

## Industrial Products Business

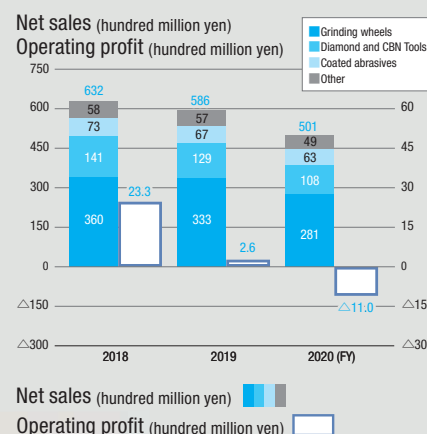
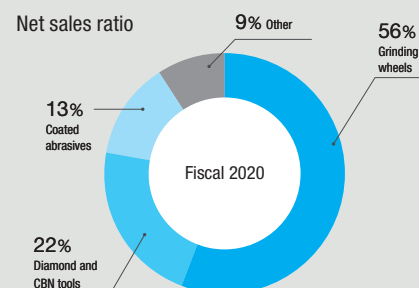
### Main products

- Grinding wheels
- Diamond wheels and tools
- CBN wheels
- Coated abrasives
- Dressers
- Grinding/polishing-related products (grinding oil, etc.)

We are one of the largest comprehensive manufacturers of grinding and polishing tools in Japan, using world-class technology to support the materials shaving, polishing, and cutting processes that are indispensable in manufacturing. Our Group includes companies such as Nippon Resibon Corporation and Hiroshima Kenma K.K., which handle offset grinding wheels and other general-purpose grinding wheels, and Noritake Coated Abrasive Co., Ltd., which handles abrasive-coated paper. Through a wide product lineup, we contribute to the development of many industries, including automobiles, steel, bearings, aircraft, shipbuilding, medical care, and semiconductors.



Group General Manager of  
Industrial Products Group  
**Akira Higashiyama**



### Performance in fiscal 2020

The Japanese markets for automobiles, steel, and bearings were significantly affected by the spread of COVID-19. This had a great impact on our business, for these markets are the key focuses of our business. Recovery was beginning to be seen near the end of the fiscal year, but sales were lower throughout as a result. Although we have witnessed resurging production because of the restart of Chinese economy and recovering demand as well as

a gradual recovery in Europe and North America, together with Southeast Asia, our sales have been dramatically low at overseas throughout the fiscal year. There were decreases both within Japan and overseas in general purpose grindstones, including cut-off wheels. These results ended with net sales of 50.094 billion yen for our Industrial Products Business, for a YoY decrease of 14.5 percent, with an operating loss of 1.098 billion yen.

### Progress of the Three-year Business Plan

In addition to the significant production adjustments made by our customers and the changing market conditions in FY2020, we also call into account the medium- and long-term market trend to take measures to improve our profitability. We are accelerating our improvement of profitability through taking effective measures, taking into account both income and expenditures through manufacturing to sales of each product. We continue to reassess locations

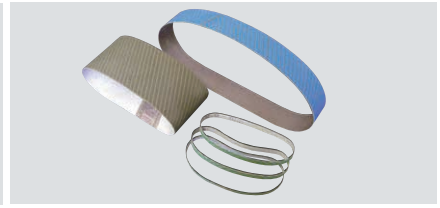
within Japan, including those of our group companies. In doing so, we have reviewed our business through examining the unique characteristics needed for both general purpose products and for custom made products as part of our efforts to increase profitability. On the other hand, our partially remote operation of manufacturing lines in China and Thailand has strengthened our overseas manufacturing, which improves our global business systems.



