IS "SMART CRIMPING" THE FUTURE IN HOSE ASSEMBLY?

IOT-ENABLED CRIMPERS CAN IMPROVE CRIMP PRODUCTION, KEEP TRACK OF DATA AND SIMPLIFY MAINTENANCE AND TROUBLESHOOTING.

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ALTHOUGH the process of hydraulic hose crimping has been around for decades, in the last few years technology has changed the landscape, completely redefining what is possible in the industry. Like others who have introduced IoT-enabled crimpers, the Gates GC20 Cortex crimper has made crimping a hydraulic hose a more intuitive, efficient, and transparent process. In turn, this technology has produced some significant benefits for end users.

First, what exactly is meant by IoT? For many it is seen as a buzzword, popping up practically everywhere you look. Lights, speakers, cameras, smoke detectors, and many more products have integrated into the "Internet of Things," allowing these devices to communicate to online applications as well as each other in real-time to make our lives easier. Also known as "smart devices," the value of a light that can be remotely switched on or off via voice command or a doorbell that alerts your phone when you have visitors is clear. But how does this technology integrate into crimping hydraulic hose? The benefits may be more considerable than they initially appear. A visual interface increases the accessibility of crimping, and connecting the crimper to the internet provides powerful on-demand tools while also laying the groundwork for impactful data analytics. Simply put, by upgrading traditional crimpers with IoT capabilities, everyone from operators to managers will benefit.

IoT-enabled crimpers, like GC20 Cortex Crimper, allow for easier training, maintenance and data collection.

Smart crimpers simplify the crimping process, thus allowing technicians to make more hose assemblies quickly and efficiently, with less mistakes.

Next-generation crimping

Safe, effective crimping of hydraulic hoses has long been considered a specialized skill set at best and was often seen as arcane or even tribal knowledge, but IoT integration has changed the game, making crimper operation easier and more accessible to everyone. Now operated using a tablet, IoT crimpers such as the Gates GC20 Cortex Crimper provide all sorts of training materials at the user's fingertips. On-demand training videos clearly explain and demonstrate for new operators how to use a hydraulic crimper safely and effectively. A digital user's manual ensures that help is available anytime, without the need to store physical booklets. Employee turnover and the need to maintain a proficient and professional workforce is a universal challenge across all industries; IoT crimpers ease that burden by offering simple, fast, and consistent onboarding and retraining for operators.

Not only is standard onboarding simplified, but IoT integration helps knock down other intimidating barriers of traditional crimping. Screensaver images with tips, tricks, and best practices enhance the operator's understanding of the crimper, allowing them to use any new features to their full potential. The ability to change language ensures training and other resources are accessible to all. Additionally, the tablet touch screen interface for the crimper is incredibly intuitive. If you can operate a smart phone, you can operate a crimper with IoT capabilities. This has proven invaluable as tech-savvy millennials and gen-Zers make up an increasing percentage of the industrial workforce.

To make the process even faster, machines like the Gates GC20 Cortex Crimper have a "favorites" feature which allows operators to preprogram common assemblies, so crimping can now be done with a single touch of a button. Having operators more familiar and comfortable using a crimper can have a direct impact on the sales of hydraulic assemblies. After installing a Gates GC20 Cortex Crimper, some customers have seen hydraulics business increase ten-fold.

Smart maintenance and troubleshooting

Caring for an IoT crimper is also made easier thanks to integrated tutorials and other resources. Videos walk the user through the various processes of calibrating the machine, including setup calibration, maintenance calibration, and die-specific calibrations. If a specific die-set is worn or not providing optimal results, the Gates GC20 Cortex Crimper can perform a die-specific calibration, adjusting the crimping algorithm only for the affected die, resulting in a more accurate crimp every time.

Likewise, when an IoT crimper does experience any issues, its integrated resources can help guide the user towards a solution. If a traditional crimper experiences any issues, it may stop working without any indication of what the underlying issue may be — it could just stop. It could take a great deal of time and effort to diagnose the problem, all while losing potential sales with a non-functioning

crimper. In contrast, the software in IoT crimpers is designed not only to detect what the specific issue is, but also to troubleshoot a solution. Is the sensor not working properly? Check to make sure nothing is obstructing it. Not crimping to tolerance? Perform a simple maintenance calibration. Having the intelligence to self-diagnose any potential issues makes the software in IoT crimpers incredibly valuable, greatly reducing machine downtime and increasing overall productivity.

