

Presentation Material

Results for Fiscal Year Ended March 2016

June 14, 2016



— Supporting the World's Key Industries Through Technologies —

 **SHINAGAWA REFRACTORIES CO.,LTD.**

Securities Code Number: **5351**

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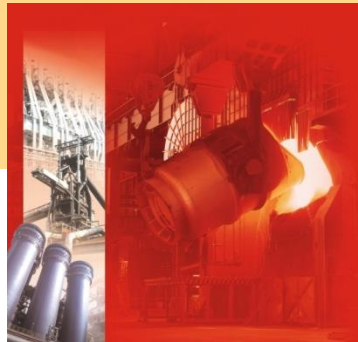
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I. Overview of Financial Results for FY2015

1. Consolidated Financial Highlights for Fiscal Year Ended March 2016

(Unit: million yen)

	FY 2014	FY 2015	YoY
	Results	Results	
Net sales	100,188	97,889	- 2.3%
Operating income	4,895	5,019	+ 2.5%
Ordinary income	5,215	4,951	- 5.1%
Profit attributable to owners of parent	3,098	2,796	- 9.7%

- Net sales declined by 2.3% YoY due to a decrease in sales of refractories and engineering services, reflecting a drop in crude steel production* and furnace construction work.
*Declined by 5.2% YoY to 104.18 million tons
- Operating income increased by 2.5% YoY as a result of cost reduction efforts, etc., ordinary income decreased by 5.1% YoY due to foreign exchange losses.

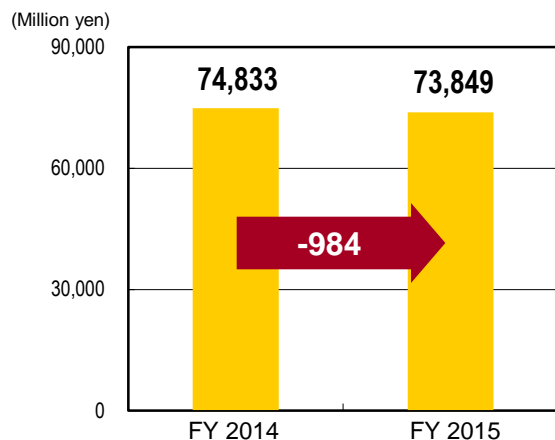
2. Net Sales by Business Segment

(Unit: million yen)

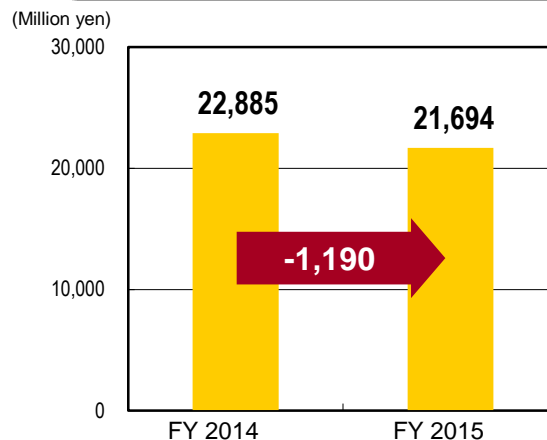
	FY 2014	FY 2015	YoY
	Results	Results	
Refractories and related products	74,833 [74.7]	73,849 [75.4]	- 1.3%
Furnace construction and engineering	22,885 [22.8]	21,694 [22.2]	- 5.2%
Real estate, Leisure business, etc.	2,470 [2.5]	2,345 [2.4]	- 5.0%
Total	100,188 [100.0]	97,889 [100.0]	- 2.3%

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

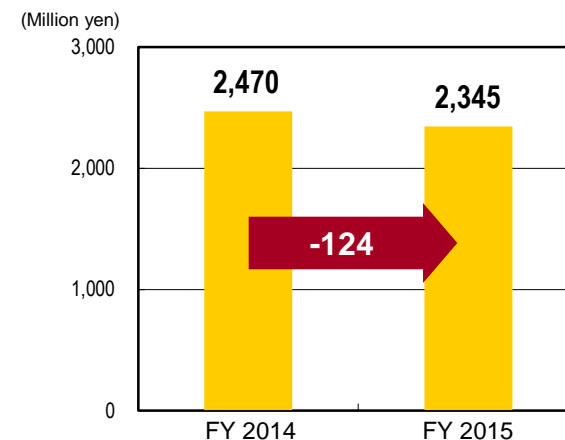
Refractories and related products



Furnace construction and engineering



Real estate, Leisure business, etc.



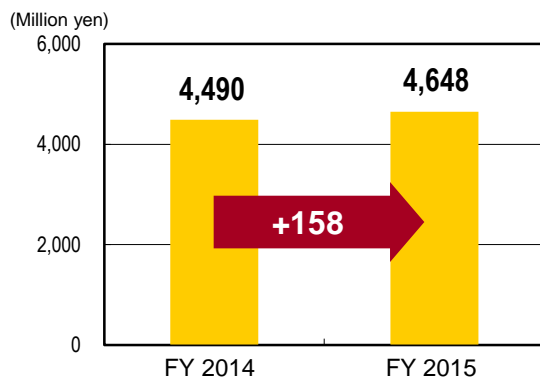
3. Operating Income by Business Segment (Segment Profit)

(Unit: million yen)

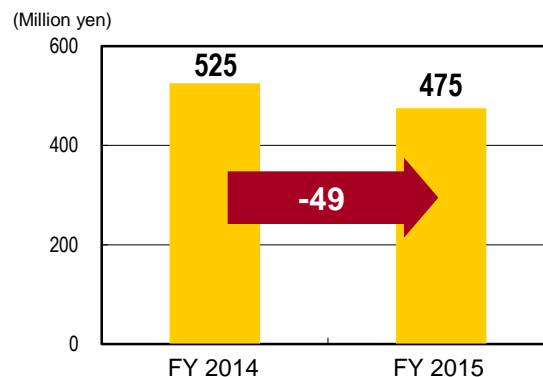
	FY 2014	FY 2015	YoY
	Results	Results	
Refractories and related products	4,490 [74.4]	4,648 [75.6]	+ 3.5%
Furnace construction and engineering	525 [8.7]	475 [7.7]	- 9.4%
Real estate, Leisure business, etc.	1,017 [16.9]	1,023 [16.7]	+ 0.6%
Total	6,033 [100.0]	6,148 [100.0]	+ 1.9%
Adjustment	-1,137	-1,129	—
Total operating income	4,895	5,019	+ 2.5%

