



Shinagawa Refractories Co., Ltd.

# SHINAGAWA UPDATE

Results for Fiscal Year Ended March 2023

June 15, 2023

TSE Securities Code Number

5351

### **Table of Contents**

I. Overview of 1. Consolidated Financial Highlights 4. Factors Behind Changes in 2. Net Sales by Business Segment Operating Income (YoY) **Financial** 5. Consolidated Balance Sheet Results for 3. Operating Income by Business Segment 6. Consolidated Cash Flows FY 2022 II. FY 2023 1. Business Environment 7. Primary Action Plans **Business Plan** 2. Consolidated Financial Results: 2020-2022 1 Sales Expansion & Competitive 3. Consolidated Financial Forecasts for FY2023 Enhancement in Japan Overseas Business Expansion 4. Factors Behind Changes 3 Vigorous Capital Investments in 2023 Operating Income (YoY) 5. The 5th Mid-Term Management Plan: 8. Shareholders Return Basic Policy & Overview of Primary Action Plans 6. Reforming Group Management Structure 6-1. Figures by Business Segment (Net Sales and Operating Income)) 6-2. Sector Overview [1] [Refractory Sector] 「Insulation Sector」 「Ceramics Sector」 [Engineering Sector] 1. Shinagawa's Long-Term Vision 4. Respect for Human Rights and Ensuring III. Next Med-Term Management Plan 2. Initiatives Toward Comfortable Working Environment the 6th Mid-Term Management Plan 5. Addressing Climate Change through and 3. Overview of Sustainability Management Long-Term Vision Refractory Business IV. Supplementary 1. Corporate Management Principles 4. Major Products Notes 2. Consolidated Net Sales & 5. Key Features and Advantages

Ordinary Income for Past 11 Years

3. The Roles of Refractories Industry



I . Overview of Financial Results for 2022 (Fiscal Year ended March 2023)

# 1. Consolidated Financial Highlights

(Unit: Billion JPY)

	FY2021 Results	FY2022 Results	YoY
Net Sales	110.7	124.9	+12.9%
Operating Income (Operating Margin)	10.1 (9.1%)	10.8 (8.7%)	+7.3% (∇0.4%)
Ordinary Income	10.7	11.4	+6.9%
Profit attributable to owners of parent	5.3	8.3	+56.5%

- Japanese crude steel production in 2022 decreased by 8.1% to 87.85 million tons YoY mainly due to sluggish steel demand for automobiles triggered by shortage of semiconductors
- Achieved record-high performance due to progress in passing on soaring refractory raw material costs to sales prices and valuation gains in inventory
- Sales price will continue to be revised to properly reflect the rapid increase of raw material costs in the next fiscal year
- Profit attributable to owners of parent increased by 56.5% due to gains on sale of idle assets (Urawa-ku, Saitama City)

Note: YoY comparisons are calculated values in units of yen, not calculated values rounded down to units of billion yen. Same applies hereafter.

# Net Sales by Business Segment

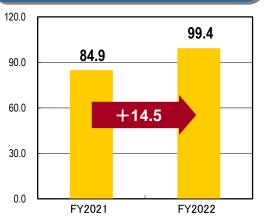
(Unit: Billion JPY)

	FY2021 Results	FY2022 Results	YoY
Refractories & Related Products	<b>84.9</b> [ 76.6 ]	<b>99.4</b> [ 79.6 ]	+17.2%
Engineering & Installation	<b>24.9</b> [ 22.6 ]	<b>24.4</b> [ 19.6 ]	▽ 1.7%
Real Estate	<b>0.9</b> [ 0.9]	<b>0.9</b> [ 0.8]	+ 1.5%
Total	<b>110.7</b> [100.0]	<b>124.9</b> [100.0]	+12.8%

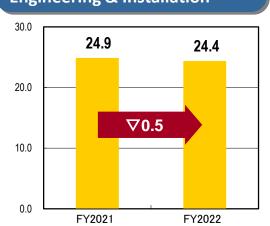
Note: Figures in square brackets [] indicate net sales share (%) by business segment.

Billion JPY

**Refractories & Related Products** 120.0



**Engineering & Installation** 



**Billion JPY** 

Billion JPY



# 3. Operating Income by Business Segment

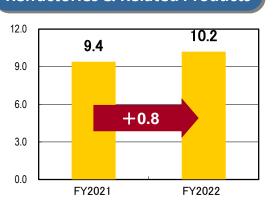
(Unit: Billion JPY)

	FY2021 Results	FY2022 Results	YoY
Refractories & Related Products	<b>9.4</b> [ 80.7]	<b>10.2</b> [ 80.6]	+8.9%
Engineering & Installation	<b>1.8</b> [ 15.6]	<b>1.9</b> [ 15.5]	+8.6%
Real Estate	<b>0.4</b> [ 3.7]	<b>0.4</b> [ 3.9]	+12.2%
Total	<b>11.7</b> [100.0]	<b>12.7</b> [100.0]	+8.9%
Adjustments	∇1.6	∇1.9	_
Operating Income	10.1	10.8	+7.3%

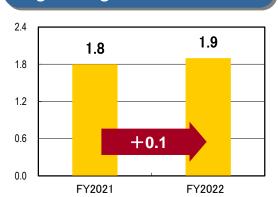
Note: Figures in square brackets [] indicate net sales share (%) by business segment.

