# SHINAGAWA UPDATE

Results for Fiscal Year ended March 2021

June 16, 2021

TSE Securities Code Number

5351

### Table of Contents

# I. Financial Highlights for FY 2020

- 1. Consolidated Financial Highlights
- 2. Net Sales by Business Segment
- 3. Operating Income by Business Segment
- 4. Factors Behind Changes in Operating Income (YoY)
- 5. Consolidated Balance Sheet
- 6. Consolidated Cash Flows
- 7. Consolidated Financial Targets for FY2021

### II. Mid Term Management Plan

- 1. Previous Mid-term Management Plan
- ${\bf 2. \ The \ 5th \ Mid-term \ Management \ Plan:}$

**Business Environment** 

3. The 5th Mid-term Management Plan:

Financial Targets (Consolidated)

4. The 5th Mid-term Management Plan:

Mission Statement & Primary Action Plans

- 5. Primary Action Plans
  - 1 Business Expansion in Japan
  - 2 Overseas Business Expansion
  - 3 New Market Development
  - 4 Capital Investment
- 6. Policy for Profits Return to Shareholders
- 7. Shinagawa's Commitment to ESG Management

### III. Supplementary Notes

- 1. History
- 2. Consolidated Net Sales and Ordinary Income for Past 13 Years
- 3. Refractory Industry: Foundation of Society
- 4. Major Products
- 5. Key Features and Strengths

- 6. Key Features and Strengths
  - (1) Ultra-High Temperature Technology
- 7. Key Features and Strengths
  - (2) Solid Customer Base
- 8. Key Features and Strengths
  - (3) Global Business Expansion
- 9. Overseas Business Locations
- 10. Japan and Overseas Refractory Supply Coverages









I. Overview of Financial Results for 2020 (Fiscal Year ended March 2021)

# 1. Consolidated Financial Highlights

(Unit: Million JPY)

	FY 2019 Results	FY 2020 Results	YoY
Net Sales	118,973	99,969	∇16.0%
Operating Income	9,597	7,285	∇24.1%
Ordinary Income	9,844	8,220	∇16.5%
(ROS)	(8.3%)	(8.2%)	(∇0.1pt)
Profit attributable to owners of parent	5,550	2,114	∇61.9%

- Japanese crude steel production in 2020 decreased by 15.9% to 82.79 million tons YoY
- Net sales decreased by 16.0% due to lower refractory sales and maintenance works caused by a decrease in Japanese crude steel production
- Operating income decreased by 24.1% mainly due to lower refractory sales
- Profit attributable to owners of parent decreased significantly by 61.9% due to impairment loss of 3.3 billion yen

# 2. Net Sales by Business Segment

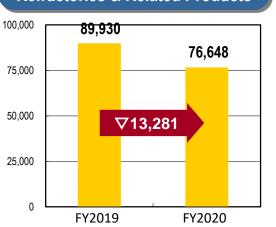
(Unit: Million JPY)

	FY 2019	FY 2020	YoY
	Results	Results	101
Refractories & Related Products	<b>89,930</b> [ 75.6 ]	<b>76,648</b> [ 76.7]	∇14.8%
Furnace Construction & Engineering	<b>27,074</b> [ 22.8 ]	<b>21,505</b> [ 21.5]	∇20.6%
Real Estate & Other Businesses	<b>1,968</b> [ 1.7]	<b>1,814</b> [ 1.8]	∇7.8%
Total	<b>118,973</b> [100.0]	<b>99,969</b> [100.0]	∇16.0%

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

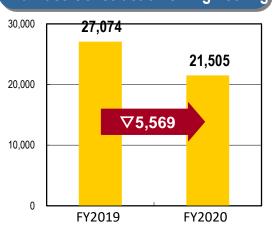
Million JPY

### Refractories & Related Products



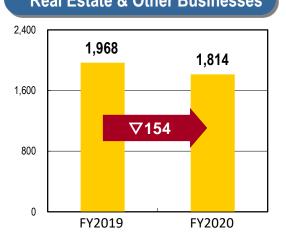


Million JPY



### Real Estate & Other Businesses

Million JPY



# 3. Operating Income by Business Segment

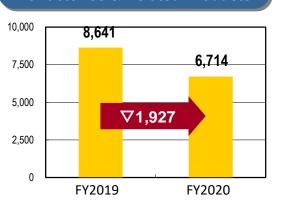
(Unit: Million JPY)

	FY 2019	FY 2020	YoY
	Results	Results	101
Refractories & Related Products	<b>8,641</b> [ 79.5 ]	<b>6,714</b> [ 77.9]	∇22.3%
Furnace Construction & Engineering	<b>1,177</b> [ 10.8]	<b>924</b> [ 10.7 ]	∇21.5%
Real Estate & Other Businesses	<b>1,057</b> [ 9.7]	<b>979</b> [ 11.4]	∇7.4%
Total	<b>10,877</b> [100.0]	<b>8,618</b> [100.0]	∇20.8%
Adjustments	∇1,279	∇1,332	_
Operating Income	9,597	7,285	∇24.1%

