



Financial Results Briefing for the Fiscal Year Ended March 2025

May 26, 2025

KROSAKI HARIMA CORPORATION

(Securities Code: 5352)

Contents

1. Overview of Financial Results for the Fiscal Year Ended March 2025

2. Progress on the 2025 Revised Management Plan

[Reference] Overview of the Company

[Regarding figures presented in these materials]

Monetary amounts presented in these materials have been rounded down to the unit indicated, and percentages have been rounded off to one decimal place, except where otherwise indicated.



1. Overview of Financial Results for the Fiscal Year Ended March 2025

Overview of Financial Results for the Fiscal Year Ended March 2025 (Consolidated)

(Billions of yen)

	FY2023	FY2024	Year-on-year change	
Net sales	177.02	177.92	+ 0.89	+ 0.5%
Operating profit	14.69	14.08	(0.60)	(4.2%)
Ordinary profit	16.38	15.31	(1.07)	(6.5%)
Profit ^{*1}	12.41	12.53	+ 0.11	+ 1.0%
ROS ^{*2}	9.3%	8.6%	(0.7pt)	
ROE ^{*3}	15.5%	13.8%	(1.7pt)	
ROIC ^{*4}	9.7%	7.6%	(2.1pt)	

Business Environment

- Domestic total crude steel output (FY2024): 82.95 million tons (down 4.5% year on year)
- Worldwide crude steel output (CY2024): 1,882.60 million tons (down 0.8% year on year)
- Total crude steel output in India (CY2024): 149.60 million tons (up 6.3% year on year)

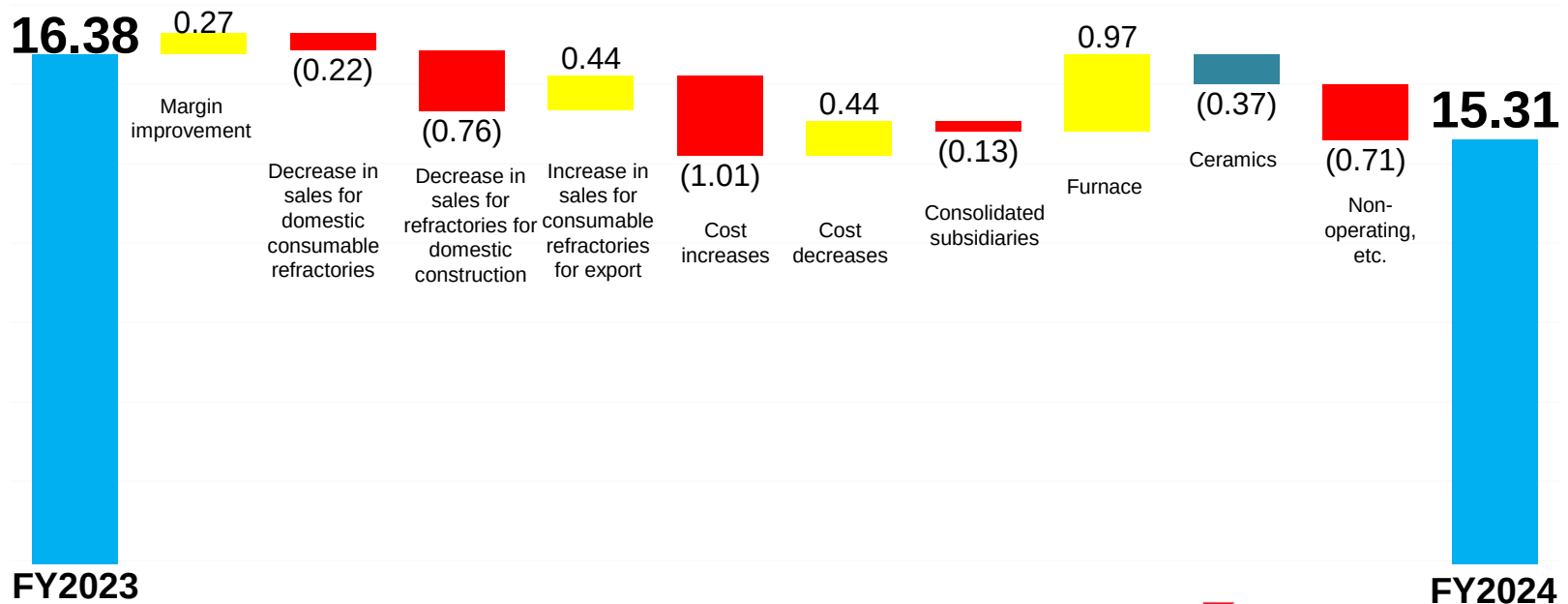
*1: Profit attributable to owners of parent *2: Return on sales (ordinary profit to net sales ratio) *3: Return on equity *4: Return on invested capital

Analysis of Factors Causing Change in Ordinary Profit [FY2023 vs. FY2024] (Consolidated)

Amid the impact of decreased crude steel output in Japan and overseas excluding India, as well as the temporary increase in cost caused by the rising prices of imported raw materials reflecting the weak yen, the Group promoted the expansion of sales in the solid Indian steel market, implemented self-help efforts to improve productivity and yields, etc., and steadily passed the rising costs of raw materials, etc. on to selling prices. However, ordinary profit decreased year on year due in part to the differences in transient gains such as non-operating income from foreign exchange gains. Despite the year-on-year decrease, it achieved a level exceeding the ¥15,000 million target set under the 2025 Revised Management Plan.

(Billions of yen)

Profit decline of ¥1.07 billion



Financial Position (Consolidated)

<Balance Sheets>

(Billions of yen)

	March 31, 2024	March 31, 2025	Change	Main factors
Assets	179.01	187.05	+ 8.03	—
Current assets	119.16	126.14	+ 6.98	Increase in accounts receivable
Property, plant and equipment and intangible assets	46.98	50.55	+ 3.57	Acquisition of machinery and equipment
Investments and other assets	12.86	10.35	(2.51)	Decrease in investment securities
Liabilities	86.32	85.41	(0.90)	—
Net assets	92.69	101.64	+ 8.94	Increase in retained earnings

Balance of interest-bearing liabilities	36.88	41.73	+ 4.85	Increase in accounts receivable
D/E ratio	0.42	0.44	+ 0.02	—
Equity ratio	48.7%	50.8%	+ 2.1pt	—

<Cash Flows>

	FY2023	FY2024	Main factors
Cash flows from operating activities	13.72	3.14	Profit before income taxes and payment of income taxes
Cash flows from investing activities	(3.58)	(4.33)	Purchase of non-current assets in Japan and overseas
Free cash flow	10.13	(1.18)	—
Cash flows from financing activities	(6.23)	0.98	Dividends paid and borrowing of funds

Performance by Segment (Consolidated)

(Billions of yen)

		FY2023	FY2024	Year-on-year change	
Refractories	Net sales	151.86	148.53	(3.32)	(2.2%)
	Segment profit	12.67	11.43	(1.24)	(9.8%)
Furnace	Net sales	15.22	19.72	+ 4.50	+ 29.6%
	Segment profit	0.55	1.51	+ 0.96	+ 175.0%
Ceramics	Net sales	8.22	7.80	(0.41)	(5.1%)
	Segment profit	0.85	0.48	(0.36)	(43.3%)
Real estate and others	Net sales	1.70	1.84	+ 0.13	+ 8.1%
	Segment profit	0.61	0.64	+ 0.03	+ 5.0%
Total	Net sales	177.02	177.92	+ 0.89	+ 0.5%
	Segment profit	14.69	14.08	(0.60)	(4.2%)

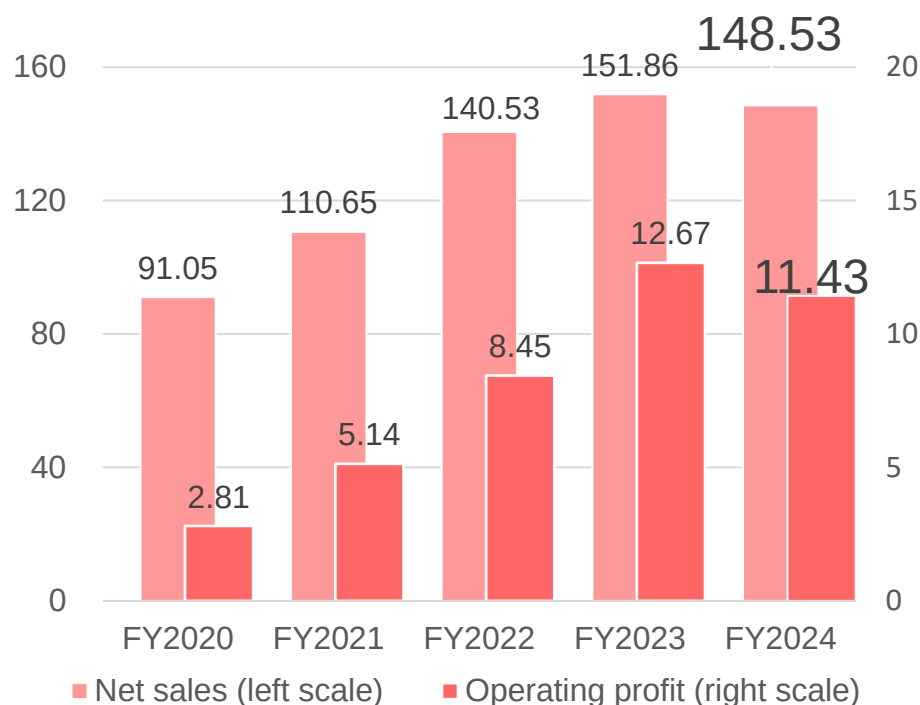
Note: The net sales of each segment represent sales to external customers and do not include inter-segment sales or transfers. The amounts of segment profit are based on operating profit.

Overview of Refractories Segment

Business Results

(Billions of yen)

	FY2023	FY2024	Year-on-year change	
Net sales	151.86	148.53	(3.32)	(2.2%)
Operating profit	12.67	11.43	(1.24)	(9.8%)



Review

- Despite efforts to expand business in the strong Indian steel market, among others, to offset the impact of a decrease in domestic and overseas crude steel output and a drop in one-time orders, both sales and profits decreased.

Initiatives for the Future

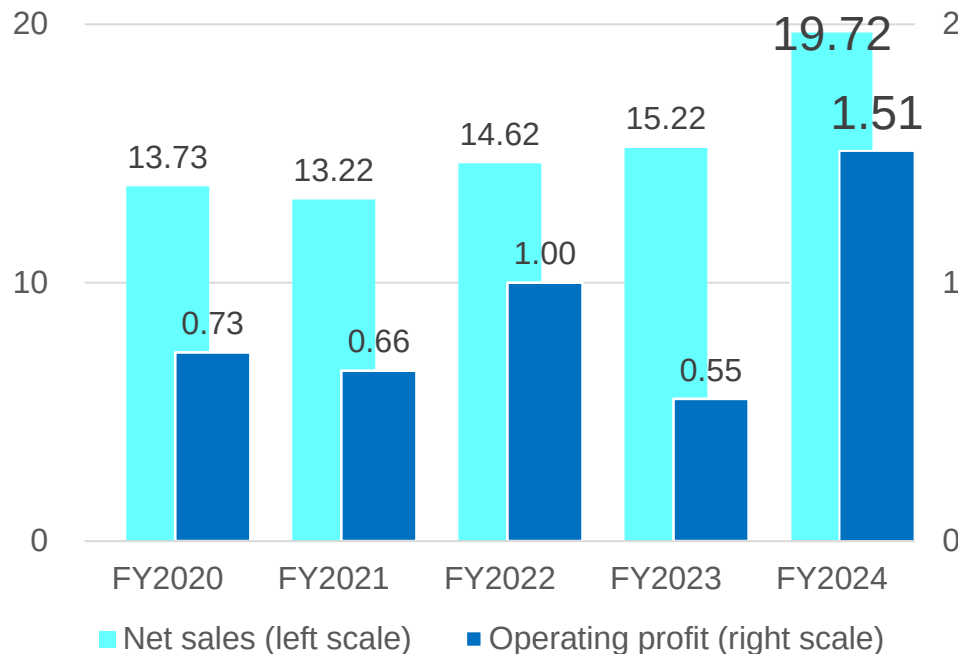
- In Japan, further enhance competitiveness through the promotion of automation, labor-saving, and digital transformation, as well as market launch of new products by using our technological strength, and strengthen revenue base.
- In India, strengthen production capacity to capture growing demand.
- In Europe and the Americas, work to further expand business revenue through deepening collaboration between alliance partner companies and our manufacturing and sales bases.

Overview of Furnace Segment

Business Results

(Billions of yen)

	FY2023	FY2024	Year-on-year change	
Net sales	15.22	19.72	+4.50	+29.6%
Operating profit	0.55	1.51	+0.96	+175.0%



Review

- Both sales and profit increased due to an upward revision in maintenance unit prices and orders received for large-scale construction projects

Initiatives for the Future

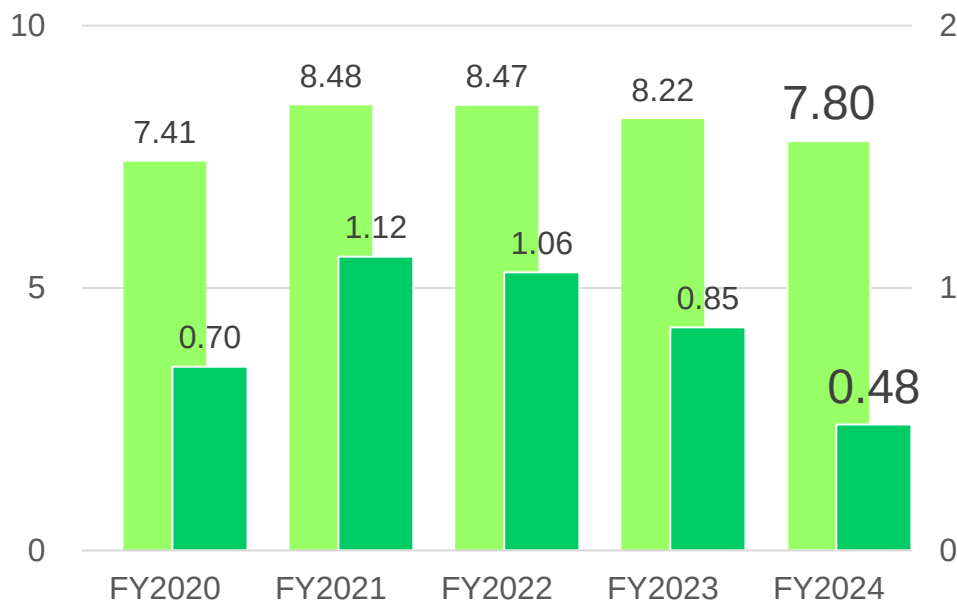
- Increase earning power by steadily capturing large-scale construction projects, continuing to receive orders for maintenance work for steel facilities, and reducing costs through personnel optimization, etc.
- Expand revenue through orders received for maintenance and new projects for non-ferrous materials users such as biomass and other power generation boilers and incinerators, in addition to the design and construction of energy-saving industrial furnaces.

