FOUNDED 1910

DGC

SOUTH AFRICA

MEMBER OF DICKINSON GROUP OF COMPANIES

A GLOBAL LEADER IN
ASSET INTEGRITY MANAGEMENT & INDUSTRIAL SOLUTIONS

www.dgrpint.com

DGC S.A.'S MISSION IS TO
FOCUS ON HELPING OUR INDUSTRIAL CUSTOMERS
OPTIMIZE THEIR MAINTENANCE COSTS & IMPROVE PLANT PERFORMANCE, BY PROVIDING INNOVATIVE SOLUTIONS
TOGETHER WITH OUR MARKET-LEADING TECHNOLOGIES
TO ENHANCE THE SERVICE LIFE
OF THEIR OPERATING ASSETS.

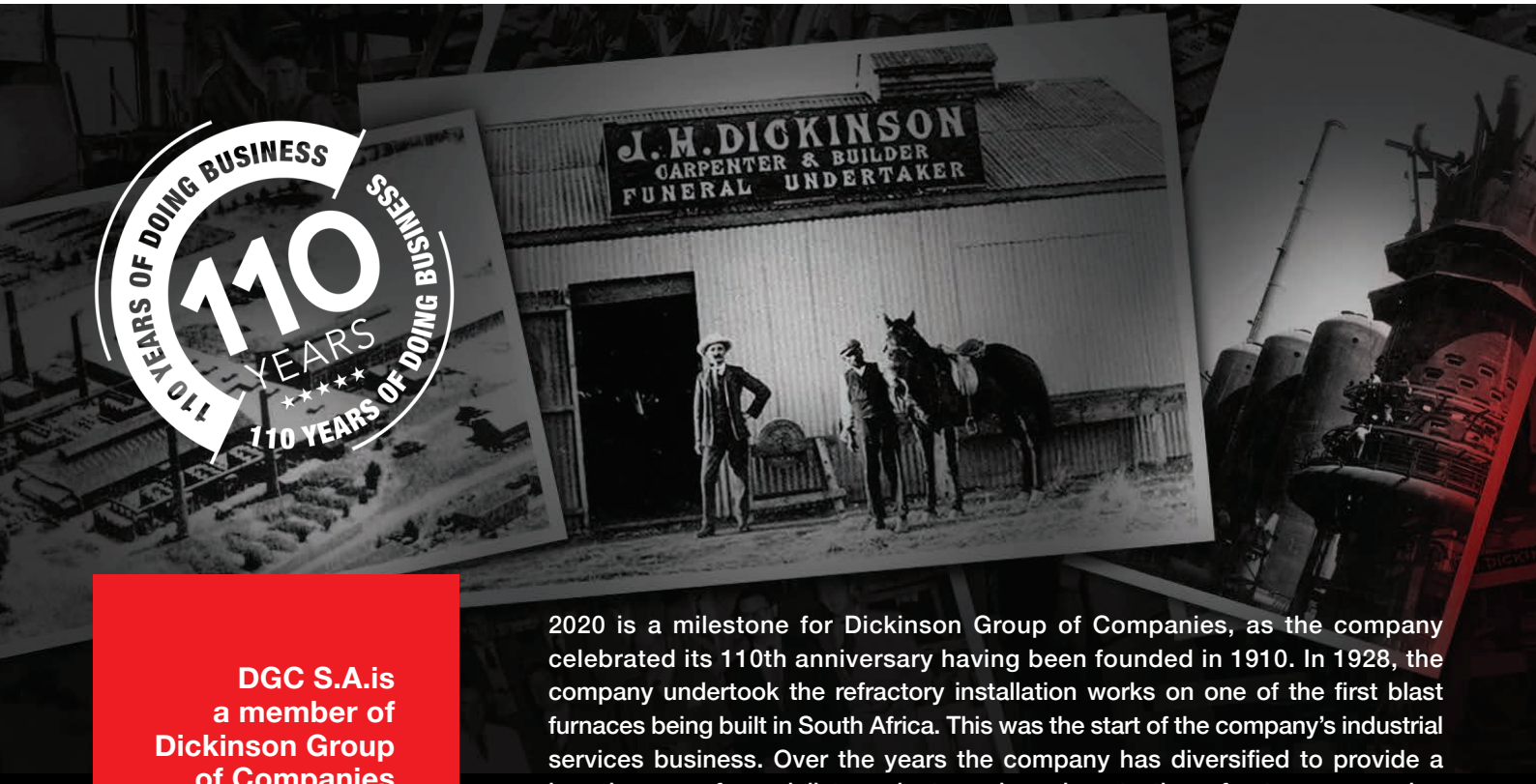
PURPOSE

We help our industrial customers optimising their maintenance costs and improving plant performance, by providing innovative solutions to enhance the service life of their operating assets.

DGC S.A. IS CUSTOMER CENTRIC WITH THE ADOPTION OF OUR GROUP-WIDE
"ONE PERSONALISED SOLUTION",
UNDERPINNED BY OUR RANGE OF HIGH-QUALITY NICHE SERVICES, WITH OUR SUPERIOR TECHNICAL EXPERTISE, DELIVERY AND CUSTOMER SERVICE.

DGC S.A. IS A MEMBER OF THE DICKINSON GROUP OF COMPANIES

DGC S.A. is customer-centric with the adoption of our group-wide **"One Personalised Solution"**, underpinned by our range of high-quality niche services, with our superior technical expertise, delivery, and customer service.



DGC S.A.is a member of Dickinson Group of Companies (DGC) that provides a unique range of high-quality niche Industrial Products and Services.

2020 is a milestone for Dickinson Group of Companies, as the company celebrated its 110th anniversary having been founded in 1910. In 1928, the company undertook the refractory installation works on one of the first blast furnaces being built in South Africa. This was the start of the company's industrial services business. Over the years the company has diversified to provide a broad range of specialist products and services to the refractory consuming industries.

