

Strategy by Business Segment

# What's Next

## Life science business

### Spin-off of surface modification technologies for improving people's QOL\*

\*QOL: Quality of life



CHIDORI®

By coating specific areas of the blade tip of an electrocautery scalpel, we have added two new functions: the ability to suppress carbide adhesion and to control temperature increase.



RAIKIRI®

We shaped an electrocautery scalpel to alleviate hand fatigue even in long-duration surgery, and this scalpel is treated with a nonslip coating to promote ease of grip during surgery.



Surface treatment for medical devices

A coating is formed on the surface of medical devices by applying and drying chemical agents. Our coatings can be applied to various materials, including metals, glass, ceramics, and resins.

In 2018, Nihon Parkerizing launched its life science business, which was spun off from traditional business field. We believe that our technologies nurtured in the steel and automotive industries would enable the “creation of new value” in surface modification technologies in other business areas. Our life science business initially created therapeutic medical device products by utilizing non-stick functions. However, we have expanded market domains, and medical devices and functional chemicals are the pillars. As a leader in surface modification, we will continue to explore new horizons through the growth of our life science business.

#### Medical devices

In the medical device field, we aim to apply the surface modification technologies we have developed to maintain public health based on “contributing to people’s lives and health.” A single-use (disposable) electrocautery scalpel that we manufacture and sell received the Health and Welfare, Biotechnology, and Medical Equipment Component Award at the 2020 Cho-Monozukuri Buhin Taisho (super-manufacturing component grand prize) organized by Monozukuri Seimei Bunmei Kiko, an NPO, and Nikkan Kogyo Shimbun, Ltd. Today, its

performance earns high marks among medical professionals, and it has already been adopted by more than 150 hospitals in this market, which European and US manufacturers have dominated. We will continue striving to gain the top market share in this product category by having more hospitals adopt the product. Meanwhile, we continue to expand our product lineup by developing implantable medical devices through industry-academia collaboration.



Ablation catheter

Purpose: Providing insulation  
Exposed metal parts are insulated to prevent thermal damage when they touch areas other than the affected area.



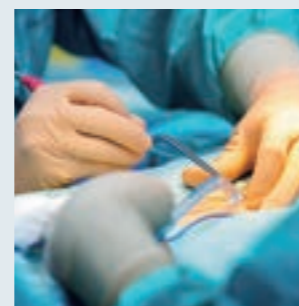
Guidewire

Purpose: Providing sliding performance  
The guidewire slides smoothly inside the catheter, making it easier to pass the catheter into the affected area.



Electrocautery scalpel (monopolar)

Purpose: Preventing sticking  
Our coating on the tip of the scalpel prevents sticking and improves wipeability.



Electrocautery scalpel (bipolar)

Purpose: Providing insulation  
The insulating coating prevents burn injuries when the part other than the exposed metal of tweezers (scalpel tip) touches the affected area.

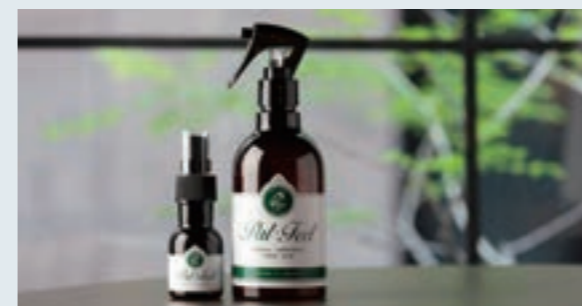
We manufacture and sell our medical devices and undertake surface treatment processing of medical devices manufactured by other companies. For example, we have started surface modification for bipolar electrocautery scalpels instead of monopolar ones and for catheter guidewires,

ablation catheters, and many other medical devices. Moving forward, we will contribute to people’s lives and health through surface modification of our products and those from other companies.

#### Functional materials

In the area of functional materials, we deal with functional coating chemicals. By “making daily life more comfortable,” we aim to apply the surface modification technologies we have developed to everyday life as we do with medical devices. The antiviral and antibacterial formulation, which has a longer-lasting effect than ordinary disinfectants, has been commercialized and is marketed as Palten Coat 688 (TC-688) for corporate customers and as Pal-Feel for general consumers.

This product is not a temporary disinfectant but a product that lasts for two months, taking advantage of our surface modification technology. We have started field surveys in the medical and nursing care industry and hotels and have begun collecting data on antiviral and antimicrobial effects and deodorant and mold prevention effects. We are promoting product development through industry-academia collaboration and aim to enter the cosmetics field in the future.



Pal-Feel

Objective: Providing long-acting antiviral and antimicrobial effects  
Applying our surface modification technologies cultivated in the industrial field provides a long-lasting antimicrobial effect on material surfaces.



