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Scientific Advances Make “Low-Cost” Belt Scraper Alternatives Obsolete

by Bruce Boyers



For many in the cement and aggregate industries, belt scrapers have often been a matter of “doing it yourself.” Such measures—for example a piece of conveyor belt material or whatever else might be laying around, perhaps fixed to a conveyor idler for tension—have been taken in an effort to save money. The truth is, though, is that not only are such solutions inferior to current technology and actually lose money for a company, they can often be damaging to conveyors as well. In the end, it can be a far better choice to go with a company that has taken the time, effort and research to develop a truly cost-effective system.

“I’ve seen everything used for belt scrapers,” says Bob Welker, sales and marketing manager for Argonics, Inc. “You often see a piece of conveyor belt attached to a weighted lever system where they’ll have a conveyor idler just bouncing on a chain on the end of a lever to supply the tension. I’ve even seen an old alternator from a truck

used as weight, and bungee cords used as well.”

“Obviously such a rig could break and drop something on somebody,” Welker continues. “Also, an old piece of conveyor might contain steel that actually damages the new belt.”

“People will come up with all kinds of interesting ideas in an effort to save money on belt scrapers,” says Alan Stark, sales rep for the Tons Per Hour product line with Aggregate Production Services, Inc. “I’ve seen everything from hanging weights off the ends of cantilever arms with a rubber clamped wiper to using springs, nuts and bolts for tension.”

Obviously belt scrapers are a necessity to keep conveyors clean of material buildup that, if not taken care of, would quickly render the conveyor useless. But modern technology has actually produced belt scrapers that are indeed “state of the art.”

Doug Hammons is the plant operator/lead man with Teichert Aggregates, leading California aggregate producer. Early on in his career, he also used homemade solutions. “We used to make our own with a piece of thick rubber and a big contraption with a counterweight on it,” he recalls. “They worked all right if you placed them just right and paid a lot of attention to them.”

Along with many other cement and aggregate producers, Hammons has long-since discovered that when it comes to belt scrapers, there is definitely a better solution. When he took over the Teichert plant, he found belt scrapers being used that were inferior and frequently wore out. “I always like to give everyone a fair chance and try other blades,” he says. “But I had used one kind at my previous company and found them to be the best. We found them to be the superior here, also.”

The belt scrapers that Hammons uses are of specially formulated polyurethane, produced by Argonics, Inc. “We get at least double the life out of these belt scrapers than any others we’ve tried,” he reports. “And they last far longer than any homemade solution I ever used.”

Polyurethane is a compound of artificial and organic compounds providing outstanding physical properties that produce an advanced wear-resistant product and versatility of applications. It outperforms rubber, metal or plastic, especially in the belt scraper application.

“They’re good enough that we don’t even have to go back and re-tension them,” Hammons adds. “We can leave them until the blade gets short and then replace the blade.”

Alan Stark of Aggregate Production Services has found these belt scrapers to be superior, also—in fact, they are the best-selling item in his sales territory. “Their chemical makeup just about knocks the socks off anything in the industry, as far as wear goes,” he says.

“Most of my customers have retrofitted their existing systems with these.”

The strength of the belt scrapers used by Hammons is in the proprietary formulation of the polyurethane—a formulation that causes the blades to last two to three times longer than others and has the advantage of 60 percent less coefficient of friction than rubber. They also provide reduced drag on conveyors lowering horsepower use, and the nonporous surface does not collect material that can damage the belt.

The belt scrapers are available in a variety of formulations depending on your application. In addition to the standard scraper, there are also flat dual-durometer scrapers available in which a harder portion scrapes rough material while a softer portion produces a squeegee effect, a “sandwich” version in which a softer, flexible layer of polyurethane is placed between two harder layers to provide heavy duty performance with flexibility, and an extremely tough scraper with ceramic wear beads embedded into a polyurethane matrix.

Due to their longer life spans and rugged durability, polyurethane belt scrapers save considerable time and money for cement and aggregate applications.

For more information contact Argonics, Inc., 1110 Wright St., Marquette, MI, 49855; visit www.argonics.com call 906-226-9747, ext. 240, fax 906-226-9779 or email information@argonics.com.

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