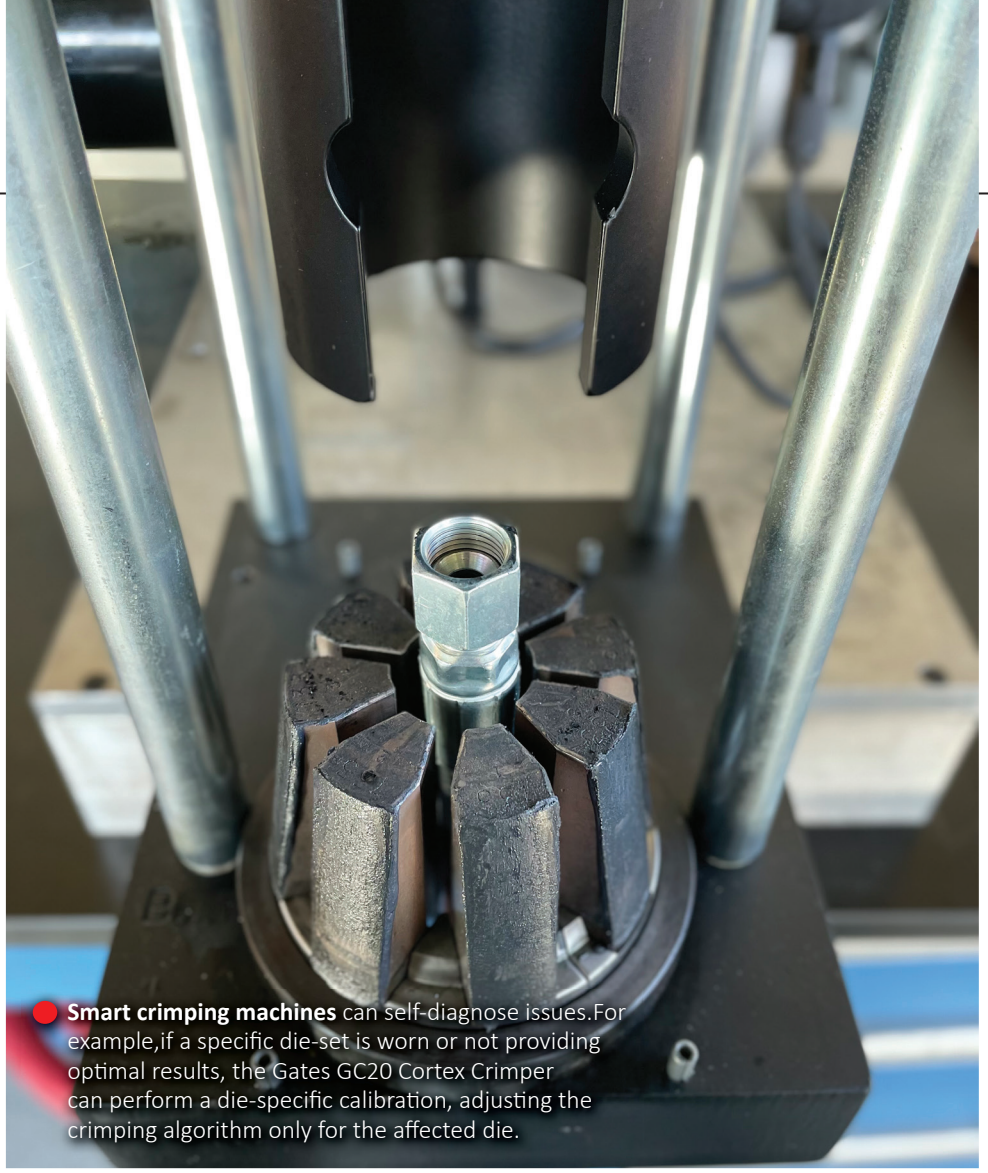
Not only are operators more comfortable and better trained on an IoT crimper, but the customer support process is vastly improved. If an IoT crimper is having issues that operators have difficulty solving locally, troubleshooting can take place remotely. Through the crimper software, customer service teams are able to directly connect to the crimper and fix issues without costly and time-consuming on-site visits. Mobile device management systems combined with error reports allow a fast, accurate diagnosis. By connecting the crimper directly to support teams, users have the tools to minimize crimper downtime, ensuring maximum efficiency and minimizing the possibility of lost sales.

The big picture

All of these benefits are readily apparent to the end-user thanks to the updated technological interface, but let's peel back another layer to examine how IoT integration helps us understand the big picture through data.

The IoT crimper can now provide real time access to crimp data. How many assemblies have been created? Which operators perform the most crimps? How many couplings have been used? Which hose is the most popular? All of these insights and more are now at the user's fingertips. Through Internet connectivity, the crimper is also able to provide real-time crimp specs, ensuring that assemblies are always created to the latest quality standards. Higher quality translates to better performance and less warranty replacements – not to mention eliminating the need for keeping a large crimp-spec reference book on hand.

How else can data provide insight? Take for instance a user managing multiple sites. Having real time crimp data on site activity can help assist with effective resource management and highlight trends or opportunities that might otherwise have gone unnoticed. It also provides the opportunity for automatic replenishment orders, to ensure the most popular items are always in stock. Between more efficient operators, higher quality assemblies, and access to crimp data, the benefits of an IoT crimper can have a real impact for managers and their business objectives.



Smart crimping machines can self-diagnose issues.For example,if a specific die-set is worn or not providing optimal results, the Gates GC20 Cortex Crimper can perform a die-specific calibration, adjusting the crimping algorithm only for the affected die.

Moving forward

The beauty of having an IoT crimper is that new features are constantly added to the machine. By utilizing connected software, the crimper application can be updated and enhanced with additional functionality directly resulting from customer feedback. Is additional training needed? New content can be downloaded easily. Are there new features or process improvements that could be made? The crimper can download the latest software version to take advantage of the newest features and benefits. Traditionally a crimper was a very static purchase. Having a connected platform ensures that the owner is always in touch with an ever-evolving array of enhancements.

New features and updates aren't the only benefits of having a connected machine. Perhaps the most exciting aspect is that IoT functionality is laying the groundwork for future innovations. Improved inventory management, automated crimp OD validation, assembly tracking, replacement referrals – the possibilities for implementing more value-added capabilities are endless.

The Internet of Things is continuing to transform everyday industries, and hydraulic hose crimping is no exception. With the introduction of connected crimpers such as the Gates GC20 Cortex Crimper, benefits of incorporating this new technology are seen at all levels, including the bottom line. Bringing state of the art technology into hydraulic crimping is breathing new life into the industry, and paving the way for even more possibilities to come.

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