



Fair warning: Electricians invent device

by Heather Young, Contributing Editor for WorkSafe Magazine

Innovation in the forest industry is not always focused on creating efficient operations. Safety is a key component of running any successful forest operation. Resource managers and contractors are always looking for new and innovative safety products to protect the health and well-being of hard-working individuals employed in the forest industry. The following article talks about one of those innovations.



Richard Shervey photo

Machine tag system for a safety vest.

Two industrial electricians have invented a device to protect workers on the ground from getting hurt or killed by mobile heavy equipment.

Long-time friends **Rick Shervey** and **John DaSilva** were talking shop in the local A & W in Prince George one sunny April day in 2006 when they overheard some terrible news. Yet another worker had been struck and killed by a loader in motion. This was the second such reported fatality involving mobile equipment within a month or so. The two industrial electricians—all too familiar with stories of friends and neighbours who'd been involved in ugly industrial accidents in the past—looked at each other and agreed something had to be done.

As they investigated the problem further, the two felt driven to find a way to prevent these kinds of incidents. They learned that every year more than a thousand workers in BC are injured or killed in incidents involving mobile equipment, such as forklifts, log loaders, lumber carriers, backhoes, dump trucks, bulldozers, and other loaders. “We’ve seen too many people get injured this way, and lost people close to us,” Shervey says. “We decided what was needed in the world was something that wouldn’t let forklifts—and other mobile equipment—continue to hit and hurt people.”

The seeds of invention

Shervey says he and his partner then decided to invest their spare time and money toward a solution. By August of that year, Shervey had left his day job to pursue their project—Pro-Active Safety Systems Technology Incorporated (PSST)—full time. Through the assistance of the WorkSafeBC Research Secretariat and other funding sources, the company’s early efforts produced a “proximity detector.” This device features an RFID tag—similar to the tags found on merchandise sold in Walmart and Canadian Tire—that’s sewn into a safety vest. The tag relays a message to a receiver in a piece of mobile equipment, warning the operator when pedestrians are nearby. The idea? “If you’re driving a piece of heavy equipment and you’re aware someone is directly behind you, you’re not going to hit them,” Shervey says.

Pedestrian traffic around mobile equipment has long posed a workplace risk. “With a limited field of vision for mobile equipment operators, it’s vital to be able to warn pedestrians in the path of traffic,” explains **Terri Holizki**, WorkSafeBC manager of Industry and Labour Services for small business. Holizki says that current mobile equipment technology features a continuous flashing light atop the cab, while another emits a beeping sound in reverse. But she says workers tend to tune out these warning signals because they remain in continuous use—regardless of whether a pedestrian is far away, or in dangerous proximity.

In search of collateral

PSST needed a lot of financial and technical support to bring the project from white board drawings to worksites. A share offering from friends and family got the project started; Okanagan Research



that warns machine operators of nearby workers

and Innovation Centre, a not-for-profit business incubator, is doing the research and development and offering business mentoring; National Research Council Canada provided research-specific grants; and WorkSafeBC's Research Secretariat has provided Innovation at Work grants.

A foothold in the real world

Shervey says their substantial investment in the project—of both time and money—is well worth it in the name of workplace safety. “Every year, many workers are injured or killed after coming in contact with mobile equipment,” says Don Schouten, WorkSafeBC manager of Industry and Labour Services for construction. “This unique technology has a great potential to save lives; it can also adapt to different situations and across many industries.”

Before the system can be used in the forest products industry, it needs to be tested in a real life environment. To that end the company has linked up with **Darcy Moshenko** and **Ray Krag** of FPInnovations, Feric Division. The team is looking for companies to participate in field trials. PSST will fund the trials for an initial period, so there will be no cost to participants.

If you would like to help bring this revolutionary safety system to the forest products industry please contact Darcy at darcy.moshenko@fpinnovations.ca 



Richard Shervey photo

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Forklift demonstration of the machine tag system.

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