

CONTINUOUS CASTING



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 and molding processes.

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

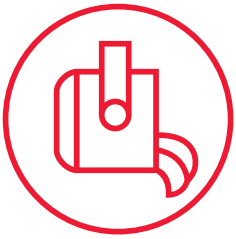
Together, we form a high-growth, customer-centric provider with a comprehensive offering and a truly global reach. Drawing on over 150 years of combined experience, we support our customers in their energy transition needs. We count more than 6,500 people and contractors, in over 30 countries.

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 IRON & STEEL INDUSTRY

As a prominent ally to the Iron & Steel industry, Caldeyrs has steadily enlarged its service solutions from ironmaking, liquid steel processing, continuous casting, reheat furnaces and other equipments. With innovation and sustainability as fundamental parts of our DNA, we have pioneered a tremendous number of new applications, such as pitch-free tap-hole clay for blast furnaces and our cutting-edge mold fluxes. Through the combination of HarbisonWalker International and Caldeyrs' expertise, the company is offering complementary product portfolios and total care services, bringing a vast array of solutions to support customer needs in all refractory and casting fluxes applications.

What we bring to the Iron & Steel industry

- Close watch over ESG topics, such as product CO₂ footprint calculation, proposing a large range of refractory products resistant to H₂; as well as Environment, Health and Safety (EHS) concerns like the reduction of respirable crystalline silica (RCS) and Phenol (PaH).
- Complete portfolio of customized solutions from ironmaking, liquid steel processing, continuous casting, reheat furnaces and other equipment.
- Full set of refractory services: from engineering & design, installation, project management, dry-out & commissioning, to maintenance and refractory assessments.
- Process analysis including fluid flow and numerical simulations.
- Technical support from trial to after sales.



OUR VALUES FOR **CONTINUOUS CASTING**



Customized solution for any type of caster: billet, bloom, beam blank, slab, thin slab. 20+ years of internal design and application of feeding equipment for granulated mold flux. Combined competence with flux application-caster operation-equipment design expertise.

Proven and reliable with over 200 installations worldwide.

VALUE OPTIMISATION

Offering tailor-made solutions that meet the commercial and technical requirements for optimal performance.

COMPLETE FLUX SOLUTIONS

From the tundish to the mold we can meet the process needs of modern steelmaking.

INTENSE FOCUS

Calderys maintains flux and equipment technology, design, service and support functions internally. We have intimate understanding and knowledge of all aspects.



OUR SERVICES



PRODUCT PORTFOLIO

Our custom engineered formulations include powder and granulated fluxes for the tundish and continuous casting mold. Employing complex mixtures of raw materials to meet specific physicochemical properties ensures the highest quality products available.

Combined with our proprietary granular flux feeding equipment to optimize the application practice, you can be assured of the highest level possible for steel quality and operational excellence.



DESIGN

The expertise in the design of mold fluxes has been achieved through years of intense development and application experience: exceptional knowledge with the continuous casting process and steel metallurgy.

Thanks to the close working relationship between the steelmakers and Calderys technicians and engineers, we will design the correct solution to obtain the best fluxes for each specific application.



QUALITY

With state of the art manufacturing facilities, quality control and development laboratories located worldwide, you can be assured of the highest quality fluxes meeting exact specifications delivery after delivery.



TECHNICAL SUPPORT

Continuous support through technical partnerships ensures long term sustainability in the competitive and evolving steelmaking landscape.



