



REFRACTORY MATERIALS INDUSTRY APPLICATIONS



LEADING THE WAY
IN ASSET INTEGRITY MANAGEMENT & INDUSTRIAL SOLUTIONS

www.dgc-africa.com

SOUTH AFRICA

ZAMBIA

DEMOCRATIC REPUBLIC OF CONGO

MADAGASCAR

ZIMBABWE

BRAZIL

CHINA

IRON & STEEL INDUSTRY

AT DGC REFRACTORIES,
WE TAKE PRIDE IN OUR ROLE
AS THE UNSUNG HEROES
OF THE STEEL INDUSTRY.



BLAST FURNACES | HOT BLAST STOVES | LADLES & CONVERTERS | COKE OVENS

Our advanced refractory solutions are engineered to enhance efficiency, improve productivity, and extend the longevity of key processes in steel manufacturing.

We understand that in the demanding world of steel production, every component must perform flawlessly under extreme conditions.

That's why we've developed a comprehensive range of refractory products tailored to meet the unique challenges of each stage in the steel manufacturing process.

BLAST FURNACES

The blast furnace is the heart of iron production, and our refractories are designed to withstand its intense demands.

We offer a suite of products engineered to optimize performance and extend campaign life:

HIGH-PERFORMANCE MAGNESIA-CARBON BRICKS FOR THE HEARTH AND BOSH

These bricks offer exceptional resistance to chemical attack and thermal stress, while their engineered porosity ensures optimal heat transfer and structural integrity.

SPECIALIZED CARBON-BASED RAMMING MIXES FOR THE TAPHOLE AREA

Our ramming mixes provide rapid setting and superior erosion resistance, effectively managing heat in this critical zone to maintain taphole integrity.

ADVANCED CERAMIC CUP FOR THE TUYERE ZONE

This cup is engineered to withstand extreme temperature fluctuations and erosion, featuring an easy-replacement design to minimize maintenance downtime.





HOT BLAST STOVES

Our refractory solutions for hot blast stoves are designed to maximize thermal efficiency and operational reliability:

HIGH-ALUMINA AND SILICA BRICKS FOR THE DOME AND UPPER SHAFT

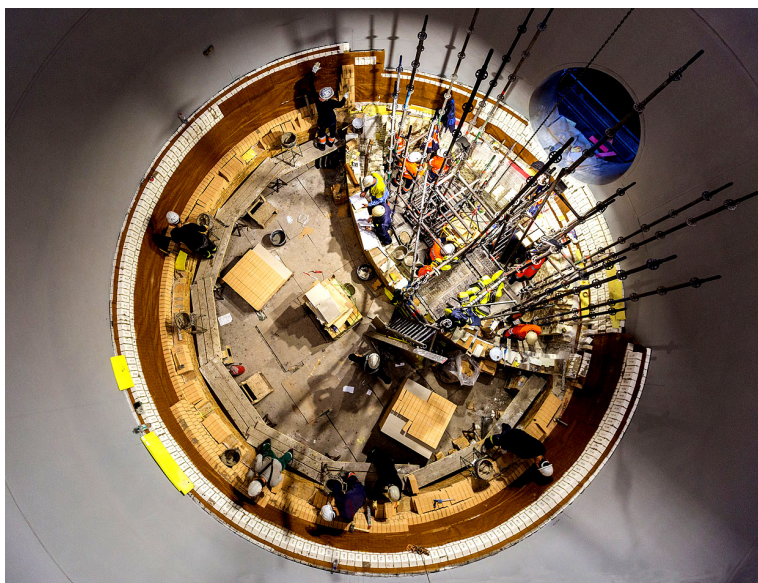
These bricks offer exceptional heat resistance and low thermal conductivity, maintaining structural stability under extreme temperatures.

INSULATING FIREBRICKS FOR THE COMBUSTION CHAMBER

Our firebricks provide optimal insulation through engineered porosity, resisting thermal shock and maintaining properties due to low iron content.

SPECIALIZED CASTABLES FOR CRITICAL JOINTS AND SEAMS

These castables match thermal expansion of adjacent brickwork, ensuring structural integrity with strong bonding and easy installation.





LADELS & CONVERTERS

In the dynamic environment of ladles and converters, our refractories provide the reliability and performance needed for efficient steel production:

MAG-CARBON BRICKS FOR THE SLAG LINE

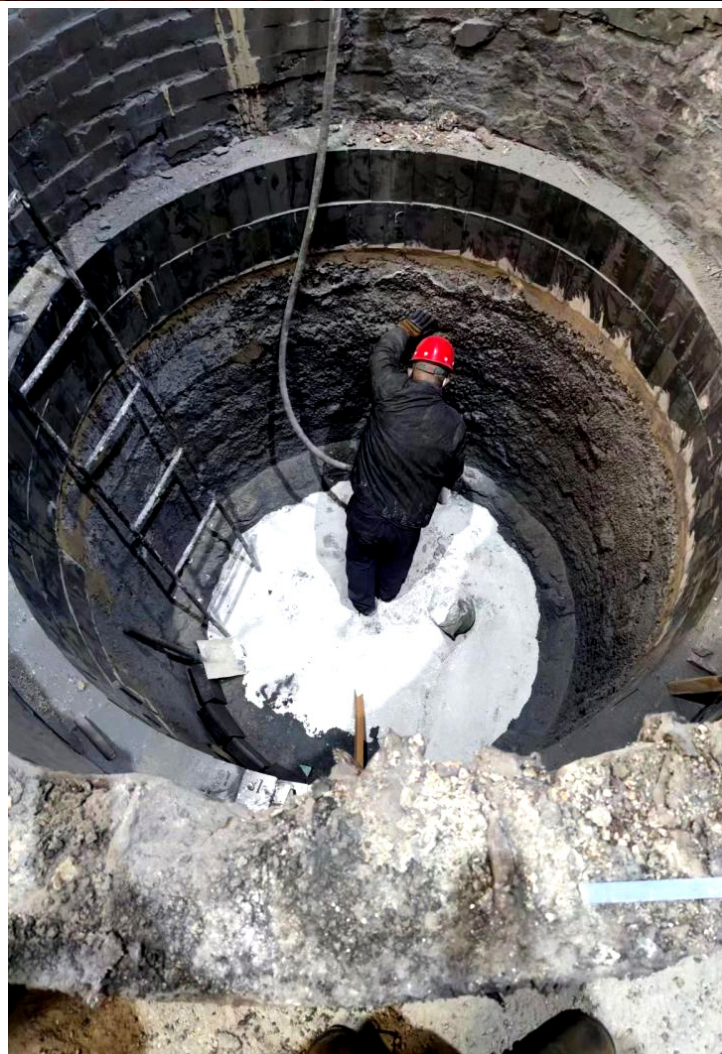
These bricks resist slag penetration and erosion while withstanding thermal shock, with carbon content optimized for various steel grades.

