ample cash flow arising from these two "revenue base businesses" will be applied to growth investments and development activities in our other businesses to diversify our earnings sources.

Under our new medium-term management plan, implementation of which begins in 2019, we will undertake facility renovation and environmental investments to help ensure that our "revenue base businesses" continue to produce stable cash flows. In addition, we will embark on full-swing efforts to integrate the operations of the recently acquired North American graphite electrode and carbon black plants. This will be done by giving rise to sales and technology synergies that will lead to optimized production and

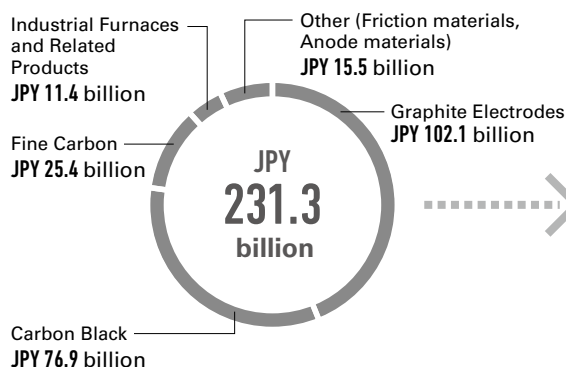
sales, and even greater quality.

For growth businesses, which include fine carbon, anode materials, and industrial furnaces, we aim to leverage technological advantages, and invest over JPY 50 billion in growth opportunities during the coming three years, to increase sales of high-value-added products. We will also maintain our emphasis on R&D, and consider M&A opportunities, in steadily promoting the development of next-generation products.

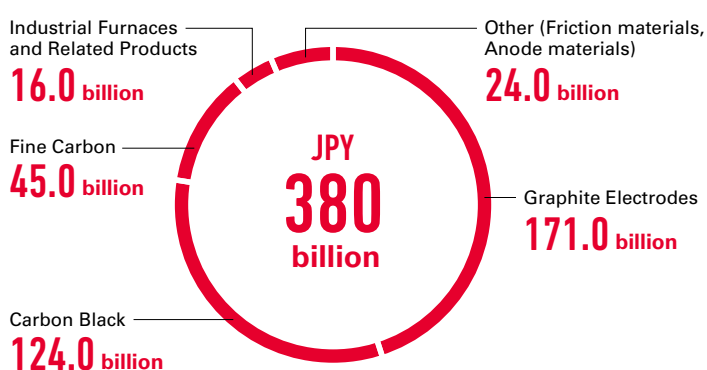
Going forward, we will strive to achieve stable growth that is not overly dependent on a particular market. We will do this by maintaining strong performance in our core businesses, and supplying various industry sectors with products of even greater added value.



FY2018 Sales Breakdown (Actual)



FY2021 Sales Breakdown Forecast (Reference)



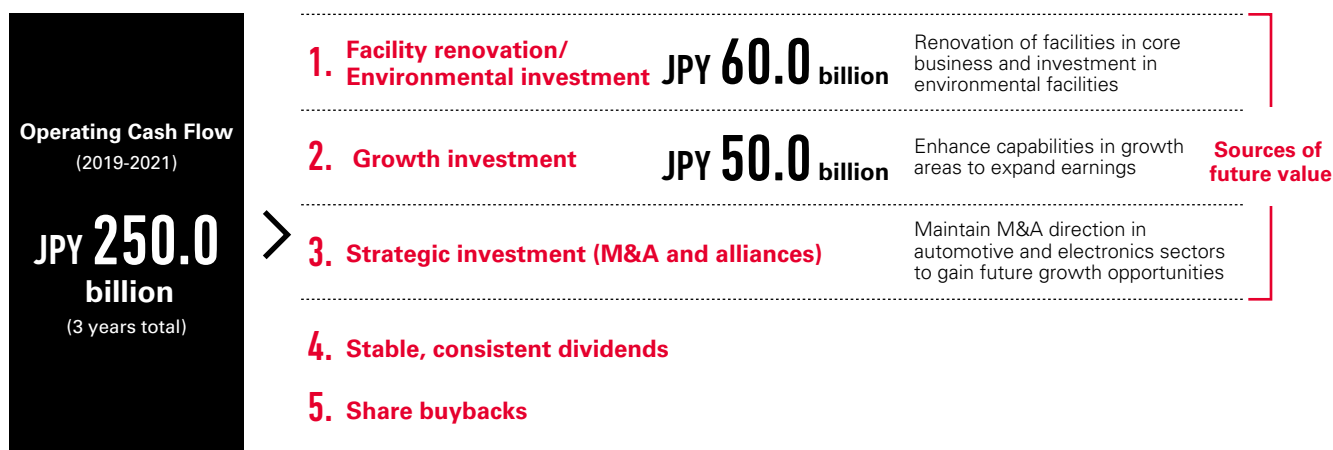
Capital Allocation

The cash flow generated within the medium-term management plan period will be invested in existing facilities and new facilities that will produce enhanced cash flows going forward. Shareholder returns will also be among our highest priorities.

Investments will total approximately JPY 60 billion for facility renovation and environmental equipment and about JPY 50 billion for growth areas. Regarding

strategic investments, we will continue to consider business expansion and profitability enhancement opportunities in areas related to our businesses. As for shareholder returns, the basic policy is to pay dividends that are stable and consistent, and efforts will be made to increase them going forward. We also aim to actively buy back company shares.

Operating Cash Flows and Their Uses Under T-2021 (Cumulative figures for 2019-2021)



Facility Renovation

Production facilities in the Company's core businesses have experienced significant age-related deterioration, and they are urgently in need of renovation. Focusing on the graphite electrode business and other core businesses the Company has long been engaged in, we will renovate existing facilities and install new facilities to maintain our ability to supply products consistently, improve productivity, and enhance quality. Under the present medium-term management plan, concentrated efforts will be made to carry out facility renovations that were postponed due to unfavorable business conditions beginning in the second half of 2008.

Environmental Investments

The Group helps to protect the global environment by providing materials that are indispensable for recycling, saving energy, and producing green energy. On the other hand, considerable resources and energy are consumed in producing these materials, so there is also an environmental burden associated with them. To harmonize our business activities with the needs of a global environment, we will spare no effort in pursuing

technological innovations and production efficiencies, and move forward with necessary environmental investments.

Investments in Growth

Over the three years beginning with 2019, we will make cumulative investments exceeding JPY 50 billion in growth areas.

In the carbon black business, we will expand our Canadian plant's production of thermal black for uses related to rubber products, metallurgical applications, and plastics. In the fine carbon business, we will gradually increase our Korean plant's capacity for producing Solid SiC focus rings, a product for which the Group is the overwhelming global market leader. In addition to the above, we will make capital investments anticipating growth in the markets for lithium-ion batteries and MLCCs (multi-layer ceramic condensers), two products that will benefit from rising adoption of electric vehicles.

All of these investments will help to expand our business base, strengthen our business portfolio, and generate future sources of cash flow.



Part 2

Business Report

Building Greater Trust and a Better Future

All business segments reported higher sales and earnings in 2018.

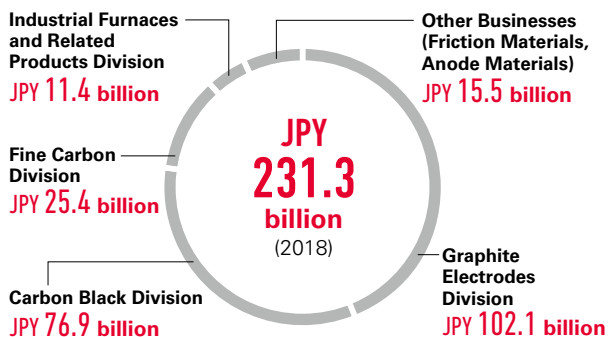
A new medium-term management plan has been launched to further strengthen our business portfolio.

Building a Business Portfolio on a Wide Array of Carbon Products

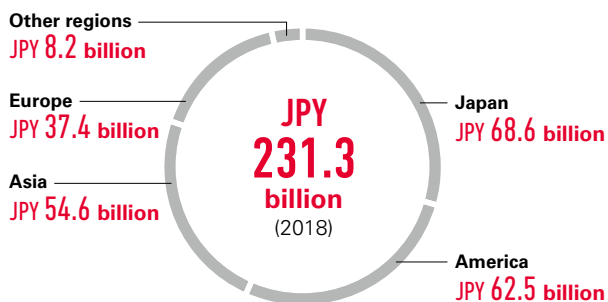
In 2018, each of our businesses achieved steady progress and recorded significantly higher income.

The Graphite Electrodes Division performed well throughout the year with the rapid recovery in EAF (Electric Arc Furnace) production. The North American production facility acquisition also contributed to higher earnings, as did acquisitions in the carbon black and fine carbon businesses.

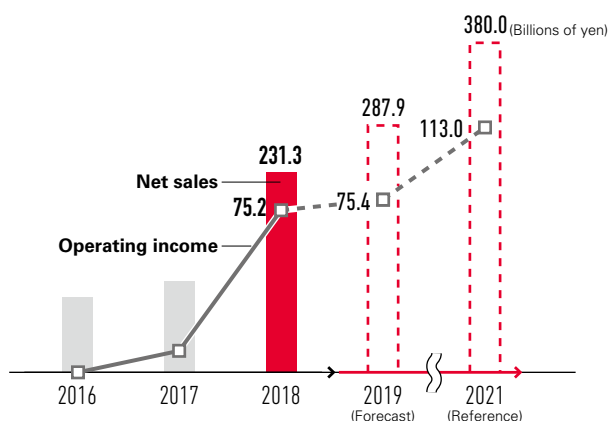
Sales by segment



Sales by region



Net sales and operating income over time



Business Segments and Summary of 2018 Business Results

	Segment	Revenue base businesses
Revenue base businesses	Graphite Electrodes Division	
	Carbon Black Division	
	Fine Carbon Division	
Growth businesses	Industrial Furnaces and Related Products Division	
	Other Businesses (Friction Materials, Anode Materials)	

Affiliates	Summary of 2018 business results
TOKAI CARBON GE HOLDING LLC TOKAI CARBON GE LLC TOKAI CARBON GE FUND CORP. TOKAI ERFTCARBON GmbH	<ul style="list-style-type: none"> • Significant increase in net sales and operating income. • Stronger environmental regulation in China sparked a recovery in global EAF production. Tight supplies of needle coke, a key raw material, caused a sharp upswing in graphite electrode prices. • Full-year earnings contribution of TOKAI CARBON GE LLC (US).
Tokai Unyu Co., Ltd. Tokai Carbon CB Ltd. TCCB US Ltd. TCCB Genpar LLC Cancarb Limited THAI TOKAI CARBONPRODUCT CO., LTD. Tokai Carbon (Tianjin) Co., Ltd.	<ul style="list-style-type: none"> • Significant increases in net sales and operating income. • Increasing demand from tire manufacturers under globally tight supply conditions. • The largest U.S. carbon black producer joined the group in September 2018.
Tokai Fine Carbon Co., Ltd. Oriental Sangyo Co., Ltd. TOKAI CARBON U.S.A., INC. MWI, INC. * TOKAI CARBON EUROPE GmbH TOKAI CARBON EUROPE LTD. TOKAI CARBON ITALIA S.R.L. TOKAI CARBON DEUTSCHLAND GmbH SCHUNKTOKAI SCANDINAVIA AB * Tokai Carbon (Dalian) Co., Ltd. Tokai Carbon Korea Co., Ltd.	<ul style="list-style-type: none"> • Significant increases in net sales and operating income. • Solid demand for specialty graphite materials for use in semiconductors and general purpose applications. • Added Tokai Carbon Korea Co., Ltd. to the consolidated group in June 2018.
Tokai Konetsu Kogyo Co., Ltd. Tokai Konetsu Engineering Co., Ltd. Shanghai Tokai Konetsu Co., Ltd. Tokai Konetsu (Suzhou) Co., Ltd.	<ul style="list-style-type: none"> • Significant increases in net sales and operating income. • Ongoing demand for industrial furnaces in the IT- and energy-related markets. • Solid demand for SiC heaters for electronic components and glass.
Tokai Material Co., Ltd. Mitomo Brake Co., Ltd. Daiya Tsusho Co., Ltd. Tokai Noshiro Seiko Co., Ltd. Tokai Carbon (Suzhou) Co., Ltd. TOKAI CARBON US HOLDINGS INC.	<ul style="list-style-type: none"> • The businesses included here all reported higher sales and earnings. • Strong demand for friction materials used in construction equipment and machine tools. • Growth in the market for anode materials used in EV lithium-ion batteries.

* Affiliates accounted for by equity method

Graphite Electrodes Division



Structural reforms over the past three years have resulted in stable earnings. The tripolar (Japan, U.S., and Europe) business structure will enhance productivity and quality, further solidifying our reputation.

Kenji Enokidani
General Manager of the Graphite Electrodes Division

T-2021 Key Measures

Business Conditions

- Tight supplies of high-quality graphite electrodes
- Growing demand for EAF steel over the medium-to-long term. Continued rise in EAF production as a percent of crude steel production.

Management Issues

- Rising price of needle coke
- Fulfillment of supply responsibilities
- Integration of North American locations with the Group (Integrated operation of global Group locations)



Key Measures

1

Respond to raw material price fluctuations

Tight raw material supplies will continue to constrain the supply of graphite electrodes. Establish a revenue base that will not be affected by raw material prices.

2

Invest in renovating and maintaining manufacturing facilities

Manufacturing facilities and equipment are aging and will be updated to maintain stable production and supply.

3

Lower the breakeven point by integrating North American locations

Further cost savings will be achieved by optimizing the Japan-U.S.-Europe production organization, and attaining greater technical heights for the Group.

Business Overview and Outlook

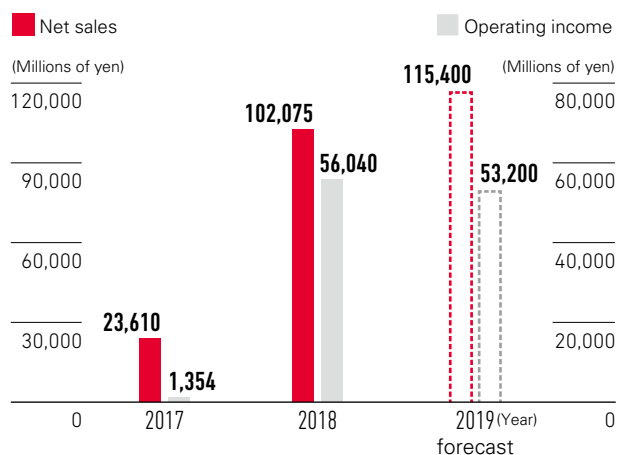
In 2018, net sales rose by 332.3% year on year, to ¥102,075 million and operating income ended the year significantly higher, at ¥56,040 million.

Amid a structural downturn, the Company cut its graphite electrode production capacity by about 40% in 2015 and redirected this capacity to the production of anode materials, for which demand was rising. Stricter environmental regulation in China, however, sparked an upturn in graphite electrode demand and the market began to recover in the second half of 2017. At the same time, prices for a key raw material, needle coke, dramatically increased due to short supply, and graphite electrode prices rose as a result. In addition, TOKAI CARBON GE LLC joined the Tokai Group in November 2017, boosting the division to record highs in sales and income for FY2018.

Supplies of needle coke and electrodes are expected to remain tight in 2019 and beyond. Our focus will be on securing stable earnings that can be reinvested in updating aging facilities. Attention will also be paid to accelerating optimization and efficiency gains in overall

Group production and sales. This will be done by moving forward with integration of the division's three globally dispersed business locations.

Business results and forecast

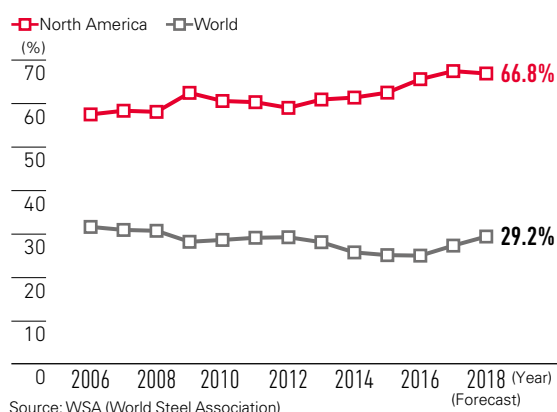


*The 2019 operating income forecast does not reflect internal adjustments.

