Circulating Dry Scrubber Technology

Solutions. Performance. Relationships.

Differentiation of a Well-Known Technology

With the need for higher SO2 and multi-pollutant capture among the utilization of a Dry FGD system, MET – Marsulex Environmental Technologies has licensed, and is now providing, an advanced version of Circulating Dry Scrubber FGD (CDS-FGD) technology to the North American market. This technology employs Multi-Stage Humidification, a key design improvement that injects water at multiple levels and separate from the reagent, into the absorber vessel and promotes high system reliability and boosts SO2 removal efficiencies.

MET licensed this demonstrated technology from the Institute of Thermal Power Engineering (ITPE). With our long standing relationship with ITPE, a respected research University with commercial CDS-FGD experience, MET secured the right partner to include in its diverse FGD technology portfolio. This innovative technology has been developed over the past two decades through research, pilot plants, and multiple full-scale installations. With more than 140 systems in operation on power plants, MSW incinerators and other industrial plants, CDS-FGD coupled with Multi-Stage Humidification is a proven solution that:

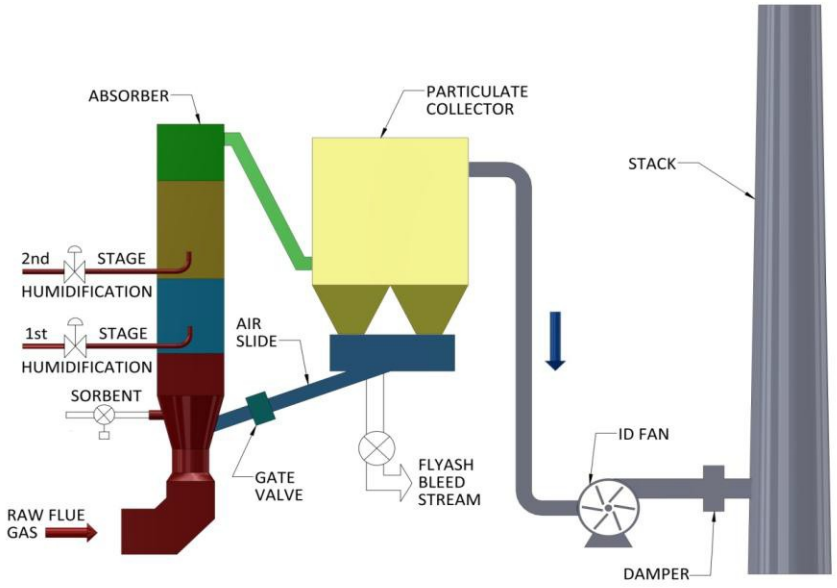
- Increases the effective residence time for reaction
- Improves performance capabilities
- Fine tunes process-to-plant operating conditions

CDS-FGD Performance Capabilities:

98+% SO_2 removal | 98+% SO_3 removal | 98+% HCL / HF removal | 90+% Hg removal

Process Review

The CDS-FGD system utilizes a semi-dry absorber that provides the proper chemistry and in-situ conditions to simultaneously and effectively absorb sulfur dioxide, acid gases and associated heavy metals. Hydrated lime powder 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, a portion of the dry solids are collected downstream of the system and recycled 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 CDS-FGD technology. MET's experience with semi-dry FGD dates back to the spray dryers of the 1980s and 1990s. Our CDS-FGD solutions are engineered, supplied, and serviced to the applicable engineering codes and highest design standards.

Technology Benefits:

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

- High % removal of SO2 and multi-pollutants
- Low capital cost
- Minimal water consumption
- Small footprint
- Operational stability
- Efficient reagent usage
- Producing no waste water streams

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MET
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