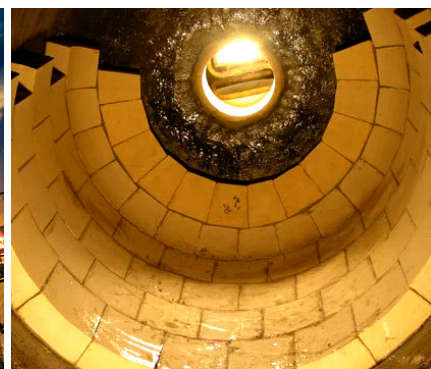
ALUMINA-MAG SPINEL BRICKS FOR THE BARREL

Our spinel bricks offer high resistance to spalling and corrosion from various slags, while minimizing heat loss during steel transfer.

HIGH-PERFORMANCE MONOLITHICS FOR QUICK REPAIRS

These monolithics provide rapid setting and strong adhesion to existing refractories, with versatile application methods for efficient repairs.





COKE OVENS

Our refractory solutions for coke ovens are designed to withstand the harsh conditions of the coking process while maintaining optimal thermal efficiency:

SILICA BRICKS FOR THE HEATING WALLS

These bricks maintain wall stability under load with low thermal expansion, resisting alkali attack for extended service life.

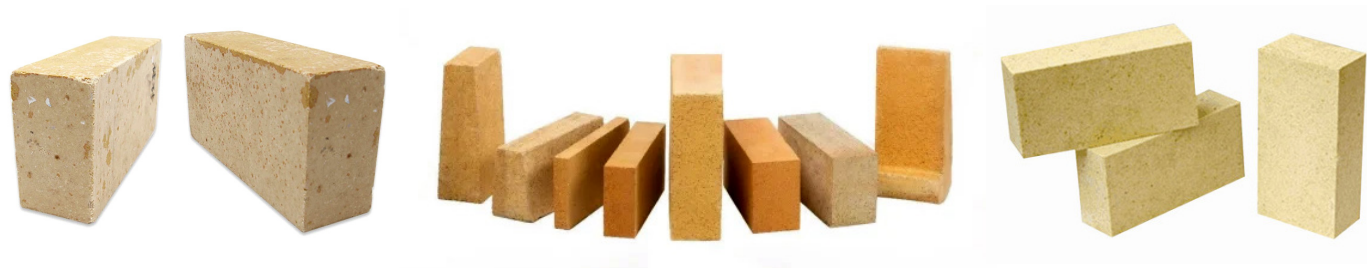
HIGH-ALUMINA BRICKS FOR THE REGENERATOR CHAMBERS

Our alumina bricks offer superior thermal shock resistance and high-temperature strength, effectively resisting carbon monoxide disintegration.

SPECIALIZED MORTARS FOR JOINTING AND SEALING


These mortars match the thermal expansion of brickwork, ensuring gas-tight seals and resisting carbon deposition to maintain permeability.

By choosing **DGC Refractories** for your iron and steel operations, you're partnering with a leader in refractory technology. Our solutions are designed not just to meet the current demands of steel production, but to anticipate and address future challenges, ensuring that your operations remain at the forefront of efficiency and productivity.



FOUNDRY INDUSTRY

At DGC Refractories, we understand that the foundry industry demands refractory solutions that can withstand extreme temperatures, resist chemical attack, and maintain structural integrity under challenging conditions.



**ELECTRIC ARC FURNACES (EAF) | INDUCTION FURNACES | LADLES & HOLDING FURNACES
ADDITIONAL FOUNDRY PRODUCTS**

**OUR ADVANCED
SOLUTIONS FOR FOUNDRY
APPLICATIONS ARE
ENGINEERED TO ENSURE
DURABILITY AND HIGH
PERFORMANCE ACROSS
A WIDE RANGE OF METAL
CASTING OPERATIONS.**

ELECTRIC ARC FURNACES (EAF)

Electric Arc Furnaces are at the heart of many steel foundries, and our refractory solutions are designed to maximize their efficiency and longevity:

HIGH-GRADE MAG-CARBON BRICKS FOR THE SIDE-WALLS AND BOTTOM

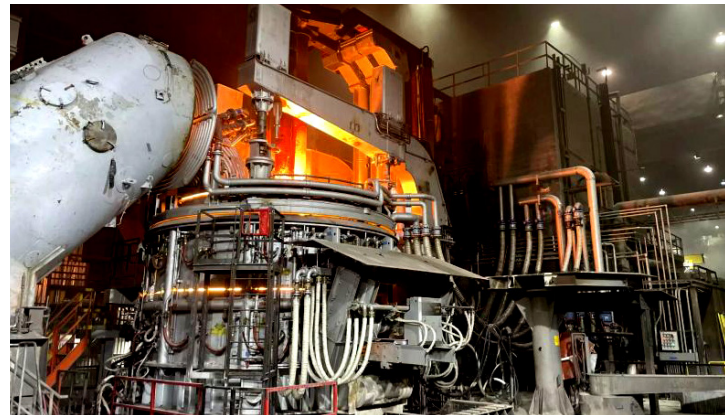
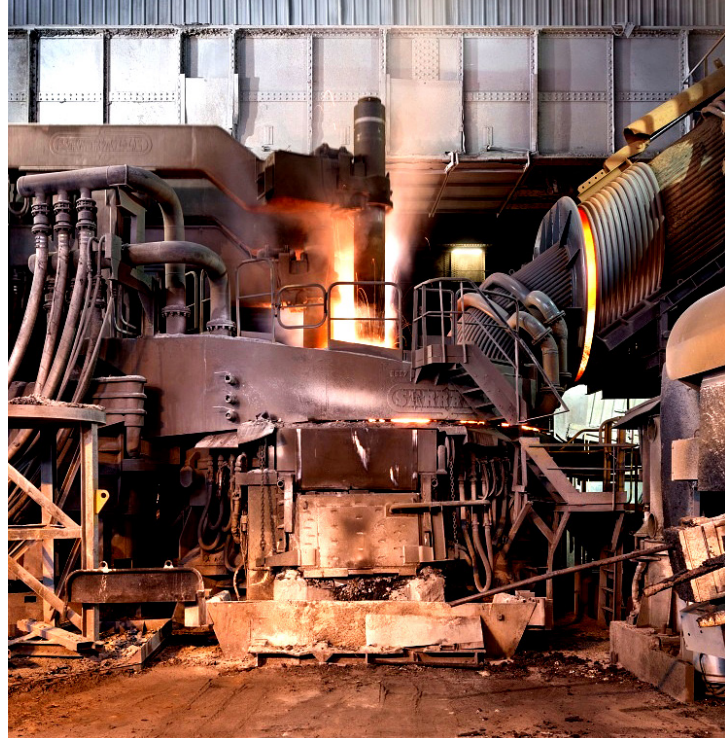
These bricks offer exceptional resistance to slag penetration and thermal shock, with optimized carbon content for enhanced thermal conductivity and longevity.