Overview of Ceramics Segment

Business Results

(Billions of yen)

	FY2023	FY2024	Year-on-year change	
Net sales	8.22	7.80	(0.41)	(5.1%)
Operating profit	0.85	0.48	(0.36)	(43.3%)



*SEMI: Semiconductor Equipment and Materials International

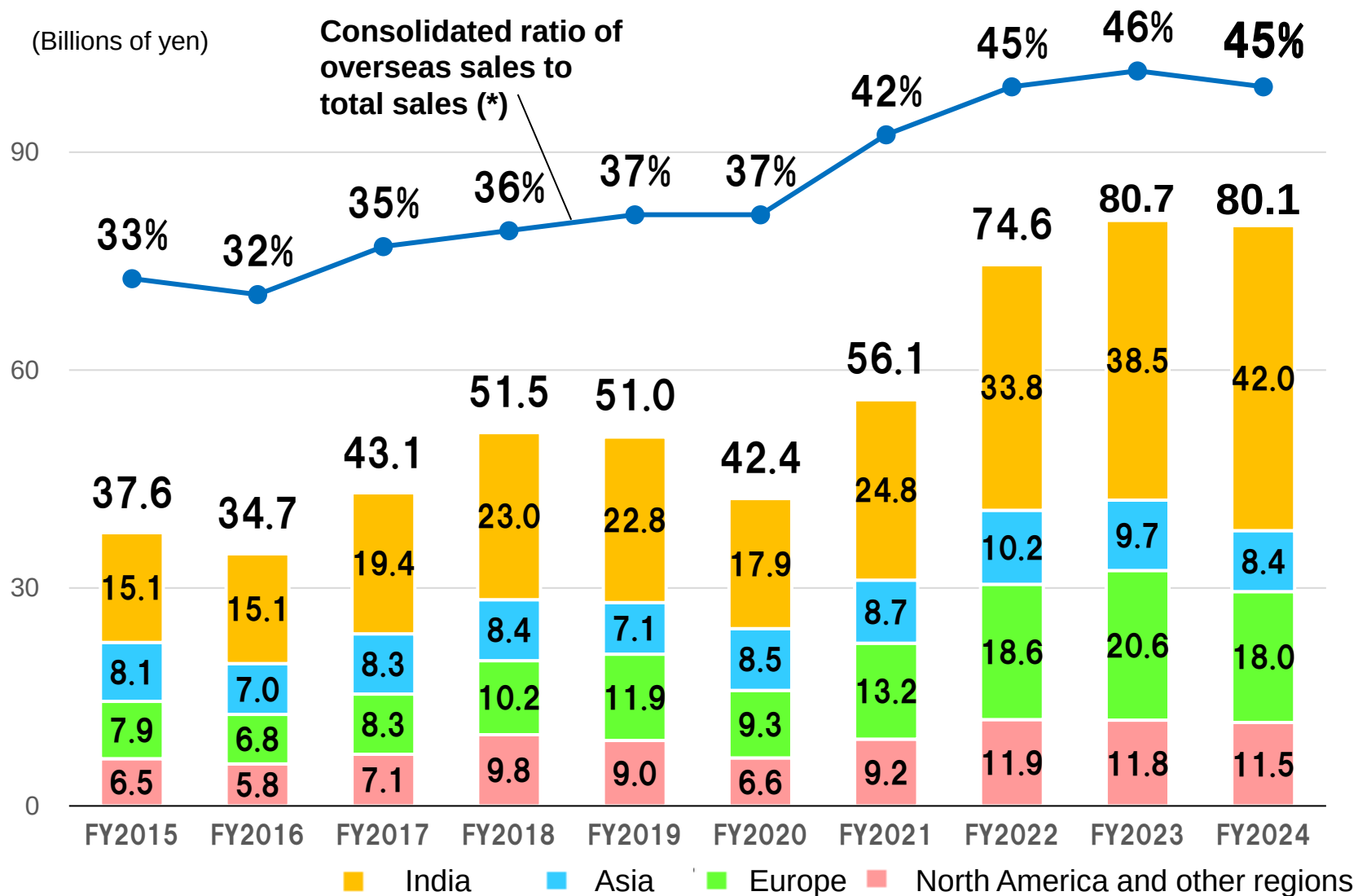
Review

- Both sales and profits declined due to a trough in orders received for ceramic materials for semiconductor manufacturing equipment and for thermal insulation materials for household fuel cells.

Initiatives for the Future

- The US Semiconductor Equipment and Materials International (SEMI*) announced in December its forecast that net sales of semiconductor manufacturing equipment would grow to an all-time high of 136.0 billion dollars (over 20 trillion yen) in 2026. We will steadily capture the growing demand for ceramics primarily for semiconductor lithography equipment.
- We will further grow revenue by driving sales expansion in each field, including thermal insulation materials for the environmental field, ceramic materials for electronic components, and products for new fields such as aerospace and health care.

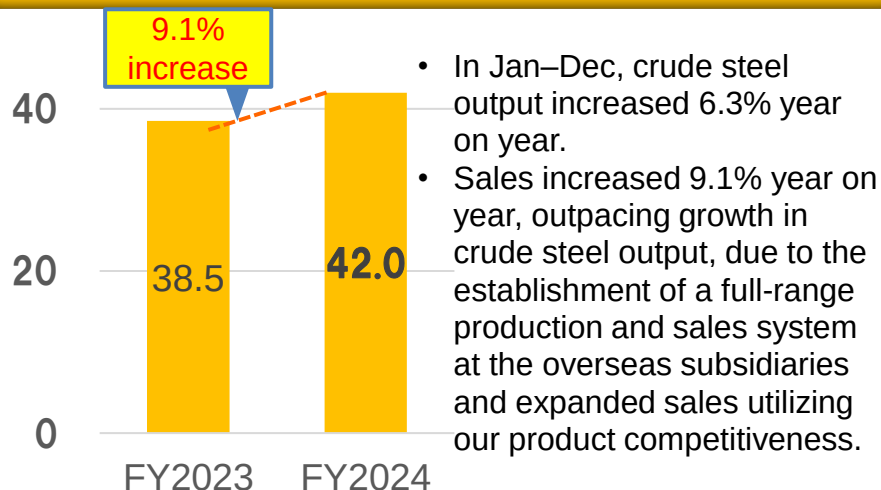
Consolidated Overseas Net Sales (in Japanese Yen)



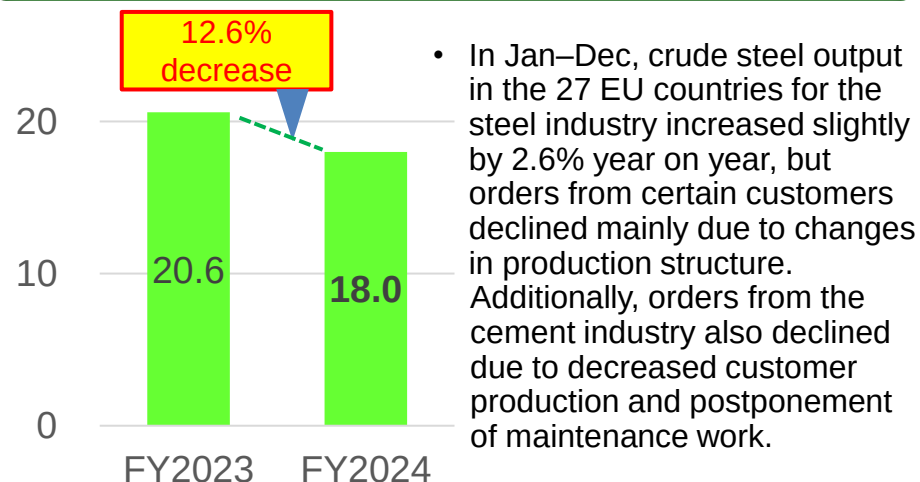
(*) Percentages are rounded to the nearest whole number.

Consolidated Net Sales by Region (in Billions of Yen)

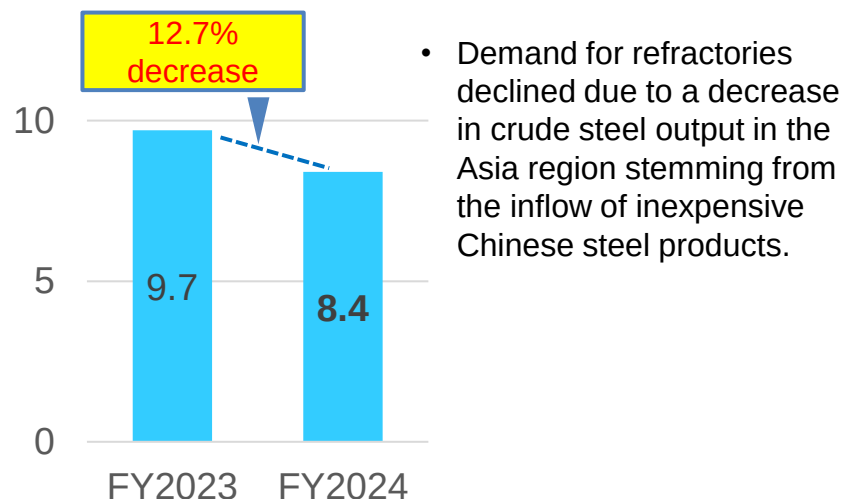
India



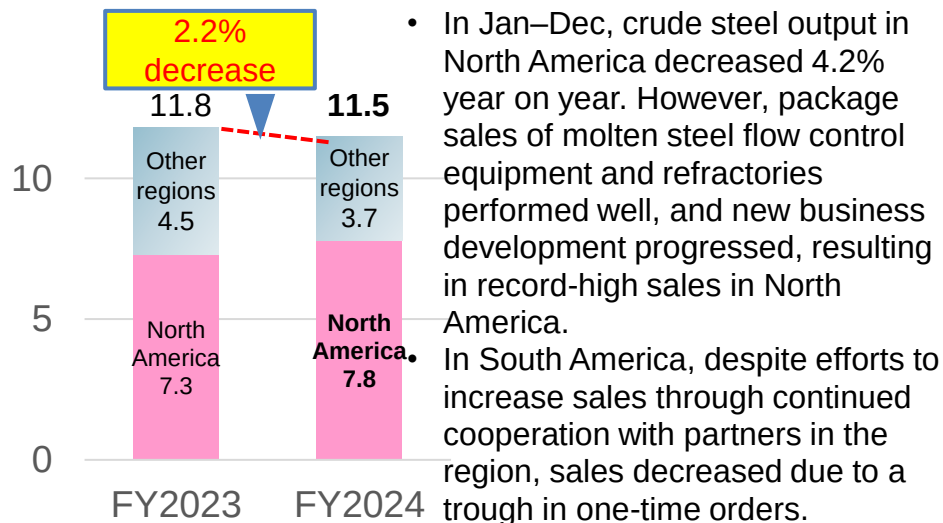
Europe



Asia

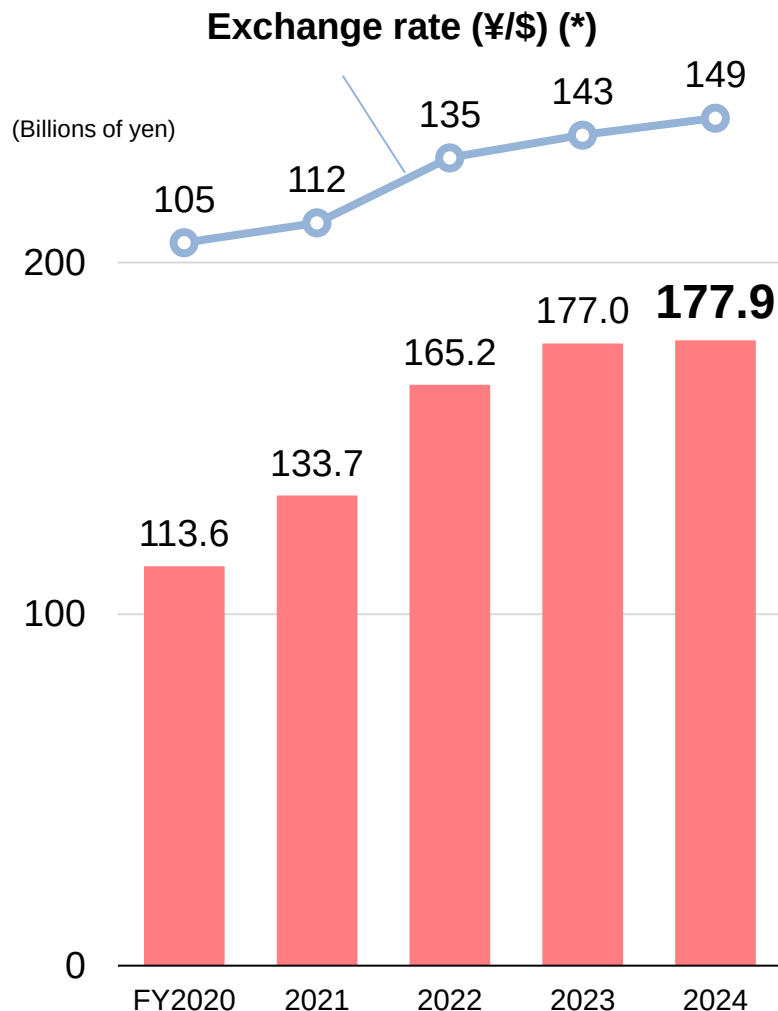


North America and other regions



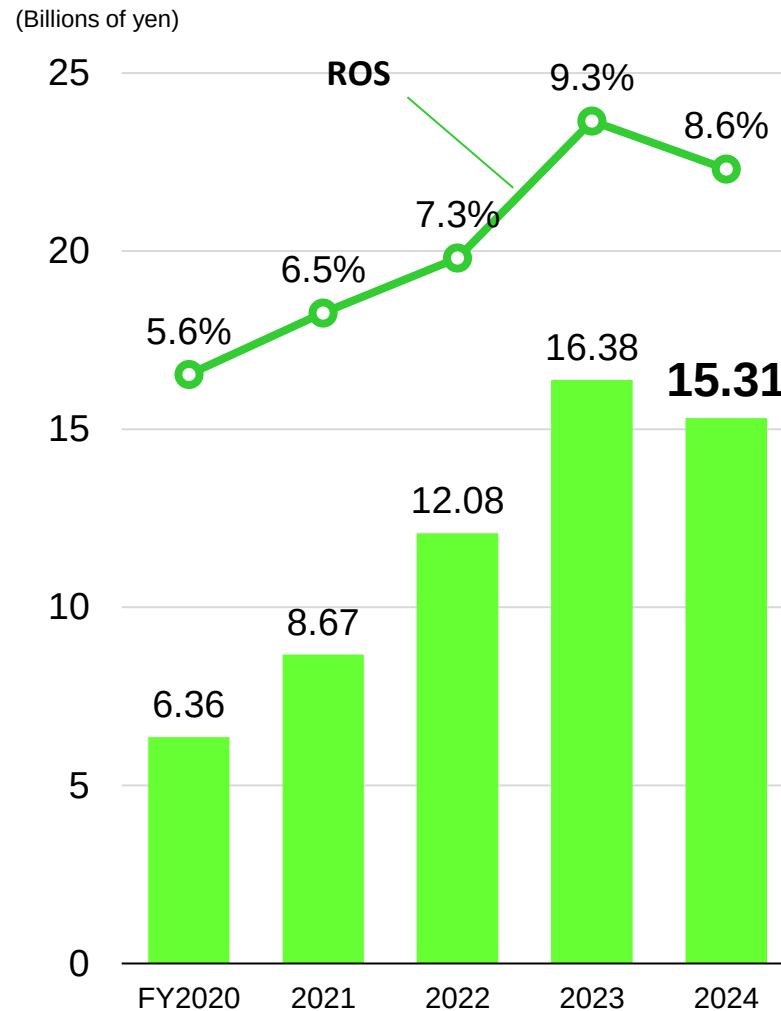
Key Indicators (Consolidated)

