



A higher level of performance

## Application Reference

# Reliable level monitoring of cement powder in a storage bin or silo



### Application problem:

Each silo contains cement of particular type specifications. One or several silos will contain a particular type of cement product. Most manufacturers or shippers of cement powder will have multiple storage silo level applications. Bins are generally fed pneumatically, or via air slide from a process or delivery vehicle. Product is normally removed from the silos via pneumatic transfer pipe or 'clam shell' or slide gate a downstream product manufacturing process, or road or rail truck.

### Solution:

An Acoustic Wave level sensor is used to monitor the level of cement powder in a storage bin or silo. The measured distance output of the sensor (communication, relay, or analogue) passes to a control system. As level changes occur in the silo, the control system will continuously monitor the sensor output. Often the level output will be used for simple inventory management purposes. Cement silos may be holding vessels for material prior to bulk shipment by truck, train, ship, or bagging and packing for lower volume sale (at plants manufacturing the cement themselves). Silos may alternatively be storage vessels feeding a process which manufactures some concrete or mortar or mix product from the cement. The control system simply needs to know how much of a given product is available, and where it is located at any given time in order to control outlet pipes or gates on silos to supply the correct material to a loading or packing facility, or the next part of a downstream manufacturing process. High or low alarm set points are often used in addition to the analog level measurement. In some cases, independent, redundant (separate) point level switch products are used for high or low level alarms, though this function can also be achieved by the Acoustic Wave instrument (using relay outputs) if required.



### Application guaranteed!

*Hawk is a world leader in level, position and flow measurement, providing cutting edge equipment to the global industrial market. We have 30 years of experience and a record of success in a wide range of areas including mining/mineral processing, water supply/waste water, bulk material handling and chemical. Our on-going commitment is to provide industry leading technology and cost effective solutions.*



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