



FURNACE & SMELTER SERVICES



**THE LEADING
ASSET INTEGRITY MANAGEMENT & INDUSTRIAL SOLUTIONS
COMPANY IN AFRICA**

www.dgc-africa.com

MISSION

DGC AFRICA's Mission is to focus on helping our 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.



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 AFRICA 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.

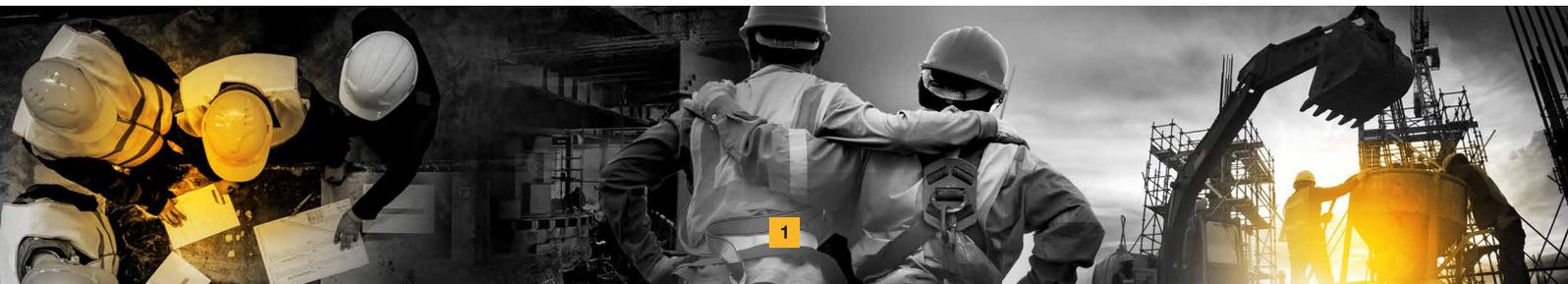
110 YEARS IN BUSINESS

DGC AFRICA IS A MEMBER OF THE DICKINSON GROUP OF COMPANIES

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 company 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.



DGC AFRICA'S STRATEGIC FOCUS

DGC AFRICA has more than 50 years' experience in Africa; since the company was involved during the 1960s on a major project for GECAMINES Sarl. in the Democratic Republic of Congo. **DGC AFRICA's** focus is on the provision of the Group's range of specialist industrial services to the mining & minerals, metals smelting, sulphuric acid plants, mineral processing, oil & gas, chemical & petrochemical and power generation industries throughout Africa.



The company is leveraging off its dominant presence in Southern Africa in Zambia, Namibia and Democratic Republic of Congo, to expand into the other Anglophone (English), Francophone (French) and Portuguese speaking countries throughout sub-Saharan Africa.

DGC AFRICA'S RANGE OF SPECIALIST SERVICES INCLUDE:

- Furnace & Smelter Services
- Industrial Vacuumation
- Silo Cleaning
- Catalyst Handling
- HP & UHP Water Blasting
- Sulphuric Acid Plant Services
- Corrosion Protection & Coatings
- Industrial Acid Proofing
- Fibreglass Reinforced Plastic (FRP) Systems
- Wear & Abrasion Protection Solutions
- Furnace Mechanical Projects
- Fabrication & Welding
- Rotary Kiln & Mill Services
- On-Site Machining Services
- Conveyor Maintenance Services

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

FURNACE & SMELTER SERVICES

DGC AFRICA 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 AFRICA's Furnace Services comprise of the following:

FURNACE REBUILD SERVICES / FURNACE REBUILD PROJECTS / FURNACE DEMOLITIONS / REFRACTORY INSTALLATION

SERVICES

FURNACE REBUILD SERVICES

SHUTDOWN PLANNING & EXECUTION

Effective planning & execution of shutdowns, turnarounds & outages are major tasks during a plant's life cycle. It is an important aspect of plant maintenance that helps improve the life expectancy of assets, to maintain inventory levels and reduce loss of revenue.

Shutdowns are costly because they are labour and material-intensive. Hence, it is key that shutdowns are carried out quickly and effectively to minimize downtime and any negative business impacts. DGC's shutdown and turnaround experts have vast experience across all metals smelting industries, providing a complete shutdown management service.

BENEFITS

- Reduced plant downtime
- Safe project implementation
- Integrated project implementation
- Significant production-cost savings
- Higher plant utilisation



FURNACE REBUILD SHUTDOWN SERVICES



DGC's total shutdown solution management teams typically consist of an integrated team of experts as needed for large and complex asset shutdowns, turnarounds and outages.

A furnace rebuild requires a wide variety of skills and expertise. It takes a dedicated team of professionals to successfully oversee. DGC Furnace Rebuild Shutdown Services has managed numerous major furnace rebuild and upgrade projects.