Cosmetics industry

Objective: Providing functionality  
Surface modification technologies are applied to raw materials to provide new performance to cosmetics.

## Strategy by Business Segment

## Chemicals

## Chemicals business

Providing surface treatment chemicals, the latest knowhow, and technical support in a variety of industrial fields



Electronics



Aerospace



Non-ferrous metals



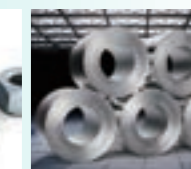
Transport/Machinery



Construction materials



Metal/Processing/Rust prevention



Steel (sheet)/Coil coating

## Descriptions of main businesses

- Paint base
- Metal corrosion prevention
- Lubricating coating
- Rolling oil
- Rust prevention oil
- Electroless nickel plating
- Other functional coating chemicals

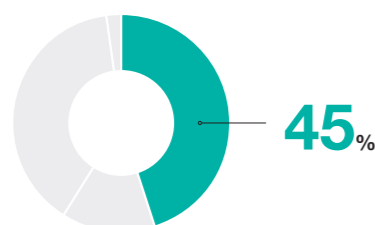
## Net sales of chemicals business

¥52,911 million

## Operating income

¥7,672 million

## Ratio to net sales



## Business overview

In FY2022, sales increased 13.5% annually to 52,911 million yen, and operating income rose 0.2% annually to 7,672 million yen.

This segment manufactures and sells surface treatment chemicals for cleaning materials, rust prevention, paint base, lubrication, and aesthetic design in all industrial fields. We also provide the latest know-how and technical support in these areas.

In Japan, sales of metal surface treatment chemicals were sluggish in the first half of the year, due in part to production cutbacks by major customers, but showed a gradual recovery in the second half. Further, overall sales of the chemicals business increased due to sales recovery in India, Indonesia, and other parts of Asia, in addition to higher sales prices in Japan and overseas. However, profitability declined as the impact of raw material price hikes continued throughout the year, resulting in only a modest increase in operating income.

## Future outlook

We foresee raw material prices to remain high. We will work to secure appropriate margins, for instance, by shifting costs to selling prices, reducing costs, and improving productivity.

## Strengths and risks

## 1 Strengths

- A wide variety of products that add various functions to surfaces
- A customer-focused service system that enables us to respond rapidly to customer demands and issues
- R&D system with state-of-the-art facilities and unique development utilizing in-house technologies
- Stable supply of high-quality products demanded by customers
- Supporting our customers' overseas expansion with a broad global network

## 2 Risks

- Structural changes in the automotive and steel industries attributed to the shift to EVs
- Intensifying price competition reflecting product commoditization
- Rising prices of phosphoric acid and other raw materials
- Tightening of chemical and environmental regulations
- Supply chain disruptions resulting from natural disasters and international conflicts.

## 3 Remedies

- Developing products for EVs, such as ones with improved sliding properties and insulation
- Developing new markets
- Developing high-value-added products by strengthening research and development
- Developing environmentally friendly products that do not contain hazardous substances
- Securing appropriate margins by shifting on higher raw material prices to selling prices and reducing costs
- Collecting information on country risks and developing and strengthening BCPs

## Growth strategies to achieve "Vision2030"

**We aim for the No.1 share of the global market in sales of surface treatment chemicals.**

Find solutions for environmental issues by developing, manufacturing, and commercializing chemicals that contribute to decarbonizing society and reducing the environmental load, such as chromium-free chemicals. Develop new businesses globally in various fields such as automobiles, steel, electricals/electronics, non-ferrous metals, and life sciences.

## Points of focus

## ■ Product development for electric vehicles

- Improving energy efficiency and functionality with durability, sliding property, and improved insulation.

## ■ Developing new markets

- Electricals/electronics, non-ferrous metals, life sciences, and more

## ■ Expanding sales of environmentally friendly products

- Chromium-free, phosphorous-free, reducing CO<sub>2</sub> emissions, reducing sludge, reducing load of waste liquid treatment, and more

## ■ Development, manufacturing, and sales of diverse functional coatings other than metal surface treatment chemicals

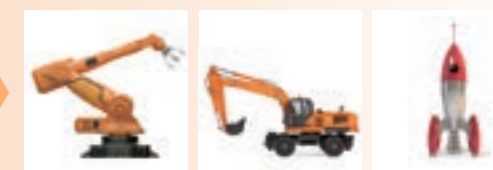
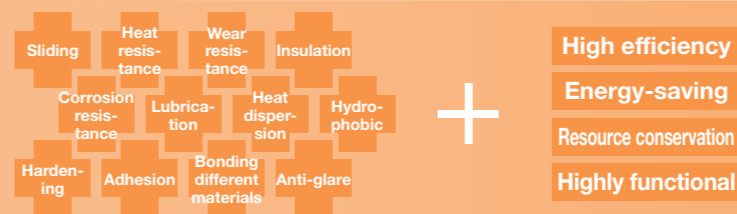
## ■ Expanding business in overseas countries

