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Catalyst performance and experimental validation of a rigorous desorber model for low temperature catalyst-aided desorption of CO_2 in single and blended amine solutions

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Highlights

- Results show the catalyst-aided desorption of CO_2 in a CO_2 capture pilot plant.
- A model developed predicts CO_2 production rates with Absolute Average Deviation (AAD) of 7.7 %.
- The new model also predicts the temperature profiles in the desorption column.
- HZSM-5 performs better than γ-Al_2O_3 in both single and blended amine solutions
- The model was used to show a high CO_2 concentration profile in the modified desorber