Cooper Controls, Inc.

INSTRUMENTATION • CONTROLS • ELECTRICAL

Saving the PLANET, One Account at a Time!™

A fruit packaging company in Modesto, CA had a fruit cocktail process that filled cans of fruit with four filler bowls that held peaches, pairs, pineapple and grapes. The existing filler bowl level controls consisted of pneumatic level sensors that had metal tips that were actually in contact with the product in the filler bowls, which became very problematic when the tips would wear off and break—falling into the food product. Cooper Controls deduced that a safer "non-contact" level sensing system would solve this problem; however, the biggest challenge was sensing level in the filler bowl that held grapes. Due to the spherical shape of grapes, this was not going to be an easy task.

After much due diligence, the solution was to use an ultrasonic sensor. Each sensor was calibrated and installed in a specific spot on each of four filler bowls with custom-made brackets. These sensors were connected to a PLC and wired to the line to control conveyors and gates that feed the product, as well as the filler speed. A touch screen was used to adjust set points and time delays at the filler. This non-contact level controller eliminated the need for the metal sensing probe, and eliminated the problem of the probe ends falling in with the food product, which made the food processor's insurance company very happy. The application has since been implemented for a variety of fruit products at the plant.

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