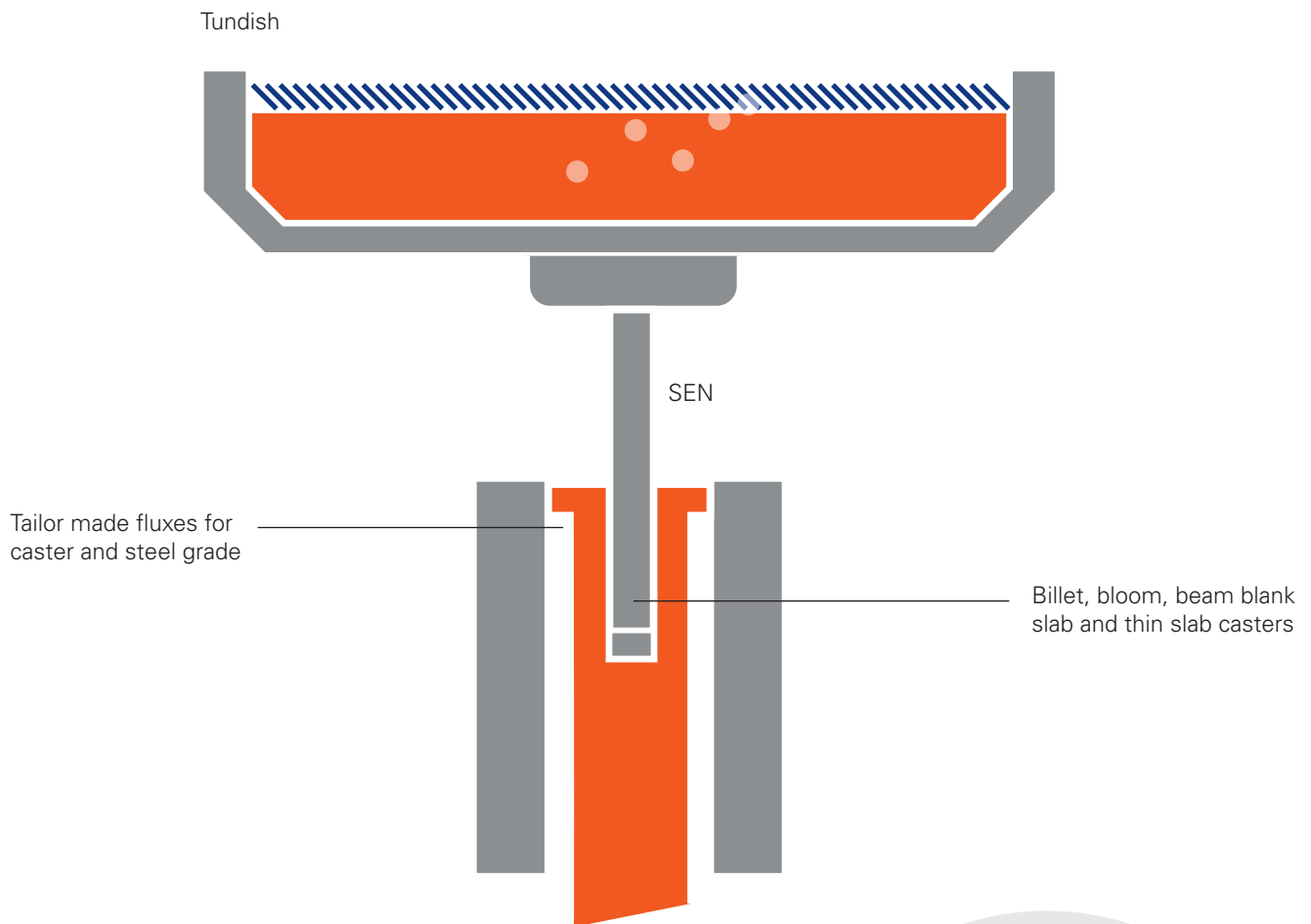
INNOVATION

Calderys was the first supplier of mold flux feeding equipment to the casting process. Our dedication to the industry has revolutionized how mold flux is now applied to the process, resulting in better operational performance and steel quality.



CASTING FLUXES SOLUTIONS FOR THE CASTING OF STEEL

Calderys is the world leader in mold fluxes for continuous casting. The leading producers worldwide rely on Calderys as a partner to assist in achieving high quality cast steel and operational excellence.



- State of the art manufacturing facilities strategically located worldwide to bring you local supply and services
- Every production site with dedicated quality control and flux development laboratories
- Over 40 years providing tailor-made casting fluxes to meet any specific requirement:
 - Caster type: billet, bloom, beam blank, slab, thin slab
 - Steel grade: from ultra low to peritectic and high carbon steels, high strength and alloyed grades including TRIP
 - Technical experts local to customers for onsite consultation



FLUX FEEDING SOLUTIONS FOR FEEDING GRANULAR MOLD FLUXES

Calderys has a dedicated department for design, service and installation of flux feeding equipment. Our commitment is to assist the industry in achieving casting excellence, bringing the best solutions for the steelmaking community.

Over 20 years since Calderys introduced the first flux feeder, we continue to innovate and improve our design with new technology.



EXACT, UNIFORM AND SAFE

Calderys' flux feeding systems continuously convey the granulated material to the mold in precisely dosed quantities that are evenly distributed.

The feeders have been proven to reduce the incidence of surface and internal defects, while providing an additional factor of safety minimizing the operators time spent around the mold.

FLEXIBLE AND PROVEN

The compact design of the flux feeder make it optimal for all casting environments and quick installation. The system has no motors or moving parts making it low maintenance with high reliability.

GENERATION 3 FEEDING SYSTEMS

The technology of the flux feeder continues to evolve, and are now equipped with sensors for full automation for mold flux thickness control, consumption monitoring, process integration and data acquisition. Silo systems with automation of flux selection, and robotic arms to apply the flux to the mold are also available.



