

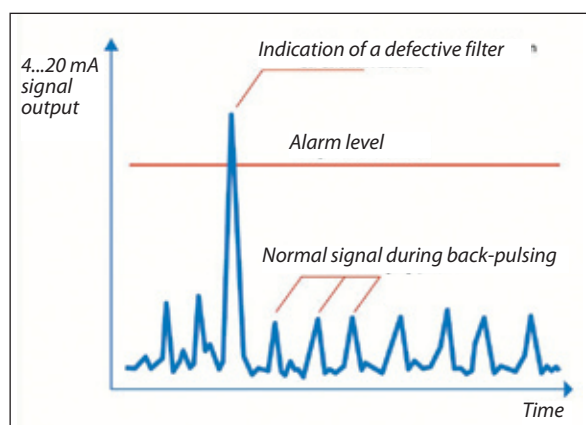
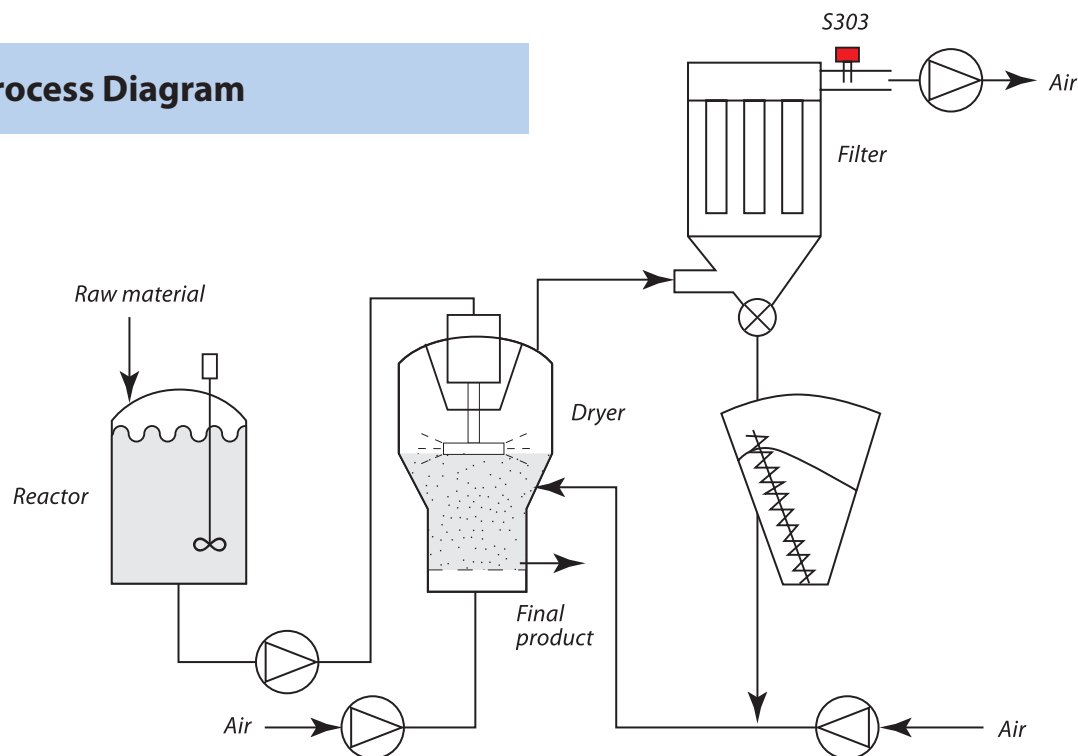
Application Note

● Monitoring Particle Emissions of Dryers with Sintrol's S303 Dust Monitor

Operators of spray and fluidised-bed drying processes need to minimise the potential for product loss from the powder collection system and improve the efficiency of the collection system. The S300 Dust Monitors are used to detect changes in dust concentration sufficiently early to avoid costly downtimes caused by blockage or breakage.

