

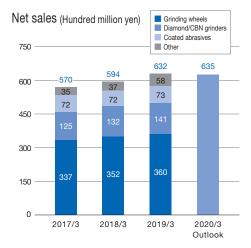
# Industrial Products Business

The process of grinding and polishing materials are necessary in manufacturing items ranging from aircraft, automobiles to syringes. By providing the tools used in these processes, we provide behind-the-scenes support for manufacturing industries.

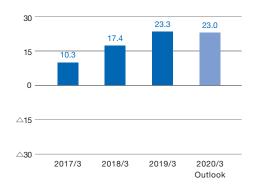
#### Main products

Polishing grinders, diamond/CBN tools, coated abrasive, etc. We boast best-in-the-world performance in processing precision, efficiency, etc.

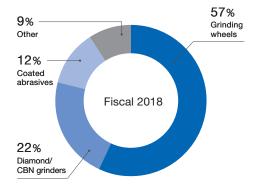




# Operating profit (Hundred million yen)



#### Net sales ratio



# Business overview of fiscal 2018

In fiscal 2018, both net sales and operating profit increased beyond their levels of the previous fiscal year. This was due to robust production in the automobile, steel, and bearing industries, which are our main domestic customers. Despite slowness in sales toward automobiles in North America, overseas too, showed strong sales with steel and automobiles in China and Southeast Asia, respectively, and resulted in growth overall.

#### Future outlook and initiatives

We will construct a global production and sales structure centered on regions including China, Thailand, and North America, and will develop growing overseas markets. At the same time, in Japan we will engage in development of new products in growing sectors such as electric vehicles and the IoT, and will work to maintain and grow our share.

We will also engage in reorganization that includes Group companies, and work to secure profitability through improvements in business efficiency.

# **TOPICS**

Firing process is one of the steps to manufacture grinding wheels, which is a type of porcelain. Our Industrial Products Group has long worked to reduce  $CO_2$  emissions through improving kiln packing and in equipment. We have met the target every year since it was set in fiscal 2016 (annual improvement of 1% or more per unit of production).



# Ceramics & Materials Business

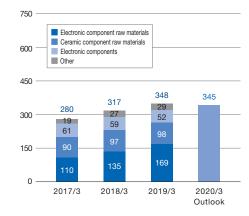
Crushing, mixing, molding, decorating, etc. These are some of the techniques of the Ceramics & Materials Group. We dig deeply into technologies for manufacturing ceramics, to produce one-of-a-kind materials and components.

#### Main products

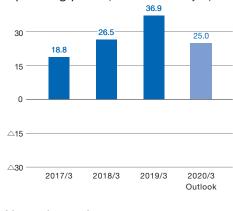
The Ceramics & Materials Group is active in a variety of industries with products characterized by high quality, including electronic paste, decalcomania paper, ceramic raw materials, thick film circuit substrate, vacuum fluorescent displays, plaster, ceramic cores, catalyst carriers, and electronic components.

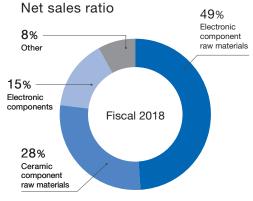


#### Net Sales (Hundred million yen)



# Operating profit (Hundred million yen)





# Business overview of fiscal 2018

In fiscal 2018, both net sales and operating profit increased beyond their levels of the previous fiscal year. This was primarily due to ongoing high multilayer ceramic capacitor demand, and growth in sales of electronic paste and electronic components. We also expanded sales overall, with growth in catalyst carriers, ceramic cores, and plaster, especially overseas.

#### Future outlook and initiatives

Amid the evolution of communications systems and the growth of electric vehicles, demand for electronic components such as multilayer ceramic capacitors and inductors is expected to expand. Our business will meet this demand through increased production and continuous development of materials for electronic components.

We also foresee expansion in the environmental power generation sector, which we plan to make a new cornerstone of our business by undertaking development of paste for piezoelectric material electrodes.

#### **TOPICS**

Catalyst carriers are used in the creation of raw materials for PET bottles, detergents, chemical fibers, and more. Improving their performance both aids the improvement of yields in customers' plants and leads to the reduction of wastes.



