

Product 1310 Magnetostrictive Level Transmitter

Application Transmitter on MLI Applications

Industry Sugar Mill

Background

The sugarcane processing industry is a vital market that impacts the economy of many tropical nations as well as some US States. Some of these facilities date back 100 years or more and measurement control for their processes are critical for safety, efficiency, and profitability. At the heart of most of these facilities is the steam boiler, which drives the cane mills, the evaporators, clarifiers, sometimes electrical generators and other important machinery within the plant.



Challenge

A customer of SOR at a sugar mill was measuring and controlling the water level in a steam drum by using two of three voting logic with three differential pressure (DP) transmitters. However, they wanted another continuous level measurement technology, which could be integrated into their control system, as a redundancy to their DP cells.

Solution

This customer already had an SOR 1100 Series Magnetic Level Indicator installed as a redundant visual indicator to the level sight glass mandated by boiler code. SOR proposed their new 1310 Magnetostrictive Level Transmitter which provides an analog 4-20mA signal using the magnetic field generated by the float in the MLI to determine the process level.

SOR installed the 1310 Magnetostrictive Level Transmitter on the existing SOR 1100 Series Magnetic Level Indicator. The simple, two-man installation of the magnetostrictive level transmitter is one of the key advantages of this instrument over other level measurement technologies. It requires the instrument be mounted flush to the side of the MLI with two stainless steel hose clamps, an insulation pad that protects the transmitter from the process temperature (which was 210°F) and a two-wire hook-up to the dual compartment housing on the transmitter head. No valves need to be closed, nor any process needs to be shut down to install this device. Once it was wired up, the instrument started reading the level immediately and outputting the analog signal to the control room where the customer set it up to be easily displayed for their operations. SOR asked the customer to trend the level signal for the 1310 Magnetostrictive Level Transmitter in order to compare it to their DP cell trend. They did so over a period of one week and both trend lines coincided, indicating that the transmitter was tracking the level correctly in the steam boiler.

