INDALIN Technology for Production of Light Olefins & BTX

Background

INDALIN is a novel catalytic cracking process developed by IndianOil for upgradation of low value naphtha to very high yield of LPG/ Light Olefins such as ethylene, propylene, butylene, etc. and gasoline containing higher concentration of BTX. C4, Kerosene and gas oil range fractions can also be processed along with naphtha.

Catalytic Cracking (FCC) process. INDALIN plant consists of mainly two sections, (i) Reactor & regenerator system for carrying out the cracking reactions in presence of catalysts and regeneration of the deactivated catalyst and (ii) Main fractionator column and gas concentration section for separation of reactor effluent stream into various products.

Process Description

INDALIN process employs circulating fluidized bed reactor and regenerator system similar to conventional Fluid Catalytic Cracking (FCC) process. Catalyst of INDALIN is micro-spherical, fluidizable solid particles having definite particle size distribution. It comprises several active ingredients having varying crystalline and amorphous acid sites in different proportions depending on feed and operating objectives. The physical properties of the catalyst components are almost similar to conventional FCC catalysts.
**Salient Features**

- High severity cracking (ROT > 550°C, Cat/Oil > 15)
- Highly attractive propylene yield of more than 25 wt% of fresh feed
- Total light olefin yields > 45 wt%
- Gasoline rich in BTX (30-50 wt%)

**Advantages**

- Reactor-regenerator section is similar to the conventional FCC unit – no issue of scale up during commercialization
- Operability at wide range of severities to vary the yield ratio of light olefins to BTX depending on refiner’s objective
- Capable of handling feed stocks up to 95% TBP point of 400°C from different sources

**Our Back up Strengths**

- Proven experience in design, revamp, troubleshooting, optimization, etc. of process units employing circulating fluidized bed systems.
- Pilot plant data bank and evaluation facilities
- Facilities for characterization of Feed, product and catalyst
- Excellent technical support and troubleshooting expertise
- Operating experience of FCC / RFCC / INDMAX units

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