عنوان مقاله:

A new approach for optimization of Benzene Alkylation process for production of ethylbenzene

محل انتشار:

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خلاصه مقاله:

Alkylation processes can be done in both homogenous liquid or heterogeneous gas -liquid phases. Nowadays , about 24% of the total world production uses the homogenous liquid phase process for production of ethylbenzene. Ethylbenzene can be made by the alkylation of benzene with ethylene in the presence of a zeolite catalyst for production of styrene monomer. the current procedure exerts extra costs for fractionation of ethylbenzene from benzene. in this study a new approach is used to modify the benzene alkylation process for production of ethylbenzene . in the proposed procedure the amount of recycle and energy consumption are diminished. also injection locations together with the amount of ethylene which is injected to the catalyst beds in the ethylbenzene reators are optimized . furthermore, the process efficiency improved by adjusting the reactor temperature profile and the feed temperature regulation.

کلمات کلیدی:

optimization, simulation, alkylation process, etylbenzene