Net Sales



(*) The exchange rate for net sales is the average rate from April to March

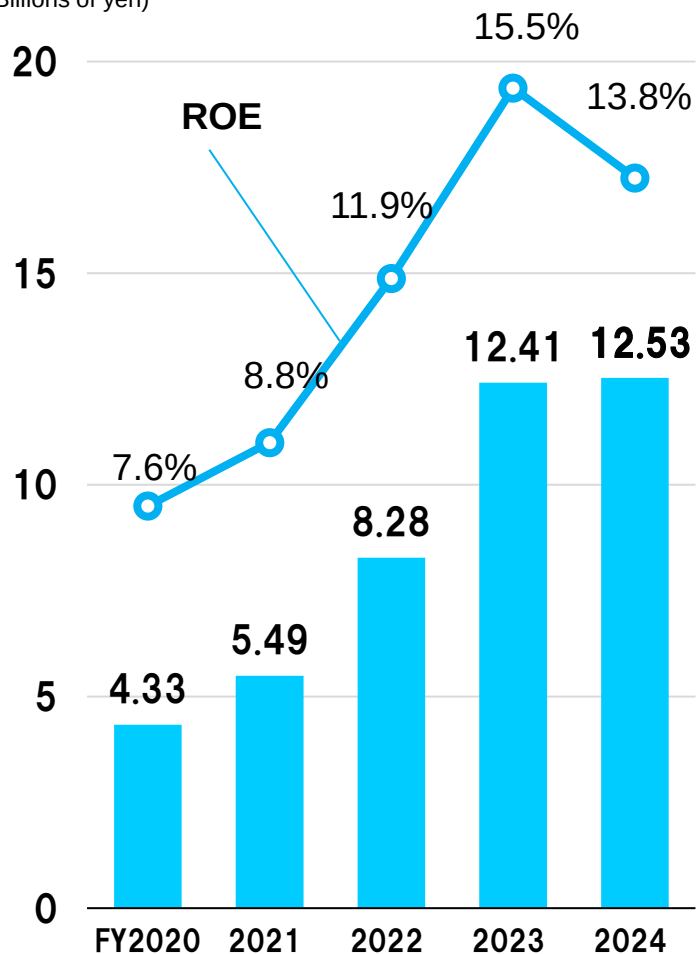
Ordinary Profit



Key Indicators (Consolidated)

Profit

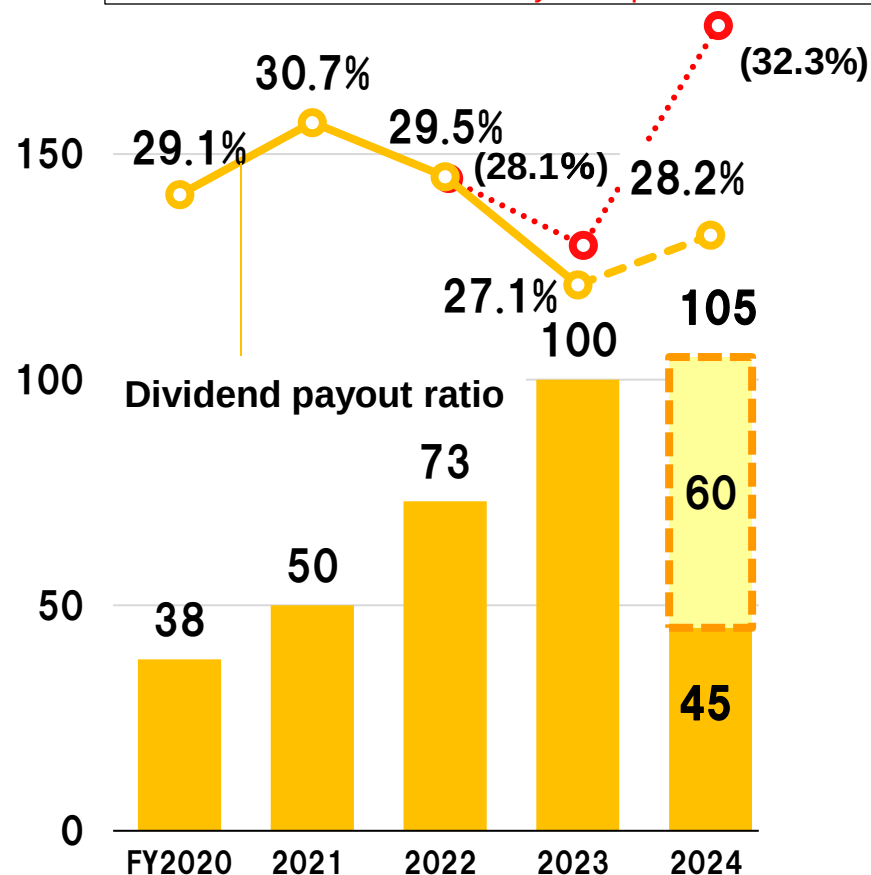
(Billions of yen)



Shareholder Dividends

(Yen)

Figures in parentheses indicate the dividend payout ratio after deduction of the gain on sales of land of the Indian subsidiary from profit.



The Company conducted a 4-for-1 stock split of its common shares as of April 1, 2024. Stock prices are calculated on the assumption that the stock split was conducted at the beginning of FY2020.

FY2025 Full-year Business Results Forecast (Consolidated)

(Billions of yen)

	FY2023	FY2024	FY2025 (*1)	Year-on-year change (FY2024 vs FY2025)	
Net sales	177.02	177.92	180.00	+ 2.07	+ 1.2 %
Operating profit	14.69	14.08	15.00	+ 0.91	+ 6.5 %
Ordinary profit	16.38	15.31	15.00	(0.36)	(2.1)%
Profit	12.41	12.53	10.00	(2.53)	(20.2)%
ROS	9.3%	8.6%	8.3%	(0.3)pt	

(Yen)

	FY2023	FY2024	FY2025 (*1)	Year-on-year change (FY2024 vs FY2025)	
Annual dividend per share	100.00 (*2)	105.00 (Planned)	115.00 (Forecast)	+ 10.00	

(*1) Business results forecasts may vary significantly due to factors such as fluctuations in demand for refractories associated with trends in crude steel output and price fluctuations of raw materials, procured goods, overseas transportation, and energy, due to factors such as trade issues and exchange rate fluctuations.

(*2) The Company conducted a 4-for-1 stock split of its common shares on April 1, 2024.

The amount of annual dividend per share above is after the stock split, on the assumption that the stock split was implemented at the beginning of the previous consolidated fiscal year.



2. Progress on the 2025 Revised Management Plan

Progress on the 2025 Revised Management Plan

(1) Progress on the 2025 Revised Management Plan

Highlights

In FY2024, we achieved the ordinary profit target of the 2025 Revised Management Plan ahead of schedule again.

This was driven by the efficient operation of the “create-produce-sell” process, namely the cycle of new product development, manufacturing, and sales, as well as upward revisions to selling prices and strengthened foundations for the global business. Going forward, we will aim for a further increase in profits.

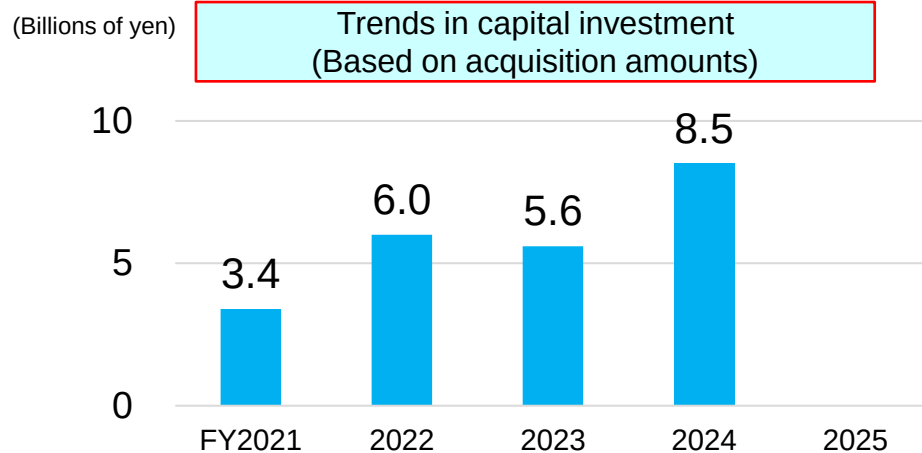
(Billions of yen)

	2025 Revised Management Plan	FY2021	FY2022	FY2023	FY2024
Net sales	180.0	133.7	165.2	177.0	177.9
Ordinary profit	15.0	8.6	12.0	16.3	15.3
ROS	8.3% or higher	6.5%	7.3%	9.3%	8.6%
ROIC	9.0% or higher	6.3%	9.7%	9.7%	7.6%

Progress on the 2025 Revised Management Plan

(1) Progress on the 2025 Revised Management Plan

Increase in the amount of capital investment and actively investing in growth fields



Amount of capital investment in the 2025 Management Plan
(Base for decision)



- The increased amount will be allocated to investment to enhance capabilities in growth fields and quality improvements in Japan and overseas.

Major capital investments in FY2021–FY2024

Japan



Overseas



Progress on the 2025 Revised Management Plan

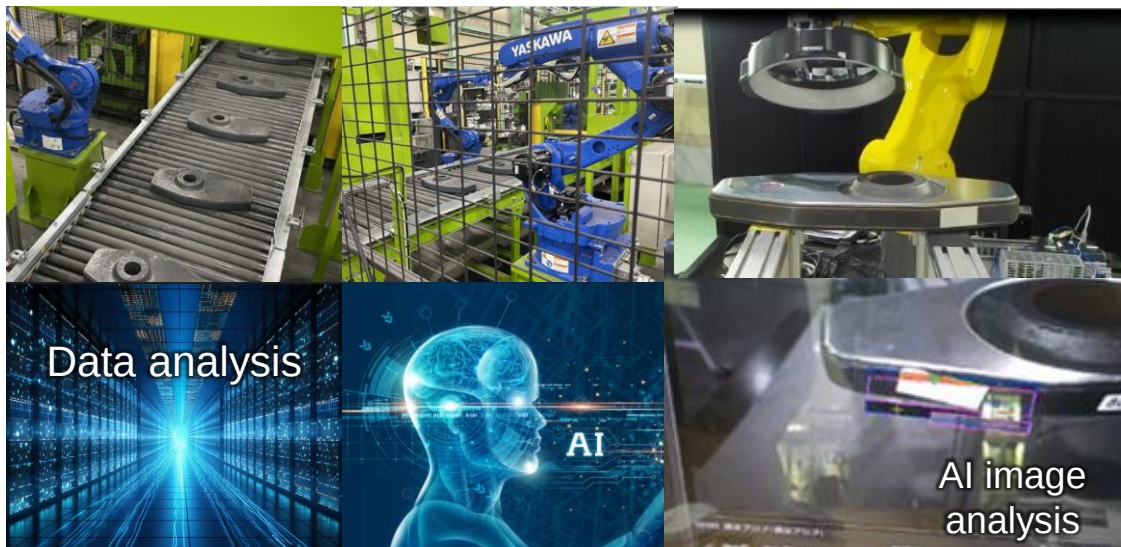
(1) Progress on the 2025 Revised Management Plan

Increase in capital investment amounts and proactive investments in growth areas (domestic and overseas)

Renewal is ongoing to automate the plants utilizing digital technology

- Raising customer satisfaction by achieving high levels of quality control and assurance through automation and data management utilizing digital technology.
- Addressing the issue of labor shortages by implementing manpower-saving measures.
- Improving productivity by promoting automated transport lines.

Automation of SN plant finishing line



Automation by an overseas subsidiary



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Highlights

► Global expansion is underway.

- The overseas sales ratio is increasing through the enhancement of **local production for local consumption framework**. (45% of consolidated sales come from overseas)
- Actively promoting capital investment in India, where growth is particularly strong.
- In addition, building an efficient global supply network through collaboration among domestic and overseas manufacturing bases.
- Responding to diverse customer needs through **cooperation with alliance partner companies overseas**.

Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Group's global management framework and manufacturing and sales through local production for local consumption

Actively appointing local employees to top positions at overseas subsidiaries
Appointing local managers to operate our overseas subsidiaries and develop manufacturing and sales activities focused on the local region

3 European bases
1 alliance partner



5 Chinese bases

Japan

6 Indian bases



1 North American base
1 alliance partner



South America
1 alliance partner

Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

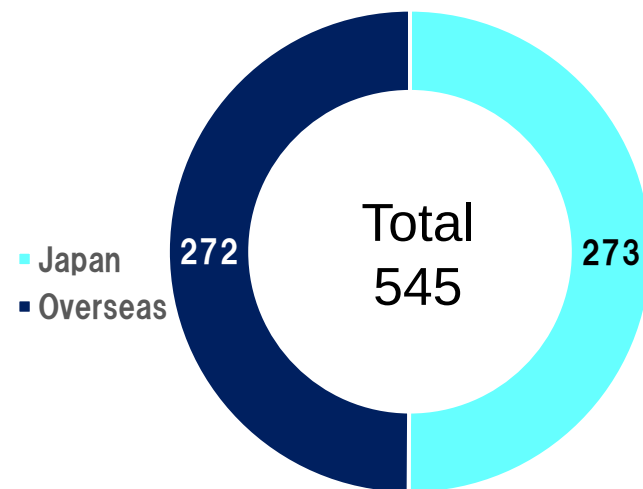
Strengthen our R&D system on a global scale

Working in R&D that matches the regional characteristics at both the bases in Japan and India.
Also considering a framework for mutually sharing information by adding a base in Europe as the third.

Number of the Company's R&D staff
including technological services

545

Annual R&D expenses amount to
¥3.7 billion (2.1% of net sales)



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Future growth potential of the Indian market

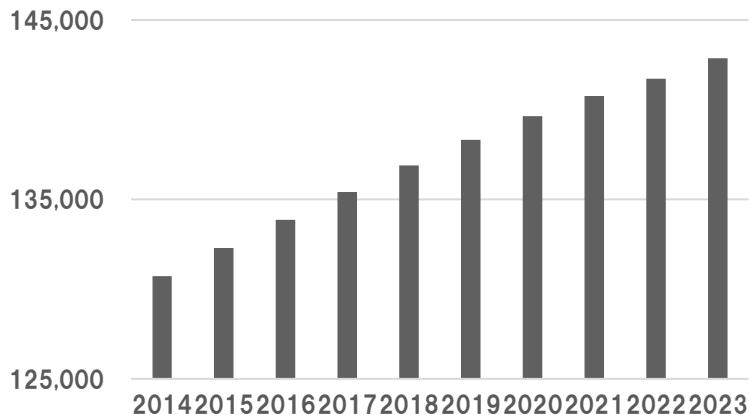
The Indian government is promoting various measures to **boost manufacturing and large-scale infrastructure development**, with the **Make in India** slogan for **expanding domestic production** and the **Self Reliant India** slogan for a **self-sufficient nation**.

Continued expansion of market size due to population growth

Population: 1,441,700,000
(world's largest)

India's total population growth

(Tens of thousands)



(*) The IMF's world country GDP ranking announced in 2024.

