



# Online Leak Sealing



## YOUR CHALLENGES

Process leaks, including fugitive emissions, are a major concern for all operating facilities, as they can result in wasteful and expensive releases, environmental issues and, in extreme cases, catastrophic incidents.

Knowing how to engineer a robust solution to stop a leak in a timely manner so that your plant, process unit or equipment item can continue operating until its next planned maintenance event, presents a significant opportunity that can deliver substantial savings.

## OUR ONLINE LEAK SEALING

We provide a full range of online leak sealing solutions, and can recommend the most suitable application for your specific needs. Our comprehensive approach covering emergency response, safety management, on-site

assessments, engineering, fabrication and installation puts a stop to all leaks, whilst allowing you to operate as normal, and delivers significant savings in the process.

## HOW WE SUPPORT YOUR BUSINESS

CR3 is available 24/7 to stop your leak, usually within 72 hours and without impacting production with our comprehensive online leak sealing service.

After our emergency response teams quickly assess the situation, we design, fabricate and install the appropriate solution online to arrest the leak while you continue to operate normally until a convenient time in the future when you can either properly repair or replace the leaking item.

Where practical to do so, we use Diamond wrapping to restore dented, gouged, corroded or eroded pipelines to their MAOP (Maximum Allowable Operating Pressure) and prevent them from shutting down.

## THE CR3 DIFFERENCE

CR3's large in-house team of highly trained technicians is subject to regular audits and a stringent safety passport scheme. We invest heavily in the latest equipment and SMART systems to maintain our reputation as the region's leading one-stop provider of specialised maintenance services.

### Innovative techniques

Our Diamond wrap can be applied at temperatures of up to 288°C and used on all materials except high-density polyethylene (HDPE). Comprising of a solid epoxy primer, it ensures good bonding and its bi-directional woven carbon-fibre base makes it extremely strong. It is chemically and pressure-resistant and requires a pre-engineering assessment of the affected area to compile information such as substrate material, wall thickness and operating temperatures and pressures.

### Exceptional service

For repairs that require surfaces to be modified (e.g. when countering heavy pitting or irregular shapes) a high modulus filler can be applied. These elements all combine to form a composite system that is stronger than steel and ensures a long service life.

In addition, we use special software to determine the number of wraps required for each repair and typically offer a warranty of up to five years, depending on the project requirements to restore the integrity of the pipe.

### Outstanding QHSE performance

Our safety performance is enhanced by continually investing in structured training programs, knowledge sharing, new processes and modern, automated equipment that increases productivity, while minimising the risk of injury. Our commitment to constant improvement is embedded in our management systems, which are certified to international standards including ISO 9001, ISO 14001 and ISO 45001.

## YOUR BUSINESS BENEFITS

**Emergency response teams** – available 24/7 to stop your leak with our range of online solutions so you can continue operating until your next planned maintenance event.

**Save time and money** – with our comprehensive approach covering emergency response, safety management, on-site assessments, engineering, fabrication and installation to stop all leaks, whilst allowing you to operate as normal, delivering significant savings in the process.

**Ensure high safety standards** – by working with a partner that is committed to delivering the highest safety standards in the industry. We offer the latest equipment, tools and systems, operating under a single project management team to ensure optimal safety.

CR3 is a leading provider of energy engineering solutions. Established in 1991, we provide specialised maintenance, plant upgrade, revamp and engineering services with a sharp focus on **Energy Efficiency, Engineering Excellence, and Sustainable Solutions.**

**To learn more, visit [CR3.Group](#)**

## Unrivalled experience

In collaboration with our technical partner, Colt Group, who are one of the leading online leak sealing providers around and certify all our leak sealing technicians, we are continually developing new products, equipment and methods to improve quality, schedule, and service life of our solutions.



## OUR SOLUTIONS

- 24/7 emergency response to provide technical support for any type of leak
- Detailed surveys to assess the situation and advise how best to stop the leak
- Fabrication of all clamp enclosures
- Complete installation service
- Online leak sealing
- Leak appraisal survey
- Full repair of leak or replacement of faulty equipment during next planned maintenance outage
- Engineering design and calculation packages for clamp enclosures
- Reinjection
- Pipeline wrapping
- Diamond wrapping
- Corrosion protection

## CR3 IN ACTION

### The challenge

A petrochemical plant had to stop a leak on an 80-inch gas/water line quickly, safely and without stopping the production of the facility.

