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In the TOWER'S Shadow Crane Owners Struggle with Staffing Needs

TuffTronix Lends an Ear to Operator-Signal Person Communications

TuffTronix' motto is "When you need to be heard." After doing some listening of its own, the company integrated hands-free technology into the mobile crane industry last year, introducing the Tower Crane Comms System. With the wireless tool, communication between crane operator and signal person requires much less effort and results in a safer, more efficient work environment.

The Miami, Fla., company, whose communication products are designed for use in situations challenged by noise, weather, and obstructions, began to focus on the crane industry because of safety concerns and the need for better, clearer communication, says Michael Husson, who with Carl Boonstra founded the company. The product, introduced last fall, has already been upgraded.

"The driving feature is totally wireless and totally hands-free," says Husson. "The crane operator can focus more on what he's doing, and the signalmen don't have to worry about the safety situation or being inconvenienced by that extra piece of equipment."

Hopping means no hauling

Tower crane communications typically involves two-way radios powered by cables running down the crane tower from the cab, and the signal person has to haul the cables throughout the jobsite. The half-duplex two-way systems also require the operator and signal person to push a button to talk. An alternative to the standard technology, TuffTronix' headset-based system involves no cables, and requires no setup. It can be packed up, transported to the jobsite, attached to a hardhat, and the operator and signal person are ready to go.

The system utilizes 80215 Blue Tooth technology on an unlicensed frequency-hopping spectrum, which requires no licensed two-way radio frequencies. It allows the crane operator and the signal person to communicate in a full-duplex conference call at the push of a button, says Boonstra. The signal person wears a wireless headset integrated into his or her hardhat.

According to product literature, the



Totally wireless, totally hands-free, the TuffTronix Tower Crane Comms System makes communications between the tower crane operator and signal person a piece of cake, even in blind lifts.

headset has built-in hearing protection, and is equipped with a noise-cancelling microphone that allows the signal person to work hands-free.

The crane operator communicates via standard microphone and speaker. Able to initiate or end the call simply by pressing a foot pedal, he or she can maintain contact with crane controls all the time. The operator is able hear the signal person clearly even in the noisiest construction site. "And, it's expandable from two to six people, depending on the jobsite and what's needed," says Boonstra.

Hands-free, box-free

Husson reports the company has made significant changes to the system since it was introduced last fall. Originally, a central computer, mounted in the crane cab, relayed information between the operator and signal person. But the central box has been eliminated so that the system "is the only wireless hands-free communication on the planet," he says.

"This is a safety-driven invention and the special thing about it is you can connect up to

six users that have full duplex communication, up to 100 yards between users," says Husson.

The system is significant for cranes in a blind lift or in a situation where weather or obstructions are a factor. With the Crane Comms system, the signal person does not have to worry about pulling cable around or having a line of site to the crane operator.

"We're in Miami, where there are very tall cranes which have to make lifts on the other side of the building [from the crane's location]," says Boonstra. "Rather than relying on hand signals, our system allows communication among several people scattered in different areas all watching to make sure the load gets moved safely." Plus, he says, the headsets act as repeaters. If a crane operator is lifting something behind him and can't hear well, he can move one headset in front of another.

"The key is it's not a line-of-sight system. Our system has the ability to go through a true range of up to 1,000 meters," says Husson. "We feel this will make the jobsite so much safer, so we'd like to see the insurance industry take note of that."

Lending an ear

At press time, the newest version of the Tower Crane Comms was in field testing. Working with Jeff York of Signal-Rite LLC, TuffTronix was running the system through its paces in California. York, who offers signal person training classes, says he likes the product as an alternative to standard two-way radio technology in training classes because it is fully voice-activated.

"Guys signaling the crane have one task they have to perform. Typically with a two-way radio, they have to hold something in one hand while they're doing something with the other hand. It takes away from the training."

He says though some crane operators haven't yet embraced the headset style, others consider it an efficient operations tool. "There are a lot of instances where the crane operator really needs to hear the crane. With this system, you don't get all the [background noise]. If somebody's rattling bolt nuts or running a jackhammer, it's muffled." ■

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