



ORFEUS

Radar in the underworld

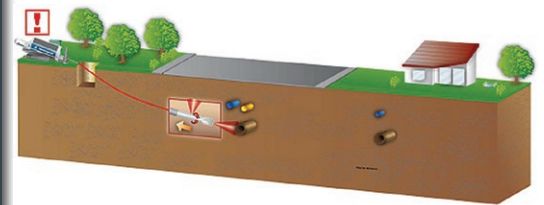
Horizontal Directional Drilling (HDD) is a very effective no-dig pipe and cables installation technique. The ORFEUS drill tip radar is designed to be a reliable and efficient detection tool that can be mounted within the bore heads of HDD machines. It is designed to help the drill operator avoid drilling through, or too close to, existing pipes, cables, sewers, etc. (either metallic or non-metallic). The technology has the ability to detect obstacles at up to a 50 centimetre radius around the bore head, depending on the soil conditions.

The radar imaging data is transmitted directly back to the drill operator. These images, after suitable processing, are able to alert the operator about utilities, or other objects, that are close enough to the drill path to be of concern, and may require corrective action.



Step 1:

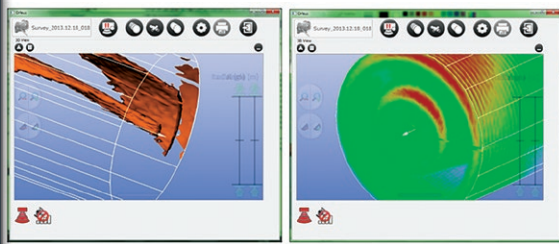
ORFEUS drill tip radar mounted on an HDD bore head



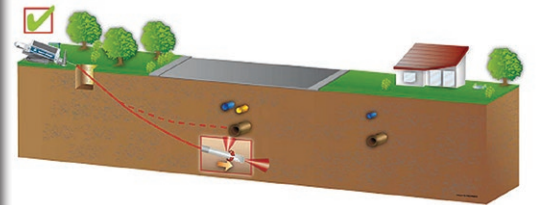
Step 3: Radar imaging data is transmitted to the drill operator



Step 2: ORFEUS drill tip radar detects an obstacle in the drilling path



Step 4: The operator changes the drilling path so as to avoid the obstacle



Such a capability should enable the use of HDD in situations that are currently regarded as entailing an unacceptable degree of risk, and thus increase business opportunities.

After successful trials, the system is now in the final stages of development.

ORFEUS has agreed a cooperation with DIN (German Standardisation Organisation) in order to create a standard, the "DIN SPEC 91322 - Bore head radar for horizontal directional drilling; environment, conditions, limitations of use".

Main application sectors of HDD rigs that could benefit from ORFEUS technology are:

- Installation of telecom cables (mainly fibre-optic), water mains, gas networks.
- River, street and railway crossings, and crossing of other natural or artificial obstacles.
- Installation of horizontal filter wells, of drainages or other geotechnical applications.
- Power cable laying and cable replacement.

www.orfeus.org

Consortium

ORFEUS project is carried out by a consortium of 11 partners from 7 countries, i.e. United Kingdom, Italy, France, Germany, Slovenia, Greece and Ireland. The project coordinator is OSYS Technology.

For more information on the project, please contact the ORFEUS partners:

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This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 308356.

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