CASE STUDY

3D TRASAR™ for CIP helped a string cheese plant prevent quality issues.

BACKGROUND

For a large string cheese producer in the North East, food safety and quality are paramount. That is why they partnered with Ecolab to install 3D TRASAR Clean-in-Place (CIP) technology. The technology continuously monitors the controls that track the plant's cleaning and sanitizing performance. It collects data directly from the plant's programmable logic controller via a smart box, which sends it to a secure server. Ecolab analysts translate the data into recommended corrective actions, which the customer and on-site Ecolab account manager can then implement.

SOLUTION

3D TRASAR remote team identified low supply flow rates for the String Cheese High Temperature Short Time (HTST) to coagulator transfer line. The flow was observed at 109 GPM , when the exception set-point was set at 120 GPM, alerting Ecolab to a potential problem. 109 GPM was on the edge of being outside of the plants CIP flow metrics so the plant continued to observe the washes for any more issues. About a week later the plant noticed that the same circuit was washing at an extremely low flow rate of 20 GPM which does not allow for enough flow to clean the transfer line effectively and could lead to quality issues with the cheese if not addressed.

Ecolab used 3D TRASAR for CIP to review the CIP cycles on the line that alerted the team to be out of scope and learned that all the circuits on that unit had extremely low flow. Visibility into the out-of-spec alarms on the CIP circuit enabled the plant to focus their efforts on the correct line and identify that a check-ball on the return line was damaged to the point that it was jammed in the return line. The plant replaced the check-ball and Ecolab recommended that they implemented a check-ball preventative maintenance program to track and maintain large volume of check-balls in the plant. Additionally, they are programming logic in place to prevent a wash from finishing if flow requirements are not met to proactively prevent this type of occurrence from happening in the future.

VALUE CREATED

PRODUCT QUALITY

Prevented non-conformant washes leading to quality issues effecting a weeks' worth of string-cheese production.

PRODUCTIVITY

Prevented needing to use additional resources to identify and troubleshoot non-conformant washes.

VALUE DELIVERED

$250,000

RESULTS

3DT for CIP identified the low flow issue with the HTST pasteurized product transfer line to the coagulator enabling the plant to quickly take action and stop the nonconformant wash cycle. With this corrective action, the plant avoided quality issues in their string cheese product that would have resulted in the loss of at least a weeks' worth of production equating to $250K worth of product. Additionally, the plant would have had to provide incremental resources to identify and correct the low-flow issue wasting time and money.

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