

Process Evaluation for methanol synthesis Process using Steam CO₂ Reforming with Stranded Gas

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A two step process design and simulation for the methanol synthesis from stranded gas were studied using commercial process simulator, PRO/II v9.1 and Aspen HYSYS v8.6. simulation studies were performed by using kinetics reactor and the stranded Gas with 10% CO₂. The operating condition for Steam-CO₂-Reforming(SCR) and Methanol synthesis respectively are with high pressure and Temperature, and methanol synthesis at 250°C with 50 bar. Recycle ratio for the process productivity, Product separation by distillation column were also studied.

Evaluation of methanol synthesis process are focused on mainly process volume, matched heat integration and economical factor. This evaluation and process behavior become the main measure of offshore plant design.