

Toyo Tanso Co., Ltd.

Results for the First Half of the Fiscal Year Ending December 31, 2019

August 2019
Toyo Tanso Co., Ltd.

Summary of Results for the First Half of the Fiscal Year Ending December 31, 2019

1. Key Points of the Results

Point 1

Underpinned by solid demand in the electronics applications sector, net sales held to the same level as previous fiscal year sales, excluding those for Chinese high-temperature reactor-pebble-bed modules (HTR-PM) recorded in the first quarter of the previous fiscal year (approximately 3.2 billion yen). Sales were also largely in line with the target amount.

Point 2

On the profit side, profit exceeded the initial forecast (2.4 billion yen) largely as a result of a weakening yen and lower-than-anticipated personnel costs. Meanwhile, price increases for some products were also successful.

Point 3

The Company revised its full-year forecast to account for factors such as effects of the intensifying US-China trade dispute and export control issues involving Japan and South Korea. Net sales are likely to decrease on the whole across the respective applications. As for income, the Company is holding to the amount initially forecast for the second half (2.6 billion yen), keeping costs at levels on par with those of the first half.

2. Results for the First Half of the Fiscal Year Ending December 31, 2019 and Forecasts for the Fiscal Year Ending December 31, 2019

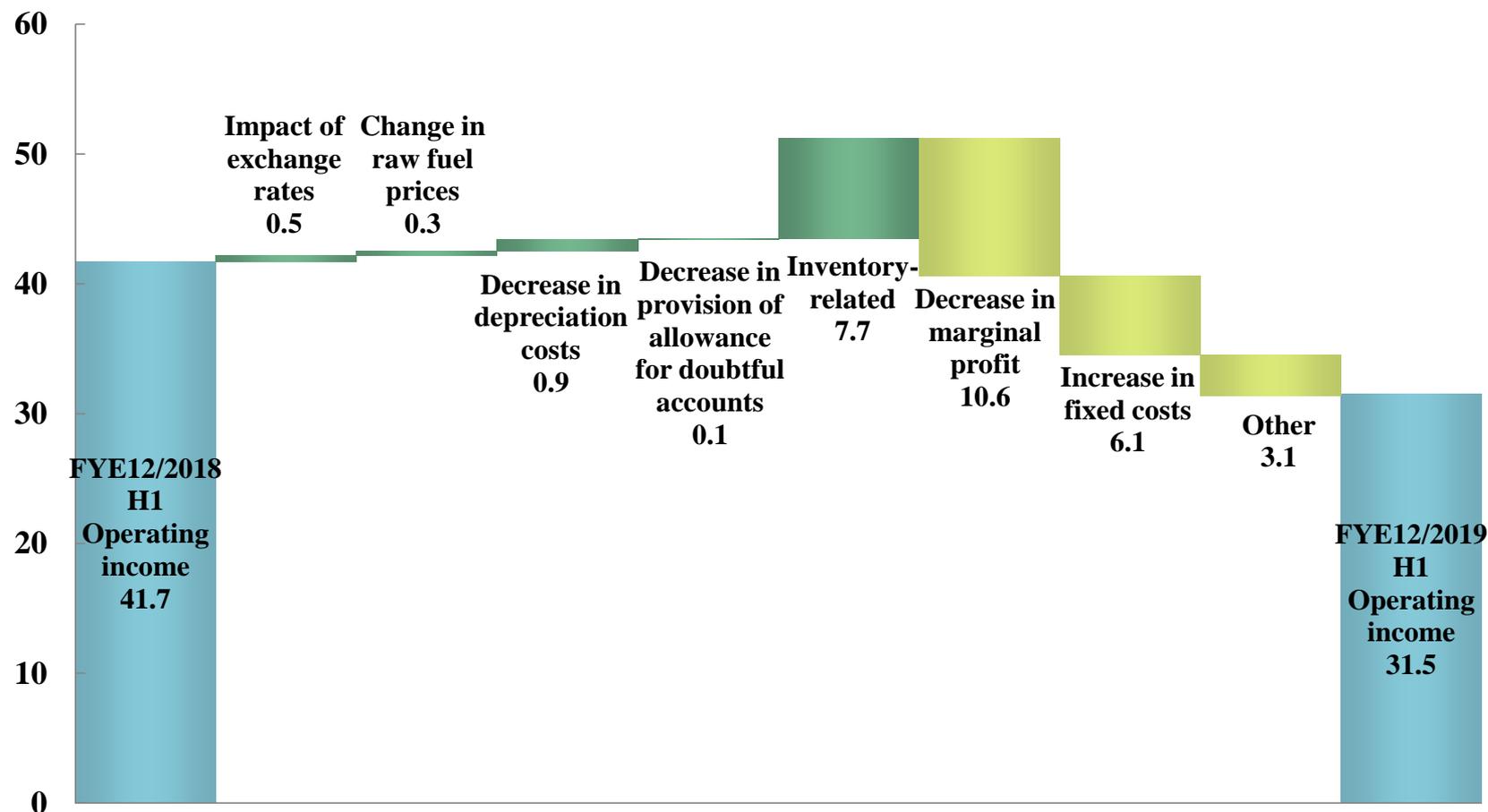
(Unit: Yen, millions)	FYE Dec. 2018		FYE Dec. 2019			
	H1	Full year	H1	Year-on-year change	Full year (forecast)	Year-on-year change
Net sales	22,056	41,132	19,141	(2,914) / (13.2) %	37,000	(4,132) / (10.0) %
Operating income	4,179	7,009	3,158	(1,020) / (24.4) %	5,800	(1,209) / (17.3) %
(Ratio of operating income to net sales)	18.9%	17.0%	16.5%		15.7%	
Ordinary income	4,092	7,057	3,066	(1,026) / (25.1) %	5,800	(1,257) / (17.8) %
(Ratio of ordinary income to net sales)	18.6%	17.2%	16.0%		15.7%	
Profit attributable to owners of parent	3,055	4,910	2,303	(751) / (24.6) %	4,000	(910) / (18.5) %
Profit attributable to owners of parent per share (basic) (yen)	146.11	234.52	109.83		190.72	
Exchange rate	108.7 yen/\$ 131.6 yen/€ 17.1 yen/CNY	110.4 yen/\$ 130.4 yen/€ 16.7 yen/CNY	110.1 yen/\$ 124.3 yen/€ 16.2 yen/CNY		(H2) 105 yen/\$ 125 yen/€ 15.5 yen/CNY	