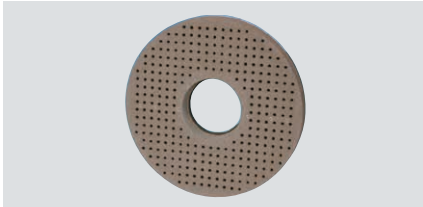
Vitrified-bonded Wheel for Gear Grinding "Gear Ace"



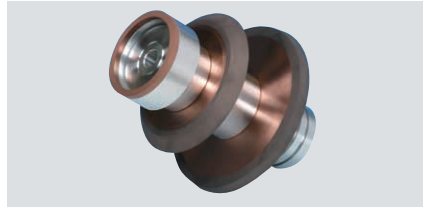
Vit-CBN Wheel "MEGA-LIFE WHEEL"



Diamond belt "Alta"



Disc grinding Wheel "Flatdy"



Metal Wheel for Super-Hard Main Groove Grinding  
"Dress-less Metal (MDL)"



Offset Wheels

## Our medium- to long-term business vision

In order to correspond to the next generation, we continue our efforts to strengthen our business foundations and maximize the synergy with each of the group company. Furthermore, the acquisition of opportunities from new and expanding markets is considered to be most important for mid-term business expansion.

In practical terms, customers are increasingly demanding lower CO<sub>2</sub> emissions in the manufacturing process in response to government policy to achieve a carbon neutral status by 2050. We are therefore focused on developing products that can be more easily produced, require less energy, and can lower CO<sub>2</sub> emissions at the same time.

In recent years, the interest of the automotive industry has rapidly shifted to electric vehicles. This shift over electric vehicles is not only limited to the change from fuel to batteries. The lighter vehicles improve fuel efficiency, and the greater precision in drive chain parts leads to lower levels of energy loss, which combined will lead to reductions in CO<sub>2</sub>. Our focus until now has been on providing the grinding and polishing tools used for internal combustion engines. However, we are keeping pace with the transition to electric vehicles and will provide new products that meet the unique needs for the parts our customers will be manufacturing.

One example: when we combine the different types of grindstones used in multiple grinding and polishing processes into one, we can develop a grindstone that increases drive chain part precision processing and can reduce energy loss. Use of such a grindstone can also shorten the working process and can greatly increase production efficiencies. Given our long history of developing and manufacturing different types of grindstones, and our deep store of fundamental and elemental technical expertise, we are confident that this development is feasible.

Our focus until now has been on the grinding and polishing technologies for metal materials, including those used in automobiles, steel, and bearings. Moving forward, we are advancing prioritized development for the semiconductor and telecommunication fields, where market is expected to grow. We are creating an environment that improves individual motivation and maximizes employee abilities, which in turn can lead to further growth. Noritake will take maximum advantage and inherit our expertise and experience that accumulated over more than 80 years to train personnel for the next generation. At the same time, we will cultivate human resources who can play active roles in the next generation.

### TOPICS

#### Expanding Production Overseas: New Facilities in China and Thailand

The opening of the new production line for NORITAKE ABRASIVES CO., LTD., in Suzhou, China, was delayed due to the spread of COVID-19, but is now scheduled to start its operation in July. This line will manufacture larger grindstones for the steel market, reflecting increasing global demand. This new line is planned to supply customers not only in China, but in Europe, North America, and India as well. We have also increased the number of manufacturing lines for ultrafine (vitrified CBN) grinding tools at NORITAKE SA CO., LTD. in Thailand. Consistent production began onsite in May on 2021. This has enabled through production for vitrified CBN products at three locations in Japan, North America, and Thailand. We will continue to strengthen onsite service systems to serve customers who are growing production world-wide.



NORITAKE SA (THAILAND) CO., LTD.

