



CASE STUDY

IMPLEMENTING PLANT STANDARDS FOR A NEW LEAK TEST SYSTEM

A software conversion on a brand new leak test system from Allen Bradley to Siemens while following strict software and hardware standards.

PROJECT SUMMARY

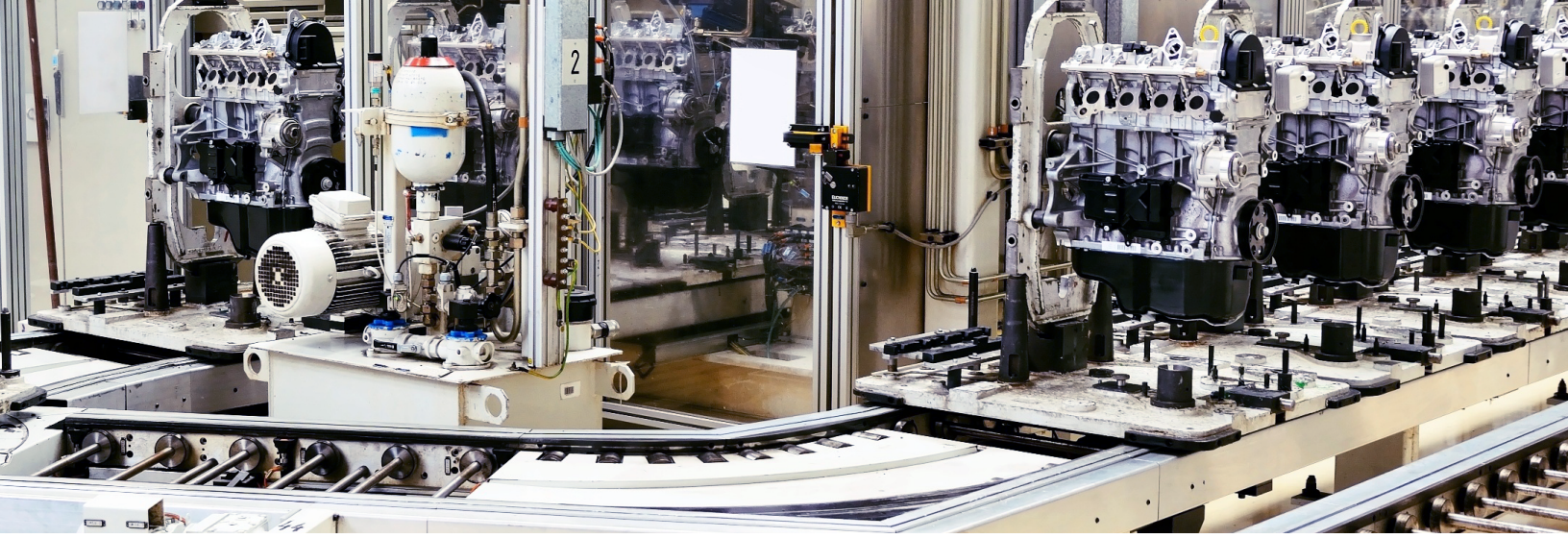
A local automotive manufacturer purchased three leak test systems from an OEM. The systems follow a turn-key, plug-and-play methodology where the equipment is completely standalone except for a few basic interlocks to the surrounding equipment. To reduce the upfront development, the OEM uses a standard template and only makes minor adjustments to sell to their different clients. However, this manufacturer wanted to use their own meticulously maintained software and hardware standards.

While the OEM was well versed in their software template, they did not have the background to convert their Allen Bradley template into the manufacturer's custom Siemens template. To ensure that the software development ran smoothly, the manufacturer recommended Siemens Certified Solution Partner Patti Engineering to bridge the gap between the OEM and the plant standards.

CHALLENGE

For this manufacturer, any new equipment has to follow a strict set of software and hardware standards. The software standards are more than just a library of blocks; but include folder structures, naming requirements, and outlines of how the code should be written. These standards allow the software to be mass-produced for all systems and make it easier for the plant engineers to troubleshoot the equipment.

On top of the OEM needing to recreate their PLC logic for two Siemens ET200 Pro PLCs, one 1500 series PLC, and HMI interfaces for three TP2200 Pro Comfort Panels, the manufacturer had recently released a new version of their standardized software. Not a single piece of equipment was running with the latest version, significantly reducing the number of available references. This, coupled with having limited experience with Siemens, resulted in their decision to bring in Patti Engineering, a trusted system integrator the manufacturer has relied on for past projects with valuable expertise as a Siemens Solution Partner.



SOLUTION

After kicking off the project, the team at Patti Engineering began structuring the software from the Allen Bradley reference. The latest version of the manufacturer's template was vastly different from the previous versions, which meant the team couldn't replicate the code from a similar system. Any lines of code not explicitly laid out in the standard had to be written from scratch. Patti Engineering's numerous projects with earlier versions gave them valuable insight into navigating the latest software and understanding what the plant engineers would expect from the code.

The Allen Bradley sample software was not an exact match to the system for this project, so Patti Engineering teamed up with an engineer from the OEM to finish software development. Together they went through each individual process to verify its inclusion in the new code and make any changes to ensure that these particular systems would function as intended. Throughout the development at the OEM's facility, Patti Engineering made sure to bring the OEM up to speed on how to work with the manufacturer's Siemens template.

RESULTS

Patti Engineering concluded their portion of the project at the OEM's facility. They trained the OEM team on the new code's functionality and completed validation testing before the systems were packaged for delivery to the manufacturer. The OEM then took over ownership of the software and installed all three systems.

At the end of the project, Patti Engineering maintained their status as a trusted advisor to the manufacturer and became a dependable, welcome Siemens resource for the OEM.

Founded in 1991, Patti Engineering, Inc. is a CSIA Certified Integrator offering high-caliber engineering and software development services. Patti Engineering is an expert in our partners' technologies. Our partners include:

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