

Circulating Fluid Bed FGD

Solutions. Performance. Relationships.

Differentiation of a Well-Known Technology

With the need for higher SO₂ and multi-pollutant capture in a semi-dry FGD system, MET – Marsulex Environmental Technologies offers an advanced Circulating Fluid Bed Flue Gas Desulfurization (CFB-FGD) system to the North American market. Employing Multi-Stage Humidification, a key design that injects water into the absorber vessel at multiple levels and separate from the reagent, this technology enhances air quality control by promoting high system reliability and increasing SO₂ removal efficiencies.

Developed over the past two decades with research, pilot plants and full-scale installations, MET licensed this innovative technology from the Institute of Thermal Power Engineering (ITPE). Our long standing relationship with ITPE together with their strong commercial CFB-FGD experience made this the right addition to our air quality control portfolio. With more than 140 systems in operation on power plants, MSW incinerators and other industrial plants, CFB-FGD with Multi-Stage Humidification is a proven solution that:

- Increases the effective residence time for reaction
- Improves performance capabilities
- Fine tunes process-to-plant operating conditions

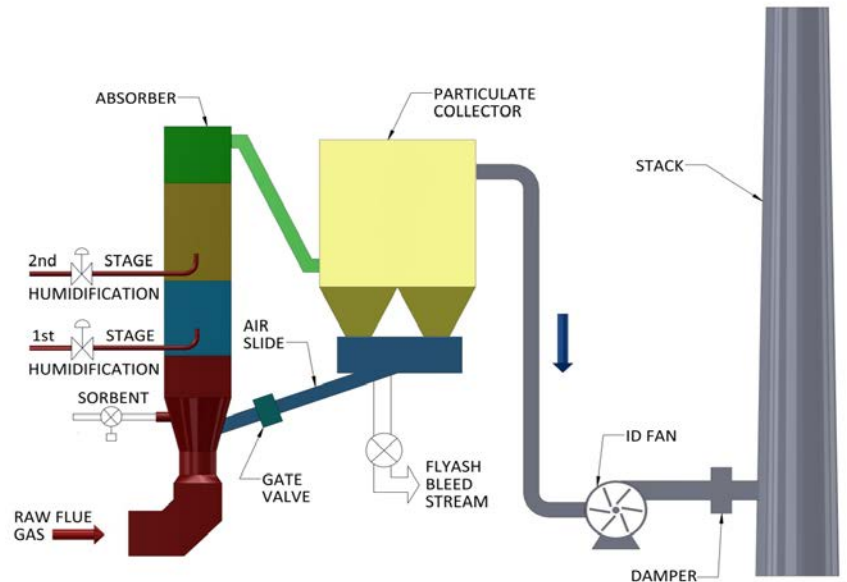


CFB-FGD Performance Capabilities:

98+% SO₂ removal | 98+% SO₃ removal | 98+% HCL / HF removal | 90+% Hg removal

Process Review

The CFB-FGD system utilizes a semi-dry reactor that provides the proper chemistry and in-situ conditions to simultaneously and effectively absorb sulfur dioxide, acid gases and associated heavy metals. Hydrated lime and water are injected independently into the absorber vessel creating maximum contact and reaction with the untreated flue gas. To maintain the fluid bed and optimize reagent utilization, the absorber is coupled with a MET designed Fabric Filter that collects and recycles a portion of the dry solids back to the absorber.



Engineering Experience

MET is widely known for its solid and innovative Wet FGD systems and delivers the same service and execution to the CFB-FGD technology. MET's experience with semi-dry FGD dates back to the spray dryers of the 1980s and 1990s. Our CFB-FGD solutions are engineered, supplied and serviced to the applicable engineering codes and design standards.

ISO-9001

MET business processes have been ISO-9001 certified by Lloyd's Register Quality Assurance since 1991. Our certification is applicable to the development, design and supply of air quality control systems and ensures the customer receives the highest measure of quality.



Technology Benefits:

CFB-FGD is truly a multi-pollutant control technology which demonstrates benefits over conventional dry or semi-dry technologies, including:

- High % removal of SO₂ and other pollutants
- Low capital cost
- Minimal water consumption
- Small footprint
- Operational stability
- Efficient reagent usage
- No waste water stream discharge