# Ceramics & Materials Business

## Main products

● Electronic component raw materials  
Electronic paste  
Decalomania paper  
Electronic ceramic powder

● Ceramic component raw materials  
Plaster  
Ceramic raw materials

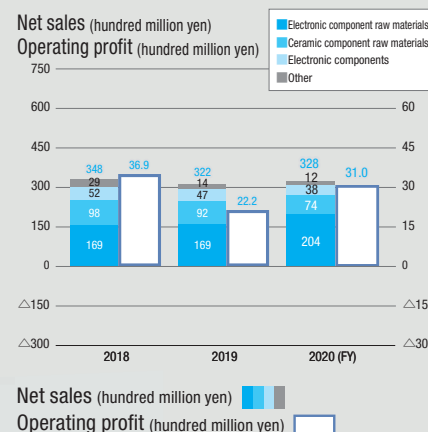
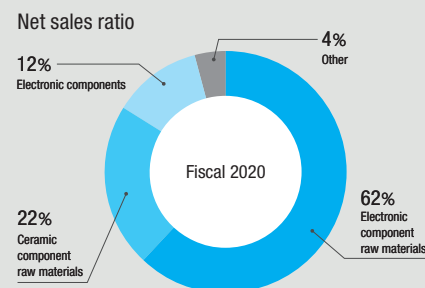
● Electronic components  
Thick film circuit substrate  
Vacuum fluorescent displays and modules

● Other  
Catalyst carriers  
Ceramic cores

Crushing, mixing, molding, and decorating patterns... Our technologies cultivated through the manufacturing of tableware produce outstanding materials and components that play roles in many fields. These products support a number of industries including the manufacture of electronic components such as multi-layer ceramic capacitors and components for automobiles, medical devices, display devices, and jet engines.



Group General Manager of  
Ceramics & Materials Group  
Hiroshi Yorita



## Performance in fiscal 2020

Sales have greatly increased for electronic paste because of the firm demand for electronics used in both high-speed cellular communications and in personal computers. Sales for raw materials for electronic components has increased due to stable demands for communication infrastructure and the recovery of the needs for automotive applications. Sales of thick film circuit have greatly decreased because of the lower demands from customers. Sales

of plaster and catalyst carriers have also decreased both within Japan and overseas. Customers' production adjustments have resulted in lower sales of ceramic cores, and sales of ceramic raw materials and vacuum fluorescent displays have dropped significantly. As a result, net sales for the Ceramics & Materials Business were at 32.780 billion yen, a YoY increase of 1.7 percent, and operating profits were at 3.099 billion yen, a YoY increase of 39.7 percent.

## Progress of the Three-year Business Plan

FY2020 was a year that saw disparities in progressing plans for our products because of the impacts from the spread of COVID-19. Materials for multi-layer ceramic capacitors (MLCC), used in electronics, trended favorably, with the increase in working from home, the greater adoption of 5G and the increasing number of base stations for 5G. Electronic paste has increased the production capacity of new plants, expanding our market share for product development. We also strengthened our development by

concentrating on our core competencies. We have increased production capacity and operations for electronic materials and for MLCC-specific needs. There were also products that suffered from decreased demand and production adjustments, and we turned our attention to improving the capabilities of catalyst carriers and improving the productivity for ceramic cores. Business systems for products, such as electronic displays and thick film circuit substrates, has been reviewed.



Decalcomania paper



Ceramic raw materials for electronic parts



Plaster products



Electrode paste



Vacuum fluorescent displays



Ceramic cores

## Our medium- to long-term business vision

In the midst of drastic changes within the social environment, our business, with its focus on precision technologies for pulverizing and dispersing inorganic materials like ceramics and precious metal will keep on offering new value. We continue to provide top-ranked materials to a wide range of markets for areas such as information technology, automobiles, and construction materials. With the increase in remote work because of COVID-19, there has been a sudden spike in demand for computers, cellular devices and telecommunication devices. We have continued to supply materials needed for the electronic components.

The key to success for this business is to keep meeting the needs of both customers and society in leading-edge fields. In order to meet the needs, we must focus on 5-year and 10-year plans for the future market and work on organizational reform. We have been making such changes up until now, but the focus has been on reforming organizations where problems were already apparent. Organizations without obvious problems

were maintained as-is. Given the speed at which the business environment is changing, we need to change to new ideas and approaches. Failing to do so means that we will be left behind the society as it changes at ever faster rates. We will keep making new challenges as we review our business and organizations thoroughly, including development, manufacturing and sales. We will not rely on a few talented employees to lead the innovative changes. Rather, we will work together with all employees step by step to make reliable changes.

