

THE LEADING ASSET INTEGRITY MANAGEMENT
& INDUSTRIAL SOLUTIONS COMPANY



DICKINSON INDUSTRIES
CORPORATE PROFILE





DICKINSON INDUSTRIES' MISSION IS TO

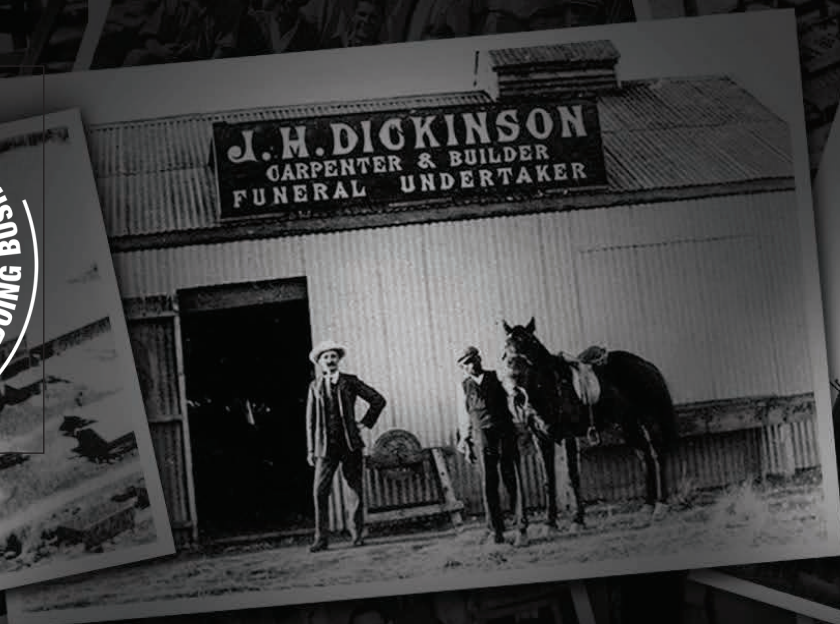
FOCUS ON HELPING OUR INDUSTRIAL CUSTOMERS
**OPTIMIZE THEIR MAINTENANCE COSTS
& IMPROVE PLANT PERFORMANCE,**
BY PROVIDING INNOVATIVE SOLUTIONS
TOGETHER WITH OUR MARKET-LEADING TECHNOLOGIES
TO ENHANCE THE SERVICE LIFE
OF THEIR OPERATING ASSETS.

PURPOSE

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



Dickinson Industries 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.



Dickinson Industries 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.



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

VALUES



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.

DICKINSON INDUSTRIES' STRATEGIC FOCUS

Aligning with the Group's mission, each of the Dickinson Industries' range of Industrial Products and Services are specially developed and customised to help our industrial customers optimize their maintenance costs and improve plant performance, by providing innovative solutions together with our market-leading technologies to enhance the service life of their operating assets.

THE COMPANY'S RANGE OF PRODUCTS AND SERVICES INCLUDE:

INDUSTRIAL PRODUCTS

Refractory Anchors
Refractory Armour Systems
Stud Welding Systems
CD Pins & Clips
Wear & Spike Studs
Shear Stud Connectors

