

Activities of heat-exchanger typed reactor in Fischer-Tropsch synthesis

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The ideal reactor for Fischer-Tropsch synthesis (FTS) must take the following characteristics: fixed bed catalyst, high catalyst efficiency due to short diffusion distances, highly efficient gas-liquid mass transfer, and isothermal operation at highest possible temperatures. In this study FTS reaction was carried out using the novel system of heat-exchanger typed reactor. The highly exothermic reaction heat generated in the FTS reaction on the cobalt active site was easily transferred to reactor wall and the transferred reaction heat was directly removed by the hot oil which circulated the wall side of the reactor in the novel system.