

Family-Owned J.P. Sand and Gravel Successfully Faces Down Big Producers

As
Seen In October 2006



by Mark Scheer

It takes a lot of aggregate to build a city, and Columbus, Ohio is definitely a city on the move. Retail, commercial, residential and road construction all put demand on aggregate supplies in the area. For over 80 years, Lockbourne, OH-based J.P. Sand and Gravel (short for Jackson Pike) has been satisfying that demand. Annually producing more than a half million tons of high-quality sand mixes and stone specs, J.P. Sand supplies home builders and concrete contractors throughout the area. They also operate a concrete block business which manufactures patio stones, retaining wall block and pavers for landscaping and other applications.

The foreman for J.P. Sand and Gravel is Tony Collins. With eighteen years of experience formerly working for a Martin Marietta facility in Hilliard, OH, Collins came from the large, corporate-run quarry background. But after three years with J.P. Sand and Gravel, Collins has adapted to the different environment, and has come to recognize the benefits a smaller operation can offer over their large, corporate counterparts. "I've known [president] Richard Roberts for almost thirty years," he said. "It's great to have a chance to come work with him now. We have a twelve-person team of really good, experienced people. One of the guys has been here almost 30 years, and that really says something about this operation."

"We're a family-run company," he continued. "It allows us to be more personal, work together with our customers on a partnership basis, rather than just telling them what can be done. Being smaller means being more flexible and able to meet your customers' demands on short notice."

What it does not mean, however, is an unlimited equipment budget. When Collins came on board, he recognized some equipment upgrades were on tap, and had made some recommendations for where new investments could be made. "Coming from a big corporation, we would just tear down a plant and put up a new one or replace it with an entire portable fleet,"



Jeffrey incorporated a scalper into the design of the feeder, a feature that is very beneficial to J.P. Sand.

he laughed. "Obviously we can't do that here, but we have looked at where we can make improvements to

the existing plant, and one need we recognized was for a more effective feeder."

"At the end of last summer, we decided in our down time to pursue getting a new feeder, and we looked at numerous different options," Collins said. "But when we met Jeffrey [Specialty Equipment] at the Ohio Aggregates and Industrial Minerals Association show last year, we were very impressed."

"I have to admit I was not that familiar with Jeffrey since we mostly worked with the same equipment all the time at Martin Marietta," he continued. "But the sturdiness and cost-effectiveness of their performance was very impressive, and their ability to build a feeder to work for exactly what we wanted was key." And Jeffrey committed to an extremely quick turnaround time: after getting a commitment from J.P. Sand ten minutes before the end of the show in November, Jeffrey had the unit built and delivered by the end of December. "We needed to get that delivered and installed quickly, and Jeffrey was able to get it done," Collins emphasized.

Carla Phelps, sales manager for Jeffrey's feeder products, concurred. "Tony said they needed it fast and we were able to get it done. It took about two months to build and deliver it, and that's with the Thanksgiving and Christmas holidays in there too!" Jeffrey's area dealer, Process Machinery of Shelbyville, Kentucky, worked together with J.P. Sand and Jeffrey to ensure the specs on the feeder met their expectations. "Ron Tihart [at Process Machinery] was instrumental in helping us move this through and get it installed," said Collins.

While the turnaround time was impressive, once the new feeder was installed, Collins was even more pleased. The Jeffrey feeder they had built is an electromagnetic design rated for 400-450 tons per hour, with a grizzly section on it to scalp off oversize; no product larger than 10" is moved across the feeder into the plant. "If I cranked that feeder up, I could bury this plant now!" Collins joked. "We've gone from our feeder being our weakest link, to it being our strongest."

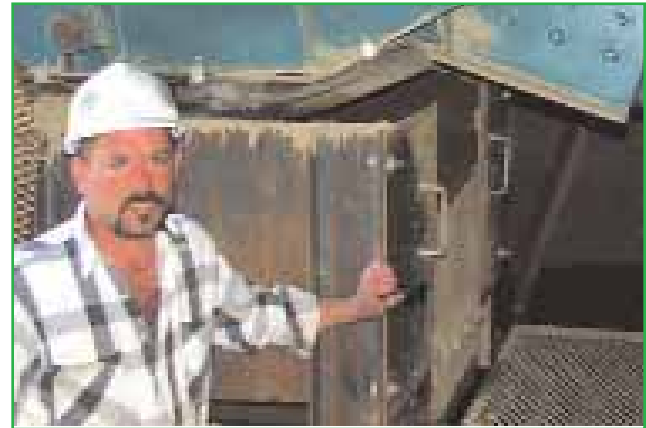
J.P. Sand's process starts by dredging their source material with a 6.5-yard Rohr clamshell dredge. "We're at about 68 feet right now, but we can go as deep as 100 feet," Collins said. "It's mostly rock, but after we get through the hard pan, we've got natural sand there if we want it."

Dredged material is stockpiled in their pit, and loaded into a 250-ton hopper with their Volvo a40 and 980g loaders. The source is then directed onto the Jeffrey feeder, which scalps off the oversize and feeds mostly 3" minus to a 7' x 20' double deck screen. Screened material is sent through a classifying tank, cleaned through a sand screw, and the finished concrete or mason sand is stacked for distribution.

The scalped oversize is sent to a surge tunnel, where it is fed up the main belt to another double-deck 5' x 20' screen, feeding Eljay and Simons primary and secondary crushers. Final product runs through a dry screen first, which screens the properly sized crushed product and sends it to a final wet screen to produce their #57 spec stone. Other screened products include Ohio spec #304, #46D and standard pea gravel.

