TATSOFT

United Copper Industries

Manufacturer of copper building wire solely committed to serving the electrical distribution market.

United Copper manufactures all major types of 600 volt building wire.

FactoryStudio helps improve performance of production lines

CHALLENGE

- The goal was to operate, monitor, and analyze each of the production lines to improve performance.

SOLUTION: FactoryStudio

- FactoryStudio from Tatsoft was chosen because the client was looking for affordable solution that could connect easily to existing plant PLCs, as well provide easy connectivity to SQL Databases to allow integration to existing quality databases.

- FactoryStudio was purchased to provide a Data-Acquisition and Reporting/Analytics layer on top of legacy systems currently being used for the operator interface.

RESULTS

- Fred Kibat, project manager at United Copper Inc, says: *"Automated reports including production, downtime, OEE, Alarm and more will help uncover areas of the lines where improvements need to be made."*

- FactoryStudio reduced the engineering time and the product's features helped keep the project organized and limited clutter throughout the project.

United Copper Industries is a manufacturer of copper building wire solely committed to serving the electrical distribution market, which manufactures all major types of 600 volt building wire used in both residential and commercial construction, such as THHN, Metal-Clad, HCF-AC, NM-B and UF-B. Manufacturing and distribution are integrated wherever possible to meet the demands in the highly competitive building wire market.

One of the company's main processes consists of several different OEM Production Lines which extrude different gauges of 600 volt building wire used in residential and commercial construction. Therefore, they needed to operate, monitor, and analyze each of the production lines to improve performance.

They started looking for an affordable solution that would allow them to connect easily to existing plant PLCs, as well provide easy connectivity to SQL Databases to allow integration to existing quality databases. They also wished to explore mobile client connectivity, which was why they decided to use FactoryStudio from Tatsoft.

As its first goal, FactoryStudio was purchased to provide a Data-Acquisition and Reporting/Analytics layer on top of legacy systems currently being used for the operator interface. Shortly, FactoryStudio will also be used at the production-line-operator level.

To assist them in this process, Tatsoft had the assistance of Wunderlich-Malec, one of our system integrators. Wunderlich-Malec is an experienced company that has been providing customers with engineering, system integration and fabrication solutions for more than 30 years.

Fred Kibat, project manager at United Copper Inc, highlights the high-quality job the company did on the project: *"Wunderlich-Malec has been terrific to work with on this project. We appreciate their expertise and ability to stay on top of newer technologies to provide longevity, stability, and reliability to our systems."*

The FactoryStudio portion of the project took around 10-12 weeks to complete, and the system is currently comprised of nearly 10,000 Tags. When integration is fully completed the system will comprise of around 30,000 Tags. Currently, they are connected to 12 PLC's and 4 OPC DA Servers.

The system uses many aspects of FactoryStudio. In addition to being an interface to the production lines, production data is logged in custom SQL tables. The production data is easily accessible through built-in query tools, as well as reports.

Another feature that the product allows and that United Copper considered essential for their operations is the fact that all setpoint changes are archived to a custom audit table, including the operator name, client node, current setpoint value, and previous setpoint value.

Also, while the network architecture does not currently support the application fully, each device (Drive, Motor, and Control Loop) has been assigned a QR Code. QR codes can be scanned via iPad or iPhone. A SQL query not only selects the display based upon the QR Code but populates the correct device tags providing a powerful real-time display from anywhere in the plant.

FactoryStudio's features also reduced engineering time - for example, templates for tag creation allows the development of project models, which helped keep the project organized and limited clutter throughout the project. Templates, along with the use of Reference tags, also greatly minimized the amounts of graphics and allowed the developer to present an application that is much more complex with a minimal amount of work. Copying and pasting to Excel was also considered a great feature that greatly reduced the time it took to create tags, alarms, and Historian points.