

عنوان مقاله:

Study of the deactivation condition of nickel catalyst used in Arak and Razi petrochemical complex

محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

In this article, the ways of deactivation of nickel catalyst used in Arak and Razi petrochemical complex were investigated. We can recognize using X-ray diffraction (XRD), Scanning Electron Microscope (SEM) and Energy Dispersive X-ray Spectroscopy (EDS) sintering of metallic nickel and surprisingly forming atomic nickel in both specimen, specially at bottom and middle of tower for Razi catalyst which seems we have chance to reuse it without any supplementary process for regenerate, although we reached to this outcome. Sulfur percentage in deactivated catalysts determined by sulfur analyzer show excess of sulfur content in them. In addition, we detected extra peaks in top of the tower for Razi sample by X-ray Spectroscopy that references to nickel sulfur phase. Also we can clearly recognize carbon deposition in both two catalysts

کلمات کلیدی:

Nickel catalyst; Steam reforming; Sintering; Sulfur poisoning; Coke formation

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