**Billion JPY** 

**Refractories & Related Products** 

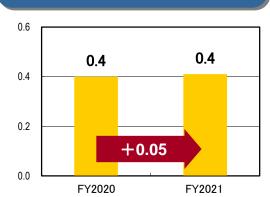






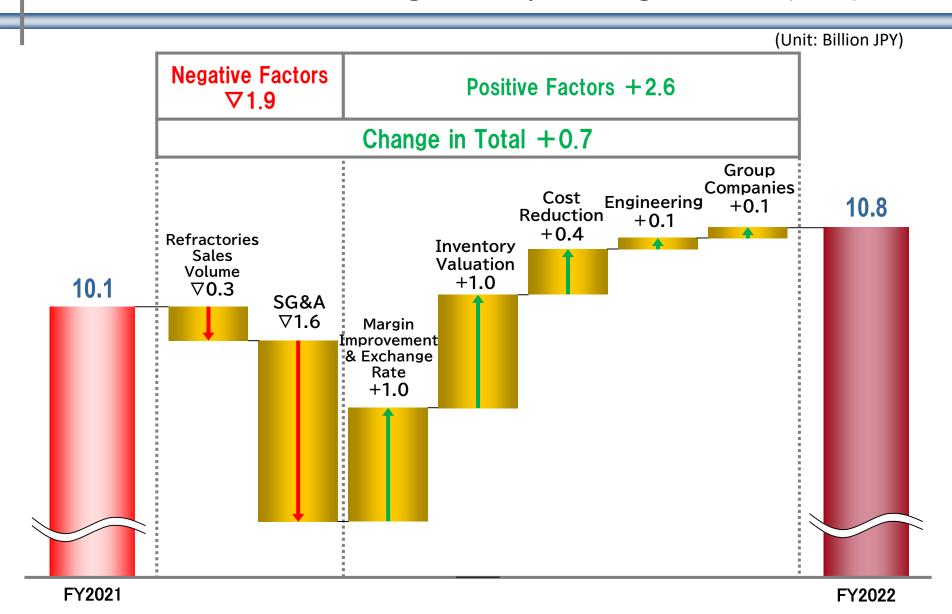
**Billion JPY** 

#### Real Estate



Billion JPY

# 4. Factors Behind Changes in Operating Income (YoY)



# 5. Consolidated Balance Sheet

(Unit: Billion JPY)

		(UII	iit: Billion JPY	)			
	FY2021	FY2022	Changes				
Current Assets	78.7	91.4	+12.6	■Cash & Cash Equivalents +1.4 ■M ■Raw Materials & Supplies +6.3	erchandise & Finis	hed Goods +4.2	
Fixed Assets	40.9	52.4	+11.4	Tangible fixed assets +3.7 •Goodwill +6.2 •Investments & other assets +1.4			
Total Assets	119.7	143.9	+24.1				
Current Liabilities	39.4	55.4	+16.0	•Notes and accounts payable +4.3	-Short-term de	ebt +11.7	
Fixed Liabilities	17.0	17.0	Δ0.1	1 •Long-term Loans Payable △0.4 •Deferred Tax Liabilities +0.3			
Total Liabilities	56.4	72.4	+16.0				
Shareholders' Equity	58.3	64.8	+6.5	■Retained Earnings +6.4			
Accumulated Other Comprehensive Incomes	1.8	3.2	+1.4	<ul> <li>Valuation difference on available—for Foreign Currency Translation Rese</li> </ul>		<b>-0.8</b>	
Non-controlling Interest	3.0	3.3	+0.2				
Total Net Assets	63.2	71.4	+8.1		FY2021	FY2022	
Total Liabilities & Net Assets	119.7	143.9	+24.1	ROE (Return on Equity)	8.8%	13.0%	

### 6. Consolidated Cash Flows

(Unit: Billion JPY)

	FY2021	FY2022	Changes
Cash Flows from Operating Activities	9.4	10.2	•
Cash Flows from Investing Activities	∇5.1	<b>▽15.9</b>	<b>4</b>
Cash Flows from Financing Activities	∇3.3	6.8	<b>4</b>
Cash and Cash Equivalents at the End of Period	16.7	18.1	+1.4

■ Interest-bearing Debt/Cash Flow Ratio

(Unit: Billion JPY)

	FY2021	FY2022	Changes
Interest-bearing Debt (a)	22.8	34.3	+11.4
Cash Flows from Operating Activities (b)	9.4	10.2	+0.7
Ratio (a)/(b)	2.4	3.3	+0.9

Main contents of cash flows

from operating activities ]

- Income before Income Taxes 12.4
- Depreciation 2.9
- Changes in Account Receivable 3.8
- Changes in Inventories ∇6.9
- Changes in Accounts Payable 1.4

Main contents of cash flows

from investing activities

- Purchase of Tangible Fixed Assets ∇4.7
- Expenses for the acquisition of shares of subsidiaries with a change in the scope of consolidation ∇11.9

Main contents of cash flows

from financing activities

- Net increase in short-term borrowings 11.1
- Expenses for the acquisition of shares of subsidiaries without a change in the scope of consolidation ∇2.1
- Cash Dividends Paid ∇1.8



### II. FY 2023 Business Plan

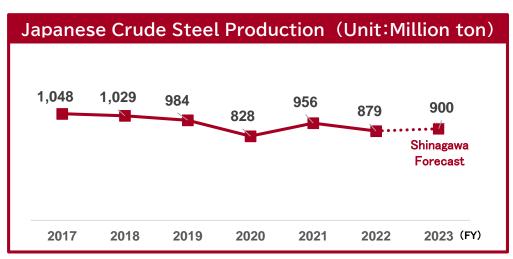
### 1. Business Environment

#### (Business Environment)

- The outlook of world economy is expected to remain uncertain due to inflation in various countries, the prolonged situation in Ukraine and geopolitical risks in East Asia.
- Crude steel production is expected to increase slightly year-on-year, and the reorganization of integrated producers is expected to continue.

### (Shinagawa's Responses)

- In response to soaring raw material prices and increased procurement risks, Shinagawa is moving ahead with securing inventory and diversifying procurement sources.
  - ⇒ Chinese raw material costs (magnesia, alumina, etc.) tend to stay at high level
  - ⇒ Li<sub>2</sub>CO<sub>3</sub> costs soared due to increasing demand for EVs
  - ⇒ Japanese raw material costs also soared due to increasing energy prices
  - ⇒ Replaced Russian electro-fused magnesia with alternative



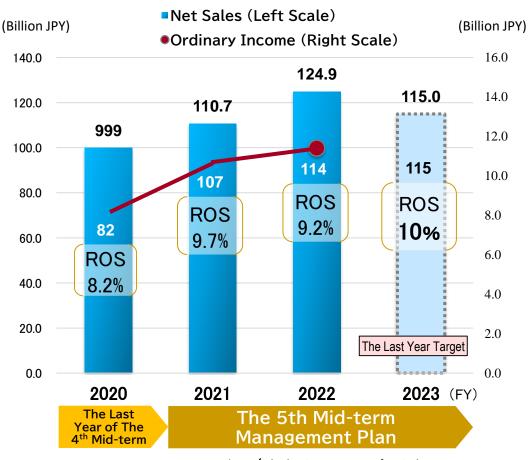
\*Source: The Japan Iron and Steel Federation



**\*Source: Shinagawa Refractories** 

### 2. Consolidated Financial Results: 2020-2022

# Achieved Record High Performance in 2022 and the Net Sales Surpassed the Target for the Final Year One Year Ahead



The 5th Mid-term Management Plan
The Last Year Target

	FY 2023 The Last Year Target
Net Sales	115 billion JPY
Ordinary Income	11.5 billion JPY
ROS	10%

#### Forecast made in 2019

Crude Steel Production in Japan:

