

Modeling for Simulation of Adiabatic and Isothermal Methanation Process

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SNG production from coal is considered again due to the issues of prices and environment. SNG is rich in methane and can be used interchangeably with natural gas and distributed by the same means. Methanation is the reaction of carbon oxides with hydrogen to form methane. The methanation processes can occur in two ways. The main difference between the two methanation processes is associated with the reactor type, which is exactly what defines the working conditions. The equipment construction and its service also depend on the methanation reactor. By modeling adiabatic and isothermal methanation processes, more effective one is defined according to the process condition. The purpose of this study is to determine how the process and its efficiency are affected by changes the process conditions.