

## Coal Gasification Process Simulation and Optimization using ASPEN Plus

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The integrated gasification combined cycle(IGCC) is an electrical power generation system which offer efficient generation from coal. This study is based on a conceptual model of an IGCC plant including a gasify reactor (20 ton/day). Process Modeling is conducted using the ASPEN Plus process simulator. The layout of the model includes a pulverizing unit, a pressurized entrained flow gasify reactor, a series of purification gas unit, COS hydrolysis reactor, MDEA column.

One of purposes of this simulation is an effective approach for simulation gasification system. The effects of change of heat duty and pressure in the gasify reactor on the gasification process are studied by sensitivity analysis using developed model.