The S303 Dust Monitor is installed at plants equipped with spray or fluidized-bed dryers downstream of cyclones or filters which are used to separate the fine powder from the carrier gas. Particle concentrations downstream of these arrestment devices are normally below 10 mg/m^3 , often not more than 2 mg/m^3 .

Process Diagram



The S300 Series Dust Monitors utilise a unique method of detecting dust particles. The received signal is analysed in the 16-bit microcontroller of the monitor over a period of time and the average value is determined. After that the monitor selects the proper range itself. No manual range setup is required.

Application Note

Monitoring Particulate Emissions of Dryers with Sintrol's S303 Dust Monitor

Process Description

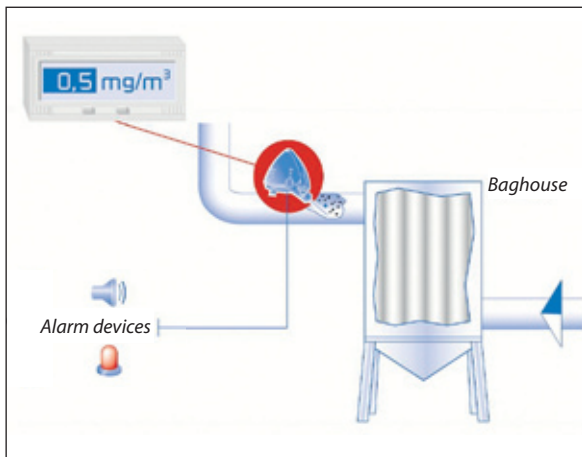
The emulsion containing a chemical compound is sprayed into a dryer. Water in the emulsion evaporates producing a fine powder and steam. The resulting mixture of steam, air and powder flows from the chamber into a filter where the powder is collected. The air and steam separated from the powder in the filter are emitted to the atmosphere through a duct. Only very small quantities of the powder are carried over

in the steam/air stream to atmosphere. In addition, process upsets can result in larger quantities of particulate being lost up the stack. This is undesirable due to concerns regarding product loss, environmental emissions and increased clean up costs. The S303 with high sensitivity and fast response time is installed after these filters to minimize this product loss.

Benefits

The following process benefits were obtained as a result of using the information from the S303 Dust Monitor:

- Reduced product loss from process
- Emission incidents minimised
- Reduced clean-up costs associated with incidents
- Credible data gathered on environmental compliance
- Reduced emissions
- Minimised filter maintenance and replacement

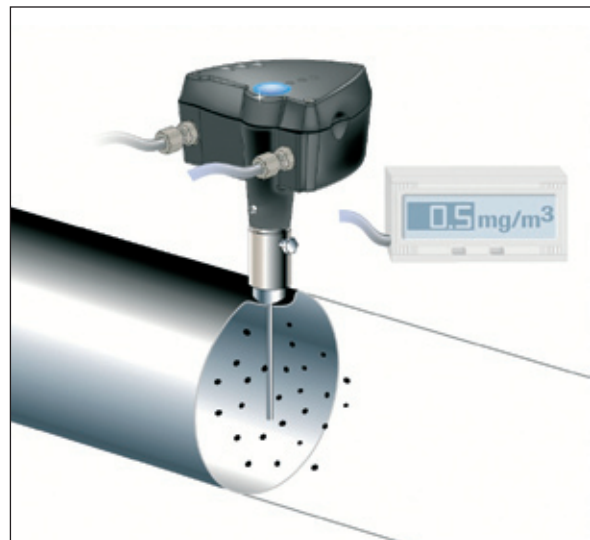


Broken bag detection in filtration systems

Typical Examples

Typical examples include:

- Cement manufacture
- Chemical processing
- Metals industry
- Foundries
- Pharmaceutical industry
- Mineral drying
- Fertilisers
- Wood processing
- Food and tobacco
- Rubber compounding
- Animal feed processing
- Power plants
- Waste incinerators
- Pulp and paper



S300 series dust monitor installed

Distributor:

