Award Winning, Farmer-Owned Co-op Partners With MAVERICK to Upgrade Cheese Milk HTST Controls In Eight Hours

The customer needed to upgrade an obsolete cheese milk HTST (high temperature short time) control system within an eight-hour time period. This system also just happened to be the heart of their plant. Without it, no production can occur.

Objective

MAVERICK teamed with the customer to do a system assessment and provide a solution ensuring an upgrade could be completed within the eight-hour window. This type of upgrade would typically require a long weekend and have multiple trades tripping over one another in order to meet the deadline.

Results

Utilizing MAVERICK's plan, the cutover took one hour. Just sixty minutes after the team shut down the old system, testing began on the new system installation. This left seven hours to test the system before production began. The next day, the vice president of operations expressed his pleasure with the effort and results of the switchover.

Solution

The time constraint required out-of-the box thinking. It wasn't acceptable to utilize existing panels or instrumentation as both would require pulling wire, terminations, panel work, configuration and calibration during the cutover window.

Instead, the team decided to install a completely new control panel and remote PLC panel. All instrumentation on the HTST control system was replaced. This allowed existing instrumentation to be simply unclamped from the stainless steel piping and replaced with new devices which were prewired, tested and calibrated for proper operation.

The current pumps and variable frequency drives were utilized. New control wiring had been pulled between the new panel and the motor control center (MCC) where the drives were located. During the cutover, the team lifted wiring from the existing system and landed new wiring which was already terminated on the new control panel end and staged at each drive.

Prior to cutover, a panel with solenoids and current to pressure (I/P) transducers were installed and tested. New poly tubing was labeled and run to each valve before the cutover, requiring disconnection/reconnection of one poly.

PLC code was fully tested prior to the cutover during the factory acceptance test (FAT) prior to arriving on site. Plant operators participated, so they were already familiar with the new operator screens and functionality of the system before installation.

With this advanced familiarity, operators were able to start the system while the MAVERICK team verified correct operation of the system. Operator involvement throughout the FAT and the startup minimized training time required after system validation.

The team stepped the system through both production and clean-in-place (CIP) operations, testing and fine-tuning control loops. With testing complete, the operators were able to run a complete CIP on the HTST system.

The MAVERICK Difference

Due to the success of the system assessment and cutover plan implementation, the MAVERICK team had ample time to spare prior to the end of the cutover window to ensure the system would start up on production without a hitch.

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