Moving forward, we anticipate that there will be new products and business opportunities for the digital transformation (DX) that results from greater advances in information communication technologies, and from carbon neutral policies that bring everyone's focus to preserving the global environment. Our role will be to create and offer new products and values which will contribute to both the customers and the environment.

### TOPICS

#### More Ceramic Core Production Lines

Ceramic cores are a consumable good used for precision casting in the formation of gas turbine, jet engine dynamic and static blade casting processes because they can be used stably even in high temperatures to create a hollow core. Despite being consumable goods, ceramic cores contribute greatly to higher efficiencies for gas turbines and jet engines. The ceramic core market was impacted significantly when there were slowdowns in energy production and aviation equipment production because of COVID-19, but because we expect future increases for demand, a new production line for ceramic cores was added at the Matsuzaka plant. During this, we addressed issues raised from the existing manufacturing lines in the Miyoshi plant, and solved these issues with Noritake Manufacturing knowledge and expertise. In addition, splitting the manufacturing into two location supports our business continuity plans.



MATSUZAKA PLANT

## Engineering Business

### Main products

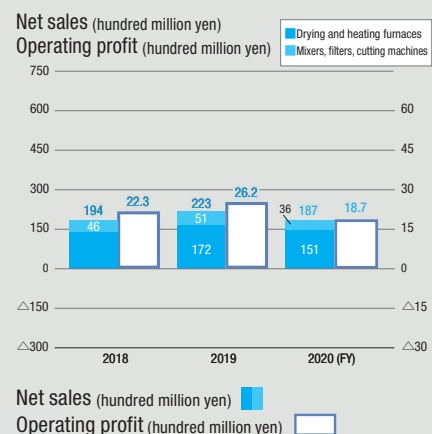
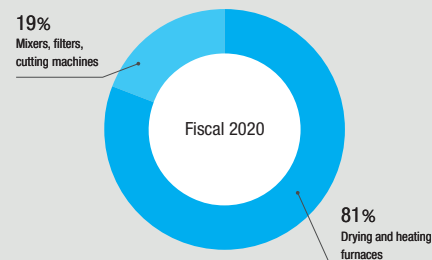
- High-efficiency heating furnace roller hearth kiln
- Far-infrared drying furnace
- Mixing and stirring machines (static mixer, etc.)
- Cutting machine
- Carbide-tipped circular sawing machine

With our core technologies of heating, mixing, filtering, and cutting, we provide wide range of engineering equipment to a variety of industries including automotive, electronic components, chemicals, medicines, and food. We contribute to greater efficiency and energy savings in the manufacturing workplaces. We develop and design drying furnaces, heating furnaces, mixing and stirring machines, filtration equipment, cutting machines, and other equipment to match the customers' needs.



Group General Manager  
of Engineering Group  
**Tomoaki Maeda**

### Net sales ratio



## Performance in fiscal 2020

Sales of our primary drying furnaces and heating furnaces have been down for major customers, given the delays in equipment installations and the restraint for equipment investment that resulted from COVID-19. Sales for mixing and stirring machines remained good for food industry, but sales were weak for chemical customers. Sales were lower for filtration systems. There were orders for large-scale devices for domestic machine part

customers, but overseas demand trended lower. Sales for carbide-tipped circular sawing machines declined dramatically, given the slump of automotive and industrial machinery customers both domestically and overseas. Engineering Business net sales therefore were 18.720 billion, down 16.2 percent YoY, and operating profits were 1.871 billion yen, down 28.5 percent YoY.

## Progress of the Three-year Business Plan

The Engineering Business is involved in promoting the development of competitive new products and new technologies for the 11th Three-year Business Plan. Installation work is needed when delivering new equipment, but after overseas travel restrictions were announced in early FY2020, we have been unable to work onsite. We have also been unable to meet with customers to share our new products and to identify new markets, which resulted to the delays for development and proposal work.