The company's vision is be recognised as a global leading asset integrity management and industrial solutions company, based on providing innovative solutions and market leading technologies, while continuing our leadership in selected geographic regions.

VALUES

Dickinson Group of Companies (DGC) has since the date it was founded in 1910 over the past 110-years been a professionally managed family-owned business.

OUR VALUES ARE THE BEDROCK OF OUR CORPORATE CULTURE.

PEOPLE

We have high standards for our exceptional employees who enjoy pushing themselves to perform at the highest levels.

INTEGRITY

We want to surround ourselves with people driven to do the right things and act with integrity in whatever they do.

TRUST

We firmly believe in our employees to act in the best interests of our customers and company.

SERVICE

We are a customer centric services business. We focus on understanding our customer's needs, ensuring that we always meet their expectations.

INNOVATION

We strive to provide our customers with innovative solutions to enhance the service life of their operating assets.

DGC S.A.'S STRATEGIC FOCUS

DGC has since the date it was founded in 1910 over the past 110-years been a professionally managed family-owned business. The company has evolved over the past century from its solid reputation as a leading furnace and industrial services company, providing high added value solutions, mainly in the following sectors: mining & metallurgy, glass, mineral processing and manufacturing industries.

We focus on helping our large industrial customers optimising their maintenance costs and improving plant performance, by providing innovative solutions together with our market leading technologies to enhance the service life of their operating assets.

DGC has the ambition to build a sustainable diversified industrial group. We have therefore moved away from the cyclical of our project related activities and developed our business model to focus on providing services for industry and building a strong international presence.

The company's vision is to be recognised as the global leading asset integrity management and industrial solutions company, based on providing innovative solutions and market leading technologies, while continuing our leadership in selected geographic regions.

DGC S.A.'S RANGE OF SPECIALIST PRODUCTS & SERVICES INCLUDE:

SERVICES

- Furnace & Smelter Services
- Furnace Rebuild Projects
- Refractory Installation
- Furnace Demolition
- Furnace Inspection Services
- Silo Cleaning Services
- Wear & Abrasion Protection Services
- Fibre-Reinforced Plastic (FRP) Systems

INDUSTRIAL PRODUCTS

- Precast Refractory Shapes
- Refractory Anchors
- Refractory Armour Systems
- CD Pins & Clips
- Wear & Spike Studs
- Shear Stud Connectors

Over the next few years, we want to continue to implement this strategy, strengthening our **"Customer Centric"** approach, to enhance the bonds with our customers, and to continue to develop high added value solutions in collaboration with our customers, in order to anticipate their future needs.

We are at the service of our customers, which is perfectly illustrated by our rebranding, involving full integration of all our subsidiaries, and our Dickinson Group of Companies **"One Personalised Solution"** slogan.

Trevor Dickinson
CHAIRMAN

SERVICES

SERVICES

FURNACE & SMELTER SERVICES

DGC S.A. has been in the furnace business since 1928; when the company was involved in the construction of one of South Africa's first Blast Furnaces.

Since then, the company has been extensively involved in numerous furnace Greenfield and Brownfield projects on industrial furnaces within the metals smelting, mineral process, power generation and petrochemical refining industries throughout sub-Saharan Africa, and internationally in numerous countries around the globe, including the Middle East, Scandinavia, Latin America, Russia and CIS Countries.

The company provides a comprehensive range of furnace services to support clients in various aspects of furnace projects and maintenance.

DGC S.A's Furnace Services comprise of the following:

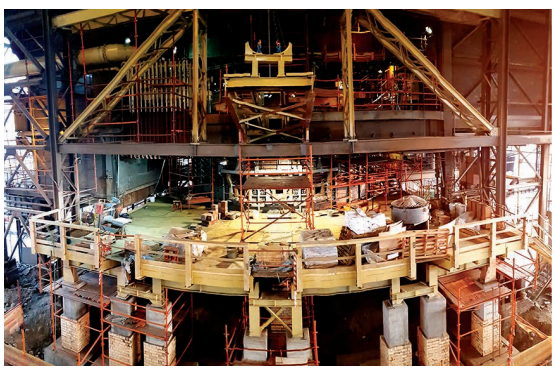
FURNACE REBUILD PROJECTS / FURNACE DEMOLITION / REFRACTORY INSTALLATION / FURNACE INSPECTION SERVICES

