Smart Company

Main products

- Electronic components
- Anisotropic Nd-Fe-B bonded magnets (MAGFINE®)
- Dental magnetic attachments (MAGFIT®)
- Ultra-compact ultra-sensitive magnetic sensors (MI Sensors)
- Iron fertilizers (TetsuRiki Agri®, TetsuRiki Aqua®) etc.

We believe that carefully resolving each of our customers' problems will lead to solutions for social issues. To realize our growth strategies, we will always take a customer-first approach and fully meet our customers' expectations by leveraging materials and applied products across the Smart Company's five business segments.

Executive Officer
Smart Company President
Masami Sugata

Strengths

- Advanced functional materials combining base technologies in materials, magnetic applications, and surface treatment
- Technologies to maximize performance of advanced functional materials and their applied products
- Carbon-neutral manufacturing processes with virtually zero CO_2 emissions from energy at four plants (Seki Plant, Gifu Plant, Higashiura Plant, Electronic Components Plant)

Opportunities

- Electronic components: Increased demand for lead frames for power cards due to EV expansion
- Magnets: Increased demand for rare earth magnets due to the expansion of mobility and energy markets
- Dental: Market growth of dental magnetic attachments due to ongoing aging population

Risks

- Quantity fluctuations depending on EV expansion progress
- Price increases and procurement restrictions of raw materials and rare earths
- Competitor entry into growth markets

Business Environment

Markets where our smart products can contribute are expected to keep growing significantly.

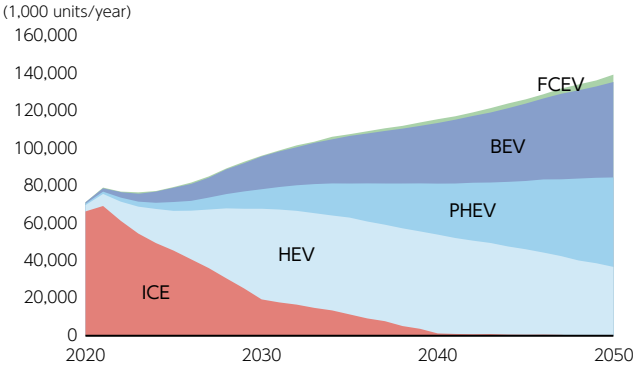
- Energy: Market growth of lead frames for power cards in inverter components, and of magnets for motors due to the progress of electrification
- Safe and secure infrastructure: Rising need for autonomous driving due to "driver shortages" in logistics and public transportation in underpopulated areas
- Healthy lifestyle: Expectations for improved QOL*1 in an aging society
- Food: Rising need to solve global CG disease*2

*1 Quality Of Life
*2 Citrus greening (CG) disease is a major disease that causes severe damage in citrus-growing regions worldwide

Value to society

Through the functional materials and applied products from our five smart businesses (electronic components, magnets, dental, sensor/metallic fiber, and iron fertilizers) we contribute to society in the four value-creating domains of energy, safe and secure social infrastructure, healthy lifestyle, and food.

Global new vehicle sales composition (passenger cars)

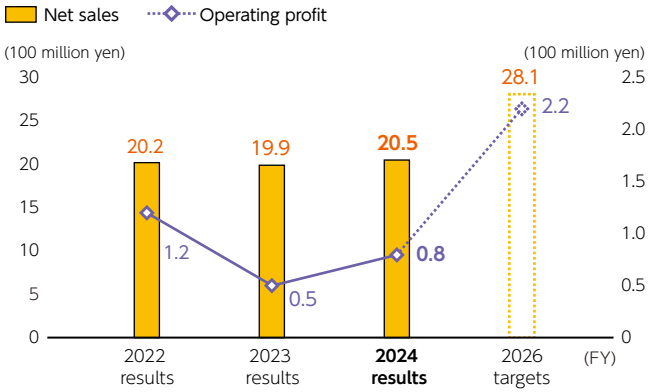


Source: JAMA Scenario for Carbon Neutrality, CNF Scenario Version

FY2024 Results

Sales revenue increased year on year, driven by steady growth in electric vehicles. Operating profit also increased from the previous year due to efforts to increase productivity and improve quality.

● Net sales, operating profit



Medium-term Management Plan update and future initiatives

– Electronic components business

In response to growing demand for lead frames used in power cards for electric vehicles, we will expand orders and strengthen our business foundation by leveraging the high quality of our long-refined "automated and integrated precision pressing-to-plating line." We will also strive to achieve sustainable growth and maintain and improve our competitiveness by working with our customers to develop products that anticipate market needs, while making timely growth investments.

– Magnet business

Starting with products with significantly enhanced corrosion resistance, we aim to expand orders for automotive products such as electric water pumps and home appliance products such as air conditioners by continuously launching improved grades that address market needs, including high-magnetic-force products and low-priced items.

– Dental business

To expand our share of the domestic market utilizing our dental magnetic attachment MAGFIT®, an insurance-covered product, we will strengthen collaboration with sales partners and introduce new products for diverse dental procedures. In the Chinese market, which is expected to grow, we will also work to expand orders through collaboration with sales partners.

– Sensor & metallic fiber business

We will develop new markets such as EV battery inspection and detection of metallic foreign objects mixed in food products, etc., using highly sensitive magnetic sensors capable of detecting ultra-low magnetic fields as low as one millionth of the Earth's magnetic field. We will also promote the adoption of our GMPS magnetic positioning system, which supports autonomous driving, mainly within the Toyota Group for use in on-site logistics.

– Iron fertilizer business

We will introduce iron fertilizers worldwide that can contribute to improving the symptoms of CG disease, which is a global problem. We will also focus on developing PDMA mass production technology with a view to future business expansion.

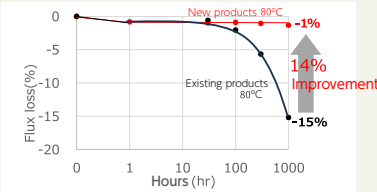
*Proline deoxymugineic acidNext-generation iron fertilizer jointly developed by Aichi Steel and Tokushima University.

TOPICS

Magnet business

The weather resistance of MAGFINE, a neodymium (Nd) anisotropic bonded magnet, has been improved through the development of coating technology that enhances its corrosion resistance. As a result, in harsh environments for magnets such as aqueous solutions, we have successfully improved magnetic force retention by 14% compared with conventional products, and have launched sample sales. It is expected to be adopted in an even wider range of motor applications than before, including water pumps.

● Magnet durability test results in aqueous solution (our evaluation)



Iron fertilizer business

Our iron fertilizers (TetsuRiki Agri/Aqua) and PDMA, leveraging our expertise and development capabilities cultivated through steel production, have been featured in the media for addressing global food challenges, including CG disease. In the field of PDMA research, we received the 57th Ichimura Academic Achievement Award together with Dr. Namba of Tokushima University for our joint-project "Development and Practical Application of Next-Generation Iron-Solubilizing Fertilizers for Desert Greening."

● Example of PDMA effectiveness in alkaline soil

Without iron supplement　　PDMA use