

25 years delivering dependable, global QAD Data Collection

THE COMPANY

Continental Structural Plastics, a Teijin Group company, is a leader in the development and manufacturing of lightweight composite components for the automotive and heavy truck industries. The company's award-winning materials are used by nearly every major global OEM for Class A body panels, pickup boxes, battery carriers and numerous structural applications. CSP has operations in Michigan, Ohio, Louisiana, Indiana, North Carolina and Mexico in North America; as well as in France and China.

Founded in 1969, CSP's decades of experience working with composites has led to numerous, innovative design solutions in light-weighting, strengthening and molding techniques, offering superior strength-to-weight ratios for customers looking to reduce weight, increase fuel efficiency and improve economy. CSP's Class A composites are e-coat oven capable, and have replaced steel and aluminium in many applications. CSP brings an overall systems approach (CAE design optimization, raw material selection, molding process, bonding and prime/paint) that results in the design and manufacturing of the best composite parts currently available on the marketplace – high-quality,



high-strength composites that are lightweight, non-corrosive, and cost-effective.

In 2006, Continental Structural Plastics utilised QAD as its ERP system and became a strategic partner with Eagle in the U.S. It's a partnership that developed and grew over the next decade and today the Eagle scanning process is used in various forms in all eight CSP locations in the United States and Mexico for data collection and remote production reporting.

THE INTERNET OF THINGS

New technologies, such as the Internet of Things and Industry 4.0, are being adopted and utilised to facilitate convergence of the physical with digital manufacturing, enabling businesses to increase traceability,

accountability and quality assurance. Industry 4.0 is taking the digital age forward, tying individual technologies into a cohesive whole, working to collect and format the massive amounts of data now available. Incorporating this newly-available technology will allow business and manufacturing systems to make operating decisions automatically, without human interaction – increasing productivity by reducing labor costs and eradicating the possibility of human error. Eagle has traditionally been at the forefront of adaptability and innovation within the data collection industry and new technology allows a more creative, more connected business for manufacturers, providing location awareness, greater traceability and optimized productivity.



RF CONTINUOUS TRANSACTION PROCESSOR

As part Eagle's IoT strategy, a solution was developed to automate key Eagle transactions and reduce operator input required. In Fall, 2016, Continental Structural Plastics implemented Eagle's RF Continuous Transaction Processor (CTP), using it on production lines to backflush, create containers and print container labels. Robert Ciavaglia, CSP's Business Systems Integration Manager, explains the rationale behind the decision to incorporate this new system.

"We use a lot of what we call 'line-side labelling' as our product moves across the shop-floor and we need to generate labels at various stages of the production process. We had realized that we needed to improve our efficiency and traceability and reduce the time operators were spending inputting data. For every five parts we produce, we need to create a label, and by utilizing the continuous backflush process via the CTP, the system generates a signal that automatically prints the label. Previously, an operator had to go to the computer to tell it he'd produced the five parts, making multiple keystrokes or using the scanner. By having the automatic feed, the continuous backflush eliminates those keystrokes, puts them in the inventory and generates the label via the printer. This is more efficient for our operators on the floor to function, saving time, increasing accuracy and cutting down the possibilities of mislabelling or human error."

The setup of the label formats were done with the assistance of Jim McNeilly. Label format assignments are both part and ship to specific. Part Numbers on labels are either black-on-white background or reverse printed (white-on-black background) to make them distinguishable from each other.





The CTP is being used currently at two facilities with plans to implement its use at eight CSP sites in the United States and Mexico, for backflush and product inventory and for shipping. Cycle counting is also an area under future consideration.

“The new configuration is set up to generate a slightly different label, one which still meets the standards we have to follow, but one where similar products have subtle differences on each label. This allows an operator to identify that this is Product A and this is Product B for example, which saves time because, as our operators are pulling product to ship, they don't have to focus on each part number, they can easily see by the style of each label which part they are pulling. This makes the process more efficient when it goes to the Shipping department.”

The implementation of the CTP and the new process was simple and straight forward to incorporate, with only a minimum of training being required by CSP's users as the engagement is all handled by computers. The electronic signal from the programmable logic controller (PLC), generates the file and places it on the QAD server for the Eagle process to locate. Robert Ciavaglia was quick to see the benefits that the new process brought about.