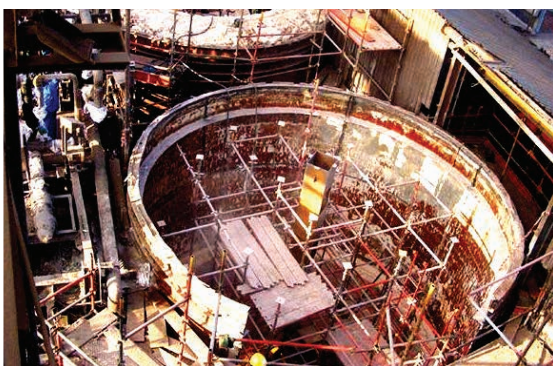
REBUILD

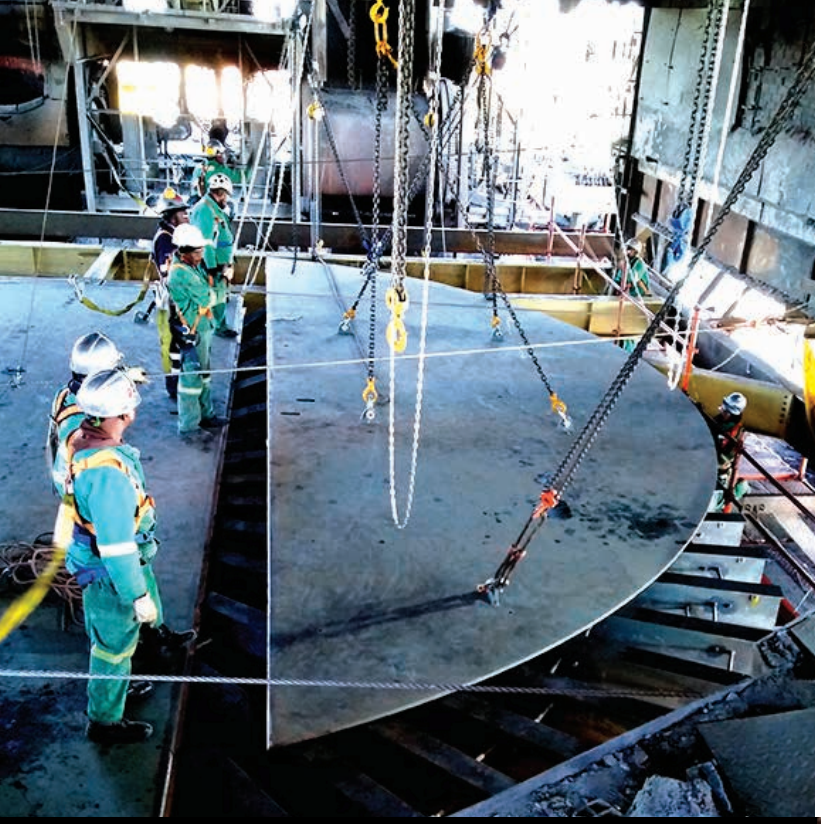
FURNACE REBUILD PROJECTS

DGC S.A. has more than 90 years' experience in providing turnkey furnace rebuild projects. Dickinson Group of Companies was founded in 1910 as a building construction company and in 1928 the company constructed one of South Africa's first Blast Furnaces, which marked the beginning of the company's furnace business.

The company has been extensively involved in the initial construction and shutdown projects on industrial furnaces for the metals smelting, mineral process, power generation and petrochemical refining industries.







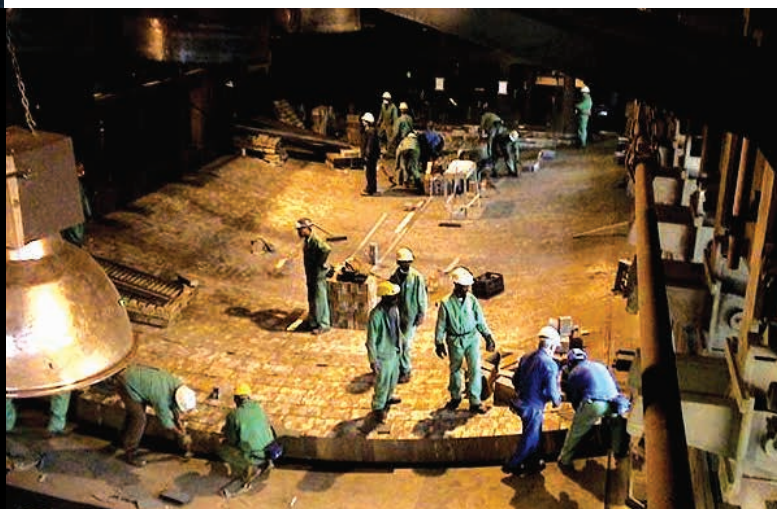
The company provides Turnkey Furnace Rebuild Project Services for major furnace outages which cover the entire scope of work including but not limited to; project and construction management services, furnace decommissioning, salamander tapping, furnace demolition and refractory installation, civil, electrical, mechanical fabrication & erection works and furnace commissioning.

At the forefront of technology, **DGC** collaborates with leading engineering and design companies, procuring, manufacturing and installing refractory materials, which comply with stringent quality specifications, safety standards and are cost effective for the application.

WITH EXPERIENCED

management, expert supervision, highly skilled motivated personnel, state-of-the-art equipment and standard operating procedures with a high regard for health, safety, environment and quality; the company offers clients cost-effective and tailor-made integrated solutions.

DGC S.A. renders professional turnkey services to large, global, diversified minerals processing and metals smelting companies.



DEMOLITION

FURNACE DEMOLITION

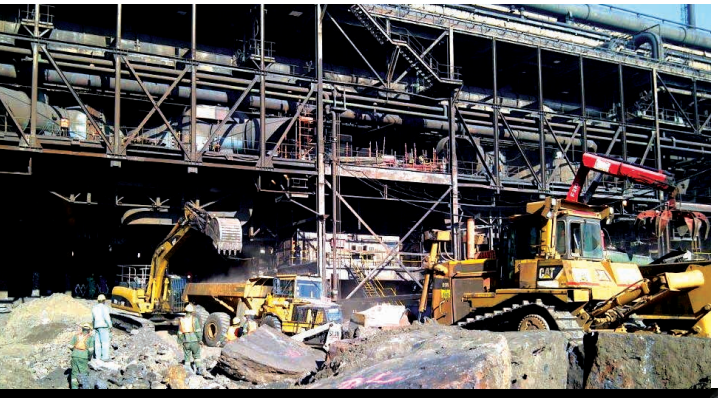
DGC S.A. is a leading provider of specialist Furnace Demolition Services. Over the past 25 years the company has undertaken numerous demanding furnace demolition projects throughout sub-Saharan Africa.

The company's extensive client base includes bluechip companies in the mining, metal smelting, mineral processing and industrial sectors. The company has the capacity, technology, expertise and know-how to undertake complex furnace demolition projects.

DGC S.A. utilizes equipment and methodologies which are highly innovative, modern and customised for improved and safer access to challenging sites.

SPECIALIST & INNOVATIVE EQUIPMENT

The company has modern, advanced and purpose-designed mechanical demolition equipment, capable of meeting the challenges posed by large, demanding furnace demolition projects. The latest technology and methodologies used substantially reduce the man power, project duration and improve the safety profile of projects.



