

Brainstorm: Disaster Prevention (Part I)

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The *Food Manufacturing* Brainstorm features industry experts sharing their perspectives on issues critical to the overall food industry marketplace. In this issue, we ask: From dust explosions to gas leaks, food companies must mitigate various safety risks every day. What solutions can food manufacturers put in place to prevent potential disasters and increase employee safety?



Combustible dust is one of the most destructive hazards in the food manufacturing industry. Your facility may be large and complicated or your facility may be small and simple. If you process powders, resize solids or dry foods, odds are you do have combustible dust hazards. The National Fire Protection Association (NFPA) has a list of standards that can be used to help mitigate these hazards, including:

- NFPA 61, Standard for the prevention of fires and dust explosions in agricultural and food processing facilities.
- NFPA 69, Standard on explosion prevention systems.
- NFPA 652, Standard on combustible dust (proposed standard).
- NFPA 654, Standard for the prevention of fires and dust explosions from the manufacturing, processing, and handling of combustible particulate solids.

Additionally, Occupational Safety and Health Administration (OSHA) has a

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Combustible Dust National Emphasis Program to help companies meet current regulations. Within many of these standards and regulations are references to spark detection and extinguishing systems.

Spark detection is a preventive measure against fires and dust explosions. Food processing, including drying, shredding, hammer milling, granulating, mixing & blending and pelletizing can often cause sparks and embers, which are typically the ignition source for fires and explosions. The spark detection system is designed to detect these hazards and extinguish sparks before they reach dust collectors, storage bins or other parts of the process. Infrared sensors detect spark, embers or hot particles and trigger countermeasures to extinguish or divert the hazards within milliseconds.

Food process industry professionals know that when a technology is factory mutual (FM) approved, it has undergone extensive testing to ensure it delivers on its promise and is reliable. When choosing any type of industrial safety system, one should consult with the supplier to ensure that their equipment meets the highest industrial safety standards.

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