PRECAST REFRACTORY SHAPES

FURNACE INSPECTION SERVICES

SILO CLEANING SERVICES

WEAR & ABRASION PROTECTION SOLUTIONS

FIBRE-REINFORCED PLASTIC SYSTEMS

COST

Ability to control operational costs and deliver within budget



FLEXIBILITY

Ability to react to new requests and requirements



SPEED

Ability to complete work quickly and in accordance with expectations



QUALITY

Ability to deliver work to expected quality standards



INNOVATION

Ability to develop new and creative solutions that fulfil business needs

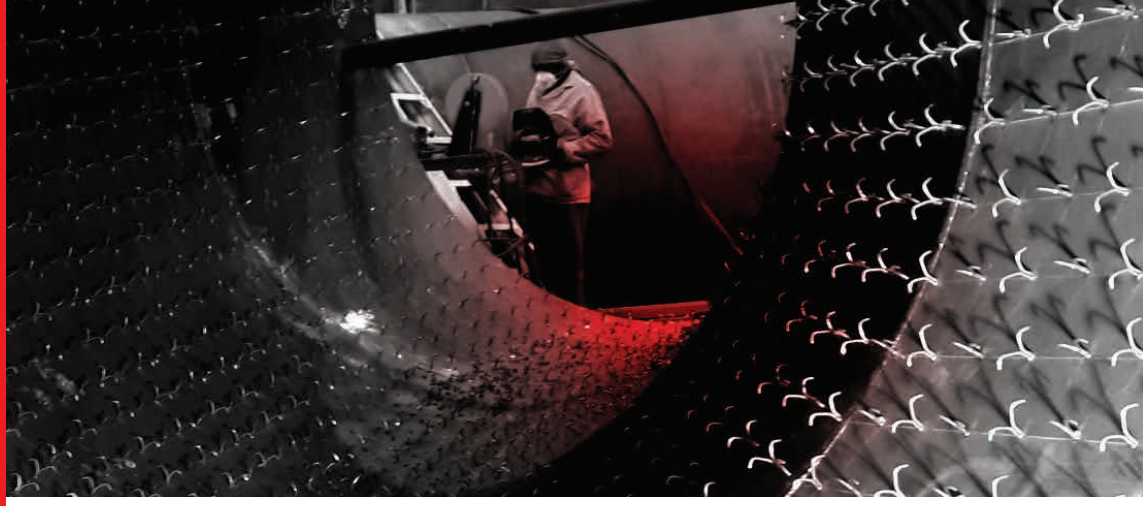


DEPENDABILITY

Ability to deliver projects and outcomes according to expectations



DGC 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



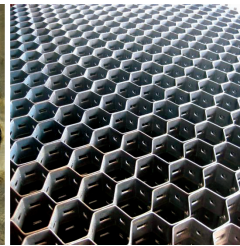
STUD WELDING SYSTEMS



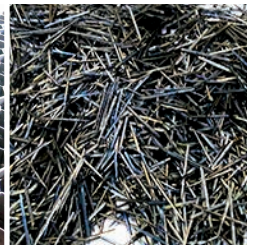
SHEAR CONNECTOR STUDS



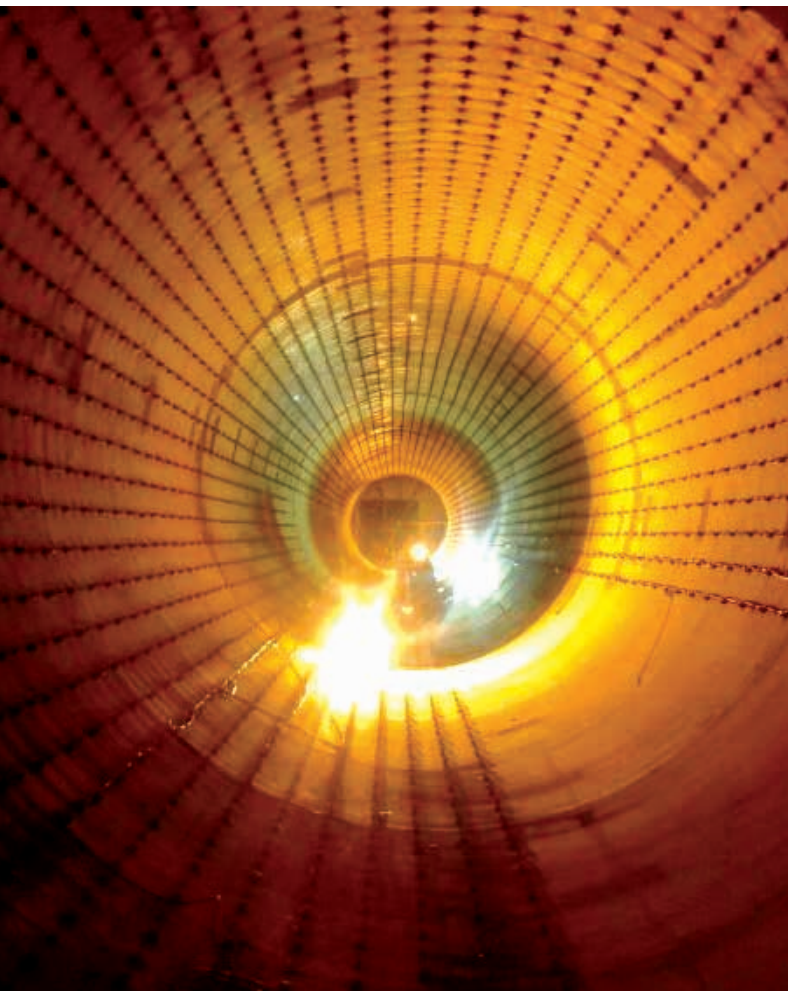
WEAR STUDS & SPIKE STUDS



HEX METAL (HEX MESH)



