Better Measurements For Better Results

The ZoloBOSS™ (Boiler Optimization Spectroscopy Sensor) laser-based system provides real-time, spatial measurements of temperature, $O_2$, $CO$ and $H_2O$ directly in harsh combustion environments. With this critical process information, operators and engineers can balance combustion, improve the process efficiency and reduce NOx and CO$_2$ emissions.

Key Features

+ Real-time, in-situ measurements directly in the furnace
  • Temperature, $H_2O$, $CO$ and $O_2$ 
  • Path average measurement for each path
+ Easy installation
  • $3/8\times3$ inch slot (1x8 cm) in water-wall membrane
+ Spatial profiles and furnace balancing information integrates into
  DCS or combustion optimizer via OPC
+ Automatic laser alignment as load changes and walls move
+ Automatic port rodder keeps slot clear of slag
+ No cooling required up to 185°F (85°C)
+ No field calibration required
+ Low maintenance
  • Periodic window and A/C cleaning
  • Performed while boiler is operating

Find out what ZoloBOSS can do for you.
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Balanced Combustion = Optimized Combustion

To effectively optimize combustion, you need key plant data including real-time, in-furnace combustion data. Traditional sensors cannot survive in the high temperature furnace environment. Plus, given their location at the back end of the furnace, traditional sensors can't measure in-furnace variation caused by local secondary and over-fired air issues. ZoloBOSS solves these shortcomings by providing real-time measurements of temperature, H₂O, O₂ and CO directly in the combustion area.

Strong correlations developed between the ZoloBOSS measurements and specific burner and air flow settings can be used to maintain a balanced combustion profile. Proper combustion balance permits operation at the optimum air to fuel settings (such as lower excess O₂) without the negative impacts of corrosion, slag formation, high CO and high LOI. Balanced and optimized combustion can be sustained through either manual control or the ZoloBOSS data can be fully integrated into a closed-loop combustion optimizer.

Proven Benefits

By enabling operators and engineers to balance combustion, ZoloBOSS delivers a range of proven operating benefits including:

+ Increased efficiency
+ Lower emissions: NOx and CO₂
+ Meet CO and LOI regulations
+ Lower auxiliary fan loads
+ Minimize slagging
+ Maintain target FEGT
+ Increased fuel flexibility
+ Adjust to frequent load changes

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Balanced Combustion Parameters

- **Air to Fuel Ratio**
- **O₂**
- **Efficiency**
- **NOx**
- **CO**

**Caution Zone**

**Optimum Zone**

**Comfort Zone**

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GLOBAL REACH

JZHC has locations all over the map, with thousands of employees worldwide.