



ADVANCED CONTROL SYSTEMS INC.

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P3 = PEAK PERFORMANCE PROGRAM



Get the most from your plant investment, keep plant personnel properly trained and motivated, and ensure that your equipment is well maintained and serviced with the P3 program from Advanced Control Systems.

The P3 Peak Performance Program features intensive training seminars at our state-of-art training center (see photo above). Attendees gain proficiency in advanced hands-on trouble-shooting and problem solving techniques, control system optimization, and advanced calibration methods for all aspects of the plant (e.g., scales, moisture probes, capacity indicators and more).

Avoid downtime, optimize production, reduce waste, and ensure consistent quality with the advanced P3 training and support services. Call Jay Newton today at (603) 387-6316 or email him at JNewton@concretebiz.com to learn more!

Update

WINTER 2010

Trade Show Edition

Hanson Pipe & Precast Meets Tough New DOT Standards With ACS Control Solutions

Nationwide, the trend is for state DOTs to increasingly require concrete product producers to be certified and accredited. For many precasters and ready-mix providers, plant certification means upgrades are required to bring batching systems, plant facilities, control systems and production records into compliance. With residential and commercial construction at historic lows in most regions, DOT work is critical to survival for many producers.

The Challenge

Texas DOT, for instance, has begun to put teeth in its requirements for top quality concrete and concrete products for all projects, including limits on the use of volumetric mixers (mobile mixers) and plant certification requirement that includes accurate production documentation. In Texas, as it has in many other states, Hanson Pipe & Precast is turning to solutions from Advanced Control Systems (ACS) to deliver accuracy, consistency and automation to meet strict DOT requirements and meet its commitment to produce high-quality precast concrete products.

Hanson Pipe & Precast's South Central Area, which includes 26 facilities in Arkansas, Louisiana, Oklahoma and Texas, is aggressively upgrading and retrofitting numerous plants to meet tough DOT requirements across the region. Older plants and plants that have been acquired in recent years often need a wide range of improvements to bring them into DOT compliance.

For instance, Hanson acquired W.T. Liston Co. in La Feria, Texas, in 2007. The plant immediately provided Hanson with a strong foothold in the Rio Grande Valley markets of Brownsville, Harlingen and McAllen. Built in 1996, the La Feria plant also required substantial upgrades not only to meet new DOT demands, but to enable the firm to expand the range of precast concrete products available in the region. The first improvement to La Feria was the transfer of a two-cubic-yard pan mixer from a New Orleans location to La Feria. The transplanted mixer was refurbished and used to replace a vintage mixer that had supplied the facility's Hawkeye pipe production system.

La Feria's second production line, which produces precast grate inlets, was also a challenge. The line used a volumetric mixing truck equipped with hoppers for aggregates, cement, water and admixtures. In mid 2009, TxDOT issued a directive making it unacceptable to use volumetric mixer trucks for batching concrete for products delivered to TxDOT projects.

The Solution

In the summer of 2009, Hanson replaced the volumetric mixing truck with an identical two-cubic-yard pan mixer to serve the precast inlet line. At the same time, Hanson installed a PCS Control System from ACS to run both production lines: pipe and precast inlets. "We were already using



The self-contained ACS Smart-Touch Control System can be located anywhere on the plant floor. Here, operator Javier Sanchez sets up for the day's pipe run at Hanson's Helmers Street plant using the Smart-Touch touch screen panel. The Helmers Street control upgrade, which included controls for two separate production lines, was completed over a weekend.

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Hanson continued

ACS control systems at many other facilities in our area and nationwide," explains Mike Haddy, Hanson Pipe & Precast's Support Services Manager for the South Central Area. "Our goal is to achieve as much consistency in equipment as possible. We were very happy with the performance of the ACS systems."