3. Factors Affecting Changes in Operating Income

(First half of fiscal year ended December 2018 vs. first half of fiscal year ending December 2019)

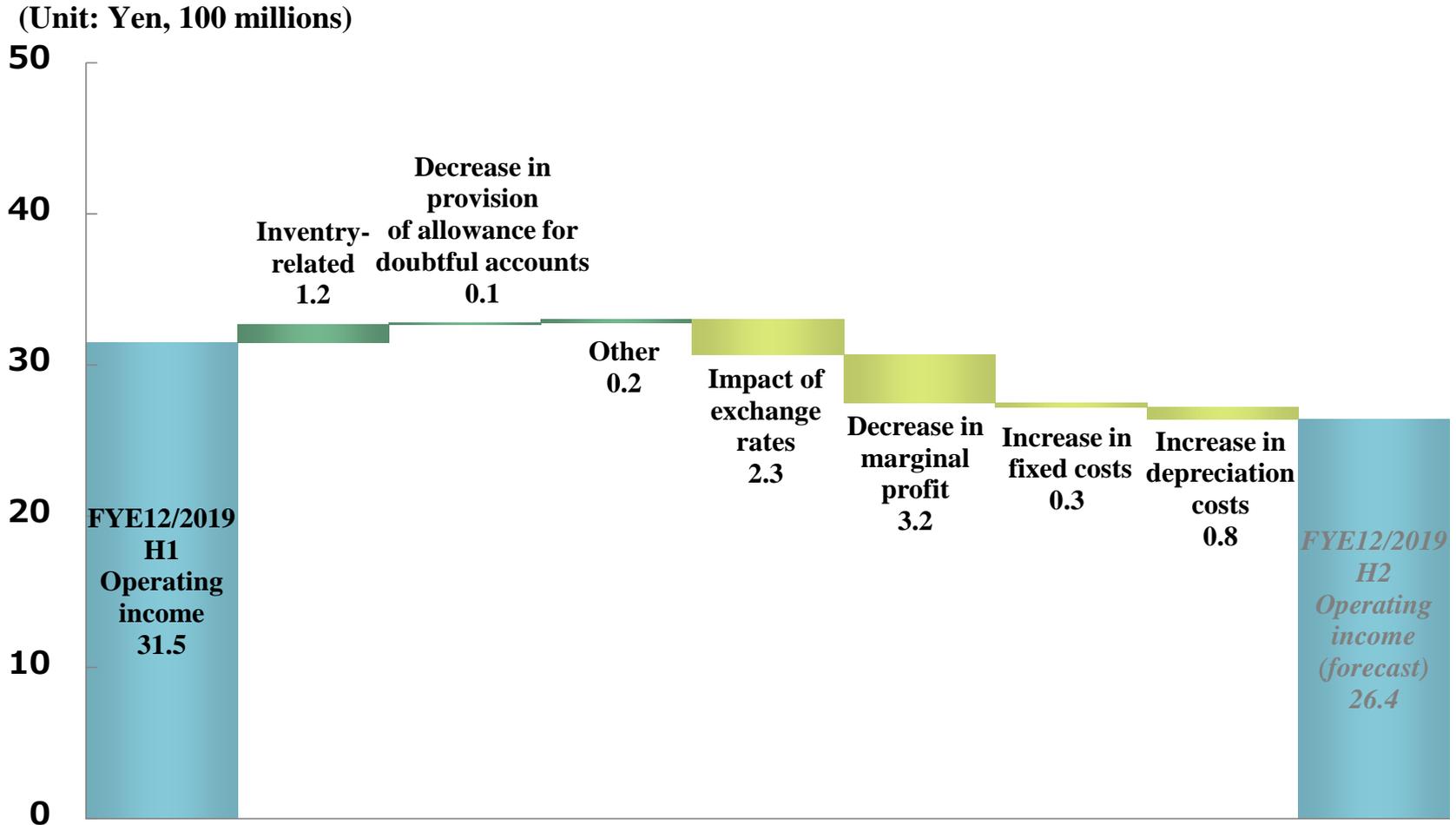
- ✓ Operating income decreased mainly due to the absence of previously recorded sales of Chinese high-temperature reactor-pebble-bed modules and due to an increase in fixed costs (mainly personnel costs)
However, the incremental increase in sales contributed positively to marginal profit

(Unit: Yen, 100 millions)