We are involved in efforts to develop new products and associate higher value propositions for existing products as we concentrate in core competence

that will allow the business to return to the right direction. In addition to focusing attention on promoting drying furnaces and heating furnaces to battery material and electronic component customers, where growth is expected to continue, we are also promoting the development of new products for automotive customers. Promotions are underway to introduce mixing and stirring machines to pharmaceutical and cosmetic customers, and filtration systems to automotive parts customers. Regarding carbide-tipped circular cutting machines, we focus on developing new materials and on construction material customers.





Static mixer



Roller hearth kiln



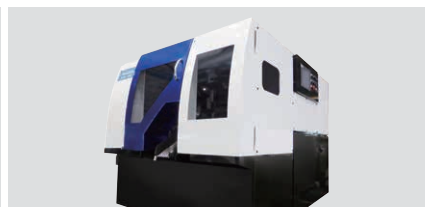
Coolant filtration system



Food sterilizer



Rotary kiln



Carbide-tipped circular sawing machine (Thin Cut Master)

## Our medium- to long-term business vision

The Engineering Business provides machinery and equipment designed to meet customer applications and needs. We support manufacturing in a variety of different industries. There was favorable growth for heating furnaces for lithium-ion battery and 5G-related business customers. Our prioritized focus has been on technological development here. The Heat Technology Testing Center for this business unit, located in Komaki City, Aichi, receives product inquiries from customers. Based on their requirements, test equipment is selected, and the center performs verification testing, changing the temperature and transportation conditions. This type of development system has been able to support the rapidly changing technological needs of our electronic component customers. We are currently performing higher heating efficiency verification testing on heating furnaces for lithium-ion battery materials. This facility has also provided the heating process work for multi-layer ceramic capacitors used in electronic components, but recently we have been using two heating processes: non-binder and re-oxidation. Development is underway for a new system that can offer non-binder, heating, and re-oxidation all in one. We have already entered the testing phase for it.

Given concerns over material shortages, we are preparing to work with new battery materials. Moving forward, plans call for aggressive research and development with an outside partner with experience in technologies we lack.

For mixing and stirring machines, we have completed work on an all-in-one system to allow for a switch to a serial line from what was once batch processing. This will be promoted to customers in the pharmaceutical and cosmetic fields. This uses the ultra-compact static mixer developed last year within a systematic approach. We are also moving forward in finding uses for the fine bubble generators, capable of creating microscopic foams. One of the primary items for filtration systems has been for gear grinding equipment. At present, the primary coolant for gear grinding is oil-based, but we are now promoting a water-soluble coolant filtration system that is more eco-friendly.

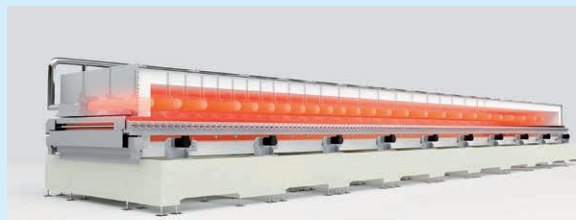
Dedicated personnel are critical for continually and stably enabling these systems. Such personnel can conduct onsite inspections at manufacturing locations for different industries. Moving forward, more attention will be given to personnel training. This business has a constant eye on the future. We are working vigorously toward the vision we have developed.

### TOPICS

#### Developed the World's First Gas-Fired Serial Heating Furnace for Lithium-Ion Battery Electrode Materials

Noritake has developed the world's first gas-fired serial heating furnace for lithium-ion battery electrode materials, using a unique ceramic radiant tube burner. Sales began in August of 2020. This product was born from a melding of different technologies. Noritake offered heating furnace technology and Tokyo Gas and Tokyo Gas Engineering Solutions, offered gas-fired heating technology. This new and highly efficient heating equipment can realize up to a 40 percent reduction in energy costs. The lithium-ion battery electrode manufacturing process, for which there has been increasing demand in recent years, requires a heating process that can be stably maintained at high heats of 1,000°C or more. A solution arose when combining technologies for gas-fired

high-temperature heating issues from three companies, and we brought that solution to market.