Production Facility Acquired in North America, the World's Largest Electric Furnace Steel Market

Electric furnaces make steel by using graphite electrodes to melt steel scrap. North America is the world's largest market for electric furnace steel, which accounts for approximately 70% of total steel production there. In November 2017, Tokai Carbon gained a North American production facility when it acquired TOKAI CARBON GE LLC. In so doing, it also established a tripolar global supply system with bases in Japan, the US and Europe. Through its base of operations in the North American market, which is expected to continue steadily growing, the Group will strive to further strengthen the position of its graphite electrodes business in the global market.

Electric Furnace Steel Production Over the Years



Global Supply System for Graphite Electrodes



TOKAI CARBON GE LLC

Location: Headquarters - Charlotte North Carolina
Plants - Hickman, Kentucky
Ozark, Arkansas

Acquisition price: ¥14.6 billion

Production capacity: 30,000 tons/yr.

Consolidated contribution: Began contributing to consolidated results in November 2017

Carbon Black Division



Acquired North American locations to enter non-Asian markets. To save costs and shift the product mix to include more high-value-added products, we will use technologies from other Group members whenever necessary.

Takashi Masaki

General Manager of the Carbon Black Division

T-2021 Key Measures

Business Conditions

- Annual growth of 2-3% expected based on strong tire and automobile production.
- Carbon black demand and supply expected to rise mainly in Asia.
- 2020 MARPOL Convention (revision of regulations on sulfur content of fuel oil used by ships)

Management Issues

- Integration of North American locations with the Group
- Continuation of stable earnings
 - Further yield improvements, and energy-efficient operation
 - Environmental burden reduction
 - Increase specialty products as a percent of the total



Key Measures

1

Integrate and optimize North American locations

Secure appropriate margins in the North American market where supply is tight. Also share technology with other locations.

2

Reduce costs through the efficient use of energy and other means

Manage the use of feedstock oil, improve productivity, share technology for efficient use of waste heat within the group, and work to reduce overall cost and maximize output.

3

Increase the percentage of high value-added products

Increase the high value-added products (specialty products) as a percentage of products sold by sharing information on products developed in Japan. Reduce reliance on the commodity market and capture share in high-margin markets.

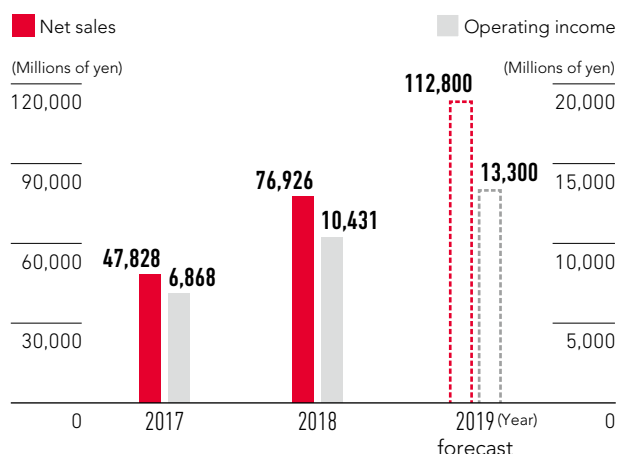
Business Overview and Outlook

In 2018, earnings greatly improved as net sales grew by 60.8% year on year, to ¥76,926 million, and operating income climbed 54.8%, to ¥10,629 million. Globally tight supplies of carbon black, resulting from several years of production capacity reductions by various industry participants, and the withdrawal of Chinese carbon black manufacturers in response to tighter environmental regulations in that country were key drivers of these results. Also contributing to higher net sales were price hikes driven by rising prices for crude oil, a key raw material.

Looking to 2019 and beyond, Tokai Carbon CB Ltd., a North American carbon black manufacturer added to the consolidated group in September 2018, will make full-year contributions to business results. Considering also the effects of tight supply conditions in the North American market, and margin corrections to account for costs of environmental measures, the outlook is for increases in both net sales and operating income. A global supply system to serve the needs of tire and rubber product manufacturers will be put in place and will include non-Asian markets. Through this endeavor and

the simultaneous leveraging of technical synergies across geographic locations to boost quality and productivity, we aim to further stabilize the earnings base for this division.

Business results and forecast



*1 The 2019 operating income forecast does not reflect internal adjustments.

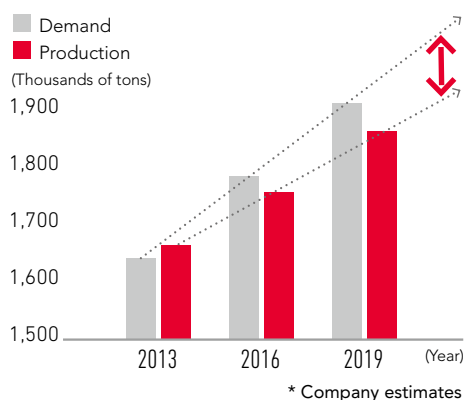
*2 Operating income for 2018 has been adjusted retrospectively as of March 31, 2018.

Acquisition of the Largest Plant in the High-Entry-Barrier North American Carbon Black Market

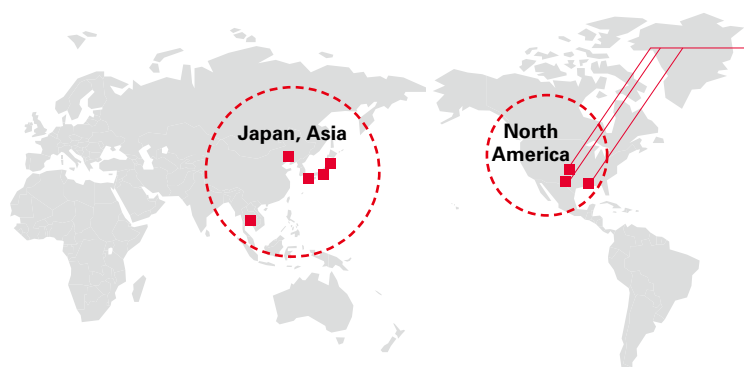
North America is experiencing steadily growing demand for carbon black. On the other hand, toughened environmental regulations make it very difficult to increase production by adding new capacity. Even tighter supplies, therefore, are expected.

Responding to these circumstances, Tokai Carbon acquired Sid Richardson Carbon, Ltd. (now Tokai Carbon CB Ltd.), the largest carbon black manufacturer in North America, in September 2018. This move increased the Group's annual production capacity to 937,000 tons, from 497,000 tons. Going forward, particular attention will be paid to fostering production and technology synergies.

Carbon Black Demand/Supply in North America



Global Supply System for Carbon Black



Tokai Carbon CB Ltd.

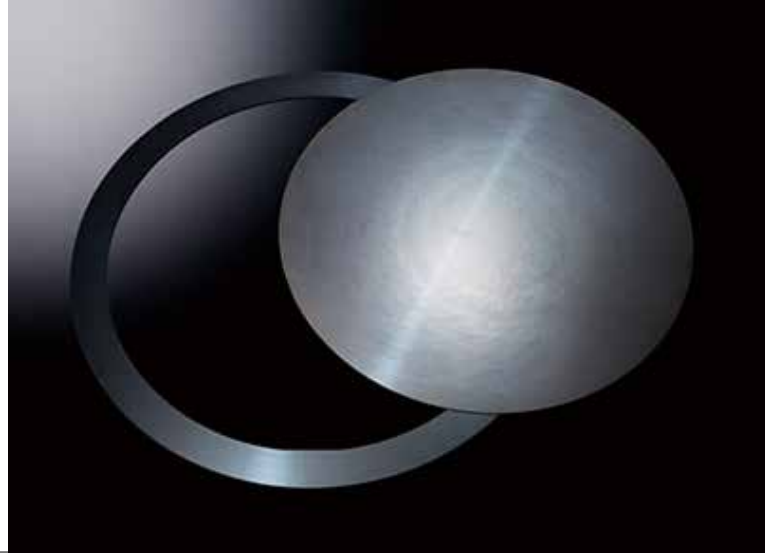
Location: Headquarters – Fort Worth, Texas
Plants – Borger, Texas; Big Spring, Texas; Addis, Louisiana

Acquisition price: ¥37.3 billion

Production capacity: 440,000 tons/yr.

Consolidated contribution: Began contributing to consolidated results in September 2018

Fine Carbon Division



Strengthened the division through a major restructuring.
We aim to achieve further profitability gains through active capital investments in the CVD SiC business.

Masafumi Tsuji

General Manager of the Fine Carbon Division

T-2021 Key Measures

Business Conditions

- Deceleration of the Chinese economy
- Slowing of the semiconductor business cycle
- Untapped demand growth in the AI and IoT markets
- Strong sales of graphite for general industrial uses

Management Issues

- Strengthening of the CVD SiC* business
- Collaboration and realization of business synergies with Tokai Carbon Korea Co., Ltd.
- Productivity improvement, cost reduction, cash flow maximization

* SiC (silicon carbide) made by CVD (chemical vapor deposition)



Key Measures

1

Restructure the CVD SiC business

Allocate CVD production equipment optimally among Japan, South Korea, and the U.S., and achieve tripolar technology and sales synergies.

2

Improve productivity, reduce costs, and maximize cash flow

Target further reduction in costs and a shift to high value-added products.

3

Pursue opportunities for mutual growth with Tokai Carbon Korea

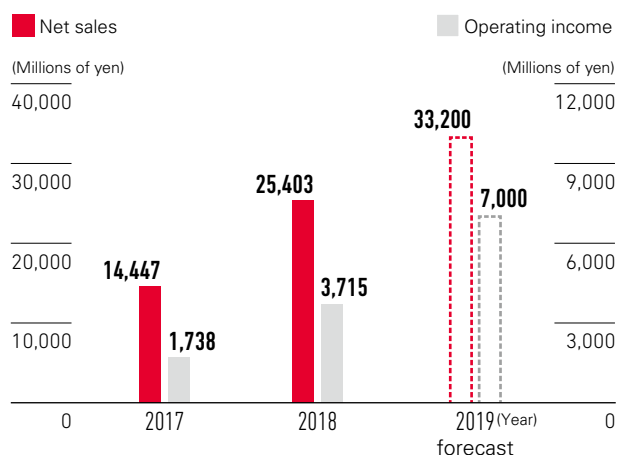
Capture demand for switching from silicon and quartz materials in the Solid SiC focus ring market with manufacturing technology and production capacity that is overwhelmingly superior to that of competitors.

Business Results Overview and Outlook

In 2018, net sales rose by 75.8% year on year, to ¥25,403 million, and operating income grew by 229.9%, to ¥5,735 million.

In 2016, the Fine Carbon Division embarked on structural reforms, such as a production capacity reduction, and greatly improved the quality of its earnings as a result. In June 2018, Tokai Carbon added Tokai Carbon Korea Co., Ltd. to the consolidated group. This made Tokai Carbon Group the world's largest manufacturer of CVD SiC products, in terms of manufacturing capacity, and put in place a platform for pursuing further growth opportunities. Solid SiC focus rings and other high-value-added CVD SiC products have high strategic significance for Tokai Carbon Group. Plans for this division are aimed at business growth in line with market expansion.

Business results and forecast



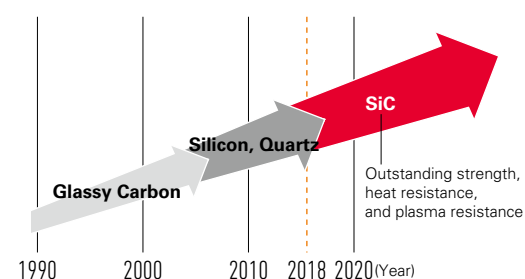
*1 The 2019 operating income forecast does not reflect internal adjustments.

*2 Operating income for 2018 has been adjusted retrospectively as of March 31, 2018.

Adding Tokai Carbon Korea Co., Ltd., a Major Supplier of Solid SiC products, to the Consolidated Group

Trends toward further miniaturization and higher integration of semiconductors have led to demand for greater durability in etching-equipment components. Demand for these components, therefore, is shifting away from those made of silicon and quartz, which account for 80% of the market, and toward components made of extremely durable SiC. Solid SiC focus rings made by Tokai Carbon Group are highly rated by major manufacturers of semiconductor manufacturing equipment, and we expect demand for them to remain strong going forward.

Focus ring material transition



Facilities at Tokai Carbon Group SiC Product Manufacturing Sites

○: Has these facilities

Production flow	Europe	China	South Korea	Japan	U.S.	Main applications
Graphite materials				○		<div>General heat-resistant applications</div> <div>Semiconductors</div> <div>Solid SiC</div> <div>High-end</div>
Processing	○	○	○	○	○	
Purification			○	○	○	
CVD SiC			○	○	○	

Industrial Furnace and Related Products Division



Recorded healthy sales of multi-layer ceramic capacitors used in automobiles and industrial components.
The production platform will be strengthened to capture market growth.

Akihiko Sato

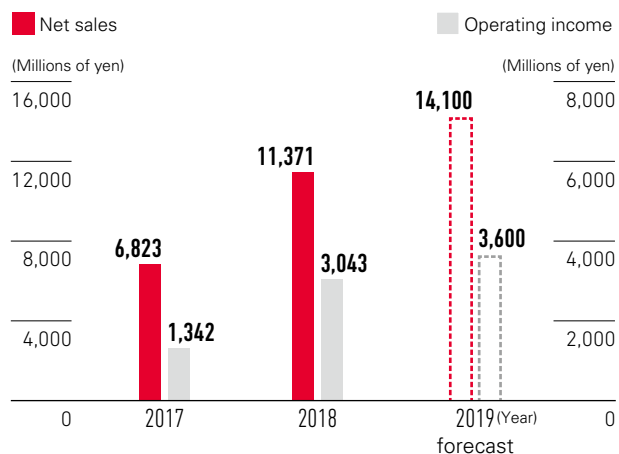
Representative Director and President
Tokai Konetsu Kogyo Co., Ltd.

Business Results Overview and Outlook

In 2018, net sales rose by 66.7%, year on year to ¥11,371 million, and operating income rose by 126.7%, to ¥3,043 million. The main products in this division are industrial furnaces and heating elements. Robust demand for these products among glass manufacturers and manufacturers of multi-layer ceramic capacitors for automobiles and industrial components was a key driver of the division's higher sales and earnings.

Growth in markets for automotive applications and lithium-ion-battery materials is expected to continue. We believe an expansion of production capacity will be needed to meet the growing demand. As we work to expand our operations, we will also focus on securing human resources, increasing sales of newly developed furnaces, cutting costs for EREMA heating elements, and making a full-scale effort to enter the field of battery materials.

Business results and forecast



* The 2019 operating income forecast does not reflect internal adjustments.

Other Businesses

(Friction materials, Anode materials)



Friction Materials

Business restructuring is the medium-term management plan theme for this business. In concert with that theme, we will focus on achieving optimal improvements for individual product types.

Hiroshi Takahashi

General Manager of Friction Materials Division



Anode Materials

Continued growth is expected in the EV market. Our next challenge is to boost product performance through greater quality and to achieve business expansion by capturing market growth that requires larger-scale CAPEX.

Mitsuaki Dozono

General Manager of Anode Materials Division

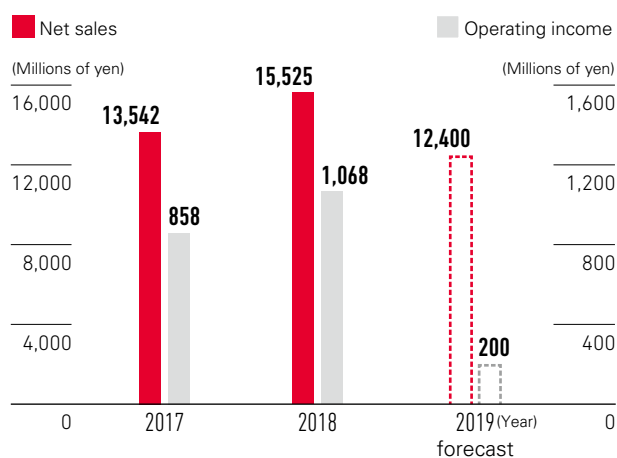
Business Results Overview and Outlook

In 2018, net sales grew 14.6% year on year, to ¥15,525 million, and operating income was up 24.5%, to ¥1,068 million.

Friction materials for use in construction equipment and in machine tools, including industrial robots, sold well. Withdrawal from the four-wheel vehicle market, to which the division was supplying commodity products, was completed as part of the business restructuring set forth in the medium-term management plan. Now attention will turn to expanding sales of products for use in industrial robots and in electromagnetic brakes for wind turbines.

