

SIEMENS



Process Instrumentation

Measuring the level of 93% sulfuric acid accurately with no compatibility issues.

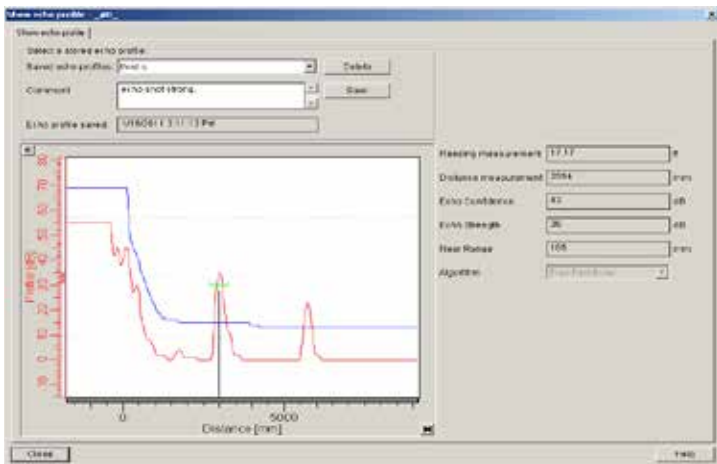
SITRANS LR250 Radar PVDF



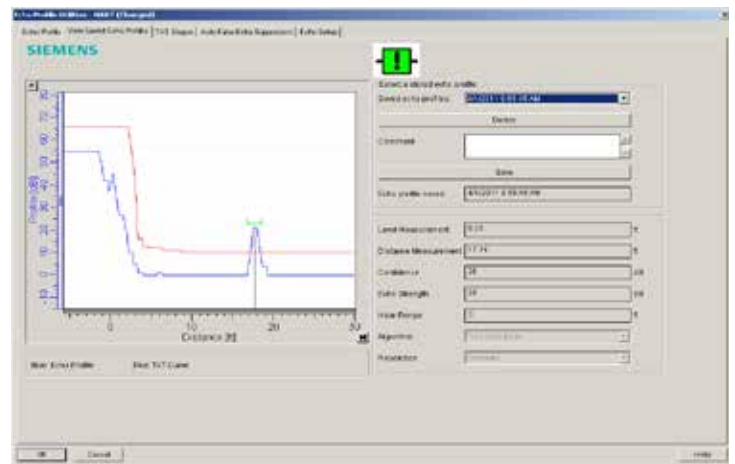
Background

A chemical processing company in Beumont, Texas was having difficulty finding an instrument that could monitor the level on various chemical tanks with very corrosive properties. On one particular tank they were monitoring 93% sulfuric acid and the company was struggling to find a level measurement device that could withstand the corrosive nature of the contents in the tank. Desperate to find a reliable, and resilient measurement solution, they were looking at alternative technologies to solve the problem.

usa.siemens.com/LR250



Signal Profile taken during the initial installation.



Signal Profile taken a year later.

Challenge

The 93% sulfuric acid tank proved to be the most challenging due to the chemical compatibility with most level instrumentation. The special wetted parts would only last a few months because of the corrosive nature of the acid and the transmitters would have to be replaced on a regular basis. This became very expensive for the chemical company, but also caused significant downtime due to the constant repairs.

Solution

Siemens invited management at the chemical company to test the SITRANS LR250 Radar PVDF for themselves. After having the unit installed for a few months, the unit was taken out and inspected. Signal profiles were taken and compared to the signal profiles when the unit was first installed, the signal profiles demonstrated a strong performance by the SITRANS LR250, the acid level was being tracked reliably and the inspection of the PVDF encapsulated horn antenna showed no compatibility issues.

Other factors that reinforced the SITRANS LR250 PVDF radar as the correct instrument for this application, was the quick and easy installation, and only having to use the Quick Start parameters to setup the unit.

Conclusion

The Siemens SITRANS LR250 transmitter with its PVDF encapsulated horn antenna has proven to be the proper instrument for sulfuric acid applications. It provides a lower cost solution than other instruments requiring exotic and expensive metal alloys. After being in operation for over three years, it has demonstrated an increased life span compared to the differential pressure transmitter, which required special wetted parts due to the corrosive media it was exposed to. With the easy installation and setup, plus the strong performance after the test of the LR250 radar transmitter the manager at the chemical processing company was so pleased that they immediately ordered several additional units.

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