STAINLESS STEEL FIBRES



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



PRECAST REFRACTORY SHAPES

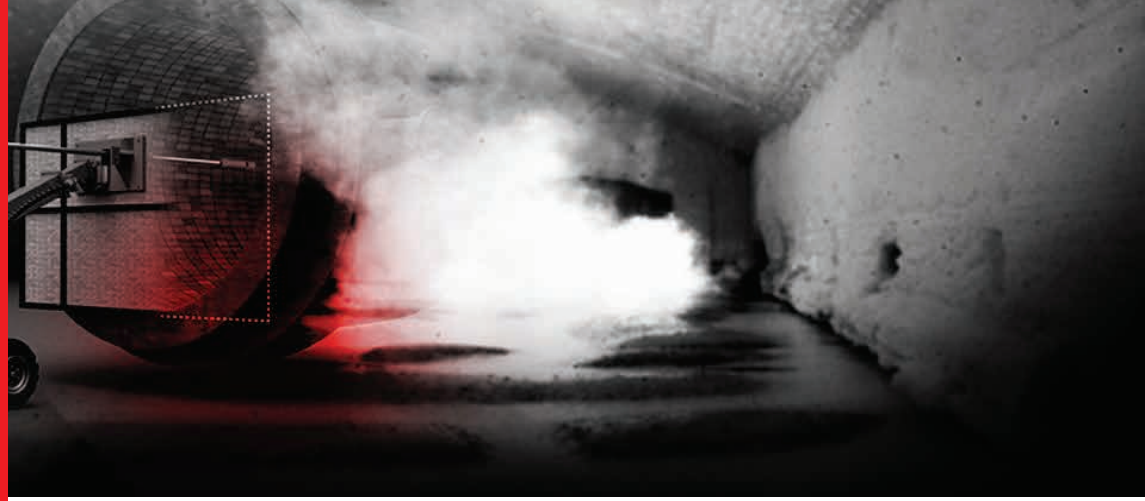
Specially designed precast refractory shapes are manufactured off-site under controlled conditions, dried out at our production facilities under stringent quality control measures, ensuring the manufacture of accurate moulds and final casting of special shapes to ensure an enhanced product service life.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

Furnace Applications:

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



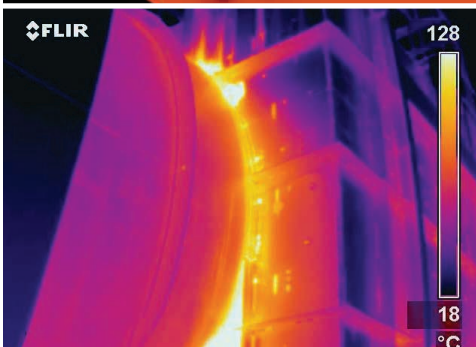
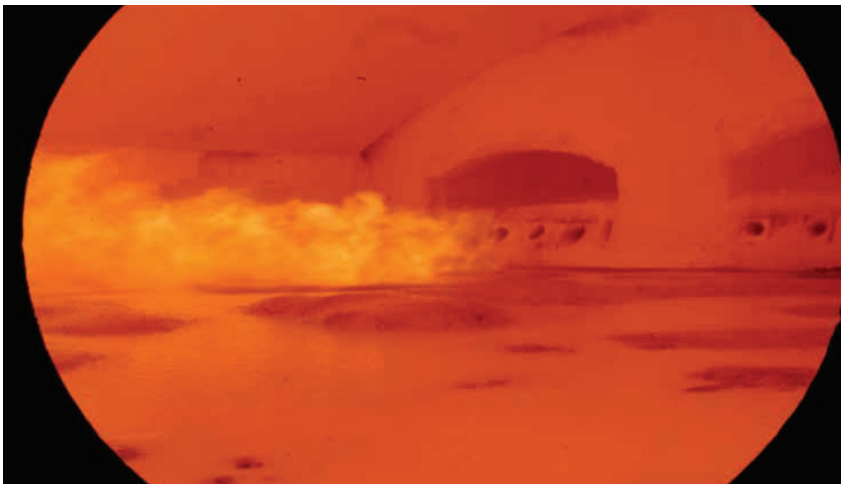
Dickinson Industries offers a comprehensive range of Furnace Inspection Services to the metals smelting, mineral processing, thermal energy and industrial furnace industries.



