

Nippon Piston Ring Co., Ltd.

6461

Tokyo Stock Exchange First Section

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FISCO Ltd.

<https://www.fisco.co.jp>

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Summary

Is responding to the evolution of the automobile engine, while also increasing sales for non-automobile engines

Nippon Piston Ring Co., Ltd. <6461> (hereafter, also “the Company”) is a major manufacturer of products including piston rings and valve seat inserts that are used as vehicle engine parts. It supplies a wide range of products to the world’s leading auto-manufacturers. Applying the core technologies that it has cultivated across its history of approximately 90 years since its establishment, the Company is also increasing sales for non-automobile engines as new products and new businesses.

1. Company profile

The Company’s main products of piston rings and valve seat inserts are parts with important functions in relation to the automobile engine’s performance, and they contribute to increasing the engine’s fuel efficiency by improving its heat resistance and abrasion resistance. In actuality, there are only five manufacturers in the world that are able to provide high quality piston rings, including the Company. For valve seat inserts as well, its strength is its expertise in sintered alloy powder blending, and it holds the leading market share, of approximately 40%, for Japanese auto-manufacturers.

In order to increase sales for non-automobile engines, the Company is progressing new products and new businesses, mainly in the fields of industrial equipment and medicine. To give an example, in the medical field, it is aiming to create products and a business for NiFreeT, new medical material of a titanium-tantalum alloy that is highly biocompatible being nickel-free and also non-magnetic.

2. Outline of results

In the FY3/21 consolidated results, net sales decreased 17.5% year-on-year (YoY) to ¥45,276mn, the operating loss was ¥165mn (compared to income of ¥1,829mn in the previous period), ordinary income declined 80.0% to ¥355mn, and the net loss attributable to owners of parent was ¥813mn (income of ¥490mn). Sales declined mainly due to the decline in the number of vehicles produced globally because of the impact of the novel coronavirus pandemic (hereafter, COVID-19). Also, in profit-loss, profitability was achieved in the 2H, due in part to reduction of costs and cutting of fixed expenses, and also the effects of improved work efficiency. But this was insufficient to cover for the decline in the 1H, so the Company recorded an operating loss for the first time since the 2008 financial crisis. Looking by fiscal half, in the 1H net sales were ¥19,629mn and the operating loss was ¥1,487mn, but results improved significantly in the 2H, with net sales of ¥25,647mn and operating income of ¥1,322mn. This was due to the promotion of structural reforms and a review of the earnings structure and implementation of effective measures under the Company’s new structure which was launched in June 2020.

Summary

For the FY3/22 consolidated results, the Company is forecasting net sales to increase 10.4% YoY to ¥50,000mn, operating income of ¥2,100mn (compared to a loss of ¥165mn in the previous period), ordinary income to rise 490.3% to ¥2,100mn, and net income attributable to owners of parent of ¥1,300mn (a loss of ¥813mn). The timing of the end of the COVID-19 pandemic is still not in sight and there are factors causing uncertainty, including the suspension of factory operations in India and the reduction in production by some auto-manufacturers due to the shortage of the supply of vehicle on-board semiconductors. But based on demand in 2H FY3/21, for the full fiscal year, net sales are forecast to increase 10.4% YoY. In profits, the forecasts include that the market prices of raw materials will rise and new product-related R&D expenses will accumulate, but profits are still expected to increase from the contributions of the increased production and the effects of the continuous reductions in costs. However, overall, the strong impression is that the forecasts are conservative, and at FISCO, we think it is highly likely that results will exceed the forecasts.

3. Growth strategy

The global automobile market is forecast to grow in the medium term, including from the spread in the use of vehicles in emerging countries. For the Company, an issue will be responding to the effects of medium- to long-term environmental regulations (the further low fuel consumption of gasoline engines, the decline in the use of gasoline engines, the increased use of new clean fuel engines, the spread of electric vehicles, etc.) With regards to this business environment, the Company anticipates that the probability for electric vehicles to quickly increase in widespread use is low. With regard to strengthening the foundation of its core business, its policy is to promote measures including technological responses to developments such as the improved fuel performance of gasoline engines and the development of clean engines as well as to the evolution of the engine due to new clean fuels like hydrogen, and further improvements to quality and cost reduction. In addition, based on the trend of the gradual spread of electric vehicles, it is also focusing on increasing sales for non-automobile engines through new products and new businesses.

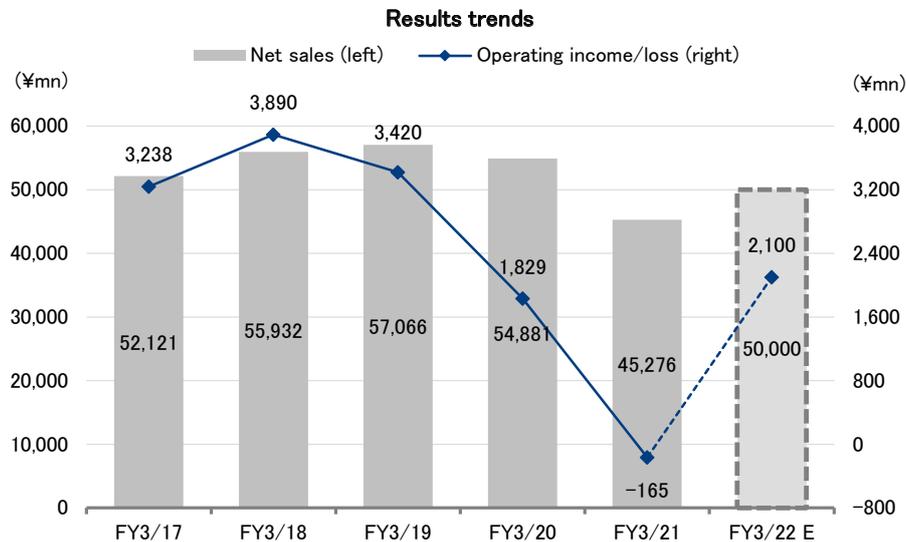
4. Initiatives for SDGs

The Company's initiatives for SDGs (Sustainable Development Goals) are divided into three categories: co-existing with the global environment, co-existing with stakeholders, and building a foundation for sustainable growth. It has specified the important issues (materiality) to be addressed as a priority for each category, and it is conducting activities toward realizing a sustainable society. Through these activities, it is aiming to take a leap forward toward becoming a sustainable company.

Key Points

- As a major manufacturer of automobile engine-use piston rings and valve seat inserts, has the top share of the valve seat inserts market for Japanese auto-manufacturers, of approximately 40%
- Forecasting sales to increase by double digits and every profit item to return to profitability in FY3/22, and the results may exceed the forecasts
- Is responding to the evolution of the automobile engine, at the same time as increasing sales for non-automobile engines

Summary



Source: Prepared by FISCO from the Company's financial results

Company overview

A major manufacturer of piston rings and valve seat inserts

1. Company overview

The Company is a major manufacturer of products including piston rings and valve seat inserts that are used as vehicle engine parts. Its corporate philosophy is to advance all things while placing the customer first, respond flexibly to environmental changes, secure profits appropriately, and reward our shareholders and other stakeholders; act in harmony with society, secure a position as a global comprehensive parts manufacturer, and contribute to the advancement of humanity; and always strive to innovate and improve results, and aim for the company to prosper and to improve the lives of employees.

