

P r i m a



# Prima

## Precast Industrial Management System

Prima is a cutting-edge production management system designed to bring assembly line efficiency to wetcast production.

### System Benefits

#### Intuitive Production Management

Traditional wetcast production plant setups make it nearly impossible to drive productivity because there are too many variables and there is no linear process flow that can be easily tracked, measured, analyzed and optimized.

Prima offers a solution to this by organizing the different work processes in the plant, and by tracking and measuring these processes for analysis and evaluation. This gives the precast producer the opportunity to organize the wetcast production of many different kind of products. It is the ideal solution for precasters who work with standard products as well as with made-to-order concrete products.

#### Reduce Labor and Increase Productivity

In contrast to traditional wetcast operations where the forms are stationary on the floor, Prima introduces a system where the forms automatically circulate in a loop through specialized work stations, such as demolding, mold cleaning and oiling, placement of reinforcement, form filling and ultimately curing.

In accordance with the principles of lean manufacturing and 5S workplace organization, specialized work stations allow for faster turnaround by eliminating non-value

adding processes. The result is that the amount of labor going into each product is significantly reduced.

When all operations at a given work station are completed the station is reported "ready" in the Prima system and the operators can move to other work stations. When all work stations have reported "ready" the molds all move one position forward on the assembly line for the next operation. This linear process drives productivity up.

#### Logging of Production Metrics

Each wetcast form rides on a dedicated carrier pallet which has an RFID tag that uniquely identifies the form. RFID readers positioned around the Prima plant identify the current location of the form and transmit relevant information about the product to the operators. Such information includes expected process time, reinforcement and filling requirements. This allows the operators to prepare and efficiently execute the necessary operations for each form.

As each work station is required to acknowledge when its operations are complete, the Prima system tracks the time consumed for each form. This feedback exposes bottlenecks and gives the manager information to further improve the production processes.

Prima also offers a real-time production tracking screen in the plant so the operators immediately know if a work station falls behind the schedule and can act accordingly to get it back up to speed.

#### Improve Safety

The Prima system is fully safety compliant, and it significantly improves safety compared to many traditional wetcast production facilities. Prima eliminates the need for fork lift trucks in the production area and there is no overhead transport of products or concrete buckets.

Furthermore, the specialized work stations can be ergonomically designed (e.g. with tool balancers so the operators do not have to work with heavy loads in inconvenient positions). Productivity is increased with safety in mind.

#### Advanced Tools for Planning

When planning a given day's production all the historical data for the relevant forms can be accessed with the Prima system. The production manager can analyze the demand for concrete and manpower throughout the day and to appropriately coordinate the queue in order to optimize throughput and balance manpower demand.

The production manager can use this information to build a production plan that is realistic and feasible, and to identify potential bottlenecks before they become a problem.

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- Reduce Labor and Increase Productivity
- Logging of Production Metrics

- Improve Safety
- Advanced Tools for Planning







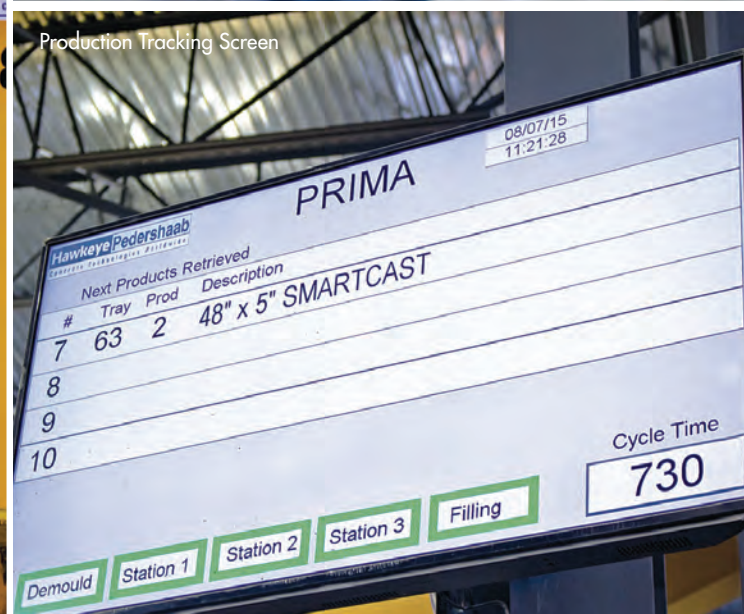
Assembly Line Work Stations



RFID Reader



Production Tracking Screen







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