

INNOVATION AND RESEARCH STRATEGY FOR A NEW HYDROCRACKING CATALYST

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ABSTRACT

Conventional hydrocracking is a well-known process designed to convert crude oil fractions boiling in the vacuum gas oil (VGO) range into transportation fuels such as diesel, jet fuel and naphtha, depending on the operator's objectives. While hydrocrackers have an excellent track record processing VGOs and lighter feedstocks, feedstocks heavier than VGO pose significant challenges resulting in diminished unit performance and processing efficiency.

Therefore, it has long been the objective of Saudi Aramco to enable its Riyadh Refinery hydrocracker to handle more demetallized oil (DMO) and much work has been carried out over the last few years to enhance this capability through process and catalyst modifications.

Saudi Aramco's R&DC and JGC C&C, a leading catalyst developer and manufacturer in Japan, have also collaborated to design and develop a catalyst system to enable the Riyadh Refinery hydrocracking unit to process a blend of VGO and DMO, targeting the extended cycle while increasing or maintaining distillate yields and quality.

The innovation and research strategy from idea creation to commercial deployment will be reviewed and presented.

Note to Organizers: Extended abstract is still been reviewed internally and will be submitted once approved.