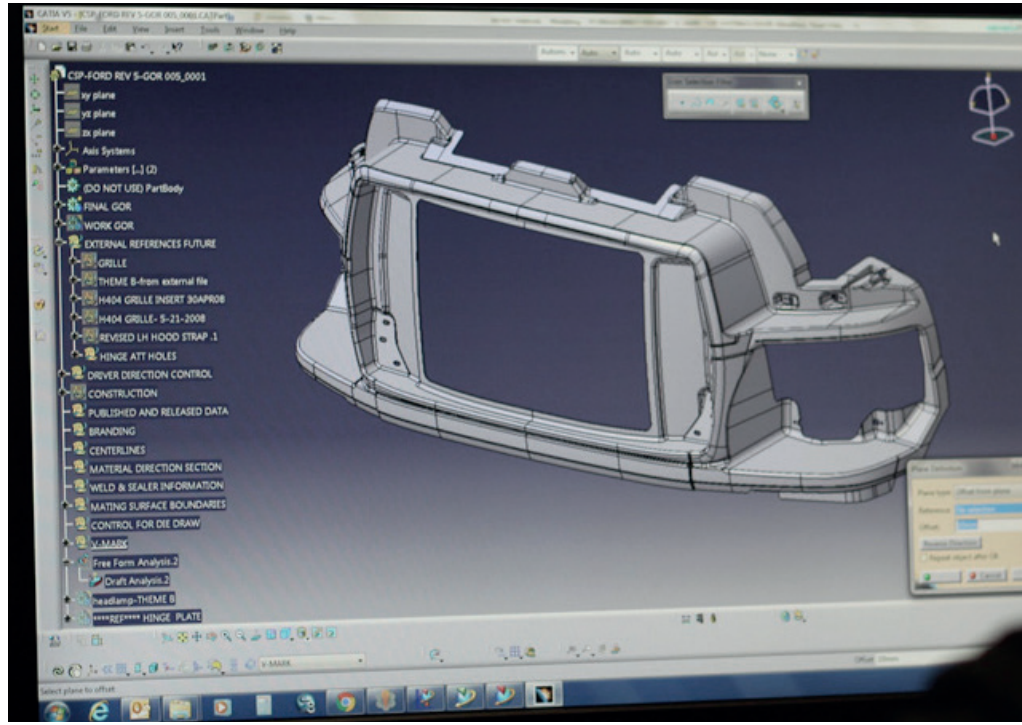
“They (the operators) don't need to go over to the computer to report production and generate a label, it's already there. This decreases the time each operator spends on the computer and improves the efficiency in getting parts through the system. And let's be clear, we're talking fast cycle times on this – every 5th part is produced within approximately 40-45 seconds. If I'm spending 10-15 seconds, every 45 seconds, generating a label, it's going to consume a good portion of my working day! We now have a focussed concentration on producing parts and not having the worry about computer administration.”



IMPLEMENTATION

The CTP was delivered to CSP as part of the existing software, with no software charges. Eagle's Product Consultant, Jim McNeilly and Support Consultant, Tony Laico, worked closely with Robert Ciavaglia in making sure the implementation was successful and that the CSP users were fully up-to-speed when and where it mattered. With a production process that involves multiple products frequently moving across the shop-floor, reducing operator dependency increases efficiency and enables the PLCs and processors to generate files and place them in the correct places and, within seconds, allowing the user to track and trace via the imprint label.

"From a technical perspective, I outlined to the Eagle team what we were looking for and Jim and Tony told me the necessary changes we needed to put in place and talked me through the implementation step by step. This is the file format we need to receive in, laying out what needs to be where, communicating with our PLC guys to make sure we're providing in that format, getting all the new configurations set up - they were just phenomenal and I greatly appreciate all the time and effort they put in on the project. They were ready to go whenever we were, and made the time for us with both the initial implementation and then with the on-going support they provide."



FUTURE

CSP intend to expand Eagle solutions into other areas of production in the future, looking to reduce laborious tasks and processes where possible.

“ The Eagle solution was delivered on time and on budget. ”

Robert Ciavaglia, CSP's Business Systems Integration Manager

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