AP-Related Business

With the business performance of road pavement companies, who are our customers, expected to recover, we aim to become a one-and-only top manufacturer by leveraging our proprietary technology and service capabilities that lead the competition

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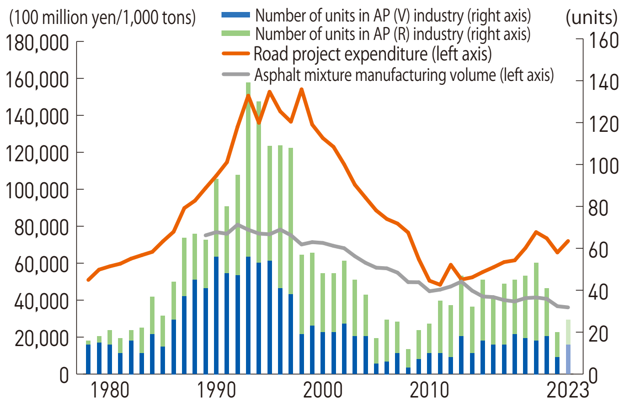
FY 2022 key points

- Road pavement companies, our customers, were forced into a difficult business environment in FY 2022 due to the soaring raw material prices. The companies are expected to recover and post profit growths in FY 2023.
- The AP-related business posted a significant decline in profit in FY 2022 but the profit is expected to increase in FY 2023.
- While net sales of its maintenance service declined 11.4% in FY 2022 from a year ago, there is growing momentum for recovery in FY 2023.
- There has been no change to our medium-term plan of 23.0 billion yen in net sales, 1.6 billion yen in operating income, and 7.0% in operating margin for FY 2024.
- The start-up of the Thai plant has been delayed but the development of the global strategic model targeting the ASEAN market is making steady progress.
- Signed an agent agreement with a construction machinery dealer in Vietnam for development of the ASEAN market.
- We sold 19 units of warm mix (foamed) equipment in FY 2022 and sales are expected to grow to 55 units in FY 2023.
- Development and introduction of products contributing to the environment have been progressing in accordance with the road map towards 2050.
- We have already signed five maintenance subscription contracts.

Road investment and AP market overview

Investment in roads, as per the Ministry of Land, Infrastructure, Transport and Tourism, has been on a recovery trend after bottoming at 4.833 trillion yen in FY 2011, and probably reached 7 trillion yen in FY 2020. Since then, the amount of investment has declined for both ordinary road and expressway projects. For FY 2023, judging from the budget requests, it is highly likely to return to growth for the first time in three years. The asphalt plant (AP) market is basically linked to road investment, and the plants built in 1980s and 1990s have entered the replacement demand period as 30 to 40 years have passed since they started operating. Japan's pavement ratio has reached around 80% and the amount of asphalt mixture manufactured has been falling by the year. Nevertheless, we can expect relatively stable sales of 30 to 40 units a year in the AP market in the future as it is necessary to deliver the mixture from an asphalt plant to the work site within an hour and a half.

Number of units shipped in AP industry and road project expenditure

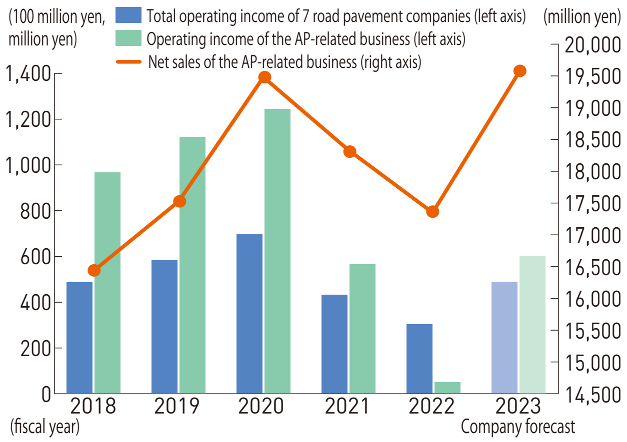


AP (R) is asphalt plants for recycled materials and AP (V) is those for virgin asphalt materials.
Source: Ministry of Land, Infrastructure, Transport and Tourism, prepared by Nikko

Business performance trend of road pavement companies

In terms of the FY 2022 business performance of the seven road pavement companies, who are the customers of the AP-related business, while total net sales were unchanged at 938.2 billion yen from the previous fiscal year, operating income fell 29.8% to 30.1 billion yen, declining for two consecutive years due to soaring raw material prices and other factors. For FY 2023, total net sales of the seven companies are expected to increase by 2.7% to 963.7 billion yen from a year earlier and operating income is forecast to rise by 61% to 48.5 billion yen reflecting the impact of sales growth and product price increases. In FY 2022, the companies curbed or postponed their capital investment given the worsening performance and some even cut back on maintenance investment. However, since around July 2023, some companies have resumed maintenance investment. In addition to the increase in environment-related investment aimed at decarbonization, attention will be focused on the public work value indicated by the cost approach in response to the workstyle reform bill to be enacted in April 2024 and the investment trends in efficiency improvement and manpower savings.