Global GDP ranking and economic growth rate (*)

Rank	Country	GDP (Billions of USD)	Economic growth (real GDP growth rate)	Annual iron consumption (per head)
1st	America	29,167	2.8	Approx. 300kg
2nd	China	18,273	4.8	Approx. 650kg
3rd	Germany	4,710	(0.2)	Approx. 300kg
4th	Japan	4,070	(0.2)	Approx. 440kg
5th	India	3,889	6.5	Approx. 80kg

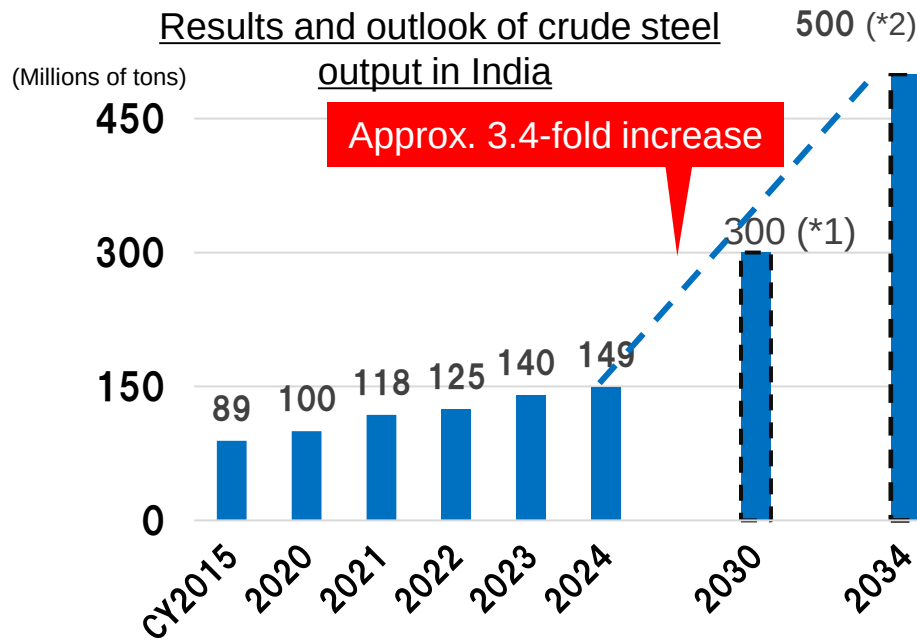
Expected to increase fivefold or more in the future

Progress on the 2025 Revised Management Plan

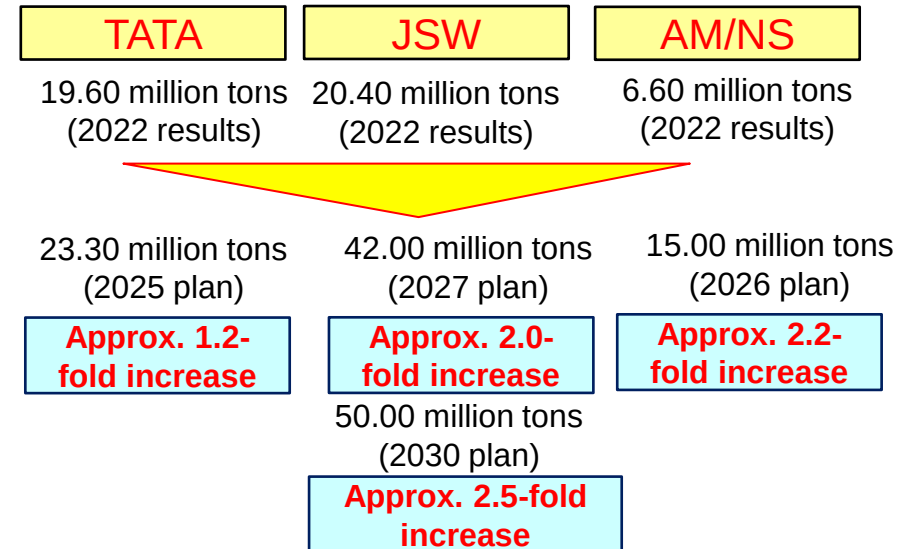
(2) Strengthen earning power and competitiveness in the Refractories Business

Enhance competitiveness in the expanding Indian market

- The Indian steel market is expected to expand steadily.
 - As the steel market expands, steelmakers are producing steel products that are higher in grade and wider in variety.
 - Refractories to be used will invariably increase quantity and advance in the level of technological requirements.
- ⇒ Opportunities to benefit from our technologies will grow.



Major Indian steelmakers' production increase plans



*1: Crude steel output capacity for 2030 targeted by the Indian government.

*2: Crude steel output capacity for 2034 targeted by the Indian government.

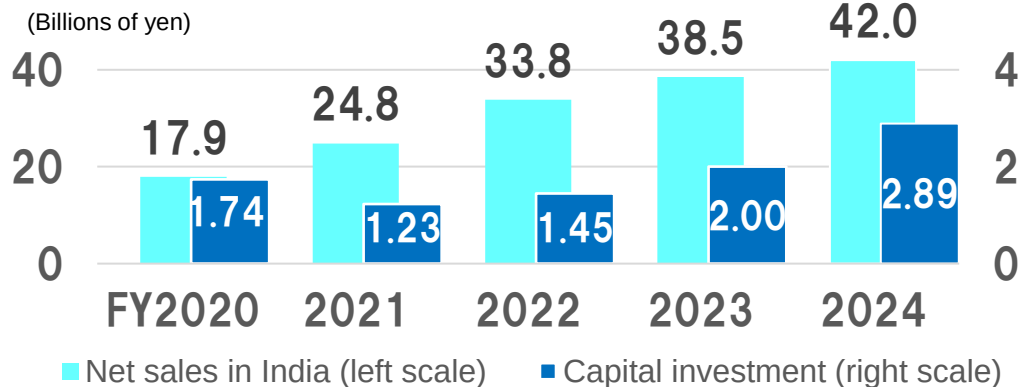
Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

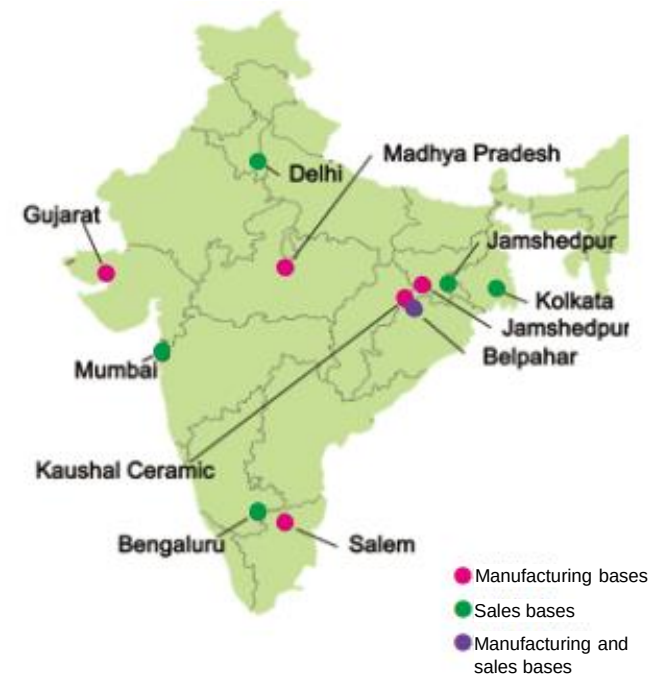
Achieve an increase in net sales by active investment in growth in India

- **TRLK**, our Indian subsidiary, holds a **top-class share** of the Indian market. It does business with approximately 50 steelmakers, including TATA Steel, AM/NS India, and JSW.
- It is making the **utmost use of the full-range production/sales capabilities** for refractories for steel.

**Net sales and capital investment
(acquisition amounts) in India**



Full-range production and sales system with six bases across India



New plants supporting the full range of production capabilities for TRLK



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Expanding capacity to capture growing demand in Eastern India

First in India
refractory brick factory
for converters



RH SNORKEL
New plant
completed in
March



The head office and main plant of our Indian subsidiary, TRLK, is located in the state of **Odisha**, where abundant iron ore resources have led to a concentration of steelworks.

AMNS India, a joint venture between NIPPON STEEL and ArcelorMittal, has announced the acquisition of land for the **planned construction of an integrated steelworks with an annual capacity of 7 million tons** in the state of **Andhra Pradesh**, adjacent to the state of **Odisha**.



Odisha

Andhra Pradesh

Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Construction of a plant in the state of Gujarat, India

Our 7th plant to be constructed in Western India (state of Gujarat) Scheduled completion: July 2026

Details of the capital investment

Site area: 230,000m²

Investment amount: Approx. ¥2,400 million

Products: High alumina bricks and
monolithic refractories

Scheduled completion: July 2026

State of Gujarat

- Population: over 60 million
- Features:
 - ▷ Largest industrial production output in India
 - ▷ Many cement and steel companies concentrate
 - ▷ Major demand area for refractories



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

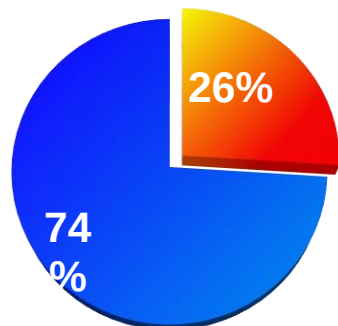
Leverage the effects of the business portfolio in the European market

Business portfolio in Europe

We have a **business structure with strength in products for the non-ferrous materials (cement)**, in addition to those for the steel industry. Our two Europe-based subsidiaries, which manufacture different types of refractories, generate synergies that are highly valued by customers. To capture a growing global demand for refractories for cement manufacturers, we are also actively expanding sales outside Europe.

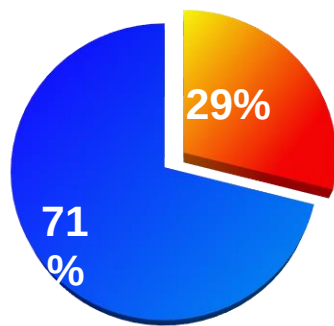
Sales breakdowns for two European subsidiaries

<KAMR (*1) sales breakdown> <REF (*2) sales breakdown>



■ For steel
■ For cement and others

(*1) KAMR: Krosaki Amr Refractorios, S.A. (location: Spain)

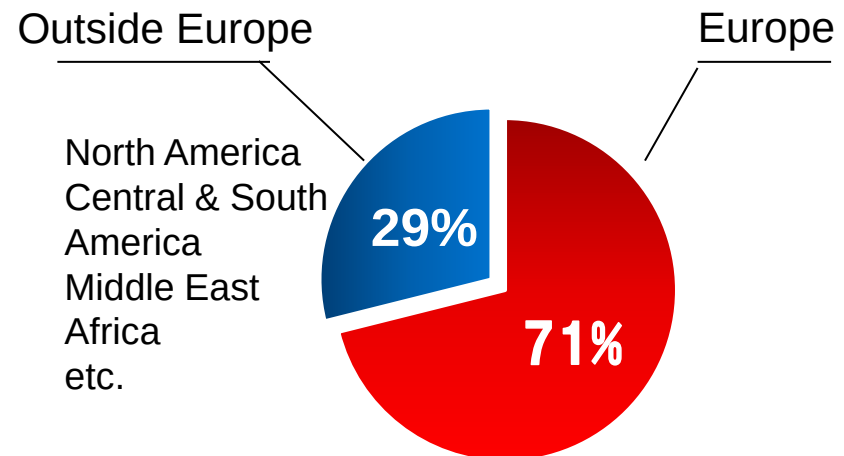


■ For steel
■ For cement and others

(*2) REF: Refractaria, S.A. (location: Spain)

2024 Net Sales KAMR + REF (€102 million)

From Spain to the global market



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Leverage the effects of partnerships in the South American markets

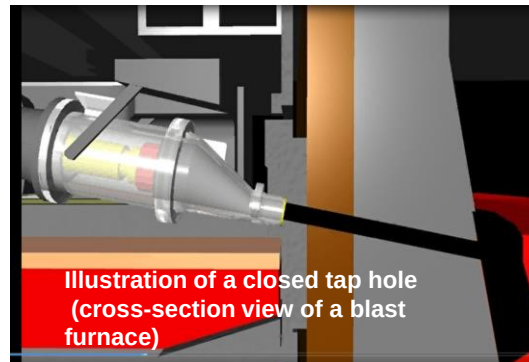
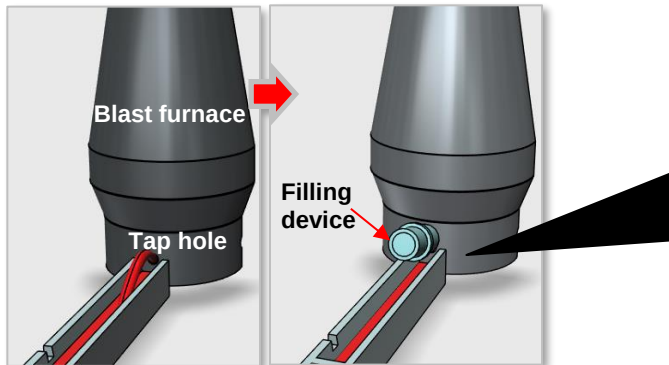
Concluded a sales agency agreement in May 2020 and a refractories license agreement in October 2021 with IBAR

Securing manufacturing and sales bases for our licensed products in Brazil **has enabled us to expand our sales in the South American market**. Our technological expertise has highly regarded by South American steel companies.

[IBAR]

- Location: Poá, Sao Paulo, Brazil
- Primary business: Manufacture and sale of refractories, production of raw materials for refractories (owning refractory materials mines)

In **October 2024**, we established a 50:50 **joint venture** with IBAR to locally manufacture and sell high-quality filling material for blast furnace tap holes, commonly known as taphole clay, and **started production in March 2026**.



Major Brazilian steel manufacturers and IBAR / joint venture



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Strengthen our business foundation in Southeast Asia, starting with Vietnam

Established a local subsidiary in Ho Chi Minh City, Vietnam, with operations started in February 2025

Crude steel production volume in Southeast Asia continues to grow steadily, driven by increasing demand for steel within the region. The quality of steel produced locally is also improving.

→ This is expected to lead to growing demand for high-performance refractories, one of our areas of strength.

Initiatives in the region:

1. Developing potential customers
2. Enhancing support systems for existing local customers
3. Conducting market research in Vietnam and neighboring countries

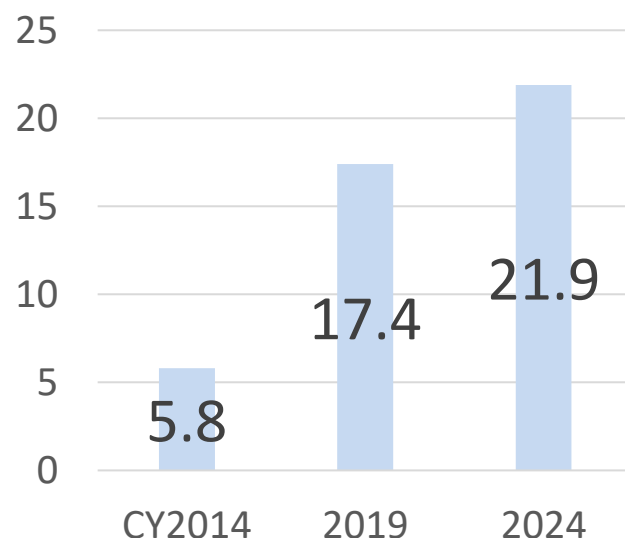


President Egawa giving a speech at the opening ceremony



Mr. Akiyama, Representative of KROSAKI VIETNAM COMPANY LIMITED, in front of the office

Crude steel production volume in Vietnam (Millions of tons)



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Highlights

► Our technological advancement in the Refractories Business

- We operate the “create-produce-sell” cycle — that is, efficiently turning the cycle of new product development, manufacturing, and sales. This enables us to deliver technologies and services that exceed customer expectations with products that overwhelm competitors.
- Viewing carbon neutrality as a new business opportunity and in response to structural changes among customers, we are enhancing our R&D framework and have launched our sustainable solutions brand, **K-GenesisX™**, to provide future-oriented solutions centered on strategic products.

Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Turn the structural change in the domestic steelmaking processes into a growth opportunity

Challenges for the steelmaking processes in Japan

- Reducing CO₂ emissions in the blast furnace method is a challenge in the pursuit of carbon neutrality.
 - To tackle this, blast furnace manufacturers are driving structural reforms in the steelmaking processes, such as expanding the use of the electric arc furnace method and hydrogen reduction.
 - Using electric arc furnace method to achieve 24-hour continuous operation (vs. traditional non-continuous operation)
 - Using electric arc furnace method to manufacture high-grade steel (vs. traditional general-purpose steel)
- ↓
- Demand will grow for highly durable refractories (**that can withstand higher temperatures and have a longer service life**) for high-grade steel manufacturing.
 - These refractories are within the area where the Group has an edge with its advanced technologies.

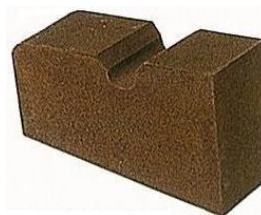
Examples of our highly durable refractory products

Porous plugs



K-GenesisX

Magnesia-chrome refractories



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Magnesia-carbon refractories



KROSAKI

Progress on the 2025 Revised Management Plan

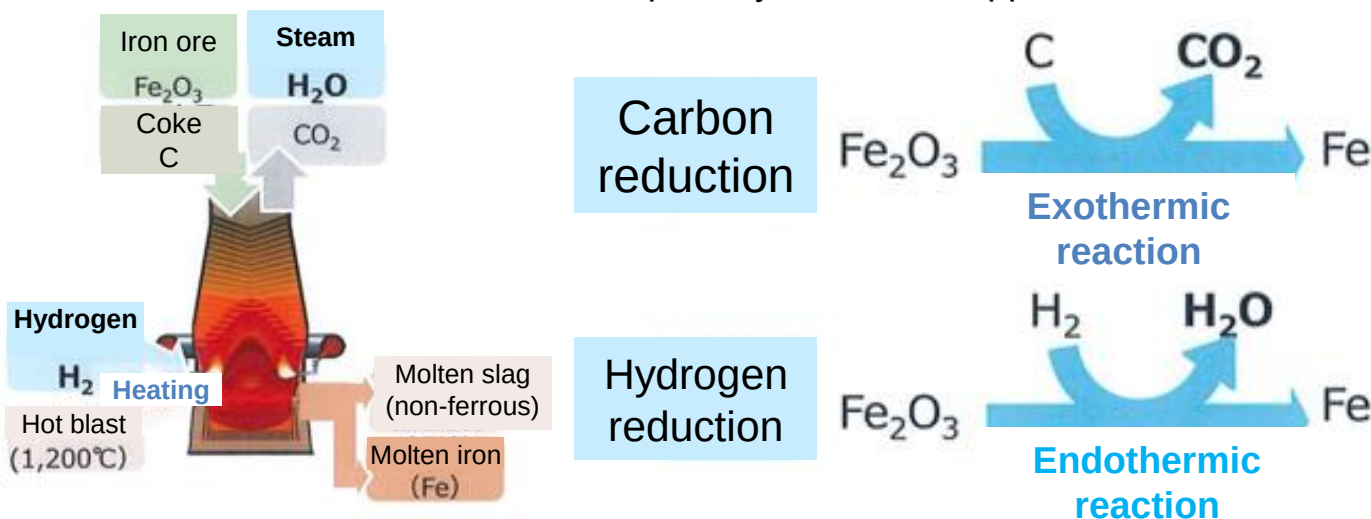
(2) Strengthen earning power and competitiveness in the Refractories Business

Turn the structural change in the domestic steelmaking processes into a growth opportunity

Manufacture of refractories that contribute to changes in iron reduction methods (methods for removing oxygen content from iron ore) used by steel manufacturers

In NEDO(*)'s project for Hydrogen Utilization in Iron and Steelmaking Processes, **our refractories were requisitioned for use** in NIPPON STEEL CORPORATION's test hydrogen reduction furnaces

Illustration from NIPPON STEEL CORPORATION's publicly available "Nippon Steel Carbon Neutral Vision 2050"



As a higher temperature is required to induce an endothermic reaction, there is a need for refractory materials that can withstand the heat.

(*) NEDO: New Energy and Industrial Technology Development Organization

Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Launch of our sustainability brand

The Group has launched **K-GenesisX™** with the objective of delivering forward-looking solutions to customers by integrating innovative technology and a strong commitment to realizing a sustainable society. Under this brand, we are developing a variety of sustainable products aimed at achieving carbon neutrality.

K-GenesisX™ — Our sustainable solutions brand website now live

Click here to view → [K-GenesisX™ | Sustainable Products & Next-Generation Technology of the Krosaki Harima Group](#)



Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Meet customers' needs with our engineering technologies

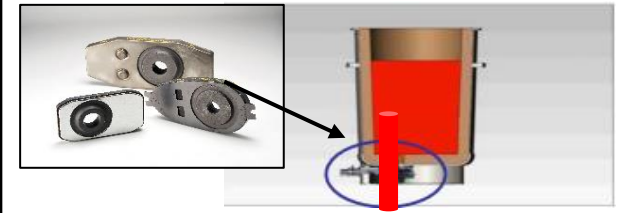
Robotic automation of slide gate plate changing (**REX-ROBO®**)

- Achieved the robotic automation of the operation to change refractories (slide gate plate*) placed on the bottom of the steel ladle
- Traditionally, this was heavy duty operations performed by human workers in a hot environment.
Our engineering technologies contributed to improving safety and labor saving in these operations at customers' sites.

*Slide gate plate

A plate used to regulate the flow of molten steel.

(Each plate weighs approx. 20 kg)
It is placed in the valve unit on the bottom of the steel ladle.



Changing operation
by a human worker



Changing operation by REX-ROBO®

First unit ordered by a domestic electric furnace manufacturer
Orders also expected from overseas

Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

Development of new materials contributing to carbon neutrality

Development of a no-need-to-dry (Dry-Free®) gunning material

Feature: No drying needed after construction due to quick-drying properties

Before

Drying needed before use

⇒ CO₂ emissions

After development

No drying needed before use

⇒ Zero CO₂ emissions

Patented

[Technological requirements]
We used to produce gunning materials by mixing unshaped refractories with cement and water, which required drying after construction. To reduce CO₂ emissions, we needed to develop alternative materials for cement and water.



→ Developed a solution binder with excellent quick-drying properties

Our Dry-Free® Series of products was awarded the highest rating by the City of Kitakyushu in its initiative for selecting products that contribute to the reduction of environmental impact.



Mr. Katayama, Deputy Mayor of the City of Kitakyushu (left) and Mr. Nishi, Executive Counsellor of the Company (right)

Dry-Free® new customer delivery results

Gunning materials: 38 customers (12 in FY2024 and FY2025)

Castable: 31 customers (18 in FY2024 and FY2025)

Orders have rapidly increased since launch in 2020.
Received orders for overseas projects as well.

Progress on the 2025 Revised Management Plan

(2) Strengthen earning power and competitiveness in the Refractories Business

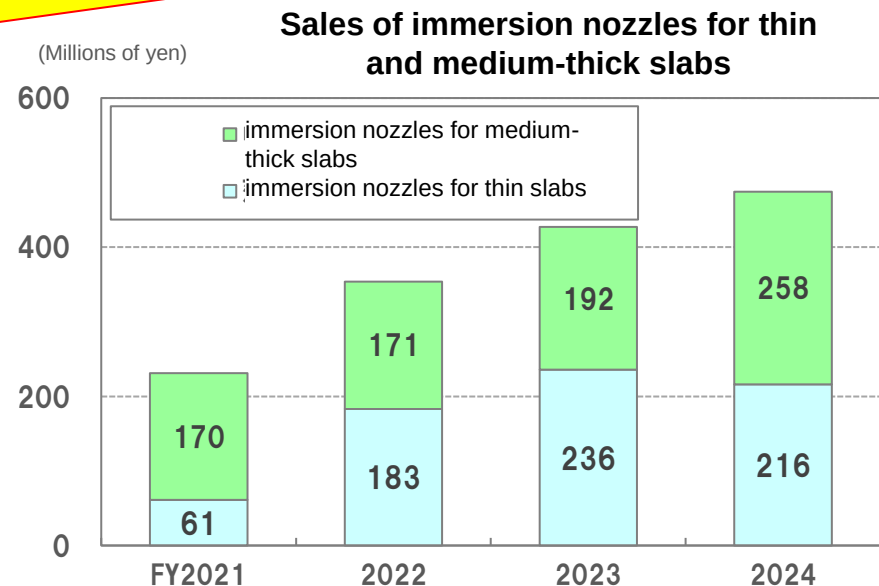
Our refractory technologies essential for high-grade steel manufacturing

For manufacturing hybrid and electric vehicles, lightweight, durable, and workable sheet steel (= high-grade steel) is essential.

- High-grade steel manufacturing requires technologies to regulate the flow of molten steel and control inclusions during continuous casting.
- Refractories play a critical role in realizing the above technologies.

Our technology solutions

Our patents	Developed a uniquely shaped immersion nozzle for thin steel sheets (thin slabs) and medium-thick steel plates (medium-thick slabs) that enables a substantial reduction in drift
	Developed nozzle material for continuous casting that prevents the accumulation of impurities



Progress on the 2025 Revised Management Plan

(3) Strengthen earning power in the Furnace Business

Highlights

► Our technological advancement in the Furnace Business

- With our comprehensive system for providing a wide variety of refractories, we offer optimized designs and installation proposals for refractories through an integrated product supply and construction services.
- Leveraging our extensive installation expertise and industrial furnace design capabilities, we carry out projects for environment-related facilities such as biomass power generation, as well as energy-efficient industrial furnaces.

Progress on the 2025 Revised Management Plan

(3) Strengthen earning power in the Furnace Business

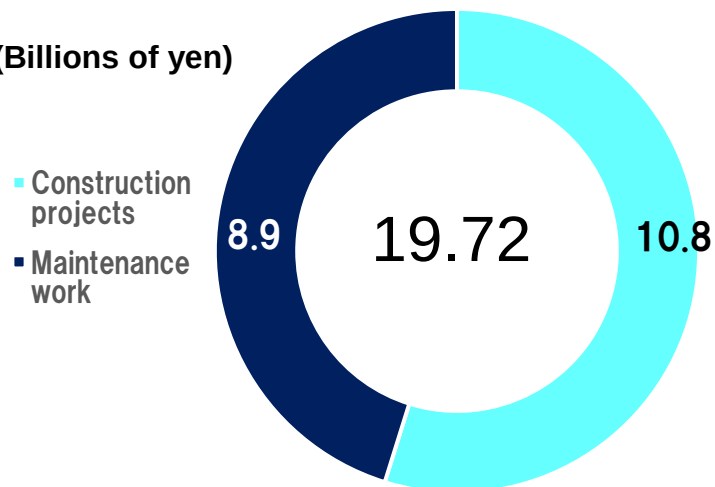
Continue to receive large project orders by leveraging integrated product and construction services and our technological superiority

Received orders for large-scale industrial furnace projects

- There has been a rise in maintenance projects for large-scale industrial furnaces.
- Unlike the numerous other vendors who only contract construction, our strengths lie in our construction services as a comprehensive refractories manufacturer as well as our ability to contract integrated services from the design of the interior to the supply of refractories (integrated product and construction solutions).
- We have a strong and varied track record in large-scale industrial furnace projects that require a high level of technology.

FY2024 Furnace Business sales breakdown

(Billions of yen)



Illustrations of large-scale industrial furnaces



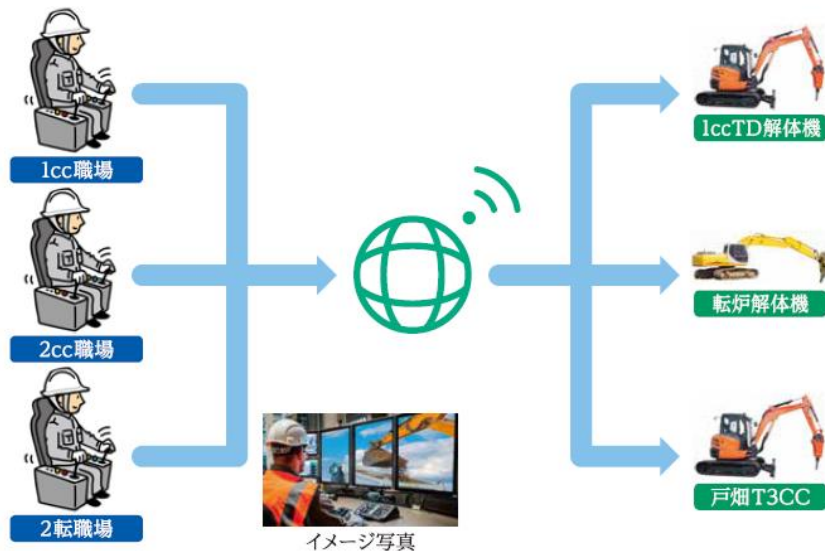
Progress on the 2025 Revised Management Plan

(3) Strengthen earning power in the Furnace Business

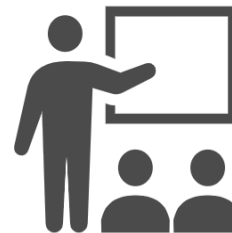
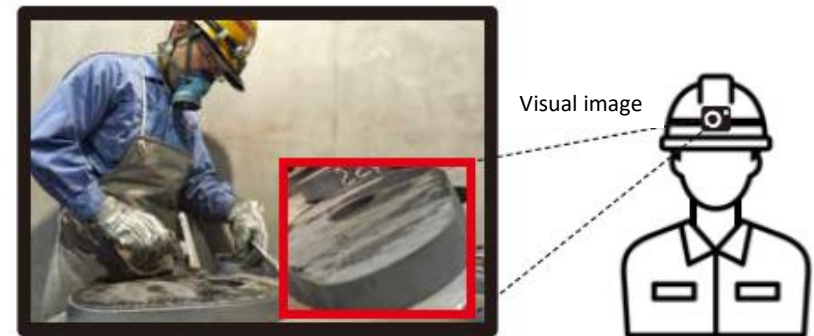
Solving problems by proactively leveraging digital technology

Improve productivity and hand down skills by leveraging digital technology

Manpower-saving concept through remote operations of heavy machinery



Handing down skills by using “GoPro,” small video cameras



Utilized in education

At the regular workshops, opinions are exchanged on the differences in work processes with skilled workers.

