

Stepping Up Safety and Reducing Equipment Downtime



State of the art in the art of metal.

For more than 50 years, ATEK Metal Technologies has manufactured aluminum castings for a variety of demanding industries, including motorsports and recreation, transportation, agriculture and industrial markets.



Before

After

Applications:

Molding Equipment Safety

Market:

Industrial Safety

Problem

To protect employees operating its molding machine, ATEK Metal Technologies (another ATEK Company) used a steel plate that sat on four inch-tall springs designed to shut the machine down when an employee stepped on the plate. The plate would compress the springs onto four limit switches that were wired to a safety mat control unit which would stop the molding machine immediately. However, over time, the steel plates became warped and the springs would stick frequently, forcing employees to adjust the limit switches after compression in order to get the molding machine running again.

“Consistency was a problem with the old system,” said Joel Stravers, maintenance supervisor at ATEK Metal Technologies. “We lost valuable time constantly adjusting the limit switches so they would create contact with the plate and get the machine running again.”

Safety was a major concern for ATEK Metal Technologies. If a worker stepped on the steel plate, but the switch didn't engage, the worker could be seriously injured.

“If someone's arm was caught in the machine when it came down, it could result in a serious injury or someone could potentially lose their arm,” said Stravers. “We were fortunate to never have an employee injured by the molding machine, but we knew we needed a safer option.”

Solution

In late 2015, the company turned to ATEK Access Technologies for its Larco industrial safety mat and safety controller. Larco industrial safety mats have a high sensitivity threshold, requiring only 5-10 pounds for activation in normal foot traffic. If an operator steps on the Larco mat, the control unit signals the molding machine to stop, even if it is in the middle of the cycle. If the operator steps off the mat, they can press the reset button and then the start button to engage the machine. If they're standing on the mat and they manually try to start the machine, the machine will not start, reducing the risk of injury.

Designed to meet the most stringent industrial requirements, Larco industrial safety mats offer a long-lasting solution to machine guarding needs. Larco mats are extremely durable, impact resilient, abrasion resistant, totally submersible and can withstand heavy forklift traffic.

"We looked into using light curtains and lasers, as well as other types of limit switches, but none gave us the flexibility and durability that the Larco industrial safety mat does," said Stravers. "The Larco mat holds up to the heat, dust and dirt in the foundry."

Results

Since installing the Larco industrial safety mat, ATEK Metal Technologies has realized numerous benefits.

"We've been able to dramatically reduce equipment downtime, saving valuable maintenance hours," said Stravers.

ATEK Metal Technologies has also enhanced employee safety at the molding machine point-of-operation. If an employee is standing on the Larco mat, the machine will not run, reducing the risk of injury.

"Our main goal was to improve safety, and the Larco industrial mat provides the consistency we were missing," said Stravers. "Thanks to the durability of the Larco mat, our employees never have to worry about the molding machine engaging while they're standing on the mat."

ATEK Metal Technologies plans to install 22 additional Larco industrial safety mats on its 11 other molding machines in 2016.