Hershey Visitors Create a Safe Candy Bar

Eriez Manufacturing Co.

In the summer of 2010, worldwide candy maker The Hershey Company opened the doors to an entertaining and highly popular addition to Hershey's Chocolate World attraction in Hershey, Penn. Hershey's "Create Your Own Candy Bar" attraction lets visitors make a custom candy bar through a simulated production line.

Visitors can customize their bars using three of six ingredient choices (called inclusions) along the production line. Each dry ingredient flows through a feeder equipped with an Eriez Xtreme Rare-Earth (RE) Grate Magnet, specifically designed to catch any ferrous contamination before the dry ingredient is metered onto the candy bar.

Another RE Grate Magnet is positioned inside a seventh hopper that dispenses sprinkles. Additionally, one Eriez RE Tube Strainer Magnet is housed within the pipe supplying chocolate to the enrober, a machine that showers the inclusion-packed bars with a waterfall of liquid chocolate. Finally, one Eriez Grate Magnet is located inside a screener that processes recycled chocolate. In total, nine Eriez Xtreme RE Magnets are utilized in the production process. Two spare magnets are used to facilitate quality checks.

"The magnets are part of our master control plan for safety," explains Krista Cessna, Associate Staff Engineer at The Hershey Company and one of the key project engineers for the new attraction. "We installed the magnets to capture any hazardous metal that may come from an ingredient supplier or fall into the product through the manufacturing process. Detection of unusual metal events triggers a line shutdown or root cause analysis."

Interactive, Hands-On Experience

Hershey's "Create Your Own Candy Bar" attraction immerses visitors in an interactive, hands-on experience where they select their favorite ingredients, operate authentic factory equipment and design packaging for their custom-made

candy bar.

In the role of chocolate innovator, guests don factory aprons and hairnets, activate the machinery and design their custom packaging at an interactive kiosk. Guests can choose three of six inclusions, such as almonds, chocolate cookie bits, pretzels, crisp rice, toffee flavored soy bit and dark chocolate chips.

Once the inclusions are added, the personalized candy bars are drenched via the enrober in Hershey's Milk Chocolate. The bars can then be topped with sprinkles.

The entire Hershey's Chocolate World attraction — which also includes a free chocolate-making tour ride, 3D show and the Hershey Trolley Works — is the official visitors center of The Hershey Company and is the most visited corporate visitors center in the world.

Rare-Earth Grate Magnets: A Perfect Fit

A conveyor takes the candy bar into the inclusion area where the six feeder hoppers are positioned to meter out small amounts of the dry inclusions onto the candy bar. The Eriez 12" diameter Model P Grate Magnets were custom designed to fit down into the opening of each hopper and catch ferrous contamination as the ingredients are fed manually into the hopper, according to Cessna.

"We check the magnets at regular intervals during the day, so they need to be easily accessible so they can be cleaned quickly," Cessna says. "Eriez was able to design the magnets to a specified weight so our operators could lift the magnets out, check them and place them right back in."

While the magnets are there to pick up any tramp metal that may have come from the suppliers' ingredients or nuts or bolts that fall off an agitator, Cessna says the expectation is that no contamination will be present. "When the magnets are checked, we expect to see nothing," she states. "If they do capture something, we follow specific procedures that have been developed."

After the candy bar moves through the inclusion stage, it enters the enrobing process where the bar runs under a curtain of chocolate. A tube strainer magnet and a grate magnet are installed in the melted chocolate system to pick up any weak or fine contamination before the melted chocolate cascades onto the candy bar.

Sprinkles are spread over the candy bar if the guest chooses that option upon initial programming. To ensure product purity, the dry sprinkles cascade over an RE Model P Grate Magnet inside the sprinkling machine before they are dispensed onto the bar.

While the candy bar is being cooled, visitors go to the design packaging area where a total of nine touch-screen monitors allows each guest to custom create an overwrap sleeve for their bar's container. The bar is then placed into a souvenir tin and the custom overwrap is placed around the tin.

Don Mastrorocco, Vice President of Quality and Regulatory Compliance at The Hershey Company, says Rare Earth magnets play a critical role in meeting safety guidelines. “Rare Earth magnets (REM) are an important component of a food safety program. A properly established and operating REM control point enables a manufacturing operation to react quickly to unusual metal findings by pinpointing and correcting the cause so that a serious food safety incident or costly equipment damage is avoided.”

For more information, please visit www.eriez.com *[1].*

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