aspenONE® MES

**Turn data into profit with the industry’s most comprehensive MES solution on the market**

aspenONE MES delivers more efficient data management, improved production execution, and enhanced performance management—enabling process manufacturers to quickly tap into their business intelligence and turn data into profit. Boasting the industry’s best and most widely used data historian on the market, Aspen InfoPlus.21® forms the core of the aspenONE MES solution, providing a solid foundation for achieving manufacturing excellence.

### Key Benefits

- Easier and faster access to information
- Faster and smarter business decisions
- Better alignment between operational and financial goals
- Accelerate root cause analysis and corrective action
- Optimize asset utilization
- Automated workflow and order tracking for improved consistency, better production tracking and reduced errors
- Integrated tools and training for greater user effectiveness

#### The Challenge: Optimize Manufacturing to Improve Profitability

Manufacturers across the process industries must work with increasing speed and responsiveness to keep pace with growing global competition and changing market conditions. It has become a competitive necessity to achieve excellence in execution with consistent and predictable performance. Towards that end, manufacturers are looking for ways to preserve margins, improve product quality, make the best use of global assets, and meet regulatory compliance to maximize profitability.

#### The aspenONE MES Advantage

aspenONE MES aggregates process, production and business information into a cohesive context with fast data discovery tools, automated workflow and order tracking, as well as extensive analytical, notification and visualization capabilities. Covering all aspects of the ISA-95 activity model, manufacturers are able to easily exchange real-time information between the shop floor and the rest of the enterprise to create actionable intelligence and optimize manufacturing excellence. The end result is lower operating costs, reduced variability and improved asset utilization—optimizing bottom line profitability.
aspenONE MES - Data Management

The Data Management capabilities within aspenONE MES puts information at your fingertips anytime, anywhere by collecting and organizing process data across disparate systems and distributing it across the enterprise—making it easy to optimize the value of your data.

----- Unlock Value with the Industry's Best Data Historian

Aspen InfoPlus.21 collects and stores large volumes of real-time and historical data from process control, manufacturing operations, and business systems—forming the foundation for an enterprise-level platform. Rich calculation, analysis and visualization tools unlock data value, allowing you to compare performance across a fleet of assets to identify best practices and disseminate them to processes and sites needing improvement. It is completely scalable and flexible—from a single process to enterprise-wide global deployments involving hundreds of locations—easily making it the most comprehensive data historian on the market.

----- Quickly Configure IO Records

Tight integration between Microsoft Excel and Aspen InfoPlus.21 allows users to quickly upload new data tags. The Configuration Excel Add-In enables users to create and configure IO records directly from Excel and also provides templates for easy system migrations.

----- Track, Trend, and Analyze Data

Compare and contrast different campaigns or events with Aspen Production Record Manager. The solution allows you to record and view any process data that has a defined beginning and end, such as batches, refinery product blends, and transitions. Troubleshoot production issues by querying specific batches and production runs based on conditions of interest such as material characteristics and process conditions.
aspenONE MES - Data Management

Facilitate Data Sharing Between Applications
aspenONE MES has powerful connectivity capabilities to facilitate data sharing. Data can be shared via several industry standard mechanisms—Aspen CIM-IO, Web Services, ODBC, and Process Data — making it easy to pull data and extract value.

Enhance Data Management with Intelligent Search
Bring speed and intelligence to data discovery with instantaneous search access to all tags across the enterprise. Quickly find and visualize relevant information with full-text search and hit highlighting across all your tags metadata attributes. Faceted search enables you to locate information based on numerous characteristics, tag types, and tag attributes. Results are organized by relevance and previews are available for all historical attributes, enabling faster information discovery.

Speed Analysis with High Performance Trends
Built on HTML5 technology, aspenONE MES provides powerful trending capabilities:

- Analyze dozens of tags on a single plot
- Better contextualization with the use of spark lines and trend previews
- Bulk editing of tag properties in the legend and the ability to add custom columns
- Easily view any part of the HTML5 trends independently, allowing you to easily create custom tables of a list of tags

Get Up to Speed Faster with Online Training
Aspen Online Training makes it easy to quickly gain the knowledge you need to perform your job more efficiently with on-demand access to a wealth of training materials—right from inside the product. Learn basic features through “Getting Started” animated tutorials or expand your skill set with brief 3-5 minute “Best Practice” tutorials to accelerate your learning curve.

