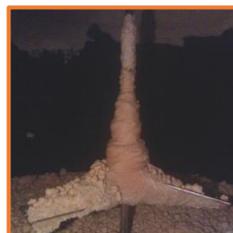


HYCONTROL

LEVEL MEASUREMENT SOLUTIONS



Latex Level Monitoring & Foam Control Application



Liquid latex measurement puzzle solved by Hycontrol

Hycontrol have solved a sticky foam detection and contents measuring problem for a leading developer and supplier of innovative polymers, elastomers and specialty chemicals at their UK plant.

The international company has a number of glass-lined liquid latex mixing tanks on site, measuring approximately 3.5m high and 1.25m diameter, located in a designated Zone 2 ATEX area. The 70°C operating environment inside the tank presents a number of level measuring challenges, including the presence of steam and vapour, an agitator blade and possibility of build-up of product on any sensors immersed in the latex.

The current level measuring pressure sensors and capacitive probes for detecting foam were proving to be very inaccurate and unreliable, with regular cleaning and re-calibration required. This not only had a direct and frustrating impact on productivity, but also increased overheads due to the unnecessary excess use of de-foamer.

The foam detection probes required regular sensitivity re-setting, involving probe removal and testing in a bucket every time the alarm went off. With no reliable foam measuring equipment providing real time data, operators were forced to add antifoam on a constant drip feed basis from a localized dosing pump to control the foam levels. This meant that de-foamer was added whether needed or not, even during the mixing process.



Based on extensive experience in such applications, Hycontrol engineers were confident their ATEX compliant VG7 radar level measuring system with drop antenna and DiFoam non-aqueous foam probe and control system would meet the dual challenge of accurate tank contents measurement and improved foam control with reduced de-foamer consumption. As

a result the client decided to undertake a trial on one of the tanks and the equipment was installed by Hycontrol **CompEx**-certified engineers*.

Hycontrol's special measurement technique incorporated in the DiFoam system uses level measuring technology specifically developed for measuring foam levels and foam-liquid interfaces. Purpose-developed for use on non-aqueous liquids, DiFoam probes already have a proven track record in a wide range of applications and industries.



By comparison, alternative, less-effective, solutions use existing level measuring technology 'adapted' to measure foam. These tend to be inherently unreliable, inaccurate and adversely affected by process product build-up on the measuring probes. The Hycontrol DiFoam sensor is designed to work reliably even in the presence of severe fouling, effectively measuring through product build-up along the probe.



As a result the main foam sensing electrode ignores the fouling and monitors only the active foam within the process. By providing accurate data on foam generation under all operational conditions, the dispensing of de-foamer can be controlled in real time to minimise consumption.



The VG7 radar level sensor is ideal for such applications, providing accurate measurements in harsh and difficult environments. The high frequency technology is unaffected by the presence of vapours and changes in pressure, temperature and dielectric constant. The unit has a very narrow beam angle and the special ETS empty tank software can be used to recognize and ignore false signals from stirrers and other internal structures, which would otherwise affect performance. The drop head antenna is designed to resist build-up of process material, thereby requiring minimal regular cleaning.

The five week trial has proved to be very successful. The radar system is accurately tracking levels in the tank and the foam detection system is providing valuable data that will allow the company to reduce their long-term de-foaming costs.

Stephen Gallagher, Technical Director of Foam Equipment at Hycontrol, said: "Examples like this prove the effectiveness of our control technology. We have now advanced to a point where even foam in a difficult product like liquid latex can be comprehensively monitored and controlled, bringing great operational benefits to customers in a variety of industries."

** - The CompEx Scheme is now recognised as the Global Competency Scheme of choice for the major oil, gas and chemical users who want to protect both their workers and capital assets.*

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