View and Manage Your Production in Real Time

Quick Facts

Summary
Global markets make it increasingly important to improve product quality while driving costs down and ensuring full product traceability. The SAP® Manufacturing Execution application is one of the world's leading manufacturing execution systems (MES) designed for the shop floor. Integrated with the SAP ERP application, SAP Manufacturing Execution creates the ideal conditions for consistently high-quality, efficient processing; delivery reliability; and effective traceability of products.

Business Challenges
- Meet international legal requirements through effective product traceability
- Improve production efficiency, quality, and delivery with more accurate control of production processes
- Address requirements for consistent serial-number generation and serialized traceability
- Create a system to view and manage work-in-progress projects at all times and deal with frequent and complex changes in product configuration data

Key Features
- **Complete visibility of end-to-end production processes** – Synchronize production processes with upstream and downstream value-added processes
- **Comprehensive range of tools** – Improve process planning, organization, and control

- **Central or master production record** – Make production-related decisions with a comprehensive product history
- **Up-to-date figures and reports** – Use metrics to monitor production processes and products of work in progress

Business Benefits
- **Complete traceability** of products throughout their lifecycles
- **Automated transfer** of operating data
- **Efficient test and repair management**
- **Fast and reliable return and complaint management**
- **Accurate tracking** of working time
- **Flexible adaptation** of product specifications and production processes
- **Optimized process control** and quality assurance
- **Tight integration and central control** of manufacturing operations

For More Information
To learn more, call SAP or visit www.sap.com/manufacturing.

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International markets provide you with more customers and sales opportunities, but they also lead to increased competition and more legal requirements. To be successful and keep pace with changing customer demands, you must maintain visibility into your manufacturing operations and synchronize them with upstream and downstream processes. Employees on the shop floor need access to real-time information on all upcoming and ongoing processes and to be able to work efficiently delivering high-quality products.

NETWORKING MANUFACTURING FACILITIES ACROSS BOUNDARIES

Manufacturing execution systems (MES) help improve the transparency of your manufacturing processes. However, they only come into their own when integrated with your enterprise resource planning (ERP) solutions. This is the only way to ensure that strategic management decisions are communicated quickly to manufacturing and brought directly to bear in all departments at all sites. In the same way, problems and weak points can be identified more quickly and factored into decision-making processes. The SAP® Manufacturing Execution application is the right choice for companies with several sites and international operations – or aspirations. The application links production processes with ERP software – in real time and across site and country boundaries.

GREATER CONTROL

SAP Manufacturing Execution makes it easier to organize and control all your production processes and procedures. The transparency and efficiency of processes is improved from start to finish thanks to manufacturing-specific functions designed to support a range of processes, such as quality management, repair management, and tracking for products and processing times applicable to multiple industries. You can also send detailed operating or manufacturing data automatically. SAP Manufacturing Execution records, distributes, and stores all the relevant data. This makes it possible, for example, to identify flaws in configuration or product quality immediately. All in all, your company will benefit from improved product quality, lower manufacturing costs, and improved delivery performance. The application also facilitates product traceability, a function required by law in many countries.

A REAL-TIME OVERVIEW OF PROCESSES AND OPERATING DATA

Our customers – in industries ranging from high tech and aerospace and defense to automotive, life sciences, and industrial machinery and components – share one goal. They are looking for new ways to improve the transparency of their manufacturing processes with the aim of improving control. The reasons vary and might include the need to meet complex legal requirements, the desire for more efficient planning and production processes, or the drive to achieve ambitious manufacturing- and quality-related goals.

However, many organizations are saddled with outdated and isolated IT systems, with key data stored in stand-alone or distributed silos. In this situation, management does not have access to the latest information from the manufacturing department. Consequently, decision-making processes are often hampered by the time and effort it takes to collect information. Managers find it difficult to act promptly; there is also a negative impact on the company's flexibility and adaptability.

EFFECTIVE COLLABORATION

SAP Manufacturing Execution creates the ideal basis for companies to control their production processes in real time. The application supports direct cooperation between management and employees. Clear, role-based user interfaces foster effective communication. Management, production, and all other company departments have access to standardized information, enabling them to work hand in hand. Top-level managers have access to all key data whenever they need it. Processes can be managed in real time – without slowing the workflow or creating long lead times. What's more, employees in the manufacturing department have a continual view of all planned and ongoing operations.

