

# Process Temperature Control



*Saint Clair Systems works with a 3-pc. can manufacturer to reduce variation in their end liner operation. Controlling the material temperature stabilized the pressure at the nozzle and yielded some extraordinary results.*

## INDUSTRY CASE STUDY

# HOLD FOR INSPECTION

## THE PROBLEM

A 3-pc can manufacturer was experiencing issues with low Cpk's and high HFI's (Holds for Inspection) due to control issues on their end liner operation.

70% of all quality rejects were due to improper coating weight. This culminated in an expensive customer reject.

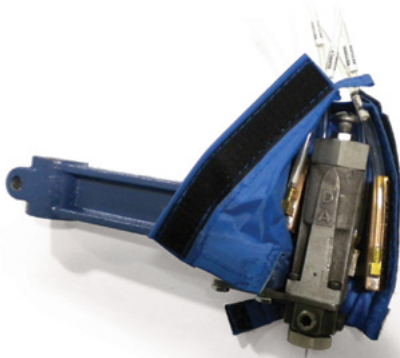
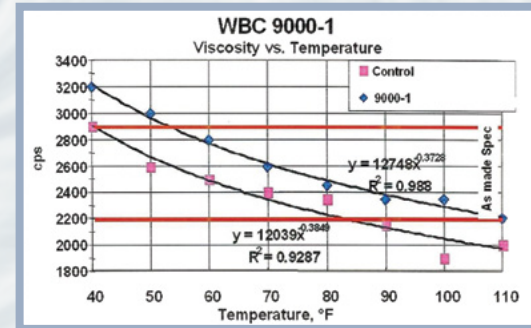


# PROCESS TEMPERATURE CONTROL CASE STUDY

## THE ANALYSIS

We analyzed their process and determined that variations in compound temperature, and its associated effect on viscosity, were creating variations in both dispense volume (weight) and placement of the bead.

There was the direct effect on fluid viscosity due to the viscosity vs. temperature characteristics of the compound. Those changes in viscosity produced variation in pressure drop in the delivery system, resulting in variations in pressure at the nozzle.



## THE SOLUTION

To successfully reduce those temperature and pressure variations, a small package was required

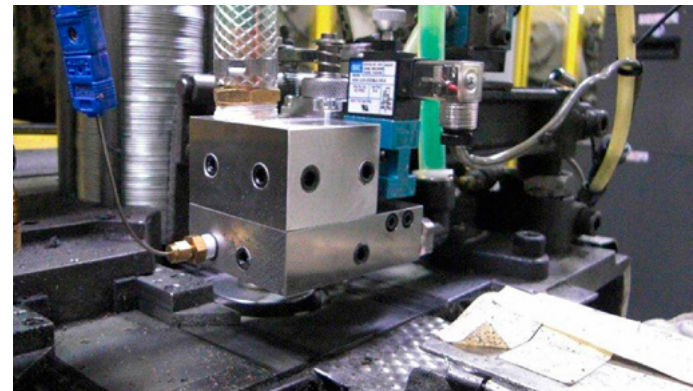
To accomplish this, we turned to our thermo-electric systems, adding a recirculation loop to enable us to use our proprietary path-tracing technology to provide accurate temperature control all the way to the point-of-application.

## THE RESULTS

Installing point-of-application temperature control reduced variations in viscosity and pressure at the nozzle, which resulted in:

**40% INCREASE IN CPK**

**47% REDUCTION IN HFI'S YEAR-OVER-YEAR**



*Since 1990, Saint Clair Systems has supplied over 3,600 temperature control systems around the World. Our engineering team provides cost effective solutions to manufacturers that understand that quality and productivity are too important to leave to uncontrolled variables. If you are interested in controlling your process, please contact us or visit our website for additional information.*