

2-2 DME Direct Synthesis Technology

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Dimethyl Ether(DME) is a clean and economical alternative fuel which can be produced from various resources as natural gas, coal or biomass through synthesis gas. The properties of DME are similar to those of LPG and it can be used for various fields; power generation fuel, transportation fuel, home fuel, etc.

An innovative process of direct synthesis of DME from synthesis gas has been developed. Newly developed catalyst in a slurry phase reactor gave a high conversion and high selectivity of DME. A large scale bench plant (5 tons/day) testing was successfully conducted and for further technical development to commercialization, pilot plant (100 tons/day) project has started in 2002 with the Japanese government support.

A feasibility study of DME production indicates that DME is competitive to conventional fuels.

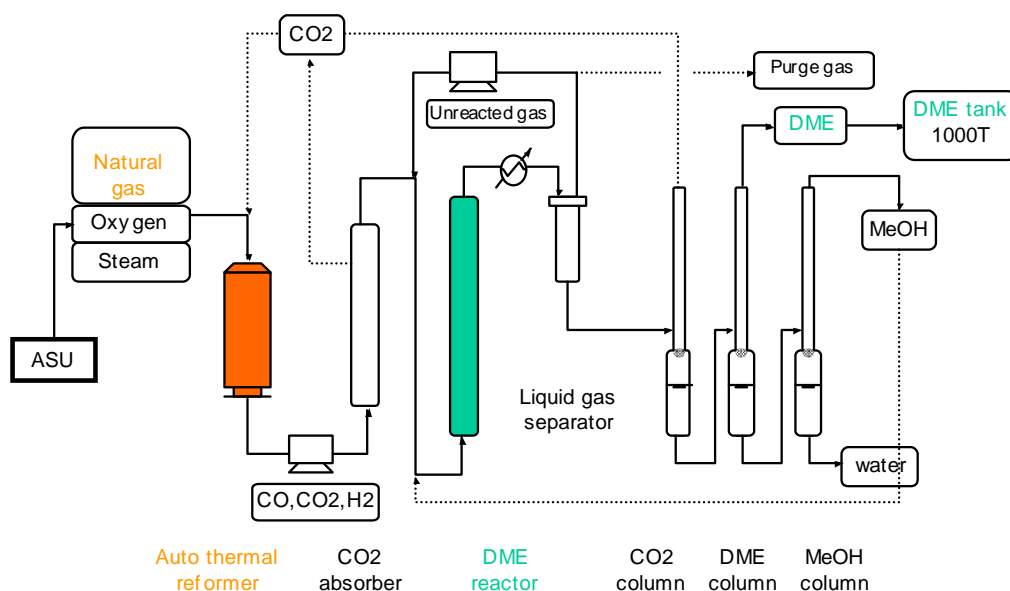


Figure 1. Process Flow Diagram of 100 tons/day DME Synthesis Plant