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

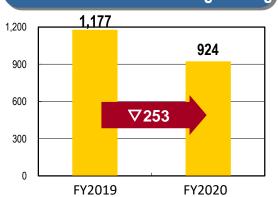
Million JPY

### **Refractories & Related Products**

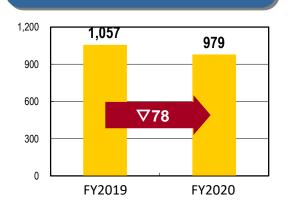


### Furnace Construction & Engineering

Million JPY

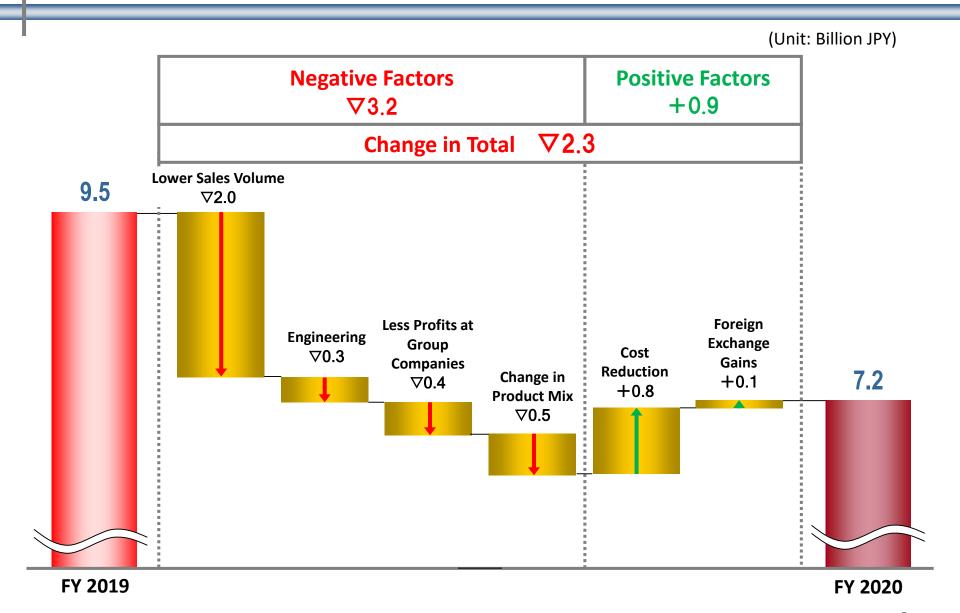


### Real Estate & Other Businesses



Million JPY

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



# 5. Consolidated Balance Sheet

(Unit: Million JPY)

		(Un	it: Million JP	Y)
	2020/3	2021/3	Changes	
Current Assets	72,010	71,654	∇356	<ul> <li>Cash &amp; Cash Equivalents +2,895</li> <li>Receivables ∇2,660</li> <li>Inventories ∇558</li> </ul>
Fixed Assets	38,237	38,550	+313	<ul> <li>Tangible &amp; intangible Fixed Assets ∇2,468</li> <li>Investment &amp; Other Assets +2,780</li> </ul>
Total Assets	110,247	110,205	∇42	
Current Liabilities	34,246	35,149	+903	• Accounts Payable $\nabla$ 1,285 • Short Term Debt $+$ 1,731 • Accrued expenses $\nabla$ 1,534 • Income Taxes Payable $+$ 450 • Current Portion of Deposit on Contract $+$ 1,506
Fixed Liabilities	9,286	4,772	∇4,514	• Long-term Loans Payable $\nabla$ 2,779 • Long-term Deposit on Contract $\nabla$ 1,448
Total Liabilities	43,532	39,872	∇3,660	
Shareholders' Equity	58,228	59,267	+1,039	•Retained Earnings +1,023
Accumulated Other Comprehensive Incomes	∇219	1,413	+1,632	•Valuation difference on available-for-sale securities +1,362
Non-controlling Interest	8,705	9,653	+948	
Total Net Assets	66,714	70,333	+3,619	2020/3 <b>2021/3</b>
Total Liabilities & Net Assets	110,247	110,205	∇42	ROE (Return on Equity) 9.9% 3.6%

### 6. Consolidated Cash Flows

(Unit: Million JPY)

	FY 2019	FY 2020	Changes
Cash Flows from Operating Activities	7,769	9,327	4
Cash Flows from Investing Activities	∇3,840	∇4,006	4
Cash Flows from Financing Activities	∇2,549	∇2,411	<b>4</b>
Cash and Cash Equivalents at the End of Period	12,669	15,564	+2,895

Interest-bearing Debt/Cash Flow Ratio

(Unit: Million JPY)

	FY 2019	FY 2020	Changes
Interest-bearing Debt	14,748	13,683	∇1,065
Cash Flows from Operating Activities	7,769	9,327	+1,558
Ratio (Year)	1.9	1.5	0.4

[ Improvement]

[ Main contents of cash flows from operating activities ]

- Income before Income Taxes +4.413
- Depreciation +2,581
- Impairment Loss +3,384
- Changes in Receivables +2,648
- Changes in Accounts Payable ∇1,270
- Income Taxes Paid ∇1,369

[ Main contents of cash flows from investing activities ]

Purchase of Tangible Fixed Assets ∇4,085

Main contents of cash flows from financing activities

- Repayments of Long-term Loans
   Payable ∇1,122
- Cash Dividends Paid **∇**1,027

# 7. Consolidated Financial Targets for FY2021

(Unit: Million JPY)

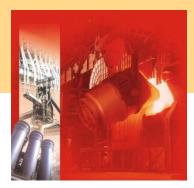
	FY 2020	FY 2021	YoY
	Results	Targets	
Net Sales	99,969 [ 100.0 ]	<b>108,000</b> [ 100.0 ]	+10.0%
Operating Income	7,285 7.3	<b>8,500</b> 7.9	+17.0%
Ordinary Income	8,220 8.2	<b>9,000</b> 8.3	+9.8%
Profit attributable to owners of parent	2,114 2.1	<b>5,800</b> 5.4	+173.5%

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

Note: From the beginning of FY 2021, i.e. April 2021, Shinagawa newly adopts "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29). In order to properly show the improvements from the previous year, YoY rate changes are calculated as if the said accounting standard is retroactively applied in FY 2020.





