Dairy Producer Transitions Lactose Crystallization Tanks Without Downtime

MAVERICK transitions a new building of lactose crystallization tanks with zero process downtime.

Objective

The customer needed to program and commission a new building containing a significant array of lactose crystallization tanks. The existing crystallization system was scheduled for removal and the customer required the new system be commissioned with minimum production impact.

Results

The MAVERICK team carefully planned a multi-tiered transition between the old and new systems, incrementally passing handshaking and control of clean-in-place (CIP) and production systems while the process was active. The dynamic process change to the new equipment was successfully implemented with no production downtime.

Solution

Process Programming:
MAVERICK adapted and developed a new system control scheme that utilized new mixproof valve clusters and replaced the legacy flow plates. The existing HMI was modified and integrated to the new control scheme, and the team made sure the resulting interface was familiar to the operators so as to maximize acceptance.

PLC Standards:
The team adopted the customer's programming styles for the process programming and expanded them in order to provide easy duplication and standardization across duplicate equipment – ensuring quick process changes and zero duplication errors.

Startup and Commissioning:
MAVERICK drove the commissioning schedule, kept I/O checkout constantly ahead of schedule and ahead of the construction pace. The team finished the project below budget.

Crystallization:
MAVERICK worked with plant personnel to optimize the lactose cooling and crystallization process and adapt the previous cooling curves to the new system.

Control Networking:
Due to the modern interconnected state of process control, numerous data connections originated from the legacy controller and were directed toward it. The MAVERICK team mapped the various networking connections and transitioned them simultaneously with the process cutover.

CIP Transition:
Because of the nature of the running process, a single CIP system was required to wash old and new equipment during the transition period. MAVERICK developed a dynamic messaging and handshaking system which allowed the operators to toggle the CIP control from the new system or old. This allowed the old CIP engine to be driven remotely with no hard cutover for sanitary washes.

Remote Support:
With remote access, a pool of experienced engineers was available to address any operator or engineering questions and concerns 24 hours a day.

The MAVERICK Difference
MAVERICK's experts combined their extensive process control and startup and commissioning experience to make an expansive and highly complex process start smoothly with zero production downtime.

MAVERICK® TECHNOLOGIES
A Rockwell Automation Company

MAVERICK Technologies, LLC
265 Admiral Trost Drive | Columbia, IL 62236 USA
+1.888.917.9100 | Fax +1.618.281.9191
info@mavtechglobal.com | mavtechglobal.com