

Optimisation of chemical absorption systems for CO₂ capture

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In this study a rate-based model of CO₂ capture through chemical absorption-desorption is simulated and optimised for various flue gases with different flow rates and compositions. Here the aim is to determine the optimal configuration of capture equipment which for each of the flue gases considered and for different targets of CO₂ removal. Hence, an overall picture of CO₂ capture through chemical absorption is built to show how the equipment size and operating conditions must be varied to account for different flow rates and compositions of flue gases. This will allow the design of equipment considering ranges of different CO₂ targets to account for possible changes in future.

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