

Studies on the production of synthesis gas for
GTL-FPSO process applications

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Steam reforming(SR) and Steam CO₂ reforming(SCR) of methane for the production of syngas were investigated over Ni-based catalysts for GTL(Gas to Liquids) – FPSO (Floating Production Storage and Offloading) applications.

The Ni-based catalysts were prepared by impregnation and coprecipitation method. The catalysts before and after the reaction were characterized by N₂ physisorption, CO chemisorption, XRD, SEM and TEM techniques. The production of syngas by SCR with low pressure (1 bar) was simulated by Aspen plus for GTL-FPSO applications. In this work, the simulated results were compared with experimental results in a fixed bed SR and SCR system by controlling the operation conditions of temperature and feed molar ratios.