Progress on the 2025 Revised Management Plan

(4) Strengthen earning power in the Ceramics Business

Highlights

- ▶ **Our technological advancement in the Ceramics Business**
 - Creating valuable technologies and products, which we provide to major semiconductor and electronic component manufacturers in Japan and overseas.
 - Holds the No.1 global share (40%) in components for electronic component firing (setters), essential for firing processes of ceramic electronic components.
 - In the fine ceramics field, capable of handling large size and precision processing, with advanced assembly techniques.
- Concluded a long-term supply agreement with the world's largest semiconductor lithography equipment manufacturer.**

Progress on the 2025 Revised Management Plan

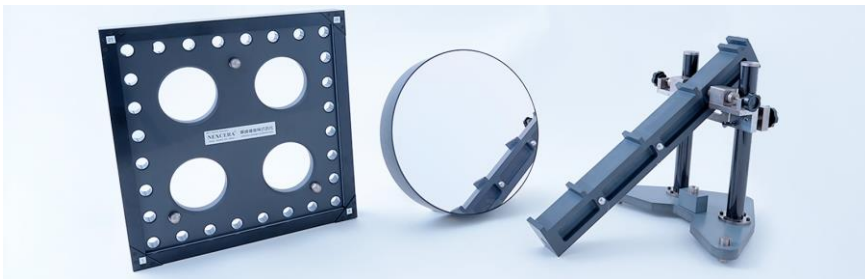
(4) Strengthen earning power in the Ceramics Business

Expand fine ceramics sales in line with the growing semiconductor market

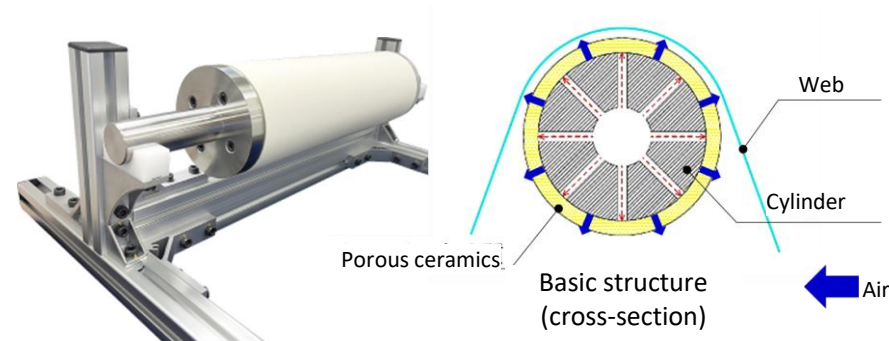
Our ceramic products are valued highly by manufacturers of semiconductor manufacturing equipment in Japan and overseas.

In the market for semiconductor lithography equipment, which provides core technologies in semiconductor manufacturing, there is an accelerating trend toward greater resolution, which has increased demand for NEXCERA®, our zero-expansion products. **Additionally, we are expanding sales activities in new areas (ceramics for floating transporters).**

NEXCERA®, ultra-low thermal expansion ceramics



Ceramics rollers for floating transporters



Our advanced technology has been recognized, and NEXCERA® is supplied to major global semiconductor lithography equipment manufacturers.

The floatation of web materials such as film through a uniform and stable supply of air from porous ceramics prevents the formation of creases.

Progress on the 2025 Revised Management Plan

(4) Strengthen earning power in the Ceramics Business

Expand sales of fine ceramics in the growing space engineering field

- We participated in the 4th International Space Industry Exhibition (ISIEX 2025) held at Tokyo Big Sight in January 2025, where we exhibited NEXCERA®, an ultra-low thermal expansion ceramic material, among other products. We belong to the Fukuoka Space Business Research Group, and gave a presentation titled “Challenging Space with Technology from Fukuoka” to showcase our products.

Exhibition booth



NEXCERA® – Complex shaping & self-diffusion bonding technology

Rib structure reduces weight → **contributes to weight reduction** of rocket payloads

Self-diffusion bonding enables joining without adhesives → **contributes to high bonding strength and high airtightness**



Thin rib structure
(Rib thickness: 3 mm)

Cap
Bonding



Box structure (mirror)
(φ340 × 70 mm)

Progress on the 2025 Revised Management Plan

(4) Strengthen earning power in the Ceramics Business

Manufacture and expand sales of a high-performance thermal insulation material that contributes to the achievement of carbon neutrality

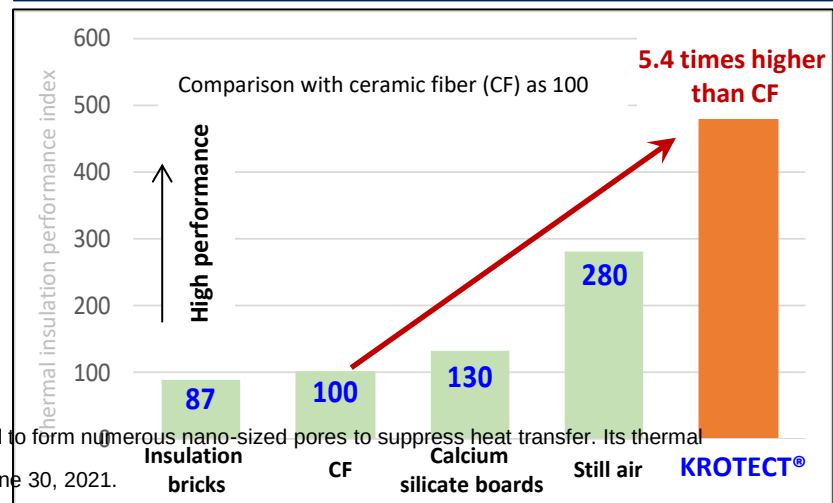
Developed a nano-porous thermal insulation material^(*1) KROTECT[®]
Control the transfer of heat in solids, the movement of air molecules, and the transmission of infrared

Low thermal conductivity is becoming increasingly important in achieving a decarbonized society, and by supplying our low thermal conductivity, high-strength, nano-porous insulation materials, we will contribute to saving energy and reducing CO² emissions in fuel cells for household use, steel, and industrial furnaces.

Nano-porous insulation material



Comparison of insulation performance with various heat-resistance insulation materials



(*1) Heat insulation material using fumed silica (silicon dioxide particles) as its main raw material to form numerous nano-sized pores to suppress heat transfer. Its thermal conductivity is lower than that of still air and remains low even in a high temperature range.

(*2) Source: The Advanced Cogeneration and Energy Utilization Center of Japan. Data as of June 30, 2021.

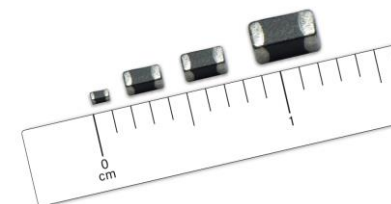
Progress on the 2025 Revised Management Plan

(4) Strengthen earning power in the Ceramics Business

Expand sales of PLATECT® (ceramics materials for electronic components)
in line with the growth of the MLCC market

Manufacturers of multi-layer ceramic capacitors (MLCC) mounted in smartphones and automobile electronic components are making capital investments to upgrade their production capacity. **The MLCC market is expected to grow by approximately 9% annually from 2023 to 2030. (*Our estimated global market share: 40%)**

Due to the spread of xEV and ADAS (advanced driver assistance systems), the widespread and practical use of 5G and 6G communications, and the development of AI and IoT, the MLCC market is expected to grow along with the growing demand for our strategic product, PLATECT®.



Progress on the 2025 Revised Management Plan

(5) Reinforce the business foundations on a company-wide basis and promote contributions to the realization of a sustainable society

Highlights

► Our governance structure

- The Board of Directors is composed of Inside Directors who are well-versed in the industry and manufacturing, and Outside Directors with diverse business experience. Lively discussions are held to support medium- to long-term growth.
- We actively appoint local leaders to head our overseas Group companies. While respecting their decision-making, we maintain governance through monthly online meetings and regular onsite visits for direct dialog.

For more details on corporate governance, please refer to pages 55-60 of the Integrated Report 2024.→

[20250218143418145s.pdf](#)

Progress on the 2025 Revised Management Plan

- (5) Reinforce the business foundations on a company-wide basis and promote contributions to the realization of a sustainable society

Status of Corporate Governance

- To strengthen the independence, objectivity, and accountability of the Board of Directors' functioning regarding director remuneration and nomination in terms of protection of the rights of minority shareholders, voluntary advisory councils (Directors and Corporate Auditors Compensation Advisory Council and Directors and Corporate Auditors Nomination Advisory Council) are held regularly and as needed.
- The Special Committee on Parent-Subsidiary Transactions, composed of all independent outside directors, is convened when significant transactions or actions with the parent company arise to deliberate and consider them, and reports to the Board.
- The Board confirms that no conflicts of interest arise that could harm the interests of minority shareholders in parent-subsidiary transactions

Directors and Corporate Auditors
Compensation Advisory Council

Directors and Corporate Auditors
Nomination Advisory Council

Special Committee on Parent-Subsidiary
Transactions (Ad hoc)

Chairperson (Representative
Director, President)

Independent Outside Director

Independent Outside Director

Independent Outside Director

Composed of
2 men and 1 woman

Progress on the 2025 Revised Management Plan

(5) Reinforce the business foundations on a company-wide basis and promote contributions to the realization of a sustainable society

Promote DX to increase productivity

Intensifying our Krosaki Monozukuri System (KMS) activities



- We pursue safety, quality, and efficiency at sites by implementing small-group *kaizen* (improvement) activities (= KMS activities).
- Top-down and bottom-up direct sharing is achieved through periodic inspection by managers.
- We raise individuals' levels of common sense by actively holding training and inter-plant exchange sessions.

We will be representing Kyushu in presenting case studies at the National Tournament



- Our small group presented an activity case study at the 45th Annual Kyushu IE^(*) Tournament and was **selected as Kyushu representative**.
- We will present the case study at the Annual National IE Tournament (July 2-4).

Case study

How we created an in-house logistics management system for the manufacturing process leveraging DX, achieving a smart, low-waste process management system by combining the *kaizen* activities of each process.

(*) IE: Industrial Engineering

Progress on the 2025 Revised Management Plan

(5) Reinforce the business foundations on a company-wide basis and promote contributions to the realization of a sustainable society

Initiatives to promote sustainability

◆ CO₂ reductions achieved to date

CO₂ emissions for FY2024 were reduced by 9.4% compared to FY2013.

Across the Company's core Refractories, Furnace, and Ceramics segments, total CO₂ emissions decreased by 14.8% against a total decrease in production volume of 14.1%, giving a 1.6% decrease in CO₂ emissions per unit of production.

Completed Withdrawal from the lime business as of March 31, 2025.

◆ Future CO₂ reduction targets

By FY2030: 50% reduction compared to FY2013

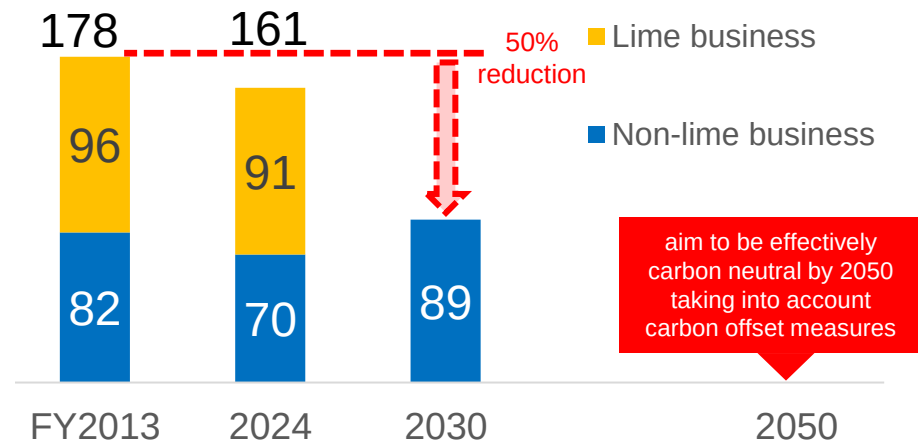
By FY2050: aim to be effectively carbon neutral by 2050 taking into account carbon offset measures

<Policies for achieving reduction targets>

- (1) Improve productivity in the manufacturing process and reduce CO₂ emissions through energy saving, model conversion, etc.
- (2) Provide products and solutions that contribute to reducing society's overall CO₂ emissions.

* We have obtained third-party assurance from an independent certification institution for our disclosed FY2023 CO₂ emissions values, including Scope 3.

<The Company's CO₂ emissions> (Thousands of tons)



* Scope

Krosaki Harima Corporation only

- SCOPE 1: The company's direct CO₂ emissions from fuel consumption and the production process
- SCOPE 2: The company's indirect CO₂ emissions from usage of power and heat procured from other sources

Progress on the 2025 Revised Management Plan

(5) Reinforce the business foundations on a company-wide basis and promote contributions to the realization of a sustainable society

Initiatives to promote sustainability

November 2021: Implementation of basic policy on D&I and setting of management targets

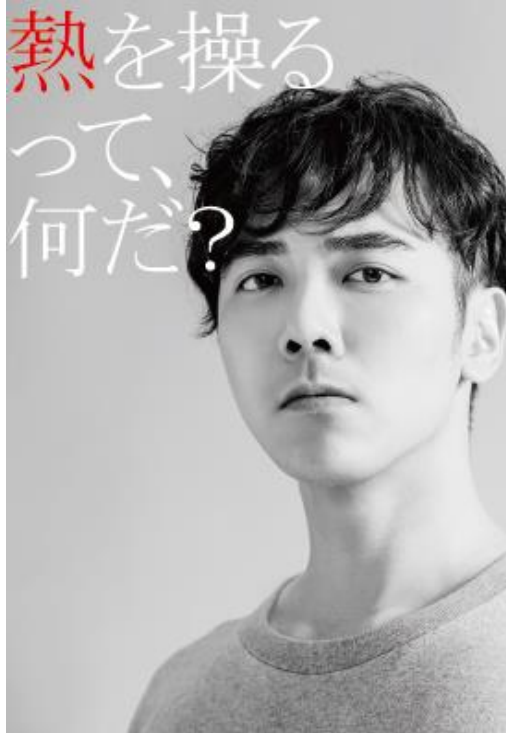
Priority initiatives

- A: Empowering women: Take advantage of employee diversity (related to diversity)
- B: Working styles, resting styles, and health promotion: Work to increase employee productivity (related to work style reforms)
- C: Creating employee-friendly workplaces and management systems (Prevent harassment and improve work morals)

	Targets					
	Ratio of women in new graduates hired (%)	Ratio of women in managerial positions (%)	Total actual working hours annually (hrs)	Annual leave taken (days)	Childcare leave taken by male workers (%)	Implementation rate of specific health guidance (%)
FY2030 target	30 or more	4.35	Below 2,000			
FY2025 target	20 or more			15	Taken by all male workers	FY2020 results 2x or more than current rate (17.4)
FY2023 results	29.41	3.25	2,067	15.4	34.7	80
FY2024 results	15.00	3.32	2,061	15.5	43.1	87
Trend		○	○	○	○	○

Progress on the 2025 Revised Management Plan

- (5) Reinforce the business foundations on a company-wide basis and promote contributions to the realization of a sustainable society



Please refer to the following for information about the Company's sustainability initiatives.

Integrated Report 2024 URL <https://contents.xj-storage.jp/xcontents/53520/75377a7f/49c8/4f5d/a469/f9b4ee821090/20250218143418145s.pdf>

SDGs HP URL

<https://www.krosaki.co.jp/sdgs-en>

[Reference] Overview of the Company

Corporate Profile (As of the end of March, 2025)

Company name:	KROSAKI HARIMA CORPORATION
Share capital	5,537 million yen
Founding	October 14, 1918
Establishment	June 1, 1919
Main business	Manufacture and sale of refractories
Number of employees	Consolidated, 5,013; non-consolidated, 2,514
Number of consolidated subsidiaries*1	13 (3 in Japan, 10 overseas)

*1 Including companies accounted for by the equity method.

