



Ensure Efficient Sootblowing

Application

As a boiler accumulates excess soot, boiler walls and heat exchanger surfaces become dirty and inhibit heat transfer. The Ovation Sootblower Optimization solution uses an intelligent modeling tool to develop heat absorption models that accurately reflect the numerous interrelationships of various heat transfer sections. Once modeled, the optimization controller delivers sequenced sootblowing control that efficiently manages steam and energy while avoiding opacity levels, steam temperatures, NOx, and time aspects.

Strategy

Balanced Sootblowing

The Sootblower Optimization solution balances sootblower scheduling to reduce unwanted opacity spikes, which result in the discharge of unsightly carbon into the atmosphere.

Strategic Sootblower Sequences

The Sootblower Optimization solution develops strategic sootblowing sequences from all key aspects of time, opacity, and thermal NOx and steam temperature impacts, ensuring that a plant only blows soot when it is needed, and only in the necessary locations. This helps to reduce opacity and thermal NOx while improving overall heat rate and boiler efficiency.

Dynamic Calculations

The Sootblower Optimization solution has the ability to dynamically calculate the cleanliness factors of the blowing process at all times, even while the plant is moving through load ranges.

Results

- Delivers optimal cleanliness, resulting in a 0.5% heat rate improvement
- Decreases soot accumulation
- Improves overall boiler efficiency
- Balances blowing sequences
- Minimizes unnecessary steam usage
- Reduces opacity spikes
- Reduces NOx formations
- Enhances steam temperature variability

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