Dry Sorbent Injection

DSI

Design features:
A dry alkaline sorbent is injected into the flue gas stream for acid gas absorption; reaction products, excess sorbent and flyash are collected in a downstream particulate control device; most commonly used for control of \( \text{SO}_2 \) and \( \text{SO}_3 \) but may be used for control of other acid gases including HCl and HF.

Applications and removal efficiencies:
DSI is well suited for moderate \( \text{SO}_2 \) reduction in utility or industrial boilers firing low sulfur fuels; also used for reduction of \( \text{SO}_3 \) upstream of activated carbon injection systems to minimize activated carbon deactivation and for control of visible emissions; removal of other acid gases can approach 98%.

Reagents:
Hydrated lime is typically used for \( \text{SO}_2 \) control while trona and sodium bicarbonate may be used for all acid gases.

Fuels:
All solid fuels, including coal, biomass and municipal solid waste.