Trends of total operating income at 7 road pavement companies and business performance of the AP-related business



SWOT analysis	Details	Countermeasures by Nikko
Strength	Overwhelming market share and credibility in the Japanese market	Proposal of new solutions such as environmentally friendly products and maintenance services ahead of the competition
	Full support of customer plants including MS	
Weakness	Price competitiveness	Re-analysis of user needs and introduction of semi-custom-made units
Opptunity	Sales expansion of environmentally friendly products towards a carbon-free society	Development of burners that run on hydrogen and ammonia
	Needs for remote and automated operations in response to manpower shortage and workstyle reform	MS proposal utilizing data analysis and DX
Threath	Introduction of similar products by rival companies	Strengthening of product development capability and human resource investment
	Entry of foreign rival companies	Proposals that go as far as support for plant operation

PEST analysis	Details	Countermeasures by Nikko
Politices	Risk of changes in public investment policy due to change of government	Acquisition of market share and strengthening of maintenance services
	Rising needs for environmentally friendly facilities for achieving decarbonization	Bolstering development of environmentally friendly products
	Expectation for the implementation of recycling laws in Thailand and China	Product development that satisfies local needs
Economy	Worsening performances and suppression of investment by road pavement companies due to soaring asphalt price	Offering of values for improving operating rate of customer plants
		Offering of plants and devices that help achieve low carbonization
	Soaring prices and difficulties in purchasing various materials and equipment	Revision of product prices
Society	Growing needs for remote and automated operation reflecting labor shortage	Promotion of remote operations and automation support
Technology	Data analysis utilizing control panels developed by Nikko	Bolstering of R&D
	Development and commercialization of new environmentally friendly products	Strengthening of development team

Business overview	Details
Products	Asphalt and recycling plants
Customers	Construction companies, road pavement companies
Market share	Static share in Japan: 78%
Sales composition and breakdown by region	44% of overall sales (Japan: 69%, Thailand: 3%, China: 28%)
Operating margin	: 0.3% (6.4% in FY 2019 before the pandemic)
Ratio of MS net sales	45.0%
Production bases	Akashi head office factory, Thailand, and Shanghai, China

MS: maintenance service

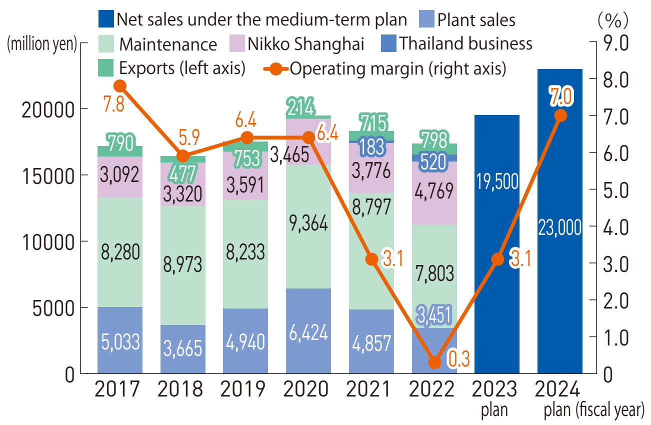
Values to be realized

- We will offer asphalt plants that will ensure a secure, safe, comfortable, and sustainable road environment in Japan.
- We will contribute to the reduction of traffic accidents, easing of traffic congestion, and development of environmentally friendly road transportation network by supporting the road infrastructure development of the ASEAN region.
- We will contribute to realization of a decarbonized society through expansion of sales of environmentally friendly products such as burners that enable fuel transition from heavy oil to LNG, ammonia, and hydrogen as well as warm mix (foamed) equipment.
- We will offer safe and highly operational plants that do not shut down and an employee-friendly work environment by offering predictive maintenance as well as remote operation and automation service in response to manpower shortage.

Source of strength

- Our asphalt quality has been highly rated and we have a 100% market share in asphalt plants for expressways in Japan.
- We boast an integrated production system combining machinery and electronics (control) and have high market share and trust.

Net sales by product, operating margin, medium-term plan numerical targets



- We offer environmentally friendly products and maintenance services that lead the competition.

Future business opportunities

Business opportunities in the Japanese market include stimulating replacement demand with our proprietary and differentiated warm mix (foamed) equipment, various burners aimed at decarbonization such as biomass, ammonia, and hydrogen, and proposals for new plant systems. Moreover, we can expect rising needs for automation and remote operation to address manpower shortage and workstyle reform at customers. In fact, a demonstration experiment of remote shipment has started at a customer with multiple plants located in Kansai. While there remain issues that need to be solved such as ensuring safety, demand is expected to grow in the future given serious labor shortage and workstyle reform. On the other hand, road pavement ratio in the ASEAN market led by Thailand is low and there is large room for growth, and we will focus on the market towards 2030.

Medium-Term Management Plan implementation strategy

Our strategy in the Japanese market is to raise the market share and enhance profitability by not only introducing environmentally friendly products that lead the competition leveraging our development capability as the top manufacturer but also carrying out remote operation, monitoring, and automation of plants, with our collective ability extending even to control, and supporting plant operation. We received orders for 40 units of warm mix (foamed) equipment in FY 2022 and expect orders for 64 units in FY 2023. We began joint development of a hydrogen burner with Tokyo Gas. In the markets overseas, our strategy is to introduce a global strategic standard model as early as possible with quality and price competitiveness that can win against foreign rivals, promote local production, and acquire agents and build an organizational structure to cultivate the ASEAN market including Vietnam and Indonesia. The Thai business, which is taking time to turn profitable, aims to post a profit in FY 2025.

FY 2022 results		FY 2023 forecast		FY 2024 numerical targets	
Net sales	17.3 billion yen	Net sales	19.5 billion yen	Net sales	23.0 billion yen
Operating income	0.049 billion yen	Operating income	0.6 billion yen	Operating income	1.6 billion yen
Operating margin	0.3%	Operating margin	3.1%	Operating margin	7.0%

Business Strategies

- Support for decarbonization
- Remote operations and automation support
- Development of standard overseas models with competitive edge
- Build an organizational structure for business expansion in the ASEAN market