

MONITANK



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PROJECT PARTNERS



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UNDERGROUND STORAGE TANKS RISK MITIGATION SYSTEM

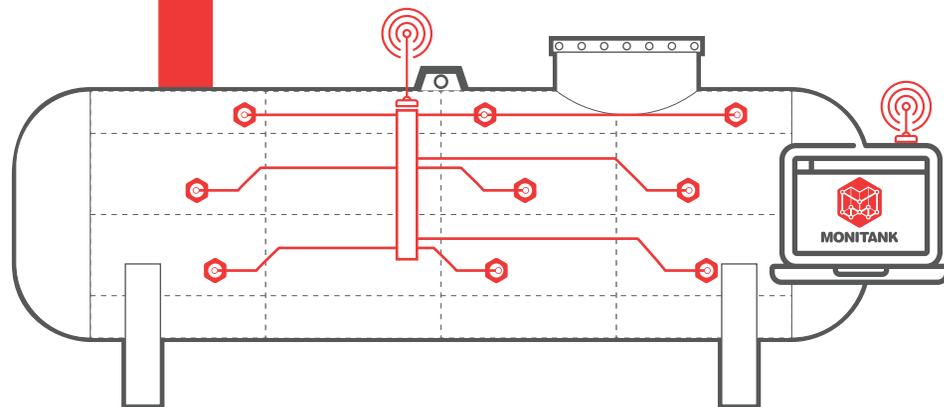


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MoniTank project has been funded by the European Union under the “Fast Track to Innovation (FTI)– Pilot Innovation Actions” program. The principal aim of MoniTank is to use acoustic emission technology for monitoring underground storage tanks with the view of managing risks more effectively.

A common problem with underground fuel storage tanks is leaking due to corrosion and cracking. Leaking may lead to soil and water contamination and is potentially a significant environmental risk. According to existing statistics a third of all installed tanks prior to 1990s are leaking or will do so before they are removed. Also, according to US Environmental Protection Agency (EPA) 2016 published results, “approximately 83 percent – 35 of 42 – of the USTs evaluated in the 10 clusters around the United States were classified with moderate or severe corrosion; 17 of the 42 USTs were classified as having moderate corrosion and 18 of the 42 were classified as having severe corrosion”.

Among the many developed and tested non destructive evaluation techniques, acoustic emission (AE) stands out as it allows for real time monitoring and detections of flaws without interrupting operation and without requiring cleaning and emptying of the tank.



Hardware/Software development

- Prototype developed for field testing.
- GUI developed for use of system and the integrated software for fault recognition.

Validation testing

- Localisation testing performed on small scale tank in laboratory conditions.
- Tank integrity tests performed on metal tanks two virgin one service exposed.
- Fault localisation testing on full scale metal tanks have been performed with existing prototype.

Future work

- System buried with tanks to perform monitoring for cracking and corrosion.
- Tank integrity tests performed on metal tanks including two virgin and one service exposed.
- Fault localisation testing on full scale metal tanks.