The roughly 400 ton-per-hour plant can produce half-a-million tons of product annually, most of which

is consumed in the local Columbus market. But their internally owned concrete-block business is a sizable customer as well. "I would say 25% of what we produce goes to the block facility," explained Collins. "They make retaining-wall block, landscape pavers, patio stones; it's a nice advantage to have that built-in



After running the feeder 8-9 hours a day, six days a week, Tony Collins says the Jeffrey has not shown so much as a hiccup in production.

demand and be able to create additional value-added products." Their remaining inventory is distributed to home builders, who utilize their aggregate as base material for foundations and parking lots; road builders working on local and state projects; and ready-mix companies producing concrete and mortar.

Short-term consistency is nice, but consistency over an even longer period of time is even more competitive for J.P. Sand. "Customers who buy from us know that even five years later, when they come back they are going to get the exact same product. That means a lot." That quality and consistency helps a smaller operation like J.P. Sand compete with the larger, high-volume producers in the area. "Pricing is always a challenge," Collins admitted. "It's tough to compete with the bigger companies around here, but we're holding our own. Our customers know what we can offer, and they come back for that product." After more than 80 years, J.P. Sand is still well-positioned to compete long into the future. Their current mining facility has a couple of decades of supply still available, and Collins said they have plenty to turn to down the road. "We have 300-plus acres here; we could even run deeper if we wanted, but that gets to be pretty hard work." The on-site plants themselves cover 20 acres of land. "I could take down the plants and mine under those if we wanted, and we do have other properties that we could start permitting too."

It is not an easy task to continuously operate in the shadow of much larger, deep-pocketed corporate producers. But J.P. Sand has shown that being big is not the only competitive advantage that customers are looking for. Personal attention, high-quality product, and quick turnaround still count for quite a bit. And J.P. Sand has been delivering that for over 80 years.

Jeffrey Specialty Equipment: The Perfect Solution, Every Time

by Mark Scheer

Much has changed in the paper, mining and aggregate industries over the past 70 years, but through it all, Jeffrey Specialty Equipment has continued to adapt to changing demands, designing and manufacturing innovative new products to improve the quality and efficiency of those operations. Today, the company continues that tradition, and are widely known in multiple industries for their high-quality products: wood hogs, chip sizers and hammermills for the paper and pulp, and waste reduction industries; coal crushers for the mining industry; and large-scale vibrating feeders for mining and aggregate operations.

And their roots can be traced even further, to the Lechner Mining Machine Company, founded in 1876 by Joseph Andrew Jeffrey. Lechner Mining produced the first power-driven coal cutter used in America, and soon became a world leader in underground mechanical miners, locomotives and other material handling solutions. Jeffrey purchased sole ownership of his company in 1887, and renamed it Jeffrey Manufacturing. Based in Columbus, Ohio until the mid-1970s, the size reduction and feeder business was relocated to a new facility in Woodruff, South Carolina in 1961. This business was acquired and incorporated as Jeffrey Specialty Equipment Corporation in 1999, and has remained a part of the Woodruff community ever since.

This distinguished past has translated in a reputation for designing high-quality, purpose-built equipment. A 22-year veteran of the industry, Carla Phelps has served as sales manager for the feeder product line for three years now. "We've always been known as a solutions company," she explained. "We do carry

some stock units in Woodruff for aggregate applications, but typically most of the products we build are specially designed for each customer." Jeffrey feeders come in two flavors, depending on the volume and application involved. Electromagnetic feeders, which function through the transfer of energy stored in springs activated by a magnetic coil, are capable of delivering material flow up to 1450 tons per hour. For even larger throughput, their electromechanical feeders, agitated through the action of an eccentric-weighted shaft, have been known to move up to 2100 tons of material per hour.

Phelps explains the advantages of each. "You definitely get more control with an electromagnetic design," she explained. "It can be controlled through a 0%-100% range. Our electromechanical feeders do offer control as an option, but once you get below 30Hz of vibration, you are not going to be moving any material."

But for large-scale operation that need to handle huge volumes of aggregate, electromechanical feeders have the edge. "Once you get over a 42" x 60" size, it is typically much more economical to go with a mechanical feeder." Most every feeder Jeffrey builds starts with an application data sheet for customers to complete, which helps them better understand the material density, sizes involved, tonnage needed, moisture content, temperature and many other application variables that can impact the effectiveness of a feeder.

"The application data sheet tells us everything, from what material is being fed, to how it is fed to the feeder. And if necessary, we'll even make a site visit to sit down and work with the customer personally." Jeffrey

carefully examines the entire system that the feeder will become part of, ensuring that it is properly integrated with the other segments in the plant. "The hopper is critical to the performance of the feeder," continued Phelps. "We even provide our customers with recommendations for hopper design based on the info they've given us. We want to be sure they are able to take full advantage of the performance of our product."

Their electromagnetic feeders, for example, are precision-tuned to .070" vibration. "The accuracy and detail of our engineering is demonstrated through the superior performance of the feeder." In this modern age of manufacturing, Jeffrey Specialty Equipment's success has caught the attention of the industry, and through consolidation, Jeffrey has become part of K-Tron International, a global leader in bulk material handling equipment and services. This has brought Jeffrey even greater resources to design and manufacture products, as well as additional marketing and distribution capability, opening even more global markets to their feeders. But the tradition and history of Jeffrey remains, and their mission of designing and producing high-quality, innovative solutions for the industries they serve has not wavered. New opportunities are always being explored, and their latest pursuit to introduce a new stone feeder to the aggregate industry is being evaluated. And with a track record like Jeffrey, it can be safely assumed that each new offering they bring to market will be met with success equal to all their existing solutions. The future performance of the mining and aggregate industries is well in hand.