Related Products
- Aspen InfoPlus.21
- Aspen Production Record Manager
- Aspen CIM-IO
- Aspen Manufacturing Master Data Manager

High performance trends expand accessibility and provide large amounts of contextualized data very fast, speeding analysis time.
Manufacturers are under intense pressure to maintain high profit margins and be operationally agile while demonstrating both internal and external compliance. aspenONE MES delivers these capabilities by providing automated workflow and order tracking to facilitate improved consistency, better production tracking, and reduced errors. Consistent, repeatable work processes maximize the efficiency of the production asset, assuring faster time-to-market.

### Consistently Manage Production Workflow

Achieve total procedural control in manufacturing work processes with Aspen Production Execution Manager. The solution provides workflow, order, and recipe management for pharmaceuticals, specialty chemicals, consumer packaged goods, and other manufacturing industries according to current Good Manufacturing Practice (cGMP) guidelines. Changes required in standard operating procedures, master recipes and operating instructions can be handled with relative ease, reducing the time needed to introduce new products and make production changes.

### Be Ready for Any Performance Audit

aspenONE MES is also an enterprise level audit compliance solution. Maintain control of your workflow and ensure the production record is complete and complies with in-house, 21CFR P11 or cGxP standards. The solution collects and manages large amounts of continuous, batch, lot and process data and associates it with the appropriate batch. It then uses this information to identify deviations and manage the associated workflows required for deviation review and approval. Breeze through QA audits and achieve faster time-to-market.

- Automate the audit and compliance process, including the incorporation of all batch deviations and their associated comment and signoff history into the electronic batch record
- Enforce the signoff and approval process before allowing a batch record to be signed off for release
- Single server implementation provides a low cost, enterprise level compliance solution
Track Production Genealogy

Aspen Production Record Manager provides native forensic genealogy capabilities, allowing you to easily track material movement, both backwards and forwards, through the whole production process. View and explore relationships and shared attributes between batches, sub-batches and resulting products, and trace to the batch attribute level to assess what happened during past production runs and to identify root causes of product quality differences. For example, if a lot is returned by a customer, you can quickly analyze which other lot(s) might be affected by searching through all intermediates and involved process steps, helping to limit liability risk and product loss. These capabilities are not found anywhere else in the market.

Track Planned Versus Actual Production Profiles

Aspen Golden Batch Profiler monitors the progress of continuous and batch production against an ideal profile and provides structured workflow for continuous quality improvement. Excursions from optimal profiles are identified early in the manufacturing cycle to reduce variability and improve batch quality.

Monitor in real-time process variables within a pre-configured envelope for a given production or batch context. Records can be organized into any sequence that has a defined beginning and end and may be statistically analyzed to determine the envelope. The tool provides an environment for building simple, heuristic models representing “ideal or golden profiles”. Process variables can then be monitored against the ideal profile from a variety of client applications. When out of control conditions occur, alarm notifications are generated, initiating root cause analysis, corrective action and recording of steps to facilitate continuous improvement.

Related Products

- Aspen Production Execution Manager
- Aspen Production Record Manager
- Aspen Golden Batch Profiler
aspenONE MES – Performance Management

Good performance management requires integrated analysis with all process and production information so that performance may be tracked in real-time. aspenONE MES fills this need, enabling process manufacturers to quickly identify manufacturing performance problems, assess root causes, and take corrective action.

Explore New Dimensions in Performance Analysis

Reduce the time spent investigating the root cause of plant problems by easily extracting data from Aspen InfoPlus.21 products into Microsoft Excel, leveraging the power of Excel for deeper performance analysis. Integration with Microsoft PowerPivot and Power View makes it possible to create analyses that can be updated automatically and distributed throughout the enterprise with SharePoint 2010. Distribute parameterized reports with automatic updates upon recall. 64-bit performance with enhanced visualization and navigation provides better “in context” data. The intelligence gleaned from such analyses opens up new opportunities to optimize performance and maximize profitability.

Access Vital Plant Data—Anytime, Anywhere

Flexible data access is an important business need. Aspen InfoPlus.21 Mobile provides users across the enterprise with mobile access to real-time and historical plant data anytime, anywhere—enabling real-time insight into operational and business performance. Configure email and text alerts to notify you of significant process excursions so you can take immediate corrective action and minimize the operational and financial impact of upset conditions. The solution leverages industry standard security technologies and protocols to ensure a secure environment for accessing critical manufacturing data.