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

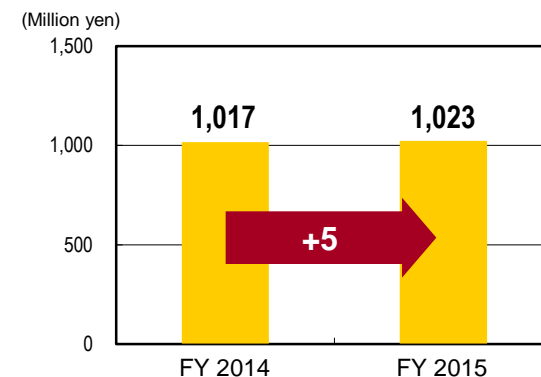
Refractories and related products



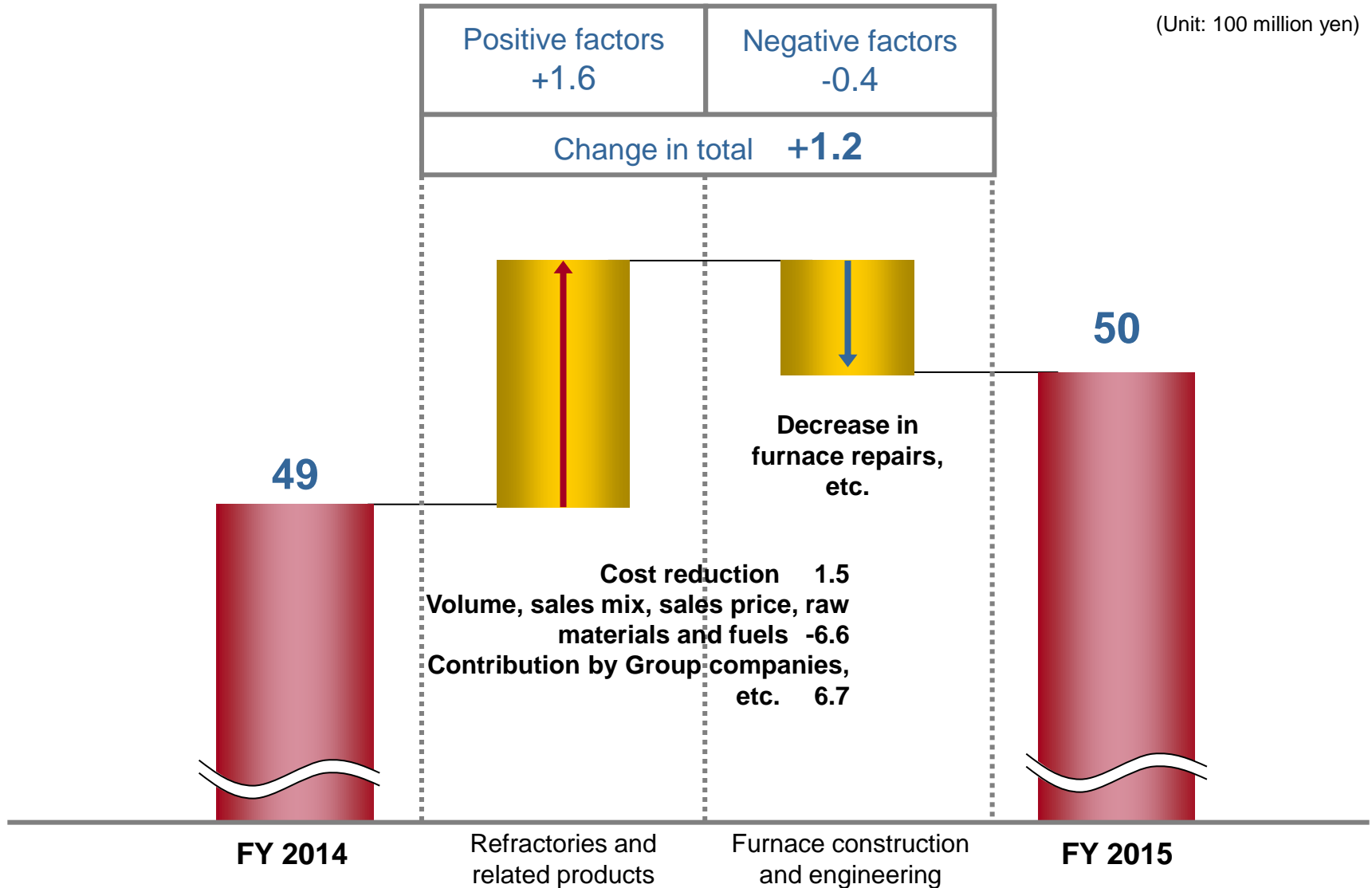
Furnace construction and engineering



Real estate, Leisure business, etc.



4. Factors Behind Changes in Operating Income (Year-on-Year Comparison)



5. Balance Sheets (Consolidated)

(Unit: million yen)

	FY 2014	FY 2015	Change	
Current assets	62,994	62,847	-147	▪ Notes and accounts receivable-trade: -835
Noncurrent assets	46,847	40,850	-5,997	▪ Investment securities: -4,382
Total assets	109,841	103,697	-6,143	
Current liabilities	41,188	40,624	-564	▪ Short-term loans payable: -745
Noncurrent liabilities	17,610	12,941	-4,669	▪ Bonds payable: -2,180 ▪ Deferred tax liabilities: -1,144
Total liabilities	58,799	53,565	-5,233	
Shareholders' equity	41,084	43,271	+2,187	▪ Retained earnings: +2,184
Accumulated other comprehensive income	4,069	924	-3,145	▪ Valuation difference on available-for-sale securities: -2,554
Minority interests	5,888	5,937	+49	
Total net assets	51,042	50,132	-909	
Total liabilities and net assets	109,841	103,697	-6,143	

6. Cash Flows (Consolidated)

(Unit: million yen)

	FY 2014	FY 2015	Change
Cash flows from operating activities	4,448	4,390	-58
Cash flows from investing activities	129	-1,173	-1,302
Cash flows from financing activities	-3,730	-2,343	+1,387
Cash and cash equivalents at the end of period	11,908	12,659	751

[Main contents of cash flows from operating activities]

- Income before income taxes and minority interests: 4,823
- Depreciation and amortization: 2,453
- Income taxes paid: -2,012

[Main contents of cash flows from investing activities]

- Purchase of property, plant and equipment: -1,720
- Proceeds from sales of investment securities: 753

[Main contents of cash flows from financing activities]

- Decrease in short-term loans payable: -1,430
- Redemption of bonds: -180
- Cash dividends paid: -612

• Interest-bearing debt/cash flow ratio: 4.9 years
(improved by 0.4 years from the previous year)

7. Financial Strategy

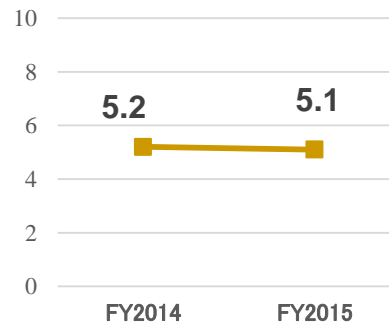
1 Securing high profitability

● ROS (Return on Sales)
and

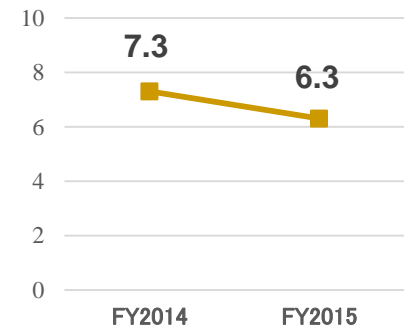
● ROE (Return on Equity)

will be set as major management indicators with the aim of enhancing management efficiency.

ROS (%)

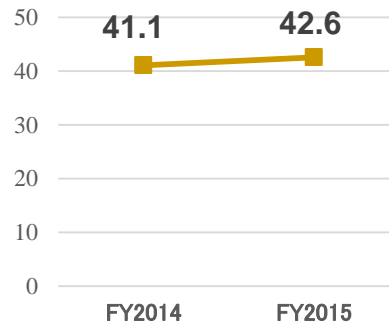


ROE (%)

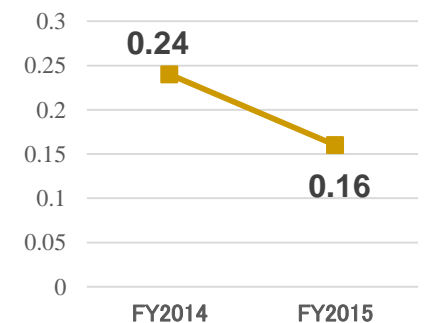


2 Further improvement of financial position

Capital adequacy ratio (%)



D/E ratio



7. Financial Strategy

3 Shareholder returns

- Maintaining constant dividend payouts.

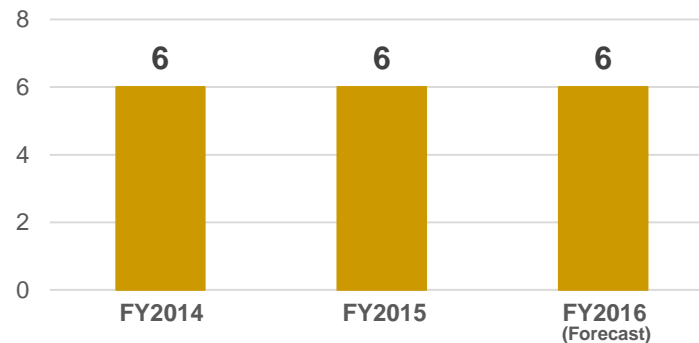
[Actual dividend payout for the fiscal year ended March 2016] (Dividend per share)

- Interim dividend: 3.00 yen
- Year-end dividend: 3.00 yen

Annual dividend: 6.00 yen

Dividend per share

(Yen)

