

The future of digital quality control in the meat sector

While metal detectors are an integral first step in food safety, proper management with regular testing is vital to ensure optimum protection is achieved. To provide food manufacturers within the meat sector with a reliable, accurate and auditable testing procedure, Fortress Technology has unveiled the latest version of its Halo digital testing.

by Phil Brown,
Managing Director,
Fortress Technology Europe.
www.fortresstechnology.com

Available on Fortress' full range of digital metal detectors, including its pipeline systems for meat and poultry applications, the self-check software is a failsafe and cost effective solution to ensure your machine is meeting quality control standards.

To successfully comply with the Global Food Safety Initiative (GFSI) and Hazard Analysis and Critical Control Point (HACCP) production standards, it is important for meat processors and packers to have an appropriate and effective testing system established for the audit process of industrial metal detectors.

Depending on the criteria set out by each retailer Code of Practice (COP), tests are

Testing should be carried out in the centre of the aperture where it is least sensitive. However, this presents challenges in products such as frozen meat. Halo overcomes this by generating signals to disturb the magnetic field in the centre of the metal detector's aperture.



COP compliant tests can be activated automatically, remotely, or manually via a sophisticated and easy-to-use, single swipe touchscreen.

typically scheduled throughout the day at hourly intervals to confirm the inspection system is working as it should be.

However, regular checks that are carried out manually can be a drain on resources. This is particularly true when testing metal detectors, which is made difficult due to access, machine position, product flow and environmental conditions. This is where Fortress' Halo digital testing comes in.

Time is money

Guaranteed to save food manufacturers time and money, Halo automatically and independently checks for all metal materials – ferrous, non-ferrous and stainless steel. The system also checks the performance of the reject system, forming an important part of manufacturing due diligence.

Available for throat, gravity and conveyor style inspection solutions, the latest Halo software release from Fortress is also beneficial when inspecting processed and raw products such as sausage, pate, chicken pieces and fish fillets on a pipeline metal detector. In addition to reducing operational costs, digital testing also reduces waste and product rework.

Up until now, metal detectors had to be manually checked every hour for QC

compliance. However, the cost of running these tests by hand on such a regular basis can be high. Rather than relying on operatives to schedule, perform, document and submit inspection checks, Halo digital testing software automates the timely aspects of the process, allowing food manufacturers to tackle this drain on resources and save thousands of pounds each month.

Additionally, reducing the frequency of manual testing helps to eliminate the risk of human error and workplace injury at critical control points on a meat manufacturing line.

Manual tests on metal detectors are challenging. They can be difficult to reach, need two people to complete the test and incur production loss while each test is completed.

Additionally, the recommended test point on a detector is the very centre of the aperture where the signal is least sensitive. However, it is impossible on a pipeline detector, for example, to manually place a test sample into the centre of the detector, which can result in data records showing inconsistent signal variations.

When specifying Halo on a Fortress metal detector, the QC test is completed with 100% accuracy by generating signals to disturb the magnetic field in the centre of

Continued on page 20

Continued from page 19

the metal detector's aperture. The check result shows the size to be exactly the same as if a real piece of metal passed through the detector.

As an external device, Halo gives manufacturers a true measure of how each metal detector is performing, removing the risk of human error while providing a reliable audit trail. This detail also means that production does not stop while the test is in progress, and will only stop the line if the metal detector or reject checks fail.

Managing and maintaining important data

There are two major components of a metal detector GFSI audit: the physical inspection of the machinery and a documentation review. Routine testing results are a significant part of this. By utilising Industry 4.0 principles, Halo digital testing gives meat firms the flexibility they need to manage and maintain important data.

Users determine how often the system completes QC tests and how the validated test data is digitally saved for audit purposes.

Tests and records can be activated automatically, remotely or manually via a sophisticated and easy-to-use, single swipe touchscreen. This permits the user to bring



Regular, manual checks on metal detectors can be a drain on resources, particularly pipeline metal detectors that inspect raw meat.

to the foreground the most relevant parameters to their operation.

Meeting all audit requirements

By incorporating all of these innovative features, Halo digital testing captures all the data required to meet audit requirements and guarantee QC compliance and control.

Payback for a new Fortress metal detector fitted with Halo digital testing is typically less than 12 months.

Utilising the latest digital software advancements, food manufacturers including those in the meat sector can be assured of a failsafe, reliable system that guarantees test data on food processing and packing lines is accurate, consistent and reliable. ■