Table A1.1: Comparison of Combined SO2/NOx Control Processes

Process	Advantages	Disadvantages
Adsorption/ Regeneration	High-temperature gas is not required High removal efficiency Low volume of wastes Potentially marketable byproduct	Solids recirculation is complex High sorbent costs High flue-gas pressure loss
Flue Gas Irradiation	High temperature gas is not required SO2, NOx, and particulate removal in one device Potentially marketable byproduct	High auxiliary power High-cost reagent (ammonia) Potential for secondary emissions (e.g., N2O) Byproduct difficult to dispose of
Wet Scrubbing Additive for NOx Removal	Easily retrofittable to scrubbers One vessel for SO2 and NOx removal Process chemistry also suitable for high-sulfur coals	Complex and precise process control needed Wastes contain nitrogen/sulfur compounds Flue-gas reheating may be required
Gas/Solid Catalytic Operations	No solids recirculation High SO2 and NOx removal Potentially marketable byproduct	High temperature gas needed Acid collection adds complexity Catalysts must be replaced periodically
Electromechanical	Mechanically simple One device for both SO2 and NOx removal No reagents needed No high volume wastes	High auxiliary power required High-temperature gas required
Dry Alkali	High temperature gas not required Easily retrofittable to dry scrubbers	High simultaneous SO2 and NOx removal may not be possible Wastes difficult to dispose of Potential for secondary emissions (e.g., NO2)

Source: Power Magazine (1990)