

Hyla Soft USA

MES-Based Tracking and Tracing Offers Many Advantages and Benefits the Bottom Line

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Achieving clarity within a plant has become an important process in today's manufacturing world. Whether plant managers want to cut costs by making operators work more efficiently or minimize losses during a recall, having a clear understanding of what is happening on the production floor can achieve these goals.

Tracking and tracing is one of the tools that can provide this clarity. Tracking and tracing records all of the materials that enter or leave a plant and monitors the status of the materials while being consumed. This information is desirable to manufacturing plants for many reasons. One benefit is that managers can evaluate the manufacturing process. This information can lead to improved lean practices and optimization, provide integration with an Enterprise Resource Planning (ERP) system, or reveal unsafe practices. If operators are adding materials incorrectly, or even possibly adding the wrong materials, controls can be put in place to ensure operators work in the desired manner. Another benefit is that critical data will be accessible during a recall. Managers will have the ability to trace back all original materials of a product and quickly determine which supplier they came from as well as being able to identify other products that may have been contaminated. Recalls are a stressful and costly process. By having an effective tracking and tracing system, companies can reduce the time and money spent during these events. Additionally, tracking and tracing data provided to the ERP system can be used as a cost analysis tool in evaluating the expenses of producing final goods.

There are many manufacturing companies today that are taking advantage of tracking and tracing. Hyla Soft USA has been working with a leading food company for the past 10 months, providing a Manufacturing Execution System (MES) to one of company's meat plants in Missouri. This facility produces deli meats, hot dogs, and sausages that are distributed to supermarkets. There are many components to the MES, but the majority of work was put into tracking and tracing, genealogy, recipe management, and overall equipment efficiency. The following is a list of tracking and tracing concerns that Hyla Soft USA has addressed for this plant.

Reduce Inventory on the Production Floor

When raw meat is received into the plant, an amount of time is allocated to each container. This represents the maximum time the meat is allowed on the production floor before it is used in the mixing equipment. If an operator attempts to use meat that is past the allotted time, the MES will stop the equipment from using it and require a supervisor's permission to continue. This is done for two reasons. The first is to ensure that operators are more efficient by reducing the number of excess containers on the floor. The second is to reduce health risks that may be present due to meat sitting in open areas for long periods of time.

Manage Inventory

Before the MES was put in place, much of the inventory recording was done on paper and Excel spreadsheets. It was very difficult to clearly understand where inventory was in real time. In the current system, reports can be generated and web screens can show where materials are located up

to the second. By placing barcode labels on all materials and containers, operators use handheld devices to scan material so the MES can follow where and how ingredients are used. This allows supervisors to keep track of inventory, while giving the operators tools to find needed materials. This process also saves operators time by eliminating the need to record data on paper.

Reduce Wasted Product

One of the major benefits of this tracking and tracing system is having control over what the operators do with the materials. Operators constantly add meat and spices at their stations. It is easy for an operator to grab a wrong spice bag or to deliver the wrong type of meat to a mixer. As soon as a batch has been contaminated with the wrong material, chances are the entire batch must be discarded. This results in a waste of materials and time. To help prevent these errors, the MES displays warning messages to operators attempting to use materials that do not match authorized recipes. If the wrong meat is detected, the MES will disable the equipment, preventing the meat from entering the mixer.

Handle a Recall

The MES in place has a genealogy process that records all of the materials and at what times they were mixed to produce a final product. If something goes wrong with a product, plant managers can use genealogy reports to help determine the cause. Tracking and tracing reports can then be used to see when certain materials arrived and what other products they were

used in. These tools can provide critical information to managers if a recall is needed.

Synchronize Storage Locations

In the fast paced environment of this plant, occasionally a storage location may become out of synch with what the MES has listed for that location. This usually happens when operators forget to use a handheld scanner when moving material. To solve this problem, Hyla Soft USA developed an “Inventory Alignment” tool. This process allows operators to select a certain area in the plant and then scan the inventory to tell the MES what is physically there. A report is then generated to show any discrepancies between what was physically scanned and the information in MES. This tool gives operators confidence that the data in the system is accurate.

The time and money saved by instituting this type of comprehensive MES-based tracking and tracing system not only produces a favorable return on investment, but also ensures that the company is doing everything possible to provide its customers with the highest quality products and services.

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