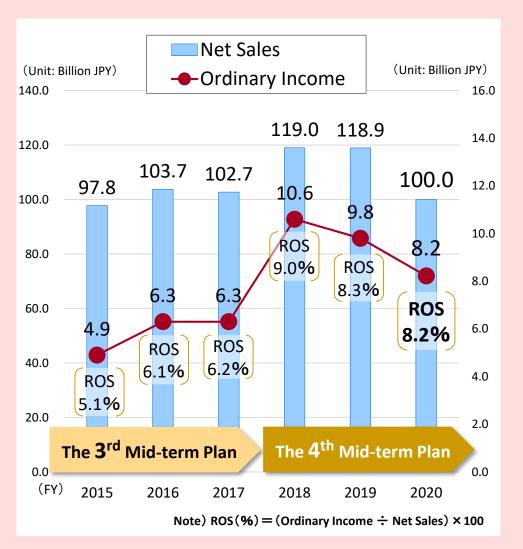




# II. Mid-term Management Plan

# 1. Previous Mid-term Management Plan: Targets vs Results ①

(The 4<sup>th</sup> Mid-term Plan: FY 2018 – 2020)



### Final Results of The 4th Mid-term Plan

	FY2020	
	Targets <b>∗</b>	Results
Net Sales	123 Billion JPY	100 Billion JPY
ROS	over 8%	8.2%

<sup>\*</sup> Targets for FY 2020 was announced on May 10, 2018

### **[Key Initiatives]**

- Initiating new pricing policies to secure proper margins
- Further market penetration and cost reductions

**Achieved ROS target of over 8.0%** 

# 1. Previous Mid-term Management Plan: Targets vs Results ②



(The 4<sup>th</sup> Mid-term Plan: FY 2018 – 2020)

### PRIMARY INITIATIVES

SALES

- **Developing New Markets**
- Improving the Profit margin

**PRODUCTION** 

- **Cost Reduction in Productions** Yield / Productivity Improvement & Further Promotion of Recycling
- **Cost Reduction in Procurements** Suppliers Diversification & Developing Technologies for Further Use of Low Grade Raw Materials
- **Production Equipment Upgrade** Upgrade and Automation of Large Press & Various Furnaces New Production Process for BOF Bricks with Higher Durability

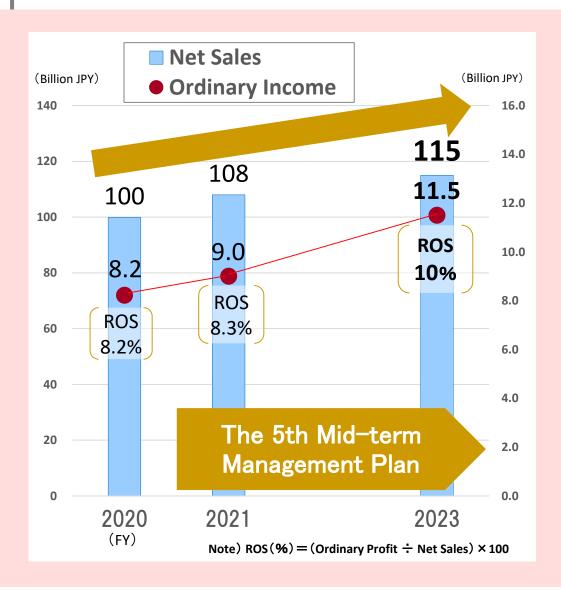
**OVERSEAS BUSINESS** 

- India: Started Production/Sales of Tap Hole Clays for Blast **Furnaces (March 2021)**
- Started Production/Sales of Spray Dried Mold Powders for **Continuous Castings (May 2019)**

# 2. The 5<sup>th</sup> Mid-term Management Plan (FY 2021-2023) Business Environment

### World Japan Definite signs of recovery in No prospect yet for the end of COVID-19 spreading infection various countries Declining steel demand in Japan triggers further blast furnaces Expecting increasing steel Steel shutdown & steelworks closure demand globally, especially **Industry** "Annual Crude Steel Production in Asia and Americas stays at a low level of 90M tons" Expecting Post COVID-19 recovery globally, while concern **Economy** and uncertainty over Japanese economy remain

# 3. The 5<sup>th</sup> Mid-term Management Plan (FY 2021-2023) Financial Targets (Consolidated)



### Financial Targets in FY2023

	FY 2023 Targets
Net Sales	115 billion JPY
Ordinary Income	11.5 billion JPY
ROS	10%

### [Main Premise of the Plan]

- Annual Crude SteelProduction in Japan:
  - 90 million tons
- Exchange Rate:

**1US\$ = 105 JPY** 

# 4. The 5<sup>th</sup> Mid-term Management Plan (FY 2021-2023) Mission Statement & Primary Action Plans

Mission Statement

Achieving record profits by providing innovative new products that exactly meet our customers' needs, with the highest degree of competitiveness in quality and cost produced using our most advanced technologies.

### Primary Action Plans

### 1. Japanese Business

- Refractories with Ceramic Fibers: Complete Package
- Integrated Services from Design to Construction
- Further Accelerating New Products Development
- Increasing Cost Competitiveness with Reducing Environment Footprint
- Optimizing Production Processes to Increase Cost Competitiveness

### 2. Overseas Business

- Further Promoting Technical & Commercial Collaboration with Quality Local Producers in Each Market
- Establishing More Local Productions: China, India and USA

### 3. New Business

Market Developments for New Innovative Non-Refractory Products

### 4. Capital Investment

•14 Billion JPY for 2021-2023 (11 Billion JPY for 2018-2020)

### 1) Sales & Market Expansion of Refractories & Ceramic Fibers (1)

# [Action Plans]

# **Further Promoting Value Addition Approaches**

- Packaging Refractory Sales with Construction Services
- Offering Construction Tools and Technologies
- Proposing New Products & Designs for Environmentally Friendly Solutions
- Packaging Sales of Refractory with Ceramic Fibers (Isolite Products)

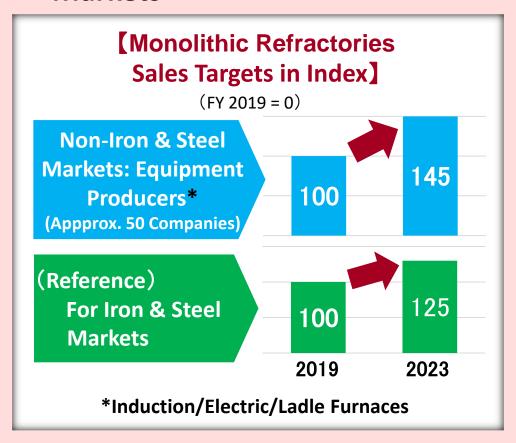
# **[Targeted Markets]**

- Sales ExpansionIntegrated Steel mills, MiniMills & Cement
  - ⇒Further Increasing Presence by Offering Refractories that help them to Reduce CO<sub>2</sub> Emission
- Market Expansion
  - **⇒Non Ferrous**
  - **⇒Industrial Furnace**
  - **⇒**Engineering Companies

