

Steam CO₂ reforming of methane over Ni-supported perovskite catalyst

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Steam CO₂ reforming of methane(MSCR) is a remarkable way to produce synthesis gas which can be feedstock for synthetic diesel, methanol, DME and so on. Recently the design of compact reformer has been hot issue for off-shore MeOH-FPSO & GTL-FPSO applications. In this work, perovskite(ABO₃) as support of catalyst was prepared by Citric method. Generally, A is the large ion in the dodecahedral hole and B is the transition metal ion. The Ni supported perovskite catalysts were prepared by impregnation characterized by various technology such as N₂ physisorption, CO chemisorption, TPR, XRD, SEM and TEM.

Aspen plus was used to estimate optimum experimental conditions for SCR reaction. The simulation results was compared with the experimental results under the tested conditions.