



## ACSI Weighing Control Strategy Drives Batch Control System Performance

*Proprietary algorithm delivers highest degree of weighing accuracy in shortest period of time.*

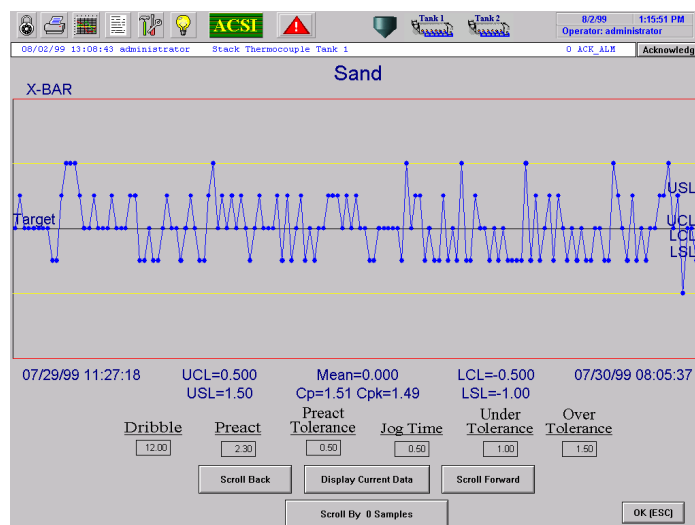
The Advanced Control Solutions, Inc., batch control system incorporates a proprietary Automatic Preact Adjustment Algorithm for weighing control. The ACSI-developed algorithm ensures materials are weighed accurately, monitors the final weight of each material and, if necessary, makes adjustments to compensate for feeder degradation and material flow changes. The process is entirely automatic.

### Traditional Weighing Control

In batching, multiple raw materials stored in various silos are weighed prior to mixing to fulfill recipe/formula requirements. Many systems start with fast feed from the silo to the scale, slow the feed as it nears the target material weight, then jogs the feed several times to come as close as possible to the target weight within the tolerance limits. This “jogging” process is repeated each time material is weighed prior to mixing.

### Precise Weighing Control

Unlike a traditional system, the ACSI controller minimizes the number of jogs needed to get material weight as close as possible to the target weight with the goal of eliminating the jog cycle altogether. The ACSI Automatic Preact Adjustment Algorithm takes the guesswork out of the process by recording and statistically analyzing weighing performance. Deviations from target are recorded and accumulated. If the deviations start to trend out of tolerance and reach a predetermined value, the average of the over or under tolerance is added to or subtracted from the preact weight. With this adjustment made, the next weighed amount should be on target. The automatic preact adjustment strategy enables the control system to continuously adapt to changing material flow characteristics and different feeding devices.



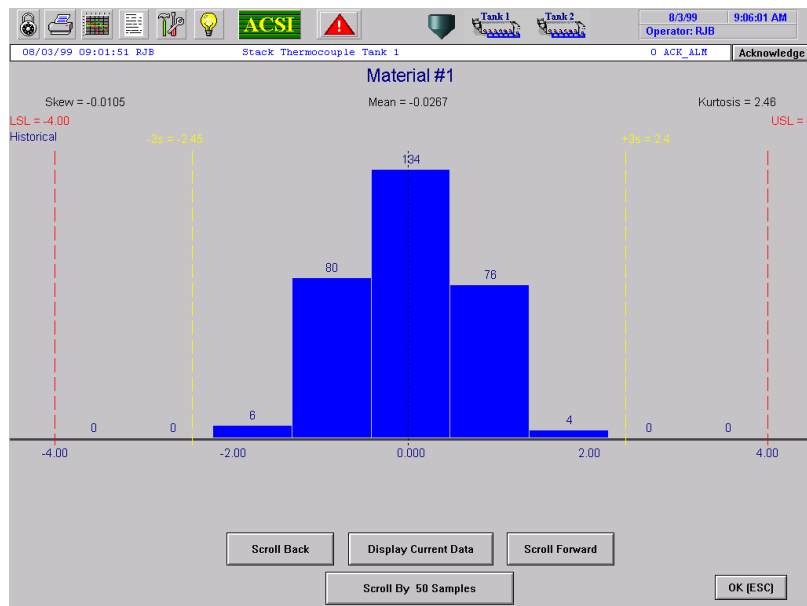


## Applications

Automatic preact adjustment is a standard component of all ACSI batch control systems and has proven to be reliable in numerous installations. When incorporated as part of an overall batch control strategy, ACSI automatic preact adjustment has successfully improved efficiencies in all glass-making applications.

## ACSI Automatic Preact Adjustment Algorithm

Improving weighing accuracy can significantly improve product quality, operating efficiencies and cost savings.



## Features

Minimizes/eliminates jog cycle

Improves weighing accuracy

Minimizes/eliminates out of tolerance alarms

## Benefits

Maximizes process efficiency  
Increases cycle speed and overall throughput  
Reduces equipment wear/tear

Ensures homogeneity from batch to batch  
Decreases material waste  
Corrects to tighter tolerances

Reduces need for operator intervention