SIEMENS

GEOMETRIC SOLUTIONS

Siemens PLM Software

Tecnomatix PLM-MES solution

Delivering a competitive advantage through end-to-end execution excellence

Benefits

- Shortens product cycles resulting in faster time-to-market
- Reduces time spent searching for operational parameters, inspection requirements and work instructions
- Provides visibility to act effectively in the face of competitive threats and economic opportunity
- Automates a broader set of business operations to eliminate errors and reduce configuration requirements
- Increases predictability of quality, costs and compliance
- Improves operational excellence to increase productivity

Summary

Making the connection between your new product development and launch business operations, and your production execution and control systems, closes the gap between simulation in the engineering environment and reality on the shop floor. It is a foundational component that has driven the development of Siemens PLM Software's product-to-production platform, paving the way for end-to-end execution excellence and leadership in the era of the digital enterprise.

By approaching product design, development, manufacturing and service with an integrated strategy, our customers can create a platform on which to build tighter, more efficient and agile business processes.
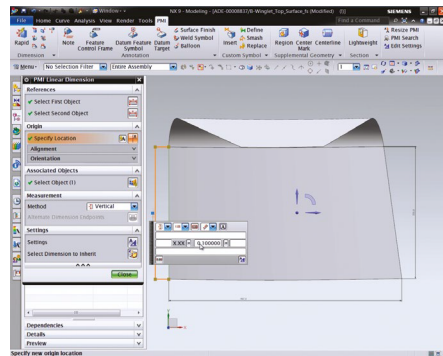
Product-to-production integration

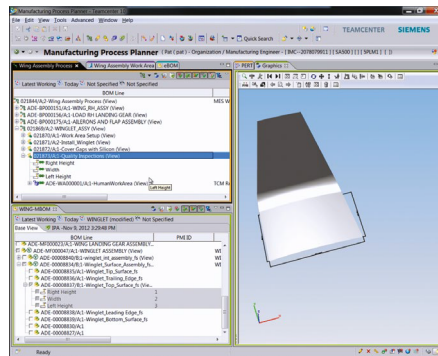By using the Tecnomatix® software Manufacturing Process Planner (MPP) application, product or material routings are defined in full associativity to product engineering deliverables as processes, operations and steps along with the necessary tooling, documents and work instructions required to begin production. Although the product lifecycle management (PLM) integration with the manufacturing execution system (MES) is optimized for the SIMATIC IT system, virtually any MES can be used to leverage the execution plan from Tecnomatix Manufacturing Process Planner. By creating this direct connection, work plans can be enhanced with order information from other enterprise systems, such as enterprise resource planning (ERP). This allows our customers to author process plans in full associativity with their product engineering deliverables, ensuring that the latest information to build a product for a particular customer is presented to factory operations personnel.

Nonconformances discovered during build operations can be elevated directly to your engineering teams through workflow integration from SIMATIC IT to Teamcenter®
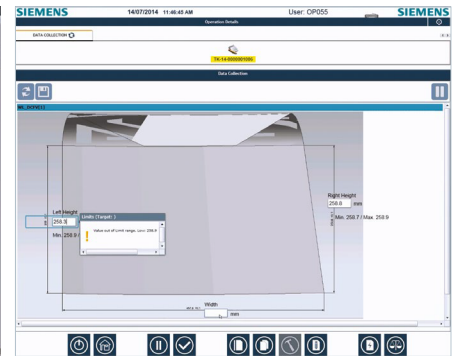
www.siemens.com/tecnomatix

Tecnomatix PLM-MES solution

Engineering uses NX to define design intent features and tolerances.

Manufacturing Process Planner can be used to manage PMIs and assign them to inspection operations.

Operators display design intent with PMI and collect actual build results using SIMATIC IT.

Features

- Brings the power of your concurrent engineering practices to bear on production operations

- Manages change processes from design through production build

- Interfaces with virtually any MES system, yet optimized for Siemens PLM Software solutions

- Facilitates master/order configurations of products to improve scalability

- Validates execution plan for correct structure

- Enables order information to be updated when necessary

- Direct access to SIMATIC IT as-built records

- Escalates nonconformance issues for engineering analysis

software. This two-way communication means that when the root cause of nonconformances or issues cannot be addressed on the shop floor, they are easily escalated to engineering department personnel for analysis and resolution. This assures full traceability, which can then be documented and implemented through formal engineering change workflows.

A true end-to-end solution

The integration between the definition process in PLM and the control and execution process in MES generates tremendous value for both domains. By aligning the effectiveness of a PLM solution for new product development and manufacturing planning with the visibility and operational efficiency of an enterprise MES solution, such as SIMATIC IT, our customers have the ability to act faster because they have visibility into their operational investments and can make better decisions that more effectively leverage their production capacity. This is a powerful paradigm that enhances their agility to meet competitive threats and respond to economic opportunity whenever the need arises.

In addition, the PLM-MES integration can improve product quality results by linking design intent information directly to inspection operations that leverage product and manufacturing information (PMI) embedded in our JT™ 3D CAD data format.

The Tecnomatix PLM-MES solution is a core component of Siemens' digitalization strategy. Combined with our integrated quality solutions, Siemens is leading the way in delivering the innovation platform for the digital enterprise.

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