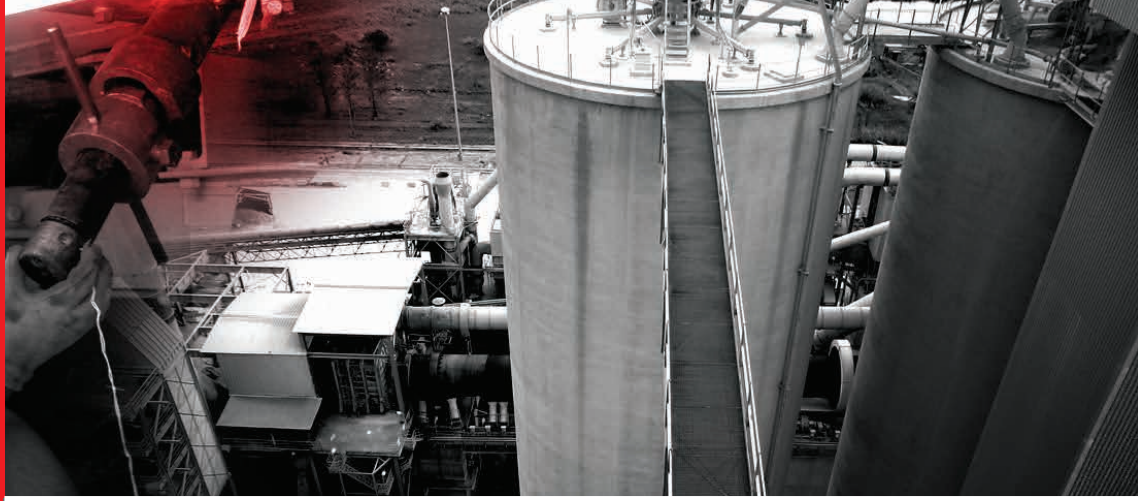
FURNACE INSPECTION SERVICES

Our Furnace Inspection Services are based on the technologies below:

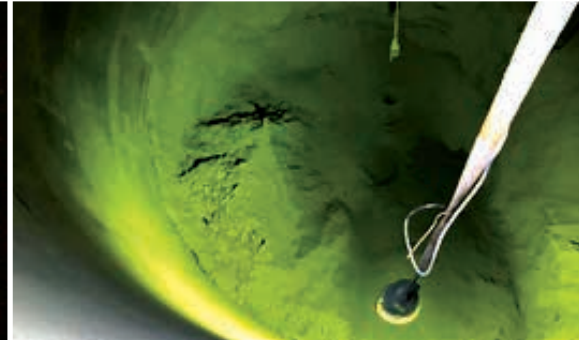
- **High-Temperature Endoscopy:** allows for real-time, remote visualization of the interior of a furnace during normal operations, enabling maintenance personnel to visually inspect and assess the state of refractories inside the furnace. Robust, purpose-designed endoscopy devices are capable of operating 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.



Dickinson Industries offers a highly specialized service for cleaning contaminated and clogged-up bulk storage containers in the manufacturing, mining and mineral processing industries.



SILO CLEANING SERVICES



These services involve the safe and efficient removal of compacted materials, are coupled with consulting services, the adoption of preventative maintenance procedures, and the 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.



Our main Silo Cleaning Technologies are described below:

CARDOX CO2 SYSTEM

Cardox Silo Cleaning Systems have a variety of different tubes for specific applications. The Cardox tubes are filled with liquid carbon dioxide - CO₂ (exactly the same as a fire extinguisher). When energized by the application of a small electrical charge, the chemical heater instantly converts the liquid carbon dioxide to a gas.

This conversion expands the CO₂ volume and builds up pressure inside the tube until it causes the rupture disc at the end of the tube to burst. This releases the CO₂ - now 600 times the original volume - through a special discharge nozzle to create a powerful heaving force, at pressures up to 40,000 psi (3,000 bar). All this takes place in milliseconds!

