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Continuous Catalytic Hydrogenation and Purification for Synthesis Non-Phthalate

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Abstract : The scope of this article includes the production of 10,000 metric tons of non-phthalate per annum. The production process will include hydrogenation, separation, purification, and recycling of unprocessed feedstock. Based on experimental data, conversion and selectivity were chosen as reaction model parameters. The synthesis and separation processes of non-phthalate and phthalate were established by using Aspen Plus software. The article will be divided into six parts: estimation of physical properties, integration of production processes, purification case study, utility consumption, economic feasibility study and identification of bottlenecks. The purities of products was higher than 99.9 wt. %. Process parameters have important guiding significance to the commercialization of hydrogenation of phthalate.

Keywords : economic analysis, hydrogenation, non-phthalate, process simulation
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