Overview of the Company

Our History

1919	Established as KUROSAKI REFRACTORIES CO., LTD. (in what is now Yahatanishi-ku, Kitakyushu City, Fukuoka)
1949	Listed on the Tokyo Stock Exchange
1956	Capital participation from Yawata Iron & Steel Co., Ltd (presently NIPPON STEEL CORPORATION)
1989	Acquired shares from the Spanish corporation ARISTEGUI MATERIAL REFRACTARIO, S. A., and made it the Company's subsidiary. Said subsidiary changed its name into AMR Refractarios, S. A. (presently KROSAKI AMR REFRACTARIOS, S. A.U., a consolidated subsidiary)
2000	Merged with Harima Ceramic Co., Ltd. and changed the name to KROSAKI HARIMA CORPORATION
2002	Made Kyushu Refractories Co., Ltd. a subsidiary (merged in 2012)
2011	Made TATA REFRACTORIES LIMITED (presently TRL KROSAKI REFRACTORIES LIMITED) in India a subsidiary
2019	Became a consolidated subsidiary of NIPPON STEEL CORPORATION (March) 100th anniversary of establishment (June 1)

KROSAKI HARIMA's Business Segments

Refractories-related businesses (refractories + furnaces) account for at least 90%



Fine ceramics for semiconductor manufacturing equipment



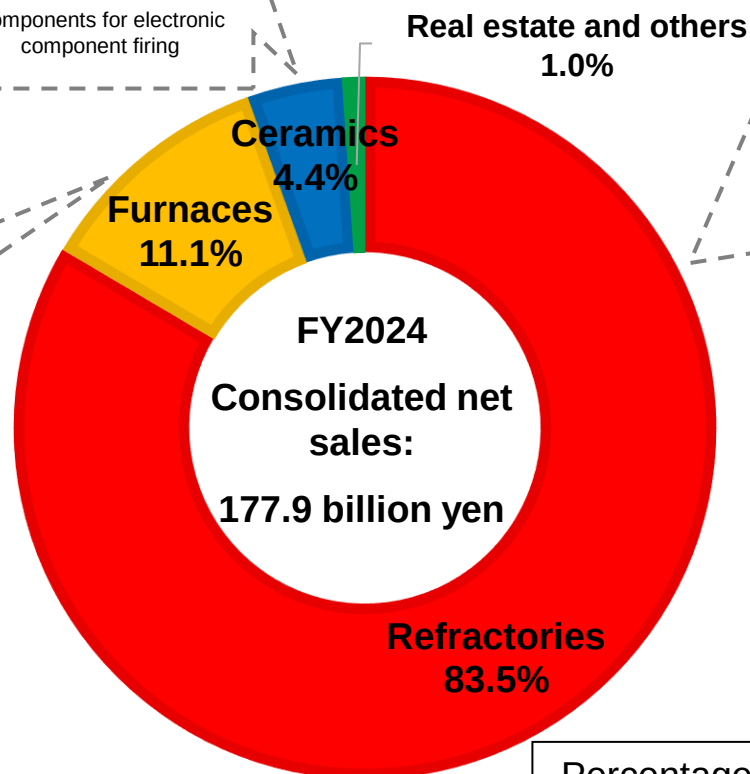
High-performance insulation materials



Components for electronic component firing

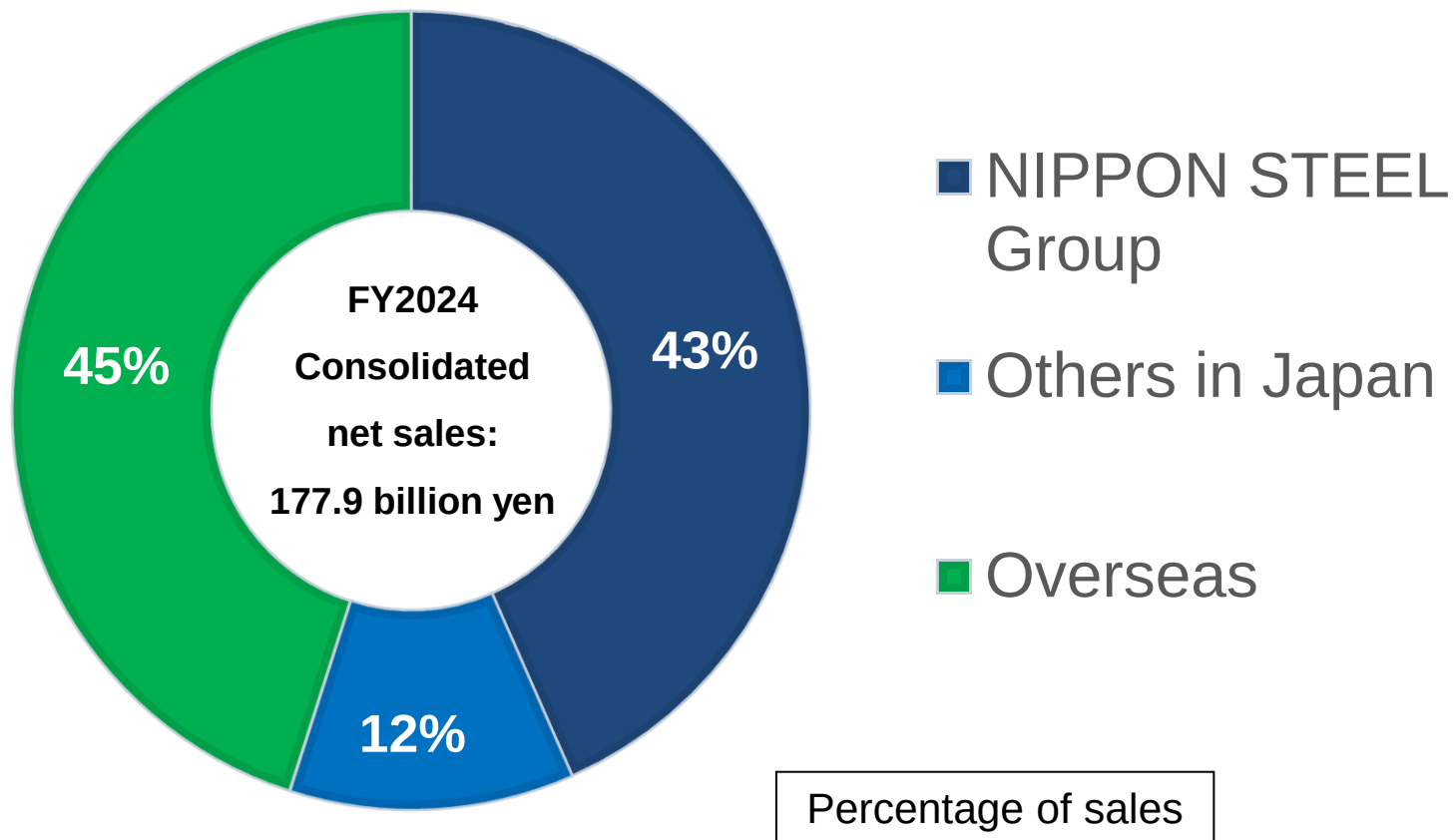


Example of construction work: pusher type billet continuous hot rolling heating furnace



Refractories

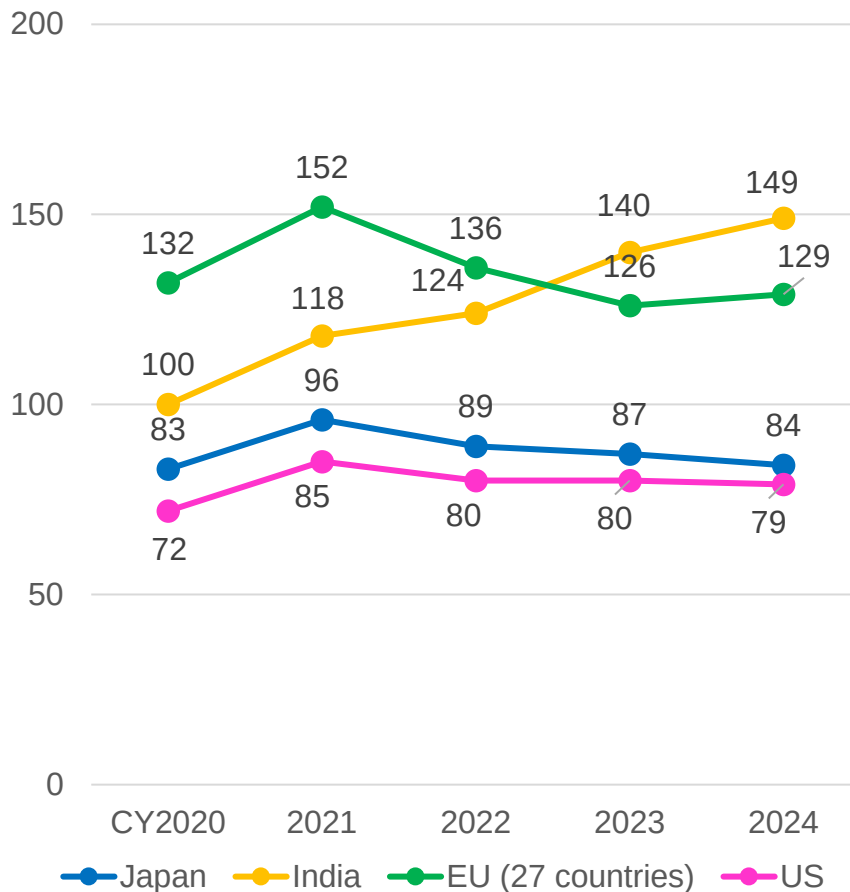
Composition of Sales by Customer



Crude Steel Output in the Steel Industry

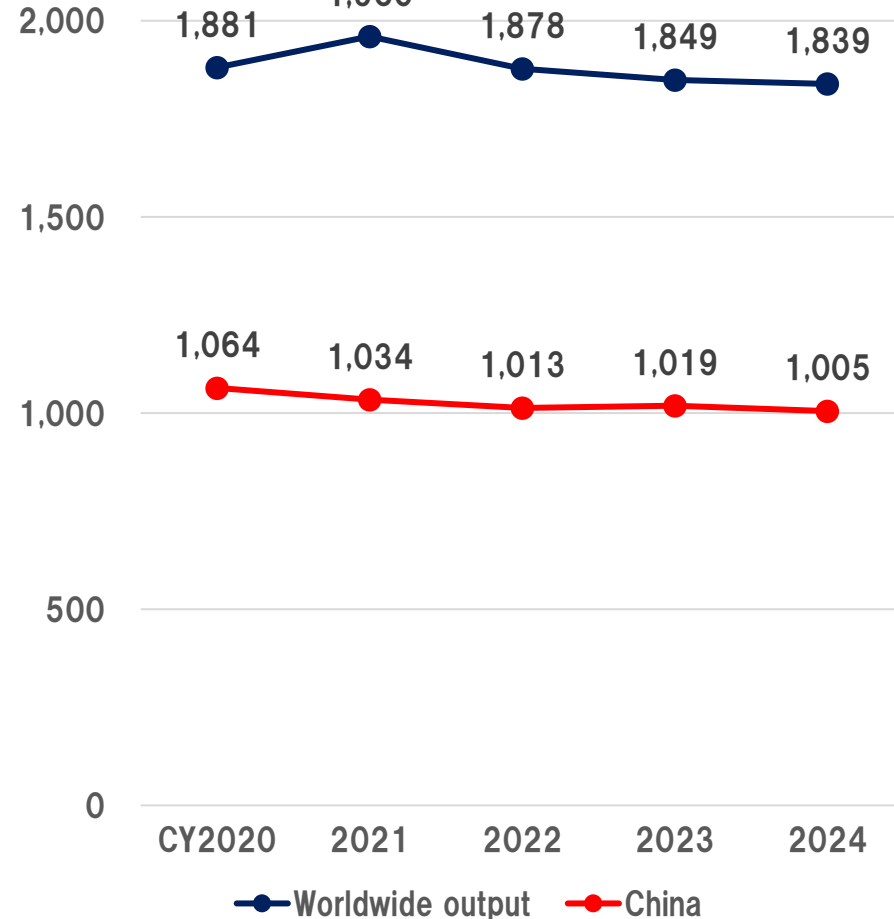
Crude steel output in Japan, India, the EU and the US

(Millions of tons)

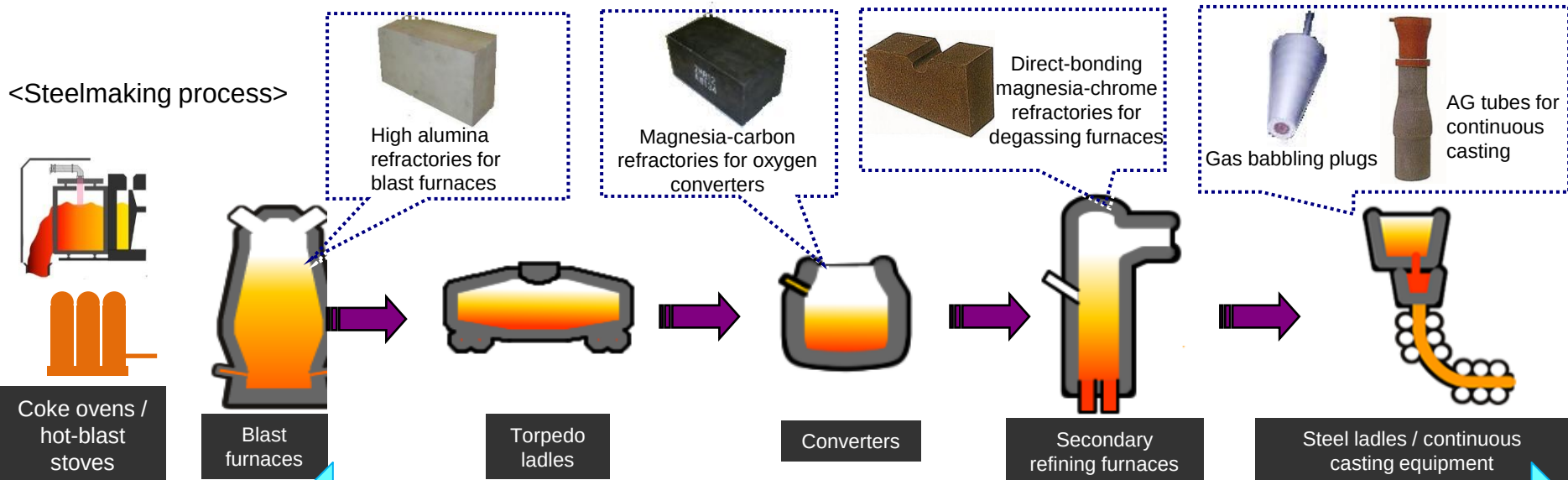


Crude steel output worldwide and in China

(Millions of tons)

