AT CALDERYS, OUR MISSION IS TO DELIVER VALUE TO OUR CUSTOMERS.

We are a world leader in providing refractory solutions and services. Our value proposition to you is built on combining our world-class refractory product portfolio with our ability to deliver high-quality project management services - from planning and installation, to turnkey delivery and commissioning.

Across all the industries we serve – Iron, Steel, Foundry, Aluminium, Cement, Power, and Petrochem - we deliver to you our promise of superior product performance and value-adding service thanks to our global network of specialized industry experts and project management professionals.

Our journey of 100 years is a testimony of our commitment to our customers. We listen to you and understand your requirements. We believe in working as one team with you and aiming for continuous improvement.

Together, we always reach an extra mile for our customers in our mission of delivering MORE.
PARTNERING YOU IN THE IRON SECTOR FOR MORE

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 around tens of blast furnace repairs over the last years and all of this across more than 20 countries. Our global network of industry experts ensure 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 optimization 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 clays

OUR END-TO-END PRODUCT AND SERVICE OFFER DEDICATED IRON INDUSTRY ENCOMPASSES:

PRODUCT PORTFOLIO
Our comprehensive product portfolio for 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, taphole 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.

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

INSTALLATION
We carry out high-quality installation services using in-house equipment and through 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.

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.
Innovative refractory concepts for the Casthouse Floors
Solutions for the Casthouse Floor

Our Innovative Product Range

Our comprehensive range for the casthouse floors is composed of aluminous and graphitic products. It includes dense castables, self-flowing castables, dry gunning and shotcreting materials, ramming and plastic mixes, dry vibrating mixes and precast ready shapes.

Dense cast-vibrated castables
CALDE™ CAST*
Dry gunning mixes
CALDE™ GUN
Dense self-flowing castables
CALDE™ FLOW
Wet gunning / shotcreting mixes
CALDE™ SPRAYCAST
Ramming mixes
CALDE™ RAM* & CALDE™ PLAST*
Dry vibratable mixes
CALDE™ DRY

* Some of the listed products are subject to a licence agreement: please check the availability, references, trademarks and specifications of the products with the relevant sales area manager.
# Solutions for the Main Runners Safety Linings

## Second safety lining

**Castable**
- CALDE™ CAST LF 46 G10
- CALDE™ CAST LS60

**Spraycast**
- CALDE™ SPRAYCAST F 50
- CALDE™ SPRAYCAST SIC 70

**Dry Mix**
- CALDE™ DRY G OA 60 S

**Self-flow**
- CALDE™ FLOW AX

## Main safety lining

**Ramming**
- CALDE™ RAM G F 45S10
- CALDE™ RAM G PB 56S15

**Castable**
- CALDE™ CAST LA 50 SZ
- CALDE™ CAST LA 60 Z

**Self-flow**
- CALDE™ FLOW AX
- CALDE™ FLOW AZ

**Spraycast**
- CALDE™ SPRAYCAST A 60 S7
- CALDE™ SPRAYCAST C 80 S 12

**Precast**
- CALDE™ CAST LC 70 S20

## Filling material

**Self-flow**
- CALDE™ FLOW AX

**Dry Mix**
- CALDE™ DRY G OA 60 S

## Compensation Joint

**Ramming**
- CALDE™ RAM G 60
- CALDE™ RAM G pb 56s 15

**Castable**
- CALDE™ CAST LA 50 SZ
Solutions for the Main Runners Wear Linings

Ramming solution

Small BFs
CALDE™ RAM G PB 56515

Medium and Large BFs
CALDE™ RAM G 60
CALDE™ RAM G C 60S 18*

Dry Mix (fast application)
CALDE™ DRY G OC 80 S

Castable mono-layer lining

Low Severity Conditions
CALDE™ CAST G UB 70S 18*

Medium and High Severity Conditions
CALDE™ CAST G 6 P
CALDE™ CAST G 7 P
CALDE™ CAST G S 195*
CALDE™ CAST G UC 71S18

