



Case Study Tank Lining

Brayfield Farm, Bucks



The Project

As is often found in this type of sectional concrete construction the joints above the liquor level are the first things to fail due to either ground movement or corrosion, in addition the cement matrix of the concrete in the gas space had been attacked by Hydrogen Sulphide leaving exposed friable concrete.

As part of the process the efficiency is determined by collecting all the biogas that is produced. This is achieved by providing a seamless, impervious system that can cope with any movement in addition to dynamic and static cracking of the concrete.

The Solution

Adalline 400 Polyurea (CE marked) was selected due to its high tensile strength independently tested and verified crack bridging capabilities, this along with being waterproof and resistant to H₂S made it the ideal choice. The work on the Tank had to be done as quickly as possible thus minimising it's time off line.

Preparation involved high pressure water jetting (6000psi) to remove weak surface latents and contaminants.

The surface was then dried with the use of indirect heaters and finally vacuumed to remove dust and debris. 250µm primer coat of EP90 epoxy primer was then applied to all surfaces in preparation of the sprayed Adalline 400 polyurea membrane. The nominal 2mm polyurea coating was applied in a single operation. As the material gels in 3-5 seconds and can be foot trafficked within a couple of minutes, it allowed for the holiday free spark test to be carried out immediately after applying the coating.

A 10 year warranty was also provided for the applied coating system.

The Outcome

The Farm Manger was extremely happy with the finished application.

The new Biogas plant is performing beyond expectation due to it's 100% gas retention within the structure, and will carry on so for the next 10 years plus.

