SINGLE LOOP WET FLUE GAS DESULFURIZATION SYSTEMS

Babcock Power Environmental
ENVIRONMENTAL
a Babcock Power Inc. company

Babcock Power Environmental Inc., a Babcock Power Inc.® company, provides fully integrated environmental solutions for utility power plants, waste-to-energy facilities, and large industrial applications. Babcock Power Environmental is the market leader in the field of environmental air pollution control technology, including providing flue gas desulfurization systems to the power generation industry for more than 40 years.

The Single Loop Wet Flue Gas Desulfurization (WFGD) system uses bidirectional nozzles on multiple levels with wall rings for wet scrubber applications to achieve maximum performance. Our system provides reliable, high quality board grade gypsum production. Through optimized design, power consumption is significantly reduced while achieving higher SO_2 removal rates. Using lime or limestone, forced oxidation, gypsum processes in its systems, Babcock Power Environmental is able to demonstrate SO_2 removals of greater than 99% on a consistent basis.

Our team of professionals continually implements programs to reduce costs associated with system design, procurement, fabrication and erection while maintaining performance and reliability. A significant achievement within this program is our use of parametric, three-dimensional design platform and project collaboration software. With this tool, our engineers are able to quickly create three-dimensional designs, models, manuals, and other materials to comply with project schedules.

Rely on industry-leading air pollution control technology from Babcock Power Environmental Inc. **Contact us today to reduce SO_2 emissions and power consumption at your facility.**

BENEFITS

Industry Leaders

- Over 30 years of experience in the WFGD industry
- Our first WFGD system installed in the U.S. in 1974
- Culley WFGD proven high availability and zero forced outages since 1994

Extensive Capabilities

- Numerous absorber vessel materials including alloys, and lined vessels utilizing various plastics, rubber or acid tile construction
- Variety of fuels, technologies, reagents and high efficiency scrubbers
- Scrubber processes include lime and limestone, force oxidation, and gypsum

Single Loop Technology

- Maximum performance for wet scrubber applications utilizing bidirectional nozzles on multiple levels with wall rings
- Reliable, high quality wall board grade gypsum production
- Achieve greater than 99% SOx reduction, while significantly reducing power consumption
- Consistently meets or exceeds performance guarantees
- Extensive use of modeling to enhance performance
- Technology available for upgrades to other OEMs' WFGDs
- Co-benefit of mercury reduction

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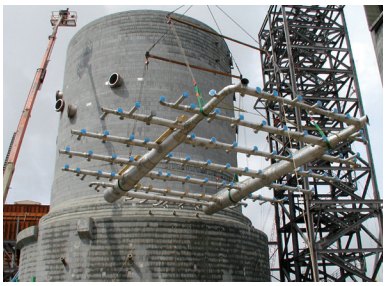
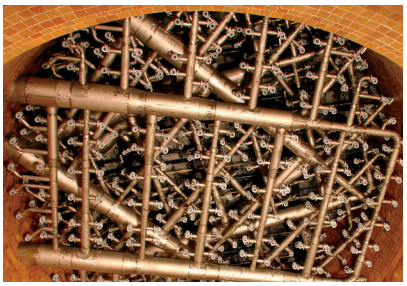
HISTORY OF RESULTS

Babcock Power Environmental Inc. implemented one of the first WFGD units in the U.S. in 1974, a 400 MW system at Duck Creek. We have made significant advances in WFGD processes over the last three decades, including the first use of forced oxidation technology and first use of bidirectional nozzles at Culley Station in the U.S. in 1994. Babcock Power Environmental now has over 12,000 MWs of WFGDs in operation or under construction. The sulfur content in the fuels burned in these plants is typically as low as 1 to 5%.





WFGD DEVELOPMENT MILESTONES		
1974	First FGD system in U.S	Duck Creek
1985	2-stage demister (internal)	Heibronn 7
1987	Reaction tank internal forced oxidation, patented agitator air injection	Gersteinwerk 2
1987	Lignite application (T=70°C [158°F], dust)	Niederaussem
1994	Absorber material alloy C276 (wallpapered, reaction tank solid)	Culley
1994	Dual direction staggered nozzles	Culley
1995	2 agitator level absorber reaction tank	Boxberg
1995	Absorber material alloy 59 (cladded)	Boxberg
2003	First concrete 660 MW vessel	Cooper
2003	Upgrade Schkopau from 94.5% to 96% SO2 removal with 15% increase in flue gas flow	E.ON
2004	Upgrade FGD system from 6 to 10 lb/MMBtu fuel while improving SO_2 removal	Culley
2006	Upgrade competitor's FGD system achieving 99.4% SO_2 removal	Trimble County
2006	Lime based WFGD with forced oxidation	Huntington
2007	First 800 MW single vessel WFGD system	TXU Oak Grove
2007	3 boilers exhaust into a single 760 MW vessel	Brown E.ON
2007	First application of Si-cast recirculation pumps in the U.S.	Warwick

Safety³ People. Power. Projects.
We're giving safety the third degree.

Babcock Power Inc. and its subsidiaries place the safety, health and security of our people at the core of our company values. Our team is our most valuable resource, generating solutions everyday to deliver safe, clean, reliable energy globally. With a keen focus on safety, Babcock Power Inc. conducts business in a manner that protects our people, our customers and the environment. From innovation to generation, we are proud of our award-winning safety record and are committed to operating with integrity and excellence.

Babcock Power®

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