MBA Experiment Results and Analysis

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Global warming, referred as green house effect, has obtained global interest. One of the possible option to prevent it is CCS (Carbon Capture and Sequestration). However, introducing CCS to power plant is difficult beacause of the economy feasibility. The most famous capture process that almost approaches the commercial implementation is absorption process using MEA as solvent. However, In spite of many advantages such as many experience about the process, the regeneration energy of the process prevents the process from introducing the CCS technology. In order to realize CCS technology, low energy and high efficiency process is needed. We proposed novel process that uses adsorption and heat integration concept named as Moving Bed Adsorption (MBA) . After mathematical modeling and simulation, we performed the experiment. The device was installed with three beds and solid circulation part. Through the valve operation, It almost realized the moving bed. In this paper, we show the result of the experiments.