

Ending Cross-Contamination

BINMASTER FLOW DETECTOR FINDS SOURCE OF WRONG FEED INGREDIENT

Problem

Complying with the Food Safety Modernization Act (FSMA) is a requirement facing producers of human food and animal feed. As part of the regulation, feed manufacturers are required to put in place preventive controls to protect against cross-contamination.

One feed manufacturer was concerned about the potential for unauthorized mixing at a potential contamination site, since additives that are helpful to one species may be detrimental – or even deadly – to the health of another.

Solution

The feed manufacturer contacted **BinMaster Level Controls**, Lincoln, NE (800-278-4241), an ISO 9001-certified company that designs and manufactures solid-state point and continuous bin level indicators, control systems, and sensing devices used while storing or processing powders and bulk solids.



Photo shows a feed mill distributor where product cross-contamination potentially could occur. The placement of a BinMaster Flow Detect 2000 single-piece flow detector ensures product flow has stopped completely. Photos courtesy of BinMaster.

BinMaster suggested that the feed manufacturer try its Flow Detect 2000 single-piece flow detector, a flow/no flow detector that houses both its remote sensor and control console in a single NEMA 4X enclosure. The Model 2000 device is a recent upgrade from the BinMaster Flow Detect 1000, in which the two main components were separate pieces.

The Flow Detect 2000 utilizes microwave Doppler radar technology, which can pass through a variety of materials to detect products inside an encasement. It includes a switchable filter that reduces the effect of vibration and ensures the detection of moderate- and fast-flowing materials.

A single analog relay output communicates flow or no flow status to a PLC and has the option of using both NO (normally open) and NC (normally closed) contacts. LED indicator lights inform the end user of the device's status.

An important benefit of the Flow

Detect 2000 technology is that it can prevent cross-contamination by ensuring that flow has stopped before a new material is introduced into the flow stream. Thus it can help prevent potentially dangerous and expensive regulatory issues under FSMA. It can be designed for use in Class II, Division 1, Groups E, F, and G dust hazard environments.

The feed manufacturer installed a Flow Detect 2000 unit at several locations around the feed mill. While installed on a distributor utilized for metering out feed ingredients from several square bins, the sensor discovered the feed additives flowing through a spout after the stream was supposed to have stopped. The problem was due to a faulty slide gate, which the feed manufacturer repaired.

As a result, the manufacturer purchased another 30 BinMaster Flow Detect 2000 single-piece sensors and installed them throughout the feed mill.

Ed Zdrojewski, editor



BinMaster Flow Detect 2000 single-piece flow detector.