

## PROCESS DESCRIPTION:

### **CRITERION\*** **Catalytic Reforming**

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In catalytic reforming, naphtha boiling range hydrocarbons are passed through three or more reactors in series in a hydrogen atmosphere at elevated temperature and modest pressure. The object of catalytic reforming is to increase the aromatic content of the naphtha boiling range stream. The high aromatic containing product is used as a high octane blending component in gasoline or is sent to an aromatics extraction unit. The extracted aromatics become the raw materials in petrochemical processes.

The choice of catalyst depends upon feedstock impurities, operating conditions and unit design. Catalysts promoted with only platinum find use in cyclic reformers and in the first reactor of semi-regenerative reformers. Catalysts promoted with equal quantities of platinum and rhenium, called bimetallic reforming catalysts, are used in semi-regenerative and cyclic reformers. These catalysts offer longer cycle length compared to the platinum only promoted catalysts, but they are more sulphur sensitive. Catalysts promoted with two to three times as much rhenium as platinum, known as skewed bimetallic reforming catalysts, are used primarily in low pressure semi-regenerative reformers. These catalysts offer longer cycle length than the equal metals loaded bimetallic reforming catalysts, when combined with a sulphur guard reactor ahead of the reformer. Low pressure cyclic reformers needing higher C5+ yields can consider the use of platinum and tin promoted reforming catalyst. The continuous catalyst regeneration reformers use a spherical catalyst promoted with platinum and tin.

#### **ADDITIONAL INFORMATION**

All catalyst information supplied by CRITERION is considered accurate but is furnished with the express understanding that the customer receiving such information shall make its own assessments to determine suitability of such information for customer's particular purpose. All purchases of catalyst from CRITERION are subject to CRITERION's standard terms and conditions of sale (including CRITERION's product warranties) set forth in a sales proposal, sales contract, order acknowledgement, and/or bill of lading.

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