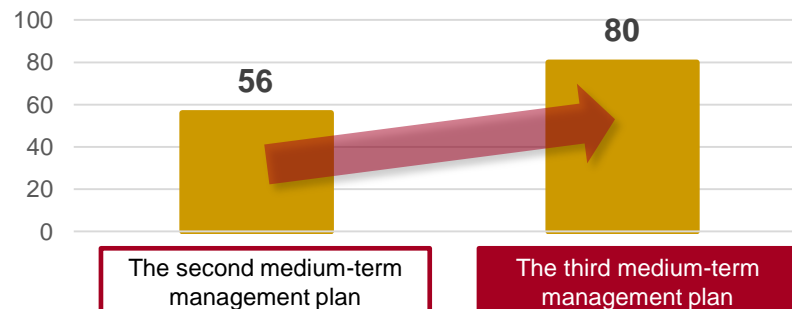


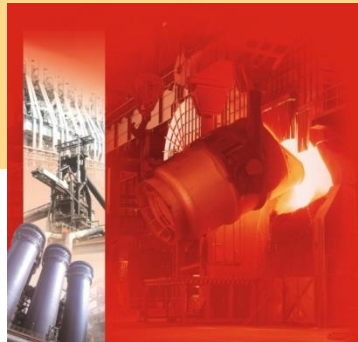
4 Investment for future growth

Amount of capital expenditure

(Actual results and medium-term plan)

(100 million yen)





II. Future Strategies

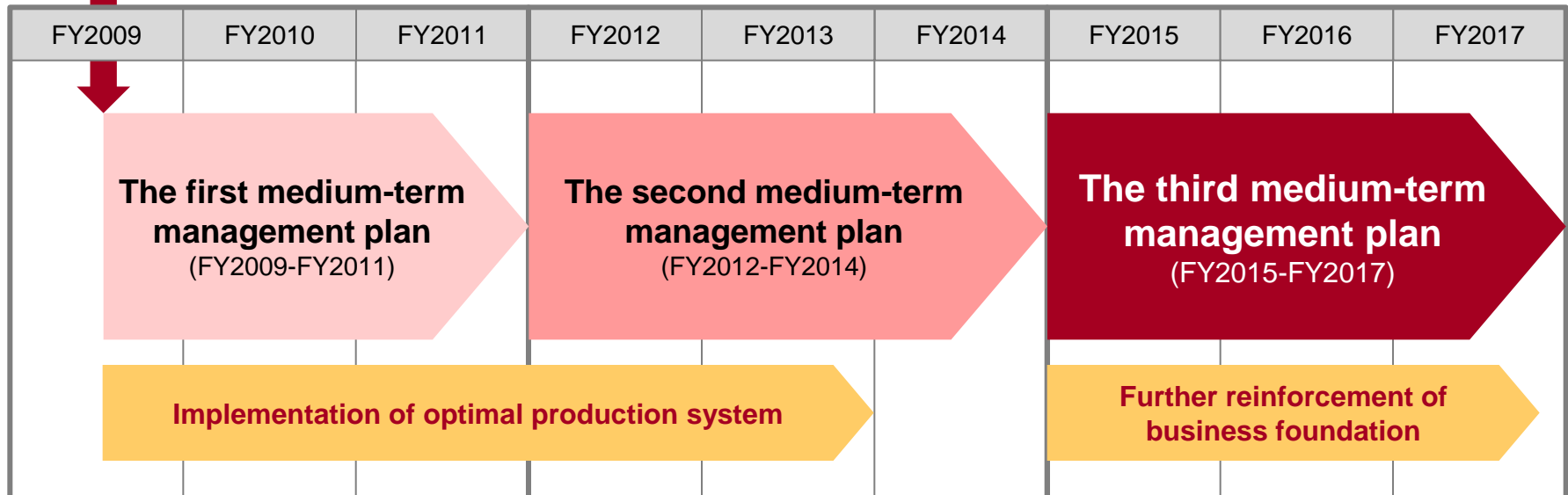
1. Overview of the Medium-Term Management Plan

Based on our successful implementation of the second mid-term management plan during 2012-2014, we commenced the third medium-term management plan in FY2015.

Basic policy of the medium-term management plan

Achieving sustainable growth for the future by enhancement of manufacturing infrastructure and human resource development.

Shinagawa Refractories Co., Ltd. was established as a result of a merger on October 1, 2009.



2. FY2016 Management Plan: Numerical Targets

(Unit: million yen)

	FY 2015	FY 2016	YoY
	Results	Forecast	
Net sales	97,889 [100.0]	102,800 [100.0]	+5.0%
Operating income	5,019 [5.1]	5,200 [5.1]	+3.6%
Ordinary income	4,951 [5.1]	5,300 [5.2]	+7.0%
Profit attributable to owners of parent	2,796 [2.9]	3,200 [3.1]	+14.4%

Note: Figures in square brackets [] indicate ratios against net sales (%).

3. Assumptions of FY2016 Management Plan

Business environment

Japanese economy: → The growth rate will remain modest.

- Corporate earnings have been improving.
- Potential negative effects from the slowdown of emerging economies.


Overseas economy: → Economic outlook remains uncertain.

- The U.S. economy stays relatively strong, while the European economy shows gradual recovery.
- Chinese economy slows down, and emerging economies are negatively impacted by resource prices declining.

The business environment stays the same from FY2015.
Domestic crude steel production: 105 million tons
Exchange rate: 120 yen per dollar

4. Key Challenges for FY2016 Management Plan


1 Further improvement of cost competitiveness

 **Key measure** Enhancement of manufacturing infrastructure and reorganization of procurement system


2 Boosting technological capabilities

 **Key measure** Development of highly value-added products

3 Business expansion in Japan

 **Key measure** Sales expansion by leveraging comprehensive expertise in refractories and furnace construction

4 Overseas business expansion

 **Key measure** Strengthening of sales system in accordance with the needs of each region

4. Key Challenges for FY2016 Management Plan

1 Further improvement of cost competitiveness

(1) Enhancement of manufacturing infrastructure

Making capital investment to upgrade the core manufacturing equipment necessary for achieving sustainable growth.

Securing reliable manufacturing infrastructure

Further improvement of competitive advantages

■ Changes in amount of capital expenditure (Consolidated/adoption basis)

(Unit: 100 million yen)	FY2015 (Actual)	FY2016 (Plan)	2-year accumulated (Plan)	Progress rate
Consolidated	30	34	64	81%
Non-consolidated	20	20	40	80%

- The spending on investment projects adopted for the two years is expected to exceed 80% of the medium-term plan budget.

4. Key Challenges for FY2016 Management Plan

1 Further improvement of cost competitiveness

(1) Enhancement of manufacturing infrastructure

<Examples>

FY2015

New press machine for manufacturing slide plates
New drying furnace

FY2016

New press machine for manufacturing magnesia-carbon bricks
Updating mold powder manufacturing equipment

Significant improvement in productivity, quality and yield-ratio by upgrading key manufacturing equipment

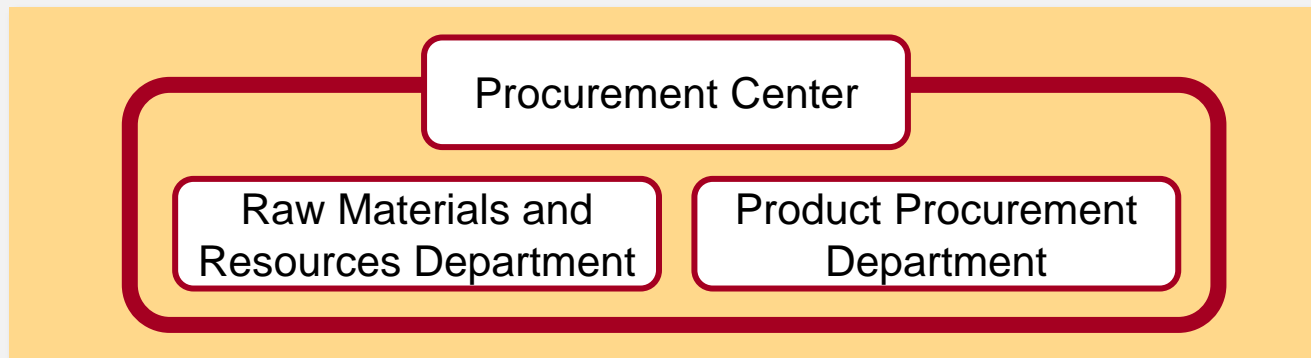
Reinforcement of cost competitive advantage

1 Further improvement of cost competitiveness

(2) Reorganization of procurement system

Creation of “Procurement Center”

(April 1, 2016)



Improving **procurement efficiency and effectiveness** by consolidating procurement operations of “raw materials/fuels” and “finished products” into one organization.

