Aspen Production Record Manager™

a feature of Aspen InfoPlus.21®

Aggregate Event and Batch Process Data for Quality Assurance and Traceability

Aspen Production Record Manager (APRM) is AspenTech's historian for event and batch process data. It is a fit-for-purpose application that automatically collects, stores and aggregates continuous information and characteristics for all batches, including process, operations and equipment data. APRM provides the data needed to ensure that a batch process yields consistently high-quality product while reducing manufacturing costs, cycle times, product waste, process variability and asset reliability.

Key Benefits

Comprehensive Track and Trace

Captures and stores all batch processing data (including data from manual activities) in a central repository. Contextualizes data with respect to the physical process units involved. Provides tracking and tracing ability from beginning steps to finished product, no matter whether batches are in the same or different production lines. Enables users to easily search for batch characteristic and drill down to the root cause of quality problems.

Golden Batch Profile Creation and Monitoring

Records and analyzes data over time to determine the critical variables to create the "Golden Batch" profile. Monitors the variables of each batch in real time to quickly determine how much they deviate from the Golden Batch with respect to time and progress. Sets alarms to track process deviations and respond in real time. Ensures adherence to quality targets and cost controls.

Batch-to-Batch Analysis

Aggregates multiple input, output and process variables for comprehensive, real-time batch analysis—including Statistical Process Control (SPC)/Statistical Quality Control (SQC) variables, and Key Performance Indicators (KPIs) within a certain period of time. Provides robust metrics to assess batch-to-batch quality consistency. Enables fast, easy identification and elimination of quality variations between batches.

Key Capabilities

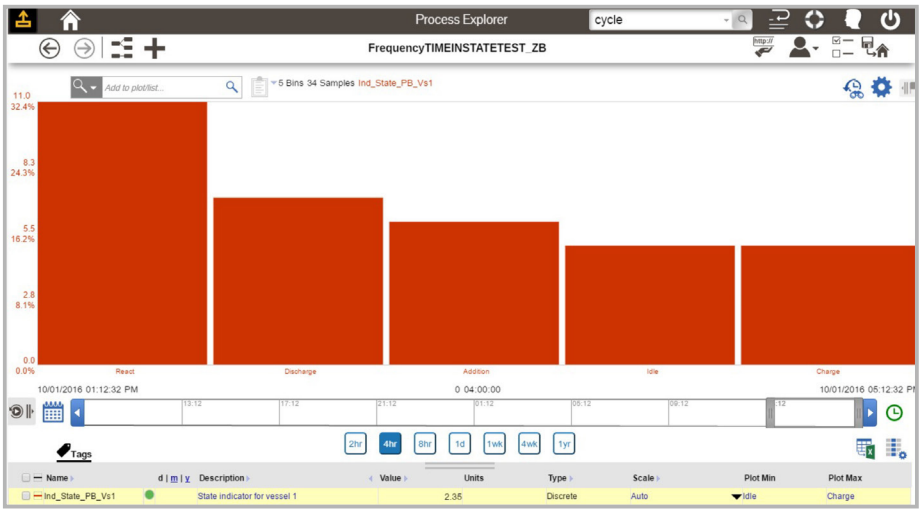
- Works with third party process historians without replicating the data
- Provides analytics tools, reporting, and plotting
- Reports can be accessible through the web to enable public consumption or generated automatically
- Interprets complex triggers
- Manages complex interrupt/resume situations
- Scrapes history for past events predating model construction
- Captures data from planning and scheduling applications
- Excel and web-based reporting add-ins available
- Extensible ISA-88 model for batch manufacture

Use Case

CHALLENGE: A polymers plant makes several grades of polymers in a batch process. Each reactor procedure is composed of multiple operations, each with different phases and different metrics. The plant must automatically collect and store this large volume of data while ensuring a thorough view of the entire batch process through analysis of each independent stage in real-time. The operations staff is unable to retrieve historical data to compare the characteristics of new batches with old ones.

SOLUTION: APRM enables the plant's operations team to define process complexities in phase, stage and substage batch configurations, providing valuable process insights for improvement and troubleshooting. APRM seamlessly creates detailed batch history records and schedules recipes and resources, ensuring that the batch process yields consistently high-quality products while decreasing the amount of off-spec materials produced and wasted.

RESULT: Deploying APRM, the plant can easily collect and aggregate batch characteristics as well as any information about equipment, processes and complex events such as those in batch manufacturing in real time. By automating shift reports, the facility eliminates the need for any manual analysis. In addition, the operations staff now has full visibility into the batch process to better understand the impacts of different parameters on final product quality, and can easily identify differences from one batch to another across multiple production lines.



With aspenONE® Process Explorer™, users can display time-in-state analysis for a batch reactor. The height of each bar represents the amount of time the reactor was in a different state.

APRM enables users to search for batches with specific characteristics and creates comprehensive reports for all available results.

Visit **aspentech.com/aprm** to learn more.