### The solution

CR3 designed, fabricated and installed a mechanical clamp to stop the leak and Diamond-wrapped the affected area to guarantee the integrity of the pipe until the next Turnaround.

### The outcome

The job was executed safely and without incident and the plant stayed online. We reassured the operator that there would be no further issues for at least another 1.5 years.

## Leading one-stop provider of specialised maintenance services

CR3 supports your business with extensive contracting experience in the delivery of catered service packages, 'blind to blind' jobs and turnkey maintenance services during major shutdowns and turnarounds. Our business upholds a culture and track record of integrated management systems that are certified to multiple international standards.

## Our Solutions

We offer a comprehensive portfolio of maintenance services that are grouped into six business lines. Our experts deliver these services – onshore and offshore – on time and on budget.

Our complete 'blind to blind' solution ensures more streamlined and efficient projects, as we maintain direct, single-source control of all critical path elements. We cater to projects of widely varying scope and complexity, and can deliver multiple shutdowns concurrently.

### Related services:

- Static & Rotating Equipment Maintenance
- Industrial Scaffolding
- Mechanical Services
- Column Modifications & Repairs
- Total Heat Exchanger Maintenance
- Flare Tip Replacements & Repairs
- Cleaning & Decontamination Services
- Mercury Management Services
- Catalyst Handling Services
- Nitrogen Services
- Waste Handling
- Decommissioning Services
- Insulation Services
- Valve Maintenance
- Storage Tank Cleaning & Maintenance

Our experts meet your demands for shorter change-outs, leaner project teams and superior quality standards for all reactor types with end-to-end solutions that reduce downtime and increase profitability.

### Related services:

- Catalyst & Adsorbent Handling Services
- Tubular Reactor Services
- Dense Loading
- 'Blind to Blind' Mechanical Services
- Reactor Internals Replacement & Repairs
- Nitrogen Services
- Waste Handling

We clean and inspect virtually all plant vessels, columns, drums and piping systems, both onshore and offshore, with services that can be tailored to requirements.

### Related services:

- Pre-Commissioning & Commissioning Services
- Nitrogen Services
- Pipeline Cleaning (Chemical & Mechanical)
- Pipeline Flooding
- Pressure Testing
- Dewatering
- Drying
- Purging

Our investment in training, equipment and SMART systems combined with our focus on safety and rigorous planning, preparation and execution of work underpins our track record as a leading provider of mechanical & plant maintenance services.

### Related services:

- Static Equipment Maintenance
- Rotating Equipment Maintenance
- Specialist Cutting Services
- Online Leak Sealing
- Controlled Bolting
- Reactor Repairs & Maintenance
- Plant Change & Piping Modifications
- In-situ Flange Facing & Machining
- Industrial Scaffolding
- Insulation Services
- Valve Maintenance
- Continuous Plant Maintenance
- Storage Tank Cleaning & Maintenance

Our extensive portfolio of cleaning services sets the benchmark in terms of technical, environmental and safety standards.

### Related services:

- Chemical Cleaning Services
- Mercury Management Services
- Fin Fan Optimisation
- Hydro Jetting Services
- CR3 Decoking Technology (CDT)
- Decontamination Services
- Waste Handling

We deliver projects safely, on time and on budget by ensuring single-source control through our multi-disciplinary approach and project management capability.

### Related services:

- Process Revamps, Rejuvenations & Retrofits
- Construction & Constructability Reviews
- Engineering, Procurement & Commissioning Services
- Operations & Maintenance
- Dismantling, Demolishing & Removal of Equipment
- Fabrication of structural, Carbon Steels & Pipe Systems
- Fabrication of Stainless Steels & Special Alloys
- Installation of Large Equipment & Pipe Systems
- Welding
- Hot & Cold Cutting
- Scaffolding & Insulation



CR3 is a leading provider of energy engineering solutions. Established in 1991, we provide specialised maintenance, plant upgrade, revamp and engineering services with a sharp focus on **Energy** Efficiency, **Engineering** Excellence, and Sustainable **Solutions**.

### Contact us today to learn more

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