

Client: South American Refinery
Year: 2021
Activity: Hydrocracker Full Unit Vapour Phase V-Purge™



Project Highlights

Full unit decontamination

Battery limit to Battery limit

Integrated engineering to **minimise schedule**

8-12 hours gas free

0% LEL, 0ppm H₂S, 0ppm Benzene

All pyrophorics eliminated

No off-site **effluent treatment**

The Challenge

A refinery in South America was planning their first shutdown of the Hydrocracker. They sought ProDecon's expertise to deliver the full unit decontamination safely and efficiently.

The Solution

ProDecon® integrated into the refinery operations team early in the planning phase to engineer and sequence the full decontamination procedure. The engineering team provided valuable expertise to maximise efficiency in the de-inventory and decontamination of the entire unit, designing a temporary steam header especially to accelerate the schedule.

The unit was fully decontaminated from battery limit to battery limit, including 10 columns, 7 vessels, 28 heat exchangers, fin fans and all piping. To minimise the refinery turnaround schedule, ProDecon® performed a vapour phase decontamination using its V-Purge™ chemistry.

The Results

Once the equipment was opened for inspection the client was satisfied by the high standards of cleaning that were achieved in such a short period of time. Partnering with ProDecon® significantly enhanced the turnaround and improved operations safety.

Decontamination Timeline

Using our fleet of decontamination equipment mobilised from the UK, ProDecon® were able to undertake the decontamination of the full unit simultaneously. The V-Purge™ injection on each circuit, lasted 8-12 hours on average and the complete decontamination including system warm up, chemical injection and system venting was completed within 24 hours for each circuit.

The total decontamination timeline lasted approx. 60 hours driven by the release schedule of the high pressure systems. ProDecon® had the equipment, expertise and resources readily available to complete the full decontamination in parallel adding further time savings had the release schedule been accelerated.

ProDecon's own steam sampling method, incorporating complex field-testing analysis was used to track the decontamination process and determine the end point as early as possible, based on results not time.