As the end of FY3/21, the Company's headquarters was located in Saitama City, Saitama Prefecture, and it had total assets of ¥61,809mn, net assets of ¥30,267mn, capital of ¥9,839mn, an equity ratio of 46.4%, and 8,374,157 issued shares (including 703,426 treasury shares).

The Group consists of 13 companies in total; the Company and 12 consolidated subsidiaries, following the absorption merger of consolidated subsidiary Nippon Ring Service Co., Ltd., and NPR Business Services Co., Ltd., on April 1, 2021.

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Company overview

2. History

Nippon Piston Ring Co., Ltd., was established in December 1934 in Tamura-cho, Shiba Ward, Tokyo City, at which time it also opened the Kawaguchi Plant. It then opened the Yono Plant in April 1939, and it was listed on the Tokyo Stock Exchange in May 1949. Subsequently, it started overseas business development from the 1970s, providing a wide range of products to the world's leading auto-manufacturers. Since the 2000s, it has been accelerating business development for the growth markets of China, ASEAN, and India.

Also, applying the core technologies that the Company has accumulated over its history since its establishment, in October 2014 it acquired a dental implant business and obtained approval for medical equipment manufacturing and marketing, in order to increase sales for non-automobile engines as new products and new businesses. Utilizing this, in September 2020 it began imports and sales of radiology medical equipment, and in April 2021, it started a technological investigation toward a specific project jointly with Professor Noriyuki Hisamori of Sophia University for NiFreeT, which is a new medical-use material of a titanium-tantalum alloy. In June 2021, it began a joint development program with Medtronic, a medical equipment manufacturer that ranks first for global sales (consolidated net sales of US\$28.9bn in FY4/20), for implantable medical devices.

History

Date	Event
December 1934	Established Nippon Piston Ring Co., Ltd., in Tamura-cho, Shiba Ward, Tokyo City, and opened the Kawaguchi Plant
April 1939	Opened the Yono Plant
May 1949	Listed on the Tokyo Stock Exchange
June 1964	Established Nippon Ring Service Co., Ltd.
January 1973	Established Schöttle Motorenteile GmbH in West Germany
July 1973	Established NPR of America, Inc. in U.S.A.
April 1974	Established NPR FUKUSHIMA WORKS CO., LTD.
September 1982	Established NPR Kawaguchi Works Co., Ltd., and NPR Distribution Center Co., Ltd.
December 1983	Established NPR Imanishi Works Co., Ltd., (currently NPR Shimane Co., Ltd.)
October 1984	Relocated the Kawaguchi Plant. Opened the Tochigi Plant
June 1989	Opened the Nogi Branch Plant of the Yono Plant (currently the Nogi Branch Plant of the Tochigi Plant)
April 1990	Established NPR IWATE CO., Ltd.
February 1996	Capital participation in IP Rings Ltd., in India
July 1997	Established Siam NPR Co., Ltd. in Thailand as a joint venture with Siam Cement Public Co., Ltd. (currently Cement Thailand Holdings)
May 1998	Transferred the headquarters to Yono City (currently Saitama City), Saitama Prefecture
December 1999	Established NPR of Europe GmbH. in Germany
December 2000	Established PT. Nippon Piston Ring Indonesia (currently PT. NT PISTON RING INDONESIA) in Indonesia
December 2001	Converted Siam NPR Co., Ltd., (Thailand) into a wholly-owned subsidiary
September 2002	Opened the Ichinoseki Plant of NPR IWATE CO., Ltd.
October 2004	Established NPR Manufacturing Michigan, Inc. in U.S.A.
January 2005	Merged Schöttle Motorenteile GmbH. with NPR of Europe GmbH
February 2005	Established NPR Auto Parts Manufacturing (Yizheng) Co., Ltd. in China
March 2005	Established NPR SINGAPORE PTE. LTD. in Singapore
February 2006	Established NPR Trading (Shanghai) Co., Ltd. in China (liquidated in December 2009)
March 2006	Established PT. NPR MANUFACTURING INDONESIA in Indonesia.
April 2006	Established NPR Auto Parts Manufacturing (Zhenjiang) Co., Ltd. in China.
May 2006	Established NPR Manufacturing Kentucky, LLC. in U.S.A.
January 2011	Merged the four US subsidiaries, of NPR US Holdings, Inc., NPR of America Inc., NPR Manufacturing Michigan, LLC. and NPR Manufacturing Kentucky, LLC. Changed the company name to NPR of America, Inc.
March 2011	Transferred all stocks held of NPR Shimane Co., Ltd.
December 2011	Established NPR AUTO PARTS MANUFACTURING INDIA PRIVATE LIMITED in India
March 2012	Absorbed and merged NPR Kawaguchi Works Co., Ltd. and NPR Distribution Center Co., Ltd.
July 2012	Conducted an absorption merger of NPR Auto Parts Manufacturing (Yizheng) Co., Ltd., and NPR Auto Parts Manufacturing (Zhenjiang) Co., Ltd.

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Company overview

Date	Event
December 2012	Established NPR Powdered Metals Manufacturing (Yizheng) Co., Ltd. in China.
July 2013	Converted PT. NT PISTON RING INDONESIA into a wholly-owned subsidiary, and it ceased to be a joint venture
October 2013	Transferred shares of NPR Powdered Metals Manufacturing (Yizheng) Co., Ltd. to Yizheng Shuanghuan Piston Ring Co., Ltd. (currently ASIMCO Shuanghuan Piston Ring (Yizheng) Co., Ltd.) and made it a joint venture. Changed the company name to NPR ASIMCO Powdered Metals Manufacturing (Yizheng) Co., Ltd.
May 2014	Acquired the metal injection molding business of Sumitomo Metal Mining Co., Ltd.
October 2014	Acquired the dental implant business of ISHIFUKU Metal Industry Co., Ltd.
October 2015	Established the Dental Implant Medical Device Center in the Tochigi Plant
October 2018	Transferred a part of the equity interest in NPR of Europe GmbH. to Daido Metal Co., Ltd. <7245>
September 2020	Started imports and sales of radiology medical devices
April 2021	Conducted an absorption merger of Nippon Ring Service Co., Ltd., and NPR Business Services Co., Ltd. Started a technological investigation with Sophia University for NiFreeT, which is a new medical-use material of a titanium-tantalum alloy
June 2021	Stated a joint development program with Medtronic <MDT> for implantable medical devices

Source: Prepared by FISCO from the Company's securities report and press releases

Business summary

Main products are automobile engine-use piston rings and valve seat inserts and provides a wide range of products to the world's leading auto-manufacturers

1. Business summary

The business segments are the Products for Automobiles Business, the Products for Marine Engines and Other Products Business, and Others (product sales, etc.) Also, the main products include piston rings, valve seat inserts, and assembly sintered camshafts, which are each important parts for the functions of a vehicle's engine.