SPECIALIZED ROOF DELTAS AND PANELS

Engineered to withstand intense heat and electrical arcing, these components provide high thermal efficiency and are designed for quick replacement to minimize downtime.

ADVANCED SPRAY COOLING SYSTEMS

Our integrated cooling technology extends refractory life through precision-engineered nozzles and automated control systems for consistent performance.



INDUCTION FURNACES

Our refractory solutions for induction furnaces are tailored to meet the unique challenges of this high-frequency melting process:

HIGH-PURITY SILICA LININGS

These linings provide exceptional resistance to thermal spalling and low thermal expansion, while their high electrical resistivity minimizes power loss.

ALUMINA-BASED DRY VIBRATION MIXES

Our mixes offer rapid installation and excellent sintering properties, with customizable formulations for various metal types and furnace designs.

SPECIALIZED SPOUT AND LIP MIXES

These mixes maintain pouring accuracy through high erosion resistance and thermal shock resistance, featuring quick-setting properties for easy maintenance.

LADLES & HOLDING FURNACES

Our refractory systems for ladles and holding furnaces are designed to maintain metal quality and temperature while maximizing operational efficiency:

ALUMINA-SPINEL CASTABLES FOR ENHANCED SLAG RESISTANCE

Our castables provide superior corrosion resistance against various slag compositions, with high hot strength and low thermal conductivity to maintain metal temperature.

INSULATING BACKUP LININGS FOR IMPROVED ENERGY EFFICIENCY

These linings feature engineered porosity for optimal insulation, minimizing heat loss while remaining compatible with various working lining materials.

QUICK-SETTING REPAIR MATERIALS FOR ON-THE-FLY MAINTENANCE

Our repair materials offer rapid strength development and excellent adhesion to existing refractories, with versatile application methods for minimal downtime.



ADDITIONAL FOUNDRY PRODUCTS

To complement our core refractory offerings, we provide a range of specialized products designed to enhance various aspects of foundry operations:

- **Ceramic fibre products** for insulation and heat containment
- **Capping & sprout materials** for precise metal flow control
- **Mica-based slip plane materials** for thermal expansion management
- **Non-wetting zircon-based washcoats** for improved surface finish in non-ferrous casting

By choosing **DGC Refractories** for your foundry operations, you're not just getting superior products – you're gaining a partner dedicated to improving your operational efficiency, product quality, and bottom line. Our commitment to the foundry industry extends to customization and innovation, ensuring that whether you're casting ferrous or non-ferrous metals, operating small batch processes or large-scale continuous operations, we have the expertise and product range to enhance your foundry's performance.

CEMENT INDUSTRY

At DGC Refractories, we understand that the cement industry operates under some of the most challenging conditions in the industrial sector.



CEMENT ROTARY KILNS | PREHEATERS & CALCINERS | KILN HOODS & TERTIARY AIR DUCTS
COOLERS

OUR SOLUTIONS FOR
THE CEMENT INDUSTRY ARE
METICULOUSLY ENGINEERED
TO EXTEND EQUIPMENT
LIFE AND IMPROVE OVERALL
EFFICIENCY,
CAPABLE OF WITHSTANDING
THE HARSH, ABRASIVE
CONDITIONS INHERENT IN
CEMENT PRODUCTION.

CEMENT ROTARY KILNS

The rotary kiln is the heart of the cement production process, and our refractory solutions are designed to optimize its performance and longevity:

BASIC BRICKS (MAGNESIA-SPINEL, MAGNESIA-HERCYNITE) FOR THE BURNING ZONE

These bricks offer exceptional resistance to alkali attack and thermal shock, with superior volume stability at high temperatures for extended service life.

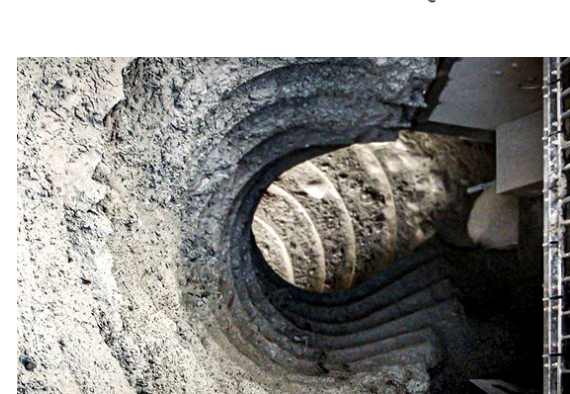
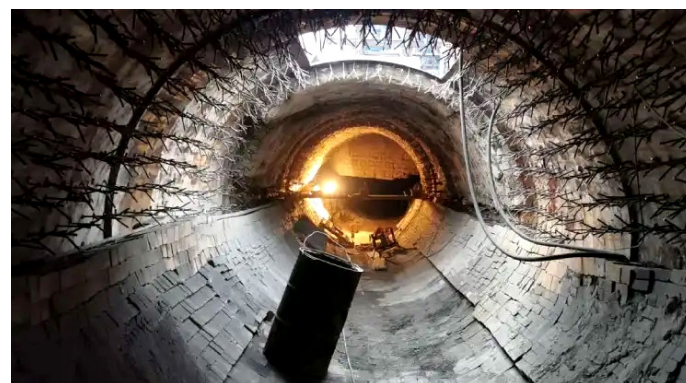
ANDALUSITE-BASED BRICKS FOR THE TRANSITION ZONE

Our andalusite-based bricks provide excellent thermal shock resistance and low thermal expansion, maintaining kiln geometry through high creep resistance.

WEAR-RESISTANT CASTABLES FOR THE INLET AND OUTLET SECTIONS

These castables combat raw material and clinker erosion with superior abrasion resistance, featuring rapid setting properties for quick installation and reduced downtime.





PREHEATERS & CALCINERS

Our refractory solutions for preheaters and calciners are designed to withstand the abrasive and corrosive environment of these critical components:

HIGH-ALUMINA CASTABLES FOR CYCLONE WALLS

These castables offer exceptional resistance to alkali attack and abrasion, maintaining structural integrity with high hot strength and improving energy efficiency through low thermal conductivity.

ABRASION-RESISTANT LININGS FOR TRANSFER CHUTES

Our linings provide superior wear resistance and impact resistance, featuring a smooth surface finish to promote material flow and reduce buildup.

SPECIALIZED ANCHORING SYSTEMS FOR IMPROVED LINING STABILITY

These systems distribute thermal and mechanical stresses evenly, utilizing corrosion-resistant materials for extended anchor life and flexible designs to accommodate various lining configurations.