2 Boosting technological capabilities

(1) Development of highly value-added products

Responding to customer needs and addressing the challenges faced by customers

High durability

- Performance enhancement of various refractory products

Enhancement of steel quality

- Improvement of technologies to design refractories for continuous casting
- Functional improvement of mold powder

Environmental Friendly
(resource & energy saving)

- Increasing use of recycled refractories
- Improvement of technologies to reduce heat loss from refractories

2 Boosting technological capabilities

(2) Future growth areas

Development of products for future growth areas

Refractories for specialty steel

- Refractories for secondary melting furnaces (for automobile and aircraft manufacturing industries)

- Mold powder for specialty steel
- Insulating materials (new application of powder technology)

Refractories for environmental applications

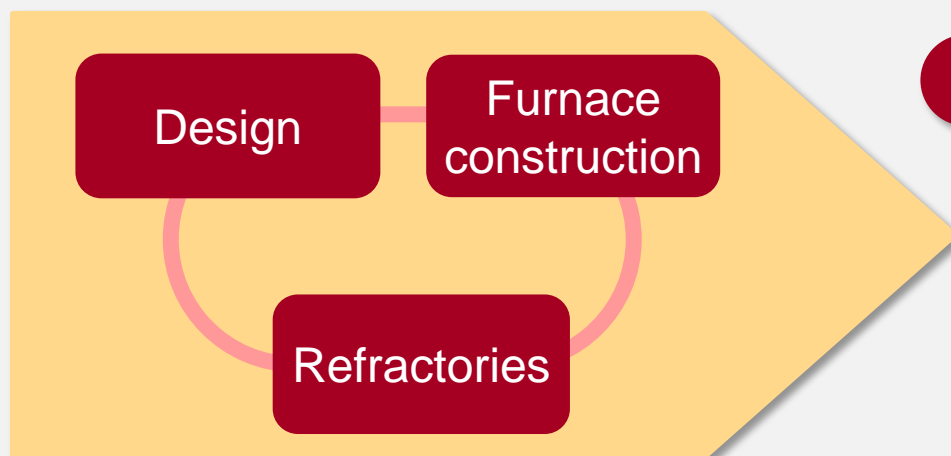
- BSF: Bio Soluble Fiber

3 Business expansion in Japan

(1) Sales increase by leveraging comprehensive expertise in refractories and furnace construction

● New Customers Development

=> Develop new customers by leveraging the Group's comprehensive expertise in refractories and furnace construction



Areas for sales increase

- Non-ferrous, industrial furnace area
(copper/aluminum smelting, lime calcination, etc.)
- Energy saving, environment related area

3 Business expansion in Japan

(1) Sales increase by leveraging comprehensive expertise in refractories and furnace construction

● Winning all major large-scale furnace construction projects from steel manufacturers

=> Winning orders for scheduled large-scale coke oven renewal projects

=> Successful completion of the current projects for continuously winning future projects

4 Overseas business expansion

Respond to the needs of respective regions around the world by reorganizing our global sales structure

Reorganizing overseas business departments in April 2015 to introduce regional business management system

- ① US/Europe, Oceania Business Department
- ② China/Asia Business Department

4. Key Challenges for FY2016 Management Plan

4 Overseas business expansion

Target 1 Southeast Asia

--- Realizing growth strategy through regional subsidiaries ---

Business Expansion from Oceania to Indonesia

- Established SRI in October 2014
- Capture growth opportunities in ASEAN, the largest market in the world



4. Key Challenges for FY2016 Management Plan

4 Overseas business expansion

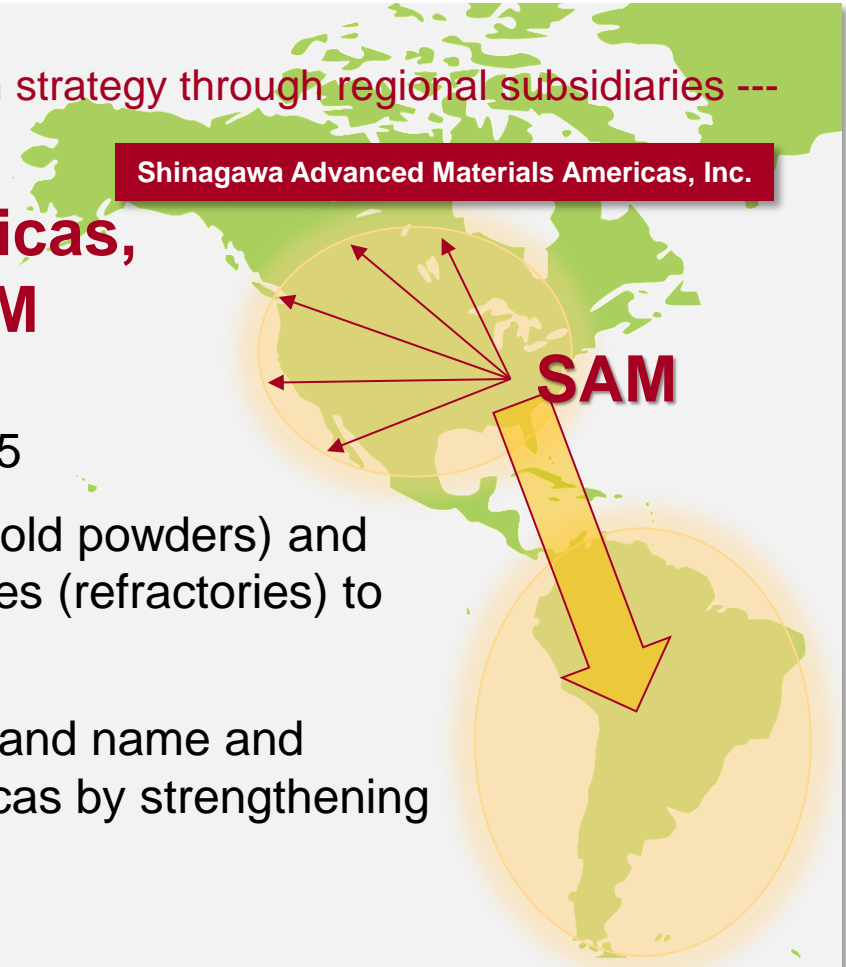
Target 2 Americas

--- Realizing growth strategy through regional subsidiaries ---

Shinagawa Advanced Materials Americas, Inc.

Expand Business in the Americas, from North to South, from SAM

- Reorganization of SAM in October 2015
- Combining sales of SAM's products (mold powders) and import from Shinagawa group companies (refractories) to pursue sales synergy
- Expand sales, penetrate Shinagawa brand name and increase market presence in the Americas by strengthening collaboration with alliance partners



4. Key Challenges for FY2016 Management Plan

4 Overseas business expansion

Target 3 China

--- Responding to growing needs for high grade steel ---

A new mold powder production line was launched in May 2016

Sales expansion of mold powder for manufacturing high grade steel sheets

Shenyang Shinagawa Metallurgy Materials Co., Ltd.

Liaoning Shinagawa Hefeng Metallurgical Material Co., Ltd.

Shinagawa Rongyuan Refractories Co., Ltd.

