CR3

SUSTAINABLE WATER
SOLUTIONS

SUSTAINABLE WATER SOLUTIONS

CHALLENGES

Significant volumes of contaminated water are generated during the mechanical cleaning of process tubing and equipment. In today's world where water conservation is paramount, our innovative treatment and recycling technology offers a more environmentally friendly alternative to conventional methods that rely on a continuous supply of water.

APPLICATION AREAS

- Catalyst Handling
- Decoking
- Decontamination Services
- Descaling
- High-Pressure Water Jetting
- Tank Cleaning

WATER TREATMENT SYSTEMS

CR3 has attained an exceptional level of technical expertise in effluent treatment recycling, stemming from the diverse cleaning operations we have completed across many industrial sectors.

Our commitment to technical excellence has positioned CR3 as an industry leader in this field, ensuring that we continue to provide innovative and cost-effective solutions for the complex challenges of water effluent treatment.

In contrast to traditional techniques, all the wastewater is securely contained for safe disposal and analysis while minimising chemical use. CR3's custom-designed filter units efficiently recycle all the water, this seamless integration of our cutting-edge technology with our ongoing industrial operations, such as high-pressure water jetting, catalyst removal and decoking, yields substantial cost advantages for our clients.

Effluent treatment recycling is a valuable strategy for industries to reduce operating costs, increase efficiency, protect valuable equipment and reduce their environmental footprint; however, it requires careful planning, investment, and ongoing management to be successful.

The CR3 wastewater operations team has successfully demonstrated the effectiveness of our treatment technology over the past four years for numerous clients in various locations, creating tailored solutions to meet each unique wastewater situation.

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.

KEY BENEFITS

WATER CONSERVATION

Recycling effluent reduces the demand for freshwater sources, helping conserve this valuable resource.

ENVIRONMENTAL PROTECTION

Treating and recycling effluent minimises pollution and ecological harm from untreated or poorly treated wastewater discharge.

COST SAVINGS

Recycling effluent cuts costs by reducing the need to purchase freshwater and wastewater disposal expenses.

REGULATORY COMPLIANCE

Many environmental regulations and permits require industries to treat their wastewater before discharge. Recycling can help meet these requirements.

SUSTAINABLE PRACTICES

Effluent treatment recycling is a sustainable practice that aligns with environmentally responsible business operations.

REDUCED ENERGY CONSUMPTION

In some cases, recycling effluent can be more energy-efficient than treating freshwater, as less energy is required to treat water to a lower quality for non-potable uses.

CR3

CASE STUDY

CHALLENGE

A refinery in Southeast Asia needed to replace the catalyst in their RDS reactors to regain process efficiencies.

Conventional wet dumping techniques for removing this fused catalyst results in large amounts of wastewater, leading to treatment and disposal issues.

The client required a more sophisticated wet dumping solution that reduced downtime, minimised the amount of wastewater generated and could recover and recycle the water used.

SOLUTION

CR3 applied their commercially proven Eco-Hydrodrilling technique, that combines drilling and hydro-blasting technology, to remove over 90% of the fused catalyst.

CR3 provided a dewatering and handling system to drain and package the spent catalyst in suitable containers for metals recovery and disposal.

The dirty water was treated and recycled to minimise the wastewater generated.

OUTCOME

The reactors were unloaded significantly faster compared to conventional wet and dry methods.

Due to CR3's advanced treatment and filtering system the amount of wastewater generated was reduced by over 85% compared to conventional wet dumping.

CR3.GROUP

ENERGY | ENGINEERING | SOLUTIONS