KILN HOODS & TERTIARY AIR DUCTS

Our solutions for kiln hoods and tertiary air ducts focus on energy efficiency and durability in high-temperature, dusty environments:

INSULATING CASTABLES FOR ENERGY EFFICIENCY

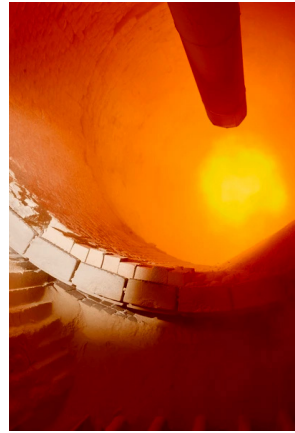
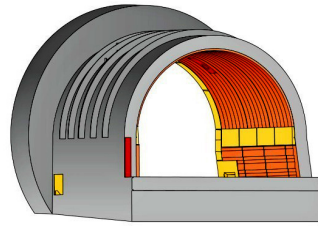
These castables minimize heat loss through low thermal conductivity, maintaining insulating properties with resistance to dust infiltration and easy application in complex geometries.

HIGH-TEMPERATURE FIBRE MODULES FOR RAPID INSTALLATION

Our fibre modules offer excellent insulating properties and lightweight construction, allowing for rapid installation and extended service life through resistance to thermal cycling.

EROSION-RESISTANT COATINGS FOR EXTENDED SERVICE LIFE

These coatings provide superior resistance to particle erosion in high-velocity gas streams, maintaining performance with high-temperature stability and easy application for reduced maintenance time.



COOLERS

Our refractory systems for clinker coolers are engineered to withstand the extreme conditions of hot clinker handling:

IMPACT-RESISTANT PLATES FOR THE CLINKER FALL ZONE

These plates offer exceptional resistance to thermal and mechanical shock, maintaining structural integrity at high temperatures with an engineered surface design to promote clinker flow.

ABRASION-RESISTANT CASTABLES FOR BULL NOSE AND WALLS

Our castables extend service intervals through superior wear resistance, promoting efficient clinker cooling with high thermal conductivity and rapid strength development for quick repairs.

SPECIALIZED MORTARS FOR PLATE INSTALLATION AND SEALING

These mortars feature thermal expansion properties matched to plate materials, ensuring secure plate installation with high bond strength and resistance to clinker infiltration.

By choosing **DGC Refractories** for your cement operations, you're partnering with a leader in refractory technology. Our commitment to the cement industry is unwavering. We work closely with cement producers to understand their specific operational challenges and develop innovative solutions that improve efficiency, reduce downtime, and extend equipment life. Whether you're operating a traditional long kiln or a modern precalciner system, **DGC Refractories** has the expertise and product range to optimize your cement production process.

NON -FERROUS METALS INDUSTRY



ALUMINA APPLICATIONS | COPPER PROCESSING | ZINC, LEAD, & NICKEL APPLICATIONS
ELECTRIC ARC FURNACES, ROTARY KILNS & SLAG CLEANING FURNACES

At **DGC Refractories**, we understand that the non-ferrous metals industry faces unique challenges in terms of corrosive environments, high temperatures, and the need for precise process control.

**OUR TAILORED
REFRACTORY PRODUCTS
ARE SPECIFICALLY DESIGNED
TO BOOST PROCESSING
EFFICIENCY AND
WITHSTAND THE DEMANDING
CONDITIONS OF
NON-FERROUS METAL
PRODUCTION.**

ALUMINA APPLICATIONS

The production of aluminium requires refractories that can withstand extremely corrosive environments and maintain their integrity over long operational periods.

Our solutions for alumina applications include:

HIGH-PURITY ALUMINA BRICKS FOR REDUCTION CELLS

These bricks offer exceptional resistance to cryolite and molten aluminium penetration, with superior thermal shock resistance to withstand operational fluctuations.

SPECIALIZED CASTABLES FOR CATHODE SEALING

Our castables ensure airtight seals with excellent bonding properties and low thermal expansion, featuring rapid setting characteristics for efficient installation and repairs.

INSULATING MATERIALS FOR ENERGY CONSERVATION

These materials maximize energy efficiency through low thermal conductivity, maintaining consistent performance with high-temperature stability and resistance to chemical attack from process fumes.



COPPER PROCESSING

Copper production involves some of the most challenging conditions for refractories, including exposure to highly corrosive slags and fluctuating temperatures.

Our refractory solutions for copper processing are designed to meet these challenges head-on:

MAG-CHROME BRICKS FOR SMELTING FURNACES

These bricks provide exceptional slag resistance to extend campaign life, maintaining furnace integrity with high hot strength and engineered thermal conductivity for optimal heat transfer.

HIGH-ALUMINA CASTABLES FOR CONVERTING VESSELS

Our castables offer superior resistance to thermal shock and chemical attack, with rapid repair capabilities to minimize downtime and excellent erosion resistance against high-velocity gas and particle streams.

EROSION-RESISTANT LININGS FOR SLAG LAUNDERS

These linings extend service intervals with advanced wear-resistant formulations, featuring a smooth surface finish to promote slag flow and reduce buildup.



ZINC, LEAD, & NICKEL APPLICATIONS

The production of zinc, lead, and nickel presents unique challenges due to the highly corrosive nature of the process environments. Our refractory solutions are engineered to withstand these aggressive conditions:

CORROSION-RESISTANT BRICKS FOR RETORTS AND CONDENSERS

These bricks offer exceptional resistance to metal vapor penetration and condensation, with high thermal conductivity for efficient heat transfer in condensers.

SPECIALIZED MONOLITHICS FOR FURNACE REPAIRS

Our monolithics provide rapid setting and strength development for quick turnaround, with excellent adhesion to existing refractory linings and resistance to thermal cycling and chemical attack.



HIGH-TEMPERATURE INSULATION FOR ENERGY EFFICIENCY

These insulation materials minimize heat loss through low thermal conductivity, resist chemical attack from process fumes, and feature lightweight designs to reduce structural load.



ELECTRIC ARC FURNACES, ROTARY KILNS & SLAG CLEANING FURNACES

These specialized vessels require refractory solutions that can be customized to meet specific process requirements while maintaining long-term reliability:

CUSTOM-DESIGNED LININGS FOR SPECIFIC PROCESS REQUIREMENTS

Our linings are tailored based on detailed process analysis, with engineered designs to optimize thermal efficiency and wear resistance.

ADVANCED MONITORING SYSTEMS FOR LINING WEAR PREDICTION

These systems feature embedded sensors for real-time temperature and wear monitoring, with predictive analytics to forecast maintenance needs and prevent unexpected failures.

RAPID REPAIR SOLUTIONS TO MINIMIZE DOWNTIME

We offer quick-setting repair materials for hot and cold applications, with modular lining designs for easy replacement of high-wear areas.

