

IRON INDUSTRY CASTHOUSE FLOOR

Refractory Concept Solutions

CALDERYS PERFORMANCE YOU CAN TRUST

For all industries with extreme temperatures and working conditions, Calderys is there for you. Combining a global network with local expertise, we offer customised solutions wherever you are: from monolithic refractory to bricks and precast shapes to a full range of engineering and installation services.

KEY POINTS

Over 100 years of refractory experience

Over 2 300 employees across 33 countries

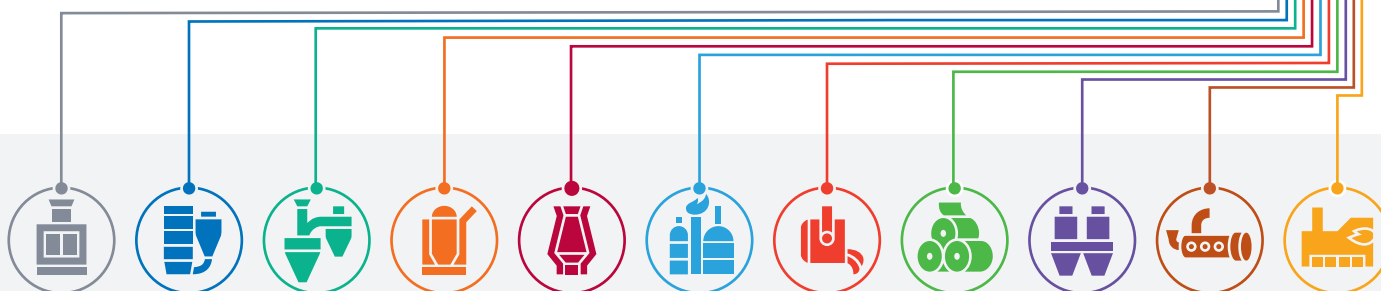
19 plants in 16 countries totaling 600 000 tons capacity