Major products



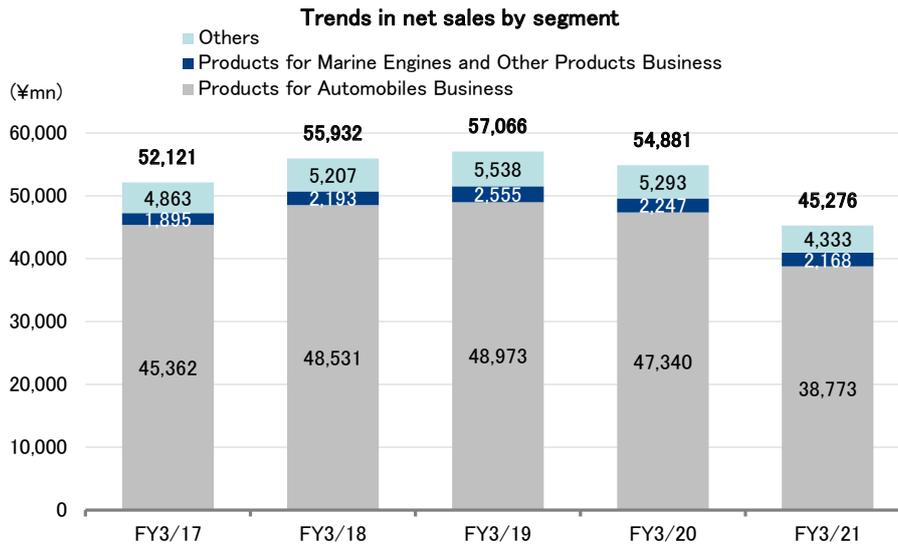
Source: The Company's results briefing materials

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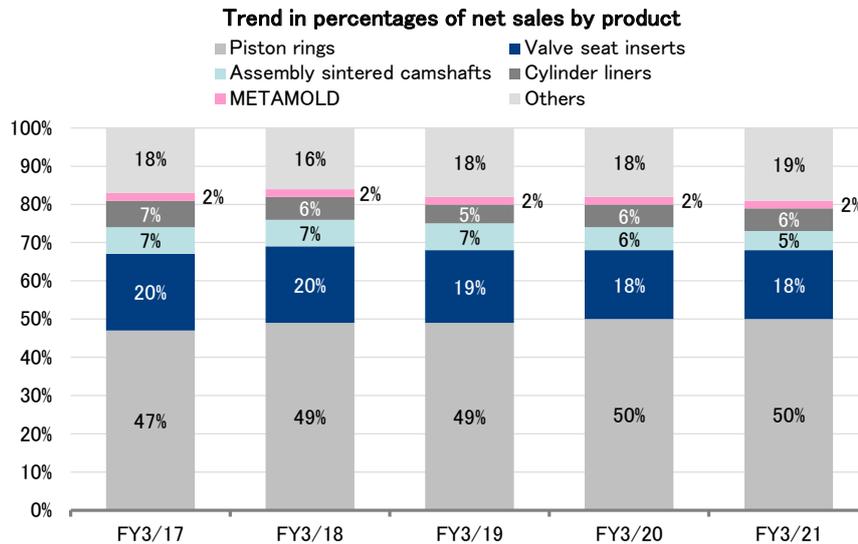
Business summary

In net sales by segment, the Products for Automobiles Business provides the majority of net sales*. Also, in the percentages of net sales by product, roughly speaking, piston rings provide 50% and valve seat inserts 20%, and this has not changed greatly in the last five fiscal years.

* Due to the impact of COVID-19, particularly in 1H FY3/21, the number of vehicles produced globally declined greatly, and therefore the Company's net sales decreased similarly.



Source: Prepared by FISCO from the Company's financial results



Source: Prepared by FISCO from the Company's results briefing materials

Business summary

2. Characteristics and strengths

The main products of piston rings and valve seat inserts are parts with important functions in relation to the automobile engine’s performance, and they contribute to increasing the engine’s fuel efficiency by improving its heat resistance and abrasion resistance.

The main roles of piston rings include a sealing function to seal leaks of combustion gas in the engine’s combustion chamber, a function to control lubricating oil (engine oil), a function to transfer heat that escapes from the combustion heat, and a function to keep down piston abrasion. They are used within the combustion chamber in the harsh conditions of a temperature of 300°C, and are a part with important functions relating directly to the engine’s performance. Therefore, in actuality there are only five companies in the world (one in the U.S., one in Germany, and three in Japan), including the Company, that are able to provide high quality piston rings. In terms of technological trends, there are requirements such as for lower friction and improved abrasion resistance, high-performance and high-quality materials, and surface treatment. The Company’s strengths include its precision processing, surface treatment, and materials and powder metallurgy technologies that it has cultivated across its history of 90 years since its establishment.

Valve seat inserts are the seats of the valves and exhaust valves and play the role of maintaining the air tightness of the combustion chamber. They are required to have durability that does not deteriorate even when impacted at high temperatures, and to have air tightness of reliably sealing-in the combustion gas. Therefore, sintered alloy is used as a material with high heat resistance and abrasion resistance. One of the Company’s strengths is its expertise in sintered alloy powder blending, for which it holds the top share, of approximately 40%, for Japanese auto-manufacturers.

3. Main customers

As its customers, the Company supplies a wide range of products to the world’s leading auto-manufacturers, including Toyota Motor Corporation <7203>, and one of its features is that it does not rely on any specific auto-manufacturer for more than 10% of net sales. Also, its supply of products to major auto-manufacturers in the U.S. and Europe and to local auto-manufacturers in China is increasing.

Main customers



Source: The Company’s results briefing materials

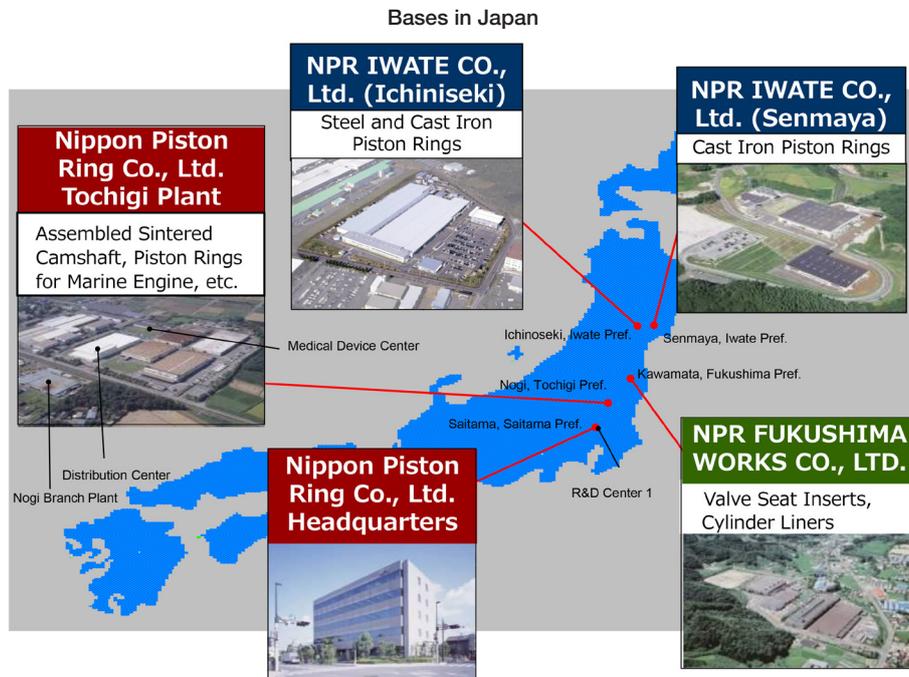
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Business summary

4. Manufacturing bases

The Group's manufacturing bases are the Company's Tochigi Plant (which includes the Medical Device Center and the Nogi Branch Plant), while manufacturing is also conducted within Japan by the manufacturing subsidiaries of NPR Fukushima Works Co., Ltd., and NPR IWATE Co., Ltd. (Ichinoseki and Senmaya), and overseas by the manufacturing subsidiaries of NPR of America, Inc. (U.S., NOA), PT. NT Piston Ring Indonesia (Indonesia, NTRI), PT. NPR Manufacturing Indonesia (Indonesia, NPMI), NPR Auto Parts Manufacturing (Yizheng) Co., Ltd (China, NAMY), NPR ASIMCO Powdered Metals Manufacturing (Yizheng) Co., Ltd. (China, NAPM), SIAM NPR Co., Ltd. (Thailand, SNPR), and NPR Auto Parts Manufacturing India Pvt. Ltd. (India, NPRI).