Target 4 India

--- Pursuing new growth ---

In addition to existing regional business of supplying ironmaking refractories, increasing sales of functional refractories to fulfill needs for producing high quality steel products

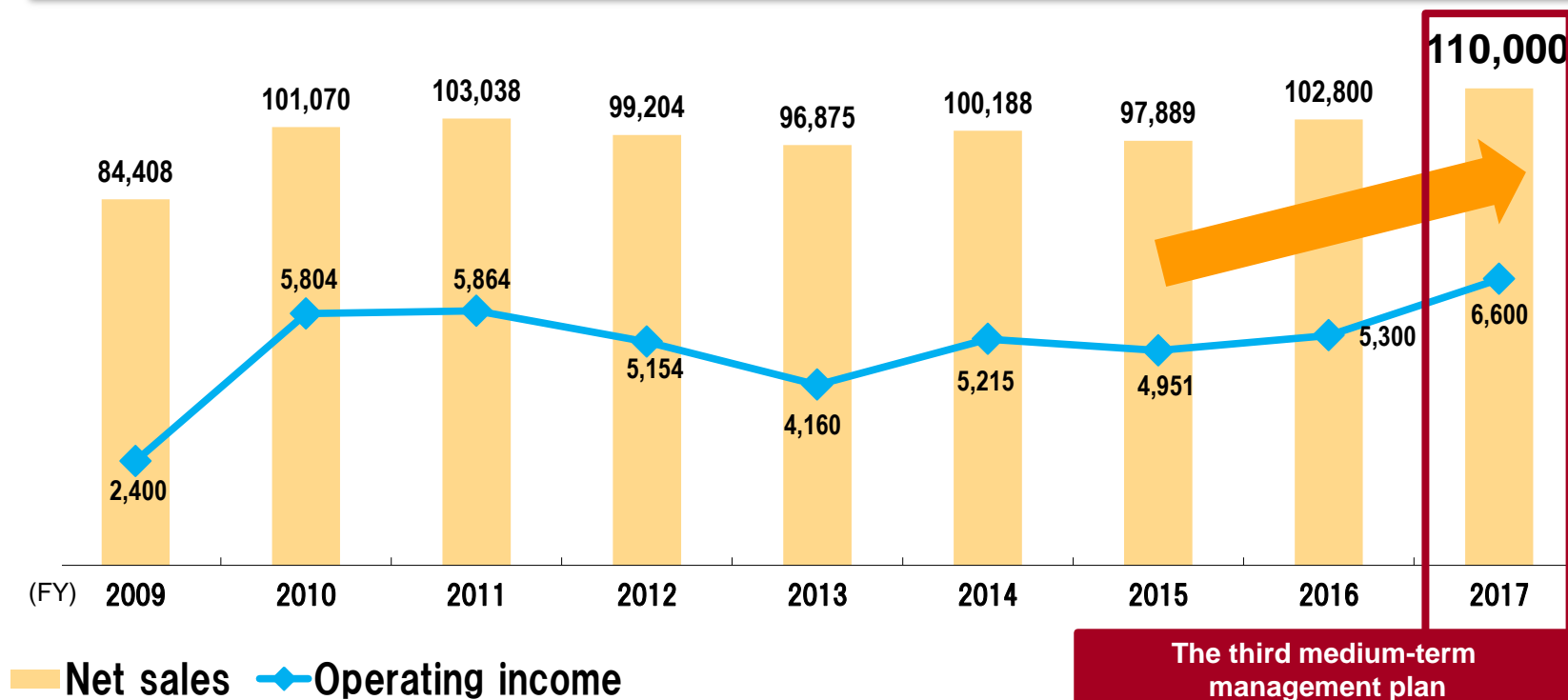
5. The Third Medium-Term Management Plan: Numerical Targets

Third Medium-Term Management Plan: Numerical Targets

Goal: Record results in FY2017

Consolidated net sales:
110.0 billion yen

Consolidated ROS
(ordinary income ratio): 6%

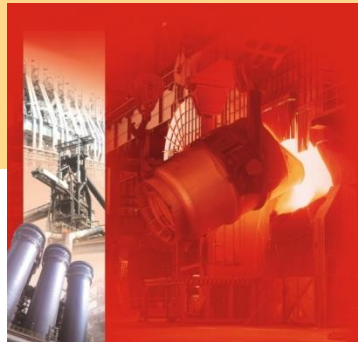


Transition to “Company with an Audit and Supervisory Committee” Structure

- * Resolved at the Board of Directors’ Meeting held on March 10, 2016
- * Planning to submit a proposal to the 182nd Ordinary General Meeting of Shareholders to be held on June 29, 2016

[Reasons for the transition]

Aim to strengthen supervisory function of the Board of Directors and further enhance corporate governance system through the audits and supervision of an “Audit and Supervisory Committee” where outside directors account for the majority of the members



III. Supplementary Notes

1. History

[Established in 1875]

Shinagawa Refractories 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. Mission Statement

Mission Statement of Shinagawa Refractories

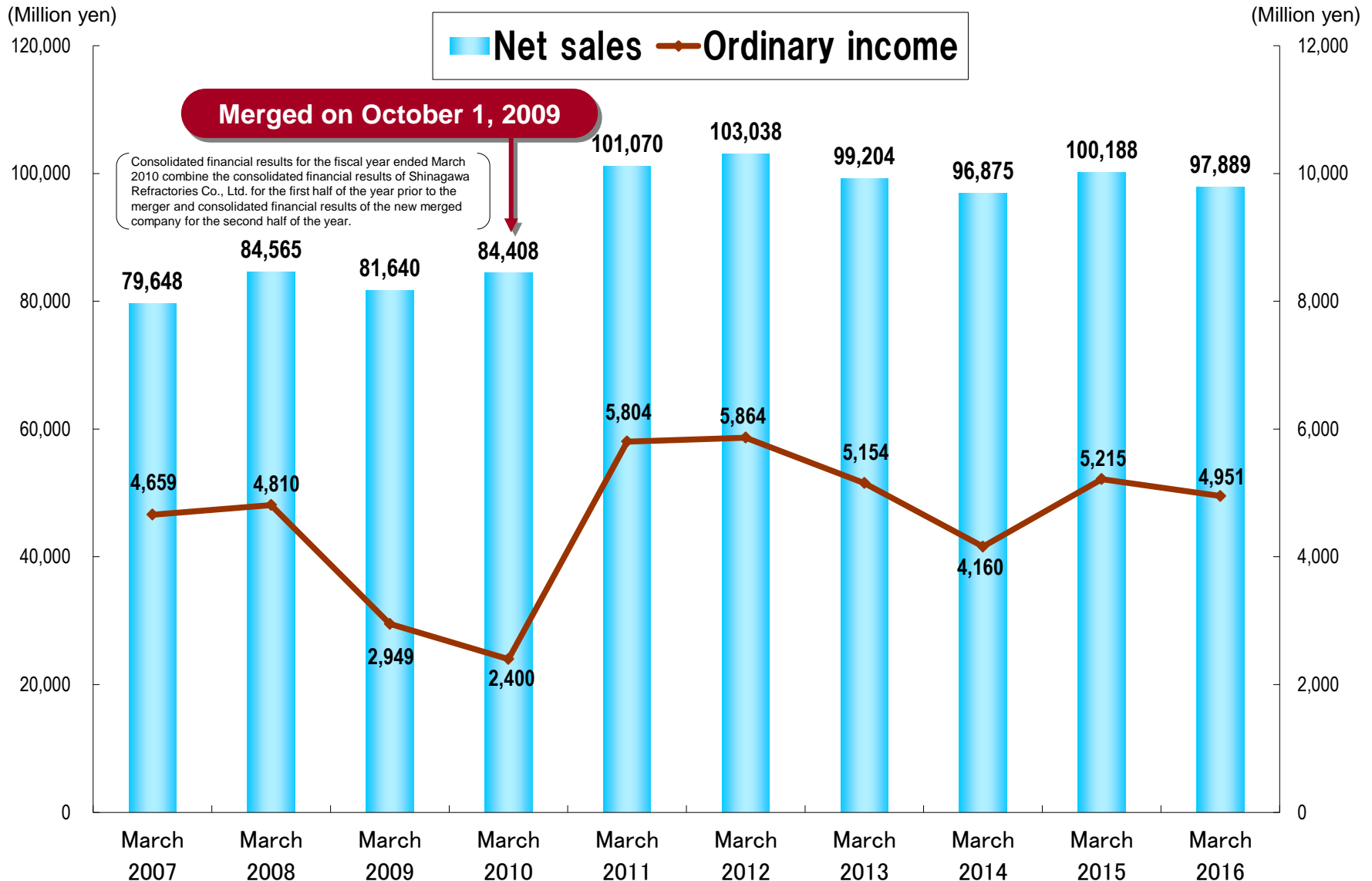
With our core philosophy of respecting the basics “Be BASIC,” Shinagawa Refractories is committed to contributing to the industrial development and the creation of affluent societies through providing high quality refractory products along with engineering services for furnace designs and constructions.

