

DOWNLOAD A FREE COPY OF
“ADVANCES IN THE DETECTION
OF SMOULDERING FIRES IN SPRAY DRIERS”
AT FIKE.COM/WARNEX

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Smouldering detection system



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The Problem:

Smouldering materials ignite fires and dust explosions

Fires and explosions are a major threat in equipment used to manufacture or store combustible powders. Especially in drying and milling applications where the necessary ingredients for a fire - fuel and oxygen - are abundantly available. All that is needed to initiate the fire or explosion is an ignition source. Smouldering is one of the most common ignition sources of fires and dust explosions in industrial processes. Unfortunately it is also one of the most difficult to prevent by controlling process conditions or by making modifications to the equipment.

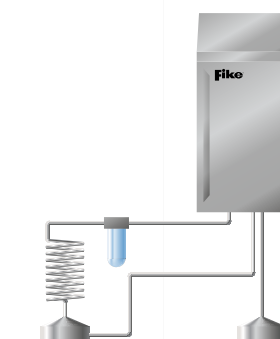
The Solution:

Early detection to prevent fires from developing

Carbon monoxide (CO) is a standard gas created during the early combustion of organic materials and a well-known marker of a smouldering reaction. Smouldering detection by CO sensors and smouldering removal at an early stage is an effective method in preventing fires and explosions. The WarnEx™ system typically consists of multiple 'Sampling and Detection Units' (SDU's) placed on each air inlet and outlet. CO gas, created by smouldering, will be detected by the WarnEx™ SDU placed on the main air outlet of the process. In order to filter out nuisance CO entering the system from the outside additional SDU's are placed on each air inlet. The WarnEx™ control unit processes the signals from the SDU's and alerts the process operators and safety systems in case smouldering material is present inside the process.

Primary Application
Dryers and mills

Industries
**Food & Beverage • Power
Chemical • Pharma**



Sampling and Detection Unit
located on the process



Control unit
located in control room

Why WarnEx™ ?

The WarnEx™ provides a reliable detection of smouldering which is a precursor stage to a fire or dust explosion.

1. WILL ALWAYS WORK

- Proven in use sensor technology
- SIL2 certified

2. NO FALSE ALARMS

- Self monitoring sensor technology designed for industrial applications
- Stray CO nuisance elimination

3. LOW COST OF OWNERSHIP

- Easy to install
- Easy to use and maintain
- Simple system, few components

4. FAST REACTION TO THE ONSET OF A FIRE

- Multiple sensors
- Short sampling lines

5. EASY TO EXTEND

- Scalable system architecture

6. PROCESS AND SAFETY MANAGEMENT

- Integrates with automatic fire suppression system
- Event analysis through datalogging and visual trending
- Complete system status on user panel

If a powder sample is provided, Fike can demonstrate the system's effectiveness through laboratory and large scale testing.