90.0 Million t//Y

Exchange Rate: 105 JPY/US\$

#### What happened in 2022

Crude Steel Production in Japan:

87.85 Million t/Y

Exchange Rate (Average): 136 JPY/US\$

<sup>\*</sup> ROS(%) = (Ordinary Income ÷ Sales) x 100

### 3. Consolidated Financial Forecasts for FY2023

# Aim to achieve record-high performance in FY 2023, the final year of the 5th mid-term management plan, exceeding FY 2022

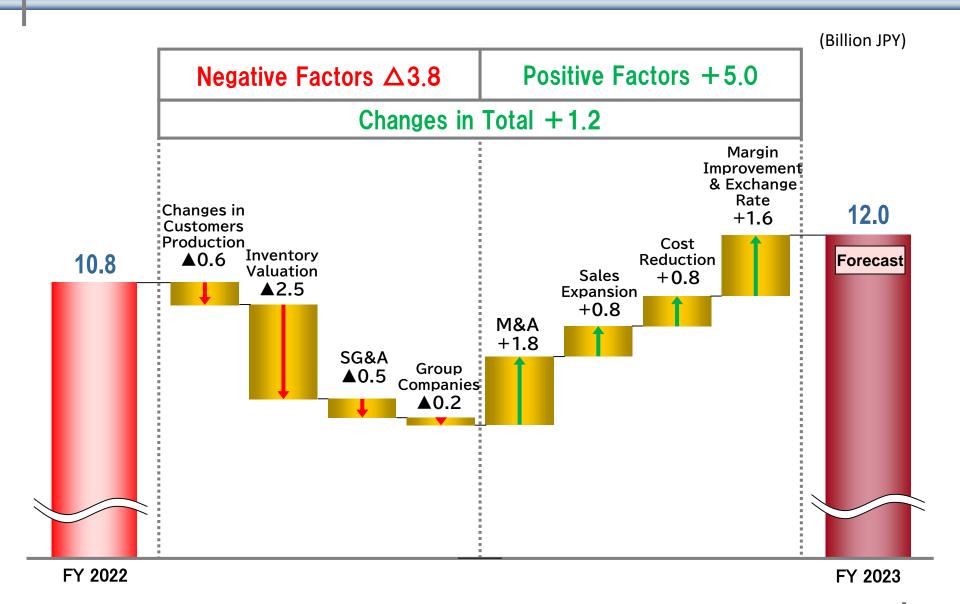
The business environment continues to be difficult due to the decrease of demand for refractories and engineering work in Japan, as well as soaring raw material and energy prices. Shinagawa aims to achieve the following results by continuously revising sales prices properly reflecting the rapid rise in raw material prices and energy costs, expanding business and sales through other majors such as M&A.

(Billion JPY)

	FY 2022	FY 2023	YoY
	Results	Forecast	
Net Sales	<b>124.9</b> [100.0]	<b>140.0</b> [100.0]	+12.0%
Operating Income	10.8 [ 8.7]	<b>12.0</b> [ 8.6]	+10.7%
Ordinary Income	<b>11.4</b> [ 9.2]	12.0 [ 8.6]	+4.7%
Profit attributable to owners of parent	8.3 [ 6.6]	<b>12.0</b> [ 8.6]	+44.5%

Note: Figures in square brackets [] indicate ratio (%) to Net Sales

# 4. Factors Behind Changes in 2023 Operating Income (YoY)



### 5. The 5<sup>th</sup> Mid-Term Management Plan:

### Basic Policy & Overview of Primary Action Plans

#### Basic Policy

Despite gradual decline of steel demand in Japan, Shinagawa aims to achieve record-high earnings by introducing new products that meet the diverse needs of our customers and our competitiveness achieved by production optimization.

# Primary Action Plans

- Sales Expansion & Competitive Enhancement in Japan
- 2 Overseas Business Expansion
- 3 New Business Opportunities
- 4 Vigorous Capital Investments

### [Main Initiatives for 2023]

Shinagawa positions 2023 as a critical springboard for the next med-term management plan and beyond, and focuses on initiatives to prepare for the future.



[Main Initiative ①]
Reforming Group
Management Structure

Required for Sustainable Future Growth

[Main Initiative 2]
Formulating Group
Long-term Vision

Shinagawa's Future Goal

## 6. Reforming Group Management Structure

- **Objectives of**
- 1 Promoting sustainable growth of the group by organizing business domains into four sectors to clearly identify opportunities and challenges for each sector
- the Reformation ② Furthering cross-sector collaboration and effective use of management resources by establishing the Group Management Strategy Council and Corporate Business HQ



From 2023

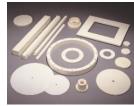
Four sectors structure allows Shinagawa to effectively strengthen the business operations of the entire group







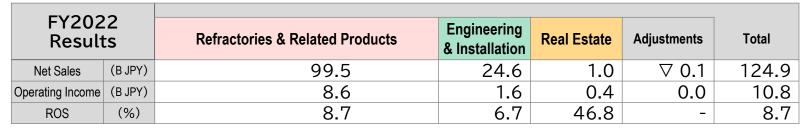






## 6-1. Figures by Business Segment (Net Sales and Operating Income)





EV202	12					
FY202 Foreca		Refractories & Related Products	Engineering & Installation	Real Estate	Adjustments	Total
Net Sales	(B JPY)	117.1	22.2	0.8	▽ 0.2	140.0
Operating Income	(B JPY)	10.2	1.2	0.5	0.0	12.0
ROS	(%)	8.8	5.5	57.0	_	8.6

Ву	New
Seg	ment

E) (0.00	_							
FY202 Result	-	Refractory	Insulation	Ceramics	Engineering & Installation	Others (Real Estate)	Adjustments	Total
Net Sales	(B JPY)	81.1	17.9	2.1	24.6	1.0	▽ 1.9	124.9
Operating Income	(B JPY)	5.3	3.2	0.1	1.6	0.4	0.0	10.8
ROS	(%)	6.6	17.9	6.4	6.7	46.8	-	8.7