Gas-fired serial heating furnace for lithium-ion battery electrode materials (C-SERT-RHK)

## Tabletop Business

### Main products

- Porcelain tableware
- Other tableware-related products
- Decorations/works of art, etc.

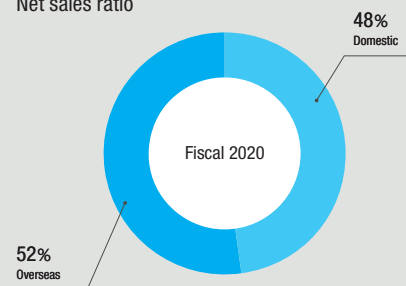
For over 100 years, Noritake tableware has been loved around the world. We offer a wide lineup of beautiful and easy-to-use tableware for daily use at home and for gifts, as well as for commercial use in hotels, restaurants, in-flight service, and more. By providing products infused with impeccable quality and taste, we enrich our customers' lives.



Group General Manager  
of Tabletop Group

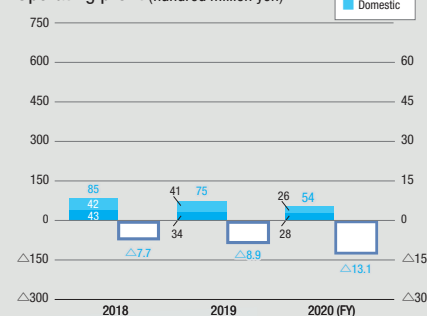
Munenari Mizukuchi

Net sales ratio



Net sales (hundred million yen)

Operating profit (hundred million yen)



Net sales (hundred million yen)

Operating profit (hundred million yen)

### Performance in fiscal 2020

The domestic market has been impacted by the spread of COVID-19. Despite increases in online sales, sales for the airline, department store, hotel, and restaurant industries decreased dramatically. Despite increases in online sales for the overseas market, overseas sales were lower because of impacts from

large-scale reseller shutdowns in the United States. Sales for hotel, restaurant, and airline customers were lower as well, which led to overall decreases world-wide.

As a result, net sales for Tabletop Business 5.44 billion yen, a 27.6 percent YoY decrease, with a 1.314 billion yen operating loss.

### Progress of the Three-year Business Plan

For the 11th Three-year Business Plan, the Tabletop Business has been involved in efforts to revitalize the business and identify systems that would maintain profitability even as the market shrinks. The strategy for revitalizing the business needed to review in light of COVID-19 in FY2020, and we focused to revise our strategies. Domestically, we reviewed sales and distribution, and in addition to promoting higher efficiencies through Concentration in Core

Competence, we also set about identifying new markets and sales routes. Three existing Noritake stores were closed. On the other hand, in addition to opening a new style of store, Noritake Square Plus, in Nagoya's Sakae Mitsukoshi, we also ran pop-up sales in locations like outlet malls. Ion mall is to be opened at a new location right next to our company in the fall of 2021, and we expect to attract new foot traffic. In response, we are renovating the Noritake



Yoshino



Rosa Rossa



Homage Collection



Orige



COLORTEX



Maison Collection (quilted pink)

Square Nagoya store. Updates were also made to the official Noritake online store, where access numbers have been increasing, improving the website's ease-of-use.

Regarding overseas market, more and more retail sales are done online in the United States. We focus to strengthen online sales, increase profit and improve profitability. We have also been revising

our sales systems for China, India, and Oceania, working also to improve profitability. As a result of the efforts, there has been a particular growth in online sales, especially in Australia. We are strengthening our relationship with a powerful and comprehensive agency in India, and promoting more publicity there.