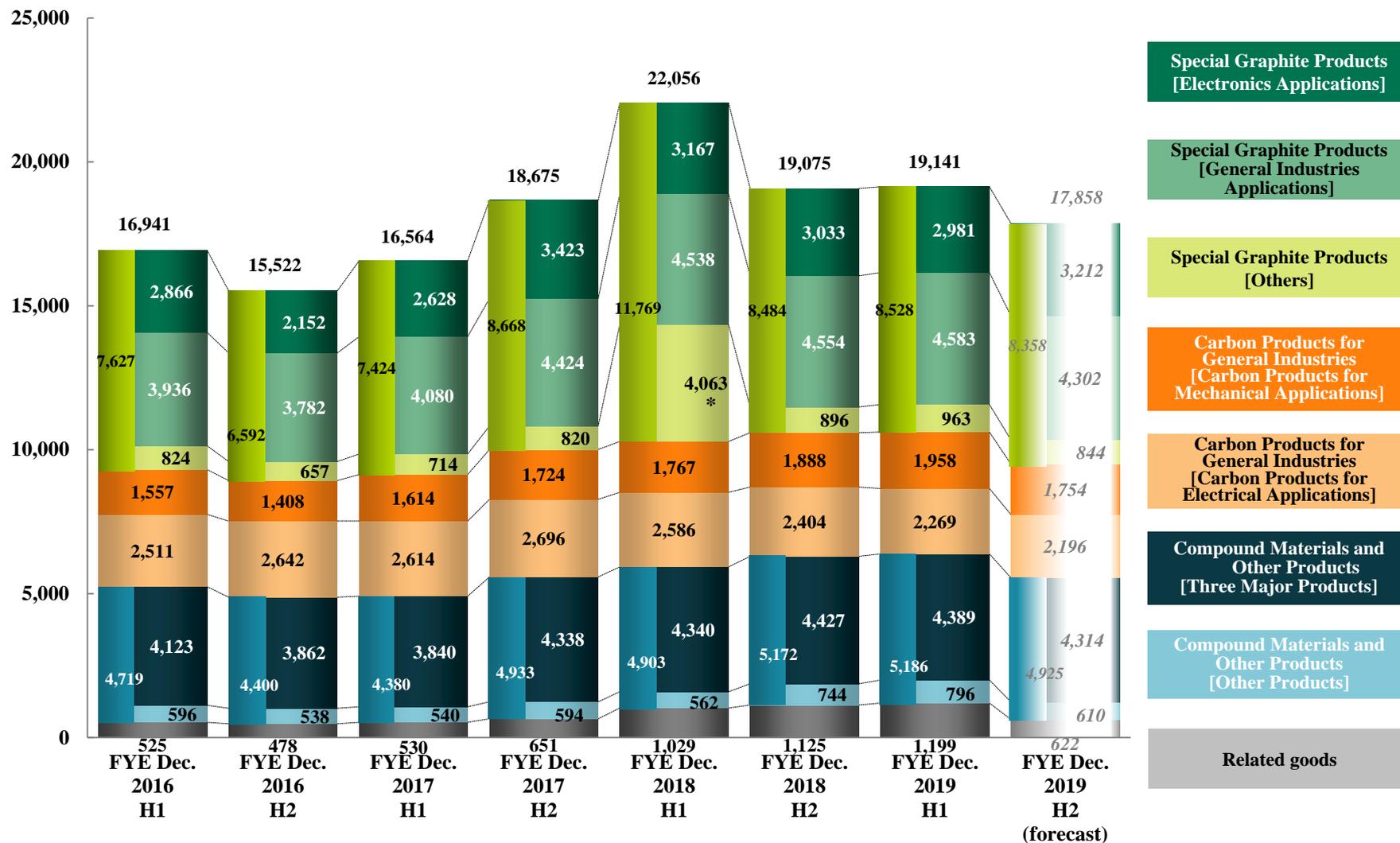
3. Factors Affecting Changes in Operating Income (First half vs. second half of fiscal year ending December 2019)

✓ Operating income decreased due to lower marginal profit resulting from a downturn in sales, and due to effects of the strong yen in the second half



4. Net Sales by Product and Segment

(Unit: Yen, millions)

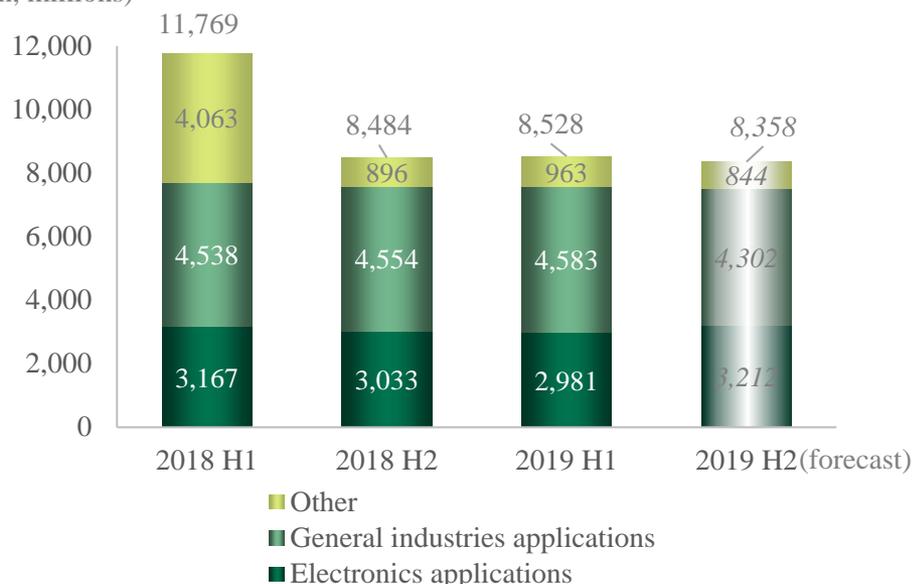


* Net sales for special graphite products [others] for the fiscal year ended December 31, 2018, include 3,204 million yen in net sales for China's high-temperature reactor-pebble-bed modules (HTR-PM).

4. Key Points of Net Sales by Product and Segment (1)

<Special Graphite Products>

(Unit: Yen, millions)



Key points

[Electronics applications]

In applications for single-crystal silicon manufacturing, full year results are likely to exceed those of the previous fiscal year given favorable results in the first half, as well as steady demand and successful outcomes of price negotiations. However, negative market factors gradually seem to be taking hold particularly given that some customers are beginning to request adjustments to delivery deadlines. In solar cell applications, results are down year on year amid factors that include a shift in Chinese government policy, yet the market is showing signs of recovery heading toward the second half, particularly given that capital investment is resuming subsequent to a temporary freeze. However, the situation still does not warrant optimism and the Company's stance remains unchanged with respect to accepting orders while striking a balance with highly profitable products.