Regarding anode materials for lithium-ion batteries, efforts will focus on achieving further growth by expanding production capacity and the customer base in line with EV/PHEV market growth.

Business results and forecast



* The 2019 operating income forecast does not reflect internal adjustments.

Research & Development

Tokai Carbon is an expert in carbon technology. We aim to continue growing by developing practical carbon technologies for customer needs and using next-generation carbon technologies to create new businesses.



Basic R&D Strategy

We pursue technology innovation driven by practical R&D and creative R&D. Through practical R&D, we respond to a wide range of customer needs by continuously improving production technologies for existing businesses. In creative R&D, we make the most of our cumulative strengths in manufacturing to create new businesses for future growth.

Having pioneered the production of graphite electrodes and carbon black in Japan, Tokai Carbon has developed proprietary technologies in a broad range of areas including high temperature processing and nano-

level surface treatment. By continuing to refine these technologies and adopting new technologies, we have given rise to new businesses that cross the boundaries of our existing operations. Examples include semiconductor silicon and other fine carbon products, and anode materials made with next-generation carbon technology.

To remain an expert in carbon technology, we will continue to take in technical innovations from society, engage in technical collaborations with other companies, and strive to develop people who will thrive in a globalized environment.

R&D Organization

Creative R&D

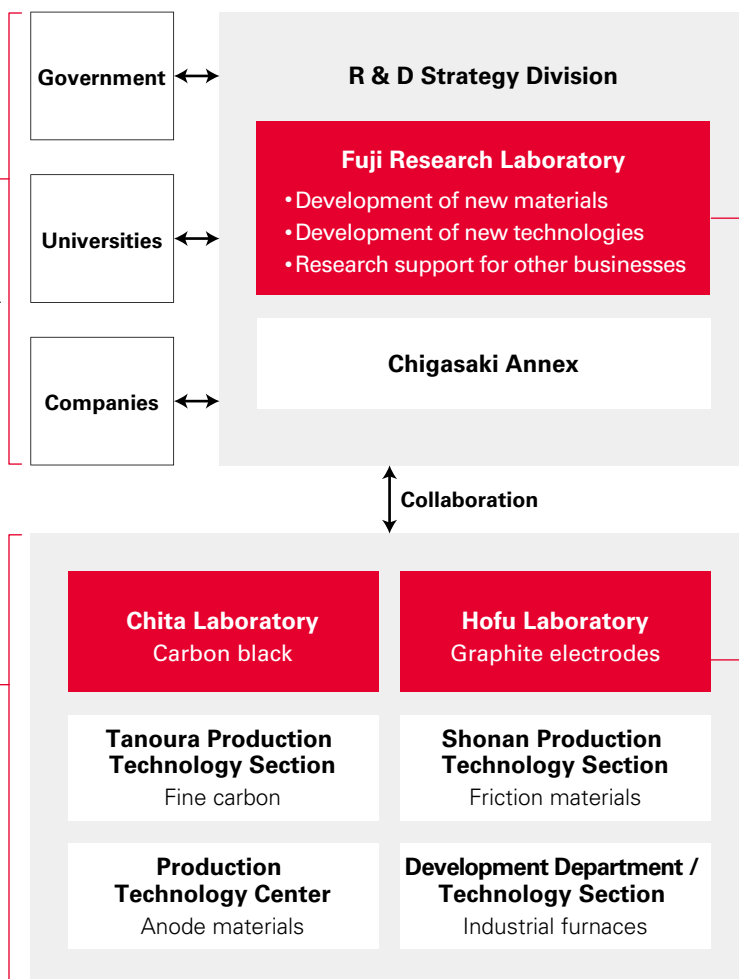
Creation of New Businesses that Cross Business Boundaries

- Development of functional components for the CASE automobile industry and the era of 5G and IoT
- Development of functional materials for environmental conservation
- Creation of the next big business after anode materials

Practical R&D

Improvement of product quality and productivity in existing businesses

- Advances in production technology and quality, cost reduction, and reduced environmental burden
- Rapid, precise responses to customer needs
- Development of new carbon black, fine carbon, and friction material products



R&D Organization

The Fuji Research Laboratory, Chita Laboratory, and Hofu Laboratory are the key components of Tokai Carbon's R&D organization, which has a long history of responding to societal and environmental changes, and wide-ranging customer needs. Our R&D organization has produced manufacturing and technological advancements, enhanced our product offerings, and contributed to the creation of new businesses.

The Fuji Research Laboratory is presently engaged in strategic R&D aimed at creating new businesses.

These will be in areas such as functionality-adding high-temperature materials for promising markets in the form of CASE automobiles, and semiconductors for 5G and IoT applications. The Chita and Hofu laboratories, meanwhile, are located next to plants and engage in practical R&D aimed at advancing technologies used in existing businesses.

In recent years, Tokai Carbon has been actively working with public research institutions, universities, and the research divisions of other companies to illuminate further possibilities for carbon.

Major R&D Facilities

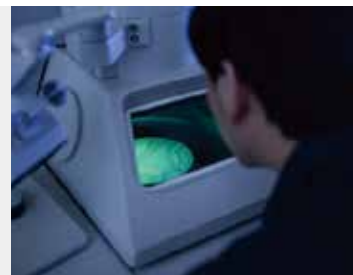
Fuji Research Laboratory

This integrated research lab is equipped with the latest research facilities, including an electron microscopy room, experimental lab, and prototype workshop. Our research here has a long history of addressing the pressing needs of the day—in areas such as semiconductors, automobiles, energy & the environment, and aerospace—to develop unique new technologies and products. We are developing technical personnel by having them participate in joint research projects with universities and research laboratories, and sending them to technical conferences, and will continue to create new businesses that respond to the era and the needs of customers.



Chita Laboratory

Located next to the Chita Plant, the Chita Laboratory leads our carbon black production R&D in an environment with direct access to the production line. This arrangement helps speed the transition from development to production, enabling development that is closely aligned with customer needs. The Chita Laboratory focuses on developing environmentally friendly products for the automotive industry.



Hofu Laboratory

The Hofu Laboratory works on improving the quality of Tokai Carbon's artificial graphite electrodes through prototype construction, and evaluation and analysis. Our research spans a broad range, including raw material analysis and investigation of electrode characteristics. The results of this research are used to achieve even greater stability in the manufacturing process. The Hofu Laboratory is Tokai Carbon's main lab for graphite electrode research and acts as a technology link for our Japanese, U.S., and European production centers.





Message from the Managing Executive Officer

Through ongoing technology advancement and human resource development, we will carry Tokai Carbon forward as an expert in carbon technology and develop products that respond to society's demands.

Toshiaki Fukuda

Managing Executive Officer
General Manager, R & D Strategy Division

Applying Core Technologies in a Diverse Range of Fields

Tokai Carbon has been in business for over 100 years and pioneered the production of carbon in Japan. Customers expect much from us and trust that we will meet their needs. In response, we constantly endeavor to improve our quality and production technology. As a result of such efforts, we became the first company to develop electrodes with a diameter of 32 inches - the world's largest. Our strengths are in heat treatment technology with free control of high temperatures, production technology that can turn out a wide range of shapes from powder all the way through blocks, and our wealth of technical experience as a comprehensive carbon manufacturer. We are working to apply these core technologies in promising growth areas that cut across business boundaries. Through this work, we are developing new materials and functional components that make the most of our strengths and are opening the door to new possibilities for carbon.

R&D Collaborations with Government, Industry, and Academic Partners

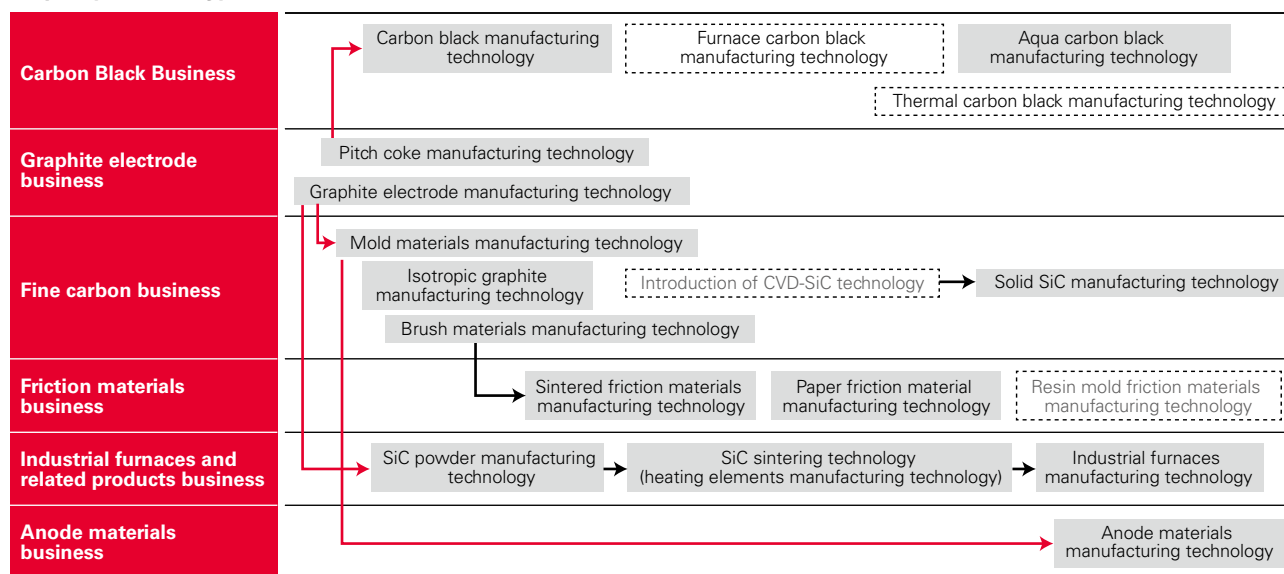
Tokai Carbon devotes significant energy to collaborating with external organizations in development efforts. We receive proposals from a wide variety of companies and research

institutions. Presently, we are engaged in several projects that we believe will result in benefits for all participants. Two of the most notable results of such efforts are a business built around anode materials and the commercialization of aqueous carbon black. Looking to the future, we aim to create more new businesses by leveraging our efforts in areas such as the development of functional components that will play key roles in future generations.

Global Technical Collaboration and Human Resource Development

We believe the ongoing growth and development of our business depends on two factors: even greater amounts of precisely targeted R&D investment and human resource development. Through "practical R&D," we are striving to maximize synergies through technical collaboration among our production facilities in Japan, other parts of Asia, and the U.S. In "creative R&D," meanwhile, we believe it is necessary to further strengthen our base of human resources as we focus on developing new functional components for automotive, energy-saving, and environmental applications. Through temporary assignments to university and other research institutions, and participation in conferences, we will continue to develop technical human resources capable of thriving on the global stage.

Proprietary Technology





Part 3

Sustainability Report

Working with Stakeholders to Create Future Value

We will fulfill our responsibilities to stakeholders and build a global ESG management platform to contribute to the sustainability of society.

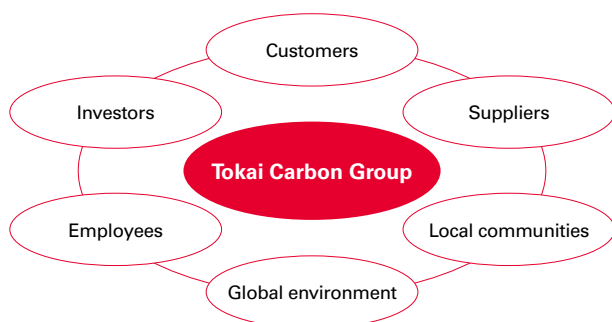
CSR basic policy and structure

At Tokai Carbon Group, our business activities are founded in our basic philosophy, Ties of Reliability. Grounded in this belief, our CSR activities focus on compliance, the environment, and social contributions. Each member of Tokai Carbon Group embraces and proactively engages in CSR to ensure we are able to make wide-reaching and continuous contributions to social development.

CSR activities are overseen by the CSR Committee, which is led by the head of the General Affairs Department and includes members representing the Corporate Planning, General Affairs, Human Resources, Legal Affairs, and Environment Safety Management departments. The CSR Committee, as a rule, holds meetings four times a year. The committee is responsible for discussing and making decisions on important CSR-related matters, bringing matters before and submitting reports to the Management Committee, and overseeing information disclosure through annual report preparation and other means.

The activities of the CSR committee provide a focal point for PDCA cycles we engage in to achieve prosperous coexistence with each of our stakeholders.

Tokai Carbon Group Stakeholders



Respecting human rights

In line with their basic policies, Tokai Carbon and its domestic Group companies have been conducting human rights education activities since 1977. Led by human rights promotion committees at the Company and division level, these activities focus on educating all employees on human rights policies and fostering enhanced awareness of their importance. In 2018, human rights education sessions were conducted 16 times with a total of around 850 participants. In 2019, the education curriculum will be structured based on the survey responses of 2018 participants. Also in 2019, the Tokai Carbon Group Human Rights Promotion Committee has been established to promote activities that are consistent across the entire Group. Human rights promotion committees will also be established within domestic Group companies.

Basic Policies on Respecting Human Rights

1. Correctly recognize equality and other human rights issues from a corporate perspective and engage in ongoing training on a companywide basis to eliminate discrimination.
2. Establish a firm awareness of the importance of respecting basic human rights and develop employees with enriched human rights sensibilities.
3. Elevate the human rights awareness of every individual employee to promote the development of a vibrant, energetic workplace and society.

(Revised in 2002)

Building an ESG Management Platform

Tokai Carbon Group aims to contribute to the sustainability of society by practicing management that is consistent with efforts to solve various global issues. At the end of 2018, we embarked on an initiative aimed at building an ESG management platform to serve as a foundation for such action. Now we are identifying key issues and working with the advice of experts to enhance ESG activities and appropriately disclose information through our website and other channels.



CSR Committee

Environmental conservation

Basic ideas

Tokai Carbon Group treats protection of the global environment as one of its highest management priorities. To harmonize our business activities with environmental needs, we have implemented an environmental management system based on the ISO 14001 international standard.

Toward that same end, we also qualitatively and quantitatively evaluate the environmental impacts of our business activities, focusing on production and distribution, and take various steps to reduce them. We believe these efforts will also contribute to the realization of a sustainable, recycling-oriented society.

To facilitate our environmental protection activities, we have established an environmental philosophy and environmental policy for the entire Tokai Carbon Group.

Environmental philosophy

Tokai Carbon Group views the protection of the global environment as one of its highest-priority management issues. We work to achieve harmony between business activities and the environment, and conduct activities towards the realization of a sustainable, recycling-based society.

Environmental policy

1. Enhance environment management system
Work to maintain and improve environment management system and conduct environmentally conscious corporate activities.
2. Promote effective use of resources and energy
Work to protect the global environment through resource conservation, energy conservation, minimizing industrial waste, and reducing emissions of greenhouse effect substances and toxic substances.
3. Comply with relevant environmental laws
Adhere to laws, ordinances, and agreements related to the environment and, as necessary, outline voluntary management standards to work towards environmental protection.
4. Promote environmental education activities and social contribution activities
Use environmental education to elevate environmental awareness and participate in local environmental conservation activities to protect the local environment and improve communication.
5. Disclose environmental information
Use IR activities to distribute environmental information related to corporate activities in order to ensure transparency.

(Established in 2011)

Environmental management

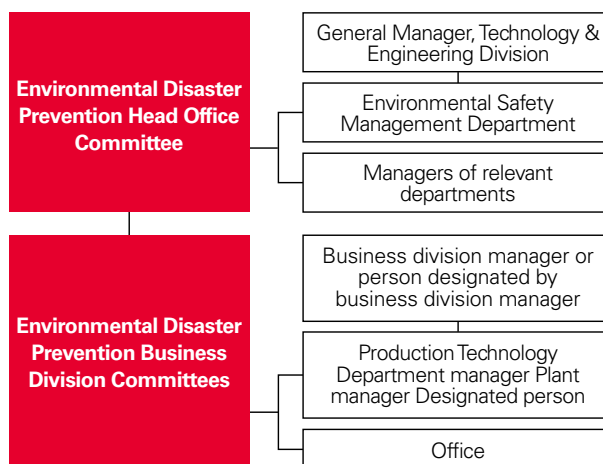
Management structure for environmental disaster prevention

Tokai Carbon has established an environmental management structure consisting of the Environmental Disaster Prevention Head Office Committee and the Environmental Disaster Prevention Business Division Committees through which Group companies participate.

