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Acme Corrugated Finds 'Absolute' Solution

by Jim Curley

To fulfill its stated promise to customers of “real-time manufacturing,” Acme Corrugated needs to have its machines up and running throughout its two shifts each day, not limping to the sidelines occasionally. So when two workhorse machines at the Hatboro, Pennsylvania, corrugator plant suffered regular downtime due to corroding ink chambers, Jeremy Cohen, Acme’s Plant Engineer, opted for an “Absolute” solution – woven carbon fiber chambers from U.K. based Absolute Engineering.

The 30 minutes a week that Acme lost due to the failing ink chambers on its Langston flexo might not sound like much, but for a company whose success is predicated upon making every minute count, it was enough to precipitate a change.

“The chambers for us were a reliability/time decision,” Cohen explains. “Uptime was really the name of the game both on our 50-inch two-color Langston flexo and our 88-inch by 200-inch one-color Serenco jumbo flexo.” The Langston, which Cohen describes as “our number one volume producer,” was retrofitted with Absolute’s woven carbon fiber chambers in 2008; the Serenco this year.

“The issue was the same on both machines: we had aluminum chambers.

When the chambers started to degrade, we would get leaks that would ultimately lead to downtime, whether it was because we had problems printing or there was dirt build-up,” Cohen explains.

“The real problem with aluminum is the corrosion

of the metal itself,” he added. “The pH of inks is between 8.5 and 9.5, and that’s corrosive. Over time, that eats away at the aluminum.

“Typically, where you see the problem is where the doctor blade is mounted to the chamber,” Cohen explains. “When that blade doesn’t sit flush with the chamber and you start to get pits, the ink just seeps



Downtime on Acme’s Corrugated’s Serenco jumbo flexo has been reduced, thanks to Absolute Engineering’s woven carton fiber chambers, says Jeremy Cohen.

through. The ink can also eat away at the aluminum inserts on screws that fasten into the chamber. After time, you can’t fasten down anymore. The carbon fiber Absolute uses doesn’t care if the ink is corrosive. It’s unbeatable.

Extended Life Guaranteed

“The typical life of an aluminum chamber in a two-shift operation is a couple to five years whereas with the Absolute you’re looking at 15 years guaranteed. Given that the life of a flexo might be 15 years as well, you could say that the chamber might last the life of the machine,” Cohen noted. “This 15-year corrosion guarantee was music to my ears.”

“Absolute is the only company to guarantee against corrosion for 15 years,” said Absolute Engineering’s Managing Director Antony Whiteside. “Aluminum or nylon begin to deteriorate within two years.”

“We’re not sophisticated printers, but for us it’s not about the sophistication of printing; it’s about uptime. That’s why we looked at the chambers as a solution,” Cohen said. He first learned about Absolute Engineering’s woven carbon fiber chambers from a sales rep for the supplier. “When we learned about the idea, we reviewed it with our maintenance people, and I called a few references Absolute provided us with,” Cohen said.



Absolute Engineering guarantees its woven carbon fiber chambers against corrosion for 15 years.

Of the installation, he adds, “We had a few blips but nothing Absolute didn’t quickly help us with from their service center in Georgia.” Cohen adds that he likes one procedure Absolute utilizes that sets them apart from other suppliers. “Absolute sends in a field service guy, not their sales guy prior to manufacturing of the system. That’s somewhat unusual. You’d be amazed at what some companies send their sales guys in to do that are technical in nature. This is something you don’t want a sales guy to do.

“Absolute’s service rep knows the product and he knows what he’s measuring for,” Cohen says. “He comes in with a sheet they fill out, on things like face length, diameter of the anilox roll, space restrictions in the machine, and information about the cylinder that loads the chamber on the anilox roll. That’s important.”

Installation is done on a weekend, with the following Monday and Tuesday devoted to operator training on such subjects as when to install new doctor blades and maintenance training. Since the chambers were installed four years ago, Cohen reports, “Leaking has been negligible, and upkeep is simple. The only thing

we see is some ink building if our guys don’t clean up in a timely manner.”

Replace, Not Repair

The installation of the chamber on the one-color Serenco was simpler. “The chambers we put on the Langston is a full-chambered doctor blade system,” Cohen explains. “The chamber we put on the Serenco is a single-blade chamber, more just a wiping mechanism.” Unlike the chambers on the Langston, there are no seals on the Serenco.



Acme’s Serenco jumbo flexo, which was retrofitted with an Absolute Engineering chamber, was also repositioned in the plant to provide for an enhanced flow of finished goods.

Before deciding to install the Absolute system on the Serenco jumbo flexo, described by Cohen as a “niche machine,” Acme tried patchwork solutions. “We tried to repair the old Serenco chambers multiple times without replacing the chamber completely,” Cohen recalls. “We put a lot of money into epoxies and other material to make the chamber smooth.

“After a while, it became obvious that it was foolish to continue to put time and money into that technology. Why would I not put in something that I knew was going to be corrosion resistant, that I wouldn’t have to babysit and that my guys can just run without interruption? That’s what I was looking for,” Cohen adds.

Absolute’s Whiteside provides other positives about his company’s carbon fiber chamber retrofitted onto the jumbo flexo. “The Serenco is a big machine, and blade changes take a long time with a traditional clamp system. With an Absolute system, we can do it about 80 percent faster than with a normal aluminum system. This means that the machine is producing boxes more of the time.

“As the blade on the Serenco is 200 inches wide, Jeremy needed to be sure that it was going to be straight and stay straight,” Whiteside explains. “Carbon fiber is 300 percent stiffer than aluminum, so bending

would never be an issue. Carbon fiber does not warp with age, and this is also important.”

In late November of 2011, Acme sold its second jumbo flexo, a McKinley. This, says Cohen, opened up



A Pacesetter control system from Intelligent Machine Control, was among the retrofits.

room on the shop floor, and the Serenco was moved to the former site of the McKinley. “This drastically improved product flow,” Cohen recalls.

Besides the Absolute Engineering’s upgrade, Acme did a series of upgrades on the Serenco. “These included a set-up computer from IMC Pacesetter and an outfeed mesh belt conveyor from Mainline Conveyor to allow for bottom sheet insertion,” Cohen says. “On the conveyor Acme did the installation and all the associated controls,” he adds. Everything was completed in the spring of 2012.

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User-Supplier Rapport

Of Cohen, Whiteside says, “Jeremy is very professional and straightforward. We have had a really good relationship based on trust, and this is reflected by this second order - always a sign that the user and supplier work well together.”

Might there be more orders? Cohen answers, “I have three machines I could put it on. Certainly our five-year-old Apstar and six-year-old Martin will soon



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become candidates for chamber replacements. We’ve talked with Antony about them.

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