[General industries applications]

Business involving applications for EDM electrodes, applications for continuous casting, and general industries applications is performing well. Beginning in the third quarter, sales are poised to slow amid a downturn in the semiconductor market due to effects of decreasing vehicle production and sales volume, and the US-China trade dispute. In America, sales are achieving steady growth, albeit small in scope, amid a scenario where efforts to expand sales particularly involving industrial furnaces are beginning to yield results.

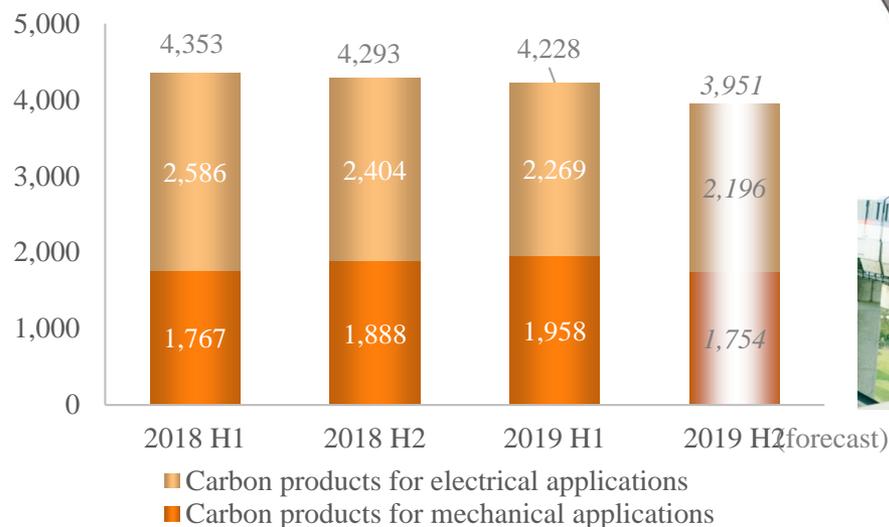
[Other]

Sales are returning to normal in the absence of the 3,204 million yen in sales for Chinese high-temperature reactor-pebble-bed modules (HTR-PM) recorded in the first quarter of the previous fiscal year.

4. Key Points of Net Sales by Product and Segment (2)

<Carbon Products for General Industries>

(Unit: Yen, millions)



Key points

[Carbon products for mechanical applications]

In the first half, domestic sales of shaft bearings, sealing rings, and other mainstay products were strong overall. Sales of pantograph sliders have been steadily gaining ground, particularly amid a rising number of inquiries involving new orders for overseas projects. We are in the process of assertively carrying out public relations initiatives targeting Japan's private railway companies. We are also preparing for vigorous demand by updating aging equipment and accordingly augmenting production capacity. Group-wide efforts are underway looking toward an early launch of automotive applications.

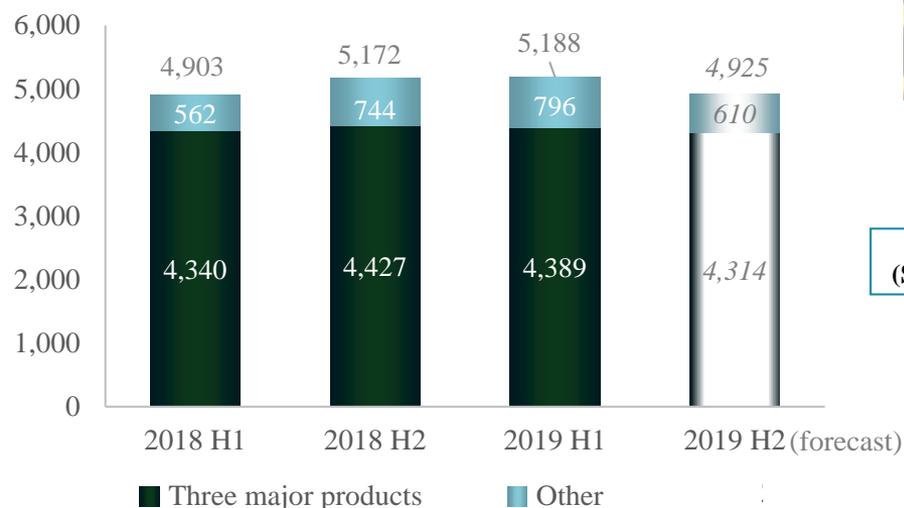
[Carbon products for electrical applications]

In the area of small-motor applications, the company is struggling to further accelerate the trend toward use of brushless motors in both home appliances (vacuum cleaners and washing machines) and power tools. In response to competition against cheap products from local manufacturers in China, the Company has been improving profitability by further cutting costs and revising prices, while maintaining and expanding market share through various initiatives that include enhancing manufacturing bases that address customer demand.

4. Key Points of Net Sales by Product and Segment (3)

<Compound Materials and Other Products>

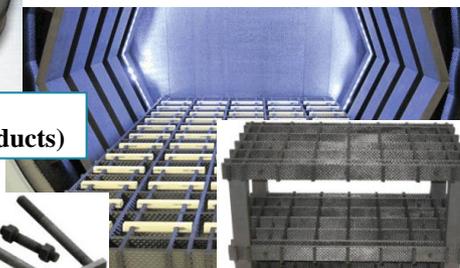
(Unit: Yen, millions)



**MOCVD susceptor
(SiC-coated graphite products)**



Graphite sheet products



**Three-layered trays
(C/C composite products)**



**Bolts and nuts
(C/C composite products)**

Key points

[Three major products]

Sales of SiC-coated graphite products were favorable in the first half due to strong demand for semiconductor applications. Growth of such sales is likely over the medium to long term with respect applications involving both power devices and LED applications, despite a slowdown particularly with respect to LED applications beginning in the second quarter, which appears to be a temporary adjustment.