Spraycast
CALDE™ SPRAYCAST C 70 S20

Castable bi-layer lining

Slag line
CALDE™ CAST G UB 55S35
CALDE™ CAST G US 70*

Metal Line
CALDE™ CAST G 7 P

Connection joints with secondary runners

Low Severity
CALDE™ RAM G PB 56S 15

Medium Severity
CALDE™ RAM G 60

High Severity
CALDE™ RAM G C 60S 18*

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Solutions for the Iron Runners

Safety lining

- Ramming Low Grade
  - CALDE™ RAM G F 45S10
- Ramming High Grade
  - CALDE™ RAM G PB 56S15
- Castable
  - CALDE™ CAST LA 60 Z
- Spraycast
  - CALDE™ SPRAYCAST A 60

Working lining

- Ramming
  - CALDE™ RAM G C 60S18*
  - CALDE™ RAM G 60
  - CALDE™ RAM G PB 56S15
- Castable Low Severity
  - CALDE™ CAST UB 85
- Castable Standard
  - CALDE™ CAST G 7 P
- Spraycast
  - CALDE™ SPRAYCAST C 70 S20

Connection joints with other runners

- Low Severity
  - CALDE™ RAM G PB 56S15
- Medium Severity
  - CALDE™ RAM G 60
- High Severity
  - CALDE™ RAM G C 60S18*
Solutions for the Slag Runners

Safety lining

Ramming Low Grade
CALDE™ RAM G F 45S10

Ramming High Grade
CALDE™ RAM G PB 56S15

Castable Low Grade
CALDE™ CAST LA 60 Z

Castable High Grade
CALDE™ CAST LA 50 SZ

Spraycast
CALDE™ SPRAYCAST A 60 S7

Working lining

Ramming
CALDE™ RAM G C 60S18*
CALDE™ RAM G 60
CALDE™ RAM G PB 56S15

Castable Low Severity
CALDE™ CAST G UB 64S25

Castable Medium Severity
CALDE™ CAST G 6 P

Castable High Severity
CALDE™ CAST G UB 55S35

Spraycast
CALDE™ SPRAYCAST C 70 S20

Connection joints with other runners

Low Severity
CALDE™ RAM G PB 56S15

Medium Severity
CALDE™ RAM G 60

High Severity
CALDE™ RAM G C 60S18*

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Solutions for the Tilters

Safety lining

**Castable**
- CALDE™ CAST LA 60 Z

**Spraycast**
- CALDE™ SPRAYCAST A 60

**Working lining**

**Castable Low Severity Operation**
- CALDE™ CAST G LC 80S5
- CALDE™ CAST G UC 82S10

**Castable High Severity Operation**
- CALDE™ CAST G UB 55S35
- CALDE™ CAST G UC 70S20
- CALDE™ CAST G UC 85S5
- CALDE™ CAST G UT 62S30

Solutions for the Runners Maintenance

**Wear lining maintenance**

**Gunning Medium Grade**
- CALDE™ GUN G B 55S18
- CALDE™ GUN G B 60S20
- CALDE™ GUN G M 33 GSP

**Gunning High Grade**
- CALDE™ GUN G C 60S28

**Gunning Low Porosity**
- CALDE™ GUN G LC 70S20

**Dry Mix**
- CALDE™ DRY G OC 80 S
## Solutions for the Runner Covers

### Main runner front end
- **Castable**
  - CALDE™ CAST LX 68
  - CALDE™ CAST M 32

- **Spraycast**
  - CALDE™ SPRAYCAST BX 85

- **Gunning**
  - CALDE™ GUN M 32

### Main runner black end
- **Castable**
  - CALDE™ CAST LX 58
  - CALDE™ CAST MF 40 G10

- **Spraycast**
  - CALDE™ SPRAYCAST A 60

- **Gunning**
  - CALDE™ GUN F 45

### Secondary Runners
- **Castable**
  - CALDE™ CAST LX 58
  - CALDE™ CAST MF 40 G10

- **Spraycast**
  - CALDE™ SPRAYCAST A 60

- **Gunning**
  - CALDE™ GUN F 45

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