



dB50 Provides Accurate and Reliable Level Measurement for Fumed Silica.

The Cabot Corporation site located in Barry, Wales, approached Pulsar Measurement looking for a Level Measurement solution for their Fumed Silica Products. The site manufactures fumed metal oxides, including both hydrophilic and hydrophobic fumed silica products, that are used in adhesives and sealants, coatings, and other applications.

The bulk density of the Fumed Silica is around 30 g/l (0.3 lb/gal), and a surface area of hundreds of square meters per gram on occasion. It is used as a thickening agent in everything from gel batteries to non-drip paint, and as a light scattering agent in cosmetics.

Long Line of Failures from Other Manufacturers

The site has tested several solutions in the past from a number of leading suppliers and each solution has failed, including radar and pressure measurement. The light compound is prone to becoming suspended in the air causing false readings, and the low density of the product made it difficult to measure the actual level within the silo.

During the filling process of the silo, large quantities of the product became airborne. This caused a problem for other solutions, where the instrument was reading the suspended particles rather than the compressed particles in the bottom of the silo, causing false readings or echo failure.

dB50 Provides the Perfect Solution

Because the dB50 is so powerful, it was able to penetrate the suspended particles allowing Pulsar Measurement to



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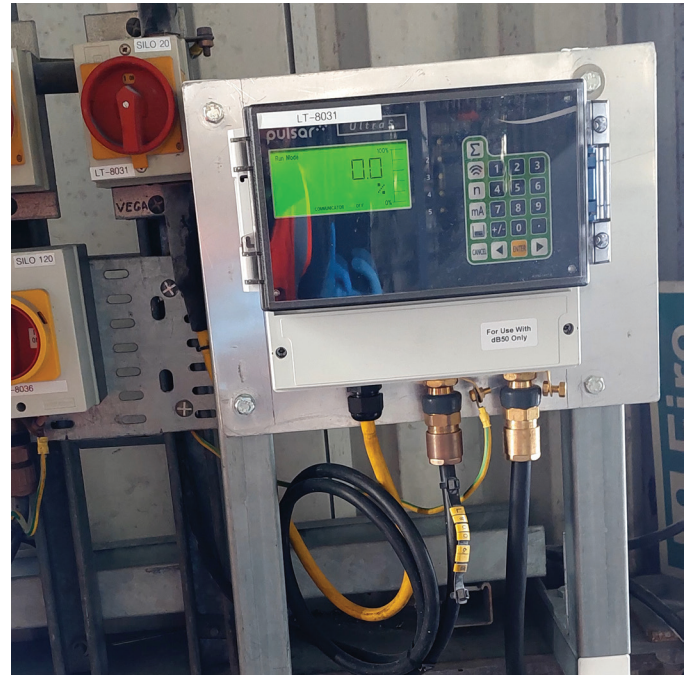
Jason Jones, Senior E & I Engineer, Cabot Carbon

read the actual level of the silicon within the silo. Using DATEM technology, the customer was able to follow the silicon level within the silo without losing the echo profile or measuring the incorrect level during filling and emptying.

Using DATEM Technology, Pulsar Measurement was also able to increase amplitude of the returning signal which was being dissipated by the suspended solids within the silo.

How does DATEM Processing Work?

Pulsar Measurement's Digital Adaptive Tracking of Echo Movement (DATEM) is an echo discrimination system that works on the basis that it identifies the true moving echo from the background noise, then follows it, ignoring all the competing echoes. The high power of the dB Ultrasonic Transducer range makes sure that all the echoes from an application can be easily monitored. The result is a highly reliable level measurement in applications that previously could not be considered.



dB50 Becomes Standard for Cabot Carbon

From the first trial, the end user was so impressed with the dB50 and DATEM that they chose the solution as standard which is now being rolled out across the company globally. Jason Jones, Senior E & I Engineer said "The solution has worked so well we have relayed this to our American Branch, who produce the same product as us, as they were having the same problems."

More Information

Ultra 5 Controller: <https://pulsarmeasurement.com/ultra-5>

dB Ultrasonic Transducers: <https://pulsarmeasurement.com/db-transducer>

www.pulsarmeasurement.com



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