



Case Study

WHAT PRICE BRAND INTEGRITY?

Given the considerable cost differential between the two inspection methods, when food manufacturers and processors weigh up the relative benefits of metal detectors and x-ray inspection systems, there have to be pretty convincing reasons for choosing the higher cost option of x-ray. Yet, according to global quality inspection specialist Loma Systems, companies with premium brands to protect are increasingly taking the x-ray route.

A decisive factor appears to be that, while metal detectors do exactly what they say they'll do on the tin, today's sophisticated x-ray machines not only detect metal and many other potentially hazardous contaminants, but can inspect for defective product too, even counting for missing items.

Let's look first at the detection capabilities of x-ray technology. In the complex processing environment of the 21st century, forget metal - what about ceramic, glass, plastic, and stones, to list just a few of the other potential hazards? Chris Williams, sales & marketing director for Loma, asserts that, "However many precautions food manufacturers and processors take, however strictly they comply with



food safety procedures, it is impossible to state with absolute certainty that there is no possibility of contaminants infiltrating the production process. For this reason, many Loma customers believe a foolproof quality inspection system is vital, not just to comply with HACCP procedures and prove due diligence, but to protect the integrity of the brand."

This last point is not lost on a growing number of firms in the ready meal, snack, confectionery and dairy sectors, where x-ray detection systems are becoming more prevalent, particularly when the brand is positioned at the upper end of the market.

When products are made with only the finest of ingredients and thousands of pounds spent on glossy adverts promoting an image of luxury and quality to justify premium pricing, manufacturers realise that they cannot afford their product to be less than perfect every time.

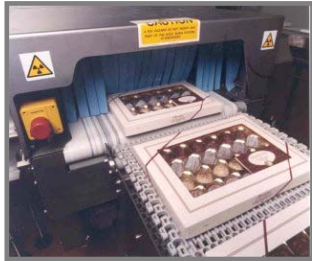
Any food processor will confirm that stainless steel is one of the most common contaminants as, all too frequently, minuscule parts of the production line itself manage to find their way into the product mix. But, unlike x-ray machines, conventional metal detectors cannot pick-up non-ferrous metals such as stainless steel when the product is wrapped in foil and, in an increasingly litigious society, some manufacturers consider this a risk not worth taking.

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Perhaps the greatest advantage of x-ray machines over metal detection inspection systems though is their ability to check for all these contaminants in products which are wrapped in foil or metallised film packaging. Metal detectors cannot detect contaminants through foil packaging and find it extremely difficult when the product is wrapped in metallised film. This factor grows in importance as brand image - a premium product - and consumer perceptions - freshness - are driving the trend for a growing number of products, from bread to confectionery bars, to be packaged in this way.

But, as you'd expect, x-ray machines have to work hard to justify the significant capital outlay and for many Loma customers it's the 'added value' factor, such as their ability to count product, that swings the decision.

Imagine how you would feel on buying a luxury box of chocolates only to find on opening it that you were one chocolate short of an assortment? Exactly. To prevent customers feeling short-changed, Thorntons, the leading high street supplier of quality chocolate and confectionery, installed a Loma AXIS x-ray machine on one of its lines in September 1999.



This has been programmed not only to eliminate product imperfections and contaminants but, just as importantly, to count the number of individual chocolates in each selection box.

Having positioned themselves at the luxury end of the market, Thorntons as a company recognised the value of x-ray technology in ensuring that customers enjoy a perfect experience every time.

Before going down the x-ray route, the company relied on conventional metal detectors but this had shortcomings, as Thorntons engineering manager Neil Hardy explains, "Many of our selection box chocolates are foil wrapped so we could only check for defects before product was wrapped and boxed. Now, with x-ray, we can inspect the chocolates a second time before they come off the production line."

Another advantage is the ability of the AXIS to detect very small contaminants. "While a metal detector can probably get down to quite a small size, this is only possible with a small aperture and we need a large aperture to accommodate a selection box," explains Neil. In fact, that's one of the reasons why Thorntons chose to buy an x-ray machine from Loma. "They were the only company willing to build a machine wide enough for our needs. All the others were simply too narrow to get our chocolate boxes through."

He is pleased with the machine's performance, "Since the AXIS was installed we haven't actually found any major instances of contamination, which from my point of view is a good thing as it gives me faith in our production processes."

While some of Thorntons production lines operate 24 hours a day, six days a week (one day is set aside for cleaning), the Loma AXIS line works a 16 hour day, five days a week and Neil Hardy reports that the machine's performance to date has proved the manufacturers' claims of reliability. An important point when you consider that Thorntons' output is around 200 tonnes - roughly two million chocolate treats - every week.
