Product inspection tips for getting ahead of the competition

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With so many product inspection systems available for the food supply industry, manufacturers and food processors need to know which system best meets their requirements and how to utilise it to its full potential. These seven tips will provide you with expert advice for choosing and using x-ray systems and equip you with the necessary knowledge on how to get the most out of this worthwhile investment.

● **Get ahead of the competition with an effective product inspection strategy**

Within the food processing and manufacturing industry, it is vital to identify and remove foreign bodies before products reach the customer. A comprehensive product inspection strategy allows you to protect your customers, the end consumer and your brand reputation by ensuring that products are free from contamination, and reduce the risk of costly product recalls.

In order to know what type of product inspection technology you should select and where it should be implemented it is advisable that you follow the principles of Hazard Analysis and Critical Control Points (HACCP) throughout your entire production line.

Firstly, you must conduct a hazard analysis audit to identify the points most vulnerable to contamination as well as the greatest contaminant threat(s). If the potential risk to your product is from metal, rubber, plastic, glass and/or even calcified bones, then x-ray technology is the recommended product inspection technology choice.

Once you have selected the correct inspection technology, then you need to establish your Critical Control Points (CCPs) i.e. points of weakness on your line, apply corrective actions and instigate data management processes.

Eagle's brand new Tall PRO XSDV, a dual view x-ray inspection system for packaged products complete with a special new reject function.

Following the HACCP principles will not only help prevent contamination throughout your production line but will also aid compliance with the majority of food safety guidelines which are now based on HACCP. These include the British Retail Consortium (BRC) Global Standards, International Featured Standard (IFS) and the US Food and Drug Administration (FDA).

Manufacturers that comply with food safety standards and retailer guidelines will be eligible to export their products to lucrative markets and well-known stores across the globe.

● **Future proof your x-ray system purchase**

When you decide to invest in a new product inspection system, the potential scenario of system modifications should always be taken into account.

Modern x-ray machines are engineered with a high degree of compatibility and are therefore capable of handling a diverse range of products of different shapes and sizes.

Furthermore, some x-ray systems allow for upgrades, enhancements or the implementation of additional features. Today's x-ray technologies are versatile and able to inspect a variety of packaged products including multi-textured, wet and dry foods, and small to medium and bulk sized products, rigid containers, glass jars and metal cans. In short, there are no limitations as to the type of products that x-ray can inspect for contaminants.

● **Additional x-ray features can further protect your profits**

Modern x-ray technology can offer you diversity and flexibility, help you to save time, money and improve your brand reputation by safeguarding your products.

Today's product inspection technology, such as x-ray, offers additional benefits to contaminant detection. For example, the ability to perform a wide range of in-line quality checks such as counting components, identifying missing or broken products, inspecting seal integrity and checking for damaged packaging.

By assessing fill levels, the system also helps you to avoid over- or underfilling of your products, leading to the reduction of costs on overfilled products and thus wastage due to inaccuracy, as well as avoiding noncompliance with contents labelling requirements.

Current regulations relating to net content declarations are not stringent with little guidance from regulatory agencies on

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enforcement criteria. However, suggested reforms to legislation such as the reinforcement in checking conformance to net contents labelling requirements by the Federal Trade Commission (FTC) highlight the importance of having multi-functional systems in place which facilitate compliance with such legislations.

Food safety standards aside, customer loyalty and trust are highly dependent on the integrity of food products and the additional benefits that x-ray technology can provide can help safeguard this.

● Protect your brand reputation and document production inspection processes

Product safety standards are being heightened worldwide and it is therefore essential that you meet stringent industry standards.

Manufacturers that seek to expand their business and strengthen their export capabilities must comply with retailer food safety guidelines as well as regional and international regulations.

International umbrella programs, such as the Global Food Safety Initiative (GFSI), help producers export globally by harmonising food safety standards, making it easier for companies to comply. As a result, food safety requirements throughout the globe are becoming increasingly similar.

New technologies offer manufacturers and processors the ability to collect and document data.

Vital operational processes are logged with the collection of datasets such as historical data from networked product inspection systems.

The data is then stored in a database on a server that can be easily accessed remotely with a statistical software that can retrieve valuable information, such as trend-lines, product reports or bar code specific information, enabling you to act efficiently and improve your operations.

Advanced technology with documenting capabilities can serve as proof of quality and integrity of the product and provide due diligence in the event of a product recall, when it will then be necessary to prove that food safety precautions were taken during the processing or manufacturing stages.

● Reduce cleaning time by selecting a robust x-ray system

Cleaning x-ray machinery does not have to be a pain. Systems which make this process as easy as counting to three are available. In the food processing and manufacturing industry, maintaining high hygiene standards is essential. Machines therefore need to be very robust to withstand chemical cleaning processes in harsh wash-down environments, as found in dairy or meat processing facilities.

The wash-down cycle can be very time consuming due to the difficult removal of cumbersome louvers, however specifically designed machines can help you make the process of cleaning and maintaining much simpler and faster. Some systems, for example, are now constructed with thick, stainless steel plates, cut and welded together, to ensure easy cleaning and improved sanitisation, eliminating food debris collection points.

You should also look to adopt x-ray systems where the conveyor belt easily lifts up through the quick release of a lever. This significantly benefits operators as they can quickly access crucial areas of the machine internals, an operation which can take up to 20-30 minutes with other systems, leading to the undesired downtime, reduced productivity and thus financial setbacks.

● Ensure you get the right level of service support for your business

The service your business provides to customers is also dependent on the service your machine supplier provides to you. Therefore, you should assess the needs of your business based on your product throughput: do you need local support during working hours, 24x7 support, remote online maintenance and/or how quickly would you need the response to be?

Prior to reactive support, you must also consider proactive support, for example a Preventative Maintenance Agreement will help you ensure that your equipment is maintained in its best operating condition, pre-empting any potential future service issues. In addition, working with a reputable partner can ensure that you and your staff

are trained properly and get the most out of your system.

From basic knowledge on how to use and maintain the machine to radiation safety training, technical service agents should be able to provide you with support and guidance relating to your needs.

● Don't forget about spare parts

In the unlikely event that something was wrong with your x-ray system, would you know what to do and where to get the spare parts from if needed?

Before you invest in a new x-ray system, always take the sales and service network of the technology provider into account – a global network of distributors, support and maintenance specialists offers you a face-to-face contact and ensures that you get technical help and spare parts for your machine easily and quickly wherever you are in the world.

In the end, the costs of implementing and maintaining an effective x-ray inspection system are much lower that the potential costs of product contamination. Can your business really afford to be without one? ■

Eagle Product Inspection is a pioneer in advanced x-ray inspection and fat analysis systems, delivering robust, market leading technology and expertise to food and beverage processors and manufacturers around the world. The Eagle Product Inspection line of x-ray inspection systems evaluates in process and finished products for contaminants such as metal, glass, stone and bone, while also having the ability to analyse the fat content of meat, count components, check seal integrity as well as measure mass and assess fill levels. With its headquarters in Tampa, Florida, and local offices across the globe, Eagle Product Inspection machines meet today's Hazard Analysis & Critical Control Points (HACCP) certification requirements. Eagle and its partners work in close collaboration to ensure that food and beverage manufacturers and their customers in turn can rest assured that the quality of every product is upheld.