# 1) Sales & Market Expansion of Refractories & Ceramic Fibers 2



Sales Expansion of Monolithic Refractories to Non-Iron & Steel **Markets** 



- **Monolithic Steel Ladle**
- **Packaging Refractory Sales with Construction Services**
- Sales Collaboration with Non-**Refractory Products from Shinagawa Group Companies** 
  - Fine Ceramics
  - Ceramic Fibers
- **Refractory Sales** 
  - Large Precast Blocks
  - Refractories for Repair/Patching

- 5. Primary Action Plans
- **Business Expansion in Japan**
- 1) Sales & Market Expansion of Refractories & Ceramic Fibers 3



- Expanding Synergies with Isolite Insulating Products
- Introducing New Innovative Products by Technology Integration

(Shinagawa) **Refractory Technologies** 



(Isolite) **Ceramic Fiber Technologies** 

### **New Composite Materials rich in Ceramic Fibers**

### **(Key Properties)**

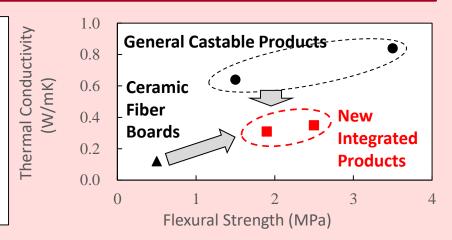
- Heat Insulation
- Heat Resistance
- Corrosion Resistance

- Strength

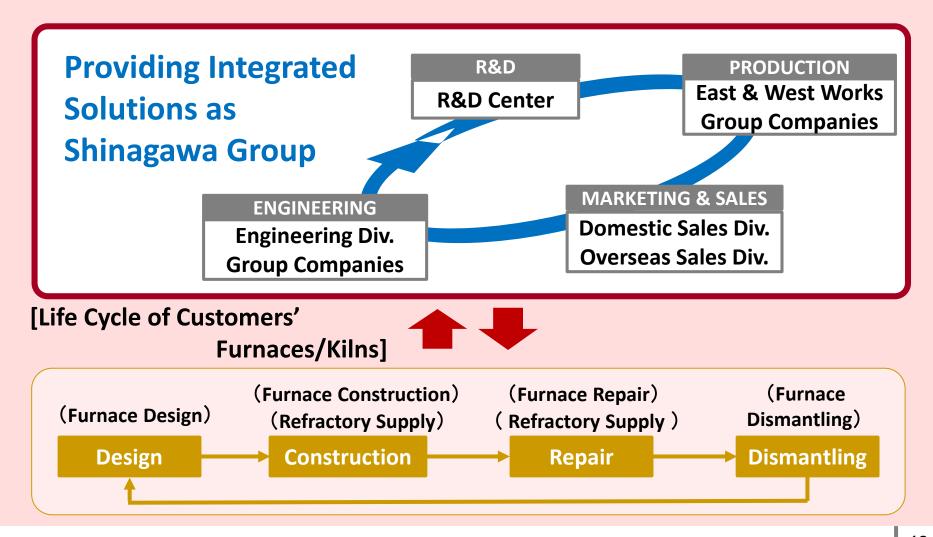
**Higher Performances** can be Achieved by

**Technology Integration** 

**Opportunities for Many New Applications** 



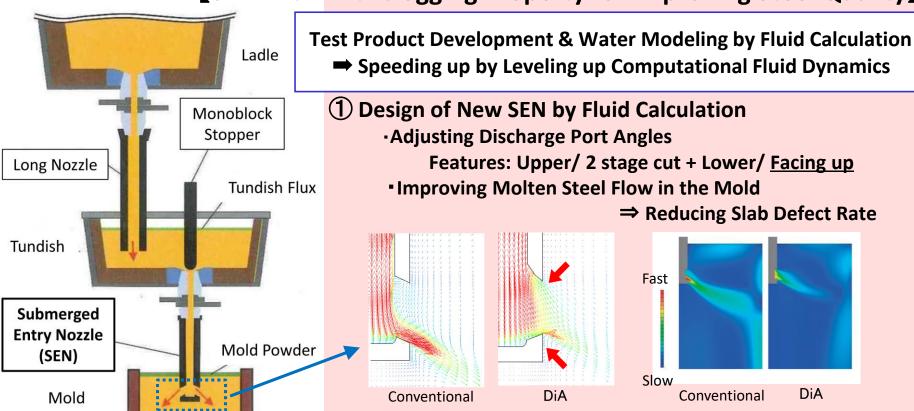
## 2) Integrated Services from Design to Construction



# 3) Further Accelerating New Products Development

~ Reinforcing Research Functions with Academic-Industrial Collaboration ~





2 Joint Research with the University's Fluid Dynamics Laboratory

# 4) Optimizing Production Processes

- ~ Enhancing Cost Competitiveness of Monolithic Refractories ~
- Consolidating Monolithic Refractories Production in West Japan 3 Locations (Ako, Hinase, Teikoku Yogyo) → 1 Location (Ako)



# 4) Optimizing Production Processes

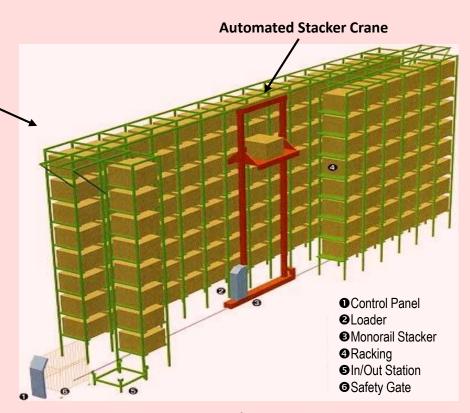
∼ New Investments for Increasing Productivity ∼

# **Major Projects**

- 1 High-Rised Warehouse
- 2 Introducing High-Speed Weighing System
- **3**Increasing Mixer Capacity

