Reliability Project Case Study

FCC Regenerator Air Grid Repairs

Designing a mechanically robust nozzle configuration with no operational downtime

During a Client's Pre-Turnaround planning activities on a Fluid Catalytic Cracking unit, historical trends indicated that there would be scope for refractory and nozzle repairs on the Regenerator air grid. Anticipating the volume of repairs and operation of the unit, Brindley engineers integrated with the Client team to design a mechanically robust nozzle configuration, with no operational downtime. We obtained quotes from different suppliers to procure the nozzles prior to the turnaround event. Installation of the nozzles occurred during the planned outage, and the Brindley Engineering team was on-site providing technical guidance for installation and inspection during the process.

BE the Solution

Working with a fully integrated team, Brindley Engineering was able to facilitate a reliable nozzle design that is capable of withstanding previously seen damage.

Our Challenges

Working on a compressed planning and design window, combined with resolving several technical issues related to material compatibilities and refractory selection, we knew it would be a race against the clock.

BE the Result

The intended replacement nozzles were installed as designed. Additional discovery work during the outage was partially mitigated thanks to procurement provisioning spearheaded by the Brindley Engineering team during the planning phases. The resultant modifications cost-effectively extend the mean time before failure of the nozzles.

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