By choosing **DGC Refractories** for your non-ferrous metal production needs, you're partnering with a leader in advanced refractory solutions. Our expertise, coupled with our commitment to innovation, ensures that we can help you overcome the unique challenges of your industry, boost processing efficiency, and improve your bottom line. Let us help you forge a more efficient and profitable future in non-ferrous metal production.

GLASS INDUSTRY

At **DGC Refractories**, we recognize that the glass industry demands refractory solutions that can withstand extreme temperatures, resist corrosive melts, and maintain precise geometries over extended periods.



CONTAINER GLASS TANKS | FIBERGLASS TANKS | FLOAT GLASS TANKS & TIN BATH BOTTOMS

**OUR COMPREHENSIVE
SOLUTIONS FOR VARIOUS
GLASS PRODUCTION
PROCESSES
ARE ENGINEERED TO ENSURE
OPTIMAL PERFORMANCE AND
LONGEVITY IN THIS
DEMANDING SECTOR.**

CONTAINER GLASS TANKS

Container glass production requires refractories that can withstand aggressive glass melts while maintaining thermal efficiency. Our solutions for container glass tanks are designed to maximize production efficiency and product quality:

AZS (ALUMINA-ZIRCONIA-SILICA) FUSED CAST REFRACTORIES FOR THE MELTING ZONE

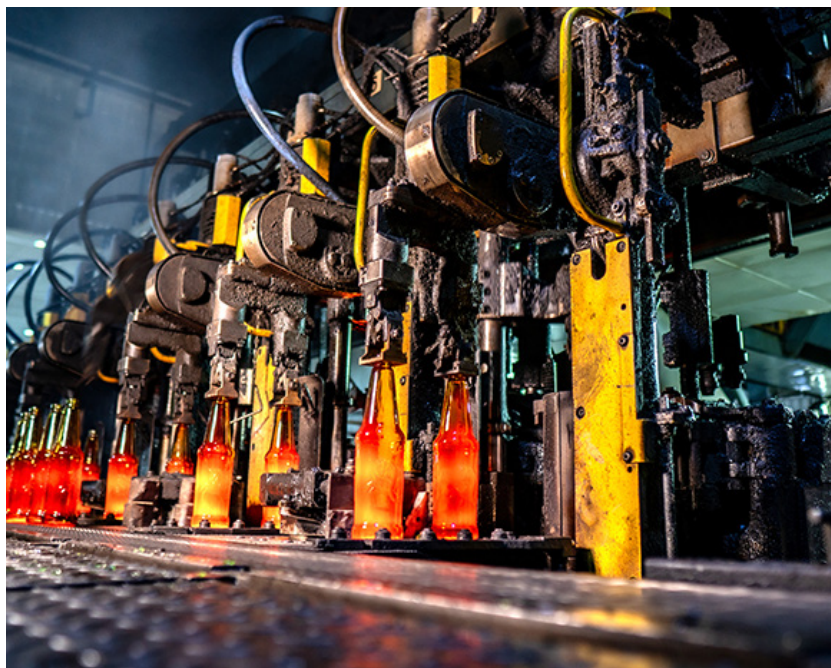
These refractories offer exceptional resistance to glass melt corrosion and erosion, with superior thermal shock resistance to withstand operational fluctuations.

SILICA CROWNS FOR OPTIMAL HEAT REFLECTION

Our silica crowns maintain crown geometry with high refractoriness under load, providing excellent thermal insulation properties for energy efficiency. These refractories maintain structural integrity with high-temperature strength, resisting alkali vapor attack for extended service life.

SPECIALIZED BONDED REFRACTORIES FOR THE SUPERSTRUCTURE

These refractories maintain structural integrity with high-temperature strength, resisting alkali vapor attack for extended service life.



FIBERGLASS TANKS

Fiberglass production presents unique challenges due to the highly corrosive nature of the glass melt and the need for precise temperature control. Our refractory solutions for fiberglass tanks are engineered to meet these demanding requirements:

HIGH-ZIRCONIA MATERIALS FOR EXTENDED CAMPAIGN LIFE

These materials provide exceptional resistance to E-glass and S-glass melt corrosion, with superior thermal stability for consistent performance.

SPECIALIZED FOREHEARTH REFRACTORIES FOR PRECISE TEMPERATURE CONTROL

Our forehearth refractories offer high thermal conductivity for responsive temperature adjustment, with excellent resistance to thermal cycling for long-term reliability.

ENGINEERED SOLUTIONS FOR BUSHING AREAS

These solutions use ultra-high purity materials to prevent contamination of glass fibres, with exceptional wear resistance to maintain bushing geometry.



FLOAT GLASS TANKS & TIN BATH BOTTOMS

Float glass production demands the highest level of refractory performance to ensure flawless glass quality. Our solutions for float glass tanks and tin bath bottoms are designed to meet these exacting standards:

ULTRA-HIGH PURITY MATERIALS TO PREVENT GLASS DEFECTS

These materials undergo stringent raw material selection and processing to minimize contaminants, with advanced manufacturing techniques to ensure homogeneous compositions.

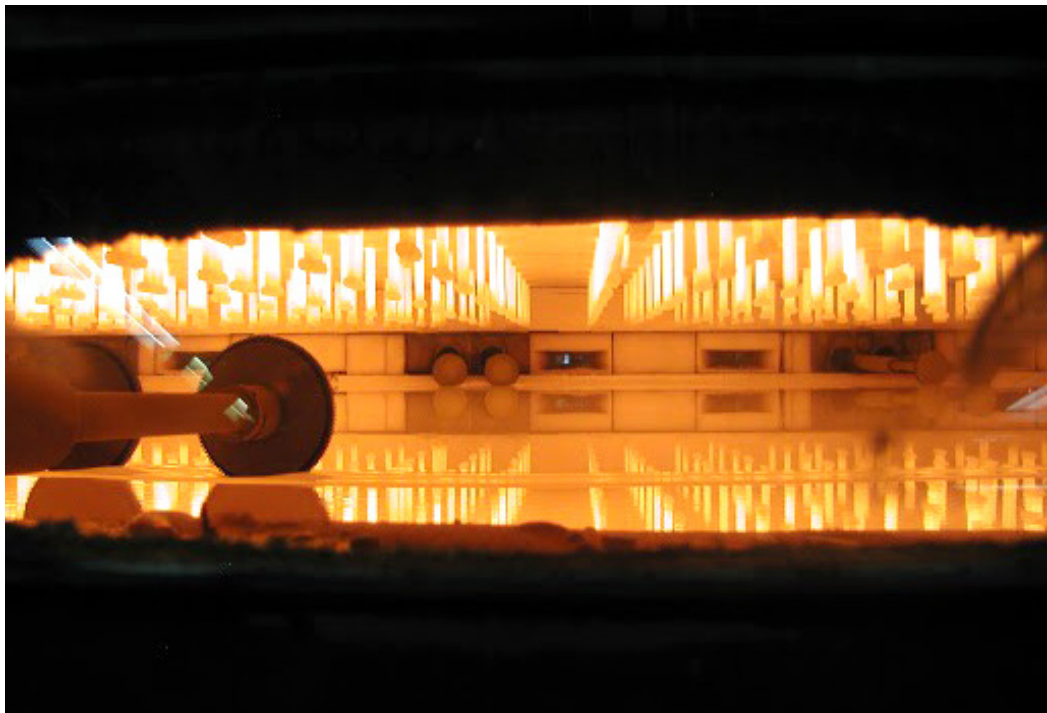
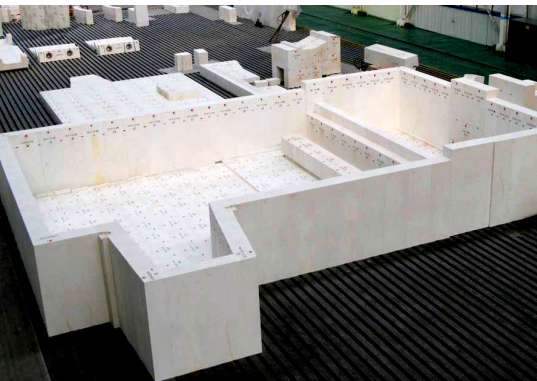
SPECIALIZED TIN-SIDE REFRACTORIES FOR THE FLOAT BATH