The Environmental Disaster Prevention Head Office Committee establishes major strategies and policies, and each business division pursues activities in line with the ISO 14001 international standard for environmental management.

Moving forward, we aim to take on challenges, the achievement of which will have progressively greater benefits for the environment.

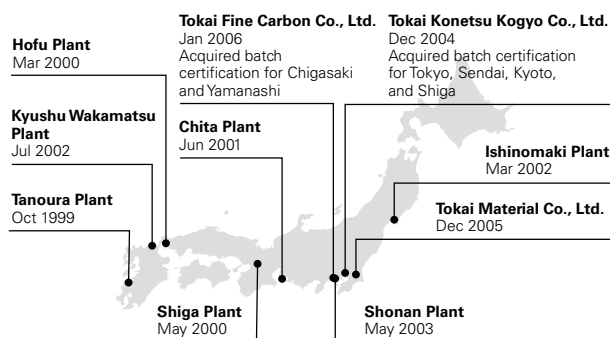
Management structure for environmental disaster prevention



Status of environmental management system certification

The ISO 14001 international standard is critical for pursuing business activities in an environmentally friendly manner. Tokai Carbon has obtained ISO 14001 certifications for all of its plants in Japan. As of 2018, all of these plants had been migrated to the new ISO 14001:2015 standard.

Status of environmental management system certification



Environmental objectives and performance

In advancing its environmental activities, Tokai Carbon undertakes initiatives focused on the following four targets.

(1) Legal compliance

We carefully confirm the requirements of relevant laws, ordinances, community treaties, and agreements and properly comply with them.

In 2018, we had no business locations in violation of key regulatory limits or standards, and we had no cases of environmental lawsuits or penalties.

(2) Zero environmental claims

Even when within standards outlined in relevant laws, ordinances, community treaties, and agreements, we appropriately respond to any incidents that could cause trouble for the local community.

No significant environmental claims were made against Tokai Carbon in 2018.

(3) Reducing CO₂ emissions per unit production

Tokai Carbon has established medium-term goals for its

environmental activities.

In 2018, each of our business divisions increased its production volume relative to the year earlier, and CO₂ emissions rose as a result.

In addition, CO₂ emissions per unit production rose because maintenance at a carbon black plant required the temporary shutdown of in-house power generation facilities there and because of a relative increase in production of electrode products requiring comparatively high amounts of energy to produce.

(4) Reduction of industrial waste

In 2018, the volume of industrial waste generated rose compared to the prior year. This increase occurred because of higher production volume in response to strong demand, lower transfers of valuable waste, and efforts to upgrade/repair facilities and dispose of idle assets.

By continuing to separate waste by type and pursuing value-added options in line with social conditions, we aim to further reduce the amounts of waste we send out for consigned treatment, or for final disposal in a landfill.

CO₂ Emission and Per Unit Production Data (Tokai Carbon Co., Ltd.)

	Units	2012 (Base year)	2016	2017	2018
CO ₂ emissions	Thousand tons	635	527	608	671
Graphite electrode business	Thousand tons	194	138	163	184
Carbon black business	Thousand tons	385	357	398	437
Fine carbon business	Thousand tons	54	31	44	47
Other businesses	Thousand tons	2	2	3	3
Per unit production (vs. 2012)	%	100.0	96.1	100.5	101.9

Industrial waste generation and treatment (Consolidated, Japan)

(t)

Action	2012 (Base year)	2016	2017	2018
Vol. consigned	3,841	3,104	3,281	4,027
Portion of above sent to landfills	1,702	777	1,006	1,790

Water Usage and Discharges of Environmentally Hazardous Substances into Water (Tokai Carbon Co., Ltd.)

	Units	2016* ¹	2017* ¹	2018* ¹
Water use	1,000m ³	2,612	2,698	2,761
BOD emissions	kg	2,385	1,062	1,461
COD emissions	kg	10,174	9,473	6,944
NO _x emissions	t	571	663	672
SO _x emissions	t	664	1,031	1,162
Total nitrogen* ²	t	—	4.7	5.4
Total phosphorus* ²	t	—	0.2	0.2

*¹ Data-gathering period: April to March of the following year.

*² Reporting scope: Business locations that could impact the bodies of water specified in the Ministry of the Environment's "Environmental Quality Standards for Water Pollution" attached table titled, "Environmental Quality Standards for Conservation of the Living Environment (Coastal waters, lakes)."

Basic ideas

Occupational safety and health is one of Tokai Carbon's highest priorities and a key concern of management. Aiming to keep our operations free of occupational accidents, we strive to ensure that everyone working in our facilities is sensitive to potential dangers.

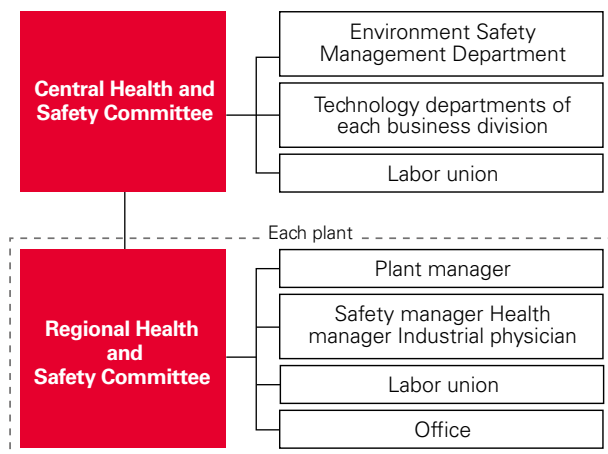
Responding to occupational accidents that occurred in 2018, we are focusing on three key points in 2019. These are: 1) Thoroughly identifying potential dangers before engaging in non-routine work activities; 2) Ensuring the safety of inexperienced individuals; and 3) Safety activities undertaken together with contractors working on site.

Health and safety management structure

We believe a united front between labor and management is vital to eliminating labor accidents. To confirm the status of health and safety activities at each plant and to deliberate and outline core initiatives related to health and safety, we convene Central Health and Safety Committee meetings attended by labor and management representatives, including executives responsible for occupational safety.

In addition, Tokai Carbon holds monthly Regional Health and Safety Committee meetings to promote health and safety activities.

Tokai Carbon health and safety organization chart



Experiential Safety Training

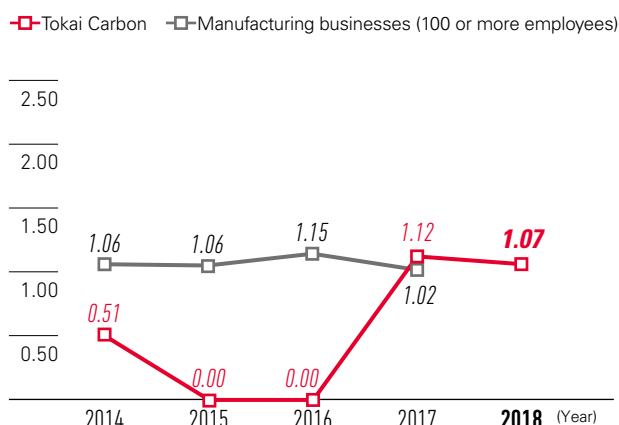
Since 2017, we have been working with a third-party organization to conduct safety experiential training to make our employees more sensitive to potential dangers. In 2018, 74 employees, including new hires, underwent this training.

Occupational accidents

The rate of lost-time accidents over the most recent five years is as shown in the chart. For the years 2014 through 2016, our rate of lost-time accidents was below the average for manufacturing businesses with at least 100 employees.

In 2018, we experienced two lost-time accidents. There were no accidents resulting in death.

Frequency rate of occupational accidents over time



Frequency rate: The number of deaths or injuries per million working hours.
Note: As of April 2019, the 2018 frequency rate of deaths or injuries in manufacturing businesses with at least 100 employees has yet to be published.

Health and safety initiatives

Aiming to eliminate labor accidents, Tokai Carbon continues to conduct near-miss reporting, KYT (Kiken Yochi (Danger Identification) Training), and other safety management activities, with participation by all employees. In the event of a labor accident or a significant near-miss event (cases that do not result in a labor accident but could lead directly to a serious accident), we disseminate this information internally and to Group companies to raise awareness and prevent the occurrence of similar incidents. To promote workplace mental health, we engage in initiatives such as holding training seminars at individual plants and conducting mental health seminars.

Human resource development

Basic ideas on hiring and employment

Tokai Carbon guarantees fair employment opportunities for all individuals and considers only aptitudes and strengths in making hiring decisions. We make no distinctions based on race, geographic origin, nationality, age, gender, sexual orientation, or disability.

In hiring recent college graduates, we seek goal-oriented, self-directed individuals who welcome challenges, are problem solvers, and will cooperate with others. When it comes to mid-career hires, we look for people who have skills that respond to our overseas business development, technical development, and other business needs.

Evaluations, compensation, and human resource development

In line with our long-term vision of being “A Global Carbon company Contributing to a Better Society,” Tokai Carbon devotes significant attention to human resource development as a way to heighten internationalism and our ability to create value – two of the themes of our basic philosophy. We aim to further strengthen the capabilities of our employees and improve our value creation capabilities as an organization. We clearly define the roles and objectives for individual employees and, to promote career development, we have established systems for attaining professional qualifications, managing objectives, and self-assessment.

Work-life balance

Tokai Carbon allows employees to take childcare leave for up to two years following the birth of a child, and nursing care leave for a total of 93 days per family. Employees may also work shortened hours up to the time their children enter elementary school. These benefits exceed statutory standards and give employees a relatively high level of flexibility in meeting family needs.

Regarding annual paid leave, our policies offer even greater flexibility with not only planned leave of at least five days but also systems for taking half days and accumulating expired leave.

Promoting diversity

Continuous employment system

We have established a re-employment system that enables motivated and skilled elderly workers to continue their employment for five continuous years after the mandatory retirement age. In 2018, we continued the employment of all 28 people who requested to stay on. To enhance our ability to consistently secure human resources, and to encourage even greater use of the system, we are planning to increase the annual compensation for re-employed workers beginning in 2019.

Opportunities for women

In 2018, Tokai Carbon formulated an action plan for promoting the careers of women. Under this plan, our goals over the two-year period beginning April 2018 and extending to March 2020 are to increase the hiring of female new graduates to at least 30% of people taken on for career-track positions and to foster a workplace environment that encourages women to continue working even after giving birth and as they proceed to raise their families.

Expanding hiring of people with disabilities

As of June 1, 2018, people with disabilities made up 1.64% of Tokai Carbon's workforce. This figure is lower than the legally mandated rate, which we are actively working to achieve by creating working environments where people with disabilities can succeed.

Consolidated employment figures by region

(individuals)

Data Points	2013	2014	2015	2016	2017	2018
Japan	1,258	1,270	1,273	1,215	1,226	1,258
North America	26	102	114	103	249*	660
Europe	268	252	251	244	251	268
Asia	364	440	454	418	416	758
Total	1,916	2,064	2,092	1,980	2,142	2,944

* The 2017 employment figure for North America rose by approximately 140 people following the November 2017 acquisition of TOKAI CARBON GE LLC.

Work-life balance data (Tokai Carbon Co., Ltd.)

Data Points	2017	2018
Employees returning from childcare leave	100 %	100 %
Employees taking family care leave	0 individuals	0 individuals
Avg. percent of annual paid leave taken	52.3 %	50.0 %
Avg. overtime hours per month	9.9 hours	12.2 hours

Basic ideas on our business and customers

Tokai Carbon Group makes materials and other industrial goods that are used in, or used to make, other industrial products and even consumer goods. Examples include items as diverse as automobiles, steel, electronic components, agricultural equipment, and lithium-ion batteries.

We are a global market leader in products such as graphite electrodes and carbon black. Our customers span a wide array of industries and are located across the globe. Indeed, over half of our sales come from customers in North America, Europe, and Asia. The reliability of our supply capabilities and excellence of our product quality have been critical in making this possible.

As a part of our customers' supply chains, we work continuously to abide by relevant laws, regulations, and social norms, and strive to minimize the environmental impact of our manufacturing operations.

Diversified Plant Location and Local Production

Diversified Plant Location, Local Production

In the past, Tokai Carbon Group based its production in Asia. In the 1990s, however, we expanded our business territory to the global market. In an effort to add production facilities in various locations, we have taken actions such as establishing a carbon black plant in China in 2004, acquiring the German graphite electrode manufacturer TOKAI ERFTCARBON GmbH in 2005, and acquiring the Canadian carbon black manufacturer Cancarb Limited in 2014. In 2017 and 2018 we also acquired graphite electrode and carbon black manufacturers in North America. These actions have made us a global player with production and sales functions near customers, and the ability to reliably supply high-quality products, in both of these businesses.

Raw material procurement

The main raw materials for the production of carbon black, are creosote oil obtained from the tar distillation process, and FCC bottom oil and ethylene bottom oil, which are obtained from the oil remaining from the refining of petroleum. For graphite electrodes, the main raw materials are a special needle coke from the distillation of tar or the refining of petroleum, and coal tar pitch.

For both carbon black and graphite electrodes, there are only a limited number of raw material suppliers, which include tar distillation companies, petroleum refineries, and petrochemical companies. That can pose a challenge in managing costs, but we must do our best to keep raw material costs as stable as possible, so that our customers and all other stakeholders can continue to rely on us.

Going forward, we will persist in our efforts to maintain close relationships with our suppliers, so that we can grow and prosper together with them, and ultimately contribute to the economy.

Supplies of the oils needed to make carbon black and the needle coke that is a key raw material for graphite electrodes are both tightening, even as demand for carbon black and graphite electrodes is rising.

In procuring raw materials for carbon black, we select suppliers based on careful considerations of volume, pricing, and raw material types. As for needle coke, procurement of its raw materials is still handled by individual plants. For greater stability in procurement, therefore, we are considering possibilities for creating a centralized procurement system that would cover all of our graphite electrode manufacturing facilities in Japan, the U.S., and Europe.

Quality management

To provide the products that satisfy our customers, Tokai Carbon Group practices strict quality management in all processes, from the design phase to raw materials procurement, manufacturing, distribution, and sales. To ensure adherence to our own strict standards, we conduct inspections at every stage from the receipt of raw materials and secondary materials to production, and shipment. We aim to strengthen the Ties of Reliability between company and customer by continuously providing safe, reliable products.

To establish a foundation for quality management, we have obtained the ISO 9001 international quality management certification for all of our manufacturing facilities in Japan. Each plant and office has established quality management systems compliant with ISO 9001, the international quality standard, and continuously conducts activities aimed at improving customer satisfaction.

Based on these activities, we repeatedly apply the plan-do-check-act (PDCA) cycle to ensure we are maintaining the quality levels that satisfy our customers. We also regularly conduct assessments and exchange opinions regarding the effectiveness of our quality management system as part of a unified effort towards quality management by all our plants and offices.

Discussion: Tokai Carbon from the Perspective of External Directors

Governance Structure for Globalization through Business
Expansion and M&A

Yoshio Kumakura (Photo: left)

External Director
Tokai Carbon Co. Ltd.

Nobumitsu Kambayashi (Photo: right)

External Director
Tokai Carbon Co. Ltd.



Objective Management Decision-Making

What are your thoughts on the roles of External Directors?

Kumakura I think everybody has their own ideas on how External Directors can contribute to the Company. My personal position is to undertake my duties not only as a specialist in the law but as a generalist offering various perspectives on sound business growth.

Kambayashi I came to the position of External Director as a former representative director on the business execution side of Kawasaki Shipbuilding Corporation and Kawasaki Heavy Industries, Ltd. At those companies, there was a strong tendency to always move full speed ahead, so I was grateful to have objective opinions from people with an external perspective. That experience is now valuable in my role as an External Director.

Kumakura Offering various perspectives in board meetings is one of the most important roles of an External Director. If I simply offered advice as an attorney, even severe comments might not be communicated to managers who could act on them - perhaps because such comments could be made by any number of people.

Kambayashi That's right. There is a tendency for advice, particularly in legal and other specialized fields, to not go any further than the top echelons of a company. By the way, External Directors like you - who force critical thinking about actual management questions - can make life difficult, can't they? (Laughs)



Yoshio Kumakura

Attorney/Patent Attorney. Partner, Nakamura & Partners. Mr. Kumakura is a corporate law specialist with particular expertise in intellectual property, anti-monopoly law, and international transactions. He has served as an External Director for all but three years since 2007.

What are the bases of your approaches to governance and business strategy issues?

