



Fluid Catalytic Cracking

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Message from the Guest Editor

Fluid catalytic cracking is an important unit for residue conversion into more useful light fractions. The H:C ratio of the product is increased through rejecting carbon atoms from the feed. Unconventional oil, including heavy oil and bitumen, contribute large volumes of residue when processed through refineries, imposing high loads on upgrading units, including fluid catalytic cracking. Hence, there is a need for more effective upgrading units.

Alteration of the process design relates to catalyst arrangement. It may potentially lead to proposing slurry-type liquid phase reactions as potential substituents to the traditionally high temperature gaseous-phase fluid catalytic crackers. Proper residence times and reactor volumes should be kept in mind to enable new units to easily function within the existing refinery platform.

Coupling fluid catalytic cracking with other upgrading processes may give rise to new processes suited, in addition to refineries, to stand-alone operation. Stand-alone processes are effective for providing on-site partial upgrading, which is essential for achieving pumpable oil standards.

