



Hiroyuki Fujiwara, President & CEO
Shinagawa Refractories Co. Ltd.

SHINAGAWA

“History Meets Modernity with our Cutting-Edge Technologies”

Shinagawa Refractories Co. Ltd., the world’s leading refractories player, has been supporting major social infrastructures by providing superior values and optimal solutions. With over 145 years of experience in refractories, the company is trusted across almost every essential industry. Its contribution to the refractory segment is worth mentioning.

In this interview with Iron & Steel Review magazine, Hiroyuki Fujiwara, President and CEO, Shinagawa Refractories Co. Ltd., highlights the milestones touched by the company in its long journey. He discusses elaborately on the company’s global expansion programme, products and services, and R&D activities. We also come to know from him how he views India as a potential market.

The Sky is the Limit for Shinagawa: It will be shaping the future of refractories. Hiroyuki Fujiwara elaborates on this particular aspect. Let’s see what he has to say regarding this.

Shinagawa Refractories looks forward to expanding its global business. Could you tell us what kind of plans you have to achieve it?

Shinagawa has been actively promoting our products and technologies by exporting from Japan for many years, but we are drastically changing our strategies in recent years to achieve “Proximity” for our global business by pursuing more local productions at each overseas location. To support the development of vital social infrastructures in the centre of a rapidly growing economy, we established PT Shinagawa Refractories Indonesia in 2014 to start monolithic productions in Jakarta, Indonesia. In 2019, Shinagawa invested in the state-of-the-art spray-dried mould powders production in the USA to support the growing production of high-quality steel products in North America. SG Shinagawa Refractories India was established in 2019 at Halol, Gujarat, to produce premium quality tap hole clay for blast furnaces. Shinagawa continues to expand our global business by achieving proximity, producing refractories where our customers use them, by further establishing local production sites globally and strategically.

Your company is already 145 years old. Could you tell us something about this journey?

Shinagawa’s founder, Katsuzo Nishimura, commenced production of fired bricks in 1875 amid Japan’s Westernization movement during the Meiji Era. Indeed, Shinagawa was the first to manufacture fired bricks as a private company in Japan. Refractories support

operations of virtually every essential industry: iron and steel, non-ferrous, power generator, cement, glass, chemicals, pulp and paper, refineries and many others. Without refractories, important industries and the products they produce would not exist. The history of Shinagawa is the reflection of dedication to the development of Japanese fundamental industry and vital social infrastructure, and we take significant pride in supporting the history of modernisation in Japan for many years. With 145 years of stellar track record as Japan’s high-quality refractory supplier, Shinagawa is ideally positioned to extend its reach for the global market and serve all the needs of customers worldwide.

We understand that Shinagawa Refractories is among the top five refractory companies in the world. Could you tell us something about your products and services?

It’s good to be in the top five in the world in terms of sales, but rather than that, we take great pride in being one of the world’s best refractory manufacturers in terms of qualities and technical services. Refractories are very unique. They are not commodities, not standardised products. Refractories are special products designed for specific requirements of our customers’ needs and applications. A process for deciding which refractories to be used for a specific application is rather an act of collaboration between us and customers, a joint development process of solutions. It is rather a long and complicated process requiring careful attention to the details, fully utilising our technologies and technical services. Economies of scale are certainly an important aspect to be successful in the refractory industry. However, Shinagawa’s



focus has always been to serve our customers in the most effective and efficient manner to differentiate ourselves from the competition not just by scales but by qualities, technologies and technical services.

Apart from Japan, in which other countries do you plan to set up your manufacturing base?

We've already set up our manufacturing plants in the USA, China, Australia, New Zealand and Indonesia, and recently and most importantly, in India. China, India, Japan and the USA are the top 4 countries in terms of crude steel production. In China, India and the USA, Shinagawa is considering further expansions of local production by adding other product lines, achieving proximity in each location to exactly meet our customers' needs.

What are the special refractory products you are manufacturing in terms of technology to stay ahead of your competitors?

Shinagawa's global proximity strategy is also the key to finding common environmental interests among the global communities. In response to the growing focus on carbon-neutral initiatives and a sustainable future, we have initiated a series of refractory recycling

projects and new investments for such technology development. We have been developing a wide range of refractories, including refractory bricks, monolithic refractories and thermal insulating materials, and accordingly own numerous unique technologies that lead to energy saving for refractory consumers. In order to reduce the energy required in refractory manufacturing, we also have been proactively working on recycling used refractories, closing the product life cycle loop from raw material extraction to product disposal.