## Our medium- to long-term business vision

Tableware is what our business group was founded on. We have been focusing on transitioning systems to one that can ensure profit, developing products that meet more casual needs in Japan and the United States. The economy, however, has been hit with stagnation after the FY2019 explosions in Sri Lanka and the spread of COVID-19 in FY2020. We have therefore been forced to make changes to the plans announced in the three-year business plan. Of particular concern has been the massive hits to the hotel, restaurant, bridal, and airline industries, where our major customers exist. Some course revisions are needed for the directions we need to aim for. Conversely, online sales have been doing well everywhere.

Moving forward, although even as more and more countries can proceed with vaccinations, the economic and lifestyle changes that COVID-19 precipitated, such as restrictions on movement, travel, eating-out and shifts to online sales for small retailers, is expected to

remain the same. Our business is reviewing the brand re-genesis called for in the three-year business plan, and believes we need to accelerate necessary strategies now. Regarding brick-and-mortar shops, we will accelerate to shift our business from department stores to outlet malls. We will also correspond to online sales media, which will help us propose and strengthen appeals of Noritake brand to a wider circle of customers. We can also take advantage of our accumulated expertise in working with high-end customers like hotels and restaurants and are working to develop new business spaces for the dining sphere.

We are certain that these efforts will help to shine a light on the prestige and quality of Noritake formal ware for new customers in online and new business model environments. Please look forward to the changing Noritake.

### TOPICS

#### Website Updates for the Official Noritake Tableware Online Shop

We relaunched a new version of the official Noritake online store on March 25, 2021. The new normal precipitated by COVID-19 has increased visitors to our online store, and we have improved the website's ease-of-use with more shopping features for customers using smartphones and mobile devices to visit. We have also added new content, including a concierge service where dining professionals introduce selected tableware, providing more comfortable living spaces that go beyond the dining table.



NORITAKE ONLINE SHOP



## Research & Development

The roots of Noritake technologies stretch back 100 years when techniques for manufacturing Western tableware were developed. At the time our passion for creating beautiful, white, delicate ceramics began an inherited skillset that has continued to this date. We continue to find a wide range of unique ceramics characteristics that form the basis for the new products we share with the world. We will continue to work to develop the technologies and products that customers all over the world expect from us while all along keeping our eyes on the next, upcoming trends.



Group General Manager  
of Development &  
Engineering Group  
**Akira Nagata**

### Technologies of Our Strength

- **Fusion Technologies for Fine-particle:** Techniques to fusion metal or ceramic fine-particle from the size of nanometer to micron.
- **Coating Technologies for Fine-particle:** Coating technologies to improve the quality and the functionality of the metal and ceramic fine-particle
- **Dispersion Technologies:** Liquid dispersion technologies for particles made of metals or ceramics
- **Forming Technologies:** Techniques to form various ceramics parts with less cost and with greater stability
- **Technologies for Porous Materials:** Core technologies for porous ceramics materials, such as grinding stones
- **Fusion Technologies:** Glass techniques to fuse materials with different thermal expansion coefficients, such as metals and ceramics
- **Environmentally-friendly Decorative Material Technologies:** Pigments, enamels, and paints that shine with brilliant color and are kind to the environment
- **Printing and Decorative Technologies:** Screen printing, decorative and circuit printing for industrial inkjet printing

## Research and Development System

Both the Development & Engineering Group and the engineering teams at each business group are involved in product development. The Development & Engineering Group is responsible for identifying new projects and products that can contribute to realizing a sustainable society, as well as the

necessary new technologies for making such projects and products to come into a reality. We actively participate in national projects, and cooperate with university and external research organizations to develop leading-edge technology development.

## Principal Development Themes and Targets

We are focusing our efforts on developing technologies that can contribute to the future of our society and to make industrial innovation. We are taking advantage of the benefits of the numerous technologies we have developed over the years and refine those technologies to an even higher degree. The technologies we have acquired are for products such as tableware, grindstones, electronic paste, ceramics, and engineering equipment. We set milestones for developments at each stages, from the one that is ready to be set off to the market and the one for the future. We go ahead with our development with a medium- to long-term perspectives.