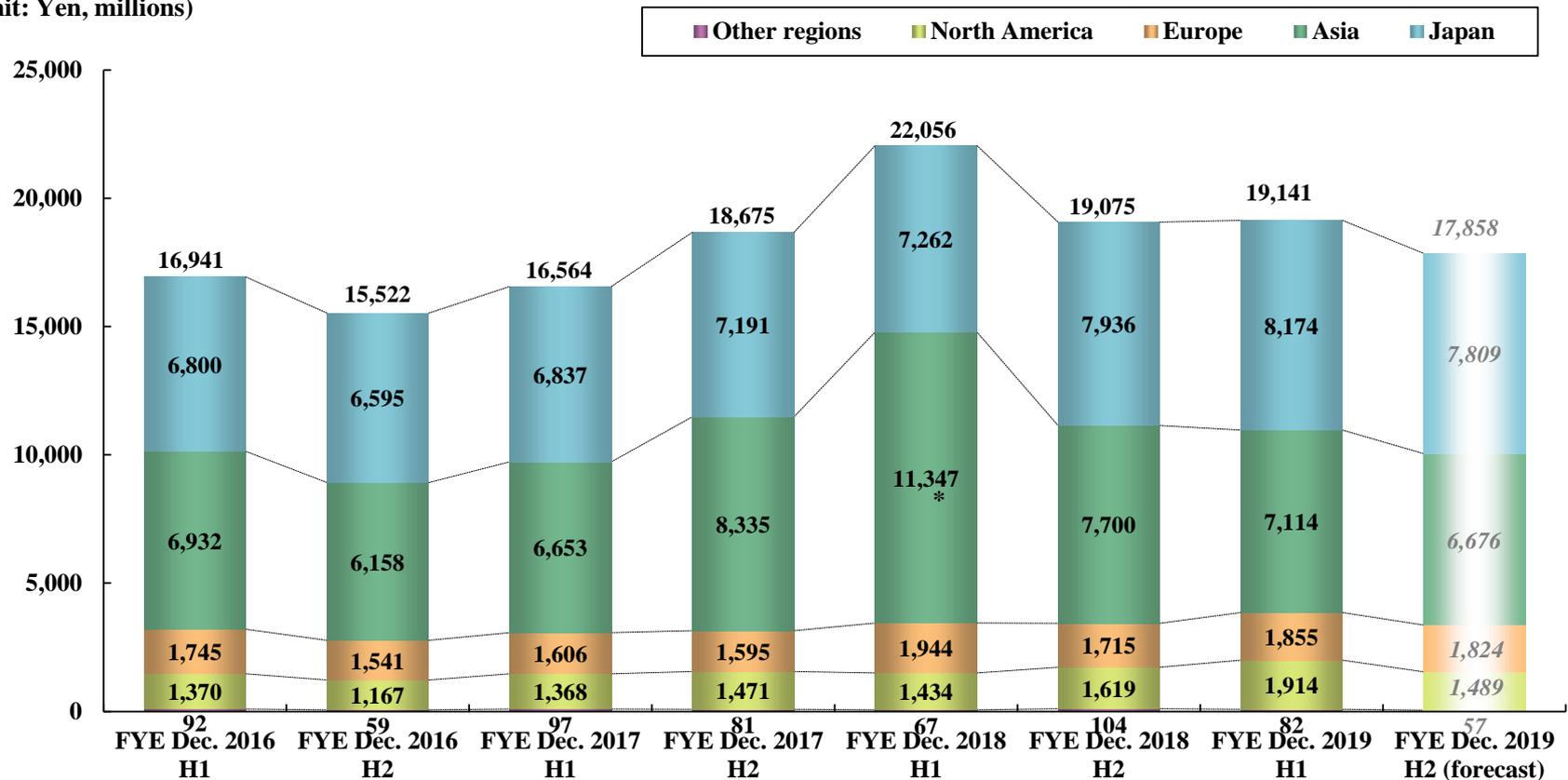
In the area of C/C composite products, sales were on par with those of the previous fiscal year amid a situation where sales in general industries applications made up for a downturn in solar cell applications (polycrystal silicon). Full-year results are poised to be strong amid the likelihood that sales will be on par with levels of the previous year.

Sales of graphite sheet products for metallurgical, automotive, and electronics applications were generally sluggish. The Company is focusing on the development of new applications.

5. Sales by Region

- ✓ Sales of product for solar cells and other applications have been strong in Japan, Europe, and North America, yet sluggish in Asia amid a slump in China
- ✓ In the second half, sales are poised to decrease in each of the geographic regions particularly due to adverse effects of the US-China trade dispute and export control issues involving Japan and South Korea

(Unit: Yen, millions)



