



## Ultrasonic system measures the level of PVC resin and reclaim



Georgia Pipe is located in the southern part of the United States. They specialize in the manufacture of UL approved PVC conduit PVC resin.

### Challenge

Ensuring that there is sufficient quantity of PVC available for the manufacturing process is critical. There are storage silos onsite containing either plastic pellets or resin. The challenge is to accurately measure the level in

these silos to re-order stock based on specific level set points.

PVC reclaim is an extremely dusty product and the company requires a level monitoring system that will perform accurately in this environment. Resin levels were being monitored daily by operators climbing silos and manually checking the levels. This manual inventory system was both time consuming and unsafe for the staff, not to mention that only one

# Petrochemical

Answers for industry.

**SIEMENS**



Siemens Level Specialist Al Dhanji worked closely with Ron Odom, Electrical Engineer, Georgia Pipe to provide the best level measurement solution for plastic resin and reclaimed plastics – two Sitrans LU10 and sixteen Echomax XPS-30s.

level measurement was taken each day. Georgia Pipe was looking to automate their level measurement system and decided to consider several systems for their facility.

## Solution

Siemens application engineer, Al Dhanji, evaluated this application and proposed a trial offer. One Siemens Sitrans LU10 ultrasonic level system and Siemens Echomax XPS-30 transducer was installed for a 30-day period. During this period, Georgia Pipe monitored the system to ensure smooth operation and accuracy. At the same time, Georgia Pipe also evaluated ultrasonic systems from three other vendors and one laser system.

After the 30-day period, Georgia Pipe operators were confident the Siemens Sitrans LU10 was their product of choice. The LU10 provided the accuracy and reliability required to monitor level in the silos and it was easy to install. The fact that one controller is able to monitor up to 10 points of level factored into their decision to pick the most cost-effective solution for their level measurement needs. As a result, they installed two Sitrans LU10 controllers and sixteen XPS-30 ultrasonic transducers to continuously and accurately provide level monitoring on all of their silos. The signals from both Sitrans LU10 controllers are sent to a PLC where the levels are viewed on an HMI. The inventory levels are also transmitted to key personnel throughout the plant to ensure there is always enough raw material on hand.

Sitran LU10 is an ultrasonic long-range level monitor for liquids and solids, offering 10-point monitoring in a single device. It can be used in a wide range of applications to measure the level of liquids, solids, or a combination of both contained in vessels of differing size, shape and configurations up to 60 m (200 ft). Advanced capabilities of the LU10 allow automatic level-to-volume conversion for standard or custom tank shapes, and SmartLinx® communication protocols allow centralized control in one control room. Sonic Intelligence® echo processing provides exceptional reliability for accurate and reliable level readings.

Echomax® XPS-30 ultrasonic transducers are robust and can be used in applications up to 30 m (100 ft). They are impervious to dust, moisture, vibrations, flooding and extreme temperatures. Non-contacting technology means there is no material buildup, no corrosion and no down-time. They are easy to install and are virtually maintenance free.

## Benefits

SITRANS LU10 ultrasonic controller improves process reliability giving Georgia Pipe operators data on the exact material level in the silo at all times. This allows them to better plan purchases of resin materials to ensure enough material for manufacturing PVC conduit. The elimination of manual inspection of material levels has increased employee safety, as the need to climb these silos is no longer required. In addition, operators can make program-

ming changes to the LU10 at ground level, as the unit can be located up to 366 m (1200 ft) away from the transducer. Level information is readily and safely available for the production team to view remotely thereby providing accurate information to make positive production decisions.

“When you are monitoring large quantities of raw material a day, it is important to have a system you can depend on with little maintenance or upkeep. With a Siemens level specialist (Al Dhanji - Senior Application Engineer - Level) at my side throughout the application, engineering, trial, commissioning, and training, what more could I ask for? The local Siemens channel partners - team of Mike and Steve Calbert and Nick Tucker with FLW South East made sure the ordering, delivery and communication worked like a charm!!!” comments Ron Odom, Electrical Engineer, Georgia Pipe.

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