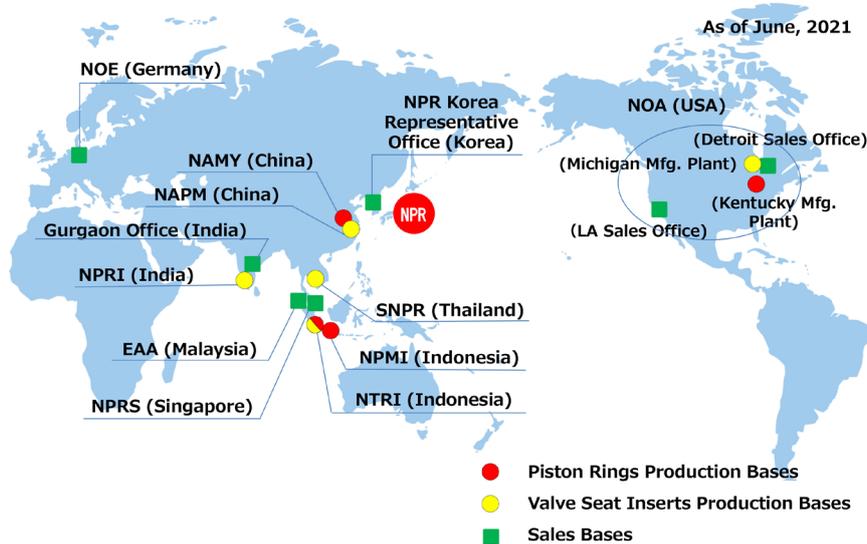
As the Group's overseas sales bases, it has sales offices in the U.S. of NOA, in China of NAMY, in Thailand of SNPR, and in India of NPRI. Also, its sales subsidiaries are NPR of Europe GmbH. (Germany, NOE), NPR Singapore Pte. Ltd. (Singapore, NPRS), E.A. Associates Sdn. Bhd (Malaysia, EAA), and an office in South Korea.



Source: The Company's results briefing materials

Business summary

Overseas bases



Source: The Company's results briefing materials

5. New products and new businesses

In order to increase sales for non-automobile engines, the Company is progressing new products and new businesses, centered on the industrial equipment and medical fields.

In METAMOLD for industrial equipment (metal powder injection molding parts), it is working to increase sales of deflectors for ball screws for vehicles' electric power steering and for SCARA robots. Furthermore, utilizing its superiority in terms of the degree of freedom for shaping and for the use of materials, the Company's policy is also to develop businesses for CASE (Connected, Autonomous, Shared & Services, Electric Vehicle) related parts, and for the robot, sensor, and medical fields.

Strengthening the development and creation of new products and businesses (METAMOLD products)



- Dimension : 50mm or less, Mass : 50g or less
- High production properties for complex shapes
- High degree of freedom for the use of materials (low alloy, SUS, Pure Ti, Ti alloy)

SCARA robot deflectors for ball screws



Electric Power Steering (EPS) deflectors for ball screws



Is utilizing the degree of freedom for shaping and for the use of materials to focus on CASE-related parts, and on the robot, sensor, and medical fields

Source: The Company's results briefing materials

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Business summary

In the medical field, in October 2014 the Company acquired a dental implant business and obtained approval to conduct medical equipment manufacturing and marketing. Utilizing this, in September 2020 it began imports and sales of radiation treatment products and in April 2021, it started sales of oral scanners.

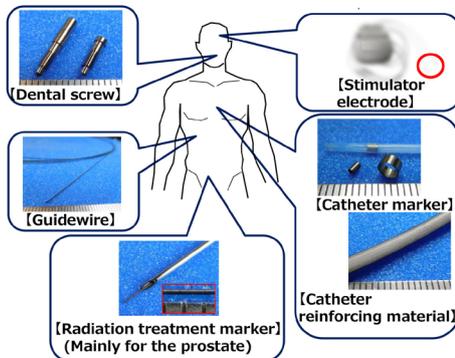
Also, in April 2021 for NiFreeT (registered trademark), which is a new medical-use material of a titanium-tantalum alloy that is highly biocompatible being nickel-free and also non-magnetic, the Company started a technological investigation toward a specific project jointly with Professor Noriyuki Hisamori and his research laboratory, which specializes in the field of materials with biological functions used in advanced medical technologies, in the Department of Engineering and Applied Sciences, Sophia University. NiFreeT was developed in-house by the Company for use with piston rings as a shape-memorizing alloy, but it has been converted to be a medical-use material because of its excellent processability and being nickel-free. It is expected to be applied to dental screws, guidewires, catheter reinforcing materials, and other products, and the Company is aiming to develop products and a business at an early stage.

**Strengthening the development and creation of new products and business
(NiFreeT product (Ti-Ta alloy))**

Currently, NiFreeT, a shape-memorizing alloy developed for use with piston rings, is being converted to be a medical material due to its superior processability

Features

- 1) Highly biocompatible being **Ni-free**, and can be **implanted within the body**
- 2) **Flexible** as a coil with **low Young's modulus** and has **high elasticity strain resistance**
- 3) **Facilitates plastic processing** and is optimal for **ultra-fine wires and pipes**
- 4) As it is **non-magnetic**, it can be used with **MRI (Magnetic Resonance Imaging)** and **MRA (Magnetic Resonance Angiography)**
- 5) **Visibility with X-ray** is high and can be used as a radiation treatment marker
- 6) Is **inexpensive** compared to the precious metal (platinum) used for medical



Investigating applications for orthopedic medical devices

NPR and Sophia University are conducting a joint investigation

By applying NiFreeT to orthopedic medical devices, the aim is to reduce the burden placed on bones when implanting devices in the body

Children's bones are soft and grow on a daily basis, so it reduces the burden placed on the body through a Young's modulus that is close to that of human bones

For the future, is formulating a plan with an eye to collaborations and joint research with hospital staff and clinical researchers

Source: The Company's results briefing materials

6. Risk factors and earning characteristics

A risk factor is that the number of vehicles produced may decrease due to changes in demand and the impact of infectious diseases, disasters, and other factors. However, in the medium-term the global automobile market will grow, including through the spread of vehicle use in emerging countries. So rather than a change in the number of vehicles produced, at the current time a risk factor for the Company is the impact of medium- to long-term environmental regulations (the further low fuel consumption of gasoline engines, the decline in the use of gasoline engines, the increased use of new clean fuel engines, the spread of electric vehicles, etc.) The Company anticipates that the probability that widespread use of electric vehicles will quickly increase is low. Its policy is to develop technologies for the evolution of the automobile engine, including responses to the further improved fuel performance of the gasoline engine and new clean fuel engines. In addition, based on the trend of the gradual spread of electric vehicles, it is also working to increase sales for non-automobile engines through new products and new businesses.

