



Flash Stripper Modeling

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Modeling the Advanced Flash Stripper for CO₂ capture using 5 m PZ | Amine scrubbing is the most mature technology for post-combustion CO₂ capture. Several studies have demonstrated that the advanced flash stripper (AFS) consumes less energy among stripper alternatives. This book seeks to demonstrate the AFS energy performance and cost over a wide range of CO₂ loading. Solvent models based on experimental results have been created by previous researchers and are available for simulation and process modeling in Aspen Plus®. In collaboration with Membrane Technology and Research Inc., various hybrid amine/membrane configurations were studied to minimize the total CO₂ capture cost. CO₂ in the flue gas is enriched by membranes from 12% to 18 and 23% for coal-fired power plant, and from 6% to 12~18% for natural gas combined cycle power plant (NGCC). The CO₂ loading covers the range of flue gas CO₂ from coal-fired power plants and NGCC. For each configuration, the cold and warm rich bypasses are optimized to minimize the energy cost. The cost optimization is also demonstrated on 5 m PZ, 5 m MDEA/5 m PZ, and 2 m PZ/3 m HMPD. The most cost-effective solvent varies...

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