



YOUR RELIABLE PARTNER

## Pre-Commissioning Services



### YOUR CHALLENGES

Prior to taking any reactor, vessel or piping system into commission, owners and operators of refineries and other processing plants need assurance of safety, quality and reliability. An improperly manufactured or installed pipeline can pose a significant risk to your company, its people and the environment. The best way to establish and maintain prime operational capabilities is to properly prepare and quality assure all essential equipment at the pre-commissioning stage.

### OUR PRE-COMMISSIONING SERVICES

CR Asia offers a comprehensive portfolio of properly engineered, high quality pre-commissioning and commissioning services. Operating under a single project management team to ensure optimal safety, quality and schedule efficiency, we support our clients with detailed

planning, coordination and execution for various scopes of construction completion, pre-commissioning and commissioning activities such as pressure testing, water flushing, air blowing and drying. In addition, our highly experienced, multidisciplinary experts undertake many specialist activities such as chemical cleaning, lube oil flushing, hydro jetting, pneumatic testing, helium / nitrogen leak testing, inspections and other associated actions within the construction environment.

### HOW WE SUPPORT YOUR BUSINESS

Engaging us as your single-source, all-inclusive solutions provider gives you confidence that our highly trained experts are applying their decades of experience to optimise your facility's performance. Our professional personnel take pride in delivering our full range of services to the highest industry standards.

## THE CR ASIA DIFFERENCE

CR Asia'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 processes

CR Asia does not compromise when it comes to investing in state-of-the-art tools and machinery. As part of our commitment to offering superior service to our clients, we use modern automated equipment that guarantees unrivalled quality, speed and safety in every project. Furthermore, our strategic partnerships augment our in-house offering, enabling us to provide holistic solutions that utilise the most advanced cleaning and maintenance technologies available.

### Exceptional QHSE performance

Safety is the central tenet of every pre-commissioning project we undertake. Our commitment to safety has led to the implementation of our own safety passport system, with all our technicians being accredited through a rigorous in-house training programme. You and your stakeholders can be assured that our work is not only timely and cost-efficient, but safe and reliable too.

### World-class experience

With decades of front-line multidisciplinary experience, CR Asia is uniquely capable of offering a one-stop solution for all your pre-commissioning needs. Our specialists are certified experts, with internationally recognised certifications that cover the detailed operation and maintenance of the units under their care.

## Unrivalled service

Over the years, we've nurtured a strong customer-focused culture that ensures on-time, on-budget delivery for all your planned and unplanned pre-commissioning, commissioning, maintenance and de-commissioning activities. Our commitment to service excellence is backed by our track record of integrated management systems that are certified to multiple international standards.



## OUR SERVICES

### Pre-commissioning of reactors and vessels

- Nitrogen purging of hydrocarbons
- Initial catalyst loading
- Flange management
- Column internals installation
- Cold cutting
- Bolt torqueing and tensioning
- Pneumatic testing
- Air blowing and drying

### Pre-commissioning pipeline cleaning

- Nitrogen / Helium Leak Testing (NHLT)
- Vacuum testing (inside to outside or outside to inside)

- Pressure testing
- Nitrogen preservation
- Hot oil flushing of critical oil piping systems
- Online pipeline maintenance pigging programmes
- Internal pipeline coating
- Pipeline mercury removal / decontamination programmes
- Pipeline descaling and de-rusting
- Pipeline gauging
- Pipeline intelligent pigging
- Pipeline abandonment programmes (special programmes for mercury contamination)
- Special oxygen piping systems

## YOUR BUSINESS BENEFITS

**Benefit from a one-stop solution** – that eliminates the need to manage multiple contractors on-site over the course of your project.

**Ensure high safety standards** – by choosing a partner with a proven commitment to maintaining a safer workplace in both onshore and offshore environments.

**Save time and money** – with a single contractor that supports numerous activities and reduces costs by utilising multi-skilled personnel to perform the full range of jobs you need done.