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Business summary

For competition risk, only a limited number of manufacturers can globally supply high quality piston rings and valve seat inserts. So, the market structure is that fluctuations in share are comparatively small in the context of the integration of auto-manufacturers and their acquisitions of companies to join their respective groups. Also, as the Company provides a wide range of products to the world's leading automobile manufacturers, the risk of it relying on a specific automobile manufacturer is small.

Results trends

In FY3/21, sales decreased and recorded an operating loss due to the impact of COVID-19, but results recovered rapidly in the 2H

1. Outline of results for FY3/21

In the FY3/21 consolidated results, net sales decreased 17.5% YoY to ¥45,276mn, the operating loss was ¥165mn (income of ¥1,829mn in the previous period), ordinary income declined 80.0% ¥355mn, and the net loss attributable to owners of parent was ¥813mn (income of ¥490mn). Also, the average exchange rates during the period were ¥106.76 to US\$1 (¥109.03 in previous year) and ¥121.88 to euro 1 (¥122.03).

Outline of results for FY3/21

	FY3/20		FY3/21		YoY
	Results	%	Results	%	
Net sales	54,881	100.0%	45,276	100.0%	-17.5%
Products for Automobiles Business	47,340	86.3%	38,773	85.6%	-18.1%
Products for Marine Engines and Other Products Business	2,247	4.1%	2,168	4.8%	-3.5%
Others	5,293	9.6%	4,333	9.6%	-18.1%
Gross profit	11,564	21.1%	8,163	18.0%	-29.4%
SG&A expenses	9,735	17.7%	8,328	18.4%	-14.5%
Operating income (loss)	1,829	3.3%	-165	-	-
Products for Automobiles Business	2,487	5.3%	-24	-	-
Products for Marine Engines and Other Products Business	-213	-	137	6.3%	-
Others	132	2.5%	146	3.4%	10.6%
Adjustment	-577	-	-424	-	-
Ordinary income	1,776	3.2%	355	0.8%	-80.0%
Net income (loss) attributable to owners of parent	490	0.9%	-813	-	-
Exchange rate					
US\$/¥	109.03	-	106.76	-	-
Euro/¥	122.03	-	121.88	-	-

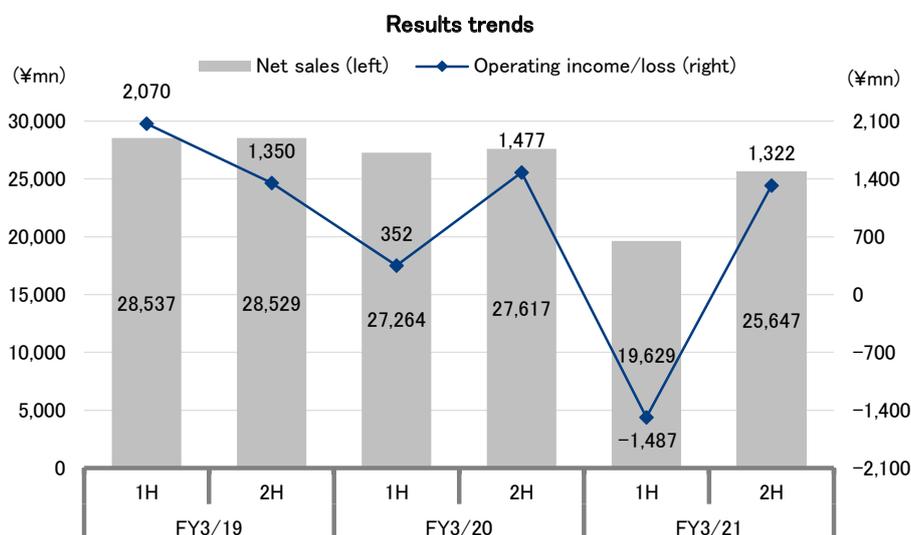
Source: Prepared by FISCO from the Company's financial results and results briefing materials

Results trends

In the automobile industry relating to the Company, the ordering environment was seen to improve in the 2H. But demand decreased due to COVID-19 and it was also impacted by the shortage of vehicle on-board semiconductors, and globally the number of vehicles produced decreased significantly. In this situation, the Company's sales decreased, including because of auto-manufacturers in various countries suspending operations and reducing production. Gross profit declined 29.4% YoY and the gross profit margin fell 3.1 percentage points (pp) to 18.0%. SG&A expenses declined 14.5%, but the SG&A expenses ratio rose 0.7pp to 18.4%. In profit-loss, profitability was achieved in the 2H due in part to reductions of costs and cutting of fixed expenses and the effects of improved work efficiency. But this was insufficient to cover for the decline in the 1H, and the Company recorded an operating loss for the first time since the 2008 financial crisis. For ordinary income, in addition to the recording of subsidy income of ¥506mn as non-operating income, the improvement to the foreign exchange gain-loss also contributed. A net loss attributable to owners of parent was recorded, due to a loss from a temporary increase in income taxes - deferred.

Looking by segment, in the Products for Automobiles Business, net sales decreased 18.1% YoY to ¥38,773mn and the operating loss was ¥24mn (compared to income of ¥2,487mn in the previous period). Although it seems that the ordering environment improved in the 2H, results were affected by the decrease in demand due to COVID-19 and the shortage of the supply of vehicle on-board semiconductors. In the Products for Marine Engines and Other Products Business, net sales decreased 3.5% to ¥2,168mn and operating income was ¥137mn (a loss of ¥213mn). Also, in Others, net sales decreased 18.1% to ¥4,333mn and operating income increased 10.6% to ¥146mn.

On comparing the fiscal halves in FY3/21, in the 1H net sales were ¥19,629mn and the operating loss was ¥1,487mn, but results greatly improved in the 2H, with net sales of ¥25,647mn and operating income of ¥1,322mn. This was due to the promotion of structural reforms and a review of the earnings structure and implementing effective measures under the Company's new structure which was launched in June 2020.



Source: Prepared by FISCO from the Company's financial results

Results trends

2. Financial condition

Looking at its financial position, at the end of FY3/21 total assets were down ¥1,799mn on the end of the previous fiscal year to ¥61,809mn. This was mainly due to increases in cash and deposits, investment securities, and retirement benefit asset, and decreases in property, plant and equipment; inventories, and notes and accounts receivable - trade. The decrease in inventories was due to the progress made in strategically optimizing inventory toward building an overall optimized product manufacturing system.

Total liabilities decreased ¥777mn to ¥31,541mn. This was due to increases in interest-bearing debt and deferred tax liabilities, and decreases in notes and accounts payable - trade, electronically recorded obligations - non-operating, and retirement benefit liability. Total net liabilities declined ¥1,021mn to ¥30,267mn. This was mainly due to increases in valuation difference on available-for-sale securities and remeasurements of defined benefit plans, but decreases in retained earnings and foreign currency translation adjustment. The equity ratio declined 0.5pp to 46.4%.

In FY3/21, interest-bearing debt increased because the Company accumulated cash and deposits to prepare for the impact of COVID-19. But it is continuing to work to strategically optimize inventories with an awareness of the supply chain as a whole. After excluding temporary factors, financially there are no major causes for concern and the Company can be said to maintaining its financial soundness.

