



Slag Processing



Steel Mill Slag Recovery Operation Gains Efficiency with **Eriez Vibratory Feeder**

Headquartered in Dearborn, Michigan, Edw. C. Levy Co. is a global provider of steel mill services, asphalt paving, and aggregate mining solutions. One of the company's key operational areas includes slag processing—recovering high-iron content material from steel mill slag. These valuable materials are then used again in the steel-making process, as well as in concrete, glass, and other industries.

At its Dearborn, Michigan facility, Levy was facing a persistent operational challenge. The slag—an abrasive, sticky material with particles ranging from 1/8 inch to 5 inches in size with a moisture content between 3% and 10%—was not feeding consistently from the hopper onto the belt conveyor.

This erratic feed pattern disrupted downstream magnetic separation, reducing the efficiency of its slag recovery operations. Compounding the issue, inconsistent flow led to material surges that damaged the conveyor belt. Frequent belt replacements were both costly and time-consuming.



Precision Feeding for Reliable Performance

To resolve these issues, Eriez provided a proven vibratory solution. Eriez recommended its 75B-HC Heavy-Duty Electromagnetic Feeder, a model specifically designed for rugged, high-capacity applications, including slag handling, aggregate processing, and mining. The throughput of the 75B-HC was more than capable of handling Levy's material flow demands of 150 tons per hour.

Once installed, the Eriez 75B-HC feeder immediately stabilized the feed rate from the hopper to the conveyor. The industry-leading electromagnetic feeder provides the superior feed rate adjustability required, which is critical for optimal downstream magnetic separation performance.

"After implementing the Eriez feeder, we saw a dramatic improvement in our process stability and the overall efficiency of our slag processing," said John Schwarz, Engineering Manager at Edw. C. Levy Co. "It's been running without issue for over 18 months. It has helped us avoid costly downtime and reduce wear on our equipment. The feeder paid for itself quickly."

Eriez recommended its 75B-HC Heavy-Duty Electromagnetic Feeder for the Levy plant.

Built for the Toughest Material Handling Jobs



As a rugged, high-capacity electromagnetic model, the 75B-HC feeder includes encapsulated coils for extended coil life, an IP65 rating for dust and moisture protection, and a durable tray suited for abrasive materials like slag. Its ability to maintain consistent tray deflection under varying loads allows for uninterrupted operation, even under the most challenging conditions.

Additionally, Eriez incorporated a vibration sensor on the tray to help Levy monitor performance and proactively address material buildup, a common issue in handling moist and sticky slag. This not only extends equipment life but also minimizes maintenance-related downtime.

"Sticky, high-moisture slag presents real challenges for uniform feeding," explained Clay O'Dana, Global Product Manager—Vibratory at Eriez. "That's where our 75B-HC excels. It delivers precise control over feed rate and handles difficult materials without compromising consistency."

Engineered to handle sticky, high-moisture slag, the Eriez feeder maintains consistent feed performance under all conditions.

Driving Measureable Results: Reduced Costs, Greater Recovery

Since its installation, the 75B-HC feeder has operated continuously with zero downtime. Its ability to deliver consistent, uniform feed from Levy's largest hopper under all conditions has saved thousands of dollars on belt replacements. More importantly, the feeder has helped optimize the downstream magnetic separation process. This enabled the company to recover and resell a greater volume of high-iron material, contributing to more substantial financial returns and environmental sustainability.

"By eliminating belt damage and improving material presentation to the magnetic separators, the 75B-HC has delivered value well beyond what was initially expected," added Tom Saccamozzone, Project Manager—Heavy Industries at Eriez. "It's a great example of how thoughtfully engineered equipment can drive meaningful performance improvements in tough applications."



A Trusted Partnership for Smarter, Stronger Slag Processing

For more information
about Eriez® vibratory
feeders and other
separation technologies,
visit Eriez.com

For Levy, installing the 75B-HC electromagnetic feeder was more than just a fix for a persistent material handling issue; It is a strategic, long-term investment in operational excellence. This solution has delivered measurable gains in throughput, equipment longevity, and safety, while providing more value from steel mill slag through improved metal recovery.

The project has also reinforced Levy's confidence in Eriez as a trusted partner with deep expertise in vibratory and magnetic separation technologies. As Levy continues to pursue process improvements across its slag processing operations, Eriez and Levy continue to work together for innovative, durable solutions engineered for the toughest material challenges.

ERIEZ

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Established in 1942, Eriez is a global leader in separation technologies. Our commitment to innovation has positioned us as a driving market force in several key technology areas, including magnetic separation, flotation, metal detection, and material handling equipment. The company's 900+ employees are dedicated to providing trusted technical solutions to the mining, food, recycling, packaging, aggregate, and other processing industries. Headquartered in Erie, Pennsylvania, USA, Eriez designs, manufactures, and markets on six continents through 12 wholly owned international subsidiaries and an extensive sales representative network. For more information, visit www.eriez.com.

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