Our tin-side refractories offer exceptional resistance to molten tin penetration and attack, with thermal properties optimized for precise temperature control.

CUSTOM-DESIGNED CANAL BLOCKS AND TWEEL SYSTEMS

These systems feature precision-engineered shapes to ensure smooth glass flow, with high-wear resistant materials for extended service life.

We understand that each glass production facility has unique requirements. Our team of experts works closely with glass manufacturers to develop tailored solutions that address specific operational challenges, whether it's extending campaign life, improving energy efficiency, or enhancing glass quality. By choosing **DGC Refractories** for your glass production needs, you're partnering with a leader in advanced refractory solutions, ensuring that your operations remain at the forefront of efficiency and product quality in the demanding world of glass manufacturing.





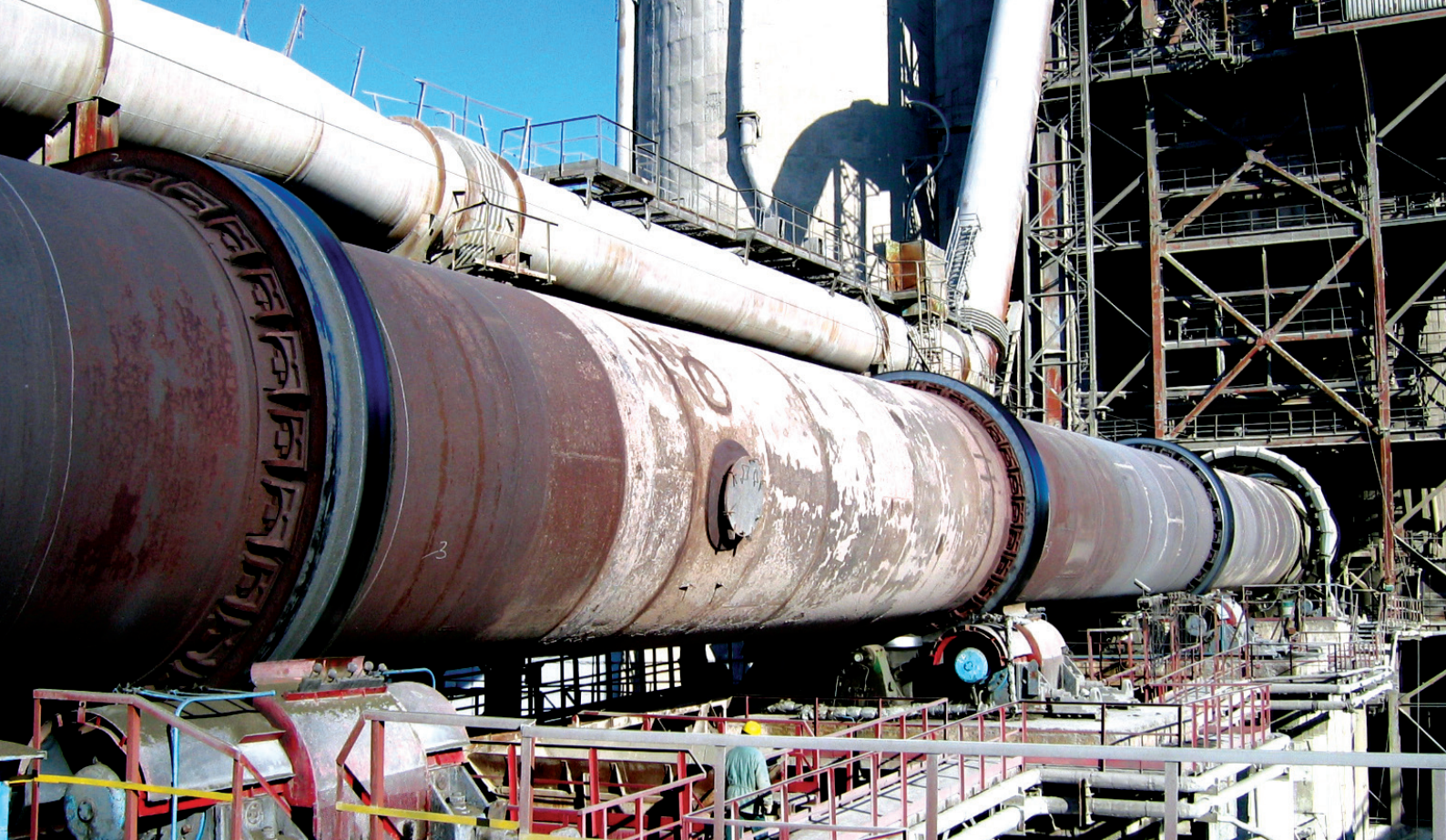
THERMALPOWER, ELECTRICAL, PETROCHEMICAL, & COAL CHEMICAL INDUSTRIES



ROTARY KILNS | SULPHUR COMBUSTION & INCINERATION PLANTS | HIGH-TEMPERATURE PROCESSES

At **DGC Refractories**, we understand that these industries operate under some of the most challenging conditions in the industrial sector.

Our specialized refractory products are meticulously engineered to deliver peak performance in these diverse and demanding environments.



ROTARY KILNS

Rotary kilns are critical components in many industrial processes, from cement production to waste incineration. Our refractory solutions for rotary kilns are designed to maximize operational efficiency and extend service intervals:

ABRASION-RESISTANT LININGS FOR RAW MATERIAL PROCESSING

These linings feature advanced ceramic composites with superior wear resistance, engineered surface textures to minimize material build-up, and customized brick shapes to optimize kiln geometry and material flow.

