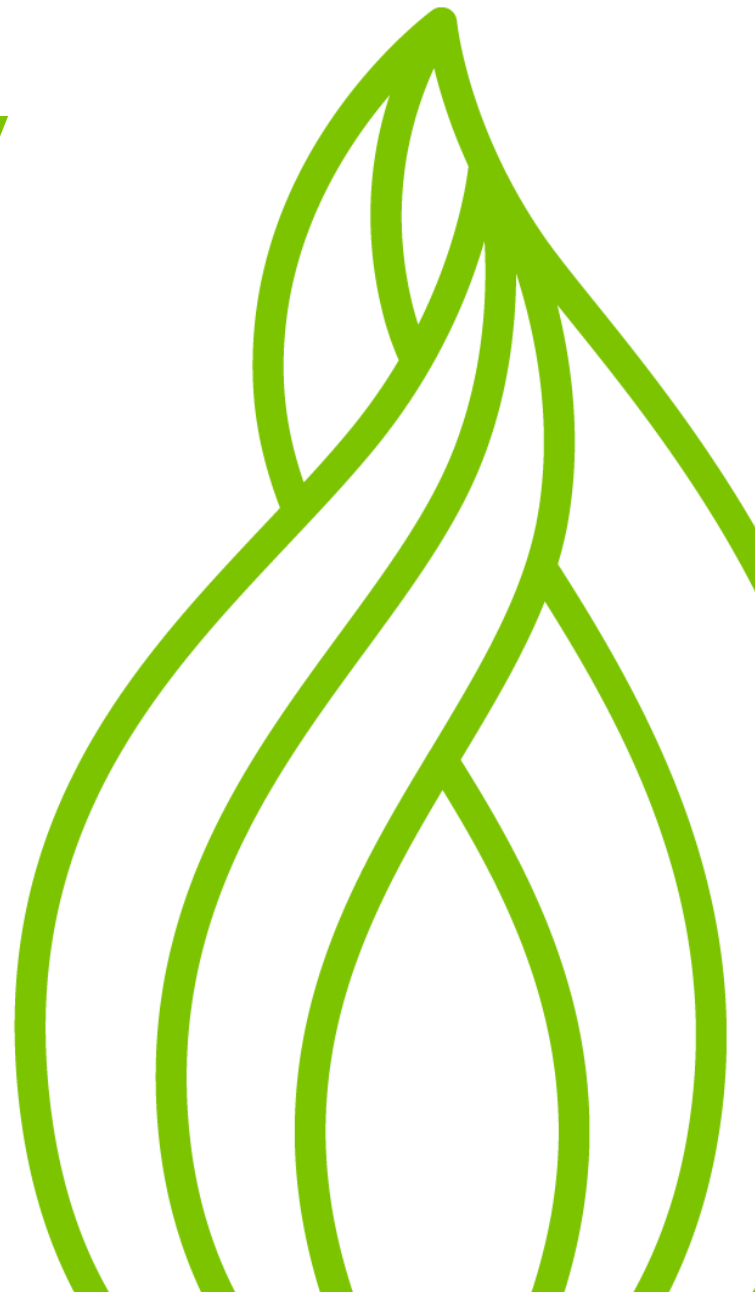




Epoxy Grout Investigation and Analysis

Value Tracking Case Study



Epoxy Grout Investigation and Analysis

Background

There are three methods to repair pipelines. Cut out and replace this is costly; Welding which is a higher risk operation as welding on to a live pipeline and epoxy grout. For over 25 years epoxy pipeline repair has been used for an intervention solution. The grout is made up of 3 separate components (resin, hardener and filler powder); it is available in 4 different grades and is selected depending on the ambient and pipeline design temperature. Each grade has a very narrow range of installation operating temperature, when it is not applied at the correct temperature it can cause delays to repairs or the grout's strength deteriorates; due to the 3 elements it can be difficult to prepare in windy or extreme weather conditions.

What's new?

A new 2 part epoxy grout was developed that contains the filler powder element within the resin which will enable 100% of the product to be mixed together and eliminate potential environmental contamination caused when adding the powder filler material. In addition, the new grades of epoxy were developed in two different colours (winter and summer) to enable technicians to easily identify the difference between them and eliminate the risk of selecting an incorrect grade. The installation operating temperature sustains its strength up to 100°C and can be applied at higher temperatures.

The benefits

Alongside cost saving, epoxy grout also provides the following intangible benefits:

- Building up supply chain resilience rather than relying on one supplier (Webber), although the mixing and curing times are similar the Namco grout has better filling properties, particularly for small annulus' as it is a runnier consistency than the Webber.
- The Namco comes in the containers that it is mixing which negates the need for additional buckets.
- Namco take the used containers away and clean and reuse these which has a positive effect on the environment. It also means we aren't having to pay to dispose of specialist waste

Financial savings

Potential savings if all the repairs were carried out on 36x36 pipes the total potential savings would be £2,920,000, this is based on 8 repairs carried out in one year.

To date we have recognised £73,000 in repairing sleeves of various sizes (ranging from 12" to 36") and outputs will continue to be monitored on upcoming work.

Implementation

Epoxy Grout has been fully implemented to the business and used as a repair technique. Outputs to be tracked for further benefits and development opportunities.