Some examples of the furnace types rebuilt:

- Flash furnaces
- Six-in-line furnaces
- Electric furnaces
- Isamelt furnaces

DGC's Furnace Rebuild Shutdown Services for major furnace outages which can cover an entire scope of work including:

REFRACTORY DEMOLITION & REMOVAL

PIPING REMOVAL & RE-INSTALLATION

COOLING ELEMENT REPLACEMENT

MECHANICAL WORK

ELECTRICAL & INSTRUMENTATION WORK

REFRACTORY INSTALLATION

OTHER ACTIVITIES





SHUTDOWN PLANNING

DGC's shutdown and turnaround experts meet and work with your project team and the construction contractors that you select to agree on the plan and optimize the schedule.

At the completion of the planning phase, you and your contractors will have a comprehensive understanding of the agreed shutdown plan as well as all necessary documents to manage and execute the project.



**SCOPING & WORK -
BREAKDOWN STRUCTURE (WBS)
SHUTDOWN METHODOLOGY**



SHUTDOWN SCHEDULE



**ACTIVITY WORK PLANS
SAFETY MANAGEMENT PLAN**



RESOURCE SCHEDULING



QUALITY MANAGEMENT PLAN



**LOGISTICS, RIGGING &
MATERIALS HANDLING PLAN**



RISK MANAGEMENT PLAN



SHUTDOWN EXECUTION MANAGEMENT

Acting as your shutdown manager, we can also coordinate all the resources, materials, and equipment needed to execute the project. Starting with a comprehensive shutdown plan, our shutdown management teams can ensure that your shutdown is conducted on time and on budget, allowing you to return to full production with an asset that delivers according to plan.

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SCHEDULE MANAGEMENT

SCOPE MANAGEMENT & CO-ORDINATION

SAFETY MANAGEMENT

QUALITY MANAGEMENT

**LOGISTICS, RIGGING
& MATERIALS MANAGEMENT**

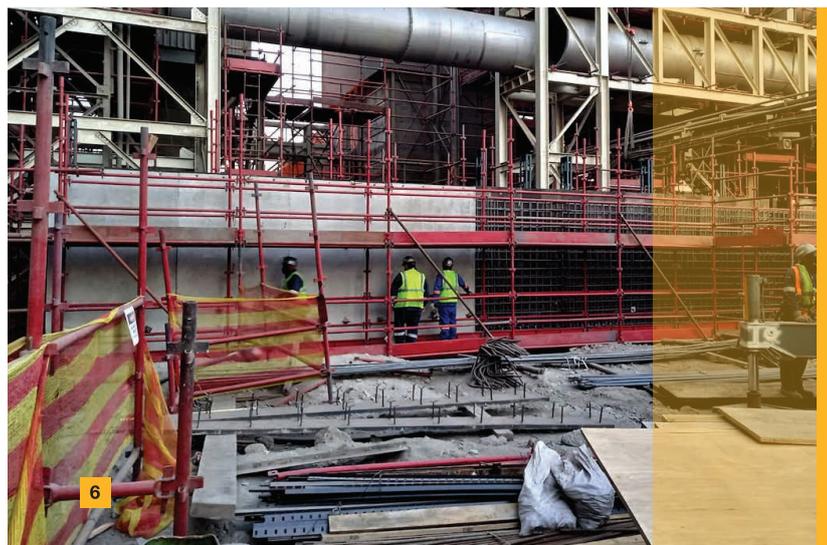
REPORTING

WORK EXECUTION



BENEFITS

- Ensuring workforce safety
- Effective communication to all stakeholders
- Managing project scope creep
- Cost management and control
- Schedule optimization
- Better allocation of resources
- Optimization of plant utilisation





