Where energies make tomorrow

Badger

Catalyst Stabilization Technology

The Catalyst Stabilization Technology (CST) significantly extends styrene dehydro catalyst life, cost, downtime, and turnaround costs. Currently over 50% of the world's licensable styrene dehydro capacity utilizes this effective technology. CST can be used for a wide range of steam to hydrocarbon ratios and on many different styrene catalysts.

CST Vaporizer

CST Spray Nozzle

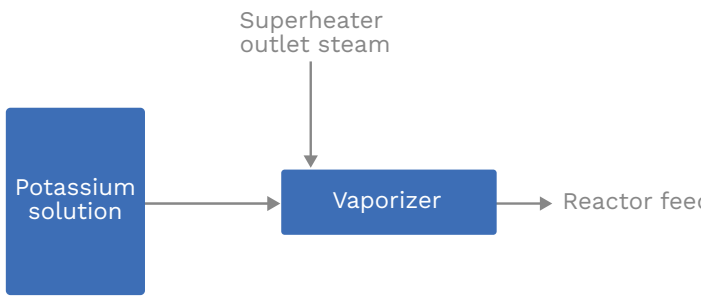
Process

Potassium solution is prepared in a small tank. The solution is sprayed into the patented Vaporizer and steam from the Steam Superheater is fed to the Vaporizer. Steam containing potassium vapor is then fed to the styrene reactors.

Concept

All commercial styrene dehydro catalysts contain potassium since it promotes the reaction to styrene and catalyzes the decoking of the active sites. Over time the potassium migrates to the cooler parts of the catalyst pellet and reactor bed, thus leaving the active sites and deactivating the catalyst. The CST technology replenishes the potassium in the styrene reactor bed.

CST process scheme



Commercial Experience

- CST has been in operation for over twenty (20) years.
- Thirteen (13) CST systems had their first startups in the last 10 years.Used successfully on a wide range of Steam/Hydrocarbon ratios and on many different commercially available styrene Dehydro catalysts.

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