## Construction Schedule

- ► Groundbreaking: Early 2021
- Starting Operations: Late 2023

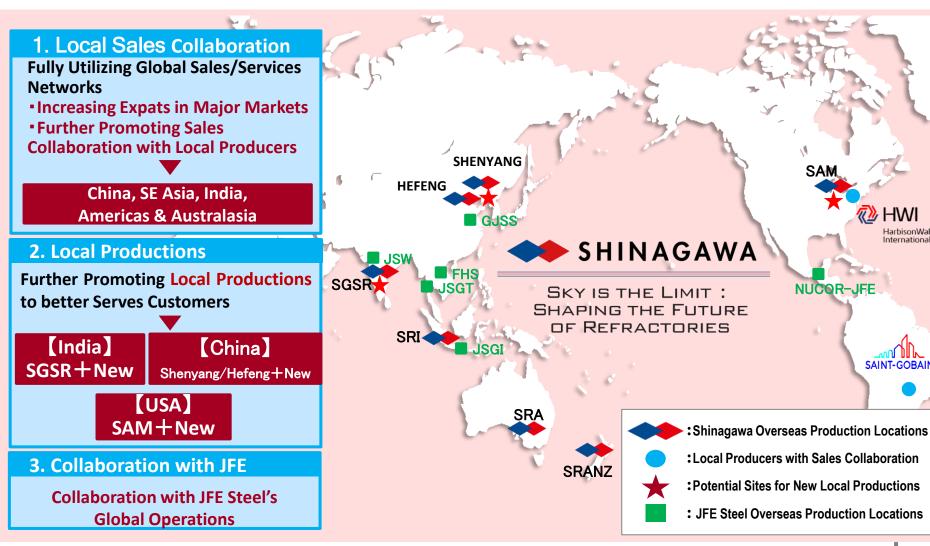


**Conceptional Drawing** 



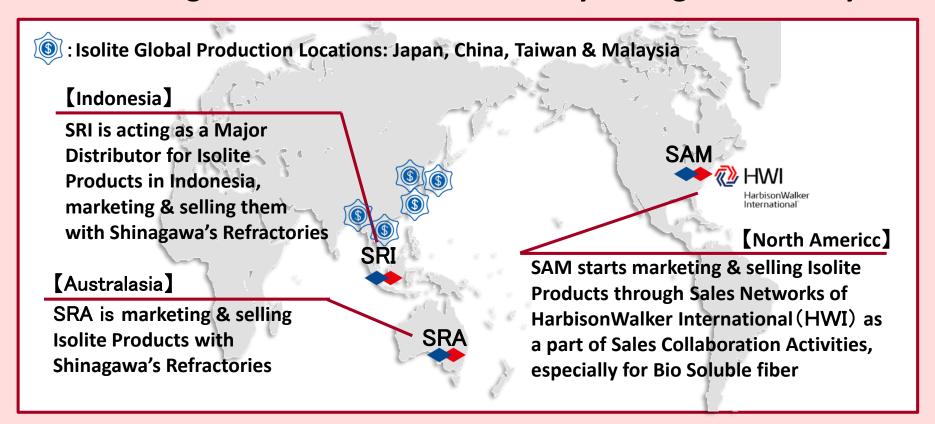
# 5. Primary Action Plans 2 Overseas Business Expansion

# 1) Action Plans to Increase Global Presence (1)

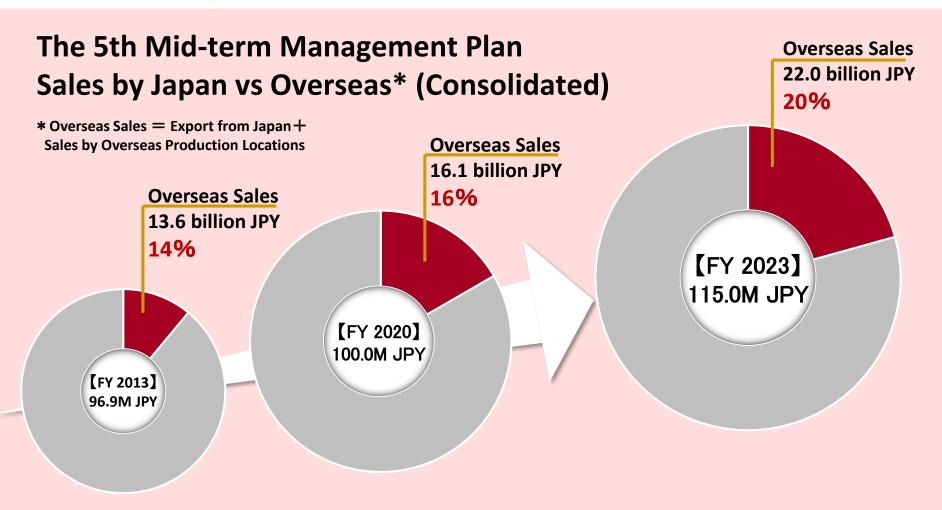


# 1) Action Plans to Increase Global Presence 2

**Further Promotion of Group Collaboration:** Marekting & Sales of Isolite Products by Shinagawa Globally



# 2) Increasing Trend of Overseas Sales

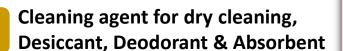


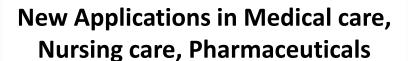
### **Expanding Business Portfolio for the Future**

**Market Developments for New Innovative Non-Refractory Products** 

### Project ① (Allophane)

Now



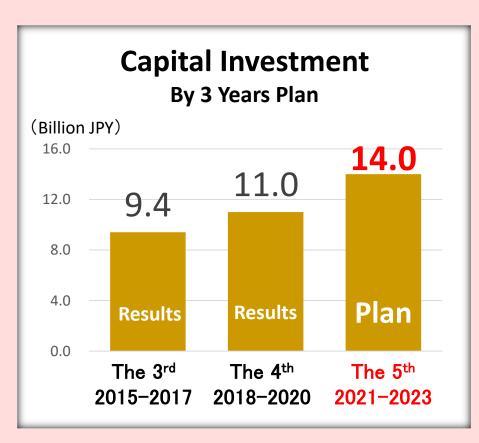






# **Expanding Capital Investment for the Future Growth**

Capital Investment of 14 billion JPY for 2021-2023



### **[Goals for the Investment]**

- Optimizing Production Process
  - Consolidating Monolithic Refractories **Production in West Japan**
- Providing Proper Maintenance and **Increasing Products Competitiveness**
- Continue to Introduce Cuttingedge Technologies and Automation

