Experimental validation of a rate-based model for CO2 capture using an AMP solution - DTU Orbit (14/12/2018)

**Experimental validation of a rate-based model for CO2 capture using an AMP solution**

Detailed experimental data, including temperature profiles over the absorber, for a carbon dioxide (CO2) absorber with structured packing in an integrated laboratory pilot plant using an aqueous 2-amino-2-methyl-1-propanol (AMP) solution are presented. The experimental gas-liquid material balance was within an average of 3.5% for the experimental conditions presented. A predictive rate-based steady-state model for CO2 absorption into an AMP solution, using an implicit expression for the enhancement factor, has been validated against the presented pilot plant data. Furthermore, a parameter sensitivity analysis for the proposed model has been carried out.

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