Getting an accurate level measurement in vessels of hotel soap

If you've ever stayed in a hotel and used one of those tiny bars of soap, chances are that soap was made in a plant in Northern Mississippi. KIK Custom Products manufactures and packages a number of household and hospitality products for big brand names throughout the United States and around the world. Their plant in Mississippi makes those tiny bars of soap for a number of hotel chains and amenity suppliers across the globe.

Condensation and sticky buildup

The process begins with a liquefied soap base that solidifies when it cools below 85˚F. The material is typically heated to at least 180˚F when the process is running. During normal operation, vapor is produced, and it condenses on the inner surface of the roof of the tank. During cleanings, operators use hot steam to purge lines to and from the vessel.

A competitor's 26 GHz radar sensor was having issues reading a level measurement when any amount of steam was present in the tank. On top of this, cleanout processes typically caused the soap to bubble up and leave a residue on the sensor, causing further issues. Inaccurate and unknown level measurements led to dangerous work conditions with the risk of the hot, sticky liquid overflowing.

Measuring through the condensation

The steam and the soapy buildup on the radar sensor were the first two big hurdles to overcome in this application. Fortunately, the 80 GHz VEGAPULS 64 has a reputation for surmounting both of these difficulties with ease. VEGA offered a free trial of the VEGAPULS 64 to prove the sensor would work in the application. In this instance, a VEGADIS 81 was added, so operators could safely view the level away from the hot steam purging from the 25' tall vessel. The radar was then set up using the VEGA Tools App via Bluetooth. VEGAPULS 64 Free Trial

A safer, more reliable measurement

Once they began using the VEGAPULS 64, KIK Custom Products discovered they were getting an accurate level reading in their soap vessel for the first time in a long time. Level readings were accurate throughout the process, even with varying amounts of steam, because the sensor is immune to condensation and build-up on the antenna. Additionally, the sensor has a higher dynamic range, so it was able to detect a low return signal coming back from the turbulent surface.

The VEGADIS 81 and the VEGA Tools App were able to provide two different ways for operators to view the level in the vessel at a safe distance away from the hot steam. Prior to this, operators would have to put on safety equipment – a full protective suit – just to get a look at the sensor and see what was happening. Upon seeing proof the operation in one vessel was running more safely and efficiently, KIK Custom Products purchased instruments for two more vessels running the same process.

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Cleaning up unreliable measurements

Nearly anyone who’s stayed in a hotel has seen these tiny bars of soap in your hotel room. Making the soap is a hot, dangerous process that can also be a little messy. The VEGAPULS 64, paired with a VEGADIS 81, makes the process safer and run more smoothly with reliably accurate measurements, and that ensures anyone staying in a hotel should be fresh and clean during their stay.

Related products

VEGAPULS 64

VEGADIS 81

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