6. The 5<sup>th</sup> Mid-term Management Plan (FY 2021-2023) Policy for Profits Return to Shareholders

# Revision to the Dividend Policy (Dividend Payout Ratio)

# **Dividend Policy**

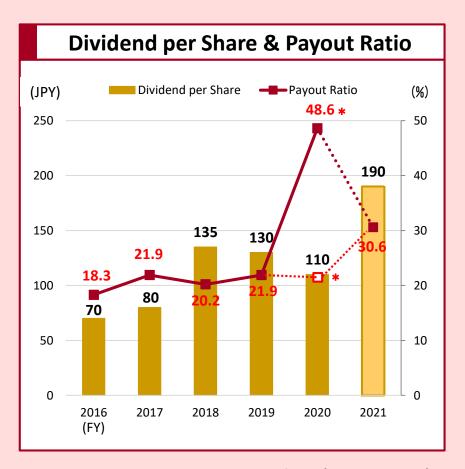
"Considering the important of enhancing the return of profits to our shareholders, we decided to aim for a dividend payout ratio of 30%."

[Until the last Management Plan]
Payout Ratio 20%



The 5th Management Plan

Payout Ratio 30%



\*: It was about 23% without the special factor (impairment loss).

# 7. Shinagawa's Commitment to ESG Management



### Contribution to society through customers by launching environment-friendly products

- Reducing the burden on the global environment by promoting the use of recycled materials
- Saving energy and reducing workload by promoting the use of monolithic refractories
- Heat loss reduction by applying heat insulating products with (ultra) high temperature and (ultra) heat properties and reducing the burden on the global environment by promoting energy saving

### **Actions in Value Chains**

- Further improvement of working environment that puts safety and health absolutely first
- Promoting zero emissions
- Reducing energy consumption and promoting thermal efficiency
- Recycling of packaging materials and promoting the use of environmentally friendly materials

### **Actions in Supply Chains**

- Selecting business partners in consideration of the working environment and promoting resource protection, fuel conversion and modal shift
- Promotion and support of green procurement









# III. Supplementary Notes

### 1. History

[Established in 1875]

Shinagawa Shirorenga Co., Ltd.

(First private company in Japan to manufacture fire bricks)

[Established in 1938]

**JFE Refractories Corporation** 

(Operated as a subsidiary of the Kawasaki Steel Corporation Group since 1944)

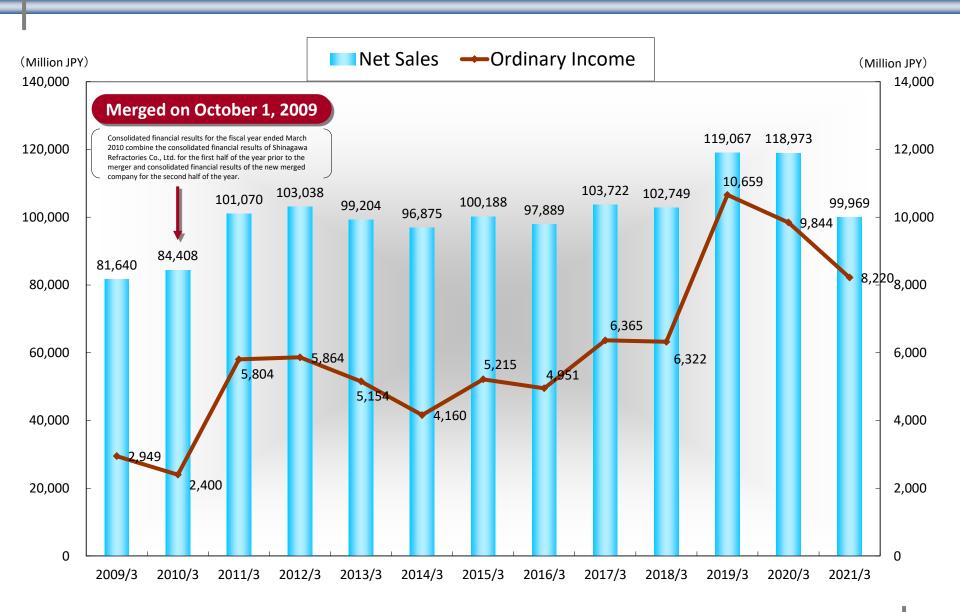
Increasing market presence and establishing reliable production infrastructure through further expansion of the refractories business

Merged on October 1, 2009

# Shinagawa Refractories Co., Ltd.

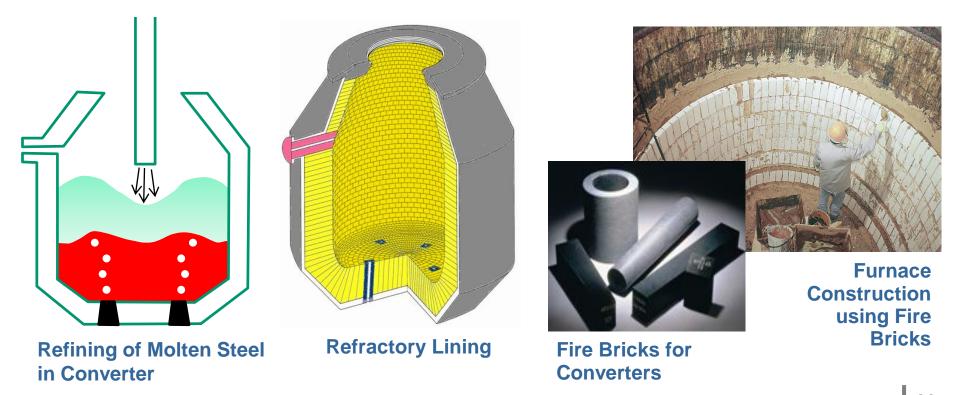
"Streamlining operational infrastructure and effectivity coping with rapid changes in the business environment through the prompt realization of integration effects."