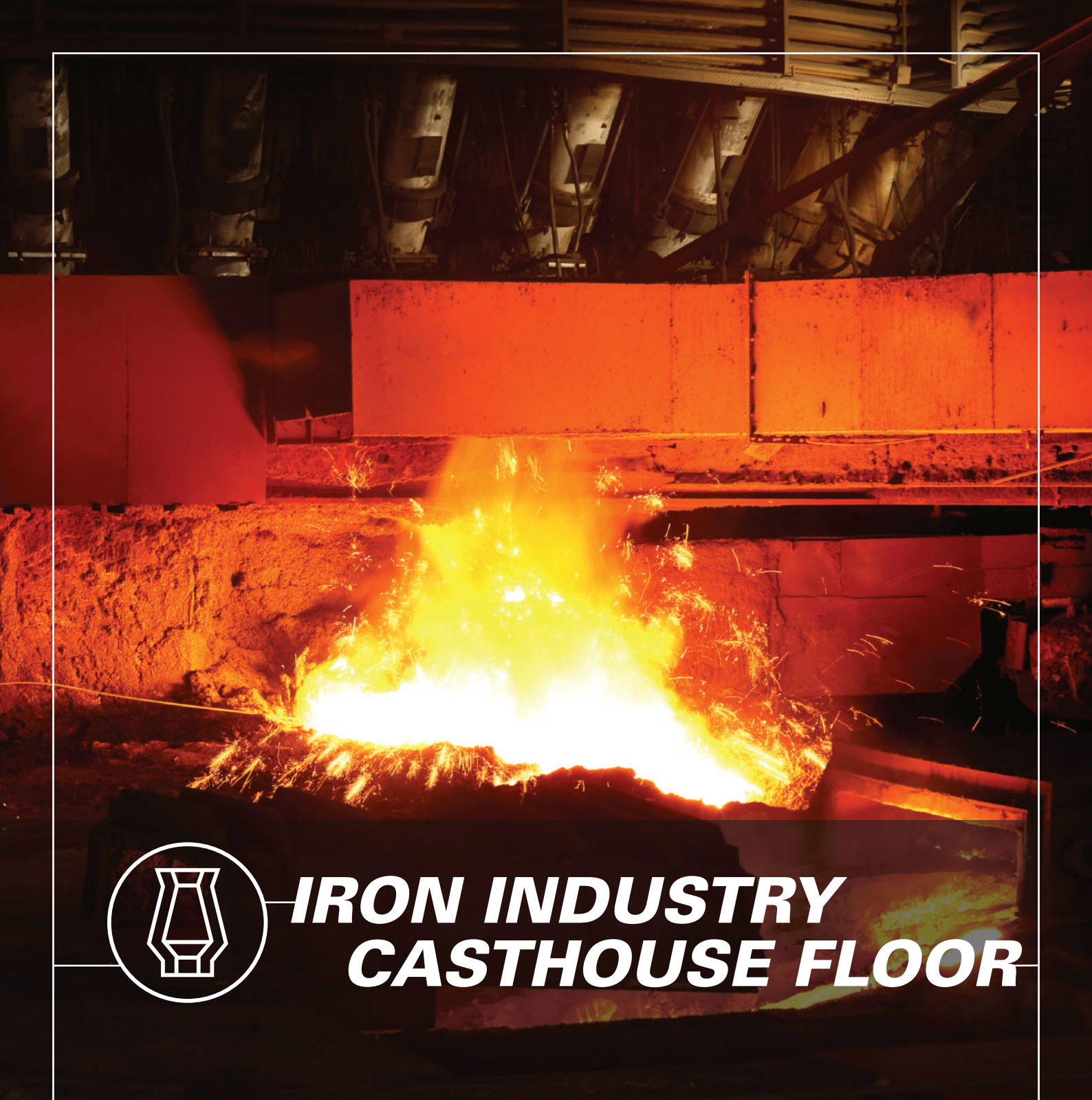
Annual revenue of over € 500 million

1 Global Technology Centre and 15 Customisation Labs

150 major projects implemented every year

Wholly-owned subsidiary of Imerys Group





IRON INDUSTRY CASTHOUSE FLOOR

INSTALLATION TECHNIQUES

- ▶ Casting / Pumping / Vibrating / Rodding behind formwork
- ▶ Self-flowing
- ▶ Bricking
- ▶ Precast ready shape

[Find Out More](#)

- ▶ Dry gunning
(Conventional and High density)
- ▶ Wet gunning / Spraycasting
- ▶ Ramming
- ▶ Dry vibratable mixing

OUR VALUE FOR CASTHOUSE FLOOR

At CALDERYS, our mission is to deliver value to our customers.

CALDERYS is a leading provider of refractory solutions and services to the Iron industry. We are present in over 100 main runners, we are plugging over 65 tap holes, and we have made numerous blast furnace repairs over the last years and all of this across more than 20 countries. Our global network of industry experts ensures that we propose the most suitable products based on your requirements and deliver to you superior refractory performance and reliable services. We are able to do so by combining our innovative product range and pioneering implementation techniques with end-to-end project management services. We deliver the following value proposition to iron makers:

Increased Productivity



By extending the service life thanks to increased availability of the production equipment and by reducing maintenance downtime.

Improved Cost Effectiveness



By reducing unit cost of hot metal thanks to continuous optimisation of the refractory solutions by our industry experts.

Enhanced Safety and Compliance



By improving the health and safety conditions in your plants thanks to our safe installation practices and our environmentally-friendly refractory products, for example our resin-bonded tap-hole clay.

OUR SERVICES

Material Selection

Calderys will select the optimal solution for you from our full range of shaped, unshaped and precast products that cover all the equipment in your blast furnace casthouse.



Quality Control

We comply with strict testing procedures on both raw materials and finished products in all of our production facilities across the globe.



Project Management

We provide complete project management services including consultation, planning, delivery scheduling, supervision, site management and also direct training for customer personnel. Be it large, small or turnkey projects - our end-to-end project management services ensure on-time and on-budget completion.



Analysis

Before we start a job, we perform an extensive analysis of your process, equipment, and working conditions in order to provide the best solution for your needs.





Design

We provide customised solutions including complete refractory lining design, thermal profiling, product selection, job quotation, development of innovative installation techniques, dry-out and start-up / operating instructions.



Logistics

Calderys logistics personnel look after the timely delivery of our products to your sites across the world.



Installation

We carry out high-quality installation services using in-house equipment and through the use of optimal installation techniques. This ensures best installation and dry-out of the refractory so that the customer gets maximum performance in terms of reduction in time required, reduction in energy requirements, low wastage and optimal performance of our refractory products.



Maintenance

We offer permanent on-site refractory service including regular and predictive maintenance and repair. We also provide rapid round-the-clock response to emergencies as required.



OUR CONCEPT

We have developed many products and innovative solutions to respond to all key requirements of our customers:

To ensure total reliability:

- A lining concept based on thermal analysis ensures that liquid iron and slag are contained in the trough.
- A safety lining which provides high strength and excellent volume stability.
- A permanent lining specially adapted for the main trough, sandwiched between the wear and the safety lining constructed from prefabricated shapes. The shapes are made with a special high strength non-oxidising castable which resists iron and slag contact. The shapes allow the trough more mechanical flexibility and provide an additional interface to stop iron penetration.

To achieve long campaigns:

- Installation of a wear lining consisting of high alumina ultra-low cement castables containing carbon and silicon carbide. The SIC content can be varied depending on the severity of corrosion. The carbon has been optimised to resist corrosion and oxidation. These products can be cast in place or prefabricated.
- Intermediate repairs of high wear areas using high alumina, reduced cement gunning mixes containing both carbon and silicon carbide can be done to extend the life of the trough lining. Gunning repairs can be carried out in cold, hot and red-hot conditions.

To reduce maintenance downtime:

- Dry vibrating mixes, which require no drying.
- Prefabricated shapes which can be installed quickly. They are cast under optimal conditions and pre-dried to assure maximum lifetime.
- Wet ramming mixes can be used to carry out fast localised repairs. These products can also be used for entire main troughs and secondary runners.