Kumakura The Company has seen its results rise rapidly over the past two years and has completed a couple large M&A deals to acquire SGL GE Holding LLC, which manufactures graphite electrodes in North America*, and Sid Richardson Carbon, Ltd.*, a manufacturer of carbon black. Management decisions that can result in such major changes require sharing all of the objective information available - information that hasn't been processed internally. It is also important to have an environment in which External Directors can frankly express their opinions. On this point, the Company's executive management earnestly listens to what External Directors have to say and actively engages in discussions with us to find the best path forward.

Kambayashi The ability to express our views in board meetings depends in part on our actively working to make our voices heard. Regardless of how much information is gathered by business execution units, ascertaining risks and worst-case scenarios, and making final decisions is difficult. There are difficult questions such as "Will we be able to successfully address strict U.S. environmental regulations?" and "Have we thought about what to do if major changes in China's environmental regulations are suddenly no longer working in our favor?" For these types of questions, I think it is important to be resolute and prepared for whatever may arise in thoroughly addressing any problems that could occur. I feel very strongly that External Directors are indispensable for maintaining a wide range of perspectives for such circumstances.

Kumakura I agree. It would be meaningless to have External Directors who are not actively contributing. I do my best to be conscious of what I can do, what I should do, as an External Director. For every statement I make in board meetings, especially in situations where I have to say things that are difficult to hear, I have a clear sense of responsibility.

* SGL GE Holding LLC has been renamed TOKAI CARBON GE LLC. Sid Richardson Carbon, Ltd. has been renamed Tokai Carbon CB Ltd. (TCCB).

Operation of an Effective, Appropriately Sized Board of Directors

What is your assessment of the efficacy of the Board of Directors?

Kumakura There are still areas that need some work, but, on the whole, I think the Board of Directors functions very well. The Board of Directors consists of eight members in total, with two External Directors. Meetings are characterized by active discussions and are effectively managed. That the Company has kept its business activities within a tight range is a key reason for this. The Board of Directors is an appropriate size for oversight. It understands the Company as a whole and has a clear grasp of what the Company is doing. Furthermore, conditions allow members of the board to share their thoughts with one another in assessing business strategy recommendations and implementation results.

Kambayashi Discussions move forward with a strong emphasis on rationality, transparency, and fairness. Also, it is critical for all companies to resist engaging in improprieties and to face up to inconvenient truths, and the Company has never experienced a problem in this regard. This can be seen as evidence of effective governance. I am impressed with the Company's corporate philosophy, Ties of Reliability, which I believe are words backed by 100 years of history.

Both of you are members of the Nomination Committee. What are your impressions regarding the selection of future board members?

Kumakura In general, it is difficult for External Directors to express their opinions on the selection of future board members. If candidates are from inside the Company, outsiders have very little information to use in making judgments. Fortunately, for us, the Company's president has taken the lead in creating opportunities for us to learn more about these Director candidates.

Kambayashi Besides that, we have opportunities to visit plants and other facilities in various locations. We can talk with those in charge and develop a strong understanding of their thoughts and ideas, so, when their names come up as Director candidates, we are already familiar with them. That too is a benefit of the Company's compact organization.

Building a Consolidated Governance System for Expanded Business Operations

What are your thoughts on how governance has been affected by the Company's rapid business expansion and M&A?

Kumakura Despite that the Company has grown rapidly, it is still not what one would call a "corporate giant." And I have no concerns that it will lose the advantage it has

Nobumitsu Kambayashi

Former President and Representative Director, Kawasaki Shipbuilding Corporation and Senior Vice President, Kawasaki Heavy Industries, Ltd. Mr. Kambayashi has a wealth of experience and knowledge relevant to the global development of manufacturing industries. He has served as an External Director since 2016.



in terms of compactness. As for M&A, the Company's forthrightness in its dealings with local industries enabled its merger with an outstanding company in the Company's own original business area of carbon products. On the whole, I feel the Company is advancing in a good direction.

Kambayashi The benefits of the Company's M&A deals have quickly become apparent. For example, the Company's Thai plant and TCCB's Texas plant are already engaging with one another and synergies have emerged. I think that business expansion will benefit the Company significantly not only in terms of technical innovation synergies but also in areas such as productivity, cost savings, and raw material procurement.

Lastly, please talk a bit about the direction for governance going forward.

Kambayashi As a current issue, I felt it was necessary to enhance capabilities in the areas of sales and market analysis on a companywide basis, and I made a recommendation to that effect. The Company's president took the lead in considering what I had to say and, in that connection, a sales strategy department was established. For the medium-to-long term, I think responding to questions on how to approach globalization will be key. For example, 70% of sales currently originate from overseas customers, but the Board of Directors has no members with deep understanding of their needs. For building a global governance system, that is a critical issue urgently in need of attention.

Kumakura Yes, the corporate division will be a key area to focus on going forward. Cultural and legal differences exist among countries and regions, so there is the question of how to build a governance system that is integrated across areas such as accounting, labor, and personnel management. As its inclusion among the Mid-Term Management Plan's key measures indicates, how to strengthen systems from the perspective of consolidated governance is a new issue to be addressed.

Kambayashi Until recently, the Company has approached management as something akin to small government. Now, however, there are matters this approach cannot address. Moving into the future, it will be necessary to steadily and appropriately expand the governance system, while retaining compactness in those areas where it is still the best option. My sense is that decisions will have to be made with even greater discretion going forward.

Basic Approach to 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, is essential in achieving this objective. To this end, we embrace the corporate philosophy of Strength in Trust. Through this philosophy and through the policies and values outlined in our Guidelines and Corporate Code of Ethics, 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 in order to realize an appropriate corporate governance 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.

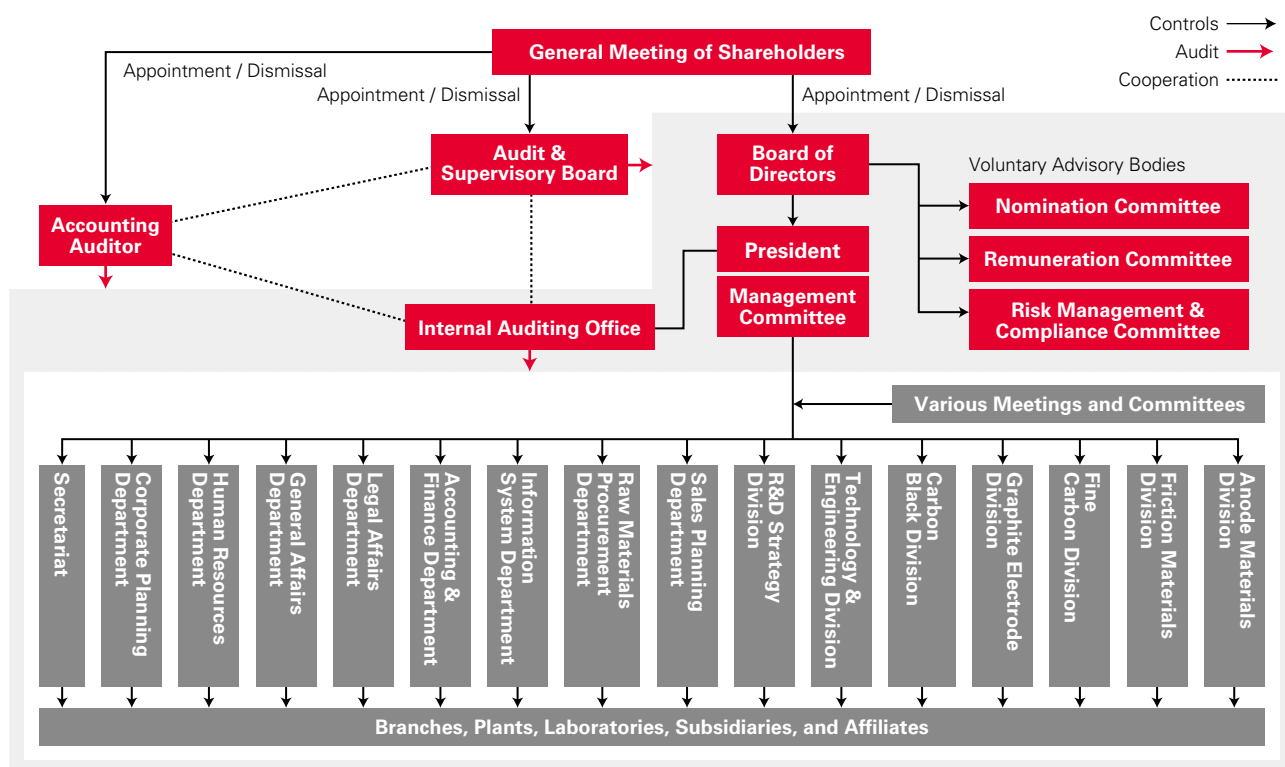
(a) Board of Directors

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 March 28, 2019, there are seven directors, including two external directors. The Nomination Committee and Compensation 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, also a voluntary advisory body, has been established immediately under the Board of Directors.

(b) Audit & Supervisory Board members and the Audit & Supervisory Board

As a general rule, the Audit & Supervisory Board of the Company meets monthly. As of March 28, 2019, 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.

Corporate Governance System



As of March 31, 2019

(c) Management Committee

The Company has established the Management Committee under the Board of Directors. This committee deliberates and makes decisions on important management matters in accordance with basic policies adopted by the Board of Directors. The Management Committee meets once a week, in principle, with participation by executive officers and Audit & Supervisory Board members. To assist the Management Committee with its work, we have also established committees to deliberate particular types of matters and report their findings to the Management Committee for higher-level consideration.

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 two 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. To see an example, please refer to pages 4 to 16 of the Notice of FY2018 Annual Meeting of Shareholders.

"Notice of FY2018 Annual Meeting of Shareholders"
<https://ssl4.eir-parts.net/doc/5301/announcement9/48713/00.pdf>

Strengthening the Effectiveness of the Board of Directors

In 2016, Tokai Carbon established the Nomination Committee, Remuneration Committee, Management Committee, and other organs to ensure strong governance led by the Board of Directors. As a result, significant improvements compared to the previous year were noted on various fronts. These improvements became apparent in the annual Board of Directors effectiveness evaluation.

At Tokai Carbon, the two External Directors deepen their understanding of key issues by actively attending important meetings other than those of the board. That the nonpartisan, objective opinions of the External Directors have greatly contributed to enhancing the oversight function of the Board of Directors was pointed out in board effectiveness evaluations.

The new more-robust governance system has largely taken hold. Evaluation results indicate that initial benefits are being appropriately maintained and further improvements in board effectiveness are being achieved.

Establishing an internal control system

To ensure that Tokai Carbon Group properly executes business operations in accordance with relevant laws, regulations and the Articles of Incorporation, the Company continuously improves its internal control system. Improvements are undertaken in accordance with the "Basic Policy for Establishing an Internal Control System," which was adopted at the May 2006 meeting of the Board of Directors and is revised as necessary.

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 achievement of performance objectives. For directors with executive responsibilities, the proportion of total remuneration that is variable is designed to rise with executive rank. This is in consideration of the significance of management responsibilities borne.

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.

Compliance

The Company has outlined a Basic Policy, Guidelines, and a Corporate Code of Ethics. We conduct corporate activities in accordance with these policies and based on a strong ethical viewpoint while also complying with the relevant laws, rules, and regulations.

(a) Compliance manual

The Compliance Manual was prepared based on the Tokai Carbon Corporate Code of Ethics and our Ethical and Compliance Conduct Standards. The manual outlines the conduct standards that all officers and employees are required to maintain as they carry out their everyday duties, and is intended to help everyone in the Company understand compliance properly.

(b) Internal reporting system

The Company has an internal system for reporting improprieties. This system has both internal (Legal Affairs Department and Audit & Supervisory Board Members) and external (an advising attorney) contact points. It allows employees to make reports and receive consultation by various means including telephone, fax, email, and postal mail. The Company's Guidelines on Handling Internal Reports clearly states that, apart from cases when the system is deliberately misused, informants will not be dismissed or subjected to unfair treatment under this system.

Management



Hajime Nagasaka
President & Chief Executive Officer
Chairman of the Board



Nobuyuki Murofushi
Member of the Board
Executive Vice President



Yuji Serizawa
Member of the Board
Executive Officer



Masafumi Tsuji
Member of the Board
Executive Officer



Katsuyuki Yamaguchi
Member of the Board
Executive Officer



Shunji Yamamoto
Member of the Board
Executive Officer



Yoshio Kumakura
Member of the Board External Director



Nobumitsu Kambayashi
Member of the Board External Director

Audit & Supervisory
Board Member

Masanao Hosoya

Audit & Supervisory
Board Member

Kazuyuki Kakehashi

Audit & Supervisory
Board Member

Kenichi Kubota

Audit & Supervisory
Board Member

Kaoru Ogashiwa

Managing Executive
Officer

Toshiaki Fukuda

Executive Officer

Kazuhiko Matsubara

Executive Officer

Yuji Yamake

Executive Officer

Hiroshi Takahashi

Executive Officer

Takashi Masaki

Executive Officer

Kazuhito Kataoka

Executive Officer

Kouji Miura

Executive Officer

Kenji Enokidani

Executive Officer

Hirofumi Masuda

(as of March 2019)

Part 4

Financial Report

Maintaining a Sound Financial Base

Tokai Carbon works to enlarge earnings by undertaking strategic, systematic investments, while maintaining a sound financial base.

Ten-year Summary (2009 - 2018)

(Millions of yen)

Consolidated	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Statements of Income										
Net sales	83,298	107,679	104,924	98,704	100,935	114,576	104,864	88,580	106,252	231,302
Gross profit	18,323	24,348	23,958	18,560	15,267	18,651	19,960	16,529	27,451	101,249
Selling, general and administrative expenses	13,024	13,773	13,491	12,859	13,611	14,947	15,871	15,398	16,358	25,964
Operating income	5,299	10,575	10,467	5,700	1,655	3,703	4,088	1,131	11,093	75,284
Ordinary income	4,993	9,854	10,104	6,470	3,114	4,180	4,317	1,702	12,855	75,210
Net income before income taxes	4,937	9,211	9,336	3,992	2,926	4,345	6,726	(7,938)	15,533	98,030
Income taxes	2,270	3,232	2,937	2,142	1,802	1,749	4,345	(67)	2,740	22,815
Net income	2,674	5,630	6,119	1,993	1,213	2,562	2,484	(7,929)	12,603	75,897
EBITDA	15,204	19,357	18,923	16,084	12,470	13,845	14,581	10,616	17,740	83,901

Sales ratio (%)										
Gross profit	22.0	22.6	22.8	18.8	15.1	16.3	19.0	18.7	25.8	43.8
Selling, general and administrative expenses	15.6	12.8	12.9	13.0	13.5	13.0	15.1	17.4	15.4	11.2
Operating income - ROS	6.4	9.8	10.0	5.8	1.6	3.2	3.9	1.3	10.4	32.5
Ordinary income	6.0	9.2	9.6	6.6	3.1	3.6	4.1	1.9	12.1	32.5
Net Income before income taxes	5.9	8.6	8.9	4.0	2.9	3.8	6.4	(9.0)	14.6	42.4
Net income	3.2	5.2	5.8	2.0	1.2	2.2	2.4	(9.0)	11.6	32.0
EBITDA	18.3	18.0	18.0	16.3	12.4	12.1	13.9	12.0	16.7	36.3

Investment-related										
Capital expenditure	8,066	6,710	13,975	12,287	9,007	6,830	5,301	6,013	4,282	11,794
Depreciation	9,524	8,853	8,286	8,712	8,656	8,629	9,242	8,124	6,647	8,617
R&D expenses	2,073	2,012	1,956	1,961	1,800	1,882	1,822	2,249	1,482	1,883

Cash flow										
Cash flow from operating activities	12,080	18,586	12,771	8,828	11,606	11,983	20,613	17,505	10,543	44,109
Cash flow investment activities	(9,231)	(6,088)	(10,666)	(12,770)	(10,791)	(24,027)	3,189	(3,622)	(14,039)	(53,849)
Free cash flows	2,849	12,498	2,105	(3,941)	815	(12,043)	23,802	13,883	(3,496)	(9,740)
Cash flow from financing activities	(7,287)	(6,795)	2,629	(3,611)	1,441	9,728	(14,926)	(7,613)	(4,534)	29,677
Increase (decrease) in cash and cash equivalents	(4,296)	5,027	4,560	(6,674)	4,155	(1,307)	8,180	5,602	(6,376)	18,979
Exchange rate (USD/JPY)	93.57	87.81	79.84	79.82	97.65	105.85	121.05	108.85	112.19	110.43

*Corporate exchange rate

(Millions of yen)