Four Goals:

- 1) Be the world's leading supplier of a full range of refractory products
- 2) Be responsive to customers' needs
- 3) Be a reliable corporate citizen for all our stakeholders
- 4) Be an attractive company for employees by providing safe, pleasant and rewarding workplace

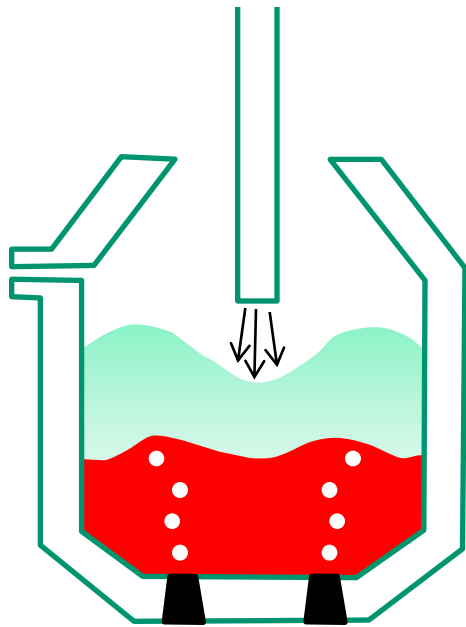
Shinagawa will strive to fully achieve these goals by pursuing excellence in developing human resources, promoting advanced technological capabilities and securing strong earning capacity along with solid financial foundation.

3. Changes in Net Sales and Ordinary Income During Past 10 Years (Consolidated Basis)

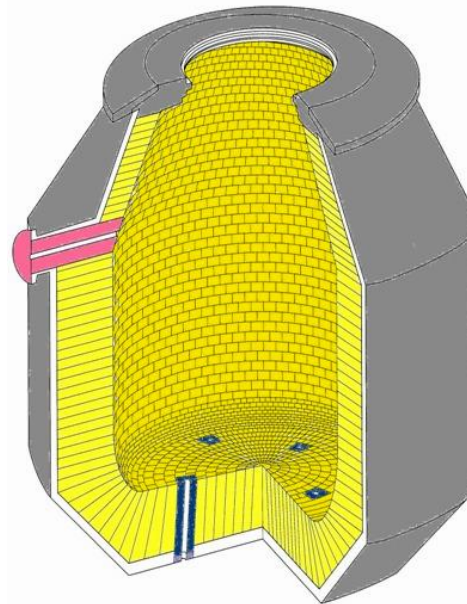


4. What are the roles of the "Refractory Industry"?

- 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 and construction.



Refining of molten steel in converter



Refractory lining



Fire bricks for converters



Furnace construction using fire bricks

5. Major Products 1/2

Refractories

Refractories are industrial materials that can resist ultra-high temperatures in excess of 1,500 degrees Celsius. 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
- 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

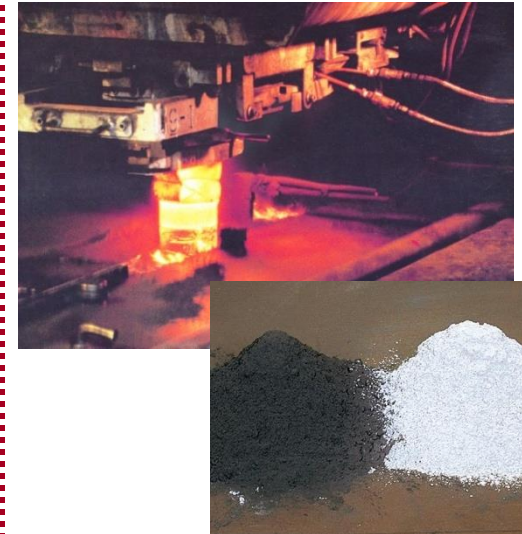
- Castable refractories
- Precast shapes
- Gunning refractories
- Plastic and ramming mixes
- Refractory mortars, etc.



Mold powder

An essential component of 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 used to manufacture steel ingot plates and rods)



5. Major Products 2/2

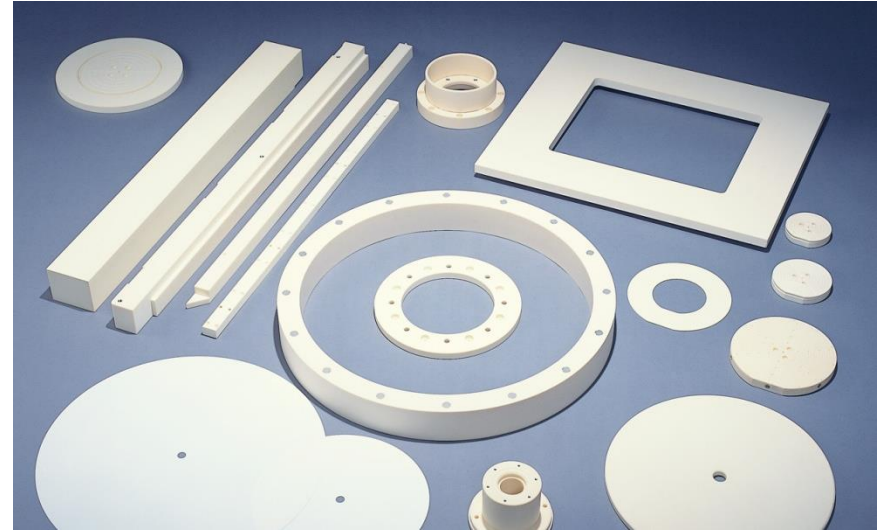
Ceramic fiber

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



Advanced ceramics

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



Chemical and other products

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



6. Key Features and Strengths

1

Leading company of ultra-high temperature technologies

2

Solid customer base with highly-advanced technological capabilities

3

Global business expansion

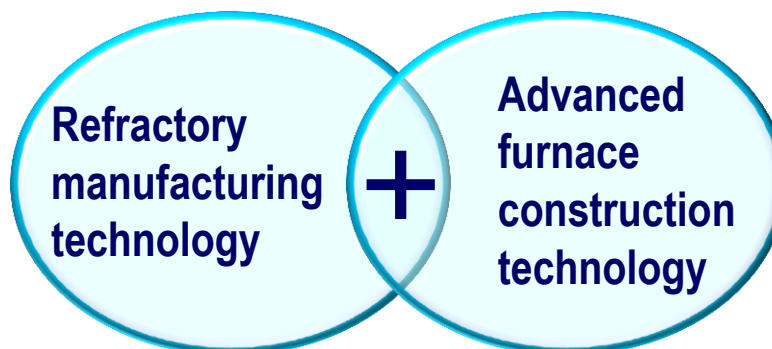
7. Key Features and Strengths

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

Leading company of ultra-high temperature technology

Solid technology development and commercialization capabilities supported by two technologies

- Refractories
- Ceramic fiber
- Advanced ceramics
- Chemical products and other products



- 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.

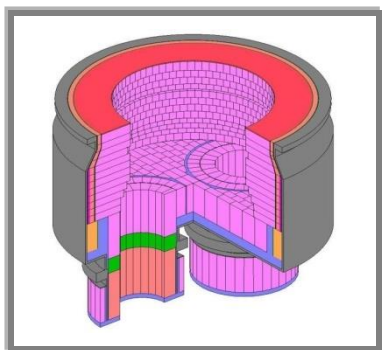
Customer-oriented technological response

Development capability to meet customer needs

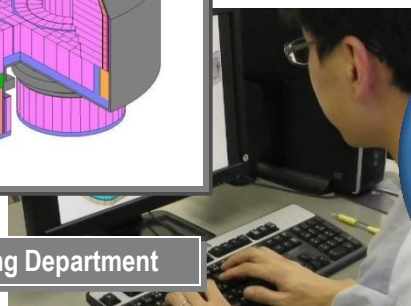
7. Key Features and Strengths

(1) Ultra-High Temperature Technology (ii) Customer-Oriented Technological Response

Work closely with customers at all times backed up by technologies and long track records of four divisions covering design, manufacturing, furnace construction, and development.



