



Siemens BW500 Integrators replace competitor's weigh-feeder controllers.

Provide fully integrated monitoring and control with a single device.

Situation

A large cement plant on the U.S. West Coast uses weigh-feeders in their cement making process to mix certain percentages of different ingredients. They use various brands of weigh-feeders including several Siemens-Milltronics units.

The company relies on the output of the weigh-feeders' controllers to speed up or slow down that particular weigh-feeder to get the correct mix. The control room, which uses Siemens PCS 7 and S7 systems, monitors all feeders and can set the motor speeds which control the actual speed of the feeders. In a typical mill at this plant, there may be up to 12 weigh-feeders running at the same time.

Challenge

The company's operators had to learn several different instruments and be able to remember how to calibrate and troubleshoot several different

controllers. Many of these controllers were old and could not be repaired. The operators were dissatisfied with the lack of support they were getting from the competitor, and the display on those older controllers was very hard to see. Many of them also had bad key pads. Because the operators could not easily calibrate the competitive feeders, the company was losing expensive product.

Solution

The local Siemens representative convinced the customer to try the Siemens BW500 integrator as a standard controller for most of their different weigh-feeders. Over the past several years, this customer has upgraded many of the controllers on their weigh-feeders (even competitor's models) to the BW500 integrator. Recently, the company successfully integrated a competitor's feeder, which uses an LVDT, with a BW500 unit using an LVDT conditioner card.

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The Siemens BW500 integrator works with most belt scales and weigh-feeders with up to four strain gauge load cells. It's patented load cell balance function eliminates errors caused by off center loading. The PID function may be used for rate control on shearing weigh-feeders where belt loading is constant and can also control pre-feeding devices.

The BW500 integrator's built-in PID controller can be used for additives blending when multiple weigh-feeder systems are operated in tandem. Batch control and alarm functions are also provided.

Optional Smart-Linx™ modules provide direct digital connections to many popular industrial communication buses with true "plug-and-play" compatibility with other control Siemens products.

Benefits

- Local support and technical knowledge
- Time savings – no need to learn three different weigh-feeder controllers
- Cost savings – can be used with competitor's weigh-feeders at the plant
- Improved process reliability – unique product features such as the ability to add a Smart-Linx card to enable the use of PROFIBUS to communicate with the Siemens PLC
- Convenience – the BW500 is smaller size, state-of-the art integrator that can fit inside the housing of the older controller so that it is protected from the weather and the harsh dusty environment. The customer did not need to upgrade the actual weigh-feeders but still has newer and better controllers.

Important Features

- Automatic zero and electronic span calibration
- Alarms for rate, load, speed, or diagnostic error
- Comprehensive weigh-feeder control functions
- Dual PID control and on-line calibration with optional analog I/O card
- Differential speed detection with second speed sensor
- Back-lit, menu-driven display
- Built-in batch controller
- Programmable analog output
- Two adjustable pulsed outputs
- Suitable for belt scale custody approval
- NTEP approved

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