Spray Drying Technology for Zero Liquid Discharge

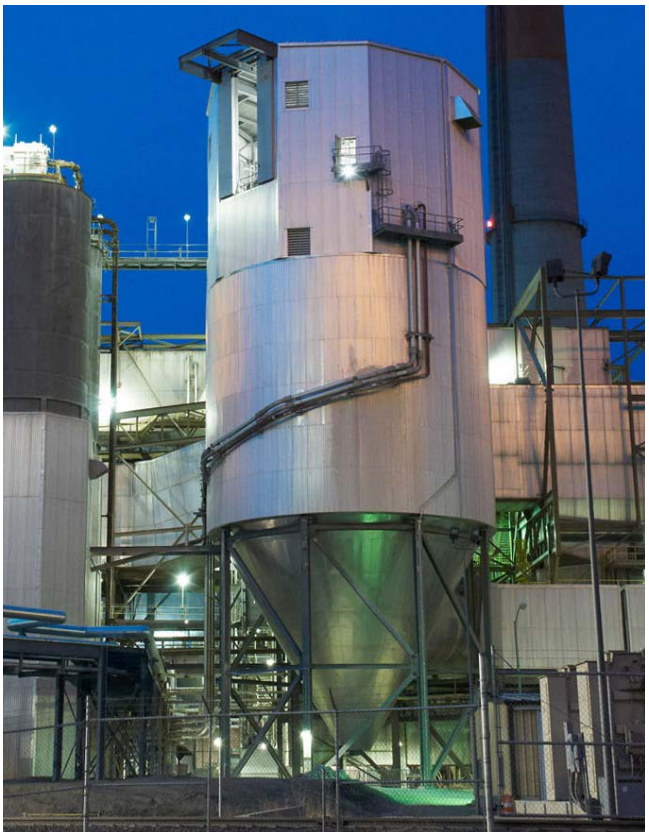
Babcock & Wilcox (B&W) offers advanced spray drying technology to meet zero liquid discharge (ZLD) requirements. Using the sensible heat of a flue gas, our patented spray drying technology is designed to reduce and/or eliminate liquid waste streams from a variety of sources.

Spray drying is a mature technology that was developed over a century ago and has been successfully utilized in coal-fired power generation applications for more than 40 years to remove SO_2 from flue gas. B&W experience is backed by ZLD spray dryer installations from various industries including waste-to-energy, glass, hazardous chemical waste, and sewage sludge incineration.

In addition to the above experience, GEA Niro, B&W's partner in spray drying, has many worldwide installations across extensive spray drying applications, including dairy and food, pharmaceutical, and chemical products. The heart of our spray dryer is the GEA Niro rotary atomizer. It features low maintenance, high availability and is manufactured with abrasion- and corrosion-resistant components for long life.

Potential benefits

- Elimination of wet FGD wastewater discharge
- May allow more time for implementation per Effluent Limitation Guidelines (ELG)
- Simple process requires limited operator attention while maintaining high reliability
- Designed for improved material handling



Applications for spray drying technology

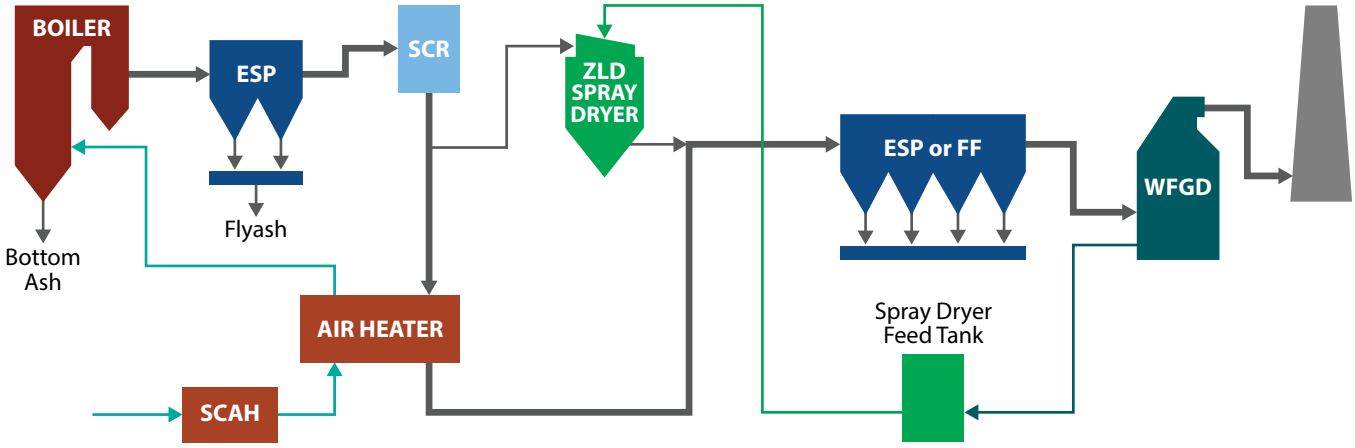
- Spray dryer absorber (SDA) flue gas desulfurization (FGD) for coal, oil, and high-chloride fuels (e.g., municipal solid waste)
- Elimination of wastewater from wet FGDs (ZLD)
- Evaporation of existing ponds
- Evaporation of cooling tower blow down
- Evaporation of other liquid effluent or waste streams

Spray dryer advantages

- High reliability
- Familiar and proven equipment
- B&W experience with approximately 17 GW of SDA installations
- Carbon steel construction
- Simple operation
- Tolerant of varying effluent compositions
- Can be used in combination with other volume reduction technologies

continued ▶

Spray dryer for zero liquid discharge component configuration



Representative equipment configuration, with new spray dryer and feed tank components in light green. Other configurations are possible.

The Babcock & Wilcox Company
1200 E Market Street, Suite 650
Akron, Ohio, U.S.A. 44305
Phone: +1 330.753.4511

www.babcock.com

BABCOCK & WILCOX

RENEWABLE | ENVIRONMENTAL | THERMAL

Established in 1867, Babcock & Wilcox is a global leader in renewable, environmental and thermal technologies and services for power and industrial applications.

For more information or to contact us, visit our website at www.babcock.com.