



CASE STUDY

CEMENT SUPPLIER



Bindicator's comprehensive application solution helps a cement supplier improve the accuracy of level measurement readings for their fly ash silos.

Problem:

A supplier of cement products for a wide variety of industries and major retail outlets offers a range of bagged cement, dry mix, and building material products. Cement product facilities are known for extreme environments – they are often incredibly dusty and operate at high temperatures resulting in wear and tear.

The Customer needed to improve the technology they used for level measurement in their fly ash silos. Fly ash is important to cement suppliers – a byproduct of coal-fired energy plants, fly ash is used in cement production to increase its strength, which improves the cement's quality and performance. However, because of the dusty environment, level measurement in fly ash silos is difficult, especially since the majority of level measurement sensors are located at the top of the silos, which can reach heights of over 200 feet.

Solution:

The Customer decided to trial [Bindicator's F78MP Series Air Radar](#). Air radar is a non-contact continuous level technology that uses electromagnetic waves traveling at the speed of light to determine the distance to the target. The F78MP Series Air Radar uses 78GHz frequency and a narrow 4° beam angle to measure level reliably in extreme applications and over long ranges.

The F78MP Series Air Radar trial was installed on one of the Customer's fly ash silos through a 3" ANSI flange with a nozzle lifting the radar unit approximately 17" above silo's roof. The radar was aimed toward the center of the silo. Initial programming was done using the display and the Quick Start Wizard.

Bindicator recommended air radar to the Customer because they are aware that the dusty fill cycles are a challenge for ultrasonic level measurement technology, as there will likely be signal loss as a result of attenuation. Unlike ultrasonic technology, air radar is nearly unaffected by intense dust and extreme temperatures making it the most suitable technology for the cement industry.

Benefits:

The Customer valued the sensor's easy installation and start-up. The operators were able to read the echo profile and confirm that the F78MP Series Air Radar was working while on top of the silo and without the use of a computer.

The fly ash silo that the air radar trial was installed on was especially active and constantly cycling between empty and full. Reliable monitoring of their fly ash inventory enabled the Customer to efficiently produce cement and maintain material levels for planning purposes.

When the Customer inspected the device after it had been installed for some time, the F78MP Series was found to be clean. The operators were surprised to find that there was no need to use the air purging options that come standard on the F78MP Series. Minimal maintenance has considerably reduced employees' exposure to safety hazards, as daily trips to the top of the silo are no longer needed.

F78MP SERIES AIR RADAR FOR LEVEL MEASUREMENT:
UNLOCK YOUR SOLUTION.