The technologies utilized include:

- Remote controlled demolition equipment
- High powered crawler excavators & hydraulic breakers
- Mechanical dismantling & rigging
- Thermal oxygen lancing
- Liquid nitrogen cooling
- Controlled hot blasting

AREAS OF EXPERTISE

- Turnkey demolition of furnaces
- Demolition and removal of refractories
- Confined space demolition
- Remote controlled demolition equipment
- Technology and expertise for effective demolition of hot and cold materials
- Mechanical demolition and dismantling of equipment and structures
- Site clean-up and rehabilitation
- Fast-track shutdowns under 24/7 conditions
- Accredited with high safety standards

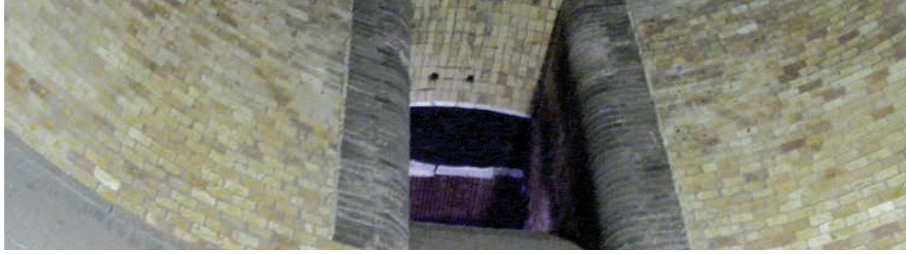
REFRACTORY

REFRACTORY INSTALLATION

DGC S.A. has 90 years of experience in the specialised field of refractories. The company specialises in the installation, repair and maintenance of the refractory linings across the complete range of metals smelting, mineral processing, chemical, refining and thermal power refractory consuming industries.

The company has extensive experience in the installation of all types of refractory materials including; bricklaying, pneumatic gunning, shotcreting, ramming, pumping, vibrocast and placement of castables, and ceramic fibre products across the complete range of furnace designs.

DGC S.A. has carried out the installation of refractories on numerous initial construction and furnace rebuild projects throughout sub-Saharan including; South Africa, Botswana, Zimbabwe, Namibia, Mozambique, Zambia, Democratic Republic of Congo, Tanzania, Malawi, Gabon, Nigeria, Niger, Senegal, and internationally including: Israel, United Arab Emirates, Saudi Arabia, Argentina and Iceland.



SCOPE OF WORK

Whether you need repairs to current facilities or are looking to establish a new plant, we have a qualified and industry experienced team of engineers, supervisors, bricklayers, gunning crews, and carpenters who have specialized knowledge of all facets of refractory design and construction.

Our belief is that the refractory management is a partnership for the long-term, our team will be available to manage the process with you - from the pre-planning to the ongoing refractory installation and demolition works throughout the service life of the furnace.

INDUSTRIAL SERVICES

DGC S.A provides a wide range of world-class Industrial Services to the mining, metals smelting, mineral processing and refining industries internationally.

The company's portfolio of Industrial Services was developed as result of the company's customer centric approach; helping its large industrial customers to optimise their maintenance costs and improve their plant performance by providing innovative solutions together with market leading technologies to enhance the service life of their operating assets.

The Industrial Services are also constantly reviewed to support **DGC S.A.'s** mission; to provide an integrated and multidisciplinary **"One Personalised Solution."** Developing services that are aimed at optimising clients' productivity, safety performance and regulatory compliance while optimising the life of their assets.

DGC S.A.'s Industrial Services comprise of the following:

SILO CLEANING SERVICES / WEAR & ABRASION PROTECTION SOLUTIONS / FIBREGLASS REINFORCED PLASTIC (FRP) SYSTEMS

DGC S.A.offers a comprehensive range of Furnace Inspection Services to the metals smelting, mineral processing, thermal energy and industrial furnace industries.

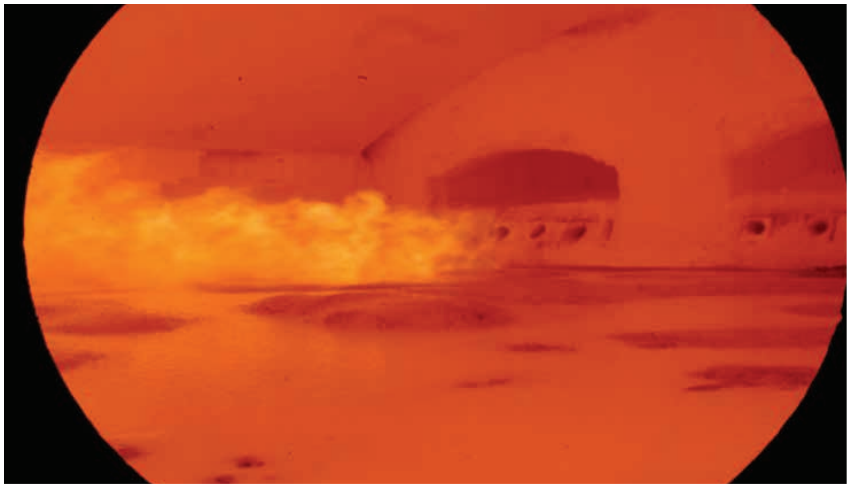
FURNACE INSPECTION SERVICES

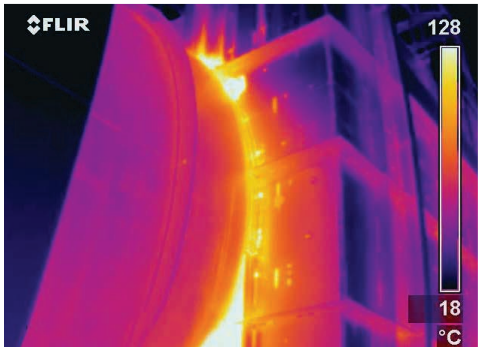
Our Furnace Inspection Services are based on the technologies below:

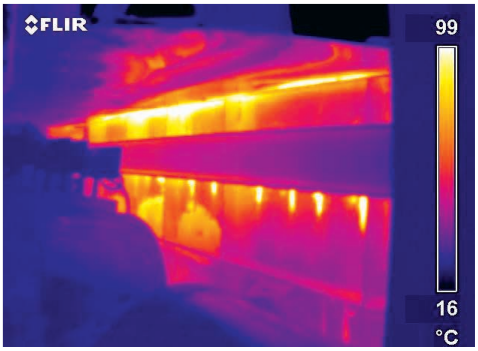
- **High-Temperature Endoscopy:** allows for real-time, remote visualization of the interior of a furnace during normal operations, enabling maintenance personnel to visually inspect and assess of the state of refractories inside the furnace. Robust, purpose-designed endoscopy devices are capable of operating within the extremely harsh conditions inside furnaces. Probes are designed to have small diameters thereby only requiring small openings (as small as 50mm).

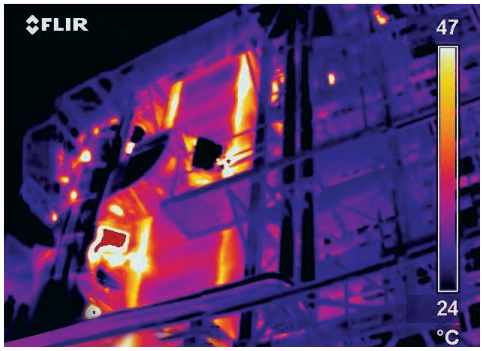
- **Infrared Thermography:** allows for real-time, visualization of the external thermal status of furnace equipment, without any contact. Infrared thermography enables operators to constantly monitor the metallic shell status, identify/localize damaged areas (internal/external) as well as estimate the remaining refractory lining thickness.

- **Combined Application:** when High-Temperature Endoscopy and Infrared Thermography are used together, a multidimensional model of the furnace is created, enabling maintenance personnel to fully visualise and assess the state of the furnace.









SILO CLEANING SERVICES

DGC S.A. offers a highly specialized service for cleaning contaminated and clogged up bulk storage containers in the manufacturing, mining and mineral processing industries.

These services, which involve the safe and efficient removal of compacted materials, are coupled with consulting services, the adoption of preventative maintenance procedures and th e formulation of proper cleaning schedules.

Our Silo Cleaning Services are executed using cutting-edge equipment that is fast, efficient and safe, as the cleaning operations require no human entry into the storage vessel at any time. The company's services are designed to safely remove compacted materials from any size or shape of silos, bins, hoppers, tanks, reactors and chimneys.

SILO MANAGEMENT

- Whether it be cement, coal, soda ash, fertilizer, plaster, animal feed, salt or clay, substances kept in silos attract moisture, which causes the material to bind and adhere to the walls or form clumps.

- As the moist product dries, it can harden and starts to break up, producing lumps that can block the valve outlets. This results in the build-up of debris, which restricts the flow of material, causing capacity reduction and production stoppages (so lumps can be removed from the valve areas or air slides). This is a typical case for **DGC S.A.'s** Silo Cleaning Services.

- Specialist expertise is critical to the success of any silo management system. **DGC S.A.** believes that, through innovation and new technologies, the company's Silo Cleaning Services can replace the traditional unsafe methods used, by avoiding having personnel work inside the unsafe confined spaces.

- In addition to providing relevant experience and know-how, Silo Cleaning Services require highly specialised equipment. **DGC S.A.** adopts a combination of specialist cleaning systems.

WEAR AND ABRASION PROTECTION SOLUTIONS

DGC S.A.'s comprehensive range of industrial linings includes international leaders, Kalenborn International's wear protection solutions. Kalenborn established 100 years ago, provides protection for the environmental and heavy industries with wear-resistant linings which have excellent abrasion and impact resistance.

Kalenborn has a global network of subsidiaries around the world - Germany, USA, Canada, Brazil, France, Poland, Hungry, Singapore, Philippines, Vietnam and exclusive representation throughout sub-Saharan Africa by **DGC S.A.**

The company provides custom design, manufacture, delivery, and installation of its materials to meet customers' specific abrasion, impact and corrosion problems. This applies in particular to industrial plants handling raw material processing as well as, transport, storage including the processing of ores, sand, slag, coal, or recycled materials. Kalenborn has a rich tradition characterized by competence and experience as well as durable, quality products. Our wear protection solutions protect industrial plants and equipment reliably against wear due to abrasion and impact. In steelworks and cement plants, in coal-fired power plants and recycling plants, in mining, and in environmental technology, our solutions keep production operations running.

EFFECTIVE WEAR PROTECTION IN A COMPLETE PACKAGE

From the development of our materials to the lining of pipes, plants, and equipment, we offer a complete range of products and services, all from a single source. In so doing, the quality and durability of our products stand above all else. As experts, we begin with the production of our materials. We know the raw materials and the manufacturing processes. That comprehensive expertise enables us to ensure the quality characteristics of our products at all times.

MINERAL FROM NATURAL BASALT TO FUSED CAST BASALT

In the early 1920s, Kalenborn's fused cast basalt works successfully produced a wear-resistant material made of basalt for the first time ever – a material now known the world over under the brand name ABRESIST. Today modern furnaces, in which the rock is smelted at 1,250 °C, are the heart of the production operations. The liquid basalt is cast in moulds and subsequently heat treated in a special process in order to give the material its crystalline structure. That makes the rock especially hard and strong. Along with very good protection against wear, ABRESIST also provides an anti-friction surface.

