Computational Studies About Several CO_2 Removal Processes in GTL Process

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The synthetic gases are generated from NG by reforming reaction and produce the hydrocarbons and olefins by Fischer-Tropch synthetic reaction in the GTL process. Since the synthetic gases contain many acid gas, including carbon dioxide, it is required to remove the acid gases before F-T reaction. The CO2 removal process can be classified into two different types, i.e., physical solvent process and chemical solvent process. Physical solvent processes use organic solvents to absorb physically acid gas components rather than reacting each other chemically. In this work, Rectisol, Selexsol, Purisol processes for removing CO2 are selected to recover the 85 , 90%, and 95% carbon dioxide and are compared between the performance by result of simulation for the efficient utilization of processes.