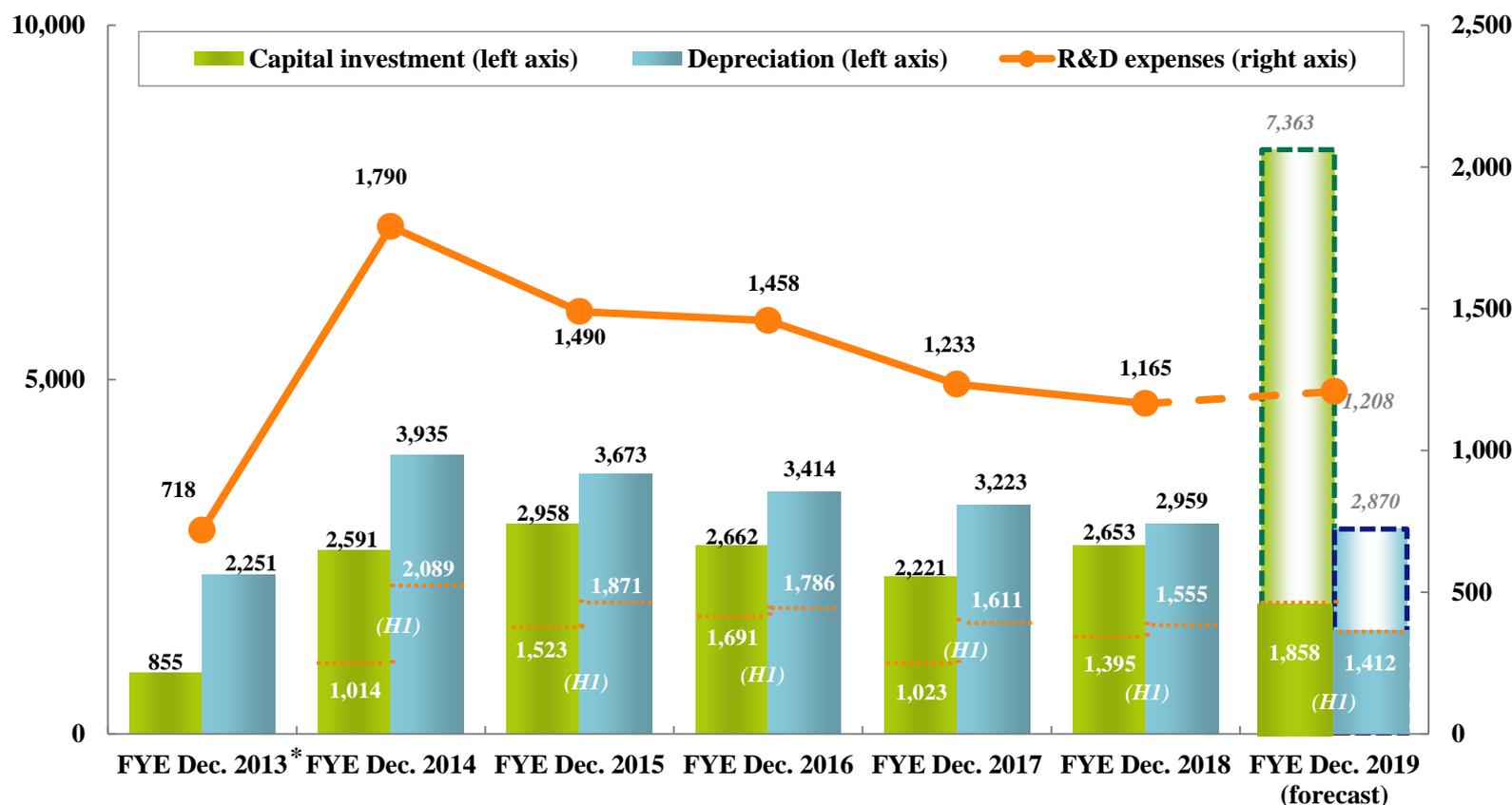
* Net sales in Asia for the first half of the fiscal year ended December 31, 2018, include 3,204 million yen in net sales for China's high-temperature reactor-pebble-bed modules (HTR-PM).

6. Capital Investment, Depreciation, and R&D Expenses

✓ Beginning in the second half, the Company will fully implement capital investment geared to improving production efficiency and shifting to higher added-value products

(Unit: Yen, millions)

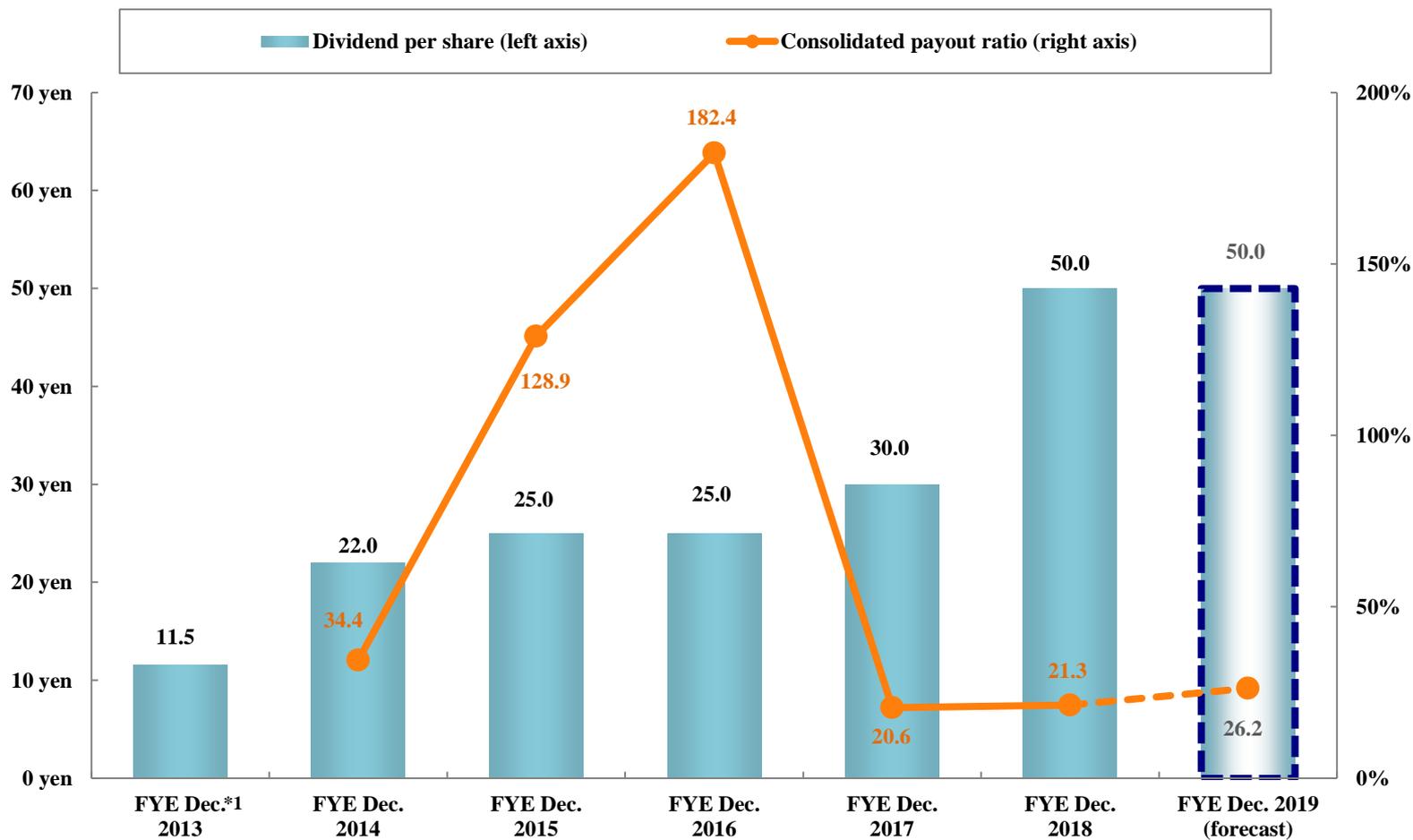
(Unit: Yen, millions)