CERAMIC FROM MINERAL TO CERAMICS KALOCER

Is a high-alumina ceramic compressed in a mould and fired at high temperatures. It is suitable for applications subject to extreme wear and temperatures of up to 1,000°C. KALCOR zirconium corundum is particularly well-suited for use in castings. In the form of plates, mosaics, moulded parts, and hollow cylinders, our ceramic materials are installed in a wide range of plant components such as pipe-lines, cyclones, sifters, and chutes. This ensures the reliable production of energy, raw materials, and other important products we all use in our everyday life.

METALLIC FROM SCRAP TO HARD METAL

For especially harsh operating conditions, we have developed special hard casting alloys – such as KALCAST, for example. Alloy components such as chromium and carbon ensure especially high hardness and abrasion resistance, whilst manganese provides impact strength. In our foundry, we produce cylinders, pipe bends and moulded parts weighing from 30 to 3,000 kg. Our KALMETALL material, from which we manufacture components that can weigh as much as several tons, consists of steel plates armoured with special hard metal alloys. It exceeds the service life of common steel several times over.

ABRESIST fused cast basalt reliably prevents abrasive wear in plant components such as scale flumes, marl hoppers, fly ash pipelines in coal-fired power plants, and coke bunkers in the iron and steel industry. The cast ceramic material KALCOR has proven effective for lining plant components that are subject not only to extremely harsh abrasion but also to high temperatures, for example in chutes for hot sinter or clinker, in asphalt mixers and hot gas pipelines. KALOCER high-alumina ceramics are available in thin, smooth molded elements and are particularly well-suited for lining conveyor belt transfer points, concrete mixers, or cyclones in the food industry.

For the high impact wear typically found in components such as bunker inlets, spiral chutes, and crushers, we recommend metallic materials such as the armoured plates made of KALMETALL and KALCAST hard casting. The hard compound KALCRET combines easy handling with excellent wear protection properties under high-temperature loading. To line large surfaces – such as those of separators on a cement mill or of blast furnace dust catchers in an integrated steel mill – the material can be applied without joints using a trowel or sprayed on. Within 48 hours, the plant is ready for operation again.

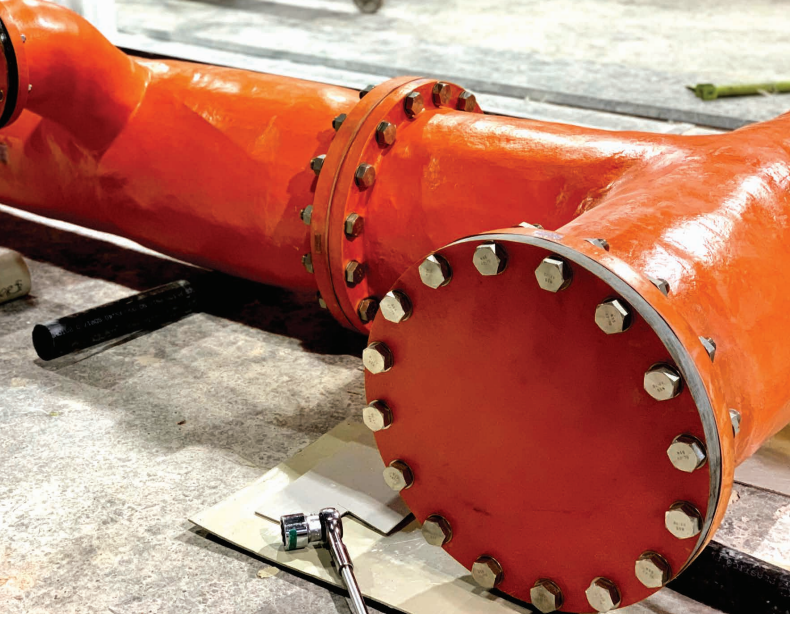
Very different requirements arise under operating conditions that demand especially good anti-friction properties, e.g., in silos and bunkers. Such applications use not only KALEN, as a thermoplastic material with ideal anti-friction properties, but also the mineral material KALCERAM. They prevent the material which is being conveyed from building up, thereby ensuring uninterrupted material flow. For rapidly applying a thin, jointless coating to large surfaces or pipes, Kalenborn offers KALEA, a sprayable material with its own application technology.

WEAR-RESISTANT PIPE SYSTEMS

Pipes, elbows, or pipe fittings are lined with materials to make them wear-resistant. Hydraulic and pneumatic pipe systems often have to withstand extremely harsh conditions. Conveying abrasive materials such as ash, sand, or sinter dust pipelines to acute levels of stress. The right wear protection ensures the continuity of the production process.

To protect pipelines against wear, we have developed a standard that uses strong linings to extend the service life of the stressed components. The smooth surfaces of the materials promote good flow characteristics. This reduces pressure losses and lowers energy costs. In pneumatic pipelines, lining the most heavily stressed points, such as elbows, branches, or transitions, is often enough to achieve the required protection.

Moreover, we offer an intelligent system for monitoring wear protection. It reports the end of the material's service life in advance and warns the operator early about the impending failure of a pipeline. That prevents environmental pollution and hazardous operating conditions.



FIBREGLASS REINFORCED PLASTIC (FRP) SYSTEMS

DGC S.A. manufacturers the complete range of FRP products including; piping & spooling, tanks & vessels, ducting, scrubbers, stacks & chimney liners as well as specialty and customer engineered products. Industries served include – mining & metals, chemical & petrochemical, oil & gas, pulp & paper, power & flue gas desulphurization.

Fibreglass Reinforced Plastic (FRP) is a composite material made of a polymer matrix reinforced with fibres, usually glass fibres.

The polymer provides excellent chemical resistance while the fibres provide the structural integrity. Depending of the resin type and the glass to resin ratio the material properties for individual structural layer can be optimised for corrosion resistance and physical strength.