Could you tell us something about refractory innovation and solutions?

In the long history of refractory industries, the main goal of product development has always been to reduce the consumption of refractories during customer operation by extending the life of these products. Additionally, Shinagawa has also been taking initiatives in mitigating the environmental burden by introducing heat insulating materials and designing their linings to save energy for our customers, developing refractory products that do not contain any harmful substances, and promoting the effective use of global resources by recycling used refractories. We are fully convinced these environmental initiatives will become even more important in the future.



Since India is now becoming one of the biggest markets for steel and refractory, what kind of investment you have planned to expand your market base?

Considering India's potentially exponential increase in steel production in coming years, Shinagawa is certainly considering investing in India to expand our local production. In addition to our tap hole clay production in Halol, Gujarat, Shinagawa will probably consider establishing a new production base for flow control system refractories in India in the near future.

Research & Development is always the most important aspect to stay ahead in business. Could you tell us something about your R&D activities?

With increasing environmental awareness, the importance of R&D activities in the refractory business is further increasing, and we continue to actively invest in R&D. In the city of Bizen Okayama, Shinagawa is proud to have world-class research facilities and researchers. The city is known as the birthplace of "Bizen ware", a type of high-quality Japanese pottery, and the know-how for making "Bizen ware" has ultimately evolved into the technologies for manufacturing refractory bricks. Shinagawa is making "history meets modernity" with our cutting-edge technologies.

Could you tell us something about your fiscal results ending in March 2022?

Shinagawa will announce our financial results ending March 2022 in June 2022. Our forecast released in February 2022 was the total revenues of 109 Billion JPY (+11.0% YoY) and ordinary profits of 10 Billion JPY (+22.0% YoY).

How do you see Shinagawa Refractories as a leading refractory company three years down the line?

Shinagawa is the future of refractories: Shinagawa has supported vital social infrastructure for over 145 years, and we will continue to challenge refractory advancement, further and faster, for the next century to come. As a one-of-a-kind refractory specialist and reliable partner, we respond to the needs of customers with speed and competitiveness in both costs and performance. With a growing focus on carbon-neutral initiatives and a sustainable future, Shinagawa has also initiated a series of refractory recycling projects and new investments for such technology development. Our group company operation now covers East Asia, the ASEAN region, Oceania, America and India, and in order to reduce total CO₂ emissions with our customers worldwide. Shinagawa continues to extend its global reach and lead the way in the energy transition. The Sky is the Limit for Shinagawa: We will be shaping the future of refractories.

Shinagawa Refractories:

Refractory Solution for High Quality Steel Since 1875


SHINAGAWA


"As a cornerstone of global refractory manufacturing, SHINAGAWA combines world class facilities with high quality product and excellent customer support to provide industry with the best refractory solutions."

Rob Lavin
Managing Director
Shinagawa Refractories Australasia


SHINAGAWA


"From iron and steel to cement and many other essential industries, SHINAGAWA offers series of products and services and every day we gain experience and build expertise in refractories. Through sincere communication, we find optimal solutions with each and every customer."

Yuri Korai
Sales - Steel Electric Furnaces
& Cement Industries

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SHINAGAWA


"SHINAGAWA is proud of providing World Class Refractory Solution - High Quality Products & Excellent Installation Service - to Indonesian Market."

Hiroshi Nakamura
President Director
PT Shinagawa Refractories
Indonesia


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SHINAGAWA
AMERICAS

"With State-of-the Art Manufacturing and Research Facilities, knowledgeable and experienced employees, SHINAGAWA Refractories, is ready to supply your refractory and ceramic needs with dependable and advanced products today and into the future."

Steve Campbell
Executive V. P. Sales & Technology
Shinagawa Americas

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The Faces of SHINAGAWA Statements

Introduction

Shinagawa Refractories Co., Ltd., a Japanese company, headquartered in Tokyo, is one of the largest refractory suppliers in the world. Since its establishment in 1875 as a first private fire brick company in Japan, Shinagawa has always retained passion and commitment to quality and continues to enhance 145 years of refractory expertise. With a focus on "Proximity," the company places the greatest importance on pursuing improvements and providing one-of-a-kind solutions for each and every customer in essential industries worldwide. Promising the highest and most consistent performance, Shinagawa looks to expand global business to better serve all the needs of customers.

145 Years of Refractory Experience

The founder of Shinagawa, Katsuzo Nishimura, commenced production of fire bricks in 1875 amid Japan's Westernization movement during the Meiji era. Indeed Shinagawa was the first to manufacture fire bricks as a private company in Japan. Starting from refractory bricks for gas generation furnaces, the company eventually started production of refractory bricks for a series of different applications; such as sulphuric acid furnace and glass furnace. In 1894, Shinagawa patented silica bricks, which led the company to expand its business into the iron and steel industry.

