

50,000 TPY Linear Alkyl Benzene Plant for Sale

Capacity

50,000 tons per year

Product

Linear Alkyl Benzene (LAB)

By-products:

- Heavy Alkylate
- Hydrogen
- Polyaromatics

History

Built in 1989

Shut down in 1999

Process Technology

UOP PACOL

Major Equipment

- PACOL unit reactors
- Hydrogen compressors
- Paraffin / hydrogen furnace
- PACOL unit separator
- Benzene drying column
- Sedimentation tank
- HF alkylation reaction mixer
- Alkylation reactors
- HF regeneration column
- HF stripper column
- Benzene column
- Paraffin column
- Re-distillation column
- Benzene stripper column
- Rinsing system
- Neutralization vessel
- Scrubber



BRIEF PLANT DESCRIPTION

This complete Linear Alkyl Benzene (LAB) plant includes three process stages: (1) Dehydrogenation of normal paraffins (pacol process), (2) Detergent alkylation (HF alkylation process), (3) Neutralization. PACOL technology is process of selective dehydrogenation of linear paraffins having high purity into mono-olefins. Process is carried out in reactor with fixed catalyst bed, where catalyst contains platinum. Reaction is performed in a hydrogen free environment, on low pressure and moderately high temperatures. Detergent alkylation is the process in which alkylation of benzene and linear mono-olefins takes place in the presence of HF acid as a catalyst in order to produce linear alkyl benzene. Due to the specificity of the process and the use of HF acid as a catalyst, and a large recycle flow of paraffins and benzene, the alkylation is divided into two basic sections: acidic process and distillation. The neutralization stage is used for collection and neutralization of liquid and gas waste flows that contain traces of hydrofluoric acid. The waste flows are generated at the HF alkylation plant. Neutralization is made with lime solution.

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