Fluid Catalytic Cracking

KBR FLUIDIZED CATALYTIC CRACKING

KBR has a tremendous depth of knowledge to bring to your new, grassroots FCC. We designed some of the first VGO and Resid crackers and continue to provide new designs to get the last drop of value from your heavy feedstocks. KBR's Orthoflow™ design has gone through several generations, but the basic configuration has remained the same. The Orthoflow arrangement has proven itself over the years to provide excellent reliability and operational performance. In recent years, KBR has extended the catalytic cracker reaction system to increase propylene production using the Maxofin™ riser. We have used our knowledge of the reaction system to process non-traditional feedstocks, like naphtha and bio-feeds.

MORE THAN 70 YEARS OF PROVEN EXPERIENCE

KBR FCC revamps prepared consistently deliver improved process performance, flexibility to process difficult feedstocks, increased capacity, improved yields, and reduced power usage.

BENEFITS

When you need increased capacity, better yields or more reliable operation, experience counts. Our suite of technology features will help you achieve your objectives:

- Increase conversion with ATOMAX™ feed injectors
- Reduce dry gas with Closed Cyclone Riser Termination
- Recover valuable products and reduce stripping steam use with KBR's proprietary packed stripper design
- Improve regeneration with Self Aerating Spent Catalyst Distributor
- Improve gasoline yield and octane with Riser quench system
- Protect your expander with CycloFines™ Tertiary Separator System
- Reduce maintenance with advanced regeneration air distributor
- Limit emissions with low NOx Regenerator configuration
- Process cheaper feedstock with dense phase downflow Catalyst Cooler
- Better Regenerator performance with REGENMAX™ baffle system
- KBR's FCC technology can be applied to help achieve the objective of reducing CO_2 from FCC operations

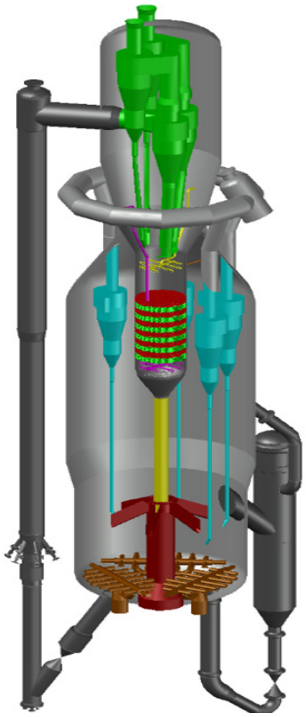
FCC REVAMP

Each FCC revamp presents unique challenges. There are always multiple constraints and objectives, and they are often mutually exclusive. KBR's proven experience and technology features guarantee the most cost-effective upgrade to your unit. Our designs can help with environmental compliance, reduce maintenance issues, and extend run lengths.

ATOMAX™ injectors were developed after extensive lab testing and provide a very fine atomization of the feed. They have a low oil side pressure drop and produce a very evenly loaded flat fan spray. ATOMAX injectors often allow an increase in capacity and performance without requiring changes to the feed pumps or feed preheat system.

KBR designed Tertiary Separator Systems provide excellent power expander protection and can often be designed to meet stringent particulate emissions limits. We have retrofitted the CycloFines™ elements in many existing TSS vessels.

Installing KBR's Self Aerating Spent Catalyst Distributor and making any other necessary changes creates a counter-current like mode of operation in the Regenerator. This has been proven to reduce NOx production, improve catalyst regeneration and reduce catalyst deactivation.



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