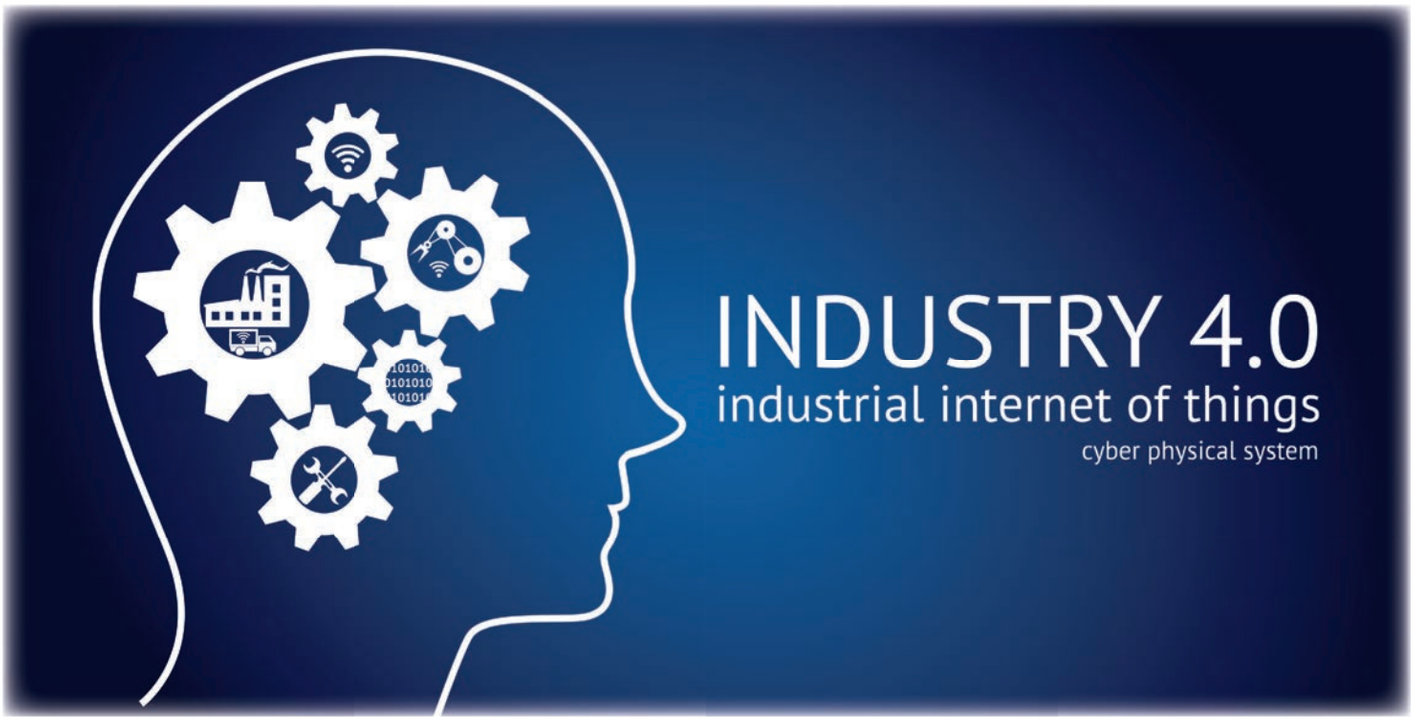

THE IMPORTANCE OF INDUSTRY 4.0

PRIME CONTROLS' BRITTANY LOYD EXAMINES THE IMPORTANCE OF INDUSTRY 4.0 TO THE CAN MAKING INDUSTRY

With what's being called the fourth Industrial Revolution, Industry 4.0 is making an impression on the manufacturing industry that is sure to have a lasting impact. What exactly is Industry 4.0 you may ask? It's the current trend of combining cyber-physical systems, the Internet of Things and the Internet of Systems all together to create something called 'Smart Factories'.

These smart factories, in which robots and machinery are equipped with web connectivity and linked with a system, can envision the entire production process and craft decisions on its own. Industry 4.0 will bring about a new approach to achieving improved results thanks to the advancement of modern technology. Machines will now be using self-optimisation, self-configuration and artificial intelligence to accomplish intricate tasks in order to drive increasingly greater cost efficiencies and superior quality of products and services.

IMPACT ON CAN MAKING

So what does this mean for the can making industry? Firstly, it means digitisation of company operations. With the increase in digital software, conversion presses, sheet feeders, conveyors, testing and inspection equipment and even new products can be prototyped digitally prior to implementation. This allows the can maker to thoroughly design and test a product to ensure it will perform to desired standards. This is an easier and more inexpensive way for can makers to bring their products to the market or test out new offerings without a full launch.

The digitisation of the operations also allows for a smoother production process. By linking various plant locations, can makers will be able to identify when a problem arises in one location and quickly enable another location to compensate for the issues. It also offers a simpler way to test new product and services in particular locations around

the world; something that was not available too long ago.

PRODUCTS AND SERVICES

Industry 4.0 also means an influx in the redesign of products and services. With the ability to have more insight into how their machines operate and where there might be issues or areas of improvement, can makers can use this information to advance and enhance their products and production. Can makers will now be able to have a first-hand view into their operations to alter or fine-tune their products at a quicker and more efficient way than previously done before.

Once upon a time, system upgrades meant a service representative had to visit the plant to perform the upgrade, resulting in costly downtime – now upgrades are easily accessible. Suppliers are able to remote into the machine and perform the upgrade, even for complex products, without wreaking havoc on your production line.

The use of smart sensors and controls on machinery can help operators identify and prevent machine breakdowns or issues before they occur. These types of preventable maintenance can save the can maker significantly from costly machine repairs and downtime.

With the adaptation of Industry 4.0 can makers can expect closer interactions with customers. With the ability to better understand their machinery and operations, can makers will be able to speak with end users more openly and alter their business accordingly. They are able to identify patterns and trends of the end user and work together to improve processes and the overall product. The increase of small, customisable runs is a trend customers are favouring currently. Now can makers will be able to work closely with the end user to produce batches of one just as inexpensively as mass production.

INDUSTRY 4.0 PROGRESS

The consequence of Industry 4.0 has already started to appear in the can making industry. With one of the first Industry 4.0 'Demonstration Cities' (Cincinnati, Ohio) right in Prime Controls' backyard, the metal sensing company based in Dayton, Ohio is increasing its efforts and innovating new smart controls and sensors to help can manufacturers increase their productivity and provide better insight into their machines.

One example is Prime's SD230 Double Shell & Missing Tab Detector plus the ET230 Ethernet IP Gateway which links the controller with the plant's PLC system, allowing operators the ability to calibrate and run sensors remotely. Additionally, the gateway enables special reporting such as output status, shell profile, current measurement readings, fault conditions along with other troubleshooting tools. By being able to run the sensor remotely, it reduces the number of times an operator will access the control cabinet, where Arc Flash is a concern.

IN SUMMARY

Overall, the implementation of Industry 4.0 will have a significant impact on the can making industry.

From increased productivity, quality and flexibility to longer product lifecycle, improved machine safety and ultimately safer working environments, can makers who adapt to this new way of manufacturing will reap the benefits of increased revenue, market share, profits and an overall increase in success for their company.

This is only the start of Industry 4.0 in the can making industry, are you ready to join the revolution? CT

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