# 2. Consolidated Net Sales and Ordinary Income for Past 13 Years



# 3. Refractory Industry: Foundation of Society

- Many varieties of materials used in public infrastructure such as iron and steel, nonferrous metals, cement, glass are manufactured in furnaces at extremely high temperature with refractory lining.
- The refractory industry provides foundational support to key industries through manufacturing of refractories and engineering services for furnace design, installation and construction.



## 4. Major Products 1/2

### Refractories

Refractories are industrial materials that can resist ultrahigh temperatures in excess of 1,500 degrees Celsius. Approximately 80% of refractory production is consumed by the steel industry.

### Next Page

### **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
- Functional products 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 component of highquality 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 used to manufacture steel ingot plates and rods)

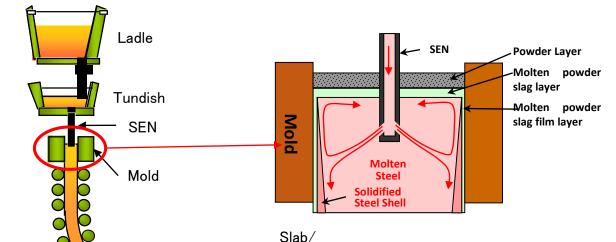


# [Close-up] Spray Dried Tower: Producing Mold Powders for Continuous Casting<sup>¾1</sup>

# High Quality Mold Powders for Continuous Casting is Essential for Producing High Quality Steel Products



**※**1: What is Continuous Casting?



Bloom/

Billet

An equipment to obtain hollow spherical granules by spraying raw material slurry into high temperature atmosphere and drying up the sprayed slurry droplets while they fall down

#### Locations of Shinagawa Spray Dried Tower

Japan (Hinase)	2011~, Update planned
USA (SAM)	2019~
China	2008~, 2016 Update
China	2008~

#### **Roles of Mold Powders**

- ① Lubrication between the mold and the steel shell
- 2 Insulation for the molten steel surface
- 3 Absorption of impurities in the molten steel

# 4. Major Products 2/2

### Ceramic fiber

Lightweight material featuring low thermal conductivity and high thermal insulation, making it essential for energy-saving



### Chemical and other products

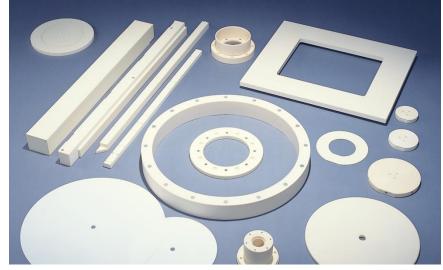
Heat-resistant paint, heat-resistant adhesives, multifunctional absorbent, desiccant, etc. with applicability to ceramic materials technologies





### Advanced ceramics

Ceramic material with a broad range of characteristics including excellent electrical insulation properties, abrasion resistance, corrosion resistance, chemical stability, mechanical strength, etc.







Leading Company of Ultra-High Temperature Technologies

Solid Customer Base with Highly-Advanced Technological Capabilities

3 Global Business Expansion

(1) Ultra-High Temperature Technology ① Key Two Technologies

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

Solid Technology Development and Commercialization Capabilities supported by Key Two Technologies

- Refractories
- Ceramic Fiber
- Advanced Ceramics
- Chemical Products

Refractory Manufacturing Technology

Furnace
Construction
Technology

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

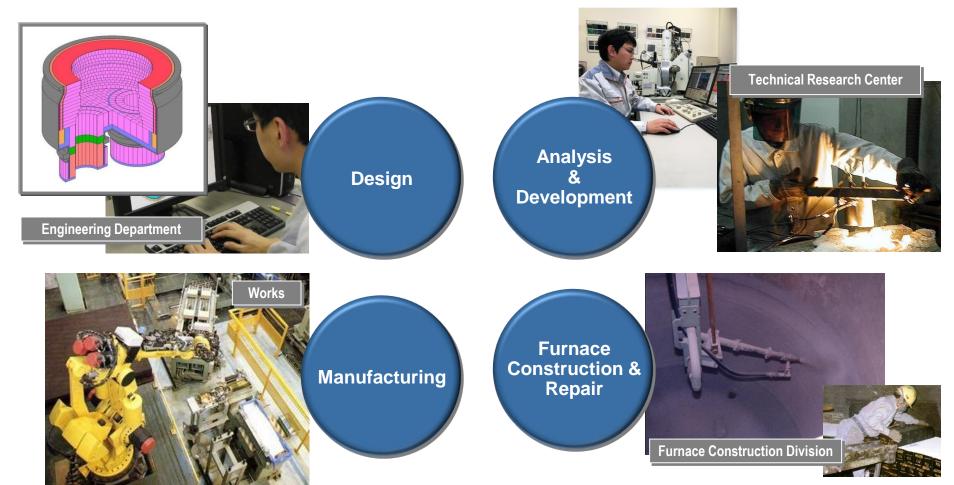
Customer-Oriented Technological Support

Development Capability to Meet Customer Needs

(1) Ultra-High Temperature Technology ② Customer-Oriented Technological Support

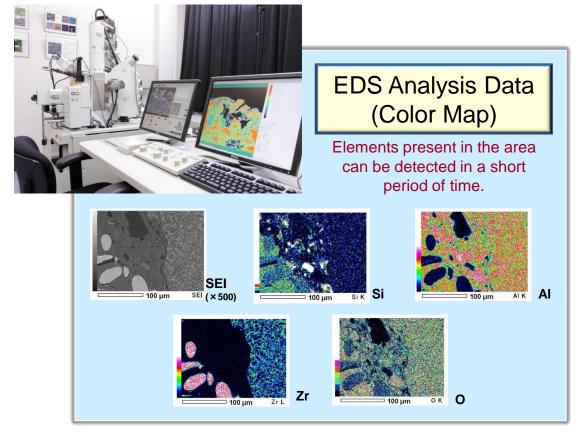
Closely work with customers with Advanced Technologies and Proven Track Records in Four Divisions:

Design, Manufacturing, Furnace Construction and Analysis & Development.

