

Message from the General Manager of Advanced Components & Materials Division



Reaping the benefits of investments, we will concentrate resources and generate synergies aimed at expanding the growth areas.

Kazuya Murakami

Vice President and Executive Officer,
General Manager of Advanced Components & Materials Division

Fiscal Year 2021 Medium-Term Management Plan

		FY2018 Results	FY2021 Targets
Magnetic Materials and Applications/ Power Electronics	Revenues	¥137.0 billion	¥175.0 billion
	Adjusted operating income [Profit margin]	[2.9%] ¥4.0 billion	[12.6%] ¥22.0 billion
	ROIC	3.9%	8.2%
Wires, Cables, and Related Products	Revenues	¥240.1 billion	¥245.0 billion
	Adjusted operating income [Profit margin]	[5.2%] ¥12.5 billion	[7.8%] ¥19.0 billion
	ROIC	8.2%	11.3%
Total*	Revenues	¥377.1 billion	¥420.0 billion
	Adjusted operating income [Profit margin]	[4.4%] ¥16.5 billion	[9.8%] ¥41.0 billion
	ROIC	5.5%	9.3%

Capital investment
(3-year cumulative)
¥69.0 billion

Power electronics

- Enhance the global production system for soft magnetic components and materials
- Increase the production capacity of ceramic products

Automotive components

- Increase the production capacity of harnesses for EPB at the production sites in Thailand and Vietnam

* Simple sum before eliminating intersegment revenues

Initiatives of Fiscal Year 2018 Medium-Term Management Plan

Targeting organic growth, we introduced innovative production lines, established Hitachi Metals San Huan Magnetic Materials (Nantong) Co., Ltd., and introduced a new continuous casting and rolling line. We also transferred our information system business and lead frame business as part of our continuous portfolio restructuring efforts. In addition, we pursued various M&A activities, with Santoku Corporation, a magnet alloy manufacturer, and HTP-Meds, LLC, a U.S. maker of medical products, becoming subsidiaries.

Basic policy of Fiscal Year 2021 Medium-Term Management Plan

Under the Fiscal Year 2021 Medium-Term Management Plan, we will work to address the megatrends of urbanization, declining birthrate and aging population, serious environmental problems, and technological advances. Specifically, we will focus on reaping the benefits of investments, concentrating our resources, and generating synergies between businesses. We have identified the following growth areas: automobiles, factory automation (FA) and robots, medical devices, and rolling stock.

Expansion into growth areas

Automobiles

The Advanced Components & Materials Division offers a wide range of products in the automotive area, including soft magnetic components and materials for power electronics, magnets, and magnet wires for wires, cables, and related products. Leveraging our advanced functional material design technology, we will generate synergies between businesses and meet the rapidly expanding needs of electrification and emerging xEV*1 vehicles.

In soft magnetic components and materials, where demand is growing, we commissioned a FINEMET® Ribbon production line at the Metglas Yasugi Works in April 2019. This will quadruple our production capacity, establishing Hitachi Metals as the world's No. 1 manufacturer. In order to increase the production capacity of soft ferrite, meanwhile, we are scheduled to start mass production in the Philippines in January 2020. Our aim is to achieve a 1.4-fold increase in sales of soft magnetic components and materials by fiscal 2021 compared with the fiscal 2018 level.

In ceramic components, there is a growing need for silicon nitride substrates and other substrates that combine high thermal conductivity and mechanical

strength as well as contribute to advances in power module cooling mechanisms in terms of compactness and cost reductions. We are increasing our domestic production capacity for silicon nitride substrates and started mass production of high-thermal-conductivity products. We are also reinforcing our polishing technologies for silicon carbide (SiC) substrates to expand business. Our aim is to achieve a 2.2-fold increase in sales of ceramic products by fiscal 2021 compared with the fiscal 2018 level.

Seeking to improve the efficiency of xEV drive motors, we developed a motor that uses amorphous metals as part of its core (see page 39 for details). Together with German research organization Fraunhofer IISB, we also developed a high-power-density technology that contributes to advances in output and compactness of on-board xEV chargers. We plan to use the outcomes of these activities to expand our business in high-performance soft magnetic components and materials.

In automotive electronic components, we will increase the production capacity for electric parking brake harnesses in Thailand and Vietnam. We will also expand our Feed Assy*2 business in Japan and China while focusing on the development of new sensors. Our aim is to achieve a 1.7-fold increase in sales of automotive electronic components by fiscal 2025 compared with the fiscal 2018 level.

In magnet wires, we have commenced mass production in Japan and Thailand in response to strong xEV demand. Going forward, we will step up sales of differentiated products, such as high-PDIV (partial discharge inception voltage) wires and surge-resistant wires.

In magnetic materials, we brought production of magnet alloys 100% in-house, expanded our lineup of

less heavy rare earth magnets to reduce resource risk, and installed new production lines for neodymium magnets and ferrite magnets. Going forward, we will improve the productivity of our new production lines and optimize our global production system in order to enhance profitability and expand orders. We are targeting an adjusted operating margin of 10% for magnetic materials in fiscal 2021.

*1 xEV: A generic term for electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs).
*2 Feed Assy: Wiring parts for xEV motors

FA/robots, medical devices, rolling stock

In electric wires and cables for FA/robots, we will strive to increase our market share, deploying our unique technologies that feature thinner and lighter design and longer-life performance. With production in Japan, China, and Vietnam, we will make flexible investment decisions in response to market fluctuations. We are targeting ¥10 billion in sales of electric wires and cables for FA/robots in fiscal 2021.

In medical devices, we will increase the performance of scintillator materials for CT equipment, expand our line of combination products of catheters and cable for catheter testing and treatment equipment, and promote mass production of new probe cables for ultrasound diagnostic equipment. Our aim is to achieve a 1.3-fold increase in sales of medical devices by fiscal 2021 compared with the fiscal 2018 level.

In electric wires and cables for rolling stock, we aim to increase our market share in China, where demand for high-speed rail is growing. In Europe, we will propose cable navigation and other solutions, in addition to supplying products. We are targeting ¥14 billion in sales of electric wires and cables for rolling stock in fiscal 2021.

Automotive area

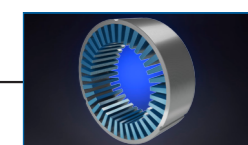
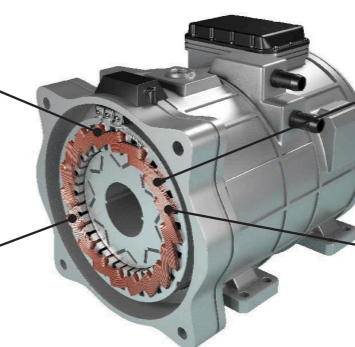
Seek synergy between magnetic materials, power electronics, and wires, cables, and related products



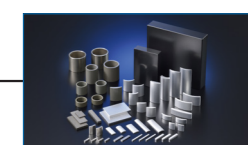
Feed Assy



Magnet wires



Amorphous metals



Magnets

Deeply cultivate the automotive and industrial infrastructure markets with the design technology for advanced components and materials at the core