HIGH-TEMPERATURE INSULATION FOR ENERGY EFFICIENCY

Our insulation systems include multi-layer lining systems to optimize thermal management, low thermal conductivity materials to minimize heat loss, and lightweight insulating castables for reduced structural load.

SPECIALIZED INSTALLATION TECHNIQUES FOR PROLONGED SERVICE LIFE

We offer precision installation methods to ensure tight joints and minimal gaps, custom anchoring systems designed for specific kiln geometries, and hot-gunning techniques for rapid in-situ repairs.



SULPHUR COMBUSTION & INCINERATION PLANTS

The corrosive nature of sulphur compounds and incineration by-products presents unique challenges for refractory materials. Our solutions for these applications focus on corrosion resistance and long-term stability:

CORROSION-RESISTANT MATERIALS FOR AGGRESSIVE ATMOSPHERES

These materials feature advanced ceramic formulations resistant to acid attack, specialized impregnation techniques to minimize gas penetration, and graded compositions to balance thermal properties and chemical resistance.

HIGH-ALUMINA CASTABLES FOR STRUCTURAL COMPONENTS

Our castables offer ultra-low cement formulations for rapid strength development, thixotropic properties for ease of installation in complex geometries, and engineered particle size distributions for optimal packing and density.

SPECIALIZED ANCHORING SYSTEMS FOR IMPROVED LINING STABILITY

These systems use corrosion-resistant alloys for extended anchor life, with engineered designs to distribute thermal and mechanical stresses and flexible systems to accommodate lining movement and expansion.



HIGH-TEMPERATURE PROCESSES

Many industrial processes require refractory solutions capable of withstanding extreme temperatures while maintaining precise geometries. Our high-temperature process solutions are tailored to meet these exacting requirements:

CUSTOM-DESIGNED REFRACTORY SOLUTIONS FOR UNIQUE PROCESS REQUIREMENTS

We offer a collaborative design process involving CFD and FEA modelling, material selection based on detailed chemical and thermal analysis, and engineered lining systems to balance insulation and wear resistance.

ADVANCED CERAMIC MATERIALS FOR EXTREME TEMPERATURE APPLICATIONS

These materials feature ultra-high purity formulations to minimize contamination risks, engineered microstructures for optimized high-temperature properties, and novel composite materials combining strength and thermal shock resistance.

INNOVATIVE INSULATION SYSTEMS FOR ENERGY CONSERVATION

Our insulation systems include multi-layer designs incorporating various material types for optimal thermal management, microporous insulation for superior performance in limited spaces, and vacuum-formed shapes for complex geometries and uniform insulation.

We understand that each industrial process has unique requirements. Our team of experts works closely with clients to develop tailored solutions that address specific operational challenges, whether it's extending equipment life, improving energy efficiency, or enhancing process control.

By choosing **DGC Refractories** for these demanding industries, you're partnering with a leader in advanced refractory solutions, ensuring that your operations benefit from cutting-edge technology and unparalleled expertise in high-temperature applications.

QUALITY ASSURANCE: THE CORNERSTONE OF OUR EXCELLENCE

At DGC Refractories, quality is not just a department; it's a mindset that permeates every aspect of our operations. Our world-class laboratory is a testament to this commitment, equipped with state-of-the-art equipment that enables us to conduct rigorous testing and quality checks throughout the entire manufacturing process.

KEY EQUIPMENT AND PROCESSES

ICP-AES SPECTROGRAPH

This equipment ensures precise chemical analysis of raw materials and finished products, capable of detecting trace elements down to parts per billion, guaranteeing consistent composition across all production batches.

LARGE-SCALE IMAGE ANALYSIS MICROSCOPE

Our microscope allows for detailed inspection and analysis of refractory microstructures, identifying potential weak points or inconsistencies before they become issues.

HIGH TEMPERATURE LOAD TESTING ANALYZER

This analyser simulates real-world conditions to evaluate material strength and performance, conducting tests at temperatures up to 1700°C and providing critical data for product development and quality control.

THERMAL SHOCK RESISTANCE TEST FURNACE

Our test furnace subjects materials to rapid temperature changes to ensure durability, mimicking the harsh conditions found in industrial applications.

X-RAY DIFFRACTION (XRD) ANALYSIS

XRD analysis identifies crystalline phases in refractory materials, ensuring consistency in mineral composition and aiding in the development of new refractory formulations.

POROSITY AND BULK DENSITY TESTING

This testing determines the physical properties crucial for refractory performance, ensuring consistent quality across production batches and helping in optimizing material properties for specific applications.



Our quality assurance process is comprehensive, covering every stage from raw material selection to final product testing. This rigorous approach ensures that every refractory product leaving our facility meets or exceeds the highest industry standards, providing our clients with the confidence and performance they require for their critical operations.

By choosing **DGC Refractories**, you're not just getting a product – you're getting a commitment to excellence that's backed by cutting-edge technology and uncompromising quality control.

PRODUCTION CAPACITY

MEETING GLOBAL DEMANDS

OUR IMPRESSIVE PRODUCTION CAPACITIES **ENSURE WE CAN MEET THE DEMANDS OF VARIOUS INDUSTRIES WITH EFFICIENCY AND RELIABILITY.** THE STRATEGIC ALLIANCE WITH CNBM HAS FURTHER ENHANCED OUR MANUFACTURING CAPABILITIES, **ALLOWING US TO PROVIDE HIGH-QUALITY REFRACTORY PRODUCTS AT SCALE.**

ANNUAL PRODUCTION CAPACITY

REFRACTORY BRICKS: 300,000 TONS

Our refractory brick production includes magnesia, alumina, silica, and specialized bricks, with flexible production lines capable of rapid product changeovers and automated handling and packaging for consistent quality.

MONOLITHIC REFRACTORIES: 200,000 TONS

This capacity encompasses castables, gunning mixes, and specialized formulations, produced in state-of-the-art mixing and packaging facilities with customizable batch sizes to meet specific project requirements.

FUNCTIONAL REFRACTORIES: TAILORED PRODUCTION BASED ON DEMAND

We have dedicated production lines for slide gate refractories, nozzles, and other functional products, employing precision manufacturing processes to ensure exact specifications with rigorous quality control at every stage of production.