Financial statements

	(¥mn)				
	FY3/18	FY3/19	FY3/20	FY3/21	Increase / decrease
Total assets	66,097	65,793	63,608	61,809	-1,799
(Current assets)	27,355	28,489	27,623	26,131	-1,492
(Non-current assets)	38,741	37,304	35,985	35,678	-307
Total liabilities	33,614	33,298	32,319	31,541	-777
(Current liabilities)	21,947	23,001	22,050	19,254	-2,796
(Non-current liabilities)	11,666	10,296	10,269	12,287	2,018
Net assets	32,482	32,495	31,289	30,267	-1,021
(Shareholders' equity)	28,918	30,189	29,950	28,299	-1,651
Equity ratio	48.1%	47.4%	46.9%	46.4%	-0.5pt

Source: Prepared by FISCO from the Company's financial results

■ Outlook

For FY3/22, is forecasting that sales will increase by double digits and every profit item will return to profitability, and moreover the results may exceed the forecasts

● FY3/22 results outlook

For the FY3/22 consolidated results, the Company is forecasting net sales to increase 10.4% YoY to ¥50,000mn, operating income of ¥2,100mn (compared to a loss of ¥165m in the previous period), ordinary income to rise 490.3% to ¥2,100mn, and net income attributable to owners of parent of ¥1,300mn (a loss of ¥813mn). Also, the expected exchange rates are ¥105.00 to US\$1 (¥106.76 in previous period) and ¥125.00 to euro 1 (¥121.88).

Outlook

Consolidated outlook for FY3/22

	FY3/21		FY3/22		YoY
	Results	% of net sales	Forecast	% of net sales	
Net sales	45,276	100.0%	50,000	100.0%	10.4%
Operating income (loss)	-165	-	2,100	4.2%	-
Ordinary income	355	0.8%	2,100	4.2%	490.3%
Net income (loss) attributable to owners of parent	-813	-	1,300	2.6%	-
Exchange rate					
US\$/¥	106.76	-	105.00	-	-
Euro/¥	121.88	-	125.00	-	-

Source: Prepared by FISCO from the Company's financial results

The timing of the end of the COVID-19 pandemic is still not in sight and there are factors causing uncertainty, including the suspension of factory operations in India and the reduction in production by some auto-manufacturers due to the shortage of the supply of vehicle on-board semiconductors. But based on demand in 2H FY3/21, net sales are forecast to increase 10.4% YoY for the full fiscal year. In profits, the forecasts include that the market prices of raw materials will rise and new product-related R&D expenses will accumulate, but profits are still expected to increase from the contributions of the increased production and the effects of the continuous reductions in costs. For capital investment, the Company will prioritize investments for which it can expect results, with a focus on investment in automation, labor saving, and R&D in Japan, and investment in equipment for increased production in China. For R&D expenses, it is actively distributing them to differentiation measures for existing products and to develop new products and businesses.

The exchange rate sensitivity (the amount that operating income is affected by a ¥1 fluctuation in the exchange rate) is approximately ¥20mn for the euro-yen rate, but for the dollar-yen rate, there is basically no affect due to the progress made in local production. The forecasts are for capital investment of ¥4.7bn (¥2.6bn in the previous period), depreciation expenses of ¥4.2bn (¥4bn), R&D expenses of ¥1.8bn (¥1.6bn), and a ratio of R&D expenses to net sales of 3.7% (3.6%). In FY3/21, the Company kept down capital investment in consideration of the impact of COVID-19, but it intends to return it to the previous level in FY3/22.

It seems that the future will remain uncertain in FY3/22 due to the impact of COVID-19. But the effects of the continuous cost reductions will contribute and the forecasts are for every profit item to recover to levels above those in FY3/20. However, overall, the strong impression is that the forecasts are conservative, and on considering that the yen is trending at a weaker level than the expected rate, at FISCO we think it is highly likely that results will exceed the forecasts.

Growth strategy

In The Next NPR 2030 long-term vision, is aiming for non-automobile sales to provide at least 40% of net sales in FY3/31

1. The long-term vision and the 8th Medium-term Management Plan

The Company formulated The Next NPR 2030 long-term vision before formulating its 8th Medium-term Management Plan (FY3/22 to FY3/24), in order to respond to the major changes to the business environment surrounding the automobile industry, including relating to exhaust gas regulations (the CO₂ problem), the New Normal (COVID-19), the spread of EV (Electric Vehicles), and the progress of CASE. The numerical targets for FY3/31 are net sales of ¥100bn, an operating income margin of at least 10%, for non-automobile sales to provide at least 40% of net sales, and a reduction of CO₂ emissions of 46% (compared to FY3/14).

The Company did not achieve the numerical targets in the 7th Medium-term Management Plan (with FY3/21 as the final fiscal year, net sales of at least ¥58bn and an operating income margin of at least 7.5%) due to the severe environmental changes, including the U.S.-China trade fraction and COVID-19. However, in the 8th Medium-Term Management Plan announced in May 2021, as the stage of building a foundation toward realizing the targets in the long-term vision, it has set the numerical targets for FY3/24 of net sales of at least ¥54bn, an operating income margin of at least 8%, for non-automobile sales to provide at least 15% of net sales, and a reduction of CO₂ emissions of 25% (compared to FY3/14).

Numerical targets

	8th Medium-term Management Plan FY3/24	The Next NPR 2030 FY3/31
Net sales	At least ¥54bn	At least ¥100bn
Operating income margin	At least 8%	At least 10%
Percentage of net sales from non-automobile sales	At least 15%	At least 40%
CO ₂ emissions (compared to FY3/14)	-25%	-46%

Source: Prepared by FISCO from the Company's results briefing materials

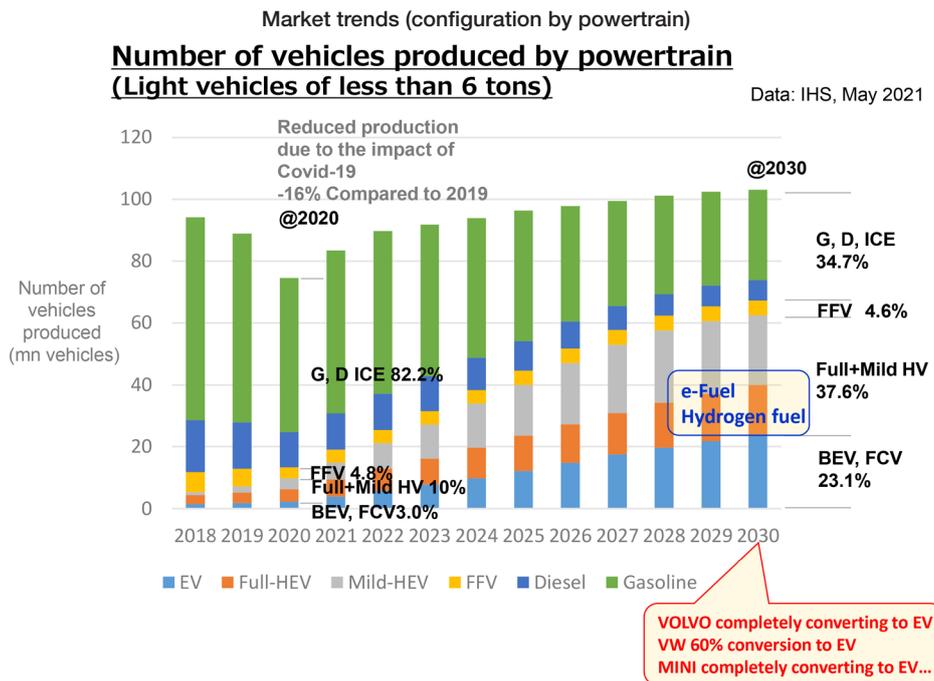
2. The market environment

The global automobile market is forecast to grow in the medium term, including from the spread in the use of vehicles in emerging countries. For the Company, an issue will be responding to the effects of medium- to long-term environmental regulations (the further low fuel consumption of gasoline engines, the decline in the use of gasoline engines, the increased use of new clean fuel engines, the spread of electric vehicles, etc.).

