



Searching for buried water leaks with tracer gas

Since last years, the buried water leaks issues are in the heart of the concerns of distribution companies and local communities. Indeed, they cause environmental and economic constraints. In addition, there are health aspects related to the penetration of contaminants in the networks.

Researcher Leaks: A real job.

The evolution of search leaks technology urges network managers to call upon specialized companies or set up specific teams. A technology has recently emerged, facilitating interventions: it is the leak detection by tracer gas. The gases used are light gases, 95% nitrogen and 5% hydrogen or-helium, introduced under pressure into underground pipes. They go through all types of soil at the points of resurgence. The leak at the soil surface can then be detected by portable sensitive devices which can measure ppm.



Helium leak detector Trace400



Wireless Hydrogen leak detector Trace50

Application Fields

The application fields are numerous :



Application 1

Buried leak with a rate of $4\text{m}^3 / \text{h}$ discovered on a public water system, found by tracer gas.

- When the plot and/or materials and/or pipe diameters are unknown with exact accuracy with impossibility to implement the endoscopic method.
- If the leak rate is insufficient for that we can locate the fault using "traditional" acoustic detection techniques (listening, correlation).
- When locating leaks, works on difficult sections such as PVC or PE pipes.
- When pressure is low or absent.
- If there are many leaks on the section.



Practical information to implement the method



- The ascent time and the amount of gas required depend on the depth of the pipe, the nature of the ground and the leak rates.
- Contrary to popular belief, the light gases are able to cross any road material.



Buried leak with a flow of $2\text{m}^3/\text{h}$ found on a sprinkler network of a logistic platform, localized by tracer gas.

Method Details

