

Whirlwind remake

An air classifier installed in 1961 has been refurbished, and is still making sand and aglime at Rockydale Quarries in Virginia.

BY **CARL EMIGH**



The Sturtevant 16-ft. Whirlwind air classifier produces aglime and concrete sand.

Rockydale Quarries Corp. has operated in the Roanoke Valley since 1932, and continues to provide a wide variety of aggregates, agricultural lime and bio-mix soils to serve the needs of many industries in Virginia and the Carolinas.

A 12-ft. air classifier installed at Rockydale's Roanoke, Va., operation in 1961 is still making agricultural lime and minus-1/4-in. sand for asphalt production. The machine was refurbished by Rockydale with parts supplied by the manufacturer in 2015, after more than 53 years of continuous operation. The refurbishing cost was 40 percent of the cost of a completely new machine.

"We worked closely with [the manufacturer] Sturtevant throughout the refurbishing process," says Rockydale Vice President of Operations Gary Hubbard. Refurbishment was an option, because the basic design of the unit hasn't changed much.

The air classifier is a Whirlwind model, and essential parts such as the fans, distributors and cones were readily replaceable, which eased the refurbishing process. Most of the original rotating parts did not need to be replaced, including the heavy-duty drive mechanism.

Rockydale also utilizes a 16-ft. Sturtevant Whirlwind air classifier to produce aglime and minus 5 mesh sand for concrete production. That machine was installed in 1985 and replaced in 2007 by another 16-ft. Whirlwind when it was damaged by fire.

OPERATION DETAILS

"Our crushing and screening system utilizes a 42-48 jaw crusher, four cone crushers and seven screens to produce riprap, gabion, 3-in. x 1-in., 57s, 8s and 10s," Hubbard says. "We use the air classifiers exclusively to produce agricultural lime and the concrete and asphalt products. One circuit produces 70 tph; the other produces 50 tph. The classifiers have no

PHOTOS COURTESY OF ROCKYDALE QUARRIES

Rockydale Quarries personnel Luis Lopez (left) and Ray St. Clair played key roles in the air classifier's refurbishing and reinstallation.



trouble keeping up with that production rate.

“The feed material is dolomitic limestone with 4 percent silica and no caustic chemicals, which keeps wear to a minimum,” Hubbard says. “Acceptable moisture content averages 2 to 5 percent. Anything higher slows production. The two air classifiers are fed a fine graded material and produce very high quality sand. To aid in moisture control, the 12-ft. [air classifier] is enclosed and the 16-ft. has a covered feed conveyor.”

In regard to the air classifiers, Hubbard says, “We do a weekly inspection: just open up the door to see how the blades, tips and distributor plate look. There’s virtually never a problem so we close up and keep on producing. Once the selector blades are dialed in to match the gradation you want, the upkeep on the unit is very simple.”

CARING FOR THE COMMUNITY

Rockydale Quarries has a long-standing history of commitment to the communities it serves. Since 1932, the company has donated time, money and material to surrounding communities. In recent years, Rockydale has made charitable

donations to nearly 100 organizations. During the Christmas season, Rockydale contributes to local food banks in honor of its customers and vendors.

The company also cares for the environment. Before establishing a new plant site, or expanding an existing site, Rockydale management works with local planning boards and agencies to conduct thorough site evaluations and address environmental concerns. **P&Q**

Carl Emigh of CME Creative Services Inc. is a freelance writer and communications specialist serving the aggregates, recycling and construction industries. Additional information courtesy of Rockydale Quarries Corp.

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Whirlwind Air Classifier