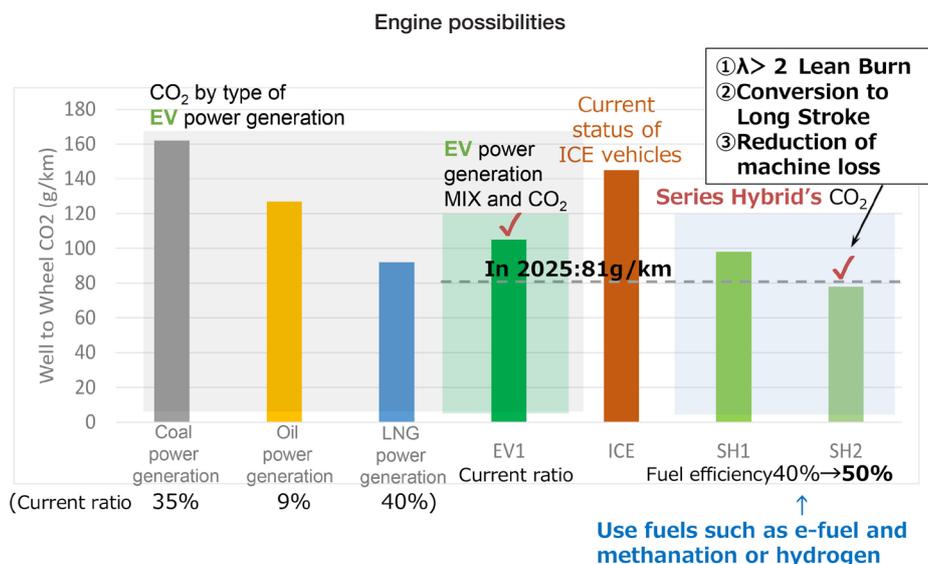
As the long-term outlook for the number of vehicles produced by power train up to 2030, based on IHS data, the Company anticipates that by 2030, the ratio of powertrains with an engine will be 77%. As some auto-manufacturers have declared that they will convert entirely to EV (Electric Vehicle), the ratio of battery-type EV will gradually increase. But it is expected that as of 2030, the ratio of the existing ICE (Internal Combustion Engine) will remain at slightly more than 30%, and moreover, that the usage of HV (Hybrid Vehicles) with improved fuel efficiency, clean e-fuel vehicles, that use renewable energy such as hydrogen to create fuel, and of FFV (flexible-fuel vehicles) will also newly spread.

Growth strategy

On the other hand, comparing the CO₂ exhaust emissions of EV under the current energy mix in Japan with the CO₂ emissions of HV that use clean e-fuel such as hydrogen to improve fuel efficiency, because the superiority of EV in terms of CO₂ emissions will decrease, the probability for the EV to advance immediately is low, and the expected scenario is that the engine will survive and remain in developed countries. In May 2021, Toyota Motor's vehicle installed with a clean hydrogen engine participated in and completed the Super Durable Series 2021 Powered by Hankook 3rd NAPAC Fuji SUPER TEC 24 Hour Race, thereby appealing for the hydrogen engine to be one choice for a new clean fuel vehicle toward the carbon-neutral era.



Source: The Company's results briefing materials



Source: The Company's results briefing materials

Growth strategy

In response to this sort of business environment and toward strengthening its core business foundation, the Company’s policy is to improve the fuel performance of the gasoline engine and respond technologically to the shift to clean vehicles and to the evolution of the engine due to new clean fuels such as hydrogen, and to further improve quality and to reduce costs. In addition, based on the gradual spread of EV, it is focusing on increasing non-automobile engine sales through new products and new businesses.

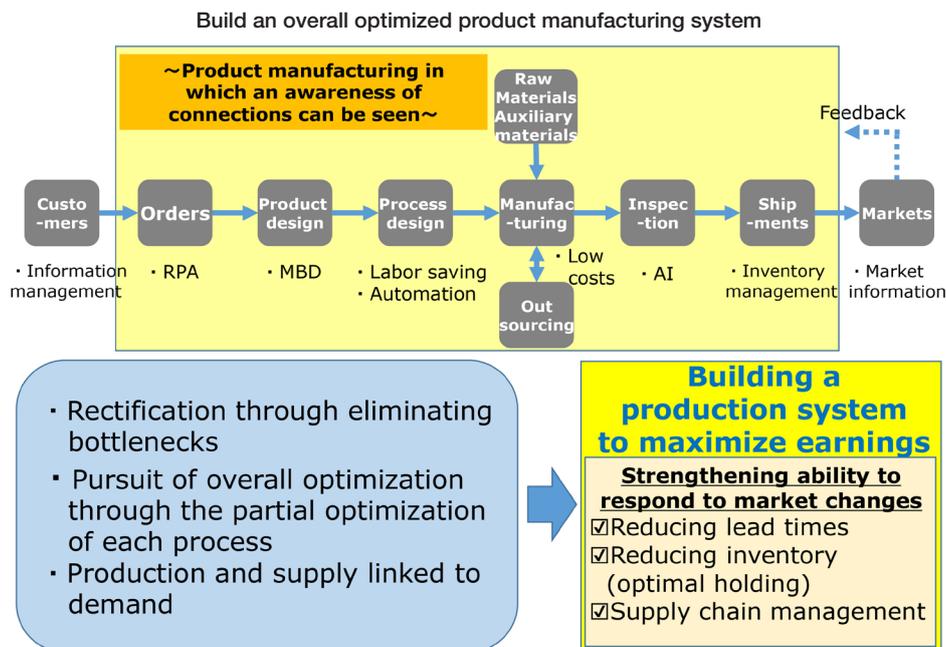
3. Priority measures

In the 8th Medium-term Management Plan, the Company has set “Change as Chance” (finding opportunities within change) as its basic policy and its action guidelines to be “The New 5S” (Speed = speed of responding to changes; Skill = skill for planning and executing strategy; Science = taking decisions scientifically based on data; Spirit = enthusiasm to want to improve the organization; Safety = a safe and secure working environment and safety awareness).

The Company has also set five priority measures of (1) build an overall optimized product manufacturing system, (2) promote technical solution proposal-oriented sales through utilizing the core technologies and products, (3) strengthen the development and creation of new products and businesses, (4) conduct structural reforms of people and organizations (awareness reforms), and (5) take a leap forward toward becoming a sustainable company.

(1) Build an overall optimized product manufacturing system

Through an awareness of the supply chain as a whole, including from raw materials procurement through to market information, the Company is aiming to reduce lead times and inventory, and to build a production system that maximizes earnings by achieving rectification through eliminating bottlenecks, pursuing overall optimization from the partial optimization of each process, and progressing production and supply linked to demand. In relating to this, it newly established the global procurement department in the structural reforms implemented in October 2020.



