

Energy savings of CO₂ removal process using split-flow gas sweetening

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Conventional process of CO₂ capture using Monoethanolamine(MEA) solution consumes relatively a large amount of energy in the stripper for absorbent regeneration. As an alternative, a split-flow gas sweetening process is recently established to reduce the regeneration energy.

In this work, a computer simulation of a split-flow process based on absorption/stripping process with MEA solutions, using Aspen plus, was performed.

The simulation results were compared to conventional CO₂ capture process for energy consumption.

It is shown that the split-flow CO₂ sweetening process provides approximately 15% reduction of absorbent regeneration energy.