

CFB Scrubbers A Flexible multi-pollutant technology

Our Circulating Fluid Bed (CFB) Scrubber efficiently captures all acid gases, metals and particulate matter down to the lowest levels. It is a versatile and flexible technology that can clean up flue gases from boilers and industrial processes using the least amount of water and project capital.

Our multi-pollutant CFB scrubbing reliably and economically captures:

- Oxides of sulfur
- HCI, HF, Hq
- PM10 and PM2.5

While providing many benefits over conventional technology:

- Uses 30-40% less water than wet FGDs
- 50% lower capital cost than wet FGDs
- Best capture of acid gases and metals
- Excellent capture of oxides of sulfur
- Very low operating cost and need for lime reagent with calcium rich boiler ash (ideal for CFB boilers)
- Low maintenance since it doesn't utilize lime slurry and rotary atomizers

If you do not need a full scrubber, we also offer advanced baghouse technology to reduce your plant's dust, metals, and acid gas emissions.

Absorber

- Self-cleaning CFB process minimizes
- maintenance Carbon steel design avoids expensive liners
- and alloys Multiple venturi design allows wide
- range of capacities Long gas and solid mixing time for high pollutant capture and maximum lime utilization

Fly Ash



Fast acting shut down valve to allow purge of • absorber solids during a boiler trip

Absorber Bottom

Flue gas inlet chamber drops out large particles



Harbin Electric Soma Kolin Location: Soma, Turkey **Customer:** Harbin Electric International Plant Capacity: 2 x 225 MWe Start-Up year: 2016 Fuel: **Turkish Lianite** Gas Flow: 2 x 1,217,200 m3/hr SO2 Removal: 79% SO3 Removal: 95%





Refinery Wesseling Germany Location: Customer: Shell Plant Capacity: 2012 Start-Up Year: Fuel: Gas Flow: SO2 Removal: SO3 Removal:

Wesseling, Germany 2 x 60 MWe Heavy Fuel Oil 2 x 382,500 m3/hr Up to 97% Up to 99%



Basin Electric Dry Fork Station Gillette, WY, USA Location: **Customer: Nooter Erikson** 420 MWe Plant Capacity: Start-Up Year: 2011 Fuel: PRB Coal Gas Flow: 3,060,000 m3/hr SO2 Removal: Up to 96% SO3 Removal: Up to 99%

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ThinkPark Tower, 1-1 Osaki 2-chome Shinagawa-ku, Tokyo 141-6025, Japan T +81 (0) 3 6737 2000 We are the premier global supplier of innovative circulating fluidized bed (CFB) technologies, providing sustainable value to our customers through our relentless drive for environmentally sound and reliable power solutions while we grow.