The control system retrofit in La Feria took just six days to complete. Haddy notes: "When it comes to these older plants, like La Feria, they may have been wired and rewired three or four times since they were first built. The ACS team of Jay Newton and engineer Reimund Richter spent a lot of time here before they actually brought in the control system, documenting everything and preparing the plant. They really do their homework and it pays off because they keep downtime to a minimum. We were making consistent, quality concrete on the seventh day."

Haddy adds: "When ACS leaves our facilities, everything works great and looks neat. We know that they are only a phone call away should we need help with anything. They can even troubleshoot our control system remotely over the Internet and make any adjustments we might require."

The PCS Control System from ACS provides the La Feria plant with automated, unattended operation and intuitive point-and-click control when needed. The concrete mix is delivered to the pipe and precast inlet lines by means of crane bucket or forklift-mounted bucket. The PCS System employs two radio remote call stations, one each for the pipe and inlet lines. The PCS Control System monitors moisture content of aggregates and the mix itself and automatically adjusts to meet precise requirements.

The PCS Control System runs on a standard PC operating on a Windows platform and ties together

plant administration, production, material ordering, consumption monitoring, process supervision, costing and maintenance into a single, efficient control solution. The PCS Control System can store up to 1,000 concrete recipes and recall them at the touch of a button.

Results

The elimination of the volumetric mixing truck at the La Feria plant and subsequent upgrades in mixers and controls has led to numerous plant operational benefits. "We're saving at least \$500 a month in truck maintenance costs and we've eliminated the risk of truck breakdowns and interruptions in production," Haddy says. "More importantly, we're able to ensure total accuracy and consistency for every batch and we can document this fact for the DOT or any customer. With this new system, we're achieving accuracy and saving thousands of pounds of cement and other materials every month."

Haddy also reports that the new controls in La Feria have led to improved team morale. "When we do one of these retrofit projects, it lets the plant staff know that we are working hard to help them do the best job possible. It has a real impact. The team may be skeptical at first that a new control system could make much of a difference, but once they see how easy it is to use and the benefits it provides, it puts a smile on everybody's face."

Statewide Rollout

Hanson Pipe & Precast is also installing ACS control

systems in three other Texas plants: Houston-Helmers, Waco and Robstown. At Hanson's Helmers Street plant, one of three in the Houston area, the firm has installed two ACS Smart-Touch Control Systems, one each for its packerhead tongue-and-groove pipe production line and one for its precast box culvert line. The new control systems will help the plant meet new TxDOT certification require-

ments for pipe plants, scheduled to go into effect this summer.

"At our Helmers Street plant, the ACS team arrived on a Saturday to install the Smart-Touch control systems and we were running again by Monday!" Haddy observes. "The pre-installation planning and control system testing done by ACS before the actual install kept our downtime to a minimum."



Newly produced concrete pipe cures indoors at Hanson's La Feria, Texas, plant. The entire plant is run by a single PCS Control System from ACS, providing advanced automation, complete documentation, and point-and-click control.



Before...

PCS Control System from ACS provides La Feria plant with a totally automated operation, remote call stations, and complete documentation of every batch for both pipe and box culvert production.

After...

Before...



After...



Hanson's Helmers Street plant.

In Waco, five mixer trucks were replaced by a fixed batching system equipped with an ACS Smart-Touch Control System. Two Tuckerbilt concrete wagons are used to move mix from the batching system to the forms. Again, this plant update meets TxDOT's requirement that all concrete pipe be produced by certified plants, which excludes the use of volumetric truck mixers.

In Robstown, the PCS Control System from ACS was installed to run two mixers, one each for pipe production and precast box culverts. "By standardizing as much as possible on ACS Control Systems in our facilities," says Haddy, "we achieve greater value because our operators can assist each other and service requires just one phone call. And, we know that these control systems help us improve plant efficiency while meeting certification requirements anywhere in our area or nationwide."

Call today

Learn how you can quickly and easily improve your plant operations with powerful, cost-effective control solutions from Advanced Control Systems. Call Jay Newton at (603) 373-6400 or mobile (608) 387-6316. Or, email Jay at JNewton@concretebiz.com.