Note: The final day of the fiscal period was changed from May 31 to December 31 as of the fiscal year ended December 31, 2013.

For this reason, the fiscal year ended December 31, 2013 was an irregular seven-month fiscal period (nine months for some subsidiaries).

✓ The Company will provide returns to shareholders while considering balance with capital efficiency and strategic investment



Note 1. The final day of the fiscal period was changed from May 31 to December 31 as of the fiscal year ended December 31, 2013.

For this reason, the fiscal year ended December 31, 2013 was an irregular seven-month fiscal period (nine months for some subsidiaries).

2. Since profit was negative in the fiscal year ended May 31, 2013 and the fiscal year ended December 31, 2013, information on consolidated payout ratio is excluded here.

8. Consolidated Balance Sheet and Statement of Cash Flows

(Unit: Yen, millions)

Consolidated Balance Sheet	Jun. 30, 2018	Dec. 31, 2018	Jun. 30, 2019
Total assets	73,358	74,951	74,397
Notes and accounts receivable - trade	14,934	15,274	13,797
Inventories	13,963	14,686	15,100
Property, plant and equipment	24,278	23,502	23,993
Total liabilities and net assets	73,358	74,951	74,397
Interest-bearing liabilities	645	505	491
Capital stock	7,906	7,947	7,947
Net assets	62,835	64,096	64,877
Equity ratio	84.6%	84.5%	86.3%

(Unit: Yen, millions)

Consolidated Statement of Cash Flows	FYE Dec. 2018 H1	FYE Dec. 2019 H1
Cash and cash equivalents at end of period	5,058	7,186
Net increase (decrease) in cash and cash equivalents	(1,302)	771
Cash and cash equivalents at beginning of period	6,361	6,414
Net cash provided by (used in) operating activities	2,751	3,233
Net cash provided by (used in) investing activities	(2,847)	(1,219)
Net cash provided by (used in) financing activities	(1,057)	(1,148)

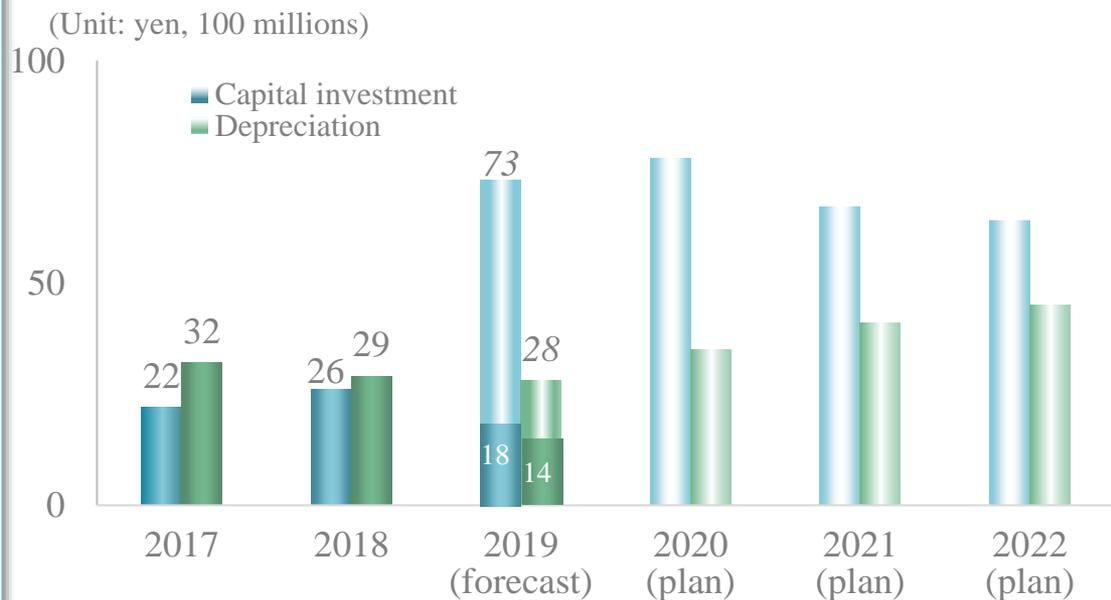
Laying the Groundwork for Growth: Forward-Looking Capital Investment



