

New Ulm Steel & Recycling Achieves High Ferrous Output with Minimal Loss Using Eriez® Electro Agitating Scrap Drums

New Ulm Steel & Recycling, buyers of scrap metal and sellers of new steel, serves southern Minnesota and surrounding areas. The company started out as a service provider for residential, commercial and industrial metals recycling. Now, after a major investment in a shredder and downstream recycling equipment, New Ulm is enjoying a profitable venture in capturing ferrous and nonferrous metals for its growing customer base looking to purchase virtually clean recovered metal.

A significant part of New Ulm's recovery operation comes from two 60" x 72" Eriez® Electro Agitating (E/A) Scrap Drum Magnets. These powerful drums work in tandem to recover the valuable ferrous scrap metal before the nonferrous metal heads to other equipment in the downstream process. Magnatech Engineering, the company that designed and manufactured the 72" x 104" auto shredder and other recycling equipment for New Ulm's operation, recommended the Eriez E/A drums.

"We found the Eriez scrap drums to be a good combination of price, size and value for the type of operation that New Ulm was looking to establish," says Michael Graveman, President of Tonganoxie, Kansas-based Magnatech. "Our customers ask us to be recycling equipment

integrators and we only work with reputable companies. In this case, we installed the Eriez scrap drums because of the excellent recovery and profitability."

The E/A Scrap Drums are positioned off the conveyor feed from the 4,000 HP auto shredder and immediately go to work removing large chunks of ferrous--including meatballs. The Eriez scrap drums have a deep reach and wide pick-up zone for increased recovery, which the New Ulm team has noticed and appreciated since the start-up phase kicked into high gear in February 2013.

"Our operation is capable of moving 500 tons within a seven-hour day. We started with the shredder a little bit in December 2012, but our first big month was February 2013," notes Josh Luneburg, the second generation owner of New Ulm. "A lot of the downstream equipment was recommended by Magnatech and they made a very good decision in sourcing the Eriez scrap drums. The two, 60" drums were the right size for our shredder and we've had no issues recovering a very high quality product without a lot of hand picking."

"Some manufacturers I researched said the scrap drums are capable of a two to four percent loss in iron, but after fine-tuning the Eriez scrap drums, we are down to a 1/2 percent loss in ferrous," Luneburg observes. "A good dozen people have told us that we have the cleanest shred. It's making our pickers' jobs a lot easier when you get the majority of the ferrous out in the first pass."

New Ulm decided on the two-drum installation to obtain the cleanest possible recovered metal. The first drum, suspended above the primary feed conveyor, picks up ferrous material from the shredder and carries it up and over the top to an intermediate conveyor section. The bulk of the non-magnetic material falls to a take-away conveyor located below the primary separator.

Because of the greatly reduced burden on the intermediate feed conveyor, the second drum often can be smaller and positioned closer to the conveyor. The drum rotates in a direction opposite to the material flow, ensuring that there is no jamming or bridging. Clean metal with only a minimum of non-magnetic material is deposited on the ferrous conveyor.

According to Luneburg, New Ulm chose to install the same diameter 60" drums to get the most recoverable ferrous possible and decrease the time the pickers needed to monitor and remove any leftover scrap material. "It's improving their productivity and increasing the amount of clean ferrous we're getting in the long run," he says.

"We don't have the market share to be a high volume player so we're trying to do the exact opposite in the industry: low volume and high good margin," Luneburg says. "Whether it's steel or nonferrous, it's all percentages. The more you can recover, the more profit you can make. However, you need to have the supporting equipment to do it. We believe the Eriez scrap drums are helping us do just that."

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