FORTRESS TECHNOLOGY

New Interceptor conquers product effect in meat inspection

Conquering the longstanding challenge of 'product effect' caused by moisture and minerals, the Interceptor from Fortress Technology is specifically designed to inspect conductive applications including meat and fish, helping to eliminate false rejects.

Increasing stainless steel detection by 100%, in contrast to recent metal detectors, Fortress's latest technology splits the frequency signals. This means that the machine can clearly differentiate between the signal generated by the product as a result of moisture or mineral content (for example salt that is prevalent in bacon) and any metal contaminant; putting a stop to a potential stainless steel signal being 'swamped' by product effect.

The sensitivity of the Interceptor means it can pick up metal contaminants half the dimensional size previously identifiable. Detection depends on the size, shape and orientation of metal particles. Although a test sample sphere is not a real world contaminant, halving the test sample sphere size to 0.5mm equates to picking up a wire length contaminant of 25mm.

On raw meat processing lines, products are exposed to a variety of processes. Although stainless steel contamination in products is a rare occurrence, the metal is prevalent in industrial meat preparation equipment. Whether you are slicing cooked meats, mincing beef or handling raw meat which is a reactive product, the use of knives and meshes are widespread and this means that there is a risk of tiny fragments entering the production chain.

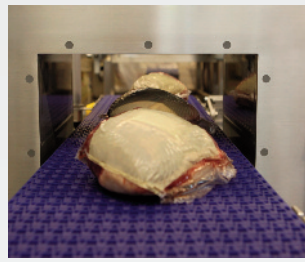
No background interference

The Interceptor builds upon the cutting-edge Simultaneous Multi-Frequency Technology introduced by Fortress some six years ago. This works by carrying out a real-time analysis of a low-frequency and a high-frequency signal simultaneously. Using an advanced algorithm the Interceptor is able to split the product and metal detection signals and then link the readings back together.

Compared to the traditional approach where specific frequencies would be tuned into, this new method means we can identify the product effect (most noticeable at lower frequencies) and eliminate it from the higher-frequency signal, where the potential effect of the metal is more prominent. For ease of use, the system learns and recalls the signature of any given product with just one pass.

Already available on Fortress's Phantom and Stealth models, this makes the manufacturing process much simpler for production staff and reduces the time spent introducing and checking operational protocols.

The combination of 100% increased metal detection sensitivity, reduced false product rejects, single pass product learning, and straightforward upgrades go a long way to boosting overall equipment effectiveness and quality assurance for food processors and manufacturers, as well as safeguarding consumers.



Being IP69K rated, the new range is resistant to water ingress, ensuring long- term reliability and performance heavy washdown meat processing environments.

Made to order in the UK, Interceptor units can be customised and deployed in different checkpoints on the meat production and packing line. For products with minced meat, such as sausages, pipeline configurations can also be incorporated.

Moving ever closer to the performance of X-ray but at a much lower capital investment, the Interceptor also reliably detects the range of ferrous and non-ferrous metals, including aluminium.

With the Interceptor, producers can challenge traditional expectations when it comes to detection inside metallised film. Many meat applications, especially bulk cuts, pose a challenge to X-ray because of the variation in density. Here, the Interceptor will be the only sure option for the detection of metal contaminants. ■