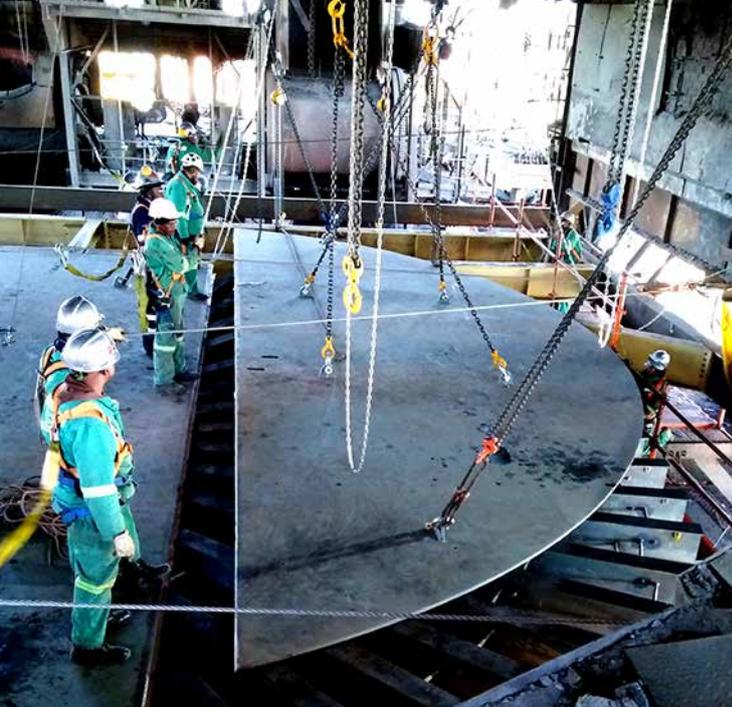
PROJECTS

FURNACE REBUILD PROJECTS

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

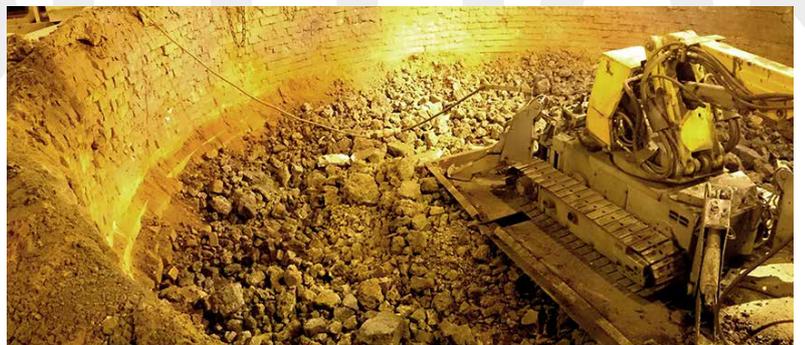


FURNACE DEMOLITION

DGC AFRICA 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 blue-chip 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 AFRICA utilizes equipment and methodologies which are highly innovative, modern and customised for improved and safer access to challenging sites.





THE COMPANY HAS MODERN, ADVANCED AND PURPOSE-DESIGNED MECHANICAL DEMOLITION EQUIPMENT, CAPABLE OF MEETING THE CHALLENGES POSED BY LARGE, DEMANDING FURNACE DEMOLITION PROJECTS.

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



SPECIALIST & INNOVATIVE EQUIPMENT

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



REFRACTORORY

REFRACTORORY INSTALLATION

DGC AFRICA 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.

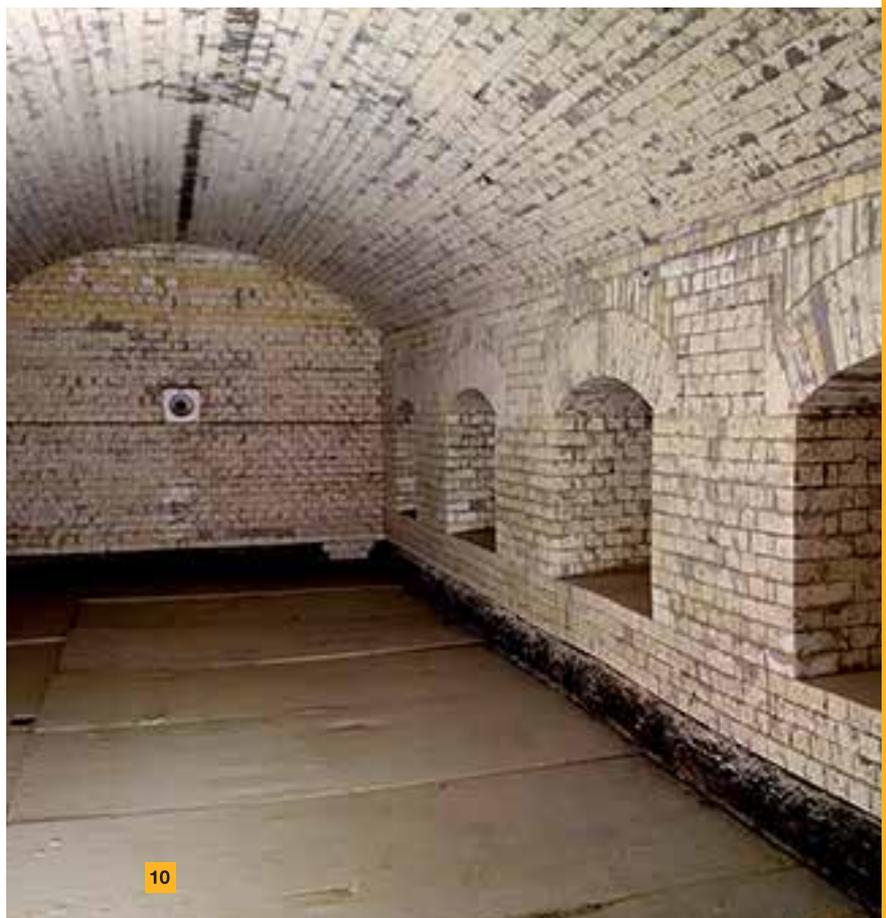
DGC AFRICA has carried out the installation of refractories on numerous initial construction and furnace rebuild projects throughout sub-Saharan including; South Africa, Botswana, Zimbabwe, Namibia, Mozambique, Zambia, Democratic Republic of Congo, Tanzania, Malawi, Gabon, Nigeria, Niger, Senegal, and 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 REFRACTORORY 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 REFRACTORORY INSTALLATION AND DEMOLITION WORKS THROUGHOUT THE SERVICE LIFE OF THE FURNACE.





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