TIGHT INTEGRATION WITH ERP APPLICATIONS

Powered by the SAP NetWeaver® technology platform and the SAP Manufacturing Integration and Intelligence application, SAP Manufacturing Execution is delivered with prebuilt integration into your existing SAP ERP application, giving visibility into your cost, material, and customer data for a clear overview of production operations and improving analytical capability for the management team across the enterprise.

MORE EFFICIENT CONTROL OF YOUR MANUFACTURING PROCESSES

SAP Manufacturing Execution provides flexible, user-friendly functions and a comprehensive range of tools for effective process planning, shop floor execution, and control. A central production record serves as the basis for making production-related decisions and provides a comprehensive product history. Up-to-date figures and reports, available at any time, enable managers to keep an eye on the status of products in production (work in progress). Customer-specific production processes can also be implemented and changed more efficiently. SAP Manufacturing Execution helps your company master the following challenges reliably and efficiently.

Traceability Throughout the Entire Product Lifecycle

A product's history can be traced from design and production through to packaging through a complete and permanent genealogy record of your products, with multilevel detailing. SAP Manufacturing Execution collects, verifies, and archives company information on every component in a product, creating a comprehensive audit trail of all processes, components, and materials involved and changed during the manufacturing and packaging of the product.

Automated Transfer of Operating Data

SAP Manufacturing Execution links the production department with all other areas of your company, creating the prerequisite for controlling processes centrally across multiple locations. Data relating to machine configuration and operation can be accessed and transferred automatically between sites.

Test and Repair Management

Now you can test products for defects and repair them quickly and reliably with a comprehensive repair-loop management environment. A knowledge database stores repair measures, facilitating production quality and delivery reliability.

Return and Complaint Management

An efficient system for managing returns and complaints is a key prerequisite for top-quality service. Feedback on the reasons for returns and complaints provides crucial data for improving product quality. SAP Manufacturing Execution enables you to track returned products or components through their lifecycle – right down to return delivery to customers. This provides companies with valuable information for product development, launch, design, and production.

Tracking of Working Time

SAP Manufacturing Execution provides powerful tools for recording and tracking employee working time and attendance accurately. It can also track time spent working on particular components and units, improving your assignment of production costs and other outlays. This simplifies payroll and billing processes and helps identify and prevent choke points in production.

Adapting Product Specifications and Production Processes

You need to manage feedback continuously from many quarters to keep production plans safely on schedule. SAP Manufacturing Execution provides companies with an effective, closed-loop feedback process that meets most any need – design integrity, cost control, inventory matters, and other issues. You can initiate change requests in real time, during production, rather than waiting until afterward, when it may be too late. Furthermore, adaptation costs (such as setup times) and all data on individual processes can be documented reliably.

Process Control and Production Quality

Data-based process control from SAP Manufacturing Execution provides new ways of improving quality-management systems. Centrally controlled product and process data lets you perform real-time analysis and event-driven management, while trend-based alerts automatically raise a flag when production or quality parameters aren't being met. This enables you to identify problems early on, eliminating wasted resources and time.

To thrive in the global market, companies are improving their manufacturing performance with manufacturing execution systems. SAP Manufacturing Execution delivers them integrated with SAP ERP, providing enterprise-wide visibility from the shop floor to the top floor.

Integration and Central Control of Manufacturing Operations

Manufacturing companies can use SAP Manufacturing Execution to collect information from multiple sources to set up a central or master production record, creating a standard, comprehensive information database for all activities. Management and shop-floor employees benefit equally: role-based functions and intuitive interfaces provide fast, real-time access at any time, improving decision-making processes and helping employees work more effectively. This eliminates time-consuming meetings, which often use old information and produce outdated results.

For More Information

For more information about how SAP software can support your MES initiatives in achieving best-in-class manufacturing and enterprise performance, please call your SAP representative or visit us online at www.sap.com/manufacturing.

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