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CASE STUDY

Eriez® Xtreme® Metal Detectors Keep Chicken-Based Slurry Free of Contaminants for Pet Food Maker Cannon Holdings, Inc.

Despite a recession, the pet industry has seen continued growth in recent years as more people seek premium pet foods, luxury products and medical care for their pets. Expenditures were estimated to reach \$58.5 billion by the end of 2014 in the United States, according to the American Pet Products Association, with \$22.6 billion spent on food alone.

With such an upbeat industry forecast, the management team at Cannon Holdings, Inc. continually looks for ways to upgrade its processing equipment to benefit its parent company, Pet Poultry, an industry leader in pre-processed pet food. Cannon Holdings, based in Quakertown, Pennsylvania, has a 40,000 square foot facility that mainly produces chicken slurry used for their customer lines of dog and cat foods.

According to Dave Johnson, Plant Manager at Cannon Holdings, the company produces 80-100,000 pounds of slurry each day at the Quakertown plant. The slurry is processed from chicken carcasses that Cannon Holdings purchases from various suppliers. To complete the loop, Cannon Holdings is the main chicken supplier to Freshpet, based in Secaucus, New Jersey.

The company's high grade dog and cat food--free of contaminants--rightfully begins at the Cannon Holding's facility, which now includes an Eriez Xtreme® Standard Metal Detector along with an Eriez Xtreme® Liquid Line Metal Detector. The equipment detects any metallic particulates that otherwise could end up in final packaging.

"It was a good business practice to install the Xtreme Metal Detectors," Johnson recalls. "We figured we could stop a problem before anything happened. The Eriez detectors have the ability to pick up very fine pieces of metal and they are incredibly accurate. It really helps us improve our quality of product."

Positioning the metal detectors for optimum use

Chicken carcasses that arrive at the plant are first conveyed through an Xtreme Standard Metal Detector which features a 34" wide x 8" high aperture opening. This initial process helps detect and reject any stray bolts or larger pieces of metal before the carcasses are conveyed into a series of grinders.

The Xtreme Liquid Line Metal Detector acts as the "final defense" after the carcasses pass through the grinders and are churned into slurry, notes Johnson. The metal detector has a 5 ½" wide x 5 ½" high aperture opening plus a 4" diameter Kynar pipe with Tri-Clover ends.

"We don't want any metal shavings that come off the grinders to get into the product, so the Eriez Metal Detector was installed to make sure nothing is contaminated," he says. "The metal detector has an automatic discharge valve, so any metal found drops into a container for easy disposal."

Food processors use the Xtreme Liquid Line Metal Detector to detect the presence of ferrous, nonferrous and stainless steel contaminants in viscous products—such as the chicken slurry processed at Cannon Holdings. When metal is detected in the product flow, a reject signal is channeled to one of the available output relays. The output relay can be used to activate a ball valve, control a visual or audio alarm, or send a signal to a PLC. Complete systems from Eriez can be provided in pipe sizes ranging from one-inch (25 mm) to six-inch (150 mm) diameters.

The Cannon Holdings maintenance staff was able to install both metal detectors with minimal downtime along the rest of the processing line, Johnson recounts. The company worked closely with Eriez Representative Steve Hilliard of Penn Quip, Inc. based in Amber, Pennsylvania, for the initial set-up, product testing and final calibrations before going online.

"As soon as the Xtreme detectors were powered on, they worked perfectly," says Johnson. "There was really no adjusting needed after that. The training we received was very satisfactory and the touch-screen menus are easy to get around. They have been trouble-free since we installed them last year. We could probably triple the output (of slurry) and the metal detectors could still handle the load with no problem."

The Xtreme Metal Detectors are designed to work under harsh conditions and built for high-pressure wash downs. The constant flow of chicken carcasses and slurry inside the humid Cannon Holdings facility made the Xtreme a wise choice, says Johnson. "These units are very tolerant and hardly need any maintenance. We are able to wash them down and clean them out every day with no trouble. It's going to be very inexpensive to maintain."

Eriez is recognized as world authority in separation technologies. The company's magnetic lift and separation, metal detection, materials feeding, screening, conveying and controlling equipment have application in the process, metalworking, packaging, plastics, rubber, recycling, mining, aggregate and textile industries. Eriez manufactures and markets these products through 12 international facilities located on six continents. For more information, call toll-free (888) 300-ERIEZ (3743) within the U.S. and Canada. For online users, visit www.eriez.com or send email to eriez@eriez.com. Eriez World Headquarters is located at 2200 Asbury Road, Erie, PA 16506