

Mediated electrochemical oxidation integrated with wet scrubbing for mixed odour gas clean-up

정상준, 찬드라세카라 필라이, 김병준, 문일식*
순천대학교 공과대학 화학공학과
(ismoon@sunchon.ac.kr*)

Ce(IV) has proved its efficiency when it is used as a oxidant in scrubbing towers. The objective of this work is to implement this alternative in a scrubbing pilot. H₂S, CH₃SH and NH₃ removals were studied in order to characterise the performances of the process. The concentration of Ce(IV) was quantified in continuous working with reoxidizing of the scrubbing solution. Using Ce mediated ion in a scrubbing tower gave satisfactory results for H₂S, CH₃SH and NH₃, and encouraging ones for mixed odour gas. Mediated electrochemical oxidation process was economically acceptable, even if compared with the other chemical scrubbing process.