# **Engineering Business**

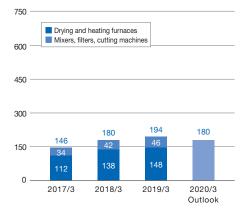
With our core technologies of heating, firing, mixing, filtering, and cutting, we propose engineering equipment to a variety of industries including automotive, electronic components, chemicals, medicine, and foods. We contribute to greater efficiency and energy savings in the manufacturing fields.

#### Main products

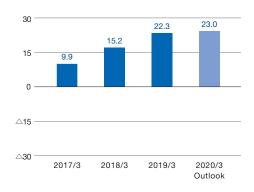
We perform development and design of drying furnaces, heating furnaces, mixers, filtration equipment, steel cutting machines, and other equipment that match customers' requests and objectives.



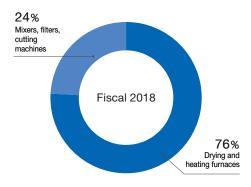
#### Net sales (Hundred million yen)



# Operating profit (Hundred million yen)



#### Net sales ratio



# Business overview of fiscal 2018

In fiscal 2018, both net sales and operating profit increased beyond their levels of the previous fiscal year. This was due to growth in sales of our leading products such as drying furnaces and heating furnaces, which benefited from active capital investment in the lithium-ion battery and electronic component sectors. Sales also grew with filtration equipment and carbide-tipped circular sawing machines, resulting in overall increase.

#### Future outlook and initiatives

As the electric vehicles become more and more common, the demand for lighter-weight bodies and higher-efficiency lithium-ion batteries increases. With these backgrounds, we predict the growing demand of drying and heating furnaces will continue, and are working on to meet the expectations.

We also develop new products that correspond to Internet of things (IoT) and reduce labor on production lines, and aim to meet the needs for automation, continuous operation and remote control.

### **TOPICS**

The Engineering Group promotes information sharing with our customers and business partners with the aim of co-prosperity. We especially dedicate the prevention of industrial accidents. In fiscal 2018, we created and distributed a handbook on occupational safety and health for business partners.



# **Tabletop Business**

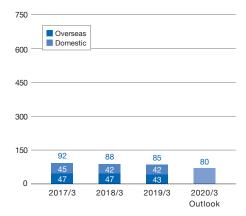
For over 100 years, Noritake tableware has been loved around the world. By providing products infused with impeccable quality and taste, we enrich our customers' lives.

#### Main products

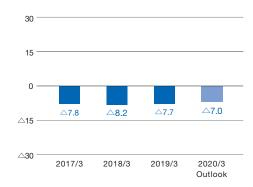
We offer a lineup of beautiful and easy-to-use tableware for daily use at home and as gifts, as well as for commercial use in hotels, restaurants, in-flight service, and more.



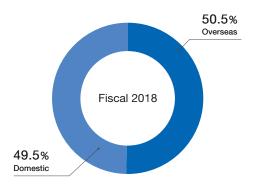
#### Net sales (Hundred million yen)



#### Operating profit (Hundred million yen)



#### Net sales ratio



# Business overview of fiscal 2018

Sales fiscal 2018 declined from the previous fiscal year, but we achieved an improvement in operating loss. Domestically, while sales to department stores declined year-on-year, commercial sales to hotels and restaurants increased, resulting in sales on par with the previous year. Overseas, sales in the U.S. declined considerably due to slow sales to our main customers. In Europe and Asia, too, sales to airlines declined, leading to an overall year-on-year decline overseas. As a result, total domestic and overseas sales declined.

# Future outlook and initiatives

In the domestic market, demand is expected to grow as the number of foreign visitors to Japan increases. We aim to expand sales of commercial tableware, targeting the hotel and restaurant markets. We will also reconstruct our distribution and retail channels, with a particular focus on e-commerce.

Looking at overseas markets, in the U.S. we will move quickly to address the expanding ratio of online sales. We will also establish sales structures in markets which are expected to grow, such as China and India.

# **TOPICS**

Red pigments for ceramics typically contain hazardous substances. While these do not leach when properly painted on ceramics, out of consideration for the environment and people, our company uses pigments of our own development that do not contain hazardous substances.