

Alcohol Distillation Processes

Master Control Solution

- ✓ “Master Control Room”
- ✓ Distillation
- ✓ Intrinsically Safe (IS)

MGP Ingredients, Inc.
Atchison, KS

Ladd Seaberg
President and CEO
800.255.0302

Our alcohol production efficiencies have improved rather noticeably as planned, allowing us to realize improved food grade alcohol production efficiencies and to set the industry standard for high purity, high quality premium products.

Ladd Seaberg
President and CEO

Project Summary

In business since 1941, MGP Ingredients is a recognized pioneer in the development and production of natural grain-based products, including specialty and commodity wheat proteins and starches, and food grade and fuel grade alcohol. MGP needed the best possible control application to support control of a new alcohol distillery operation, as well as the integration and upgrade of an existing PLC/HMI-controlled alcohol distillery operation. Bachelor Controls assisted them with the proper migration path, taking into consideration future expansions planned by MGP to the selected control applications.



Objectives / Requirements

MGP sought to implement a robust, scalable “Master Control Room” solution that would facilitate automated control of specific current and future processes, including

- New high-quality alcohol distilling processes
- Existing alcohol distilling process control system
- Mill house processes
- Mash cooker processes
- Evaporator/dryer processes

The new solution required system redundancy and the ability to interface easily and economically with instrumentation in explosive environments. Plus, the solution needed to support open communication technology and standards. The new control solution also had to seamlessly interface with the existing legacy PLC architecture so that initial control investments (hardware, wiring/installation costs, etc.) would not be lost.

Results / Benefits

To provide a cost-effective, integrated process solution, BCI designed a single scalable, coordinated system that traversed thresholds between DCS typically used in process applications and PLC controls usually applied in discrete manufacturing. Intrinsically Safe (IS)-rated flexible I/O modules were distributed and mounted directly into the hazardous areas close to field devices, eliminating long wiring runs in hardened conduit and the need for expensive, explosion-proof enclosures. The high-level operator interface configuration consists of a Server/Client architecture featuring “rotary” station licenses, some dedicated for full-time system operations and others available on a “first-come, first-serve” basis for the non-dedicated user. The BCI solution supports typical operator interface functions while providing an extensive information flow, from the most elementary plant floor sensor to MGP's enterprise-level database application.

We are now able to provide even higher purity, high quality products.

Ladd Seaberg
President and CEO



Bachelor Controls, Inc.

Systems Integration for Manufacturing

Sabetha • Kansas City • Memphis • 785.284.3482 • sales@bachelorcontrols.com • www.bachelorcontrols.com