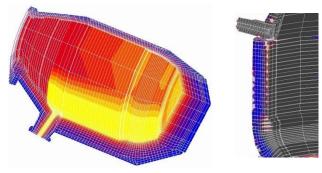


(1) Ultra-High Temperature Technology ③ Development Capability to Meet Customer Needs

# World-Class Facilities and Resources allow our Research Center to Propose and Develop Optimal Products for Customers



Analysis of Refractories' Microstructures



Structural Analysis of Converters

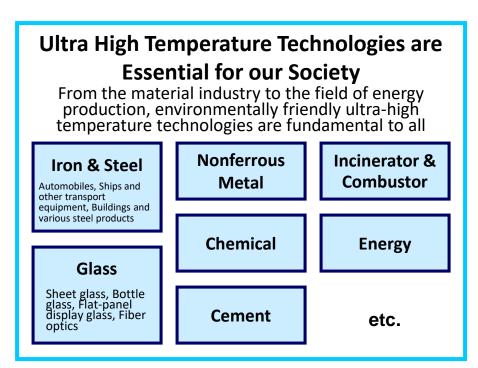


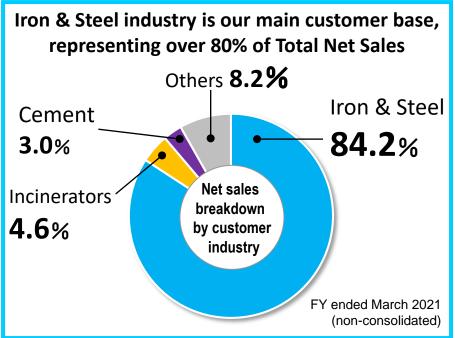
Water Model Simulation of Molten Steel Flow in the Mold

# 7. Key Features and Strengths (2) Solid Customer Base

Solid Customer Base with Highly-Advanced Technological Capabilities

# Supplying Optimal High Quality Products for Various Customers Industries Globally





# 8. Key Features and Strengths (3) Global Business Expansion

# Successful Business Expansion Globally

Since 1997 when we launched JV company in China, Shinagawa has been expanding our global presence by establishing production sites in Australia, New Zealand, the US, Indonesia and India.

### [China] ← Established 1997

- 1997: Established a joint venture company, Shenyang Shinagawa Glorious Metallurgy Materials Co., Ltd. (current Shenyang Shinagawa Metallurgy Materials Co., Ltd.)
- 2003: Made an equity investment in a joint venture company, Jinan Ludong Refractory Co., Ltd.
- 2008: Established a joint venture company, Liaoning Shinagawa Hefeng Metallurgical Material Co., Ltd.

#### [Australia] ← Established 1998

- ●1998: Established a joint venture general refractory company
- ●2003: Fully consolidated the joint venture company and renamed it Shinagawa Refractories Australasia Pty. Ltd.

### [USA] ← Established 2006

●2006: Established Shinagawa Advanced Materials Americas Inc. in Ohio

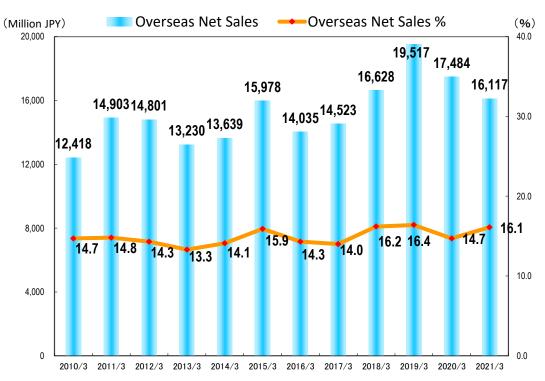
#### [Indonesia] ← Established 2014

● 2014: Established PT Shinagawa Refractories Indonesia in Jakarta

### [India] ← Established 2019

●2019: Established SG Shinagawa Refractories India in Gujarat

### Overseas Net Sales and its % of Total (consolidated)



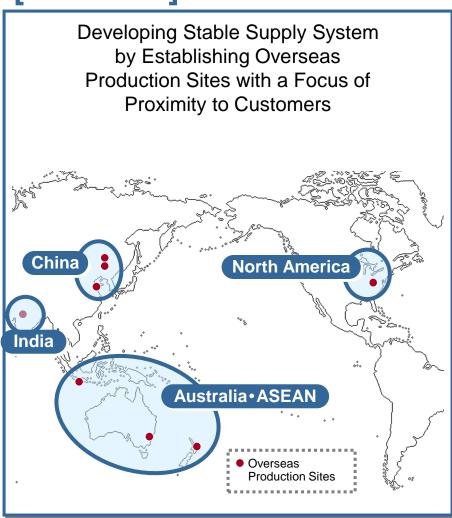
### 9. Overseas Business Locations

Expanding Global Footprint by increasing Overseas Business Locations in China, Oceania, Asia and the Americas with our focus of Proximity to Customers

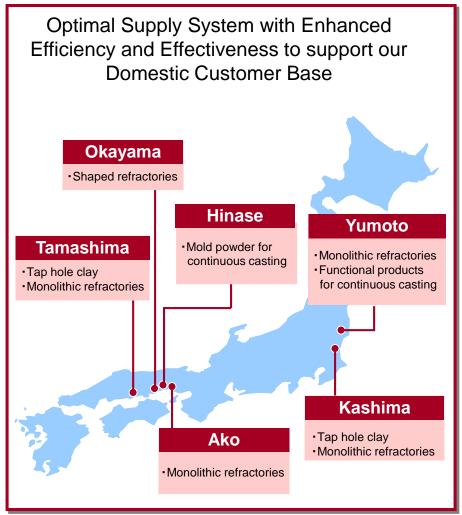


# 10. Japan and Overseas Refractory Supply Coverages

### [Overseas]



# [Japan]



### **Disclaimer**

This document is intended to provide information on the results for the fiscal year ended March 2021 (April 2020 – March 2021) and is not intended to solicit investment in securities issued by the Company.

The document was prepared based on data available as of June 16, 2021. 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.

# SHINAGAWA UPDATE

Results for Fiscal Year ended March 2021

June 16, 2021

TSE Securities Code Number

5351