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A Novel Temperature Swing Adsorption Process for Natural Gas Purification, Part II: Performance Assessment

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ABSTRACT

A novel temperature swing adsorption-based natural gas purification cycle using a monolith consisting of adsorbent-coated microchannels is investigated in this two-part study. In the accompanying paper, Part I, the development of a full process simulation model, and selection of geometric parameters and adsorbent and heat transfer fluid were reported. This paper, Part II, develops a comprehensive performance map of the process that involves determination of ranges of product purity, CH₄ recovery and process capacity, and energy requirements. The TSA-based

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