

# Design and Simulation of a CO<sub>2</sub> capture process using activated potassium carbonate

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## **ABSTRACT**

In this project a simulation of a CO<sub>2</sub> capture process using Aspen Plus 7.2 will be investigated. The CO<sub>2</sub> in the flue gas emitted from a typical power plant will be investigated using a solvent composed of potassium carbonate activated with piperazine. The thermodynamic model used for the simulation is extended UNIQUAC which will be validated in Aspen from experimental data from the literature. A process simulation of the full set-up of the capture process will be validated from pilot plant data from the literature. Finally an optimal process design will be made focused mainly on energy reductions. atabases will be used.