Source: The Company’s results briefing materials

Growth strategy

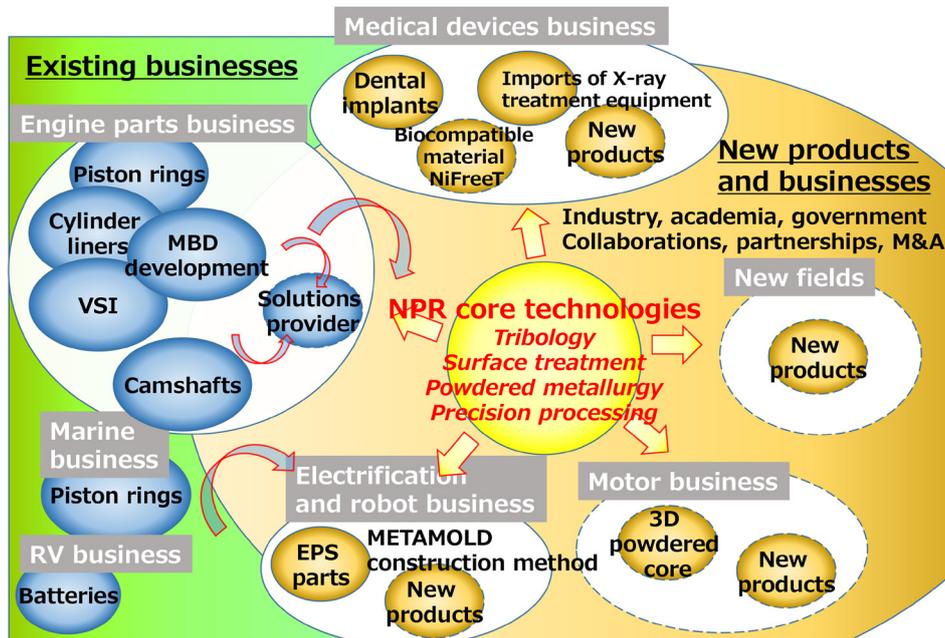
(2) Promote technical solution proposal-oriented sales through utilizing the core technologies and products

Previously, the sales departments and the development departments both negotiated with customers separately. But in the structural reforms implemented in October 2020, the technical negotiation duties of the development departments was transferred to the Engineering Sales Department (Engineering and Sales Department I supervises domestic sales, and Engineering and Sales Department II supervises overseas sales) and they were integrated. They are providing solutions to problems such as reducing piston ring friction and valve seat thermal management, and contributing to reducing fuel consumption. Moreover, the aim is to establish a model-based design and to be a solution provider that undertakes design evaluations.

(3) Strengthening the development and creation of new products and businesses

Toward increasing sales for non-automobile engines, the Company is utilizing its core technologies (tribology= technologies relating to friction, wear, and lubrication; surface treatment technologies; powder metallurgy technologies; and precision processing technologies), and promoting development of new products and businesses centered on the electrification and robot business, the medical devices business, and the motor business. In particular, in the industrial equipment field, it is increasing sales of METAMOLD products, and in the medical field, it is creating products and a business for NiFreeT, which is a new bio-compatible material of a titanium-tantalum alloy. It is also working on initiatives such as developing an axial gap-type motor with a powdered core. In the structural reforms implemented in October 2020, it integrated the METAMOLD business promotion department and the new products business development department in order to increase the speed that work is progressed.

Strengthen the development and creation of new products and businesses



Source: The Company's results briefing materials

Growth strategy

(4) Conduct structural reforms of people and organizations (awareness reforms)

With the aim of cultivating a corporate structure, organization and people that can change alongside the environment, the Company is promoting business structural reforms (optimizing procurement from a global perspective, promoting reforms and abolitions of products, and DX (Digital Transformation)), organizational reforms (merging domestic subsidiaries; newly establishing, integrating and abolishing organizations; and transitioning to becoming a company with audit and supervisory committee), and awareness reforms (reforming workstyles and converting to job-based employment, conducting open innovation, and realizing diversity). Specifically, for example with regards to awareness reforms, it is improving work efficiency through introducing technologies such as IoT and RPA, at the same time as promoting workstyle reforms with increased “job satisfaction,” supporting the activities of senior and female employees, and establishing environments in which employees can work with job satisfaction, and it is considered that these efforts are leading to an improvement in employees’ work engagement.

(5) Taking a leap forward toward becoming a sustainable company

For its initiatives toward the SDGs as important issues that the Company will tackle as a priority from among the various issues that exist in society, it has specified co-existing with the global environment (contributing to the environment through products and contributing to the environment in business activities), co-existing with stakeholders (improving customer satisfaction, employee safety and health, and realizing diversity), and building a foundation for sustainable growth (respecting human rights, corporate governance, and compliance), and it is conducting activities toward realizing a sustainable society.

Specifically, for contributing to the environment through products, the Company is developing products that will contribute to improving consumption by 1.5%, while for contributing to the environment in business activities, the Company is working to reduce CO₂ emissions. Also, in March 2021 in the System to Certify Corporations with Excellent Health Management initiated by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi, the Company was certified as a Health Management Excellent Corporation 2021 (large-scale corporations section). This is the second time it has been certified, following on from last year. Moreover, as initiatives to strengthen corporate governance, in June 2020 it established a nomination and remuneration advisory committee and in June 2021, it transitioned to being a company with an audit & supervisory committee.

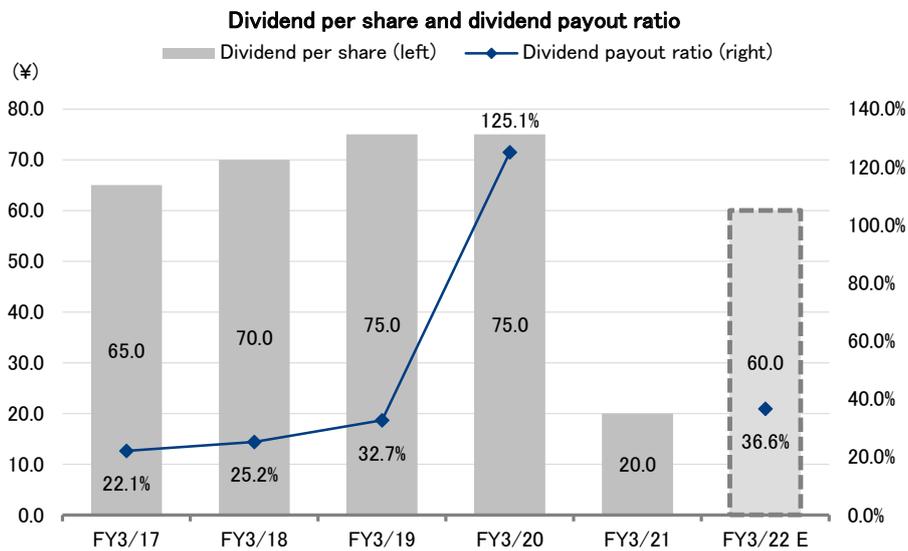
Taking a leap forward toward becoming a sustainable company



Source: The Company's results briefing materials

Shareholder return policy

The Company positions returning profits appropriately and stably to shareholders as one of management's most important issues, and it pays a dividend based on a comprehensive judgement of results trends, future business development, and other factors. Based on this basic policy, in FY3/21 it paid an annual dividend of ¥20.0 (period-end dividend ¥20.0), a decrease of ¥55.0 YoY. For FY3/22, it is forecasting an annual dividend of ¥60.0 (interim dividend ¥20.0, period-end dividend ¥40.0), an increase of ¥40.0 YoY. Also, in August 2020 it acquired 150,000 treasury shares in order to implement a flexible capital policy in response to changes to the business environment.



Source: Prepared by FISCO from the Company's financial results



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