Incrementally Improve Any Batch or Continuous Process

Use any production marker, such as a batch number, lot number, or refinery blend type, and quickly gather all the relevant information that describes a defined production time period (the production context), regardless of the data source. Aspen Production Record Manager allows you to seamlessly overlay all relevant data (historian, ERP, lab, etc.) so that you can visually determine areas for improvement or compare/contrast with similar production runs. Perform incremental ad hoc analysis or implementation to accelerate root cause detection and analyze problems not previously possible, such as catalyst deactivation cycles or production shifts, driving improved manufacturing performance.
aspenONE MES – Performance Management

Align Operations with Business Objectives

Often there is no clear visibility of performance and its connection to business financial objectives. Aspen KPI Builder bridges the gap with a template environment for creating and testing KPI definitions that align plant operational decisions with corporate and financial objectives.

KPIs can be defined which merge real-time data from aspenONE MES Data Management solutions with key operational and financial goals and other applications such as process models or scheduling. As a result, the real-time view allows everyone to see the cost impact of their decisions and drive towards operational excellence. A built-in KPI Creation Wizard simplifies setup of operational KPIs to accelerate time-to-value.

For batch processes, Aspen Production Record Manager provides a single, dynamic view that aggregates key metrics from multiple systems so that you can easily determine what is stable and what needs immediate attention.

Visualize Information Relevant to Your Role

Aspen Role-Based Visualization is a rich portal environment that allows you to aggregate content from multiple sources into a web-based graphical user interface. Easily add KPIs with built-in grid and dashboard components, utilize high performance trending, or create/customize visualization graphics using dynamic content. The powerful personalization features enable customization of work environments that are relevant to the needs of the user.

For added flexibility, an Operations Navigator option and the RTView dashboard component makes it even easier for SharePoint 2010 users to create actionable business intelligence.

Real-Time SPC Product Quality Control

Statistical Process Control is a well known technique for improving manufacturing processes. However, SPC capabilities are often not integrated with all of the necessary information for making the best decisions, leading to delays in recognizing, notifying and correcting problems.

Aspen Real-Time Statistical Process Control Analyzer is a performance management tool for continuous and batch operations, applying statistical process control techniques to process data in real-time. The solution works in conjunction with Aspen InfoPlus.21 and/or Aspen Production Record Manager to perform SPC monitoring, analysis and alarming of operating data. Histograms, Pareto charts and a wide variety of SPC charts and other graphic displays are provided. Alarms are automatically generated in real-time from user-defined control chart alarm rules. Users have the capability to dynamically recalculate process control limits and SPC values based on changes in process values. The end result is improved product quality and reduced manufacturing costs for continuous and batch SPC operations.

Related Products

- Aspen InfoPlus.21 Mobile
- Aspen Real-Time Statistical Process Control Analyzer
- Aspen KPI Builder
- Aspen Role-Based Visualization
- Aspen Process Explorer
- Aspen IP.21 Process Browser

Monitor the quality of important product streams using Aspen Real-Time Statistical Process Control Analyzer
aspenONE MES covers all aspects of the ISA-S95 activity model, enabling manufacturers to easily exchange real-time information between the shop floor and the rest of the enterprise.

Empower Your Company to Succeed

aspenONE MES provides the tools that enable companies to increase profitability, reduce variability and improve asset utilization. AspenTech’s Professional Services team helps customers maximize benefits by efficiently deploying MES solutions as well as the relevant KPIs to drive manufacturing excellence. Unparalleled industry domain knowledge with comprehensive MES product expertise has allowed AspenTech to deliver thousands of successful implementations, minimizing the total cost of ownership for our customers. Combined with our world-class 24/7 technical support service, flexible training options, and local language product availability, AspenTech provides the resources to enable your company to meet and exceed its business objectives. To learn more, visit www.aspentech.com/pro_services.

About AspenTech

AspenTech is a leading supplier of software that optimizes process manufacturing—for energy, chemicals, engineering and construction, and other industries that manufacture and produce products from a chemical process. With integrated aspenONE® solutions, process manufacturers can implement best practices for optimizing their engineering, manufacturing, and supply chain operations. As a result, AspenTech customers are better able to increase capacity, improve margins, reduce costs, and become more energy efficient. To see how the world’s leading process manufacturers rely on AspenTech to achieve their operational excellence goals, visit www.aspentech.com.

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