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A review: Desorption of CO_2 from rich solutions in chemical absorption processes

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ABSTRACT

Research on CO_2 capture has mainly been focused on improving the effectiveness and enhancing the efficiency of CO_2 absorption process, while little attention has been paid to the stripping performance of rich solutions. The available literature in the area of detailed desorption methods and desorber operation is relatively scarce as compared to absorption research. This paper gives a brief summary of the methods used for the regeneration of rich solutions in chemical absorption of carbon dioxide. The performances of different absorbents in the conventional heating process were compared and the newly developed methods, including acid addition, membrane technology, dual alkali method and etc., are discussed and compared with the conventional heating process. The comparison of these methods is focused on the regeneration ratio, cyclic performance and energy consumption.

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