

Contextualising knowledge

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Posted By Paul Boughton



"Operational excellence relies on the alignment of key functions to help grow the business. With thousands of veterans also on the verge of retirement, the process industries face a crisis due to shortfall of vital skills." - Robert Golightly, MES, Products, AspenTech

Improving operational decisions with enhanced data visualisation. By Robert Golightly

Extracting maximum value from manufacturing assets needs the adoption of best practices and the use of innovative technology. However, it is the skill and expertise of its workforce that ultimately determines successful outcomes.

Manufacturers are familiar with the importance of capturing, processing and analysing plant data – essentially contextualising knowledge from the plant. Putting people into context is equally important.

One of the primary manufacturing executions systems (MES) functions is to provide the real-time and manufacturing intelligence to stakeholders - from the plant floor through to the boardroom - allowing them to see the bigger production picture and take appropriate strategic actions that impact the success of business performance.

MES software provides intuitive display graphics that helps manufacturers to make timely and crucial operational decisions that can optimise performance of assets, drive greater profitability and meet customer expectations.

The culture of improvement

Operational excellence relies on the alignment of key functions to help grow the business. With thousands of veterans also on the verge of retirement, the process industries face a crisis due to shortfall of vital skills.

Crucially, the ability to unite people, processes and technology is essential to ensure the seamless transfer of knowledge and support a sustainable and profitable business for future generations.

Shifting corporate culture towards greater alignment requires executive leadership to reinforce the importance of collaboration. However, motivation is only part of the strategy. The initiative demands that there is a transparent continuous assessment of processes that meets KPIs on an individual, departmental and group level. Integrating all areas of the business avoids silo practices and ensures that communication is timely, accurate and relevant.

The transition to better data management, design and control systems is essential to achieve sustainable results.

MES delivers efficient data management, improved production execution and enhanced performance management enabling process manufacturers to quickly access their business intelligence and turn data into profit. aspenONE Process Explorer (a1PE) from AspenTech is a web application for monitoring real-time process information, as well as historical data from Aspen InfoPlus.21 and a variety of other data sources.

Engineers responsible for several units in the plant can respond quickly to a disturbance and with a1PE they can choose between desktop, laptop, tablets and smartphones, so they are always in touch with their production data, anytime and anywhere.

In the latest release, a1PE intelligently helps to provide context that drives effective analysis, builds asset hierarchies that simplify monitoring and diagnostics, as well as expanding batch and event visualisation.

With dynamic gauges, dials and other dashboard elements, operations can deliver performance dashboards that are lightning-fast and quickly convey important information in one platform.

The advantages of a1PE include:

- * Searches across a wide set of data sources and content types, including production records, alarms, graphics, trends, ad hoc tag lists and comments to locate all pertinent information
- * Looks at data by production segment, event or batch within a single tool
- * Events are flexible and users can plot periods of time where operators have placed comment markers or where alarms exist
- * Gives mobile workers, managers and executives access to current production information on their laptops, desktop, tablet or smartphone with a true thin client solution
- * Produces dashboards tailored for different users' needs within minutes
- * Understands batch variability more easily; over time, within batch and batch-to-batch
- * Supports knowledge sharing and collaboration.

Empowering people with the right tools, processes and procedures will embolden staff to make calculated and timely decisions that can identify and resolve the root causes of problems quickly to keep the operation performing to plan.

Maximising manufacturing output improves operations by 10% to 30% through increased throughput, reduced bottlenecks and improved work flow by easy-to-use modelling and analysis capabilities.

Payback can usually be seen within six months of implementing MES tools that deliver benefits both at plant floor level and to executive decision-makers.

Manufacturing excellence

A workforce that adopts best practice and utilises advanced, integrated MES software can optimise all aspects of the operation to achieve maximum return for the business. Gaining greater visibility into plant behaviour and seeing the overall production picture allows staff to make better decisions affecting production.

MES efficiently 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 visualisation capabilities.

Covering all aspects of the ISA-S95 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 optimise manufacturing excellence. Putting all of these benefits into context - the end result is lower operating costs, reduced variability and improved asset utilisation optimising bottom line profitability.

Robert Golightly, MES, Products, **AspenTech**.

Tags:

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enhanced data visualisation