OUR PRODUCTS

Our comprehensive product portfolio for the iron industry includes alumina, carbon and silicon carbide based products. It includes dense castables, self-flowing castables, dry gunning and shotcreting materials, ramming and plastic mixes, dry vibrating mixes, injection and grouting products, tap-hole clays and precast ready shapes. It covers every step of the iron making process - from coke oven and sinter plant, to blast furnaces, casthouse floor and finally hot metal transport and treatment.

Dense cast-vibrated castables

- ▶ CALDE® CAST

Dry gunning mixes

- ▶ CALDE® GUN

Dense self-flowing castables

- ▶ CALDE® FLOW

Ramming mixes

- ▶ CALDE® RAM
- ▶ CALDE® PLAST

Dry vibratable mixes

- ▶ CALDE® DRY

Wet gunning / shotcreting mixes

- ▶ CALDE® SPRAYCAST



INNOVATION

At Calderys, innovation is a key priority keeping us proactive to better anticipate customer needs and market trends. Discover some of the main elements of our innovation philosophy.

Beyond product development

Innovation at Calderys goes beyond products: We are pioneering new **installation techniques**, improving **equipment** to deliver higher yields, and creating new **services** to always bring more value to our customers.

Global network

Calderys leverages global expertise & resources from the worldwide Imerys group.

Local adaptability

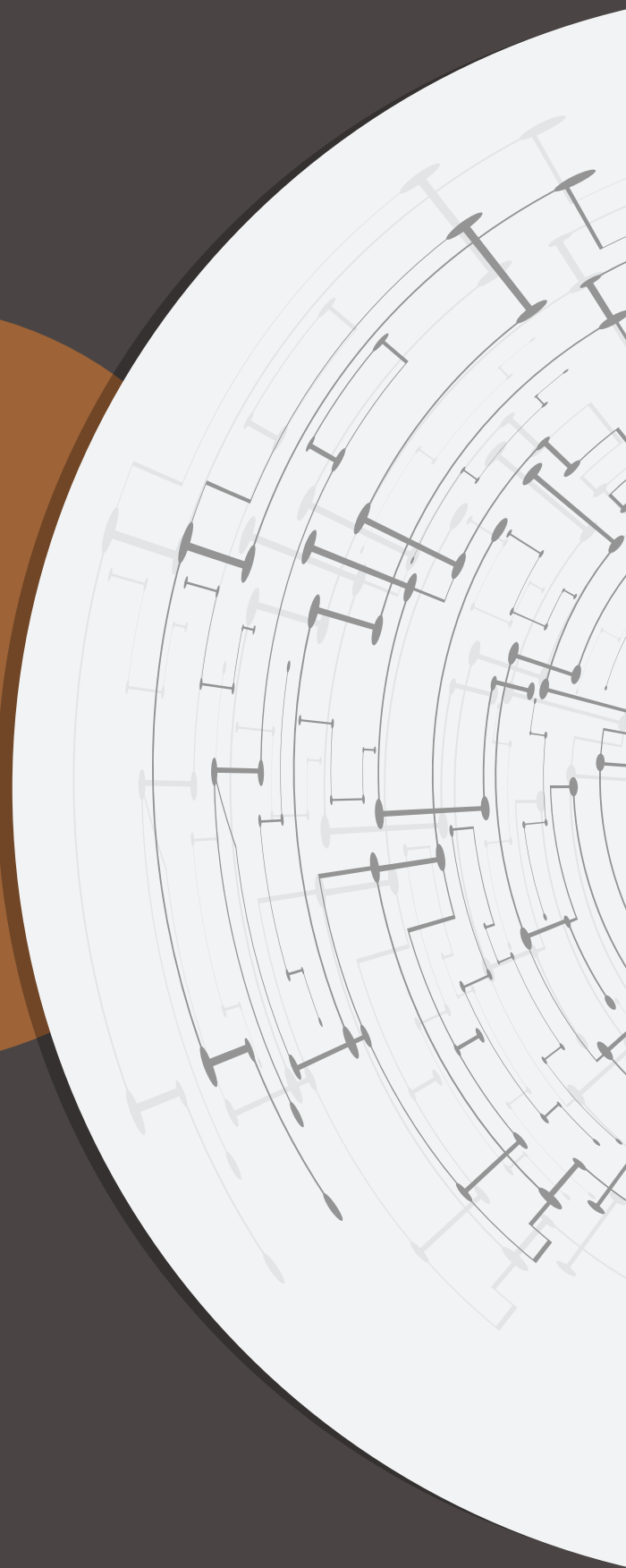
15 strategically-located Customisation Labs around the globe to meet country-specific demands with fast response time.

Advanced project management

We use the latest digital tools to ensure the most efficient path from idea generation to product launch.

Safety focus

Beyond strict safety protocols in our labs, we deliver safer new products & installation processes (i.e. to reduce air pollution, optimise formulas for higher health standards).



info@calderys.com

www.calderys.com

