Process Solutions

Honeywell

Production Manager: Closing the Gap between Plant Control and Business Systems

Improve plant performance through data integration, automation and visualization

Challenges

To make smart decisions and ensure regulatory compliance, staff at all levels of the organization require accurate and timely information. Enterprise resource planning and asset management strategies depend on clear views of equipment health, operational performance, and production plans; production and maintenance managers need data that lets them manage the production process and easily identify under-performing assets.

However, the production data, equipment run hours, quality assays, batch tracking and other key metrics they need are dispersed across the organization. A variety of vendors' SCADA systems, PLCs and DCS, as well as historians and other applications are called on. Both volume and variety militate against the effective capture and use of information.

The result is that key indicators are missed and staff time is spent manually collecting data rather than analyzing and acting on information to improve the operation.

Solution

Honeywell's Production Manager is a manufacturing execution system (MES) that helps plants effectively capture, share and display data; drive continuous improvement and operational excellence. It simplifies compliance and improves plant performance through integration, automation and visualization:

- **Integrating** data sources from across the organization using open standards such as OPC, ODBC and web services to connect to all control systems, historians and business applications, regardless of the manufacturer.

- **Automating** plant data capture to ensure timely and accurate records, transitioning staff from filling in log sheets to identify opportunities for process improvement. Where manual entry is still required, customizable web-forms streamlines data capture.

- **Visualizing** data through out-of-the-box and user-defined dashboards and reports for plant performance information that drives process improvement.

Features

Secure and scalable, Production Manager uses a simple web interface to give users role-based access across the enterprise while preserving data accountability and traceability for compliance purposes. Core Microsoft® components, such as SQL Server, SharePoint®, .NET and Internet Explorer®, provide an architecture that is suitable for both small plants and enterprise solutions. Production Manager provides the flexibility to adapt to your changing operational and business needs. A combination of standard and custom web-based dashboards and reports enable both supervisory overview and detailed analysis of production data to support more effective operations.

A wide range of tools streamline and enhances downtime reporting, production planning, production accounting, batch tracking and materials management:

- **Downtime events** – stoppages, slowdowns and over-production events are recorded along with their causes both automatically and manually. Standard reports help prioritize and analyze these events to reveal root causes and formulate improvement strategies that eliminate process bottlenecks. Repetitive identification and elimination of root causes helps drive continuous improvement.

Downtime Dashboard

- **Performance KPI's** for both operations and maintenance are derived from site-based downtimes, equipment monitoring and production events. These KPI's may be used to compare performance of both equipment and processes across the enterprise.

- **Operational Equipment Effectiveness** (OEE) may be calculated on equipment and processes. The combination of Availability, Rate, and Quality as a percentage of target provides a generic performance indicator that are displayed in real time. Analysis of trends and overlay with operational and maintenance events provides greater insight to the plant's performance.
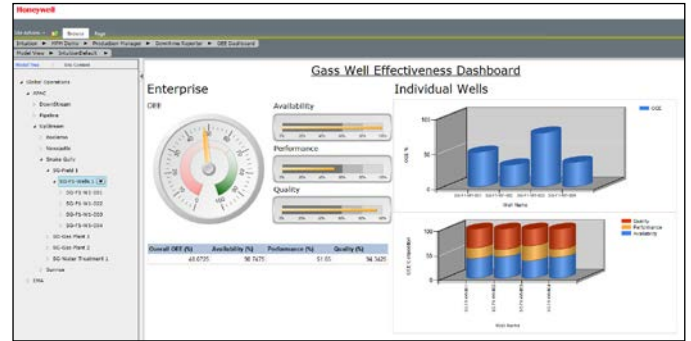
OEE Well Field

- **Configurable web forms** support site specific data requirements and provide validation of entered data and custom workflows. Forms may be used for a variety of purposes such as logbooks, recipe selection, managing consumables and lab sample assays. A grid view of automatic and manually entered data supports custom filtering, drill-down, user-defined action icons for workflows and export-to-Excel.

- **Planned Targets** enable progressive comparison against actual production. Plans may be established for different plant areas and target types. Yearly targets are automatically pro-rated to daily targets according to the planned daily activities. Backups may be taken of an active plan and saved as snapshots. These snapshots may then be used as an historical reference for comparison or to restore as the active plan.

- **Effective movement and inventory management** provides complete visibility of all material transactions, material qualities and inventories across the entire supply chain. Access to validated coordinated information is captured from all real-time and transactional plant systems.

- **Production accounting** automatically collects production data from real-time control systems at scheduled times or when events occur. Production data may be edited where necessary and approved by users with appropriate security privilege. All edits are logged for auditing. Comprehensive statistical reconciliation tools provide multi-component mass balance and managed workflows.

Benefits

Accurate downtime and production information for analysis and reporting brings a range of benefits at the plant and corporate level.

Analysis to drive improvement

Automatic data collection improves accuracy and timeliness of data, while freeing staff from filling in log sheets to identify process improvement opportunities. Dashboards help production staff quickly identity priority areas, while corporate dashboards give at-a-glance performance comparisons between distributed operational assets.

Cutting costs

Increased production output from existing assets enables deferment of capital expenditure required for plant expansions. System support costs are reduced through reduced deployment costs using a web user interface and centralized management of servers. Standardization across the enterprise enables greater mobility of staff between operations, lower training costs and use of centralized help centers and support protocols.

Mobile efficiency

The web-based user interface for data entry and reporting provides on-the-go access to plant information and reports. Alert notification of plant events through email and SMS text messaging improves visibility and resolution time of important operational issues.

A single version of the truth

A centralized information system ensures all players work from the same page, eliminating delays and versioning issues common with spreadsheet applications.

Simpler reporting

Production Manager utilizes Microsoft SQL Server® Reporting Services to provide a suite of standard out-of-the-box web-based reports and dashboards which may be easily modified and extended. Reports may be scheduled or initiated by the user on-demand. Reports and dashboards provide parameter input (filtering) and support charting, drill-down and data summarization.

Support Services

Production Manager comes with worldwide, premium support services through our Benefits Guardianship Program (BGP). Helping improve and extend the benefits applications deliver, BGP safeguards your software investment.

For More Information

Learn more about how Honeywell's Production Manager can improve operational performance, visit our website www.honeywellprocess.com/software or contact your Honeywell account manager.

Honeywell Process Solutions

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