

HYCONTROL



with



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Tremco illbruck, created from the merger of Tremco's European Sealant/Weatherproofing Division with illbruck Sealant Systems in September 2005, is a leading manufacturer of sealants, glazing, waterproofing, roofing, flooring and passive fire protection products. Given the diverse range of

finished products and raw materials, accurate level measuring is vital for both stock control and to comply with stringent health and safety issues for employees and suppliers. When looking to improve their existing level systems, Tremco engineers recognised that given the range of sticky, volatile and potentially hazardous vessel contents, finding suitable equipment to operate under all these demanding and varying conditions would not be easy.

However, following a site visit and discussions with Tremco, extreme level measuring specialists Hycontrol came up with a comprehensive solution that met all their criteria. Hycontrol's extensive experience in the chemical industry ensures clients receive the best engineered solution for their application, offering a combination of high accuracy and maximum safety, without compromise. They recognise the importance of dual redundancy measurement in such installations and have developed integrated safety critical level measuring systems for a wide range of applications.



Nine of the vessels, installed in three of Tremco's tank farms, are all fitted with intrinsically safe versions of Hycontrol's VF7 series, TDR radar units. Installed in tandem with these are ATEX certified probes and switches to provide independent 'belt and braces' high level alarm security. The seven solvent tanks are

fitted with explosion proof HYCTF-TD vibrating probe switches, whilst the two bitumen tanks are fitted with MD20 RF admittance switches. The different measuring technologies were carefully selected to ensure measurement accuracy and safety could not be compromised in any way by the effects of vapour interfaces, temperature changes, pressure fluctuations or build up of sticky materials on the probes.

The versatile TDR level gauges are ideal for such retrofit applications and can be fitted inside tanks via very small apertures (typically 1" BSP) and usually without structural modifications. The TDR transmitter sends low-power electromagnetic pulses along the instrument's probe. Upon reaching the surface of the vessel contents, the pulses are reflected back and the instrument measures the time between the emission and the reception of the signal, converting this into a precalibrated 4-20 mA output current proportional to the level in the vessel. Any weak or spurious signals are analysed and ignored by the electronics. The TDR units, which have a proven track record measuring difficult products such as adhesives, volatile solvents, bitumen and sticky polymers, provide an unrivalled accuracy of better than ± 3 mm over the 10 metre measuring range, ensuring precise stock control. Any inevitable steady build of product on the stainless steel probe has no adverse operational effects, thereby maintaining safety integrity.



The tuning fork principle of TF-TD vibrating probes will operate with virtually any liquid product and these versatile devices require no set-up or calibration whatsoever. This makes them ideal for use with difficult and hazardous volatile solvents. They are available with a wide range of flanged or screwed process connections and can have extensions, enabling probes to reach three metres into a tank if required. The wetted parts of standard switches are 316 stainless steel, whilst special Halar coated and Hastelloy switches are available for extremely corrosive applications. The switch has a visual indication showing its on/off status and a test point on the side of the housing to

allow easy checking of switch functionality.

The remaining six tanks on site are fitted with Hycontrol's Microflex C advanced ultrasonic level measuring units, four of which are Microflex CIS intrinsically safe ATEX versions. These two wire level transmitters minimise on site cabling and can be calibrated either at the unit or remotely via HART, making set-up and service very straightforward. The proven ultrasonic non-contact technology, together with proprietary false echo software, provides stable and reliable high accuracy level data. High level alarm signals for the six tanks are again provided by intrinsically safe vibrating probes and admittance switches.

Hycontrol has been established for over 25 years, manufacturing and supplying an extensive range of instrumentation to a wide and varied customer base throughout the world. Industries include: Water and Waste, Food and Beverage, Chemical and Petrochemical, Environmental and Utilities and the Quarry/Aggregate Industry. With our knowledge and experience with proven technology we have provided pressure, level and flow solutions on media as diverse as chocolate and sulphuric acid, cornflakes and bitumen. Our products have been fitted to everything from Nuclear Power Plants to Water and Waste Treatment Works.

Level Measurement

- Radar
- TDR
- Ultrasonic
- Thruwall
- Hydrostatic



Level Switches

- Float
- Rotary Paddle
- Capacitance
- Admittance
- Vibrating Probe
- Microwave
- Conductivity



Instrumentation

- Sludge Blanket & Interface Levels
- Process Indicators
- Alarm & Display Panels
- Remote Level Monitoring
- Silo Protection
- Industry Safety Systems



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