

## The split-flow amine process for the removal of acid gases from natural gas

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The gas sweetening process is CO<sub>2</sub> removal from natural gas. The conventional amine process of gas sweetening is basic amine sweetening process in industrial process. This process has some problems that contain boosting air and water quality, reducing energy usage and decreasing amine loss.

In this study, we designed new gas sweetening process with the split-flow cycle when the results are compared with the simulated data of the conventional amine process using the Aspen Plus™. The solvent used in these processes of the gas sweetening is alkanolamine (MEA, DGA) in water. The treating of natural gas which contain various CO<sub>2</sub> concentration (1.7 mole% ,13.58 mole% and 42.66 mole%) are simulated. The results indicate the performance of the split-flow amine process that achieves high CO<sub>2</sub> removal at lower reboiler duty.