RHI Magnesita at a glance 2020

### The driving force of the refractory industry





# The global leader in refractories

#### Contents

Our challenges	4
Leader in our field	6
Global reach	8
Extreme innovation	10
Mining solutions	12
Collaborative culture	14
Get in touch	16

As global leader we use our resources, worldwide presence and **expertise** to drive change in the refractory industry for the benefit of our customers, who rely on us. 💔

Stefan Borgas **Chief Executive Officer** 



Leader

























# **RHI Magnesita**

RHI Magnesita is the global leader in refractories. We have the largest number of locations around the world and the most innovative, reliable products and services. We also provide the most robust supply and quality security, thanks to our exceptional vertical integration — from mining to production

## We have a vital job to do ...

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Refractory products are used in all the world's high-temperature industrial processes. Without them, the steel, cement, lime, non-ferrous metals, glass, energy, environment and chemical industries couldn't exist.

Refractories defy the most hostile conditions to stay strong and stable at temperatures of 1200 °C and much, much higher. To contain materials safely while they're burned, melted, blasted, fired, fused, and shaped. And to protect equipment such as furnaces and kilns against thermal, mechanical and chemical stress.

Our job is to provide answers to these extreme challenges. The product portfolio ranges from bricks and lining mixes to flow control products such as slide gates, nozzles and plugs. Their service lives range from a few cycles within a day to as long as 10 years. The base materials we use to make them are magnesite and dolomite remarkable materials which themselves require skilful handling: the melting point of fused magnesia is above 2800 °C.

€ 2.9 bn 2019 revenue

128 Number of solutions contracts worldwide





Refractories defy the most hostile conditions to stay strong and stable at temperatures of 1200 °C and much, much higher.

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Leadership is not just about being the biggest or strongest. To us, it's about using those advantages to set the pace of innovation in our industry and delivering the best results for our customers and sustainability for the environment. "

# ... and we take leadership seriously

business results.

Content Challenges

Leader















Continuous progress in our 4.0 sales initiative enables us to offer more than just traditional refractory products. So we don't take our market leadership for granted. We aim to stay No.1 by driving positive change in our industry, and the industries that rely on us. By applying our exceptional resources, we're working to enhance not only our customers' operations but their

#### **Total revenue** by segment



69% Steel



**31% Industrial** (cement/lime, non-ferrous metals and other process industries)

# There for you, wherever you need us

The more closely we work with our customers, the greater the difference we can make for them. So having a global network of offices, research centres and production sites is important to us, and to them. We'll go on extending our global reach, to be nearer to even more customers.

Being closer to customers doesn't just mean we can be more responsive to their needs. It also helps us to listen better - to understand their concerns, cultures and ways of working. And to be alert to new thinking and ideas that enable us to deliver ever better advice, service and solutions.

Our exceptional resources and expertise extend far beyond making and selling products. We also provide solutions to customers worldwide for cover projects, materials specification, thermal studies, numerical simulations, technical support and follow-up in application of minerals, electromechanical services for refractory equipment, artificial intelligence for the use of data and connectivity, and predictive maintenance.









2 COUNTRIES



# Taking innovation to 1200°C and beyond

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€64m Investment in R&D and Technical Marketing

1,598 Global patents and patent applications held

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Challenges

Leader

Global







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At RHI Magnesita, innovation takes place in extreme conditions. Holding and pouring hot liquids may seem quite simple. But when the liquid is molten metal at 1200 °C or more, it's a real challenge. We're applying advanced science and technology - in materials, robotics, sensors, big data and machine learning - to transform industrial processes at extreme temperatures. With more than 480 professionals in R&D, technical marketing and production management, we have the largest team of specialists. Our technical engineers and experts consult, develop and deliver innovative solutions directly to customers on site. The overall goal is to push the boundaries of what's possible in our industry, and those of our customers.

But our innovation doesn't stop there. It's a mindset that everyone at RHI Magnesita shares. "How can we do this better?" is part of the culture — in HR, finance and customer service just as much as in R&D and production.

For customers in capital-intensive, highly competitive industries, it's important that our leadership in technology is matched by a strong focus on creating customer value through innovative processes, business models and customer relationships. So all of us work as a team to make processes quicker, products more costeffective and solutions more beneficial for our customers.

## Leaving nothing to chance

We'd rather leave nothing to chance. So we've made RHI Magnesita the most vertically integrated company in the industry.

### 1

Our products account for only around two to five percent of a customer's production costs. But their reliability — of supply and performance — is absolutely crucial. A single missed shipment or product failure could shut down a whole plant.

We'd rather leave nothing to chance. So we've made RHI Magnesita the most vertically integrated company in the industry.

The source materials for refractory products are the naturally occurring minerals magnesite and dolomite, and magnesia processed from seawater. Our resources include the world's best reserves of dolomite. This gives us extremely high levels of supply security and quality control. In a volatile global marketplace, it also helps to stabilise costs and secure long-term price competitiveness for our customers. Full vertical integration means we can take meaningful responsibility for end-to-end customer service and complete bespoke solutions, extending from raw materials production through to installation and management services to recycling of used materials.

Content

13 Raw material sites

up to 98.2% Product purity in our Pomba mine in Brazil

No.1 Best magnesite mine in the world

Challenges Leader

Global

Innovation

Culture

Get in touch



Mining

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## Ultimately we're all about people

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#### Serving our customers

We're the acknowledged industry leader in innovative technology. But to deliver results for customers, that technology has to be put to work effectively. By people.

That's why we attach so much importance to our people. To attracting and retaining the best talent. To a leadership style that encourages openness, fresh thinking and initiative. To a collaborative culture that values ideas and determination to add value for our customers. Colleagues who are down-to-earth, positive, energetic and optimistic make strong teams who get results.

Our people comprise more than 85 nationalities and many of us work on-site with our customers in 125 countries, helping to optimise their use of refractories and develop tailored solutions. We take pride in their reputation for being friendly, trustworthy partners, who are bright, responsive and easy to work with. 13,650+

Employees

480 Specialists

85 Nationalities

280 Apprentices

Challenges

Leader

### Respecting communities and the environment

We've taken the lead in applying technology to make refractory products efficiently without harming people or the environment. Through digitisation, robotisation, automation and new materials we continue to make our factories cleaner and greener.

We will continue to play a leading role in sustainability.

We've launched key initiatives and research programmes to significantly reduce our carbon footprint, partnering up with customers to lower their emissions. Driven by reduced primary raw material requirements, energy savings, efficiency increases and cost savings we are improving our sustainability performance. we ind As cu W ins m





We set high targets for quality and environmental standards across our entire business. And we've established an integrated management system to ensure we consistently meet those high standards of quality, environmental protection, and occupational health and safety throughout the group.

We report regularly and transparently on our sustainability performance in our annual report. And as well as engaging positively with their local communities, many of our sites hold open days we've found that seeing how we work significantly increases local support and respect.

As part of our end-to-end service, we also help customers use our products more sustainably. We're working with leading universities and research institutions on new natural and synthetic raw materials and recycling concepts to utilise used refractory material now and in the future.

# The driving force of the refractory industry

### Get in touch

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Content



Leader





Innovation

Mining 



Get in touch







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RHI Magnesita is the driving force of the refractory industry. With 13,650 highly skilled people across more than 40 countries, we are the leading global supplier of high-grade refractory products, systems and services. These enable the high-temperature production of steel, cement and glass and many more materials essential to daily life.

