APPLICATION NOTE

Cement Application

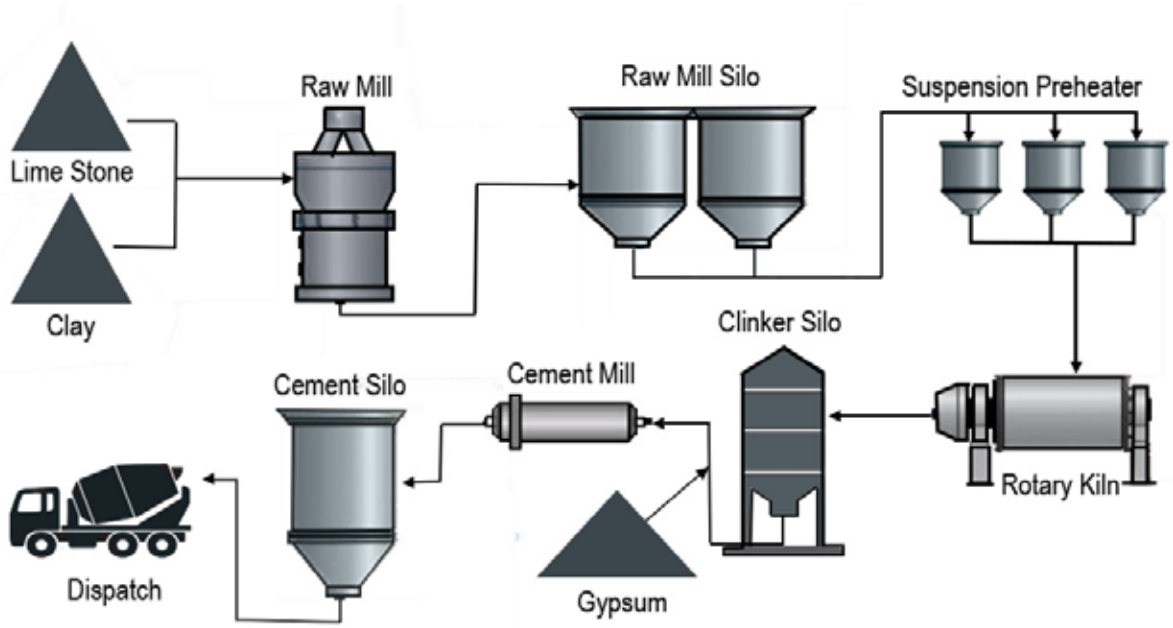
We were the first, we're trusted worldwide, and we help thousands stay compliant—We Know Cement.

Auburn
A Nederman Company

REV A

Monitoring Locations and Regulatory Requirements

Compliance with stringent environmental regulations such as U.S. EPA NESHAP and MACT standards requires placing monitoring solutions at key emission points throughout the cement manufacturing process. Monitoring is necessary at quarrying and crushing stations, kiln stacks, clinker coolers, finish mills, and baghouse compartments. Continuous monitoring at these locations helps detect leaks, optimize filter performance, and keep emissions within regulatory limits. A centralized data logging and compliance reporting system reduces the risk of violations and improves overall operational efficiency.



CRITICAL MONITORING POINTS

Raw Material Extraction and Crushing

Dust is generated during material extraction, crushing, and pre-homogenization.

Raw Mill and Preheater

Materials are ground into fine powder and preheated with kiln exhaust gases.

Kiln and Clinker Cooling

Clinker production involves intense heat, making monitoring at the kiln inlet, outlet, and cooler essential.

Cement Grinding and Storage

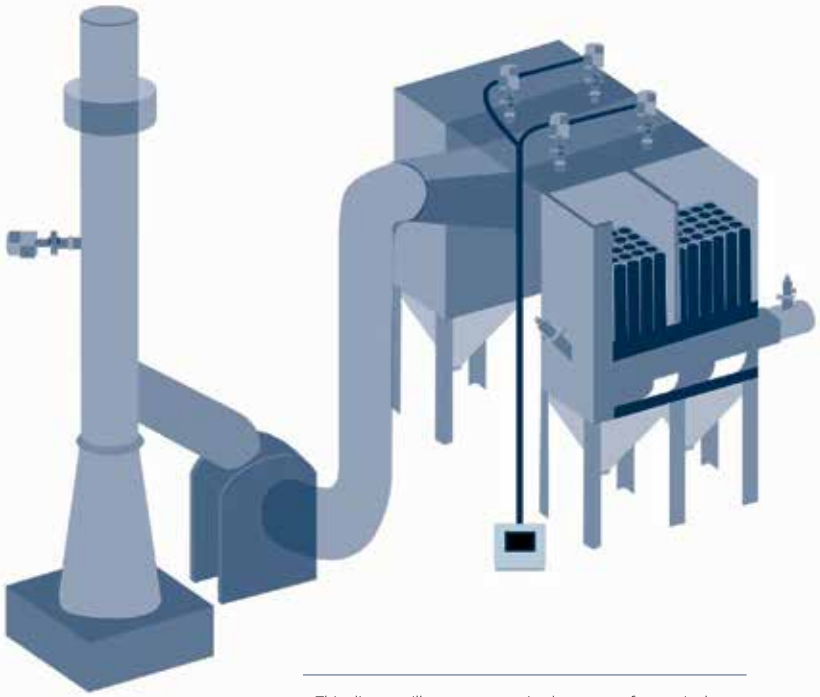
Fine grinding of clinker and additives produces significant dust, impacting product quality.

Packing and Dispatch Areas

Packaging generates dust that needs effective monitoring to minimize loss and maintain a safe environment.

Beyond regulatory compliance

Particulate monitoring systems offer significant operational and financial benefits by serving as proactive maintenance tools. By accurately detecting early signs of filter degradation, these systems help users predict and address potential failures before they escalate into costly emission events. Advanced monitoring techniques provide real-time insights into dynamic dust emissions during bag filter cleaning cycles, enabling precise identification of faulty chambers or rows. Integration with monitoring software further enhances maintenance efficiency by analyzing cleaning signatures and pressure sensor data, allowing operators to optimize filter performance, minimize wear, and reduce compressed air consumption. Remote monitoring capabilities also enable verification of maintenance effectiveness, maintaining consistent filter performance and reducing the risk of catastrophic failures. As a result, facilities not only maintain compliance but also achieve substantial savings in spare parts, maintenance labor, and production downtime.



This diagram illustrates generic placements for particulate sensors within an industrial dust collection system.

Auburn Benefits

- **Reliable Compliance Monitoring**
- **Improved Operational Reliability**
- **Reduced Unplanned Downtime**
- **Optimized Energy Efficiency**
- **Comprehensive System Visibility**

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Recommended Products

Designed to tackle the unique challenges of cement manufacturing, from stringent emissions regulations to maintaining peak baghouse efficiency.

B-PAC SYSTEM

Optimizes baghouse performance with real-time monitoring and automated control to reduce maintenance and improve efficiency.

PM 1 PRO

A rugged, in-situ dust monitor designed for accurate, real-time emissions measurement in harsh cement environments. efficiently.

INSIGHT SOFTWARE

Transforms raw sensor data into actionable insights, enabling smarter decisions for emissions control and process optimization.

Beyond these featured products, our scalable solutions offer the flexibility and reliability needed to optimize operations and sustain long-term efficiency. Contact our Industry Experts to learn how Auburn can improve your operations.

"Auburn baghouse control systems deliver a clear ROI in cement production by reducing maintenance costs and ensuring compliance with environmental regulations- **World Cement Publication.**

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