Consolidated	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Balance Sheet										
Total current assets	76,878	81,684	88,421	86,879	90,984	94,685	87,968	77,645	85,444	166,546
On-hand liquidity	9,285	12,076	16,572	11,891	16,048	14,862	23,045	28,528	22,152	46,797
Accounts receivables	28,408	31,494	28,543	28,259	30,075	33,972	26,897	24,220	30,265	55,137
Inventory	36,821	33,868	37,979	42,993	41,507	41,299	34,253	20,734	27,564	58,789
Other current assets	2,363	4,245	5,325	3,734	3,352	4,551	3,771	4,162	5,463	5,823
Total fixed assets	78,043	73,619	73,142	79,788	92,443	115,753	96,106	81,178	99,286	150,537
Tangible fixed assets	54,767	50,916	55,166	58,169	61,985	67,581	56,629	43,122	51,405	75,703
Intangible fixed assets	700	490	382	438	464	14,103	11,324	10,534	16,343	52,009
Investment and other assets	22,576	22,212	17,593	21,179	29,994	34,069	28,153	27,521	31,537	22,824
Total assets	154,922	155,304	161,563	166,668	183,427	210,439	184,074	158,824	184,730	317,084
Total current liabilities	28,582	28,625	45,439	38,050	42,385	44,897	31,126	29,028	36,870	91,654
Short-term interest-bearing liabilities	10,687	6,272	19,471	14,636	20,718	21,576	9,537	12,910	14,074	41,709
Accounts payables	10,488	15,051	16,059	16,145	14,179	16,051	11,397	9,591	14,522	26,001
Other current liabilities	7,405	7,301	9,907	7,268	7,488	7,269	10,191	6,525	8,274	23,944
Total long-term liabilities	20,297	21,072	8,901	15,351	17,809	33,198	27,976	16,806	20,728	26,528
Long-term interest-bearing liabilities	11,333	12,162	1,747	6,191	5,044	16,713	14,398	4,137	2,068	8,000
Other long-term liabilities	8,964	8,910	7,154	9,160	12,765	16,484	13,577	12,669	18,660	18,528
Total liabilities	48,879	49,698	54,340	53,401	60,195	78,096	59,103	45,834	57,599	118,183
Total net assets	106,042	105,605	107,223	113,266	123,232	132,343	124,971	112,989	127,130	198,900
Shareholder's capital	100,326	102,200	106,606	106,887	106,807	108,006	108,910	99,693	110,089	180,105
Total liabilities and net assets	154,922	155,304	161,563	166,668	183,427	210,439	184,074	158,824	184,730	317,084

Ratio analysis (%)										
ROA	3.1	6.4	6.4	3.9	1.8	2.1	2.2	1.0	7.5	30.0
ROE	2.6	5.4	5.9	1.9	1.0	2.0	2.0	(6.8)	10.4	47.1
Capital-to-asset ratio	67.2	66.6	64.5	66.1	66.0	61.8	66.8	69.9	68.4	59.2

Indicator per share										
EPS (JPY)	12	26	29	9	6	12	12	(37)	58	347
BPS (JPY)	478	485	488	516	567	610	577	521	593	881
Dividend (JPY)	8	8	8	7	6	6	6	6	12	24
Dividend payout ratio (%)	65	31	28	75	106	50	52	—	21	7

Financial Statements

Consolidated Balance Sheets

(Millions of yen)

	FY2017	FY2018
Assets		
Current assets		
Cash and cash equivalents	22,152	46,797
Notes and accounts receivable	*4 30,265	*4 55,137
Merchandise and finished goods	9,429	17,106
Work in progress	10,094	23,113
Raw materials and supplies	8,041	18,569
Deferred tax assets	1,312	2,325
Other	4,662	3,999
Allowance for doubtful accounts	(514)	(504)
Total current assets	85,444	166,546
Fixed assets		
Tangible fixed assets		
Buildings and structures, net	14,839	19,078
Machinery, equipment and vehicles, net	26,398	38,018
Furnaces, net	813	2,370
Land	6,161	7,343
Construction in progress	1,113	5,972
Other, net	2,077	2,920
Total tangible fixed assets	*1 51,405	*1 75,703
Intangible fixed assets		
Software	867	1,279
Goodwill	9,510	45,507
Customer-related assets	4,569	3,934
Other	1,395	1,287
Total intangible fixed assets	16,343	52,009
Investments and other assets		
Investment securities	*2 28,121	*2 17,204
Net defined benefit asset	2,531	1,995
Deferred tax assets	225	2,888
Other	722	786
Allowance for doubtful accounts	(62)	(50)
Total investment and other assets	31,537	22,824
Total fixed assets	99,286	150,537
Total assets	184,730	317,084

*1 The cumulative amount of depreciation of tangible fixed assets is as follows:

	FY2017	FY2018
	¥ 189,584 million	¥ 225,230 million

*2 Items associated with affiliates are as follows:

	FY2017	FY2018
Investment securities (shares)	¥ 5,911 million	¥ 696 million

(Millions of yen)

	FY2017	FY2018
Liabilities		
Current liabilities		
Notes and accounts payable	*4 11,463	*4 22,364
Electronically recorded obligations	*4 3,059	*4 3,637
Short-term borrowings	12,006	39,641
Current portion of long-term debt within one year	2,068	2,068
Income taxes payable	1,550	11,208
Consumption taxes payable	203	607
Accrued expenses	2,056	2,932
Reserve for bonuses	438	1,276
Other	*4 4,023	*4 7,915
Total current liabilities	36,870	91,654
Fixed liabilities		
Long-term debt	2,068	8,000
Deferred tax liabilities	9,281	10,456
Net defined benefit liability	6,189	5,081
Reserve for directors' retirement benefits	83	86
Reserve for executive officers' retirement benefits	39	57
Provision for environment and safety measures	45	577
Other	3,021	2,267
Total fixed liabilities	20,728	26,528
Total liabilities	57,599	118,183
Net assets		
Shareholders' capital		
Common stock	20,436	20,436
Additional paid-in capital	17,473	17,333
Retained earnings	79,433	149,594
Treasury stock	(7,253)	(7,258)
Total shareholders' capital	110,089	180,105
Other accumulated comprehensive income		
Net unrealized gains/losses on other securities	11,345	7,345
Foreign currency translation adjustments	3,631	(737)
Remeasurements of defined benefit plans	1,299	1,026
Total other accumulated comprehensive income	16,277	7,634
Non-controlling interests	763	11,160
Total net assets	127,130	198,900
Total liabilities and net assets	184,730	317,084

*3 Commitment line agreement

Tokai Carbon concluded a loan commitment line agreement with nine correspondent financial institutions to efficiently procure operating funds. Details such as the unused loan commitment amount are as follows:

	FY2017	FY2018
Total loan commitment amount	¥ 10,000 million	¥ 20,000 million
Outstanding loan amount	—	—
Unused balance	¥ 10,000 million	¥ 20,000 million

*4 Notes and electronically recorded obligations maturing at end of fiscal year

Notes and electronically recorded obligations maturing at the end of the fiscal year are accounted on their maturity dates.

Financial Statements

Consolidated Statement of Operations

(Millions of yen)

	FY2017	FY2018
Net sales	106,252	231,302
Cost of sales	*1,*4 78,800	*1,*4 130,053
Gross profit	27,451	101,249
Selling, general and administrative expenses		
Selling cost	*2 4,542	*2 7,746
General administrative cost	*3,*4 11,815	*3,*4 18,218
Total of selling cost and general administrative cost	16,358	25,964
Operating income (loss)	11,093	75,284
Non-operating income		
Interest income	44	175
Dividend income	468	538
Royalty income	327	404
Rental income	138	153
Equity in income of non-consolidated subsidiaries and affiliates	1,325	698
Other	545	237
Total non-operating income	2,849	2,209
Non-operating expense		
Interest expense	334	614
Compensation expenses	121	—
Foreign exchange losses	68	83
Additions to provision for environment and safety	10	700
Other non-operating expense	551	883
Total non-operating expenses	1,087	2,283
Ordinary income (loss)	12,855	75,210
Extraordinary income		
Gain on step acquisitions	—	22,843
Gain on sales of non-current assets	*5 2,567	*5 73
Gain on liquidation of subsidiaries and associates	522	33
Gain on sales of investment securities	58	—
Total extraordinary income	3,148	22,949
Extraordinary losses		
Loss on disposal of fixed assets	—	*6 100
Loss on sales of fixed assets	—	*7 29
Loss on sales of shares of subsidiaries and associates	373	—
Loss on sale of equity invested in affiliates	96	—
Total extraordinary losses	470	129
Income (loss) before income taxes	15,533	98,030
Income taxes, inhabitants tax, and enterprise taxes	2,740	22,815
Income taxes adjustments	189	(683)
Total income taxes	2,930	22,132
Net income	12,603	75,897
Net income attributable to non-controlling shareholders	257	1,899
Net income attributable to owners of the parent	12,346	73,998

*1 Inventories at the end of the fiscal year are shown after reductions in book values to reflect declines in profitability, and the following inventory valuation losses are included in the cost of sales.

	FY2017	FY2018
	¥ 9 million	¥ 14 million

*2 Major items included in selling expenses and their amounts are as follows

	FY2017	FY2018
Warehousing and shipping expenses	¥ 3,665 million	¥ 5,714 million
Selling expenses	901	2,029

*3 Major items included in general and administrative expenses and their amounts are as follows

	FY2017	FY2018
Salaries and allowances	¥ 3,885 million	¥ 5,459 million
Additions to reserve for bonuses	132	352
Retirement benefit expenses	173	219
Additions to reserve for directors' retirement benefits	14	14
Additions to reserve for executive officers' retirement benefits	17	23
Depreciation and amortization	498	646
Research and development expenses	1,416	1,819
Amortization of goodwill	460	2,555
Rent expenses	691	704

*4 Total amount of research and development expenses included in general and administrative expenses and production costs

	FY2017	FY2018
	¥ 1,482 million	¥ 1,883 million

*5 Gain (losses) on sales of fixed assets were as follows

	FY2017	FY2018
Buildings	¥ (39) million	¥ 0 million
structures	(25)	—
Land	2,633	64
Other	(1)	8
Total	2,567	73

In the previous fiscal year, gains on sales of land, gains (losses) on sales of buildings, and losses on sales of structures derived from the same asset sales. Therefore, these items are mutually offset and shown as gains on sales of fixed assets on the consolidated statement of operations.

*6 Losses on disposal of fixed assets were as follows

	FY2017	FY2018
Demolition	—	¥ 100 million
Other	—	0
Total	—	100

*7 Losses on sales of fixed assets were as follows

	FY2017	FY2018
Machinery and equipment	—	¥ 26 million
Other	—	2
Total	—	29

Financial Statements

Consolidated Statement of Cash Flows

(Millions of yen)

	FY2017	FY2018
Cash flows from operating activities		
Net income/(loss) before income taxes	15,533	98,030
Depreciation and amortization	6,647	8,617
Loss on sales of investment securities	(58)	—
Loss (gain) on step acquisition	—	(22,843)
Loss (gain) on liquidation of subsidiaries and associates	(522)	(33)
Loss (gain) on sales of equity invested in affiliates	96	—
Loss (gain) on sales of shares of subsidiaries and associates	373	—
Loss on sales of tangible assets	(2,567)	56
Amortization of goodwill	460	2,555
Increase (decrease) in allowance for doubtful accounts	(39)	(64)
Increase (decrease) in reserve for bonuses	114	808
Increase (decrease) in net defined benefit liability	(500)	(1,339)
Decrease (increase) in net defined benefit assets	(608)	535
Increase (decrease) in provision for environment and safety measures	(428)	532
Interest and dividends income	(513)	(714)
Interest paid	334	614
Foreign exchange (gain) losses	20	55
Equity in income (gain) of non-consolidated	(1,325)	(698)
Decrease (increase) in trade receivables	(4,586)	(15,370)
Decrease (increase) in inventories	(2,848)	(24,264)
Increase (decrease) in trade payables	3,212	9,508
Increase (decrease) in accrued expenses	237	(500)
Increase (decrease) in account payables	71	(92)
Decrease (increase) in advance payments	(744)	77
Increase (decrease) in consumption taxes payables	(162)	218
Other	195	1,990
Subtotal	12,395	57,679
Interest income and dividends received	724	1,011
Interest paid	(324)	(585)
Income taxes paid	(2,252)	(13,995)
Net cash provided by (used in) operating activities	10,543	44,109
Cash flows from investing activities		
Payment into time deposits	(0)	(5,000)
Proceeds from withdrawal of time deposits	—	4,000
Purchase of tangible fixed assets	(4,336)	(8,491)
Proceeds from tangible fixed assets	2,704	71
Purchased of intangible assets	(360)	(627)
Proceeds from sales of investment securities	109	—
Proceeds from liquidation of subsidiaries and associates	542	—
Proceeds from sales of shares of subsidiaries and associates	246	—
Purchase of shares of subsidiaries resulting in a change in the scope of consolidation	* ₂ (12,964)	* ₂ (5,648)
Purchase of interest in subsidiaries resulting in change in scope of consolidation	—	* ₃ (37,278)
Contingent consideration paid for acquisition of shares of subsidiaries	—	(862)
Other	19	(11)
Cash flow from investing activities	(14,039)	(53,849)

(Millions of yen)

	FY2017	FY2018
Cash flows from financing activities		
Net increase (decrease) in short-term borrowings	9,019	27,804
Proceeds from long-term debt	—	8,000
Repayment of long-term debt	(10,042)	(2,068)
Payment of dividend	(1,918)	(3,836)
Payment attributable to non-controlling shareholders	(54)	(19)
Purchase of shares of subsidiaries that do not result in a change in the scope of consolidation	(1,499)	(167)
Others	(38)	(33)
Cash flows from financing activities	(4,534)	29,677
Effect of exchange rate change on cash and cash equivalents	1,654	(959)
Increase (decrease) in cash and cash equivalents	(6,376)	18,979
Cash and cash equivalents at beginning of the period	28,521	22,145
Cash and cash equivalents at end of the period	*1 22,145	*1 41,124

*1 Reconciliation of balance of Cash and cash equivalents at the end of the period and those on consolidated balance sheet

	FY2017	FY2018
Cash and cash equivalents	¥ 22,152 million	¥ 46,797 million
Time deposits with original maturities of more than three months	(7)	(5,673)
Cash and cash equivalents	22,145	41,124

*2 Principal assets and liabilities of a company that became a consolidated subsidiary due to acquisition of shares FY2017
Principal assets and liabilities of TOKAI CARBON GE HOLDING LLC upon consolidation of the company along with its two subsidiaries resulting from acquisition of its shares, as well as the relationship between the acquisition price of the shares of the company and expenditures (net) for its acquisition are as follows.

Current assets	¥ 5,406 million
Fixed assets	11,789
Goodwill	4,174
Current liabilities	(2,330)
Fixed liabilities	(5,665)
Foreign currency translation adjustments	2
Acquisition cost of shares of TOKAI CARBON GE HOLDING LLC	13,376
Cash and cash equivalents of TOKAI CARBON GE HOLDING LLC	(412)
Net: Funds used for acquisition of shares of subsidiaries resulting in a change in the scope of consolidation	12,964

The above figures are amount reflecting the significant revision of the initial allocation amount of acquisition costs due to finalization of provisional accounting treatments for the business combination.

Current fiscal year (January 1, 2018 to December 31, 2018)

Principal assets and liabilities of Tokai Carbon Korea Co., Ltd., previously an equity-method affiliate, upon its inclusion in the scope of consolidation as a result of the Company's acquisition of additional shares, as well as the relationship between the acquisition price of the shares of the company and expenditures (net) for its acquisition are as follows.

Current assets	¥ 11,706 million
Fixed assets	6,776
Goodwill	28,980
Current liabilities	(2,513)
Fixed liabilities	(74)
Foreign currency translation adjustments	(29)
Non-controlling interests	(8,820)
Valuation by equity method before consolidation	(5,344)
Gain (loss) on step acquisition	(22,843)
Acquisition cost of shares of Tokai Carbon Korea Co., Ltd.	7,836
Cash and cash equivalents of Tokai Carbon Korea Co., Ltd.	(2,188)
Net: Funds used for acquisition of shares of subsidiaries resulting in a change in the scope of consolidation	5,648

*3 Principal assets and liabilities of companies that became consolidated subsidiaries due to acquisition of equity stakes during the fiscal year

Principal assets and liabilities of Tokai Carbon CB Ltd. upon consolidation of the company along with its two group companies resulting from acquisition of equity stakes, as well as the relationship between the acquisition price for the acquired stake of the company and expenditures (net) for its acquisition are as follows.

