

AN ABSTRACT OF A THESIS

DOUBLE ALKALI SCRUBBING OF POWER
PLANT FLUE GAS

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Master of Science in Chemical Engineering

This study describes step by step how sulfur dioxide is removed in the scrubbing section and scrubbing liquor is regenerated in the regeneration section by a mathematical model. Sulfur dioxide was scrubbed with solutions of sodium sulfite, bisulfite and sulfate. Limestone and lime slurries were used to regenerate the scrubbing liquor. The process consisted of ten equipment items; each item was represented by a model subroutine all of which were developed simultaneously. This model used the method of successive substitution. Over 80 percent of sulfur dioxide and all sulfate were removed as a mixture of calcium sulfite and calcium sulfate, and the clear scrubbing liquor was regenerated.

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PLANT FLUE GAS

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CERTIFICATE OF APPROVAL OF THESIS

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