

### steam CO<sub>2</sub> reforming of methane over Ni-based perovskite type catalysts

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Steam CO<sub>2</sub> reforming of methane(SCR) is a remarkable way to produce synthesis gas which can be a feedstock for synthetic diesel, methanol, dimethyl ether(DME) and so on. Recently the design of compact reformer has been a hot issue for off-shore MeOH - FPSO & GTL-FPSO applications. So it is necessary to develop catalysts with high activity and stability. In this study, Sr doped perovskite type catalysts was prepared by Pechini method. Generally, A is rear earth or alkali metal ion, and B is the transition metal ion. The prepared perovskite type catalysts were characterized by various techniques such as N<sub>2</sub> physisorption, CO chemisorption, TPR, XRD, SEM and TEM. Commercial simulation package was used to estimate optimum experimental conditions for SCR reaction. The simulation results were compared with the experimental results under the tested conditions.