

Modifying Existing CIP Systems



Overview

The company, a major yogurt manufacturer, asked Avanceon to modify their existing CIP systems to allow for better control and subsequent efficiency improvement over all aspects of the cleaning process. The Avanceon engineering team created and installed a standard CIP methodology throughout the plant that allowed the customer to ensure product quality, shorten wash times & decrease chemical/water usage as well as increase ease of troubleshooting.

The Challenge

The customer had multiple (19) CIP systems that had been created by different programmers over a span of over 10 years. As a result, the customer struggled with making simple modifications to their systems to improve existing or add new functions. Whether it was changing the pulse times of their valves (in order to clean all parts of the valve,) altering circuit wash times or ensuring the proper valves were being pulsed, any type of modification was tedious and time-consuming. Faced with the complexity and differences within each skid type, Avanceon was tasked with developing a standard that could be applied to each CIP regardless of the number of solution tanks or number of circuits that each skid serviced.

The Avanceon Solution

Avanceon worked with the customer and determined that implementing a pin chart solution would grant the customer with the most visibility into their cleaning process, as well as deliver true ease of use. We began by modifying and standardizing the RSLogix 5000 code, which would allow us to introduce 2 different styles of pin charts. The pin charts, created in Microsoft Excel, enabled us to overcome the complexities and differences within each skid type. One pin chart controls the Master Skid (the tanks creating the solution and pumping the water and solution through the system for varying times) and the other pin chart controls the circuit devices (valves/pumps along the path being cleaned.) In the Master Skid pin chart, values can also be written to the set points of the PID loops controlling the temperature and flow rates specific for each cleaning step.



The Result

The new system has generated a limitless potential for savings. With the flexibility to shorten wash times for specific parts and equipment as well as closely monitor the steps which send water and chemicals to the drain, the customer has been able to increase wash efficiency while significantly decreasing their downtime. Standardization of the process has also led to a decrease in the amount of time spent troubleshooting, as technicians need only be familiar with a single methodology.