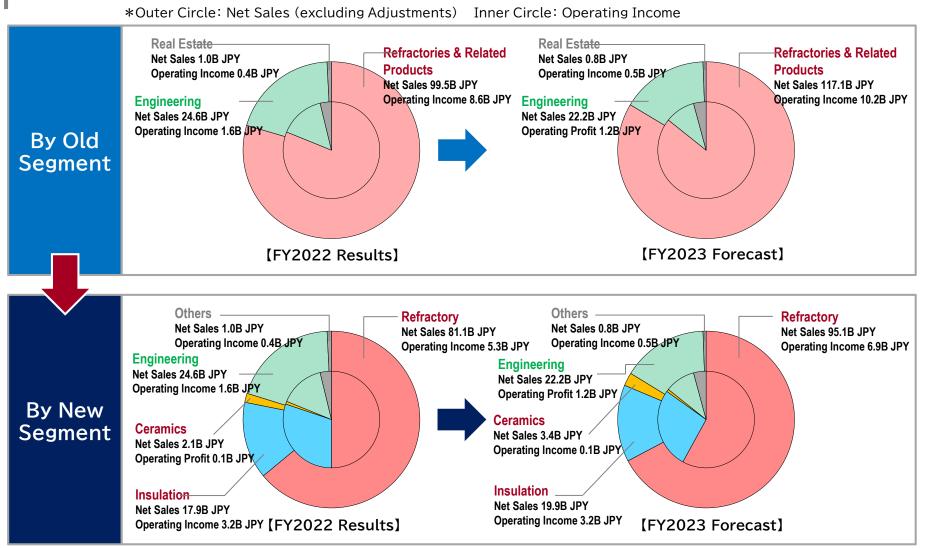
E)(0.00	`~							
FY202 Foreca	_	Refractory	Insulation	Ceramics	Engineering & Installation	Others (Real Estate)	Adjustments	Total
Net Sales	(B JPY)	95.1	19.9	3.4	22.2	8.0	△ 1.7	140.0
Operating Income	(B JPY)	6.9	3.2	0.1	1.2	0.5	0.0	12.0
ROS	(%)	7.3	16.2	3.3	5.5	57.0	_	8.6

Note 1: The reclassification of FY2022 results to new segments was done by a simple method and may change in the future.

Note 2: Overhead costs, which were previously included in adjustments, are now allocated to each segment.

Note 3: Sales transactions within the group, which were previously eliminated between segments, are eliminated in adjustments.

## 6-1. Figures by Business Segment (Net Sales and Operating Income)



Note 1: The reclassification of FY2022 results to new segments was done by a simple method and may change in the future.

Note 2: Overhead costs, which were previously included in adjustments, are now allocated to each segment.

Note 3: Sales transactions within the group, which were previously eliminated between segments, are eliminated in adjustments.

### 6-2. Sector Overview 1



# 「Refractory Sector」

### **Sector Vision**

### Be the Customer's First Choice

### Growth Strategy/ Basic Policy

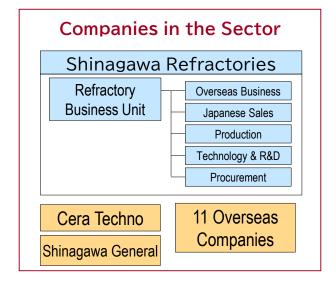
- Sales Expansion & Competitiveness Enhancement in Japan
  - · Maintain sales volume in Japan for steel and expand sales for non-ferrous metals and industrial furnaces
  - Strengthen cost competitiveness through production restructuring and optimization
  - Reinforce manufacturing capabilities by sharing best practices globally within the group companies

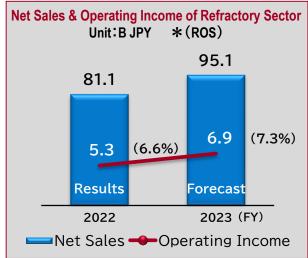
### Overseas Business Reinforcement & Expansion

- Grow business in the Americas by strengthening local production and sales capabilities
- Expand overseas business alliances and promote M&A mainly in the area of flow control system refractories
- Enhance production bases in Japan for export businesses and further focus on product development for overseas markets

### **Pursuing Sustainability**

- Expand used refractory recycling business in collaboration with the Engineering Sector
- · Collaborate with the Insulation Sector to promote solution-oriented sales to reduce customers' heat loss
- Enhance product line-up for new iron-making processes toward carbon neutrality
- Further reduce GHG emissions from our production processes through proactive capital investment





# 6-2. Sector Overview 2



# [Insulation Sector]

### **Sector Vision**

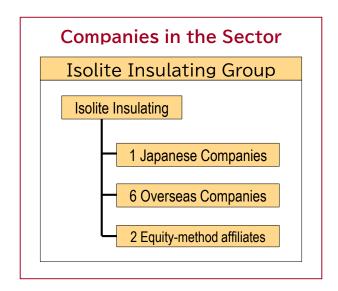
- Pursue ambidextrous management of "Exploitation and Exploration" for future growth
- Expand global supply of environmental friendly insulation products

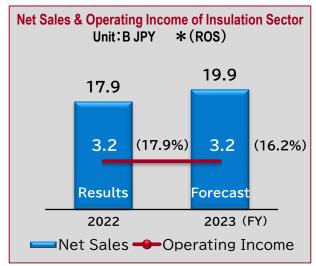
### Growth Strategy/ Basic Policy

- **Exploitation of Core (Insulation) Business** 
  - Further improve customer satisfaction by reinforcing collaboration between manufacturing, sales, R&D and engineering
  - Quality and productivity improvement and cost reduction through innovation of fiberization technology
  - Further implement best practices by strengthening support for overseas subsidiaries
  - Strengthen collaboration with the Refractory Sector sharing a sales platform

### **Exploration of New Growth Opportunities**

- Expand market as necessities for producing automobile/fuel cell parts & semiconductors/electronic parts
- Increase market penetration for noncombustible building materials and energy-saving/sustainable products with our fireproof insulation performance
- Marketing One-of-a-kind Product with Advanced Performance
  - Further enhance insulation performance based on the concept of "friendly to people and the environment" — Enhance product line-up of biosoluble fiber and alumina fiber products —





## 6-2. Sector Overview 3 [Ceramics Sector]



### **Sector Vision**

**Ensure a strong presence within Shinagawa Group by** growing with "Advanced Ceramics Technology"

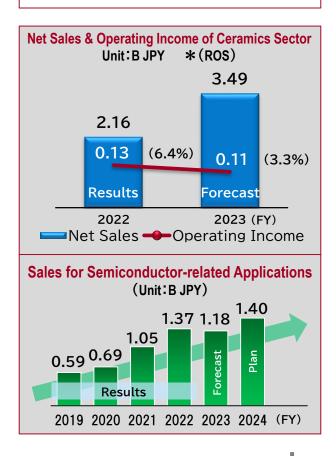
### Growth Strategy/ Basic Policy

- **Exploitation of Existing Markets** 
  - Increase production capacity for the growing market of semiconductor manufacturing equipment
  - Reinforce cost competitiveness for the market of liquid crystal manufacturing equipment
- **Enter and Expand Sales in Three New Markets** 
  - ① Special evaporation materials ② Large roll materials 3 Lithium-ion battery
- **Product Line-Up Expansion** 
  - Sales expansion by enhancing product line-up of abrasion resistant ceramics
- **Expansion by introducing New Technology and Reorganization**

