

عنوان مقاله:

Reactors regeneration by chemical injection for environmental protection and energy saving

محل انتشار:

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خلاصه مقاله:

A naphtha hydrogen desulfurizer (HDS) upstream of the reformer was experiencing increasing pressure differential across the reactor bed. The HDS differential pressure potentially would cause a reduction in charge rates or unscheduled downtime. The cause for the pressure differential increase was believed to be from gum formation due to oxygen in-leakage at a storage tank. Deactivation of heterogeneous catalysts is a problem that causes loss of catalytic rate with time. This deactivation and regeneration of heterogeneous catalysts classifies deactivation by type (chemical, thermal, and mechanical) and by mechanism (poisoning, fouling, thermal degradation, vapor formation, vapor-solid and solid-solid reactions, and attrition/crushing). Petroleum refineries must pay attention to spent hydroprocessing catalysts particularly since they are hazardous toxic wastes and the environmental problem of spent hydroprocessing catalysts. Studies have been conducted with the aim of reduction and decreasing of differential pressure with saving energy and environmental challenges. Research has been carried out to understand the mechanisms under which coke formation occurs and search for solutions to reduce or eliminate coke deposition and significant efforts have been exerted over in developing coke-inhibiting methods and injection chemicals for decomposing gum , coke and impurities. Because several months of catalyst activity remained on the catalyst, the on-line cleaning allowed the refiner to wait for the scheduled turnaround for the HDS unit

کلمات کلیدی:

HDS unit, reduction, chemical injection, environment, energy saving

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