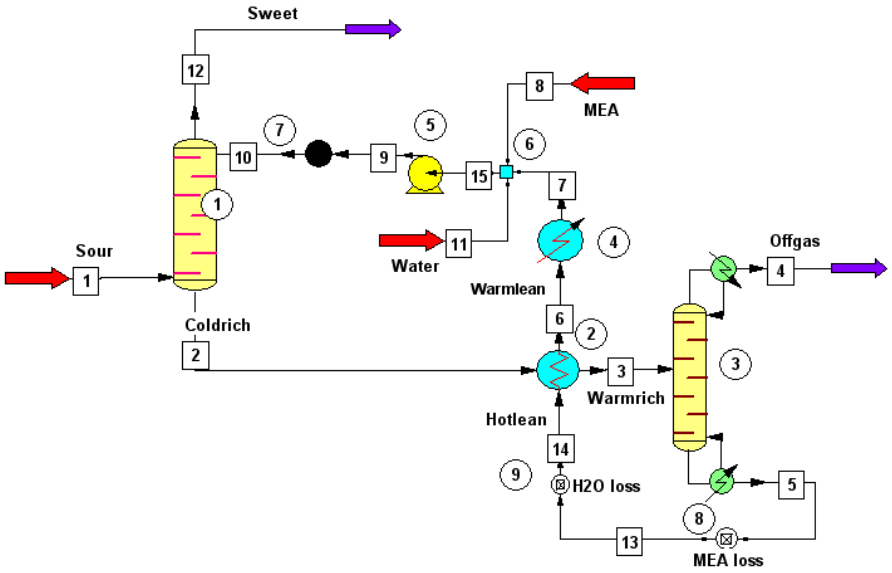
MEA Sour Gas Treatment Plant



DESCRIPTION:

A group of thermodynamic methods available in CHEMCAD 5 is intended for use with specific technical applications. This is the case with Amine model, which is capable to predict equilibria for desulfurization of gases with aqueous solutions of ethanolamines.

This flowsheet describes a typical monoethanolamine (MEA) sour gas treatment plant. Sour gas containing approx. 0.5 mole % of H2S and 2 mole % of CO2 enters the absorber unit at 900 psig and 90 F. Acid gases are removed in the absorber column by contact with lean MEA (15 wt. % aqueous solution). The rich MEA is then heated and regenerated in the stripper column at 26.2 psia. The regeneration column has a reboiler and a partial condenser. Regenerated MEA passes through heat exchanger to preheat the rich amine stream. It is then mixed with make-up MEA and water, boosted to the absorption column's pressure, cooled, and directed onto the top of the absorber.