## CR ASIA IN ACTION

### The challenge

An offshore fabrication company needed a specialist contractor to perform the pre-commissioning of a new subsea pipeline system.

### The solution

CR Asia was chosen to perform the pre-commissioning due to our dedicated commitment to safety. Upon appointment, CR Asia proceeded to perform full pre-commissioning operations, coordinating and supervising the project throughout.

### The outcome

The pre-commissioning process was completed safely and efficiently, with all relevant risks being identified and dealt with and all tasks completed according to schedule.

## CR ASIA – YOUR RELIABLE PARTNER

CR Asia is the leading provider of highly specialised pre-commissioning and maintenance services to the Oil, Gas, Chemical, Power and other heavy industries throughout Asia. As your reliable partner, we provide the safest and most efficient solutions to the maintenance, repair and overhaul challenges facing your business. **To learn more, visit [www.crasia.net](http://www.crasia.net)**

# Your Reliable Partner

## Asia's leading one-stop provider of specialised maintenance services

CR Asia 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 Services

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.

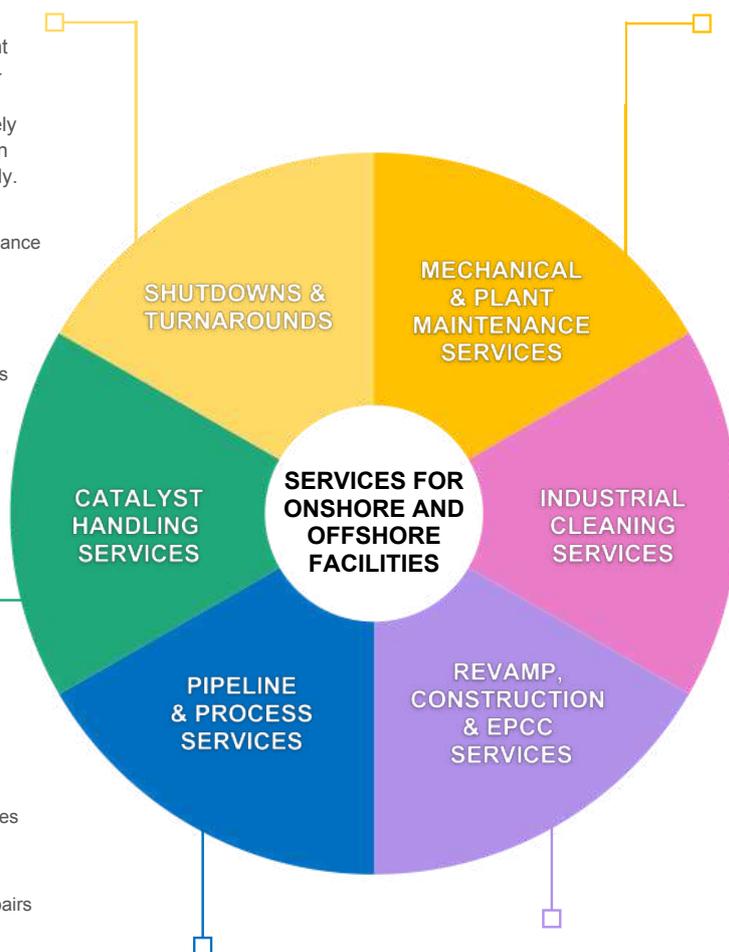
### Related services:

- 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
- CR Asia 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

## Our Business

# 30



# 4



# 4000+



## Our Partners

CR Asia has established long-term alliances with a number of key strategic partners. This collaborative approach ensures our customers always benefit from having access to the most appropriate tools and technologies on any given project. We recognise our industry is constantly evolving. That's why we are continuously looking to expand our network of strategic alliance partners.



## CR Asia - Your Reliable Partner

CR Asia is the leading provider of highly specialised pre-commissioning and comprehensive maintenance services to the Oil, Gas, Chemical, Power and other heavy industries throughout Asia. As your reliable partner, we provide the safest and most efficient solutions to the maintenance, repair and overhaul challenges facing your business.

### Contact us today to learn more

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