#### Companies in the Sector

Shinagawa Fine Ceramics

Shinagawa Specialty Ceramics Americas



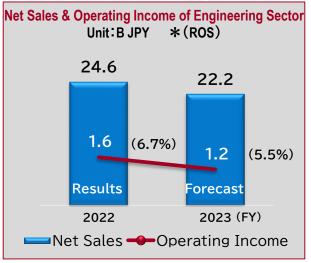
### **Sector Vision**

Fully integrate accumulated advanced technology with experienced workforce to achieve sustainable growth

### Growth Strategy/ Basic Policy

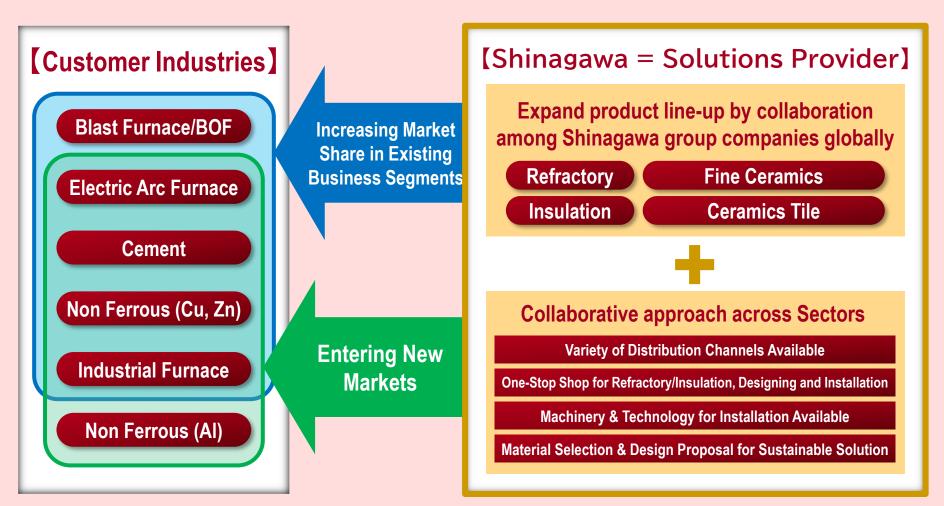
- **Securing Large Scale Projects** 
  - Continuously secure large-scale projects by further improving customer satisfaction for safety, quality, and technology
- Business expansion by fully integrating the group's strengths
  - Promote business expansion by enhancing comprehensive capabilities through optimally utilize all resources available within the group
- **Pursuing Sustainability** 
  - Pursue sustainability by continuously taking actions toward carbon neutrality and expanding recycling business
- **Evolving Installation Technologies for the Future** 
  - Actively promote the development of new technologies and pursue the installation business of a new era (DX, Automation, Diversity)





# 7. Primary Action Plans 11 Sales Expansion & Competitive Enhancement in Japan

1) Sales expansion through collaboration among refractory, insulation, and engineering businesses



# 7. Primary Action Plans 11 Sales Expansion & Competitive Enhancement in Japan

## 2) Business Expansion into the Aluminum Industry

The world's leading producer of monolithic refractories for the aluminum industry

### Allied Mineral Products (AMP)

Shinagawa: Exclusive Distributor of AMP's Products for Aluminum Industry in Japan

**Entry into the Aluminum Industry in Japan** 

Aiming for Net Sales of 2 Billion JPY in 2028

# Strategic Sales Targets for the Aluminum Industry in Japan (Unit: Billion JPY)

#### 2.5 2 Billion JPY Refractory market for aluminum industry in Japan is assumed to be 10 billion JPY 1.5 Market **Entry** 0.5 0 2022 2023 2024 2025 2026 2027 2028 (FY)

#### AMP's Global Locations (14)



# 7. Primary Action Plans 2 Overseas Business Expansion

# 1) Increasing Trend of Overseas Sales

42.4 Billion JPY Welcoming SRB (Brazil) and SSCA (USA) with net sales 30% of total 13.3 Billion JPY, the Group's overseas net sales in FY2023 are expected to reach 42.4 Billion JPY, far [FY2023] 140 Billion JPY exceeding the med-term plan, and the overseas sales ration is expected to reach at 30%. Expected to overachieve **[Current Forecast]** 27.7 Billion JPY 22.0 Billion JPY 22% 22.2 Billion JPY 20% 13.6 Billion JPY 20% 14% [FY2023] [FY2022] 115 Billion JPY 124.9 Billion JPY [FY2021] [FY2013] 110.7 Billion JPY Results 96.9 Billion JPY Results Results The 5<sup>th</sup> Mid-Term Plan

# 7. Primary Action Plans 2 Overseas Business Expansion

### 2) Growth Strategy in the Americas

#### [Implemented Strategy in 2022]

# Increasing Production & Sales Capabilities in the Americas

In December 2022, Shinagawa completed the acquisition of the Refractories business in Brazil and the Wear-Resistant Ceramics business in USA from Saint-Gobain (France)

Contributing to our Consolidated Performance from FY2023

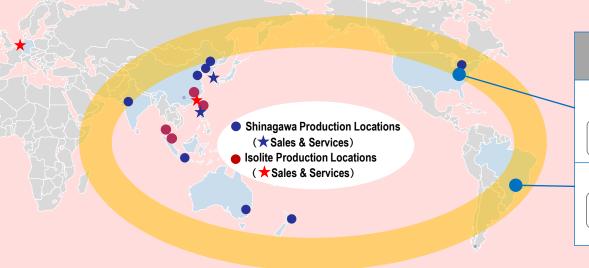
FY2023: Net Sales+13.3 B JPY, Operating Income +1.8 B JPY

#### [Strategy Beyond 2023]

# Further Business Growth in the Americas by fully Utilizing New Locations

Building a production & sales network among Shinagawa Group locations, including the supply of refractories from Brazil to USA and Australia

