



BOILER MACT COMPLIANCE

Single solution provider for all MACT requirements

Power of the Group

Industrial Boiler MACT is here and Clyde Bergemann Power Group offers a comprehensive solution to help your plant meet all the stringent new regulations. Clyde Bergemann Power Group is your single source provider to address all emission control requirements. The “Power of the Group” will bring the most economic and proven solutions for all your MACT needs.

Controlled Hazardous Air Pollutants (HAPs)

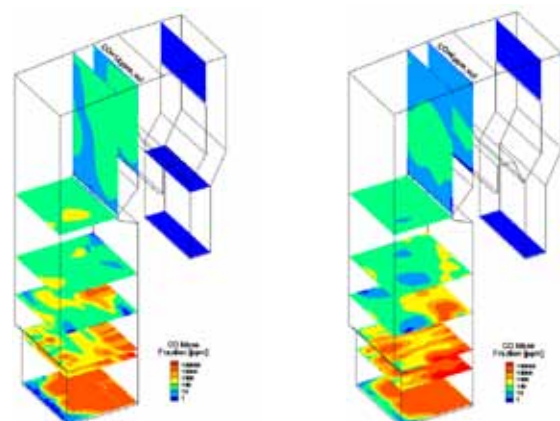
The new rule clearly defines the control limits for five hazardous air pollutants. These HAPs include:

- PM (as surrogate for non-Hg metals)
- HCl (as surrogate for acid gases)
- Hg (mercury)
- CO (as surrogate for non-dioxin organic HAPs)
- Dioxins and Furans

Combustion Optimization for CO Control

The most cost effective way to reduce CO emissions is through combustion optimization. Combustion air control enhances mixing within the furnace which can radically reduce the production of CO with a co-benefit of reducing dioxin, furan and particulate matter. With a Clyde Bergemann Power Group air system upgrade, you quickly begin your journey to

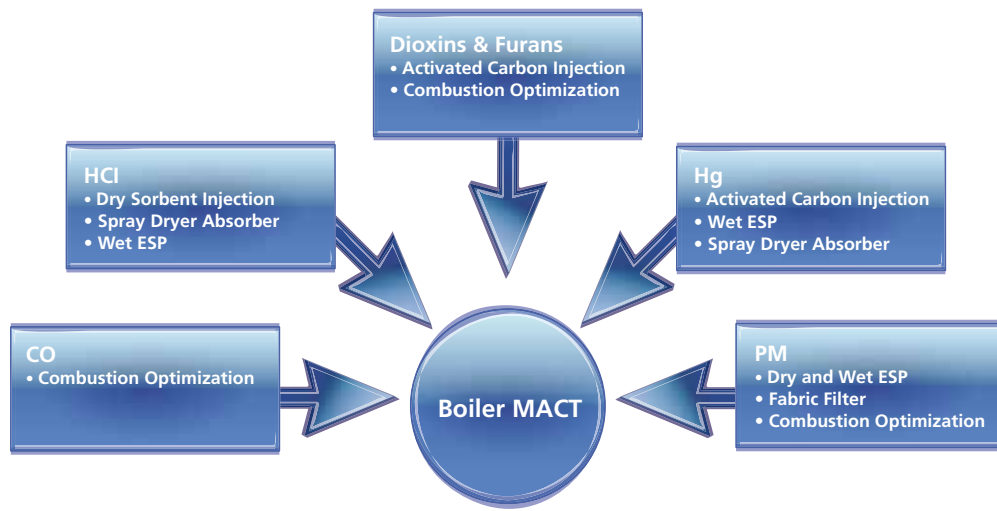
MACT compliance. Our state-of-the-art Stacked Air System (SAS) technology injects staged, low pressure and high momentum Over Fire Air (OFA) exactly where it is required. Computational Fluid Dynamic (CFD) modeling of each boiler’s combustion chamber provides a customized solution for the OFA port quantity, size, location and pressure to optimize combustion and reduce emissions.



CO before OFA retrofit

CO after OFA retrofit





Providing solutions for all MACT requirements

Acid Gas Control

Clyde Bergemann provides a variety of field proven technologies utilized for the reduction of HCl, which is the surrogate for acid gas emissions from boiler flue gas streams. Calcium or sodium based sorbent injection is recommended for acid gas control. With Clyde Bergemann optimized technology, the sorbent can be efficiently dispersed into the flue gas stream as a Dry Sorbent (DSI) or as a slurry in a Spray Dryer Absorber (SDA).

Mercury, Dioxin and Furan Control

Powder Activated Carbon (PAC) sorbent is injected into the flue gas for Hg, dioxin and furan control. Reaction by-products are then captured in the downstream electrostatic precipitator or fabric filter. In some cases where mercury is oxidized, a spray dryer absorber may capture mercury without additional sorbent injection. In addition to Clyde Bergemann's advanced technology, our site testing with Portable Sorbent Injection (PSI) can determine and then optimize the level of control for the permanent system.

Particulate Matter Control

Clyde Bergemann particulate matter control technologies include state-of-the-art pulse jet fabric filters and wet and dry process electrostatic precipitators. With over 60 years of particulate control design experience we can provide the correct type and size of particulate matter removal equipment that should be installed to meet your MACT requirements.

⚙️ Tailored Compliance Solutions

- MACT compliance with single source guarantee
- Over 60 years experience
- Multi-facility project execution capability
- Increased thermal efficiency
- Multiple technology options for particulate matter and acid gas control
- Strategic solutions that optimize capital, operating and maintenance expenses
- Integrated CFD and APC modeling
- Mobile equipment for sorbent injection trials
- Boiler tuning and optimization services
- Staged air for NOx control
- Hundreds of installations across all industries



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