SIMATIC IT is the Manufacturing Execution System of Siemens. It’s a highly scalable MES, and with its complete portfolio of Suites and Industry Verticals, it fully covers the ISA-95 requirements. SIMATIC IT supports manufacturers by enhancing productivity and flexibility through technological leadership in MES/MOM with industry specific features.

It gives true visibility from the machine/line up to the enterprise, by integrating Manufacturing Execution with Manufacturing Intelligence.

SIMATIC IT for Mechatronics Assembly Lines is an Industry Vertical which provides standard functionality required in the mechanical and electronic assembly industries and it is used mainly on the production shop floor covering product data collection, operator activity assistance and traceability information retrieval.

It applies to various industry sectors:
• Automotive First Tier Suppliers
• Electronic boards/panels (PCBs)
• Electronic devices
• White goods
• Mechanical assembly
• Battery assembly

What it offers:
• Traceability: the possibility to track all work operations, assembled components and quality measures related to produced items
• Interlocking: checking that everything is correct before performing work operations, in order to minimize scrap and waste
• Interfacing with ERP systems to receive master data and production orders
• Order management
• Standard interface with shop floor devices
• Integrated failure detection
• Manual Assembly support
• Monitoring the real-time performance of production equipment
• Key Performance Indicator (KPI) calculation and reporting
Order Management
Supports Planned Order download, sequencing and dispatching, providing real-time re-prioritization for each downloaded list of orders. Production planning and order scheduling can be managed in an external APS system and fed back to SIMATIC IT.

Integrated failure detection
An integrated GUI shows the product currently processed at the workstation for visual inspection:

- Select from a defect catalog to log defects on subassemblies, components and specific positions
- Attach repair instructions and rework notes

It enables the following features:

- Defect position selection
- Traceability messages delivery.

When a defect is identified, it is very important to quickly manage the rework and the repair in order to have the piece back in production, thus reducing waste and scraps as much as possible.

Manual Assembly support
An integrated GUI shows the product currently processed at the workstation for manual assembly steps. It displays the product BoM and optionally the product image, including configured detail shapes. Here it is possible to scan the identifier of the subassembly; unserialized components may be acquired automatically.

Online Monitoring
The machine monitor is an up-to-the-minute production status cockpit chart displaying produced items, performance and quality figures for the current work shift. It is designed to be displayed on large screens hanging above the production lines. As soon as some parameter falls below a configurable threshold, visual indication is given by means of a RAG (red-amber-green) lamp image.

KPI management and Reporting
Provides quantitative visibility into manufacturing operations and business processes. When it comes to manufacturing profitability, availability of data directly from the plant floor is mandatory.

Predefined KPI’s and reports include:

- Serial Number report
- Component traceability reports
- Defect Pareto report and DPM report
- FPY on materials and production orders
- Process capability indices

Find out more
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