ITAMCO Connects Forklifts to the Industrial Internet of Things

FORKLIFTS, THE WORKHORSES OF THE PLANT FLOOR, are more valuable than ever at ITAMCO. The company has connected their forklifts to the Industrial Internet of Things (IIoT)—the integration of machinery and equipment with networked sensors and software.

ITAMCO is a manufacturer of precision-machined components, specializing in gears—from mining gearing to production runs of CBN-ground transmission gears. In 2012, ITAMCO implemented an MTConnect®-enabled machine-monitoring program. After key pieces of machinery were connected to MTConnect and to their Enterprise Resource Planning (ERP) system, ITAMCO developed a communication system for their forklifts.

Now, as soon as a machine operator scans the barcode on a pallet, signifying the completion of the product cycle at his machine, a forklift operator and forklift are on their way to the machine. Each forklift is linked to ITAMCO's ERP system through its GPS and an application on a smart tablet mounted in the forklift. Forklift operators are notified via their smart devices—employees use iPods, iPads and smartphones—when they're needed. The communication system is so efficient it will summon the closest forklift to the machine. The forklift operator will also know how many pallets need to be moved and where they should be taken. If the product is being moved to another workstation, the workers in that area will be notified that the product is on its way.

"We developed the application because both of our facilities are rather large and forklift operators where always looking for forklifts to move their material but could never find one. Also, material would sit for hours at a machine, delaying the next operation. This application

solved the problem by notifying a material handler as soon as the materials were ready to go to the next work area," said Joel Neidig, an Engineer and Lead Technology Developer at ITAMCO. The system has been well received by the ITAMCO employees. "It has definitely helped me schedule the movement of materials from one work center to another," said Arthur Doody, Material Handler at ITAMCO.

Connecting forklifts to the IIoT is just one more way ITAMCO is able to reduce production time and maintain competitive pricing for their customers. "We've seen a 10% reduction in the time it takes to get material ready for the next operation," said Mr. Neidig. To learn more

A smart tablet, mounted in the front of the forklift, connects the truck to ITAMCO's ERP system. The forklift also has a GPS.

The technology team at ITAMCO created an application that links communication among machine operators, forklift drivers, and the company's ERP system.

about additional innovations at ITAMCO, view Joel Neidig's presentation at a recent Autodesk User Conference at www.au.autodesk.com/au-online/classes-on-demand/class-catalog/2015/class-detail/11913#chapter=0. Mr. Neidig's presentation is the third presentation at 13:00 minutes.

About MTConnect®

MTConnect is a set of open, royalty-free standards that uses XML and Internet Protocol technology as a common communication link to publish machine data over networks. In the simplest terms, MTConnect translates the proprietary computer language of each machine into a common and simple internet-based language that can be used by an ever-growing field of data acquisition and machine-monitoring software applications.

About ITAMCO

Since 1955, ITAMCO has provided open gearing and precision machining services to many heavy-duty industries including mining, off-highway vehicles, marine, and aviation. In addition, the technology team at ITAMCO has launched their "Strategic Technology Initiative for Additive Manufacturing"; implemented MTConnect®, a plant-monitoring system; released over 65 apps for mobile devices; designed and markets iBlue, the first industrial Bluetooth transmitter; and developed an award-winning Google Glass application. Learn more about ITAMCO at www.itamco.com or call (574) 936-2112.