Current assets	¥ 13,364 million
Fixed assets	16,184
Goodwill	10,045
Current liabilities	(2,313)
Acquisition price for acquired stake in Tokai Carbon CB Ltd.	37,282
Cash and cash equivalents of Tokai Carbon CB Ltd.	(3)
Net: Funds used for acquisition of stake in subsidiaries resulting in a change in the scope of consolidation	37,278

Data Section

Basic information on each division

Graphite Electrodes Division Basic information

What are Graphite Electrodes?

Did you know that there are two ways to make iron? The blast furnace method and the electric arc furnace method. The electric arc furnace method recycles used iron scrap by melting it in an electric arc furnace. It is the graphite electrodes inside the furnace that actually melt the iron. Graphite has high thermal conductivity and is very resistant to heat and impact. It also has low electrical resistance, which means it can conduct the large electrical currents needed to melt iron. In recent years, graphite electrodes have been made even more efficient: they can now conduct even higher currents and more power. Using the expertise collected over a century of innovation, Tokai Carbon has developed the world's biggest electrodes. They measure 32 inches (about 80 cm) in diameter and are 3 meters long. Tokai Carbon's graphite electrodes are made to last, making them a trusted name in the industry.



For DC Furnaces
(direct current furnaces)



For AC Furnaces
(alternating current furnaces)



For LF Furnaces
(refining furnaces)

Main Raw Materials



Needle coke

Needle-like crystals develop.
Low thermal expansion coefficient.

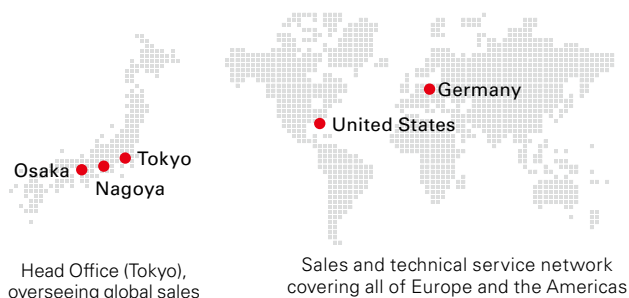


Pitch

Produced by heat treatment of coal tar.
Carbonizes under heat (50% yield).

Sales

Reach customers worldwide with tripolar structure in Japan, the US and Europe



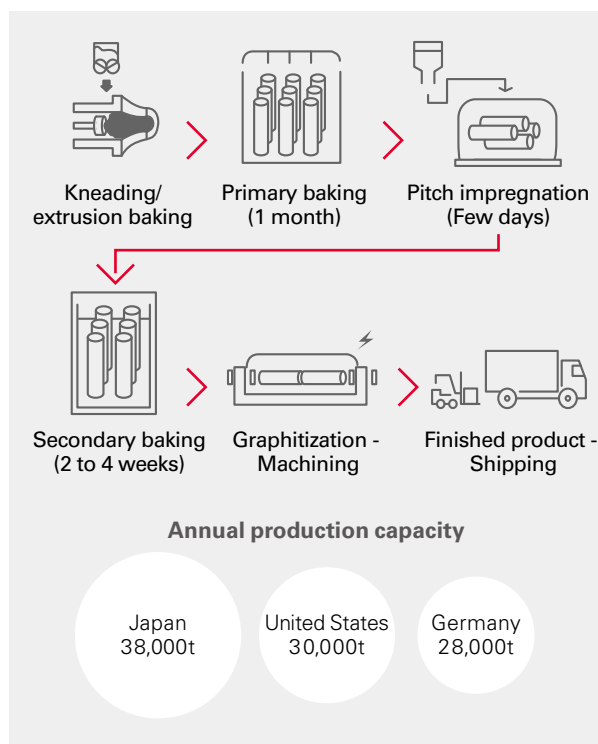
Customers



Steel manufacturers
(electric arc furnace steelmaking)

Manufacturing Process

Needle coke and pitch are mixed and then molded. Heat treatment is then applied in the baking and graphitization process to form the finished product.



Carbon Black Division Basic information

What is Carbon Black?

There is a reason why tires are black. It's because fine particles of carbon called "carbon black" are mixed in with the rubber. In fact, carbon black can make up about 30% of the weight of a tire. Its job is to make the tires stronger and more long-lasting. Carbon black can also be found in the black ink used in inkjet printers and in the rubber parts of many industrial products. Carbon black's nano-scale particles mean that it has a wide range of applications. An essential part of many newly developed products, it plays a role in many facets of our lives.



SEAST

TOKABLACK



Aqua Black

Main Raw Materials



Carbon black feedstock oil

Natural Gas
*Thermal Black

Sales

Three sales bases in Japan, Thailand and China meet demand in those countries and the Asia region. Thermal black is sold to more than 44 countries worldwide from our Canadian sales base.

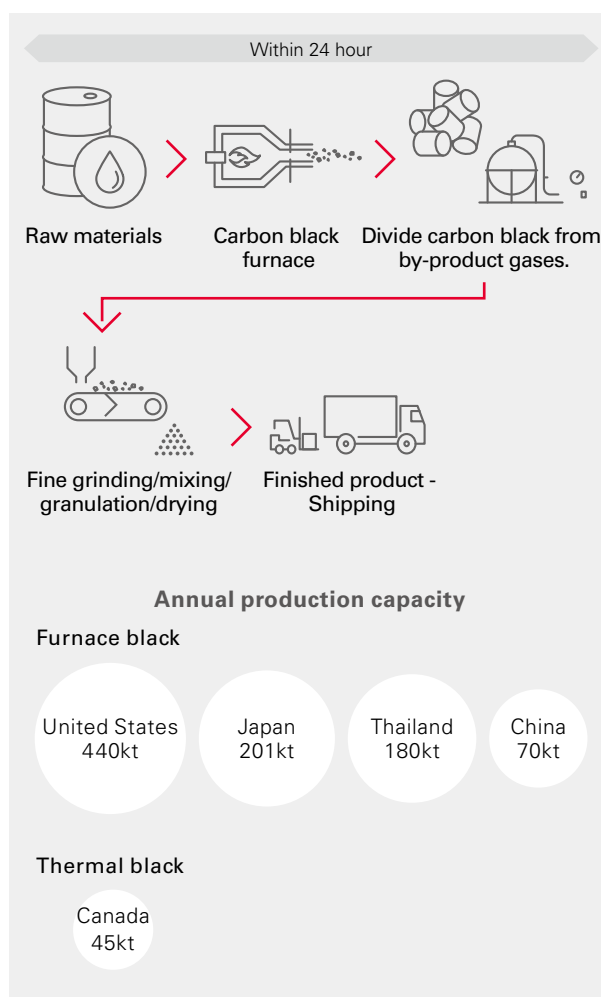


Customers

Bridgestone Corporation
Sumitomo Rubber Industries, Ltd.
TOYO TIRE & RUBBER CO., LTD.
The Yokohama Rubber Co., Ltd.
(Alphabetical order)

Manufacturing Process

Soot-like carbon particles are generated through the incomplete combustion of oil to make carbon black.



Fine Carbon Division Basic information

What is Fine Carbon?

The word "fine" in English has a double meaning: it can mean "wonderful," and it can also mean something broken down or refined into small pieces. So, as the name suggests, fine carbon is made from tiny carbon particles broken down to the micron level. It is used in semiconductors and other fields that demand high precision. Resistant to heat and corrosion, conductive and easy to process, fine carbon is used in molds, casts and a wide range of other applications in general industry. Tokai Carbon, one of only a handful of fine carbon manufacturers around the world, offers a wide variety of products to suit our customers' needs.

Main Raw Materials



Amorphous cokes



Pitch

Sales

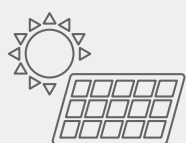
Comprehensive service to Japanese customers from 3 domestic bases.

Global sales network in Asia, Europe and North America through our group companies.



Head Office (Tokyo), overseeing global sales

Customers



Semiconductor manufacturers/
Solar cell manufacturers
(monocrystalline and polycrystalline silicon manufacturing and semiconductor manufacturing processes, etc.)



Continuous casting manufacturers/
Mold manufacturers and many more



Isotropic Graphite
G/HK Series



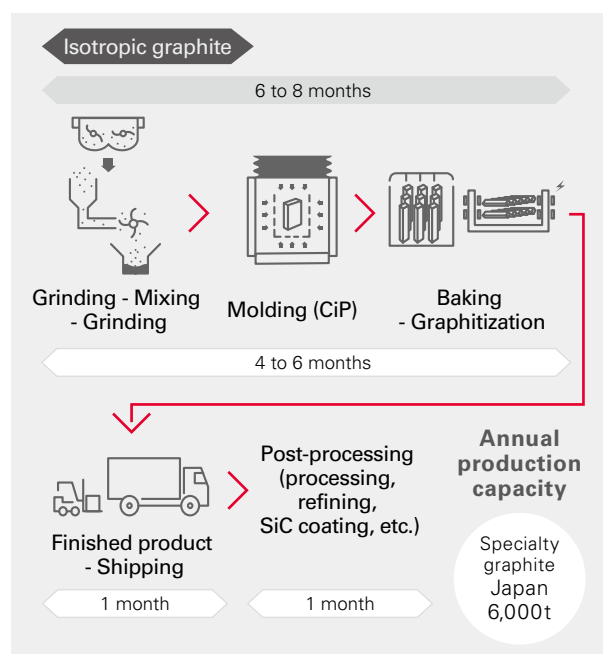
Extruded Graphite



SiC Coated Carbon

Manufacturing Process

The manufacturing of materials is centralized at the Tanoura Plant in Kumamoto Prefecture, and post-processing (processing, refining, SiC coating, etc.) is done both in Japan and at our international bases in Asia, Europe and North America.



Industrial Furnaces and Related Products Division

Basic information

What are EREMA (silicon carbide) Heating Elements and Industrial Furnaces?

The flat glass used in smartphone liquid crystal screens is made in a gas or oil furnace. It comes out of the furnace very hot and needs to be cooled down slowly. EREMA heating elements are responsible for that delicate temperature regulation. In 1927, EREMA became the first silicon carbide heating elements to be sold commercially in Japan. We have been improving their quality ever since and are now the biggest producer in the industry. Industrial furnaces are used to heat, melt and sinter glass, ceramics, electronic components, metals and powders. As a comprehensive manufacturer, we design and manufacture industrial furnaces as well as the heating elements and refractory materials that go in them. From small test furnaces to large scale industrial equipment, we enlist a wide range of technologies to produce furnaces and related products for all fields.



EREMA (silicon carbide) Heating Elements

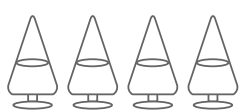


EREMA Resistors

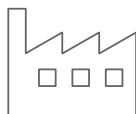


Industrial Furnaces

Main Raw Materials



SiC (silicon carbide)
EREMA (silicon carbide)
heating elements
raw materials



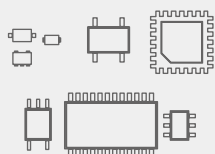
Various industrial machines/materials
For industrial furnaces, we deal with
the design through assembly stages,
so do not produce the raw materials.

Sales

Exporting across Asia and worldwide from our sales bases in Japan and China.



Customers



Electronic components
industry
LiB-related industry
Sheet glass/optical glass



Other industries
involving
heat treatment
Ceramic materials and
many other industries
We work with a variety
of distributors.

Manufacturing Process

EREMA (silicon carbide) heating elements



Manufacture SiC
as a raw material

About 1 month

Industrial furnaces

4 to 8 months (depending on manufacturing process)

Design/
Manufacture/
Delivery

Determine
specifications
in advance,
proceed from
quote to order

Discuss details
in meeting
- Detailed design
- Approval

Materials
procurement
- Assembly
- Testing

Shipping
- Installation
on site

Test run
at installation
site

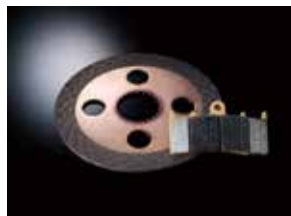
Delivery
(official
delivery)

Friction Materials Division

Basic information

What are Friction Materials?

Brakes and clutches may seem completely different, but they are in fact very similar. Brakes use friction to reduce speed, and clutches use friction to control power transmission. Both parts rely on friction materials to function. Tokai Carbon is a leading company in friction materials. We hold a big share in the large-sized motorcycle market, where power control is particularly challenging. We also manufacture the sliding materials—that is, materials developed to glide without any friction—used in hydraulic machine parts. Both friction and sliding materials are essential to smooth power transmission in machines and vehicles.



Sintered Metal Friction Materials



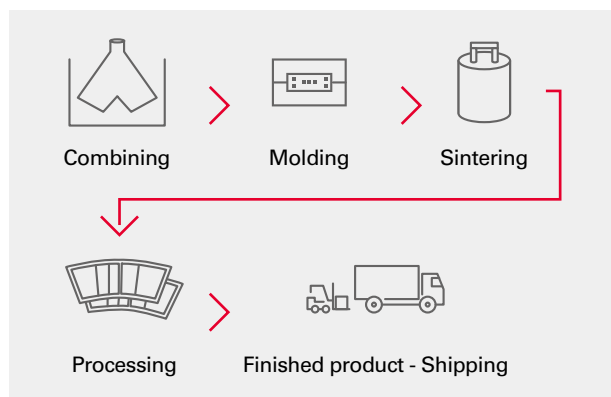
Paper Friction Materials



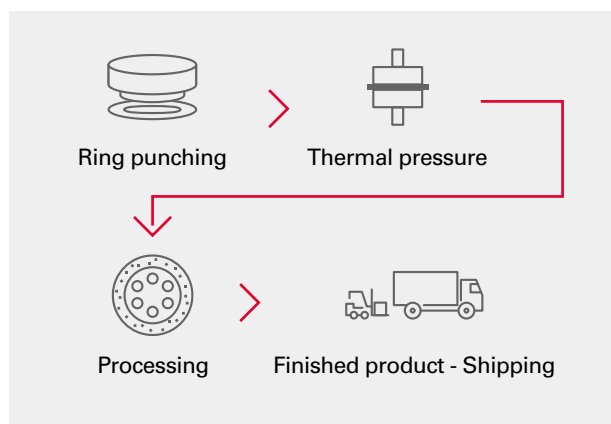
Carbonaceous Friction Materials

Manufacturing Process

Main Lining Materials: Sintering



Main Lining Materials: Paper



Sales

Group Sales Offices



Customers

Various manufacturers

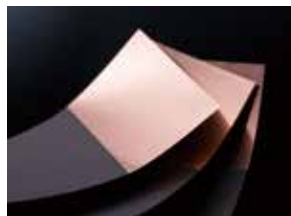
Motorcycle	Tractor	Combine
Hydraulic shovels	Dump truck	Forklift
Industrial robots	Railroads	Ships

Anode Materials Division

Basic information

What are Anode Materials?

Lithium-ion batteries are rechargeable. They are used in things like mobile phones, computers, hybrid and electric cars. The cathode is made from lithium oxide, and the anode is made from carbon. Tokai Carbon produces and sells materials for the anode. Uniform quality and low cost are essential, particularly for anode materials used in large scale lithium-ion batteries like those in electric cars. At Tokai Carbon, we apply our excellent graphite production technology developed over our hundred-year history and use competitively priced raw materials to support the future of lithium-ion batteries.



Anode materials

Main Raw Materials



Natural graphite



Cokes

Sales

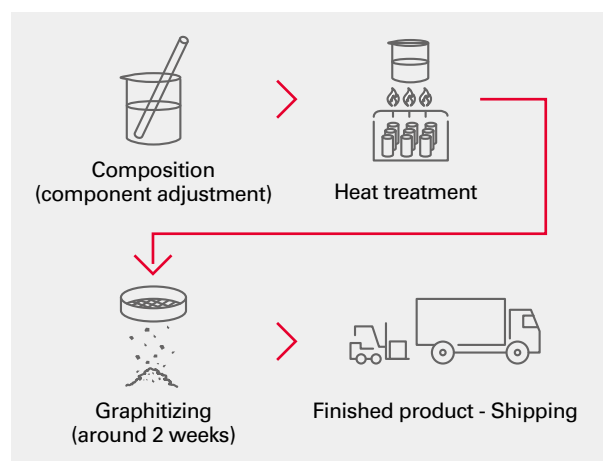
We supply anode materials to major battery manufacturers through Mitsubishi Chemical Corporation.

