



## DSEAR-COMPLIANT LEVEL INSTRUMENTATION UPGRADE AT ANAEROBIC DIGESTER PLANT

### BACKGROUND

In early 2023, an Anaerobic Digester plant required an upgrade to its level measurement instrumentation following the findings of a DSEAR (Dangerous Substances and Explosive Atmospheres Regulations) survey. The existing level measurement devices were identified as obsolete and no longer suitable for the hazardous area classification of the process, creating both compliance and reliability concerns.

**SIEMENS**

### CHALLENGE

The primary challenge was to bring the plant's level measurement systems into full compliance with DSEAR regulations while maintaining operational continuity. The existing instrumentation lacked the required certification and reliability for operation within potentially explosive atmospheres. In addition, associated installation components—including glands, cabling, and earthing—also required assessment and replacement to ensure full system integrity and safety.

### SOLUTION

Our service team undertook a comprehensive instrumentation upgrade, replacing the obsolete devices with Siemens SITRANS LR250 non-contact radar level transmitters and SITRANS CLS200 high-level capacitance switches. These instruments were selected for their proven performance, hazardous area approvals, and suitability for anaerobic digestion processes. As part of the upgrade, we also replaced glands, cables, and earthing where necessary to ensure full compliance with DSEAR requirements. The project was delivered by our experienced service engineers, combining strong technical knowledge with high-precision calibration and installation equipment, and supported by our world-leading technology partners.





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**RESULT**

The upgraded level measurement system now fully complies with DSEAR regulations, significantly improving both plant safety and measurement reliability. The use of modern, non-contact radar and certified high-level switches has reduced maintenance requirements and enhanced operational confidence. The plant now benefits from a future-proofed instrumentation solution, delivered safely, efficiently, and in line with regulatory best practice.



**EQUIPMENT SUPPLIED**

The Siemens SITRANS LR250 has recently been superseded by the new **Siemens SITRANS LR530 Flange encapsulated PTFE Continuous**

Siemens SITRANS LR530 flange encapsulated antenna provides continuous monitoring of liquids and slurries to a range of 120 m (394 ft). The PTFE lens and integrated gasket is easy to clean and ideal for highly corrosive media. The 80 GHz frequency creates a narrow, focused beam allowing for smaller antenna and decreasing sensitivity to obstructions.



**Jon Tayler**  
Group Chairman