This instantaneous build-up in pressure reaches the yielding pressure of the rupture (shear) disc which bursts, releasing a heaving mass of carbon dioxide which breaks the surrounding material.

SILOWHIP SYSTEM

Our SiloWhip Systems are powered by hydraulics and are controlled from the top of a silo; on the outside. The system is composed of a whipping head, boom telescope, hose, and other accessories.

The whipping head is suspended inside the silo and used to efficiently clear material build-ups using the pneumatic or hydraulic driven rotary cutter. The system has 360-degree rotation capabilities and an operating depth of up to 50 meters. A range of cutters is used depending on the type of material a silo contains. Cleared material simply falls to the base of the silo for extraction.

DGC's comprehensive range of industrial linings includes international leaders, Kalenborn International's wear protection solutions.



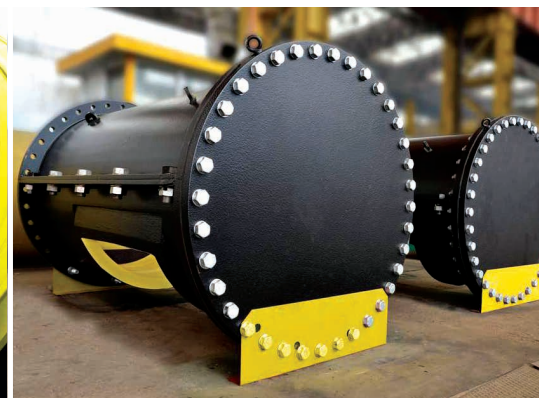
WEAR & ABRASION PROTECTION SOLUTIONS

Kalenborn established 100 years ago, provides protection for the environmental and heavy industries with wear-resistant linings which have excellent abrasion and impact resistance.

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.

We rely on a high-quality range of mineral, ceramic and metallic materials as well as compounds and plastics. That variety enables us to create lining systems that are perfectly matched to each specific application. Working closely together with our customers is particularly important to us. In close collaboration, we develop concepts for sustainable solutions and then realize them – both in our own works and on-site at the facilities of the customer.

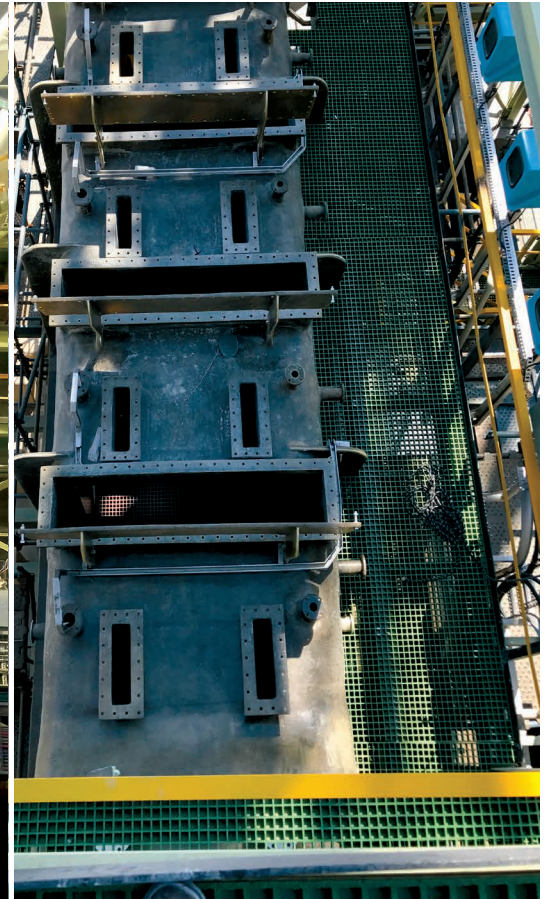


DGC manufacturers the complete range of FRP products including; piping & spooling, tanks & vessels, ducting, scrubbers, stacks & chimney liners as well as specialty and custom engineered products.



FIBRE-REINFORCED PLASTIC SYSTEMS

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 structural integrity. Depending on the resin type and the glass to resin type and the glass to resin ratio the material properties for individual structural layers can be optimized for corrosion resistance and physical strength.





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