



Pork Processor Achieves Zero Downstream Foreign Material Findings with PPO's Waterfall System

A leading multinational meat processor, specializing in prepared products for the global market, faced ongoing challenges in managing foreign material (FM) contamination risks for its high-profile brands. Recognizing the critical need to safeguard product quality and its brand reputation, the company mandated a multi-hurdle approach to enhance foreign material detection and prevention in their plants. This case study examines the successful implementation of PPO's Waterfall System in one of their newest production facilities.

Background

This processor takes great pride in producing high-quality products across their brands. X-ray and metal detection were not effectively addressing their foreign materials issues, so the company sought additional technology to enhance their detection capabilities. As a result, the company decided to expand its multi-hurdle approach to include a vision-based technology that could effectively detect the materials that were being missed by both the X-rays and the metal detection system. They considered several options and tested a few different technologies. When they opened a new plant processing pork trims into further-processed products, they decided it was time to implement their expanded multi-hurdle approach.

The Solution: PPO Smart Imaging

After evaluating several different technologies, the processor chose to implement a PPO Smart Imaging System in the Waterfall Configuration. The system was installed at a critical control point – the last stage of the production line before the trims were ground and mixed into the final product. This strategic placement ensured that all incoming raw materials were inspected in batches by the supplier, allowing the processor to charge back for the contaminated product. PPO's Smart Imaging System, with its sophisticated combination of hyperspectral imaging, visual inspection and artificial intelligence (AI) provided the comprehensive detection capabilities this processor was looking for, across a wide range of contaminants.

Achieving Zero Downstream Foreign Materials

This processor has an exceptional FSQA team that carefully tracks many aspects of production, including foreign materials findings. They implemented the PPO Smart Imaging System on one of two parallel lines in their new facility, about 6 months after the plant opened. Before the PPO system was installed, the FSQA team identified that the two lines had very similar levels of foreign materials findings.

After implementing a PPO Smart Imaging System on one of the two processing lines, the FSQA team continued to track downstream foreign materials findings on both lines over 12 months.

During that time, the line with a PPO system had zero downstream foreign materials findings. The line without a PPO system continued to have downstream FM findings at the same frequency as before.

The implementation of PPO's Waterfall System was a game-changer for this plant and changed the company's standard multi-hurdle design. By achieving zero downstream foreign material incidents since installation, the company has significantly enhanced its product quality and minimized waste on this line. The system's ability to detect and reject a wide range of contaminants, combined with its strategic placement within the production line, enabled the processor to establish a robust foreign material prevention program and reinforce its commitment to food safety.

The company has now installed a second system on the parallel line in this facility and has also implemented PPO technology in other plants.

Examples of PPO Findings in Line

