

SOWING THE SEEDS FOR HIGH SPEED CONTAMINANT REJECTION

Levantine specialises in the baking, caramelising and seasoning of edible nuts and seeds. A second Stealth Gravity System from **Fortress Technology** is ensuring all contaminants are removed

When edible nut and seed processor Levantine wanted to be sure of installing precise and reliable gravity metal detection on a bulk bagging line, with a particular focus on its high-speed reject capabilities, it opted for the latest version of a system it had installed five years earlier – the Stealth Gravity system from Fortress Technology.

Levantine first acquired a Stealth Gravity metal detector for its products in 2013. “We installed a further line, and wanted to obtain the same level of reliability and accuracy,” said managing director David Danil.

“We are BRC (British Retail Consortium) certified,” he explained. “As a part of that, we have HACCP (Hazard Analysis and Critical Control Point) assessments, with metal contaminant detection high up on the list of control points. Sensitivity levels are also hugely important, and the Fortress equipment exceeded those requirements too.”

While different varieties of nut still account for the majority of Levantine’s volume, seeds are becoming an increasingly important part of the business.

The company caters for retail portion packs, including own-label products for many of the major multiples. Yet, the

majority of its business involves the bulk supply of nuts and seeds to other food processors, including snack brands, chocolatiers and ice cream manufacturers. Bulk bags are filled in weights of 12.5kg, 15kg, 25kg and even 1 tonne.

A key question for Levantine was the speed and precision of the reject system, which is clearly a critical issue with valuable free-flowing product in freefall. It is vital that any contaminant is accurately targeted and removed, but this needs to happen without removing excessive amounts of uncontaminated product with it.

“In terms of the reject mechanism, we knew that this system did the job for us,” said Danil. “The speed is adjustable via a

pressure-reducing valve, depending on the weight and speed of the product.”

One concern for Levantine before installation was that vibration in such a busy manufacturing environment, with product pouring vertically through the aperture, might adversely affect the accuracy of the machine. “The fixing needs to be solid, since anything that shakes the metal detector affects the reading and its accuracy,” he said.

Kevin Shackell, sales manager at



Fortress, adds: "The reject mechanism, in particular, is powerful and precise, so the metal detector needs to be securely held in place to avoid physical interference. But it also needs to be effectively isolated to avoid electrical interference."

The need to factor in 'product effect' is important in many food categories, including nuts and seeds, especially where salt, oils and other seasonings can mimic the presence of metal contaminants. "The impact of this 'wet' product effect has been minimal for us with the Stealth Gravity detector," said Danil. "The machine settings can be adjusted to read the product accurately."

He added: "Typically, we're only likely to get a false reject where there's a clump of product, salt or herbs, for example. It's not a big issue for us."

Levantine operates a busy manufacturing site in Hayes, West London, and produces in excess of 10 tonnes of edible nuts and seeds daily.

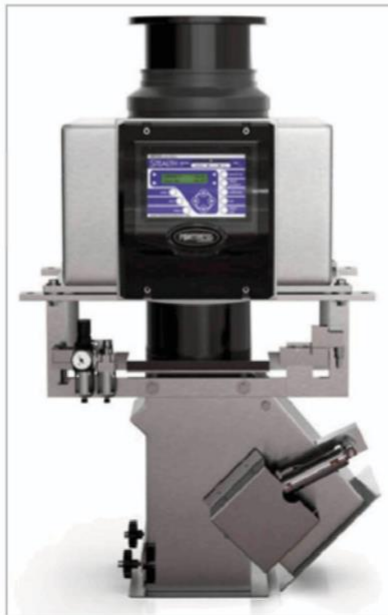
To save on space, the Stealth metal detector is located midway between the first floor of the Levantine factory and a mezzanine. It is controlled from a remote panel at operator level, with product falling from a hopper to the weighing and bagging station below.

Stealth offers the high sensitivity which comes with Digital Signal Processing technology, allowing the detection of ferrous, non-ferrous and stainless steel contaminants, even down to the smallest dimensions. Data collection is integral to the system, with Contact Reporter

Software helping to ensure HACCP compliance.

"A number of features set us apart at Fortress," said Shackell. "One of these is our 'Never Obsolete' guarantee. It means we will always be there with support and upgrades wherever necessary. A second is our readiness to customise systems and configure them to fit in with specific needs and plant layouts. Of course, if we can plan them from an earlier stage, as was the case with the second Stealth system at Levantine, that makes the project easier to manage and to optimise."

Fortress Technology
www.fortresstechnology.co.uk



Levantine recently installed its second Stealth Gravity Metal Detector on a new bulk nuts and seed production line

