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Interceptor metal detectors save pork producer's bacon

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Four Interceptor metal detectors from Fortress Technology has enabled a North American pork producer to meet its new fast-food customer's tough requirements for accurately and reliably inspecting high volumes of bacon. Thanks to the Interceptor's increased sensitivity and simultaneous multi-frequency innovation, the producer has not only satisfied its client's stringent food safety specifications, it has also eliminated false rejects by isolating product effect.

When a leading pork producer won a new contract with a major fast-food chain, investment in a higher-quality metal detection system was crucial to meeting its client's exacting standards. The company's existing inspection equipment was struggling to cope with the notorious product effect common with challenging meat products that are wet and highly conductive.

Salty products such as bacon can be especially challenging to inspect. Salt increases the conductivity of the wet product, which impacts a metal detector's ability to distinguish between any metal contaminants, including stainless steel, that may have been introduced during processing and the false signal given by the combination of product attributes. These different factors can lead to false readings and consequently higher product waste.

Regional Sales Manager at Fortress Technology Eric Garr relays, "Product effect can make it difficult for standard detectors to tell the difference between the signal generated by the bacon itself and any signal given off by a metal contaminant. As well as resulting in a high volume of false rejects, there's greater potential for real contamination to be missed."

Size sensitive in one pass

With the fast-food chain demanding more stringent sensitivity specifications, the bacon producer sought a solution to conquer product effect once and for all. User friendly features that support quick set up are always highly valued by this busy production plant, notes Garr.

Inspecting retail and bulk packages of bacon ranging from between 10 lbs. and 15 lbs., single pass product learning and automatic calibration means that operatives are not having to constantly reset and recalibrate the metal detector for the different pack sizes. "These automated technology features make the manufacturing process much simpler for production staff and significantly reduces the time spent introducing and checking operating protocols," adds Garr.

The Interceptor works by carrying out a real-time analysis of a low-frequency and a high-frequency output signal simultaneously. Although the size of metallic contaminant that's detectable depends on the product size and temperature, as well as the aperture size, typically the Interceptor can improve detection levels for stainless steel by as much as 100 percent in contrast to standard metal detectors. The result is a more reliable and accurate reading regardless of size, shape and orientation of metal particles.

Additionally, a built-in Noise Immunity structure minimizes external electrical disturbances, further lowering the occurrence of false rejects.

The enhanced sensitivity, accuracy and cost efficiencies have more than satisfied the producer's new clients' exacting demands. Having invested in four new Interceptor, the pork plant continues to retain its solid reputation for quality and food safety.

"With the Interceptor, Fortress continues to safeguard some of the leading products and brands by challenging traditional detection expectations and ensuring product effect does not compromise inspection performance or operational efficiencies," says Garr. "The combination of 100% increased metal detection sensitivity, elimination of false product rejects and easy to use automated features has reassured our client, their customer and consequently millions of fast food consumers. Everyone is happy!"