APPLICATIONS

PIPING & SPOOLING

Fibreglass Reinforced Plastic (FRP) piping systems for corrosive applications have been used widespread within industry for more than 50 years. FRP piping has superior corrosion resistance when compared to metallic piping and can be more economical than the stainless, titanium and high nickel alloy alternatives. That is why industries such as Pulp & Paper, Mining, Chemical Processing, Water, Power & FGD have successfully chosen to utilise FRP piping in their process systems.

TANKS & VESSELS

Fibreglass reinforced plastic (FRP) tanks and vessels, including the auxiliary components can be fabricated in virtually any shape or configuration, demonstrating the flexibility inherent with FRP composites. FRP tanks are your environmentally safe answer to processing and storing corrosive gases and liquids, whether below or above ground. Tanks, vessels and scrubbers can be designed to handle a wide variety of dynamic, hydrostatic loads and chemical environments. Such processing systems also find use as absorbers, de-misters, air strippers and bleach towers.

DUCTING

Fiberglass Reinforced Plastic (FRP) Ductwork is your answer to conveying critical fumes within your facility. FRP duct systems have a long history in industries such as Power, FGD, Metals and Mining, Pulp & Paper, Chemical Processing and Odour Control.

SCRUBBERS

Industrial scrubbers/absorbers, shells and vessel internals have been manufactured using FRP for many years due to the corrosion resistance and dependability of Fiberglass Reinforced Plastic. FRP scrubbers and scrubber components have been used in a wide range of industries to include Power & FGD, Metals & Mining, Chemical Processing, Cement, Water Remediation and Odour Control. With proper material selection, FRP can provide long term corrosion resistance and low maintenance costs in applications where carbon steel, stainless steel, duplex stainless steel, coatings, linings are simply not a long-term solution. FRP material is also a more economical solution to high-nickel content alloys in scrubber environments containing elevated chloride concentrations or wet acids.

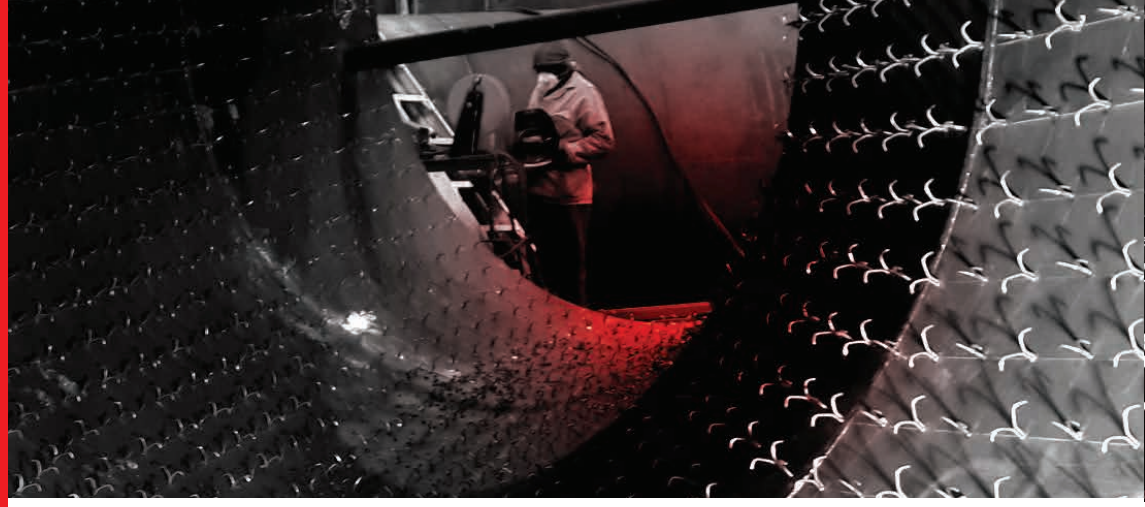
STACKS & CHIMNEY LINERS

Industries such as Pulp & Paper, Metals & Mining, Chemical Processing and Power & FGD successfully utilise FRP Stacks in process systems in which FRP has superior corrosion resistance. Compared to metallic stacks or where FRP is more economical than the stainless, titanium and high nickel alloy alternatives. Speciality & Custom Engineered Products - Fiberglass Reinforced Plastic composites naturally lend itself to unique customer requirements which do not lend themselves to standard designs, existing tooling or standard manufacturing practices.

SPECIALITY & CUSTOM ENGINEERED PRODUCTS

Fiberglass Reinforced Plastic composites naturally lend itself to unique customer requirements which do not lend themselves to standard designs, existing tooling or standard manufacturing practices.

DGC S.A. has been designing, manufacturing and installing standard, custom-made high-quality refractory anchors as well as a wide range of anchor supporting systems for more than 35 years.



INDUSTRIAL PRODUCTS

Visit our Online Refractory Anchors Shop: www.dgrpint.com/anchor-shop

The company manufactures and distributes an extensive range of refractory anchors, steel fibres, hex mesh, stud-welding equipment, shear connectors, arc and wear studs for standard industrial use, through to specialty applications in the Mining, Metals Smelting, Mineral Processing, Petrochemical Industries. Our industrial products are installed by welders coded to ASME IX.

