



Case Study: 001

Bund Protection in Hydrofluoric Acid Containment Areas

The Industry

Nuclear Processing Industry

The Challenge

Hydrofluoric acid is a highly toxic very corrosive material which is an essential component in the nuclear industry. In the event of a breach in a hydrofluoric acid storage tank, a vital element to contain that spillage is a series of concrete bunds which retain the fluid, and prevent environmental pollution.

Due to the high concentration of the hydrofluoric acid, a laboratory test program was proposed by Corrocoat, after the successful completion of this work the client selected the following solution for this project.

The Main Solution

The concrete was allowed to age and cure, prior to full surface preparation in accordance with Corrocoat's concrete preparations requirements. The following coatings system was selected:

- **Polyglass WCP** Specialist concrete primer - applied at 100 microns to seal and stabilise the substrate.
- **Graphite S** two-pack acrylated ester system – applied at 350 - 500 microns, This second primer layer is electrically conductive and allows full spark testing to be carried out after the work is completed.
- **Polyglass VEF** Glass Flake vinyl ester acrylic co-polymer - applied at 1500 microns to give superior resistance to service, environment and chemical attack.
- **Veilcoat VEF** two-pack vinyl ester/acrylic co-polymer as a final sealer coat applied at 300 - 500 microns.

As per standard procedure a small fillet of **Corrocoat VE** and a layer of multidirectional laminate was also applied to all wall/floor joints to ensure the system would retain high tensile strength in these areas, should the bunds be flexed by an external force.

All coated surfaces were spark tested to ensure that there were no pinholes or flaws.

Results & Benefits

Due to the variable designs of the bunds a number of options for the system were considered. By involving Corrocoat at the design stage, we were able to give careful thought to the specialised needs of the project and make use of the latest coating technologies. The client now has a high performance system that will require minimum maintenance, thus delivering reduced lifetime costs.

Credentials

As one of the world's leading names in anti-corrosion technology, Corrocoat has more than 40 years' experience in the supply and application of specialist bund linings and coating systems. We have proved to be a reliable partner in the harsh environment for all types of industrial applications, having completed a wide range of projects both on and off site in a professional manner and often to tight timescales.