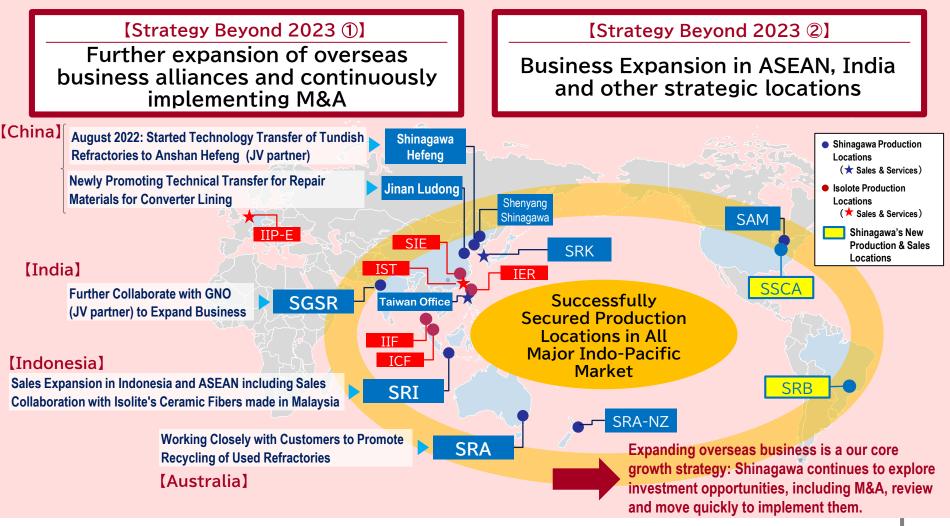
Reinforcing Supply Chains in the Americas and South Pacific



	Location	Capital Stock	Employees (as of December 2022)
SSCA  (Manufacture & Sales of Wear-Resistant Ceramics	Latrobe, PA USA	7 Million USD	53
SRB (Manufacture & Sales of Refractories	Vinhedo, SP Brazil	192 Million Brazilian Real	365

# 7. Primary Action Plans 2 Overseas Business Expansion

## 3) Overseas Business Expansion Strategy

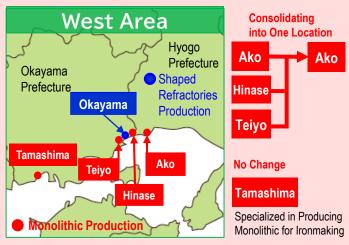




# 7. Primary Action Plans 3 Vigorous Capital Investments

### Production Optimization in Japan

### Consolidating Monolithic Production in the West area to **Enhance Competitiveness (4 Locations ⇒ 2 Locations)**



Construction of a State-of-the-Art Plant started in 2021 at Ako to Exclusively Produce Monolithic in the West Area (Total Capital Investment: 3.7 Billion JPY)

- The overall schedule progresses as planned
  - ⇒ Infrastructure has been completed, and construction of new plant facilities is underway.
- Scheduled to start trial operation in January 2024
  - ⇒ Commercial production to start in April 2024

#### Consolidation: Before and After

	Plant	Before	After	Note	
	Okayama			No Change	
a	Ako	0	0	Building a State of the Art New Plant	
West Area	Hinase	0 ☆	☆	Will be Specialized in Producing Mold Powder	
>	Teiyo	0		Closed in 2024	
	Tamashima	0	0	No Change	
5 1 11 11 5 10 1 0 11					

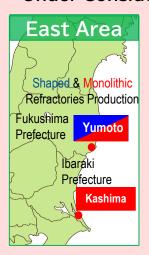
Production Line-up ☐:Shaped ○:Monolithic ☆: Mold Powder

#### Major Capital Investment in FY2022

Plant	設備	Amount
Okayama	AGV (x2)	162 Million JPY
Ako	New Production Lines for Monolithic	918 Million JPY
Hinase	New Spray Drier	411 Million JPY

\*Total Capital Investment in FY2022: 5.181 Million JPY

#### **Investments in East Area Under Consideration**



Considering Production Optimization of the East Area: (1) Responding reorganization of the production systems of integrated steel companies, and (2) Making Yumoto Plant as the Mother Factory among Shinagawa Group's Overseas Operations.

- Production Optimization for Monolithic
- Modernization of Flow Control System Refractories Production Lines

### 8. Shareholders Return

### Sustainable Return of Profits to our Shareholders

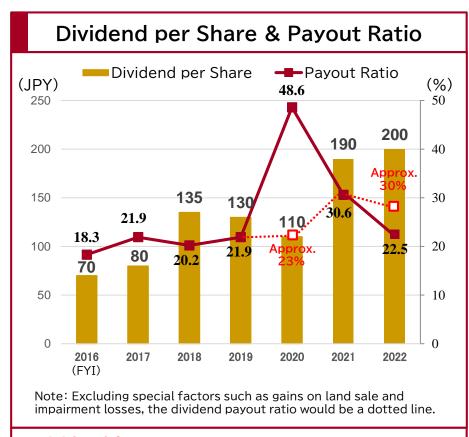
### [Dividend Policy]

Considering the important of enhancing the return of profits to our shareholders, Shinagawa decided to aim for a dividend payout ratio of 30%.

\* 20% until 2020

### (Investments for Growth)

Shinagawa continues to actively sell idle assets such as land, and in principle, will allocate the generated cash to future growth investments.



#### <Dividend for FY2023>

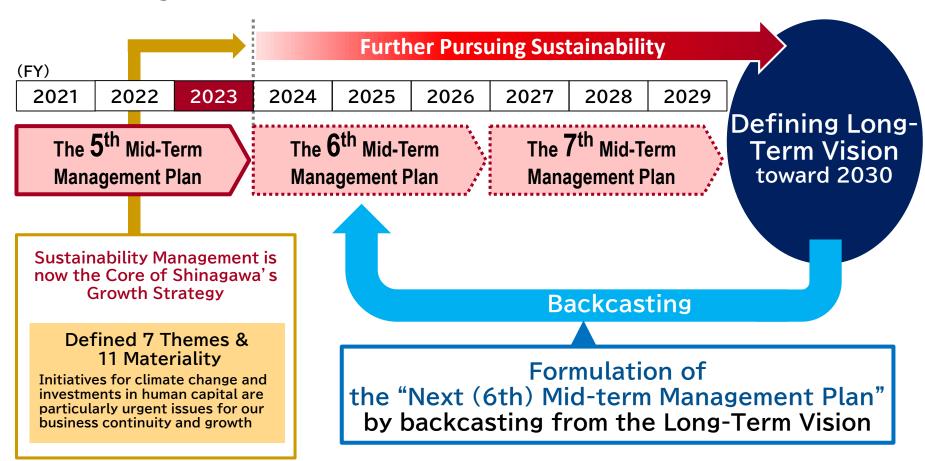
The full-year earnings forecast for FY2022 is 140.0 billion JPY in net sales and 12.0 billion JPY in ordinary income. Considering the recent uncertainty in raw material prices and foreign exchange trends, the dividend for FY 2023 has not been decided yet.



