

A.2 THERMAL POWER - CONTROL TECHNOLOGY SUMMARY

SO_x Reduction

Control of SO₂ emissions has become a complex problem with several options available and many factors involved in making the choice between them. One of the main problems is that some of the factors are intangible in nature and are therefore difficult to quantify.

Sulphur oxide emissions can be reduced by several methods

- 1) use of naturally occurring low-sulphur fuel
- 2) removal of the sulphur before combustion
- 3) reaction with an absorbent during combustion
- 4) removal of the sulphur after combustion

In rating the alternatives for SO₂ control, the major consideration is the degree of control required. Some processes are capable of a very high removal efficiency but are expensive; others cost much less but are limited to a relatively low level of removal efficiency.

The following recommendations are made for process choice at different required levels of emission reduction. It should be noted that these are only approximate and that site-specific conditions could well change the ranking. The rankings are judgmental in nature, based on a subjective evaluation of factors such as cost, commercial viability, absorption efficiency, and process reliability. A more quantitative approach to ranking does not seem feasible in view of all the uncertainties involved.

<u>Removal efficiency level, %</u>	<u>Process listing</u>
Higher than 90%	<ol style="list-style-type: none"> 1. Double alkali 2. Limestone scrubbing with promoters 3. Coal gasification (combined cycle)^a 4. Regenerable scrubbing processes
90%	<ol style="list-style-type: none"> 1. Limestone scrubbing with promoters 2. Limestone scrubbing 3. Double alkali

^a When and if developed.