A day in the life of a cement plant manager

Words like Industry 4.0 and the Internet of Things (IoT) seem to be everywhere you look these days, but what do they mean for a rugged industry like cement? After all, don’t you already have the feeling of not enough time in the day—emails to answer, maintenance to attend to, customers to manage, measurements to validate... the list goes on and on. So how can even more data—even more to look at on your smart device—actually save you time? Let’s take a look.

This may not sound similar to a day at work for you currently—but we’ll get to that.

You’re in your cement plant’s adjacent quarry and want to check the efficiency of one of the primary crushers. You pull out your cell phone to see the flow rate of the belt scale—good, it’s right where it should be.

On the way back from the quarry, you get a call that a filter bag has ripped and an acoustic sensor has detected particulate in one of the plant’s bag houses. You get your phone out again after coming to a safe stop and confirm this, based on the alarm from one of your SITRANS AS100 acoustic sensors that’s over range. You tell the repair crew to fix the filter and then continue driving back to the plant.

You pass the stacker-reclaimer and watch as the growing pile is being monitored by a Siemens Echomax XPS-15 transducer and MultiRanger ultrasonic controller. You take out your phone to check the pile’s level,
Real time, dependable monitoring

For remote operating and monitoring of SITRANS instruments or other products, a tablet or PC with web access can access SIMATIC PDM via a web server. This gives you direct access to any device on the bus using standard industrial protocols and an EDD.

If a tablet or smart phone is used instead of a normal work station, it is mobile and can connect to the network over wireless. Complete visualization of your process and measurements are available for quick and easy access.

Imagine the flexibility: you're in a meeting and a tough question comes up about inventory or maybe about an issue in production—why not check it in real time? You're now able to provide an answer by accessing the data virtually through your smart device, or even change the parameter settings of the instrument to make it more accurate through SIMATIC PDM.

You could be in the same building as the device or halfway around the world—no line of sight restrictions, no limited Bluetooth connectivity—using robust, readily available WiFi, the SIMATIC PCS 7 with integrated SIMATIC PDM solution stands alone.

Knowledge any time, from everywhere

Complete knowledge of what's happening in your plant—of what's happening with each of your instruments—at all times.

Much more than a traditional distributed control system (DCS), SIMATIC PCS 7 combines a unique scalable architecture with powerful engineering tools and a wide variety of additional functions such as alarm management, process safety, and asset management, all of which can be integrated seamlessly into your existing environment. SIMATIC PCS 7 has everything you need to completely and safely automate your entire production process, from goods receipt to goods issue, in process plants.

CEMAT, based on SIMATIC PCS 7, represents a complete philosophy on how to operate a cement plant, how to make diagnoses to keep downtimes to a minimum in the event of a plant problem, and how to interconnect drives, MCCs, power devices, and process instrumentation from the plant.

SIMATIC PCS 7 distributed control system from Siemens provides total transparency of your automation system—for cement plant managers or those in any other industry—through your phone, tablet, or PC via a webserver with a process overview interface. SIMATIC PDM is used on a tablet or PC via a web server for complete access to the instruments for diagnosis or process variables.

How about:

- Checking the measurements of all your belt scales in a quarry from the comfort of your truck on a cold winter day?
- Resetting the totalizers on two coriolis flowmeters on grinding additives without walking past a seemingly endless series of pipes?
- Lowering the 100% level on your 15 level instruments to help reduce inventory cost?
- Changing the scaling of your submerged pressure transmitters without leaving the control room?

Critical process information can be at your fingertips on your device of choice—tablet, phone, or computer.
Partnering with process instruments

Your data, however, no matter how readily available, is only as good as the sensors it’s coming from.

Take the Heracles cement plant in Greece, which uses Siemens level measurement in its raw material silos. “We can now rely on the level system from Siemens to provide us with the automated control we need for efficient raw mill feeding,” says the company’s technical consultant at the plant.

Or Chinese cement producer Longyuan Construction Anhui Cement Company, Ltd., which uses Siemens weighing technology to ensure accuracy in its custody transfers. “After installing Siemens belt scales, we see a real difference in our current operations,” says Longyuan Construction’s director of engineering.

And St. Marys Cement in Bowmanville, Canada, which has used a host of Siemens instrumentation throughout its plant for decades. When asked about these devices, the plant’s electrical supervisor simply states: “They just work.”

Even in the age of IOT and the digital factory, you still need your plant’s machinery and automation to “just work.” Without accurate, reliable, and rugged process instrumentation and analytics, that day-in-the-life as described previously is made much more difficult at best—or nearly impossible at worst.

But the seamless integration of your sensors and your smart device puts you ahead of the game, able to deal with issues before they become problems.

Industry 4.0 and automation with your smart device

Siemens instrumentation and automation can’t solve all the world’s problems, but SIMATIC PCS 7 with PDM makes it easier to deal with some of yours.

As long as your automation system has Siemens as a backbone with SIMATIC PCS 7, this option is available. Just add a web server with a web based visualization interface and SIMATIC PDM. That’s it.

With the advent of Industry 4.0, this option for transparency and connectivity takes process instrumentation to a different level, giving you unparalleled control and access.

Days in the life of your plant just got a whole lot simpler.