# Ⅲ. Next Med-Term Management Plan and Long-Term Vision

## 1. Shinagawa's Long-Term Vision

Defining Shinagawa's Long-Term Vision that pursues both business growth and sustainable solutions for social issues together



# 2. Initiatives Toward the 6th Mid-Term Management Plan

Focusing on ROIC Management, Shinagawa further promotes Growth Strategy and maximize Corporate Values to further create and strengthen our "Earning Power"

### **ROIC Management**

Management Strategy that emphasizes Capital Efficiency

Put Emphasis on Cost of Capital and Pursuing the Efficiency of Profit Creation for Growth

⇒ Define ROIC Targets (long and short term) by each Sector and Focus on Achieving Long-Term Targets

\*: The 6th Mid-Term Management Plan will be published on May 2024

### **Growth Strategy**

Further Promoting Growth Strategy toward The 6<sup>th</sup> Mid-Term Management Plan

### **Optimization of Business Portfolio for both Manufacturing and Sales**

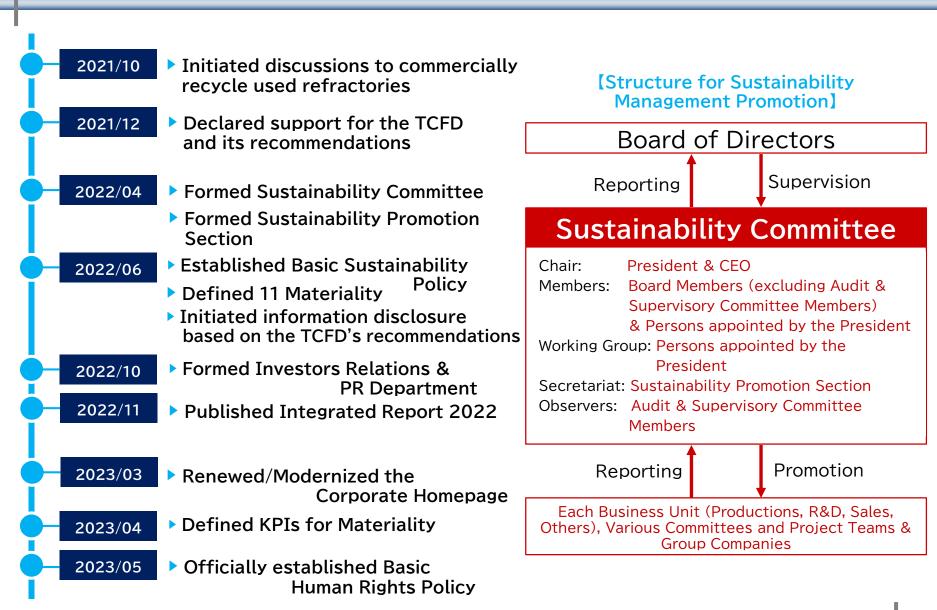
- Expanding Business Scale and Optimizing Sales Portfolio
  - Maintain Sales Volume for Steel Industries in Japan
  - Increase Sales for Non-Ferrous/Industrial and Overseas Revenues
  - Modernize Production Line for Flow Control System Refractories to accelerate Overseas Expansion
- Responding timely to changes in the production systems of our customers' industries in Japan
  - Reorganizing Production Portfolio in Japan

# Maximizing Corporate Values

Fully Utilizing Results by Maximizing Corporate Values, Shinagawa Reinvests in Further Growth and Enhance Returns to Stakeholders

 Proper levels of Dividend and Total Payout Ratio will be considered as Shareholder Returns

# 3. Overview of Sustainability Management



# 4. Respect for Human Rights and Ensuring <u>Comfortable Working Environment</u>

### "Shinagawa's Charter of Corporate Behavior": Respect for Human Rights and Ensuring a Comfortable Working Environment

Shinagawa respects human rights, individuality, and personality and never discriminate on the basis of gender, nationality, principles, physical or mental disability, or social status. We ensure a safe and comfortable working environment for our employees and strive to develop the abilities of each and every employee.

#### **Basic Human Rights Policy**

- Fully support and respect international norms on human rights
- Request fully commitment from supply chain partner companies
- Zero-tolerance for any kind of discrimination and harassment
- Conduct Human Rights Due Diligence

#### Human Resource Development Policy

- Developing a workforce that is rich in diversity, highly specialized, and capable of executing strategies
- Provide proper environment for Human Resource Development
  - Full respect for human rights and individuality
  - Safe and comfortable working environment
  - Objective and fair evaluation

#### **Diversity & Inclusion**

Securing active workplace environment for diverse workforces

[Primary Initiatives]

**Compliance Training** 

**Harassment Prevention** 

**Focus on Diversity Recruitment** 

### Ensuring Comfortable Working Environment

Supporting work styles tailored to each employee's individual situation

(Primary Initiatives)

Active Use of Annual Paid Leave

**Introducing Flexible Working Styles** 

Active Use of Family Care Leave

**Dormitory and Company Housing** 

#### Health & Safety

Creating workplaces to ensure the safety and health of employees

[Primary Initiatives]

**Hazard Simulation Training Center** 

Implementing Safety Patrol

**Promoting Workplace 5S Activities** 

Managing Mental Health

KPI Female Managers
25%~
(by 2030)

Foreign National Employees

3x~ vs 2020
(by 2030)

Employees with Disabilities 3.0%~ (by 2025)

Male taking Childcare Leave 100%

Annual Leave Taken 80%~ Training Hours 20 hours~ Per Year/Employee

# 5. Addressing Climate Change through Refractory Business

Responding to Urgent Issue of "Addressing Climate Change," In addition to Initiative within Shinagawa (Scope1.Scope2),

「Shinagawa focuses on Reducing CO<sub>2</sub> at Customers through refractory Business」(Scope3)

# Initiatives toward Scope 3

- Promoting Recycling of used Refractories
- 2 Developing Environment Friendly Products
- **3** Providing Solutions for Heat Loss

and others

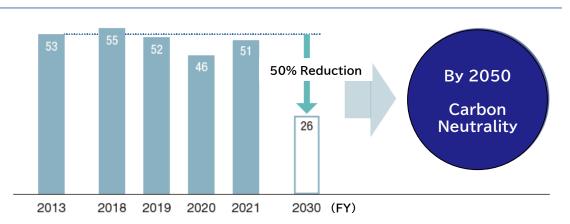
hinagawa's Initiative

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By FY2030 50% Reduction in CO<sub>2</sub> Emissions (Scope1.2) By FY2050
Carbon Neutrality
(Scope1.2+Scope3)

Target of CO<sub>2</sub> Emissions Reduction (KT/Y)



Shinagawa Pursues and Promotes both 「Growth Strategy」 & 「Sustainable Solutions」 Together





Shinagawa Refractories Co., Ltd.

