

Eriez E-Z Tec metal detector



BY RAY SPURGEON

## Tasty Technology

Seasoning manufacturer eliminates contamination effectively and efficiently with metal detection and separation technology

**F**or the past six years, Copenhagen, Denmark-based Chr. Hansen, a manufacturer of blended seasonings, has operated a plant in Elyria, Ohio. There, the company manufactures custom flavor blends for a variety of food manufacturers, including Tyson Foods, Frito-Lay, Shearer's Chips and Freshmark.

METAL DETECTION

The company is part of the Chr. Hansen Group, which develops and produces natural food ingredients, pharmaceuticals and diagnostics for specific allergy disease management and biotechnological products for the human, animal and industrial markets.

**Tramp metal is unwanted metal in the product stream, a common quality control concern for all process industries. That's when the company began exploring metal detection and separation technology.**

To create their custom seasoning blends, however, the company utilizes a large quantity of raw ingredients, which constantly flow into the plant from various sources.

For example, Chr. Hansen's makes a proprietary seasoning blend for Frito-Lay

Funyuns Onion Flavored Rings. The raw materials, like the onion ingredient, can come from just about anywhere — India, Israel and local Ohio farmers, etc.

In fact, Chr. Hansen uses between 3,000 and 4,000 different raw materials to manufacture its custom seasoning blends. This makes maintaining superior quality an ongoing challenge. And since Chr. Hansen's highest priority is product consistency and quality, potential problems of this nature are addressed proactively.

One particular quality concern for Chr. Hansen was "tramp metal" contamination that could possibly enter the product stream from any one of the thousands of raw material ingredients. Tramp metal is unwanted metal in the product stream, a common quality control concern for all process industries. That's when the company began exploring metal detection and separation technology.

### Application Analysis

Since the feedstock could be contaminated, metal detection at the input point of the Chr. Hansen process seemed an appropriate safeguard. It stood to reason that even if the contamination did not necessarily damage process equipment, product that would eventually be rejected by detectors at the output side could result in much processing cost wasted as a result of undetected contaminated feed.

However, a careful evaluation of the application and potential implementation costs by application engineers determined that, with nearly 4,000 ingredients flowing into the process stream, checking all incoming raw materials would prove time-consuming, costly, tedious and, ultimately, counterproductive. Metal contamination could potentially come from anywhere — raw materials, shipping and packaging, or even Chr. Hansen's own processes.

As a result of the evaluation, Chr. Hansen determined that employing

