SYNTHOTECH

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LeakVISION

The In-Pipe Leak Visualisation System

Now Available on SynthoCAM™ and Synthotrax™

SYNOVATE

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Introducing LeakVISION

LeakVISION is a patented in-pipe leakage detection sensor, mounted to a robot base or push-rod camera system. This innovative system is used for the inspection of in-pipe features to indicate the presence of leakage from pipeline features, such as joints, connections and defects.

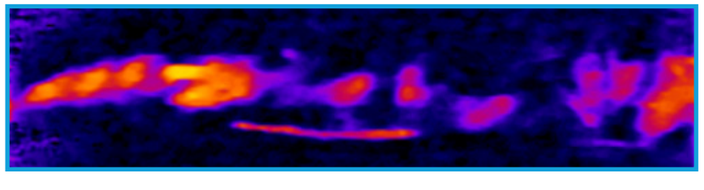
The system was developed during a collaborative project alongside Northern Gas Networks and Synovate, whilst also working with the EIC and a consortium of innovators, including ROSEN, The Technology Partnership (TTP) and the University of Leeds.

LeakVISION aims to address the challenge of the traditional method of “above ground bar holing”. This technique can often produce inaccurate results, causing unnecessary excavation and reinstatement works to be carried out. The application of the technique can also be physically demanding and can cause unwanted strains or injury to operatives performing the work.

Specially built thermal image sensor locates leakages

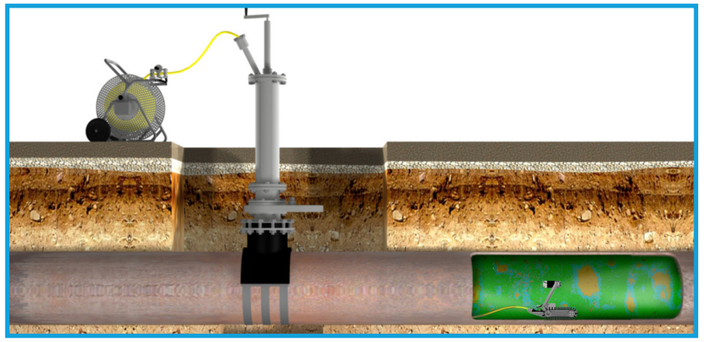
The LeakVISION solution can increase productivity by locating underground leakage both reactively and proactively. The complex underground gas network creates a challenging environment to find the exact location of underground leakage.

LeakVISION’s technology makes use of thermography to analyse and highlight leakage by directly scanning the pipeline and pinpointing the area. This provides improved decision making and very precise targeted remediation, reducing the impact to the environment and road users by preventing and minimising excavation.



A LeakVISION scan highlights the internal features to give an area of interest. This allows teams to make informed and targeted repair over replacement decisions with pin-point accuracy the first time. A typical scan of a leaking joint is shown below on the previous page. The brighter areas indicate a higher likelihood of leakage, whilst darker areas highlight a lower leakage likelihood.

A LeakVISION inspection collects large amounts of data. The team have developed a risk model that can use site and network data to help manage pipeline risks in a different way to the MRPS that prioritise replacement.



Environmental

Reduced need for excavation and reinstatement, with the potential to lower emissions if leak detection is improved and fixed quicker.

Societal

A decrease in excavations means less street work and disruptions, as well as the minimisation of return call outs.

Financial

Reduced need for excavation to assess pipes in difficult to reach places, as well as reduced costs through less labour required.

LeakVISION’s technology is flexible for the application needed. The thermal image sensor can be inserted into a pipe via a robot base or push-rod camera system using an insertion system depending on the pipe configuration and operational requirements.

The LeakVISION system also comes equipped with a display monitor for live pipe viewing.