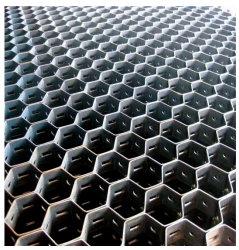
Dickinson Industries' extensive range of Industrial products includes the following:

REFRACTORY ANCHOR SYSTEMS

STUD WELDING SYSTEMS

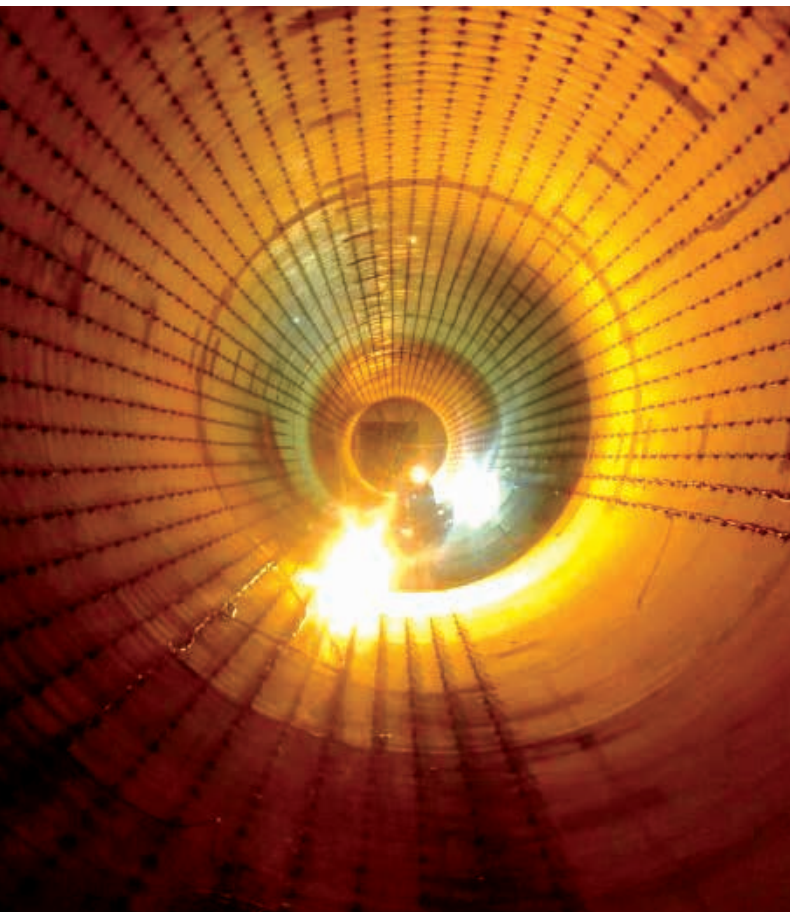
SHEAR CONNECTOR STUDS

WEAR STUDS & SPIKE STUDS



HEX METAL (HEX MESH)

STAINLESS STEEL FIBRES



DGC S.A.'s Precast Division was established in 1986, specializing in the manufacture of customized precast refractory shapes.

PRECAST SHAPES

PRECAST REFRACTORY SHAPES

Specially designed precast refractory shapes are manufactured off-site under controlled conditions, dried out at our production facilities under stringent quality control measures, ensuring the manufacture of accurate moulds and final casting of special shapes to ensure an enhanced product service life. Precast refractory shapes offer the added benefits of ease of installation and shortened repair times.

Furnace Applications:

- Launders
- Ladles
- Burners
- Feed Chutes
- Bull Nose
- TAD Damper
- Cyclone Roofs
- Kiln Hood Roofs
- Cement Burner Lance
- Coke Oven Bricks & Modules


VR9·T·EC
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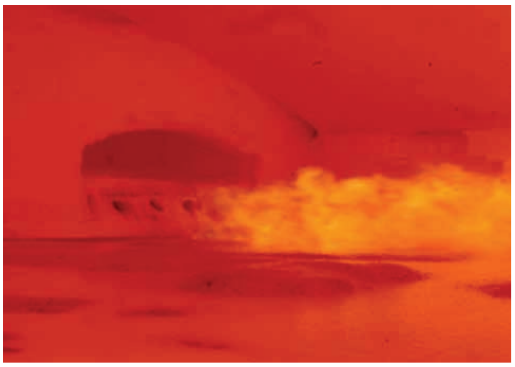
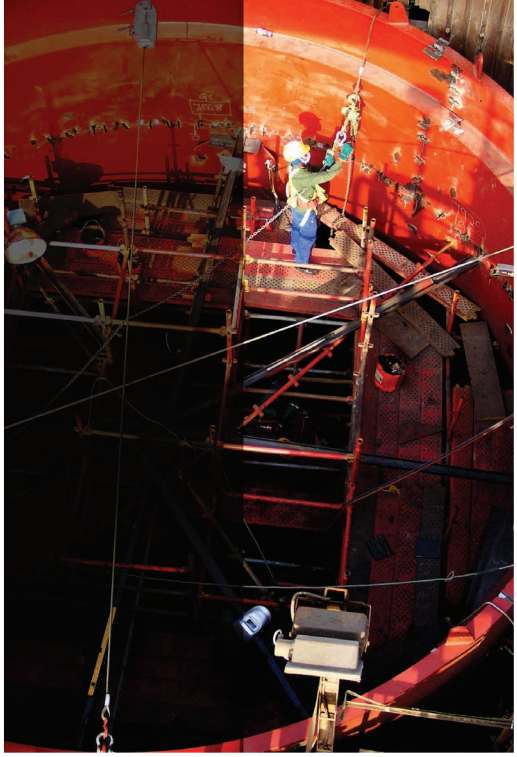
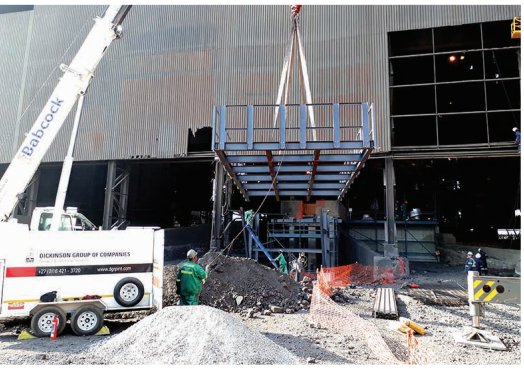



FM 3D13T


WELDED SPIKE STUDS

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