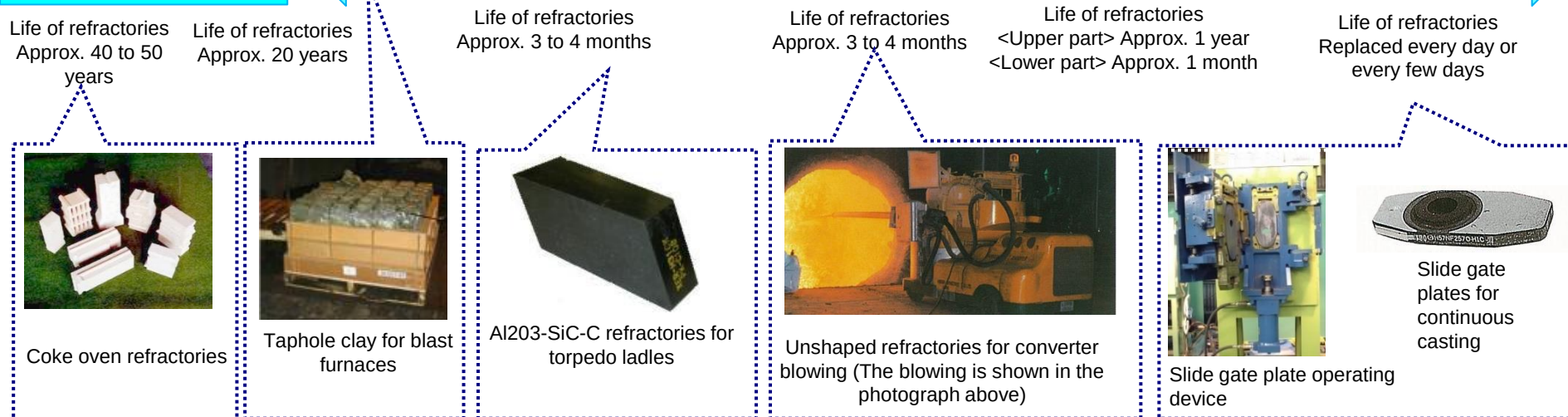


Our Business Areas (Refractories Business)



Demand linked to capital investment

Consumables



Main Markets and Production Bases for Refractories Products

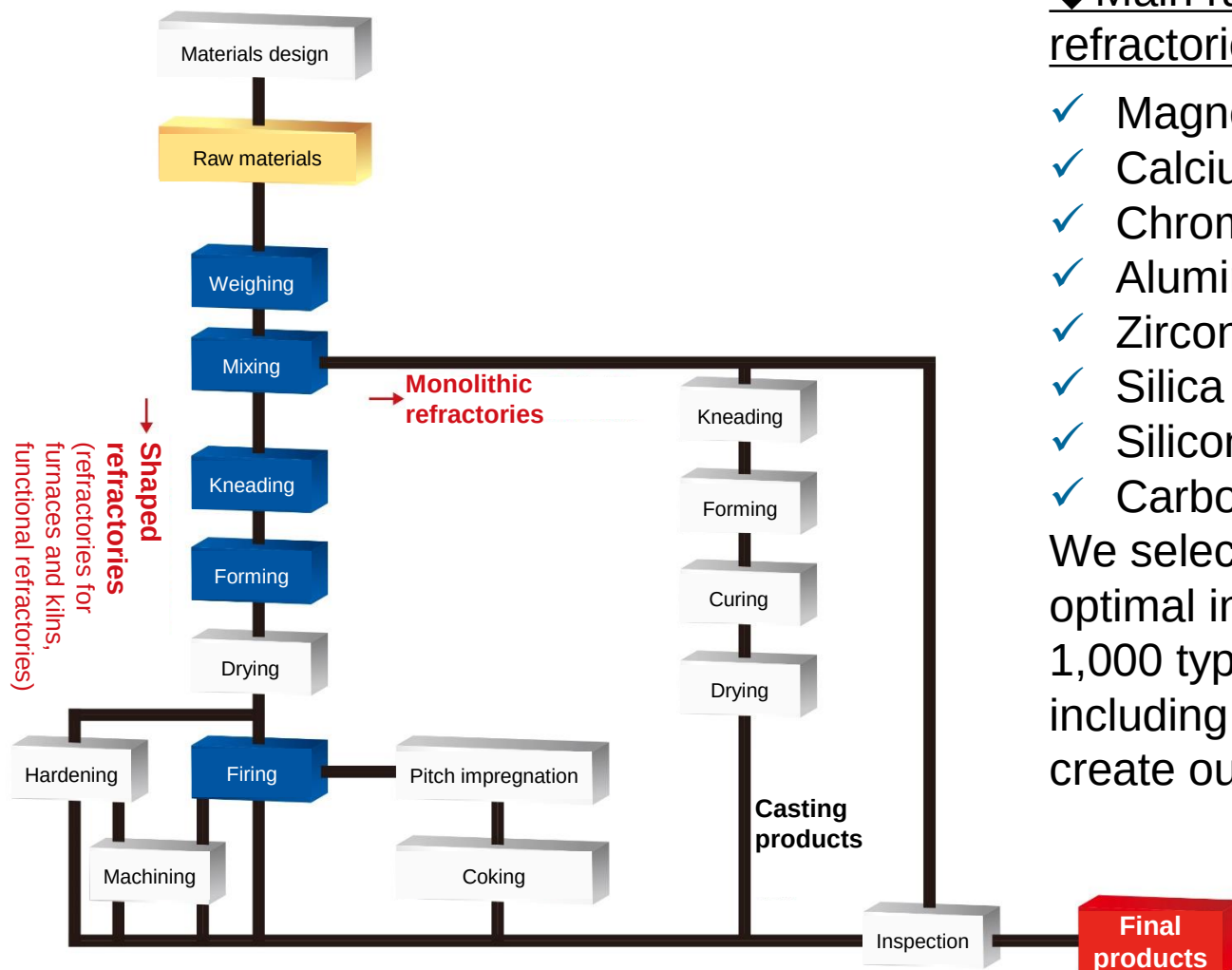
Type of refractory	Refractories for furnaces and kilns 	Functional refractories			Monolithic refractories	
		AG nozzles 	SN nozzles and plates for continuous casting 	Gas babbling plugs 	Repair materials / casting materials 	Taphole clay 
Main steelmaking equipment and facilities	Blast furnaces, hot-blast stoves, coke ovens, torpedo ladles, converters, secondary refining furnaces	Continuous casting equipment	Continuous casting equipment	Steel ladles	Blast furnaces, converters, steel ladles	Blast furnaces
Applications (functions)	Inner lining of equipment	Regulating the flow of molten steel	Controlling the flow of molten steel	Agitating the molten steel	Repairs and inner lining of equipment	Blocking blast furnace tap holes
The KROSAKI HARIMA Group's main production bases	•Japan •China •Spain •India	•Japan •China •India	•Japan •Spain •India •China	•Japan •India •China	•Japan •China •India •Spain	•Japan •India
The KROSAKI HARIMA Group's main markets	•Japan •Asia •Europe •North America •India •South America •China	•Japan •Asia •Europe •North America •Australia •China •India	•Japan •Asia •Europe •North America •Australia •China •India	•Japan •Europe •North America •Asia	•Japan •India •Asia •Australia •North America •Europe	•Japan •Asia •North America •Australia •India

Refractories Manufacturing Process

◆ Main raw materials used in refractories ◆

- ✓ Magnesium oxide (MgO)
- ✓ Calcium oxide (CaO)
- ✓ Chromium oxide (Cr₂O₃)
- ✓ Alumina (Al₂O₃)
- ✓ Zirconia (ZrO₂)
- ✓ Silica (SiO₂)
- ✓ Silicon carbide (SiC)
- ✓ Carbon (C), etc.

We select and combine the optimal ingredients from over 1,000 types of ingredients, including particle size, to create our own recipes.



Business Domain of the Furnace Segment

Upkeep and maintenance

We undertake the construction, repair and maintenance of refractories in equipment at steel mills, cement plants, and other facilities.



Refractories work in a coke oven



Refractories work inside a rotary cement kiln

Design and construction of industrial furnaces (heating furnaces, environmental industry furnaces, etc.)

We mainly engage in the design and construction of industrial furnaces (heating furnaces, incinerators, power generation boilers, etc.). We also design and construct only the locations where refractories are used, and provide engineering for ancillary machinery and equipment. We also contribute to addressing energy and environmental problems by achieving energy savings.



Exterior of a walking beam furnace (heating furnace)



Refractories work inside a heating furnace

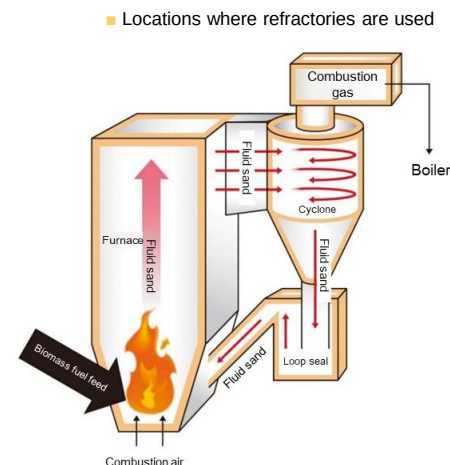
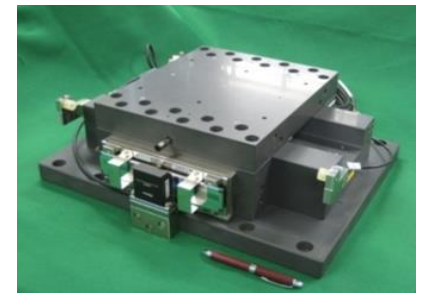
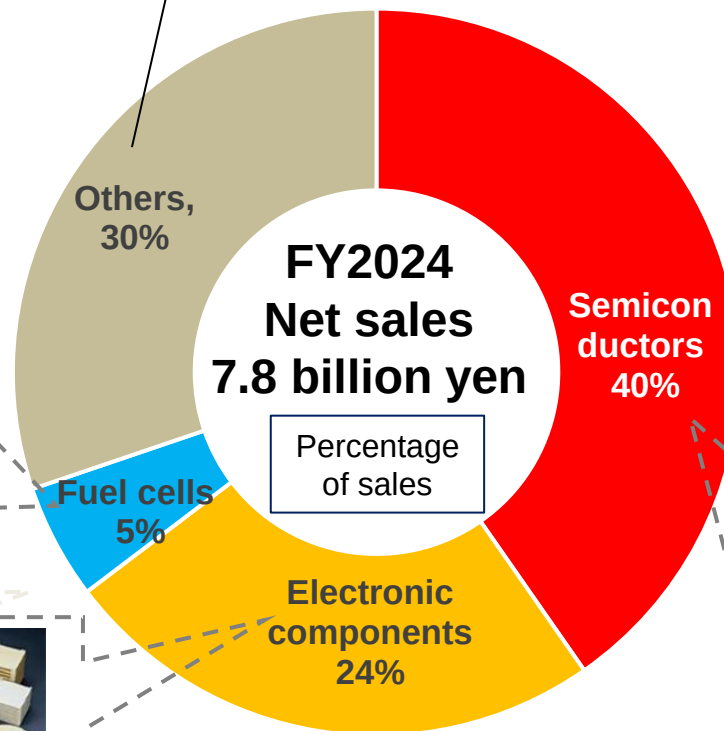
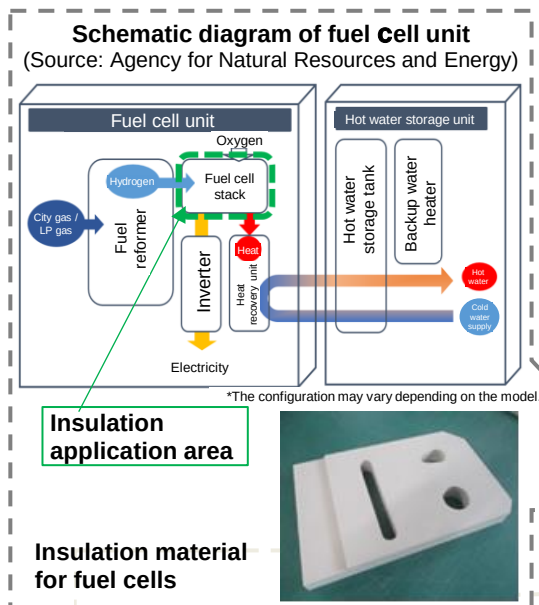


Illustration of a biomass power generation boiler

Our Business Areas (Ceramics Business)

Making full use of our advanced technologies and expertise in the Ceramics business, we contribute broadly to a wide range of industries, with a focus on semiconductors and electronic components.

Medical care, space, precision machinery, etc.



Ceramic component for semiconductor manufacturing equipment



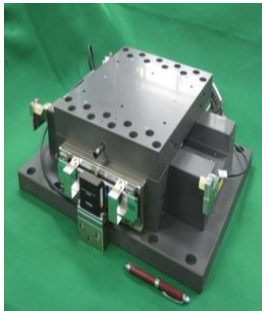
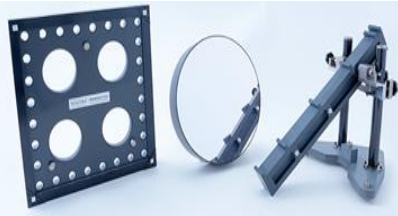
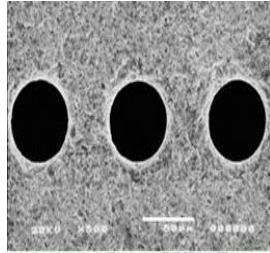
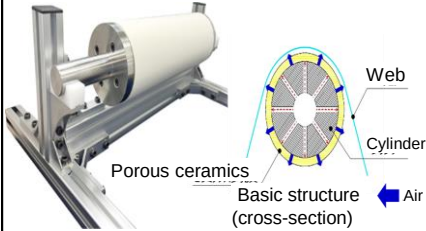
Heaters for semiconductor manufacturing facilities



Components for electronic component firing

Ceramics Product Lineup (1)

Contributing to industrial advancement with high-performance fine ceramics

Product category	Ceramics for precision components		Machinable ceramics	Ceramic rollers for floating transporters
Product examples				
Main applications	Semiconductor manufacturing equipment	Measurement devices and optical devices	Electronic component, industrial machinery, and semiconductor manufacturing	Web handling (transportation of functional films and other materials)
Features and characteristics	Applied in semiconductor manufacturing equipment and precision machinery, utilizing our strengths in large-sized shapes and precision processing, as well as assembly techniques	Utilizing the outstanding dimensional stability and environmental robustness of NEXCERA® zero-expansion ceramics, we apply them in reference devices for measurement instruments and optical mirrors.	- Machinable ceramics that can be processed in the same way as metals - Enables precision processing on the scale of microns - The photograph shows a Macerite HSP probe card (an IC chip inspection jig formed on a silicon wafer) drilled with tiny holes (60μm in diameter).	- Web materials such as films are kept floating and contactless through a uniform and stable supply of air from porous ceramics, which prevent the formation of creases. - Excellent wear resistance and electrical insulation

Ceramics Product Lineup (2)

Contributing to semiconductors, electronic components, fuel cells, etc.
with thermal control technologies

Product category	High-performance thermal insulation materials	Heaters	Components for electronic component firing
Product examples			
Main applications	Household fuel cells, steel and non-ferrous metals, industrial furnaces, aircrafts, automobiles	Semiconductor-related equipment	Electronic component manufacturing
Features and characteristics	• Provide better thermal insulation than still air and are markedly superior to existing insulation materials, especially in high-temperature ranges • Contribute to energy savings and improved productivity through thinner, smaller, and lighter components	• Used mainly for exhaust piping, vacuum pumps, and excluding units of semiconductor-related equipment • Detachable pipe heaters with excellent maintainability efficiently heat stainless steel pipes and others with high thermal insulation, contributing to energy savings	• Indispensable components, mainly for ceramic electronic component firing • We boast the No. 1 market share globally for use in multi-layer ceramic capacitors (MLCC).



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These materials are not disclosure materials designated under the Financial Instruments and Exchange Act, and we do not guarantee the accuracy or completeness of the information presented herein. Moreover, the forward-looking statements presented in these materials represent the views of the Company based on the information available at the time when the materials were prepared, and involve uncertainties.

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