Tectronix Focuses On Sensitivity, Reliability and Ease Of Use

by Wayne Miller

Greg Balmer realized more than 10 years ago that the lumber industry needed a better metal detection system to increase productivity and cut back on down time. Key to this was the need to offer a system that the customers would believe in and trust to be reliable. With that in mind, he decided to create a company that manufactures state-of-the-art metal detection equipment, to accomplish his goal of helping those in the industry across the world do what they do best—manufacture lumber.

Today, the company offers a complete line of Metal Shark™ products, that include a round aperture whole log metal detector, and a unique and exclusive 24-inch long vibratory and belt conveyor metal detector. For their Flat Plate metal detector they only require a 48-inch long Metal Free Zone for a vibrating conveyor and a 30-inch long Metal Free Zone for a belt conveyor metal detector. Tectronix also manufactures a line of specialty application products for engineered wood mat or panel scanning and planer in-feed.

According to Balmer, the Metal Shark™ line represents a revolutionary new design in "high sensitivity" industrial metal detectors, based on three principles: sensitivity, reliability and ease of use. All of the models have the shortest Metal Free Zone (MFZ) in the industry. The equipment housings are also made of stainless steel, which Balmer said shields against the transient influences that cause false or nuisance tripping.

Tectronix was established in 1995 out of Balmer's frustration with the market for metal detection in the lumber industry. At the time, he was working for a manufacturer of vibratory conveyors for chipper and hog in-feed systems, and most customers were specifying metal detectors as an integral component of their conveyor. Holding a degree in mechanical engineering and being a licensed heavy duty mechanic, he was adept at figuring out what was missing from all metal detection equipment offered to the lumber industry at the time.

"I saw a viable marketing opportunity and flew all over the United States and Canada to get everyone excited about the opportunity for the forestry industry," Balmer said. "I embarked on a pilgrimage to the United Kingdom and Germany, where all the major suppliers of metal detection technology were, but had the door slammed in my face."

He was marketing his ideas to large metal detection manufacturing companies, which were all preoccupied with other industries at the time. Balmer found a small company in Germany that had some experience in forestry, and he developed partnership with them to buy their electronics and utilize their skill to begin manufacturing metal detectors.

For more than 10 years, his company had been manufacturing metal detection equipment for the lumber industry. But, in 2004, Balmer decided to create a new generation of electronics, and he wanted to do something different than what everyone else in the forestry industry had done to date. He created the exclusive round aperture whole log metal detector, which is capable of finding much smaller pieces of metal.

"My experience has shown me that most people think all metal detectors are the same, that their performance and capabilities are the same. Nothing could be farther from the truth," Balmer said. "Most of these whole log metal detectors don't have the ability to find the head of a nail. Our new product runs on a higher signal strength capability and can find smaller metal on any plane or angle."

He added that his company works with customers, trying to coach them on each question to ask, when looking for a metal detector that is going to suit their needs. Balmer knows that the faster a company moves wood through their systems, the more critical it is to find and eliminate metal.

"If you break a saw or nick a planer knife, the down time can really hurt your business," he explained. "That means that it is completely necessary that a company gets the right equipment, and has it programmed, set up and maintained correctly."

According to Balmer, when a company spends the money on a Tectronix metal detection system, they will get their money back in a year or less.

"Our system will actually pinpoint the location of that metal and we can put a dye mark on it, or we can electronically signature where that metal is and allow the software downstream—such as optimization software—to then make an efficient choice as to how much of the log to cut," he explained.

Balmer stated that one important benefit of the system is the protection of the planer knives in any system. Balmer says his machinery can scan up to 6,000 feet per minute with "deadly accuracy."

"Anyone who runs a planer knows the cost of maintaining that planer, and the cost of any down time," he said. "There seems to be a real interest in protecting the planer with a metal detector. It is kind of your last line of defense. We are selling more and more units for planer in-feed systems."

Another benefit to the Metal Shark™ detection system is having a system that is intelligent enough to recognize a product signature, and not trigger a false reading.

"When you put your product through the system and you hit the learn button, it learns the product and the environment, and when you introduce metal into it, it recognizes that," Balmer explained. "This again helps with eliminating the down time at your mill. If you lessen the number of false trips, you are getting more product through and not having to stop as often."

He added that this also helps a mill with loss prevention. If a mill has a false trip with their metal detection system, they might be throwing away perfectly useable fiber, thinking that they have metal in the product.

