



PROJECT PROFILE

HEINKEL CENTRIFUGE INTEGRATION

PHARMACEUTICAL INDUSTRY CLIENT

Customer Background

Our client custom manufactures active pharmaceutical ingredients at their CGMP-compliant facility in California. CGMP, which stands for Current Good Manufacturing Practices, is a life sciences industry standard that ensures products and processes are controlled, traceable, and consistent.

Enterprise Automation's approach aligns well with CGMP facilities, as we focus on testing, standard documentation, and rigorous processes. Since 2022, we've worked closely with this client, managing controls on mission-critical equipment and systems. At their facility, which uses Allen-Bradley and AVEVA platforms, the client chose Enterprise Automation as a key partner for automation consulting and system integration across many processes.

Project Background

In upgrading one of their critical processes, the client procured a new centrifuge and planned to have the vendor, Heinkel, handle commissioning. Otherwise a perfect fit for the process, the Heinkel centrifuge was designed for compatibility with Heinkel-only systems including those for visualization and control.

Without integration into the facility's existing AVEVA Plant SCADA system, many of the benefits of centralized control would be lost, including automatic and remote operations, centralized data and alarm management, and process-wide visibility.

Investing in this integration offered several benefits to this business. It would cut labor by reducing manual operation, as well as speed up production. The increased visibility would improve workflows for validation, troubleshooting, maintenance, and reduce downtime. Given the client's goals of swift completion and thorough validation, EA was the right partner for the job.

Project Manager



Joe
Assio

Project Technical Lead



Ezequiel
Ansaldi

Key Insights:

- Reduced months of schedule through with close vendor collaboration
- Generated over 380 pages of validation documentation for CGMP compliance

Key Technologies:

- Allen Bradley L81 ControlLogix Controller
- FactoryTalk AssetCentre
- AVEVA Plant SCADA (formerly Citect SCADA)

EA Solutions

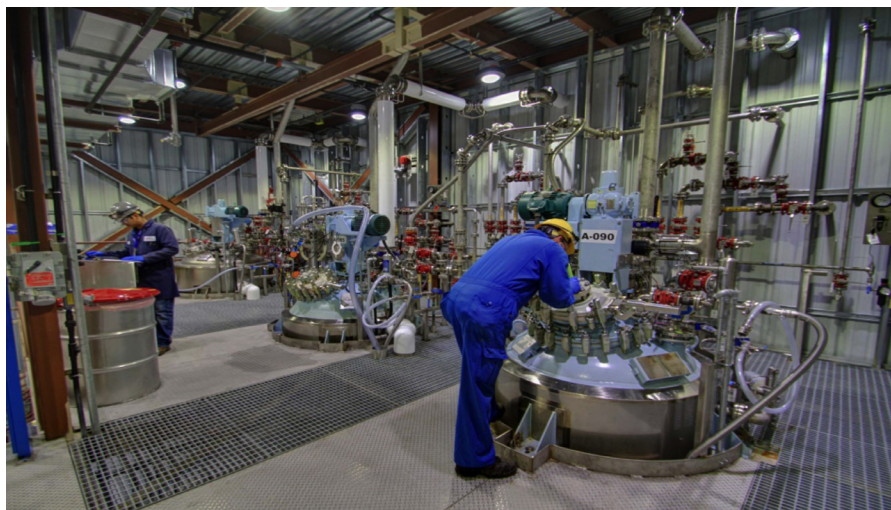
If done with a more traditional approach, this upgrade might have taken over a year: procurement, vendor commissioning, then integration. Instead, EA sped up the process by working alongside Heinkel in a parallel, collaborative workflow. Modifying vendor systems is unusual, but by keeping frequent communication and having Heinkel verify all programming changes, EA saved months without risking quality or client confidence.

Integrating the centrifuge required programming, validation documentation, and strict CGMP compliance. EA's engineers carefully compared the new centrifuge's program with the client's previous one, then updated both Heinkel's and the client site's PLC code to enable PLC-to-PLC communication. EA added logic for the site's valves into Heinkel's program using reusable code modules. In the SCADA system, engineers created new screens and tags to give better visibility and control over centrifuge operations.

When unexpected issues arose, such as delays during commissioning, the team stayed proactive. They communicated openly, adapted plans, and used the waiting time to develop documentation and run preliminary tests.

Installing the centrifuge meant carefully validating and testing the new equipment, I/O points, PLC code, and SCADA components. At every stage, the engineers kept detailed records to meet CGMP standards. These records included important documents like the automation validation master plan, user requirement specification, system design description, validation trace matrix, and a site acceptance test (SAT) checklist.

The project resulted in the successful integration and validation of the centrifuge within the client's control system. The team received praise for clear, ongoing communication with Heinkel and for keeping the project moving forward despite challenges. Looking ahead, Enterprise Automation will keep working with this client on future technology upgrades to strengthen their automation system and support the safe, regulated production of pharmaceutical products.



Enterprise Automation, A Tetra Tech Company (NYSE:TTEK), a nationwide process automation consultant - plans, designs, documents, builds, tests, deploys, and supports critical automation and OT infrastructure for process industries.

All trademarks referenced in this document are the trademarks of their respective owners. ©2024 Enterprise Automation, All Rights Reserved