# SHINAGAWA UPDATE

Results for Fiscal Year Ended March 2023

June 15, 2023

TSE Securities Code Number

5351



# IV. Supplementary Notes

# 1. Corporate Management Principles

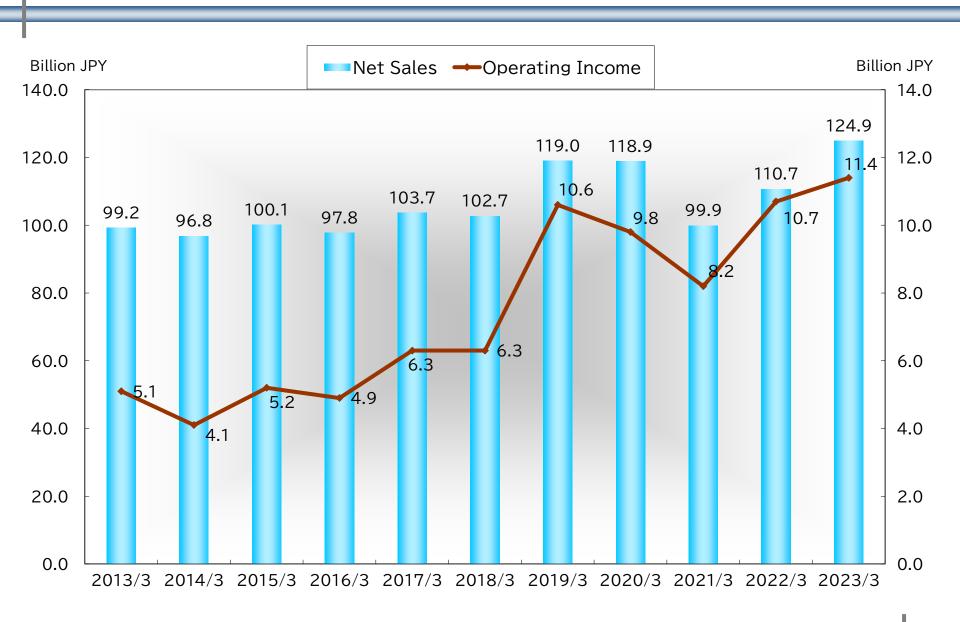
### **Shinagawa's Management Principles**

Shinagawa contributes to the industrial development and the realization of a prosperous and sustainable society through providing high quality refractory products and engineering services such as designing and constructions of various furnaces.

We develop human resources with a high level of creativity and execution abilities, pursue excellence in technical capabilities, and establish solid financial base to achieve the followings:

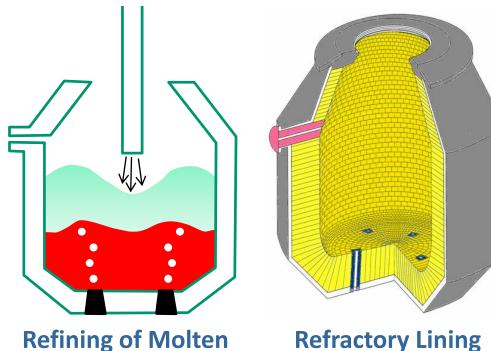
- 1 Be a leading global provider of thermal solutions and refractory engineering services
- 2 Respond to customers' needs with timely, well-thought-out and reliable solutions
- 3 Earn high level of trusts from our shareholders, suppliers, customers and communities
- 4 Provide our employees with a safe, positive and productive working environment

## 2. Consolidated Net Sales & Ordinary Income for Past 11 Years



# 3. The Roles of Refractories Industry

- Many vital materials that support important social infrastructure, such as steel, non-ferrous metals, cement and glass, are produced in furnaces lined with refractory products.
- The refractories industry supports the foundation of these key industries through providing refractory products and engineering services for designing and constructions of furnaces.



Refining of Molten Steel in Converter

Fire Bricks for Converters

Furnace Construction with Fire Bricks

# 4. Major Products

### Refractories

- Refractories are industrial materials that can resist ultra-high temperatures in excess of 1,500 °C.
- Approximately 80% of refractory production is consumed by the steel industry.

### **Shaped Refractories**

Shaped refractories ("fire bricks") provide basic support to industrial furnaces and ultra-high temperature processing facilities

- Magnesia-based bricks
- Carbon-containing bricks
- Fire-clay and high-alumina bricks
- Flow control system refractories for continuous casting
- Silicon carbide bricks
- Silica bricks, etc.



#### **Monolithic Refractories**

A complete system package including "product, design, installation and after-sales service" that can suit a wide range of applications

- Castable refractories
- Precast shapes
- Gunning refractories
- Plastic and ramming mixes
- Refractory mortars, etc.



#### **Mold Powder**

# An essential material for producing high-quality steel

(Powder-type material added to maintain the surface temperature inside casting molds. It prevents the steel from oxidizing and acts as a lubricant during the continuous casting process.



## 5. Key Features and Advantages

Leading Company of Ultra-High
Temperature Technologies

**Next Page** 

Solid Customer Base with Highly-Advanced Technological Capabilities

3 Active Global Business Expansion

### 5. Key Features and Advantages

## **Leading Company of Ultra-High Temperature Technology**

# Solid Technology Development and Commercialization Capabilities supported by Key Two Technologies

- Refractories
- Ceramic Fibers
- Fine Ceramics
- Chemical Products

Refractory Manufacturing Technology



- Furnace Design
- Engineering Services
  - Furnace construction work for blast furnaces, converters, incinerators
  - Ultra-fast relining of blast furnaces and hot stoves
  - Maintenance of furnaces used by iron and steelmaking works

**Customer-Oriented Technological Support** 

Development Capability to Meet Customer Needs

#### Disclaimer

This document is intended to provide information on the results for the fiscal year ended March 2023 (April 2022 – March 2023) and is not intended to solicit investment in securities issued by the Company.

The document was prepared based on data available as of June 15, 2023. Opinions, forecasts, etc. described herein are based on the Company's judgment at the time of the preparation of the document. The Company does not warrant or guarantee the accuracy or completeness of the information contained herein, and such information may change without notice in the future.





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