Engineering Department



Design



Analysis
and
development

Technical Research Center



Manufacturing



Works

Furnace
construction
and repair



Furnace Construction Division

7. Key Features and Strengths

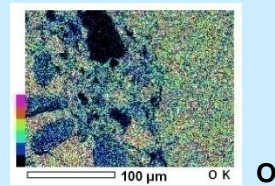
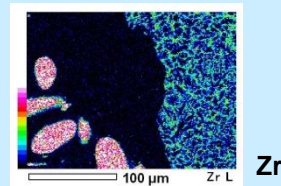
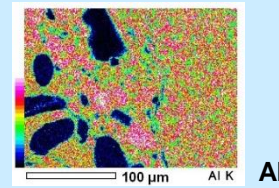
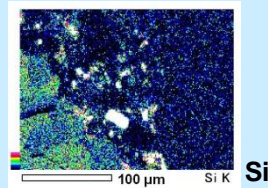
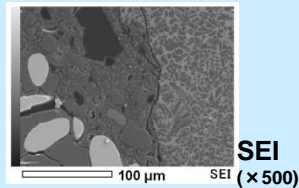
(1) Ultra-High Temperature Technology (iii) Development Capability to Meet Customer Needs

With world-class research facilities, the Research Center focuses on the development of products to meet the exact needs of customers

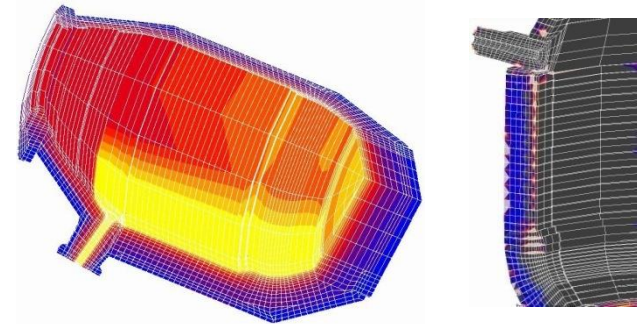


EDS analysis data
(color map)

Elements present in the area
can be detected in a short
period of time.



Analysis of microstructures of refractories



Structural analysis of converters



Water model simulation of molten steel flow in the mold

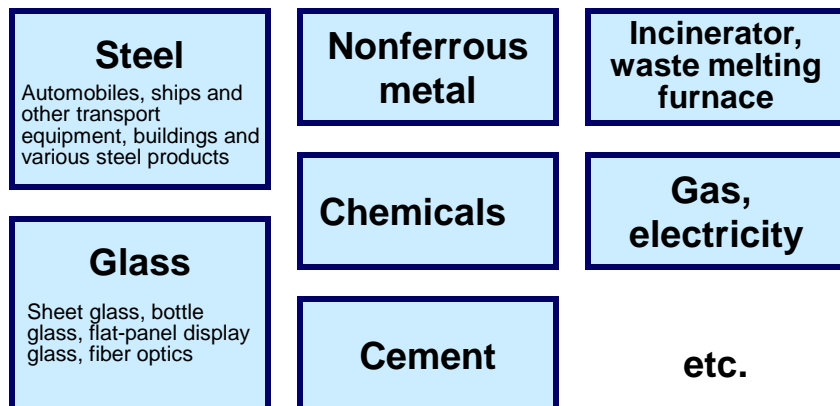
8. Key Features and Strengths (2) Solid Customer Base

Solid customer base with highly-advanced technological capabilities

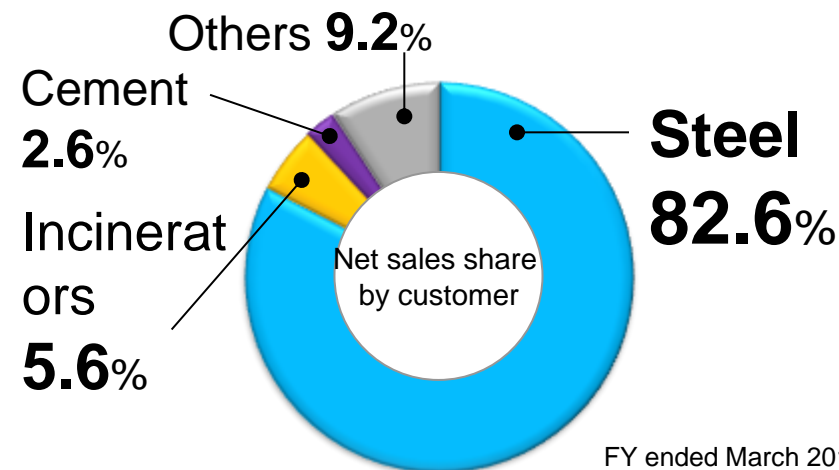
Meeting the exact needs of customers in various industries including the Japanese steelmaking industry, known for their best steelmaking technology in the world

Ultra-high temperature technologies are fundamental technologies for many industries

From the material industry to the field of energy production, environmentally friendly ultra-high temperature technologies are fundamental to all.



Steel industry is the main customer, accounting for approximately 80% of the total sales



FY ended March 2016
(non-consolidated)

9. Key Features and Strengths (3) Global Business Expansion

Global business expansion

Starting from our launch into China in 1997, the Company has continued to expand overseas, establishing production bases in Australia and the U.S.

[China] ← Entered market in 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.
- 2005: Established a joint venture company, Shinagawa Rongyuan Refractories Co., Ltd.
- 2008: Established a joint venture company, Liaoning Shinagawa Hefeng Metallurgical Material Co., Ltd.

[Australia] ← Entered market in 1998

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

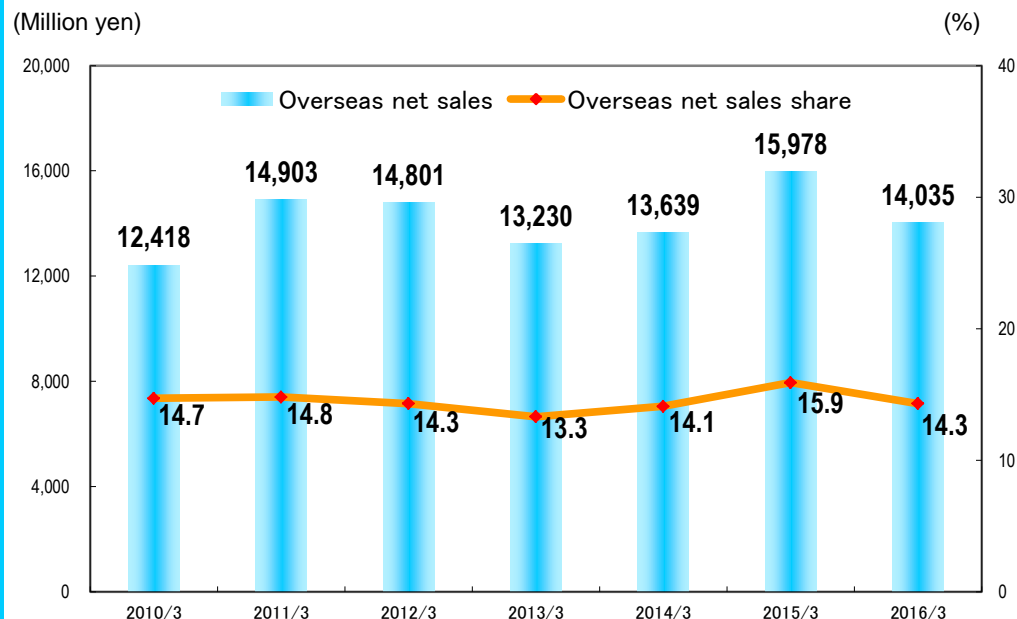
[U.S.] ← Entered market in 2006

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

[Indonesia] ← Entered in 2014

- 2014: Established PT Shinagawa Refractories Indonesia in Jakarta

Overseas net sales and market share (consolidated)



10. Current Status of the Expansion of Overseas Business Locations

Expanding overseas business locations in China, Oceania, and the Americas with a focus on areas close to the production sites of our customers

Shenyang Shinagawa Metallurgy Materials Co., Ltd.



Liaoning Shinagawa Hefeng Metallurgical Material Co., Ltd.



Shinagawa Advanced Materials Americas, Inc.



Shinagawa Rongyuan Refractories Co., Ltd.



Taiwan Liaison Office

North America Branch Office

PT Shinagawa Refractories Indonesia

Shinagawa Refractories Australasia Pty. Ltd.



