



Data Sheet for BellHawk Online Real-Time Manufacturing Execution System (MES) Bundle

Overview

The BellHawk Online Manufacturing Execution System (MES) provides an easy to use and affordable Cloud-based solution for operations tracking and management in mid-sized manufacturing operations. It is especially suitable for manufacturers who make customized products to order, either directly from raw materials, or from a standard set of intermediate materials.



The BellHawk Online MES (BOL-MES) tracks the receipt and put-away of raw materials, their transformation into finished products through a sequence of operations, as well as the picking, packing and shipping of products.

BOL-MES enables manufacturing plants to replace their existing use of paper forms with a barcode tracking system and/or upgrade their existing systems to use the latest AIDC (Automated Identification and Data Capture) technologies without needing to replace their existing ERP (Enterprise Resource Planning) or accounting systems.

BOL-MES can be used stand-alone or can exchange data existing with accounting, ERP, and other in-plant or Cloud-based systems through its web-services interface. Using BOL-MES with an existing accounting or ERP system is much less expensive than purchasing a new combination ERP-MES system. It also avoids changing all your accounting procedures just to add AIDC based operations tracking and management.

BOL-MES is the top-of-the-line of the BellHawk Online operations tracking systems for manufacturers. Manufacturing plants can start out using the simple BellHawk Online SPTS Simple Production Tracking System (SPTS) or the BellHawk Online License Plate Material Tracking System (LP-MTS).

Then the plant can upgrade to the BellHawk (RT-OPS) Real Time Operations Tracking System which integrates the capabilities of both LP-MTS and SPTS to track the transformation of raw materials into finished products. Finally, by upgrading to BOL-MES, the plant can add capabilities such as Machine/Line Status Tracking, Real-Time Production Scheduling, Warehouse Management, and Real-Time Demand Based Materials Planning.

Production Tracking Capabilities

The production tracking capabilities integrated within the MES system include:

- Ability to see the real-time status of work orders and customer orders anywhere, anytime there is an internet connection using a wide-variety of web-browser equipped devices.
- Ability to specify routes, with bills of material for each step/operation, and to produce barcoded travelers with which to track labor, work orders, and materials.
- Ability to track work-in-process material as it flows from one operation to another, either in a batch or as individual pieces.
- Tracks labor consumed on work order operations as well as the elapsed time for each operation.
- Tracks the consumption of materials on each operation and the production of work-in-process materials or finished products, as well as unused materials returned to stock.
- Tracks depletion of floor stock based on auto-reduction as work products are reported out from each operation.
- Error detection and mistake prevention, including preventing the use of wrong or expired materials on operations.
- Tracks scrap and rework, plus secondary materials such as reusable scrap produced by operations.
- Tracks service, manufacturing/processing, assembly, and test/repair work orders.



Inventory Tracking Capabilities

The inventory tracking capabilities integrated within a BellHawk Online MES system include:

- Provides real-time view of the status of raw, intermediate and finished goods inventory.
- Provides real-time tracking of work-in-progress between manufacturing operations.
- Tracks containers of material in multiple geographic locations, with the same materials being in multiple locations.
- Tracks customer owned materials.
- Tracks inventory using “license-plate” tracking methods.
- Tracks materials by lot-number, container, location, and expiration date.
- Tracks materials in nested containers, such as barcoded cartons on a barcoded pallet.



- Tracks individually barcoded items including serial numbers.
- Tracks receiving and put-away of raw goods materials.
- Tracks picking, packing and shipping of finished goods.
- Tracks who handled each container of materials for traceability purposes.
- Tracks returns to stock as well as scrapped inventory and inventory adjustments.
- Performs “cycle-count” type inventory validation.
- Tracks assets and tools, including issuance to people

Warehouse Management Capabilities

- Enter or import Purchase Order.
- Track receiving against Purchase Orders.
- Handling Vendor Part Number translation
- Generation of Pick Orders from Work Orders.
- Pick Materials for Production Operations
- Enter or Import Sales/Ship Orders
- Handling Customer Sales Order Information
- Generation of Work Orders from Sales Orders for Make-to-Order products
- Generate Pick Orders from Sales Orders
- Record Picking, Packing, and Shipping of Products
- Record Loading of Trucks
- Produce Packing Slips and Bills of Lading
- Generation of Advanced Shipment Notice (ASN) data for use by EDI systems.



Machine/Line Tracking

BOL-MES includes the capability to track the status of machines or production equipment or lines, including recording the time required for setup and tear down, as well as the run time and down times. BOL-MES also includes the capability to allocate the labor, materials, and machine time across multiple work orders running at the same time on a machine or line.

Activity Based Costing

BOL-MES tracks the labor, materials, and machine/line time required for making each product. It can then compare the predicted cost with the actual job, so as to enable determination of where data used for costing jobs may need future adjustment.

Real-Time Scheduling

Based on the information BOL-MES collects about the status of each job, BOL-MES creates and dynamically adjusts schedules for each work center in real-time to ensure, as far as is possible, that Work Orders are completed on-schedule. The scheduling algorithm gives priority to jobs that are falling behind schedule and also takes into account a user defined importance, such as "Rush", in recommending the order in which Work Orders should be performed in each work center.

Real-Time Demand Based Materials Planning

BOL-MES tracks time-phased predicted available inventory in real-time. In doing this it starts with the physical inventory, adds materials to be ordered or made, subtracts materials to be used on work orders or planned to be shipped to customers. This enables materials managers to see what materials they are predicted to have of each part at future dates, which they can use for materials requirements planning.



BOL-MES also has a set of screens that enable materials managers to start with a make-to-order sales order line item and then to interactively create work orders to make the finished products as well as Work Orders to make sub-assemblies or parts if there are not enough of these in-stock. These screen, which are based on the product BOMs stored in BellHawk, also enable the creation of purchase orders, when there are predicted shortages of raw materials parts.

Please note that the Real-Time Demand-Based Planning is designed to complement longer range Materials Requirements Planning (MRP), which may be performed by the organization's ERP system.

For More Information

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For more details please see www.BellHawkOnline.com.