Strategy by Business Segment

# Toll processing

## Toll processing business

Providing processing services for adding diverse functions that contribute to reducing environmental impact



### Descriptions of main businesses

- Conversion coatings
- Salt bath nitriding
- Gas carburizing, carbonitriding
- Gas soft nitriding
- Electroless nickel plating
- Solid lubrication
- Other heat treatment and surface treatment

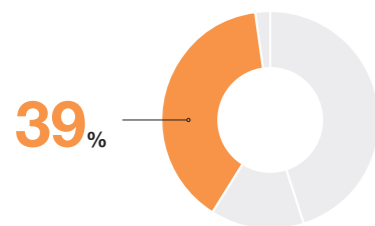
### Net sales of toll processing business

¥46,743 million

### Operating income

¥6,086 million

### Ratio to net sales



### Business overview

In FY2022, sales increased 4.3% annually to 46,743 million yen, and operating income decreased 10.3% annually to 6,086 million yen.

This segment provides surface treatment services such as rust prevention processing, which includes lubrication, high adhesion, and other functional properties; heat treatment processing, which increases the strength and durability of metals; and plating, which adds high corrosion resistance and wear resistance by coating the surface of materials with a thin metal film.

Overall sales in the toll processing business increased due to relatively strong sales in some parts of Asia, such as Vietnam and India, as well as a weaker yen against the US dollar. On the other hand, sales grew sluggishly in Japan, North America, China, and Thailand due to a slowdown in production by auto parts manufacturers, our significant customers. By rising raw material and utility costs, this trend resulted in a decline in profitability and a decrease in operating income.

### Future outlook

Although global price hikes are putting pressure on earnings in this business segment, we will promote a certain degree of price pass-through and productivity improvement through automation, robotization, DX, and other initiatives. Although we are forced to struggle in the US market, in overseas markets generally we are producing results from customer development and improvement in profitability at unprofitable locations.

### Strengths and risks

#### 1 Strengths

- Various technologies such as conversion coatings, heat treatment (carburizing, nitriding), and electroless plating
- A customer-focused service system that enables us to respond in a timely way to customer demands and issues
- Unique technologies and know-how cultivated over more than 90 years of history since our founding
- Timely suggestion and provision of surface modification treatments that satisfy customers' demands
- Supporting our customers' overseas expansion with a broad global network

#### 2 Risks

- Structural changes in the automotive parts industry reflecting the shift to EVs
- Intensifying price competition reflecting commoditization of technologies
- In-house surface modification treatment by customers and overseas relocation of customers
- Tightening of chemical and environmental regulations
- Supply chain disruptions resulting from natural disasters, international conflicts.

#### 3 Remedies

- Developing new and differentiated technologies for EVs, such as ones for improving heat resistance and wear resistance and ones for bonding different materials
- Strengthening cooperation with mega-suppliers
- Strengthening overseas business and exploring new local customers
- Developing new processing technologies that contribute to the reduction of CO<sub>2</sub> and hazardous substance emissions
- Collecting information on country risks and developing and strengthening BCPs

### Growth strategies to achieve "Vision2030"

We aim to be recognized worldwide and the most trusted partner for our customers.

Strengthen ties with mega-suppliers targeting critical components for electric vehicles (BEV, HEV, PHEV) as demand will continue to increase in this area, and further strengthen business ties in Japan and overseas to reactivate business in existing fields and develop new fields globally to reinforce our business foundation.

#### Points of focus

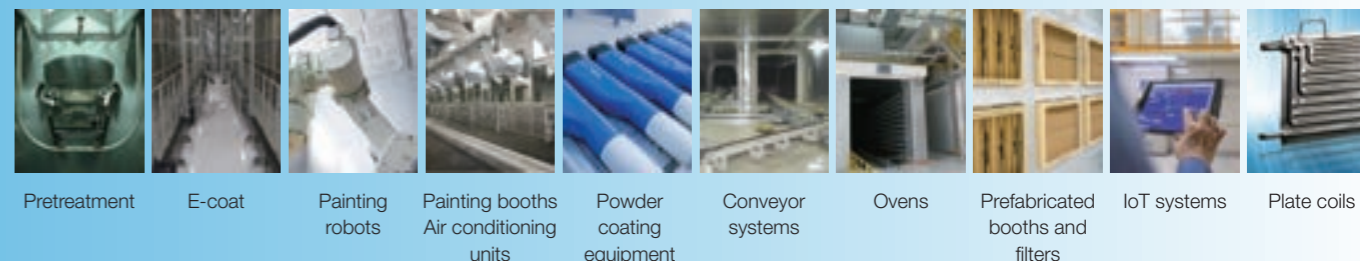
- Respond to requirements of next-generation automobiles.
- Gain orders for critical components for electric vehicles (BEV, HEV and PHEV) (Sliding property, insulation, wear resistance.)
- Develop applications for next-generation automotive technologies (Anti-glare, heat dispersion, dissimilar material joint.)
- Develop new business other than the automotive business (Construction machinery, construction, robots, aerospace)
- Strengthen sales activities at key overseas bases (Thailand, China, and North America) and gain non-Japanese customers
- Expand services that reduce the environmental load (Low-temperature treatments)
- Reactivate existing fields through lateral deployment and gain in-house production at customers

