

# ALUMINUM & NON-FERROUS



# CALDERYS



**150+** years of combined experience

**6,500+** people and contractors in over 30 countries

**50** plants in the 5 continents

One of the world's largest supplier in high temperature solutions



Enlarged portfolio of solutions from refractory bricks and monolithics to steel casting fluxes and green molding sand solutions

**Calderys is a leading global provider for industries operating in high temperature conditions. We specialize in thermal protection for industrial equipment with a wide range of refractory products, and advanced solutions to enhance steel casting, metallurgical fluxes and molding processes.**

In 2023, Calderys joined forces with HarbisonWalker International, the largest supplier of refractory products and services in the United States.

Together, we form a high-growth, customer-centric provider with a comprehensive offering and a truly global reach. Drawing on over 150 years of combined experience, we support our customers in their energy transition needs. We count more than 6,500 people and contractors, in over 30 countries.

**Our international network of experts ensures an end-to-end offer with tailored services.**

We are constantly developing innovative products and techniques in order to **optimize costs and performance**, combining world-class Research & Development and technical experts, as well as responsive supply chain and sales departments.

Our global structure allows us to design the customized solutions of today while **anticipating the industries' needs of tomorrow**. Calderys pays particular attention to the industry's impact on the environment and has a sustainability program articulated around three pillars: supporting our customers in their energy transition needs, improving our environmental footprint and being committed to people and local communities.

**Health and safety is an integral part of how we do business.** The same attention to detail that helps us provide personalized products and solutions is also applied to our rigorous health and safety criteria. Our activities require the highest level of professionalism to carry out our projects. To guarantee the strictest standards, Calderys employs a number of safety, occupational health and environmental protocols across all its entities worldwide — applicable to both our own employees as well as subcontractors and temporary workers.



# OUR VALUE TO THE THERMAL INDUSTRY

Thermal industries have entered an era of transition: many companies are striving to increase the productivity of their operations in the face of supply chain volatility, stiff competition and mounting climate demands. To Calderys, this is an opportunity to innovate and adapt refractory solutions to the new industrial processes.

## **What we bring to high temperature industries**

- A complete portfolio of refractory solutions for each served application in aluminum and non-ferrous processes, cement production, energy and environment operations, chemicals engineering and petrochemicals and industrial minerals
- Specialized products for fast dry-out and optimal thermal insulation of the furnaces
- Project Engineering teams focused on reducing total cost of ownership of furnaces, covering both operational and maintenance needs
- Process knowledge on emerging industry trends: a close monitoring of global process insights together with our customers, helping them transition to a low carbon era
- Full service package: from merchandise procurement to deliveries on site, project and site management
- Tailor-made design and engineering based on project needs
- Installation services including low porosity gunning, and spraycast services
- Dry out services for refractory lining
- Inspection and after-sales service



# WHAT WE BRING TO **ALUMINUM PRODUCERS**

CALDERYS is the world leader in monolithic refractory solutions for the aluminum industry. We are serving over 1500 customers in over 70 countries on 5 continents: from primary & secondary producers to casting foundries.



With a dedicated refractory range specially formulated for aluminum contact, Calderys provides world-class solutions to the top OEMs and largest end users in the field.

The ALKON® brand is known worldwide as the gold standard for refractory specific to the aluminum industry. These products are created specifically to defend against major impacts in your furnaces and other equipment in contact with liquid aluminum, particularly corundum formation and mechanical abuse.

## **REFERENCES**

Calderys is a reliable choice for all your refractory needs.

Ask us about our references around the world in:

- Primary Aluminum (from potcells to tank furnaces)
- Secondary Aluminum (including rotary kilns, melting and holding furnaces)
- Aluminum Foundry (from twin chamber furnaces to transfer ladles)

# OUR SERVICES



## PROJECT MANAGEMENT

Calderys offers global full package refractory projects: from the initial design, to material selection and supply, to supervision, installation and dry-out on-site. Calderys is a valued supplier of turnkey projects to major aluminum OEMs – ask us for our list of project references.



## REFRACTORY SOLUTION EXPERTISE

Calderys experts ask the right questions to select the best refractory lining design and materials for you, based on decades of experience in the field. The solutions we propose are adapted to your specific equipment and process conditions, taking into account your need to avoid the loss of production time.