*** Jinan Ludong Refractory Co., Ltd.**

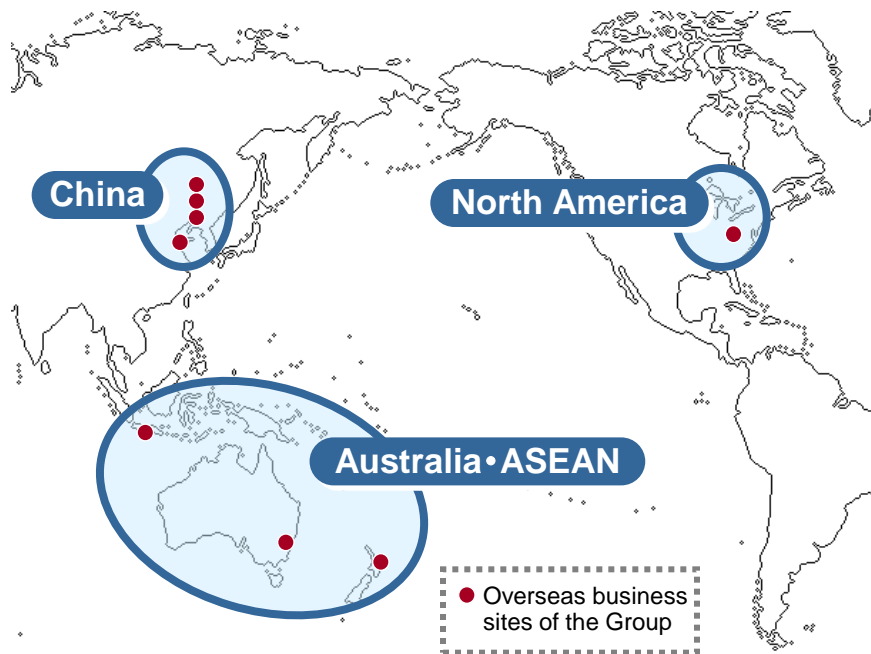
Shinagawa Refractories Australasia New Zealand Ltd.

Overseas business sites (* indicates affiliated companies. All others are consolidated subsidiaries.)
 Overseas sales offices

11. Domestic and Overseas Production System

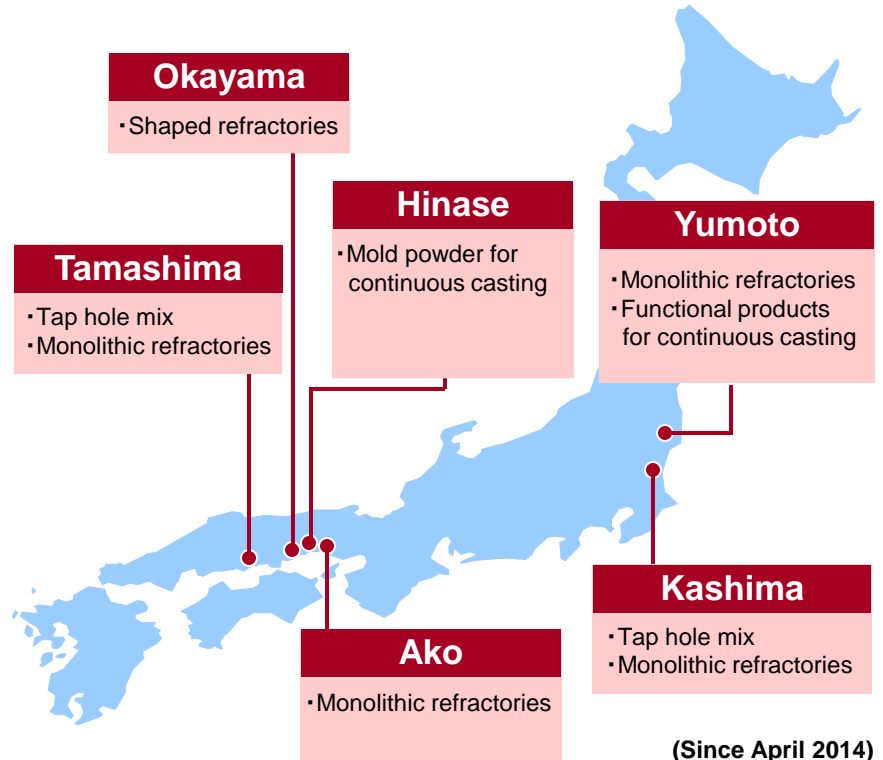
[Overseas]

Developing a stable supply system by establishing the Group's manufacturing sites closer to customers in order to responsive to customer needs



[Japan]

Promoting the redevelopment of a reliable supply system with enhanced efficiency and effectiveness



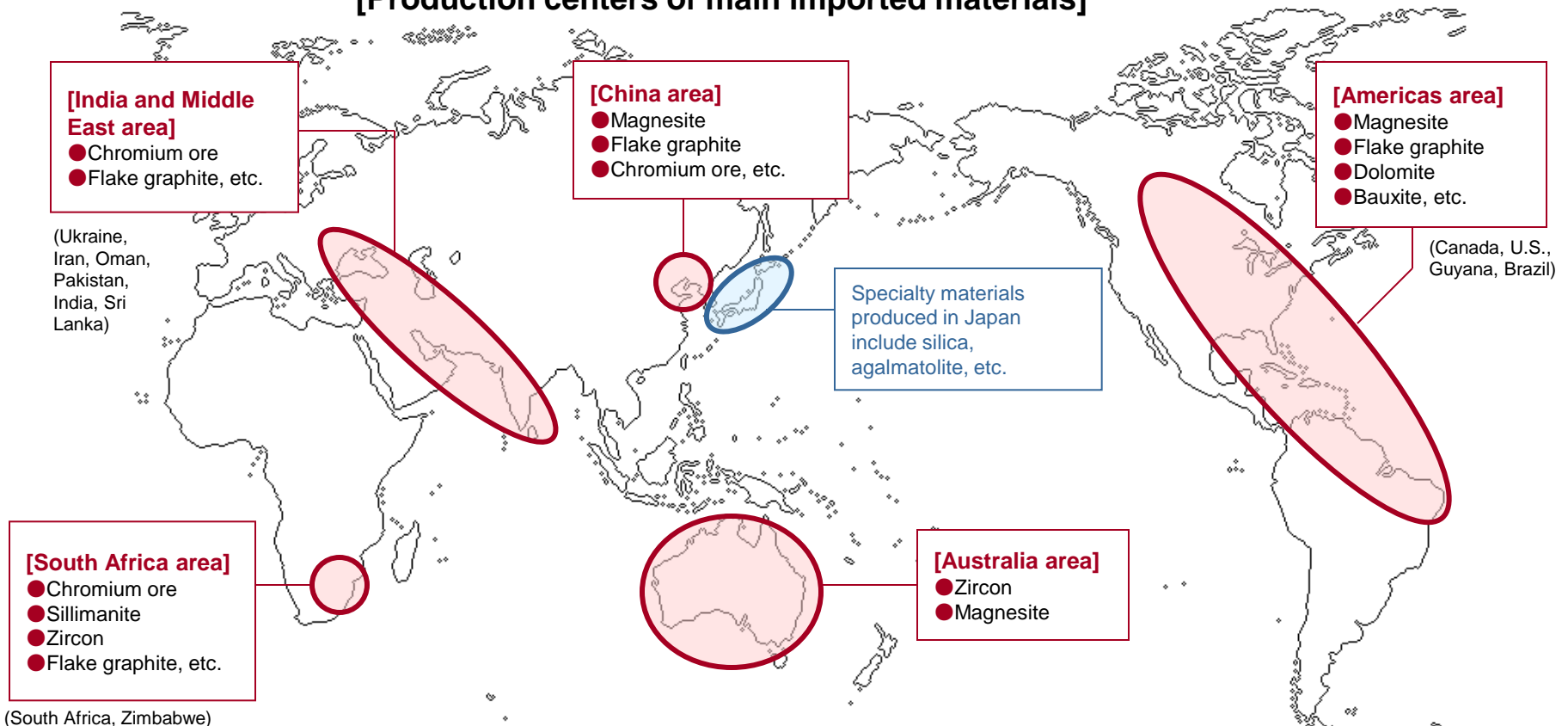
12. Global Procurement System

The Company depends on foreign sources for approximately 60% of refractory materials, 80% or more of which (approximately 50% of the total raw materials) are imported from China.



Amid such circumstances, the Company developed a balanced procurement system to source materials from production centers in five geographical areas around the world from the perspective of having balanced portfolio.

[Production centers of main imported materials]



Disclaimer

This document is intended to provide information on the results for the fiscal year ended March 2016 (April 2015 – March 2016) and is not intended to solicit investment in securities issued by the Company.

The document was prepared based on data available as of June 14, 2016. 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.