Strategy by Business Segment

# Engineering

## Engineering business

We provide full turnkey painting and surface modification solutions, regardless of equipment size and industrial field.



### Descriptions of main businesses

- Pretreatment equipment
- E-coat equipment
- Wastewater treatment system
- Coating equipment and robots
- Paint booths, Air conditioning units
- Powder coating equipment
- Conveyor systems
- Ovens
- IoT systems
- Plate coils

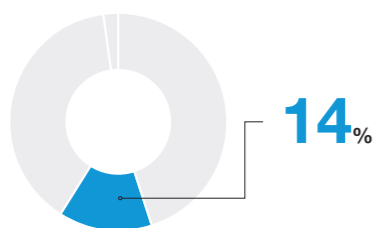
### Net sales of Engineering business

¥ **16,790** million

### Operating loss

¥ **8** million

### Ratio to net sales



### Business overview

In FY2022, sales decreased 29.8% annually, to 16,790 million yen, with an operating loss of 8 million yen (compared to an operating income of 151 million yen in the previous year). This segment designs, manufactures and sells pretreatment, coating, and powder coating equipment, mainly for the transportation machinery industry.

In the previous fiscal year, the construction of large-scale equipment projects in Japan and overseas progressed and contributed to our business performance. In the fiscal year under review, however, profits decreased significantly, forcing us to post an operating loss due to the reduced effect of the above projects and factors such as the postponement of construction periods reflecting the lockdown in China and the steep rise in steel prices.

### Future outlook

Although various cost increases have put pressure on profits under the global price hikes, we have sufficient backorders and have begun to see positive signs amid the slow recovery.

In the global automotive market, in particular, new investment is expected to increase in China and India, making it essential to strengthen relationships with Japanese auto-makers and local manufacturers. We will also continue to develop emerging markets such as Vietnam, Cambodia, and Myanmar.

### Strengths and risks

#### 1 Strengths

- Supporting customers with all sizes of facilities and from all industrial fields
- Extensive track record of deliveries in a wide range of industrial fields, from the automotive and steel industries to cutting-edge industries
- A one-stop service from design to maintenance services for all lines related to surface treatment and coating
- Developing and proposing new surface treatments and cutting-edge coating processes that are critical to coating quality
- Supporting our customers' global strategies with a proven track record

#### 2 Risks

- Significant decrease in demand for capital investment reflecting an economic downturn.
- Additional costs associated with material price hikes and the reworking of design and installation works.
- Loss of opportunities to receive orders resulting from delays in engineering development
- Occurrence of severe accidents and disasters involving people and construction

#### 3 Remedies

- Stabilizing profits by expanding after-sales services such as maintenance and inspections and sales of consumables
- Ensuring thorough construction cost management from design to construction management
- Strengthening overseas business development
- Developing facilities with a low environmental impact that leads to a reduction in CO<sub>2</sub> emissions .
- Developing and selling highly productive facilities incorporating IoT equipment management systems
- Ensuring thorough safety and health management to achieve zero accidents and disasters

### Growth strategies to achieve "Vision2030"

**As a comprehensive engineering company, we contribute to solving issues for various customers, from the automotive industry to the general industry, through collaboration with our chemicals business.**

We will promote business expansion in overseas markets, which continue to grow, and will work to create a foundation for sustainable growth by increasing earnings strength and differentiating ourselves from our competitors by developing IoT facility management systems and environmentally friendly products, and through other measures.

### Points of focus

- **Increase added value through joint selling of equipment and chemicals**  
(Zirconium conversion coating, CHEMICON)
- **Develop and commercialize IoT equipment management systems and environmentally friendly products**  
(PARKER LEAPS, DRYCUBE)
- **Expand sales of high-value-added products**  
(Ionics powder coating equipment)
- **Enhance equipment maintenance business**
- **Expand business in growing markets overseas**