Total capital investment

Around 30.0 billion yen

(Cumulative total for 2018-2022)



1. Groundwork for tapping growth of the high-end semiconductor market
2. Augmentation of processing capacity with the aims of boosting market share and increasing added value
3. Improving production efficiency and achieving labor savings by updating aging equipment and automating operations

1. Groundwork for tapping growth of the high-end semiconductor market

SiC-coated graphite products
Investment for augmenting
production capacity:
3.1 billion yen



Address increasing demand for MOCVD systems and epitaxial growth systems accompanying growth the markets for power devices (Si, SiC, GaN, etc.) and LED

1.5 times more capacity

- ✓ Capable of meeting needs for next-generation MOCVD systems
- ✓ New building to be completed in 2020
(Some systems will go into operation in 2019)



Investment for augmenting
purification capacity:
2.85 billion yen
(2.0 billion yen in Japan,
0.85 billion yen in China)

Build global supply framework fully drawing on capacity in America and Germany (current)

- ✓ Slated to go into operation in 2020, involving capacity expansion in Japan and new framework in China
- ✓ Semiconductor miniaturization is contributing to mounting demand for high purity graphite materials and insistence on increasingly high purity levels
- ✓ Demand is also increasing for next-generation semiconductor, LED and optical fiber applications

2. Augmentation of processing capacity with the aims of boosting market share and increasing added value



FACILITY



HUMAN SKILL

- ✓ Efforts underway to successively augment processing facilities of subsidiaries in Japan and abroad (Europe, North America, Asia)
- ✓ Achieve lower costs while rationalizing and streamlining operations by installing Multi-task machines, etc.
(Labor savings, 24-hour operation, reduction of night shift hours, etc.)

- ✓ Secure personnel and implement training prior to augmenting processing equipment
Dispatch engineers from main operations to improve processing technology in Japan and abroad, particularly overseas subsidiaries
- ✓ Establish manufacturing center at site of Owada Carbon Industrial Co., Ltd. (subsidiary)
Develop mechanisms for passing down expertise in the form of explicit knowledge, with two skilled processing engineers dedicated to the task of carrying out training of manufacturing personnel



Strengthen both tangible (facilities) and intangible (skills/technology) aspects of operations

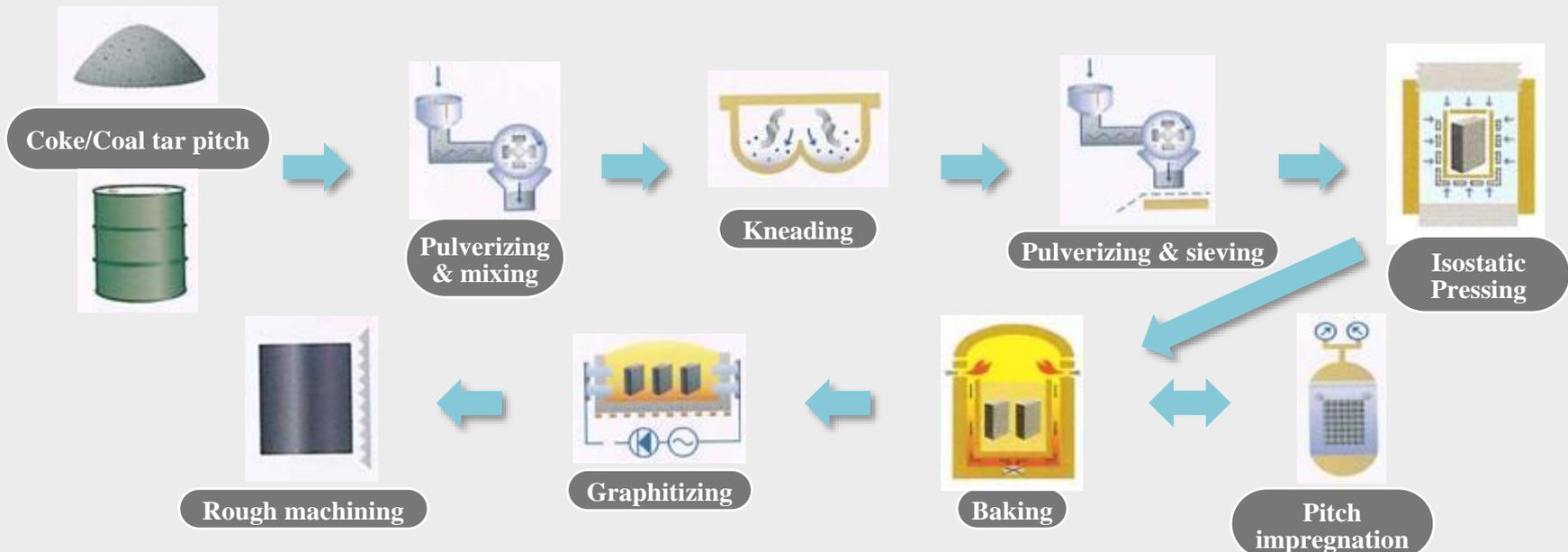
3. Improving production efficiency and achieving labor savings by updating aging equipment and automating operations

Investment in automating and updating isotropic graphite production facilities

3.8 billion yen

(Amount determined as of July 2019)

- ✓ Decision reached to undertake successive investment while placing priority on increasing **production capacity by 1.3 times** (2019 levels by 2025), on the basis of the grand design for capital investment
- ✓ Amount approved for investment as of July 2019 slated to be put to use over the years 2019 to 2021
- ✓ This will also help the environment by reducing energy consumption (2.4% decrease in annual energy consumption)





Note: This presentation contains “forward-looking statements” and forecasts of business results. These statements are not historical facts but instead represent the Company’s beliefs regarding future events, many of which, by their nature, are inherently uncertain and beyond the Company’s control. It is possible that the Company’s actual results may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements.

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