Customers

The Lithium Ion Battery will be supplied to western electric vehicle makers through the battery producers.

Manufacturing Process

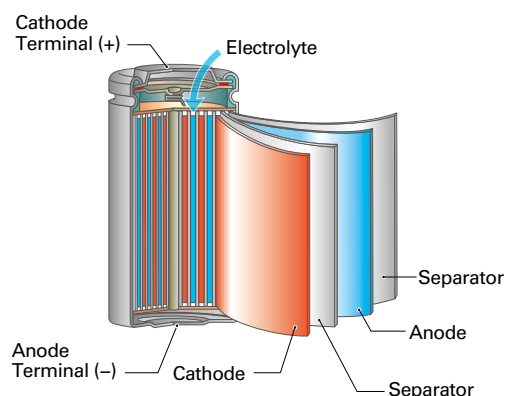
We produce the high quality and safe materials our customers demand by combining multiple raw materials and processing them in the optimal way.



Production/development base: Production Technology Center (Hofu, Yamaguchi Prefecture)

How Lithium-Ion Batteries Work


Unlike zinc-carbon batteries, lithium-ion batteries are rechargeable. Lithium ions can move back and forth between the cathode and anode. This means they can move away from the graphite anode to the cathode during discharge and can then move back to it during charging. This mechanism works because of graphite's structure and chemical stability. Lithium-ion batteries have a bigger battery capacity and operating voltage compared to other types of rechargeable battery and can withstand "top up" charging (charging before the battery is fully discharged). This makes them very powerful for their size and weight. Lithium-ion batteries are now gathering attention as batteries for electric cars.



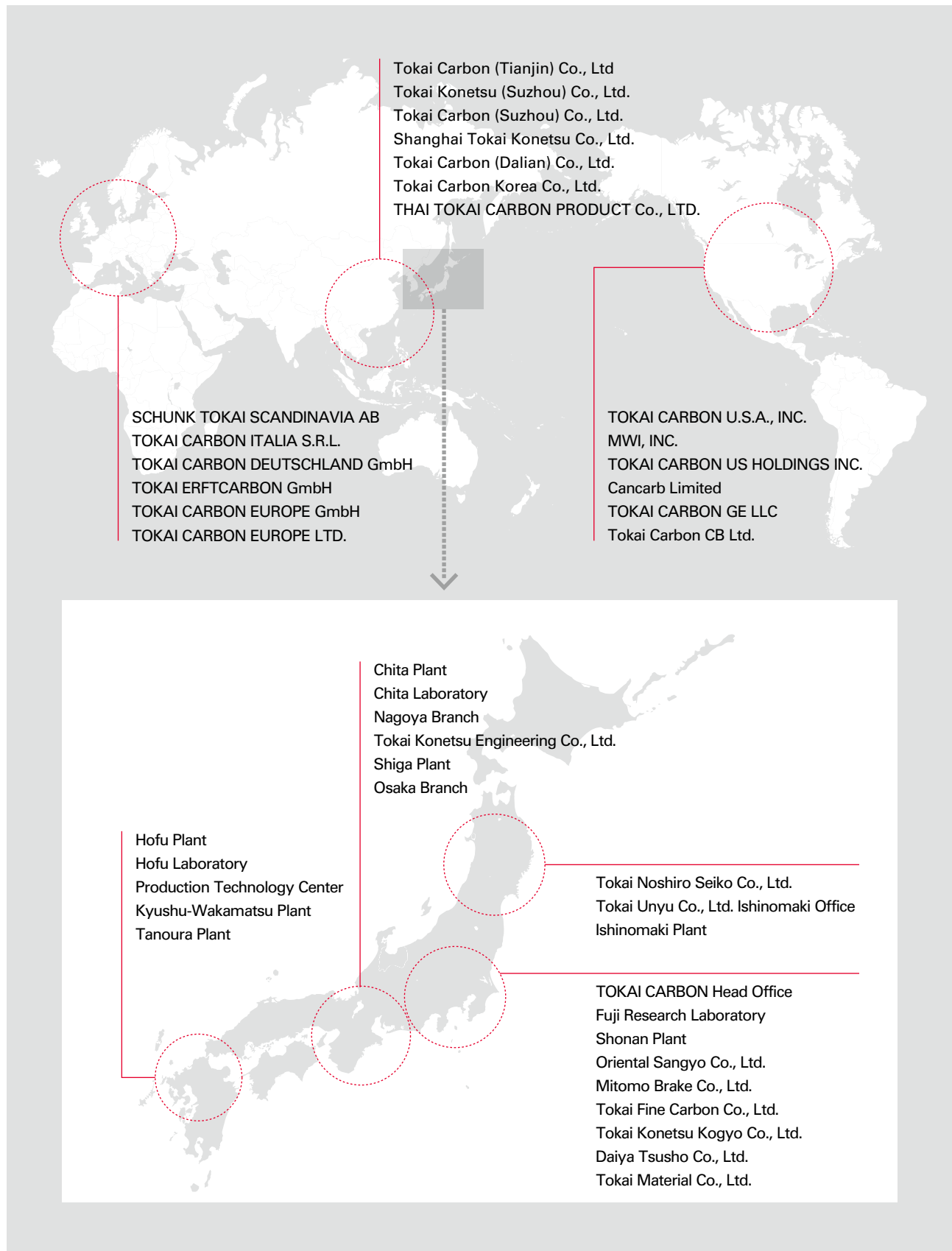
Company Overview

Trade Name	TOKAI CARBON CO., LTD.
Head Office	1-2-3 Kita-Aoyama, Minato-ku, Tokyo 107- 8636, Japan Tel: +81-3-3746-5100 (Switchboard)
Established	1918
President & CEO	Hajime Nagasaka, President and CEO
Fiscal Year	Ending December 31
Capital Stock	20,436 million JPY (as of December 2018)
Number of Employees	729 (2,944 consolidated) (as of December 2018)
Operations	Manufacture and sales of Carbon Black, Graphite Electrodes, Fine Carbon, Friction materials, Industrial furnaces and related products
Offices	Head Office: Tokyo Research Laboratory: Fuji (Shizuoka), Chita, Hofu Sales Branch: Osaka, Nagoya Plant: Ishinomaki, Shonan, Chita, Shiga, Hofu, Production Technology Center, Kyushu-Wakamatsu, Tanoura
Main Banks	Bank of Tokyo-Mitsubishi UFJ

History

- 
- 1918** — Founded as Tokai Electrode Mfg. Co. Ltd.
Business set up to provide a steady supply of quality graphite electrodes. Anticipated growth in electricity-using industries with healthy demand for carbon products. Was also a response to make effective use of the excess electricity at the time.
- 1936** — Japan's first exports of graphite electrodes (from the Nagoya Plant to Sweden)
- 1938** — Chigasaki Plant completed. Began production of carbon motor brushes and carbon rods.
- 1941** — First full-scale production of carbon black in Japan at the Kyushu-Wakamatsu Plant.
- 1950** — Developed SEAST 116, Japan's first industrial-grade carbon black.
- 1960** — Completed TD 350, a carbon motor brush with excellent rectification and abrasion resistance, for the main motor in high-speed trains on the *Tokaido Shinkansen* (Bullet train). Won popularity for use in high-speed rail.
- 1962** — Supplied the first Japanese 24-inch graphite electrodes and exported to Britain, Canada and West Germany.
- 1975** — Changed trade name to Tokai Carbon Co., Ltd.
- 1986** — The Tanoura Plant commenced production exclusively dedicated to fine carbon.
- 1987** — Established Tokai Carbon America, Inc. in New York as an overseas subsidiary to strengthen Tokai Carbon's sales activities outside Japan.
- 1990** — Helped finance Thai Carbon Product Co., Ltd., a joint venture in Thailand. Concluded a contract to provide Tokai Carbon's carbon production technology.
- 1992** — Merged with Toyo Carbon Co., Ltd.
- 1994** — Japan's Orbital Reentry Experiment (OREX) vehicle was launched with a nose cap outfitted with our carbon-carbon (C/C) composites.
- 1996** — Established Tokai Carbon U.S.A., Inc. as an overseas subsidiary in Oregon to operate in businesses such as SiC coating.
- 2004** — Established subsidiary Tokai Carbon (Tianjin) Co., Ltd. in Tianjin, China to produce and sell carbon black.
- 2005** — Successfully produced 32-inch graphite electrodes—the world's largest—for commercial use and shipped to the U.S.
Acquired German graphite electrode and cathode producer ERFTCARBON GmbH (now TOKAI ERFTCARBON GmbH).
- 2014** — Acquired Canadian carbon black producer Cancarb Limited.
- 2017** — With rapid growth in LiB anode materials, separated the anode material business from the R&D Strategy Division and made it a division.
Acquired North American graphite electrode plant. Achieved tri-regional structure of Asia, North America and Europe.
- 2018** — Acquired the North American carbon black manufacturer, Sid Richardson Carbon Ltd. (now Tokai Carbon CB Ltd.)

Group Companies



Head Office

TOKAI CARBON JAPAN

Minato-ku, Tokyo

Laboratory

TOKAI CARBON Fuji Research Laboratory

Sunto-gun, Shizuoka

TOKAI CARBON Chita Laboratory

Chita-gun, Aichi

TOKAI CARBON Hofu Laboratory

Hofu, Yamaguchi

Branch

TOKAI CARBON Osaka Branch

Kita-ku, Osaka

TOKAI CARBON Nagoya Branch

Nagoya, Aichi

Graphite Electrodes Division

TOKAI CARBON Shiga Plant

Oumihachiman, Shiga

TOKAI CARBON Hofu Plant

Hofu, Yamaguchi

TOKAI CARBON GE HOLDING LLC

Charlotte U.S.A.

TOKAI CARBON GE LLC

Charlotte U.S.A.

TOKAI CARBON GE FUND CORP.

Charlotte U.S.A.

TOKAI ERFTCARBON GmbH

Grevenbroich Germany

Carbon Black Division

TOKAI CARBON Ishinomaki Plant

Ishinomaki, Miyagi

TOKAI CARBON Chita Plant

Chita-gun, Aichi

TOKAI CARBON Kyushu-Wakamatsu Plant

kita-Kyusyu, Fukuoka

Tokai Unyu Co., Ltd. Ishinomaki Office

Ishinomaki, Miyagi

Tokai Carbon CB Ltd.

Fort Worth U.S.A.

TCCB US Ltd.

Fort Worth U.S.A.

TCCB Genpar LLC

Fort Worth U.S.A.

Cancarb Limited

Medicine Hat Canada

THAI TOKAI CARBON PRODUCT CO., LTD.

Bangkok Thailand

Tokai Carbon (Tianjin) Co., Ltd

Tianjin China

Fine Carbon Division

TOKAI CARBON Tanoura Plant

Ashikita-gun, Kumamoto

Tokai Fine Carbon Co., Ltd. Head Office

Chigasaki, Kanagawa

Oriental Sangyo Co., Ltd.

Kofu, Yamanashi

TOKAI CARBON U.S.A., INC.

Hillsboro U.S.A.

MWI, INC.

Rochester U.S.A.

TOKAI CARBON EUROPE GmbH

Grevenbroich Germany

TOKAI CARBON EUROPE LTD.

West Midlands U.K.

TOKAI CARBON ITALIA S.R.L.

Milano Italy

TOKAI CARBON DEUTSCHLAND GmbH

Buchholz-Mendt Germany

SCHUNK TOKAI SCANDINAVIA AB

Trollhättan Sweden

Tokai Carbon (Dalian) Co., Ltd.

Dalian China

Tokai Carbon Korea Co., Ltd.

Anseong-si, Korea

Industrial Furnaces and Related Products Division

Tokai Konetsu Kogyo Co., Ltd. Head Office

Minato-ku, Tokyo

Tokai Konetsu Engineering Co., Ltd.

Oumihachiman, Shiga

Shanghai Tokai Konetsu Co., Ltd.

Shanghai, China

Tokai Konetsu (Suzhou) Co., Ltd.

Suzhou, China

Other Divisions

TOKAI CARBON Shonan Plant [Friction Materials Division]

Chigasaki, Kanagawa

TOKAI CARBON Production Technology Center [Anode Materials Division]

Hofu, Yamaguchi

Tokai Material Co., Ltd. Head Office/Plant [Friction Materials Division]

Yachiyo, Chiba

Mitomo Brake Co., Ltd. [Friction Materials Division]

Hiki-gun, Saitama

Daiya Tsusho Co., Ltd. Head Office [Friction Materials Division]

Koto-ku, Tokyo,

Tokai Noshiro Seiko Co., Ltd. [Friction Materials Division]

Noshiro, Akita

Tokai Carbon (Suzhou) Co., Ltd. [Friction Materials Division]

Suzhou, China

Other

TOKAI CARBON US HOLDINGS INC.

Hillsboro U.S.A.

Stock Information

Stock Summary

Securities code	5301
Stock Exchange Listing	First Section of Tokyo Stock Exchange, Inc.
Fiscal Year	from January 1 to December 31
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	4-5, Marunouchi 1-Chome, Chiyoda-ku, Tokyo 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

(as of December 31, 2018)

Total number of shares issued by the company	598,764,000
Total number of outstanding shares	224,943,104
Total number of shareholders	73,204

Major Shareholders

(as of December 31, 2018)

Name	Number of shares held (1,000 shares)	Shareholding ratio (%)
JP MORGAN CHASE BANK 380684	12,358	5.80
Japan Trustee Services Bank, Ltd. (trust account)	11,154	5.23
The Master Trust Bank of Japan, Ltd. (trust account)	11,066	5.19
MUFG Bank, Ltd.	7,958	3.73
Mitsubishi Corporation	6,748	3.17
Mitsubishi UFJ Trust and Banking Corporation	6,290	2.95
The Master Trust Bank of Japan, Ltd. (Retirement benefit trust account/ Mitsubishi Chemical Corporation account)	5,900	2.77
BNY GCM CLIENT ACCOUNT JPRD AC ISG (FE-AC)	5,832	2.74
Japan Trustee Services Bank, Ltd. (trust account 5)	3,562	1.67
J.P. MORGAN BANK LUXEMBOURG S.A. 1300000	3,152	1.48

Notes 1. Tokai Carbon holds 11,789,000 shares of treasury stock but has not been listed among the major shareholders above.

2. The shareholding ratio was calculated excluding treasury stock.

Share Owner Information

(as of December 31, 2018)

Shareholder	Number of shares held (1,000 shares)	Shareholding ratio
Financial Institutions	68,658 (32%)	
Individuals/Others	67,684 (32%)	
Foreign Corporations, etc.	47,769 (22%)	
Japanese Corporations	22,038 (10%)	
Financial Instruments Business Operators	7,001 (3%)	
Total	213,150 (99%)	

1. Share numbers are rounded down to the nearest 1,000 shares. 2. The shareholding ratio was calculated excluding treasury stock.

Dividend Policy

- Tokai Carbon's policy to determine profit sharing is based on the earnings performance from a medium-term perspective, with due consideration given to securing sufficient retained earnings while aiming to strengthen the Group-wide business foundation, increase corporate value and pursue shareholders' interest.
- Our basic policy is to distribute dividends of surplus twice a year, an interim dividend and a year-end dividend. The decision-making body of such dividends of surplus is the Shareholders' Meeting for the year-end dividend, and the Board of Directors for the interim dividend.
- Retained earnings will be appropriated to strengthen financial condition and is intended to be used as funds to maintain stable dividend payments.
- The Articles of Incorporation provide that an interim dividend may be distributed with a record date of June 30 every year by the resolution of the Board of Directors.

Dividends per share and dividend payout ratio

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Dividends per share (yen)	8	8	7	6	6	6	6	12	24	48
Dividend payout ratio (%)	66.0	52.8	102.4	42.7	40.8	38.1	(11.8)	31.1	23.8	21.9

* 2019=Forecast 2019

Editorial Policy

The Tokai Carbon Group pursues medium-to-long term business strategies to realize its long-term vision of being "A Global Carbon Company Contributing to a Better Society." This Annual Report presents our business results and outlook, and overviews of individual businesses, from both financial and non-financial perspectives.

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.

Issue Date
July 2019

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, 2018 and December 31, 2018.

Disclaimers

This report contains future-oriented statements based on information available at the time the report was issued. Actual results could vary greatly from forecasts. Factors affecting results include, and are not limited to, economic conditions, raw material prices, product demand/supply trends, product market conditions, and currency exchange rates.



<https://www.tokaicarbon.co.jp/en/>

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