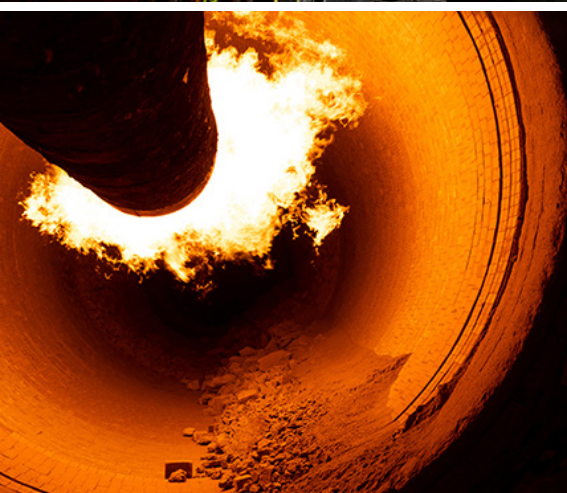
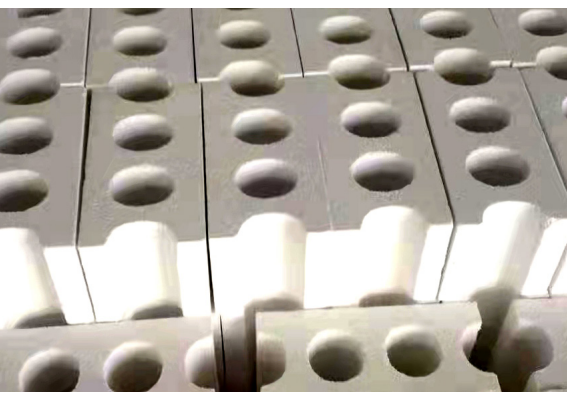


These robust production capacities, enhanced by CNBM's advanced production techniques and facilities, enable us to deliver tailored solutions promptly and effectively, meeting the diverse needs of our global clientele across multiple industries.

By choosing **DGC Refractories**, you're partnering with a manufacturer capable of meeting large-scale demands without compromising on quality or customization. Our production capabilities ensure that we can support your projects, no matter their size or complexity, with the highest quality refractory solutions delivered on time and to specification.

WHY CHOOSE

DGC REFRACTORIES



INNOVATIVE AND SUSTAINABLE SOLUTIONS:

- **Cutting-edge R&D facilities** dedicated to developing eco-friendly refractory solutions
- **Continuous improvement in energy efficiency and waste reduction** in our manufacturing processes
- **Commitment to helping clients** reduce their carbon footprint through advanced refractory technologies

EXTENDED SERVICE LIFE:

- **Proprietary formulations** designed for maximum durability in harsh industrial environments
- **Advanced wear-resistant materials** that significantly extend equipment lifespan
- **Comprehensive after-sales support** to optimize refractory performance and longevity

COMPREHENSIVE PRODUCT RANGE:

- **One-stop solution** for all refractory needs across diverse industries
- **Customizable products** to meet unique process requirements
- **Continuous expansion of our product portfolio** to address evolving industry challenges

RIGOROUS QUALITY CONTROL & ASSURANCE:

- **ISO 9001:2015 certified** manufacturing processes
- **State-of-the-art testing facilities** ensuring consistent product quality
- **Dedicated quality assurance team** overseeing every stage of production

CUSTOM SOLUTIONS FOR DIVERSE NEEDS:

- **Experienced technical team** capable of designing bespoke refractory solutions
- **Collaborative approach**, working closely with clients to understand and meet their specific requirements
- **Flexibility to adapt our products and services** to unique industrial challenges

GLOBAL EXPERTISE THROUGH CNBM PARTNERSHIP:

- **Access to world-class research** and development resources
- **Leveraging international best practices** in refractory manufacturing
- **Global supply chain capabilities** ensuring reliable product availability

TECHNICAL SUPPORT & TRAINING:

- **Comprehensive installation and maintenance support**
- **Regular training programs** for clients' technical teams
- **On-site troubleshooting** and optimization services

COST-EFFECTIVE SOLUTIONS:

- **Focus on total cost of ownership**, not just initial product cost
- **Refractory designs that optimize energy efficiency** in client operations
- **Predictive maintenance strategies** to minimize unplanned downtime

PARTNERING FOR EXCELLENCE



Our commitment to excellence, innovation, and customer satisfaction drives us to continually push the boundaries of what's possible in refractory technology. By choosing **DGC Refractories**, you're not just selecting a supplier; you're partnering with a leader in industrial heat management solutions.

We are dedicated to forging a future of unparalleled efficiency and innovation alongside our clients. Our expertise can transform your operations, guiding you on a journey of continuous improvement and success. At **DGC Refractories**, we are committed to being your strategic partner, supporting your growth and prosperity with unparalleled engineering solutions.

THE NEXT STEP

Ready to revolutionize your industrial heat management? Contact our team of experts today for a personalized consultation. Let us demonstrate how **DGC Refractories** can enhance your operational efficiency, sustainability, and bottom line. Together, we'll elevate your operations to new heights of performance and profitability.

CHOOSE DGC REFRACTORIES - WHERE INNOVATION MEETS EXCELLENCE IN REFRACTORY SOLUTIONS.



DGC INTERNATIONAL

E International@dgc-africa.com

2nd Floor, The AXIS,
26 Bank Street,
Cybercity,
Ebene, 72201,
Mauritius

DGC SOUTH AFRICA

Contact Person: Wynand Boshoff

T +27 16 421 3720
E sales@dgrpint.com

10 Smuts Avenue, Vereeniging,
1930, South Africa

REGIONAL OPERATIONS

DGC NORTH-WEST

Contact Person: Gawie Hugo

T +27 83 391 0531
E Northwest@dgc-africa.com

DGC KWA-ZULU NATAL

Contact Person: Denver Gounden

T +27 73 161 9913
E Kzn@dgc-africa.com

DGC LIMPOPO

Contact Person: Walter Mulovhedzi

T +27 76 896 7676
E Limpopo@dgc-africa.com

DGC ZAMBIA

Contact Person: Warren du Plessis

T +260 761 83 2470
T +27 82 319 8005
E Zambia@dgc-africa.com

Plot 2394, Freedom Way,
Mufulira

DGC DEMOCRATIC REPUBLIC OF CONGO

Contact Person: Warren du Plessis

T +243 8996 49 493
T +27 82 319 8005
E DRC@dgc-africa.com

Kolwesi Office:

118 Avenue Kalima, Quartier Mutoshi,
Commune Manika / Kolwezi

Lubumbashi Office:

199 Avenue Mubanzo Quartier; Golf Malela.
Commune Lubumbashi,
Province du Haut-Katanga, République
démocratique du Congo

DGC MADAGASCAR

Contact Person: Abizar Pichori

T +261 32 112 2122
E Madagascar@dgc-africa.com

Lot Ivx 30 Bis Ankazomanga rue
Dr Raseta Antananarivo, 101,
Madagascar

DGC ZIMBABWE

Contact Person: Douglas Mhazo

T +263 772 514 480
E Zimbabwe@dgc-africa.com

311 Esap Way, Willowvale
Harare, Zimbabwe

OUR OFFICES



www.dgc-africa.com