The absorbent recovery method using an organic acid in CO_2 chemical absorption process

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Chemical absorption is the most popular technology to capture CO_2 in the post-combustion capture. However, it has a drawback to require higher energy to recover absorbent in the stripping process. This work focused on a method to reduce energy demand for absorbent recovery by acid addition in a stripper and applied reaction crystallization process to overcome technical obstacles in the separation process between MEA and the acid. This study presents the effect of acid addition on the stripper and the effective recovery of the MEA and the acid in the method. Also, this study compares the total cost consumption of the method with that of previous chemical absorption process.