The Tectronix products have been installed all across the United States, as well as overseas in countries such as Australia, New Zealand, Chile, Brazil and Argentina. The company offers a service technician to be on-site for start up of the equipment, as well as engineered drawings and on-going customer service.
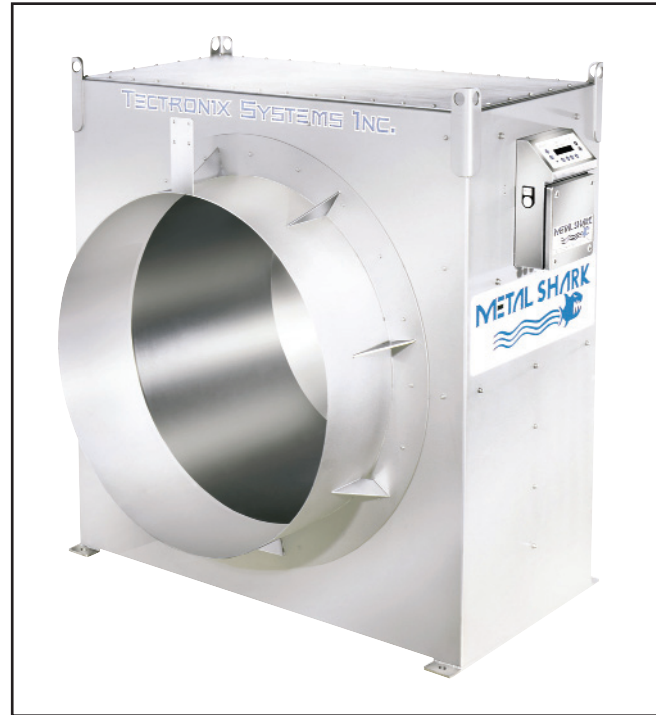
"A lot of the time, I will go to a site in advance of the start up crew, and train them and make sure that the electrical system is done correctly," Balmer said.

Tectronix markets the Metal Shark™ detection systems to sawmills, original equipment manufacturers, distributors and end users. In addition to sales from the headquarters, Tectronix has distributors located across the country, including the Pacific Northwest, the East Coast and the South. Balmer's stipulations on his distributor sales force are that they act as consultants to customers.
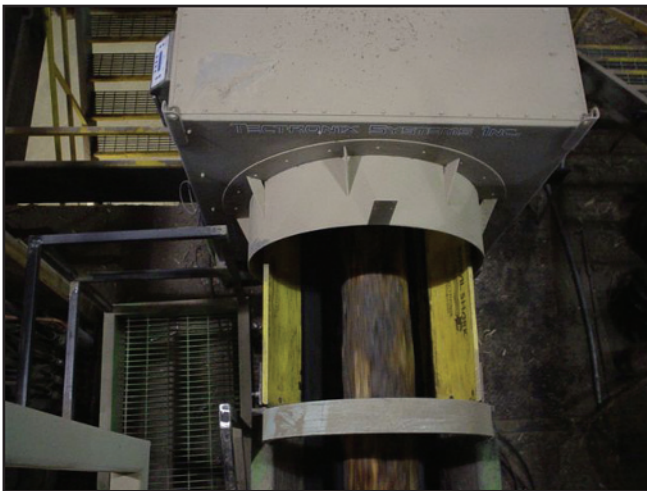
"You have to work with the customer," he said. "Quality control starts from the time we start to manufacture, through the installation and during their commisioning of the equipment."

Greg Balmer, founder of Tectronix in Langley, B.C., started the company in 1995 after becoming frustrated with the existing market of metal detection in the lumber industry.


Metal Shark™ metal detectors have the shortest Metal Free Zones of any other metal detection products on the market, Balmer stated.

The vibratory and belt conveyor system provides three-sided protection configured to suit a company's conveyor.

The round aperture whole log metal detector ensures 100 percent accuracy at a speed of 6,000 feet per minute.

Tectronix offers the unique and exclusive 24-inch long vibratory and belt conveyor metal detector.
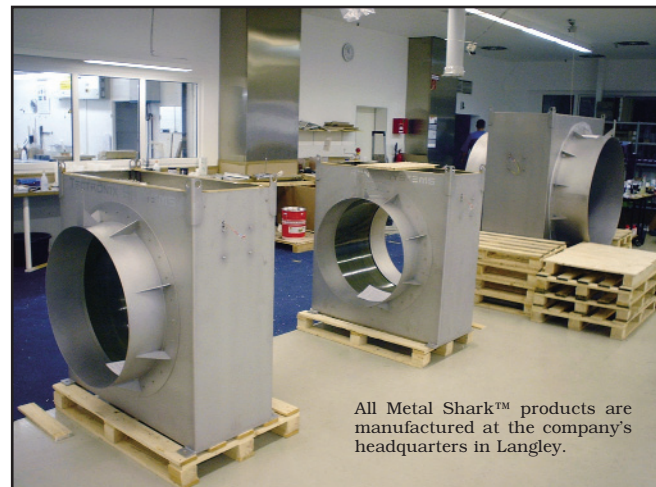
All Metal Shark™ products are manufactured at the company's headquarters in Langley.