

WHO WE ARE

“Our experience in diverse industries and collaboration with numerous manufacturers allow for application of **best fit solutions**. This expertise drives our design and engineering to achieve the safest, highest performing, lowest cost of ownership, and most robust analytical system solutions.”

WHAT WE DO

Applied Controls is focused on the total Analyzer System from the sample point to sample return. We can design, engineer, build, start-up, train and service on-line continuous analyzer systems-from wall mounted units to complete shelter houses.

WHAT WE OFFER

- Environmental/Process Analyzer System Integration
- Analyzer System Engineering
- Sample Conditioning Systems
- Enclosure/Shelters
- F.A.T. Live Streaming
- Start-up/Commissioning/Training
- Field Service and Calibration
- Complete Turnkey Systems

VALUE-ADDED

- Technical Support
- Installation and Setup
- Maintenance
- Warranty

For more information on any of our products or services please visit us at: Analyzer-Systems.com



Carbon Monoxide (CO) Monitoring System for PRB Coal



Why Monitor CO in the Mill?



This system is an example of a multi-point continuous CO measurement. PRB coal is a much more volatile solid fuel and therefore the use of a stream switching system should be avoided.

Coal mills are susceptible to fires for several reasons. Many mill fires start under the grinding table when coal falls through unchecked. As coal is ground to a powder, the risk of fire or explosion increases substantially. But there are two instances when the onset of combustion can be indicated by a significant rise in the level of CO. One occurs when coal is brought in close contact with elevated pulverizer temperatures. The other is when suspended coal dust or smoldering hot spots of coal enter a grinder. While temperature measurements can be used to detect coal burning within a mill, a CO detection system can provide an early warning that fire is imminent. This allows preventative actions to be taken before a problem gets out of control. A CO monitoring system starts with the probe being mounted in a confined space and transporting a sample to the analyzer on a continuous and dedicated basis. The measurement can detect a significant rise in CO level, suggesting that a fire is about to be caused by oxidizing coal dust or a smoldering hotspot somewhere within the mill. This infrared detector is so sensitive to the level of CO that a fire within the surrounding area, such as a silo linked to a mill, can be detected.

REASONS TO MONITOR

- A CO detection system can provide an early warning that fire is imminent, allowing preventative actions to be taken.
- Because a CO detector monitors continuously, it removes the element of chance from techniques such as spot checks or intermittent monitoring making them superfluous.
- CO monitoring can detect dangerous buildups of CO while a mill is in standby if the remaining coal has begun to smolder. This reduces the possibility of a fire or explosion when the mill is put back into service. Starting up a mill is potentially dangerous because oxygen is suddenly introduced to an environment where CO may have already accumulated.

ADVANTAGES

- Applied Controls has over 75 years of combined experience in Sample Systems for all types of analytical measurements; including Gas Chromatography, moisture, etc.
- We can utilize any manufacturer's equipment that proves to be the best fit technology for the application needs.
- Our Engineering Staff are Sample System experts. We design your analytical systems from Sample Point to Return, covering everything in between.
- Our dedicated Service Engineers ensure our customers receive second to none support for all commissioning and on-demand service needs.