STERLING®
SYSTEMS & CONTROLS, INC.
Automation ~ Batching ~ Process ~ Systems

UPGRADED BATCHING SOLUTION
FOR BAKING INDUSTRY

CASE STUDY

Benefits

- Batch size was increased ten fold
- The quantity of mixes was reduced
- Significant reduction in handling of small mixer bowls
- Eliminated mechanical conveyor equipment needed to move mixer bowls and mixers
- Ingredient order flexibility led to significantly reducing dust
- Smaller factory floor footprint

Typical Features

- Eliminated as much existing equipment as possible (conveyors, frames, transporting of materials)
- Flexible batch ingredient order reduced dust (adding half of the liquids first, then the dry ingredients reduced dust, helped premix)
- Replaced existing equipment stack for larger batches, smaller footprint, same ceiling height
- Updated PLC panel to current generation Allen-Bradley PLC
- Use new weight instruments, one for each of the four (4) scales
- Updated OS to current generation Windows PC; all devices on Ethernet (PLC, PC, weight instruments, etc.)
- Reused existing motor starter panel and maintained hard wiring between PLC and motor starter panels

System Valuation

System pricing is unique to the specific application goals and requirements. Approximate system cost ranges from $50 -$200 thousand. Call us for a proposal.

OVERVIEW:

A middle-America located bread producer has worked with Sterling Systems & Controls for nearly 25 years. Recently the customer asked Sterling Systems to analyze the existing batching and material handling systems and to offer upgrades to reduce manual handling of bowls and eliminate equipment while increasing production.

THE CHALLENGE:

Sterling Systems & Controls, Inc. reviewed the existing designs and operations with customer personnel and evaluated the processes currently in place looking for opportunities to achieve the customer goals as stated above.

THE SOLUTION:

As a result of the evaluation Sterling Systems & Controls offered and implemented a design to increase batch size by ten (10) times, upgraded and replaced scaling equipment for both dry and liquid ingredients (scales and liquid meters). In addition, the existing batching control systems were upgraded to include formulation, inventory, lot tracking and data acquisition

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as recommended by Sterling Systems.

THE RESULTS:

The number of mixes was reduced, reducing handling of small mixer bowls and the associated conveyor equipment to move bowls and the mixers.

Customer comments after completion of the upgraded system by Sterling Systems & Controls include:

> *"I do believe this had to be one of the smoothest installs we have ever done"*
>
> *"It was clear that we were well planned and a lot of forethought was put into this project before we jumped"*
>
> *"The system is awesome"*
>
> *"The cleaning crews asked if we mixed last night, it was so clean after production"*
>
> *"Cycle time is fast, way faster than we can process, and weighments are dead on"*

KEY BENEFITS

BATCHING PRODUCTIVITY INCREASED: Batch size was increased along with speed and accuracy. Sterling Systems batching system upgrade increased batch size by ten (10) fold.

CLEANER BATCHING PROCESS: Customized ingredient sequencing led to lower dust levels during batching: "the cleaning crews asked if we mixed last night, it was so clean after production".

ABOUT STERLING SYSTEMS & CONTROLS:

Sterling Systems & Controls, Inc. offers over fifty (50) years of experience in providing efficient and unique solutions for weighing, batching, process controls, automation and providing micro, minor and bulk weighing/batching systems. We utilize the latest technology in data management, raw material and production data tracking.

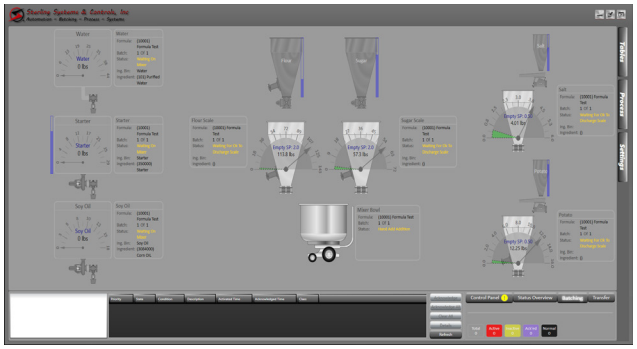

Figure 1: Main batching and mixing screen

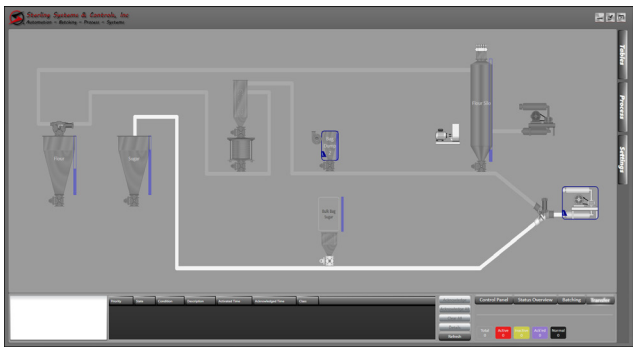

Figure 2: Transfer system screen illustrating sugar and flour transfer equipment

Figure 3: Bowl Mixer

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Serving your processing needs for over 50 years.