



# Aggregate plant relies on radar level transmitter for inventory monitoring in silos

## Process Instrumentation



SITRANS LR260  
Radar Level Transmitter

### Challenge

An International Aggregates Company has a diverse business which includes aggregate products they mine at their own quarries to produce ready mix, asphalt, liquid asphalt and recycled concrete products. The company also provides management services for the construction industry, including major road projects. For these projects, the company uses aggregates and fly ash in processing products for use in building roads. The aggregates and fly ash are kept in large silos.

The company must make sure they have adequate supplies of their raw materials on hand in the silos. Previously, they would check the silo inventories using a manual measurement.

### Solution

The local Siemens representative suggested the customer try the SITRANS LR260 continuous radar transmitter for measuring the product levels in their silos. The customer was convinced the Siemens radar instruments could do the job and purchased seven of the level transmitters for their aggregate product silos. All of the units are connected to SITRANS RD500 remote data managers to provide integrated web access,

alarm event handling and data capture for the transmitters.

This application presented a particular challenge because some of the round silos were divided internally, making the inside geometry unusual. The local Siemens representative's service department worked diligently to determine the exact geometry of each silo so they could provide the customer with the most accurate operating system.

The application requires that silo levels be checked at the beginning and end of each production day to determine product usage. Inventory usage is based upon the differential between the two level measurements. In addition, levels of product can change rapidly because the company uses batch processing. Now the customer does not have to worry about bad weather or personnel availability to obtain dependable level measurements. The SITRANS LR260 radar transmitters measure the levels reliably and continuously.

In the future, the customer plans to connect all of their plants via wireless communication in order to keep close tabs on inventory and check production rates.

## Benefits

- **Cost Savings**  
By automating the inventory monitoring of the silos, there is a reduction of product waste due to incorrect mixtures in the final product.
- **Time savings:**  
Automated inventory monitoring means that the time that was spent by personnel having to climb the silos and manually measure the product levels is now used in other areas of the process to increase production.
- **Improved accuracy:**  
The automated monitoring is much more accurate and reliable than the manual measurement system.
- **Improved quality of finished product:**  
The precise composition of the finished product is more certain because of the increased measurement accuracy.
- **Easy to use:**  
The radar transmitter's graphical local user interface (LUI) makes operation simple with plug-and-play setup using the intuitive Quick Start Wizard.

### About the SITRANS LR260 Radar Level Transmitter

SITRANS LR260 instrument is a 2-wire, pulse radar level transmitter for continuous monitoring of solids in storage vessels, including extreme levels of dust and high temperatures.

The transmitter includes a graphical local user interface (LUI) that improves setup and operation using an intuitive Quick Start Wizard and echo profile displays for diagnostic support. Startup is easy using the Quick Start wizard with a few



SITRANS RD500 Remote Data Manager

parameters required for basic operation. Its unique design allows safe and simple programming using the Intrinsically Safe handheld programmer without having to open the instrument's lid.

### About the SITRANS RD500 Remote Data Manager

The easy-to-use RD500 remote data manager uses a web-based application and hardware modules. The unique modular approach allows a variety of process signals to be monitored, while the serial ports allow data to be collected from any Modbus RTU device.

The RD500 data manager comprises a master communications module, and up to 16 slave modules. Various module types are available, allowing up to a maximum of 128 conventional inputs and outputs. The RD500 data manager's serial ports can collect data from up to 247 Modbus RTU slave devices including field instruments.

Siemens Industry, Inc.  
3333 Old Milton Parkway  
Alpharetta, GA 30005

1-800-241-4453  
info.us@siemens.com

[usa.siemens.com/pi](http://usa.siemens.com/pi)

Subject to change without prior notice  
Order No.: PICS-00074-0212  
All rights reserved  
Printed in USA  
©2012 Siemens Industry, Inc.

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.