



Flare Maintenance



YOUR CHALLENGES

Flare systems play a vital role in protecting refineries and petrochemical facilities by enabling them to be depressurised in a safe and controlled manner following an upset or emergency.

Hence, making sure the flare system is well maintained and fully operational is a key priority for all operators, particularly with it being a last line of defence against a major incident.

OUR FLARE MAINTENANCE

We have extensive experience of providing complete flare system revamps and maintenance services onshore and offshore including construction, erection, inspection, cleaning, repairs, flare tip replacements, guy wire tensioning, dismantling and complete project management. Our combination of applying the latest equipment and multi-skilled technicians in a 'blind to blind' turnkey approach helps to minimise downtime and maximise returns.

HOW WE SUPPORT YOUR BUSINESS

In addition to having highly qualified rope access technicians (up to IRATA level 3), we provide drone inspections of flare systems and other inaccessible areas, like chimneys onshore and the airgap (between the underdeck and surface of the sea) on offshore platforms.

Drone inspections enhance safety by eliminating the risk to personnel normally tasked with such jobs and save significant time, resources and cost.

We have specialist structural engineering expertise for designing and certifying the latest lifting solutions. We can also work very close to online flares by using Hydro-shield technology, which provides a curtain of water, in the event of a live relieving case, to shield our technicians from the live flare and provide sufficient protection for them to retreat a safe distance before the flare lights.

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 equipment and techniques

We continually invest in the latest tools and techniques to ensure we deliver optimal safety, quality and schedule efficiency.

Our Hydro-shield technology, which provides a curtain of water, in the event of a live relieving case, to shield our technicians from the live flare and provide sufficient protection for them to retreat a safe distance before the flare lights.

Exceptional service

We minimise time and cost by having a multi-skilled workforce and a one-team approach that covers safety management, cleaning, inspection, structural engineering, heavy lifting, plus any repairs and all mechanical work.

Our strategic partnerships boost our in-house capabilities, enabling us to provide turnkey solutions that are fully integrated for any project. Together we can provide specialist lifting solutions for offshore flare tip replacements that avoid the use of helicopters and crane vessels, saving significant time and cost.

Outstanding QHSE performance

Our quality and safety track record is maintained through structured training programmes, knowledge sharing, new processes and automated equipment that increases productivity while minimising the risk of injury.

Drone inspections enhance safety by eliminating the risk to personnel normally tasked with such jobs and save significant time, resources and cost.

Unrivalled experience

To date, we have successfully performed numerous flare revamp and maintenance projects, both onshore and offshore, across the region and are uniquely positioned as one of the few companies capable of delivering multiple flare projects at the same time.



OUR SOLUTIONS

- Flare tip replacement (onshore and offshore)
- Flare tip and ignition system maintenance and inspection
- Flare stack and riser construction, maintenance and inspection
- Flare derrick structure construction, maintenance and inspection
- Flare system revamps
- Heavy and special lifting equipment and associated structural engineering services (including winches, sheaves, crane block, gantry, etc.)
- Guy wire replacement, tensioning, maintenance and inspection
- Online flare maintenance (with Hydro-shield technology)

YOUR BUSINESS BENEFITS

Benefit from a holistic approach – enabling us to provide turnkey solutions that are fully integrated for any project, of any size and make use of the most advanced technology available.

Save time and money – by having a multi-skilled workforce and a one-team approach that covers safety management, cleaning, inspection, structural engineering, heavy lifting, plus any repairs and all mechanical work.

Enhanced safety and quality – by continually investing in the latest tools and techniques to ensure we deliver optimal safety, quality and schedule efficiency.

CR3 IN ACTION

The challenge

A gas separation plant in SE Asia needed to perform the inspection and maintenance of a 115 m high demountable flare comprising of six sections weighing 15 tons each.

The solution

In collaboration with Conbit, we provided special lifting equipment including hook blocks and sheaves to overhaul and load test the existing derrick 3 months before the shutdown to prove its integrity.

The outcome

Using the existing derrick and winch system saved significant cost and time. The Client was able to flare again within regulatory stipulations.

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](#)

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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