Process Solutions

Solution Note

Improve Batch Production and Business Results with Experion Batch Manager

Facing today's challenges in batch manufacturing

Most batch manufacturing plants today are facing challenges such as:

- Maximizing productivity from assets to meet demand
- Producing an increasing number of different products
- Maintaining the complex sequencing software in batch execution often on mature control platforms
- Reducing production costs to remain competitive

Honeywell's Experion Batch Manager

Honeywell's Experion® Batch Manager, offered with PlantCruise by Experion, is designed to address all these requirements:

- Featuring a single, robust controller platform for creating and completely executing all levels of the ISA S88 procedural model
- Quickly modify and execute an entire batch recipe, while also manually operating certain parts of it to address specific needs
- Reduce reliability and maintenance issues and communication latency for faster delivery cycles with 100% on-spec production.

Through a single operating and engineering platform for batch execution, Experion Batch Manager eliminates the costs associated with a server and additional batch hardware/software. Since it runs on an optionally redundant controller, Experion Batch Manager offers high reliability for users to maintain consistency in product quality.

Comparing server-based vs. controller-based batch architectures

Server-based

The first generation of S88 batch control systems rely on parts of the batch executing in a server or other high-level network node. This server becomes a communication bottleneck between the controllers which carry out the process actions and the operator.

In server-based architectures the operator's view of the batch is provided via the batch server and server failure can lead to loss of view and loss of production. Control of phases is also reliant on the server. A server failure can lead to a hazardous situation or reduction in quality if phases cannot execute as configured when expected. While a batch server can be nominally redundant, manual intervention is still required to change over between servers. Batch processes require many peer-to-peer connections between controllers, a function that cannot be performed by the batch server. Peer-to-peer configuration is engineering intensive and complex to maintain. The server is a Microsoft machine and so periodically an interruption to production is required for it to be shut down for routine maintenance.

Controller-based

Progress in technology now allows an entire batch sequence to execute in the controller which brings a number of business benefits over the server-based batch system. A controller based system is inherently more robust and provides a single operating and engineering platform for batch execution. The absence of a server removes the associated costs, security and maintenance issues as well as communication latency.

The Ideal: Controller-based architecture

Experion Batch Manager provides a single controller platform on which all levels of the S88 procedural model execute. This controller can be optionally redundant using a well-proven bumpless changeover mechanism. The operator's view of the batch comes directly from the redundant controller and is not dependent on a batch server or on any single point of failure. Multiple Experion controllers behave as a single virtual controller.

As all batch functions are built into the system, there is no additional batch hardware or software package to purchase, install and maintain. Standard displays are provided for all batch functions and can be augmented with custom displays showing batch information in the context of familiar plant layouts.

A batch system may consist of up to 20 redundant controllers with no configuration effort for peer-to-peer connections. Removing the communication bottleneck of the batch server reduces batch cycle times. Transition from one phase to the next no longer involves a server and may take place in the same controller. This reduces communication dead time during phase transitions.

The Honeywell Advantage

Controller-based architecture uses current technology to overcome problems experienced with batch solutions by building batch into the system.

Honeywell's Experion Batch Manager is designed to maximize the availability, productivity, operability and maintainability of any batch plant to improve efficiency and profitability. It can be deployed and maintained with the support of Honeywell's impressive project and service organization.

It Matters. Learn more how Honeywell solutions help solve what matters.

For More Information
To learn more about Honeywell's Experion Batch Manager, visit our website www.honeywellprocess.com or call your local HPS Account Manager.

Honeywell Process Solutions
Honeywell
1250 West Sam Houston Parkway South
Houston, TX 77042

Honeywell House, Arlington Business Park
Bracknell, Berkshire, England RG12 1EB

Shanghai City Centre, 100 Junyi Road
Shanghai, China 20051

www.honeywellprocess.com

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