After the 1905 Japanese-Russo War, Japan saw a robust

economic growth. In line with nationalization of the railway, development of gas infrastructure and construction boom, the company started production of decorative bricks for buildings. In fact, Shinagawa manufactured all of the original burgundy-colour decorative bricks for the Central Railway Station of the Ministry of Railways, which is currently known as Tokyo Station. For this honourable project, for the first time in Japan, Shinagawa imported a press machine from Germany and employed double-action press technique, which was still rare in the world of brick manufacturing. It took almost a year to complete the production and delivery of some 940,000 red ornamental bricks.

Refractories support operations of virtually every essential industry: iron and steel, non-ferrous, power generator, cement, glass, chemicals, pulp and paper, refineries and many others. History of Shinagawa is the reflection of dedication to the development of Japanese fundamental industry and vital social infrastructure. With 145 years of stellar track record as Japan’s high quality refractory supplier, Shinagawa is well positioned to extend its reach for the global market and serve all the needs of customers worldwide.

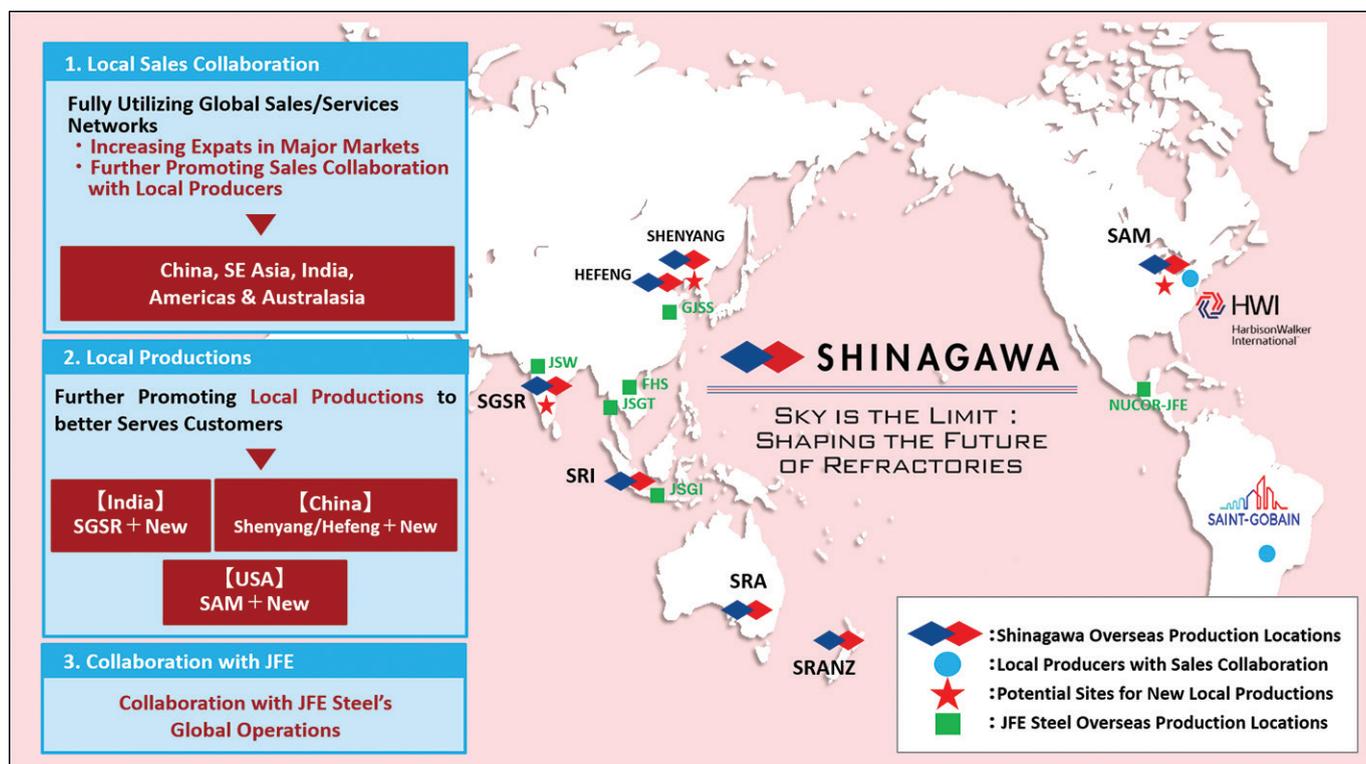
Global Business Expansion with a Focus on “Proximity”

Shinagawa built its very first plant in Shibaura, Tokyo, and later added one in Iwaki, Fukushima and one in Bizen, Okayama. The company now has 14 manufacturing plants worldwide and further looks to expand its global reach with a focus on “Proximity.”