More and more governments and industries are working to contribute to the issue of climate change, aiming for carbon neutral status. The same is for the Noritake Group. We need environmental perspectives to move our research and development forward. More and more technological innovations are needed to make our future society comfortable, and we will actively participate to make it come true. Innovations are required in areas such as electric vehicles, power semiconductors, energy-related components, and next-generation high-speed mobile communication. We will keep on our effort to contribute to the society.

## Ceramic Technologies will be the Key for Major Changes for the Environment and Society

Glass enamels are used when glazing tableware. Noritake has developed unique glass materials that do not deteriorate when exposed to high-temperature hydrogen. This glass material will help to realize next-generation hydrogen manufacture devices that can produce hydrogen more cheaply.

Roughly 50 percent of the grindstones we sell are made from highly porous ceramics, known as porous mediums. One of Noritake's greatest strengths has been the research and development of porous ceramics, with a wide variety of features that take advantage of the pores, or holes, within ceramics.

Fine bubble generation technology, for both micro-bubbles and ultra-fine bubbles, has been used for the structure of porous ceramics. This is unique in a way that allows bubbles to be generated in a variety of liquids without

the addition of any powerful force. We have taken advantage of that unique aspect to provide products with useful applications in a wide range of industries, including foods and beverages, chemical engineering, metal processing, waste processing, and biological solutions.



Fine bubble high-efficiency gas-liquid reaction device

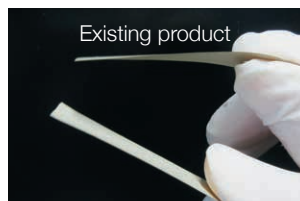


Photo of fine bubble generation

## Toward Non-heating Technologies Arising from Material Technologies Developed in the Heating Process

For many years, Noritake has refined and perfected technologies to form materials at high temperatures and develop products based on them. One such example is electronic paste developed for electronic components. The decorative techniques to apply liquid gold and paint to ceramic dishes is applied here to combine resins and solvents to form a paste. The market for in-vehicle products has grown lately, and the demand has grown for conductive pastes that use resin and do not burn off, which helps to reduce vehicle weight and lessen the damage from vehicle vibrations. To meet that need, Noritake is focusing on the development of a conductive resinous silver paste. Conventional pastes used for in-vehicle electronic component electrodes are used to absorb vibrations, but are also affected by the heat

generated by peripheral equipment. Since Noritake's conductive resinous silver paste is highly heat-resistant, it is suited for use in in-vehicle electronic components.



Existing product



Developed product

Conductive resinous silver paste after heat-resistance testing (200°C for 10 hours)

## Processing Technologies and Heat Strategies Contributing to Solutions for Information Communication

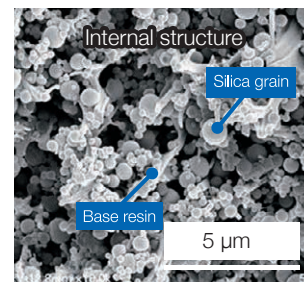
In recent years, the use of silicon semiconductors has increased in mobile devices such as smartphones and computers. Attention is shifting, however, to materials with less loss of electricity, for use as power semiconductors with increasing use in electric vehicles and next-generation high-speed mobile communication. The materials used here are very difficult to process. As such, an innovation in processing tools and technologies is needed. We have therefore developed a semi-fixed abrasive grain polisher, the LHA pad, which is more friendly to the environment. This technology controls porous structures, and represents a fusion of different technologies, including micro-granular precious metals, liquid gold within ceramic pigments, paints, and electronic pastes. Our present technologies owe to more than 115 years of experiences we have cultivated through the manufacture of tableware.

Another innovation is specific to heat issues. One of our greatest strength is our unique technique of firing. It enables us to express different forms and

colors to the fired substances freely. This technology also helps us to advance our development on heating and heat release. We believe we can contribute to a wide range of innovations with our skills. Now, we also work with heat-dissipating ceramic materials to help to take countermeasure against heat for the growing power semiconductor market.



Overall image



Internal structure

Semi-fixed abrasive grain polisher, the LHA pad