## INSTALLATION & MACHINES

To ensure optimal performance for your refractory, Calderys provides full installation services through our certified installation teams around the world (Calderys & partners), including safety officers and supervisors. Calderys can also offer the machines you need for your next installation (i.e. gunning, shotcrete, mixing), to be delivered to your site.



## MAINTENANCE

So that our customers can focus on their core processes, Calderys offers regular and predictive refractory maintenance as well as rapid round-the-clock response to emergencies.



## SAFETY

Because safety is our priority, to ensure safe execution, supply, and installation, Calderys can provide you with all required documents and personal safety equipment to execute a project in the safest possible way.

# REFRACTORY SOLUTIONS

## FOR PRIMARY ALUMINUM

- **Electrolysis:** range of DVM, bricks & mortar, and sealing monolithics for potcells approved by several technology providers
- **Anode Baking Furnace:** precast top blocks, insulating monolithics, and mortar/sealing patch
- **Rodding shop ferrous foundry:** full set of refractory products
- **Transfer ladles:** popular self-flowing monolithics like **ALKON® FLOW LB 75** for extended lifetime and easy cleaning
- **Casthouse holding furnaces:** best sellers such as **ALKON® CAST LB 85** in bath wear lining and complete solutions for furnaces up to 130t capacity



## FOR SECONDARY ALUMINUM

- **Melting furnaces:** depending on your furnace design (tank, top charge, sidewall, CIF, etc.) a full range of monolithic or brick solutions can be offered
- **Solutions will be zoned to fit the furnace process conditions:** chamber temperature peaks, alloys processed, mechanical abuse from the charge and skimming, usage of salts / fluxes
- **Solutions** will focus on minimising production downtime to minimise your cost of ownership by combining quick installing / drying products, precast shapes, and / or quick installation methods
- **Solid results:** we can reach metal to metal duration of a couple of hours for small repairs, a couple of days for larger repairs, and 2 weeks for a complete large furnace relining
- **ALKON®** monolithic refractories enable high performance even in the most extreme conditions we have seen around the world



## FOR ALUMINUM FOUNDRY

- **Worldwide leader** in monolithic solutions for Melting-Holding twin chamber furnaces
- **Global best-sellers:** **ALKON® CAST 204 / AF 481, ALKON® CAST HM 80 AL** with excellent mechanical strength combined with strong corundum growth resistance and easy dross cleaning
- Cast in-situ, in house services, and modular prefabricated shape solutions for dosing furnaces
- **For all casthouse types,** monolithic solutions for metal ladles and launders focus on lifetime and thermal efficiency



## PRECAST SHAPE

More and more aluminum producers are trusting Calderys to prefabricate blocks for their aluminum furnaces – Calderys can even perform the installation at your facilities.

**Precast shapes combine the maximum performance of monolithics** (whatever their dry-out time) with high speed of installation at your site. You can also ship us your equipment (up to 20 tonnes) for installation and dry-out by Calderys staff. Our precast service centres cast and install the precast pieces for you – the ultimate in hassle-free installation.



## INNOVATION

Calderys continues innovating, adapting our offerings to global developments thanks to the close collaboration within our Calderys Expert Network and Imerys Science & Technology labs.

We are the only monolithic refractory supplier offering the full range of monolithic technologies and applications to serve you best: hydraulic bond, no cement, sol-gel, 2 component P-bond cold setting, P-bond gun & brick solutions, as well as CALDE® WIRE MIX.

Continuous innovation has developed the Calderys product portfolio over decades, so you can benefit from our solutions which match any and all of your needs.



**DISCLAIMER:** CALDERYS does not warrant the accuracy, fitness for purpose or update of any information disclosed herein. The recipient shall refer to the present content as indicative only. For any instructions or advice, please address formal request to CALDERYS. This document and the information contained herein are the exclusive property of CALDERYS. Reproduction, alteration, copy, release, publication or distribution, in whole or in part, is not allowed. References, trademarks and specifications of the products may vary according to the geographical area to be supplied. For any inquiries regarding supply of products, please liaise with CALDERYS nearest sales contact. Errors and omissions excepted.