Proximity – nearness in space, time and relationship – is the core of Shinagawa’s strategic global strategy. Proximity could also be translated as physical or geographical closeness, availability in the same time zone and a reliable relationship based upon trust and confidence. Achieving all these aspects of proximity is how and why Shinagawa has established its position as Japan’s leading refractory manufacturer.

On its home ground in Japan, Shinagawa operates six production plants at two main locations: East Works and West Works. While East Works mainly produce value-added functional shaped refractories, such as shrouds and nozzles for steelmaking process, West Works cover a wide variety of products, from shaped refractories to monolithic, precast shapes and even mould powders for continuous casting of steel. Although the first plant in Tokyo was eventually closed, the works in Fukushima and Okayama have remained to hold two of the largest production capacities of the company through 145 years.

Turning to overseas markets, Shinagawa has achieved great success in developing the finest mould powders for high-end steel mills in China. Two joint venture companies, Shenyang Shinagawa Metallurgy Materials in Shenyang since 1997 and Liaoning Shinagawa Hefeng Metallurgical Material in Anshan since 2008, have achieved a predominant market share as suppliers of spray-dried mould powders for major steel producers in China. In recent years, they further extend their proximity for customers in South Korea, Vietnam, India, Australia and Brazil.



Shinagawa Overseas Business Expansion

In Australia and Oceania, Shinagawa Refractories Australasia (SRA) was established in 1998 and now covers more than 30% market share of all refractory spend in the region. Three highly efficient monolithic plants are located in Unanderra, NSW and Kwinana, WA in Australia and Huntly in New Zealand. As the largest local refractory supplier in the region, SRA delivers cost-competitive, consistent quality products for Australian steel producers and many industrial customers.

In ASEAN region, Shinagawa Refractories Indonesia (SRI), established in 2014, locally manufactures monolithic refractories. Located in Jakarta, the centre of a rapidly growing economy, SRI supports development of vital social infrastructures by providing full-range high-quality refractory materials from all Shinagawa group companies.

In the US, Shinagawa Advanced Materials Americas (SAM) became a 100% subsidiary of Shinagawa Refractories in 2006. SAM operates a mould powders plant in Mogadore, OH, and its dedicated technical team and three expat engineers from Japan work closely together to offer superior “Made in America” mould powders and functional refractories imported from Japan. Beyond the company’s own network, Shinagawa has seen a successful sales evolution through business alliance with HarbisonWalker International, Pittsburgh, PA, the largest supplier of refractory products and services in the US. Even further, Shinagawa is considering a new local production investment and potential technical collaboration.

In India, SG Shinagawa Refractories India (SGSR), established in August 2019, supplies premium quality tap hole clay for blast furnaces in India from its plant in Halol, Gujarat. For a stable operation of local blast furnaces, SGSR provides flexible delivery lead time and on-site technical support with two expat

engineers from Japan. Here also, another local production project is in discussion, and Shinagawa plans to strengthen the “Made in India” product portfolio in coming years.

Innovative Refractory Solutions for Sustainable Future

Shinagawa’s global proximity strategy is also the key to find common environmental interests among the global communities. In response to growing focus on carbon-neutral initiative and sustainable future, the company has initiated a series of refractory recycling projects and new investments for such technology development. The Shinagawa group operation now covers East Asia, the ASEAN region, Oceania, Americas and India, and, in order to reduce total CO₂ emission, the company’s extended commitments include taking the initiative in leading the way to energy transition. Promoting sustainability and environment-friendly technologies, Shinagawa is committed to providing quality products while improving energy efficiency and utilizing recycled materials.

Midterm Strategy

On the FY2021 annual sales revenue basis, Shinagawa is the fourth largest refractory supplier in the world. The company’s 2023 midterm performance target includes 35% growth from 2020 in its overseas sales revenue. As Heiki Miki, Overseas Business Division Director, emphasizes, “Shinagawa will be there for our customers worldwide: we are reachable where they need us most, with solutions and improvements they need most. Achieving proximity in every sense, Shinagawa is ready to serve customers anywhere, anytime and for anything at all.”



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